Manufacturing Cloud

Salesforce, Spring '24

CONTENTS

MANUFACTURING CLOUD

Manufacturing Cloud lets you bring your entire book of business and customer service journey into Salesforce. All your teams—from sales, operations, finance, channel partners, and customer service—can collaborate on developing accurate volume and revenue forecasts, drive business growth, and ensure customer satisfaction. Manufacturing Cloud provides objects, features, tools, and apps built specifically for the manufacturing industry. It's built on the Salesforce platform, which means you can use Sales Cloud and Service Cloud functionality depending on your business needs.

EDITIONS

Available in: Lightning Experience

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions

GET STARTED

- Create a Trial Org
- Learn About Manufacturing Cloud for Sales
- Learn About Manufacturing Cloud for Service
- Trailhead: Manufacturing Cloud Basics
- Trailhead: Manufacturing Cloud Trailmix

LEARN MORE

Learn About Manufacturing Cloud and Explore
Learn how Manufacturing Cloud can help your business and customers. Understand its core functionality, create a trial org, and learn how to get started.

Set Up Users and Permissions for Manufacturing Cloud
Learn how to set up profiles and assign permissions to your Manufacturing Cloud users.

Set Up a Partner Portal to Collaborate on Your Run-Rate Business
Create a responsive portal where your partners can access knowledge articles, collaborate on sales agreements and advanced account forecasts, and manage leads to improve sales and revenue. Partners can get visibility into sales agreement negotiations, share leads, work on forwarded opportunities, and view and update account forecasts.

Set Up Additional Features in Manufacturing Cloud
Manufacturing Cloud comes with features that help manufactures get greater visibility and control of their commercial operations, service experience, and partner engagements. Scale up your processes and enhance your business operations by configuring features such as Actionable Relationship Center, Events and Milestones, and Intelligent Document Reader. Some features are configured in Setup, others in the app, and some require integration with external systems.

Manage Long-Term Business with Sales Agreements
Make your business transactions, profits, and revenue margins more predictable with sales agreements. Use sales agreements to negotiate the purchase and sale of products over a continued period of time. Sales agreements provide you insights into products, prices, discounts, and quantities. With an integrated sales experience, you can also track your planned quantities, actual quantities, and revenue with associated updates from orders and contracts.

Forecast Your Run-Rate and New Business with Account-Based Forecasting

Plan for demand more efficiently and align your production and sales teams around your evolving customer trends. Forecasts can show you planned and actuals for your business in one place, forecasted out for a specific period of time, grouped by product, location, or other dimensions.

Forecast Based on a Customer's Forecast with Program Based Business

Manufacturing suppliers across industries work closely with their customers to supply the products and components needed to manufacture equipment. In order to do this successfully, suppliers need to consider their customers' forecasts in order to determine their own. Program based business gives manufacturing suppliers complete visibility into their book of business, by using a program-based model to gain deep insights into their customers' forecasts.

Manage Your Organizational Targets with Account Manager Targets

Convert your organization's growth plans into measurable targets with Account Manager Targets. Motivate your account managers to close deals and drive more business. Create targets for revenue, quantity, and other currency or non-currency measure types and allocate specific target percentages to your team members. Strategically distribute targets by products and accounts to meet market demands and organizational requirements. Distribute targets by month, quarter, or year for better visibility and periodic reviews. Update target values at any time and redistribute targets as needed.

Build Distributor Relationships with Partner Visit Management

Partner Visit Management helps sales managers in your company schedule visits to partner and distributor locations. Sales managers can use those visits to monitor performance, arrange for periodic check-ins, conduct trainings, upsell and cross-sell products, and follow up on sales agreement renewals and warranty expiration. With action plan templates, sales managers can create lists of tasks and associated assessment indicators that are commonly repeated across multiple visits. Then field reps can use action plans to perform the tasks associated with a visit and capture metrics on their mobile devices.

Work with Actionable Segmentation in Manufacturing Cloud

Meet your business goals by assigning prioritized actionable lists to your sales agents and providing guidance on prospect or customer engagement. Help your sales agents maximize their engagement outcome with outreach list in split view. Guide your sales or service agents to effectively engage with prospects, including existing customers, who might be interested in your products or services.

Manage the Service Lifecycle with Manufacturing Cloud

Manufacturing Cloud for Service lets you manage your customer service experience in Salesforce. It brings the power of Service Cloud to manufacturers and provides industry-specific functionality. Your customer service representatives (CSRs) can use the Service Console for Manufacturing to stay productive, across multiple channels, even while solving issues in the field. CSRs can work with service console components in Manufacturing Cloud to meet the needs of your customers and business. Service technicians in the field can generate service estimates quickly using the Pre-Work Estimation app.

Manage the Asset Lifecycle in Manufacturing Cloud

Manage every stage in an asset's lifecycle and get visibility into all the activities related to an asset. Customer service representatives (CSRs) can use the powerful Asset Service Console for Manufacturing to stay on top of the changes related to an asset, to view the major milestones of the asset, and to capture the key details of the asset. Link assets with related accounts by using Asset Account Participant records and with related contacts by using Asset Contact Participant records. Get visibility into the operations of your asset fleets.

Manage the Warranty Lifecycle in Manufacturing Cloud

Orchestrate the complete warranty lifecycle—from warranty administration to claims collection and adjudication—by using Warranty Lifecycle Management. Create and manage warranties at multiple product levels. Define a robust framework of warranty eligibility rules and entitlements based on labor, parts, and expenses covered. Develop thorough service standards for product defects, expenses, and labor services to ensure accuracy and consistency in warranty management and service operations. Capture the right information about claims from partners, dealers, and distributors to minimize subjectivity in claims adjudication, and reduce followups for clarification. Build an automated warranty claims adjudication process to supercharge the efficiency of claims adjudicators, to prevent manual errors, and to reduce processing time. Manually scrutinize and adjudicate warranty claims from a single page.

Manage Product and Part Inventory in Manufacturing Cloud

Empower inventory mangers, service technicians, and service reps to plan inventory transfers and returns better with near real-time visibility into inventory at different inventory locations such as warehouses and distribution lots. Track information about your inventory with the inventory management data model. Design your inventory search experience to track and manage your inventory across its entire lifecycle by using the powerful Criteria-Based Search and Filter feature. Set up a search experience for users to search and track inventory by using fields from multiple objects. Decide the way the results are shown and what users can do with the results.

Analyze Your Manufacturing Business Trends

Learn how to set up and work with analytics for Manufacturing Cloud.

Automate Your Business Processes in Manufacturing Cloud

Automate complex processes and decision-making with low- to no-code tools. Use the suitable Flow for Manufacturing tool to meet your unique business needs. Create branded experiences with OmniStudio. Use the default actions that are available with Manufacturing Cloud in Process Builder and Flow Builder.

Extend Manufacturing Cloud with Prebuilt Apps

Manufacturing Cloud provides prebuilt apps to help you get started with your implementation and explore proof-of-concept configurations. Prebuilt apps include metadata, tools, and workflows for nuanced, process-specific needs.

Considerations for Manufacturing Cloud

Review these considerations before you start working with Manufacturing Cloud.

SEE ALSO:

Manufacturing Cloud Developer Guide

Industries Common Features Guide

Learn About Manufacturing Cloud and Explore

Learn how Manufacturing Cloud can help your business and customers. Understand its core functionality, create a trial org, and learn how to get started.

> 💡 Tip: Looking for our main documentation page? Go to Manufacturing Cloud. If you opened this page using a bookmark, consider updating it to point to the Manufacturing Cloud page instead.

What Is Manufacturing Cloud?

Salesforce Manufacturing Cloud is a platform that helps you manage your entire book-of-business and customer service lifecycle, while increasing collaboration and transparency between sales, operations, and partners.

Get Started with Manufacturing Cloud for Sales

Manufacturing Cloud for Sales makes your run-rate business more predictable and ensures transparency and collaboration across your sales and operations teams with accurate forecasts. See a complete picture of new business opportunities, customer agreements, and long-term projects and programs. Explore a trial org and then learn about what's included, what setup we recommend, and how to get ready for your implementation.

Get Started with Manufacturing Cloud for Service

Manufacturing Cloud for Service helps you manage your entire customer service experience. You can solve customer issues, automate service processes, manage warranties, survey your customers, and forecast your service revenue and spare parts demand. Explore a trial org and then learn about what's included, what setup we recommend, and how to get ready for your implementation.

Create a Manufacturing Cloud Trial Org

Get hands-on experience with Manufacturing Cloud and Rebate Management in a full-featured trial experience. Trial orgs are intended for proof of concept and guided self-exploration. Trial orgs expire in 30 days.

SEE ALSO:

Manufacturing Cloud Developer Guide

Industries Common Features Guide

What Is Manufacturing Cloud?

Salesforce Manufacturing Cloud is a platform that helps you manage your entire book-of-business and customer service lifecycle, while increasing collaboration and transparency between sales, operations, and partners.

Manufacturing Cloud extends Sales Cloud and Service Cloud with industry-specific capabilities. It's built on the Salesforce Customer 360 platform; it's not a managed package. Your business can decide how Manufacturing Cloud is implemented in your org. You can implement Manufacturing Cloud for Sales, Manufacturing Cloud for Service, or Manufacturing Cloud for both Sales and Service. You can have a mix of Manufacturing Cloud users and standard Sales Cloud or Service Cloud users.

You can integrate Manufacturing Cloud with your existing Enterprise Resource Planning (ERP) systems and Order Management Systems (OMS) by using APIs, the MuleSoft Accelerator for Manufacturing, or other middleware solutions. Think of Manufacturing Cloud as a system of record, engagement, and innovation that sits on top of your back-office systems.

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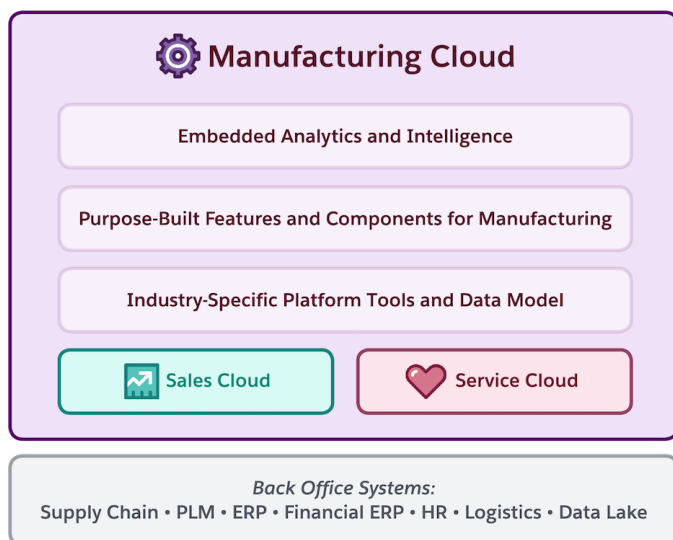
Who Can Use Manufacturing Cloud?

Manufacturing Cloud can be used by companies in the manufacturing industry who want to manage their commercial operations, orchestrate their service experience, and streamline their partner engagement.

- Original equipment manufacturers (OEMs)
- Production suppliers
- Distribution or aftermarket manufacturers

- Process manufacturers
- Oil and gas producers
- Companies that manage run-rate, on-going, or long-term business
- Companies that want to orchestrate their service lifecycle
- Companies that want to drive greater partner engagement

What Are the Benefits of Using Manufacturing Cloud?

Manufacturing Cloud can help your business in various ways.

- Modernize your commercial operations
- Manage, grow, and forecast your entire top-line revenue
- Transform your service experiences
- Consolidate customer interactions into a single source-of-truth
- Simplify and strengthen your partner engagements
- Make faster, more informed decisions with actionable analytics

How Does Manufacturing Cloud Work and What Can It Do?

Built on the Salesforce Platform, Sales Cloud, and Service Cloud, Manufacturing Cloud meets the unique needs of manufactures with features, data models, and workflows based on industry-wide best practices. It comes with robust, prebuilt components, standardized workflows, and automation tools.

First, let's go over how business transactions are represented in Manufacturing Cloud.

Planned

New business or one-off business is tracked by using *opportunities* and *quotes*. Run-rate or long-term negotiated business is tracked using *sales agreements*, *contracts*, or both.

Actuals

Actual business is tracked using *orders* placed against contracts, sales agreements, quotes, and opportunities.

With these basics in mind, let's visualize a simplified customer journey from start to finish in Manufacturing Cloud.

Now let's see what you can do with Manufacturing Cloud's industry-specific apps, features, components, and tools.
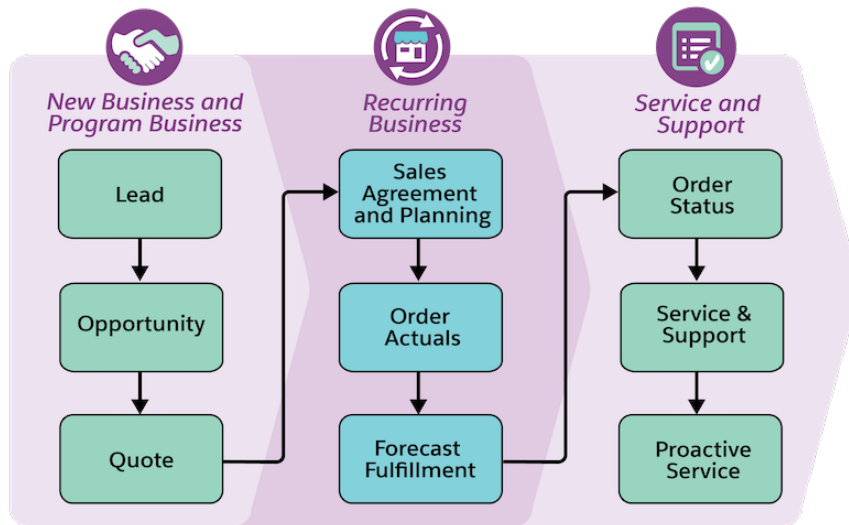
Manufacturing Cloud for Sales

- Make your run-rate business more predictable and track customer compliance by using *Sales Agreements*. Run-rate business is also called committed or renewal business, and is sometimes less formal, such as a handshake deal or a verbal agreement.

- Create robust and powerful account forecasts by using *Advanced Account Forecasting*. These forecasts can inform your demand plans as they show planned and actuals alongside historical orders or other measures. You can also view forecasts by regions, product categories, or other custom dimensions.

- Collaborate and engage with dealers, distributors, reps, and resellers in the self-service *Experience Cloud portal*. Partners can work on leads, sales agreements, forecasts, and so on.

- Grow your business by using *Account Manager Targets* for currency or non-currency measure types that you assign to team members.

- Operationalize market and program forecasts by using *Program Based Business*. Import and derive forecasts based on your customer or market forecasts with the goal of creating business opportunities.

- Help your sales managers schedule dealer and distributor visits by using *Partner Visit Management*. During visits you can monitor performance, follow up on sales agreements, and capture key metrics.

Manufacturing Cloud for Service

- Deliver excellent customer service from the unified *Service Console for Manufacturing*. The console and its *industry-focused service components* let customer service representatives (CSRs) have a 360-degree view of customer engagements. They can respond and solve issues more quickly while providing consistent, meaningful, and personalized interactions.

- Maximize asset lifetime value and cultivate deeper customer loyalty by creating an end-to-end, scalable warranty management process using *Warranty Lifecycle Management*. Manage product and asset warranties, establish thorough service standards, capture descriptive warranty claims from partners, and efficiently adjudicate claims.

- *Forecast service revenue and spare parts demand* by using the flexible advanced account forecasting framework.

- Collect feedback using surveys to develop a voice of the customer and gain actionable insights by using *Feedback Management*.

Process Automation Tools

Automate customer-focused digital experiences for your entire business with Flow Builder and the suite of tools included in *Flow for Manufacturing*, formerly known as Digital Process Automation.

What's Included in Manufacturing Cloud?

Manufacturing Cloud includes industry-specific standard objects, features, tools, permission sets, apps, and other default configurations. The objects, features, and default assets available to you depend on whether you're using Manufacturing Cloud for Sales, Manufacturing Cloud for Service, or Manufacturing Cloud for Sales and Service.

Here's a detailed view of the features and functionality included in each offering.

Feature or Functionality	Included in Manufacturing for Sales?	Included in Manufacturing for Service?	Included in Manufacturing for Sales and Service?
Sales Cloud functionality (Lead and opportunity management, pipeline forecasting)	✔	✖	✔
Sales Agreements	✔	✖	✔
Advanced Account Forecasting (uses Data Pipelines and Data Processing Engine)	✔ Used to forecast run-rate and new business	✔ Used to forecast service revenue and spare parts demand*	✔
Account Manager Targets	✔	✖	✔
Program Based Business	✔	✖	✔
Partner Visit Management (Visits and Action Plans)	✔	✖	✔
Flow for Manufacturing (OmniStudio, Decision Table, Document Generation, Business Rules Engine, and Data Processing Engine)	✔	✔	✔
Service Cloud functionality (Channel and case management)	✖	✔	✔
Warranty Lifecycle Management	✖	✔	✔
Service Console for Manufacturing	✖	✔	✔
Asset Service Console for Manufacturing	✖	✔	✔
Service console components (Action Launcher, Audit Trail, Identity Verification, Record Alerts, and Timeline)	✖	✔	✔
Voice of the Customer (Feedback Management)	✖	✔	✔
MuleSoft Accelerator for Manufacturing	✔ (requires additional licenses)	N/A	✔ (requires additional licenses)
CRM Analytics add-on	✔ (requires additional licenses)	N/A	✔ (requires additional licenses)
Experience Cloud Manufacturing partner portal template	✔ (requires additional licenses)	N/A	✔ (requires additional licenses)

Feature or Functionality	Included in Manufacturing for Sales?	Included in Manufacturing for Service?	Included in Manufacturing for Sales and Service?
Rebate Management add-on	✔ (requires additional licenses)	✔ (requires additional licenses)	✔ (requires additional licenses)
Field Service	N/A	✔ (requires additional licenses)	✔ (requires additional licenses)

📝 **Note:** *To forecast service revenue and spare parts demand, create custom forecast fact objects and Data Processing Engine templates.

SEE ALSO:

Get Started with Manufacturing Cloud for Sales

Get Started with Manufacturing Cloud for Service

Manufacturing Cloud Basics

Manufacturing Cloud Pricing

Get Started with Manufacturing Cloud for Sales

Manufacturing Cloud for Sales makes your run-rate business more predictable and ensures transparency and collaboration across your sales and operations teams with accurate forecasts. See a complete picture of new business opportunities, customer agreements, and long-term projects and programs. Explore a trial org and then learn about what's included, what setup we recommend, and how to get ready for your implementation.

Get Oriented

What is Manufacturing Cloud for Sales?

Trailhead: Manufacturing Cloud Basics

Video: Watch a Demo

Create a Manufacturing Cloud for Sales Trial Org

Dive In: Learn About Recommended Core Features

Manage Long-Term Business with Sales Agreements

Forecast Your Run-Rate and New Business with Advanced Account Forecasting

Manage Your Organizational Targets with Account Manager Targets

Go Deeper: Learn About Features for Specific Business Needs

Forecast Based on a Customer's Forecast with Program Based Business

Build Distributor Relationships with Partner Visit Management

Flow for Manufacturing

Extend Further: Learn About Additional Capabilities & Add-Ons

Mulesoft Exchange: Connect Your Systems with the Mulesoft Accelerator for Manufacturing

Collaborate on Your Run-Rate Business in a Partner Portal

Analyze Your Manufacturing Business Trends

Enhance Your Incentive Model with Rebate Management

Get Ready for Your Implementation

Plan and Prepare for Your Implementation

Set Up Users and Permissions

Know Your Resources & Get Help

Trailhead: Manufacturing Cloud Trailmix

Manufacturing Cloud Learning Map

Manufacturing Cloud Developer Guide

Trailblazer Community: Manufacturing Cloud & Rebate Management Group

Accelerators Catalog: Find Expert Coaching

Tip: When you're ready to set up things, go to the Guidance Center for personalized help right inside the app. Then, look for the **Manage Manufacturing Cloud for Sales** section. If you don't see this section, click **View More**.

Get Started with Manufacturing Cloud for Service

Manufacturing Cloud for Service helps you manage your entire customer service experience. You can solve customer issues, automate service processes, manage warranties, survey your customers, and forecast your service revenue and spare parts demand. Explore a trial org and then learn about what's included, what setup we recommend, and how to get ready for your implementation.

Get Oriented

What is Manufacturing Cloud for Service?

Trailhead: Manufacturing Cloud Basics

Video: Watch a Demo

Create a Manufacturing Cloud Trial Org

Dive In: Learn About Recommended Core Features

Manage the End-to-End Warranty Lifecycle

Deliver Quality Service with the Service Console for Manufacturing

Get a 360-Degree View of an Asset with the Asset Service Console for Manufacturing

Forecast Service Revenue and Spare Parts Demand with Advanced Account Forecasting

Go Deeper: Learn About Features for Specific Business Needs

Enhance Your Customer Service Experience with Service Console Components

Collect Customer Feedback with Salesforce Feedback Management

Flow for Manufacturing

Extend Further: Learn About Additional Capabilities & Add-Ons	**Get Ready for Your Implementation**	**Know Your Resources & Get Help**
Enhance Your Incentive Model with Rebate Management	Plan and Prepare for Your Implementation Set Up Users and Permissions	Manufacturing Cloud Developer Guide Trailhead: Manufacturing Cloud Trailmix Trailblazer Community: Manufacturing Cloud & Rebate Management Group Accelerators Catalog: Find Expert Coaching

> **Tip:** When you're ready to set up things, go to the Guidance Center for personalized help right inside the app. Then, look for the **Manage Manufacturing Cloud for Service** section. If you don't see this section, click **View More**.

Create a Manufacturing Cloud Trial Org

Get hands-on experience with Manufacturing Cloud and Rebate Management in a full-featured trial experience. Trial orgs are intended for proof of concept and guided self-exploration. Trial orgs expire in 30 days.

1. Determine the trial org type that you need:

   - Learning Trial Org: This fully configured org includes rich sample data and lets you see all the Manufacturing features in action. Use these orgs to see what a comprehensive enablement looks like.

   - Pre-Release Trial Org: This fully configured org includes rich sample data and lets you see all the Manufacturing features in action. Use these orgs to see what a comprehensive enablement looks like.

   - Base Trial Org: This unconfigured org is a blank slate with only the necessary licenses and permissions. Use these orgs for quick proof of concept projects or general testing.

2. Open the chosen trial org's sign-up page:

   - Learning Trial Org
   - Pre-Release Trial Org
   - Base Trial Org

3. Enter your contact details.

4. Read and agree to the service agreement.

5. Click **Submit**.

After your org is created, look for an email with login details. Your trial org includes pre-enabled Manufacturing Cloud and Rebate Management features. It also includes Experience Cloud, Digital Process Automation, and CRM Analytics for Manufacturing Cloud.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions

Set Up Users and Permissions for Manufacturing Cloud

Learn how to set up profiles and assign permissions to your Manufacturing Cloud users.

Assign the Manufacturing Permission Sets to Users

Assign permission sets to internal users and partners based on their required level of access to Sales Agreements, Account Forecasting, and Account Manager Targets.

Create a Key Account Manager User Profile and Provide Access to Objects

Assign a user profile to your key account managers and provide the required object permissions. Depending on how restrictive you want access to be, you can change the object permissions.

Set Field Permissions in Profiles

After you've assigned object level permissions to a profile, you can assign field permissions that specify the access level for each field in an object.

Set Field Permissions on Orders and Contracts

If the actuals calculation mode for sales agreements is automatic, give your users access to view and edit the Orders and Contracts objects. Add the sales agreement lookup to the page layouts of Orders and Contracts.

Set Field Permissions on Manufacturing Objects

Field-level security settings determine which fields a user sees. The most restrictive field access settings always apply. For example, you can have a field that's required in a page layout but is read-only in the field-level security settings. The field-level security overrides the page layout, so the field remains read-only.

SEE ALSO:

Assign Users Permission Sets for Service Lifecycle Features in Manufacturing Cloud

EDITIONS
Available in: Lightning Experience
Available in: **Enterprise**, **Unlimited**, and **Developer** Editions

Assign the Manufacturing Permission Sets to Users

Assign permission sets to internal users and partners based on their required level of access to Sales Agreements, Account Forecasting, and Account Manager Targets.

Manufacturing Cloud provides the following permission sets related to Sales Agreements, Account Forecasting, and Account Manager Targets.

PERMISSION SET	DESCRIPTION
Manufacturing Sales Agreements	Gives users access to sales agreements that work with orders, contracts, and more.
Manufacturing Sales Agreements For Community	Lets partner users collaborate on sales agreements in a partner portal.
Manufacturing Account Forecast	Lets users track account forecasts for quantity and revenue metrics of products.
Manufacturing Account Manager Targets	Gives users access to Account Manager Target features that include creating, assigning, and distributing targets.

EDITIONS
Available in: **Enterprise**, **Unlimited**, and **Developer** Editions.

USER PERMISSIONS
To assign permission sets:
• Assign Permission Sets AND View Setup and Configuration

Before assigning the Manufacturing permission sets to your users, ensure that Sales Agreements, Account Forecasting, and Account Manager Targets are enabled in your org.

> ✏️ **Note:** The permission sets for Manufacturing Cloud include the relevant permission set licenses that are required to use Manufacturing Cloud. Assigning the permission set to a user also assigns the necessary permission set license.

1. In Setup, enter `Users` in the Quick Find box, and then select **Permission Sets**.

2. Select the permission set that you want to assign to users.

3. Click **Manage Assignments** and then **Add Assignments**.

4. Select the checkboxes next to the appropriate users, and click **Assign**.

SEE ALSO:

[Permission Set Licenses](#)

Create a Key Account Manager User Profile and Provide Access to Objects

Assign a user profile to your key account managers and provide the required object permissions. Depending on how restrictive you want access to be, you can change the object permissions.

You can provide object permissions using permission sets or user profiles. If you provide object permissions using permission sets, assign the following permission sets for sales agreements, account forecasting, and account manager targets:

- Manufacturing Sales Agreements
- Manufacturing Advanced Account Forecasting
- Manufacturing Program Based Business
- Manufacturing Account Forecasting
- Manufacturing Account Manager Targets

Assign a user profile and provide object permissions to the user profile.

1. In Setup, in the Quick Find box, enter `Users` and then select **Profiles**.

2. Clone the Standard User profile, enter a name for the cloned profile, and save your changes.

3. Click **Edit**, and go the Standard Object Permissions section.

4. Select the create, read, update, delete, and view all permissions for the following objects:

   - Sales Agreements
   - Advanced Account Forecast Facts
   - Advanced Account Forecast Fact Adjustments
   - Advanced Account Forecast Set Partners
   - Advanced Account Forecast Set Uses
   - Manufacturing Programs
   - Manufacturing Program Component Forecast Facts
   - Manufacturing Program Forecast Facts
   - Manufacturing Program Variant Forecast Facts
   - Account Forecasts
   - Account Manager Targets

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions.

USER PERMISSIONS

To create users:
- Customize Application

To edit object permissions:
- Manage Profiles and Permission Sets, and Customize Application

5. Select at least read access for the following objects:

- Accounts
- Advanced Account Forecast Facts
- Advanced Account Forecast Fact Adjustments
- Advanced Account Forecast Set Partners
- Advanced Account Forecast Set Uses
- Contacts
- Manufacturing Program Component Forecast Facts
- Manufacturing Program Forecast Facts
- Manufacturing Program Variant Forecast Facts
- Orders
- Opportunities
- Contracts
- Products
- Price Books

6. To provide delete permissions for active, approved, canceled, or expired sales agreements, go to the General User Permissions section, and select **Delete Sales Agreements**.

📝 Note: A profile with the Delete Sales Agreement permission can be assigned to account managers and to partner users.

7. To provide edit permissions for actual quantities of sales agreement products, go to the General User Permissions section, and select **Edit Actual Quantities of Sales Agreement Products**.

📝 Note:

- If the quantities for sales agreements are derived automatically from orders and contracts, go to the General User Permissions section, and select **Activate Orders** and **Activate Contracts**.
- If you want users to collaborate on account forecast adjustments and change growth metrics, provide read and edit permissions for the objects.

Provide create, read, update, delete, and view all permissions in the required combinations for all other objects. The permissions control access at the object level. The sharing model controls access to individual records within that object type. Set access levels based on the functional requirements for the profile. For example, create different groups of permissions for individual contributors, managers, and administrators.

SEE ALSO:

Manage Users

Set Field Permissions in Profiles

After you've assigned object level permissions to a profile, you can assign field permissions that specify the access level for each field in an object.

1. From Setup, enter *Profiles* in the Quick Find box, then select **Profiles**.

2. Select a profile.

3. In the Field-Level Security section, click **View** next to the object you want to modify, and then click **Edit**.

4. Specify the field's access level and save your work.

USER PERMISSIONS

To set field-level security:
- Manage Profiles and Permission Sets

  AND

  Customize Application

Set Field Permissions on Orders and Contracts

If the actuals calculation mode for sales agreements is automatic, give your users access to view and edit the Orders and Contracts objects. Add the sales agreement lookup to the page layouts of Orders and Contracts.

To allow your key account managers to view and edit the Sales Agreement lookup on a new order or contract record, you must make it visible.

1. From Setup, go to Object Manager.

2. Click the **Order** object.

3. Select **Fields and Relationships**.

4. Click **Sales Agreement**, and then click **Set Field-Level Security**.

5. For the user profiles that you want to grant edit permission, select Visible. For view-only access, select Read-Only.

Follow these steps for the **Contract** object.

SEE ALSO:

   Field Permissions

USER PERMISSIONS

To modify field-level security:
- Customize Application

Set Field Permissions on Manufacturing Objects

Field-level security settings determine which fields a user sees. The most restrictive field access settings always apply. For example, you can have a field that's required in a page layout but is read-only in the field-level security settings. The field-level security overrides the page layout, so the field remains read-only.

In Object Manager, set up field-level permissions on these objects to provide your key account managers visibility into sales agreements, account forecasts, and account manager targets.

- Sales Agreement
- Sales Agreement Product
- Sales Agreement Product Schedule
- Account
- Account Forecast
- Opportunity
- Account Forecast Adjustment
- Account Forecast Period Metric
- Account Product Forecast
- Order
- Account Product Period Forecast
- Account Manager Target
- Account Manager Target Distribution
- Account Manager Periodic Target Distribution

1. From Setup, go to Object Manager.

2. For the Sales Agreement object, you can choose to provide visible access on the following fields:

   - Contact: To use Communities for collaboration on sales agreements
   - Total Agreement Amount: Mark as visible to users of all profiles

   Note: We recommend that you provide read-only access to the Actuals Calculation Mode field.

3. For sales agreement product, if a user doesn't have at least read-only, visible access on any of these fields, they won't be able to see the corresponding data in the Agreement Terms tab. If they have read-only access but not visible access, they can't edit the values in the Agreement Terms tab.

   - Initial Planned Quantity
   - Total Planned Quantity
   - Total Actual Quantity
   - Total Forecasted Quantity
   - Sales Price
   - Total Planned Amount
   - Discount Percentage
   - Total Forecasted Amount
   - Total Actual Amount

4. For sales agreement product schedule, if a user doesn't have at least read-only, visible access on any of these fields, they won't be able to see the corresponding data in the Agreement Terms tab. If they have read-only access but not visible access, they can't edit the values in the Agreement Terms tab.

- Planned Quantity
- Planned Quantity
- Actual Quantity
- Forecasted Quantity
- Sales Price
- Planned Amount
- Discount Percentage
- Forecasted Amount
- Actual Amount

5. For account forecast adjustment, make sure to provide at least visible access to your users on Adjusted By and Adjusted Comments fields so that they can collaborate on forecast adjustments during the planning period.

6. For account forecast period metric, allow your account owners to edit the Account Growth Percentage and Market Growth Percentage fields.

Set Up a Partner Portal to Collaborate on Your Run-Rate Business

Create a responsive portal where your partners can access knowledge articles, collaborate on sales agreements and advanced account forecasts, and manage leads to improve sales and revenue. Partners can get visibility into sales agreement negotiations, share leads, work on forwarded opportunities, and view and update account forecasts.

EDITIONS

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Create the Manufacturing Partner Template and Add Partner Users
Use the Manufacturing Experience Cloud template to create a site and improve collaboration with your partners.

Which Objects are Available for Experience Cloud Users?
An Experience Cloud license determines the baseline feature access available to an Experience Cloud user. Each Experience Cloud license makes create, read, edit, or delete permissions available to Experience Cloud site users for specific data objects. Assign user permissions for these objects through a profile, permission set, or both.

SEE ALSO:

Understand the Basics of Experience Cloud

Create the Manufacturing Partner Template and Add Partner Users

Use the Manufacturing Experience Cloud template to create a site and improve collaboration with
your partners.

1. Enable Experience Cloud in your org.

    a. From Setup, enter `Digital Experiences` in the Quick Find box, then select **Settings**.

    b. Select **Enable Experience Workspaces**

2. Create your Manufacturing site.

    a. From Setup, enter `All` in the Quick Find box, and then select **All Sites**.

    b. Click **New**.

    The Community Creation wizard opens with several templates for you to choose from.

    c. Select the Manufacturing template. Click **Get Started**.

    d. Enter a site name. For URL, enter the name of your site. Click **Create**.

    You can now customize the site using Experience Builder.

3. Create a partner Experience Cloud user profile and provide access to objects.

    a. In Setup, enter `Users` in the Quick Find box, and then select **Profiles**.

    b. Clone the Experience Cloud user profile, enter a name for the cloned profile, and save your changes.

    c. Click **Edit**, and go the Standard Object Permissions section.

    d. Assign the required permissions for sales agreements, leads, opportunities, products, orders, and advanced account forecasting.

4. Enable partner users.

    a. From the App Launcher, enter `Accounts`, and select it.

    b. Open the record of the account for which you want to create a partner user. View or add the contact record for the person you
    want to add.

    c. On the contact detail page, click **Manage External User**, then select **Enable Partner User** or **Enable Customer User**.

5. Assign the Manufacturing Sales Agreement and Manufacturing Sales Agreements For Experience Cloud permission sets to partner
users to collaborate on sales agreements.

6. Assign the Manufacturing Advanced Account Forecasting and Manufacturing Advanced Account Forecasting For Experience Cloud
permission sets to partner users to collaborate on advanced account forecasts.

7. In the Settings page in Setup, create a sharing set for all partner users. Provide the required access for each object. For example, for
Advanced Account Forecasting, provide access to the Advanced Account Forecast Set partner and Advanced Account Forecast Fact
objects.

> **Note:** In the Experience Cloud portal, the number of sales agreements on the action card is the number of sales agreements for
> which the logged-in user is a contact. The list displayed on clicking **View All** or by navigating to the Sales Agreements tab shows
> all the sales agreements shared through sharing sets and role hierarchies.

> **Note:** In the Experience Cloud portal, the number of advanced account forecast set partner records are the number of accounts for which the partner is a contact. The list displayed by navigating to the Advanced Account Forecasts tab shows all the records shared through sharing sets and role hierarchies.

SEE ALSO:

Which Objects are Available for Experience Cloud Users?

An Experience Cloud license determines the baseline feature access available to an Experience Cloud user. Each Experience Cloud license makes create, read, edit, or delete permissions available to Experience Cloud site users for specific data objects. Assign user permissions for these objects through a profile, permission set, or both.

This page lists the object access you can grant to Experience Cloud users under each of these licenses: Customer Community, Customer Community Plus, Partner Community, and External Apps.

> **Note:** This table lists all objects provided by all Industries products. Not all of these objects are available with your specific Manufacturing Cloud license.

EDITIONS
Available in: Lightning Experience
Available in: **Professional**, **Enterprise**, **Unlimited**, and **Developer** Editions

Each license has a "login" version that provides identical access levels. If you experience any difficulties with a login license, contact your Salesforce representative.

As a best practice, always clone the standard profile associated with a community license, and change object permissions as needed. If you want to limit the number of cloned profiles, use permission sets to assign object permissions.

Objects in **bold** are automatically available to users when the license is provisioned. All other objects must be assigned in a profile or permission set.

	Customer Community	Customer Community Plus	Partner Community	External Apps
Account	**Create**, **Read**, Edit	Create, **Read**, Edit	Create, **Read**, Edit	**Read**, Edit
AccountBrand	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete
AccountRelationship		Read	Read	
Accreditation	Create, Read, Edit	Create, Read, Edit, Delete	Create, Read, Edit	Create, Read, Edit, Delete
ActionPlan			**Create**, **Read**, **Edit**, **Delete**	**Create**, **Read**, **Edit**, **Delete**
ActionPlanTemplate	Read	Read	**Create**, **Read**, **Edit**, **Delete**	**Create**, **Read**, **Edit**, **Delete**
Address	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit
AdvAccountForecastFact	Read, Edit	Read, Edit	Read, Edit	Read, Edit
AdvAcctForecastFactAdj	Create, Read	Create, Read	Create, Read	Create, Read
AdvAcctForecastSetPartner	Read	Read	Read	Read
AiVisitRecommendation	Read, Edit	Read, Edit	Read, Edit	Read, Edit

	Customer Community	Customer Community Plus	Partner Community	External Apps
AiVisitTaskRcmd	Read, Edit	Read, Edit	Read, Edit	Read, Edit
ApplicationCase		Create, Read, Edit, Delete		
AppointmentTopicTimeSlot	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit
AssessmentIndicatorDefinition	Create, Read, Edit	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete
AssessmentTask	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete
AssessmentTaskContentDocument	Create, Read, Edit	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete
AssessmentTaskDefinition	Create, Read, Edit	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete
AssessmentTaskIndDefinition	Create, Read, Edit	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete
AssessmentTaskOrder	Create, Read, Edit	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete
Asset	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit
Assortment	Read	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit
AssortmentProduct	Read	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit
AuthApplicationAsset	Create, Read, Edit, Delete	Create, Read, Edit, Delete		Create, Read, Edit, Delete
AuthApplicationPlace	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete
AuthLocationAccessSchedule	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete
AuthorizationForm	Read	Read	Read	Read
AuthorizationFormConsent	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit
AuthorizationFormDataUse	Read	Read	Read	Read
AuthorizationFormText	Read	Read	Read	Read
AuthorizedInsuranceLine	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete
Award	Create, Read, Edit	Create, Read, Edit, Delete	Create, Read, Edit	Create, Read, Edit, Delete
BackgroundOperation	Read	Read	Read	**Read**
Benefit	Read	Read	Read	Read
BenefitParameterValue	Read	Read	Read	Read
BenefitType	Read	Read	Read	Read
BoardCertification	Create, Read, Edit	Create, Read, Edit, Delete	Create, Read, Edit	Create, Read, Edit, Delete
BusinessLicense	Create, Read, Edit	Create, Read, Edit, Delete	Create, Read, Edit	Create, Read, Edit, Delete
BusinessLicenseApplication	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete
BusinessMilestone	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete
BusinessProfile	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete

	Customer Community	Customer Community Plus	Partner Community	External Apps
BusinessType	Read	Read	Read	Read, Edit
BusRegAuthorizationType	Read	Read	Read	Read
BusRegAuthTypeDependency	Read	Read	Read	Read
BuyerAccount	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	
Campaign			Create, Read, Edit	
CareBarrier	**Create**, **Read**, **Edit**, **Delete**	**Create**, **Read**, **Edit**, **Delete**	**Create**, **Read**, **Edit**, **Delete**	
CareBarrierDeterminant	**Create**, **Read**, **Edit**, **Delete**	**Create**, **Read**, **Edit**, **Delete**	**Create**, **Read**, **Edit**, **Delete**	
CareBarrierType	**Create**, **Read**, **Edit**, **Delete**	**Create**, **Read**, **Edit**, **Delete**	**Create**, **Read**, **Edit**, **Delete**	
CareDeterminant	**Create**, **Read**, **Edit**, **Delete**	**Create**, **Read**, **Edit**, **Delete**	**Create**, **Read**, **Edit**, **Delete**	
CareDeterminantType	**Create**, **Read**, **Edit**, **Delete**	**Create**, **Read**, **Edit**, **Delete**	**Create**, **Read**, **Edit**, **Delete**	
CareDiagnosis	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	
CareInterventionType	**Create**, **Read**, **Edit**, **Delete**	**Create**, **Read**, **Edit**, **Delete**	**Create**, **Read**, **Edit**, **Delete**	
CareMetricTarget	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit
CareObservation	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit
CarePgmProvHealthcareProvider	Read	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Read
CarePractnFacilityAppt	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit
CarePreauth	**Read**	**Read**	**Read**	**Read**
CarePreauthItem	**Read**	**Read**	**Read**	**Read**
CareProgram	Read	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Read
CareProgramCampaign	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete
CareProgramEligibilityRule	Read	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Read
CareProgramEnrollee	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete
CareProgramEnrolleeProduct	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete
CareProgramEnrollmentCard	Create, Read	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read
CareProgramGoal	Read	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Read
CareProgramProduct	Read	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Read

	Customer Community	Customer Community Plus	Partner Community	External Apps
CareProgramProvider	Read	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Read
CareProgramTeamMember	Read	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Read
CareProviderAdverseAction	Create, Read, Edit	Create, Read, Edit, Delete	Create, Read, Edit	Create, Read, Edit, Delete
CareProviderFacilitySpecialty	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit
CareProviderSearchableField	Read	Read	Read	Read
CareRegisteredDevice	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete
CareRequest	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	
CareRequestDrug	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	
CareRequestExtension	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	
CareRequestItem	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	
CareRequestReviewer	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	
CareSpecialty	Create, Read, Edit	Create, Read, Edit, Delete	Create, Read, Edit	Create, Read, Edit, Delete
CareSpecialtyTaxonomy		Create, Read, Edit, Delete		Create, Read, Edit, Delete
CareTaxonomy	Create, Read, Edit	Create, Read, Edit, Delete	Create, Read, Edit	Create, Read, Edit, Delete
Case	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	
ChannelProgram			Read	
ChannelProgramLevel			Read	
ChannelProgramMember			Read	
Claim	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete
ClaimCase	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	
ClaimCoverage	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete
ClaimItem	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete
ClaimParticipant	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete
ClaimPaymentSummary	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete
CodeSet	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit
CommSubscription	Read	Read	Read	Read
CommSubscriptionChannelType	Read	Read	Read	Read
CommSubscriptionConsent	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit
CommSubscriptionTiming	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit
ComplaintCase	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	

	Customer Community	Customer Community Plus	Partner Community	External Apps
ConsumptionSchedule			Create, Read, Edit	
Contact	Create, **Read**, Edit	Create, **Read**, Edit	Create, **Read**, Edit	Create, **Read**, Edit
ContactEncounter	Create, Read	Create, Read	Create, Read, Edit, Delete	
ContactPointAddress	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit
ContactPointConsent	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit
ContactPointEmail	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit
ContactPointPhone	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit
ContactPointTypeConsent	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit
Contract	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete
ContractLineItem		Create, Read, Edit	Create, Read, Edit	
CourseOffering	Read	Read	Read	Read
CoverageBenefit	**Read**	**Read**	**Read**	**Read**
CoverageBenefitItem	**Read**	**Read**	**Read**	**Read**
CoverageType	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete
CustomerProperty	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete
DandBCompany			Create, Read, Edit, Delete	
DataUsePurpose	Read	Read	Read	Read
DeliveryTask	Create, Read, Edit	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete
DistributorAuthorization	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete
Document	**Read**	**Read**	**Read**	**Read**
DocumentChecklistItem	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete
DocumentTemplate	Read	Read	Read	Read
DocumentTemplateClause	Read	Read	Read	Read
ElectronicMediaGroup	Read	Read	Read	
EngagementChannelType	Read	Read	Read	Read
EnrolleeBenefit	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit
EnrollmentEligibilityCriteria	Read	Read	Read	Read
Entitlement	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	
EntitlementContact	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	
Examination	Read	Read	Read	Read

	Customer Community	Customer Community Plus	Partner Community	External Apps
Expense	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit
ExpenseReport	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit
FulfillmentOrder	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit
GeneratedDocument	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete
HealthCareDiagnosis	**Read**	**Read**	**Read**	
HealthcareFacilityNetwork	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit
HealthcarePayerNetwork	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit
HealthcarePractitionerFacility	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit
HealthCareProcedure	**Read**	**Read**	**Read**	
HealthcareProvider	Create, Read, Edit	Create, Read, Edit, Delete	Create, Read, Edit	Create, Read, Edit, Delete
HealthcareProviderNpi	Create, Read, Edit	Create, Read, Edit, Delete	Create, Read, Edit	Create, Read, Edit, Delete
HealthcareProviderSpecialty	Create, Read, Edit	Create, Read, Edit, Delete	Create, Read, Edit	Create, Read, Edit, Delete
HealthcareProviderTaxonomy	Create, Read, Edit	Create, Read, Edit, Delete	Create, Read, Edit	Create, Read, Edit, Delete
Household	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit
Idea	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit
IdeaTheme	Read	Read	Read	Read
IdentityDocument	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit
Image	Create, Read	Create, Read	Create, Read	Create, Read
Individual	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit
IndividualApplication	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete
InfoAuthorizationRequest	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	
InspectionAssessmentInd	Read	Read	Read	Read
InspectionType	Read	Read	Read	Read, Edit
InspectionViolation		Read	Read	
InStoreLocation	Create, Read	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit
InsuranceClaimAsset	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete
InsurancePolicy	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete
InsurancePolicyAsset	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete
InsurancePolicyCoverage	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete
InsurancePolicyMemberAsset	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete

	Customer Community	Customer Community Plus	Partner Community	External Apps
InsurancePolicyParticipant	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete
InsurancePolicySurcharge	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete
InsurancePolicyTransaction	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete
InsuranceProfile	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete
JobProfile	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit
JournalSubType	**Read**	**Read**	**Read**	**Read**
JournalType	**Read**	**Read**	**Read**	**Read**
Lead			Create, **Read**, Edit	
LegalEntity	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete
LoanApplicant	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete
LoanApplicantAddress	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete
LoanApplicantAsset	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete
LoanApplicantDeclaration	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete
LoanApplicantEmployment	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete
LoanApplicantIncome	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete
LoanApplicantLiability	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete
LoanApplicationAsset	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete
LoanApplicationFinancial	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete
LoanApplicationLiability	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete
LoanApplicationProperty	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete
LoanApplicationTitleHolder	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete
Location	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit
LocationGroup	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit
LoyaltyLedger	**Read**	**Read**	**Read**	**Read**
LoyaltyMemberCurrency	**Read**	**Read**	**Read**	**Read**
LoyaltyMemberTier	**Read**	**Read**	**Read**	**Read**
LoyaltyProgram	**Read**	**Read**	**Read**	**Read**
LoyaltyProgramCurrency	**Read**	**Read**	**Read**	**Read**
LoyaltyProgramMbrPromotion	Read	Read	Read	Read
LoyaltyProgramMember	**Read**	**Read**	**Read**	**Read**

	Customer Community	Customer Community Plus	Partner Community	External Apps
LoyaltyProgramPartner	Create, **Read**, Edit, Delete	Create, **Read**, Edit, Delete	Create, **Read**, Edit, Delete	Create, **Read**, Edit, Delete
LoyaltyTier	**Read**	**Read**	**Read**	**Read**
LoyaltyTierBenefit	Read	Read	Read	Read
LoyaltyTierGroup	**Read**	**Read**	**Read**	**Read**
MaintenancePlan	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	
MaintenanceWorkRule	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	
MemberBenefit	Read	Read	Read	Read
MemberPlan	**Create**, **Read**, **Edit**	**Create**, **Read**, **Edit**	**Create**, **Read**, **Edit**	**Create**, **Read**, **Edit**
OccupationLicenseApplication		Create, Read, Edit	Create, Read, Edit	
OmniDataTransform	Read	Read	Read	Read
OmniDataTransformItem	Read	Read	Read	Read
OmniESignatureTemplate	Read	Read	Read	Read
OmniProcess	Read	Read	Read	Read
OmniProcessCompilation	Read	Read	Read	Read
OmniProcessElement	Read	Read	Read	Read
OmniScriptSavedSession	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete
OmniUiCard	Read	Read	Read	Read
OperatingHours	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	
Opportunity			Create, **Read**, Edit	
Order	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete
OrderDeliveryMethod	Read, Create, Edit	Read, Create, Edit	Read	Read, Create, Edit
OrderSummary	Read, Edit	Read, Edit	Read, Edit	Read, Edit
PartnerFundAllocation			Create, Read, Edit	
PartnerFundClaim			Create, Read, Edit	
PartnerFundRequest			Create, Read, Edit	
PartnerMarketingBudget			Create, Read, Edit	
PartyConsent	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit
PartyIncome	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit
PartyRelatedParty	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit

	Customer Community	Customer Community Plus	Partner Community	External Apps
PartyRelationshipType	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit
PersonEducation	Create, Read, Edit	Create, Read, Edit, Delete	Create, Read, Edit	Create, Read, Edit, Delete
PersonEmployment		Create, Read, Edit, Delete		Create, Read, Edit, Delete
PersonExamination	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit	Create, Read, Edit, Delete
PersonLifeEvent	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete
PgmRebateTypBnftMapping	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit
PlanBenefit	Read	Read	Read	Read
PlanBenefitItem	Read	Read	Read	Read
Polygon	Read	Read		Read, Create, Delete, Edit
PreliminaryApplicationRef	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete
Pricebook2	Read	Read	Read	Read
Producer	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete
ProducerCommission	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete
ProducerPolicyAssignment	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete
Product2	Read	Read	Read	Read
ProductCatalog	Read	Read	Read	Read
ProductCategory	Read	Read	Read	Read
ProductCategoryProduct	Create, Read	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit
ProductCoverage	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete
ProductItem	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	
ProductRequest	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	
ProductServiceCampaign	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	
ProductTransfer	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	
ProgramRebateType	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit
ProgramRebateTypeBenefit	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit
ProgramRebateTypeFilter	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit
ProgramRebateTypePayout	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit
ProgramRebateTypPayoutSrc	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit
Promotion	Read	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit
PromotionChannel	Read	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit

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	Customer Community	Customer Community Plus	Partner Community	External Apps
PromotionProduct	Read	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit
PromotionProductCategory	Create, Read	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit
PublicComplaint	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit	Create, Read, Edit, Delete
PublicProgram	Read	Read	Read	Read
PurchaserPlan	**Create**, **Read**, **Edit**	**Create**, **Read**, **Edit**	**Create**, **Read**, **Edit**	**Create**, **Read**, **Edit**
PurchaserPlanAssn	**Create**, **Read**, **Edit**	**Create**, **Read**, **Edit**	**Create**, **Read**, **Edit**	**Create**, **Read**, **Edit**
Question	Create, Read	Create, Read	Create, Read	Create, Read
Quote			Create, **Read**, Edit	
RebateMemberProductAggregate	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit
RebatePayment	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit
RebatePayoutAdjustment	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit
RebateProgram	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit
RebateProgramMember	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit
ReceivedDocument	Read	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Read
RecordsetFilterCriteria	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit
RegAuthorizationTypeProduct	Read	Read	Read	Read
RegulatoryAuthority	Read	Read	Read	Read
RegulatoryAuthorizationType	Read	Read	Read	Read
RegulatoryCode	Read	Read	Read	Read
RegulatoryCodeAssessmentInd	Read	Read	Read	Read
RegulatoryCodeViolation	Read	Read	Read	Read
RegulatoryTrxnFee	Create, Read, Edit	Create, Read, Edit		Create, Read, Edit
RegulatoryTrxnFeeItem	Create, Read, Edit	Create, Read, Edit		Create, Read, Edit
ResidentialLoanApplication	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete
RetailLocationGroup	Create, Read	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit
RetailStore	Create, Read	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit
RetailStoreGroupAssignment	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete
RetailStoreKpi	Create, Read	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit
RetailVisitKpi	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete
ReturnOrder	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	

	Customer Community	Customer Community Plus	Partner Community	External Apps
SalesAgreement	Read, Edit	Read, Edit	Read, Edit	Read, Edit
SecuritiesHolding	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete
SerializedProduct	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit
ServiceAppointment	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	
ServiceContract		Create, Read, Edit	Create, Read, Edit	
ServiceCrew	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	
ServiceResource	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	Read
ServiceTerritory	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	
Shift	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete
ShiftPattern	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit
Shipment	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit
SocialPost	Read	Read	Read	Read
Solution	**Read**	**Read**	**Read**	
StoreActionPlanTemplate	Create, Read	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete
StoreAssortment	Read	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit
StoreProduct	Read	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit
Survey	**Read**	**Read**	**Read**	**Read**
SurveyInvitation	**Read**	**Read**	**Read**	**Read**
SurveyResponse	**Create**, **Read**, **Edit**	**Create**, **Read**, **Edit**	**Create**, **Read**, **Edit**	**Create**, **Read**, **Edit**
SurveySubject	**Read**	**Read**	**Read**	**Read**
TimeSheet	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit
TrainingCourseParticipant	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit
TransactionJournal	**Read**	**Read**	**Read**	**Read**
TrnCourse	Read	Read	Read	Read
UnitOfMeasure	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit
UnitOfMeasureConversion	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit
VehicleUserAssignment	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete
ViolationEnforcementAction	Read, Edit	Read, Edit	Read	Read, Edit
ViolationInspAssessmentInd		Read	Read	
ViolationType	Read	Read	Read	Read

	Customer Community	Customer Community Plus	Partner Community	External Apps
ViolationTypeAssessmentInd	Read	Read	Read	Read
Visit	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete
VisitedParty	Create, Read	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit
Visitor	Create, Read	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit
VolunteerProject	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete
Voucher	Read	Read	Read	Read
VoucherDefinition	Read	Read	Read	Read
WarrantyTerm	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit
WebCart	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	
WebStore	Read	Read	Read	
WebStoreCatalog	Read	Read	Read	
Wishlist	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	
WorkCapacityLimit	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	
WorkerCompCoverageClass	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete	Create, Read, Edit, Delete
WorkOrder	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	
WorkPlan	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	
WorkPlanSelectionRule	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	
WorkPlanTemplate	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	
WorkStepTemplate	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	
WorkType	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit
WorkTypeCareSpecialty	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit
WorkTypeCodeSetBundle	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit
WorkTypeGroup	Create, Read, Edit	Create, Read, Edit	Create, Read, Edit	

SEE ALSO:

Develop a Security Plan for Your Experience Cloud Site

Set Up Additional Features in Manufacturing Cloud

Manufacturing Cloud comes with features that help manufactures get greater visibility and control of their commercial operations, service experience, and partner engagements. Scale up your processes and enhance your business operations by configuring features such as Actionable Relationship Center, Events and Milestones, and Intelligent Document Reader. Some features are configured in Setup, others in the app, and some require integration with external systems.

Actionable Relationship Center for Manufacturing Cloud

Explore the relationships between people, businesses, assets, and so on, by using Actionable Relationship Center (ARC). Design ARC relationship graphs to get a comprehensive view of related records on an intuitive, visual map. Create graphs to view the different objects with related information, such as sales agreements, orders, and opportunities that are associated with an account. Customize card names, display fields, and object and record actions so your users can easily navigate and interact with records during customer engagements.

Context Service for Manufacturing Cloud

Use Context Service to optimize the sharing and consumption of data between business applications and procedures. Context Service acts as a layer between applications and procedures and helps you design procedures with more flexibility, eliminate redundant input, and improve process performance. Context Service comprises context definitions, which is a complete set of the information required to execute a particular process. Context definitions consist of a canonical data structure, mappings to data sources, and context tags to enable consuming applications to retrieve and use data.

Intelligent Document Reader in Manufacturing Cloud

Automatically extract data from documents to create, update, or verify records by using Intelligent Document Reader. Intelligent Document Reader uses Amazon Textract for optical character recognition. Upload documents in the JPG, JPEG, PNG, or PDF format, define the types of documents that you want to extract information from, and specify objects where extracted information is stored. For example, create a document type for rebate claim invoices, upload a rebate claim invoice, and verify the extracted data against the Transaction Journal records in your org. Or, create a document type for warranty claim invoices and map the extracted information to Claim records.

Events and Milestones for Manufacturing Cloud

Get visibility into the key moments in the lifecycle of contacts, accounts, and assets by using the Events and Milestones component. Capture key information about each event or milestone, identify upcoming engagements, initiate timely actions, and plan business processes.

Actionable Relationship Center for Manufacturing Cloud

Explore the relationships between people, businesses, assets, and so on, by using Actionable Relationship Center (ARC). Design ARC relationship graphs to get a comprehensive view of related records on an intuitive, visual map. Create graphs to view the different objects with related information, such as sales agreements, orders, and opportunities that are associated with an account. Customize card names, display fields, and object and record actions so your users can easily navigate and interact with records during customer engagements.

Quickly create ARC relationship graphs using the templates that come with the Actionable Relationship Center Templates for Manufacturing prebuilt app. The prebuilt app includes four templates that help you visualize key relationships in your commercial and service operations. See Visualize Commercial and Service Relationships.

Configure Actionable Relationship Center Graphs for Manufacturing Cloud

Create Actionable Relationship Center (ARC) relationship graphs to visualize records related to an object on an interactive component. Build relationship graphs in Setup by forming relationships between parent and child objects, peer objects, and related objects for the parent object. Then, add ARC components to Lightning record pages and Experience Cloud site pages.

Configure Actionable Relationship Center Graphs for Manufacturing Cloud

Create Actionable Relationship Center (ARC) relationship graphs to visualize records related to an object on an interactive component. Build relationship graphs in Setup by forming relationships between parent and child objects, peer objects, and related objects for the parent object. Then, add ARC components to Lightning record pages and Experience Cloud site pages.

1. Create a relationship graphic. See Create a Relationship Graph in ARC.

2. Add peer objects to a relationship graph. See Add Peer Objects to an ARC Relationship Graph.

3. Show child records on a relationship graph. See Configure Show Child Records on an ARC Relationship Graph.

4. Consolidate duplicate records across objects. See Consolidate Duplicate Records in an ARC Graph .

5. Add ARC components to record pages. See Customize Record Pages using ARC Components.

6. Add ARC components to Experience Cloud site pages. See Customize Experience Cloud Templates Using ARC Components .

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To configure Actionable Relationship Center:
- Access Actionable Relationship Center

To add the ARC Relationship Graph component to a record page:
- Access Actionable Relationship Center

  AND

  Customize Application

Context Service for Manufacturing Cloud

Use Context Service to optimize the sharing and consumption of data between business applications and procedures. Context Service acts as a layer between applications and procedures and helps you design procedures with more flexibility, eliminate redundant input, and improve process performance. Context Service comprises context definitions, which is a complete set of the information required to execute a particular process. Context definitions consist of a canonical data structure, mappings to data sources, and context tags to enable consuming applications to retrieve and use data.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions

For instructions on how to configure Context Service, see Context Service.

Warranty teams build warranty claim adjudication processes. To run a warranty claim adjudication process, process automation tools such as the Business Rules Engine fetch warranty claim data from various sources, often multiple times. Context Service serves as a layer between the data sources and the tools that enable the easy retrieval and utilization of claims data. The predefined Claim Details context definition has a data structure for claims data, mappings to data sources, and context tags to enable the consuming tools to use the claims data. To learn how to use the predefined Claim Details context definition to build a warranty claim adjudication process, see Context Definition for Warranty Claim Adjudication Processes.

Intelligent Document Reader in Manufacturing Cloud

Automatically extract data from documents to create, update, or verify records by using Intelligent Document Reader. Intelligent Document Reader uses Amazon Textract for optical character recognition. Upload documents in the JPG, JPEG, PNG, or PDF format, define the types of documents that you want to extract information from, and specify objects where extracted information is stored. For example, create a document type for rebate claim invoices, upload a rebate claim invoice, and verify the extracted data against the Transaction Journal records in your org. Or, create a document type for warranty claim invoices and map the extracted information to Claim records.

For instructions on how to configure Intelligent Document Reader, see Intelligent Document Reader.

Events and Milestones for Manufacturing Cloud

Get visibility into the key moments in the lifecycle of contacts, accounts, and assets by using the Events and Milestones component. Capture key information about each event or milestone, identify upcoming engagements, initiate timely actions, and plan business processes.

Use the Events and Milestones component to get a comprehensive view of these events and milestones.

WHAT CAN YOU VIEW?	WHERE CAN YOU VIEW?	EXAMPLES
Person Life Events	Contact and Person Account records	• Birth • Graduation • Relocation • Retirement
Business Milestones	Business Account records	• Merger & Acquisition • Executive Change • New Product Launch • Market Listing
Asset Milestones	Asset records	• Delivered • Extended Warranty • 3 Month Service • Critical Recall

Create or Update Event and Milestone Types in Manufacturing Cloud
Create asset milestones, business milestones, and person life events if the default types don't meet your business needs. Deactivate and activate the values as needed.

Customize Icons for Asset Milestones in Manufacturing Cloud
Choose icons for the life event types, business milestone types, or asset milestone types that you create, or replace the default icons with your own icons. For example, if you create an asset milestone type for Critical Repair, use the icon of a wrench to denote the milestone.

Add the Events and Milestones Component to Asset, Account, and Contact Record Pages

To display asset milestones, life events, or business milestones on the Asset, Contact, or Account record page, add the Events and Milestones component to the page. Configure the visibility of the component and hide the event and milestone types that you don't want users to see. When you hide an event or milestone type, it doesn't appear on the component until you add an event or milestone of that type.

Create or Update Event and Milestone Types in Manufacturing Cloud

Create asset milestones, business milestones, and person life events if the default types don't meet your business needs. Deactivate and activate the values as needed.

1. From the object management settings for the Person Life Event, Business Milestone, or Asset Milestone object, go to Fields & Relationships.

2. Click **Event Type** or **Milestone Type**.

3. Under Event Type Picklist Values or Milestone Type Picklist Values, click **New**, and then add the new milestone types.

4. To make a picklist value the default option for selection, select **Default**.

5. Under Event Type Picklist Values or Milestone Type Picklist Values, click **Deactivate** next to the value that you want to deactivate.

6. To activate an event type or milestone type, under Inactive Values, click **Activate** next to the value.

7. Save your changes.

   If your instance uses Translation Workbench, notify your translators when you add or update picklist values so that the new picklist values are translated.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To customize Person Life Events, Business Milestones, and Asset Milestones:
- Customize Application

Customize Icons for Asset Milestones in Manufacturing Cloud

Choose icons for the life event types, business milestone types, or asset milestone types that you create, or replace the default icons with your own icons. For example, if you create an asset milestone type for Critical Repair, use the icon of a wrench to denote the milestone.

1. From Setup, in the Quick Find box, enter `Events and Milestones`, and then select **Events and Milestones**.

2. Select the object name from these options: Life Events, Business Milestones, and Asset Milestones. You can select more than one name.

3. Click **Change Icon** next to the milestone or event type that you want to change the icon for.

4. Click **Upload Files**, and select the SVG file for the icon.

5. Save your changes.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To customize Person Life Events, Business Milestones, and Asset Milestones:
- Customize Application

Add the Events and Milestones Component to Asset, Account, and Contact Record Pages

To display asset milestones, life events, or business milestones on the Asset, Contact, or Account record page, add the Events and Milestones component to the page. Configure the visibility of the component and hide the event and milestone types that you don't want users to see. When you hide an event or milestone type, it doesn't appear on the component until you add an event or milestone of that type.

1. On an Account, Contact, or Asset record page, from Setup, select **Edit Page**.

2. Drag the Events and Milestones component to a section on the page.

3. Select the Events and Milestones component.

4. In the Properties pane, depending on the record page that you are on—person account, business account, contact, or asset, under Hide Event Types or Hide Milestone Types, click **Select**.

5. Select the event types or milestone types that you want to hide, and then click **OK**.

   When you hide an event or milestone type, the type doesn't appear on the component until you add an event or milestone of that type.

6. Save your changes, and then activate the page layout.

7. Assign the component as org default, and then click **Next**.

8. Review the assignments, and then save your changes.

Manage Long-Term Business with Sales Agreements

Make your business transactions, profits, and revenue margins more predictable with sales agreements. Use sales agreements to negotiate the purchase and sale of products over a continued period of time. Sales agreements provide you insights into products, prices, discounts, and quantities. With an integrated sales experience, you can also track your planned quantities, actual quantities, and revenue with associated updates from orders and contracts.

What are Sales Agreements?

A sales agreement is a long-term agreement between a manufacturer and their customer for the sale of products. Manufacturers also refer to sales agreements as run-rate, renewable, production, and ongoing business agreements or projects. Sales agreements give sales teams an at-a-glance view of the planned and the actual revenue and quantities of orders across the agreement period.

Set Up and Configure Sales Agreements

Get started with Sales Agreements by setting up its foundational features. Specify when sales agreements can be renewed and choose how the actual values of orders are calculated in sales agreements by default. Manage agreement metrics, the stages in the sales agreement lifecycle, and how agreements are approved.

Create and Work with Sales Agreements

Bring predictability to your business transactions, profitability, and revenue margins with sales agreements. Use sales agreements to negotiate purchase and sale of products over a continued period of time. A sales agreement provides you insight into products, prices, discounts, and quantities. With an integrated sales experience, you can also track your planned and actual quantities and revenues with real time updates from orders and contracts.

Considerations for Sales Agreements

Keep the following considerations in mind while setting up and using Sales Agreements in Manufacturing Cloud.

SEE ALSO:

Trailhead: Sales Agreements and Forecasting in Manufacturing Cloud

Trailhead: Admin Essentials for Sales Agreements and Account Forecasting

What are Sales Agreements?

A sales agreement is a long-term agreement between a manufacturer and their customer for the sale of products. Manufacturers also refer to sales agreements as run-rate, renewable, production, and ongoing business agreements or projects. Sales agreements give sales teams an at-a-glance view of the planned and the actual revenue and quantities of orders across the agreement period.

EDITIONS
Available in: **Enterprise**, **Unlimited**, and **Developer** Editions

Get Started with Sales Agreements

A sales agreement has a fixed duration that can be divided into multiple schedules. Sales teams can add products or categories of products to a sales agreement, based on the product level of the sales agreement. The agreement terms of a sales agreement give sales teams visibility into key price, revenue, and quantity metrics for different products or categories across different schedules of the agreement.

Instead of manually comparing the actual revenue and quantity values, or actuals, from fulfilled orders against planned values, you can use sales agreements to pull out order information and view it in the agreement's terms. With sales agreements, sales and operations teams can manage their inventory better, track customer compliance for committed orders, and get greater visibility into their run-rate business.

Sales teams can manage the complete lifecycle of sales agreements, from their creation to their renewal. They can revise agreement terms based on updated negotiations, market conditions, and inventory.

Sales teams can also collaborate on agreements with channel partners by using manufacturing Experience Cloud sites.

Watch this video to understand the foundational capabilities of Sales Agreements.

📹 Watch a video

If you can't watch the video in full screen, open the video on a new tab: ▶ Get Started with Sales Agreements in Manufacturing Cloud.

Learn About Sales Agreements in Commercial Operations

Let's go over how business transactions are represented in Manufacturing Cloud, and how sales agreements come into the picture.

Leads

Track prospects who are interested in buying a product with leads.

Opportunity

Convert a lead into an opportunity to track deals in progress.

Quotes

Create quotes to show your customers the prices of the products and services that you offer.

Contracts

Define contracts to establish the terms for doing business with your customers.

Sales Agreements
> Create sales agreements to track the planned and actual sale of products and services over a period of time.

Orders
> Track customer requests for products and services by using orders. You can place orders against quotes, sales agreements, and contracts. Standalone orders and orders associated with contracts contribute to the actuals of sales agreements.

Set Up and Configure Sales Agreements

Get started with Sales Agreements by setting up its foundational features. Specify when sales agreements can be renewed and choose how the actual values of orders are calculated in sales agreements by default. Manage agreement metrics, the stages in the sales agreement lifecycle, and how agreements are approved.

Enable Sales Agreements
Help your key account managers plan for sales and operations better by enabling sales agreements in your org. Key account managers can use sales agreements to negotiate business transactions.

Define Renewal Period for Sales Agreements
You can determine the start of the renewal period for all sales agreements in your Salesforce org. Enter the number of days before the end date of a sales agreement to mark the beginning of the renewal period. Users can renew a sales agreement only when the renewal period starts.

Choose How Sales Agreement Actuals Are Calculated
Define how actuals are calculated and updated by default in all sales agreements in your Salesforce org. Sales agreements actuals can be derived from orders, from orders associated with contracts, or from data imported from external systems. You can also give users the permission to change how the actuals of specific sales agreements are calculated. Users can also manually update the actual quantities of products for every schedule when a sales agreement is active.

Manage Metrics for Sales Agreements
Select the metrics that you want to show for sales agreements and group similar metrics. Select the quantity and revenue metrics that you want your key account managers to view on the Agreement Terms tab of a sales agreement, for products across all schedules. Create metric groups to group similar metrics and help account managers view agreement terms for metrics in a group based on their business needs.

Create Custom Metrics for Sales Agreements
Account managers can use custom metrics to track performance indicators such as territory-based revenue, inventory level, and average price. Create custom number, currency, or formula data type fields for the Sales Agreement Product and the Sales Agreement Product Schedule objects. Then, define a unique mapping between the fields to create a metric to add to the Agreement Terms tab of a sales agreement.

Define the Stages in the Sales Agreement Lifecycle
The Status and Status Code fields on a sales agreement record determine the stages of the sales agreement. The predefined status code values help you maintain a consistent classification to manage the standard lifecycle of sales agreements. Add stages to the lifecycle by creating statuses and mapping the new statuses to the predefined status codes. To customize the sales agreement lifecycle further, rename, reorder, and delete statuses.

Choose How Sales Agreements Are Approved
Key account managers can self-approve sales agreements, submit sales agreements to be approved through an approval process, or both. To prevent key account managers from self-approving sales agreements, enable Approval Process in the Sales Agreement settings in Setup.

Specify the Contacts Notified About Sales Agreement Process Failures

Certain automated processes run daily at 1:00 AM in your Salesforce org's timezone. If any of these automated processes fail, an email notification is sent to users. You can select the users to whom the email notifications are sent.

Customize Page Layouts for Sales Agreements

Give users the visibility into key information about a sales agreement and get sales agreements approved by customizing the Sales Agreement record page. A page layout controls the placement and organization of buttons, fields, s-controls, Visualforce, custom links, and related lists on an object record page. The page layout also determines which fields are visible, read only, and required.

Edit Multi-Line Layouts for Sales Agreement Products

You can add, remove, and reposition the columns that are shown on the Edit All Sales Agreement Products window where you specify the details of products in a sales agreement. You can add the custom metrics for sales agreements to the multi-line layout.

Control Access to Mass Update for Sales Agreements

Reduce data corruption due to user errors and help maintain data sanctity by controlling access to the Mass Update button in Agreement Terms of Sales Agreements for your users. Clone the Manufacturing Sales Agreements and the Manufacturing Sales Agreements For Community permission sets, disable the Mass Update for Sales Agreement system permissions, and assign the permission set to users.

Enable Sales Agreements

Help your key account managers plan for sales and operations better by enabling sales agreements in your org. Key account managers can use sales agreements to negotiate business transactions.

1. From Setup, enter `Manufacturing` in the Quick Find box, and then select **Sales Agreements**.

2. Turn on Sales Agreements.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions.

USER PERMISSIONS

To enable sales agreements:
- Customize Application

Define Renewal Period for Sales Agreements

You can determine the start of the renewal period for all sales agreements in your Salesforce org. Enter the number of days before the end date of a sales agreement to mark the beginning of the renewal period. Users can renew a sales agreement only when the renewal period starts.

1. In Setup, in the Quick Find box, enter `Manufacturing`, and then select **Sales Agreements**.

2. In the Renewal Days field of the Renewal section, enter the number of days before the sales agreement end date from when you want to start the renewal period.

   📝 Note: The defined renewal days are applicable for all sales agreements in your Salesforce org.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions.

USER PERMISSIONS

To renew sales agreements:
- Customize Application

👁 **Example:** For example, if the end date of a sales agreement is December 31 and the defined renewal days is 30, users can renew the sales agreement from December 1.

SEE ALSO:

[Renew a Sales Agreement](#)

Choose How Sales Agreement Actuals Are Calculated

Define how actuals are calculated and updated by default in all sales agreements in your Salesforce org. Sales agreements actuals can be derived from orders, from orders associated with contracts, or from data imported from external systems. You can also give users the permission to change how the actuals of specific sales agreements are calculated. Users can also manually update the actual quantities of products for every schedule when a sales agreement is active.

1. In Setup, in the Quick Find box, enter `Manufacturing`, and then select **Sales Agreements**.

2. On the Sales Agreement Setup page, in the Actuals Calculation section, select one of these options.

Manually using API upload	If you use an external system to manage your orders and contracts, you can upload the updated quantities in bulk at regular intervals by using an integration method. The application picks up these updates when the daily scheduled job runs in your Salesforce org. This job updates the relevant information in sales agreements.
Automatically from direct orders	If active orders are associated with sales agreements, the actual quantities of products are automatically derived and updated. The updates are based on the orders that apply to a specific schedule. Select this option if there are no orders associated with contracts.
Automatically from orders through contracts	If active orders are associated with sales agreements, the actual quantities of products are automatically derived and updated. The updates are based on the orders that apply to a specific schedule. Select this option if there are orders associated with contracts.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To choose the actuals calculation mode for all sales agreements in an org:
- Customize Application

To edit actual quantities for past schedules:
- Edit Actual Quantity of Sales Agreements Products

All sales agreements inherit the actuals calculation option at the time of their creation. If you change the actuals calculation option, the change applies only to the sales agreements created after that point.

📝 **Note:** To enable users to change the actuals calculation mode for a specific sales agreement, give them Edit permission to the Actuals Calculation field on the sales agreement.

SEE ALSO:

[Manage Sales Agreements Actuals](#)

[Recalculate Actuals for Sales Agreement Terms](#)

[How Are Sales Agreement Actuals Calculated?](#)

Manage Metrics for Sales Agreements

Select the metrics that you want to show for sales agreements and group similar metrics. Select the quantity and revenue metrics that you want your key account managers to view on the Agreement Terms tab of a sales agreement, for products across all schedules. Create metric groups to group similar metrics and help account managers view agreement terms for metrics in a group based on their business needs.

The data that key account managers see in the agreement terms of a sales agreement record depends on the selected metric group. Because users can switch between metric groups, they can view more than 10 metrics in the agreement terms for sales agreements.

You can select standard and custom metrics to be shown. The standard metrics available for selection are:

- Planned Amount
- Planned Quantity
- Forecasted Quantity
- Forecasted Amount
- Actual Quantity
- Actual Amount
- Sales Price
- Discount Percentage

> 📝 **Note:** You can select up to 10 metrics for display.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To modify metrics:
- Customize Application

1. From Setup, in the Quick Find box, enter `Manufacturing`, and then select **Sales Agreements**.

2. If you implemented Sales Agreements before Spring '23, in the Agreement Terms Metrics section, enable metric groups.

   > ⚠️ **Warning:** After you enable metric groups in your org, you can't disable them.

   A metric group called Preset Group is created. Preset Group contains these standard metrics:
   - Planned Quantity
   - Actual Quantity
   - Sales Price
   - Discount Percentage
   - Planned Amount

3. To create a metric group, click **New**.

   You can have up to 100 metric groups in an org. Each metric group can have up to 10 metrics.

4. Specify a name for the metric group.

5. Specify whether the metric group is the default group.

    You can specify only one metric group as the default group.

6. From the Available Metrics list, select the metrics that you want to add to the metric group, and move them to the Selected Metrics list.

    All standard and custom metrics are listed in the Available Metrics list.

7. Save your work.

SEE ALSO:

Create Custom Metrics for Sales Agreements

View Sales Agreement Terms Data

Sales Agreement Metrics

Create Custom Metrics for Sales Agreements

Account managers can use custom metrics to track performance indicators such as territory-based revenue, inventory level, and average price. Create custom number, currency, or formula data type fields for the Sales Agreement Product and the Sales Agreement Product Schedule objects. Then, define a unique mapping between the fields to create a metric to add to the Agreement Terms tab of a sales agreement.

> **Note:** A custom metric can store values with up to five decimal places. To store custom and revenue metric values with up to five decimal places, ask Salesforce Customer Support to enable the More Decimals on Price option for your org.

1. Create custom fields on the Sales Agreement Product and Sales Agreement Product Schedule objects.

    a. In Object Manager, select **Sales Agreement Product** or **Sales Agreement Product Schedule**.

    b. In Fields & Relationships, click **New**.

    c. Select the data type for the new custom field, and then click **Next**.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create custom metrics:
- Customize Application

d. Enter the field label, and click **Next**.

e. Assign the necessary field-level access to your key account managers, and then click **Next**.

f. Add the field to the page layout.

g. Save your changes.

2. Map the custom fields in the Sales Agreement Product object with custom fields in the Sales Agreement Product Schedule object.

a. In Setup, in the Quick Find box, enter `Manufacturing`, and then select **Sales Agreements**.

b. To map the custom fields of the Sales Agreement Product and Sales Agreement Product Schedule objects, in the Metrics Mapping section, select the required product metric for each product schedule metric.

The custom fields of the Sales Agreement Product Schedule object are listed under Product Schedule Metrics. The custom fields of the Sales Agreement Product object are listed under Product Metrics.

📝 Note: Custom fields having data type other than number, currency, or formula aren't available in these lists.

c. Save your changes.

📝 Note: For custom metrics, the status of the sales agreement is the basis for taking the value in the Sales Agreement Product Schedule field.

- If a Sales Agreement Product Schedule field value is revised when the sales agreement is in the Activated status, the original value is taken.
- If a Sales Agreement Product Schedule field value is revised when the sales agreement is in the UnderRevision status, the revised value is taken.

If needed, add custom metrics to the page layout and multi-line layout for the Sales Agreement Product object.

SEE ALSO:
Manage Metrics for Sales Agreements
View Sales Agreement Terms Data
Create Custom Fields
Sales Agreement Metrics

Define the Stages in the Sales Agreement Lifecycle

The Status and Status Code fields on a sales agreement record determine the stages of the sales agreement. The predefined status code values help you maintain a consistent classification to manage the standard lifecycle of sales agreements. Add stages to the lifecycle by creating statuses and mapping the new statuses to the predefined status codes. To customize the sales agreement lifecycle further, rename, reorder, and delete statuses.

Here's how the Status and Status Code fields work together.

- The Status Code field stores predefined status categories. You can't add custom values to this field.
- The Status field stores status values for sales agreements. You can add custom values to this field.

The predefined status code values are mapped to the predefined status code values. Here are the predefined status code and status values:

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create custom status values:
- Customize Application

- Activated
- Approved
- Cancelled
- Draft
- Expired
- Rejected
- UnderRevision

To ensure that preconfigured sales agreement processes, such as actuals calculation processes, work as expected when custom statuses are in use, Salesforce references the Status Code field—rather than the Status field.

To customize or extend your sales agreement lifecycle, create status values and map the values to the predefined status code values. You can also edit the labels of predefined status values, delete them, reorder them, and activate or deactivate them.

1. From the object management settings for sales agreements, go to Fields & Relationships.

2. Click **Status**.

3. To create a status value, perform these steps.

    a. In the Status Picklist Value section, click **New**.

    b. Enter a label for the status value.

    c. Enter an API name for the status value.

    d. In Status Category, select the status code to map the status value to.

    e. Save your changes.

4. To edit the label of a status value, perform these steps.

    a. Click **Edit** for the status value.

    b. Enter a label for the picklist value.

    c. Save your changes.

5. To make a status value the default for the status field, perform these steps.

    a. Click **Edit** for the status value.

    b. Select **Default**.

    c. Save your changes.

6. To reorder status values, perform these steps.

    a. Click **Reorder**.

    b. Reorder the picklist values by using the picklist controls.

    c. If needed, select **Display values alphabetically, not in the order entered**.

    d. Save your changes.

7. To delete a status value, click **Del** for the status value.

8. To deactivate or activate a status value, click **Deactivate** or **Activate** for the status value, respectively.

> Note: By default, when an approved sales agreement reaches its start date, the status of the agreement automatically changes to Activated. If you add custom status values, make sure that you reorder the status values mapped to the Activated status code

appropriately. To ensure that users use the custom value to activate a sales agreement, move the custom status values after the default Activated status value.

Create a path to guide your users through the stages in your sales agreement lifecycle. Create a path for the Sales Agreement Object that's based on the Status picklist.

You can reference the custom values in an approval process for sales agreements.

SEE ALSO:

Manage the Lifecycle of a Sales Agreement

Choose How Sales Agreements Are Approved

Choose How Sales Agreements Are Approved

Key account managers can self-approve sales agreements, submit sales agreements to be approved through an approval process, or both. To prevent key account managers from self-approving sales agreements, enable Approval Process in the Sales Agreement settings in Setup.

Sales agreements can be approved in two ways.

- Self-approval: Key account managers can approve a sales agreement by themselves by changing the status of the sales agreement to Approved.
- Approval Process: If your org has an approval process for sales agreements, key account managers can use the process to get sales agreements approved. See Approval Processes.

To restrict the self-approval of sales agreements, enable Approval Process in Setup. Then, key account managers are required to submit sales agreements for approval through the approval process.

1. In Setup, in the Quick Find box, enter `Manufacturing`, and then select **Sales Agreements**.
2. In the Approval Process section, do one of these:

   - To allow approvals only through a predefined process and restrict self-approvals, turn on Approval Process.
   - To allow approvals through the predefined process and self-approvals, turn off Approval Process.

If you set up an approval process for sales agreements, ensure that you add the Submit for Approval quick action to the page layout of sales agreements.

📝 Note: At least one product must be associated with a sales agreement for the sales agreement to be eligible for approval.

SEE ALSO:

Set Up an Approval Process

Customize Page Layouts for Sales Agreements

Define the Stages in the Sales Agreement Lifecycle

Manage the Lifecycle of a Sales Agreement

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To configure approvals:
- Customize Application

Specify the Contacts Notified About Sales Agreement Process Failures

Certain automated processes run daily at 1:00 AM in your Salesforce org's timezone. If any of these automated processes fail, an email notification is sent to users. You can select the users to whom the email notifications are sent.

If an automated process fails, an email with details of the failure and next steps is sent to the primary and secondary contacts that you provide. There are three automated daily processes that run.

- Auto-activation of sales agreements when their start dates are reached
- Auto-expiration of sales agreements when their end dates are reached
- Auto-calculation of actual quantities of all active sales agreements based on associated orders

1. In Setup, enter `Manufacturing` in the Quick Find box, and then select **Sales Agreements**.

2. In the Email Notifications section, click **Edit Contacts**.

3. Add the email addresses of the primary and secondary contacts.

4. Save your changes.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions.

USER PERMISSIONS

To modify email addresses:
- Customize Application

Customize Page Layouts for Sales Agreements

Give users the visibility into key information about a sales agreement and get sales agreements approved by customizing the Sales Agreement record page. A page layout controls the placement and organization of buttons, fields, s-controls, Visualforce, custom links, and related lists on an object record page. The page layout also determines which fields are visible, read only, and required.

1. From Setup, select **Object Manager**.

2. Click **Sales Agreement** from the list of objects, and click **Page Layouts**.

3. Click **Edit** in the quick actions menu for the Sales Agreement Layout page layout.

4. Provide a name and select the check box for **Feed-Based Layout** if you want a separate tab for Chatter.

5. Save your changes.

6. Drag and drop the Submit for Approval button into the Buttons section of the page layout to use it as a quick action for a sales agreement record.

7. Drag and drop the Sales Agreement Products and the Sales Agreement History related lists in the Related List section.

Add the Sales Agreement related list to the page layout of the Account, Order, and Contract objects.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions.

USER PERMISSIONS

To modify page layouts:
- Customize Application

Edit Multi-Line Layouts for Sales Agreement Products

You can add, remove, and reposition the columns that are shown on the Edit All Sales Agreement Products window where you specify the details of products in a sales agreement. You can add the custom metrics for sales agreements to the multi-line layout.

1. From the object management settings for Sales Agreement Product object, go to Page Layouts.

2. Next to the name of a sales agreement product page layout, click **Edit**.

3. Click **Edit Multi-Line Layout**.

4. Move fields between Available Fields and Selected Fields.
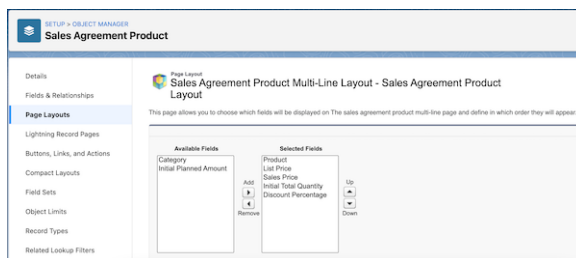
5. Save your changes.

Control Access to Mass Update for Sales Agreements

Reduce data corruption due to user errors and help maintain data sanctity by controlling access to the Mass Update button in Agreement Terms of Sales Agreements for your users. Clone the Manufacturing Sales Agreements and the Manufacturing Sales Agreements For Community permission sets, disable the Mass Update for Sales Agreement system permissions, and assign the permission set to users.

📝 **Note:** Before you assign permission sets, ensure that Sales Agreements is enabled.

1. In Setup, in the Quick Find box, enter `Users`, and then select **Permission Sets**.

2. Click **Clone** next to the Manufacturing Sales Agreements permission set.

3. Specify a name for the cloned permission set and click **Save**.

4. Click the cloned permission set, and click **System Permissions**.

5. Deselect the Mass Update for Sales Agreement checkbox.

6. Save your work.

7. Assign the cloned permission set to users as needed.

8. Repeat these steps for the Manufacturing Sales Agreements For Community permission set.

SEE ALSO:

   Update Multiple Values in Agreement Terms

Create and Work with Sales Agreements

Bring predictability to your business transactions, profitability, and revenue margins with sales agreements. Use sales agreements to negotiate purchase and sale of products over a continued period of time. A sales agreement provides you insight into products, prices, discounts, and quantities. With an integrated sales experience, you can also track your planned and actual quantities and revenues with real time updates from orders and contracts.

<div style="float:right;">

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions.

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Sales Agreement Metrics

Track the key quantity and revenue metrics for long-term business negotiations that matter to your company in sales agreements. You can view metrics for products and categories across all schedules on the Agreement Terms tab of a sales agreement. While some metrics are auto-calculated based on orders and contracts, you can specify values for others.

Create a Sales Agreement

Create a sales agreement to get a consolidated view of products, schedules, and associated metrics for long-term business transactions.

Manage Products and Categories in a Sales Agreement

Key account managers can add products or categories to a sales agreement based on the product level of the agreement. After you add products or categories to a sales agreement, you must get the agreement approved. You can also update the products or categories that you add to a draft sales agreement. When a new product line or product category is introduced, or an existing line is expanded to include more products, you can add more products or categories to an activated sales agreement.

Manage Sales Agreement Terms

Monitor revenue and quantity metrics across various products and schedules in a sales agreement on the Agreement Terms tab on a Sales Agreement record. Update individual or multiple sales agreement values at a time. Recalculate the agreement's actuals.

Manage Sales Agreements Actuals

With sales agreements, sales teams can track the actual revenue and quantity values, or actuals, from fulfilled orders. Sales teams can compare actuals with planned revenue and quantity values to track customer compliance with sales agreements.

Manage the Lifecycle of a Sales Agreement

Track the planned and actual values of agreement terms across the lifecycle of sales agreements—from inception to renewal.

Sales Agreement Metrics

Track the key quantity and revenue metrics for long-term business negotiations that matter to your company in sales agreements. You can view metrics for products and categories across all schedules on the Agreement Terms tab of a sales agreement. While some metrics are auto-calculated based on orders and contracts, you can specify values for others.

> **EDITIONS**
>
> Available in: **Enterprise**, **Unlimited**, and **Developer** Editions

Price Metrics

Metric	Description	Usage
List Price	Price per unit of the product as specified in the price book you selected while creating the sales agreement.	The list price can't be edited for a sales agreement product.
Sales Price	Price per unit of the product at which you want to sell it to your customer. If you change the sales price for a specific schedule in Agreement Terms, it only changes for that schedule.	If you change the sales price for a specific schedule in a sales agreement's terms, it only changes for that schedule. If you're using the pricing features for Sales Agreements, the sales price is updated when you get the guidance price.
Discount Percentage	Discount that you want to offer on the sales price of the product.	If you change the discount for a specific schedule in Agreement Terms, it only changes for that schedule.

Amount Metrics

Metric	Description	Usage
Initial Planned Amount	Total amount of the product or product category that you initially plan to sell across the sales agreement term. This amount is	If you change the planned amount for a specific schedule in Agreement Terms, it only changes for that schedule. This field is

Metric	Description	Usage
	equally distributed across all schedules when you save your changes.	mandatory for a product category-based sales agreement.
Total Planned Amount	Aggregated value auto-calculated by adding the planned amount of the product across all schedules at a given time.	It dynamically changes based on the schedule-level changes in planned amounts. For a particular schedule, here's how the planned amount is calculated: {(Planned Quantity for the Schedule X Sales Price for the schedule) X (1-Discount/100)}
Total Actual Amount	Total value auto-calculated by adding the actual amount of the product across all schedules at a given time.	It dynamically changes based on the schedule-level changes in actual amounts. Actual amounts can be either manually updated through an API update or derived from orders based on the configuration. Before a sales agreement is active, the actual amount of a product is zero.
Total Forecasted Amount	Accumulated value auto-calculated by adding the forecasted amount of the product across all schedules at a given time.	When you create the product, this value is zero. You can change it on the Agreement Terms tab. It dynamically changes based on the schedule-level changes in forecasted amounts.

Quantity Metrics

Metric	Description	Usage
Initial Total Quantity	Total quantity of the product that you initially plan to sell across the sales agreement term.	This quantity is equally distributed across all schedules when you save your changes. If you change the planned quantity for a specific schedule in Agreement Terms, it only changes for that schedule. This field is optional for a category-based sales agreement.
Total Planned Quantity	Aggregated value auto-calculated by adding the planned quantities of the product across all schedules at a given time.	When you create the product, this value is the same as the initial total quantity. It dynamically changes based on the schedule-level changes in planned quantities.
Total Actual Quantity	The total value auto-calculated by adding the actual quantities of the product across all schedules at a given time.	It dynamically changes based on the schedule-level changes in actual quantities. Actual quantities can be either manually updated through an API update or derived from orders based on the configuration. Before a sales agreement is active, the actual quantity of a product is zero.

Metric	Description	Usage
Total Forecasted Quantity	Accumulated value auto-calculated by adding the forecasted quantities of the product across all schedules at a given time.	When you create the product, this value is the same as the initial total quantity. You can change it on the Agreement Terms tab. It dynamically changes based on the schedule-level changes in forecasted quantities.

SEE ALSO:

Manage Metrics for Sales Agreements

Create Custom Metrics for Sales Agreements

Create a Sales Agreement

Create a sales agreement to get a consolidated view of products, schedules, and associated metrics for long-term business transactions.

1. From the App Launcher, find and select **Sales Agreements**.

2. Click **New**.

3. Enter a unique name for the sales agreement.

4. Search for an existing account or create an account.

5. Change the owner of the sales agreement to another existing user in your org, if necessary.

    The current user is the default owner.

6. Select the status of the sales agreement.

    A sales agreement is always created in a Draft state.

7. For Start Date, select the date on which the sales agreement activates.

    After a sales agreement is approved, the agreement automatically activates when the agreement reaches the start date.

8. For Schedule Frequency, select the duration of a schedule in the sales agreement:

Option	Description
One-Time	The sales agreement consists of one schedule, and activates on the start date and expires on the end date.
Weekly	The sales agreement consists of weekly schedules. The first schedule starts from the start date you selected, and the last schedule ends on the end date you selected. The weekly schedule consists of seven days and begins from the day of the start date, not the first day of the calendar week. The number of weeks depends on the schedule count.
Monthly	The sales agreement consists of monthly schedules. The first schedule starts from the start date you selected, and the last schedule ends on the end date you selected. The number of months depends on the schedule count.
Quarterly	The sales agreement consists of quarterly schedules. The first schedule starts from the start date you selected, and the last schedule ends on the end date you selected. The number of quarters depends on the schedule count.

Option	Description
Yearly	The sales agreement consists of yearly schedules. The first schedule starts from the start date you selected, and the last schedule ends on the end date you selected. The number of years depends on the schedule count.

9. For Schedule Count, enter the number of schedules for which you want the sales agreement to be active.

Enter *1* if the schedule frequency is one-time. You can create up to 72 schedules. Contact Salesforce support if you want to increase the schedule count limit.

10. If the sales agreement has the One-Time schedule frequency, in the End Date field, enter the date on which the sales agreement expires.

For all other schedule frequencies, irrespective of the date you enter, when you save your changes, the app calculates the end date based on the start date, schedule frequency, and schedule count you selected.

11. Select a contact related to the account, if necessary.

12. Search and select a price book.

Depending on the price book you select, the products filter automatically when you add products to your sales agreement. This field is optional for product category-based sales agreements.

13. For Product Level, select the level of the products associated with the sales agreement.

- Product
- Category

Use Category to create a sales agreement for multiple products that belong to the same product category.

14. Enter a description, if necessary.

15. For Actuals Calculation Mode, define the mode of calculating the actual quantities of products for sales agreements:

> Note: The field defaults to the selection made by your admin in Setup. To see the Actuals Calculation Mode field on the Sales Agreement page, ask your admin to add the field to the page layout. If you have edit access for the field and the sales agreement is in the Draft state, you can change the default calculation mode for the sales agreement.

Option	Description
Manually using API upload	When the sales agreement activates, the actual quantities for products aren't automatically recalculated and refreshed. You can upload changed values in bulk using API upload. The daily process recalculates sales agreement actual quantities at regular intervals based on the latest uploaded data available.
Automatically from direct orders	When the sales agreement activates, the actual quantities for products are automatically recalculated based on all orders that reference this particular sales agreement.
Automatically from orders through contracts	When the sales agreement activates, the actual quantities for products are automatically recalculated based on all orders that reference the contracts that are associated with this particular sales agreement.

Add products or categories to your sales agreement. Then, get your sales agreement approved. You can modify the name, description, and contact details for an approved, active, canceled, or expired sales agreement.

SEE ALSO:

Manage Products and Categories in a Sales Agreement

Approve a Sales Agreement

Manage Products and Categories in a Sales Agreement

Key account managers can add products or categories to a sales agreement based on the product level of the agreement. After you add products or categories to a sales agreement, you must get the agreement approved. You can also update the products or categories that you add to a draft sales agreement. When a new product line or product category is introduced, or an existing line is expanded to include more products, you can add more products or categories to an activated sales agreement.

You can create a sales agreement with these product levels.

- Product: Add products to sales agreements with the Product product level. The agreement terms of product-based sales agreements are calculated and shown at the product level.

- Category: Add categories to sales agreements with the Category product level. A category represents a group of related products. The agreement terms of category-based sales agreements are calculated and shown at the category level.

> 📝 **Note:** You can add up to 1500 products or categories to a sales agreement. To increase the limit, contact Salesforce Customer Support.

Add Products from a Price Book to a Sales Agreement

Add products from a price book to a draft or activated sales agreement with the Product product level. Specify the planned revenue and quantity details for each product.

1.

   On a sales agreement record page, from the Sales Agreement Products related list, click [▼] , and then click **Add Products**.

2. Select the products to be added to the sales agreement.

   You can add only 50 products at a time to a sales agreement. To add more than 50 products to a sales agreement, add the products in batches of 50.

3. Click **Next**.
   On the Edit Select Sales Agreement Products page, you can view the products that are added to the sales agreement. The list price for each product is fetched from the price book associated with the sales agreement.

4. In Initial Total Quantity, enter the total quantity of the product that you initially plan to sell across the entire duration of the sales agreement.

   After you add the products to the sales agreement, the initial total quantity of each product is equally distributed in each schedule of the sales agreement.

5. In Sales Price, enter the final price per unit of the product that you want to sell to the customer.

6. Enter the discount percentage that's applied on the sales price of a product.

7. Enter other details as needed.

8. Save your changes.

If you add products to an activated sales agreement, you must get your changes approved.

Add Categories from a Price Book to a Sales Agreement

Add categories to a draft or activated sales agreement with the Category product level. Specify the planned revenue and quantity details for each category. To add categories to a sales agreement, ensure that categories and catalogs were created in Salesforce.

> ⊘ **Important:** For a category-based sales agreement, if you want orders for a product in a category to be considered for actuals calculation, you must select that category as the primary category for the product.

1.
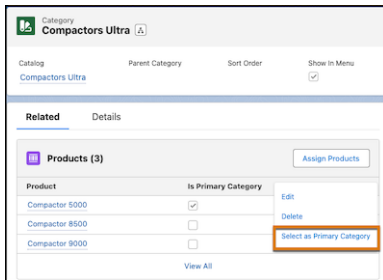
   On a sales agreement record page, from the Sales Agreement Products related list, click [▼], and then click **Add Category**.

2. Search for and select the category to be added to the sales agreement.

3. For Sales Price, enter the sum of the prices of all products in the category.

4. In Initial Total Quantity, enter the total quantity of all the products in the category that you initially plan to sell across the entire duration of the sales agreement.

   After you add the category to the sales agreement, the initial total quantity of each catalog is equally distributed in each schedule of the sales agreement.

5. In Initial Planned Amount, enter the total amount of all the products in the category that you initially plan to sell across the entire duration of the sales agreement.

   After you add the category to the sales agreement, the initial planned amount of each category is equally distributed in each schedule of the sales agreement.

6. Enter the discount percentage that's applied on the sales price of the category.

7. Save your changes.

If you add categories to an activated sales agreement, you must get your changes approved.

Update the pricing, revenue, and quantity metrics of a category in a draft sales agreement by clicking the **Edit** quick action for the category in the Sales Agreement Product related list on the Sales Agreement record page.

SEE ALSO:

   Manage the Lifecycle of a Sales Agreement

   Update Values in Sales Agreement Terms

Manage Sales Agreement Terms

Monitor revenue and quantity metrics across various products and schedules in a sales agreement on the Agreement Terms tab on a Sales Agreement record. Update individual or multiple sales agreement values at a time. Recalculate the agreement's actuals.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions

View Sales Agreement Terms Data

Track specific sales agreement term values by viewing the terms for a metric group or for all schedules. Easily compare metrics for products across various schedules with minimum scrolls. Filter sales agreement data by products or categories, or by time period. Use keyboard shortcuts to quickly navigate through your data and perform key actions.

Update Values in Sales Agreement Terms

Update individual values at a time or simultaneously update multiple values of a single metric. You can update the agreement term values for all the schedules of a draft sales agreement and the values for the future schedules of an activated or approved sales agreement. When you make updates to an activated sales agreement, its status changes to UnderRevision. After you get the updates approved, the sales agreement is reactivated.

Recalculate Actuals for Sales Agreement Terms

Recalculate actuals on the Agreement Terms tab of an active sales agreement with a single click. The recalculation process derives product quantities from all associated orders that are fulfilled from the last recalculation date, and updates the sales agreement.

View Sales Agreement Terms Data

Track specific sales agreement term values by viewing the terms for a metric group or for all schedules. Easily compare metrics for products across various schedules with minimum scrolls. Filter sales agreement data by products or categories, or by time period. Use keyboard shortcuts to quickly navigate through your data and perform key actions.

Enhanced View for Sales Agreement Data

Swiftly track and maintain your sales agreement data with the enhanced view. Easily compare metrics across schedules, move around your sales agreement data, and perform actions using your keyboard. The enhanced view is enabled by default for Sales Agreements.

Features in the Enhanced View

The enhanced view for sales agreement data comes with these features.

- Frozen Columns: The Product Name, Metric, and Total columns stay visible while you scroll across various schedules in the agreement. This feature ensures that you don't lose context of the product and metrics, and don't make data entry errors.

- Merged Product Name Cells: The cells with the product names are merged so you can easily identify the metrics for each product.

- Keyboard Shortcuts: You can quickly perform key actions such as editing a cell, saving your changes, and redoing your changes. See Keyboard Actions for Sales Agreement Data.

If needed, you can switch to the legacy view for sales agreement data. The legacy view for sales agreements doesn't include the features that come with the enhanced view for sales agreements. To use the legacy view on a sales agreement's record page, turn on Legacy View on the Agreement Terms tab.

📝 **Note:** We recommend that you use the enhanced view to make the most of the performance, usability, and accessibility enhancements.

Considerations for Using the Enhanced View

Review these considerations for using the enhanced view for sales agreements.

- You may not be able to view the complete edit details of cells that are at or near the bottom edge of the agreement terms table.

- To resolve the errors for any cell values, view the description of the errors in the popover at the bottom of the agreement terms table.
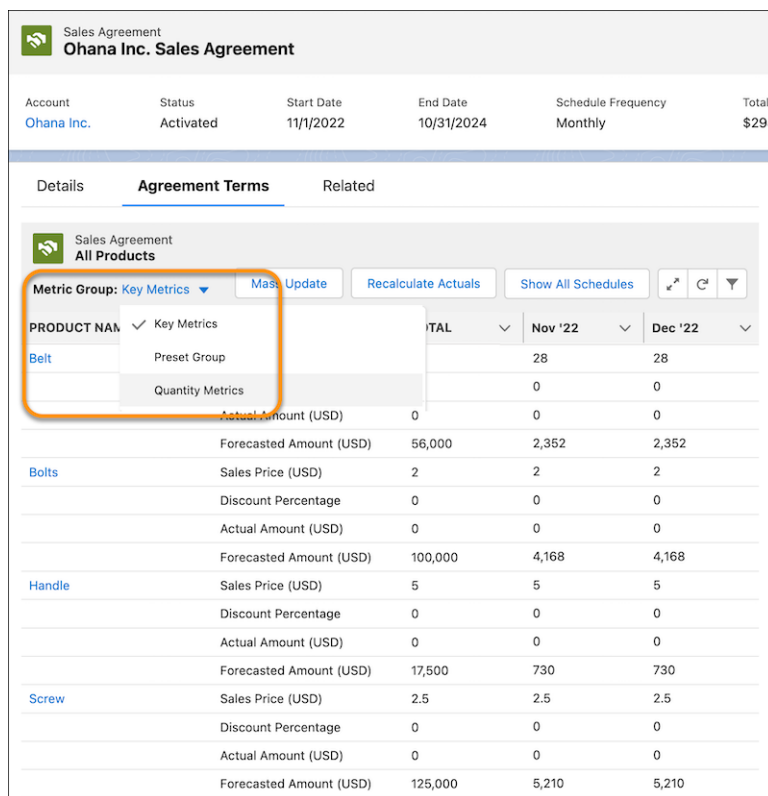
View Sales Agreement Data for a Metric Group

Use metric groups to view the agreement terms for specific metrics. Your admin can create metric groups that include selected metrics based on your business needs.

- To view the data for selected metrics that are part of a metric group, on the Agreement Terms tab of a sales agreement, select the metric group from the Metric Group field.

  For example, to view forecasts specific to the revenue measures that are part of a group, select **Revenue Metrics**.

  📝 Note: The data for the default metric group is shown in the agreement terms. If your admin didn't specify a default group, the data for the first group in the alphabetically sorted order is shown.

The values for the metrics in the selected metric group are shown in the agreement terms grid.

View Sales Agreement Data for All Schedules

The agreement terms grid shows the agreement terms for only eight periods, by default. You can choose to view agreement terms for all schedules.

- On the Agreement Terms tab of a sales agreement, click **Show All Schedules**.
  The agreement terms for all schedules are shown.

View Revised Sales Agreement Data

After you add or update the products or categories in an activated sales agreement, view the agreement terms for all items, items with edits, and recently added items. Switch the views on the Agreement Terms tab.

1. On the Agreement Terms tab of an updated product-based sales agreement, choose one of these options.

   - All Products
   - Products with Edits
   - Recently Added Products
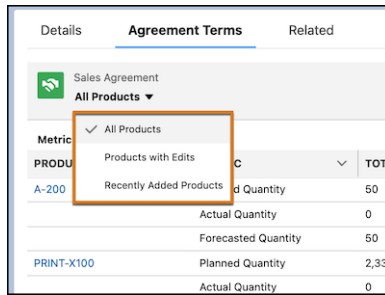
The agreement terms grid shows the metrics for the selected products.

2. On the Agreement Terms tab of an updated category-based sales agreement, choose one of these options.

   - All Categories
   - Categories with Edits
   - Recently Added Categories

The agreement terms grid shows the metrics for the selected categories.

Get an Expanded View of Sales Agreement Data

Get a larger, focused view into the agreement terms of a sales agreement by opening the terms on a separate window.

-
  On a sales agreement's record page, on the Agreement Terms tab, click [⤢].
  The agreement terms appear on a separate window with the data for all schedules.

Filter Sales Agreement Data

Filter the agreement terms of a sales agreement by products or categories and by time period.

1.
   On a sales agreement's record page, on the Agreement Terms tab, click [▼].

2. To filter agreement terms by products or product categories, search for and select the products or categories.

3. To filter agreement terms by time period, select an option.

Option	Description
Current Periods	Shows the forecast for the current month and 7 months in the future.
Range	Shows the forecast for a specified range.
Set Periods	Shows the forecast for up to eight selected periods.

4. Apply the filter.

Keyboard Actions for Sales Agreement Data

Navigate through your sales agreement data and quickly perform key actions by using your keyboard. Use shortcuts to save changes, undo changes, edit a cell, and so on. To use keyboard actions, you must use the enhanced view for sales agreements.

Review the list of keyboard commands for the actions that you can perform on the sales agreement data.

Action	Command
Save your changes	Ctrl + S (Windows/Linux) Cmd + S (macOS)
Undo your changes	Ctrl + Z (Windows/Linux) Cmd + Z (macOS)
Redo your changes	Ctrl + Y (Windows/Linux) Cmd + Shift + Z (macOS)
Cycle actions on the Agreement Terms tab	Tab or Tab + Shift (Windows/Linux) Tab or Tab + Shift (macOS)
Edit a cell	Enter (Windows/Linux) Return (macOS)
Stop editing a cell or exit the expanded view	Escape (Windows/Linux) Escape (macOS)
Move to the cell above	Arrow key (Windows/Linux) Arrow key (macOS)
Move to the cell below	Arrow key (Windows/Linux) Arrow key (macOS)
Move to the next cell	Arrow key (Windows/Linux) Arrow key (macOS)
Move to the previous cell	Arrow key (Windows/Linux) Arrow key (macOS)

Update Values in Sales Agreement Terms

Update individual values at a time or simultaneously update multiple values of a single metric. You can update the agreement term values for all the schedules of a draft sales agreement and the values for the future schedules of an activated or approved sales agreement. When you make updates to an activated sales agreement, its status changes to UnderRevision. After you get the updates approved, the sales agreement is reactivated.

Update Individual Values in Agreement Terms

Revise the individual values in the agreement terms of a draft or activated sales agreement.

1. On a sales agreement's record page, click **Agreement Terms**.

2. Double-click on the cell that has the value that you want to edit, and edit its value.

   You can also click Enter (Windows/Linux) or Return (macOS) on the cell you want to edit. You can make multiple edits at a time.

3. Save your changes.

   The status of an activated sales agreement changes to UnderRevision. The ⓘ icon in a cell indicates that the cell has an updated value.

   You can view the agreement terms for all items, items with edits, and recently added items.

4. If needed, get the changes to your sales agreement approved.

   - If your admin set up an approval process, click **Submit for Approval**.

   - If you can self-approve the sales agreement, change the status of the sales agreement to Approved.

   - If the changes are approved, the status of the sales agreement changes to Activated and the values are updated in the agreement terms.

   - If the changes are rejected, the status of the sales agreement changes to Activated but the previous values are retained.

Update Multiple Values in Agreement Terms

Simultaneously update multiple values of a draft or activated sales agreement. Concurrently update the values of all products or categories, or up to 350 products or categories for all schedules or multiple schedules.

1. On a sales agreement's record page, on the Agreement Terms tab, click **Mass Update**.

2. Select the products or categories.

   You can select multiple products or categories at a time.

3. Select the necessary schedules.

   You can select multiple products or categories at a time.

4. Select the metric that you want to change the values for.

5. Select the action.

   - Increase By

   - Decrease By

   - Replace With

6. Enter a value for the selected action.

7. To convert the value into its corresponding percentage, select **Use as percentage**.

8. Save your changes.

You receive an in-app notification when the process is complete.

The status of an activated sales agreement changes to UnderRevision. The ⓘ icon in a cell indicates that the cell has an updated value.

You can view the agreement terms for all items, items with edits, and recently added items.

9. If needed, get the changes to your sales agreement approved.

- If your admin set up an approval process, click **Submit for Approval**.

- If you can self-approve the sales agreement, change the status of the sales agreement to Approved.

- If the changes are approved, the status of the sales agreement changes to Activated and the values are updated in the agreement terms.

- If the changes are rejected, the status of the sales agreement changes to Activated but the previous values are retained.

SEE ALSO:

Recalculate Actuals for Sales Agreement Terms

Recalculate actuals on the Agreement Terms tab of an active sales agreement with a single click. The recalculation process derives product quantities from all associated orders that are fulfilled from the last recalculation date, and updates the sales agreement.

Actuals are calculated and updated for sales agreements through the daily run automated process. Recalculate actuals after you create orders or import orders data.

📝 **Note:** If you manually recalculate actuals for a sales agreement on a certain day, the sales agreement isn't considered in the daily run automated process for that day.

💡 **Tip:** For a category-based sales agreement, if you want orders for a product in a category to be considered for actuals calculation, you must select that category as the primary category for the product.

1. Open a sales agreement record.

2. On the Agreement Terms tab, click **Recalculate Actuals**.

3. Select the schedules that you want to recalculate the actuals for.

- Current schedule

- Past and current schedules

4. Click **Recalculate**.

You receive an in-app notification when the process is complete.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To modify sales agreements:
- Read and Edit permissions on Sales Agreement

To update actual quantities:
- Edit Actual Quantity of Sales Agreements Products permission

To view the latest values, refresh the agreement terms.

SEE ALSO:

Recalculate Actuals for Sales Agreement Terms

How Are Sales Agreement Actuals Calculated?

Choose How Sales Agreement Actuals Are Calculated

Manage Sales Agreements Actuals

With sales agreements, sales teams can track the actual revenue and quantity values, or actuals, from fulfilled orders. Sales teams can compare actuals with planned revenue and quantity values to track customer compliance with sales agreements.

How Are Sales Agreement Actuals Calculated?

A daily automated process derives and calculates sales agreement actuals from orders, from orders associated with contracts, or from quantities imported from external systems. Users can also manually recalculate the actuals of an activated sales agreement.

Create Orders to Calculate Sales Agreement Actuals

If the actual quantities are automatically calculated from direct orders, create orders from the related list of a sales agreement record. A daily run automated process derives the product quantity fulfilled in each activated order, and then updates that quantity in the sales agreement.

Create Orders Associated with Contracts to Calculate Sales Agreement Actuals

Create contracts and orders from the related list of a sales agreement record if the actuals calculation mode is Automatically from orders through contracts. A daily automated process derives the product quantity fulfilled in each active order, and updates the actual quantity in the sales agreement.

Import Data to Update Sales Agreement Actuals

Update the actuals of sales agreements by importing product quantity data in bulk from external systems. If your company stores order, contract, and proof-of-sale information in external systems, your admin can configure the sales agreement actuals to be calculated manually in the Sales Agreement settings in Setup.

SEE ALSO:

Calculate Actuals for Sales Agreements Using the Data Processing Engine

How Are Sales Agreement Actuals Calculated?

A daily automated process derives and calculates sales agreement actuals from orders, from orders associated with contracts, or from quantities imported from external systems. Users can also manually recalculate the actuals of an activated sales agreement.

How Are Actuals Derived?

Admins can choose how actuals for all sales agreements in your Salesforce org are calculated in the Sales Agreement settings in Setup. If users have access to the Actuals Calculation Mode field on the Sales Agreement object, they can choose how actuals are calculated for a sales agreement record.

Actuals for a sales agreement can be derived from these sources.

- Orders, if the actuals calculation mode is Automatically from direct orders.
- Orders associated with contracts, if the actuals calculation mode is Automatically from orders through contracts.
- Data imported from external systems, if the actuals calculation mode is Manually using API upload.

Where Are Actuals Stored and Shown?

The Actual Quantity and the Actual Amount fields on the Sales Agreement Product Schedules object store the actual values for a product or a category for a particular schedule of a sales agreement. The Total Actual Quantity and the Total Actual Amount fields on the Sales Agreement Product object aggregates the actual values for a product or a category for all schedules in a sales agreement. The values in all these fields are shown in the table on the Agreement Terms tab of a sales agreement.

How Are Actuals Updated?

An automated process runs every day at 1:00 AM in your org's time zone and calculates and updates the sales agreement actuals. You can also click the Recalculate Actuals button on a sales agreement record page to recalculate the actuals of that sales agreement.

The automated process considers the quantity and amount of all order products associated with an order. The process considers active orders that have reached their start date in the current schedule of a sales agreement. For each product present in both the active order and the active sales agreement, the order quantity is added to the actual quantity in the sales agreement and the order amount is added to the actual amount in the sales agreement.

Here's how the automated process updates the actuals of sales agreements.

- The process considers activated orders with start dates in the current schedule of a sales agreement.
- The process doesn't consider orders that have been activated in the current schedule of a sales agreement if the orders have start dates in the past schedules of a sales agreement. To consider the actuals of activated orders with start dates in past schedules, you must manually recalculate the actuals of that sales agreement.
- The process doesn't consider orders with start dates in the future schedules of a sales agreement that have been activated in the current schedule. Also, if you manually recalculate the actuals of a sales agreement, activated orders with start dates in the future schedules aren't considered. These orders are considered only when those schedules begin.
- The process considers an order from the day after the order's start date. For example, if the order start date is 1 January, the actual quantities of that order are considered for calculation from 2 January.
- The process only considers orders that have been activated until 11:00 PM for the actuals that are calculated on 1:00 PM the next day. All orders activated after 11:00 PM are considered the next time the process runs.
- For an order that has already been considered in a sales agreement, if you update the order in the current schedule, the updates aren't considered by the process and its actuals aren't recalculated. To consider the actuals of updated orders in a sales agreement, you must manually recalculate the actuals of that sales agreement.
- Actuals for a sales agreement are calculated based on the calculation mode at the time of activation. The automated process doesn't consider any change to the actuals calculation mode during the active period.
- If there's any active reduction order, the order quantity is deducted from the actual quantity in the sales agreement.
- Actuals for expired, canceled, and deleted sales agreements can't be updated.
- The process considers the last actuals calculation date. If the last actuals calculation date is 4 May, and the current date is 19 May, the automated process for today only recalculates actual quantities for any order changes after 4 May.
- If you've manually calculated the actuals of a sales agreement on a certain day, the automated process doesn't consider the sales agreement that day.
- Order products with negative quantities and unit prices are considered when actuals are calculated for sales agreements. Sales teams create orders with negative quantities to represent order returns or recalls. Negative quantities and unit prices for order products are reflected in the Actual Amount and Actual Quantity metrics on the Agreement Terms tab for a sales agreement record.

💡 **Tip:** To check if the actuals of a sales agreement were recalculated by the process, check the Last Modified By and Last Modified Date fields in the sales agreement. If a sales agreement was updated by the process, the Automated Process value is specified in the Last Modified By field in the sales agreement.

📝 **Note:** Ensure that the actuals are calculated for the right schedules in a sales agreement. The autogenerated name of a sales agreement product schedule is determined by its start date. For example, in a monthly sales agreement, if a schedule's start date is August 31, 2023 and the end date is September 30, 2023, the schedule's name will be Aug '23. For an activated order with September 7, 2023, the actuals will be reflected in the Aug '23 schedule.

Create Orders to Calculate Sales Agreement Actuals

If the actual quantities are automatically calculated from direct orders, create orders from the related list of a sales agreement record. A daily run automated process derives the product quantity fulfilled in each activated order, and then updates that quantity in the sales agreement.

💡 **Tip:** For a category-based sales agreement, if you want the orders for a product in a category to be considered for actuals calculation, you must select that category as the primary category for the product.

For an order to be considered in the actuals for a sales agreement, in that order record, select that sales agreement's record and select the same account and price book as selected in the sales agreement record.

EDITIONS
Available in: **Enterprise**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS
To create orders: • Activate Orders
To create orders: • Read and Edit access on Orders

1. Create an order associated with a sales agreement.

   a. Open an activated sales agreement's record.

   b. On the Related tab, in the Orders related list, click **New**.

   c. Search for and select the account associated with the sales agreement.

   d. Enter an order start date that's on or after the start date of the sales agreement and before the end date of the sales agreement.

   e. In Status, select **Draft**.

   f. Enter the other details, and save your changes.

2. Add order products to the order.

   a. On the Related tab of the order, in the Order Products related list, click **Add Products**.

   b. Select the products to be added to the order, and click **Next**.

   You can add products only when the status of an order is Draft. We recommend that you add only those products that are also part of the associated sales agreement. There may be inconsistencies in the actuals calculations if you add products that aren't part of the sales agreement. When an order is complete and is ready to be shipped or provisioned, activate the order.

   c. Specify the quantities and unit prices of the products.

   You can specify positive or negative values for quantities and unit prices for order products. Negative quantities for order products represent order recalls or returns. To create order products with negative quantities, ensure that your admin enabled negative quantities in Setup. See Enable Negative Quantities for Order Products .

   d. Save your changes.

3. Change the status of the order to Activated.

   You can edit product quantities after the order is activated.

The daily run automated process selects all activated orders a day after their start date. For a product or category present in both the activated order and the activated sales agreement, the order quantity is added to the actual quantity in the sales agreement. If there's any active reduction order, the order quantity is deducted from the actual quantity in the sales agreement.

SEE ALSO:

Recalculate Actuals for Sales Agreement Terms

How Are Sales Agreement Actuals Calculated?

Choose How Sales Agreement Actuals Are Calculated

Create Orders Associated with Contracts to Calculate Sales Agreement Actuals

Create contracts and orders from the related list of a sales agreement record if the actuals calculation mode is Automatically from orders through contracts. A daily automated process derives the product quantity fulfilled in each active order, and updates the actual quantity in the sales agreement.

> 💡 **Tip:** For a category-based sales agreement, if you want orders for a product in a category to be considered for actuals calculation, you must select that category as the primary category for the product.

1. Create a contract associated with a sales agreement.

    a. Open a sales agreement's record.

    b. On the Related tab, in the Contracts related list, click **New**.

    c. Search for and select the account associated with the sales agreement.

    d. Enter a contract start date that's on or after the start date of the associated sales agreement, and before the end date of the sales agreement.

    e. Enter the contract term.

        Ensure that the contract end date is on or before the end date of the associated sales agreement.

    f. In Status, select **Draft**.

    g. Enter the other details, and save your changes.

2. Create an order associated with the sales agreement and the contract.

    a. Open an activated sales agreement's record.

    b. On the Related tab, in the Orders related list, click **New**.

    c. Search for and select the account associated with the sales agreement.

    d. In Contract Number, search for and select the contact to be associated with the orders.

    e. Enter an order start date that's on or after the start date of the sales agreement and before the end date of the sales agreement.

        The start date of the order must be after the contract's start date. The start date of the order serves as the primary condition based on which actual quantities are picked up for calculation. All actuals are computed based on the start date.

    f. In Status, select **Draft**.

    g. Enter the other details, and save your changes.

3. Add order products to the order.

    a. On the Related tab of the order, in the Order Products related list, click **Add Products**.

b. Select the products to be added to the order, and click **Next**.

You can add products only when the status of an order is Draft. We recommend that you add only those products that are also part of the associated sales agreement. There may be inconsistencies in the actuals calculations if you add products that aren't part of the sales agreement. When an order is complete and is ready to be shipped or provisioned, activate the order.

c. Specify the quantities and unit prices of the products.

You can specify positive or negative values for quantities and unit prices for order products. Negative quantities for order products represent order recalls or returns. To create order products with negative quantities, ensure that your admin enabled negative quantities in Setup. See Enable Negative Quantities for Order Products .

d. Save your changes.

4. Change the status of the order to Activated.

You can edit product quantities after the order is activated.

SEE ALSO:

Recalculate Actuals for Sales Agreement Terms

How Are Sales Agreement Actuals Calculated?

Choose How Sales Agreement Actuals Are Calculated

Import Data to Update Sales Agreement Actuals

Update the actuals of sales agreements by importing product quantity data in bulk from external systems. If your company stores order, contract, and proof-of-sale information in external systems, your admin can configure the sales agreement actuals to be calculated manually in the Sales Agreement settings in Setup.

To manually update sales agreement actuals, admins must specify the Manually using API upload option in the Actuals Calculation section on the Sales Agreement settings in Setup.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions

The Sales Agreement Product Schedules object stores the planned and actual values of various quantity and revenue metrics for a product or a category for a particular schedule of a sales agreement. You can use various data integration and transfer methods to update the Actual Quantity and Actual Amount field values for Sales Agreement Product Schedule records. A daily scheduled job that runs at 1:00 AM in your Salesforce org's time zone refreshes the relevant information in sales agreements.

📝 Note: To update the actuals of sales agreements, you must be assigned the Edit Actual Quantity of Sales Agreements Products General user permission.

Use these methods to update the actuals of sales agreements in your org.

Transfer Data from CSV Files

If your partners share proof-of-sales and transaction information in CSV files, use the ProcessCSV Flow action to transfer the records either to a custom object or directly to the Sales Agreement Product Schedules object.

Transfer Data from External Systems

If you use external systems to store orders and contracts, such as enterprise resource planning solutions, use integration tools to transfer data to the Sales Agreement Product Schedules object. You can use Bulk API or Data Loader to transfer the data.

SEE ALSO:

Choose How Sales Agreement Actuals Are Calculated

Recalculate Actuals for Sales Agreement Terms

How Are Sales Agreement Actuals Calculated?

Salesforce Developers: Salesforce Data Loader

Manage the Lifecycle of a Sales Agreement

Track the planned and actual values of agreement terms across the lifecycle of sales agreements—from inception to renewal.

What Are the Stages in a Sales Agreement's Lifecycle?

The status of a sales agreement represents the stage of a sales agreement. The status of a sales agreement determines agreement term values that users can edit and if users can add products or categories to the sales agreement. If your admin set up an approval process for sales agreements, get a sales agreement approved during the agreement's inception and when its agreement terms are updated.

Approve a Sales Agreement

After you create a sales agreement, you must get it approved before its start date, or it won't be activated. You must also get a sales agreement approved when you update its terms. If your admin has set up an approval process for sales agreements, you must submit sales agreements for approval. If an approval process isn't set up, you can self-approve sales agreements.

Activate a Sales Agreement

An approved sales agreement gets activated automatically on its start date after the daily process runs at 1:00 AM. If a sales agreement isn't approved by the start date, the daily automated process doesn't select the sales agreement for activation. If the activation process fails, you must manually activate the sales agreement.

Cancel a Sales Agreement

You can cancel an approved or activated sales agreement. After a sales agreement is cancelled, it can't be edited. Actuals for a sales agreement are recalculated after it's cancelled.

Expire a Sales Agreement

An active sales agreement automatically expires on its end date. You can't edit an expired sales agreement. The status of the sales agreement updates to Expired on the end date after the daily system job runs at 1:00 AM. If the expiration process fails, you can manually change the status of the sales agreement to Expired. You can't expire an agreement before the end date.

Renew a Sales Agreement

Renew a sales agreement to create another sales agreement with the same products and attributes. You can renew a sales agreement when it's active, under revision, or expired. When you renew a sales agreement, all products along with their initial planned quantities are copied into the new sales agreement. You can renew sales agreements based on the renewal period defined by your Salesforce admin.

Delete a Sales Agreement

You can delete an active, approved, canceled, or expired sales agreement. You can only delete a sales agreement if it doesn't have any active orders associated with it.

SEE ALSO:

Define the Stages in the Sales Agreement Lifecycle

Choose How Sales Agreements Are Approved

What Are the Stages in a Sales Agreement's Lifecycle?

The status of a sales agreement represents the stage of a sales agreement. The status of a sales agreement determines agreement term values that users can edit and if users can add products or categories to the sales agreement. If your admin set up an approval process for sales agreements, get a sales agreement approved during the agreement's inception and when its agreement terms are updated.

Stages in a Sales Agreement's Lifecycle

Review the stages of a sales agreement, what they mean, the values that you can update in different stages, and if you can add and delete products in different stages.

Stage	Description	Values You Can Update	Add Products?	Delete Products?
Draft	The agreement terms of a sales agreement in the Draft status aren't finalized. When you create a sales agreement, it is in the Draft status.	Planned quantities and revenues, sales prices, discounts, and custom metric values such as inventory	Yes	Yes
Approved	The agreement terms of a sales agreement in the Approved status are finalized. Sales agreements can be self-approved by users or submitted for approval through an approval process.	Custom metric values such as inventory	No	No
Activated	An approved sales agreement automatically gets activated on its start date. A sales agreement can't be activated before its start date.	Planned quantities and revenues, sales prices, discounts, and custom metric values such as inventory	Yes When you add products to an activated sales agreement, its status changes to UnderRevision.	No
Under Revision	When you update the agreement terms or add products to a sales agreement in the Draft or	Planned quantities and revenues, actual quantities and revenues, sales prices, discounts, and custom	Yes	Yes You can only delete products that are added when the Sales

Stage	Description	Values You Can Update	Add Products?	Delete Products?
	Activated status, the status of the sales agreement is automatically changed to UnderRevision. The updates to a sales agreement are applied based on its approval.	metric values such as inventory		Agreement is under revision.
Expired	An activated sales agreement automatically expires on its end date. You can't expire an agreement before the end date. You can't edit a sales agreement in the Expired status.	Custom metric values such as inventory	No	No
Cancelled	You can't edit a sales agreement in the Cancelled status. Actuals for a sales agreement are recalculated after it's cancelled.	Custom metric values such as inventory	No	No
Renewed	Renew a sales agreement to create another sales agreement with the same planned values for all products or categories. Renew a sales agreement when it's activated, under revision, or expired. Renew a sales agreement during its renewal period, as defined in the Sales Agreement settings in Setup. You can edit the agreement terms of the renewed sales agreement. A sales agreement created by renewing another sales agreement is in the Draft status.	—	—	—
Deleted	You can delete a sales agreement record. You can delete a sales agreement only if it doesn't have any active orders associated with it.	—	—	—

What Happens When You Update the Agreement Terms of a Sales Agreement?

You can add products or categories and revise the agreement terms of a sales agreement in the Draft or Activated status. When you update an activated sales agreement, its status automatically changes to UnderRevision. To reactivate the sales agreement, you must get the sales agreement approved. Here's how the updates to a sales agreement apply based on its approval.

- Approved: The updates to a sales agreement can be approved by changing its status to Approved. After the changes are approved, the status of the sales agreement changes to Activated and the values are updated in the agreement terms.

- Rejected: The updates to a sales agreement can be rejected by changing its status to Rejected. If the changes are rejected, the status of the sales agreement changes to Activated but the changed values aren't retained.

Approve a Sales Agreement

After you create a sales agreement, you must get it approved before its start date, or it won't be activated. You must also get a sales agreement approved when you update its terms. If your admin has set up an approval process for sales agreements, you must submit sales agreements for approval. If an approval process isn't set up, you can self-approve sales agreements.

You can only get a sales agreement approved if you've added at least one product or category with it.

You can get a sales agreement approved either by submitting for approval through an approval process or by self-approving it. If your admin has set up an approval process, you must submit a sales agreement for approval through the approval process and can't self-approve the sales agreement.

1. Open a sales agreement record.

2. Choose one of the options.

   - To self-approve a sales agreement, in the Details tab, select a status that's mapped to the Approved status code and save your changes.

   - In the quick actions menu, click **Submit for Approval**, and then provide a justification, if necessary.

   - For a new sales agreement, after the sales agreement is approved, the status of the sales agreement changes to Activated.

   - For a sales agreement with updated sales agreement terms, after the changes are approved, the status of the sales agreement changes to Activated and the values are updated in the agreement terms.

   - For a sales agreement with updated sales agreement terms, after the changes are rejected, the status of the sales agreement changes to Activated but the changed values aren't retained.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions.

USER PERMISSIONS

To approve sales agreement
- Read and Edit permissions on Sales Agreement

SEE ALSO:

Choose How Sales Agreements Are Approved

Activate a Sales Agreement

An approved sales agreement gets activated automatically on its start date after the daily process runs at 1:00 AM. If a sales agreement isn't approved by the start date, the daily automated process doesn't select the sales agreement for activation. If the activation process fails, you must manually activate the sales agreement.

1. Open a sales agreement record.

2. On the Details tab, select a status that's mapped to the Active status code.

3. Save your changes.

After you activate a sales agreement, you can change these values on the Agreement Terms tab.

- Actual quantities per product or category per schedule, if the actuals calculation mode is manual.

- Forecast quantities and amounts per product or category per schedule.

Cancel a Sales Agreement

You can cancel an approved or activated sales agreement. After a sales agreement is cancelled, it can't be edited. Actuals for a sales agreement are recalculated after it's cancelled.

You can't cancel a sales agreement if it's in the Draft, Under Revision, or Expired status.

1. From the quick actions menu on a sales agreement record, click **Cancel**.

2. To confirm your action, click **Yes**.
   For active sales agreements with the Actuals Calculation Mode as Automatically from direct orders or Automatically from orders through contracts, all actual quantities are recalculated when you cancel the sales agreement. You receive an in-app notification when the recalculation is complete.

If the process fails, you can click **Recalculate Actuals** on the Agreement Terms tab to initiate the process.

Expire a Sales Agreement

An active sales agreement automatically expires on its end date. You can't edit an expired sales agreement. The status of the sales agreement updates to Expired on the end date after the daily system job runs at 1:00 AM. If the expiration process fails, you can manually change the status of the sales agreement to Expired. You can't expire an agreement before the end date.

📝 Note: To terminate a sales agreement before its start date, cancel the sales agreement instead of expiring it.

1. In a sales agreement record, go to the Details tab.

2. Select a status corresponding to the Expired status code.

3. Save your changes.

Renew a Sales Agreement

Renew a sales agreement to create another sales agreement with the same products and attributes. You can renew a sales agreement when it's active, under revision, or expired. When you renew a sales agreement, all products along with their initial planned quantities are copied into the new sales agreement. You can renew sales agreements based on the renewal period defined by your Salesforce admin.

1. From the quick actions menu on a sales agreement record, click **Renew**.

2. Enter a name for the renewed sales agreement.

3. To determine the schedules of the renewed sales agreement, perform one of these steps.

   - If you're renewing a one-time sales agreement, specify the start and end dates for the renewed sales agreement.

   - If you're renewing a weekly, monthly, quarterly, or yearly sales agreement, specify the start date for the renewed sales agreement.

   📝 **Note:** The start date of the renewed agreement can be any date after the expiration of the current sales agreement.

4. Click **Renew**.
   A Sales Agreement record for the renewed sales agreement is created.

On a sales agreement record, you can view the links to the renewed-from and renewed-to sales agreements.

SEE ALSO:

   Define Renewal Period for Sales Agreements

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions.

USER PERMISSIONS

To modify sales agreement
- Read, Edit permissions on Sales Agreement

Delete a Sales Agreement

You can delete an active, approved, canceled, or expired sales agreement. You can only delete a sales agreement if it doesn't have any active orders associated with it.

1. On a sales agreement record, click **Delete**.

2. To confirm your action, click **Delete**.

   📝 **Note:** All account product forecast records linked to a deleted sales agreement are also deleted.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions.

USER PERMISSIONS

To delete sales agreement
- Delete Sales Agreements

Considerations for Sales Agreements

Keep the following considerations in mind while setting up and using Sales Agreements in Manufacturing Cloud.

Sales Agreement Setup and Configuration

- When your org gets upgraded during a release, make sure you check the cloned permission sets for Manufacturing Sales Agreements and Manufacturing Sales Agreements For Community.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions

The Mass Update for Sales Agreements system permission gets automatically deselected in existing cloned permission sets during a release upgrade. You can reassign this permission in the cloned permission sets if required. There's no impact when you clone a permission set after a release upgrade.

- We recommend not changing the API names of custom fields in use in custom metrics in the Sales Agreement Product and Sales Agreement Product Schedule objects. Remove the mapping between the custom fields before changing their API names.

- The fields on sales agreements objects are of type double Number (18,0) with no precision defined at the API level. The data display is up to 2 decimal places as defined by the platform at the UI level.

Sales Agreement Terms

- A sales agreement can have a maximum of 1500 products or product categories and 72 schedules. Contact Salesforce support if you want to increase the limits. Note that having a large number of product or product categories and schedules can affect system performance.

- Order products with negative quantities and unit prices are considered when actuals are calculated for sales agreements. Sales teams create orders with negative quantities to represent order returns or recalls. Negative quantities and unit prices for order products are reflected in the Actual Amount and Actual Quantity metrics in the Agreement Terms tab for a sales agreement record.

- To ensure that actuals for order returns are calculated accurately, sales teams must create order products with negative quantities to represent order returns. If both the quantity and the unit price are negative for an order product, the actuals calculated will be positive.

- To let your sales team create order products with negative quantities, enable negative quantities in Setup. To learn more, see Enable Negative Quantities for Order Products .

- For sales agreements with Product Level as Category, the Mass Update action may not work if you're trying to increase or decrease the Initial Planned Quantity for specific schedules. The Planned Amount field is a derived field where Planned Amount = IF((PlannedAmount > 0),PlannedAmount,PlannedQuantity * SalesPrice * (1 - DiscountPercentage)). If you update the value once more, the value changes.

- If you update the number of products and schedules in a sales agreement, you can experience a delay in saving the agreement terms.

- The edit history isn't saved when you edit a forecast quantity, forecast amount, or any custom forecast metrics for a sales agreement or use the Mass Update option to update the forecast values. And there's no indicator that the forecast metric value in that cell is modified.

- You can't add a product to a sales agreement if the product already exists in the sales agreement.

- The autogenerated name of a sales agreement product schedule is determined by its start date. For example, in a monthly sales agreement, if a schedule's start date is August 31, 2023 and end date is September 30, 2023, the schedule's name will be Aug '23. Or, in a yearly sales agreement, if a schedule's start date is December 31, 2023 and end date is December 30, 2024, the schedule's name will be 2023. You can change the autogenerated name of a schedule by editing the Name field of a Sales Agreement Product Schedule record.

- If you create a monthly sales agreement that starts between the 29th and the 31st day of a month, the names of some schedules may look inconsistent. Some schedules may have the same name and some month names may be skipped. No dates are skipped across the schedules. For example, if you create a monthly sales agreement that begins on May 31, 2024 and has 6 schedules, these schedules will be generated.

Name	Start Date	End Date
May '24	May 31, 2024	June 30, 2024
Jul '24	July 1, 2024	July 30, 2024
Jul '24	July 31, 2024	August 30, 2024

Name	Start Date	End Date
Aug '24	August 31, 2024	September 30, 2024
Oct '24	October 1, 2024	October 30, 2024
Oct '24	October 31, 2024	November 30, 2024

You can change the autogenerated name of a schedule by editing the Name field of a Sales Agreement Product Schedule record.

Sales Agreement Lifecycle

- If you add custom statuses for Sales Agreement, make sure you use the Reorder action to arrange the multiple statuses related to the Activated Status Category. Move the custom status after the default Activated status value. When the sales agreement reaches the start date, and its status is Approved, the record automatically changes to the Activated status (default value). Then, you can manually change the status to the custom value that's related to the Activated status category.

- When you clone an existing sales agreement, it's created in Draft state with the same start date as the original sales agreement. The cloned sales agreement, however, doesn't contain the products and schedules of the original sales agreement.

- If you get an error when simultaneously converting more than 100 quotes, opportunities, or custom objects to sales agreements using the new Sales Agreements Connect REST API, try converting with fewer objects at a time.

Sales Agreement Actuals Calculation

- If you manually recalculate actuals for a sales agreement on a certain day, the sales agreement isn't considered in the nightly actuals calculation job on that day.

- For a category level sales agreement, if you want an ordered product to be considered for actuals calculation, ensure that you specify its primary category in the sales agreement.

Enhanced View for Sales Agreement Data

- You may not be able to view the complete edit details of cells that are at or near the bottom edge of the agreement terms table.

- To resolve the errors for any cell values, view the description of the errors in the popover at the bottom of the agreement terms table.

SEE ALSO:

Considerations for Manufacturing Cloud

Forecast Your Run-Rate and New Business with Account-Based Forecasting

Plan for demand more efficiently and align your production and sales teams around your evolving customer trends. Forecasts can show you planned and actuals for your business in one place, forecasted out for a specific period of time, grouped by product, location, or other dimensions.

> 📝 **Note:** There are two versions of forecasting, Account Forecasting and Advanced Account Forecasting. We recommend that new implementations use Advanced Account Forecasting and that existing implementations plan a migration. Don't enable both forecasting features.

Account Forecasting and Advanced Account Forecasting Comparison

Compare Account Forecasting and Advanced Account Forecasting to make an informed decision about the feature you want to use for account forecast calculations in your org. We recommend that you enable only one of these features in your org based on your decision.

Create Holistic Forecasts with Advanced Account Forecasting

Use Advanced Account Forecasting to generate baseline 360-degree forecasts based on opportunities, orders, sales agreements, historical orders, and other custom measures that help you view all aspects of your business from Salesforce and beyond.

Create Account Forecasts to Enhance Your Planning

Use Account Forecasting to generate forecasts based on orders, opportunities, and sales agreements. Create formulas to calculate your forecasts as per the requirements of your company. Define a recurring adjustment period in alignment with your company's planning period to allow for collaborative edits during that period. After the period is over, the forecasts are locked. Use the locked forecast values to plan inventory and operations for the upcoming schedules. Get insights into comparative sale of products across accounts to prepare for new possibilities of expanding your market.

SEE ALSO:

Forecast Service Revenue and Spare Parts Demand

Manufacturing Cloud Developer Guide

Account Forecasting and Advanced Account Forecasting Comparison

Compare Account Forecasting and Advanced Account Forecasting to make an informed decision about the feature you want to use for account forecast calculations in your org. We recommend that you enable only one of these features in your org based on your decision.

> 📝 **Note:** Enabling both Advanced Account Forecasting and Account Forecasting in your org can cause forecast data disruption or unforeseen errors. We'll enforce this restriction in a future release.

Capability	Account Forecasting	Advanced Account Forecasting
Forecasting Scope	Manage account forecasts on orders, opportunities, and sales agreements.	Manage your entire account book of business such as orders, opportunities, sales agreements, and program based business across various time horizons.
Opportunity forecasting by role/ territory	✅	✅
Account based forecast	✅	✅

Capability	Account Forecasting	Advanced Account Forecasting
Visibility of entire book of business	✓	✓
Forecast settings by region/business unit	✗	✓
Complex and configurable forecast calculations	Basic (Formula builder)	Advanced (Data Processing Engine and formula builder)
Account forecast visibility	✓	✓
Configurable forecasting (right-level to forecast)	✗	✓
Partner/customer forecast collaboration	✗	✓
Real-time impact assessment	✓	✓
Sales forecast process orchestration	Basic (same adjustment period and frequencies across all users)	Advanced (adjustment periods and frequencies by profile)
Forecast sharing with advanced permissions	Account level	Flexible
Traceability of adjustments	System level (supports only forecast quantity and revenue)	System level (supports adjustment on any editable measure)
Any level hierarchy forecasting	✗	✓
Persona specific forecast views	✗	✓
Time-series forecasting	✗	✓
Advanced analytical insights	✗	✓
Configurable forecast rollups	✗	✓
Works with Manufacturing Cloud for Service	✗	✓ (requires custom Data Processing Engine jobs)

Create Holistic Forecasts with Advanced Account Forecasting

Use Advanced Account Forecasting to generate baseline 360-degree forecasts based on opportunities, orders, sales agreements, historical orders, and other custom measures that help you view all aspects of your business from Salesforce and beyond.

Capabilities of Advanced Account Forecasting

With Advanced Account Forecasting, you can create forecasts across regions, products, product categories, or any other custom dimensions in a single instance of Manufacturing Cloud. You can generate forecasts for multiple horizons, for example, weekly or monthly, and use a rolling forecast depending on your business requirements.

Advanced Account Forecasting Terminology

Here's a comprehensive list of key terms and concepts for Advanced Account Forecasting.

Forecast Fact Object Included with Advanced Account Forecasting

Advanced Account Forecasting comes with a predefined forecast fact object called Advanced Account Forecast Fact.

Configure Advanced Account Forecasting

Use these steps to set up Advanced Account Forecasting in your org.

Create and Configure Forecast Sets

Forecast Sets are the primary building blocks required to generate 360-degree forecasts. A forecast set contains the information necessary to generate the forecast for an account considering custom dimensions, frequencies, and measures.

Streamline Forecast Calculations with Data Processing Engine Definitions

Advanced Account Forecasting uses Data Processing Engine to filter and aggregate data from orders, opportunities, sales agreements, location, product category, and custom objects. You can activate the out-of-the-box data processing engine jobs, or create and run your own using existing templates.

Calculate Account Forecasts Using Flows

You can orchestrate a flow using Flow Builder to run the account forecast calculations. Use the flow to run the data processing engine jobs to aggregate data from sales agreements, orders, opportunities, or any other custom objects, and calculate forecasts. Schedule the flows according to your requirements. You can use the out-of-the-box invocable actions called Calculate Advanced Account Forecast and Update Advanced Account Forecast Set Partner in the flow for baseline calculations of forecasts data.

Example: Generate Forecasts Across Multiple Regions with Advanced Account Forecasting

You can use the Advanced Account Forecasting feature to configure forecasts according to your business needs. To explain the flexibility that Advanced Account Forecasting offers, let's consider the example of a business conglomerate spread across multiple regions. The company has a distributed account forecasting model where each region creates and maintains forecasts according to their business needs.

Create Triggers for Your Forecast Calculations

If you're using custom advanced account forecast fact objects for your forecasts, you can create triggers to calculate forecasts for your accounts instead of using the CalculateAdvancedForecast invocable action in the flow. A trigger is Apex code that executes before or after specific data manipulation language (DML) events occur, such as before object records are inserted into the database, or after records have been deleted.

Define Custom Fiscal Years for Your Manufacturing Forecasts

You can define custom fiscal years to generate forecasts according to the specific needs of your business.

View Forecasts and Make Adjustments

With Advanced Account Forecasting, generate forecasts across regions, products, product categories, or any other custom dimensions in a single instance of Manufacturing Cloud. Your account managers have the flexibility to make forecast adjustments whenever necessary.

Migrate from Account Forecasting to Advanced Account Forecasting

You can use Advanced Account Forecasting to generate forecasts based on opportunities, orders, sales agreements, historical orders, and any other custom measures considering all aspects of business from Salesforce and beyond. If you're an existing customer using Account Forecasting, follow these steps to migrate to Advanced Account Forecasting.

Considerations for Advanced Account Forecasting

Review these considerations before you start using Advanced Account Forecasting.

Deploy Advanced Account Forecasting Analytics for Manufacturing

Use the Advanced Account Forecasting Analytics for Manufacturing app to gain insights into your forecast data and develop accurate forecasts to optimize your production and operations. Deploy Advanced Account Forecasting Analytics for Manufacturing by assigning permissions, enabling CRM Analytics, and creating and sharing the analytics app for your users.

SEE ALSO:

Trailhead: Advanced Account Forecasting with Manufacturing Cloud

Trailhead: Data Processing Engine Essentials in Advanced Account Forecasting

Trailhead: Data Processing Engine Customization in Advanced Account Forecasting

Capabilities of Advanced Account Forecasting

With Advanced Account Forecasting, you can create forecasts across regions, products, product categories, or any other custom dimensions in a single instance of Manufacturing Cloud. You can generate forecasts for multiple horizons, for example, weekly or monthly, and use a rolling forecast depending on your business requirements.

Learn and Explore

Watch this video to understand the capabilities of Advanced Account Forecasting.

🎥 Watch a video

Key Features

Advanced Account Forecasting has these key features:

- You can create separate forecast sets to define forecast configurations for different groups of accounts, rather than a single configuration for your entire org. Different forecast set can be set up for regions, business units, or other logical groupings.

- You can configure forecast calculations for each business unit differently, and then run these calculations through scheduled flows or in real time.

- Data Processing Engine definitions are used to generate, regenerate, and recalculate forecasts. A separate template is available for rollover of the forecast data at the start of a new period. You can create multiple definitions and customize the logic to trigger forecast processes for specific forecast sets or accounts.

- You can create custom measures for forecast sets, and then specify calculation methods and aggregation type for each measure. You can also create custom formulas to calculate forecast data.

- For each forecast set, you can configure different adjustment periods for different user profiles.

SEE ALSO:

Trailhead: Advanced Account Forecasting with Manufacturing Cloud

Trailhead: Data Processing Engine Essentials in Advanced Account Forecasting

Trailhead: Data Processing Engine Customization in Advanced Account Forecasting

Advanced Account Forecasting Terminology

Here's a comprehensive list of key terms and concepts for Advanced Account Forecasting.

Forecast Dimensions

Dimensions are used to categorize forecast data. For example, you could have dimensions for product, region, or ship-to-location. You can associate up to six dimensions with a forecast set. Period and account are mandatory dimensions in Advanced Account Forecasting. The out-of-box forecast fact object, Advanced Account Forecast Fact, includes predefined dimensions.

Forecast Fact Objects

Forecast fact objects store the actual forecast data such as the opportunity quantity, opportunity revenue, order quantity, and order revenue records. Advanced Account Forecasting comes with a preconfigured forecast fact object, Advanced Account Forecast Fact. For more information, see Forecast Fact Object with Advanced Account Forecasting.

Forecast Sets

Forecast Sets are the primary building blocks required to generate holistic forecasts. Forecast sets contain the necessary dimensions, measures, and other configuration information to generate advanced account forecasts. For example, the Salesforce admin at a company that operates in EMEA and APAC regions can create two different forecast sets with specific configurations to generate forecasts based on the unique forecasting requirements of these regions. For information about forecast sets, see Create and Configure Forecast Sets.

Measures

Measures provide a complete view of the forecasts for your business, in terms of both quantity and revenue. For example, opportunity quantity or opportunity revenue. You define measures in the context of forecast fact objects. The out-of-box forecast fact object, Advanced Account Forecast Fact, includes predefined measures.

Measure Groups

Measure groups filter forecast data by the measures included in the group, such as order quantity or order revenue. In the forecast grid, users see forecasts for measures that are part of the selected measure group. For example, you can create a measure group called Quantity Measure Group with the opportunity quantity, order quantity, and sales agreement quantity measures.

Period Groups

Period groups contain details of periods of time for which forecasts are generated. Generate forecasts for past or future periods by specifying the start period. Forecast periods can be of month, quarter, or year type. You can also define weekly forecasts if custom fiscal year is enabled in your org. For more information, see Define Custom Fiscal Year.

SEE ALSO:

Create and Configure Forecast Sets

Forecast Fact Object Included with Advanced Account Forecasting

Create Dimensions

Create Period Groups

Forecast Fact Object Included with Advanced Account Forecasting

Advanced Account Forecasting comes with a predefined forecast fact object called Advanced Account Forecast Fact.

The Advanced Account Forecast Fact object stores information about the advanced account forecast records. The fact object comes with these predefined dimensions and measures:

Dimensions

- Product
- Period
- Account

Measures

- Opportunity Quantity

- Opportunity Revenue
- Order Quantity
- Order Revenue
- Last Year Order Quantity
- Last Year Order Revenue
- Sales Agreement Quantity
- Sales Agreement Revenue
- Forecasted Quantity
- Forecasted Revenue

Configure Advanced Account Forecasting

Use these steps to set up Advanced Account Forecasting in your org.
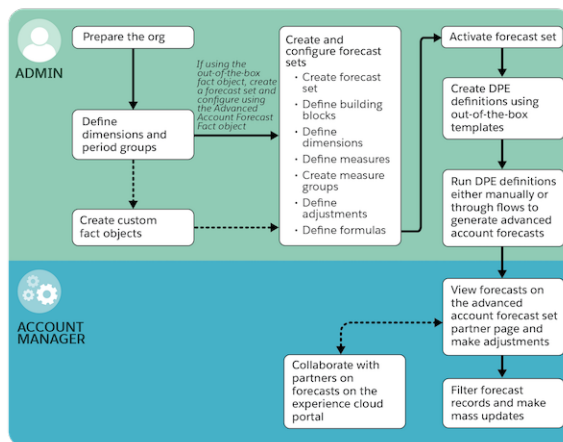
1. Prepare your org. See Enable Advanced Account Forecasting and Data Pipelines and Assign permission set to users. Also, Set field-level security and create sharing rules for the Advanced Account Forecast Fact object and the Advanced Account Forecast Set Use object records.

2. Define dimensions and period groups.

3. The generated forecast data is stored in the out-of-the-box forecast fact object by default. Optionally, you can create custom fact objects to store the forecast data.

4. Create forecast sets and configure building blocks, including forecast fact object field mappings, dimensions, frequencies, data processing engine definitions, forecast formulas, and adjustment periods.

5. Activate the forecast sets.

6. Customize or use the out-of-the-box Data Processing Engine templates.

7. Create custom flows with data processing engine jobs.

8. View and filter forecasts, and make adjustments on page 191.

9. Collaborate with partners on forecasts on the Experience Cloud portal.

1. Enable Advanced Account Forecasting

   To use the Advanced Account forecasting feature, enable Advanced Account Forecasting for your org.

2. Enable Data Pipelines for Advanced Account Forecasting

   To use the Data Processing Engine templates to generate forecasts for your accounts, enable Data Pipelines.

3. Assign Permission Sets for Advanced Account Forecasting

   Assign permission sets to internal users and partners based on their required level of access to Advanced Account Forecasting.

4. Control Access to Mass Update and Import CSV for Advanced Account Forecasting

   Control access to the Mass Update and Import CSV buttons for Advanced Account Forecasting for your users by using permission sets.

5. Set Field-Level Security for Fact and Partner Object in Manufacturing Cloud

   To provide users, such as regional managers or account managers, with separate levels of visibility to forecast data, configure field-level security for the Advanced Account Forecast Partner and Advanced Account Forecast Fact objects.

6. Create Sharing Rules for Fact and Partner Records in Manufacturing Cloud

   Define sharing rules to give users, such as regional managers and account managers, access to Advanced Account Forecast Set Partner and Advanced Account Forecast Fact records. Sharing rules extend your organization-wide default settings. You can create rules based on the record owner or other criteria.

7. Create Custom Forecast Fact Objects

   For a given forecast set, you can either create a custom fact object that contains the metadata for the forecast, or add additional fields to the out-of-the-box Advanced Account Forecast Fact object. Add all dimensions and measures of the forecast set to the fact object as fields. The values in the fields are updated based on the parameters you define in a forecast set whenever the forecast data calculations happen.

8. Create Dimensions

   Dimensions are used to categorize forecast data. You can view forecast data based on each dimension. For example, you can categorize forecast data by region, business unit, or any other dimensions. You can relate up to six dimensions to a forecast set.

9. Create Period Groups

   Period groups contain details of periods of time for which forecasts are generated. You can generate forecasts for past or future periods by specifying the start period. Forecast periods can be of month, quarter, or year type. You can also define the number of forecast periods that must be displayed at any given time.

Enable Advanced Account Forecasting

To use the Advanced Account forecasting feature, enable Advanced Account Forecasting for your org.

> 📝 **Note:** If you already set up forecasting using the original Account Forecasting feature, disable Account Forecasting first. Enabling both forecast features can cause data disruption or unforeseen errors. For more information, see Migrate from Account Forecasting to Advanced Account Forecasting.

1. In Setup, enter `Manufacturing` in the Quick Find box.

2. In Feature Settings, under Manufacturing, select **Advanced Account Forecasting**.

3. Enable **Advanced Account Forecasting**.

Enable Data Pipelines for Advanced Account Forecasting

To use the Data Processing Engine templates to generate forecasts for your accounts, enable Data Pipelines.

1. In Setup, enter `Data Pipelines` in the Quick Find box and then select **Get Started**.

2. Enable **Data Pipelines**.

Assign Permission Sets for Advanced Account Forecasting

Assign permission sets to internal users and partners based on their required level of access to Advanced Account Forecasting.

> 📝 **Note:** Before you assign permission sets, ensure that Advanced Account Forecasting and Data Pipelines are enabled.

Manufacturing Cloud provides these permission sets related to Advanced Account Forecasting.

Permission Set	Description
Data Pipelines Base User	Lets users generate forecast data using the Data Processing Engine provided with Data Pipelines.
Manufacturing Advanced Account Forecasting	Gives users access to the advanced account forecasting objects and features.
Manufacturing Advanced Account Forecast For Community	Gives partner users access to the advanced account forecasting objects and features.

1. In Setup, in the Quick Find box, enter `Users`, and then select **Permission Sets**.

2. Click **Manufacturing Advanced Account Forecast**.

3. Click **Manage Assignments** and then **Add Assignments**.

4. Select the checkboxes next to the names of the users you want to assign, and then click **Assign**.

5. Repeat these steps for the Data Pipelines Base User and the Manufacturing Advanced Account Forecast For Community permission sets.

Control Access to Mass Update and Import CSV for Advanced Account Forecasting

Control access to the Mass Update and Import CSV buttons for Advanced Account Forecasting for your users by using permission sets.

📝 **Note:** Before you assign permission sets, ensure that Advanced Account Forecasting and Data Pipelines are enabled.

1. In Setup, in the Quick Find box, enter `Users`, and then select **Permission Sets**.

2. Click **Clone** next to **Manufacturing Advanced Account Forecast**.

3. Specify a name for the cloned permission set and click **Save**.

4. Click to open system permissions in the cloned permission set.

5. The Mass Update for Advanced Account Forecasting and Import CSV for Advanced Account Forecasting system permissions are enabled by default. Deselect either the Mass Update for Advanced Account Forecasting or Import CSV for Advanced Account Forecasting checkboxes, or both to disable access.
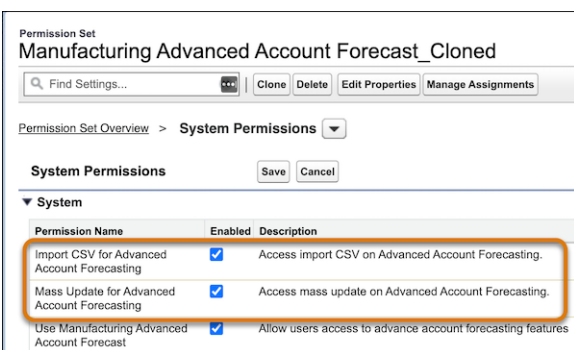
6. Save your work.

7. Assign the cloned permission set to users as needed.

Set Field-Level Security for Fact and Partner Object in Manufacturing Cloud

To provide users, such as regional managers or account managers, with separate levels of visibility to forecast data, configure field-level security for the Advanced Account Forecast Partner and Advanced Account Forecast Fact objects.

1. In Setup, from the object management settings for Advanced Account Forecast Set Partner, go to **Fields & Relationships**.

2. Select the field you want to modify.

3. Click **Set Field-Level Security**.

4. Specify the field's access level.

   We recommend limiting access to Account ID, Name, and Forecast Set ID on the Advanced Account Forecast Set Partner object because updates to these fields can disrupt your data. You can choose to provide read-only access for all profiles other than the System Administrator profile.

5. Save your changes.

6. Repeat the steps to specify field-level access for the Advanced Account Forecast Fact object.

SEE ALSO:

Field-Level Security

Create Sharing Rules for Fact and Partner Records in Manufacturing Cloud

Define sharing rules to give users, such as regional managers and account managers, access to Advanced Account Forecast Set Partner and Advanced Account Forecast Fact records. Sharing rules extend your organization-wide default settings. You can create rules based on the record owner or other criteria.

> **Note:** If you want to create a sharing rule based on record ownership by a public group, first create the group. Likewise, to create a rule based on record ownership by a role, first create the roles and role hierarchy.

You can choose to give your account managers and regional managers different levels of access for forecast measures. For example, provide edit access to regional managers for all the quantity and revenue measures. And restrict access to account managers to view or edit the fields containing forecast data which the regional manager modified.

1. From Setup, in the Quick Find box, enter `Sharing Settings`, and then select **Sharing Settings**.

2. Click **New** in the **Advanced Account Forecast Set Partner Sharing Rules** related list.

3. Enter a rule name, label, and description.

4. Select a rule type.

5. Specify the users with whom to share the records.

6. Specify the level of access for the users.

7. Repeat the steps to create sharing rules for the Advanced Account Forecast Fact object.

> **Example:** Sample Sharing Rule Based on Record Owner and Group
>
> To allow all users that belong to the Account Managers public group to view each other's Advanced Account Forecast Set Partner records, specify these values.

Field	Value
Rule Type	Based on Record Owner
Advanced Account Forecast Fact: owned by members of	Public Groups: Account Managers
Share with	Public Groups: Account Managers
Access Level	Read Only

Sample Sharing Rule Based on Record Owner and Role

In this example, the following role hierarchy is used.

- VP Sales (Global)
  - VP Sales (APAC)
    - Regional Manager Sales (APAC)

    – Account Manager Sales (APAC)

To allow all users with the Regional Manager Sales (APAC) role to view each other's Advanced Account Forecast Set Partner records, specify these values.

Field	Value
Rule Type	Based on Record Owner
Advanced Account Forecast Fact: owned by members of	Roles: Regional Managers APAC (Sales)
Share with	Roles: Regional Managers APAC (Sales)
Access Level	Read Only

In this rule, the roles that are above Regional Manager Sales (APAC) in the hierarchy can also view the records. However, users with the Account Manager Sales (APAC) role can't view the records owned by roles above them.

SEE ALSO:

Sharing Rules

Organization-Wide Sharing Defaults

Create Custom Forecast Fact Objects

For a given forecast set, you can either create a custom fact object that contains the metadata for the forecast, or add additional fields to the out-of-the-box Advanced Account Forecast Fact object. Add all dimensions and measures of the forecast set to the fact object as fields. The values in the fields are updated based on the parameters you define in a forecast set whenever the forecast data calculations happen.

> 📝 **Note:** You can refer to the out-of-the-box Advanced Account Forecast Fact object to understand how to create your custom fact object.

1. In Setup, from the upper-right corner of any page, click **Create | Custom Object**.

2. For the custom object, enter appropriate information in the fields and configure its features.

3. Save the new object.

4. In Object Manager, click **Fields & Relationships**, and then create custom fields for the object.

For custom fact objects, always create lookups to the account ID and period objects. To create a lookup to the Period object, create a required Text custom field with length as 18.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions.

USER PERMISSIONS

To modify forecast settings:
• Customize Application

SEE ALSO:

Forecast Fact Object Included with Advanced Account Forecasting

Create Dimensions

Dimensions are used to categorize forecast data. You can view forecast data based on each dimension. For example, you can categorize forecast data by region, business unit, or any other dimensions. You can relate up to six dimensions to a forecast set.

1. In Setup, in the Quick Find box, enter `Manufacturing`, and then select **Advanced Account Forecasting**.

2. Go to the Dimensions tab.

3. To create a dimension, click **New**, and then specify a name and source object for the dimension. For example, create a dimension called Business Region with source object as Region.

4. Save your work.

> **Note:** Account and Period are mandatory dimensions and are included automatically for a forecast set. You can add additional dimensions, such as Product, based on your business requirement.

Create Period Groups

Period groups contain details of periods of time for which forecasts are generated. You can generate forecasts for past or future periods by specifying the start period. Forecast periods can be of month, quarter, or year type. You can also define the number of forecast periods that must be displayed at any given time.

1. In Setup, in the Quick Find box, enter `Manufacturing`.

2. In Feature Settings, under Manufacturing, select **Advanced Account Forecasting**, and then navigate to the Period Groups tab.

3. Click **New**, specify these details, and then save your changes.

Field	Value
Name	Name of the period group. For example, Sales_Period_Group.
Status	Status of the period group. Select Active or Inactive.
Start Period	Start period to generate forecasts. For example, to generate forecasts from six periods after the current period, enter 6. To generate forecasts from six periods before the current period, enter -6. To generate forecasts from the current period, enter 0.
Display Duration	Number of periods for which to generate and display account forecasts.

Field	Value
Type	Type of period. For example, Weekly, Monthly, Quarterly, or Yearly. The option to create a period group of weekly type is available only if custom fiscal years are enabled in your org. For more information, see Define Custom Fiscal Years for Your Manufacturing Forecasts.

Create and Configure Forecast Sets

Forecast Sets are the primary building blocks required to generate 360-degree forecasts. A forecast set contains the information necessary to generate the forecast for an account considering custom dimensions, frequencies, and measures.

For each forecast set, define these building blocks.

- Forecast Period and Fact Object
- Forecast Fact Object Field Mappings
- Forecast Frequencies
- Data Processing Engine Definitions
- Forecast Dimensions
- Forecast Measures
- Forecast Adjustments
- Forecast Formulas

> Note: Ensure that you activate a forecast set before using it to generate forecasts.

1. In Setup, in the Quick Find box, enter *Manufacturing*.

2. In Feature Settings, under Manufacturing, select **Advanced Account Forecasting**, and then navigate to the Forecast Sets tab.

3. Click **New**, specify these details, and then save your work.
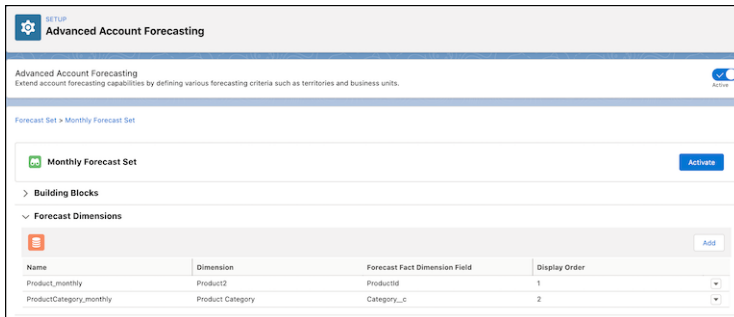
EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions.

USER PERMISSIONS

To modify forecast settings:
- Customize Application

Field	Description
Name	Name of the forecast set. For example, MonthlyForecast.
Period Group	Period group associated with the forecast set.
Forecast Fact Object	Forecast fact object to store forecast data for the forecast set.
Description	Description of the forecast set.

> **Note:** A forecast set is created in an inactive state. After you define all the building blocks, you can activate the forecast set. You must deactivate a forecast set before making any changes to it.

1. **Define Forecast Set Building Blocks**

   Configure forecast fact object field mappings, forecast frequencies, and data processing engine definitions for a forecast set. These configurations are required when you use the forecast set to generate forecasts for your accounts.

2. **Define Forecast Set Dimensions**

   You can associate multiple dimensions with a forecast set. For example, to generate forecast data specific to the ship-to-location, country, and product information for your accounts, associate the country, ship-to-location, and product dimensions with the forecast set.

3. **Define Forecast Set Measures**

   You can define multiple measures for a forecast set. For example, opportunity quantity, opportunity revenue, last year order quantity, sales agreement quantity, and so on.

4. **Create Measure Groups**

   Create measure groups so that users can view account forecasts with specific measures, such as quantity or revenue. In the forecast grid, users see forecasts for measures that are part of the selected measure group.

5. **Define Forecast Set Adjustments**

   You can define adjustment periods to provide different stakeholders an option to modify forecast data based on their insights into market conditions, growth in the specific product or industry segment, and any other trends.

6. **Define Forecast Set Formulas**

   Define forecast formulas to calculate forecasts based on different formulas for different periods.

7. **Activate a Forecast Set**

   After configuring a forecast set according to your requirement, you must activate the forecast set before using it to generate forecasts for your accounts.

Define Forecast Set Building Blocks

Configure forecast fact object field mappings, forecast frequencies, and data processing engine definitions for a forecast set. These configurations are required when you use the forecast set to generate forecasts for your accounts.

1. In Setup, in the Quick Find box, enter `Manufacturing`, and then select **Advanced Account Forecasting**.

2. On the Forecast Set tab, expand the Building Blocks section.

3. Specify the forecast fact field mappings.

Field	Value
Forecast Context	Name of the forecast context lookup field in the forecast fact record. For example, Account.
Period	Name of the period lookup field in the forecast fact record.
Forecast Quantity	Name of the forecast quantity lookup field in the forecast fact record.
Forecast Revenue	Name of the forecast revenue lookup field in the forecast fact record.
Forecast Status	Name of the status field in the forecast fact record.
Forecast Set	Select Advanced Account Forecast Set Use ID. For forecast sets configured and already in use to generate forecasts before the Spring'23 release, keep your selection as Advanced Account Forecast Set Partner ID.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions.

USER PERMISSIONS

To modify forecast settings:
- Customize Application

Forecast Fact Field Mappings

Forecast Context	Period
Location	Period ID

Forecast Quantity	Forecast Revenue
Forecasted Quantity	Forecasted Revenue

Forecast Status	Forecast Set
Status	Advanced Account Forecast Set Use ID
	Advanced Account Forecast Set Partner ID
	✓ Advanced Account Forecast Set Use ID
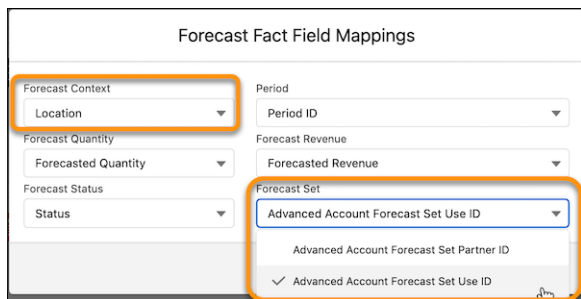
📝 **Note:** You must specify the forecast fact field mappings before activating the forecast set.

4. Specify the forecast frequencies.

Field	Value
Calculation Frequency	The frequency at which forecasts are calculated for the forecast set. Select Monthly, Quarterly, or Yearly.
Rollover Frequency	The frequency at which forecasts for new periods are generated.

5. Specify the data processing engine definitions.

Field	Value
Generate Definition	Data processing engine definition for generating forecasts for the forecast set.
Regenerate Definition	Data processing engine definition for regenerating forecasts for the forecast set.
Recalculate Definition	Data processing engine definition for recalculating forecasts for the forecast set.
Rollover Definition	Data processing engine definition for generating forecasts for new periods during rollover for the forecast set.
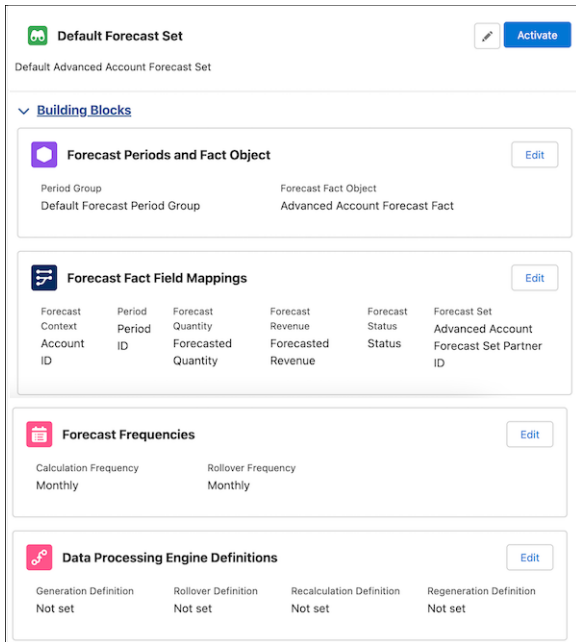
6. Save your work.

Define Forecast Set Dimensions

You can associate multiple dimensions with a forecast set. For example, to generate forecast data specific to the ship-to-location, country, and product information for your accounts, associate the country, ship-to-location, and product dimensions with the forecast set.

1. In Setup, in the Quick Find box, enter `Manufacturing`.

2. In Feature Settings, under Manufacturing, select **Advanced Account Forecasting**, and then navigate to the Forecast Sets tab.

3. Expand the Forecast Dimensions section.

**4.** Click **New**, specify these details, and then save your work.

Field	Description
Name	Name of the dimension.
Forecast Fact Dimension Field	Name of the forecast fact dimension field in the forecast fact object.

Field	Description
Display Order	Position (from left to right) of this dimension as a column in the forecast table. Measure values are grouped by the first dimension, then by the next dimension, and so on. For example, when you enter 1 for the product dimension and 2 for the location dimension, measure values are grouped by product and then by location.

Define Forecast Set Measures

You can define multiple measures for a forecast set. For example, opportunity quantity, opportunity revenue, last year order quantity, sales agreement quantity, and so on.

1. In Setup, in the Quick Find box, enter `Manufacturing`.

2. In Feature Settings, under Manufacturing, select **Advanced Account Forecasting**, and then navigate to the Forecast Sets tab.

3. Expand the Forecast Measures section.

4. Click **New**, specify these details, and then save your work.

Field	Description
Name	Name of the measure. For example, Order Revenue.
Forecast Fact Measure Field	Name of the forecast fact measure field in the forecast fact object.
Measure Type	Type of measure. For example, Quantity.
Aggregation Type	Aggregation type to use for the measure. For example, Sum, Avg.
Calculation Method	Method to calculate the measure. Select from these values. • Batch Process: A batch process, such as Data Processing Engine definitions, to calculate the measure values.

Field	Description
	• User-Editable: Users can edit forecast values. • Forecast Formula: Forecast values are calculated using the forecast formula.
Track Adjustments	Specify whether adjustments to the measure values are tracked. Select Yes or No.
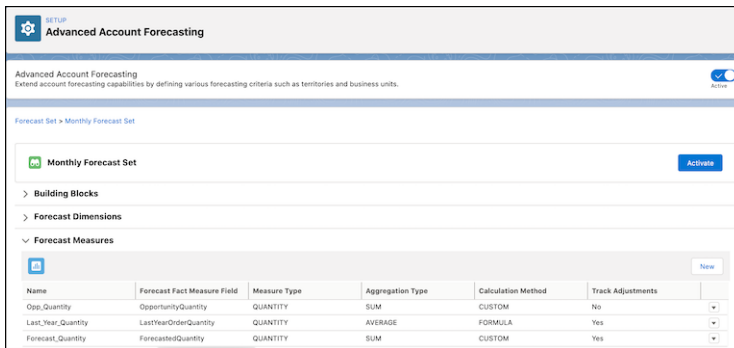
Create Measure Groups

Create measure groups so that users can view account forecasts with specific measures, such as quantity or revenue. In the forecast grid, users see forecasts for measures that are part of the selected measure group.

1. In Setup, in the Quick Find box, enter `Manufacturing`.

2. In Feature Settings, under Manufacturing, select **Advanced Account Forecasting**, and then navigate to the Forecast Sets tab.

3. Click **Edit** next to a forecast set.

4. Expand **Forecast Measure Groups**.

5. Click **New**, specify these details, and then save your work.

Field	Description
Name	Name of the measure group. For example, Revenue Measure Group.
Default Group	Specifies whether the measure group is the default group. The default value is No.
Available Measures	The list of measures available for the forecast set.
Selected Measures	The list of measures selected for the measure group.

Define Forecast Set Adjustments

You can define adjustment periods to provide different stakeholders an option to modify forecast data based on their insights into market conditions, growth in the specific product or industry segment, and any other trends.

1. In Setup, in the Quick Find box, enter `Manufacturing`.

2. In Feature Settings, under Manufacturing, select **Advanced Account Forecasting**, and then navigate to the Forecast Sets tab.

3. Expand the Forecast Adjustments section.

4. Click **New**, specify these details, and then save your work.

Field	Description
User Profile	Profile of the user who makes the adjustment.
Frequency	The frequency at which you can make adjustments.
Period Start Day	Number of days from the beginning of the specified frequency during which you can adjust forecast values. For example, to start the adjustment period from the fifth day of the month or quarter, enter 5.
Duration Days	Number of days that the adjustment period remains open. For example, to specify an adjustment duration of 10 days beginning on the provided period start day, enter 10.
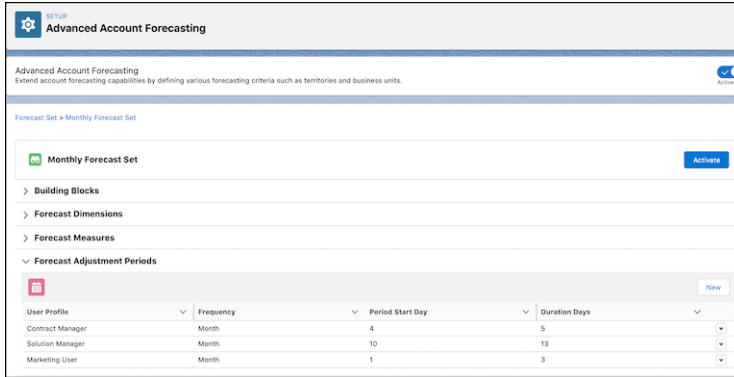
Define Forecast Set Formulas

Define forecast formulas to calculate forecasts based on different formulas for different periods.

1. In Setup, in the Quick Find box, enter `Manufacturing`.

2. In Feature Settings, under Manufacturing, select **Advanced Account Forecasting**, and then navigate to the Forecast Sets tab.

3. Expand the Forecast Formulas section.

4. Click **New**, specify these details, and then save your work.

Field	Description
Calculation Basis	Basis for calculation of the forecast. For example, Quantity or Revenue.
Start Period	Start period of the formula. For example, to begin the start period from the sixth month if the period type is monthly, enter 6.
End Period	End period of the formula.
Formula	Formula to use for forecast calculations between the start and end periods.
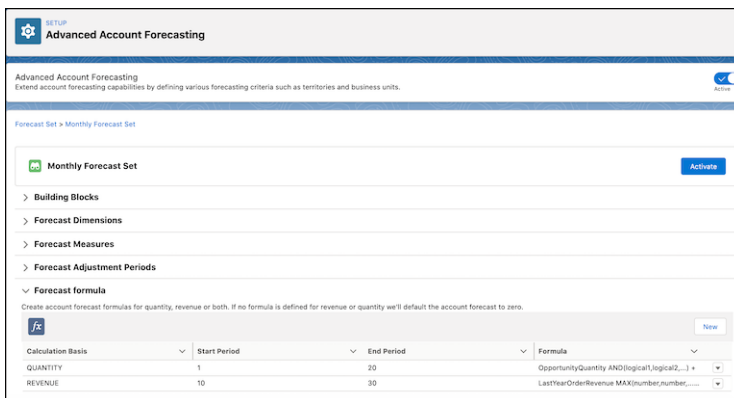
Activate a Forecast Set

After configuring a forecast set according to your requirement, you must activate the forecast set before using it to generate forecasts for your accounts.

1. In the Forecast Set setup page, click the **Forecast Set** tab.

2. Click **Activate** next to the forecast set.

Streamline Forecast Calculations with Data Processing Engine Definitions

Advanced Account Forecasting uses Data Processing Engine to filter and aggregate data from orders, opportunities, sales agreements, location, product category, and custom objects. You can activate the out-of-the-box data processing engine jobs, or create and run your own using existing templates.

⛔ **Important:** The updated Data Processing Engine templates in Spring'23 use the Advanced Account Forecast Set Use object instead of the Advanced Account Forecast Set Partner object to manage the forecast fact data.

Data Processing Engine Templates with Advanced Account Forecasting

Advanced Account Forecasting has Data Processing Engine (DPE) templates that you can clone and customize. Use these templates to create and run Data Processing Engine jobs to generate, regenerate, recalculate, or rollover the forecasts for your accounts.

Clone Data Processing Engine Templates

You can clone the Data Processing Engine templates with Advanced Account Forecasting. Then, activate and use the cloned definition to generate forecasts for your accounts. You can also create a Data Processing Engine from scratch, and select the Process Type as Advanced Account Forecast.

Activate a Data Processing Engine Definition

Only active Data Processing Engine definitions can be used to generate account forecasts. You can clone and customize any of the predefined Data Processing Engine templates with Advanced Account Forecasting, and then activate the definitions.

Customize Data Processing Engine Templates

You can clone the predefined Data Processing Engine templates and customize them according to your business needs if the predefined templates don't meet your requirements.

SEE ALSO:

Data Processing Engine Definition: Generate Account Forecast

Data Processing Engine Definition: Regenerate Account Forecast

Data Processing Engine Definition: Recalculate Account Forecast

Data Processing Engine Definition: Rollover Account Forecast

Data Processing Engine

Data Processing Engine Templates with Advanced Account Forecasting

Advanced Account Forecasting has Data Processing Engine (DPE) templates that you can clone and customize. Use these templates to create and run Data Processing Engine jobs to generate, regenerate, recalculate, or rollover the forecasts for your accounts.

Data Processing Engine Job	Purpose	Result
Generate Account Forecast	Uses the data from active orders, opportunities, and sales agreements to generate forecasts for an account and forecast set with the dimensions and frequency defined in the forecast set.	Generates forecasts for the given account and forecast set.
Regenerate Account Forecast	Regenerates the forecasts for a given account and forecast set. Use this data processing engine job to regenerate forecasts for your accounts when you make any changes to the frequency, dimensions, or start period associated with the forecast set.	Expires the existing forecast data and then regenerates forecasts for the given account and forecast set.
Recalculate Account Forecast	Recalculates the forecasts for a given account and forecast set. Use this data processing engine job to recalculate forecasts for your accounts when you make changes to sales agreements or opportunities associated with an account such as add additional products or remove existing products.	Expires the existing forecast data and then recalculates forecasts for the given account and forecast set.
Rollover Account Forecast	Generates forecasts for new periods during rollover for a given account and forecast set and then invalidates the forecast for the oldest period.	Generates forecasts for new periods during rollover.

📝 **Note:** Use the recalculate and rollover jobs together to generate forecast data for new periods during rollover and recalculate the existing forecast data.

Data Processing Engine Definition: Generate Account Forecast
The Generate Account Forecast Data Processing Engine definition is a template job. It aggregates the quantity and revenue data for a given account and forecast set from active orders, opportunities, and sales agreements. It then generates forecasts with the dimensions and frequency defined in the forecast set. You can customize the template to include custom dimensions, such as region, or custom measures such as quarter-on-quarter revenue growth. You can also modify the calculation logic for existing measures.

Data Processing Engine Definition: Recalculate Account Forecast
The Recalculate Account Forecast Data Processing Engine definition is a template job. It aggregates the quantity and revenue data to recalculate the existing forecasts. You can customize the template to include custom dimensions such as region, or custom measures such as quarter-on-quarter revenue growth.

Data Processing Engine Definition: Regenerate Account Forecast
The Regenerate Account Forecast Data Processing Engine definition is a template job. It aggregates the quantity and revenue data to regenerate forecasts for a given account and advanced account forecast set. Use this job to regenerate forecasts for your accounts when you make any changes to the frequency, dimensions, or start period associated with the advanced account forecast set. You can customize the template to include custom dimensions such as region, or other custom measures.

Data Processing Engine Definition: Rollover Account Forecast

The Rollover Account Forecast Data Processing Engine definition is a template job. It aggregates the quantity and revenue data for a given account and forecast set from orders, opportunities, and sales agreements for new periods during rollover. Use this job along with the Recalculate Account Forecast job to recalculate the existing forecast data during rollover. You can customize the template to include custom dimensions such as region, or other custom measures.

Data Processing Engine Definition: Generate Account Forecast

The Generate Account Forecast Data Processing Engine definition is a template job. It aggregates the quantity and revenue data for a given account and forecast set from active orders, opportunities, and sales agreements. It then generates forecasts with the dimensions and frequency defined in the forecast set. You can customize the template to include custom dimensions, such as region, or custom measures such as quarter-on-quarter revenue growth. You can also modify the calculation logic for existing measures.

Nodes Originating from the Account Data Source

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Account	Data Source	Account	-	The account object is used as the data source.
Fetch Account Id Input Variable	Formula	Account	-	Creates a transient variable with the value provided in the input variable.
Filter Account With Id	Filter	Fetch Account Id Input Variable	-	Filters the accounts based on account IDs.
Fetch Active Account Forecast Set Partner For Account Id	Inner Join	Filter Active Account Forecast Set Partners	Filter Account With Id	Gets the advanced account forecast set partner records that are active and belong to the filtered account IDs.
Fetch Valid Account Forecast Set Partner For Account Id	Right Outer Join	Count Number of Active Account Forecast Set Partners For Account Id	Filter Account With Id	Identifies the advanced account forecast set partner records that aren't in Active or Draft status.

Nodes Originating from the Product Data Source

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Product	Data Source	Product	-	The product object is used as the data source.
Filter Active Products	Filter	Product	-	Filters the active products.
Generated Account Forecast Facts Join Active Products	Inner Join	Generated Account Forecast Facts Join Filtered Accounts	Filter Active Products	Gets the valid advanced account forecast fact records for active products.
Valid Opportunity Within Acct Frsct Set Partner Date Range Join Active Products	Inner Join	Filter Valid Opportunity Within Account Forecast Set Partner Date Range	Filter Active Products	Gets the valid opportunity line items for the active products within the forecast set date range.
Valid Order Within Acct Frsct Set Partner Date Range Join Active Products	Inner Join	Filter Valid Order Within Account Forecast Set Partner Date Range	Filter Active Products	Gets the valid order line items for active products within the forecast set date range.
Valid Sales Agreement Within Acct Frcst Set Partner Date Range Join Active Prod	Inner Join	Filter Valid Sales Agreement Within Account Forecast Set Partner Date Range	Filter Active Products	Gets the valid sales agreement products that are active and are within the forecast set date range.

Nodes Originating from the Period Data Source

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Period	Data Source	Period	-	The period object is used as the data source.
Generated Account Forecast Facts Join Periods	Inner Join	Generated Account Forecast Facts Join Account Forecast Sets	Period	Gets the valid advanced account forecast facts for the specified period.

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Compute Join Field On Period Nodes	Formula	Period	-	Creates a cartesian attribute on the period records.
Account Forecast Set Partner Join Period Data	Inner Join	Validate Number of Active Forecast Set Partners For Account Id	Compute Join Field On Period Nodes	Creates a cross-product between the advanced account forecast set partner records and periods with window dates and periods.
Generated Active Acct Forecast Set Partner With Account Forecast Set Join Period	Inner Join	Generated Active Account Forecast Set Partner Join Account Forecast Set	Compute Join Field On Period Nodes	Creates a cross-product between advanced account forecast set partner and periods.

Forecast Metadata

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Advanced Account Forecast Set	Data Source	Advanced Account Forecast Set	-	The advanced account forecast set object is used as the data source.
Identify Selected Account Forecast Set	Filter	Advanced Account Forecast Set	-	Filters the forecast set IDs based on the input variable.
Fetch Account Forecast Period Group	Inner Join	Identify Selected Account Forecast Set	Advanced Account Forecast Period Group	Gets the forecast period group IDs related to the forecast set IDs.
Fetch Account Forecast Period Setup	Inner Join	Fetch Account Forecast Period Group	Advanced Account Forecast Period	Gets the forecast set period data associated with the forecast set IDs.
Generated Active Account Forecast Set Partner Join Account Forecast Set	Right Outer Join	Generated Account Forecast Set Partner Join Active Account Forecast Set Partner	Fetch Account Forecast Period Setup	Gets the advanced account forecast set partner records associated with the forecast set data.

Nodes Originating from the Advanced Account Forecast Set Partner Data Source

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Advanced Account Forecast Set Partner	Datasource	Advanced Account Forecast Set Partner	-	The advanced account forecast set partner object is used as the data source.
Filter Active Account Forecast Set Partners	Filter	Advanced Account Forecast Set Partner	-	Filters active and draft forecast set partner records.
Fetch Active Account Forecast Set Partner For Account Id	Inner Join	Filter Active Account Forecast Set Partners	Filter Account With Id	Gets the active advanced account forecast set partner records belonging to the filtered account IDs.
Count Number of Active Account Forecast Set Partners For Account Id	Group and Aggregate	Fetch Active Account Forecast Set Partner For Account Id	-	Counts the number of advanced account forecast set partner records that are in Active or Draft status for a given account and forecast set.
Fetch Valid Account Forecast Set Partner For Account Id	Right Outer Join	Count Number of Active Account Forecast Set Partners For Account Id	Filter Account With Id	Identifies the advanced account forecast set partner records that aren't in Active or Draft status.
Generate Data For Account Forecast Set Partner	Formula	Fetch Valid Account Forecast Set Partner For Account Id	-	Generates the status, today's date, and forecast set ID for the advanced account forecast set partner records.
Generated Account Forecast Set Partner Join Active Account Forecast Set Partner	Right Outer Join	Filter Active Account Forecast Set Partners	Generate Data For Account Forecast Set Partner	Checks if a duplicate advanced account forecast set partner record in Active status is already available.
Generated Active Account Forecast Set Partner Join Account Forecast Set	Right Outer Join	Generated Account Forecast Set Partner Join Active Account Forecast Set Partner	Fetch Account Forecast Period Setup	Gets the forecast set data for each advanced account forecast set partner record.
Generated Active Acct Forecast Set Partner With Account Forecast Set Join Period	Inner Join	Generated Active Account Forecast Set Partner Join Account Forecast Set	Compute Join Field On Period Nodes	Creates a cross-product between advanced account forecast set partner and periods.

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Compute Period Type Flag On Period Data For Acct Forecast Set Partner Start Date	Formula	Generated Active Acct Forecast Set Partner With Account Forecast Set Join Period	-	Finds the advanced account forecast set partner period data with the required Period Type flag.
Identify Period Nodes For Frequency For Acct Forecast Set Partner Start Date	Filter	Compute Period Type Flag On Period Data For Acct Forecast Set Partner Start Date	-	Filters the advanced account forecast set partner period data with the required Period Type flag.
Compute Period Nodes For Account Forecast Set Partner Start Date	Formula	Identify Period Nodes For Frequency For Acct Forecast Set Partner Start Date	-	Identifies the current periods for the advanced account forecast set partner records.
Identify Period Nodes For Account Forecast Set Partner Start Date	Filter	Compute Period Nodes For Account Forecast Set Partner Start Date	-	Filters the current periods for the advanced account forecast set partner records.
Compute Today Date Day Period Offset For Account Forecast Set Partner	Formula	Identify Period Nodes For Account Forecast Set Partner Start Date	-	Generates the Active Window Size, Period Offset, and Today's Date Offset fields for the advanced account forecast set partner records.
Compute Account Forecast Set Partner Date Offsets	Formula	Compute Today Date Day Period Offset For Account Forecast Set Partner	-	Generates the Current Period Start Date, Start Period Number, and End Period Number for the advanced account forecast set partner records.
Compute Account Forecast Set Partner Adjusted Dates	Formula	Compute Account Forecast Set Partner Date Offsets	-	Generates Advanced Account Forecast Set Partner Name, Advanced Account Forecast Set Partner Start Date (Adjusted Start Date), and Advanced Account Forecast Set Partner End Date (Adjusted End Date) for the advanced account forecast set partner records.

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Compute Account Forecast Set Partner Adjusted Last Year Dates	Formula	Compute Account Forecast Set Partner Adjusted Dates	-	Generates Advanced Account Forecast Set Partner Last year Start Date (Adjusted Last Year Start Date) and Advanced Account Forecast Set Partner Last Year End Date (Adjusted Last Year End Date) for the advanced account forecast set partner records.
Validate Number of Active Forecast Set Partners For Account Id	Filter	Compute Account Forecast Set Partner Adjusted Last Year Dates	-	Validates the advanced account forecast set partner records to ensure that there are no duplicate records in Active or Draft status.
Compute Unique Identifier For Generated Account Forecast Set Partner Data	Formula	Validate Number of Active Forecast Set Partners For Account Id	-	Creates a new unique identifier for each advanced account forecast set partner record. This identifier is used as an external ID to relate the advanced account forecast set partner record to the corresponding advanced account forecast fact records during writeback.
Insert Account Forecast Set Partner Record	Writeback	Compute Unique Identifier For Generated Account Forecast Set Partner Data	Forecast Set Partner	Persists the newly created advanced account forecast set partner record.
Generated Account Forecast Facts Join Filtered Accounts	Inner Join	Generated Account Forecast Facts Join Periods	Compute Unique Identifier For Generated Account Forecast Set Partner Data	Joins the generated advanced account forecast fact records with the persisted forecast set partner record to get the unique identifier for the advanced account forecast set partner record and account ID.
Activated Order Join Upserted Account Forecast Set Partner	Inner Join	Activated Order Join Order Item	Compute Unique Identifier For Generated Account Forecast Set Partner Data	Gets the orders associated with the advanced account forecast set partner records.

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Filtered Opportunity Join Upserted Account Forecast Set Partner	Inner Join	Filtered Opportunity Join Opportunity Line Item	Compute Unique Identifier For Generated Account Forecast Set Partner Data	Gets the opportunities items associated with the advanced account forecast set partner records.
Valid Sales Agreement Join Upserted Account Forecast Set Partner	Inner Join	Filtered Sales Agreement Join Sales Agreement Product Schedule	Compute Unique Identifier For Generated Account Forecast Set Partner Data	Gets the sales agreements associated with the advanced account forecast set partner records.
Account Forecast Set Partner Join Period Data	Inner Join	Compute Unique Identifier For Generated Account Forecast Set Partner Data	Compute Join Field On Period Nodes	Creates a cross-product between the advanced account forecast set partner records, and window dates and periods.
Compute Period Type Flag On Period Data For Account Forecast Set Partner	Formula	Account Forecast Set Partner Join Period Data	-	Identifies the advanced account forecast set partner period data with the required Period Type flag.
Identify Period Nodes For Selected Frequency For Account Forecast Set Partner	Filter	Compute Period Type Flag On Period Data For Account Forecast Set Partner	-	Filters the advanced account forecast set partner period data with the required Period Type flag.
Compute Period Nodes For Adjusted Dates For Account Forecast Set Partner	Formula	Identify Period Nodes For Selected Frequency For Account Forecast Set Partner	-	Finds the advanced account forecast set partner periods (adjusted periods) for each of the advanced account forecast set partner records.
Identify Period Nodes For Account Forecast Set Partner	Filter	Compute Period Nodes For Adjusted Dates For Account Forecast Set Partner	-	Filters the advanced account forecast set partner periods (adjusted periods) for each of the advanced account forecast set partner records.
Compute Last Year Period Dates On Account Forecast Set Partner	Formula	Identify Period Nodes For Account Forecast Set Partner	-	Generates the last year period end date and last year period start date for the forecast set partner record periods (adjusted periods).

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Opportunity Metrics Data Join Account Forecast Set Partner Period Data	Inner Join	Valid Opportunity Within Acct Frsct Set Partner Date Range Join Active Products	Compute Last Year Period Dates On Account Forecast Set Partner	Gets the opportunity items associated with the advanced account forecast set partner record periods (adjusted periods).
Order Metrics Data Join Account Forecast Set Partner Period Data	Inner Join	Valid Order Within Acct Frsct Set Partner Date Range Join Active Products	Compute Last Year Period Dates On Account Forecast Set Partner	Gets the order items associated with the advanced account forecast set partner record periods (adjusted periods).
Sales Agreement Metrics Data Join Account Forecast Set Partner Period Data	Inner Join	Aggregate Records To Consolidate SAPS Period Join Data	Compute Last Year Period Dates On Account Forecast Set Partner	Gets the sales agreement quantities associated with the advanced account forecast set partner record periods (adjusted periods).
Valid Sales Agreement Join Account Forecast Set Partner Period Data	Inner Join	Valid Sales Agreement Within Acct Frcst Set Partner Date Range Join Active Prod	Compute Last Year Period Dates On Account Forecast Set Partner	Gets the sales agreement schedules associated with the advanced account forecast set partner record periods (adjusted periods).

Nodes Originating from the Advanced Account Forecast Fact Data Source

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Advanced Account Forecast Fact	Data Source	Advanced Account Forecast Fact	-	The advanced account forecast fact object is used as the data source.
Generated Account Forecast Facts Join Existing Account Forecast Facts	Left Outer	Generated Account Forecast Facts Join Filtered Accounts	Advanced Account Forecast Fact	Adds the advanced account forecast fact record ID to the list of available fields. This field is needed during the upsert operation for the advanced account forecast fact records.

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Nodes Originating from the Opportunity Data Source

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Opportunity	Data Source	Opportunity	-	The opportunity object is used as the data source.
Filter Opportunity Based On Result	Filter	Opportunity	-	Filter opportunities based on their status.
Filtered Opportunity Join Opportunity Line Item	Inner Join	Filter Opportunity Based On Result	Opportunity Line Item	Gets all the opportunities' products (items).
Filtered Opportunity Join Upserted Account Forecast Set Partner	Inner Join	Filtered Opportunity Join Opportunity Line Item	Validate Number of Active Forecast Set Partners For Account Id	Gets the opportunity items associated with the advanced account forecast set partner records.
Identify Opportunities Within Account Forecast Set Partner Date Range	Formula	Filtered Opportunity Join Upserted Account Forecast Set Partner	-	Identifies the opportunities' items associated with the advanced account forecast set partner records within the rollover window.
Filter Valid Opportunity Within Account Forecast Set Partner Date Range	Filter	Identify Opportunities Within Account Forecast Set Partner Date Range	-	Filters the opportunities' items associated with the advanced account forecast set partner records within the rollover window.
Valid Opportunity Within Acct Frsct Set Partner Date Range Join Active Products	Inner Join	Filter Valid Opportunity Within Account Forecast Set Partner Date Range	Filter Active Products	Filters the active opportunities' items associated with the advanced account forecast set partner records.
Opportunity Metrics Data Join Account Forecast Set Partner Period Data	Inner Join	Valid Opportunity Within Acct Frsct Set Partner Date Range Join Active Products	Compute Last Year Period Dates On Account Forecast Set Partner	Gets the opportunities' items associated with the advanced account forecast set partner record periods (adjusted periods).
Compare Opportunity Metric Line Item Close Date With Period Range For Facts	Formula	Opportunity Metrics Data Join Account Forecast Set Partner Period Data	-	Calculates the opportunity quantity and opportunity revenue for the advanced account forecast set partner

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
				record periods (adjusted periods).
Consolidate Field Names For Opportunity Metric Line Forecast Facts	Slice	Compare Opportunity Metric Line Item Close Date With Period Range For Facts	-	Removes any extra fields that aren't required to create the advanced account forecast fact record.

Nodes Originating from the Order Data Source

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Order	Datasource	Order	-	The order object is used as the data source.
Filter Activated Order	Filter	Order	-	Filters the orders based on their status.
Activated Order Join Order Item	Inner Join	Filter Activated Order	Order Item	Gets all order items associated with the orders.
Activated Order Join Upserted Account Forecast Set Partner	Inner Join	Activated Order Join Order Item	Validate Number of Active Forecast Set Partners For Account Id	Gets the order items associated with the advanced account forecast set partner records.
Identify Orders Within Account Forecast Set Partner Date Range	Formula	Activated Order Join Upserted Account Forecast Set Partner	-	Identifies the order items associated with the advanced account forecast set partner records within the rollover window.
Filter Valid Order Within Account Forecast Set Partner Date Range	Filter	Identify Orders Within Account Forecast Set Partner Date Range	-	Filters the order items associated with the advanced account forecast set partner records within the rollover window.

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Valid Order Within Acct Frsct Set Partner Date Range Join Active Products	Inner Join	Filter Valid Order Within Account Forecast Set Partner Date Range	Filter Active Products	Filters the active order items associated with the advanced account forecast set partner records.
Order Metrics Data Join Account Forecast Set Partner Period Data	Inner Join	Valid Order Within Acct Frsct Set Partner Date Range Join Active Products	Compute Last Year Period Dates On Account Forecast Set Partner	Gets the order items associated with the advanced account forecast set partner record periods (adjusted periods).
Compare Order Metric Line Item Close Date With Period Range For Facts	Formula	Order Metrics Data Join Account Forecast Set Partner Period Data	-	Calculates the order quantity and order revenue for the advanced account forecast set partner record periods.
Consolidate Field Names For Order Metric Line Forecast Facts	Slice	Compare Order Metric Line Item Close Date With Period Range For Facts	-	Removes any extra fields that aren't required to create the advanced account forecast fact record.

Nodes Originating from the Sales Agreement Data Source

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Sales Agreement	Data Source	Sales Agreement	-	The sales agreement object is used as the data source.
Filter Valid Sales Agreement	Filter	Sales Agreement	-	Filters sales agreements based on their status.
Filtered Sales Agreement Join Sales Agreement Product	Inner Join	Filter Valid Sales Agreement	Sales Agreement Product	Gets all the sales agreement product records associated with the sales agreement records.

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Filtered Sales Agreement Join Sales Agreement Product Schedule	Inner Join	Filtered Sales Agreement Join Sales Agreement Product	Sales Agreement Product Schedule	Gets all the sales agreement product schedule records associated with sales agreement product records.
Valid Sales Agreement Join Upserted Account Forecast Set Partner	Inner Join	Filtered Sales Agreement Join Sales Agreement Product Schedule	Validate Number of Active Forecast Set Partners For Account Id	Gets the sales agreement product schedule records associated with the advanced account forecast set partner records.
Identify Sales Agreements Within Account Forecast Set Partner Date Range	Formula	Valid Sales Agreement Join Upserted Account Forecast Set Partner	-	Finds the sales agreement records associated with the advanced account forecast set partner records within the active date range.
Filter Valid Sales Agreement Within Account Forecast Set Partner Date Range	Filter	Identify Sales Agreements Within Account Forecast Set Partner Date Range	-	Filters the sales agreement records associated with the advanced account forecast set partner records within the active date range.
Valid Sales Agreement Within Acct Frcst Set Partner Date Range Join Active Prod	Inner Join	Filter Valid Sales Agreement Within Account Forecast Date Range	Filter Active Products	Filters the sales agreement product schedule records based on active products associated with the advanced account forecast set partner records.
Valid Sales Agreement Join Account Forecast Set Partner Period Data	Inner Join	Valid Sales Agreement Within Account Forecast Date Range Join Active Products	Compute Last Year Period Dates On Account Forecast Set Partner	Relates the generated sales agreement forecast record with the period records that are applicable for the given forecast set parameters.
Identify Valid Period Nodes For SAPS Start Date And End Date	Formula	Valid Sales Agreement Join Account Forecast Set Partner Period Data	-	Identifies the period record that's applicable for a given sales agreement generated forecast record. The records that aren't applicable are marked for filtering.
Filter Valid Period Nodes For SAPS Start Date And End Date	Filter	Identify Valid Period Nodes For SAPS Start Date And End Date	-	Filters the generated sales agreement forecast data records that are marked for filtering in

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
				the Identify Valid Period Nodes For SAPS Start Date And End Date formula node.
Valid Sales Agreement Within Acct Frcst Set Partner Date Range Join Active Prod	Inner Join	Filter Valid Sales Agreement Within Account Forecast Date Range	Filter Active Products	Filters sales agreement product schedule records based on active products associated with the advanced account forecast set partner records.
Valid Sales Agreement Join Account Forecast Set Partner Period Data	Inner Join	Valid Sales Agreement Within Account Forecast Date Range Join Active Products	Compute Last Year Period Dates On Account Forecast Set Partner	Gets sales agreement product schedule records associated with the advanced account forecast set partner record periods (adjusted periods).
Identify Valid Period Nodes For SAPS Start Date And End Date	Formula	Valid Sales Agreement Join Account Forecast Set Partner Period Data	–	Finds sales agreement product schedule records associated with the advanced account forecast set partner record periods (adjusted periods).
Filter Valid Period Nodes For SAPS Start Date And End Date	Filter	Identify Valid Period Nodes For SAPS Start Date And End Date	–	Filters sales agreement product schedule records associated with the advanced account forecast set partner record periods (adjusted periods).
Compute End Of Last Period And Sales Agreement Effective Date	Formula	Filter Valid Period Nodes For SAPS Start Date And End Date	–	Generates the LastPeriodStart Date, Last Period End Date, PeriodEffectiveEndDate, and PeriodEffectiveStartDate for the advanced account forecast set partner record periods.
Compute Number of Applicable Days For SAPS Quantity Calculations	Formula	Compute End Of Last Period And Sales Agreement Effective Date	–	Generates the applicable days for the sales agreement product schedule quantity calculations.
Fetch Sales Price From Last Period For Calculation	Formula	Compute Number of Applicable Days For SAPS Quantity Calculations	–	Gets the sales price for the last period.

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Determine Last Period Quantity And Revenue For SAPS Calculation	Formula	Fetch Sales Price From Last Period For Calculation	-	Determines the last period quantity and revenue for sales agreement product schedule calculation.
Compute Quantity From Applicable Periods In SAPS Period Join Data	Formula	Determine Last Period Quantity And Revenue For SAPS Calculation	-	Calculates the quantity for the sales agreement product schedule start date.
Compute Applicable Quantity And Revenue In SAPS Period Join Data	Formula	Compute Quantity From Applicable Periods In SAPS Period Join Data	-	Calculates the quantity for the sales agreement product schedule.
Aggregate Records To Consolidate SAPS Period Join Data	Group and Aggregate	Compute Applicable Quantity And Revenue In SAPS Period Join Data	-	Generates the sum of quantities for the advanced account forecast set partner record periods.
Sales Agreement Metrics Data Join Account Forecast Set Partner Period Data	Inner Join	Aggregate Records To Consolidate SAPS Period Join Data	Compute Last Year Period Dates On Account Forecast Set Partner	Gets the sales agreement quantities associated with the advanced account forecast set partner record periods (adjusted periods).
Compare Sales Agreement Metric Line Item Close Date With Period Range	Formula	Sales Agreement Metrics Data Join Account Forecast Set Partner Period Data	-	Calculate the sales agreement quantity and sales agreement revenue for the advanced account forecast set partner records for the specified periods.
Consolidate Field Names For Sales Agreement Metric Line Forecast Facts	Slice	Compare Sales Agreement Metric Line Item Close Date With Period Range	-	Remove any duplicate sales agreement product schedules.

Consolidated Metrics

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Consolidate Field Names For Order Metric Line Forecast Facts	Slice	Compare Order Metric Line Item Close Date With Period Range For Facts	-	Removes any extra fields that aren't required to create the advanced account forecast fact records.
Consolidate Field Names For Sales Agreement Metric Line Forecast Facts	Slice	Compare Sales Agreement Metric Line Item Close Date With Period Range	-	Removes any extra fields that aren't required to create the advanced account forecast fact records.
Consolidate Field Names For Opportunity Metric Line Forecast Facts	Slice	Compare Opportunity Metric Line Item Close Date With Period Range For Facts	-	Truncates the fields that are no longer required in the generated opportunity forecast data.
Append Consolidated Opportunity Order SA Metric Data For Forecast Facts	Append	• Source Node 1: Consolidate Field Names For Order Metric Line Forecast Facts • Source Node 2: Consolidate Field Names For Opportunity Metric Line Forecast Facts • Source Node 3: Consolidate Field Names For Sales Agreement Metric Line Forecast Facts	-	Merges all advanced account forecast fact records from opportunities, orders, and sales agreements.
Aggregate Account Forecast Fact Records To Eliminate Duplicates	Group and Aggregate	Append Consolidated Opportunity Order SA Metric Data For Forecast Facts	-	Aggregates the advanced account forecast fact records from opportunities, orders, and sales agreements.

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Generated Account Forecast Facts Join Active Products	Inner Join	Aggregate Account Forecast Fact Records To Eliminate Duplicates	Filter Active Products	Adds the Product Name field to the list of fields. The Product Name then gets added to the advanced account forecast fact record name.
Generated Account Forecast Facts Join Periods	Inner Join	Generated Account Forecast Facts Join Active Products	Period	Adds the fully qualified Period name to the list of attributes. This label then gets added to the advanced account forecast fact record name.
Generated Account Forecast Facts Join Filtered Accounts	Inner Join	Generated Account Forecast Facts Join Periods	Compute Unique Identifier For Generated Account Forecast Set Partner Data	Add the account owner ID and unique identifier for the advanced account forecast set partner to the list of attributes. The account owner ID is stamped in the owner ID attribute of each advanced account forecast fact record during the writeback.
Generated Account Forecast Facts Join Existing Account Forecast Facts	Left Outer	Generated Account Forecast Facts Join Filtered Accounts	Advanced Account Forecast Fact	Joins new advanced account forecast fact records with the existing active advanced account forecast fact records.
Sort Before Writeback	Formula	Generated Account Forecast Facts Join Existing Account Forecast Facts	-	Sorts the advanced account forecast fact records by account and product.
Compute IsActive Attribute On Account Forecast Fact	Formula	Sort Before Writeback	-	Generates the name and default status for each advanced account forecast fact record.
Upsert Account Forecast Fact Record	Writeback	Compute IsActive Attribute On Account Forecast Fact	Forecast Fact	Upserts the advanced account forecast fact records to the core objects.

Data Processing Engine Definition: Recalculate Account Forecast

The Recalculate Account Forecast Data Processing Engine definition is a template job. It aggregates the quantity and revenue data to recalculate the existing forecasts. You can customize the template to include custom dimensions such as region, or custom measures such as quarter-on-quarter revenue growth.

Nodes Originating from the Account Data Source

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Account	Datasource	Account	-	The account object is used as the data source.
Fetch Account Id Input Variable	Formula	Account	-	Creates a transient variable with the value provided in the input variable.
Filter Account With Id	Filter	Fetch Account Id Input Variable	-	Filters the accounts based on account IDs.
Account Forecast Set Partner Join Account	Inner Join	Filter Active Account Forecast Set Partners	Filter Account With Id	Gets the advanced account forecast set partner records for the given account ID.
Generated Account Forecast Facts Join Filtered Accounts	Inner Join	Aggregate Account Forecast Fact Records To Eliminate Duplicates	Filter Account With Id	Gets the account owner ID and active forecast window for the advanced account forecast fact records.

Nodes Originating from the Product Data Source

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Product	Datasource	Product	-	The product object is used as the data source.
Filter Active Products	Filter	Product	-	Filters the active products.

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Generated Account Forecast Facts Join Active Products	Inner Join	Generated Account Forecast Facts Join Filtered Accounts	Filter Active Products	Gets valid advanced account forecast fact records for active products.
Valid Opportunity Within Acct Frsct Set Partner Date Range Join Active Products	Inner Join	Filter Valid Opportunity Within Account Forecast Set Partner Date Range	Filter Active Products	Gets valid opportunity line items for active products within the advanced account forecast set date range.
Valid Order Within Acct Frsct Set Partner Date Range Join Active Products	Inner Join	Filter Valid Order Within Account Forecast Set Partner Date Range	Filter Active Products	Gets valid order line items for active products within the advanced account forecast set date range.
Valid Sales Agreement Within Acct Frcst Set Partner Date Range Join Active Prod	Inner Join	Filter Valid Sales Agreement Within Account Forecast Set Partner Date Range	Filter Active Products	Gets valid sales agreement products that are active and are within the forecast set date range.

Nodes Originating from the Period Data Source

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Period	DataSource	Period	-	The period object is used as the data source.
Generated Account Forecast Facts Join Periods	Inner Join	Generated Account Forecast Facts Join Account Forecast Sets	Period	Gets valid advanced account forecast facts for the period.
Compute Join Field On Period Nodes	Formula	Period	-	Creates a cartesian attribute on the period records.

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Account Forecast Set Partner Join Period Data	Inner Join	Compute Account Forecast Set Partner Last Year Active Window Dates	Compute Join Field On Period Nodes	Creates a cross-product between advanced account forecast set partner and periods with window dates and periods.
Generated Active Acct Forecast Set Partner With Account Forecast Set Join Period	Inner Join	Generated Active Account Forecast Set Partner Join Account Forecast Set	Compute Join Field On Period Nodes	Creates a cross-product between advanced account forecast set partner and periods.

Forecast Metadata

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Advanced Account Forecast Set	Data Source	Advanced Account Forecast Set	-	The advanced account forecast fact object is used as the data source.
Fetch Forecast Set Id Input Variable	Formula	Advanced Account Forecast Set	-	Gets the ForecastSetId input variable.
Identify Selected Account Forecast Set	Filter	Fetch Forecast Set Id Input Variable	-	Filters advanced account forecast set IDs based on the input variable.
Fetch Account Forecast Period Group	Inner Join	Identify Selected Account Forecast Set	Advanced Account Forecast Period Group	Gets forecast period group IDs related to the advanced account forecast set IDs.
Fetch Account Forecast Period Setup	Inner Join	Fetch Account Forecast Period Group	Advanced Account Forecast Period	Gets advanced account forecast set period data associated with the advanced account forecast set IDs.
Generated Active Account Forecast Set Partner Join Account Forecast Set	Inner Join	Generated Account Forecast Set Partner Join Active Account Forecast Set Partner	Fetch Account Forecast Period Setup	Gets advanced account forecast set partner records associated with the advanced account forecast set data.

Nodes Originating from the Advanced Account Forecast Set Partner Data Source

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Advanced Account Forecast Set Partner	Datasource	Advanced Account Forecast Set Partner	-	The advanced account forecast set partner object is used as the data source.
Filter Existing Active Account Forecast Set Partners	Filter	Advanced Account Forecast Set Partner	-	Filters active and draft advanced account forecast set partner records.
Account Forecast Set Partner Join Account	Inner Join	Filter Existing Active Account Forecast Set Partners	Filter Account With Id	Filters advanced account forecast set partner records for the specified AccountId input.
Generate Data For Account Forecast Set Partner	Formula	Account Forecast Set Partner Join Account	-	Generates the status, today's date, and advanced account forecast set ID for the advanced account forecast set partner records.
Generated Active Account Forecast Set Partner Join Account Forecast Set	Inner Join	Generate Data For Account Forecast Set Partner	Fetch Account Forecast Period Setup	Gets advanced account forecast set data for each advanced account forecast set partner record.
Generated Active Acct Forecast Set Partner With Account Forecast Set Join Period	Inner Join	Generated Active Account Forecast Set Partner Join Account Forecast Set	Compute Join Field On Period Nodes	Creates a cross-product between advanced account forecast set partner and periods.
Compute Period Type Flag On Period Data For Acct Forecast Set Partner Start Date	Formula	Generated Active Acct Forecast Set Partner With Account Forecast Set Join Period	-	Finds advanced account forecast set partner period data with the required Period Type flag.
Identify Period Nodes For Frequency For Acct Forecast Set Partner Start Date	Filter	Compute Period Type Flag On Period Data For Acct Forecast Set Partner Start Date	-	Filters advanced account forecast set partner period data with the required Period Type flag.

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Compute Period Nodes For Account Forecast Set Partner Start Date	Formula	Identify Period Nodes For Frequency For Acct Forecast Set Partner Start Date	-	Finds current periods for the advanced account forecast set partner records.
Identify Period Nodes For Account Forecast Set Partner Start Date	Filter	Compute Period Nodes For Account Forecast Set Partner Start Date	-	Filters current periods for the advanced account forecast set partner records.
Compute Today Date Day Period Offset For Account Forecast Set Partner	Formula	Identify Period Nodes For Account Forecast Set Partner Start Date	-	Generates Active Window Size, Period Offset, and Today's Date Offset for the advanced account forecast set partner records.
Compute Account Forecast Set Partner Date Offsets	Formula	Compute Today Date Day Period Offset For Account Forecast Set Partner	-	Generates Current Period Start Date, Start Period Number, and End Period Number for the advanced account forecast set partner records.
Compute Account Forecast Set Partner Adjusted Dates	Formula	Compute Account Forecast Set Partner Date Offsets	-	Generates Forecast Set Partner Name, Forecast Set Partner Start Date(Adjusted Start Date), and Forecast Set Partner End Date(Adjusted End Date) for the advanced account forecast set partner records.
Compute Account Forecast Set Partner Adjusted Last Year Dates	Formula	Compute Account Forecast Set Partner Adjusted Dates	-	Generates Forecast Set Partner Last year Start Date(Adjusted Last Year Start Date) and Forecast Set Partner Last Year End Date(Adjusted Last Year End Date) for the advanced account forecast set partner records.
Compute Account Forecast Set Partner Active Window Dates	Formula	Compute Account Forecast Set Partner Adjusted Last Year Dates	-	Generates Rollover Start Date, and Rollover End Date for the advanced account forecast set partner records.
Compute Account Forecast Set Partner	Formula	Compute Account Forecast Set Partner	-	Generates Last year Rollover Start Date and Last Year Rollover End Date for the advanced

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Last Year Active Window Dates		Active Window Dates		account forecast set partner records.
Activated Order Join Upserted Account Forecast Set Partner	Inner Join	Activated Order Join Order Item	Compute Account Forecast Set Partner Last Year Active Window Dates	Gets orders associated with the advanced account forecast set partner records.
Filtered Opportunity Join Upserted Account Forecast Set Partner	Inner Join	Filtered Opportunity Join Opportunity Line Item	Compute Account Forecast Set Partner Last Year Active Window Dates	Gets opportunities items associated with the advanced account forecast set partner records.
Valid Sales Agreement Join Upserted Account Forecast Set Partner	Inner Join	Filtered Sales Agreement Join Sales Agreement Product Schedule	Compute Account Forecast Set Partner Last Year Active Window Dates	Gets sales agreements associated with the advanced account forecast set partner records.
Account Forecast Set Partner Join Period Data	Inner Join	Compute Account Forecast Set Partner Last Year Active Window Dates	Compute Join Field On Period Nodes	Gets advanced account forecast fact records associated with the forecasts set partner records.
Compute Period Type Flag On Period Data For Account Forecast Set Partner	Formula	Account Forecast Set Partner Join Period Data	-	Creates a cross-product between the advanced account forecast set partner records and window dates and periods.
Identify Period Nodes For Selected Frequency For Account Forecast Set Partner	Filter	Compute Period Type Flag On Period Data For Account Forecast Set Partner	-	Finds advanced account forecast set partner period data with the required Period Type flag.
Compute Period Nodes For Adjusted Dates For Account Forecast Set Partner	Formula	Identify Period Nodes For Selected Frequency For Account Forecast Set Partner	-	Filters advanced account forecast set partner period data with the required Period Type flag.
Identify Period Nodes For Account Forecast Set Partner	Filter	Compute Period Nodes For Adjusted Dates For Account Forecast Set Partner	-	Finds rollover periods for the advanced account forecast set partner records.

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Compute Last Year Period Dates On Account Forecast Set Partner	Formula	Identify Period Nodes For Account Forecast Set Partner	-	Finds advanced account forecast set partner periods (adjusted periods) for each of the advanced account forecast set partner records.
Opportunity Metrics Data Join Account Forecast Set Partner Period Data	Inner Join	Valid Opportunity Within Acct Frsct Set Partner Date Range Join Active Products	Compute Last Year Period Dates On Account Forecast Set Partner	Filters advanced account forecast set partner periods (adjusted periods) for each of the forecast set partner records.
Order Metrics Data Join Account Forecast Set Partner Period Data	Inner Join	Valid Order Within Acct Frsct Set Partner Date Range Join Active Products	Compute Last Year Period Dates On Account Forecast Set Partner	Generates Last Year Period End and Last Year Period Start dates for the advanced account forecast set partner record periods (adjusted periods).
Sales Agreement Metrics Data Join Account Forecast Set Partner Period Data	Inner Join	Aggregate Records To Consolidate SAPS Period Join Data	Compute Last Year Period Dates On Account Forecast Set Partner	Gets opportunities items associated with the advanced account forecast set partner record periods (adjusted periods).
Valid Sales Agreement Join Account Forecast Set Partner Period Data	Inner Join	Valid Sales Agreement Within Acct Frcst Set Partner Date Range Join Active Prod	Compute Last Year Period Dates On Account Forecast Set Partner	Gets order items associated with the advanced account forecast set partner record periods (adjusted periods).

Nodes Originating from the Advanced Account Forecast Fact Data Source

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Advanced Account Forecast Fact	Datasource	Advanced Account Forecast Fact	-	The advanced account forecast fact object is used as the data source.

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Generated Account Forecast Facts Join Existing Account Forecast Facts	Outer Join	Compute Unique Identifier For Generated Account Forecast Fact Data	Advanced Account Forecast Fact	Joins generated advanced account forecast fact data with the existing advanced account forecast fact data.

Nodes Originating from the Opportunity Data Source

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Opportunity	Datasource	Opportunity	-	The opportunity object is used as the data source.
Filter Opportunity Based On Result	Filter	Opportunity	-	Filter opportunities based on their status.
Filtered Opportunity Join Opportunity Line Item	Inner Join	Filter Opportunity Based On Result	Opportunity Line Item	Gets all the opportunities' products (items).
Filtered Opportunity Join Upserted Account Forecast Set Partner	Inner Join	Filtered Opportunity Join Opportunity Line Item	Compute Account Forecast Set Partner Last Year Active Window Dates	Gets opportunities' items associated with the advanced account forecast set partner records.
Identify Opportunities Within Account Forecast Set Partner Date Range	Formula	Filtered Opportunity Join Upserted Account Forecast Set Partner	-	Finds opportunities' items associated with the advanced account forecast set partner records within the rollover window.
Filter Valid Opportunity Within Account Forecast Set Partner Date Range	Filter	Identify Opportunities Within Account Forecast Set Partner Date Range	-	Filters opportunities' items associated with the advanced account forecast set partner records within the rollover window.
Valid Opportunity Within Acct Frsct	Inner Join	Filter Valid Opportunity Within	Filter Active Products	Filters active opportunities' items associated with the

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Set Partner Date Range Join Active Products		Account Forecast Set Partner Date Range		advanced account forecast set partner records.
Opportunity Metrics Data Join Account Forecast Set Partner Period Data	Inner Join	Valid Opportunity Within Acct Frsct Set Partner Date Range Join Active Products	Compute Last Year Period Dates On Account Forecast Set Partner	Gets opportunities' items associated with the advanced account forecast set partner record periods (adjusted periods).
Compare Opportunity Metric Line Item Close Date With Period Range For Facts	Formula	Opportunity Metrics Data Join Account Forecast Set Partner Period Data	-	Calculates the opportunity quantity and opportunity revenue for the forecast set partner record periods (adjusted periods).
Consolidate Field Names For Opportunity Metric Line Forecast Facts	Slice	Compare Opportunity Metric Line Item Close Date With Period Range For Facts	-	Removes any extra fields that aren't required to create the advanced account forecast fact record.

Nodes Originating from the Order Data Source

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Order	Datasource	Order	-	The order object is used as the data source.
Filter Activated Order	Filter	Order	-	Filters orders based on their status.
Activated Order Join Order Item	Inner Join	Filter Activated Order	Order Item	Gets all order items associated with the orders.
Activated Order Join Upserted Account Forecast Set Partner	Inner Join	Activated Order Join Order Item	Compute Account Forecast Set Partner Last Year Active Window Dates	Gets order items associated with the advanced account forecast set partner records.

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Identify Orders Within Account Forecast Set Partner Date Range	Formula	Activated Order Join Upserted Account Forecast Set Partner	-	Finds order items associated with the advanced account forecast set partner records within the rollover window.
Filter Valid Order Within Account Forecast Set Partner Date Range	Filter	Identify Orders Within Account Forecast Set Partner Date Range	-	Filters order items associated with the advanced account forecast set partner records within the rollover window.
Valid Order Within Acct Frsct Set Partner Date Range Join Active Products	Inner Join	Filter Valid Order Within Account Forecast Set Partner Date Range	Filter Active Products	Filters active order items associated with the advanced account forecast set partner records.
Order Metrics Data Join Account Forecast Set Partner Period Data	Inner Join	Valid Order Within Acct Frsct Set Partner Date Range Join Active Products	Compute Last Year Period Dates On Account Forecast Set Partner	Gets order items associated advanced account forecast set partner record periods (adjusted periods).
Compare Order Metric Line Item Close Date With Period Range For Facts	Formula	Order Metrics Data Join Account Forecast Set Partner Period Data	-	Calculate the order quantity and order revenue for the advanced account forecast set partner record periods.
Consolidate Field Names For Order Metric Line Forecast Facts	Slice	Compare Order Metric Line Item Close Date With Period Range For Facts	-	Removes any extra fields that aren't required to create the advanced account forecast fact record.

Nodes Originating from the Sales Agreement Data Source

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Sales Agreement	Datasource	Sales Agreement	-	The sales agreement object is used as the data source.

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Filter Valid Sales Agreement	Filter	Sales Agreement	-	Filters sales agreements based on their status.
Filtered Sales Agreement Join Sales Agreement Product	Inner Join	Filter Valid Sales Agreement	Sales Agreement Product	Gets all sales agreement product records associated with the sales agreement records.
Filtered Sales Agreement Join Sales Agreement Product Schedule	Inner Join	Filtered Sales Agreement Join Sales Agreement Product	Sales Agreement Product Schedule	Gets all sales agreement product schedule records associated with the sales agreement product records.
Valid Sales Agreement Join Upserted Account Forecast Set Partner	Inner Join	Filtered Sales Agreement Join Sales Agreement Product Schedule	Compute Account Forecast Set Partner Last Year Active Window Dates	Gets sales agreement product schedule records associated with the advanced account forecast set partner records.
Identify Sales Agreements Within Account Forecast Set Partner Date Range	Formula	Valid Sales Agreement Join Upserted Account Forecast Set Partner	-	Finds sales agreement records associated with the advanced account forecast set partner records within the active date range.
Filter Valid Sales Agreement Within Account Forecast Set Partner Date Range	Filter	Identify Sales Agreements Within Account Forecast Set Partner Date Range	-	Filters sales agreement records associated with the advanced account forecast set partner records within the active date range.
Valid Sales Agreement Within Acct Frcst Set Partner Date Range Join Active Prod	Inner Join	Filter Valid Sales Agreement Within Account Forecast Set Partner Date Range	Filter Active Products	Filters sales agreement product schedule records based on active products associated with the advanced account forecast set partner records.
Valid Sales Agreement Join Account Forecast Set Partner Period Data	Inner Join	Valid Sales Agreement Within Acct Frcst Set Partner Date Range Join Active Prod	Compute Last Year Period Dates On Account Forecast Set Partner	Gets sales agreement product schedule records associated with the advanced account forecast set partner record periods (adjusted periods).
Identify Valid Period Nodes For SAPS Start Date And End Date	Formula	Valid Sales Agreement Join	-	Identifies all records from the advanced account forecast fact data where the period start date

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Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
		Account Forecast Set Partner Period Data		and end date falls between the sales agreement product schedule start date and end date.
Filter Valid Period Nodes For SAPS Start Date And End Date	Filter	Identify Valid Period Nodes For SAPS Start Date And End Date	-	Filters all records from the advanced account forecast fact data where the period start date and end date falls between the sales agreement product schedule start date and end date.
Compute End Of Last Period And Sales Agreement Effective Date	Formula	Filter Valid Period Nodes For SAPS Start Date And End Date	-	Generates the Last Period Start Date, Last Period End Date, Period Effective End Date, and Period Effective Start Date fields for the advanced account forecast set partner record periods.
Compute Number of Applicable Days For SAPS Quantity Calculations	Formula	Compute End Of Last Period And Sales Agreement Effective Date	-	Generates the applicable days for sales agreement product schedule quantity calculations.
Fetch Sales Price From Last Period For Calculation	Formula	Compute Number of Applicable Days For SAPS Quantity Calculations	-	Gets the sales price from the last period.
Determine Last Period Quantity And Revenue For SAPS Calculation	Formula	Fetch Sales Price From Last Period For Calculation	-	Determines the last period quantity and revenue for sales agreement product schedule calculation.
Compute Quantity From Applicable Periods In SAPS Period Join Data	Formula	Determine Last Period Quantity And Revenue For SAPS Calculation	-	Calculates the quantity for the sales agreement product schedule start date.
Compute Applicable Quantity And Revenue In SAPS Period Join Data	Formula	Compute Quantity From Applicable Periods In SAPS Period Join Data	-	Calculates the quantity for the sales agreement product schedule.

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Aggregate Records To Consolidate SAPS Period Join Data	Group and Aggregate	Compute Applicable Quantity And Revenue In SAPS Period Join Data	-	Generates the sum of quantities for the advanced account forecast set partner record periods.
Sales Agreement Metrics Data Join Account Forecast Set Partner Period Data	Inner Join	Aggregate Records To Consolidate SAPS Period Join Data	Compute Last Year Period Dates On Account Forecast Set Partner	Gets sales agreement quantities associated with the advanced account forecast set partner record periods (adjusted periods).
Compare Sales Agreement Metric Line Item Close Date With Period Range	Formula	Sales Agreement Metrics Data Join Account Forecast Set Partner Period Data	-	Calculate the sales agreement quantity and sales agreement revenue for the advanced account forecast set partner for the specified periods.
Consolidate Field Names For Sales Agreement Metric Line Forecast Facts	Slice	Compare Sales Agreement Metric Line Item Close Date With Period Range	-	Removes any duplicate sales agreement product schedules.

Consolidated Metrics

Node Name	Type	Left Node (Join)/Source Object (Data Source)/Source Node (Filter or Formula)	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Description
Consolidate Field Names For Order Metric Line Forecast Facts	Slice	Compare Order Metric Line Item Close Date With Period Range For Facts	-	Removes any extra fields that aren't required to create the advanced account forecast fact record.
Consolidate Field Names For Sales Agreement Metric Line Forecast Facts	Slice	Compare Sales Agreement Metric Line Item Close Date With Period Range	-	Removes any extra fields that aren't required to create the advanced account forecast fact record.

Node Name	Type	Left Node (Join)/Source Object (Data Source)/Source Node (Filter or Formula)	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Description
Consolidate Field Names For Opportunity Metric Line Forecast Facts	Slice	Compare Opportunity Metric Line Item Close Date With Period Range For Facts	-	Merges all advanced account forecast fact records from opportunities, orders, and sales agreements.
Append Consolidated Opportunity Order SA Metric Data For Forecast Facts	Append	• Source Node 1: Consolidate Field Names For Order Metric Line Forecast Facts • Source Node 2: Consolidate Field Names For Sales Agreement Metric Line Forecast Facts • Source Node 3: Consolidate Field Names For Opportunity Metric Line Forecast Facts	-	Merges all advanced account forecast fact records from opportunities, orders, and sales agreements.
Aggregate Account Forecast Fact Records To Eliminate Duplicates	Group and Aggregate	Append Consolidated Opportunity Order SA Metric Data For Forecast Facts	-	Aggregates advanced account forecast fact records from opportunities, orders, and sales agreements.
Compute Unique Identifier For Generated Account Forecast Fact Data	Formula	Aggregate Account Forecast Fact Records To Eliminate Duplicates	-	Generates a unique identifier for each record in the advanced account forecast fact object.
Generated Account Forecast Facts Join Existing Account Forecast Facts	Outer Join	Compute Unique Identifier For Generated Account Forecast Fact Data	Advanced Account Forecast Fact	Joins new advanced account forecast fact records with existing active advanced account forecast fact records.
Compute Account Partner Product Period Data For	Formula	Generated Account Forecast Facts Join Existing Account Forecast Facts	-	Identifies the account ID, partner ID, period ID, and product ID for the generated advanced account forecast fact records.

Node Name	Type	Left Node (Join)/Source Object (Data Source)/Source Node (Filter or Formula)	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Description
Account Forecast Fact Upsert				
Generated Account Forecast Facts Join Filtered Accounts	Inner Join	Compute Account Partner Product Period Data For Account Forecast Fact Upsert	Compute Account Forecast Set Partner Last Year Active Window Dates	Gets the account owner ID and active forecast window for the generated advanced account forecast fact records.
Generated Account Forecast Facts Join Periods	Inner Join	Generated Account Forecast Facts Join Filtered Accounts	Period	Get fully qualified label for the periods that are part of the generated advanced account forecast fact records.
Generated Account Forecast Facts Join Active Products	Inner Join	Generated Account Forecast Facts Join Periods	Product	Gets the product name for the products that are part of the generated advanced account forecast fact records.
Identify Account Forecast Facts In Active Recalculation Window	Formula	Generated Account Forecast Facts Join Active Products	-	Identifies advanced account forecast fact records that are within the active forecast window.
Compute Measure Data For Account Forecast Fact Upsert	Formula	Identify Account Forecast Facts In Active Recalculation Window	-	Computes the quantity and revenue for the applicable orders, last year orders, opportunities, and sales agreements.
Compute Status Name Owner Attribute On Forecast Fact Records	Formula	Compute Measure Data For Account Forecast Fact Upsert	-	Computes the name, account owner ID, status for each of the generated advanced account forecast fact records.
Upsert Account Forecast Fact Record	Writeback	Compute Status Name Owner Attribute On Forecast Fact Records	-	Upserts the advanced account forecast fact records to the core objects.

Data Processing Engine Definition: Regenerate Account Forecast

The Regenerate Account Forecast Data Processing Engine definition is a template job. It aggregates the quantity and revenue data to regenerate forecasts for a given account and advanced account forecast set. Use this job to regenerate forecasts for your accounts when you make any changes to the frequency, dimensions, or start period associated with the advanced account forecast set. You can customize the template to include custom dimensions such as region, or other custom measures.

Nodes Originating from the Account Data Source

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Account	Datasource	Account	-	The account object is used as the data source.
Account Forecast Set Partner Join Account	Inner Join	Filter Existing Active Account Forecast Set Partners	Account	Obtains all advanced account forecast set partner records associated with a given account.

Nodes Originating from the Product Data Source

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Product	Datasource	Product	-	The product object is used as the data source.
Filter Active Products	Filter	Product	-	Filters the active products.
Generated Account Forecast Facts Join Active Products	Inner Join	Generated Account Forecast Facts Join Filtered Accounts	Filter Active Products	Gets valid advanced account forecast fact records for active products.
Valid Opportunity Within Acct Frsct Set Partner Date Range Join Active Products	Inner Join	Filter Valid Opportunity Within Account Forecast Set Partner Date Range	Filter Active Products	Gets valid opportunity line items for active products within the advanced account advanced account forecast set date range.
Valid Order Within Acct Frsct Set Partner Date Range Join Active Products	Inner Join	Filter Valid Order Within Account Forecast Set Partner Date Range	Filter Active Products	Gets valid order line items for active products within the advanced account advanced account forecast set date range.

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Valid Sales Agreement Within Acct Frcst Set Partner Date Range Join Active Prod	Inner Join	Filter Valid Sales Agreement Within Account Forecast Set Partner Date Range	Filter Active Products	Gets valid sales agreement products that are active and are within the forecast set date range.

Nodes Originating from the Period Data Source

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Period	DataSource	Period	-	The period object is used as the data source.
Generated Account Forecast Facts Join Periods	Inner Join	Generated Account Forecast Facts Join Account Forecast Sets	Period	Gets valid advanced account forecast fact records for the period.
Compute Join Field On Period Nodes	Formula	Generated Account Forecast Facts Join Periods	-	Creates a cartesian attribute on the period records.
Account Forecast Set Partner Join Period Data	Inner Join	Validate Number of Active Forecast Set Partners For Account Id	Compute Join Field On Period Nodes	Creates a cross-product between advanced account forecast set partner and periods with window dates and periods.
Generated Active Acct Forecast Set Partner With Account Forecast Set Join Period	Inner Join	Generated Active Account Forecast Set Partner Join Account Forecast Set	Compute Join Field On Period Nodes	Creates a cross-product between advanced account forecast set partner and periods.

Forecast Metadata

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Advanced Account Forecast Set	Datasource	Advanced Account Forecast Set	-	The advanced account forecast set object is used as the data source.
Fetch Forecast Set Id Input Variable	Formula	Advanced Account Forecast Set	-	Gets the ForecastSetId input variable.
Identify Selected Account Forecast Set	Filter	Fetch Forecast Set Id Input Variable	-	Filters advanced account forecast set IDs based on the input variable.
Fetch Account Forecast Period Group	Inner Join	Identify Selected Account Forecast Set	Advanced Account Forecast Period Group	Gets forecast period group IDs related to the advanced account forecast set IDs.
Fetch Account Forecast Period Setup	Inner Join	Fetch Account Forecast Period Group	Advanced Account Forecast Period	Gets advanced account forecast set period data associated with the advanced account forecast set IDs.
Generated Active Account Forecast Set Partner Join Account Forecast Set	Inner Join	Generate Data For Account Forecast Set Partner	Fetch Account Forecast Period Setup	Gets advanced account forecast set partner records associated with the advanced account forecast set data.

Nodes Originating from the Advanced Account Forecast Set Partner Data Source

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Advanced Account Forecast Set Partner	Datasource	Advanced Account Forecast Set Partner	-	The advanced account forecast set partner object is used as the data source.
Filter Existing Active Account Forecast Set Partners	Filter	Advanced Account Forecast Set Partner	-	Filters active and draft advanced account forecast set partner records.

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Account Forecast Set Partner Join Account	Inner Join	Filter Existing Active Account Forecast Set Partners	Account	Filters advanced account forecast set partner records for the specified AccountId.
Generate Data For Account Forecast Set Partner	Formula	Account Forecast Set Partner Join Account	-	Generates the status, today's date, and advanced account forecast set ID for the advanced account forecast set partner records.
Generated Active Account Forecast Set Partner Join Account Forecast Set	Inner Join	Generate Data For Account Forecast Set Partner	Fetch Account Forecast Period Setup	Gets advanced account forecast set data for each advanced account forecast set partner record.
Update Inactive Account Forecast Set Partner Record	Writeback	Generated Active Account Forecast Set Partner Join Account Forecast Set	-	Depending on the selected advanced account forecast set ID, sets the status of the applicable advanced account forecast set partner records to Inactive as part of the regeneration.
Generated Active Acct Forecast Set Partner With Account Forecast Set Join Period	Inner Join	Generated Active Account Forecast Set Partner Join Account Forecast Set	Compute Join Field On Period Nodes	Creates a cross-product between advanced account forecast set partner and periods.
Compute Period Type Flag On Period Data For Acct Forecast Set Partner Start Date	Formula	Generated Active Acct Forecast Set Partner With Account Forecast Set Join Period	-	Finds advanced account forecast set partner period data with the required Period Type flag.
Identify Period Nodes For Frequency For Acct Forecast Set Partner Start Date	Filter	Compute Period Type Flag On Period Data For Acct Forecast Set Partner Start Date	-	Filters advanced account forecast set partner period data with the required Period Type flag.
Compute Period Nodes For Account Forecast Set Partner Start Date	Formula	Identify Period Nodes For Frequency For Acct Forecast Set Partner Start Date	-	Finds the current periods for the advanced account forecast set partner records.

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Identify Period Nodes For Account Forecast Set Partner Start Date	Filter	Compute Period Nodes For Account Forecast Set Partner Start Date	-	Filters the current periods for the advanced account forecast set partner records.
Compute Today Date Day Period Offset For Account Forecast Set Partner	Formula	Identify Period Nodes For Account Forecast Set Partner Start Date	-	Generates the Active Window Size, Period Offset, and Today Date Offset for the advanced account forecast set partner records.
Compute Account Forecast Set Partner Date Offsets	Formula	Compute Today Date Day Period Offset For Account Forecast Set Partner	-	Generates the Current Period Start Date, Start Period Number, and End Period Number for the advanced account forecast set partner records.
Compute Account Forecast Set Partner Adjusted Dates	Formula	Compute Account Forecast Set Partner Date Offsets	-	Generates Forecast Set Partner Name, Forecast Set Partner Start Date (Adjusted Start Date), and Forecast Set Partner End Date (Adjusted End Date) for the advanced account forecast set partner records.
Compute Account Forecast Set Partner Adjusted Last Year Dates	Formula	Compute Account Forecast Set Partner Adjusted Dates	-	Generates Forecast Set Partner Last Year Start Date (Adjusted Last Year Start Date) and Forecast Set Partner Last Year End Date (Adjusted Last Year End Date) fields for the advanced account forecast set partner records.
Compute Unique Identifier For Generated Account Forecast Set Partner Data	Formula	Compute Account Forecast Set Partner Adjusted Last Year Dates	-	Generates Rollover Start Date, and Rollover End Date for the advanced account forecast set partner records.
Insert Account Forecast Set Partner Record	Writeback	Compute Unique Identifier For	-	Generates Last Year Rollover Start Date, and Last Year Rollover End Date for the advanced

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
		Generated Account Forecast Set Partner Data		account forecast set partner records.
Generated Account Forecast Facts Join Filtered Accounts	Inner Join	Generated Account Forecast Facts Join Periods	Compute Unique Identifier For Generated Account Forecast Set Partner Data	Gets orders associated with the advanced account forecast set partner records.
Activated Order Join Upserted Account Forecast Set Partner	Inner Join	Activated Order Join Order Item	Compute Unique Identifier For Generated Account Forecast Set Partner Data	Gets opportunities' items associated with the advanced account forecast set partner records.
Filtered Opportunity Join Upserted Account Forecast Set Partner	Inner Join	Filtered Opportunity Join Opportunity Line Item	Compute Unique Identifier For Generated Account Forecast Set Partner Data	Gets sales agreements associated with the advanced account forecast set partner records.
Valid Sales Agreement Join Upserted Account Forecast Set Partner	Inner Join	Filtered Sales Agreement Join Sales Agreement Product Schedule	Compute Unique Identifier For Generated Account Forecast Set Partner Data	Gets advanced account forecast fact records associated with the advanced account forecast set partner records.
Account Forecast Set Partner Join Period Data	Inner Join	Compute Unique Identifier For Generated Account Forecast Set Partner Data	Compute Join Field On Period Nodes	Creates a cross-product between the advanced account forecast set partner records and window dates and periods.
Compute Period Type Flag On Period Data For Account Forecast Set Partner	Formula	Account Forecast Set Partner Join Period Data	-	Finds advanced account forecast set partner period data with the required Period Type flag.
Identify Period Nodes For Selected Frequency For Account Forecast Set Partner	Filter	Compute Period Type Flag On Period Data For Account Forecast Set Partner	-	Filters advanced account forecast set partner period data with the required Period Type flag.
Compute Period Nodes For Adjusted Dates For Account Forecast Set Partner	Formula	Identify Period Nodes For Selected Frequency For Account Forecast Set Partner	-	Finds the rollover periods for the advanced account forecast set partner records.

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Identify Period Nodes For Account Forecast Set Partner	Filter	Compute Period Nodes For Adjusted Dates For Account Forecast Set Partner	-	Finds advanced account forecast set partner periods (adjusted periods) for each of the advanced account forecast set partner records.
Compute Last Year Period Dates On Account Forecast Set Partner	Formula	Identify Period Nodes For Account Forecast Set Partner	-	Filters advanced account forecast set partner periods (adjusted periods) for each of the forecast set partner records.
Opportunity Metrics Data Join Account Forecast Set Partner Period Data	Inner Join	Valid Opportunity Within Acct Frsct Set Partner Date Range Join Active Products	Compute Last Year Period Dates On Account Forecast Set Partner	Generates the Last year Period End Date and Last Year Period Start Date for the advanced account forecast set partner record periods (adjusted periods).
Order Metrics Data Join Account Forecast Set Partner Period Data	Inner Join	Valid Order Within Acct Frsct Set Partner Date Range Join Active Products	Compute Last Year Period Dates On Account Forecast Set Partner	Gets opportunities' items associated with the advanced account forecast set partner record periods (adjusted periods).
Sales Agreement Metrics Data Join Account Forecast Set Partner Period Data	Inner Join	Aggregate Records To Consolidate SAPS Period Join Data	Compute Last Year Period Dates On Account Forecast Set Partner	Gets order items associated with the advanced account forecast set partner record periods (adjusted periods).
Valid Sales Agreement Join Account Forecast Set Partner Period Data	Inner Join	Valid Sales Agreement Within Acct Frcst Set Partner Date Range Join Active Prod	Compute Last Year Period Dates On Account Forecast Set Partner	Gets sales agreement quantities associated with the advanced account forecast set partner record periods (adjusted periods).

Nodes Originating from the Advanced Account Forecast Fact Data Source

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Advanced Account Forecast Fact	Datasource	-	-	The advanced account forecast fact object is used as the data source.
Generated Account Forecast Facts Join Existing Account Forecast Facts	Left Outer	Generated Account Forecast Facts Join Filtered Accounts	Advanced Account Forecast Fact	Joins generated advanced account forecast fact records by processing data from orders, opportunities, and sales agreements to the existing advanced account advanced account forecast fact records.

Nodes Originating from the Opportunity Data Source

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Opportunity	Datasource	Opportunity	-	The opportunity object is used as the data source.
Filter Opportunity Based On Result	Filter	Opportunity	-	Filter opportunities based on their status.
Filtered Opportunity Join Opportunity Line Item	Inner Join	Filter Opportunity Based On Result	Opportunity Line Item	Gets all opportunities' products (items).
Filtered Opportunity Join Upserted Account Forecast Set Partner	Inner Join	Filtered Opportunity Join Opportunity Line Item	Validate Number of Active Forecast Set Partners For Account Id	Gets opportunities' items associated with the advanced account forecast set partner records.
Identify Opportunities Within Account Forecast Set Partner Date Range	Formula	Filtered Opportunity Join Upserted Account Forecast Set Partner	-	Finds opportunities' items associated with the advanced account forecast set partner records within the rollover window.

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Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Filter Valid Opportunity Within Account Forecast Set Partner Date Range	Filter	Identify Opportunities Within Account Forecast Set Partner Date Range	-	Filters opportunities' items associated with the advanced account forecast set partner records within the rollover window.
Valid Opportunity Within Acct Frsct Set Partner Date Range Join Active Products	Inner Join	Filter Valid Opportunity Within Account Forecast Set Partner Date Range	Filter Active Products	Filters active opportunities' items associated with the advanced account forecast set partner records.
Opportunity Metrics Data Join Account Forecast Set Partner Period Data	Inner Join	Valid Opportunity Within Acct Frsct Set Partner Date Range Join Active Products	Compute Last Year Period Dates On Account Forecast Set Partner	Gets opportunities' items associated with the advanced account forecast set partner record periods (adjusted periods).
Compare Opportunity Metric Line Item Close Date With Period Range For Facts	Formula	Opportunity Metrics Data Join Account Forecast Set Partner Period Data	-	Calculates the opportunity quantity and opportunity revenue for the forecast set partner record periods (adjusted periods).
Consolidate Field Names For Opportunity Metric Line Forecast Facts	Slice	Compare Opportunity Metric Line Item Close Date With Period Range For Facts	-	Removes any extra fields that aren't required to regenerate the advanced account forecast fact record.

Nodes Originating from the Order Data Source

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Order	Datasource	Order	-	The order object is used as the data source.

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Filter Activated Order	Filter	Order	-	Filters orders based on their status.
Activated Order Join Order Item	Inner Join	Filter Activated Order	Order Item	Gets all order items associated with the orders.
Activated Order Join Upserted Account Forecast Set Partner	Inner Join	Activated Order Join Order Item	Validate Number of Active Forecast Set Partners For Account Id	Gets order items associated with the advanced account forecast set partner records.
Identify Orders Within Account Forecast Set Partner Date Range	Formula	Activated Order Join Upserted Account Forecast Set Partner	-	Finds order items associated with the advanced account forecast set partner records within the rollover window.
Filter Valid Order Within Account Forecast Set Partner Date Range	Filter	Identify Orders Within Account Forecast Set Partner Date Range	-	Filters order items associated with the advanced account forecast set partner records within the rollover window.
Valid Order Within Acct Frsct Set Partner Date Range Join Active Products	Inner Join	Filter Valid Order Within Account Forecast Set Partner Date Range	Filter Active Products	Filters active order items associated with the advanced account forecast set partner records.
Order Metrics Data Join Account Forecast Set Partner Period Data	Inner Join	Valid Order Within Acct Frsct Set Partner Date Range Join Active Products	Compute Last Year Period Dates On Account Forecast Set Partner	Gets order items associated advanced account forecast set partner record periods (adjusted periods).
Compare Order Metric Line Item Close Date With Period Range For Facts	Formula	Order Metrics Data Join Account Forecast Set Partner Period Data	-	Calculate the order quantity and order revenue fields for the advanced account forecast set partner record periods.
Consolidate Field Names For Order Metric Line Forecast Facts	Slice	Compare Order Metric Line Item Close Date With Period Range For Facts	-	Removes any extra fields that aren't required to regenerate the advanced account forecast fact record.

Nodes Originating from the Sales Agreement Data Source

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Sales Agreement	Datasource	Sales Agreement	-	The sales agreement object is used as the data source.
Filter Valid Sales Agreement	Filter	Sales Agreement	-	Filters sales agreements based on their status.
Filtered Sales Agreement Join Sales Agreement Product	Inner Join	Filter Valid Sales Agreement	Sales Agreement Product	Gets all sales agreement product records associated with the sales agreement records.
Filtered Sales Agreement Join Sales Agreement Product Schedule	Inner Join	Filtered Sales Agreement Join Sales Agreement Product	Sales Agreement Product Schedule	Gets all sales agreement product schedules associated with the sales agreement product records.
Valid Sales Agreement Join Upserted Account Forecast Set Partner	Inner Join	Filtered Sales Agreement Join Sales Agreement Product Schedule	Validate Number of Active Forecast Set Partners For Account Id	Gets all sales agreement product schedules associated with the advanced account forecast set partner records.
Identify Sales Agreements Within Account Forecast Set Partner Date Range	Formula	Valid Sales Agreement Join Upserted Account Forecast Set Partner	-	Finds sales agreements associated with the advanced account forecast set partner records within the rollover window.
Filter Valid Sales Agreement Within Account Forecast Set Partner Date Range	Filter	Identify Sales Agreements Within Account Forecast Set Partner Date Range	-	Filters sales agreements associated with the advanced account forecast set partner records within the rollover window.
Valid Sales Agreement Within Acct Frcst Set Partner Date Range Join Active Prod	Inner Join	Filter Valid Sales Agreement Within Account Forecast Date Range	Filter Active Products	Filters sales agreement product schedules based on active products associated with the advanced account forecast set partner records.

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Valid Sales Agreement Join Account Forecast Set Partner Period Data	Inner Join	Valid Sales Agreement Within Account Forecast Date Range Join Active Products	Compute Last Year Period Dates On Account Forecast Set Partner	Gets sales agreement product schedules associated with the advanced account forecast set partner record periods (adjusted periods).
Identify Valid Period Nodes For SAPS Start Date And End Date	Formula	Valid Sales Agreement Join Account Forecast Set Partner Period Data	-	Finds sales agreement product schedules associated with the advanced account forecast set partner record periods (adjusted periods).
Filter Valid Period Nodes For SAPS Start Date And End Date	Filter	Identify Valid Period Nodes For SAPS Start Date And End Date	-	Filters sales agreement product schedules associated with the advanced account forecast set partner record periods (adjusted periods).
Compute End Of Last Period And Sales Agreement Effective Date	Formula	Filter Valid Period Nodes For SAPS Start Date And End Date	-	Generates the LastPeriodStart Date, Last Period End Date, PeriodEffectiveEndDate, and PeriodEffectiveStartDate for the advanced account forecast set partner record periods.
Compute Number of Applicable Days For SAPS Quantity Calculations	Formula	Compute End Of Last Period And Sales Agreement Effective Date	-	Generate applicable days for the sales agreement product schedule quantity calculations.
Fetch Sales Price From Last Period For Calculation	Formula	Compute Number of Applicable Days For SAPS Quantity Calculations	-	Gets the sales price from the last period.
Determine Last Period Quantity And Revenue For SAPS Calculation	Formula	Fetch Sales Price From Last Period For Calculation	-	Determines the last period quantity and revenue for sales agreement product schedule calculation.
Compute Quantity From Applicable Periods In SAPS Period Join Data	Formula	Determine Last Period Quantity And Revenue For SAPS Calculation	-	Calculates the quantity for the sales agreement product schedule start date.

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Compute Applicable Quantity And Revenue In SAPS Period Join Data	Formula	Compute Quantity From Applicable Periods In SAPS Period Join Data	-	Calculates the quantity for the sales agreement product schedule.
Aggregate Records To Consolidate SAPS Period Join Data	Group and Aggregate	Compute Applicable Quantity And Revenue In SAPS Period Join Data	-	Generates the sum of quantities for the advanced account forecast set partner record periods.
Sales Agreement Metrics Data Join Account Forecast Set Partner Period Data	Inner Join	Aggregate Records To Consolidate SAPS Period Join Data	Compute Last Year Period Dates On Account Forecast Set Partner	Gets sales agreement quantities associated with the advanced account forecast set partner record periods (adjusted periods).
Compare Sales Agreement Metric Line Item Close Date With Period Range	Formula	Sales Agreement Metrics Data Join Account Forecast Set Partner Period Data	-	Calculates the sales agreement quantity and sales agreement revenue for the advanced account forecast set partner records.
Consolidate Field Names For Sales Agreement Metric Line Forecast Facts	Slice	Compare Sales Agreement Metric Line Item Close Date With Period Range	-	Removes any extra fields that aren't required to regenerate the advanced account forecast fact record.

Consolidated Metrics

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Consolidate Field Names For Order Metric Line Forecast Facts	Slice	Compare Order Metric Line Item Close Date With Period Range For Facts	-	Removes any extra fields that aren't required to regenerate the advanced account forecast fact record after processing the data from orders.

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Consolidate Field Names For Sales Agreement Metric Line Forecast Facts	Slice	Compare Sales Agreement Metric Line Item Close Date With Period Range	-	Removes any extra fields that aren't required to regenerate the advanced account forecast fact record after processing the data from sales agreements.
Consolidate Field Names For Opportunity Metric Line Forecast Facts	Slice	Compare Opportunity Metric Line Item Close Date With Period Range For Facts	-	Removes any extra fields that aren't required to regenerate the advanced account forecast fact records after processing the data from opportunities.
Append Consolidated Opportunity Order SA Metric Data For Forecast Facts	Append	• Source Node 1: Consolidate Field Names For Order Metric Line Forecast Facts • Source Node 2: Consolidate Field Names For Sales Agreement Metric Line Forecast Facts • Source Node 3: Consolidate Field Names For Opportunity Metric Line Forecast Facts	-	Merges all advanced account forecast fact records from opportunities, orders, and sales agreements.
Aggregate Account Forecast Fact Records To Eliminate Duplicates	Group and Aggregate	Append Consolidated Opportunity Order SA Metric Data For Forecast Facts	-	Aggregates advanced account forecast fact records from opportunities, orders, and sales agreements.
Generated Account Forecast Facts Join Active Products	Inner Join	Aggregate Account Forecast Fact Records To Eliminate Duplicates	Filter Active Products	Gets the product name for the products that are part of the generated advanced account advanced account forecast fact records.

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Generated Account Forecast Facts Join Periods	Inner Join	Generated Account Forecast Facts Join Active Products	Period	Get the fully qualified label for the periods that are part of the generated advanced account advanced account forecast fact records.
Generated Account Forecast Facts Join Filtered Accounts	Inner Join	Generated Account Forecast Facts Join Periods	Compute Unique Identifier For Generated Account Forecast Set Partner Data	Gets the account owner ID and active forecast window for the generated advanced account advanced account forecast fact records.
Generated Account Forecast Facts Join Existing Account Forecast Facts	Left Outer	Generated Account Forecast Facts Join Filtered Accounts	Advanced Account Forecast Fact	Joins new advanced account forecast fact records with the existing active advanced account forecast fact records.
Compute IsActive Attribute On Account Forecast Fact	Formula	Generated Account Forecast Facts Join Existing Account Forecast Facts	-	Obtains the name and status for the generated advanced account forecast fact records.
Upsert Account Forecast Fact Record	Writeback	Compute IsActive Attribute On Account Forecast Fact	Forecast Fact	Upserts the advanced account forecast fact records to the core objects.

Data Processing Engine Definition: Rollover Account Forecast

The Rollover Account Forecast Data Processing Engine definition is a template job. It aggregates the quantity and revenue data for a given account and forecast set from orders, opportunities, and sales agreements for new periods during rollover. Use this job along with the Recalculate Account Forecast job to recalculate the existing forecast data during rollover. You can customize the template to include custom dimensions such as region, or other custom measures.

Nodes Originating from the Account Data Source

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Account	Datasource	Account	—	The account object is used as the data source.
Fetch Account Id Input Variable	Formula	Account	—	Creates a transient variable with the value provided in the input variable.
Filter Account With Id	Filter	Fetch Account Id Input Variable	—	Filters accounts based on the account IDs.
Account Forecast Set Partner Join Account	Inner Join	Filter Existing Active Account Forecast Set Partners	Filter Account With Id	Gets active and draft advanced account forecast set partner records for the filtered account IDs.
Generated Account Forecast Facts Join Filtered Accounts	Inner Join	Aggregate Account Forecast Fact Records To Eliminate Duplicates	Filter Account With Id	Joins the two nodes to add account owner IDs to the generated advanced account forecast fact records.
Active Account Forecast Set Facts For New Periods	Inner Join	Active Account Forecast Set Facts For New Periods Join Products	Filter Account With Id	Joins the two nodes to add product IDs to the generated advanced account forecast fact records.

Nodes Originating from the Product Data Source

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Product	Datasource	Product	—	The product object is used as the data source.
Filter Active Products	Filter	Product	—	Filters active products.
Generated Account Forecast Facts Join Active Products	Inner Join	Generated Account Forecast Facts Join Filtered Accounts	Filter Active Products	Gets valid advanced account forecast fact records for active products.

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Valid Opportunity Within Acct Frsct Set Partner Date Range Join Active Products	Inner Join	Filter Valid Opportunity Within Account Forecast Set Partner Date Range	Filter Active Products	Gets valid opportunity line items for the active products within the advanced account forecast set date range.
Valid Order Within Acct Frsct Set Partner Date Range Join Active Products	Inner Join	Filter Valid Order Within Account Forecast Set Partner Date Range	Filter Active Products	Gets valid order line items for active products within the advanced account forecast set date range.
Valid Sales Agreement Within Acct Frcst Set Partner Date Range Join Active Prod	Inner Join	Filter Valid Sales Agreement Within Account Forecast Set Partner Date Range	Filter Active Products	Gets valid sales agreement products that are active and are within the forecast set date range.

Nodes Originating from the Period Data Source

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Period	DataSource	Period	—	The period object is used as the data source.
Generated Account Forecast Facts Join Periods	Inner Join	Generated Account Forecast Facts Join Active Products	Period	Gets valid advanced account forecast fact records for the period.
Compute Join Field On Period Nodes	Formula	Period	—	Creates a cartesian attribute on the period records.
Account Forecast Set Partner Join Period Data	Inner Join	Compute Account Forecast Set Partner Last Year Active Window Dates	Compute Join Field On Period Nodes	Creates a cross-product between advanced account forecast set partner and periods with window dates and periods.

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Generated Active Acct Forecast Set Partner With Account Forecast Set Join Period	Inner Join	Generated Active Account Forecast Set Partner Join Account Forecast Set	Compute Join Field On Period Nodes	Creates a cross-product between advanced account forecast set partner and periods.

Forecast Metadata

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Advanced Account Forecast Set	Datasource	Advanced Account Forecast Set	—	The advanced account forecast set object is used as the data source.
Fetch Forecast Set Id Input Variable	Formula	Advanced Account Forecast Set	—	Gets the ForecastSetId input variable.
Identify Selected Account Forecast Set	Filter	Fetch Forecast Set Id Input Variable	—	Filters advanced account forecast set IDs based on the input variable.
Fetch Account Forecast Period Group	Inner Join	Identify Selected Account Forecast Set	Advanced Account Forecast Period Group	Gets forecast period group IDs related to the advanced account forecast set IDs.
Fetch Account Forecast Period Setup	Inner Join	Fetch Account Forecast Period Group	Advanced Account Forecast Period	Gets advanced account forecast set period data associated with the advanced account forecast set IDs.
Generated Active Account Forecast Set Partner Join Account Forecast Set	Inner Join	Generated Account Forecast Set Partner Join Active Account Forecast Set Partner	Fetch Account Forecast Period Setup	Gets advanced account forecast set partner records associated with the advanced account forecast set data.

Nodes Originating from the Advanced Account Forecast Set Partner Data Source

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Advanced Account Forecast Set Partner	Datasource	Advanced Account Forecast Set Partner	—	The advanced account forecast set partner object is used as the data source.
Filter Existing Active Account Forecast Set Partners	Filter	Advanced Account Forecast Set Partner	—	Filters active and draft advanced account forecast set partner records.
Account Forecast Set Partner Join Account	Inner Join	Filter Existing Active Account Forecast Set Partners	Filter Account With Id	Filters advanced account forecast set partner records for the specified AccountId input.
Generate Data For Account Forecast Set Partner	Formula	Account Forecast Set Partner Join Account	—	Generates the status, today's date, and advanced account forecast set ID for the advanced account forecast set partner records.
Generated Active Account Forecast Set Partner Join Account Forecast Set	Inner Join	Generate Data For Account Forecast Set Partner	Fetch Account Forecast Period Setup	Gets advanced account forecast set data for each advanced account forecast set partner record.
Generated Active Acct Forecast Set Partner With Account Forecast Set Join Period	Inner Join	Generated Active Account Forecast Set Partner Join Account Forecast Set	Compute Join Field On Period Nodes	Creates a cross-product between advanced account forecast set partner and periods.
Compute Period Type Flag On Period Data For Acct Forecast Set Partner Start Date	Formula	Generated Active Acct Forecast Set Partner With Account Forecast Set Join Period	—	Finds advanced account forecast set partner period data with the required Period Type flag.
Identify Period Nodes For Frequency For Acct Forecast Set Partner Start Date	Filter	Compute Period Type Flag On Period Data For Acct Forecast Set Partner Start Date	—	Filters advanced account forecast set partner period data with the required Period Type flag.

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Compute Period Nodes For Account Forecast Set Partner Start Date	Formula	Identify Period Nodes For Frequency For Acct Forecast Set Partner Start Date	—	Finds the current periods for the advanced account forecast set partner records.
Identify Period Nodes For Account Forecast Set Partner Start Date	Filter	Compute Period Nodes For Account Forecast Set Partner Start Date	—	Filters the current periods for the advanced account forecast set partner records.
Compute Today Date Day Period Offset For Account Forecast Set Partner	Formula	Identify Period Nodes For Account Forecast Set Partner Start Date	—	Generates the Active Window Size, Period Offset, and Today Date Offset for the advanced account forecast set partner records.
Compute Account Forecast Set Partner Date Offsets	Formula	Compute Today Date Day Period Offset For Account Forecast Set Partner	—	Generates the Current Period Start Date, Start Period Number, and End Period Number for the advanced account forecast set partner records.
Compute Account Forecast Set Partner Adjusted Dates	Formula	Compute Account Forecast Set Partner Date Offsets	—	Generates Forecast Set Partner Name, Forecast Set Partner Start Date (Adjusted Start Date), and Forecast Set Partner End Date (Adjusted End Date) fields for the advanced account forecast set partner records.
Compute Account Forecast Set Partner Adjusted Last Year Dates	Formula	Compute Account Forecast Set Partner Adjusted Dates	—	Generates Forecast Set Partner Last year Start Date (Adjusted Last Year Start Date) and forecast Set Partner Last Year End Date (Adjusted Last Year End Date) fields for the advanced account forecast set partner records.
Compute Account Forecast Set Partner Active Window Dates	Formula	Compute Account Forecast Set Partner Adjusted Last Year Dates	—	Generates Rollover Start Date, and Rollover End Date fields for the advanced account forecast set partner records.
Compute Account Forecast Set Partner	Formula	Compute Account Forecast Set Partner	—	Generates Last year Rollover Start Date, and Last Year Rollover

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Last Year Active Window Dates		Active Window Dates		End Date fields for the advanced account forecast set partner records.
Activated Order Join Upserted Account Forecast Set Partner	Inner Join	Activated Order Join Order Item	Compute Account Forecast Set Partner Last Year Active Window Dates	Gets orders associated with the advanced account forecast set partner records.
Filtered Opportunity Join Upserted Account Forecast Set Partner	Inner Join	Filtered Opportunity Join Opportunity Line Item	Compute Account Forecast Set Partner Last Year Active Window Dates	Gets opportunities items associated with the advanced account forecast set partner records.
Valid Sales Agreement Join Upserted Account Forecast Set Partner	Inner Join	Filtered Sales Agreement Join Sales Agreement Product Schedule	Compute Account Forecast Set Partner Last Year Active Window Dates	Gets sales agreements associated with the advanced account forecast set partner records
Generate Active Account Forecast Set Facts For Forecast Set Partner	Inner Join	Compute Account Forecast Set Partner Last Year Active Window Dates	Active Account Forecast Facts Join Period	Gets forecast fact records associated with the advanced account forecasts set partner records.
Account Forecast Set Partner Join Period Data	Inner Join	Compute Account Forecast Set Partner Last Year Active Window Dates	Compute Join Field On Period Nodes	Creates a cross-product between the advanced account forecast set partner records and window dates and periods.
Compute Period Type Flag On Period Data For Account Forecast Set Partner	Formula	Account Forecast Set Partner Join Period Data	—	Finds advanced account forecast set partner period data with the required Period Type flag.
Identify Period Nodes For Selected Frequency For Account Forecast Set Partner	Filter	Compute Period Type Flag On Period Data For Account Forecast Set Partner	—	Filters advanced account forecast set partner period data with the required Period Type flag.
Compute Period Nodes For Rollover Dates For Account Forecast Set Partner	Formula	Identify Period Nodes For Selected Frequency For Account Forecast Set Partner	—	Finds the rollover periods for the advanced account forecast set partner records.

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Compute Period Nodes For Adjusted Dates For Account Forecast Set Partner	Formula	Identify Period Nodes For Selected Frequency For Account Forecast Set Partner	—	Finds advanced account forecast set partner periods (adjusted periods) for each of the advanced account forecast set partner records.
Identify Period Nodes For Account Forecast Set Partner	Filter	Compute Period Nodes For Adjusted Dates For Account Forecast Set Partner	—	Filters advanced account forecast set partner periods (adjusted periods) for each of the forecast set partner records.
Compute Last Year Period Dates On Account Forecast Set Partner	Formula	Identify Period Nodes For Account Forecast Set Partner	—	Generates the Last year Period End Date and Last Year Period Start Date for the advanced account forecast set partner record periods (adjusted periods).
Opportunity Metrics Data Join Account Forecast Set Partner Period Data	Inner Join	Valid Opportunity Within Acct Frsct Set Partner Date Range Join Active Products	Compute Last Year Period Dates On Account Forecast Set Partner	Gets opportunities' items associated with the advanced account forecast set partner record periods (adjusted periods).
Order Metrics Data Join Account Forecast Set Partner Period Data	Inner Join	Valid Order Within Acct Frsct Set Partner Date Range Join Active Products	Compute Last Year Period Dates On Account Forecast Set Partner	Gets order items associated with the advanced account forecast set partner record periods (adjusted periods).
Sales Agreement Metrics Data Join Account Forecast Set Partner Period Data	Inner Join	Aggregate Records To Consolidate SAPS Period Join Data	Compute Last Year Period Dates On Account Forecast Set Partner	Gets sales agreement quantities associated with the advanced account forecast set partner record periods (adjusted periods).
Valid Sales Agreement Join Account Forecast Set Partner Period Data	Inner Join	Valid Sales Agreement Within Acct Frcst Set Partner Date Range Join Active Prod	Compute Last Year Period Dates On Account Forecast Set Partner	Gets sales agreement schedules associated with the advanced account forecast set partner record periods (adjusted periods).

Nodes Originating from the Opportunity Data Source

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter or Formula)	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Description
Opportunity	Datasource	Opportunity	—	The opportunity object is used as the data source.
Filter Opportunity Based On Result	Filter	Opportunity	—	Filter opportunities based on their status.
Filtered Opportunity Join Opportunity Line Item	Inner Join	Filter Opportunity Based On Result	Opportunity Line Item	Gets all the opportunities products (items).
Filtered Opportunity Join Upserted Account Forecast Set Partner	Inner Join	Filtered Opportunity Join Opportunity Line Item	Compute Account Forecast Set Partner Last Year Active Window Dates	Gets opportunities' items associated with the advanced account forecast set partner records.
Identify Opportunities Within Account Forecast Set Partner Date Range	Formula	Filtered Opportunity Join Upserted Account Forecast Set Partner	—	Finds opportunities' items associated with the advanced account forecast set partner records within the rollover window.
Filter Valid Opportunity Within Account Forecast Set Partner Date Range	Filter	Identify Opportunities Within Account Forecast Set Partner Date Range	—	Filters opportunities' items associated with the advanced account forecast set partner records within the rollover window.
Valid Opportunity Within Acct Frsct Set Partner Date Range Join Active Products	Inner Join	Filter Valid Opportunity Within Account Forecast Set Partner Date Range	Filter Active Products	Filters active opportunities' items associated with the advanced account forecast set partner records.
Opportunity Metrics Data Join Account Forecast Set Partner Period Data	Inner Join	Valid Opportunity Within Acct Frsct Set Partner Date Range Join Active Products	Compute Last Year Period Dates On Account Forecast Set Partner	Gets opportunities' items associated with the advanced account forecast set partner record periods (adjusted periods).
Compare Opportunity Metric Line Item Close Date With Period Range For Facts	Formula	Opportunity Metrics Data Join Account Forecast Set Partner Period Data	—	Calculates the opportunity quantity and opportunity revenue for the forecast set partner record periods (adjusted periods).

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter or Formula)	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Description
Consolidate Field Names For Opportunity Metric Line Forecast Facts	Slice	Compare Opportunity Metric Line Item Close Date With Period Range For Facts	—	Removes any extra fields that aren't required to create the advanced account forecast fact record.

Nodes Originating from the Order Data Source

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Order	Datasource	Order	—	The order object is used as the data source.
Filter Activated Order	Filter	Order	—	Filters orders based on their status.
Activated Order Join Order Item	Inner Join	Filter Activated Order	Order Item	Gets all order Items associated with the orders.
Activated Order Join Upserted Account Forecast Set Partner	Inner Join	Activated Order Join Order Item	Compute Account Forecast Set Partner Last Year Active Window Dates	Gets order items associated with the advanced account forecast set partner records.
Identify Orders Within Account Forecast Set Partner Date Range	Formula	Activated Order Join Upserted Account Forecast Set Partner	—	Finds order items associated with the advanced account forecast set partner records within the rollover window.
Filter Valid Order Within Account Forecast Set Partner Date Range	Filter	Identify Orders Within Account Forecast Set Partner Date Range	—	Filters order items associated with the advanced account forecast set partner records within the rollover window.
Valid Order Within Acct Frsct Set Partner Date Range Join Active Products	Inner Join	Filter Valid Order Within Account Forecast Set Partner Date Range	Filter Active Products	Filters active order items associated with the advanced account forecast set partner records.

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Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Order Metrics Data Join Account Forecast Set Partner Period Data	Inner Join	Valid Order Within Acct Frsct Set Partner Date Range Join Active Products	Compute Last Year Period Dates On Account Forecast Set Partner	Gets order items associated advanced account forecast set partner record periods (adjusted periods).
Compare Order Metric Line Item Close Date With Period Range For Facts	Formula	Order Metrics Data Join Account Forecast Set Partner Period Data	—	Calculate the order quantity and order revenue fields for the advanced account forecast set partner record periods.
Consolidate Field Names For Order Metric Line Forecast Facts	Slice	Compare Order Metric Line Item Close Date With Period Range For Facts	—	Removes any extra fields that aren't required to create the advanced account forecast fact record.

Nodes Originating from the Sales Agreement Data Source

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Sales Agreement	Datasource	Sales Agreement	—	The sales agreement object is used as the data source.
Filter Valid Sales Agreement	Filter	Sales Agreement	—	Filters sales agreements based on their status.
Filtered Sales Agreement Join Sales Agreement Product	Inner Join	Filter Valid Sales Agreement	Sales Agreement Product	Gets all sales agreement products associated with the sales agreements.
Filtered Sales Agreement Join Sales Agreement Product Schedule	Inner Join	Filtered Sales Agreement Join Sales Agreement Product	Sales Agreement Product Schedule	Gets all sales agreement product schedules associated with the sales agreement products.

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Valid Sales Agreement Join Upserted Account Forecast Set Partner	Inner Join	Filtered Sales Agreement Join Sales Agreement Product Schedule	Compute Account Forecast Set Partner Last Year Active Window Dates	Gets sales agreement product schedules associated with the advanced account forecast set partner records.
Identify Sales Agreements Within Account Forecast Set Partner Date Range	Formula	Valid Sales Agreement Join Upserted Account Forecast Set Partner	—	Finds sales agreements associated with the advanced account forecast set partner records within the rollover window.
Filter Valid Sales Agreement Within Account Forecast Set Partner Date Range	Filter	Identify Sales Agreements Within Account Forecast Set Partner Date Range	—	Filters sales agreements associated with the advanced account forecast set partner records within the rollover window.
Valid Sales Agreement Within Acct Frcst Set Partner Date Range Join Active Prod	Inner Join	Filter Valid Sales Agreement Within Account Forecast Set Partner Date Range	Filter Active Products	Filters sales agreement product schedules based on active products associated with the advanced account forecast set partner records.
Valid Sales Agreement Join Account Forecast Set Partner Period Data	Inner Join	Valid Sales Agreement Within Acct Frcst Set Partner Date Range Join Active Prod	Compute Last Year Period Dates On Account Forecast Set Partner	Gets sales agreement product schedules associated with the advanced account forecast set partner record periods (adjusted periods).
Identify Valid Period Nodes For SAPS Start Date And End Date	Formula	Valid Sales Agreement Join Account Forecast Set Partner Period Data	—	Finds sales agreement product schedules associated with the advanced account forecast set partner record periods (adjusted periods).
Filter Valid Period Nodes For SAPS Start Date And End Date	Filter	Identify Valid Period Nodes For SAPS Start Date And End Date	—	Filters sales agreement product schedules associated with the advanced account forecast set partner record periods (adjusted periods).
Compute End Of Last Period And Sales Agreement Effective Date	Formula	Filter Valid Period Nodes For SAPS Start Date And End Date	—	Generates the Last Period Start Date, Last Period End Date, Period Effective End Date, and Period Effective Start Date fields

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
				for the advanced account forecast set partner record periods.
Compute Number of Applicable Days For SAPS Quantity Calculations	Formula	Compute End Of Last Period And Sales Agreement Effective Date	—	Generates the applicable days for sales agreement product schedule quantity calculations.
Fetch Sales Price From Last Period For Calculation	Formula	Compute Number of Applicable Days For SAPS Quantity Calculations	—	Gets the sales price from the last period.
Determine Last Period Quantity And Revenue For SAPS Calculation	Formula	Fetch Sales Price From Last Period For Calculation	—	Determines the last period quantity and revenue for sales agreement product schedules calculations.
Compute Quantity From Applicable Periods In SAPS Period Join Data	Formula	Determine Last Period Quantity And Revenue For SAPS Calculation	—	Calculates the quantity for the sales agreement product schedules start date.
Compute Applicable Quantity And Revenue In SAPS Period Join Data	Formula	Compute Quantity From Applicable Periods In SAPS Period Join Data	—	Calculates the quantity for the sales agreement product schedules.
Aggregate Records To Consolidate SAPS Period Join Data	Group and Aggregate	Compute Applicable Quantity And Revenue In SAPS Period Join Data	—	Generates the sum of quantities for the advanced account forecast set partner record periods.
Sales Agreement Metrics Data Join Account Forecast Set Partner Period Data	Inner Join	Aggregate Records To Consolidate SAPS Period Join Data	Compute Last Year Period Dates On Account Forecast Set Partner	Gets sales agreement quantities associated with the advanced account forecast set partner record periods (adjusted periods).
Compare Sales Agreement Metric Line Item Close Date With Period Range	Formula	Sales Agreement Metrics Data Join Account Forecast Set Partner Period Data	—	Calculate the sales agreement quantity and sales agreement revenue for the advanced account forecast set partner for the specified periods.

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Aggregate SAPS Records To Remove Duplicate For Forecast Facts	Aggregate	Compare Sales Agreement Metric Line Item Close Date With Period Range	—	Remove any duplicate sales agreement product schedules.

Consolidated Metrics

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Consolidate Field Names For Order Metric Line Forecast Facts	Slice	Compare Order Metric Line Item Close Date With Period Range For Facts	—	Removes any extra fields that aren't required to create the advanced account forecast fact record.
Consolidate Field Names For Opportunity Metric Line Forecast Facts	Slice	Compare Opportunity Metric Line Item Close Date With Period Range For Facts	—	Removes any extra fields that aren't required to create the advanced account forecast fact record.
Append Consolidated Opportunity Order SA Metric Data For Forecast Facts	Append	• Source Node 1: Consolidate Field Names For Order Metric Line Forecast Facts • Source Node 2: Consolidate Field Names For Opportunity Metric Line Forecast Facts • Source Node 3: Consolidate Field Names For Sales	—	Merges all advanced account forecast fact records from opportunities, orders, and sales agreements.

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Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
		Agreement Metric Line Forecast Facts		
Aggregate Account Forecast Fact Records To Eliminate Duplicates	Group and Aggregate	Append Consolidated Opportunity Order SA Metric Data For Forecast Facts	—	Aggregates the advanced account forecast fact records from opportunities, orders, and sales agreements.
Compute Unique Identifier For Generated Account Forecast Fact Data	Formula	Aggregate Account Forecast Fact Records To Eliminate Duplicates	—	Creates a unique identifier for the new advanced account forecast fact records.
Generated Account Forecast Facts Join Existing Account Forecast Facts	Outer Join	Compute Unique Identifier For Generated Account Forecast Fact Data	Filter Active Account Forecast Set Facts	Joins new advanced account forecast fact records with the existing active advanced account forecast fact records.
Compute Account Partner Product Period Data For Account Forecast Fact Upsert	Formula	Generated Account Forecast Facts Join Existing Account Forecast Facts	—	Generates ForecastFactAccountId, ForecastFactPartnerId, ForecastFactPeriodId, and ForecastFactProductId for the advanced account forecast fact records.
Generated Account Forecast Facts Join Active Products	Inner Join	Compute Account Partner Product Period Data For Account Forecast Fact Upsert	Product	Gets Product Name and Product Is Active for the advanced account forecast fact records.
Generated Account Forecast Facts Join Periods	Inner Join	Generated Account Forecast Facts Join Active Products	Period	Gets the Period Start Date, End Date, and Fully Qualified Name for the advanced account forecast fact records.

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Generated Account Forecast Facts Join Filtered Accounts	Inner Join	Generated Account Forecast Facts Join Periods	Compute Account Forecast Set Partner Last Year Active Window Dates	Gets the Account Owner for the advanced account forecast fact records.
Identify Account Forecast Facts In Active Rollover Window	Formula	Generated Account Forecast Facts Join Filtered Accounts	—	Generates the IsActiveRolloverPeriod flag for the advanced account forecast fact records.
Compute Measure Data For Account Forecast Fact Upsert	Formula	Identify Account Forecast Facts In Active Rollover Window	—	Calculates quantity and revenue values of opportunities, orders and sales agreements for the advanced account forecast fact records.
Compute Status Name Owner Attribute On Forecast Fact Records	Formula	Compute Measure Data For Account Forecast Fact Upsert	—	Generates Name, Owner, and Status for the advanced account forecast fact records.
Consolidate Field Names For Adjusted Forecast Facts	Slice	Compute Status Name Owner Attribute On Forecast Fact Records	—	Removes any extra fields that aren't required to create the advanced account forecast fact records
Generate Active Account Forecasts Facts Adjusted Dates and New Periods	Outer Join	Consolidate Field Names For Adjusted Forecast Facts	Compute Active Account Forecast Set Facts For New Periods	Combines advanced account forecast fact records of new rollover period and new products periods.
Compute Active Account Forecasts Facts Adjusted Dates and New Periods	Formula	Generate Active Account Forecasts Facts Adjusted Dates and New Periods	—	Gets combined advanced account forecast fact records of new rollover period and new product periods.
Consolidate Field Forecasts Facts	Slice	Compute Active Account Forecasts	—	Removes any extra fields that aren't

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Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Adjusted Dates and New Periods		Facts Adjusted Dates and New Periods		required to create the advanced account forecast fact records.
Generate Adjusted Facts Expire Facts and New Period Facts Records	Outer Join	Consolidate Field Forecasts Facts Adjusted Dates and New Periods	Consolidate Field Names for Expire Account Forecast Facts	Combines new period advanced account forecast fact records of rollover and the new period advanced account forecast fact records of new products, and expires the advanced account forecast fact records for the old period.
Compute Adjusted Facts Expire Facts and New Period Facts Records	Formula	Generate Adjusted Facts Expire Facts and New Period Facts Records	—	Gets the combined new adjusted period advanced account forecast fact records and the new period advanced account forecast fact records for new products. Also, expires the advanced account forecast fact records for the old period.
Consolidate Adjusted Facts Expire Facts and New Period Facts Records	Slice	Compute Adjusted Facts Expire Facts and New Period Facts Records	—	Removes any extra fields that aren't required to create the advanced account forecast fact records.
Upsert Account Forecast Fact Record	Writeback	Consolidate Adjusted Facts Expire Facts and New Period Facts Records	—	Upserts the advanced account forecast fact records to the core objects.

Nodes Originating from the Account Forecast Fact Data Source

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Advanced Account Forecast Fact	Datasource	Advanced Account Forecast Fact	—	The advanced account forecast fact object is used as the data source.
Filter Active Account Forecast Set Facts	Filter	Advanced Account Forecast Fact	—	Filters active advanced account forecast fact records.
Generated Account Forecast Facts Join Existing Account Forecast Facts	Outer Join	Compute Unique Identifier For Generated Account Forecast Fact Data	Filter Active Account Forecast Set Facts	Joins new advanced account forecast fact records with the existing active advanced account forecast fact records.

Expire Account Forecast Facts

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Active Account Forecast Facts Join Period	Inner Join	Filter Active Account Forecast Set Facts	Period	Adds the period start date and end date for the active advanced account forecast fact records.
Generate Active Account Forecast Set Facts For Forecast Set Partner	Inner Join	Compute Account Forecast Set Partner Last Year Active Window Dates	Active Account Forecast Facts Join Period	Gets active advanced account forecast fact records for the advanced account forecast set partner records.
Compute Account Forecast Facts outside of window	Formula	Generate Active Account Forecast Set Facts For Forecast Set Partner	—	Finds advanced account forecast fact records that are outside of the adjusted window of the advanced account

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
				forecast set partner records.
Identify Inactive Account Forecast Facts	Filter	Compute Account Forecast Facts outside of window	—	Filters advanced account forecast fact records that are outside of the adjusted window of the advanced account forecast set partner records.
Compute Status On Inactive Forecast Facts	Formula	Identify Inactive Account Forecast Facts	—	Changes the status of advanced account forecast fact records to Inactive.
Consolidate Field Names for Expire Account Forecast Facts	Slice	Compute Status On Inactive Forecast Facts	—	Removes any extra fields that aren't required to create the advanced account forecast fact records.
Generate Adjusted Facts Expire Facts and New Period Facts Records	Outer Join	Consolidate Field Forecasts Facts Adjusted Dates and New Periods	Consolidate Field Names for Expire Account Forecast Facts	Gets the combined new adjusted period advanced account forecast fact records for rollover and the new period advanced account forecast fact records for new products. Also, expires the advanced account forecast fact records for the old period.

Add New Period for Existing Products

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Compute Period Nodes For Rollover Dates For Account Forecast Set Partner	Formula	Identify Period Nodes For Selected Frequency For Account Forecast Set Partner	—	Finds the rollover periods for the advanced account forecast set partner records.
Identify Period Nodes For Rollover Dates For Account Forecast Set Partner	Filter	Compute Period Nodes For Rollover Dates For Account Forecast Set Partner	—	Filters the rollover periods for the advanced account forecast set partner records.
Aggregate Account Forecast Facts Based on Product To Eliminate Duplicates	Group and Aggregate	Filter Active Account Forecast Set Facts	-	Gets existing products for the advanced account forecast set partner records.
Generate Active Account Forecast Set Facts For New Periods For Existing Products	Formula	Aggregate Account Forecast Facts Based on Product To Eliminate Duplicates	—	Generates new rollover period for the existing products of the advanced account forecast set partner records.
Active Account Forecast Set Facts For New Periods Join Products	Inner Join	Generate Active Account Forecast Set Facts For New Periods For Existing Products	Product	Gets the advanced account forecast fact records with active products
Active Account Forecast Set Facts For New Periods	Inner Join	Active Account Forecast Set Facts For New Periods Join Products	Filter Account With Id	Gets the advanced account forecast fact records based Account Id input.
Compute Active Account Forecast Set Facts For New Periods	Formula	Active Account Forecast Set Facts For New Periods	—	Generates all the advanced account forecast fact records for the advanced account forecast set partner records.

Node Name	Type	First Node (Join)/Source Object (Data Source)/Source Node (Filter, Formula, Slice, or Writeback)	Second Node (Join)/Target Object (Writeback)	Description
Generate Active Account Forecasts Facts Adjusted Dates and New Periods	Outer Join	Consolidate Field Names For Adjusted Forecast Facts	Compute Active Account Forecast Set Facts For New Periods	Combines the advanced account forecast fact records for the new rollover period and the new product periods.

Clone Data Processing Engine Templates

You can clone the Data Processing Engine templates with Advanced Account Forecasting. Then, activate and use the cloned definition to generate forecasts for your accounts. You can also create a Data Processing Engine from scratch, and select the Process Type as Advanced Account Forecast.

1. From Setup, enter *Data Processing Engine* in the Quick Find box, and then select **Data Processing Engine** under Workflow Services.
2. Click any job name where the Template check box is selected, and the Process Type is Advanced Account Forecast.
3. Click **Save As** on the definition header and enter a name for the new definition.
4. Click **Save**.

Activate a Data Processing Engine Definition

Only active Data Processing Engine definitions can be used to generate account forecasts. You can clone and customize any of the predefined Data Processing Engine templates with Advanced Account Forecasting, and then activate the definitions.

1. From Setup, enter *Data Processing Engine* in the Quick Find box, and then select **Data Processing Engine** under Workflow Services.
2. Click the job name that you customized.
3. Click **Activate** on the builder header.

    You can run an active definition with flows, or from within the Data Processing Engine builder. If you run a definition from within the builder, define input variables specific to that definition.

Customize Data Processing Engine Templates

You can clone the predefined Data Processing Engine templates and customize them according to your business needs if the predefined templates don't meet your requirements.

When you modify a DPE template, you also must modify the associated forecast set, and define additional dimensions or period groups according to your requirements.

When you clone and use the predefined templates as is, the generated forecast data is stored in the out-of-the-box Advanced Account Forecast Fact object. If you want to view account forecasts for additional measures, or remove any existing measures, make sure that you modify the fields in the Advanced Account Forecast Fact object, or create a custom fact object for your use.

Example: Analyze Product Cost and Profit Margins with Advanced Account Forecasting and Data Processing Engine

A company wants to analyze the cost and profit margins of their products using account forecasts. However, the predefined measures available with Advanced Account Forecast Fact only help account managers view quantity and revenue-based metrics for their products from orders, opportunities, and sales agreements. Demand planners typically look at the cost of a product across accounts and also the profit margins for a specific account-product combination. Having visibility into the revenue and profit margins for future periods helps them plan their costing and discounting strategies for all accounts. In this example, we'll see how you can add new measures for advanced account forecasts and use the Data Processing Engine to calculate the values for these custom measures.

Example: Add the Location Dimension for Account Forecasts

You can customize the default forecast set and out-of-the-box Data Processing Engine templates by adding additional dimensions, measures, and filters. This example shows how to add a dimension called Location and customize the out-of-the-box Generate Account Forecast Data Processing Engine definition to generate account forecasts.

Example: Analyze Product Cost and Profit Margins with Advanced Account Forecasting and Data Processing Engine

A company wants to analyze the cost and profit margins of their products using account forecasts. However, the predefined measures available with Advanced Account Forecast Fact only help account managers view quantity and revenue-based metrics for their products from orders, opportunities, and sales agreements. Demand planners typically look at the cost of a product across accounts and also the profit margins for a specific account-product combination. Having visibility into the revenue and profit margins for future periods helps them plan their costing and discounting strategies for all accounts. In this example, we'll see how you can add new measures for advanced account forecasts and use the Data Processing Engine to calculate the values for these custom measures.

> **EDITIONS**
>
> Available in: **Enterprise**, **Unlimited**, and **Developer** Editions.

Business Requirements

Here are the requirements from the demand planners.

- Define the fixed and variable cost of a product in its associated price book. A product can have multiple price books associated with it, each with different fixed and variable costs. A price book is a list of products and their associated prices. Each product and its price is called a price book entry.

- When a product is associated either with a sales agreement or an opportunity, derive the fixed and variable cost of a product from the price book associated with the sales agreement or opportunity.

- View these metrics on the forecast grid:
  - Fixed Cost
  - Variable Cost Per Unit
  - Total Cost
  - Actual Profit
  - Forecasted Profit
  - Forecasted Gross Margin Percentage
  - Actual Gross Margin Percentage

- Aggregate the total variable cost, quantity, and fixed cost of a product for all sales agreement products and opportunity products and group the data by product. Then, divide the total variable cost by the total quantity to get the cost per unit of a product.
- Customize the Data Processing Engine templates to calculate the values for all measures.
- Derive the actual profit and actual gross margin from orders.
- Define unique formulas for the other metrics that update the final values in the forecast grid. The formulas must be applied on the values calculated by the Data Processing Engine.

Get Started

1. Create Custom Fields to Capture Cost and Profit Metrics

   To capture fixed cost and variable cost details, create custom fields on Price Book Entry. Then add those custom fields on the Advanced Account Forecast Fact object so that the data can be written back for each period by the Data Processing Engine job. Additionally, you can add custom fields for other measures that demand planners want to view on the forecast display.

2. Add Revenue Measures to a Forecast Set

   Define the new cost and profit-based revenue measures in the forecast set that determines the forecast display for accounts. When specifying forecast measures, you can select the measure type, aggregation type, and calculation method.

3. Customize the Generate Account Forecast Template

   Clone and customize the predefined Data Processing Engine templates available with Advanced Account Forecasting to generate, calculate, rollover, and regenerate forecasts with the new revenue measures. The cloned definitions must be activated after you make the required changes and the definitions are selected for use in the forecast set. You can run the definitions periodically through scheduled flows for all or selected accounts.

Create Custom Fields to Capture Cost and Profit Metrics

To capture fixed cost and variable cost details, create custom fields on Price Book Entry. Then add those custom fields on the Advanced Account Forecast Fact object so that the data can be written back for each period by the Data Processing Engine job. Additionally, you can add custom fields for other measures that demand planners want to view on the forecast display.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions.

1. Add these custom fields to Price Book Entry.

Field Label	Field Name	Data Type
Fixed Cost	FixedCost_c	Currency
Variable Cost Per Unit	VariableCostPerUnit_c	Currency

2. Add the custom fields to Advanced Account Forecast Fact.

Field Label	Field Name	Data Type
Fixed Cost	FixedCost_c	Currency
Variable Cost Per Unit	CostPerUnit_c	Currency

3. Add other custom measures as formula fields to Advanced Account Forecast Fact.

Field Label	Field Name	Data Type	Formula
Actual Gross Margin Percent	ActualGrossMarginPercent_c	Formula (Currency)	`IF(OrderQuantity <> 0, OrderRevenue - ( ( OrderQuantity * CostPerUnit__c ) + FixedCost__c ), 0)`
Forecasted Gross Margin Percent	ForecastedGrossMarginPercent_c	Formula (Currency)	`IF(ForecastedQuantity <> 0, ( ForecastedRevenue - ( ForecastedQuantity * CostPerUnit__c + FixedCost__c )) / ForecastedRevenue, 0)`
Actual Profit	ActualProfit_c	Formula (Currency)	`IF(OrderQuantity <> 0, OrderRevenue - ( ( OrderQuantity * CostPerUnit__c ) + FixedCost__c ), 0)`
Forecasted Profit	ForecastedProfit_c	Formula (Currency)	`ForecastedRevenue - ( ( ForecastedQuantity * CostPerUnit__c ) + FixedCost__c )`
Total Cost	TotalCost_c	Formula (Currency)	`(ForecastedQuantity * CostPerUnit__c ) + FixedCost__c`

Add Revenue Measures to a Forecast Set

Define the new cost and profit-based revenue measures in the forecast set that determines the forecast display for accounts. When specifying forecast measures, you can select the measure type, aggregation type, and calculation method.

> 📝 **Note:** In this topic, we only list the measures that the admin adds to an existing forecast set. We don't provide steps on how to create a forecast set for our example. To learn how to create a forecast set, see Create and Configure Forecast Sets.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions.

Add the following measures to the forecast set.

Name	Forecast Fact Measure Field	Measure Type	Aggregation Type	Calculation Method	Track Adjustments
Cost Per Unit	Cost Per Unit	Revenue	Average	Batch Process	No
Fixed Cost	Fixed Cost	Revenue	Maximum	Batch Process	No

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Name	Forecast Fact Measure Field	Measure Type	Aggregation Type	Calculation Method	Track Adjustments
Total Cost	Total Cost	Revenue	Sum	Batch Process	No
Actual Profit	Actual Profit	Revenue	Sum	Batch Process	No
Forecasted Profit	Forecasted Profit	Revenue	Sum	Batch Process	No
Actual Gross Margin %	Actual Gross Margin Percent	Quantity	Minimum	Batch Process	No
Forecasted Gross Margin %	Forecasted Gross Margin Percent	Quantity	Minimum	Batch Process	No

*For the measures that specify a formula in the Forecast Fact Measure Field, the formula is applied to the value calculated when the DPE job runs. This value becomes the final value written back to a field on the Advanced Account Forecast Fact object.

The calculation method is selected as the Batch Process for all the measures because the Data Processing Engine (DPE) transforms data in the org to calculate the values for these measures.

Customize the Generate Account Forecast Template

Clone and customize the predefined Data Processing Engine templates available with Advanced Account Forecasting to generate, calculate, rollover, and regenerate forecasts with the new revenue measures. The cloned definitions must be activated after you make the required changes and the definitions are selected for use in the forecast set. You can run the definitions periodically through scheduled flows for all or selected accounts.

📝 Note: In this example we show you how to customize the Generate Account Forecast template to analyze cost and profit margins in a forecast. You'll need to repeat the same steps to customize the other Data Processing Engine templates for recalculation, rollover, and regeneration processes.

1. Edit Sales Agreement Product Schedule Nodes

   To ensure that the fixed cost and variable cost of all products are included in Data Processing Engine calculations, update all nodes originating from Sales Agreement Product Schedule.

2. Edit Opportunity Line Item Nodes

   To ensure that the fixed cost and variable cost of all products are included in Data Processing Engine calculations, update all nodes originating from Opportunity Line Item.

3. Write Back Revenue Measure Values

   To write back data for the custom revenue measures that demand planners want to view on the forecast grid, update the appropriate nodes. The data is written back to the Advanced Account Forecast Fact object.

Edit Sales Agreement Product Schedule Nodes

To ensure that the fixed cost and variable cost of all products are included in Data Processing Engine calculations, update all nodes originating from Sales Agreement Product Schedule.

Customizing a Data Processing Engine definition is complex. This example walks you through adding two custom fields, updating the required existing nodes for those fields, adding new nodes, and adding formulas to calculate the values of your custom fields. Finally, the values for fixed cost and total variable cost can be aggregated for all sales agreement products for a forecast period.

1. Add the custom fields from Price Book Entry as data source fields on a node.

    a. Search for and select the **Sales Agreement Product Schedule** data source node, then click **Add Related Object**.

    b. Select **Sales Agreement Product.Pricebook Entry** as the object.

    c. Click **Selected Fields** and select **Fixed Cost** and **Variable Cost**.

    d. Enter the alias for the fields as *SAPSFixedCost* and *SAPSVariableCostPerUnit*.

    e. Click **Done** and **Done**.

2. Create a formula node to calculate the total variable cost for sales agreement products.

    a. Click **New Node** and enter these details.

    Node Type: **Formula**

    Name: *Compute SAPSTotalVariableCost*

    b. Save your changes.

    c. For Source Node, search for and select **Sales Agreement Product Schedule**.

    d. Enter these formula details.

    Alias: *SAPSTotalVariableCost*

    Field Type: **Number**

    Length: *16*

    Decimal Places: *2*

    Formula: {SAPSPlannedQuantity} * {SAPSVariableCostPerUnit}

    e. Click **Done** and **Done**.

3. Update a join node to replace the source node with the new formula node.

    a. Search for and select **Filtered Sales Agreement Join Sales Agreement Product Schedule** and then update these details.

    Second Source Node: **Compute SAPSTotalVariableCost**

    Selected Fields: **SAPSTotalVariableCost**, **SAPSFixedCost**

    b. Click **Done** and **Done**.

4. Add the custom fields in all join nodes that follow the Filtered Sales Agreement Join Sales Agreement Product Schedule node.

    💡 **Tip:** To find the nodes that you need to update, you can follow the reference links provided at the bottom of a node's detail page in the sentence "This node is referenced by # node." Or you can search for the node name.

    a. Search for and select the **Valid Sales Agreement Join Upserted Account Forecast Set Partner** join node.

    b. In the First Node section, click **Selected Fields**.

    c. Add **SAPSTotalVariableCost** and **SAPSFixedCost** as fields and then click **Done**.

d. For the following join nodes, repeat the steps to add the SAPSTotalVariableCost and SAPSFixedCost fields.

- Valid Sales Agreement Within Acct Frcst Set Partner Date Range Join Active Prod
- Valid Sales Agreement Join Account Forecast Set Partner Period Data

5. Create group and aggregate nodes to eliminate duplicates from sales agreement product schedules and calculate average fixed cost.

a. Click **New Node** and enter these details.

Node Type: **Group and Aggregate**

Name: *Aggregate SAPS To Eliminate Duplicates For Period*

b. Save your changes.

c. For Source Node, search for and select **Filter Valid Period Nodes For SAPS Start Date And End Date**.

d. Click **Selected Group Fields** and select these fields, then click **Done**.

- AdvanceAccountForecastSetId
- SAAccountId
- SAPProductId
- SAPSEndDate
- SAPSPeriodId
- SAPSStartDate

e. In the Aggregate section, specify these details.

Alias: *MaxFixedCostForSAPS*

Function: **Max**

Aggregate Field: **SAPSFixedCost**

f. Click **Done** and **Done**.

g. Repeat these steps to create another group and aggregate node with these details.

Node Type: **Group and Aggregate**

Name: *Aggregate SAPS To Calculate AverageFixedCost*

Source Node: **Aggregate SAPS To Eliminate Duplicates For Period**

Selected Group Fields:

- AdvanceAccountForecastSetId
- SAAccountId
- SAPProductId
- SAPSPeriodId

Alias: *AverageFixedCost*

Function: **Avg**

Aggregate Field: **MaxFixedCostForSAPS**

h. Click **Done** to save your changes.

6. Create a join node to retrieve fixed cost for aggregated sales agreement product schedules.

a. Click **New Node** and enter these details.

Node Type: **Join**

Name: *Fetch ComputedFixedCost For Aggregated SAPS*

   b. Save your changes.

   c. For Join Type, select **Left Outer**.

   d. In the First Node section, search for and select **Aggregate SAPS Records To Remove Duplicate For Forecast Facts**.

   e. Click **Select Fields** and add all he fields, then click **Done**.

   f. In the Second Node section, search for and select **Aggregate SAPS To Calculate AverageFixedCost**.

   g. Click **Select Fields**, add **AverageFixedCost**, and rename its Alias as *ComputedFixedCost*. Then click **Done**.

   h. Map the following fields between the first node and second node.

      AdvanceAccountForecastSetId *with* AdvanceAccountForecastSetId

      AccountId *with* AccountId

      ProductId *with* SAPProductId

      PeriodId *with* SAPSPeriodId

   i. Click **Done** and **Done**.

7. Update formula nodes to compute the value of consolidated total variable cost of all sales agreement products for a particular forecast period.

   a. Search for and select the **Fetch Sales Price From Last Period For Calculation** formula node.

   b. Click **Add Formula** and enter these details.

      Alias: *LastPeriodSAPSTotalVariableCost*

      Field Type: **Number**

      Number Length: *16*

      Decimal Places: *2*

      Formula: LASTVALUE({SAPSTotalVariableCost})

   c. Click **Done** and **Done**.

   d. Use the reference link at the bottom of the page to open the **Determine Last Period Quantity And Revenue For SAPS Calculation** formula node.

   e. Click **Add Formula** and enter these details.

      Alias: *FinalizedLastPeriodSAPSTotalVariableCost*

      Field Type: **Number**

      Number Length: *16*

      Decimal Places: *2*

      Formula: IF ({LastPeriodSAPSTotalVariableCost} == 0, {SAPSTotalVariableCost}, {LastPeriodSAPSTotalVariableCost})

   f. Click **Done** and **Done**.

   g. Use the reference link to open the **Compute Quantity From Applicable Periods In SAPS Period Join Data** formula node.

   h. Click **Add Formula** and enter these details.

      Alias: *ApplicableTotalCostFromSAPSStartDate*

      Field Type: **Number**

Number Length: *16*

Decimal Places: *2*

Formula: `IF ({IsValidPeriodNodeForSAPSStartDate} == 1, ( {ApplicableDaysFromSAPSStartDate} / {NumberOfDaysInCurrentSAPSSchedule} ) * {SAPSTotalVariableCost} , 0)`

i. Click **Add Formula** again and enter these details.

Alias: *ApplicableTotalCostToSAPSEndDate*

Field Type: **Number**

Number Length: *16*

Decimal Places: *2*

Formula: `IF ({IsValidPeriodNodeForSAPSEndDate} == 1, IF ({IsValidPeriodNodeForSAPSStartDate} == 0, ( {ApplicableDaysToSAPSEndDate} / {FinalizedNumberOfDaysInLastSAPSSchedule} ) * {FinalizedLastPeriodSAPSTotalVariableCost}, 0) , 0)`

j. Click **Done** and **Done**.

k. Use the reference link to open the **Compute Applicable Quantity And Revenue In SAPS Period Join Data** formula node.

l. Click **Add Formula** and enter these details.

Alias: *ApplicableTotalVariableCost*

Field Type: **Number**

Number Length: *16*

Decimal Places: *2*

Formula: `{ApplicableTotalCostToSAPSEndDate} + {ApplicableTotalCostFromSAPSStartDate}`

m. Click **Done** and **Done**.

8. Aggregate the two computed values for total variable cost and fixed cost for sales agreement products for a particular forecast period.

a. Search for and select the **Aggregate Records To Consolidate SAPS Period Join Data** group and aggregate node.

b. Click **Add Aggregate** and enter these details.

Alias: *ConsolidatedTotalVariableCost*

Function: **Sum**

Aggregate Field: **ApplicableTotalVariableCost**

c. Click **Add Aggregate** again, and enter these details.

Alias: *MaxSAPSFixedCost*

Function: **Max**

Aggregate Field: **SAPSFixedCost**

d. Click **Done** and **Done**.

e. Use the reference link to open the **Sales Agreement Metrics Data Join Account Forecast Set Partner Period Data** join node.

f. In the First Node section, click **Selected Fields** and enter these details.

Alias: *ConsolidatedTotalVariableCost*

Alias: *MaxSAPSFixedCost*

g. Click **Done** and **Done**.

h. Use the reference link to open the **Compare Sales Agreement Metric Line Item Close Date With Period Range** formula node.

i. Click **Add Formula** and enter these details.

Alias: *TotalVariableCostForCurrentPeriod*

Field Type: **Number**

Number Length: *16*

Decimal Places: *2*

Formula: IF({LeftPeriodId}=={PeriodId} , IF({SalesAgreementEffectiveDate} >= {PeriodStartDate} && {SalesAgreementEffectiveDate} <= {PeriodEndDate} , {ConsolidatedTotalVariableCost} , 0),0)

j. Click **Done** and **Done**.

k. Use the reference link to open the **Aggregate SAPS Records To Remove Duplicate For Forecast Facts** node.

l. Click **Add Aggregate** and enter these details.

Alias: *ComputedFixedCost*

Function: **Max**

Aggregate Field: **MaxSAPSFixedCost**

m. Click **Done** and **Done**.

n. Use the reference link to open the **Aggregate Records To Consolidate SAPS Period Join Data** group and aggregate node.

o. Click **Add Aggregate** and enter these details.

Alias: *ComputedTotalVariableCost*

Function: **Sum**

Aggregate Field: **TotalVariableCostForCurrentPeriod**

p. Click **Done** and **Done**.

Whew! That was a lot of customization. The next step is to change nodes originating from Opportunity Line Item.

Edit Opportunity Line Item Nodes

To ensure that the fixed cost and variable cost of all products are included in Data Processing Engine calculations, update all nodes originating from Opportunity Line Item.

This example walks you through adding two custom fields, updating the required existing nodes, adding new nodes, and adding formulas to calculate the values. Finally, the values for fixed cost and total variable cost can be aggregated for all opportunity products for a forecast period.

1. Add the custom fields from Price Book Entry as data source fields on a node.

    a. Search for and select the **Opportunity Line Item** data source node, then click **Add Related Object**.

    b. Select **PricebookEntry** as the object.

    c. Click **Selected Fields** and select **Fixed Cost** and **Variable Cost**.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions.

USER PERMISSIONS

To edit a DPE definition:
- Customize Application
- Modify All Data

    d. Enter the alias for the fields as `OpportunityLineItemFixedCost` and
       `OpportunityLineItemVariableCostPerUnit.`

    e. Click **Done** and **Done**.

2. Create a formula node to calculate the total variable cost for opportunity line items.

    a. Click **New Node** and enter these details.

       Node Type: **Formula**

       Name: `Compute OpportunityLineItemTotalVariableCost`

    b. Save your changes.

    c. For Source Node, search for and select **Opportunity Line Item**.

    d. Enter these formula details.

       Alias: `OpportunityLineItemTotalVariableCost`

       Field Type: **Number**

       Number Length: `16`

       Decimal Places: `2`

       Formula: `{OpportunityLineItemQuantity} * {OpportunityLineItemVariableCostPerUnit}`

    e. Click **Done** and **Done**.

3. Update a join node to replace the source node with the new formula node.

    a. Search for and select **Filtered Opportunity Join Opportunity Line Item** and then update these details.

       Second Source Node: **Compute OpportunityLineItemTotalVariableCost**

       Selected Fields: **OpportunityLineItemTotalVariableCost**, **OpportunityLineItemTotalFixedCost**

    b. Click **Done** and **Done**.

4. Add the custom fields in all join nodes that follow the Filtered Opportunity Join Opportunity Line Item node.

    💡 **Tip:** To find the nodes that you need to update, you can follow the reference links provided at the bottom of a node's detail
       page in the sentence "This node is referenced by # node." Or you can search for the node name.

    a. Search for and select the **Join Upserted Account Forecast Set Partner** join node.

    b. In the First Node section, click **Selected Fields**.

    c. Add **OpportunityLineItemFixedCost** and **OpportunityLineItemTotalVariableCost** as fields and then click **Done**.

    d. For the Valid Opportunity Within Acct Frsct Set Partner Date Range Join Active Products and the Opportunity Metrics Data Join
       Account Forecast Set Partner Period Data join nodes, repeat the steps to add the OpportunityLineItemFixedCost and
       OpportunityLineItemTotalVariableCost fields.

5. Update formula nodes to ensure that the two computed values for total variable cost and fixed cost for opportunity line items show
   up for each forecast period. The opportunity close date must fall within a period's start and end date.

    a. Search for and select the **Compare Opportunity Metric Line Item Close Date With Period Range For Facts** formula node.

    b. Click **Add Formula** and enter these details.

       Alias: `ComputedFixedCost`

       Field Type: **Number**

       Number Length: `16`

Decimal Places: *2*

Formula: IF({OpportunityCloseDate} >= {PeriodStartDate} && {OpportunityCloseDate} <= {PeriodEndDate} ,{OpportunityLineItemFixedCost} , 0)

    c. Click **Add Formula** again and enter these details.

    Alias: *ComputedTotalVariableCost*

    Field Type: **Number**

    Number Length: *16*

    Decimal Places: *2*

    Formula: IF({OpportunityCloseDate} >= {PeriodStartDate} && {OpportunityCloseDate} <= {PeriodEndDate} ,{OpportunityLineItemTotalVariableCost} , 0)

    d. Click **Done** and **Done**.

6. Update a slice node to ensure that the fields for ComputedTotalFixedCost and ComputedTotalVariableCost are retained in the downstream nodes.

    a. Search for and select the **Consolidate Field Names For Opportunity Metric Line Forecast Facts** slice node.

    b. Click **Selected Fields** and select the **ComputedTotalFixedCost** and **ComputedTotalVariableCost** fields.

    c. Click **Done** and **Done**.

7. Update a formula node to ensure that the Data Processing Engine computed values for fixed cost and variable cost assigned to orders is always defaulted to zero. Orders represent the actual business of a company and the costs must be derived from the orders reported in a given period.

    a. Search for and select the **Compare Order Metric Line Item Close Date With Period Range For Facts** formula node.

    b. Click **Add Formula** and enter these details.

    Alias: *ComputedFixedCost*

    Field Type: **Number**

    Number Length: *16*

    Decimal Places: *2*

    Formula: 0

    c. Click **Add Formula** again and enter these details.

    Alias: *ComputedTotalVariableCost*

    Field Type: **Number**

    Number Length: *16*

    Decimal Places: *2*

    Formula: 0

    d. Click **Done** and **Done**.

    e. Click the node reference link at the bottom of the page to open the **Consolidate Field Names For Order Metric Line Forecast Facts** slice node.

    f. Click **Selected Fields** and add the **ComputedTotalFixedCost** and **ComputedTotalVariableCost** fields.

    g. Click **Done** and **Done**.

The next step is to write back the computed values to Advanced Account Forecast Fact.

Write Back Revenue Measure Values

To write back data for the custom revenue measures that demand planners want to view on the forecast grid, update the appropriate nodes. The data is written back to the Advanced Account Forecast Fact object.

This example walks you through aggregating the values for the computed variable cost and fixed cost across sales agreements, opportunities, and orders. You also define a formula to compute the final cost per unit of a product for a single period. Finally, the values for fixed cost and cost per unit are written back to the target object, Advanced Account Forecast Fact.

1. Update a group and aggregate node to add two aggregate records for computed fixed and variable cost.

    a. Search for and select the **Aggregate Account Forecast Fact Records To Eliminate Duplicates** group and aggregate node.

    b. Click **Add Aggregate** and enter these details.

        Alias: *CumulativeTotalVariableCost*

        Function: **Sum**

        Aggregate Field: ComputedTotalVariableCost

    c. Click **Done** and **Done**.

    d. Click **Add Aggregate** again and enter these details.

        Alias: *MaxFixedCost*

        Function: **Max**

        Aggregate Field: ComputedFixedCost

    e. Click **Done** and **Done**.

2. Update a join node to add the cumulative aggregated fields in all join nodes that follow the Aggregate Account Forecast Fact Records To Eliminate Duplicates node.

    > 💡 **Tip:** To find the nodes that you need to update, you can follow the reference links provided at the bottom of a node's detail page in the sentence "This node is referenced by # node." Or you can search for the node name.

    a. Search for and select the **Generated Account Forecast Facts Join Active Products** join node

    b. In the First Node section, click **Selected Fields**.

    c. Add **CumulativeTotalVariableCost** and **MaxFixedCost** as fields and then click **Done**.

    d. For the Generated Account Forecast Facts Join Periods, the Generated Account Forecast Facts Join Filtered Accounts, and the Generated Account Forecast Facts Join Existing Account Forecast Facts join nodes, repeat the steps to add the **CumulativeTotalVariableCost** and **MaxFixedCost** fields.

3. Create a formula node to calculate the final cost per unit of a product and link it to another node.

    a. Click **New Node** and enter these details.

        Node Type: **Formula**

        Name: *Compute Revenue Metrics*

    b. Save your changes.

    c. For Source Node, search for and select **Advanced Account Forecast Fact**.

    d. Enter these formula details.

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Alias: *CostPerUnit*

Field Type: **Number**

Number Length: *16*

Decimal Places: *2*

Formula: `IF({CumulativeOpportunityQuantity}==0,`
`IF({CumulativeSalesAgreementQuantity}==0, 0,`
`{CumulativeTotalVariableCost}/{CumulativeSalesAgreementQuantity}),`
`{CumulativeTotalVariableCost}/({CumulativeOpportunityQuantity} +`
`{CumulativeSalesAgreementQuantity}))`

    e. Click **Done** and **Done**.

    f. Search for and select the **Compute IsActive Attribute On Account Forecast Fact** formula node.

    g. Update the source node to **Compute Revenue Metrics**.

    h. Click **Done** and **Done**.

4. Update a writeback node with values to forecast fact records.

    a. Search for and select the **Upsert Account Forecast Fact Record** writeback node.

    b. Click **Add Row** and enter these details.

       Source Node Field: **MaxFixedCost**

       Target Field: **FixedCost_c**

    c. Click **Add Row** and enter these details.

       Source Node Field: **CostPerUnit**

       Target Field: **CostPerUnit_c**

    d. Click **Done** and **Done**.

Example: Add the Location Dimension for Account Forecasts

You can customize the default forecast set and out-of-the-box Data Processing Engine templates by adding additional dimensions, measures, and filters. This example shows how to add a dimension called Location and customize the out-of-the-box Generate Account Forecast Data Processing Engine definition to generate account forecasts.

1. Create a custom object called Product Location Mapping with these fields.

Field Name	Type
Product_c	Lookup to Product object
Location_c	Lookup to Location object
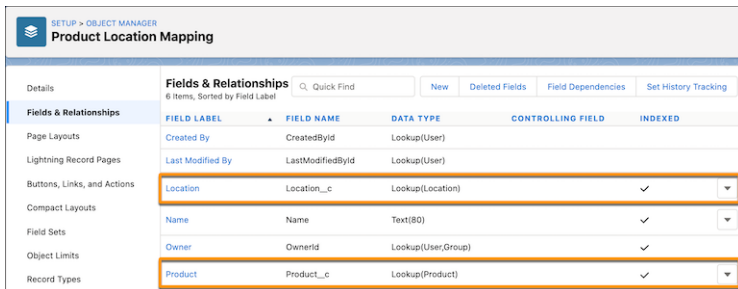
2. Add product and location mapping records in the Product Location Mapping object.

3. In the Advanced Account Forecasting setup, create a dimension called Location with the following values.

Field Name	Value
Name	Location
Source Object	Location

4. In the Default Forecast Fact object, add a custom field called Location with a lookup to the Location object.
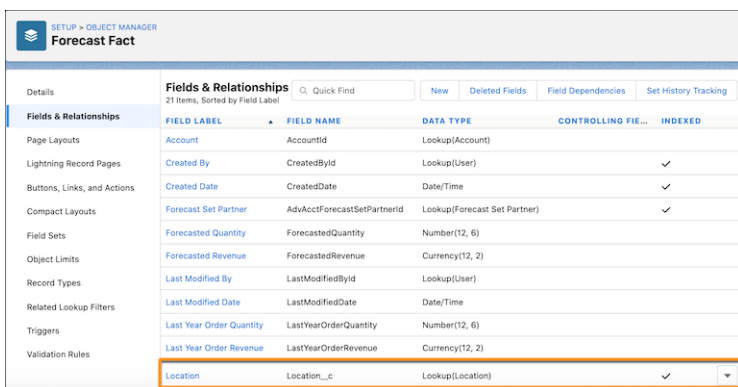
5. Configure the Default Forecast Set to include the Location dimension. To show the forecast data with products for each location, change the display order for the Product dimension to 2 and enter the display order for Location as 1.

Field Name	Description
Name	Location
Forecast Fact Dimension Field	Location__c
Display Order	1

6. Open the out-of-the-box Generate Account Forecast Data Processing Engine definition.

7. Click **Save As**, and then save the definition as Custom Generate Account Forecast.

8. Add two data source nodes called Location and Product Location Mapping. For the Product Location Mapping node, in the object, select the Location and Product fields and add an alias for the two fields.

Field Name	Alias
Product	PLMProductId
Location	PLMLocationId
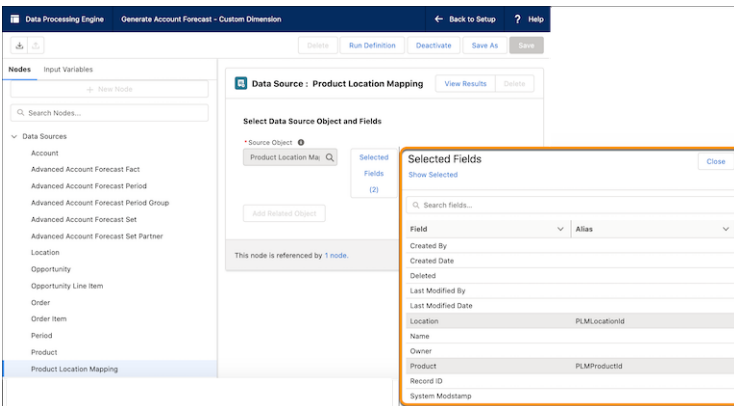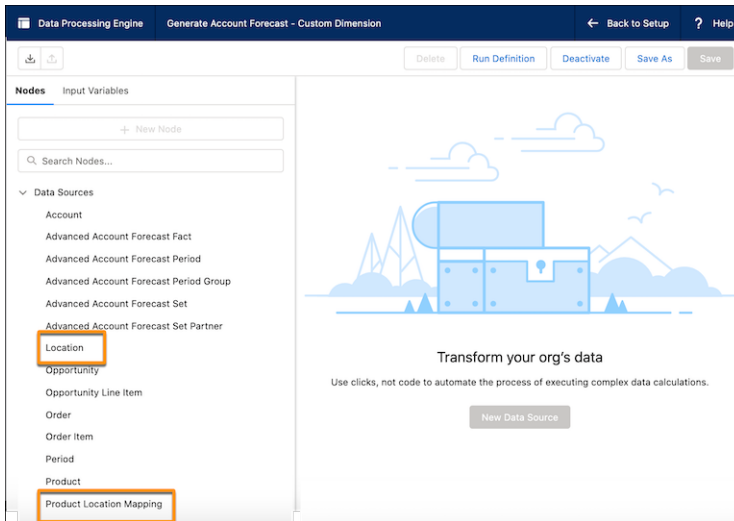
9. Add an Inner join called Generate Account Forecast Fact Join Product Location Mapping, with the source node as Compute IsActive Attribute On Account Forecast Fact and target node as Product Location Mapping. Map the product field of the source node (ProductId) to the target node (PLMProductId).
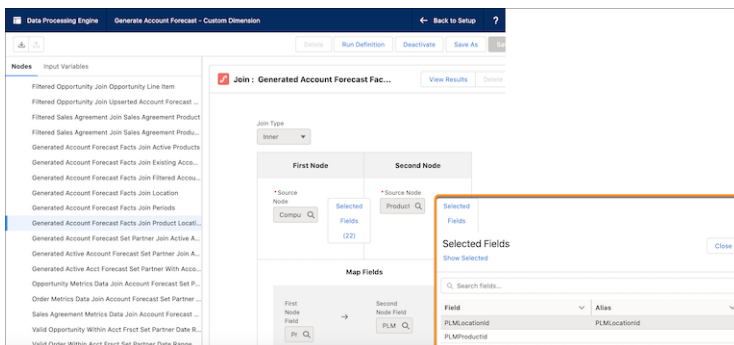
10. Add an inner join called Generated Account Forecast Fact Join Location with the source node as Generate Account Forecast Fact Join Product Location Mapping and target node as Location. Map the location fields: PLMLocationId to LocationId.
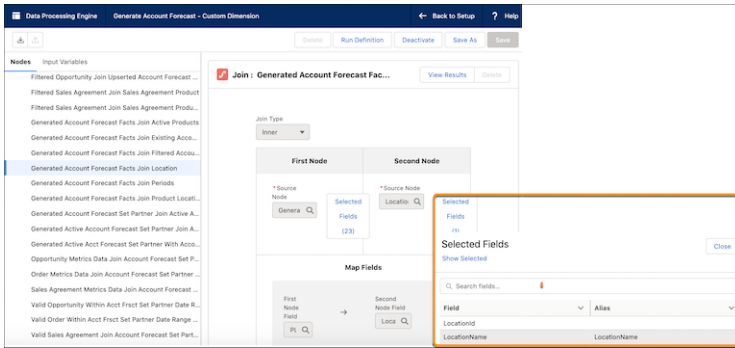
11. Download the Custom Generate Account Forecast data processing engine definition file.

12. Open the file in a JSON editor, and then replace the API name of the source node for the Upsert Account Forecast Fact Record writeback node by the API name of the Generated Account Forecast Fact Join location node.
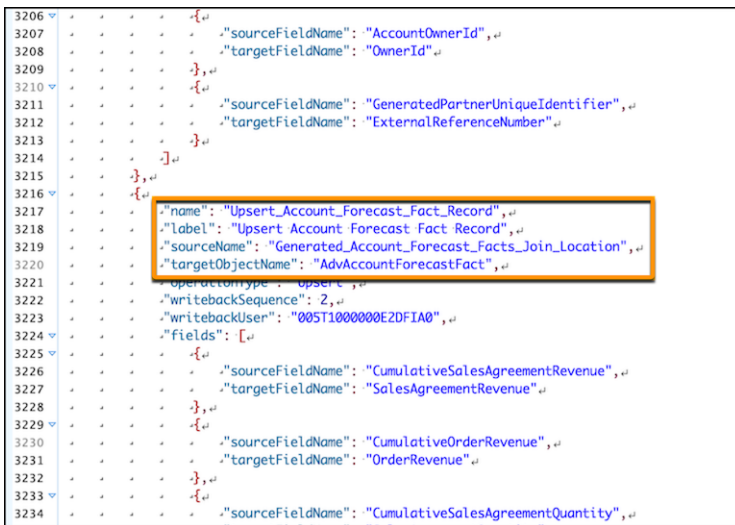
13. Upload the modified JSON file to your org.

14. Update the Upsert Account Forecast Fact Record writeback node to include a source field (PLMLocationId) and Target (Location_c), and then save the definition.
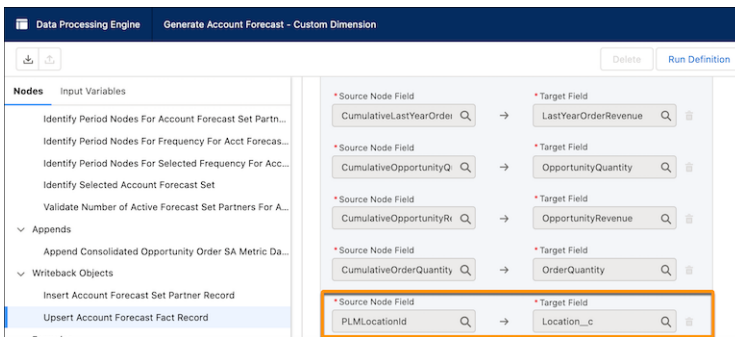
Calculate Account Forecasts Using Flows

You can orchestrate a flow using Flow Builder to run the account forecast calculations. Use the flow to run the data processing engine jobs to aggregate data from sales agreements, orders, opportunities, or any other custom objects, and calculate forecasts. Schedule the flows according to your requirements. You can use the out-of-the-box invocable actions called Calculate Advanced Account Forecast and Update Advanced Account Forecast Set Partner in the flow for baseline calculations of forecasts data.

If you're processing a large number of records, we recommend processing the data in batches to generate forecasts.
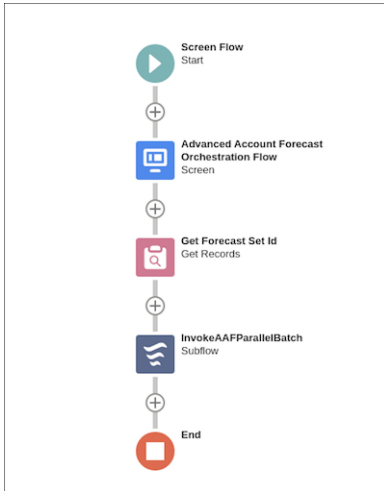
Here's is an example flow with three batch jobs.
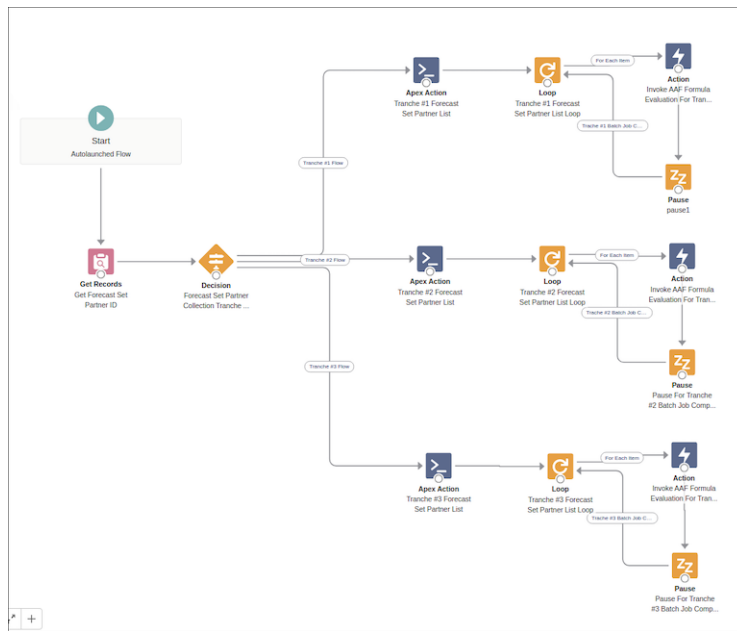
Run DPE Definitions Using Flows to Generate Forecasts for Product Categories

Example: Generate Forecasts Across Multiple Regions with Advanced Account Forecasting

You can use the Advanced Account Forecasting feature to configure forecasts according to your business needs. To explain the flexibility that Advanced Account Forecasting offers, let's consider the example of a business conglomerate spread across multiple regions. The company has a distributed account forecasting model where each region creates and maintains forecasts according to their business needs.

Account Forecast Model for Multiple Regions

Let's look at the requirements for two different regions within the organization to illustrate how Advanced Account Forecasting can be used to address the account forecasting needs in a single instance of Manufacturing Cloud.

Criterion	Region 1	Region 2
Business model	Account managers work with individual key accounts. There's a finite set of products. Large quantities of the products are shipped and therefore, forecasting by shipping location helps in reducing costs.	A large number of customers exist along with a large number of products.
Forecast dimensions	The Account, Product, Ship-from Location, and Period dimensions.	The Channel (modeled as a parent account with multiple child accounts), Product Category, and Period dimensions.
Forecast metrics	The revenue and quantity metrics for opportunities, sales agreements, and orders for account managers and regional managers.	The revenue and quantity metrics for opportunities and orders for channel managers and category managers.
Forecast granularity	Quarterly	Monthly
Forecast calculation frequency	Monthly	Monthly
Adjustment frequency	The adjustment frequency for account managers is the 1st to 7th of a month, and the 7th to 14th of every quarter for the regional manager.	The adjustment frequency for the channel manager is the 1st to 5th of every month, and the 6th to 8th of the month for the category managers.
Consensus forecast revenue and quantity	The average of the regional manager and account manager revenues and quantities.	The maximum of the channel manager and category manager forecast revenues and quantities.

Implement Advanced Account Forecasting in the Org

Advanced Account Forecasting can address the specific requirements of each region in the organization in a single instance of Manufacturing Cloud. For the organization in the example, these are the high-level steps they must follow. You can always create custom dimensions, measures, period groups, and fact objects according to your specific business needs.

1. Enable Advanced Account Forecasting.
2. Define the forecast dimensions.
   - Product

- Product Category
- Ship-from-Location

  📝 **Note:** The Account and Period dimensions are mandatory and are available in the org.

3. Define the period groups: monthly and quarterly.

4. Create two fact tables to store forecast facts with these fields:

   Mandatory Fields

   - A field that looks up to Account ID
   - A text field (18 char) that has a period populated
   - Fields representing forecast set and status
   - Fields representing forecast quantity and revenue

   Additional Fields

   - Forecast Fact 1: Dimension fields for Product and Ship-from Location
   - Forecast Fact 2: Dimension field for Product Category

     📝 **Note:** Alternatively, you can extend the out-of-the-box forecast fact entity with relevant measures and dimensions.

5. Modify the out-of-the-box data processing engine definitions according to region-specific business needs.

6. Create one forecast set each for Region 1 and Region 2.

7. Define the forecast dimensions relevant for each forecast set:

   - Region 1 has the Product and Ship-from Location dimensions.
   - Region 2 has the Product Category dimension.

8. Configure the forecast set for each region.

   a. Select the relevant forecast fact object, and then map the mandatory dimensions and measures.

   b. Define the forecast calculation and rollover frequencies.

   c. Map the relevant data processing engine definitions.

9. Define the forecast measures, and then map the measures to corresponding measure fields in the custom fact object. Indicate the type of aggregation criteria (batch, computed, or user-editable), and whether to track forecast adjustments.

10. Define the applicable forecast adjustment periods for each profile for the forecast sets.

11. Define the forecast formulas.

12. Activate the forecast sets.

13. Run the data processing engine definitions directly, or create an orchestration workflow to run the data processing engine definitions.

14. Define the roles, profiles, field-level security and create sharing rules, and then apply these to the users.

Create Triggers for Your Forecast Calculations

If you're using custom advanced account forecast fact objects for your forecasts, you can create triggers to calculate forecasts for your accounts instead of using the CalculateAdvancedForecast invocable action in the flow. A trigger is Apex code that executes before or after specific data manipulation language (DML) events occur, such as before object records are inserted into the database, or after records have been deleted.

1. From Setup, open Object Manager.

2. Click the custom advanced account forecast fact object.

3. Click **Triggers**, then click **New**.

4. Define a trigger with your forecast calculation formula and then save your work.

   You trigger must include these three XML files.

   - CustomForecastFactFormulaEvaluator.cls

   - CustomForecastFactUtil.cls

   - CustomForecastFactTrigger.tgr

If you're adding them, you must create them in this order. If you already have these files on your system and use the Metadata API to deploy them, the deployment takes care of the order.

For example, a trigger for a CustomForecastFact__c object that calculates the forecast quantity and forecast revenue, and inserts the values in the custom fact record has these three XML files.

```
public class CustomForecastFactFormulaEvaluator {

    Map<String, String> calculationFrequencyToPeriodTypeMap = new Map<String, String>
{
        'Yearly' => 'Year', 'Quarterly' => 'Quarter', 'Monthly' => 'Month', 'Weekly' =>
 'Week'
    };

    static Map<Id, AdvAcctForecastSetPartner> partnerMap;
    static Map<Id, AdvAccountForecastSet> forecastSetMap;
    static Map<Id, AdvAcctForecastPeriodGroup> periodGroupMap;
    static Map<String, List<Period>> periodsMap;
    static Map<String, Period> currentPeriodMap;
    static Map<String, Period> pastPeriodMap;
    static Map<String, Period> futurePeriodMap;
    static Map<Id, Map<Integer, AdvAccountForecastFormula>> quantityFormulaMap;
    static Map<Id, Map<Integer, AdvAccountForecastFormula>> revenueFormulaMap;

 AdvAcctForecastSetPartner partner;
    AdvAccountForecastSet forecastSet;
    AdvAcctForecastPeriodGroup periodGroup;
    Map<Integer, AdvAccountForecastFormula> quantityFormulaByPeriod;
    Map<Integer, AdvAccountForecastFormula> revenueFormulaByPeriod;
    Date forecastStartDate;
    List<Period> periods;
    List<Date> periodStartDates;
    static Map<Id, CustomForecastFactFormulaEvaluator> partnerCache = new Map<Id,
CustomForecastFactFormulaEvaluator>();
```

```
    public static void initialize(Set<Id> partnerIds) {
        partnerMap = loadForecastSetPartners(partnerIds);
        forecastSetMap = loadForecastSets(partnerMap.values());
        periodGroupMap = loadForecastPeriodGroups(forecastSetMap.values());
        periodsMap = loadPeriods();
        pastPeriodMap = loadPastPeriodMap();
        currentPeriodMap = loadCurrentPeriodMap();
        futurePeriodMap = loadFuturePeriodMap();
        loadForecastFormulas(forecastSetMap.keySet());
    }

    private CustomForecastFactFormulaEvaluator(Id forecastSetPartnerId) {
        partner = loadForecastSetPartner(forecastSetPartnerId);
        forecastSet = loadForecastSet(partner.AdvAccountForecastSetId);
        periodGroup = loadForecastPeriodGroup(forecastSet.ForecastPeriodGroupId);
        loadForecastFormulas(forecastSet.Id);
        periods =
loadPeriods(resolvePeriodTypeFromCalculationFrequency(forecastSet.CalculationFrequency));

        periodStartDates = extractPeriodStartDates(periods);
        forecastStartDate =
getForecastStartDate(resolvePeriodTypeFromCalculationFrequency(forecastSet.CalculationFrequency),
 periodGroup.StartPeriod);
    }

   public static CustomForecastFactFormulaEvaluator getInstance(Id forecastSetPartnerId)
 {
        if(!partnerCache.containsKey(forecastSetPartnerId)) {
            partnerCache.put(forecastSetPartnerId, new
CustomForecastFactFormulaEvaluator(forecastSetPartnerId));
        }
        return partnerCache.get(forecastSetPartnerId);
    }

    private AdvAcctForecastSetPartner loadForecastSetPartner(Id forecastSetPartnerId)
{
        return partnerMap.get(forecastSetPartnerId);
    }

    private static Map<Id, AdvAcctForecastSetPartner> loadForecastSetPartners(Set<Id>
forecastSetPartnerIds) {
        return new Map<Id, AdvAcctForecastSetPartner>([SELECT Id, AdvAccountForecastSetId
 FROM AdvAcctForecastSetPartner WHERE Id IN : forecastSetPartnerIds]);
    }

    private AdvAccountForecastSet loadForecastSet(Id forecastSetId) {
        return forecastSetMap.get(forecastSetId);
    }

    private static Map<Id, AdvAccountForecastSet>
loadForecastSets(List<AdvAcctForecastSetPartner> partners) {
        Set<Id> forecastSetIds = new Set<Id>();
        for (AdvAcctForecastSetPartner partner : partners) {
            forecastSetIds.add(partner.AdvAccountForecastSetId);
```

```
        }
        return new Map<Id, AdvAccountForecastSet>([SELECT Id, ForecastPeriodGroupId,
CalculationFrequency FROM AdvAccountForecastSet WHERE Id IN :forecastSetIds]);
    }

    private AdvAcctForecastPeriodGroup loadForecastPeriodGroup(Id forecastPeriodGroupId)
 {
        return periodGroupMap.get(forecastPeriodGroupId);
    }

    private static Map<Id, AdvAcctForecastPeriodGroup>
loadForecastPeriodGroups(List<AdvAccountForecastSet> forecastSets) {
        Set<Id> forecastPeriodGroupIds = new Set<Id>();
        for (AdvAccountForecastSet forecastSet : forecastSets) {
            forecastPeriodGroupIds.add(forecastSet.ForecastPeriodGroupId);
        }
        return new Map<Id, AdvAcctForecastPeriodGroup>([SELECT Id, StartPeriod FROM
AdvAcctForecastPeriodGroup WHERE Id IN :forecastPeriodGroupIds]);
    }

    private void loadForecastFormulas(Id forecastSetId) {
        quantityFormulaByPeriod = quantityFormulaMap.get(forecastSetId);
        revenueFormulaByPeriod = revenueFormulaMap.get(forecastSetId);
    }

    private static void loadForecastFormulas(Set<Id> forecastSetIds) {
        List<AdvAccountForecastFormula> formulaList = [SELECT Id, AdvAccountForecastSetId,
 FormulaType, StartPeriod, EndPeriod, FormulaExpression FROM AdvAccountForecastFormula
 WHERE AdvAccountForecastSetId IN :forecastSetIds];

        quantityFormulaMap = new Map<Id, Map<Integer, AdvAccountForecastFormula>>();
        revenueFormulaMap = new Map<Id, Map<Integer, AdvAccountForecastFormula>>();

        for(AdvAccountForecastFormula formula : formulaList) {
            Id forecastSetId = formula.AdvAccountForecastSetId;

            if(!quantityFormulaMap.containsKey(forecastSetId))
quantityFormulaMap.put(forecastSetId, new Map<Integer, AdvAccountForecastFormula>());
            if(!revenueFormulaMap.containsKey(forecastSetId))
revenueFormulaMap.put(forecastSetId, new Map<Integer, AdvAccountForecastFormula>());

            switch on formula.FormulaType {
                when 'QUANTITY' {
                    for (Integer i = formula.StartPeriod; i <= formula.EndPeriod; i++)
 {
                        quantityFormulaMap.get(forecastSetId).put(i, formula);
                    }
                }
                when 'REVENUE' {
                    for (Integer i = formula.StartPeriod; i <= formula.EndPeriod; i++)
 {
                        revenueFormulaMap.get(forecastSetId).put(i, formula);
                    }
                }
```

```
            }
        }
    }

    private List<Period> loadPeriods(String periodType) {
        return periodsMap.get(periodType);
    }

    private static Map<String, List<Period>> loadPeriods() {
        Map<String, List<Period>> periodsMap = new Map<String, List<Period>>();
        List<Period> periods = [SELECT Id, Type, StartDate FROM Period ORDER BY Type,
StartDate];
        for (Period period : periods) {
            if(!periodsMap.containsKey(period.Type)) {
                periodsMap.put(period.Type, new List<Period>{period});
            } else {
                periodsMap.get(period.Type).add(period);
            }
        }
        return periodsMap;
    }

    private List<Date> extractPeriodStartDates(List<Period> periods) {
        List<Date> startDateList = new List<Date>();
        for(Period period : periods) {
            startDateList.add(period.StartDate);
        }
        return startDateList;
    }

    private Date getForecastStartDate(String periodType, Integer startPeriod) {
        Period forecastStartPeriod;

        if(startPeriod == 0) {
         forecastStartPeriod = getCurrentPeriod(periodType);
        } else {
            forecastStartPeriod = getPeriodByOffset(periodType, startPeriod);
        }

        return forecastStartPeriod.StartDate;
    }

    private Period getCurrentPeriod(String periodType) {
        return currentPeriodMap.get(periodType);
    }

    private static Map<String, Period> loadPastPeriodMap() {
        Map<String, Period> periodMap = new Map<String, Period>();
        Date today = Date.today();
        List<Period> periods = [SELECT Id, Type, StartDate, EndDate FROM Period WHERE
StartDate <= :today AND EndDate <= :today LIMIT 1];
        for(Period period : periods) {
            periodMap.put(period.Type, period);
        }
```

```
        return periodMap;
    }

    private static Map<String, Period> loadCurrentPeriodMap() {
        Map<String, Period> periodMap = new Map<String, Period>();
        Date today = Date.today();
        List<Period> periods = [SELECT Id, Type, StartDate, EndDate FROM Period WHERE
StartDate >= :today AND EndDate <= :today LIMIT 1];
        for(Period period : periods) {
            periodMap.put(period.Type, period);
        }
        return periodMap;
    }

    private static Map<String, Period> loadFuturePeriodMap() {
        Map<String, Period> periodMap = new Map<String, Period>();
        Date today = Date.today();
        List<Period> periods = [SELECT Id, Type, StartDate, EndDate FROM Period WHERE
EndDate >= :today AND EndDate <= :today LIMIT 1];
        for(Period period : periods) {
            periodMap.put(period.Type, period);
        }
        return periodMap;
    }

    private Period getPeriodByOffset(String periodType, Integer startPeriod) {
        Date today = Date.today();
        if (startPeriod < 0) {
            return pastPeriodMap.get(periodType);
        } else if (startPeriod > 0) {
            return futurePeriodMap.get(periodType);
        } else {
            return getCurrentPeriod(periodType);
        }
    }

    public void eval(List<CustomForecastFact__c> forecastFacts) {
        List<FactWrapper> factWrapperList =
createFactRecordPeriodStartDatePair(forecastFacts);
        for (FactWrapper wrapper : factWrapperList) {
            CustomForecastFact__c fact = wrapper.fact;
            Date factStartDate = wrapper.startDate;

            Integer periodNumber = getPeriodNumber(forecastStartDate, factStartDate);

           // Here is the place where we can apply formula based on various conditions.

            // What we see below is just an example.
            Double dummyFactor = 1;
          fact.ForecastedQuantity__c = dummyFactor * (nvl(fact.OpportunityQuantity__c)
 + nvl(fact.OrderQuantity__c) + nvl(fact.LastYearOrderQuantity__c) +
nvl(fact.SalesAgreementQuantity__c));
            fact.ForecastedRevenue__c = dummyFactor * (nvl(fact.OpportunityRevenue__c)
 + nvl(fact.OrderRevenue__c) + nvl(fact.LastYearOrderRevenue__c) +
```

```
nvl(fact.SalesAgreementRevenue__c));
        }
    }

    private Double nvl(Decimal input) {
        if (input == null ) return 0;
        return nvl(input.doubleValue(), 0);
    }

    private Double nvl(Double input) {
        return nvl(input, 0);
    }

    private Double nvl(Double input, Double defaultVal) {
        if (input == null) return defaultVal;
        return input;
    }

    private Integer getPeriodNumber(Date forecastStartDate, Date forecastFactStartDate)
 {
        if (forecastFactStartDate < forecastStartDate) {
            // For Past Period we will always use the formula defined for period 1.
            return 1;
        }
        Integer forecastStartDatePeriodNumber =
periodStartDates.indexOf(forecastStartDate);
        Integer forecactFactStartDatePeriodNumber =
periodStartDates.indexOf(forecastFactStartDate);
        return forecactFactStartDatePeriodNumber - forecastStartDatePeriodNumber + 1;
    }

    private String resolvePeriodTypeFromCalculationFrequency(String calculationFrequency)
 {
        return calculationFrequencyToPeriodTypeMap.get(calculationFrequency);
    }

    private List<FactWrapper>
createFactRecordPeriodStartDatePair(List<CustomForecastFact__c> forecastFacts) {
        List<FactWrapper> wrapperList = new List<FactWrapper>();

        Map<Id, Period> periodMapById = new Map<Id, Period>(periods);
        for(CustomForecastFact__c fact : forecastFacts) {
            wrapperList.add(new FactWrapper(fact,
periodMapById.get(fact.Period__c).StartDate));
        }

        return wrapperList;
    }

    private class FactWrapper {
        CustomForecastFact__c fact;
        Date startDate;

        FactWrapper(CustomForecastFact__c fact, Date startDate) {
```

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```
            this.fact = fact;
            this.startDate = startDate;
        }
    }
}
```

```
public class CustomForecastFactUtil {
 public static void calculateForecast(Set<Id> forecastFactIds) {
        List<CustomForecastFact__c> forecastFacts = loadForecastFacts(forecastFactIds);


        // Map of Facts by PartnerId
        Map<Id, List<CustomForecastFact__c>> factMapByPartnerId = new Map<Id,
List<CustomForecastFact__c>>();
        for(CustomForecastFact__c fact : forecastFacts) {
            Id partnerId = fact.AdvAcctForecastSetPartner__c;
            if (!factMapByPartnerId.containsKey(partnerId)) {
              factMapByPartnerId.put(partnerId, new List<CustomForecastFact__c> {fact});

            } else {
                factMapByPartnerId.get(partnerId).add(fact);
            }
        }

        CustomForecastFactFormulaEvaluator.initialize(factMapByPartnerId.keySet());

        for(Id partnerId : factMapByPartnerId.keySet()) {
            CustomForecastFactFormulaEvaluator formulaEvaluator =
CustomForecastFactFormulaEvaluator.getInstance(partnerId);
            formulaEvaluator.eval(factMapByPartnerId.get(partnerId));
        }

        update forecastFacts;
    }

   private static List<CustomForecastFact__c> loadForecastFacts(Set<Id> forecastFactIds)
 {
        return [
            SELECT Id, AdvAcctForecastSetPartner__c, OrderQuantity__c, OrderRevenue__c,
 OpportunityQuantity__c, OpportunityRevenue__c
              , SalesAgreementQuantity__c, SalesAgreementRevenue__c,
LastYearOrderQuantity__c, LastYearOrderRevenue__c
              , ForecastedQuantity__c, ForecastedRevenue__c, Period__c
            FROM CustomForecastFact__c
            WHERE Id IN :forecastFactIds
        ];
```

```
        }
}
```

```
trigger CustomForecastFactTrigger on CustomForecastFact__c (after insert) {
    CustomForecastFactUtil.calculateForecast(Trigger.newMap.keySet());
}
```

SEE ALSO:

Define Apex Triggers

Define Custom Fiscal Years for Your Manufacturing Forecasts

You can define custom fiscal years to generate forecasts according to the specific needs of your business.

1. From Setup, enter **Fiscal Year** in the Quick Find box, then select **Fiscal Year**.

2. To create a custom fiscal year, select **Custom Fiscal Years**.
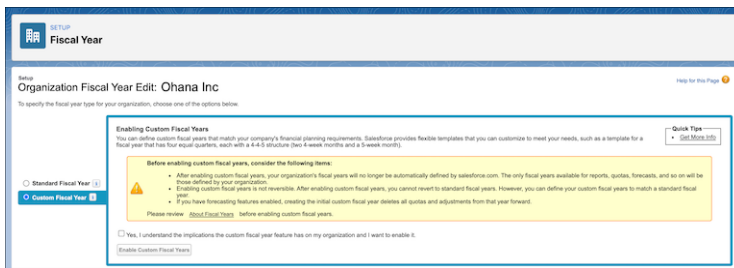
3. Select **Yes** to acknowledge the implications.

4. Click **Enable Custom Fiscal Years**, and define your fiscal year. See Define a Custom Fiscal Year.

5. Save your work.

> ✏️ Note:
> - To use weekly periods for your forecasts, you must enable custom fiscal years in your org.
> - After enabling custom fiscal years in your org, you can't revert to standard fiscal years.
> - You can create custom fiscal years manually and you can create only one past year for your custom fiscal year.

> 💡 Warning: If you're an existing Manufacturing Cloud customer and have Account Forecasting or Advanced Account Forecasting enabled in your org, after you enable custom fiscal years, all your forecasts data can be corrupted. To fix this issue, run the Recalculate All option in account forecasting and the regenerate data processing engine job in advanced account forecasting to regenerate the forecasts for you accounts.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions.

USER PERMISSIONS

To change fiscal year
- Customize Application

View Forecasts and Make Adjustments

With Advanced Account Forecasting, generate forecasts across regions, products, product categories, or any other custom dimensions in a single instance of Manufacturing Cloud. Your account managers have the flexibility to make forecast adjustments whenever necessary.

View Forecasts Using the Advanced Account Forecast Set Use Object
Use the Advanced Account Forecast Set Use object to view forecasts and make the necessary adjustments.

View Forecasts by Account with Advanced Account Forecast Set Partner

If you implemented Advanced Account Forecasting before the Spring'23 release, use the Advanced Account Forecast Set Partner object to view forecasts and make the necessary adjustments.

Filter Advanced Account Forecasts

Use filters to declutter your forecast grid and focus on key information.

Make Forecast Adjustments

You can adjust advanced account forecast values during the adjustment period defined by the admin for your user profile.

Update Multiple Values in Advanced Account Forecasts

You can update multiple values across multiple dimensions like product and location in advanced account forecasts. Select a measure and an advanced account forecast fact list view to mass update values across multiple periods.

View Forecasts Using the Advanced Account Forecast Set Use Object

Use the Advanced Account Forecast Set Use object to view forecasts and make the necessary adjustments.

> **Note:** Customers who were using Advanced Account Forecasting before the Spring'23 release can continue to use the Advanced Account Forecast Set Partner object to view forecasts for your accounts. For more information, see View Forecasts by Account with Advanced Account Forecast Set Partner.

1. From the App Launcher, find and select **Advanced Account Forecast Set Uses**.

2. Click to open an advanced account forecast set use record.

   > **Note:** To view the forecast data, wait for the data processing engine runs to complete. The Advanced Account Forecast Set Use records display data only after the Data Processing Engine definitions runs are completed.

3. To view forecasts specific to measures that are part of a group, select a Measure Group.

4. To view the forecast data for all periods, click **Show All Periods**.

5. If the forecast data spans multiple rows, click the forward and back arrows to navigate between pages.

If you need to update the forecast data for an Advanced Account Forecast Set Use record in Draft status, change the record status to Active, and then update the data.

View Forecasts by Account with Advanced Account Forecast Set Partner
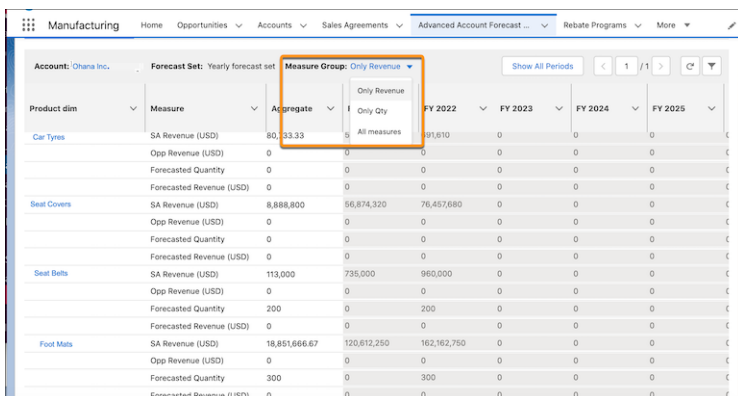
If you implemented Advanced Account Forecasting before the Spring'23 release, use the Advanced Account Forecast Set Partner object to view forecasts and make the necessary adjustments.

1. From the App Launcher, find and select **Advanced Account Forecast Set Partner**.

2. To view the records, select a list view.

   You can also create and save a list view to view the necessary records. The list view shows the status of the Advanced Account Forecast Set Partner record. The status can be Active or Inactive.

3. To view the record details, click a record in the list.

   > **Note:** To view the forecast data for your accounts, wait for the data processing engine runs to complete. The Advanced Account Forecast Set Partner records display data only after the Data Processing Engine definitions runs are completed.

4. To view forecasts specific to measures that are part of a group, select a Measure Group.

5. If you want to view the forecast data for all periods, click **Show All Periods**.

6. If the forecast data spans multiple rows, click the forward and back arrows to navigate between pages.

   > **Note:** If you want to update the forecast data for an Advanced Account Forecast Set Partner record in the Draft status, change the record status to Active, and then update the data.

If you need to update the forecast data for an Advanced Account Forecast Set Partner record in Draft status, change the record status to Active, and then update the data.

Filter Advanced Account Forecasts

Use filters to declutter your forecast grid and focus on key information.

Filter Forecasts by Dimensions and Periods

Use standard filters to view advanced account forecast data by time periods and dimensions.

Filter Forecasts by Forecast Fact List Views

Use advanced filters to view advanced account forecast data filtered by the list views that you create on your advanced account forecast fact object.

Filter Forecasts by Dimensions and Periods

Use standard filters to view advanced account forecast data by time periods and dimensions.

1. In the App Launcher, find and select **Advanced Account Forecast Set Uses** or **Advanced Account Forecast Set Partners** (For customers who were using Advanced Account Forecasting before the Spring'23 release.).

2. Open the record that you want to create the standard filters for.

3. On the Advanced Forecast tab, click ▼ .

4. Select **Standard**.

5. Search for the desired dimensions, such as Product.

6. If needed, select a time period.

Time Period	Description
Current Periods	Displays the forecast for the current month and seven succeeding months.
Range	Displays the forecast for a date range.
Set Periods	Displays the forecast for selected periods.

Keep in mind that when you specify a dimension and a time period, you see only the data that meet both the criteria.

7. Click **Apply**.

Filter Forecasts by Forecast Fact List Views

Use advanced filters to view advanced account forecast data filtered by the list views that you create on your advanced account forecast fact object.

To use advanced filters, first create a list view on your advanced account forecast fact object.

1. In the App Launcher, find and select **Advanced Account Forecast Set Uses** or **Advanced Account Forecast Set Partners** (For customers who were using Advanced Account Forecasting before the Spring'23 release.).

2. Open the record that you want to create the advanced filters for.

3. On the Advanced Forecast tab, click ▼ .

4. Select **Advanced**.

5. Select an advanced account forecast fact list view.

6. Click **Apply**.

After you apply the filter, you can view the advanced account forecast data filtered by the selected list view.

👁 **Example:** A manufacturing company sells in two locations, New York and Singapore. They sell products under two product categories, Hammers and Compactors. Here's how they set up advanced account forecasting.

- Dimensions: Location and Product Category

- Measures: Order Revenue, Order Quantity, and Adjusted Order Revenue

- Period frequency: Monthly

- Start date: January 1, 2022
- End date: December 31, 2022

The forecast for their partner account, Acme, has twelve monthly periods starting from January 1, 2022 and ending on December 31, 2022. The forecast has 48 forecast fact records (12 periods * 2 locations * 2 product categories).

The account manager for the manufacturing company wants to view the forecasts for only the Compactor products in Singapore. To see this data, a list view called *Compactors Singapore 2022* is created on the Advanced Account Forecast Fact object with these filters.

- Location equals Singapore
- Product Category equals Compactor

To view the forecast data for the Compactor products in Singapore, the account manager opens the Advanced Account Forecast Set Partner record for Acme and selects the **Compactors Singapore 2022** list view in the advanced filter.

Make Forecast Adjustments

You can adjust advanced account forecast values during the adjustment period defined by the admin for your user profile.

1. For the period that you want to adjust, click the pencil icon in the cell.
2. Enter the new value for the measure and add an adjustment note. Your note can include only text.
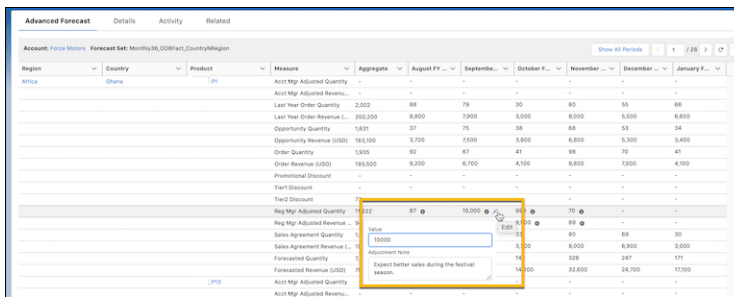
📝 Note:

- You can make adjustments only for the forecast measures that your admin has defined adjustments periods for.
- You can make adjustments only when the adjustment window is open and the associated forecast set and Advanced Account Forecast Partner record are Active.
- The number of forecast measure values that you can adjust at a time in the grid is calculated using a formula, $[(n*2) + (m)]$ less than or equals 25. Here, n is the number of measures being adjusted, with history tracking enabled, and m is the number of measures being adjusted, without history tracking enabled. Multiple adjustments in the grid are handled using an API call. When history tracking is enabled, an adjustment to a forecast measure value includes two subrequests: creating an adjustment fact record and updating the forecast fact record. So, a single API call with 12 adjustments requires 24 operations.

Update Multiple Values in Advanced Account Forecasts

You can update multiple values across multiple dimensions like product and location in advanced account forecasts. Select a measure and an advanced account forecast fact list view to mass update values across multiple periods.

To mass update forecast data, create a list view on the advanced account forecast fact object and add the desired filters to it. Select this list view when performing the mass update.

1. In the App Launcher, go to **Advanced Account Forecast Set Uses** or **Advanced Account Forecast Set Partners** (For customers who were using Advanced Account Forecasting before the Spring'23 release.).

2. Open the record for which you want to mass update the forecast values.

3. Click **Mass Update**.

4. Select the measure that you want to change the values for.

5. Select an advanced account forecast fact list view.

6. Select one of these actions.

   - Increase By
   - Decrease By
   - Replace With

7. Enter a value for the selected action. To use the value as a percentage, select **Use as percentage**.

8. Save your changes.

You receive an in-app notification and an email alert when the mass update process is complete or when it fails. If there's a process failure, you can rerun the process or contact your admin.

The ⓘ icon in a cell indicates that the value in that cell was successfully modified.

📝 Note: To mass update the values for a measure, the calculation method of the measure must be editable. See Define Forecast Set Measures.

📝 Note: You can update multiple values of a measure in advanced account forecasts only during the adjustment period.

📝 Note: You can't update the values of advanced account forecasts when the forecast set is inactive or when recalculation is in progress.

👁 Example: A manufacturing company sells in two locations, New York and Singapore. They sell products under two product categories, Hammers and Compactors. Here's how they set up advanced account forecasting.

- Dimensions: Location and Product Category
- Measures: Order Revenue, Order Quantity, and Adjusted Order Revenue
- Period frequency: Monthly
- Start date: January 1, 2022
- End date: December 31, 2022

The forecast for their partner account, Acme, has twelve monthly periods starting from January 1, 2022 and ending on December 31, 2022. The forecast has 48 forecast fact records (12 periods * 2 locations * 2 product categories).

A partner at Acme asks the account manager to anticipate more demand for hammers in New York. The account manager wants to increase Acme's order quantity for the Hammer product category sold in the New York location by 10% across all periods. To

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions.

USER PERMISSIONS

To modify advanced account forecasts
- Read and Edit permissions on Advanced Account Forecasts

To mass update advanced account forecasts
- Mass Update for Advanced Account Forecasting System Permission

update this data, a list view called *Hammers New York 2022* is created on the Advanced Account Forecast Fact object with these filters.

- Location equals New York
- Product Category equals Hammers

To update the forecast, the account manager opens the relevant Advanced Account Forecast Set Partner record and selects these values for the mass update action.

- Measure: Adjusted Order Quantity
- List view: Hammers New York 2022
- Action: Increase By
- Value: 10
- Use as percentage: Selected

When the mass update is completed, the account manager gets a notification and can view the updated values in the forecast grid.

Migrate from Account Forecasting to Advanced Account Forecasting

You can use Advanced Account Forecasting to generate forecasts based on opportunities, orders, sales agreements, historical orders, and any other custom measures considering all aspects of business from Salesforce and beyond. If you're an existing customer using Account Forecasting, follow these steps to migrate to Advanced Account Forecasting.

1. Disable the older version of Account Forecasting.

   > 📝 Note: Enabling both Account Forecasting and Advanced Account Forecasting in your org can cause data disruption or unforeseen errors.

2. Enable Advanced Account Forecasting.

3. Assign permission sets to users according to your business needs.

4. Set field-level security and create sharing rules for the fact and partner object records.

5. Update the out-of-the-box forecast set definition to include the period groups and display duration according to your business need.

6. Use one of these options to modify the out-of-the-box data processing engine definitions to generate forecasts:

   - Use the out-of-the-box forecast set.
   - Modify the out-of-the-box data processing engine definitions to include the Account Product Period Forecast object as a data source. Alternatively, you can modify the out-of-the-box Advanced Account Forecast Fact object to include the custom metrics from the Account Product Period Forecast object.

7. You can also upload data for the Advanced Account Forecast Set Partner and Advanced Account Forecast Fact objects by using Data Loader.

   For more information, see About Data Loader .

Considerations for Advanced Account Forecasting

Review these considerations before you start using Advanced Account Forecasting.

- When using Data Processing Engine definitions for generating advanced account forecasts in Manufacturing Cloud, keep the limits and limitations for Data Processing Engine in mind. For more details, see Data Processing Engine Limits.

- If you're using an orchestration flow to generate forecasts, keep the limitations of Flows in mind. For more information, see Flows

- The additional factors that impact the time taken for generating forecast data in your org are:

  - The number of qualifying and non-qualifying currencies that are used to generate the forecast data.

  - The complexity of the forecast formulas, the number of product and period records, and the number of orders, opportunities, and sales agreements.

  - The consumption of resources when calling external APIs when processing the forecast data.

- Any custom validation rules and triggers added on your advanced account forecasting objects can interfere with forecast generation. If the forecast generation for your accounts fails, disable the custom rules and triggers and then try generating forecasts.

- The number of forecast measure values that you can adjust at a time in the grid is calculated using a formula, $[(n*2) + (m)]$ less than or equals 25. Here, n is the number of measures being adjusted, with history tracking enabled, and m is the number of measures being adjusted, without history tracking enabled. Multiple adjustments in the grid are handled using an API call. When history tracking is enabled, an adjustment to a forecast measure value includes two subrequests: creating an adjustment fact record and updating the forecast fact record. So, a single API call with 12 adjustments requires 24 operations.

- The Rollover Account Forecast Data Processing Engine (DPE) definition runs only at the start of each period so you won't see forecasts generated for newer periods if you change forecast settings during an ongoing period. For example, if you change the display duration for a forecast in the middle of a month, the Rollover DPE considers the update only when it runs at the start of the next month. To consider the forecast settings updates, such as changes to forecast dimensions, frequencies, or period group settings during an ongoing forecast period, make sure you run the Regenerate Account Forecast DPE definition after you update the settings.

- We recommend that you keep these limits in mind when configuring Advanced Account Forecasting. We'll enforce these restrictions in a future release.

Type	Recommended Limit
Forecast sets	10
User-defined forecast set dimensions	3
Fact objects	10
Forecast set measures	20
Measures displayed in UI	20
Periods displayed in UI	56
Periods in a period group	56
Forecast recalculations in a year	52
Forecast regenerations in a year	4
Forecast rollovers in a year	56

- When you specify a negative start period offset in Advanced Account Forecasting, the generated forecasts start from a past period. To generate forecasts from a future period, specify a positive start period offset.

- When you configure a custom fact object, ensure that the object has lookups to account, period, partner, and product. For period, create a text field (18 char) that has a period populated.

- Forecast quantity and forecast revenue measures are included by default for a forecast set. Map these measures to the corresponding fields in the fact object before activating your forecast set.

- Make sure that you specify the same values for frequency for the period group and the rollover frequency for a forecast set. Having different values for the frequencies can lead to forecast calculation errors.

- If you want to roll over the forecasts anytime during a month, then increment the start period by 1, and then run the Rollover Data Processing Engine job.

- Period and account are the default dimensions available for a forecast set. You can configure additional dimensions if necessary.

- These Account Forecasting features aren't available with Advanced Account Forecasting:

  - Add Products

  - Show Growth

  - Recalculate

- When your org gets upgraded during a release, make sure you check the cloned permission sets for Manufacturing Advanced Account Forecasts and Manufacturing Advanced Account Forecasts for Community. The Mass Update for Advanced Account Forecasting and Import CSV for Advanced Account Forecasting system permissions get automatically deselected in existing cloned permission sets during a release upgrade. You can reassign the permissions in the cloned permission sets if required. There's no impact when you clone a permission set after a release upgrade.

  Considerations for Advanced Account Forecasting When Processing Large Volumes of Data
  When you use Advanced Account Forecasting to process large volumes of data, Salesforce recommends that you process the data in batches.

SEE ALSO:

Considerations for Advanced Account Forecasting When Processing Large Volumes of Data

When you use Advanced Account Forecasting to process large volumes of data, Salesforce recommends that you process the data in batches.

Key Considerations

- The total number of forecast fact records to process.

- The forecast fact object used to store the forecast data. The out-of-the-box forecast fact object supports higher data volumes and provides higher scalability compared to a custom forecast fact object.

- The number of forecast sets that you use to generate the forecasts.

- The configuration of the forecast sets, dimensions, and period groups.

Forecast Calculations by Using an Orchestration Flow

- You can process up to 60 million forecast fact records in a single Data Processing Engine flow process. For larger volumes, divide the fact records into smaller volumes based on criteria such as region or account groups before processing.

- Writeback of forecast data calculated using forecast formulas takes time due to the large volume of data to process in the forecast fact records.

Forecast Formula Baseline Calculation by Using Data Processing Engine

- Leverage the data processing engine by modeling the forecast formula as formula nodes in the data processing engine definitions for baseline formula calculations. This improves the scalability and performance to address the processing of up to 16 million rows of forecast fact records in a single data processing engine job run and reduces the overall processing time by over 60% compared to the orchestration flow.
- You model the forecast formulas in the forecast set but the Calculate Advanced Account Forecasts and Update Advanced Account Forecast Set Partner invocable actions aren't used as part of the orchestration flow to calculate the forecasts.
- The forecasting data processing engine job run creates or updates the forecast set partner records to an Active status.

Model Forecast Formulas as Fields on the Forecast Fact Object

Use this approach when the forecast formulas don't vary with time. Leverage the platform capabilities to model the forecast quantity and forecast revenue as formula fields on the fact object that you're using for your forecast calculations. You aren't required to model the forecast formulas in the data processing engine definitions or to use an orchestration flow with the Calculate Advanced Account Forecasts and Update Advanced Account Forecast Set Partner invocable actions to generate forecasts.

SEE ALSO:

> Customize Fields

Deploy Advanced Account Forecasting Analytics for Manufacturing

Use the Advanced Account Forecasting Analytics for Manufacturing app to gain insights into your forecast data and develop accurate forecasts to optimize your production and operations. Deploy Advanced Account Forecasting Analytics for Manufacturing by assigning permissions, enabling CRM Analytics, and creating and sharing the analytics app for your users.

<div style="border:1px solid; padding:4px;">

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** editions where Manufacturing Cloud is enabled.

</div>

1. Assign Admin Permissions for Advanced Account Forecasting Analytics for Manufacturing

   Allow admins to create and manage the Advanced Account Forecasting Analytics for Manufacturing app by assigning them the necessary permissions.

2. Assign User Permissions for Advanced Account Forecasting Analytics for Manufacturing

   Allow your users to view the Advanced Account Forecasting Analytics for Manufacturing app by assigning them the necessary permissions.

3. Enable CRM Analytics

   Before you create the Advanced Account Forecasting Analytics for Manufacturing app, enable CRM Analytics in your org.

4. Meet the Data Requirements to Create the Advanced Account Forecasting Analytics for Manufacturing App

   To create the Advanced Account Forecasting Analytics for Manufacturing app, make sure that your Salesforce org has the required data.

5. Set Field-Level Security for the Advanced Account Forecasting Analytics for Manufacturing App

   Before you create the Advanced Account Forecasting Analytics for Manufacturing app, make sure that the Analytics Cloud Integration User profile has access to all of the fields that the app uses.

6. Create and Share the Advanced Account Forecasting Analytics for Manufacturing App

   Create an app from the Advanced Account Forecasting Analytics for Manufacturing template and share it with your users.

7. Keep the Data in the Advanced Account Forecasting Analytics for Manufacturing App Up-to-Date

    Keep the data in your analytics app current by scheduling the app to refresh on a daily basis.

8. Use Advanced Account Forecasting Analytics for Manufacturing

    Use the dashboards in the Advanced Account Forecasting Analytics for Manufacturing app to analyze your forecast data and develop accurate forecasts to optimize your production and operations.

Assign Admin Permissions for Advanced Account Forecasting Analytics for Manufacturing

Allow admins to create and manage the Advanced Account Forecasting Analytics for Manufacturing app by assigning them the necessary permissions.

1. From Setup, in the Quick Find box, enter `Users`, and then select **Users**.

2. Click the name of a user with the System Administrator profile.

3. Click **Permission Set Assignments**, and then click **Edit Assignments**.

4. Select the **CRM Analytics Plus Admin** and **Manufacturing Advanced Account Forecast Admin** permission sets.

5. Click **Add**, then save your changes.

6. Repeat these steps for other admins who create and manage the Advanced Account Forecasting Analytics for Manufacturing app.

> **EDITIONS**
>
> Available in: **Enterprise**, **Unlimited**, and **Developer** editions where Manufacturing Cloud is enabled.

Assign User Permissions for Advanced Account Forecasting Analytics for Manufacturing

Allow your users to view the Advanced Account Forecasting Analytics for Manufacturing app by assigning them the necessary permissions.

1. From Setup, in the Quick Find box, enter `Users`, and then select **Users**.

2. Click the name of a user who needs access to the Advanced Account Forecasting Analytics for Manufacturing app.

3. Click **Permission Set Assignments**, and then click **Edit Assignments**.

4. Select the **CRM Analytics Plus User** and **Manufacturing Advanced Account Forecast User** permission sets.

5. Click **Add**, then save your changes.

6. Repeat these steps for other users who view the Advanced Account Forecasting Analytics for Manufacturing app.

> **EDITIONS**
>
> Available in: **Enterprise**, **Unlimited**, and **Developer** editions where Manufacturing Cloud is enabled.

Enable CRM Analytics

Before you create the Advanced Account Forecasting Analytics for Manufacturing app, enable CRM Analytics in your org.

1. From Setup, in the Quick Find box, enter `Getting Started` and then, under Analytics, select **Getting Started**.
   If you see the Launch CRM Analytics button, then CRM Analytics is already enabled in your org. Otherwise, turn it on.

2. Click **Enable CRM Analytics**.

> **EDITIONS**
>
> Available in: **Enterprise**, **Unlimited**, and **Developer** editions where Manufacturing Cloud is enabled.

Meet the Data Requirements to Create the Advanced Account Forecasting Analytics for Manufacturing App

To create the Advanced Account Forecasting Analytics for Manufacturing app, make sure that your Salesforce org has the required data.

Your org must have the Advanced Account Forecast Set Partner object.

If your org doesn't have access to the Advanced Account Forecast Set Partner object, then you get an error when you try to create the Advanced Account Forecasting Analytics for Manufacturing app. Follow the instructions in the message to add the required data, and then try to create the app again.

Set Field-Level Security for the Advanced Account Forecasting Analytics for Manufacturing App

Before you create the Advanced Account Forecasting Analytics for Manufacturing app, make sure that the Analytics Cloud Integration User profile has access to all of the fields that the app uses.

1. From Setup, in Object Manager, click an object that's used in the Advanced Account Forecasting Analytics for Manufacturing app.

2. Click **Fields & Relationships**.

3. Click the field name and then click **Set Field-Level Security**.

4. For the Analytics Cloud Integration User profile, select **Visible**, and then save your changes.

5. Repeat these steps for all of the fields on all of the objects that the app uses.

Create and Share the Advanced Account Forecasting Analytics for Manufacturing App

Create an app from the Advanced Account Forecasting Analytics for Manufacturing template and share it with your users.

> ☑ **Note:** Before you create the app, make sure that Sales Agreements are enabled in your org. For more information on how to enable Sales Agreements, see Enable Sales Agreements.

1. In CRM Analytics Studio, click **Create** and then select **App**.

2. Select the **Advanced Account Forecasting Analytics for Manufacturing** template, then click **Continue**.

3. Review the preview page, then click **Continue**.

4. To create an app or use settings from an existing app, make a selection, and click **Continue**. Analytics runs a compatibility check of the data in your Salesforce org.

5. If the compatibility check uncovers any issues, follow the instructions in the error message to resolve them. Then, try to create the app again. When the compatibility check completes successfully, click **Looks good, next**.

6. The next page of the wizard asks you to make these selections.

   a. Select fields for Forecasting Revenue and Quantity. Select the Forecast Revenue and Forecast Quantity measures you've configured in the Forecast Set in Advanced Account Forecasting Setup.

   > ☑ **Note:** Your app contains only the data for the measures you select.

   b. Select custom Dimensions for Forecasting. You can select up to two custom dimensions from the Advanced Account Forecast Fact object for forecasting.

> **Note:** If you don't want to see forecasts for custom dimensions in your app skip to step 8.

    c. Select custom dimension from the Orders object to map with the first custom dimension selected from the Forecast Fact object.

    d. Select custom dimension from the Orders object to map with the second custom dimension selected from the Forecast Fact object.

7. Click **Looks good, next**.

8. Name your app, then click **Create**.
The process takes a few minutes. When it completes, refresh the page.

> **Note:** If you see an error saying the Analytics Integration User doesn't have access to selected fields, update the field-level security for the app. See Set Field-Level Security for the Advanced Account Forecasting Analytics for Manufacturing App. For more information about FLS, see Field-Level Security in Salesforce Help.

Now, share the app with your users. You can share it only with users who are assigned the admin or user permission sets for Advanced Account Forecasting Analytics for Manufacturing.

1.
In CRM Analytics Studio, open your app and click [⬆].

2. On the Give Access tab of the share window, under Invite others, add the names of users in your org.

3. For every user you add, select their level of access: Viewer, Editor, or Manager.

4. Save your changes.

Keep the Data in the Advanced Account Forecasting Analytics for Manufacturing App Up-to-Date

Keep the data in your analytics app current by scheduling the app to refresh on a daily basis.

To schedule your app, see Schedule Data Refresh for a CRM Analytics App. Select a time outside normal work hours so the data refresh doesn't interrupt business activities.

> **EDITIONS**
>
> Available in: **Enterprise**, **Unlimited**, and **Developer** editions where Manufacturing Cloud is enabled.

Use Advanced Account Forecasting Analytics for Manufacturing

Use the dashboards in the Advanced Account Forecasting Analytics for Manufacturing app to analyze your forecast data and develop accurate forecasts to optimize your production and operations.

Go to CRM Analytics Studio, open the Advanced Account Forecasting Analytics for Manufacturing app, and click the Dashboards tab to see the list of dashboards.

> **EDITIONS**
>
> Available in: **Enterprise**, **Unlimited**, **Performance**, and **Developer** Editions where Manufacturing Cloud is enabled

Accounts' Health Dashboard

Monitor your accounts' performance and take measures to improve your accounts' health. The dashboard charts answer these questions:

- How's my account performing against the forecast?
- How accurate are my forecasts?
- What's the total forecasted revenue for a selected period?

- Which accounts need attention?

Account Insights Dashboard

Track your accounts' performance and identify accounts that need attention. The dashboard charts answer these questions:

- How's my account performing against the forecast?
- What's the actual and forecasted revenue for a selected period?
- What's in the forecast?
- How accurate are the forecasts for the account?
- How's the account performing based on custom dimensions?
- How are the account's products performing based on the key metrics for quantity and revenue?
- What are my top-performing products and accounts?
- Which products or accounts need my attention?
- What's my total revenue from opportunities and orders?
- What's the forecasted quantity and revenue for each product, service region, account, and owner?

Product Performance Dashboard

Track your product performance against the forecasted demand. The dashboard shows how the forecast varies based on time and various dimension-level combinations and identifies the accounts and products that need attention. The dashboard charts answer these questions:

- How's the product performing against the forecast?
- How's the product category performing against the forecast?
- How's the product family performing against the forecast?
- What's the actual revenue for a selected period?
- How's the product performing based on custom dimensions?
- How's the product category performing based on custom dimensions?
- How's the product family performing based on custom dimensions?
- When have I had the highest forecast variance based on quantity and revenue?
- What are my top-performing products?
- Which products need my attention?

Forecast Analysis Dashboard

The Forecast Analysis dashboard lets you monitor the accuracy of your forecast based on the forecasted, adjusted, and actual revenue and quantity. With this dashboard, you can analyze how forecasts vary across time and plan measures to improve forecast accuracy. The dashboard charts answer these questions.

- How's the product performing against the forecast and adjusted forecast?
- How's the product family performing against the forecast and adjusted forecast?
- What's the total forecasted revenue and quantity for a selected period?
- What's the adjusted forecasted revenue for a selected period?
- How accurate are my forecasts?
- What's the actual, forecast, and adjusted forecast variance for the selected period based on revenue and quantity?

- How did the forecast accuracy trend over time?
- Which product or account had the maximum forecast variance for a selected period?
- What's the monthly forecast variance for the selected period?
- What's the overall adjustments made in a period of three months?

Statistical Order Forecasting Dashboard

Work on an effective manufacturing plan by analyzing statistical order forecasts for an advanced account forecast set. The statistical forecast data includes order quantity and order revenue values. Plan better at a granular level based on the defined dimensions. Get answers to these questions:

- What's the trend of order quantity and revenue over the course of the specified period?
- What's the distribution of forecasted order quantity and revenue for the specified dimensions?
- What's the accuracy of the forecasted order quantity and revenue values?

Create Account Forecasts to Enhance Your Planning

Use Account Forecasting to generate forecasts based on orders, opportunities, and sales agreements. Create formulas to calculate your forecasts as per the requirements of your company. Define a recurring adjustment period in alignment with your company's planning period to allow for collaborative edits during that period. After the period is over, the forecasts are locked. Use the locked forecast values to plan inventory and operations for the upcoming schedules. Get insights into comparative sale of products across accounts to prepare for new possibilities of expanding your market.

📝 **Note:** There's a newer version of forecasting available called Advanced Account Forecasting. To learn about how the features are different, review this comparison. For new implementations, use Advanced Account Forecasting. For existing implementations, plan your migration.

Table 1: Learn About Account Forecasting

Task	Resources
Account Forecasting Data Model	Manufacturing Cloud Standard Objects
Enable Account Forecasting	Enable Account Forecasting
Configure Account Forecasts	- Sales Agreements and Forecasting in Manufacturing Cloud - Configure Account Forecasts

Enable Account Forecasting

Help your account managers track forecast numbers for their accounts. Enable account forecasting for your company so that key account managers can collaborate on forecasts and plan their sales and operations better.

Configure Account Forecasts

Define the account forecast configurations for your org on the Account Forecasting page in Setup.

View and Maintain Forecasts

Get accurate forecasts for your accounts for new and existing products. If a product is tracked through any of your associated orders, opportunities, and sales agreements, forecast is calculated for it. Based on the unique formulas your admin creates, you can view quantity and revenue forecast numbers all consolidated in the Forecast tab of your account's record. During each adjustment period, you can also recalculate forecasts based on the most current account and market growth metrics. Your peers and executives can collaboratively edit the forecast numbers to share insights. You can focus on high-performing products, discover possibilities of sale for new products, and also plan your sales and operations for the upcoming month or quarter.

Considerations for Account Forecasting

Review these considerations before setting up and using Account Forecasting in Manufacturing Cloud.

Enable Account Forecasting

Help your account managers track forecast numbers for their accounts. Enable account forecasting for your company so that key account managers can collaborate on forecasts and plan their sales and operations better.

> 📝 **Note:** There's a newer version of forecasting available called Advanced Account Forecasting. To learn about how the features are different, review this comparison. For new implementations, use Advanced Account Forecasting. For existing implementations, plan your migration.

1. From Setup, enter `Manufacturing` in the Quick Find box, and then select **Account Forecasting**.
2. Enable Account Forecasting.

Configure Account Forecasts

Define the account forecast configurations for your org on the Account Forecasting page in Setup.

> 📝 **Note:** There's a newer version of forecasting available called Advanced Account Forecasting. To learn about how the features are different, review this comparison. For new implementations, use Advanced Account Forecasting. For existing implementations, plan your migration.

Configure Forecast Generation and Display Settings

Set up the forecast display settings on the Account Forecasting page in Setup. You can define the start period, forecast frequency, and the display duration for rolling forecasts. The forecast display rolls over and adds another period every month or quarter, depending on the selected forecast frequency. This rolling forecast capability ensures that you forecast as many months ahead as in the display duration.

Configure Account Forecast Generation Filters

Select the list views for accounts and products in the Setup page of Account Forecasting. Forecasts are generated only for the selected accounts.

Configure Account Forecast Calculation Settings

Define the sales agreements to use for calculating sales agreement metric values in account forecasts by selecting a sales agreement list view.

Configure Forecast Adjustment Settings

Align your forecast adjustments with your company's planning period. During the adjustment period, your company can collaborate on forecasts and modify forecast values. Forecast values are locked beyond the adjustment period. Account managers can use the time beyond the adjustment period to plan inventory and operations.

Configure Forecast Generation and Display Settings

Set up the forecast display settings on the Account Forecasting page in Setup. You can define the start period, forecast frequency, and the display duration for rolling forecasts. The forecast display rolls over and adds another period every month or quarter, depending on the selected forecast frequency. This rolling forecast capability ensures that you forecast as many months ahead as in the display duration.

> **Note:** There's a newer version of forecasting available called Advanced Account Forecasting. To learn about how the features are different, review this comparison. For new implementations, use Advanced Account Forecasting. For existing implementations, plan your migration.

1. From Setup, enter `Manufacturing` in the Quick Find box, and then select **Account Forecasting**.

2. Define the following:

   a. Forecast Frequency: Select monthly or quarterly.

   b. Start Period: This field derives the start period for generating forecasts. Enter the number of periods before the current period to arrive at the start period. For example, if the current period is August 2020 and you enter the 6 periods ago as the start period, you generate forecasts starting from February 2020. To start from the current period, enter 0.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions.

USER PERMISSIONS

To modify forecast settings:
- Customize Application

> **Tip:** If you want to compare quantity and revenue forecasts, it's helpful to generate forecasts for previous periods. Your account managers can gain insights into product performance for past, present, and future periods.

c. Display Duration: Select the total number of periods for generating forecasts. For example, if the start period is February 2020 and the display duration is 8 periods, you generate forecasts from February 2020 to September 2020.

The forecast display rolls over and adds another period every month or quarter, depending on the selected forecast frequency. For example, let's assume that the forecast frequency is monthly and the display duration is from February 2020 to September 2020. At the end of February 2020, you get a forecast for March 2020 to October 2020.

> **Warning:**
> - You can have a display duration of up to 36 periods. Adding more than 36 periods can result in performance issues.
> - If you modify the forecast display settings, all active forecast records expire, and the regenerated records replace them. If regeneration fails, account owners receive a notification.
> - Account forecasts are regenerated when you change the generation and display settings. If you regenerate account forecasts, the forecast data for manually added products and any adjustments are lost. To ensure that the forecast data for manually added products is included, create an opportunity, order, or sales agreement for those products. Alternatively, manually add the products and adjustments again.

> **Important:** Any custom validation rules and triggers added on your account forecasting objects can interfere with the account forecast generation process. If the forecast generation for your accounts fails, disable the custom rules and triggers and then try generating forecasts.

Before saving your settings, use the Account Forecast Formula Builder to create formulas for all periods. You can create different formulas to calculate quantity and revenue. If the display duration is 8 months, you can create up to 8 formulas.

SEE ALSO:

Build Formulas to Calculate Forecast

Configure Account Forecast Generation Filters

Select the list views for accounts and products in the Setup page of Account Forecasting. Forecasts are generated only for the selected accounts.

> **Note:** There's a newer version of forecasting available called Advanced Account Forecasting. To learn about how the features are different, review this comparison. For new implementations, use Advanced Account Forecasting. For existing implementations, plan your migration.

1. Create list views for accounts and products.

a. On the Accounts page, create a list view of all the accounts that you want to forecast for.

b. On the Products page, create a list view of all the products that you want to include in the account forecasts.

> **Important:** Key account managers can generate forecasts only if either **All users can see this list view** or **Share list view with groups of users** is selected for the list views.

2. Select the list views for account forecasting.

a. From Setup, enter `Manufacturing` in the Quick Find box, and then select **Account Forecasting**.

b. In the Account Forecast Generation Filters section, select the list views in the two fields.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions.

USER PERMISSIONS

To modify forecast settings:
- Customize Application

- Accounts: Select the account list view.
- Products: Select the product list view.

> **Note:** If no list views are selected, forecasts for all the accounts and active products in your Salesforce org are generated.

c. Save your changes.

SEE ALSO:

Recalculate All Account Forecasts

Create or Clone a List View in Lightning Experience

Configure Account Forecast Calculation Settings

Define the sales agreements to use for calculating sales agreement metric values in account forecasts by selecting a sales agreement list view.

> **Note:** There's a newer version of forecasting available called Advanced Account Forecasting. To learn about how the features are different, review this comparison. For new implementations, use Advanced Account Forecasting. For existing implementations, plan your migration.

- Enable Opportunity Probability to use the value in the Probability field of opportunities for calculating opportunity metric values in account forecasts.
- Enable Opportunity Product Schedules to forecast calculations based on opportunity quantity and revenue schedules.

Select Sales Agreement List View for Account Forecasting

The sales agreements in the selected list view are considered when calculating the sales agreement metric values of account forecasts.

Use Opportunity Probability to Calculate Account Forecasts

Enable Opportunity Probability to calculate opportunity quantity and revenue values in account forecasts.

Use Opportunity Product Schedules to Calculate Account Forecasts

Enable Opportunity Product Schedules to forecast calculations based on opportunity quantity and revenue schedules.

Select Sales Agreement List View for Account Forecasting

The sales agreements in the selected list view are considered when calculating the sales agreement metric values of account forecasts.

> **Note:** There's a newer version of forecasting available called Advanced Account Forecasting. To learn about how the features are different, review this comparison. For new implementations, use Advanced Account Forecasting. For existing implementations, plan your migration.

1. On the Sales Agreements page, create a list view that has the sales agreements to consider for calculating account forecasts.

2. From Setup, in the Quick Find box, enter `Manufacturing`, and then select **Account Forecasting**.

3. In the Account Forecast Calculation Settings section, select the list view of sales agreements to consider.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions.

USER PERMISSIONS

To modify forecast settings:
- Customize Application

> ✎ **Note:** If no list view is selected, all active and expired sales agreements in your Salesforce org are considered.

4. Save your changes.

To view the latest account forecast values after selecting the list view, click **Recalculate All Forecasts**. You can also ask your users to recalculate each account's forecast individually.

Use Opportunity Probability to Calculate Account Forecasts

Enable Opportunity Probability to calculate opportunity quantity and revenue values in account forecasts.

> ✎ **Note:** There's a newer version of forecasting available called Advanced Account Forecasting. To learn about how the features are different, review this comparison. For new implementations, use Advanced Account Forecasting. For existing implementations, plan your migration.

1. From Setup, in the Quick Find box, enter `Manufacturing`, and then select **Account Forecasting**.

2. In the Account Forecast Calculation Settings section, enable Opportunity Probability.

3. Save your changes.

To view the latest account forecast values after enabling Opportunity Probability, click **Recalculate All Forecasts**. You can also ask your users to recalculate each account's forecast individually.

Use Opportunity Product Schedules to Calculate Account Forecasts

Enable Opportunity Product Schedules to forecast calculations based on opportunity quantity and revenue schedules.

> ✎ **Note:** There's a newer version of forecasting available called Advanced Account Forecasting. To learn about how the features are different, review this comparison. For new implementations, use Advanced Account Forecasting. For existing implementations, plan your migration.

> 🛑 **Important:** Enable Product Schedules in your Salesforce org before enabling Opportunity Product Schedules. Enable quantity scheduling and revenue scheduling for products.

1. From Setup, in the Quick Find box, enter `Manufacturing`, and then select **Account Forecasting**.

2. In the Account Forecast Calculation Settings section, enable Opportunity Product
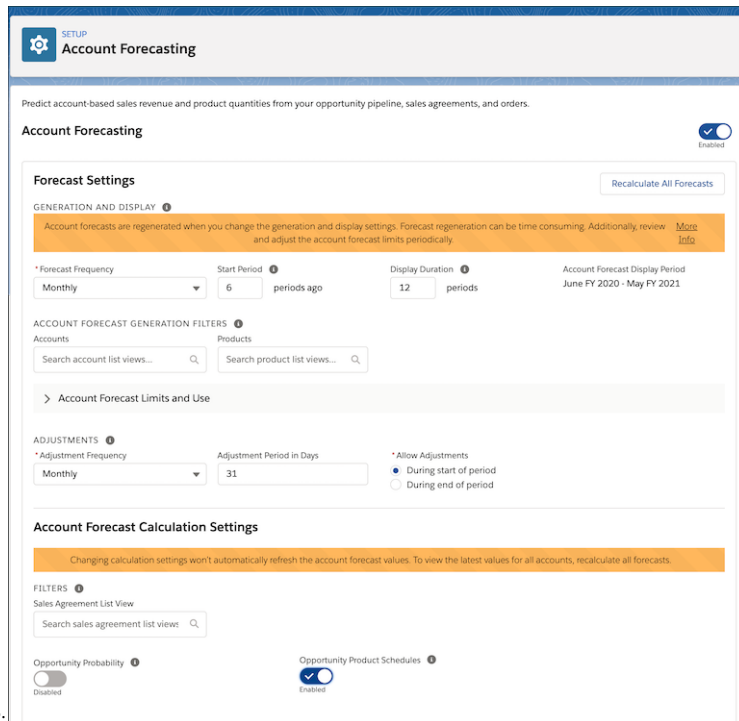
Schedules.

3. Save your changes.

To view the latest account forecast values after enabling Opportunity Product Schedules, click **Recalculate All Forecasts**. You can also ask your users to recalculate each account's forecast individually.

Configure Forecast Adjustment Settings

Align your forecast adjustments with your company's planning period. During the adjustment period, your company can collaborate on forecasts and modify forecast values. Forecast values are locked beyond the adjustment period. Account managers can use the time beyond the adjustment period to plan inventory and operations.

> **Note:** There's a newer version of forecasting available called Advanced Account Forecasting. To learn about how the features are different, review this comparison. For new implementations, use Advanced Account Forecasting. For existing implementations, plan your migration.

1. From Setup, enter `Manufacturing` in the Quick Find box, and then select **Account Forecasting**.

2. Specify the adjustment settings.

   a. For Adjustment Frequency, select monthly or quarterly. Forecasts can be manually adjusted at this frequency.

     If your forecast frequency is quarterly, you can't have monthly adjustments.

   b. For Adjustment Period in Days, enter the number of days in each month or quarter for editing forecast values.

     Forecasts automatically recalculate for new and existing products at the start of every adjustment period.

   c. Allow Adjustments: Select whether you allow adjustments at the start or the end of every month or quarter.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions.

USER PERMISSIONS

To modify forecast settings:
- Customize Application

> **Note:** Account forecast is recalculated automatically at the start of every adjustment period. The process runs once, at 1:00 AM of your Salesforce org's timezone.

At the start or the end of each quarter or month, specify the adjustment days when users can collaborate and modify forecast values for accounts. The adjustments give peers and executives insights into product performance, market growth, and account growth. Forecast values are locked at the end of each adjustment period. This time beyond the adjustment period helps account managers plan sales and operations for the upcoming periods. Account managers can determine the accounts to target for driving business based on the forecast revenues. Account managers can plan inventory and stock for the upcoming periods based on the forecast quantities.

> **Example:** If you have monthly adjustments for 15 days at the start of the period, account managers can edit forecasts for the first 15 days of each month.

SEE ALSO:

  Track Adjustments to Forecasts

Recalculate All Account Forecasts

Recalculate forecasts for all the identified accounts at any time during your company's fiscal year.

> **Note:** There's a newer version of forecasting available called Advanced Account Forecasting. To learn about how the features are different, review this comparison. For new implementations, use Advanced Account Forecasting. For existing implementations, plan your migration.

1. From Setup, enter `Manufacturing` in the Quick Find box, and then select **Account Forecasting**.

2. Click **Recalculate All Forecasts**.

View the Defined Limits, Percentage of Limit Used, and Usage Details for Account Forecasts

You can view the data volume used and number of times certain operations have run for account forecasts in your Salesforce org. Compare this usage with the defined limits by checking the percentage of the limit used. You can ensure optimal performance of your Salesforce org by reviewing these details periodically.

> **Note:** There's a newer version of forecasting available called Advanced Account Forecasting. To learn about how the features are different, review this comparison. For new implementations, use Advanced Account Forecasting. For existing implementations, plan your migration.

Expand the Account Forecasts Limits and Use section. This section shows three values associated with the Account Product Period Forecast object, and the recalculation and regeneration of all account forecasts in your Salesforce org.

Type	Percentage of Limit Used	Value of Current Use	Limit
Account Product Period Forecast Records	0%	84	9000000
Number of Account Forecast Recalculations	15%	8	52
Number of Account Forecast Regenerations	25%	1	4

Type	Percentage of Limit Used	Value of Current Use	Limit
Account Product Period Forecast Records	The percentage of limit used by the Account Product Period Forecast object records.	The number of existing Account Product Period Forecast object records.	The maximum limit defined for the Account Product Period Forecast object records is 9 million.
Number of Account Forecast Recalculations	The percentage of limit used by the recalculation of all account forecasts.	The number of times all the account forecasts have been recalculated.	The maximum number of times all the account forecasts can be recalculated is 52 times per year.
Number of Account Forecast Regenerations	The percentage of limit used by the regeneration of all account forecasts.	The number of times all the account forecasts have been regenerated.	The maximum number of times all the account forecasts can be regenerated is 4 times per year.

📝 Note:

- The number of account forecast recalculations and regenerations increases by 1 only when that operation succeeds. If the operation fails, the number remains the same.
- If the Account Product Period Forecast Record limit in your org is reached, new products aren't added when recalculating a single account forecast or recalculating all account forecasts. In addition, you can't add new products to forecasts.
- You can click the refresh icon next to Account Product Period Forecast Records anytime to refresh the values in this row.

Create Custom Fields for Account Product Forecast and Account Product Period Forecast Objects

You can create custom fields for the Account Product Forecast and Account Product Period Forecast objects and define a unique mapping for these fields. This mapping creates a metric that you can add to an account forecast. Use these custom metrics to track account forecasts better.

📝 Note: There's a newer version of forecasting available called Advanced Account Forecasting. To learn about how the features are different, review this comparison. For new implementations, use Advanced Account Forecasting. For existing implementations, plan your migration.

1. Add a custom field for Account Product Forecast.

   a. In Object Manager, select Account Product Forecast.

   b. In Fields & Relationships, select **New**.

   c. Select the data type for the custom field and click **Next**.

   d. Provide the field label.

   e. Provide the required field-level access to your key account managers.

   f. Add the field to the page layout and click **Save**.

2. Add a custom field for Account Product Period Forecast.

   a. In Object Manager, select Account Product Period Forecast.

   b. In Fields & Relationships, select **New**.

   c. Select the data type for the custom field and click **Next**.

   d. Provide the field label.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions.

USER PERMISSIONS

To create custom metrics:
- Customize Application

e. Provide the required field-level access to your key account managers.

f. Add the field to the page layout and click **Save**.

📝 Note:

- You can create custom fields for currency, number, and percentage field types.
- You can't create Roll-Up Summary fields for Account Product Period Forecast.
- You can update multiple values of a single custom metric for multiple products and periods during the account forecast adjustment window.

SEE ALSO:

Create Custom Fields

Map Custom Fields of Account Product Forecast and Account Product Period Forecast

Add custom metrics to the Forecast tab of an account by mapping custom fields of Account Product Forecast and Account Product Period Forecast. Make each mapping unique.

📝 Note: There's a newer version of forecasting available called Advanced Account Forecasting. To learn about how the features are different, review this comparison. For new implementations, use Advanced Account Forecasting. For existing implementations, plan your migration.

📝 Note: You can create a mapping only for currency, number, decimal, and percentage data types.

1. In Setup, enter `Account Forecasting` in the Quick Find box.

2. In Feature Settings, under Manufacturing, select **Account Forecasting**.

3. In the Metrics Mapping section, all custom fields are listed under Product Period Metrics. For each row, click the corresponding dropdown value for **Product Metrics**.

4. Click **Save**.

👁 Example: For the Product Period metric, select Inventory Quantity. Select Inventory Level as the corresponding Product metric.

SEE ALSO:

Create Custom Fields for Account Product Forecast and Account Product Period Forecast Objects

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions.

USER PERMISSIONS

To create custom metric mapping:
- Customize Application

Select Metrics to Display in Forecast

Select the metrics you want your key account managers to view on the Forecast tab for an account.

📝 **Note:** There's a newer version of forecasting available called Advanced Account Forecasting. To learn about how the features are different, review this comparison. For new implementations, use Advanced Account Forecasting. For existing implementations, plan your migration.

Choose metrics for quantity and revenue to be displayed for products across all periods. The metrics available for your selection are as follows:

- Opportunity Quantity
- Opportunity Revenue
- Last Year's Order Quantity
- Last Year's Orders Revenue
- Current Orders Quantity
- Current Orders Revenue
- Sales Agreement Planned Quantity
- Sales Agreement Planned Revenue

1. From Setup, in the Quick Find box, enter `Account Forecasting`, and then select **Account Forecasting**.

2. In the Forecast Metrics section, select either **Quantity** or **Revenue** as a metric.

3. In the Displayed Forecast Metrics section, use the dual pick list to move each metric from the Available Metrics list to the Selected Metrics list.

   The summary metrics for Forecasted Quantity and Forecasted Revenue are automatically added to the Forecast tab display on each account.

4. Use the Sort Up and Sort Down arrows to change the sequence of metrics in the Forecast tab.

SEE ALSO:

   Map Custom Fields of Account Product Forecast and Account Product Period Forecast

Build Formulas to Calculate Forecast

Use the Formula Builder on the Account Forecasting page in Setup to create formulas for forecast calculations. You can define your own formulas for quantity and revenue based on sales agreements, orders, opportunities, and account metrics.

📝 **Note:** There's a newer version of forecasting available called Advanced Account Forecasting. To learn about how the features are different, review this comparison. For new implementations, use Advanced Account Forecasting. For existing implementations, plan your migration.

You can create complex and sophisticated formulas in the Formula Builder for your unique requirements.. At least one formula for quantity, or revenue is required to cover all periods. If you create formulas for both quantity and revenue for even one period, follow the same pattern for all periods.

1. In Setup, search for `Account Forecasting` in the Quick Find box.

2. In Feature Settings, under Manufacturing, select Account Forecasting.

3. In the Forecast Formula Builder section, click Add Formula.

4. Select Type as Quantity or Revenue.

    For a particular period, if you only create a formula of only one type, the formula for the other type is defaulted to zero.

5. To create a formula, use fields, functions, and operators. Pick a field, an operator, and a function in any combination to create a formula in the Compose Formula text box.

6. Enter the start and end period in the Effective Period Range section. For example, if the formula is applicable for the first three periods, enter 1 as the start period, and 3 as the end period.
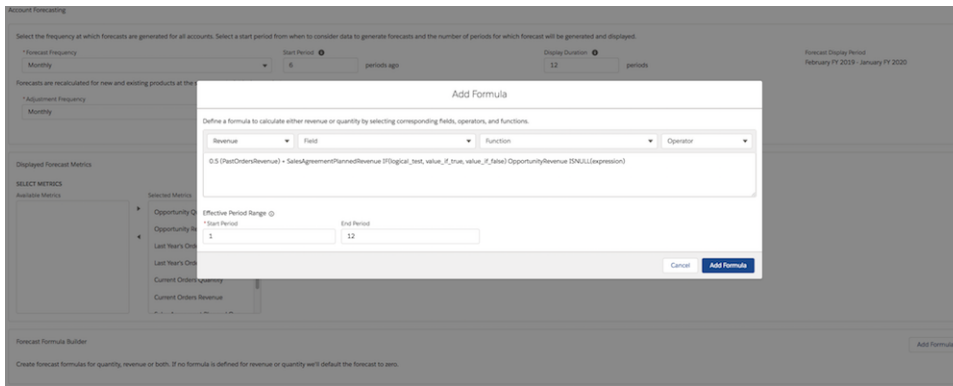
7. Click **Add Formula**.

    Based on the forecast display duration, you can create either a single formula for all periods, or multiple formulas for different period ranges. If the forecast display period is 12 months, you can create up to 12 formulas.

SEE ALSO:

Configure Forecast Generation and Display Settings

Setup Email Notifications for Account Forecasts

Set up contact information to send notifications along with suggested next steps in case automated processes fail.

> 📝 **Note:** There's a newer version of forecasting available called Advanced Account Forecasting. To learn about how the features are different, review this comparison. For new implementations, use Advanced Account Forecasting. For existing implementations, plan your migration.

In case of any forecast setting modifications, depending on the change, forecast is either automatically regenerated or recalculated for all accounts. An email with details of the failed automated process and suggested next actions is sent to the primary and secondary contacts that you provide. Emails are sent in case any of the following processes fail:

- If forecast formulas are modified, forecast is recalculated for all current and future periods.

- If forecast display settings are modified, all active forecast records are expired and replaced with new regenerated records..

1. In Setup, search for `Account Forecasting` in the Quick Find box.

2. In Feature Settings, under Manufacturing, select Account Forecasting.

3. In the Email Notifications section, add the email addresses of a primary contact and a secondary contact if required..

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions.

USER PERMISSIONS

To modify email addresses:
- Customize Application

Notifications for Account Forecast Operations

When forecast operations, like forecast generation, complete or fail, admins and account managers are notified via in-app notifications, email, or both.

Based on the notification, the user can get details around the status of the process, and then rerun the process or contact their admin. If there's a failure, email notifications that admins receive also include suggested next actions. Here are details about the operations that trigger notifications.

Forecast Operation	When Are Notifications Sent?	Failure Details	Next Steps
Generate Account Forecasts	When an account's forecast is created for the first time through an asynchronous job.	The generation process can fail completely or with partially generated periods. Here are some possible reasons for failure. • Errors in database triggers or custom validations are encountered. • You exceed the data limits for account forecast generation. • The status of the Account Forecast record isn't set to Active. • An End Date is specified for the Account Forecast record. • An active Account Forecast record exists for the account.	The admin can generate forecasts for the failed accounts again or ensure that there are no custom validations or triggers in place that prevent the completion of the process. If the process failed due to data limits, request additional capacity, or delete records as required.
Recalculate Account Forecasts	When the recalculation process is triggered for all accounts in the org by the admin, or for each account by the account manager.	The recalculation process can fail completely or with partially created records. Here are some possible reasons for failure. • Errors in database triggers or custom	The admin can recalculate all forecasts again, or ensure that there are no custom validations or triggers in place that prevent the completion of the process. If the process failed due to data limits, request

Forecast Operation	When Are Notifications Sent?	Failure Details	Next Steps
		validations are encountered. • You exceed the data limits for Account Product Period Forecast records. • You exceed the data limits for Number of Account Forecast Recalculations.	additional capacity, or delete records as required. The account manager can also recalculate forecasts for their own accounts.
Rollover Account Forecasts	At the start of each period. Keep in mind that when the first period expires, a new period is added to the forecast display.	The rollover process can fail to create forecasts for the new period or to expire the forecasts for the first period. Here are some possible reasons for failure. • Errors in database triggers or custom validations are encountered on these objects and records. • Account Forecast • Account Product Forecast • Account Product Period Forecast	The admin or the account manger can manually recalculate forecasts for the impacted accounts during the next adjustment period. The admin can ensure that there are no custom validations or triggers in place that prevent the completion of the process.
Regenerate All Account Forecasts	When the forecast display configurations are changed in Setup. Keep in mind that configuration changes expire all existing Account Forecast records and generates new records to replace them.	The regeneration process can fail completely or with partially created records. Here are some possible reasons for failure. • Errors in database triggers or custom validations on the Account Forecast or Account Period Forecast Metric objects are encountered. • You exceed the data limits for Account Product Period Forecast records. • You exceed the data limits for Number of Account Forecast Regenerations.	The admin can ensure that there are no custom validations or triggers in place that prevent the completion of the process. If the process failed due to data limits, request additional capacity, or delete records as required. The account manager can try generating the account forecast by entering growth metrics for the account during the next adjustment period.

View and Maintain Forecasts

Get accurate forecasts for your accounts for new and existing products. If a product is tracked through any of your associated orders, opportunities, and sales agreements, forecast is calculated for it. Based on the unique formulas your admin creates, you can view quantity and revenue forecast numbers all consolidated in the Forecast tab of your account's record. During each adjustment period, you can also recalculate forecasts based on the most current account and market growth metrics. Your peers and executives can collaboratively edit the forecast numbers to share insights. You can focus on high-performing products, discover possibilities of sale for new products, and also plan your sales and operations for the upcoming month or quarter.

> **Note:** There's a newer version of forecasting available called Advanced Account Forecasting. Ask your admin about migrating. To learn more, see Maintain Holistic Account Forecasts.

> **Note:** To view account forecasts, a user must be assigned a profile with the View Setup and Configuration administrative permission.

Generate Forecasts for the First Time

When Account Forecasting is enabled in Salesforce, you can generate forecasts for your account and provide growth metrics to generate forecasts.

Switch Metrics View in Account Forecasts

In Account Forecasts, you can view the different quantity and revenue metrics in separate views.

Recalculate Forecast in a Single Click

Recalculate forecasts for your account in a single click. During the adjustment period in your Salesforce org, you can recalculate forecasts to view the latest values after multiple users edit the values.

Update Multiple Values of Account Forecasts

You can update multiple values of a single metric of an account forecast at a time.

Add Products to an Account Forecast

You can add new products to an account forecast, even outside the adjustment period. Account forecast is automatically recalculated to reflect the forecast metrics of all the periods for the new products.

Filter Account Forecasts by Products

You can filter account forecasts by products.

Filter Account Forecasts by Time Period

For a more detailed view, you can filter account forecasts by time period.

Track Adjustments to Forecasts

During the adjustment period, multiple users can collaborate on your forecasts to make adjustments. In addition to the metrics provided by default, you can edit the values of the custom metrics too. It's critical for you to track the edits for each cell and reset the value whenever required.

Generate Forecasts for the First Time

When Account Forecasting is enabled in Salesforce, you can generate forecasts for your account and provide growth metrics to generate forecasts.

> **Note:** There's a newer version of forecasting available called Advanced Account Forecasting. Ask your admin about migrating. To learn more, see Maintain Holistic Account Forecasts.

Before you generate forecast, make sure that you have at least one of the following associated with your account:If there are no related objects, the forecast values are zero because there are any products to generate forecast for. You can add new products to an account forecast, even outside the adjustment period.

- Orders
- Opportunities
- Sales Agreements

In an ever-changing business, you want to forecast based on the most current values for account and market growth. So, when you generate forecasts for the first time, you can provide the account growth percentage and market growth percentage for the upcoming month or quarter.

1. On an account's record, click the **Forecast** tab.

2. Enter a percentage value at which you expect your account to grow for the upcoming period. The duration of the period depends on whether the forecast frequency is monthly or quarterly.

3. Enter a percentage value at which you expect the market for your products to grow for the upcoming period. The duration of the period depends on whether the forecast frequency is monthly or quarterly.

4. Click **Generate Forecast**.

   The forecast is generated in the account's currency. Depending on the volume of data to be generated, you may have to wait for some time before you see the forecasts for the first time. An in-app notification is sent to you when the forecast is ready. To view the results on the Forecast tab, refresh the page.

SEE ALSO:

Configure Account Forecasts

Switch Metrics View in Account Forecasts

In Account Forecasts, you can view the different quantity and revenue metrics in separate views.

> **Note:** There's a newer version of forecasting available called Advanced Account Forecasting. Ask your admin about migrating. To learn more, see Maintain Holistic Account Forecasts.

To switch the metrics view, click the view name.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions.

USER PERMISSIONS

To generate forecast
- Owner of the account record, read, and edit permissions.

USER PERMISSIONS

To switch views
- Read, Edit permissions on Account Forecasts
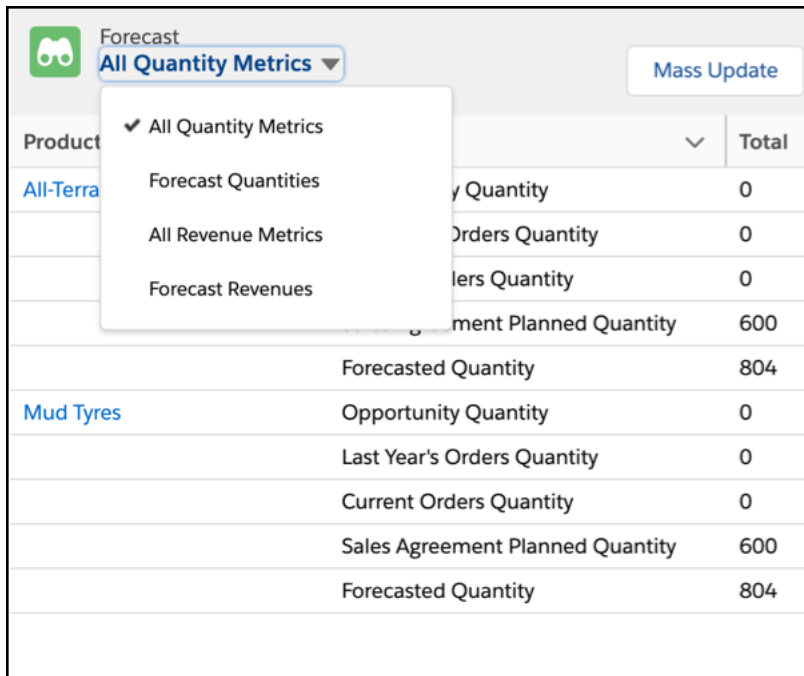
Table 2: Metrics Views

View	Description
All Quantity Metrics	Shows quantity metrics for opportunities, orders, sales agreements, and forecast for all products across all periods.
Forecast Quantities	Shows only the forecast quantities for all products across all periods.
All Revenue Metrics	Shows revenue metrics for opportunities, orders, sales agreements, and forecast for all products.
Forecast Revenues	Shows only the forecast revenues for all products across all periods.

Recalculate Forecast in a Single Click

Recalculate forecasts for your account in a single click. During the adjustment period in your Salesforce org, you can recalculate forecasts to view the latest values after multiple users edit the values.

> **Note:** There's a newer version of forecasting available called Advanced Account Forecasting. Ask your admin about migrating. To learn more, see Maintain Holistic Account Forecasts.

Forecasts are recalculated when you edit the growth metrics, or when you choose to only recalculate based on existing growth metrics.

1. Open an account's record and navigate to the Forecast tab.

2. Click **Show Growth** or **Recalculate**.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions.

USER PERMISSIONS

To recalculate forecast
- Read, Edit permissions on Account Forecasts

3. If you clicked Show Growth, you can edit the account and market growth percentage values, and click **Apply**. If you clicked Recalculate, the process is immediately triggered with the existing metrics.

> **Note:** If an account forecast is being recalculated and you click **Recalculate**, it will only be recalculated after the in-progress recalculation is completed.

The recalculation process derives quantities and revenues from orders, opportunities, and sales agreements. It applies the forecast formula and the updated growth metrics from the last recalculation date and updates the forecast.

You receive an in-app notification when the process is complete. To view the latest values, refresh the record.

Update Multiple Values of Account Forecasts

You can update multiple values of a single metric of an account forecast at a time.

> **Note:** There's a newer version of forecasting available called Advanced Account Forecasting. Ask your admin about migrating. To learn more, see Maintain Holistic Account Forecasts.

1. In the Forecast tab of an account's record page, click **Mass Update** .

2. Select the products. You can select multiple products at a time.

   You can update the values of all products or up to 350 products for all periods or multiple periods at once.

3. Select the periods. You can select multiple periods at a time.

4. Select the metric for which you want to change the values.

5. Select an action:

   a. Increase By

   b. Decrease By

   c. Replace With

6. Enter a value for the selected action and save your changes. You can change the value into a percentage by selecting **Use as percentage**.

   > **Note:**
   > - You can update multiple values of a metric in account forecasts only during the adjustment period.
   > - You can't update values of account forecast when recalculation is in progress.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions.

USER PERMISSIONS

To modify account forecast
- Read, Edit permissions on Account Forecasts

You receive an in-app notification when the process is complete. You can see ⓘ in every updated cell. This icon is an indicator that the forecast metric value in that cell has been modified.

Add Products to an Account Forecast

You can add new products to an account forecast, even outside the adjustment period. Account forecast is automatically recalculated to reflect the forecast metrics of all the periods for the new products.

> 📝 **Note:** There's a newer version of forecasting available called Advanced Account Forecasting. Ask your admin about migrating. To learn more, see Maintain Holistic Account Forecasts.

1. In an account's record page, click **Add Products** on the Forecast tab.

2. Select the products to be added and save your changes.

> 📝 **Note:** You can add a maximum of 50 products to an account forecast at a time.

Filter Account Forecasts by Products

You can filter account forecasts by products.

> 📝 **Note:** There's a newer version of forecasting available called Advanced Account Forecasting. Ask your admin about migrating. To learn more, see Maintain Holistic Account Forecasts.

1.
   In the Forecast tab of an account's record page, click ▼.

2. Search for the products you want to filter and apply the filter.

   You can also filter time periods along with products.

Filter Account Forecasts by Time Period

For a more detailed view, you can filter account forecasts by time period.

> 📝 **Note:** There's a newer version of forecasting available called Advanced Account Forecasting. Ask your admin about migrating. To learn more, see Maintain Holistic Account Forecasts.

1.
   From the Forecast tab on an account's record page, click ▼.

2. Select one of these options in the Time Period section, and apply the filter.

Option	Description
Current Periods	Displays the forecast for the current month and seven months in the future.
Range	Displays the forecast for a specified range.
Set Periods	Displays the forecast for up to eight selected periods.

3. To apply the filter to all account forecasts, select **Apply period filter to account forecasts**.

> 📝 **Note:** You can save a filter with up to eight periods for an account.

You can also filter by product and time period.

Track Adjustments to Forecasts

During the adjustment period, multiple users can collaborate on your forecasts to make adjustments. In addition to the metrics provided by default, you can edit the values of the custom metrics too. It's critical for you to track the edits for each cell and reset the value whenever required.

> 📝 **Note:** There's a newer version of forecasting available called Advanced Account Forecasting. Ask your admin about migrating. To learn more, see Maintain Holistic Account Forecasts.

1. On an account's record, navigate to the Forecast tab.

2. Click ⓘ in a cell.

The icon is an indicator that the forecast value in that cell is modified. In the popover, you can view the last auto-calculated forecast value and the last three manual edits, along with the User ID and adjustment note for each edit.

3. To reject the manual edits and accept the auto-calculated forecast value, click **Reset**.

SEE ALSO:

Configure Account Forecasts

Considerations for Account Forecasting

Review these considerations before setting up and using Account Forecasting in Manufacturing Cloud.

- Account forecasts are only supported for standard fiscal year and not for custom fiscal year.

- Sales agreements for product categories aren't considered while generating account-based forecasts.

- When you click Show All Periods for an Account Forecast record, you can see all past periods, but you can't edit the values.

- You can't mass update custom metrics of account forecasts.

- After you generate the forecast for an account, we recommend that you don't move past orders, past opportunities, and past sales agreements to future periods. If you move them to future periods, recalculation or rollover of the account forecast will cause the product quantity to reflect twice (in the past and future periods). For example, you have an opportunity in July with a product quantity as 10 and you change the period to September. On recalculation, the product quantity is reflected in both the past and future periods.

- The maximum limit defined for the Account Product Period Forecast object records is 9 million. If the Account Product Period Forecast Record limit in your org is reached, new products aren't added when recalculating a single account forecast or recalculating all account forecasts. In addition, you can't add new products to forecasts.

- Enter the validation rule for Account Growth Percentage and Market Growth Percentage fields as a percentage. For example, to restrict users from specifying a value greater than 20 in the Account Growth Percentage field, enter the validation rule for this field to be greater than 0.2.

- When list views are selected for account forecasts, account managers can generate forecasts only if either **All users can see this list view** or **Share list view with groups of users** is selected for the list views.

- If the number of display periods is more than 8, you can experience a delay in generation and display of account forecast. After multiple manual adjustments are made on a single page of account forecast, the saving of values and recalculation can take some time.

- We recommend not changing the forecast generation and display settings when the account forecast is being regenerated. Account forecast regeneration process is restarted when you change the forecast generation and display settings. The regeneration process can be time-consuming if your org has many accounts. Before making any changes, make sure to check your in-app notifications for any account forecast regeneration in-progress.

- The Account Product Period Forecasting object fields are of type double Number (18,0) with no precision defined at the API level. The data display is up to 2 decimal places as defined by the platform at the UI level.

- After rollover or recalculation of account forecasts at the end of a month, the forecasts for some accounts can show the same period multiple times. As a workaround, regenerate the forecasts for the affected accounts.

- If you expire an Account Forecast record, the associated Account Product Period Forecast records don't become inactive. To get a list of all active Account Product Period Forecast records, make sure that you get only the Account Product Period Forecast records that are linked to an Account Forecast record with Active status.

- Account forecasts are regenerated when you change the generation and display settings. If you regenerate account forecasts, the forecast data for manually added products and any adjustments are lost. To ensure that the forecast data for manually added products is included, create an opportunity, order, or sales agreement for those products. Alternatively, manually add the products and adjustments again.

- We recommend not changing the API names of custom fields in use in custom metrics in the Account Product Forecast and Account Product Period Forecast objects. Remove the mapping between the custom fields before changing their API names.

- Any custom validation rules and triggers added on your account forecasting objects can interfere with the account forecast generation process. If the forecast generation for your accounts fails, disable the custom rules and triggers and then try generating forecasts.

- If you change your personal language or your org's standard language, then in the forecasts table, these column headers are changed to the new language: Product Name, Metric, and Total. The standard metric names are changed to the new language, but the custom metric names won't be changed to the new language. For existing forecasts, the forecast period names won't be changed to the new language. If you generate forecasts after changing the language, then the forecast period names will be in the new language. The name of a product shown in the forecasts table is determined by the Name field in that product's record.

SEE ALSO:

Considerations for Manufacturing Cloud

Forecast Based on a Customer's Forecast with Program Based Business

Manufacturing suppliers across industries work closely with their customers to supply the products and components needed to manufacture equipment. In order to do this successfully, suppliers need to consider their customers' forecasts in order to determine their own. Program based business gives manufacturing suppliers complete visibility into their book of business, by using a program-based model to gain deep insights into their customers' forecasts.

With Program Based Business, program managers can manage the end-to-end lifecycle of a program where they derive forecasts based on their customers' forecasts, transform these forecasts into business opportunities, and convert those opportunities into run-rate business. Program based business is common across multiple industries such as process, aerospace, defense, automotive, engineer-to-order, and make-to-order environments.

Watch this video to understand the capabilities of Program Based Business.

🎥 Watch a video

If you can't watch the video in full screen, open the video on a new tab: ▶ Manage Your Manufacturing Programs.

Learn About Program Based Business

Learn about the key terms, key features, and out-of-the-box forecast fact objects included with Program Based Business.

Set Up and Configure Program Based Business

These high-level steps define the admin workflow for Program Based Business.

Create Programs and Derive Forecasts from Customers' Forecasts

These high-level steps define the program manager workflow with Program Based Business.

Considerations for Program Based Business

Review these considerations before you start using Program Based Business.

SEE ALSO:

Manage Your Program Based Business

Manufacturing Cloud Developer Guide

Learn About Program Based Business

Learn about the key terms, key features, and out-of-the-box forecast fact objects included with Program Based Business.

Key Features of Program Based Business

Program Based Business with Manufacturing Cloud is a comprehensive solution that uses advanced account forecasting capabilities to generate accurate forecasts for your products based on your customers' programs and resulting forecasts.

Program Based Business Terminology

Here's a comprehensive list of key terms and concepts for Program Based Business.

Forecast Fact Objects with Program Based Business

These predefined forecast fact objects are available with Program Based Business.

Program Based Business Workflow

Understand the high-level steps for setting up and using Program Based Business.

Key Features of Program Based Business

Program Based Business with Manufacturing Cloud is a comprehensive solution that uses advanced account forecasting capabilities to generate accurate forecasts for your products based on your customers' programs and resulting forecasts.

You can then transform your product forecasts into business opportunities based on profitability analysis, and ultimately convert those opportunities into run-rate business. For example, a supplier for headlights for an Original Equipment Manufacturer (OEM), such as a car manufacturer, can derive forecasts based on their OEM's forecasts.

Program Based Business helps you accomplish these business tasks:

- Define your products and your customers' products, and create relationships between them.
- Create forecast sets for program, program variants, and components.

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- Create templates with forecast sets that define the structure of your program forecasts.

- Define manufacturing programs based on templates.

- Import external forecast data from CSV files into Program Based Business objects.

- Generate component forecasts using Data Processing Engines.

- Make adjustments to component forecasts.

- Perform business transformations such as converting component forecasts to opportunities, quotes to sales agreement, and so on. To learn more, see Transformations.

Program Based Business Terminology

Here's a comprehensive list of key terms and concepts for Program Based Business.

Forecast Dimensions

Dimensions define the structure of forecasts. For example, you can categorize forecasts by business unit, product, and production location. You can relate up to 6 dimensions to a forecast set. For a list of predefined dimensions included with the out-of-box forecast fact objects, see Forecast Fact Objects with Program Based Business.

Forecast Fact Objects

Forecast fact objects store the actual forecast data, such as the forecasted revenue, the product quantity, and the total cost records. Program Based Business comes with these out-of-the-box forecast fact objects:

- Manufacturing Program Forecast Fact

- Manufacturing Program Variant Forecast Fact

- Manufacturing Program Component Forecast Fact

Forecast Sets

Forecast Sets are the primary building blocks required to generate holistic forecasts. Forecast sets contain the necessary dimensions, measures, and other configuration information to generate manufacturing program, manufacturing program variant, or manufacturing program component forecasts. For example, if a component supplier wants to forecast the demand for components of different customers, the supplier can create a separate forecast set for each customer. Each set can be configured based on the unique component requirements of the customer.

Manufacturing Program

A manufacturing program is a set of related measures that provides a long-term view of various business opportunities for the products manufactured by manufacturing suppliers. For example, as a supplier of tires to Tesla, Continental Tires can create a program for their upcoming concept vehicle, that's valid from January 1, 2022 to December 1, 2024. A manufacturing program includes the manufacturing program, manufacturing program variant, and manufacturing program component forecasts.

Measures

Measures provide a complete view of the forecasts for your business, in terms of both quantity and revenue. For example, measures can be gross margins, forecast revenue, and forecasted quantity. You define measures in the context of forecast fact objects. For a list of the predefined measures included with the out-of-box forecast fact objects, see Forecast Fact Objects with Program Based Business.

Period Groups

Period groups contain details of periods of time for which forecasts are generated. Generate forecasts for past or future periods by specifying the start period. Forecast periods can be of month, quarter, or year type. You can also define the number of forecast periods to show.

Program Templates
Define the structure of your manufacturing program by creating a Program Template. Your program managers can then easily set up customer-specific programs using these templates. For example, a supplier can create separate templates for customers from different industries, such as hospitality, aerospace, and construction.

SEE ALSO:

Forecast Fact Objects with Program Based Business

These predefined forecast fact objects are available with Program Based Business.

Fact Object	Description	Predefined Dimensions	Predefined Measures
Manufacturing Program Forecast Fact	Stores information about the generated manufacturing program forecast records.	Production Location: Production location of the customer.	Market Share Percent: A percentage that represents the market share of the total number of product units. For example, if an OEM is planning to manufacture 10,000 cars of the ABC model in December 2021 and 25% will be manufactured at plant XYZ, 25% is the market share.
		Period: Calendar period associated with the manufacturing program forecast fact record. Period can be of type monthly, quarterly, or yearly.	Expected Revenue Per Unit: Expected revenue per unit of the product.
			Forecasted Revenue: Forecasted revenue of the manufacturing program, calculated by multiplying the forecasted quantity with the market share percent.
			Forecasted Quantity: Forecasted quantity of the product associated with the manufacturing program.

Fact Object	Description	Predefined Dimensions	Predefined Measures
			Previous Period Product Quantity: Product quantity in the previous period.
			Adjusted Forecasted Quantity: Adjusted value of the forecasted quantity.
			Adjusted Forecasted Revenue: Adjusted value of the forecasted revenue.
			Product Quantity: Total number of units of the product that is manufactured as part of the program.
Manufacturing Program Variant Forecast Fact	Stores information about the generated manufacturing program product variant forecast records.	Production Location: Production location of the customer.	Market Share Percent: Market share of the total number of variant product units in percent.
		Production Model: Model associated with the manufacturing program variant forecast fact record.	Forecasted Quantity: Forecasted quantity of the product variant.
		Product Variant: Product variant associated with the manufacturing program product variant forecast fact record. A variant is the same product with a different option. For example, a car model can be available in multiple colors. Each color of the model will be its variant.	Adjusted Forecasted Quantity: Adjusted value of the forecasted quantity.
		Calendar Period: Calendar period associated with the manufacturing program product variant forecast fact record.	
Manufacturing Program Component Forecast Fact	Stores information about the generated manufacturing program component forecast records.	Production Location: Production location of the customer.	Forecasted Quantity: Forecasted quantity of the product variant component.
		Product Variant: Product variant associated with the manufacturing program product variant forecast fact record.	Forecasted Revenue: Forecasted revenue from the product variant component.

Fact Object	Description	Predefined Dimensions	Predefined Measures
		Product Component: Component of the product variant that's associated with the manufacturing program product variant component forecast fact record.	Total Fixed Cost: Total fixed cost of a unit of the product variant component.
		Period: Period associated with the manufacturing program product variant component forecast fact record.	Variable Cost Per Unit: Variable cost of a unit of the product variant component.
			Selling Price Per Unit: Selling price of a unit of the product variant component.
			Total Cost: Total cost of a unit of the product variant component,calculated by adding the total fixed cost per unit, variable cost per unit, and the selling price per unit.
			Adjusted Forecasted Quantity: Adjusted value of the forecasted quantity.
			Adjusted Forecasted Revenue: Adjusted value of the forecasted revenue.
			Expected Profit Percent: Expected profit from the product variant component in percent.

Program Based Business Workflow

Understand the high-level steps for setting up and using Program Based Business.
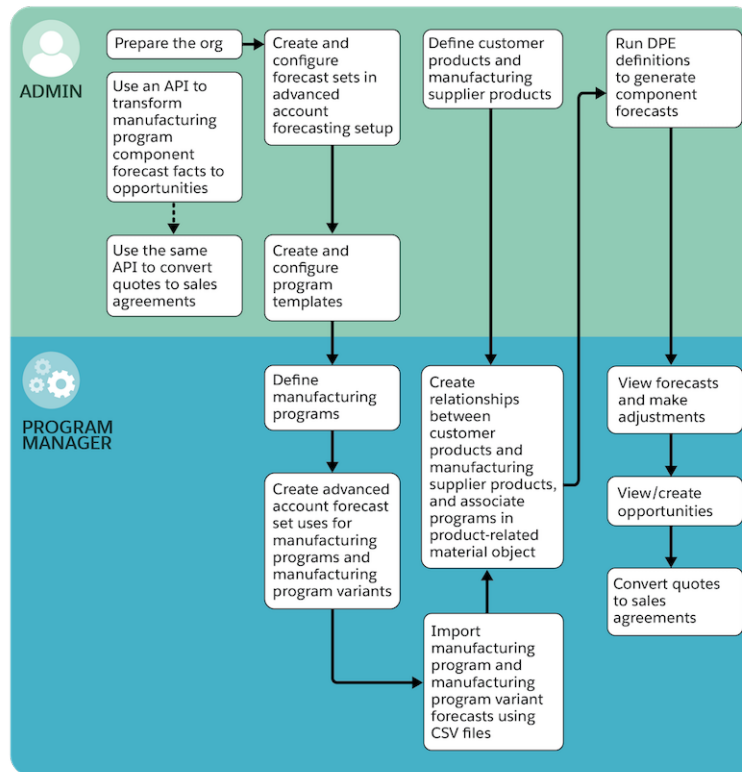
1. **Prepare the Org**

   Enable Program Based Business, Advanced Account Forecasting, and Data Pipelines in Setup. Assign permission sets and object access to user profiles. See Set Up the Basics for Program Based Business.

2. **Create Forecast Sets**

   Define forecast sets with configuration details for the manufacturing program, the program variants, and related components. See Create a Forecast Set for Program Based Business, Create a Period Group for Program Based Business, and Create a Dimension for Program Based Business.

3. **Create Program Templates**

   Create program templates to define a structure for your manufacturing programs. Then your program managers can quickly and easily set up customer-specific programs using those templates. You define the template sections with associated forecast sets that contain configuration details for the manufacturing program, the program variants, and related components. Also map the forecast fact object that stores the data for the program, variants, or components to the respective forecast sets. For example, you can create a template called Auto Program Template to generate forecasts for parts and accessories associated with a vehicle manufacturer program. See Create a Program Template.

4. **Define Manufacturing Programs**

   Your program managers create customer-specific programs using program templates. See Create a Manufacturing Program.

5. **Create Advanced Account Forecast Set Uses**

   Advanced Account Forecast Set Use object defines the relationship between an advanced account forecast set and another object (for example, a manufacturing program) whose record serves as the context for generating forecasts. Create two Advanced Account Forecast Uses — one for the manufacturing program and another one for the manufacturing program variant. See Create an Advanced Forecast Set Use.

6. Import Data Using CSV Files

Program managers import data from separate CSV files for the manufacturing program and the manufacturing program variant. See Create a .CSV File and Import Data from a .CSV File.

7. Define Customer Products and Manufacturing Supplier Products

Define your customers' products and the manufacturing supplier products. Use the Product Purpose field to differentiate between your products and theirs. For example, select product purpose as Plan for customer products and product variants, and Sell for product components. See Add Customer and Supplier Products.

8. Create Relationships between Customer and Supplier Products

Associate your products with your customer's products by using the Product Related Material object. See Create Relationships Between Customer Products and Manufacturing Supplier Products.

9. Generate Component Forecasts with Data Processing Engines

Run Data Processing Engine templates for the component forecast calculations. See Calculate Component Forecasts with Data Processing Engine Templates for Program Based Business and Generate Component Forecasts Using Flows.

10. Transform Manufacturing Program Forecast Facts to Opportunities or Quotes to Sales Agreements

Use the business transformation APIs with Program Based Business to convert the forecast fact records into opportunities or quotes into opportunities. Define mappings between the fact and opportunity objects or the quote and sales agreement objects using the ObjectHierarchyRelationship metadata API. See Transform Forecast Data and Transformations.

Set Up and Configure Program Based Business

These high-level steps define the admin workflow for Program Based Business.

Watch this video to understand how to set up Program Based Business.

🎥 Watch a video

If you can't watch the video in full screen, open the video on a new tab: ▶ Set Up Program-Based Business in Manufacturing Cloud.

Review the admin workflow for program based business.
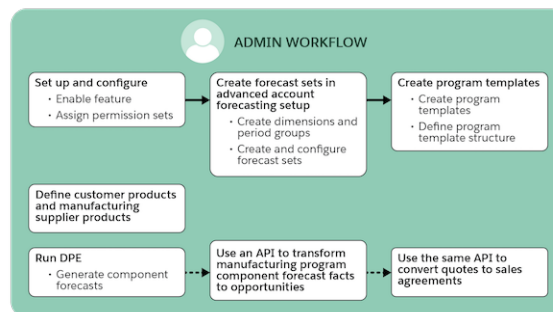
1. Enable Program Based Business and supporting features. See Enable Program Based Business and Supporting Features.

2. Assign permission sets. See Assign User Permissions.

3. Create dimensions and period groups. See Create a Dimension for Program Based Business and Create a Period Group for Program Based Business.

4. Create and configure forecast sets. See Create a Forecast Set for Program Based Business.

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5. Create program templates. See Create a Program Template.

6. Define customer products and manufacturing supplier products. See Add Customer and Supplier Products.

7. Run Data Processing Engine definitions. See Calculate Component Forecasts with Data Processing Engine Templates for Program Based Business and Generate Component Forecasts Using Flows.

8. Transform forecast data to opportunities, and quotes to sales agreements. See Transform Forecast Data and Transformations.

Set Up the Basics for Program Based Business

Enable Program Based Business in your org and assign users the necessary permission sets.

1. Enable Program Based Business and Supporting Features

   To use the Program Based Business feature, enable Program Based Business for your org. Also enable Advanced Account Forecasting to create forecast sets, and Data Pipelines to use the Data Processing Engine templates to generate manufacturing program component forecasts.

2. Assign Permission Sets for Program Based Business

   Assign permission sets to user profiles based on their required level of access.

Enable Program Based Business and Supporting Features

To use the Program Based Business feature, enable Program Based Business for your org. Also enable Advanced Account Forecasting to create forecast sets, and Data Pipelines to use the Data Processing Engine templates to generate manufacturing program component forecasts.

1. From Setup, in the Quick Find box, enter `Manufacturing`, and then select **Advanced Account Forecasting**.
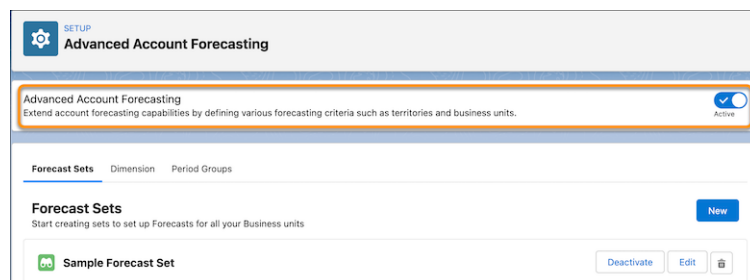
2. Enable **Advanced Account Forecasting**.

3. Enter `Data Pipelines` in the Quick Find box, and then select **Getting Started**.

4. Enable **Data Pipelines**.
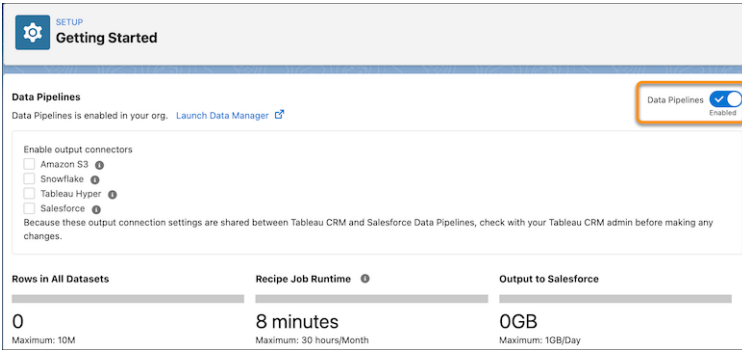
5. Enter `Program Based Business` in the Quick Find box, and then select **Program Based Business**.

6. Enable **Program Based Business**.
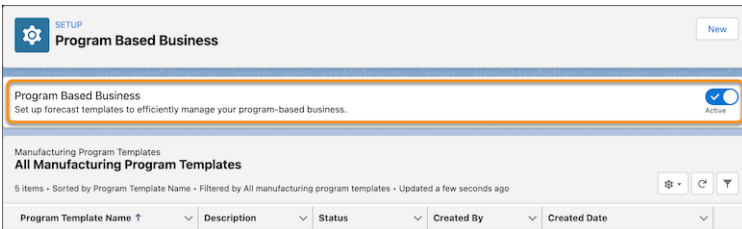
Assign Permission Sets for Program Based Business

Assign permission sets to user profiles based on their required level of access.

🛑 **Important:** Before you assign permission sets, ensure that Advanced Account Forecasting, Program Based Business, and Data Pipelines are enabled in your org.

1. From Setup, in the Quick Find box, enter `Users`, and then select **Users**.

2. Select a user and in the Permission Set Assignments section, click **Edit Assignments**.

3. Move the required permission sets to the Enabled Permission Sets list.

Permission Set	Who Needs It
Manufacturing Advanced Account Forecast	Users who create and manage forecast sets for program, program variant, and component forecasts.
Manufacturing Program Based Business	Users who create and manage program templates and manufacturing programs.
Data Pipelines Base User	Users who create, customize, run, and monitor the data processing engine definitions.
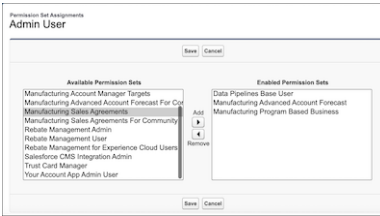
4. Save your work.

Configure Program Based Business

Ensure that your implementation of program based business meets the needs of your unique organization by configuring period groups, dimensions and forecast sets, and cloning the Data Processing Engine templates.

1. Create a Period Group for Program Based Business

   Before you create forecast sets for Program Based Business, create period groups for your forecasts. Period groups contain details of periods for which forecasts are generated. You can generate forecasts for past or future periods by specifying the start period. Forecast periods can be of month, quarter, or year type. You can also define the number of forecast periods that must be displayed at any given time.

2. Create a Dimension for Program Based Business

   Create forecast data for your components across multiple dimensions such as product location, production model, product variant, and product variant component.

3. Create a Forecast Set for Program Based Business

   Forecast Sets are the primary building blocks required to generate 360-degree forecasts. Forecast sets contain the necessary configuration information to generate manufacturing program forecasts. Create three separate forecast sets for your manufacturing program, manufacturing program variant, and manufacturing program component forecasts.

4. Create a Program Template

   Create program templates to define a structure for your manufacturing programs. Then your account managers can quickly and easily set up customer-specific programs using those templates. Define the template sections with associated forecast sets that contain configuration details for the manufacturing program, the program variants, and related components. Also map the forecast fact object that stores the data for the program, variants, or components to the respective forecast sets. For example, you can create a template called Auto Program Template to generate forecasts for parts and accessories associated with a vehicle manufacturer program.

Create a Period Group for Program Based Business

Before you create forecast sets for Program Based Business, create period groups for your forecasts. Period groups contain details of periods for which forecasts are generated. You can generate forecasts for past or future periods by specifying the start period. Forecast periods can be of month, quarter, or year type. You can also define the number of forecast periods that must be displayed at any given time.

> 📝 **Note:** Create three period groups, one for the manufacturing program forecasts, another for the manufacturing program variant forecasts, and a third for the manufacturing program component forecasts.

1. From Setup, in the Quick Find box, enter `Manufacturing` and then select **Advanced Account Forecasting**.

2. Navigate to the Period Groups tab.

3. Click **New**, and then specify these details.
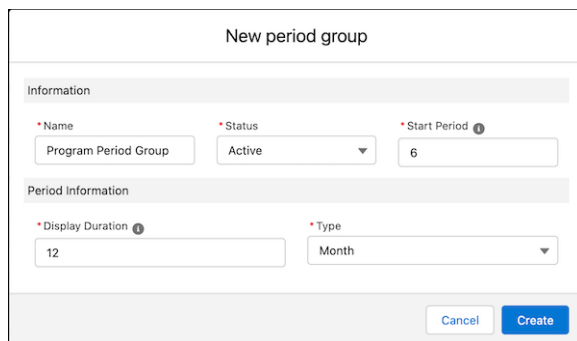
Field	Value
Name	Name of the period group. For example, Program Period Group.
Status	Status of the period group. Select Active or Inactive.
Start Period	Enter a number that indicates in which period to start generating forecasts. For example, to generate forecasts from six periods after the current period, enter 6. To generate forecasts from six periods before the current period, enter -6. To generate forecasts from the current period, enter 0.
Display Duration	Number of periods for which to generate and display account forecasts.
Type	Type of period. For example, Monthly, Quarterly, or Yearly.

New period group

Information

* Name
Program Period Group

* Status
Active

* Start Period
6

Period Information

* Display Duration
12

* Type
Month

Cancel   Create

4. Save your work.

Create a Dimension for Program Based Business

Create forecast data for your components across multiple dimensions such as product location, production model, product variant, and product variant component.

The Manufacturing Program Forecast Fact, Manufacturing Program Variant Forecast Fact, and Manufacturing Program Component Forecast Fact objects include predefined dimensions for your use. To associate a new dimension with a forecast set, first create the dimension and specify its source object.

1. From Setup, in the Quick Find box, enter `Manufacturing`, and then select **Advanced Account Forecasting**.

2. Navigate to the Dimensions tab.

3. Click **New**.

4. Specify a name and source object for the dimension. For example, create a dimension called Manufacturing Location with a source object such as Manufacturing Program Component Forecast Fact.

5. To create additional dimensions, repeat these steps.
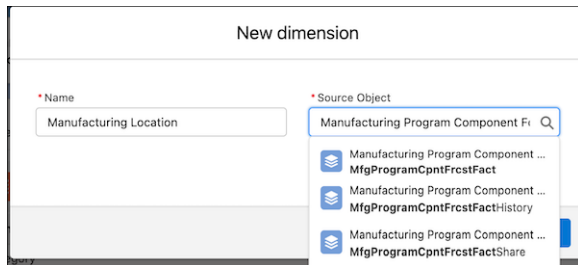
6. Save your work.

Create a Forecast Set for Program Based Business

Forecast Sets are the primary building blocks required to generate 360-degree forecasts. Forecast sets contain the necessary configuration information to generate manufacturing program forecasts. Create three separate forecast sets for your manufacturing program, manufacturing program variant, and manufacturing program component forecasts.

1. From Setup, in the Quick Find box, enter `Manufacturing`, and then select **Advanced Account Forecasting**.

2. Navigate to the Forecast Sets tab.

3. Click **New**, specify these details, and then save your work.

Field	Description
Name	Unique name of the forecast set. For example, Component Forecast Set.
Period Group	Period group associated with the forecast set. For more information on how to create a

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Field	Description
	period group, see Create a Period Group for Program Based Business.
Forecast Fact Object	Specify which forecast fact object to use to store forecast data for this forecast set. Program Based Business includes three out-of-the-box forecast fact objects: • Manufacturing Program Forecast Fact • Manufacturing Program Variant Forecast Fact • Manufacturing Program Component Forecast Fact For example, if you're creating a forecast set for component forecasts, select Manufacturing Program Component Forecast Fact.
Description	Description of the forecast set.

Important: Ensure that the period group type, and calculation and rollover frequencies, of the forecast set for manufacturing program, manufacturing program variant, and manufacturing program component forecasts are same.

Note:

• The Forecast Formula section in a Program Based Business specific forecast set has no significance and is not used in forecast calculations.

• A forecast set is created in an inactive state. After you define all the building blocks as described in Configure a Forecast Set for Program Based Business, you can activate the forecast set. You must deactivate a forecast set before making any changes to it.

1. [Configure a Forecast Set for Program Based Business](#)
   Define forecast fact object field mappings, forecast frequencies, and data processing engine definitions for the forecast set. Also define adjustment periods to provide different stakeholders an option to modify forecast data based on their insights into market conditions, growth in either a specific product or industry segment, and any other trends.

Configure a Forecast Set for Program Based Business

Define forecast fact object field mappings, forecast frequencies, and data processing engine definitions for the forecast set. Also define adjustment periods to provide different stakeholders an option to modify forecast data based on their insights into market conditions, growth in either a specific product or industry segment, and any other trends.

1. From Setup, in the Quick Find box, enter `Manufacturing`, and then select **Advanced Account Forecasting**.

2. Navigate to the Forecast Sets tab.

3. Click **Edit** next to your forecast set name.

4. Expand the Building Blocks section.

5. Enter forecast period and fact object details.

Field	Value
Period Group	Period group of the forecast set. For example, if you create a forecast set for program forecasts, select the period group that you created for program forecasts.
Forecast Fact Object	Forecast fact object of forecasts. For example, if want to create a forecast set for program forecasts, select Manufacturing Program Forecast Fact.

6. Enter forecast fact field mapping details.

Field	Value
Account	Name of the manufacturing program lookup field in the fact record.
Period	Name of the period lookup field in the fact record.
Forecast Quantity	Name of the forecast quantity field in the fact record.

Field	Value
Forecast Revenue	Name of the forecast revenue field in the fact record.
Forecast Status	Name of the status field in the fact record.
Forecast Set	Name of the account forecast set use lookup field in the fact record.

> **Note:** Before activating the forecast set, ensure that you specify the forecast fact field mappings.

7. Enter forecast frequency details.

Field	Value
Calculation Frequency	Frequency at which forecasts are calculated for the forecast set. Select either Monthly, Quarterly, or Yearly.
Rollover Frequency	Frequency at which forecasts for new periods are generated.

8. f you're creating a forecast set for component forecasts, select the Data Processing Engine definitions for generation, regeneration, rollover, and recalculation.

9. Expand the Forecast Dimensions section and enter details.

Field	Description
Name	Name of the dimension.

Field	Description
Forecast Fact Dimension Field	Name of the forecast fact dimension field in the associated forecast fact object.
Display Order	Position (from left to right) of this dimension as a column in the forecast table. Measure values are grouped by the first dimension, then by the next dimension, and so on. For example, when you enter 1 for the product dimension and 2 for the location dimension, measure values are grouped by product and then by location.

10. Enter the required details for these fields.

Field	Description
Name	Name of the dimension.
Forecast Fact Dimension Field	Name of the forecast fact dimension field in the associated forecast fact object. For more information on the dimensions associated with the out-of-the-box forecast fact objects, see Forecast Fact Objects with Program Based Business.
Display Order	Position (from left to right) of this dimension as a column in the forecast table. Measure values are grouped by dimensions. For example, when you enter 1 for the product dimension and 2 for the location dimension, measure values are grouped by product and then by location.

11. Expand the Forecast Measures section and enter details.

Field	Description
Name	Name of the measure. For example, Forecasted Revenue.
Forecast Fact Measure Field	Name of the forecast fact measure field in the associated forecast fact object. For more information on the measures associated

Field	Description
	with the out-of-the-box forecast fact objects, see Forecast Fact Objects with Program Based Business.
Measure Type	Type of measure. For example, Quantity.
Aggregation Type	Aggregation type to use for the measure. For example, Sum, Avg, and so on.
Calculation Method	Method to calculate the measure. Select from these values. • Batch Process: A batch process, such as Data Processing Engine definitions, to calculate measure values. • User-Editable: Users can edit forecast values. • Forecast Formula: Forecast values are calculated using the forecast formula.
Track Adjustments	This option is not available for Program Based Business forecast sets.

12. Specify the required details for these fields.

Field	Description
Name	Name of the measure. For example, Forecasted Revenue.
Forecast Fact Measure Field	Name of the forecast fact measure field in the associated forecast fact object.
Measure Type	Type of measure. For example, Quantity.
Aggregation Type	Aggregation type to use for the measure. For example, Sum, Avg, and so on.
Calculation Method	Method for calculating the measure. Options include: • Batch Process: A batch process, such as Data Processing Engine definitions, to calculate measure values. • User-Editable: Users can edit forecast values. • Forecast Formula: Forecast values are calculated using the forecast formula.
Track Adjustments	Indicates whether the adjustments made to the advanced account forecast values for this measure are tracked. This option is not available for Program Based Business forecast sets.

13. Expand the Forecast Adjustment Periods section and enter details.

Field	Description
User Profile	Profile of the user who makes the adjustment.
Frequency	Frequency at which you can make adjustments.
Period Start Day	Number of days from the beginning of the specified frequency during which you can adjust forecast values. For example, to start the adjustment period from the fifth day of the month or quarter, enter 5.
Duration Days	Number of days for which the adjustment period remains open. For example, to specify an adjustment duration of 10 days beginning on the provided period start day, enter 10.

Create a Program Template

Create program templates to define a structure for your manufacturing programs. Then your account managers can quickly and easily set up customer-specific programs using those templates. Define the template sections with associated forecast sets that contain configuration details for the manufacturing program, the program variants, and related components. Also map the forecast fact object that stores the data for the program, variants, or components to the respective forecast sets. For example, you can create a template called Auto Program Template to generate forecasts for parts and accessories associated with a vehicle manufacturer program.

1. From Setup, in the Quick Find box, enter `Program Based Business`, and then select **Program Based Business**.

2. Click **New**.

3. Specify these values:

Field	Description
Name	Unique name for the program template.
Status	Options include: • Active • Inactive • Draft

Field	Description
	A template is created in Draft status. To use the template to create programs, set the status to Active.
Description	Description for the program template.
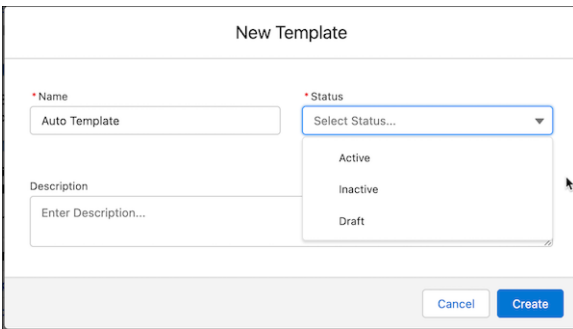
4. Save your work.

1. [Create a Template Section](#)

   Template sections define the structure of a program template. The associated forecast set contains configuration details for the manufacturing program, the program variants, and related components.

SEE ALSO:

   [Create a Manufacturing Program](#)

Create a Template Section

Template sections define the structure of a program template. The associated forecast set contains configuration details for the manufacturing program, the program variants, and related components.

Create sections for the program forecasts, program variant forecasts, and program component forecasts. You can only create a template section for a template in Draft or Inactive status.

1. From Setup, in the Quick Find box, enter `Program Based Business`, and then select **Program Based Business**.

2. Select a template, then click **New Section**.

3. Enter the required values for these fields.

Field	Description
Name	Unique name for the program template item.
Transformation Type	Type of transformation. Select ForecastSetRelation.

Field	Description
Display Order	Display order of the transformation in the manufacturing program template.
Transformation Basis	Forecast set that's used for the transformation.
Description	Description for the template item.

4. Save your work.

Add Customer and Supplier Products

Add your products and your customer's products. Program Managers can then create relationships between them using the Product Related Material object.

1. From the App Launcher, find and select **Products**.

2. Click **New**.

3. Specify these values:

Field	Description
Product Name	Name of the product.
Product Family	Product family to which the product belongs.
Product Code	Unique identifier for the product.
Active	Specify whether the product is active.
Product Purpose	Indicate the purpose of the product.
	• Sell: Select this option for your product.

Field	Description
	• Plan: Select this option for a customer product.
	• Purchase: Select this option for a product that you plan to purchase.
	Only products with the Sell product purpose are included in Data Processing Engine runs.
Description	Number of units of the component required per unit of the product.

4. Save your work.

Calculate Component Forecasts with Data Processing Engine Templates for Program Based Business

Program Based Business uses Data Processing Engines to generate component forecasts. You can customize jobs, generate or recalculate data, or schedule the Data Processing Engine job to run during rollover at the end of a period.

These data processing engine job templates are provided with Program Based Business.

Data Processing Engine Job	Purpose	Result
Generate Program Component Forecast	Generates component forecasts for a given manufacturing program.	-

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions.

USER PERMISSIONS

To create forecast sets:
• Manufacturing Advanced Account Forecast permission set

Data Processing Engine Job	Purpose	Result
Regenerate Program Component Forecast	Regenerates the component forecasts for a given manufacturing program. Use this job when you make any changes to the frequency, dimensions, or start period in the forecast set for component forecasts.	Expires the existing forecast data and then regenerates forecasts for the given manufacturing program.
Recalculate Program Component Forecast	Recalculates the component forecasts for a given manufacturing program. Use this job when you add or remove components, or make any changes to product related materials.	-
Rollover Program Component Forecast	Generates component forecasts for new periods during rollover for a given manufacturing program and then invalidates the forecast for the oldest period.	Generates component forecasts for new periods during rollover.

To use an out-of-the-box Data Processing Engine template:

1. Ensure that Data Pipelines is enabled. For information on how to enable Data Pipelines, see Enable Program Based Business and Supporting Features.

2. From Setup, in the Quick Find box, enter `Data Processing Engine`, and then select **Data Processing Engine**.
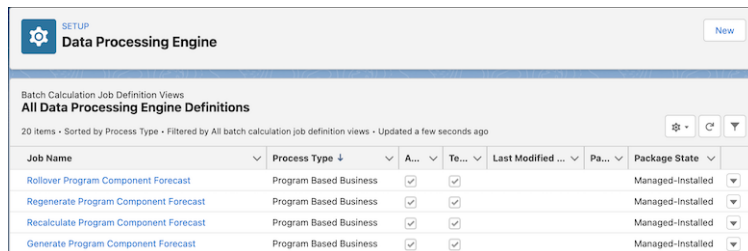
3. Open an out-of-the-box Data Processing Engine definition.

   Data Processing Engines with the Program Based Business process type can be used for generating manufacturing program component forecasts and are available for selection when generating component forecasts.
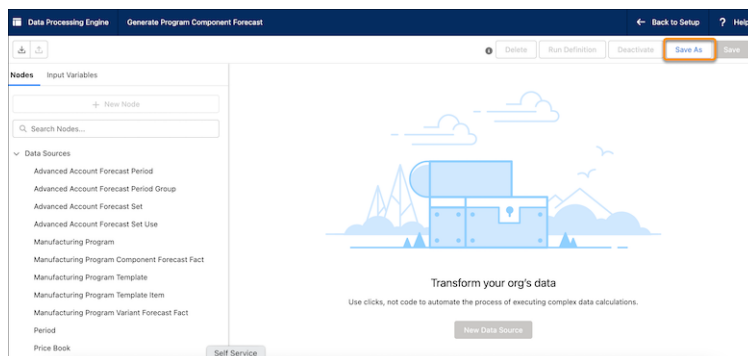
4. Click **Save As**.

5. Enter a name and description for the Data Processing Engine. Retain the same API name and process type, and then click **Activate**.
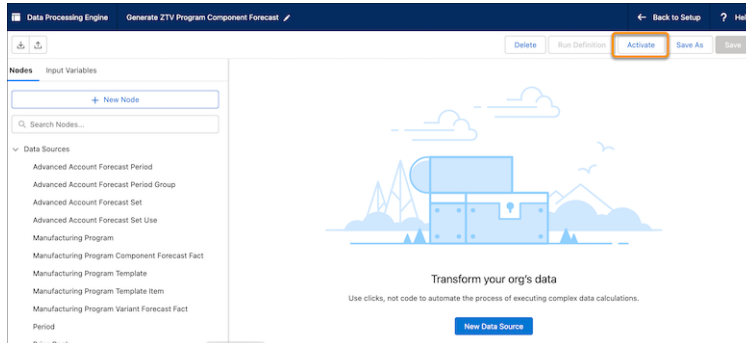
Make sure that the source objects used in the job are available in the org. Also, ensure that the required Setup objects are enabled. For example, from Setup in Order Settings, the Order object must be enabled. You must have read and create permissions on the objects.

The Data Processing Engine definition is now ready to be run by a custom flow.

> 🛑 Important:
>
> - When you run a Data Processing Engine definition, ensure that the parameters—Manufacturing Program Id, Program Component Template Item Name and Program Variant Template Item Name—are correctly mapped to the template associated with the manufacturing program. Incorrect mappings can lead to errors in the generated manufacturing program component forecasts.
>
> - The out-of-the-box Data Processing Engine templates for Program Based Business work only for manufacturing programs in Active status.
>
> - To calculate the forecasted revenue for components, ensure that the pricebook contains the prices of all the components that you plan to sell. The forecasted revenue for a component is calculated during a Data Processing Engine run by multiplying the price of the component with the forecasted quantity. The price of the component is derived from the pricebook for product components.

> 📝 Note: When you run a Data Processing Engine definition, the job status is shown as completed in Monitor Workflow Services, even when records fail due to batch job failures, database space constraints, or writeback issues. The failed records are shown on the Tasks tab for a job run. To view the details of failed records, use this request with the batch job ID using an API tool such as Postman.

```
/services/data/v53.0/jobs/ingest/<job ID>/failedResults/
```

Where, v53.0 is the API version.

Generate Component Forecasts Using Flows

You can orchestrate a flow using Flow Builder to run the Data Processing Engine jobs to calculate component forecasts.

Check out these resources to learn how to best use Flow Builder

Resource	Information Available
Flow Builder Tour	A topic that helps you get familiar with the Flow Builder's requirements and user interface.
Flow Concepts	Information about what a flow is made of and how it's different from workflow rules.
Build a Simple Flow	A Trailhead project that helps you use the Flow Builder.
Run Data Processing Engine Definitions	A task topic on how to run data processing engine definitions with flows.
Flow Best Practices	Information about how to improve your experience in building and managing flows.
Troubleshoot Flow Errors	Information about how to resolve issues with flows.

Transform Forecast Data

After you generate the manufacturing program component forecasts, your account managers can use the forecast data to create opportunities. Use the Transformations API with Program Based Business to convert the manufacturing program component forecast fact records to opportunities. You can also use the Transformations API to convert quotes to sales agreements.

To ensure that the transformation works correctly, define mappings between the fact and opportunity objects or the quote and sales agreement objects using the ObjectHierarchyRelationship metadata API.

For more information on the Transformations API, see Transformations.

> 📝 Note: The Transformations API can be used to convert both active and inactive fact records to opportunities. We recommend that you specify only active fact record IDs when using the API.

1. Create Object Hierarchy Relationship Mappings for Program Based Business Transformations
   Create a mapping definition record in the ObjectHierarchyRelationship object for the source to target mapping at each level in the hierarchy.

Create Object Hierarchy Relationship Mappings for Program Based Business Transformations

Create a mapping definition record in the ObjectHierarchyRelationship object for the source to target mapping at each level in the hierarchy.

For example, for converting fact to opportunity, create mappings for opportunity header, opportunity line item, and opportunity line item schedule. After you create the mappings, use an API tool, such as Postman, to deploy them.

1. Create a mapping file for some or all of these sources to target object field mappings depending on your business case.

   - Parent to Parent Mapping: To transform the header of the source object to the header of the target object. For example, Manufacturing Program Component Forecast Fact to Opportunity or Quote to Sales Agreement.

     MfgProgramCpntFrcstFact to Opportunity mapping

```xml
<?xml version="1.0" encoding="UTF-8"?>
                              <ObjectHierarchyRelationship
xmlns="http://soap.sforce.com/2006/04/metadata">
                              <parentObjectMapping>
                        <inputObject>MfgProgramCpntFrcstFact</inputObject>

                              <outputObject>Opportunity</outputObject>
                              </parentObjectMapping>
                              <outputPntRelationshipFieldName/>

<inputObjRecordsGrpFieldName>ManufacturingProgram</inputObjRecordsGrpFieldName>
                              <parentRecord/>
                              <mappingType>ParentToParent</mappingType>
                              <usageType>TransformationMapping</usageType>
                              </ObjectHierarchyRelationship>
```

Quote to SalesAgreement mapping

```xml
<?xml version="1.0" encoding="UTF-8"?>
                              <ObjectHierarchyRelationship
xmlns="http://soap.sforce.com/2006/04/metadata">
                              <parentObjectMapping>
                              <inputObject>Quote</inputObject>
                        <outputObject>SalesAgreement</outputObject>

                              <mappingFields>
                              <inputField>AccountId</inputField>
                              <outputField>AccountId</outputField>
                              </mappingFields>
                              <mappingFields>
                              <inputField>Name</inputField>
                              <outputField>Name</outputField>
                              </mappingFields>
                              <mappingFields>
```

```
                                                    <inputField>ExpirationDate</inputField>
                                                    <outputField>StartDate</outputField>
                                                    </mappingFields>
                                                    <mappingFields>
                                                    <inputField>Pricebook2Id</inputField>
                                                    <outputField>PricebookId</outputField>
                                                    </mappingFields>
                                                    </parentObjectMapping>
                                                    <outputPntRelationshipFieldName/>

<inputObjRecordsGrpFieldName>Account</inputObjRecordsGrpFieldName>
                                                    <parentRecord/>
                                                <mappingType>ParentToParent</mappingType>


<usageType>TransformationMapping</usageType>
                                                    </ObjectHierarchyRelationship>
```

- Parent to Child Mapping: To transform the header of the source object to the child in a target object. For example, Manufacturing Program Component Forecast Fact to Opportunity Line Item or Manufacturing Program Component Forecast Fact to Opportunity Line Item Schedule.

MfgProgramCpntFrcstFact to OpportunityLineItem mapping

```
<?xml version="1.0" encoding="UTF-8"?>
                                        <ObjectHierarchyRelationship
xmlns="http://soap.sforce.com/2006/04/metadata">
                                        <parentObjectMapping>
                                    <inputObject>MfgProgramCpntFrcstFact</inputObject>

                                        <outputObject>OpportunityLineItem</outputObject>

                                        <mappingFields>
                                        <inputField>SellingPricePerUnit</inputField>
                                        <outputField>UnitPrice</outputField>
                                        </mappingFields>
                                        </parentObjectMapping>

<outputPntRelationshipFieldName>Opportunity</outputPntRelationshipFieldName>

<inputObjRecordsGrpFieldName>ProductComponent</inputObjRecordsGrpFieldName>

<parentRecord>CmpForecastFactToOpportunity1</parentRecord>
                                        <mappingType>ParentToChild</mappingType>
                                        <usageType>TransformationMapping</usageType>
                                        </ObjectHierarchyRelationship>
```

MfgProgramCpntFrcstFact to OpportunityLineItemSchedule mapping

```
<?xml version="1.0" encoding="UTF-8"?>
                                        <ObjectHierarchyRelationship
xmlns="http://soap.sforce.com/2006/04/metadata">
                                        <parentObjectMapping>

<inputObject>MfgProgramCpntFrcstFact</inputObject>
```

```
<outputObject>OpportunityLineItemSchedule</outputObject>

                              <mappingFields>
                       <inputField>ForecastedRevenue</inputField>

                              <outputField>Revenue</outputField>
                              </mappingFields>

                              <mappingFields>
                       <inputField>ForecastedQuantity</inputField>

                              <outputField>Quantity</outputField>
                              </mappingFields>

                              </parentObjectMapping>

<outputPntRelationshipFieldName>OpportunityLineItem</outputPntRelationshipFieldName>


<parentRecord>CmpForecastFactToOpportunityItem1</parentRecord>
                              <mappingType>ParentToChild</mappingType>


<usageType>TransformationMapping</usageType>
                              </ObjectHierarchyRelationship>
```

Period to OpportunityLineItemSchedule Mappings

```
<?xml version="1.0" encoding="UTF-8"?>
                              <ObjectHierarchyRelationship
xmlns="http://soap.sforce.com/2006/04/metadata">
                              <parentObjectMapping>
                       <inputObject>Period</inputObject>

<outputObject>OpportunityLineItemSchedule</outputObject>
                              <mappingFields>
                       <inputField>startDate</inputField>


<outputField>ScheduleDate</outputField>
                              </mappingFields>
                              </parentObjectMapping>
                       <outputPntRelationshipFieldName/>

                              <inputObjRecordsGrpFieldName/>
<parentRecord>CmpForecastFactToOpportunityItemSchedule</parentRecord>
                              <mappingType>Support</mappingType>


<usageType>TransformationMapping</usageType>
```

```
<sourceReferenceRelaFieldName>Period</sourceReferenceRelaFieldName>
                                        </ObjectHierarchyRelationship>
```

- Child to Child Mapping: To transform the child in a source object to a child in the target object. For example, Quote Line Item to Sales Agreement Product.

QuoteLineItem to SalesAgreementProduct

```
<?xml version="1.0" encoding="UTF-8"?>
                                <ObjectHierarchyRelationship
xmlns="http://soap.sforce.com/2006/04/metadata">
                                <parentObjectMapping>
                                <inputObject>QuoteLineItem</inputObject>
                             <outputObject>SalesAgreementProduct</outputObject>

                                <mappingFields>
                                <inputField>Description</inputField>
                                <outputField>Name</outputField>
                                </mappingFields>
                                <mappingFields>
                                <inputField>PricebookEntryId</inputField>
                                <outputField>PricebookEntryId</outputField>
                                </mappingFields>
                                </parentObjectMapping>

<outputPntRelationshipFieldName>SalesAgreement</outputPntRelationshipFieldName>

<parentRelationshipFieldName>Quote</parentRelationshipFieldName>
                                <parentRecord>QuoteToSA</parentRecord>
                                <mappingType>ChildToChild</mappingType>
                                <usageType>TransformationMapping</usageType>
                                </ObjectHierarchyRelationship>
```

- Support Mapping: To derive the field values from a source field lookup object. This mapping is used along with other mappings. For example, to create an opportunity, you require account ID, but the account ID isn't available directly on the Manufacturing Program Component Forecast Fact. The account ID can be derived from the manufacturing program ID because the Manufacturing Program object has an Account field. In this case, we can derive the account ID from the Manufacturing Program using support mapping.

ManufacturingProgram to Opportunity mapping

```
<?xml version="1.0" encoding="UTF-8"?>
                                <ObjectHierarchyRelationship
xmlns="http://soap.sforce.com/2006/04/metadata">
                                <parentObjectMapping>
                                <inputObject>ManufacturingProgram</inputObject>
                                <outputObject>Opportunity</outputObject>
                                <mappingFields>
                                <inputField>AccountId</inputField>
                                <outputField>AccountId</outputField>
                                </mappingFields>
                                </parentObjectMapping>
                                <outputPntRelationshipFieldName/>
                                <inputObjRecordsGrpFieldName/>
```

```
<parentRecord>CmpForecastFactToOpportunity1</parentRecord>
                            <mappingType>Support</mappingType>
                            <usageType>TransformationMapping</usageType>

<sourceReferenceRelaFieldName>ManufacturingProgram</sourceReferenceRelaFieldName>
                            </ObjectHierarchyRelationship>
```

2. Package each mapping file as a zip file in the following format. Note that the .settings file contains the mappings.

```
∨ 📁 ObjectHierarchyRelationship
        CmpForecastFactToOpportunityItem.settings
  📄 package.xml
```
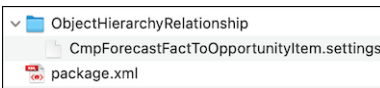
The `package.xml` file looks like this:

```xml
<?xml version="1.0" encoding="UTF-8"?>
                <Package xmlns="http://soap.sforce.com/2006/04/metadata">
                <types>
                <members>*</members>
                <name>ObjectHierarchyRelationship</name>
                </types>
                <version>55</version>
                </Package>
```

3. Deploy the mappings using an API tool such as Postman.

Here's a sample request to transform MfgProgramCpntFrcstFact to an Opportunity.

```json
{
                "inputObjectIds": [
                "0sTxx000000003FEAQ",
                "0sTxx000000004rEAA",
                "0sTxx0000000001EAA",
                "0sTxx000000001dEAA"
                ],
                "inputObjectName": "MfgProgramCpntFrcstFact",
                "usageType": "TransformationMapping",
                "outputObjectName": "Opportunity",
                "outputObjectDefaultValues": {
                "Opportunity": {
                "Pricebook2Id": "PriceBookID",
                "StageName": "Prospecting",
                "Probability": "20",
                "Name": "SampleFactToOpp",
                "CloseDate" : "2022-12-31"
                },
                "OpportunityLineItemSchedule": {
                "Type": "Both" // It's based on the product schedule enabled on setup.
                }
                }
                }
```

Here's a sample response that transforms MfgProgramCpntFrcstFact to an Opportunity.

```
[{
                "inputIds": ["0sTxx000000003FEAQ", "0sTxx000000004rEAA"],
                "outputId": "006xx000000003F123"
                "errorReason": null,
                "isSuccess": true
                },
                {
                "inputIds": ["0sTxx0000000001EAA", "0sTxx000000001dEAA"],
                "outputId": "006xx000000003F124"
                "errorReason": null,
                "isSuccess": true
                }
                ]
```

Create Programs and Derive Forecasts from Customers' Forecasts

These high-level steps define the program manager workflow with Program Based Business.
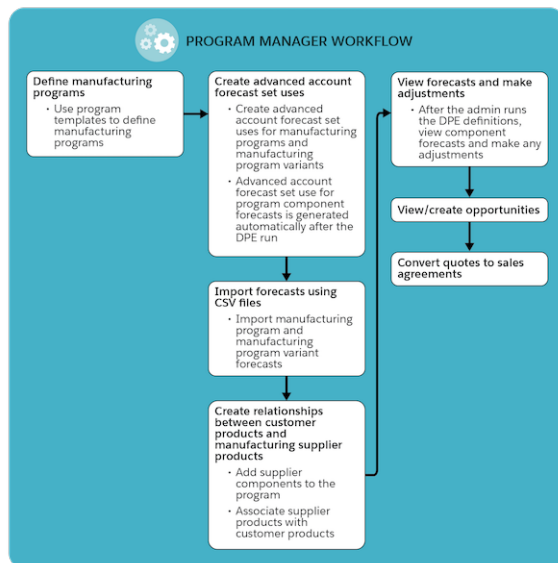
1. Define manufacturing programs. See Create a Manufacturing Program.

2. Create Advanced Account Forecast Set Uses. See Create an Advanced Account Forecast Set Use.

3. Import forecast using CSV files. See Create a .CSV File and Import Data From a .CSV File.

4. Create relationships between customer products and manufacturing supplier products. See Create Relationships Between Customer Products and Supplier Products.

5. View forecasts and make adjustments. See View Program Based Business Forecasts, Filter Manufacturing Program Forecasts, and Make Adjustments to Manufacturing Program Component Forecasts.

Create a Manufacturing Program

Account managers can easily create customer-specific programs using program templates.

Use the Advanced Account Forecast Set Use object to associate the program forecast set with an object record whose data is used when generating forecasts. For example, select a manufacturing program as the Forecast Context to base forecasts on those records. Create two forecast set uses, one for the manufacturing program and one for the program variant. The forecast set use for manufacturing program components is created when your admin runs the Data Processing Engine definitions.

Manufacturing suppliers across industries work closely with their customers to supply the products and components needed to manufacture equipment.

Associate your products with your customer's products by creating relationships.

View forecasts for your manufacturing programs. You can view manufacturing program, manufacturing program variant, and manufacturing program component forecasts.

You can filter the manufacturing program forecast records by dimensions and by time period.

You can adjust the component forecast values during the adjustment period defined by the admin for your user profile.

Create a Manufacturing Program

Account managers can easily create customer-specific programs using program templates.

1. From the App Launcher, find and select **Manufacturing Programs**.

2. Click **New**.

3. Specify these values:

Field	Description
Name	Name of the manufacturing program.
Manufacturing Program Template	Template associated with the manufacturing program. The available templates are defined by your admin.
Status	Status of the program.
Program Type	Type of the program. This field is currently not available for use.
Related Manufacturing Program	Another manufacturing program associated with the manufacturing program.
Start Date	Start date of the program.
End Date	End date of the program.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions.

USER PERMISSIONS

To create a manufacturing program:
- Program Based Business permission set

4. Save your work.

SEE ALSO:

[Create a Program Template](#)

Create an Advanced Account Forecast Set Use

Use the Advanced Account Forecast Set Use object to associate the program forecast set with an
object record whose data is used when generating forecasts. For example, select a manufacturing
program as the Forecast Context to base forecasts on those records. Create two forecast set uses,
one for the manufacturing program and one for the program variant. The forecast set use for
manufacturing program components is created when your admin runs the Data Processing Engine
definitions.

1. From the App Launcher, find and select **Advanced Account Forecast Set Uses**.

2. Click **New**.

3. Specify these values:

Field	Description
Name	Name of the advanced account forecast set use.
Forecast Context	Object record used as the context for generating forecasts.
Advanced Account Forecast Set	The advanced account forecast set to use for creating the forecast data.
Last Calculation Date	Date when the forecast values were last calculated for the associated manufacturing program and forecast set.
Status	Status of the advanced account forecast set use.

4. Save your work.

Prepare a CSV File for Program Based Business

Manufacturing suppliers across industries work closely with their customers to supply the products and components needed to manufacture equipment.

For example, a Tier-1 tire manufacturer in the automotive industry may supply parts, assemblies, and components as part of an OEM program by a car manufacturer. The overall sales process involves close collaboration with the OEM to get their program forecasts and program variant forecasts, and identify the parts and components that can be supplied to the OEM. The Tier-1 manufacturers may rely on third party research, such as IHS Markit, which provides production schedules per vehicle per assembly.

Manufacturers can use this research data, along with data obtained through collaboration, to populate program forecasts and program variant forecasts. Program Managers can then import the forecasts data using CSV files. Create two CSV files: one for the manufacturing program forecasts, and one for the manufacturing program variant forecasts. The Data Processing Engines use the manufacturing program forecasts and manufacturing program variant forecasts to generate manufacturing program component forecasts.

⊘ **Important:** Make sure that the CSV file includes data for all periods in the manufacturing program, otherwise the CSV upload may fail with errors.

1. Create a .CSV File
   Follow these guidelines when you prepare a .csv file for import.

2. Import Data From a .CSV File
   Import data from a .csv file into a target object. Use this data to calculate supplier component forecasts, but only after you run data processing engine templates.

Create a .CSV File

Follow these guidelines when you prepare a .csv file for import.

- The first row in the .csv file lists the field names of the object to which you want to upload the records. Think of these like the columns in a spreadsheet.

  ⊘ **Important:** Many objects in Salesforce are related to other objects. Keep these additional factors in mind when listing relationship fields in the first row.

    – Add a reference to a related object in a CSV file.

- – To describe the relationship between an object and its parent, use `RelationshipName.IndexedFieldName`, where `RelationshipName` is the relationship name of the field and `IndexedFieldName` is the indexed field name that uniquely identifies the parent record.
- – Use the describeSObjects() call in the API to get the relationshipName property value for a field.

Here's an example of relationship fields:

- – `AdvAcctForecastSetUse` is the parent of `ManufacturingProgramForecastFact`.
- – Name is an indexed field on `AdvAcctForecastSetUse`. As a result, you can use `AdvAcctForecastSetUse.Name` to uniquely identify the `AdvAcctForecastSetUse` record.

> 📝 Note: Be sure to use unique values in the indexed field. If there's more than one record with the same value, the .csv file upload process fails with the `DUPLICATE_EXTERNAL_ID:Name: more than one record found for external id field` error.

For example, if you upload records to the Manufacturing Program Forecast Fact object, the first row in the .csv file looks like this.

```
Name,AdvAcctForecastSetUse.Name,Status,ProductionModel.Name,ProductionLocation.Name,Period.Id,ProgramQuantity,ExpectedRevenue,PerUnit,MarketSharePercent,ForecastRevenue,ForecastQuantity,ExternalReferenceNumber
```

- Each subsequent row corresponds to a record in Salesforce. A record consists of a series of fields that are delimited by commas.

```
FastCars AutoX Chennai JanFY2023,Fast Cars Program Set
Use,Active,AutoX,Chennai,026T10000002icqIAA,500,250000,22,150000,300,FastCars AutoX
Chennai JanFY2023
```

- Ensure that all records in a .csv file are for the same object. You'll specify the Target Object when you import the CSV file.
- Use only commas as delimiters.
- Ensure that .csv files are in the UTF-8 format.
- Ensure that all products in the .csv file have the same number of associated periods. If the products in the .csv file have unequal periods, the upload fails with an error.
- We use Bulk API to upload records. For more information on how to prepare a .csv file for Bulk API upload, see Prepare CSV Files

> 👁 Example: A car manufacturer named Fast Cars wants to launch the AutoX car in 2025. The program manager at a manufacturing supplier, Car Components, wants to forecast the program quantity, expected revenue per unit, forecasted quantity, and forecast revenue for January 2023, February 2023, and March 2023 for the Chennai and Bangalore plant locations.

Create a .csv file for program forecasts in this format.

Name	AdvAcctForecastSetUse.Name	Status	ProductionModel.Name	ProductionLocation.Name	PeriodID	ProgramQuantity	ExpectedRevenuePerUnit	MarketSharePercent	ForecastQuantity	ForecastRevenue	ExternalReferenceNumber
FastCars AutoX Chennai JanFY2023	Fast Cars Program Set Use	Active	AutoX	Chennai	026T10000002icqIAA	500	250000	22	150000	300	FastCars AutoX Chennai JanFY2023
FastCars AutoX Chennai FebFY2023	Fast Cars Program Set Use	Active	AutoX	Chennai	026T10000002icqIAA	600	120000	15	97000	350	FastCars AutoX Chennai FebFY2023
FastCars AutoX	Fast Cars Program Set Use	Active	AutoX	Chennai	026T10000002icqIAA	700	230000	26	230000	400	FastCars AutoX

Name	AllTtMilne	Status	RollMilne	RollTitline	PeriodID	RgmQoty	ExtRevnRvh	MktfshReet	FrctsQoty	FrctsRvne	ElfftcUnhn
Chennai MarFY2023											Chennai MarFY2023
FastCars AutoX Bangalore JanFY2023	Fast Cars Program Set Use	Active	AutoX	Bangalore	026T10000002icqIAA	550	89000	10	54000	450	FastCars AutoX Bangalore JanFY2023
FastCars AutoX Bangalore FebFY2023	Fast Cars Program Set Use	Active	AutoX	Bangalore	026T10000002icrIAA	670	350000	21	340000	500	FastCars AutoX Bangalore FebFY2023
FastCars AutoX Bangalore MarFY2023	Fast Cars Program Set Use	Active	AutoX	Bangalore	026T10000002icsIAA	890	150000	18	450000	550	FastCars AutoX Bangalore MarFY2023

Here's an example of the `fastcarsprogram.csv` file.

```
Name,AdAcctForecastSetUse.Name,Status,ProductionModel.Name,ProductionLocation.Name,PeriodId,ProgramQuantity,ExpectedRevenuePerUnit,MarketSharePercent,ForecastedRevenue,ForecastedQuantity,ExternalReferenceNumber
FastCars AutoX Chennai JanFY2023,Fast Cars Program Set
Use,Active,AutoX,Chennai,026T10000002icqIAA,500,250000,22,150000,300,FastCars AutoX
Chennai JanFY2023
FastCars AutoX Chennai FebFY2023,Fast Cars Program Set
Use,Active,AutoX,Chennai,026T10000002icrIAA,600,120000,15,97000,350,FastCars AutoX
Chennai FebFY2023
FastCars AutoX Chennai MarFY2023,Fast Cars Program Set
Use,Active,AutoX,Chennai,026T10000002icsIAA,700,230000,26,230000,400,FastCars AutoX
Chennai MarFY2023
FastCars AutoX Bangalore JanFY2023,Fast Cars Program Set
Use,Active,AutoX,Bangalore,026T10000002icqIAA,550,89000,10,54000,450,FastCars AutoX
Bangalore JanFY2023
FastCars AutoX Bangalore FebFY2023,Fast Cars Program Set
Use,Active,AutoX,Bangalore,026T10000002icrIAA,670,350000,21,340000,500,FastCars AutoX
 Bangalore FebFY2023
FastCars AutoX Bangalore MarFY2023,Fast Cars Program Set
Use,Active,AutoX,Bangalore,026T10000002icsIAA,890,150000,18,450000,550,FastCars AutoX
 Bangalore MarFY2023
```

If the program manager at Car Components wants to forecast the forecasted quantity and market share percent at the variant level (Red color AutoX and Blue color AutoX) for three months (January 2023, February 2023, and March 2023) for the Chennai and Bangalore locations, they can create a .csv file for the program variant forecasts as shown in this example:

```
Name,AdAcctForecastSetUse.Name,Status,ProductionModel.Name,ProductionLocation.Name,Product.Name,PeriodId,ForecastedQuantity,MarketSharePercent,ExternalReferenceNumber
FastCars AutoX Chennai Red JanFY2023,Fast Cars Variant Set Use,Active,AutoX,Chennai,AutoX
 Red,026T10000002icqIAA,500,22,FastCars AutoX Chennai Red JanFY2023
FastCars AutoX Chennai Red FebFY2023,Fast Cars Variant Set Use,Active,AutoX,Chennai,AutoX
 Red,026T10000002icrIAA,600,15,FastCars AutoX Chennai Red FebFY2023
FastCars AutoX Chennai Red MarFY2023,Fast Cars Variant Set Use,Active,AutoX,Chennai,AutoX
 Red,026T10000002icsIAA,700,26,FastCars AutoX Chennai Red MarFY2023
```

```
FastCars AutoX Chennai Blue JanFY2023,Fast Cars Variant Set
Use,Active,AutoX,Chennai,AutoX Blue,026T10000002icqIAA,550,10,FastCars AutoX Chennai
Blue JanFY2023
FastCars AutoX Chennai Blue FebFY2023,Fast Cars Variant Set
Use,Active,AutoX,Chennai,AutoX Blue,026T10000002icrIAA,670,21,FastCars AutoX Chennai
Blue FebFY2023
FastCars AutoX Chennai Blue MarFY2023,Fast Cars Variant Set
Use,Active,AutoX,Chennai,AutoX Blue,026T10000002icsIAA,890,18,FastCars AutoX Chennai
Blue MarFY2023
FastCars AutoX Bangalore Red JanFY2023,Fast Cars Variant Set
Use,Active,AutoX,Bangalore,AutoX Red,026T10000002icqIAA,250,11,FastCars AutoX Bangalore
 Red JanFY2023
FastCars AutoX Bangalore Red FebFY2023,Fast Cars Variant Set
Use,Active,AutoX,Bangalore,AutoX Red,026T10000002icrIAA,340,25,FastCars AutoX Bangalore
 Red FebFY2023
FastCars AutoX Bangalore Red MarFY2023,Fast Cars Variant Set
Use,Active,AutoX,Bangalore,AutoX Red,026T10000002icsIAA,560,34,FastCars AutoX Bangalore
 Red MarFY2023
FastCars AutoX Bangalore Blue JanFY2023,Fast Cars Variant Set
Use,Active,AutoX,Bangalore,AutoX Blue,026T10000002icqIAA,700,9,FastCars AutoX Bangalore
 Blue JanFY2023
FastCars AutoX Bangalore Blue FebFY2023,Fast Cars Variant Set
Use,Active,AutoX,Bangalore,AutoX Blue,026T10000002icrIAA,650,12,FastCars AutoX Bangalore
 Blue FebFY2023
FastCars AutoX Bangalore Blue MarFY2023,Fast Cars Variant Set
Use,Active,AutoX,Bangalore,AutoX Blue,026T10000002icsIAA,430,35,FastCars AutoX Bangalore
 Blue MarFY2023
```

Considerations for Creating a CSV File

- Populate ExternalReferenceNumber with either a unique name or number. You can use this field during the upsert to identify existing records. For example, if you want to change the program quantity of AutoX cars to 600 for the January 2023 period for the Chennai location, use this format.

```
ProgramQuantity,ExternalReferenceNumber
600,FastCars AutoX Chennai JanFY2023
```

If a record exists in Salesforce with the same ExternalReferenceNumber in the target object, then the system updates the record with the values that are provided in the .csv file. Otherwise, the system inserts a new record in the target object.

> 📝 Note: You can also use the Name field as the External ID Field API Name during the upsert operation. But if more than one record with the same name exists, the .csv file upload process fails with the `DUPLICATE_EXTERNAL_ID:Name: more than one record found for external id field` error.

- You can't use the relationship field name (`RelationshipName.IndexedFieldName`) for the Period object because it has only ID as the lookup field, and you can't customize the object to add an external ID field.

Import Data From a .CSV File

Import data from a .csv file into a target object. Use this data to calculate supplier component forecasts, but only after you run data processing engine templates.

1. From the App Launcher, in the Quick Find box, enter *Manufacturing Program* and then select **Manufacturing Program**.

2. To create a manufacturing program, click **New** .

3. To import data from a .csv file into a target object (either Manufacturing Program Forecast Fact or Manufacturing Program Variant Forecast Fact), on the Manufacturing Program tab, click **Import CSV File**.

   Create or update forecast records for program forecasts, and for product variant forecasts, by using either the Add Records or Add and Update Records option.

> ⚠ **Warning:** Ensure that the CSV files you're uploading for the manufacturing program and manufacturing program variants don't contain duplicate period IDs for the same set of dimension hierarchy records. For example, for a manufacturer FastCars, for Chennai location and AutoX product, you can't have more than one record with the same period ID.

4. Save your work.

View the Import Status of a .CSV File

CSV file upload is an asynchronous process. Whenever a user uploads a .csv file, the system creates a Received Document record. By default, the name of the Received Document is same as the name of the file that the user uploaded.

View the Import Status of a .CSV File

CSV file upload is an asynchronous process. Whenever a user uploads a .csv file, the system creates a Received Document record. By default, the name of the Received Document is same as the name of the file that the user uploaded.

To allow asynchronous processing of the received documents, select Session Security Level Required at Login as **None** for the required user profiles. If you select Session Security Level Required at Login as **High Assurance**, only synchronous and UI processing is supported. The processing status won't change to Processed and the records won't get created. See this knowledge article for details.

1. From the App Launcher, find and select **Received Documents**.

2. To view the upload details, click the received document that has the same name as the uploaded .csv file. If the import process of a .csv file fails with errors, you can view the number of processed records and the error details in the Failed Records File field.
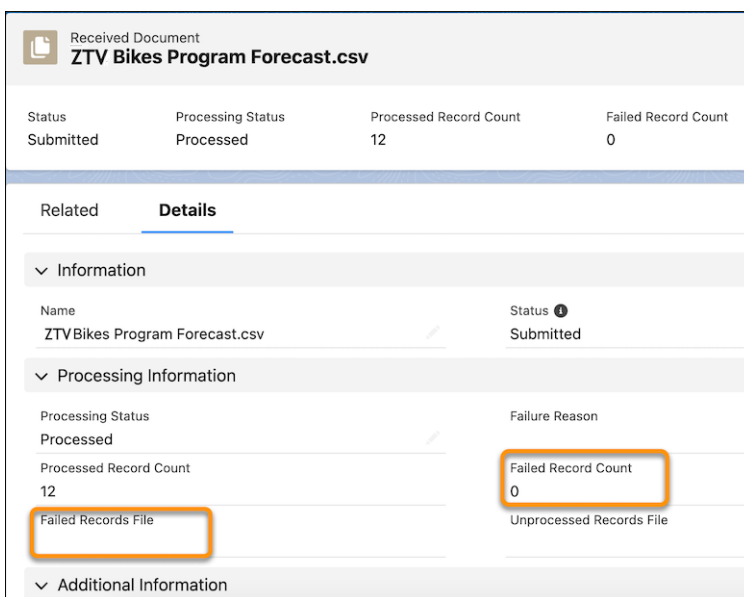
Create Relationships Between Customer Products and Supplier Products

Associate your products with your customer's products by creating relationships.

1. From the App Launcher, find and select **Product Related Materials**.

2. To add a product-related material, click **New**.

3. Enter the required values for these fields.

Field	Description
Name	Name of the product related material.
Manufacturing Program	Manufacturing program that's associated with the product-related material.
Product	Customer's product

Field	Description
Product Component	Manufacturing supplier product or your product.
Product Component Pricebook	Pricebook that's associated with the product component.
Quantity Per Product Unit	Number of units of the component required per unit of the product.
Quantity Unit of Measure	Unit of measure for the component quantity.
Effective Start Date	Date from which the product component is effective.
Effective End Date	Date when the product component is no longer effective.
Minimum Eligible Quantity	Minimum quantity of the product component that's required to accept the deal.
Minimum Eligible Quantity Unit of Measure	Unit of measure for the minimum eligible quantity of the component.
Lead Time	Lead time required to manufacture the product component.
Lead Time Unit of Measure	Unit of measure for the lead time.

⚠️ **Warning:** Each product related material record must have a unique combination of product variant and product component.

📝 **Note:**

- The Product Component Pricebook field on the Product Related Material object is optional. Note that if you select a pricebook in which the specified product component doesn't exist, and the DPE is run, forecasts for that product component aren't shown in the forecast grid.
- Component forecasts are generated based on the effective start and end dates for the component. If the generated forecast value for the component is lesser than the minimum eligible quantity for the component, the system automatically updates the forecast value to the minimum eligible quantity.

> ⊗ **Important:** To calculate the forecasted revenue for components, ensure that the pricebook contains the prices of all the components that you plan to sell. The forecasted revenue for a component is calculated during a Data Processing Engine run by multiplying the price of the component with the forecasted quantity. The price of the component is derived from the pricebook for product components.

> ⊗ **Important:** To generate forecasts for all periods, ensure that the effective start date for the product related material record and the manufacturing program forecast set period start date are the same. If you specify an effective start date of February 1, 2022 in a product related material record, and the forecast set is configured to generate quarterly forecasts starting January 1, 2022, the forecast data for the first quarter of 2022 isn't generated.

4. Save your work.

After you create the relationship between your products and your customers' products, your admin runs the Data Processing Engine definitions to generate manufacturing program component forecasts.

View Program Based Business Forecasts

View forecasts for your manufacturing programs. You can view manufacturing program, manufacturing program variant, and manufacturing program component forecasts.

1. From the App Launcher, find and select **Manufacturing Programs**.

2. To view a specific list of Manufacturing Programs, select a list view. List views show whether a Manufacturing Program is active or inactive.

3. To view details, click a Manufacturing Program name.

4. Use the Forecast dropdown to view program, program variant, or component forecasts. For example, select Program Forecast Set to view the program forecasts for the Zylic Program for 2 years manufacturing program.

   Program Forecast

Program Variant Forecast

Program Component Forecast

5. If the forecast data spans multiple rows, use the forward and back arrows to navigate between pages.

> 📝 **Note:** If you want to update the forecast data for a Manufacturing Program record in Draft status, first change the record status to Active.

> 📝 **Note:** To view the component forecasts, wait for the data processing engine runs to complete.

SEE ALSO:

Filter Manufacturing Program Forecasts

Make Adjustments to Manufacturing Program Component Forecasts

Filter Manufacturing Program Forecasts

You can filter the manufacturing program forecast records by dimensions and by time period.

1.
   In the Manufacturing Program tab of a manufacturing program record page, click [▼].

2. Search for the required dimensions.

3. To show the data for a specific period for the specified dimensions, select one of these options in the Time Period section.

Option	Description
Current Periods	Shows the manufacturing program component forecasts for the current month and the next seven months.
Range	Shows the manufacturing program component forecasts for a specified date range.
Set Periods	Shows the manufacturing program component forecasts for selected periods.

4. Apply the filter.

   📝 **Note:** When you filter forecasts in the grid using dimensions, the dimension fields show all the values in the dropdown based on your search criteria. For example, if you're filtering forecasts by the Product dimension, the dropdown shows all the valid products. If the search criteria isn't relevant to the current forecast, an error is displayed after you apply the filter. We recommend that you restrict your search criteria to show only valid values relevant to the forecast in the grid.

Make Adjustments to Manufacturing Program Component Forecasts

You can adjust the component forecast values during the adjustment period defined by the admin for your user profile.

📝 **Note:**
- You can make adjustments only for the forecast values that have adjustments enabled.
- You can make adjustments only when the adjustment window is open and the associated forecast set, advanced account forecast set use record, and manufacturing program record are Active. You configure the forecast adjustments when you configure the forecast sets for Program Based Business. For more information, see Configure a Forecast Set.

1. For the period that you want to adjust, click the pencil icon in the cell.

2. Enter the new value for the measure and add an adjustment note. Ensure that the adjustment note is of type text.

Considerations for Program Based Business

Review these considerations before you start using Program Based Business.

- The out-of-the-box Data Processing Engine templates for Program Based Business work only for manufacturing programs in Active status.

- The Forecast Formula section in a Program Based Business-specific forecast set has no significance and isn't used in forecast calculations.

- When using Data Processing Engine definitions for generating manufacturing program component forecasts, keep the limits and limitations for Data Processing Engine in mind. For more details, see Data Processing Engine Limits.

- If you're using an orchestration flow to generate forecasts, keep the limitations of Flows in mind. For more information, see Flows.

- When you run a Data Processing Engine definition, ensure that the parameters—Manufacturing Program Id, Program Component Template Item Name, and Program Variant Template Item Name—are correctly mapped to the template associated with the manufacturing program. Incorrect mappings can lead to errors in the generated manufacturing program component forecasts.

- Ensure that the CSV files that you upload for the manufacturing program and manufacturing program variants don't contain duplicate period IDs for the same set of dimension hierarchy records. For example, for a manufacturer FastCars, for Chennai location and AutoX product, you can't have more than one record with the same period ID.

- Ensure that you set up field-level security on the Bulk Job ID and Target Object API Name fields on the Received Document object so that these fields aren't visible to a standard user.

- Ensure that the period group type, and calculation and rollover frequencies, of the forecast set for manufacturing program, manufacturing program variant, and manufacturing program component forecasts are the same.

- Each product related material record must have a unique combination of product variant and product component.

- The Product Component Pricebook field on the Product Related Material object is optional. If you enter a pricebook in which the specified product doesn't exist, and the DPE is run, forecasts for that product component aren't shown in the forecast grid.

- To generate forecasts for all periods, ensure that the effective start date for the product related material record and the manufacturing program forecast set period start date are the same. If you specify an effective start date of February 1, 2022 in a product related material record, and the forecast set is configured to generate quarterly forecasts starting January 1, 2022, the forecast data for the first quarter of 2022 isn't generated.

- If the manufacturing program start date, program variant forecast start dates, and period group start date are different, the generated forecast is based on the latest date. For example, if the manufacturing program start date is January 1, 2022 the program variant forecast periods start date is January 1, 2022, and the start period in the period group setup for the associated forecast set is February 1, 2022, then the forecast grid shows component forecasts from February 1, 2022.

- If the manufacturing program end date, period group end date, or periods specified in the uploaded manufacturing program variants forecasts are different, forecasts are generated up to the earliest date. For example, if the manufacturing program end date is December 31, 2024, the period group end date is November 30, 2024, and the end date of periods in the period group setup for the associated forecast set is December 31, 2023, the forecast grid shows component forecasts up to December 31, 2023.

- The Rollover Program Component Forecast Data Processing Engine (DPE) definition runs only at the start of each period so you won't see forecasts generated for newer periods if you change forecast settings during an ongoing period. For example, if you change the display duration for a forecast in the middle of a month, the Rollover DPE considers the update only when it runs at the start of the next month. To consider the forecast settings updates, such as changes to forecast dimensions, frequencies, or period group settings during an ongoing forecast period, make sure you run the Regenerate Program Component Forecast DPE definition after you update the settings.

Considerations for Program Based Business When Processing Large Volumes of Data

Program Based Business uses Data Processing Engines to generate manufacturing program component forecasts. The data volumes in
the manufacturing program forecast fact, manufacturing program variant forecast fact, and manufacturing program component forecast
fact records play a crucial role in determining the time taken to generate these forecasts.

The number of forecast fact records is a scalar multiple of all relevant dimensions. For example, the number of manufacturing program
forecast fact records is 50*10*36*3 = 54000, for a manufacturing program with these values:

- Manufacturing program records: 50
- OEM products, for example, cars: 10
- Product variant SKUs, for example, Alpha, Gamma, Delta: 80
- Program Component SKUs, for example, engines: 10
- Periods: 36
- Locations: 3

For the above manufacturing program, the number of manufacturing program variant forecast fact records is 50*80*36*3 = 432,000,
and the number of manufacturing program component forecast fact records is 50*80*10*36*3 = 4,320,000.

📝 **Note:** The forecast formula baseline calculation has a significant impact on the time taken to calculate forecasts.

The out-of-the-box forecast fact objects support higher data volumes compared to custom fact objects.

Keep these limits in mind when using Program Based Business. The standard fiscal calendar is used to come up with these
recommendations.

Type	Recommended Limit for Small Orgs (Up to 4 million records)	Recommended Limit for Large Orgs (Up to 55 million records)
Manufacturing Programs	50	150
Products	100	200
Periods	36	60
Manufacturing Program Forecast Facts	54000	450000
Manufacturing Program Variants	432000	5850000
Manufacturing Program Components	4320000	58500000
Product Related Materials	40000	195000

📝 **Note:** To load large volumes of data, the manufacturing program grid may take more than two seconds.

Best Practices

These are some of the best practices for using Program Based Business.

- When processing large volumes (for example, 60 million records), split the data into smaller batches based on criteria such as region, manufacturing program, product, or product category.

- For Data Processing Engines, an export capacity of 1 GB of CSV file data per day is included in an org. For out-of-the-box Data Processing Engine templates, this capacity translates to 2.67 GB for 9 million records, and therefore, you can process up to 3 million forecast fact records in a single day with one org. To process more than 3 million records in a day, purchase additional processing capacity by using the Salesforce Data Pipelines AddOn license.

- Archive or purge the forecast records that you no longer need.

Manage Your Organizational Targets with Account Manager Targets

Convert your organization's growth plans into measurable targets with Account Manager Targets. Motivate your account managers to close deals and drive more business. Create targets for revenue, quantity, and other currency or non-currency measure types and allocate specific target percentages to your team members. Strategically distribute targets by products and accounts to meet market demands and organizational requirements. Distribute targets by month, quarter, or year for better visibility and periodic reviews. Update target values at any time and redistribute targets as needed.

Learn and Explore

Trailhead: Account Manager Targets in Manufacturing Cloud

Trailhead: CRM Analytics Dashboards for Account Manager Targets

Get Started

Set Up and Configure Account Manager Targets

Set up Account Manager Targets in Manufacturing Cloud to help your organization track its growth plans. You can select the frequency of the time periods by which targets can be distributed and the hierarchy for assigning targets. In addition, you can specify the default price book used for distributing targets by product. Define these configurations using the Account Manager Targets page in Setup. You can also view the usage of data volume and limits defined for the Account Manager Periodic Target Distribution object in the Setup page.

Create and Work with Account Manager Targets

Create targets for a fiscal year with currency or non-currency measure types. Assign specific percentages of the targets to your immediate team members. Distribute targets by product and account, and by time period. Update the target value anytime and propagate these updates to that target's assignment values, if necessary. Manage an invalid assignment by reassigning it to another team member, changing the owner, moving it to the parent target, or deleting it.

Considerations for Account Manager Targets

Review the following considerations before setting up and using Account Manager Targets in Manufacturing Cloud.

SEE ALSO:

Manufacturing Cloud Developer Guide

Set Up and Configure Account Manager Targets

Set up Account Manager Targets in Manufacturing Cloud to help your organization track its growth plans. You can select the frequency of the time periods by which targets can be distributed and the hierarchy for assigning targets. In addition, you can specify the default price book used for distributing targets by product. Define these configurations using the Account Manager Targets page in Setup. You can also view the usage of data volume and limits defined for the Account Manager Periodic Target Distribution object in the Setup page.

Enable Account Manager Targets

To use the Account Manager Targets feature, enable Account Manager Targets in Setup.

Choose the Frequency for Distributing Account Manager Targets

Select the frequency of the periods by which the account manager targets are distributed when an account manager distributes targets by period. The value of a target is automatically divided among all the periods with the selected frequency equally. Account managers can update the distributed target values in different periods.

Choose Team Member Hierarchy for Account Manager Targets

Select the team member hierarchy for account manager targets. The selected hierarchy determines the users that account manager can assign targets to.

Specify the Default Price Book for Account Manager Targets

Specify the default price book for the account manager targets that are distributed by product. The selected price book is populated by default in all the target distributions when account managers distribute a target by product. By selecting a default price book, account managers don't need to manually select a price book for each target distribution. Account managers can replace the default price book with another one in a target distribution.

Manage Measures for Account Manager Targets

Manage the measures for the account manager target values by configuring the Measure field on the Account Manager Target object. Use the predefined Revenue measure or create customer measures. Create currency type measures, such as total order amount and total sales agreement amount. Or, create non-currency type measures, such as customer satisfaction and net promoter score. You can also rename, reorder, and delete measures.

Account Manager Target Distribution Limits

View the defined and used data volume limits of the Account Manager Periodic Target Distribution object in your Salesforce org.

Enable Account Manager Targets

To use the Account Manager Targets feature, enable Account Manager Targets in Setup.

1. From Setup, in the Quick Find box, enter `Account Manager Targets`, and then select **Account Manager Targets**.

2. Turn on Account Manager Targets.
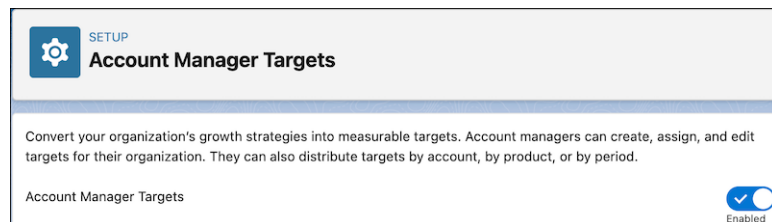
You can view the periodic distribution limits for account manager targets in the Account Manager Targets page in Setup.

Choose the Frequency for Distributing Account Manager Targets

Select the frequency of the periods by which the account manager targets are distributed when an account manager distributes targets by period. The value of a target is automatically divided among all the periods with the selected frequency equally. Account managers can update the distributed target values in different periods.

1. From Setup, in the Quick Find box, enter `Account Manager Targets`, and then select **Account Manager Targets**.

2. In the Distribution Frequency section, select a period type.

   - Monthly
   - Quarterly
   - Yearly

   The default period type is Monthly.

🛑 **Important:** If you change the distribution frequency, the new frequency will only apply to the targets created after the change.

SEE ALSO:

[Distribute Account Manager Targets](#)

Choose Team Member Hierarchy for Account Manager Targets

Select the team member hierarchy for account manager targets. The selected hierarchy determines the users that account manager can assign targets to.

1. From Setup, in the Quick Find box, enter `Account Manager Targets`, and then select **Account Manager Targets**.

2. In the Team Member Hierarchy section, select a team member hierarchy type.

Option	Description
Manager Hierarchy	Use the user role hierarchy to determine the team member hierarchy for account manager targets. The manager defined for users is considered for this hierarchy type. This hierarchy is defined in the Roles page in Setup.
Forecasts Hierarchy	Use the forecast hierarchy to determine the team member hierarchy for account manager targets. This hierarchy is defined in the Forecasts Hierarchy page in Setup.

> ⚠ **Warning:** If you change the team member hierarchy type, all existing targets are made read-only.

SEE ALSO:

Specify the Default Price Book for Account Manager Targets

Specify the default price book for the account manager targets that are distributed by product. The selected price book is populated by default in all the target distributions when account managers distribute a target by product. By selecting a default price book, account managers don't need to manually select a price book for each target distribution. Account managers can replace the default price book with another one in a target distribution.

1. From Setup, in the Quick Find box, enter `Account Manager Targets` in the Quick Find box, and then select **Account Manager Targets**.

2. In the Price Book section, search for and select a price book.
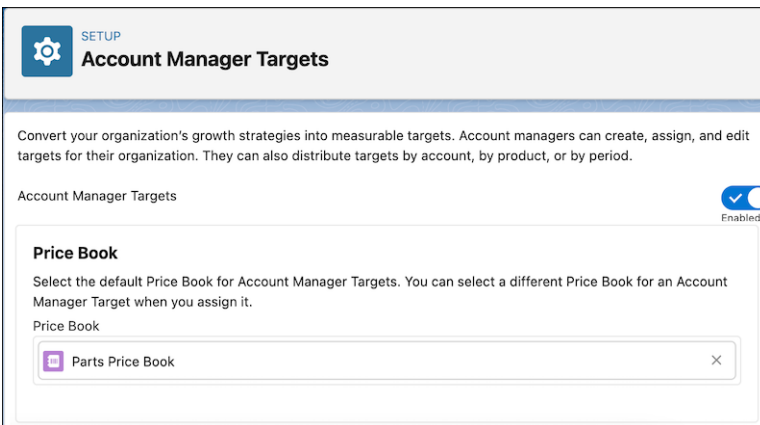
SEE ALSO:

Manage Measures for Account Manager Targets

Manage the measures for the account manager target values by configuring the Measure field on the Account Manager Target object. Use the predefined Revenue measure or create customer measures. Create currency type measures, such as total order amount and total sales agreement amount. Or, create non-currency type measures, such as customer satisfaction and net promoter score. You can also rename, reorder, and delete measures.

1. From the object management settings for Account Manager Targets, go to Fields & Relationships.

2. Select **Measure**.

3. To add a new measure value, perform these steps.

    a. In the Measure Picklist Values section, click **New**.

    b. Enter a label for the measure value.

    c. Enter an API name for the measure value.

    d. Select a measure type.

    The predefined measure type values, Currency and Non-Currency, help you maintain a consistent classification of measure values. Select Currency for currency type of targets. Select Other for non-currency type of targets.

    e. Save your changes.

    The new measure appears when account managers are creating targets.

4. To edit the label of a measure value, perform these steps.

    a. Click **Edit** for the measure value.

    b. Enter a label for the picklist value.

    c. Save your changes.

5. To make a measure value the default for the measure field, perform these steps.

    a. Click **Edit** for the measure value.

    b. Select **Default**.

    c. Save your changes.

6. To reorder measure values, perform these steps.

    a. Click **Reorder**.

    b. Reorder the picklist values by using the picklist controls.

    c. If needed, select **Display values alphabetically, not in the order entered**.

    d. Save your changes.

7. To delete a measure value, click **Del** for the measure value.

8. To deactivate or activate a measure value, click **Deactivate** or **Activate** for the measure value, respectively.

SEE ALSO:

    Add or Edit Picklist Values

Account Manager Target Distribution Limits

View the defined and used data volume limits of the Account Manager Periodic Target Distribution object in your Salesforce org.
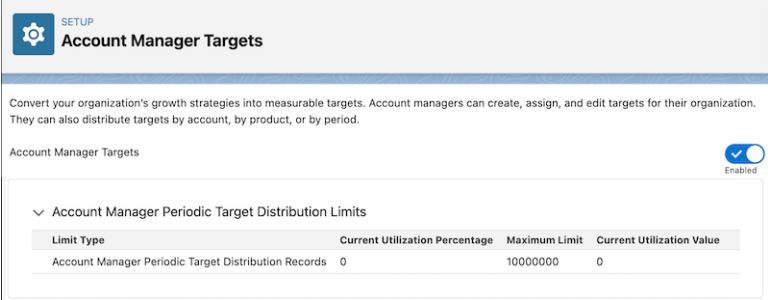
Expand the Account Manager Periodic Target Distribution Limits section to view the data volume of targets. Review the usage details periodically to ensure that the data volume used by account manager targets in your Salesforce org is within the defined limits. If the limit is exceeded, delete the required number of Account Manager Periodic Target Distribution records to bring usage within the limits.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions

Here are the values you can view.

- Current Utilization Percentage: The percentage of the limit used by the Account Manager Periodic Target Distribution object.
- Maximum Limit: The limit for the Account Manager Periodic Target Distribution object is 10 million.
- Current Utilization Value: The number of existing Account Manager Periodic Target Distribution records.

> **Note:** All the values are updated daily at 1:00 AM of your Salesforce org's time zone.

SEE ALSO:
Considerations for Account Manager Targets

Create and Work with Account Manager Targets

Create targets for a fiscal year with currency or non-currency measure types. Assign specific percentages of the targets to your immediate team members. Distribute targets by product and account, and by time period. Update the target value anytime and propagate these updates to that target's assignment values, if necessary. Manage an invalid assignment by reassigning it to another team member, changing the owner, moving it to the parent target, or deleting it.

Create an Account Manager Target

Create an account manager target to help your organization achieve business demands. Account manager targets can be used to manage the sales targets for your organization. You can create targets for yourself or assign targets to your team members.

Assign an Account Manager Target

You can assign an account manager target to your immediate team members. Your team members are derived based on the organizational hierarchy selected for account manager targets by your Salesforce admin.

Distribute Account Manager Targets

You can distribute target assignments by accounts and products. You can also distribute an overall target by time period, or a target assignment for a product or an account by time period.

Propagate Account Manager Target Changes to Assignments

When you change the value of an account manager target, the assignment values aren't automatically updated to reflect these changes. You must propagate the target values manually.

View the Desired Account Manager Targets

Track account manager targets that you assign and the targets assigned to you by using predefined list views. View the targets distributed for an account in the account's record page.

Manage Invalid Account Manager Target Assignments

Targets can become invalid for various reasons including a team member leaving the organization, changes in the manager hierarchy, and a new team member with existing targets. Changes in the configuration of the team member hierarchy can also invalidate target assignments. Manage an invalid assignment by reassigning it to another member, moving it to the parent target, changing the assignment's owner, or deleting it.

Change an Account Manager Target's Owner

You can change the owner of an account manager target.

Clone an Account Manager Target

You can clone account manager targets. When you clone an account manager target, the target assignments aren't cloned for the new account manager target. You must assign and distribute the targets.

Delete an Account Manager Target

You can delete account manager targets. When you delete an account manager target, all the associated child targets, that is, all the targets that are created as part of that target's assignments or subsequent assignments, are deleted.

Create an Account Manager Target

Create an account manager target to help your organization achieve business demands. Account manager targets can be used to manage the sales targets for your organization. You can create targets for yourself or assign targets to your team members.

1. From the App Launcher, find and select **Account Manager Targets**.

2. Click **New**.

3. Enter a name for the account manager target.

4. Select a fiscal year.

   You can select the current fiscal year, the next fiscal year, or the fiscal year after the next one. The current fiscal year is selected by default. Fiscal year is based on the fiscal year set up in your Salesforce org.

   📝 Note: Account manager targets are only supported for standard fiscal year and not for custom fiscal year.

5. Select a measure.

   Your Salesforce admin can create custom measures for creating targets of currency or non-currency type. You can create targets with various measures for your organization, such as customer satisfaction, net promoter score, product quantity, and more. The revenue measure is provided by default.

   📝 Note: After creating an account manager target, you can change the measure only until it hasn't been assigned.

6. Enter a target value for the account manager target.

   If the target is of Currency measure type, the target value is in the currency of your Salesforce org. If the target is of the Non-Currency measure type, the target value is in units.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To modify account manager targets:

- View Setup and Configuration
- Read, Edit permissions on Account Manager Target

7. Save your work.

You must distribute and assign the targets among your team members.

SEE ALSO:

Assign an Account Manager Target

Distribute Account Manager Targets

Assign an Account Manager Target

You can assign an account manager target to your immediate team members. Your team members are derived based on the organizational hierarchy selected for account manager targets by your Salesforce admin.

1. From the App Launcher, find and select **Account Manager Targets**.

2. Open the record of the account manager target that you want to assign.

3. On the Assignments tab of the record, click **Assign Targets**.

The list of your team members appears in the Team Assignments section of the Assignments tab.

4. Enter either a percentage of the overall target value or a target value for assigning to a team member.

When you enter either the target percentage or the target value, the other field is populated automatically. For example, let's assume that the value of the target you're assigning is 2000000. You assign 50 percent of this target to a team member. The Target Value field of this team member's assignment is automatically populated as 1000000.

> **Note:** The sum of the target assignment values need not be equal to the overall target value. It can be less than or more than the overall target value.

5. Save your work.

If you choose not to assign a target to a team member, the Target Percentage and the Target Value fields are blank for that team member. You can't perform any actions on that team member's assignment row.

The team members who have been assigned targets receive an in-app notification in their Salesforce org. They can view the assignments in the account manager target home page.

You can edit the assignment values by clicking **Edit Assignment** on the Assignment tab.

SEE ALSO:

    Distribute Account Manager Targets

    Choose Team Member Hierarchy for Account Manager Targets

Distribute Account Manager Targets

You can distribute target assignments by accounts and products. You can also distribute an overall target by time period, or a target assignment for a product or an account by time period.

Distribute Account Manager Targets by Account and Product

Distribute your account manager targets and target assignments by account and product. You can distribute each target assignment for specific accounts and products.

1. On an account manager target's record, go to the Assignments tab.

2. In the Distribute By column of the Team Assignments section, click **Account and Product** in a team member's assignment row.

You can also distribute a target by navigating to the Account Manager Target Distribution related list in the target's record page, and then clicking **View Distribution**.

USER PERMISSIONS

To modify account manager targets:
- Read, Edit permissions on Account Manager Target
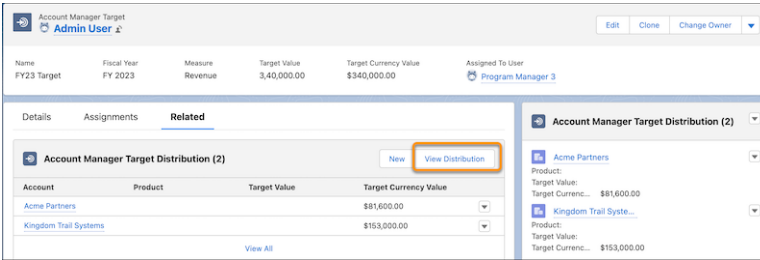
3. Distribute the assignment by account.

   a. In the Account tab of the Distribute target assignment window, click **Add Row**.

   b. Search and select the account that you want to distribute this target assignment by.

   c. Specify either the target percentage or target currency value. The target percentage is the percentage of the target assignment value.
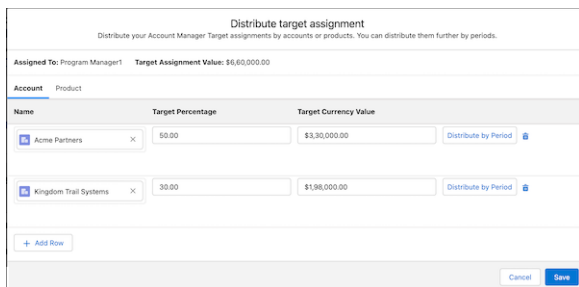
   When you specify the target percentage or the target currency value, the other field is populated automatically. For example, let's assume that the target assignment value is 1000. You assign 10 percent of this assignment to a particular account. The Target Currency Value field of this account's distribution is automatically populated as 100. Similarly, if you enter the target currency value as 100, the Target Percentage field of this account's distribution is automatically populated as 10.

4. Distribute the assignment by product.

   a. Go to the Product tab of the Distribute target assignment window.

   b. Click **Add Row**.

   c. Search and select the product that you want to distribute this target assignment with.

   d. If needed, replace the default price book with another price book.

   Your Salesforce admin defines the default price book for distributing targets by product.

   e. Enter the list price for the product.

   If the product is in the selected price book, the list price of the product is populated automatically.

   f. Specify either the target percentage or target currency value. The target percentage is the percentage of the target assignment value.

   When you specify the target percentage or the target currency value, the other field is populated automatically. For example, let's assume that the target assignment value is 1000. You assign 10 percent of this assignment to a particular product. The Target Currency Value field of this product's distribution is automatically populated as 100. Similarly, if you enter the target currency value as 100, the Target Percentage field of this product's distribution is automatically populated as 10.

The target value is calculated by dividing the target currency value divided by the list price.

📝 **Note:** If an account manager target is of non-currency measure type, the Target Currency Value in product distribution rows is a number and not a currency value.

5. Save your work.

You must propagate your changes to your assignments to ensure they're reflected accurately.

You can further distribute a target assignment for a product or an account by time period.

Distribute Account Manager Targets by Time Period

Distribute an account manager's target value by time period. You can either distribute the overall target assignment in different periods or distribute a target assignment for a product or an account in different time periods. Your Salesforce admin sets the frequency of the time periods by which you can distribute account manager targets.

1. Distribute an overall account manager target assignment by time period.

   a. On an account manager target's record, go to the Assignments tab.

   b. In the Distribute By column of your team assignments, click **Period** for a team member's assignment.

   c. Change the target values as needed.

    d. Save your changes.

2. Distribute the account and product distribution of target assignments by time period.

    a. Go to the Assignments tab in the record of an account manager target that has assignments distributed by account and product.

    b. In the Distribute By column of the Team Assignments section, click **Account and Product** in a team member's assignment row. The target values already distributed for accounts and products are displayed.

    c. Click **Distribute by Period** in an account distribution or product distribution row.
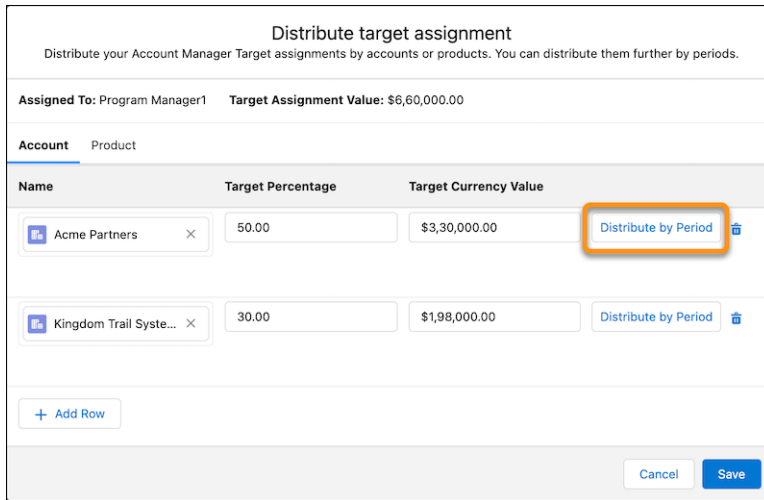
    The target currency value of an account or product distribution is distributed equally across all the time periods.

    d. Change the target values as needed.

    e. Save your changes.

    You receive an in-app notification after the assignment value is distributed.

You must propagate your changes to your assignments.

SEE ALSO:

    Choose the Frequency for Distributing Account Manager Targets

    Specify the Default Price Book for Account Manager Targets

    Propagate Account Manager Target Changes to Assignments

Propagate Account Manager Target Changes to Assignments

When you change the value of an account manager target, the assignment values aren't automatically updated to reflect these changes. You must propagate the target values manually.

1. In the record of the account manager target that changed, go to the Assignments tab.

2. Click **Propagate to Assignments**.
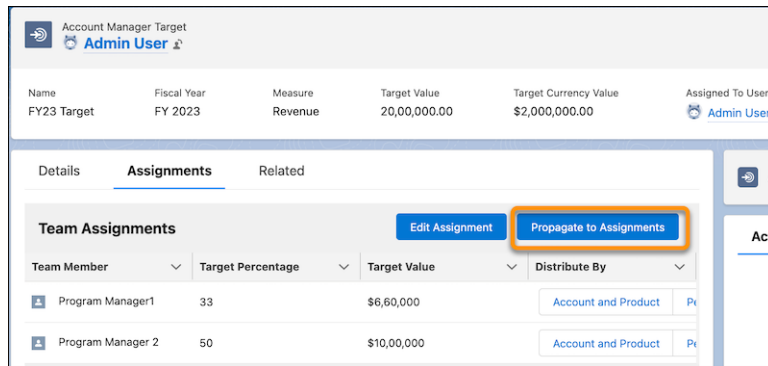
You receive an in-app notification when the assignment values are updated. The team members whose assignments values are updated also receive an in-app notification that their target values changed.

📝 Note: The assignment values of only your immediate team members are updated.

View the Desired Account Manager Targets

Track account manager targets that you assign and the targets assigned to you by using predefined list views. View the targets distributed for an account in the account's record page.

View Account Manager Targets You Assign and Assigned to You

You can filter account manager targets by the assigned user with two list views provided by default. The list views filter all the account manager targets that you create and assign.

- Assigned by Me: This list view displays the records of all the account manager targets you have assigned. This list also includes all the targets you created because you are the owner of these target records.

- Assigned to Me: This list view displays the records of all the account manager targets assigned to you by other users. This list also includes all the targets you created because you are Assigned To User of these targets.

💡 Tip: To filter this list further, click [filter icon]. Select the Filter by Owner filter type, choose the appropriate option, click **Done**, and save the filter changes.

In addition to the two default list views, you can also create your own list views.

View Account Manager Targets for an Account

The account manager targets distributed by account show in the Account Manager Targets tab of the account's record page. You can view the targets assigned to you and your team members for an account.
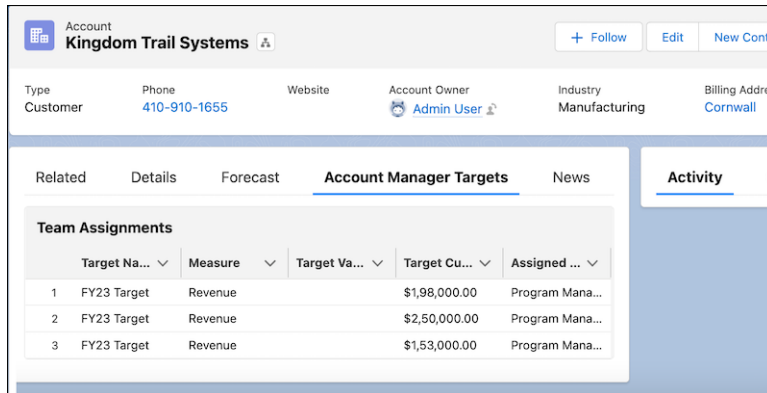
The account manager target details displayed in the Account Manager Targets tab are read-only.

👁 Example:

- Your manager assigns a target to you and distributes that target between two accounts. You can view the distributed target values for each account in that account's record. You view these details in the Targets Assigned to Me section in the Account Manager Targets tab.

- You assign a target to your team members and distribute the assignments among five accounts. You can view the distributed target assignment values for each account in that account's record. You view these details in the Team Assignments section in the Account Manager Targets tab. Each of your team members can see their assignments values for each account in that account's record. Your team members can view these details in the Targets Assigned to Me section in the Account Manager Targets tab.

Manage Invalid Account Manager Target Assignments

Targets can become invalid for various reasons including a team member leaving the organization, changes in the manager hierarchy, and a new team member with existing targets. Changes in the configuration of the team member hierarchy can also invalidate target assignments. Manage an invalid assignment by reassigning it to another member, moving it to the parent target, changing the assignment's owner, or deleting it.

Invalid target assignments are shown in the Invalid Team Assignments section of the Assignments tab in the target's record. You can view a target in the Invalid Team Assignments section only if you're the owner of that target.

1. On an account manager target's record, go to the Assignments tab.

2.
   In the Invalid Team Assignments section, for an invalid assignment, click .

USER PERMISSIONS

To modify account manager targets:
- Read, Edit permissions on Account Manager Target

To change ownership of account manager target records:
- Read, Edit, and Modify All permissions on Account Manager Target
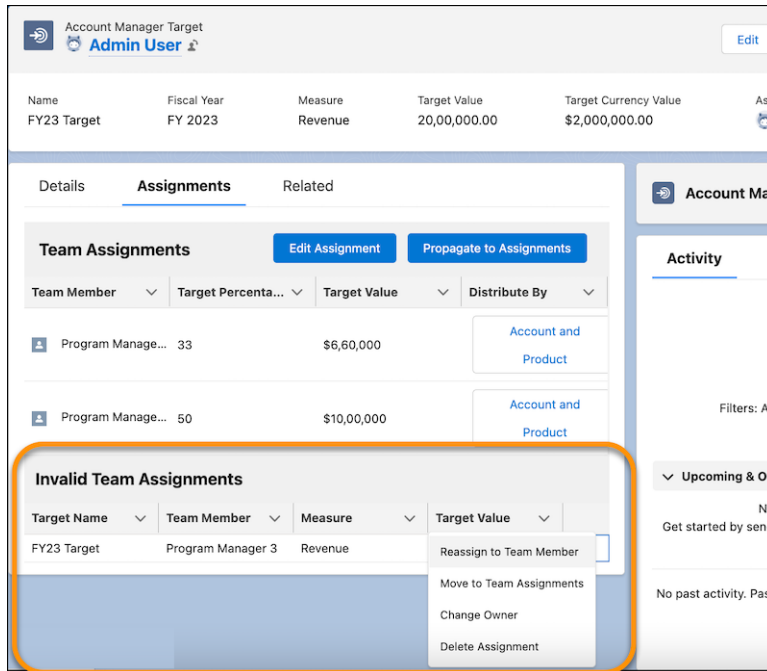
3. Perform an action.

Option	Description
Reassign to Team Member	To assign the invalid assignment to another team member, click **Reassign to Team Member**. Enter the team member's name and save the changes. You can reassign an invalid assignment only to team members who don't have an existing assignment. A team member can have only one assignment for an account manager target.
Move to Team Assignment	To move the invalid assignment to the Team Assignments section of the account manager target, click **Move to Team Assignments**. You can move the invalid assignment of a team member only if that team member doesn't have an existing assignment. In addition, the measure and fiscal year of the invalid assignment must match the measure and fiscal year of the account manager target.
Change Owner	To change the owner of the invalid assignment, click **Change Owner**. Enter the user's name and save the changes. You can change the ownership only to those users who are in your organizational hierarchy.
Delete Assignment	To delete the invalid assignment, click **Delete Assignment**.

⚠ Warning: Deleting the assignment also deletes the child targets in the target's hierarchy.

Change an Account Manager Target's Owner

You can change the owner of an account manager target.

1. In an account manager target's record page, click **Change Owner**.
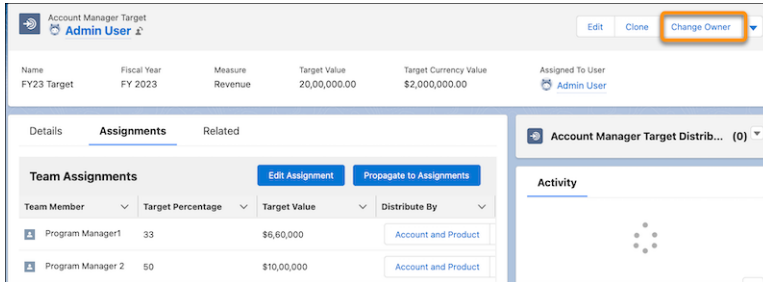
2. Search and select a new owner.
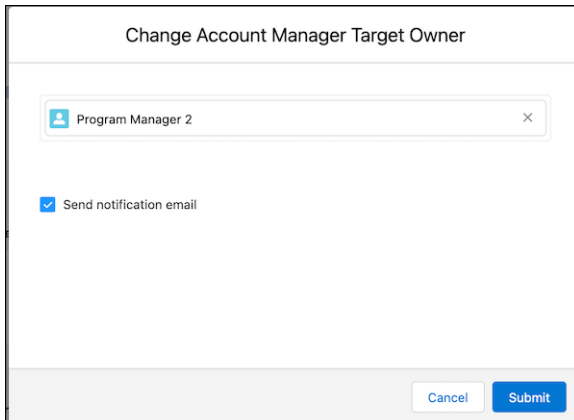
3. To notify the new owner, select **Send notification email**.

4. Click **Submit**.

Clone an Account Manager Target

You can clone account manager targets. When you clone an account manager target, the target assignments aren't cloned for the new account manager target. You must assign and distribute the targets.

1. In an account manager target's record page, click **Clone**.

2. Specify the information for the new account manager target or leave the existing values as is.

3. Save your work.

Delete an Account Manager Target

You can delete account manager targets. When you delete an account manager target, all the associated child targets, that is, all the targets that are created as part of that target's assignments or subsequent assignments, are deleted.

1. In an account manager target's record page, from the Quick Actions menu, select **Delete**.

2. To confirm your action, click **Delete**.

Considerations for Account Manager Targets

Review the following considerations before setting up and using Account Manager Targets in Manufacturing Cloud.

- Account manager targets are only supported for standard fiscal year and not for custom fiscal year.
- If you change the team member hierarchy type, all existing targets are made read-only.
- If you change the distribution frequency, the new frequency will only apply to the targets created after the change.
- Account managers must have Modify All permission on the Account Manager Target object to change ownership of account manager targets.
- Account managers can choose to remove the default price book and select another one.
- When distributing an account manager target by product, if the number of products selected is less than 15, the product distribution details are saved immediately. If the number of products selected is greater than 15, a background job is run to save the product distribution details.

- When you open an account manager target record, refresh the page to view the field appropriate for the target's measure. If the measure is of currency type, Target Currency Value is displayed. If the measure is of non-currency type, Target Value is displayed.
- The maximum limit defined for the Account Manager Periodic Target Distribution object is 10 million.

SEE ALSO:

Account Manager Target Distribution Limits

Build Distributor Relationships with Partner Visit Management

Partner Visit Management helps sales managers in your company schedule visits to partner and distributor locations. Sales managers can use those visits to monitor performance, arrange for periodic check-ins, conduct trainings, upsell and cross-sell products, and follow up on sales agreement renewals and warranty expiration. With action plan templates, sales managers can create lists of tasks and associated assessment indicators that are commonly repeated across multiple visits. Then field reps can use action plans to perform the tasks associated with a visit and capture metrics on their mobile devices.

<table>
<tr><td>EDITIONS</td></tr>
<tr><td>Available in: Lightning Experience</td></tr>
<tr><td>Available in: Enterprise, Unlimited, and Developer Editions</td></tr>
</table>

Partner Visit Management Workflow

Using Partner Visit Management in Manufacturing Cloud, admins create the tasks to be performed during visits, specify their context, define the metrics to be captured, and create action plans. Sales managers create visits, assign field reps to visits, and associate action plans to visits. Field reps perform tasks and capture metrics during the visits.

Set Up Partner Visit Management

To get started with Partner Visit Management, enable it in Setup and assign users the appropriate permission sets. Manufacturing Cloud comes with separate page layouts for sales managers and field reps with components that address their unique business requirements. Typically, sales managers use the Salesforce desktop site to schedule visits and field reps use the Salesforce mobile app on their mobile devices to perform visits.

Plan Effective Visits to Partners

Track and manage the performance of distributors in your territory. Sales managers can plan visits for their field reps to visit distributor locations, assign tasks to be performed in a visit, and define metrics to capture during a visit. After a visit is complete, you can compare the expected metrics versus the actual metrics for the key performance indicators you defined and then take necessary actions.

Execute Visits and Perform Tasks

The Partner Visits mobile app helps field reps stay organized while they juggle their tasks. The app provides a complete view of the most relevant, actionable information on a mobile device without logging into multiple systems. Field reps can focus on the visits for each day, view key information for each visit, perform tasks, capture metric values, and take notes on the go within the context of the tasks.

SEE ALSO:

Improve Collaboration with Your Distributors with Visit Management

Partner Visit Management Workflow

Using Partner Visit Management in Manufacturing Cloud, admins create the tasks to be performed during visits, specify their context, define the metrics to be captured, and create action plans. Sales managers create visits, assign field reps to visits, and associate action plans to visits. Field reps perform tasks and capture metrics during the visits.
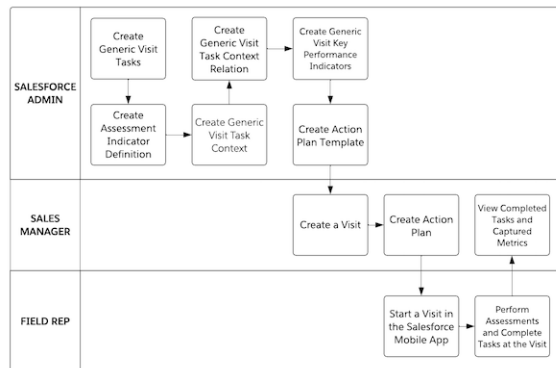
Salesforce Admin Workflow

1. Create tasks that field reps must perform at a visit. See Create Generic Visit Tasks.

2. Specify the parameters to capture the performance or compliance metrics. See Create Assessment Indicators for Distributor Visit Tasks.

3. Associate other Salesforce records with tasks to make the visits more meaningful. See Set Context for a Visit Task.

4. Compare expected and actual values for the metrics captured for a particular task. See Compare Targets and Actuals with Generic Visit Key Performance Indicators.

5. Create an action plan template to capture the frequently performed tasks. See Create an Action Plan Template for Distributor Visits.

Sales Manager Workflow

1. Create a visit and assign a field rep. See Create a Visit.

2. Relate an action plan to a visit. See Create an Action Plan for a Visit.

3. After a field rep completes their visit, view completed tasks and track the captured metrics.

Field Rep Workflow

Start a visit by using the Partner Visits app on your mobile device. Check visit details, perform tasks, capture metrics, and take notes. See Execute Visits and Perform Tasks.

Set Up Partner Visit Management

To get started with Partner Visit Management, enable it in Setup and assign users the appropriate permission sets. Manufacturing Cloud comes with separate page layouts for sales managers and field reps with components that address their unique business requirements. Typically, sales managers use the Salesforce desktop site to schedule visits and field reps use the Salesforce mobile app on their mobile devices to perform visits.

Enable Partner Visit Management

To enable users to plan and execute effective visits to partners, turn on Partner Visit Management in Setup.

Assign Permission Sets for Partner Visit Management

To get started with Partner Visit Management, assign the appropriate permission sets to user profiles based on their required level of access.

Preconfigured Page Layout for Visit Planning

Sales managers can schedule visits, track visit details, and create tasks for field reps by using the preconfigured desktop Visit page and Generic Visit Task page layouts.

Preconfigured Page Layout for Visit Completion

Field reps can track key visit details and complete the tasks during a visit by using the preconfigured mobile Visit page and Task page layouts.

Enable Partner Visit Management

To enable users to plan and execute effective visits to partners, turn on Partner Visit Management in Setup.

1. From Setup, in the Quick Find box, enter `Partner Visit Management`, and then select **Partner Visit Management**.

2. Turn on Partner Visit Management.
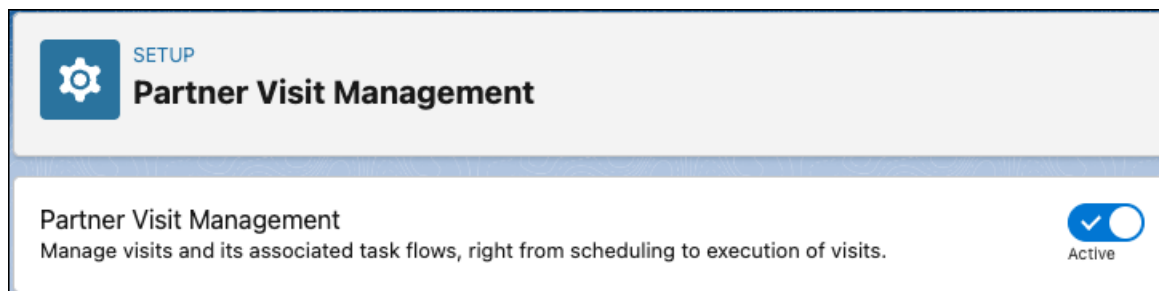
Assign Permission Sets for Partner Visit Management

To get started with Partner Visit Management, assign the appropriate permission sets to user profiles based on their required level of access.

To access the Partner Visit Management objects and task flows, you can assign one of the following combinations of permission sets.

- Partner Visit Management and Action Plans permission set
- Industries Visits and Action Plans permission sets

1. From Setup, in the Quick Find box, enter `Users`, and then select **Users**.

2. Select a user and in the Permission Set Assignments section, click **Edit Assignments**.

3. Select the permission set from the Available Permission Sets list, and move it to the Enabled Permission Sets list.

4. Save your changes.

Preconfigured Page Layout for Visit Planning

Sales managers can schedule visits, track visit details, and create tasks for field reps by using the preconfigured desktop Visit page and Generic Visit Task page layouts.

Visit Page Layout

Sales managers can capture key visit information, assign field reps to visits, and provide special instructions by using the preconfigured Visit record page for desktop. The Visit page layout has these tabs:

Details

Capture key details, such as visit priority, account, location, planned start and end times, assigned user, and special instructions to the assignee. Closely track the status of planned and ongoing visits and set the context for the visit. Relate a visit to a specific work type, such as general inspection or quarterly audit.

Related

Assign a visitor to a visit. The Generic Visit Tasks related list on the Related tab shows the tasks related to a specific visit by sales managers that aren't part of the related action plan. The Visited Parties related list shows specific persons, such as a warehouse supervisor at a distributor, that the sales managers want the rep to meet during the visit. If you relate files and attachments with a visit, on the Files related list, you can view the files and attachments, such as promotion banners to verify during supplier visits.

Action Plans

Relate an action plan template that has predefined tasks and metrics, to a visit by using the Action Plans related list. Review the mandatory and optional tasks related to the template and add the action plan.
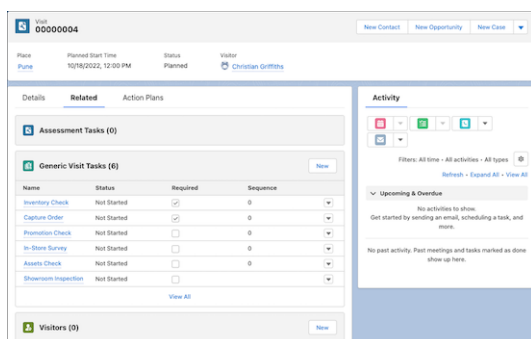
Generic Visit Task Page Layout

Sales managers can create tasks for a field rep by using the preconfigured Generic Visit Tasks record page for desktop. The Generic Visit Task page layout has these tabs:

Details

Capture key details, such as the related visit, reference task, description, and planned start and end times. Mark a task as a definition to create multiple tasks of the same type.

Related

On the Generic Visit Task Context Relations related list, view the relationships of a task and the task's associated records, such as a sales agreement record, an asset warranty record, or a case record. View the files related to a task.
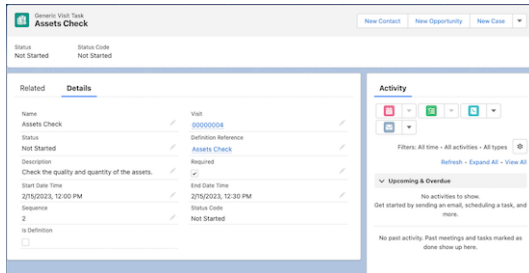
Preconfigured Page Layout for Visit Completion

Field reps can track key visit details and complete the tasks during a visit by using the preconfigured mobile Visit page and Task page layouts.

Visit Page Layout

Field reps can view a list of visits, track the visit progress, and perform key actions by using the preconfigured Visits record page for mobile. The Visit page layout has these tabs:

Visit List

Shows the list of in-progress and upcoming visits when the field rep starts the day. Field reps can scan through the most important information, such as account name, planned start time, and visit priority.

Visit Map

If addresses and maps are enabled, the rep can view the visit location on an embedded map.

Visit Actions

Shows the actions to start and end a visit, and an action that redirects the rep to the navigation app on the mobile device.

Visit Task List

Shows the list of tasks related to a visit and indicates whether a task is mandatory. A progress ring beside each task changes color based on the status of the task: started, in progress, and completed.

Task Page Layout

Field reps can quickly perform the evaluation and can complete the tasks by using the preconfigured Task page layout for mobile. The Task page layout has these tabs:

Details

Shows key details, such as the name of the task, task status, and related context records, and indicates whether the task is mandatory.

Assessment Indicator Definitions

Shows the list of the assessment indicator definitions related to the task as a questionnaire.

Expected Values and Actual Values

Shows the expected or target value for each assessment indicator definition. Has a section where the reps can record the actual metric values.

Plan Effective Visits to Partners

Track and manage the performance of distributors in your territory. Sales managers can plan visits for their field reps to visit distributor locations, assign tasks to be performed in a visit, and define metrics to capture during a visit. After a visit is complete, you can compare the expected metrics versus the actual metrics for the key performance indicators you defined and then take necessary actions.

Create Generic Visit Tasks

Create tasks that a field rep can perform during a visit to a distributor. For example, a rep can upsell additional products, negotiate sales agreement renewals, discuss discounts, rebates, and more. Sales managers can define their own tasks and associate their own assessment indicators with the tasks that help capture key business and performance metrics.

Create Assessment Indicators for Distributor Visit Tasks

Define assessment indicator definitions to specify the parameters to measure a distributor's performance or compliance. These records are used to define metrics for specific task contexts.

Set Context for a Visit Task

A task performed during a visit can have a specific context such as a distributor's account, a specific order, a product, or even a sales agreement. Sales mangers can associate specific assessment indicators with a task to make it more meaningful. The context of a task makes the job specific for the field rep.

Compare Targets and Actuals with Generic Visit Key Performance Indicators

Create Generic Visit Key Performance Indicator records to associate an assessment indicator definition to a visit task context. These records help sales managers compare expected versus actual values for metrics captured for a particular task.

Create an Action Plan Template for Distributor Visits

An action plan template is a reusable framework that helps you capture commonly or frequently-performed tasks. Sales managers can create one action plan template and associate it to multiple visits. For example, you can create an action plan template for quarterly distributor visits and add a few typical tasks such as conducting a survey, reviewing the last quarter's finances, and pitching sale of a new product.

Create a Visit

Create a visit and assign a field rep to the intended visit location such as a distribution center, a customer's office, or a supplier's warehouse.

Create an Action Plan for a Visit

Associate an action plan to a visit to form the connection between the place to visit, the visit, and the tasks to be performed. Sales managers can add tasks that are performed frequently by field reps to an action plan template and then publish the template. An action plan template can be associated with multiple Visit records and the tasks within the template get automatically associated with the visits.

Create Generic Visit Tasks

Create tasks that a field rep can perform during a visit to a distributor. For example, a rep can upsell additional products, negotiate sales agreement renewals, discuss discounts, rebates, and more. Sales managers can define their own tasks and associate their own assessment indicators with the tasks that help capture key business and performance metrics.

When a sales manger creates a generic visit task, they must select it as a definition. The runtime equivalent of that task is created automatically when the field rep starts the task on their mobile app.

1. From the App Launcher, find and select **Generic Visit Tasks**, and then click **New**.

2. Enter a name and description for the task.

3. Select the Status as **Is Defined** to mark the task as a definition.

4. Select the checkbox **Required** to mark the task as mandatory.

5. Select the start and end date and time.

6. Enter a numeric value for Sequence.

7. Save your changes.

> 📝 **Note:** If you use the Generic Visit Tasks related list on a Visit record to create a task, the Visit field is auto-populated.

Create Assessment Indicators for Distributor Visit Tasks

Define assessment indicator definitions to specify the parameters to measure a distributor's performance or compliance. These records are used to define metrics for specific task contexts.

For example, a sales manager can create a numeric assessment indicator called Number of Sales Agreements to Renew, and instruct the field rep to confirm the number with the distributor during a visit. Or, the manager can create a date-time indicator called Warranty Expiration Date and use it for visits to distributors who have active warranties.

1. From the App Launcher, find and select **Assessment Indicator Definitions**, and then click **New**.

2. Enter the name and description for the indicator.

3. Select an indicator field type.

   - Number

   - Boolean

   - Percentage

   - Date Time

   - Text

   - Decimal

4. Click **Save**.
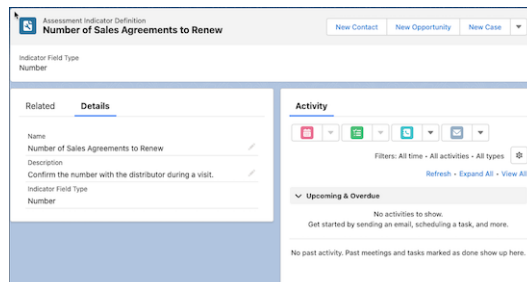
Set Context for a Visit Task

A task performed during a visit can have a specific context such as a distributor's account, a specific order, a product, or even a sales agreement. Sales mangers can associate specific assessment indicators with a task to make it more meaningful. The context of a task makes the job specific for the field rep.

A task can be associated with multiple context records. For example, a field rep is assigned a task to follow up on a sales agreement with a distributor. You can associate this task with a sales agreement record, the distributor's account record, and the product records that are part of the agreement.

1. From the App Launcher, find and select **Generic Visit Task Context**, and then click **New**.

2. Enter a name and description for the task.

3. Click the down arrow under Context, and select an object, then select the required record.

4. To mark the task as a definition, for Status, select **Is Defined**.

5. To mark the task as mandatory, select **Required**.

6. Select the start and end date and time.

7. Save your changes.
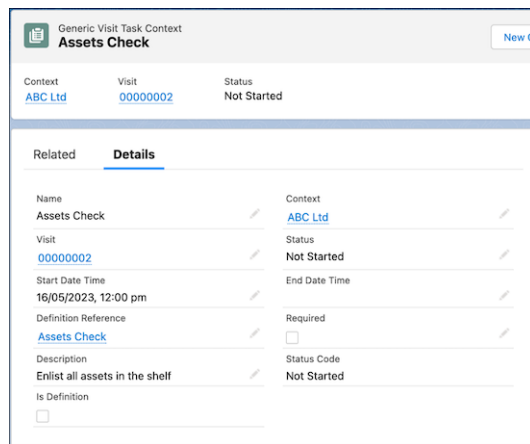
You can view the list of Generic Visit Task Context records associated with a task on the Generic Visit Task Context Relations related list of a task.

Compare Targets and Actuals with Generic Visit Key Performance Indicators

Create Generic Visit Key Performance Indicator records to associate an assessment indicator definition to a visit task context. These records help sales managers compare expected versus actual values for metrics captured for a particular task.

For example, a visit task context Sales Agreement Renewals can be associated with an assessment indicator definition Number of Sales Agreements to Renew. The sales manger can review the sales agreements with a specific partner account that are expected to be renewed in the next six months and define the expected value. During the visit, a field rep can check with the distributor and capture the actual value based on how many the dealer wants to actually renew. The sales manger can find this information for both expected and actual values on a Generic Visit Key Performance Indicator record and take next steps.

1. From the App Launcher, find and select **Generic Visit Key Performance Indicators**, and then click **New**.

2. Search for and select a Visit Task Context record.

3. Search for and select an Assessment Indicator Definition record.

4. Select the Action Plan Type as **Assessment Execution**.

5. Based on the field type of the assessment indicator, define the expected value.

6. Save your changes.
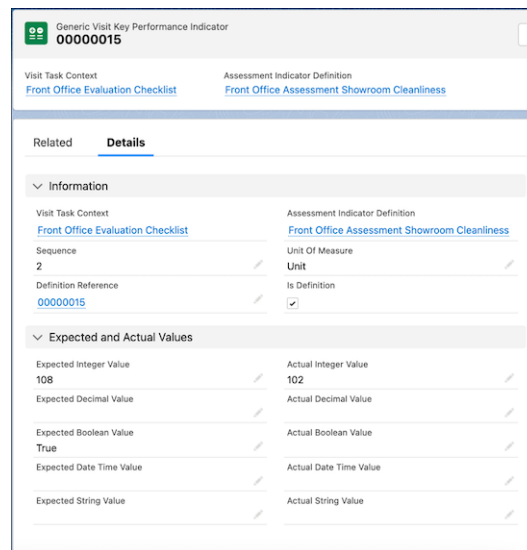
After a visit task is completed, the actual value for the assessment indicator is populated.

Create an Action Plan Template for Distributor Visits

An action plan template is a reusable framework that helps you capture commonly or frequently-performed tasks. Sales managers can create one action plan template and associate it to multiple visits. For example, you can create an action plan template for quarterly distributor visits and add a few typical tasks such as conducting a survey, reviewing the last quarter's finances, and pitching sale of a new product.

1. From the App Launcher, find and select **Action Plan Templates**, and then click **New**.

2. Enter a name and a description for the template.

3. For Target Object, select **Visit**.

4. For Action Plan Type, select **Assessment Execution**.

5. Select the checkbox **Let users add items to action plans** if you want reps to add tasks while on a visit.

6. Click **Save**.

7. Click **New Generic Assessment Task**.

8. Select **Is Required** if you want to make the task mandatory to perform.

9. Enter a value for Display Order.

> **Note:** The display order is the sequence to perform tasks in a visit. Each task gets a positive and unique value. When the action plan template is added to a visit, field reps assigned to the visit can see the tasks sequenced according to the display order. If the display order value isn't entered, the tasks are sorted in alphabetical order. But if the display order is entered for only a few tasks, then the tasks with undefined display order are sorted in alphabetical order and appear at the top of the task list, followed by the defined tasks. If field reps create tasks while on a visit, then the newly created tasks are displayed at the end of the task list.

10. Save your changes.

11. Click **Publish Template** to activate it.

Create a Visit

Create a visit and assign a field rep to the intended visit location such as a distribution center, a customer's office, or a supplier's warehouse.

1. From the App Launcher, find and select **Visits**.

2. Click **New**.

3. Click the down arrow under Place, select **Locations** or **Addresses**, then select the required record.

4. Select a visit priority.

   - High

   - Medium

   - Low

5. For Account, select the account of the distributor.

6. Enter the start and end date and time.

   The actual time can vary based on the real-time activity of the field rep.

7. For Context, select one of these type of records.

   - Sales Agreement

   - Advanced Account Forecast Set Use

   - Advanced Account Forecast Set Partner

   - Account Manager Targets

   - Manufacturing Program

   - Rebate Program

8. Provide special instructions to the field rep, if any.

   For example, sales managers can ask a rep to solicit feedback on a new product while at a dealer's location.

9. Click the down arrow under Visitor, select **People**, then select a field rep.

10. Save your changes.

Create an Action Plan for a Visit

Associate an action plan to a visit to form the connection between the place to visit, the visit, and the tasks to be performed. Sales managers can add tasks that are performed frequently by field reps to an action plan template and then publish the template. An action plan template can be associated with multiple Visit records and the tasks within the template get automatically associated with the visits.

1. From the App Launcher, find and select **Visits**.

2. Open the required visit record.

3. On the Related tab of the visit record page, for the Action Plan related list, click **New Plan**.

4. Specify the action plan details.

   a. Enter a name for the action plan.

   b. Search for and select the action plan template that you want to assign to the visit. You can assign only published templates.

   c. Enter a start date for the association of this template with the visit record.

   d. If needed, select **Skip Nonwork Days for Tasks**.

   e. Click **Next**.

5. Review the tasks that are related to the template, and then save your changes.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions.

USER PERMISSIONS

To create action plans:
- Partner Visit Management permission set
- Create access on Visit and Action Plan Template

Execute Visits and Perform Tasks

The Partner Visits mobile app helps field reps stay organized while they juggle their tasks. The app provides a complete view of the most relevant, actionable information on a mobile device without logging into multiple systems. Field reps can focus on the visits for each day, view key information for each visit, perform tasks, capture metric values, and take notes on the go within the context of the tasks.

Complete Your Visits on the Go

Launch the Generic Visits app on your mobile device to check the visit details of the day. When at a location, you can check the account's details and start the assigned tasks.

Complete Your Visits on the Go

Launch the Generic Visits app on your mobile device to check the visit details of the day. When at a location, you can check the account's details and start the assigned tasks.

1. In your Salesforce mobile app, tap **Menu**, **App Launcher**, and then **Generic Visits**.

2. The page with the list of scheduled visits appears. In this page, you can see all the visits assigned to you for the day. The location of the places to visit are available in the embedded map, if your manager has set up maps and addresses. You can filter the list by date, priority, and status.

   ✏️ Note: The location of the places to visit are available in the embedded map, if your manager has set up maps and addresses.

3. To view details and get started, tap the required visit.

4. Click **Get Directions** to open the navigation app and reach the location.

5. A visit's home page shows this information.

   - Tasks: View the list of tasks assigned to you for a particular store. The tasks are sequenced by your sales manager. If you don't see any tasks on this tab, tap **Overview** to see if your manager provided special instructions.

   - Notes: View notes from previous visits.

   - Overview: Your one-stop shop for all the information you need about a visit. View account details, special instructions, previous visits, and previous orders.

6. Tap the **Start Visit** button to start a visit and trigger a timer.

7. Under Tasks, tap each item to drill down into the task details and associated metrics to capture.

8. For each task, you can see the associated assessment indicators with its corresponding target values, if any. As you capture the actual values against a task's assessment indicators, the progress ring shows the task completion. When you finish capturing the values of assessment indicators, the progress ring is green.

9. To attach a file, under All Files click **Upload Files** and select the file you want to attach.

10. Tap **New Notes** if you want to add your observations

11. When you complete the tasks assigned to your visit, return to the visit's home page.

12. Tap **End Visit**, if you complete all the tasks assigned to you. If not, you can:

   • Complete the visit if you completed all mandatory tasks but not all optional tasks. Enter a reason for the incomplete tasks and tap **Complete Visit**.

   • Abandon the visit if you did not complete the mandatory tasks. Enter a reason for the incomplete tasks and tap **Abandon Visit**.

When you complete metric specifications for a task, go back to the home page to continue with other assigned tasks.

Work with Actionable Segmentation in Manufacturing Cloud

Meet your business goals by assigning prioritized actionable lists to your sales agents and providing guidance on prospect or customer engagement. Help your sales agents maximize their engagement outcome with outreach list in split view. Guide your sales or service agents to effectively engage with prospects, including existing customers, who might be interested in your products or services.

Actionable List Members
Help your sales agents view actionable list members or prospects, including existing customers. Set up and assign actionable lists to sales agents or service agents. The agents can then engage with and build trusted relationships with the prospects.

Outreach List
Help your sales or service agents get the most out of their prospect engagements with Outreach List in the split view. Enable the agents to effortlessly and efficiently cross-sell products, collect outstanding dues, and provide advisory services to prospects, including existing customers.

Actionable List Engagement
Help your sales agents engage with the prospects, including existing customers, interested in a product or service, such as a new product model or an extended warranty. Allow agents to complete an engagement seamlessly without having to leave the sales console. They can record a prospect's responses, complete transactions, and wrap up the engagement by taking notes and scheduling a follow-up meeting.

Work with Actionable Segmentation in Manufacturing Cloud
Use the Actionable Segmentation components in Manufacturing Cloud to help you maximize your engagement outcomes.

Actionable List Members

Help your sales agents view actionable list members or prospects, including existing customers. Set up and assign actionable lists to sales agents or service agents. The agents can then engage with and build trusted relationships with the prospects.

For detailed set up and configuration steps, see Actionable List Members in the Industries Common Features Guide.

Outreach List

Help your sales or service agents get the most out of their prospect engagements with Outreach List in the split view. Enable the agents to effortlessly and efficiently cross-sell products, collect outstanding dues, and provide advisory services to prospects, including existing customers.

For detailed set up and configuration steps, see Outreach List in the Industries Common Features Guide.

Actionable List Engagement

Help your sales agents engage with the prospects, including existing customers, interested in a product or service, such as a new product model or an extended warranty. Allow agents to complete an engagement seamlessly without having to leave the sales console. They can record a prospect's responses, complete transactions, and wrap up the engagement by taking notes and scheduling a follow-up meeting.

For detailed set up and configuration steps, see Actionable List Engagement in the Industries Common Features Guide.

Work with Actionable Segmentation in Manufacturing Cloud

Use the Actionable Segmentation components in Manufacturing Cloud to help you maximize your engagement outcomes.

Components	What it helps you do	Learn more
Actionable List Members	Determine which prospects and existing customers to contact first.	View Actionable List Members
Outreach List	View a prioritized and consolidated list of prospects, including existing customers, who you can contact.	Open Outreach List and View Prospects
Actionable List Engagement	Get meaningful guidance on prospect outreach and promotion of products and services.	Engage with Prospects

Manage the Service Lifecycle with Manufacturing Cloud

Manufacturing Cloud for Service lets you manage your customer service experience in Salesforce. It brings the power of Service Cloud to manufacturers and provides industry-specific functionality. Your customer service representatives (CSRs) can use the Service Console for Manufacturing to stay productive, across multiple channels, even while solving issues in the field. CSRs can work with service console components in Manufacturing Cloud to meet the needs of your customers and business. Service technicians in the field can generate service estimates quickly using the Pre-Work Estimation app.

Tip: Not sure where to start? Check out Get Started with Manufacturing Cloud for Service to watch a demo, learn about what's included, and what setup we recommend.

Service Lifecycle Management Features in Manufacturing Cloud

Service Console for Manufacturing empowers customer service representatives (CSRs) to get a holistic view of a contact, promptly resolve customer queries, and get alerts about critical activities. Asset Service Console for Manufacturing gives CSRs a 360-degree view of an asset and its activities, such as its major milestones, service performed on it, and its related cases and warranties. Service console components are versatile capabilities that can be customized within these consoles or extended to work with other standard pages.

Set Up Customer and Asset Service Lifecycle Features in Manufacturing Cloud

Set up features to manage the customer and asset service lifecycle. Give users access to the Service Console for Manufacturing and the Asset Service Console for Manufacturing. Configure the service console components in Manufacturing Cloud to fine-tune each step in your service experience.

Service Console for Manufacturing

Orchestrate every part of the service experience and provide meaningful, personalized interactions to your customers from a unified console. The Service Console for Manufacturing ties together powerful components that elevate the productivity of customer service representatives (CSRs) and present a 360-degree view of the customer. The console can help CSRs quickly resolve customer cases, proactively address issues, and take advantage of upsell opportunities, like warranty renewals and related subscriptions.

Work with the Service Console Components in Manufacturing Cloud

Use the service console components in Manufacturing Cloud to help you perform customer service tasks such as verifying a customer's identity, tracking interactions with your customers, and launching actions to resolve customer queries.

Provide On-Site Pre-Work Estimates and Track Customer Approvals

Let service technicians in the field generate quick estimates for products and services, track customer approvals, and create orders—all without leaving the customer site. To get started, use the pre-work estimation OmniScripts, OmniStudio FlexCards, Document Templates, and a custom component. Pre-work estimation components work in the Salesforce desktop site and in the Salesforce mobile app.

Forecast Service Revenue and Spare Parts Demand

Use the Advanced Account Forecasting feature to shape accurate forecasts for service revenue and spare parts demand. To process forecasts, create custom forecast fact objects. Also, create data processing engine templates and jobs. You can then use these data processing engines in custom flows to generate accurate forecasts.

Develop a Voice of the Customer

With Salesforce Feedback Management, you can create engaging, easy-to-use surveys with a simple editor to collect feedback and information from your customers.

Service Lifecycle Management Features in Manufacturing Cloud

Service Console for Manufacturing empowers customer service representatives (CSRs) to get a holistic view of a contact, promptly resolve customer queries, and get alerts about critical activities. Asset Service Console for Manufacturing gives CSRs a 360-degree view of an asset and its activities, such as its major milestones, service performed on it, and its related cases and warranties. Service console components are versatile capabilities that can be customized within these consoles or extended to work with other standard pages.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions.

Service Console for Manufacturing

The Service Console for Manufacturing helps CSRs deliver personalized, intelligent service interactions to customers. From a single page, CSRs can get visibility into activities related to a customer, look into customer requests and resolve them, and proactively perform actions. The Service Console for Manufacturing brings together service console components and Platform capabilities to help CSRs make the most out of every interaction.

Asset Service Console for Manufacturing

The Asset Service Console for Manufacturing lets CSRs enhance every part of an asset's lifecycle. CSRs can use it to keep tabs on activities related to the asset, track its major milestones, and capture granular information about its sale and usage. CSRs can also manage cases, work orders, warranties, and claims for an asset.

Service Console Components in Manufacturing Cloud

Manufacturing Cloud for Service comes with service console components, a suite of capabilities that enable CSRs to fine-tune different aspects of the service experience. Service console components include Identity Verification, Timeline, Record Alerts, Audit Trail, Action Launcher, and Service Process Studio. Service Console for Manufacturing and Asset Service Console for Manufacturing come with some preconfigured service console components.

Service console components can be customized within the consoles to meet your business needs. For example, you can customize the preconfigured timeline in the Service Console for Manufacturing to show information about sales agreements related to a contact. Service console components can also be configured individually and extended to work with different standard pages. For example, you can add a timeline on the Account record page to show information about work orders related to the account.

How Do Different Capabilities Come Together?

Here's how different capabilities work within the Service Console for Manufacturing and the Asset Service Console for Manufacturing and as separate service console components.

Capability	Included in the Service Console for Manufacturing?	Included in the Asset Service Console for Manufacturing?	How Can You Use It With Different Standard Apps?
Identity Verification	Yes The console comes with a Verify Customer Identity flow.	No	You can use the preconfigured Verify Customer Identity flow, the preconfigured flow available with Industry Service Excellence, or create your own flow.
Record Alerts	Yes The console comes with a Record Alerts component.	Yes The console comes with a Record Alerts component.	You can add the Record Alerts component to other pages, such as Account and Sales Agreements, and configure record alerts based on your business use.

Capability	Included in the Service Console for Manufacturing?	Included in the Asset Service Console for Manufacturing?	How Can You Use It With Different Standard Apps?
Timeline	Yes The console comes with a Timeline component and a preconfigured timeline called Interaction Timeline that shows engagement interaction records related to a contact. You can create timelines that show other records for the console, too.	Yes The console comes with a Timeline component and a preconfigured timeline called Asset Timeline that shows work orders and work order line items records related to an asset. You can create timelines that show other records for the console, too.	You can configure a timeline to show any records and add the Timeline component to any standard app page, such as Account.
Audit Trail	Yes	No	Audit Trail works with identity verification records. CSRs can view customer identity verification logs using Audit Trail.
Actions & Recommendations	Yes The console comes with an Actions & Recommendations component. It lists and recommends flows.	Yes The console comes with an Actions & Recommendations component. It lists and recommends flows.	You can add the Actions & Recommendations component to other pages, such as Account and Sales Agreements, and configure it based on your business use.
Action Launcher	No If you've configured Action Launcher for your org, you can manually add the Action Launcher component to the console page layout.	No If you've configured Action Launcher for your org, you can manually add the Action Launcher component to the console page layout.	You can add the Action Launcher component to any standard app. It lists Salesforce Flow, OmniScripts, and Quick actions.
Knowledge	Yes The console comes with a Knowledge component.	No	Knowledge is a standard platform capability. You can add the Knowledge component to a custom Lightning console app.
Service Process Studio	No	No	You can create and activate a service process so that CSRs can launch it through the Action Launcher component on a record details page.
Milestones	No	Yes	You can add the Events and Milestones component to the

Capability	Included in the Service Console for Manufacturing?	Included in the Asset Service Console for Manufacturing?	How Can You Use It With Different Standard Apps?
			Account, Contact, or Asset record page layouts to show details about key moments in the lifecycle of these records.

SEE ALSO:

[Service Console for Manufacturing](#)

[Manage the Asset Lifecycle in Manufacturing Cloud](#)

Set Up Customer and Asset Service Lifecycle Features in Manufacturing Cloud

Set up features to manage the customer and asset service lifecycle. Give users access to the Service Console for Manufacturing and the Asset Service Console for Manufacturing. Configure the service console components in Manufacturing Cloud to fine-tune each step in your service experience.

Enable Service Lifecycle Management Features in Manufacturing Cloud

To give users access to the Service Console for Manufacturing and the Asset Service Console for Manufacturing, enable Service Console for Manufacturing in Setup.

Assign Users Permission Sets for Service Lifecycle Features in Manufacturing Cloud

Assign permission sets to admins and users based on their required level of access to the Service Console for Manufacturing and Asset Service Console for Manufacturing features.

Prerequisites for Service Console for Manufacturing

Review these prerequisites to use the Service Console for Manufacturing and its individual components.

Protect the Identity of Your Manufacturing Customers

Use Identity Verification to verify the identity of a customer or their authorized representative. This helps manufacturers in protecting a customer's personally identifiable information (PII) when processing requests, preventing its unauthorized use, and complying with data regulations. A customer service representative can verify a caller's identity by asking them preset questions and locating their profile in the customer database. You can choose which details a person must provide to prove their identity, such as a social security number, birth date, email, or phone number.

Ensure Privacy of Customers With Audit Trail

Audit Trail lets customer service representatives inspect customer identity verification logs, detect potential cases of identity fraud, and meet audit compliance standards. Audit Trail works with customer identity verification records, which are created when the CSRs use the Verify Customer Identity flow to verify the customer's identity.

View Customer Activity on a Timeline in Manufacturing Cloud

Timeline provides a comprehensive, chronological, and interactive view of customer-related activities in a single place. For example, when a customer calls in about their warranty for one of your products, the customer service representative can create an engagement interaction that gets included in the Timeline. That way, when other service reps help the customer, they can easily see what's already been discussed.

Stay Informed About Changes Related to Your Manufacturing Customers

Record Alerts help your customer service representatives and account managers stay on top of changes related to your manufacturing customers. For example, when a customer's case about their warranty is escalated, customer service representatives can stay in the loop.

Launch Actions to Resolve Customer Queries with Action Launcher

Action Launcher makes it easier for customer service representatives to find and execute service actions such as scheduling service appointments, escalating a case, and renewing a customer contract. You can configure actions using flows, OmniScripts, or quick actions for your business use cases.

Create an End-to-End Manufacturing Service Process

Use Service Process Studio to create a process for your customer service operations. Customer service representative (CSRs) can launch a service process to work on customer service operations through their entire lifecycle, from request intake to fulfillment.

Enable Service Lifecycle Management Features in Manufacturing Cloud

To give users access to the Service Console for Manufacturing and the Asset Service Console for Manufacturing, enable Service Console for Manufacturing in Setup.

> 📝 **Note:** Manufacturing Cloud includes a predefined console app. However, the components you use in the console must be configured to meet your business needs. To learn more Prerequisites for Service Console for Manufacturing.

1. From Setup, in the Quick Find box, enter `Service Console for Manufacturing`, and then select **Service Console for Manufacturing**.

2. Turn on **Service Console for Manufacturing**.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions.

USER PERMISSIONS

To enable Service Console for Manufacturing:
- Service Console for Manufacturing AND Industry Service Excellence permission sets

Assign Users Permission Sets for Service Lifecycle Features in Manufacturing Cloud

Assign permission sets to admins and users based on their required level of access to the Service Console for Manufacturing and Asset Service Console for Manufacturing features.

Manufacturing Cloud provides the following permission sets related to the Service Console for Manufacturing and the Asset Centric Console for Manufacturing.

Table 4: Permission Sets for Service Console for Manufacturing

PERMISSION SET	DESCRIPTION
Industry Service Excellence	Gives admins access to objects and features for Industry Service Excellence.
Service Console for Manufacturing	Gives users access to Service Console for Manufacturing and Asset Service Console for Manufacturing features.
Warranty Lifecycle Management Psl	Gives users access to Asset Service Console for Manufacturing features. It also gives users access to Warranty Lifecycle Management features.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions.

USER PERMISSIONS

To assign permissions:
- Assign Permission Sets AND View Setup and Configuration

1. From Setup, in the Quick Find box, enter `Users`, and then select **Users**.

2. Select a user and in the Permission Set Assignments section, click **Edit Assignments**.

3. Select the required permission sets from the Available Permission Sets list, and move them to the Enabled Permission Sets list.

4. Save your changes.

Prerequisites for Service Console for Manufacturing

Review these prerequisites to use the Service Console for Manufacturing and its individual components.

Here are the prerequisites to use Service Console for Manufacturing.

Record Alerts

To view Record Alerts in the console, assign users the Omnistudio Admin permission set and enable Standard Omnistudio Runtime in Omnistudio Settings page in Setup.

Order and Asset Records

To view order and asset records in the console, ensure that the Order and Asset related lists are added to the Account object page layout.

Timeline

To use the Timeline component in the console, enable Timeline in Setup. The preconfigured Timeline component in the console is anchored to the Contact object. To create a custom timeline anchored to other objects, configure the Timeline component included with Industries Service Excellence and add the component to the required page. To learn how, see View Customer Activity on a Timeline in Manufacturing Cloud.

Knowledge

To use the Knowledge component in the console, you must enable Knowledge from the Knowledge Settings page in Setup and assign users the necessary permission set license, user permissions, and Knowledge object permissions. To learn more, see Salesforce Knowledge.

Identity Verification

To use Identity Verification with the console, you can either use the preconfigured Identity Verification Flow for Manufacturing Service Excellence or customize the predefined flow available with Industry Service Excellence. To learn more, see Protect the Identity of Your Manufacturing Customers.

Engagement Records

To integrate computer-telephony with the Service Console for Manufacturing, configure computer-telephony integration (CTI) systems. You can set up a softphone using Service Cloud's CTI integration, and the identity verification flow and the engagement data model work seamlessly with Service Cloud's CTI process. Then, use the Engagement Connect APIs to configure the link between the softphone and an Engagement Interaction record. This ensures that an Engagement Interaction record is automatically created when an inbound call comes in.

To configure CTI, see Salesforce Open CTI.

To use the Connect APIs, see Engagement Connect APIs.

You can also configure Service Cloud Voice for partner telephony (BYOT) to set up a similar call center experience. To configure BYOT, see Set Up Service Cloud Voice with Partner Telephony.

Protect the Identity of Your Manufacturing Customers

Use Identity Verification to verify the identity of a customer or their authorized representative. This helps manufacturers in protecting a customer's personally identifiable information (PII) when processing requests, preventing its unauthorized use, and complying with data regulations. A customer service representative can verify a caller's identity by asking them preset questions and locating their profile in the customer database. You can choose which details a person must provide to prove their identity, such as a social security number, birth date, email, or phone number.

The identity verification process relies on identity verification objects and flows, which can be customized as per your business needs.

You can customize a preconfigured flow or create a flow to be used with the console and other standard apps. You can use or customize these preconfigured Identity Verification flows:

- Verify Caller Identity: If you have the Service Console for Manufacturing permission set license, and you enable Service Console for Manufacturing, this predefined flow is automatically available in your org.

- Verify Customer Identity: If you have the Industries Service Excellence permission set license, and you enable Service Console for Manufacturing, this predefined flow is automatically available in your org.

When you enable Service Console for Manufacturing in your org, some Identity Verification records are automatically created in the org. These records store metadata about which objects and fields are used in the Identity Verification flow.

- Identity Verification Process Definition: Sample Verification Flow for Manufacturing Service

- Identity Verification Process Details: ContactSearch

- Identity Verification Process Field: PhoneSearch, EmailSearch, ContactNameResult, AccountNameResult, ContactName, AccountName, Phone, and Email.

For detailed setup and configuration steps, see Identity Verification in the Common Features Guide.

SEE ALSO:

Salesforce Call Center

Ensure Privacy of Customers With Audit Trail

Audit Trail lets customer service representatives inspect customer identity verification logs, detect potential cases of identity fraud, and meet audit compliance standards. Audit Trail works with customer identity verification records, which are created when the CSRs use the Verify Customer Identity flow to verify the customer's identity.

For detailed set up and configuration steps, see Audit Trail in the Industries Common Features Guide.

View Customer Activity on a Timeline in Manufacturing Cloud

Timeline provides a comprehensive, chronological, and interactive view of customer-related activities in a single place. For example, when a customer calls in about their warranty for one of your products, the customer service representative can create an engagement interaction that gets included in the Timeline. That way, when other service reps help the customer, they can easily see what's already been discussed.

Manufacturing Cloud includes a default Timeline configuration set up to work with contact records and engagement interactions. In addition, the Timeline component is included in the Service Console for Manufacturing. You can set up the Timeline component to work with other objects and add it to other pages in standard navigation apps too. You can even add it to your partner portal.

How Timeline Works in Manufacturing Cloud

A timeline lets users see data from objects as a sequence of events happening over time. You determine what information shows on the timeline by choosing the base (or primary) object and the related objects. You can use standard objects or custom objects.

Set Up a Timeline in Manufacturing Cloud

Configure interactive timelines that provide access to information about customers.

Add Timeline to a Record Page

To let your Manufacturing Cloud users see the Timeline and its data, add it to a Lightning record page.

Add Timeline to Your Experience Cloud Site

To let people use Timeline without logging in to Manufacturing Cloud, add it to your Experience Cloud site.

How Timeline Works in Manufacturing Cloud

A timeline lets users see data from objects as a sequence of events happening over time. You determine what information shows on the timeline by choosing the base (or primary) object and the related objects. You can use standard objects or custom objects.

A user's profile permissions determine access to timelines. You can assign a user multiple timeline configurations.

For example, a customer service representative may have access to timelines that represent warranty term records or case activities.

Before you start configuring a timeline, identify your business requirements. At a minimum, decide which objects are required for the timeline and the information you want it to show.

Set Up a Timeline in Manufacturing Cloud

Configure interactive timelines that provide access to information about customers.

User Permissions Needed

To set up Manufacturing Cloud features:	Customize Application
To configure a Timeline:	Read and Edit access for objects you're including on the Timeline

1. From Setup, in the Quick Find box, enter `Timeline`, and then select **Timeline**.

2. Turn on **Timeline Configuration**.

> **Note:** Enabling Timeline is a one-time task. After you enable Timeline in your org, you can't disable it.

3. Click **New Timeline**.

    a. Enter a name for the timeline.

    b. Enter an API name for the timeline, or accept the name that's automatically generated.

    c. Select an object that serves as the basis for the timeline.

    You can base your timeline on any Salesforce object (standard or custom). You can add related objects to the timeline later.

    For example, to represent a machine's maintenance history on a timeline, select Asset as the timeline object.

> **Note:** If you use a custom object on your timeline, ensure that it displays correctly by making sure it has a custom tab. See Create a Custom Object Tab for more information.

    d. Click **Save**.

4. On the Global Settings page, turn **Show Age** on to show how old a record of the base or primary object was when an event occurred, along with the date of the event.
For example, you can see the age of an account based on when it was created. If the base object is Asset, the age of the asset at the time of an event is shown. Otherwise, only the event and the date appear.

5. If you chose to show age along with the timestamp, choose the field to use for calculating age.

To show the age of this asset, you might select the `Install Date` field.

6. Click **Next**.

7. On the Timeline Related Objects page, click **Add Related Object**.

    a. Select a related object (standard or custom) that contains information you want to display on the timeline.

    You can add up to five related objects per base object. If an object has record types, you can select up to five record types.

    b. Select the field that associates the related object with the base timeline object, then click **Next**.

    If a related object has only one lookup to the base object, then the field is auto-selected and can't be changed.

> **Note:** Enhanced Timeline doesn't support encrypted fields. Make sure any field you choose isn't encrypted.

c. Add conditions for showing records on the timeline. You can add conditions only for indexed fields. Then click **Next**.
For example, you can show tasks that aren't canceled or deferred.

Add Related Object

Set Record Visibility ⓘ

Show records on the timeline only when

All Conditions Are Met (AND) ▼

*Field	*Operator	*Value
Status ▼	Not Equals ▼	Deferred 🔍 🗑

+ Add Condition
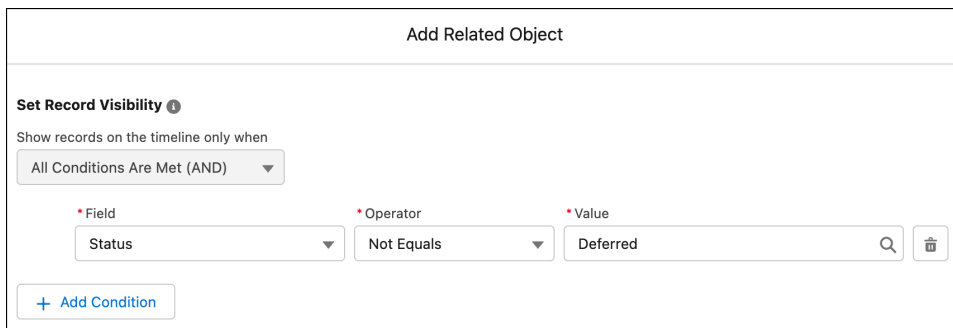
d. Select the Title, Subtitle, and Timestamp fields for the timeline events, and then click **Next**.

Every event on a timeline has a title, an optional subtitle, and a timestamp, which are sourced from fields in the related object.

- For title, you can use something like a Subject field. For example, "Call Customer."
- For subtitle, you can use something like a Description field. For example, "Ask about upcoming event."
- For timestamp, select a field that's likely to have a value, such as Created Date. The timestamp appears alongside the event on the timeline. Events without a timestamp don't appear on the timeline.

e. Select the fields and related lists you want to display on the timeline, and then click **Add**.

8. To save the timeline and make it available for use, click **Activate**.

9. Preview the timeline you've configured by selecting a base object record in the View Timeline On field.
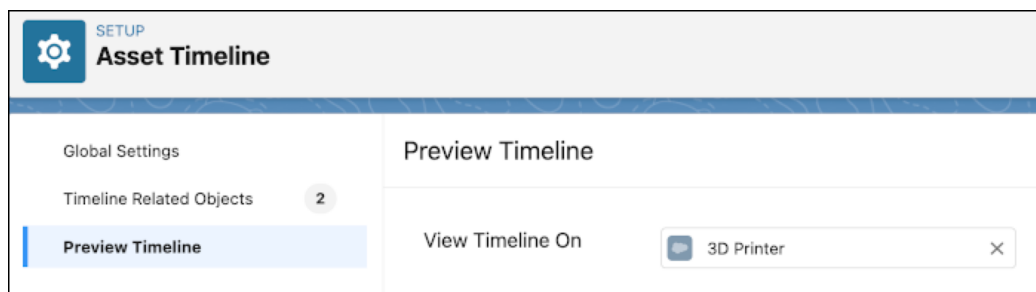
SETUP
Asset Timeline

Global Settings	**Preview Timeline**
Timeline Related Objects 2	
Preview Timeline	View Timeline On 💬 3D Printer ✕

Add Timeline to a Record Page

To let your Manufacturing Cloud users see the Timeline and its data, add it to a Lightning record page.

User Permissions Needed

To set up Manufacturing Cloud features:	Customize Application
To configure a Timeline:	Read and Edit access for objects you're including on the Timeline

1. Go to the record page of the object on which you created a timeline.

2. Select the gear icon on the top-right corner of the page and then click **Edit Page**.

3. Drag the Timeline component to the editable content area.

4. To select the timeline configurations you want to make available to users, click **Select** in the component properties panel.

   Only active timeline configurations are available for selection.
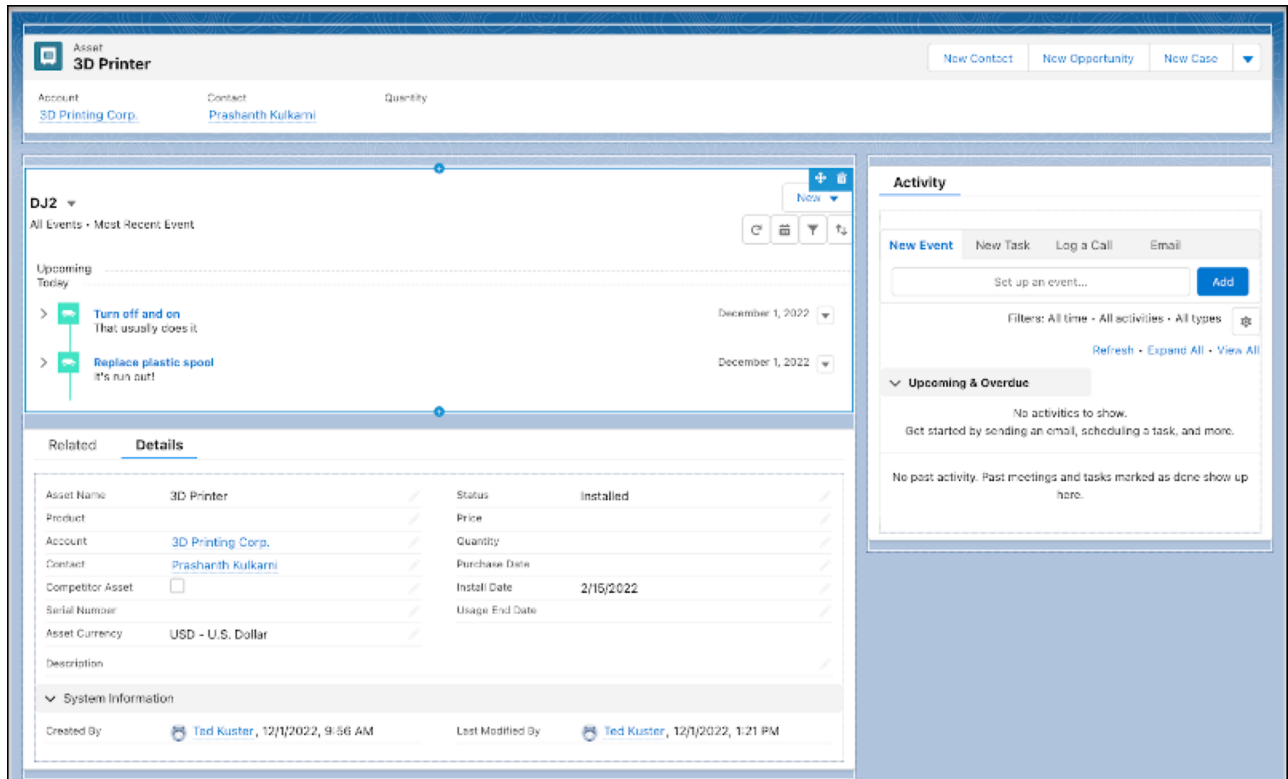
5. In the Timeline window, select the required configurations and then click **OK**.

   You can select up to 5 timeline configurations.

6. Save and activate your changes.

Add Timeline to Your Experience Cloud Site

To let people use Timeline without logging in to Manufacturing Cloud, add it to your Experience Cloud site.

User Permissions Needed

To set up Manufacturing Cloud features:	Customize Application
To configure a Timeline:	Read and Edit access for objects you're including on the Timeline

1. From Setup, in the Quick Find box, enter *All Sites* and select **All Sites**.

2. Click **Builder** for the site in which you want to add Timeline.

   You can add Timeline to only those sites that support record detail pages.

3. Select the required record page from the Home menu.

4. Drag the **Timeline** component from the Components menu to the relevant content area.

5. In the Timeline properties panel, click **Select…**.

6. In the Timeline window, select the required configurations and then click **OK**.

   You can select up to five configurations.

7. Publish your changes.

Stay Informed About Changes Related to Your Manufacturing Customers

Record Alerts help your customer service representatives and account managers stay on top of changes related to your manufacturing customers. For example, when a customer's case about their warranty is escalated, customer service representatives can stay in the loop.

You can use record alerts in the Service Console for Manufacturing or configure it for any other app that your customer service reps or account managers use. Configure record alerts based on your business needs.

For detailed set up and configuration steps, see Record Alerts in the Industries Common Features Guide.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions.

Launch Actions to Resolve Customer Queries with Action Launcher

Action Launcher makes it easier for customer service representatives to find and execute service actions such as scheduling service appointments, escalating a case, and renewing a customer contract. You can configure actions using flows, OmniScripts, or quick actions for your business use cases.

For detailed set up and configuration steps, see Action Launcher in the Industries Common Features Guide.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions.

Create an End-to-End Manufacturing Service Process

Use Service Process Studio to create a process for your customer service operations. Customer service representative (CSRs) can launch a service process to work on customer service operations through their entire lifecycle, from request intake to fulfillment.

For detailed set up and configuration steps, see Service Process Studio in the Industries Common Features Guide.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions.

Service Console for Manufacturing

Orchestrate every part of the service experience and provide meaningful, personalized interactions to your customers from a unified console. The Service Console for Manufacturing ties together powerful components that elevate the productivity of customer service representatives (CSRs) and present a 360-degree view of the customer. The console can help CSRs quickly resolve customer cases, proactively address issues, and take advantage of upsell opportunities, like warranty renewals and related subscriptions.

Watch this video to take a tour of the Service Console for Manufacturing.

▶️ Watch a video

If you aren't able to watch the view in full screen, open the video on a new tab: ▶ Take a Tour of Service Console for Manufacturing.

Learn About Service Console for Manufacturing

The Service Console for Manufacturing is where your customer service representatives (CSRs) can view a timeline of interactions with the customer, get contextual alerts, review and create assets, orders, and cases, take relevant actions, and search for knowledge articles. Learn how the console is organized to help your CSRs manage the entire service lifecycle from one page.

Work with the Service Console for Manufacturing

The Service Console for Manufacturing gives you a holistic picture of the customer and ties together the tools that you need to resolve their queries and provide proactive service. For example, when a B2B customer calls your service center, as a customer service representative (CSR), you can use the console to multitask without losing the context of the interaction. On a single screen, track upcoming engagements, check order delivery status and asset performance, upsell an extended warranty, escalate a case, and more.

Extend Service Console for Manufacturing

Supercharge agent productivity and deepen customer relationships by customizing the service console components in Manufacturing Cloud. Customize the components within the Service Console for Manufacturing or configure them to work with different standard pages. Watch this video to explore how to extend the Service Console for Manufacturing.

Learn About Service Console for Manufacturing

The Service Console for Manufacturing is where your customer service representatives (CSRs) can view a timeline of interactions with the customer, get contextual alerts, review and create assets, orders, and cases, take relevant actions, and search for knowledge articles. Learn how the console is organized to help your CSRs manage the entire service lifecycle from one page.

Manufacturing Cloud provides a preconfigured console app that displays information about your contacts. The console is designed to help CSRs deliver excellent customer service. Here's how everything comes together.

View Customer Details

CSRs can see the contact details of the customer (1).

Track Interactions with Customers

CSRs can ensure continuity in engagements with the customer with a chronological, interactive timeline of all interactions with the customer (2). The timeline component is preconfigured to work with contact records and engagement interactions.

Get Contextual Alerts

CSRs can receive timely alerts on related activities like upcoming warranty renewals, asset performance issues, order delays, and open cases. These alerts can help them proactively address issues (3). You must set up alerts as per your business needs.

Manage Related Orders, Cases, and Assets

Get a snapshot of the customer's assets, cases, and orders. CSRs can quickly create records or edit existing ones, with minimal clicks and scrolling (4).

Take Relevant Actions

CSRs can get recommendations and launch actions such as create a case, create a warranty claim, buy an extended warranty, and schedule a service appointment (5). You must configure flow-based actions according to your business needs.

Search for Knowledge Articles

CSRs can get quick access to relevant knowledge articles and answer customers' questions (6).

Work with the Service Console for Manufacturing

The Service Console for Manufacturing gives you a holistic picture of the customer and ties together the tools that you need to resolve their queries and provide proactive service. For example, when a B2B customer calls your service center, as a customer service representative (CSR), you can use the console to multitask without losing the context of the interaction. On a single screen, track upcoming engagements, check order delivery status and asset performance, upsell an extended warranty, escalate a case, and more.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions.

When a customer calls your service center, as a CSR, you can create an engagement interaction record and verify the customer's details with the Identity Verification flow. After the flow verifies the customer, you are directed to the contact's record page in the Service Console for Manufacturing app. You're able to see all the information related to the verified customer. If your company isn't using flows, you can open a contact's record directly from a contact list view.

Here's what you can do from the console page.

- In the Contact Details card, you can find the customer's contact details (1).
- In the Timeline card, you can view a chronological, searchable timeline of interactions with the customer (2).
- In the Alerts card, you can check if there are any alerts configured for your business context that need attention, such as alerts on the expiration of a warranty, performance of an asset, or status of a case (3). Accordingly, you can proactively address the issues and take the required actions.
- You can also view, open, and edit the related orders, cases, and assets of the account on the relevant snapshots (4).
- In the Actions & Recommendations card, you can check the recommended actions configured for your use case and launch the relevant ones, such as escalating a case, scheduling a service appointment, or buying an extended warranty (5).
- In the Knowledge card, you can search and open the relevant Knowledge articles to answer the customer's queries (6).

Extend Service Console for Manufacturing

Supercharge agent productivity and deepen customer relationships by customizing the service console components in Manufacturing Cloud. Customize the components within the Service Console for Manufacturing or configure them to work with different standard pages. Watch this video to explore how to extend the Service Console for Manufacturing.

📹 Watch a video

If you aren't able to watch the view in full screen, open the video on a new tab: ▶ Extend Service Console for Manufacturing.

EDITIONS
Available in: **Enterprise**, **Unlimited**, and **Developer** Editions.

Work with the Service Console Components in Manufacturing Cloud

Use the service console components in Manufacturing Cloud to help you perform customer service tasks such as verifying a customer's identity, tracking interactions with your customers, and launching actions to resolve customer queries.

Use these links to learn about the service console components in Manufacturing Cloud.

EDITIONS
Available in: **Enterprise**, **Unlimited**, and **Developer** Editions.

Components	What it helps you do	Learn more
Identity Verification	Verify the identity of a customer or a customer's authorized representative and protect their personally identifiable information.	Protect the Identity of Your Manufacturing Customers
Audit Trail	Examine customer identity verification records to ensure the security of customers and maintain audit compliance standards.	Open Audit Trail and Analyze Audit Records
Timeline	Get a chronological timeline of customer-related activities such as engagement interactions with customers.	View Customer Activity on a Timeline in Manufacturing Cloud on page 307

Components	What it helps you do	Learn more
Record Alerts	Receive actionable and contextually relevant alerts on records, such as alerts on delivery status or case escalations.	Monitor and Take Action on Record Alerts
Action Launcher	Launch relevant actions to promptly address your customer's queries.	Launch Actions
Service Process Studio	Deploy service processes to get started with customer service operations.	Service Process Studio

Provide On-Site Pre-Work Estimates and Track Customer Approvals

Let service technicians in the field generate quick estimates for products and services, track customer approvals, and create orders—all without leaving the customer site. To get started, use the pre-work estimation OmniScripts, OmniStudio FlexCards, Document Templates, and a custom component. Pre-work estimation components work in the Salesforce desktop site and in the Salesforce mobile app.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions

Pre-Work Estimation Workflow

Here are the high-level steps in the pre-work estimation workflow.
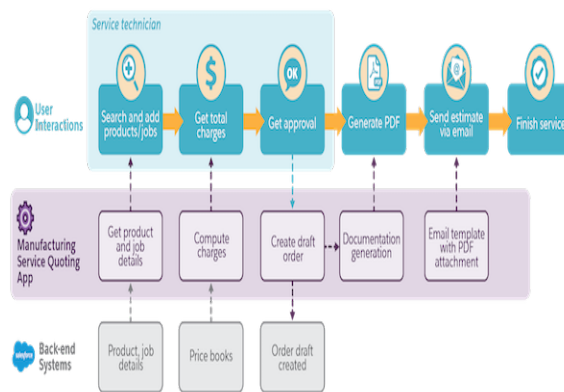
Prerequisites for Pre-Work Estimation
Complete these prerequisites before you configure the pre-work estimation components.

Set Up a Lightning App Page for Pre-work Estimation
To let your service technicians generate pre-work estimates, create a Lightning app page in Lightning App Builder. Lightning app pages are supported both in the Salesforce mobile app and Lightning Experience.

Create Estimates and Orders with Pre-Work Estimation

Service technicians can use the Pre-Work Estimation app page in the Salesforce mobile app to create service estimates, track customer approvals, and create orders.

SEE ALSO:

OmniStudio

Prerequisites for Pre-Work Estimation

Complete these prerequisites before you configure the pre-work estimation components.

Create Accounts, Products, and Pricebooks

Before you use the pre-work estimation components, create Account and Product records in your org. The service technician can select from a list of available accounts and products on the app. A Product record must be associated with at least one active Pricebook record.

Set Up Foundation Document Generation (Optional)

If you want to automatically generate a .pdf file containing order details after a service technician places an order using the app, set up Foundation Document Generation. See Foundation Document Generation for details. Service technicians can email the .pdf file to the partner or customer directly from the app.

To generate a .pdf file containing order details and links, you must have the required setup for Foundation Document Generation in your org, and an active Document Template record in your org named OrderDetails.

Set Up a Lightning App Page for Pre-work Estimation

To let your service technicians generate pre-work estimates, create a Lightning app page in Lightning App Builder. Lightning app pages are supported both in the Salesforce mobile app and Lightning Experience.

1. From Setup, in the Quick Find box, enter `User Interface`, and then select **Lightning App Builder**.

2. Click **New**.

3. Select **App Page** and click **Next**.
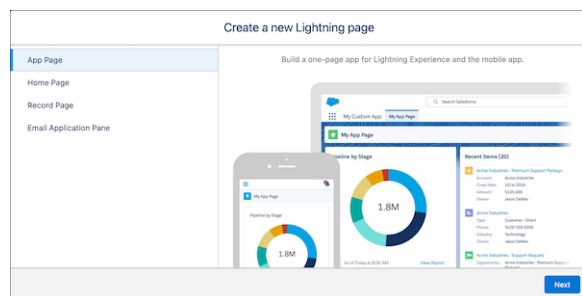
4. Enter `Pre-Work Estimation` in the Label field, and then click **Next**.

5. Select **One Region** and click **Finish**.
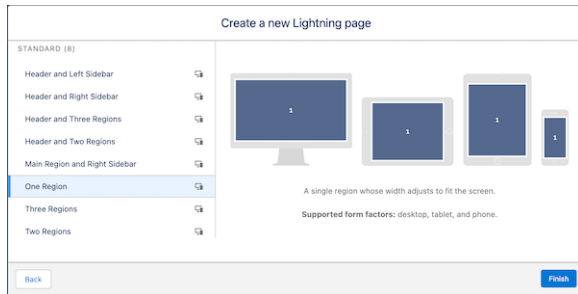
6. Drag the Omniscript component on to the canvas.

7. In the component's properties panel, provide the following details:

   a. Type: **team**

   b. Subtype: **createOrder**

   c. Theme: **Newport**

   d. Display: **Display OmniScript on page**

   e. Language: **English**

   f. Language Direction: **Left to Right**

8. Click **Save** then **Activate**.

9. In Page Settings, choose an icon for your page.

10. In Lightning Experience, add your page to Lightning Experience apps.

    For example, select **Manufacturing** from the list of available apps, and click **Add page to app**.

11. In Mobile Navigation, add your page to the mobile navigation menu. Use the arrows to move the page up or down.
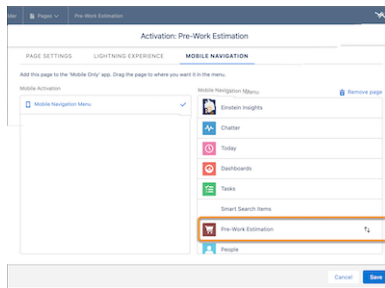
12. Click **Save**.

SEE ALSO:

Create an App Home Page with the Lightning App Builder

Lightning App Builder

Create Estimates and Orders with Pre-Work Estimation

Service technicians can use the Pre-Work Estimation app page in the Salesforce mobile app to create service estimates, track customer approvals, and create orders.

📝 **Note:** To use the Pre-Work Estimation app, we recommend that you use the Mobile Only app. On the home screen of the Salesforce app, tap **Menu** near the bottom of your device. Then tap **App Launcher** and **Mobile Only**.

1. Open the Salesforce mobile app.

2. Tap **Menu**, then tap **Pre-Work Estimation**.
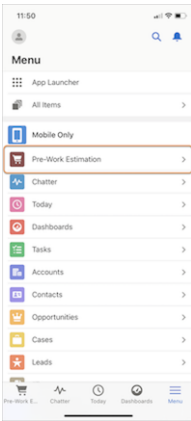
3. Type and select an account, then tap **Next**.
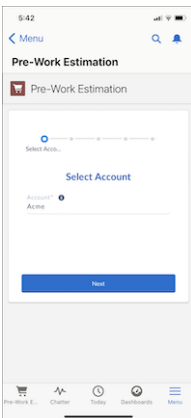
4. Select a contact for the account, then tap **Next**.

USER PERMISSIONS

To create document templates, create or import OmniScripts, and generate documents:
• OmniStudio Admin

   AND

   DocGen Designer

To create or import OmniScripts and generate documents:
• OmniStudio Admin

   AND

   DocGen Runtime User

To generate documents using existing OmniScripts:
• OmniStudio User

   AND

   DocGen Runtime User
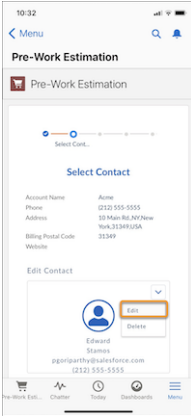
> 💡 **Tip:** To edit a contact's details, including their email address, use the menu on their contact card. You can also add a contact.
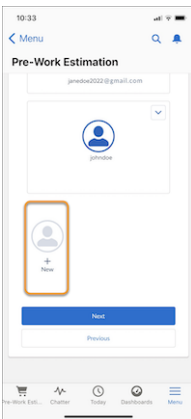
5. Enter a product or service name, then tap **Search Product**.
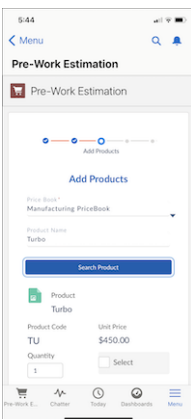
6. To select the products you want to include in the estimate, enter a quantity, and then tap **Select**.

7. Tap **Add Products**.

8. Repeat the steps to add more products or services. You can also add the labor charges or installation charges for the parts and accessories.

9. Tap **Next**.

10. Review the list of added products.

11. Tap **Confirm and Create Order.**
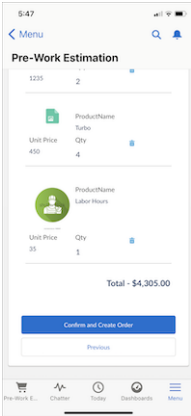
> 📝 **Note:** To edit a product quantity, tap **Previous** and search for the product again. To overwrite the existing value, enter the new product quantity. Don't worry, you won't lose any of the other products and details that you've added to the order. We only update products that you overwrite.

12. To preview the draft order details, tap **View Order Details**.

13. To send an email to the contact with the order details, tap **Email PDF**. This button is displayed only after the order PDF generation is complete.

> 📝 **Note:** If you don't specify a contact, or select a contact without specifying their email address, the Email PDF button doesn't show.

Forecast Service Revenue and Spare Parts Demand

Use the Advanced Account Forecasting feature to shape accurate forecasts for service revenue and spare parts demand. To process forecasts, create custom forecast fact objects. Also, create data processing engine templates and jobs. You can then use these data processing engines in custom flows to generate accurate forecasts.

For more information on how to use Advanced Account Forecasting, see Holistic Forecasts with Advanced Account Forecasting.

> 📝 **Note:** The default advanced account forecast fact objects and Data Processing Engine templates that are available with Advanced Account Forecasting for sales use cases in Manufacturing Cloud don't work with service use cases. You can create custom Data Processing Engine definitions according to your business needs.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions.

Develop a Voice of the Customer

With Salesforce Feedback Management, you can create engaging, easy-to-use surveys with a simple editor to collect feedback and information from your customers.

To know how to use surveys, see Enhance Customer Experience with Salesforce Feedback Management.

Manage the Asset Lifecycle in Manufacturing Cloud

Manage every stage in an asset's lifecycle and get visibility into all the activities related to an asset. Customer service representatives (CSRs) can use the powerful Asset Service Console for Manufacturing to stay on top of the changes related to an asset, to view the major milestones of the asset, and to capture the key details of the asset. Link assets with related accounts by using Asset Account Participant records and with related contacts by using Asset Contact Participant records. Get visibility into the operations of your asset fleets.

Learn About Asset Service Console for Manufacturing

With the Asset Service Console for Manufacturing, customer service representatives (CSRs) can get visibility into critical information about an asset without switching applications. CSRs can track key milestones related to an asset, get alerts on its activities, and view services performed on it. They can capture granular details about the asset, manage its related warranties, cases, work orders, and claims, and take proactive actions.

Associate an Asset with its Related Accounts

Create Asset Account Participant records to track all the accounts associated with an asset in the asset's lifecycle. For example, an asset can be related with the supplier who supplied you the asset and the customer who bought the asset. An asset can have multiple account participants.

Associate an Asset with its Related Contacts

Create Asset Contact Participant records to track all the contact associated with an asset in the asset's lifecycle. For example, associate an asset with the technician who repaired it, with the finance manager who facilitated its sale, and with the sales executive who sold it. An asset can have multiple contact participants.

Manage Fleets of Assets in Manufacturing Cloud

Monitor your fleet operations and track the key activities of your fleets of assets. Create a fleet and add assets to it, such as mobile equipment, fixed systems, and power tools. You can also capture key information about the participants involved in all stages of a fleet's lifecycle. Use Action Plans and Record Alerts to get greater visibility into and control of the operations of your fleets.

Learn About Asset Service Console for Manufacturing

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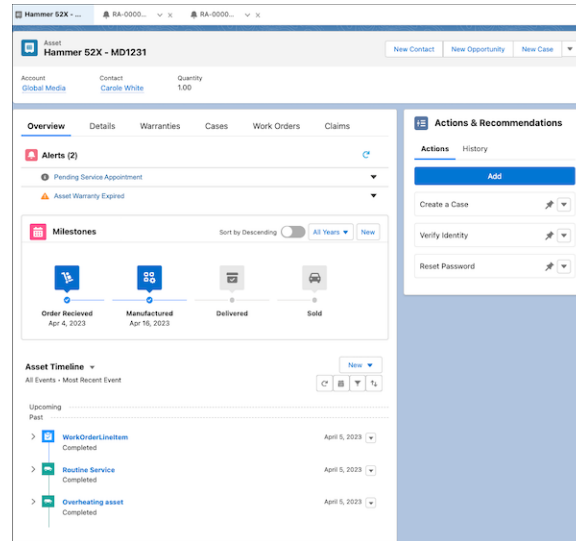
Here's what CSRs can do within the console.

Get Actionable Alerts

CSRs can get contextual alerts that let them proactively make recommendations to partners and customers. CSR can get timely alerts on activities like upcoming warranty term expiration, pending service appointment, and status of cases related to the asset.

See Key Milestones

CSRs can capture and view major milestones in the lifespan of an asset, such as manufactured, order received, and delivered. They can hover over a milestone to see its details and initiate actions such as creating an action plan, event, or task or logging a call.

View a Visual Snapshot of Service Performed on the Asset

CSRs can view a chronological, interactive timeline of work orders and work order line items related to an asset to understand the service performed on it. While the Asset Console for Manufacturing comes with a preconfigured timeline, you can create timeline configurations to show information like cases and claim items related to an asset.

Take Contextual Actions

CSRs can perform actions that address customer queries related to assets, such as renewing warranties, scheduling service appointments, and creating cases. CSRs can complete their work quickly and consistently by launching actions from a list of actions and get recommendations for the next best actions.

View Granular Asset Details

CSRs can capture and view critical details about an asset, such as its name, quantity, price, serial number, and related account, contact, and product.

Manage Related Warranties, Cases, Work Orders, and Claim Items

CSRs can get snapshots of Asset Warranty, Case, Work Order, and Claim Item records related to an asset. They can view and edit asset warranties, cases, work orders, and claim items by opening them as subtabs in the console. They can also create records from the related list.

SEE ALSO:

Set Up Customer and Asset Service Lifecycle Features in Manufacturing Cloud

Configure Events and Milestones for Automotive Cloud

Associate an Asset with its Related Accounts

Create Asset Account Participant records to track all the accounts associated with an asset in the asset's lifecycle. For example, an asset can be related with the supplier who supplied you the asset and the customer who bought the asset. An asset can have multiple account participants.

The admin can add picklist values for the Stakeholder Role field on the Asset Account Participant object in Object Manager.

1. From the App Launcher, find and select **Asset Account Participants**.

2. Click **New**.

3. Enter a name for the participant.

4. Search for and select the account to be linked with the asset.

5. For Stakeholder Role, select the role of the account linked with the asset, such as financier, customer, or sales dealer.

6. Search for and select an asset.

7. Select **Active**.

8. Select a start date and end date for the association between the asset and the account.

9. For Usage Type, select **Manufacturing**.

10. Save your changes.

Use an Actionable Relationship Center graph to visualize the related stakeholders.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create Asset Account Participant records
- Claims Management Foundation permission set

   OR Service Console for Manufacturing permission set

Associate an Asset with its Related Contacts

Create Asset Contact Participant records to track all the contact associated with an asset in the asset's lifecycle. For example, associate an asset with the technician who repaired it, with the finance manager who facilitated its sale, and with the sales executive who sold it. An asset can have multiple contact participants.

The admin can add picklist values for the Stakeholder Role field on the Asset Contact Participant object in Object Manager.

1. From the App Launcher, find and select **Asset Contact Participants**.

2. Click **New**.

3. Enter a name for the participant.

4. Search for and select the contact to be linked with the asset.

5. For Stakeholder Role, select the role of the contact linked with the asset, such as technician, owner, or finance manager.

6. Search for and select an asset.

7. Select **Active**.

8. Select a start date and effective end date for the association between the asset and the account.

9. For Usage Type, select **Manufacturing**.

10. Save your changes.

Use an Actionable Relationship Center graph to visualize the related stakeholders.

Manage Fleets of Assets in Manufacturing Cloud

Monitor your fleet operations and track the key activities of your fleets of assets. Create a fleet and add assets to it, such as mobile equipment, fixed systems, and power tools. You can also capture key information about the participants involved in all stages of a fleet's lifecycle. Use Action Plans and Record Alerts to get greater visibility into and control of the operations of your fleets.

Create Fleets in Manufacturing Cloud

Create a fleet to track the activities of a group of assets and to capture key details such as the type of the fleet, the duration when the fleet is operational, and the owner of the fleet.

Add Assets to Fleets in Manufacturing Cloud

Add assets to a fleet and monitor important information such as the status of an asset in relation to the fleet, the usage of an asset, and the period when they're a part of the fleet.

Create Fleet Participants in Manufacturing Cloud

Track the key accounts, contacts, and users associated with a fleet by creating Fleet Participant records. Capture the key details of a fleet participant such as their role and their status in relation to a fleet.

Considerations for Fleet Management in Manufacturing Cloud

Review the considerations for using fleet management features in Manufacturing Cloud.

Create Fleets in Manufacturing Cloud

Create a fleet to track the activities of a group of assets and to capture key details such as the type of the fleet, the duration when the fleet is operational, and the owner of the fleet.

Ensure that your admin has turned on the fleet management features by using the enableFleetManagement metadata API.

1. From the App Launcher, find and select **Fleets**.

2. Click **New**.

3. Enter a name for the fleet.

4. Search for and select a parent fleet, if applicable.

5. Select the date from when the fleet is operational.

6. Select the date until when the fleet is operational.

7. In Current Owner, select an account.

8. Select the type.

    - Employee

    - Material

    - Executive

    - Commercial

9. Select the status.

    - Active

    - Inactive

10. Save your changes.

Add Assets to Fleets in Manufacturing Cloud

Add assets to a fleet and monitor important information such as the status of an asset in relation to the fleet, the usage of an asset, and the period when they're a part of the fleet.

Ensure that your admin has turned on the fleet management features by using the enableFleetManagement metadata API.

1. From the App Launcher, find and select **Fleet Assets**.

2. Click **New**.

3. Search for and select an asset.

4. Search for and select a fleet.

5. Select the date from when the asset is a part of a fleet.

6. Select the date until when the asset is a part of a fleet.

7. Select the status.

    - Registered

    - Active

    - Assigned

    - Under Maintenance

- Out of Service
- Inactive

The Active Asset Count field on a Fleet record considers only the Fleet Asset records that are in the Active status.

8. Save your changes.

Create Fleet Participants in Manufacturing Cloud

Track the key accounts, contacts, and users associated with a fleet by creating Fleet Participant records. Capture the key details of a fleet participant such as their role and their status in relation to a fleet.

Ensure that your admin has turned on the fleet management features by using the enableFleetManagement metadata API.

1. From the App Launcher, find and select **Fleet Participants**.
2. Click **New**.
3. Search for and select an asset.
4. Search for and select a fleet.
5. Select the date from when the participant is related to the fleet.
6. Select the date until when the participant is related to the fleet.
7. For Participant, select **Account**, **Contact**, or **User** and select a record.
8. Select the participant role.

- Driver
- Maintenance Associate
- Manager
- Operations Manager

9. Select the status.

- Active
- Inactive
- Resigned

10. Save your changes.

Considerations for Fleet Management in Manufacturing Cloud

Review the considerations for using fleet management features in Manufacturing Cloud.

- You can't turn on the fleet management features from Setup. Make sure that you turn on the feature by using the enableFleetManagement metadata API.
- You can create record alerts for Fleet but not for Fleet Asset or Fleet Participant.
- You can create action plan templates with Fleet as the target object.

- Experience Cloud users don't have access to Fleet, Fleet Asset, or Fleet Participant.

SEE ALSO:

Considerations for Manufacturing Cloud

Manage the Warranty Lifecycle in Manufacturing Cloud

Orchestrate the complete warranty lifecycle—from warranty administration to claims collection and adjudication—by using Warranty Lifecycle Management. Create and manage warranties at multiple product levels. Define a robust framework of warranty eligibility rules and entitlements based on labor, parts, and expenses covered. Develop thorough service standards for product defects, expenses, and labor services to ensure accuracy and consistency in warranty management and service operations. Capture the right information about claims from partners, dealers, and distributors to minimize subjectivity in claims adjudication, and reduce followups for clarification. Build an automated warranty claims adjudication process to supercharge the efficiency of claims adjudicators, to prevent manual errors, and to reduce processing time. Manually scrutinize and adjudicate warranty claims from a single page.

Learn About Warranty Lifecycle Management

Establish warranty eligibility rules, define service standards, capture claims, and adjudicate claims using Warranty Lifecycle Management in Manufacturing Cloud. Use the robust, extensible data model in Warranty Lifecycle Management.

Set Up Warranty Lifecycle Management

To let users administer warranty rules and entitlements and capture, track, and adjudicate warranty claims, enable Warranty Lifecycle Management in Setup and assign them appropriate permission sets.

Manage Warranties and Service Standards for Your Products and Assets

Establish robust warranty eligibility terms and entitlements for products and assets and standardize your service operations. Manage product and asset warranties by recording warranty term details and assigning them to products, product families, or assets. Extend or restrict coverage for warranty terms based on product fault, labor effort required, or product part. Define a comprehensive set of service standards that can be accurately and consistently used in the warranty lifecycle and other operations performed by your company.

Capture Warranty Claims from Partners and Distributors

With detailed warranty claim information, warranty adjudicators can accurately investigate product defects, swiftly verify claim coverages and expenses, and reduce follow-ups for additional information. Capture information about defective assets, existing warranties, causal parts, expenses incurred, and claim stakeholders by creating Claim, Claim Item, Claim Coverages, Claim Coverage Payment Details, and Claim Participant records. Partners can easily submit warranty claims and closely track their status from the Manufacturing Experience Cloud site. Manufacturers can also create claims on behalf of partners.

Adjudicate Warranty Claims

Adjudicate warranty claims by examining defective assets and their causal parts, by checking existing warranty coverages, and by verifying labor services, part replacements, and expenses incurred to rectify the asset. Warranty claim adjudicators can get a holistic view of every aspect of the warranty claim and manually adjudicate the claim on the preconfigured Claims record page. Admins can set up a warranty claim adjudication process by using process automation tools such as Flow Builder and Business Rules Engine.

SEE ALSO:

Warranty Administration and Claims Management in Manufacturing Cloud

Learn About Warranty Lifecycle Management

Establish warranty eligibility rules, define service standards, capture claims, and adjudicate claims using Warranty Lifecycle Management in Manufacturing Cloud. Use the robust, extensible data model in Warranty Lifecycle Management.

Capabilities of Warranty Lifecycle Management

Use the capabilities of Warranty Lifecycle Management in Manufacturing Cloud to achieve various business outcomes.

Warranty Lifecycle Management Data Model

Learn about the objects in the Warranty Lifecycle Management data model.

Capabilities of Warranty Lifecycle Management

Use the capabilities of Warranty Lifecycle Management in Manufacturing Cloud to achieve various business outcomes.

EDITIONS
Available in: **Enterprise**, **Unlimited**, and **Developer** Editions

Key Business Outcome	Capability
Manage warranties for products and assets	• Define comprehensive warranty entitlements including labor, parts, and expenses covered and exchange types • Establish thorough terms on warranty eligibility based on product usage, warranty duration, and more • Assign warranties to products, product families, and assets • Extend or restrict warranty term coverage based on product defect, labor service required, or causal part of the product • Define exclusions, void terms, and extensions for the coverage of warranties assigned to specific assets
Establish robust service operation standards	• Create standard codes to describe product defects, labor services, expenses, and other operations • Map the combinations of product defects with the different labor services that can rectify them • Apply consistent standards while defining warranty terms and adjudicating warranty claims
Capture warranty claims from partners and distributors	• Accurately investigate product defects with detailed information on defective assets, causal parts, and product fault codes

Key Business Outcome	Capability
	• Get visibility into existing warranty coverages to verify claim eligibility • Track expenses incurred, labor services performed, and parts replaced to rectify the asset • Associate stakeholders involved with a warranty claim to solicit additional information • Let partners effortlessly create warranty claims on the Manufacturing Experience Cloud site
Set up process automation to adjudicate warranty claims	• Build a flexible adjudication process that meets your company's needs by using process automation tools • Reduce subjectivity and processing time for claim adjudication • Quickly perform administrative tasks
Adjudicate warranty claims manually	• Review warranty claim details and adjudicate the claim from a single page • Determine approved payouts for every expense incurred, labor service performed, and part replaced to repair the asset • Audit warranty claims processed by automation workflow or other claim adjudicators • Verify approved claimed amounts for warranty claims with significant financial implications

Warranty Lifecycle Management Data Model

Learn about the objects in the Warranty Lifecycle Management data model.

Objects to Define Warranty Rules and Service Standards
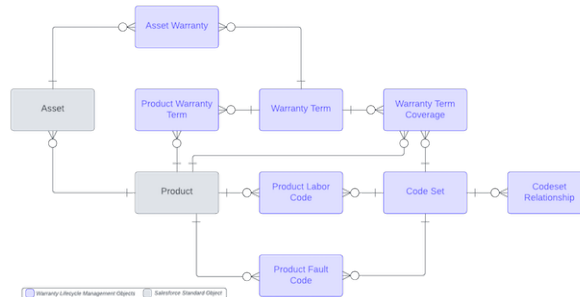
Warranty Term

Stores information about warranty terms with the labor, parts, expenses, and exchange options that you offer to rectify issues with products.

Product Warranty Term

Stores information about warranty terms that are related to a product or a product family.

Asset Warranty Term

Stores information about warranty terms that are related to an asset. You can specify extensions or exclusions for the assigned warranty term.

Warranty Term Coverage

Stores information about extensions or restrictions for a warranty term based on a code set or a product part.

Code Set

Stores information about unique codes in the context of their systems and versions of those systems. Code sets store standard definitions of a situation or an activity.

Product Fault Code

Stores information about the relationship between a product or product family and the fault code.

Product Labor Code

Stores information about the relationship between the labor code that's applicable to a product or product family and the required standard operation time.

Codeset Relationship

Stores information about the relationship between a code set and its related code set. For example, a labor code associated with a fault code.

Objects to Capture Warranty Claims
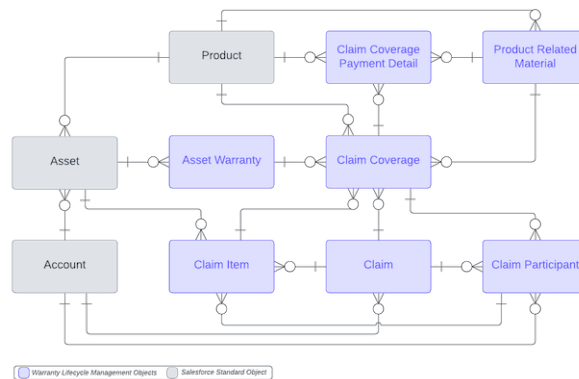
Claim

Stores information about a claim to request a manufacturer to compensate a partner for the repair work performed on a defective asset, such as its status, type, reason, and account.

Claim Item

Stores information about a defective asset related to a claim, such as its usage, fault date, and repair date.

Claim Coverage

Stores information about a causal part in a defective asset, such as its fault code and coverage type.

Claim Coverage Payment Detail

Stores information about the labor services, part replacements, or expenses that are incurred to rectify a causal part.

Claim Participant

Stores information about the stakeholders that are related to a claim.

Set Up Warranty Lifecycle Management

To let users administer warranty rules and entitlements and capture, track, and adjudicate warranty claims, enable Warranty Lifecycle Management in Setup and assign them appropriate permission sets.

Enable Warranty Lifecycle Management

To give users access to Warranty Lifecycle Management features, enable Warranty Lifecycle Management in Setup.

Assign Permission Sets for Warranty Lifecycle Management

Assign the appropriate permission sets to users to give them access to objects, fields, and features for Warranty Lifecycle Management.

Enable Warranty Lifecycle Management

To give users access to Warranty Lifecycle Management features, enable Warranty Lifecycle Management in Setup.

1. From Setup, in the Quick Find box, enter `Warranty Lifecycle Management`, and then select **Warranty Lifecycle Management**.

2. Turn on **Warranty Lifecycle Management**.
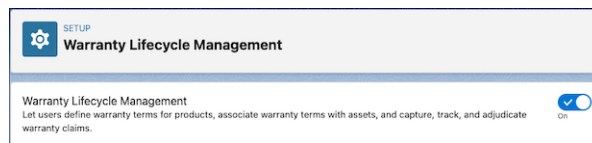
EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To enable a feature:
- Customize Application

Assign Permission Sets for Warranty Lifecycle Management

Assign the appropriate permission sets to users to give them access to objects, fields, and features for Warranty Lifecycle Management.

1. From Setup, in the Quick Find box, enter `Users`, and then select **Users**.

2. Select a user and in the Permission Set Assignments section, click **Edit Assignments**.

3. Select the required permission sets from the Available Permission Sets list, and move them to the Enabled Permission Sets list.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To assign permission sets
- Manage Users

Permission Set	Description
Warranty Lifecycle Management Psl	Gives warranty administrators, managers, and claims adjudicators access to Warranty Lifecycle Management objects and features.
Claims Management Foundation	Gives warranty claims adjudicators access to features to track and adjudicate warranty claims.
Warranty Management for Experience Cloud	Gives partner users access to Warranty Lifecycle Management features in an Experience Cloud site. This permission set is typically only assigned to partner users, not customer users.

4. Click **Save**.

Ensure you specify the appropriate tab settings to give users access to tabs for the Warranty Lifecycle Management objects. You can specify tab settings in users' profiles. Or, you can clone the standard permission sets, specify the appropriate tab settings, and assign the cloned permission sets to users.

SEE ALSO:

Permission Sets

Tab Settings

Manage Warranties and Service Standards for Your Products and Assets

Establish robust warranty eligibility terms and entitlements for products and assets and standardize your service operations. Manage product and asset warranties by recording warranty term details and assigning them to products, product families, or assets. Extend or restrict coverage for warranty terms based on product fault, labor effort required, or product part. Define a comprehensive set of service standards that can be accurately and consistently used in the warranty lifecycle and other operations performed by your company.

How Warranty Terms and Service Standards Information Is Represented in Manufacturing Cloud

Learn how you can capture information about products, warranty terms and entitlements, and service standards.

Create a Warranty Term

Define warranty terms to specify the eligibility requirements and the entitlements you provide to rectify issues with products. Specify the labor, parts, expenses, and exchange options covered under the warranty term.

Create a Warranty Term Coverage

Define warranty term coverages to introduce greater granularity and flexibility to your rules on warranty eligibility and entitlement. You can extend or restrict the coverage of a warranty term based on labor effort required or expenses incurred. Specify the part of a product or the product labor code or expense code to be included or excluded in the coverage of a warranty term.

Create a Product Warranty Term

To assign a warranty term to a product or product family, create a product warranty term. The standard warranty terms assigned to a product or product family apply to all assets for that product or product family.

Create an Asset Warranty

To assign a warranty term to an asset, create an asset warranty. Specify any extensions or exclusions for the assigned warranty term.

Create a Code Set

Establish a robust set of service standards that can be accurately and consistently used in various operations performed by your company. Define a code set to standardize the definition of a situation or an activity, for example for code sets for labor activities, product defects, and expenses.

Create a Product Fault Code

Create product fault codes to establish standardized descriptions of the typical faults in a product. Use product fault codes to easily identity the defects in a product and sort products repairs and replacements based their faults.

Create a Product Labor Code

Define product labor code to standardize the type of labor services your company offers with their estimated effort. You can specify product labor codes in warranty term coverages to extend or restrict the labor services that are covered under a warranty term.

Create a Codeset Relationship

Define codeset relationships to associate a code set with another code set. For example, create codeset relationships between product fault codes and product labor codes to map the combinations of product defects with the different labor services that can rectify them.

SEE ALSO:

Register Products and Assign Warranties Quickly

How Warranty Terms and Service Standards Information Is Represented in Manufacturing Cloud

Learn how you can capture information about products, warranty terms and entitlements, and service standards.

Requirement	Action	Example
A manufacturer wants to model each stock-keeping unit (SKUs) sold. Each product has a price that's related to it and can be sold to a customer.	Create Product records.	Marine Exploration Corporation, a manufacturer, creates products for Marine Generator Gold-Y priced at $82,000, Marine Generator Silver-Z, Generator Rotor priced at $30,000, and Generator Regulator priced at $8,000.
A manufacturer wants to model multiple products under a product family. A product family is collection of related products.	Create picklist values for the Product Family field on the Product object.	Marine Exploration Corporation creates the Marine Generators product family to group the Marine Generator Gold-Y and Marine Generator Silver-Z products.
A manufacturer wants to model physical items of commercial value that are manufactured, delivered, sold to a customer, or installed as a part of another	Create an Asset record.	Marine Exploration Corporation sells a Marine Generator Gold-Y JS0609 asset to a partner.

Requirement	Action	Example
asset. An asset is an instance of a product.		
A manufacturer wants to define a relationship between two related products, such as a product and its part.	Create a Product Related Material record.	Marine Explorations Corporation creates a product relater material to define a relationship between Marine Generator Gold-Y and its component, Generator Rotor.
A manufacturer wants to define the eligibility requirements and entitlements for warranties for products, product families, and assets.	Create a Warranty Term record.	Marine Exploration Corporation creates a standard warranty term called Marine Generator Standard Warranty with a warranty duration of 24 months, 60% labor covered, and 85% expenses covered.
A manufacturer wants to extend or restrict the coverage of warranty terms based on product fault, labor effort required, or product part.	Create a Warranty Term Coverage record.	Marine Exploration Corporation extends the coverage of the Marine Generator Standard Warranty to cover the Generator Rotor product component and the Rotor Control Repair product labor code.
A manufacturer wants to associate a warranty term to a product or product family.	Create a Product Warranty Term record.	Marine Exploration Corporation associates the Marine Generator Standard Warranty with the Marine Generator Gold-Y product.
A manufacturer wants to associate a warranty term to an asset and define extended or restricted eligibility requirements or entitlements.	Create an Asset Warranty record.	Marine Exploration creates an asset warranty to extend coverage of the warranty of the Marine Generator Gold-Y JS0609 asset. They extend the labor covered to 75% and expenses covered to 90%.
A manufacturer wants to define unique codes to standardize the definitions of labor activities, product faults, and expenses.	Create a Code Set record.	Marine Exploration Corporation creates these code sets: • Generator Rotor Control Repair • Generator Regulator Repair • Overheating Rotor Control • Malfunctioning Generator Regulator
A manufacturer wants group logically related codes.	Create picklist values for the Code Set Type field in the Code Set object.	Marine Exploration Corporation creates a Labor Expense code set type to group all code sets on labor expenses.
A manufacturer wants to associate a code set on a product fault with a product or a product family.	Create a Product Fault Code record.	Marine Exploration Corporation creates product fault codes to associate these code sets with each other: • Overheating Rotor Control code set with the Generator Rotor product • Malfunctioning Generator Regulator code set with the Generator Regulator product

Requirement	Action	Example
A manufacturer wants to associate a code set on a labor service with a product or a product family and specify estimated effort.	Create a Product Labor Code record.	Marine Exploration Corporation creates product labor codes to associate the following with each other: • Generator Rotor Control Repair code set with the Generator Rotor product • Generator Regulator Repair code set with the Generator Regulator product
A manufacturer wants to create a relationship between two code sets, such as a product labor code and a product fault code.	Create a Codeset Relationship record.	Marine Exploration Corporation creates code set relationships to associate these code-sets with each other: • Overheating Rotor Control code set with the Generator Rotor Control Repair code set • Malfunctioning Generator Regulator code set with the Generator Regulator Repair code set

Create a Warranty Term

Define warranty terms to specify the eligibility requirements and the entitlements you provide to rectify issues with products. Specify the labor, parts, expenses, and exchange options covered under the warranty term.

1. From the App Launcher, find and select **Warranty Terms**.

2. Click **New**.

3. Provide values for these fields.

Field	Description
Warranty Term Name	The name of the warranty term.
Active	Indicates whether the warranty term is active.
Warranty Duration	The duration of the warranty offered by this term.
Effective Start Date	Date on which the warranty term became available for use. • Install Date • Manufacture Date • Purchase Date
Warranty Unit Of Time	The unit in which the warranty duration is measured. • Days

Field	Description
	- Months
	- Weeks
	- Years
Price Book	The ID of the price book item associated with this warranty term.
Usage Covered	The product usage that's covered in the warranty term.
Usage Covered Unit of Measure	The unit in which usage is measured.
Description	Description of the warranty term.
Code	A code or other identifier associated with this warranty term.
Warranty Type	The type of warranty.
	- Repair
	- Standard
	- Supplier
Exclusions	Description of any exclusions.
Exchange Type	The type of exchange offered.
	- Advance Exchange
	- Loaner
	- Return Exchange
Transferable	Indicates whether the warranty term can be transferred to a new owner.
Labor Covered	The percentage of labor covered.
Labor Covered Duration	The duration for which the labor is covered.
Parts Covered	The percentage of parts covered.
Parts Covered Duration	The duration for which parts are covered.
Expenses Covered	The percentage of expenses covered.
Expenses Covered Duration	The duration for which expenses are covered.
Labor Covered Unit of Time	The unit in which labor covered duration is measured.
	- Days
	- Months
	- Weeks
	- Years
Parts Covered Unit of Time	The unit in which parts covered duration is measured.
	- Days
	- Months

Field	Description
	• Weeks
	• Years
Expenses Covered Unit of Time	The unit in which expenses covered duration is measured.
	• Days
	• Months
	• Weeks
	• Years

4. Save your work.
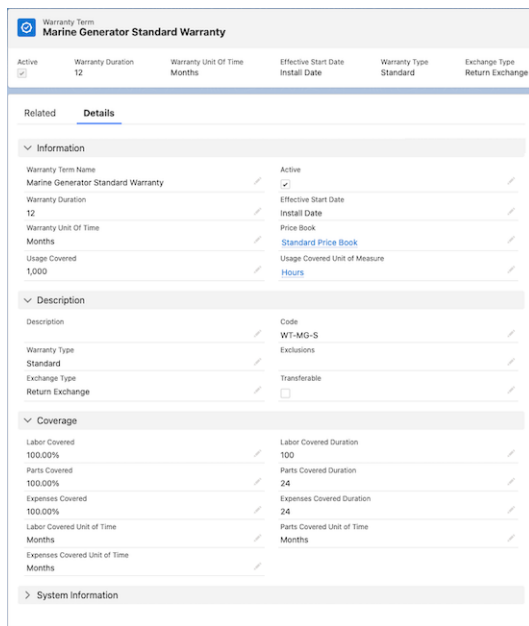
👁 **Example:** The warranty manager at Thomas Railways Equipment, Inc., a manufacturer, defines a warranty term to cover their Pneumatic Drill product. She specifies the following details:

- Warranty Term Name: Pneumatic Drill Standard Warranty
- Active: True
- Warranty Duration: 12
- Effective Start Date: Install Date
- Warranty Unit of Time: Months
- Price Book: Generators Price Book
- Usage Covered: 2000
- Usage Covered Unit of Measure: Hours
- Warranty Type: Standard
- Exchange Type: Return Exchange

- Transferable: True
- Labor Covered: 70%
- Labor Covered Duration: 24
- Labor Covered Unit of Time: Months
- Expenses Covered: 50%

Create a Warranty Term Coverage

Define warranty term coverages to introduce greater granularity and flexibility to your rules on warranty eligibility and entitlement. You can extend or restrict the coverage of a warranty term based on labor effort required or expenses incurred. Specify the part of a product or the product labor code or expense code to be included or excluded in the coverage of a warranty term.

1. From a Warranty Term record, on the Warranty Term Coverages related list of the Related tab, click **New**.

2. To change the warranty term, specify a warranty term.

3. To specify the part of the product to be included or excluded from the coverage of the warranty term, enter a product part.

4. To specify the product labor code or expense code to be included or excluded from the coverage of the warranty term, enter a covered code.

5. To indicate whether the product part or covered code is excluded from the coverage of the warranty term, select **Excluded**.

6. Save your changes.
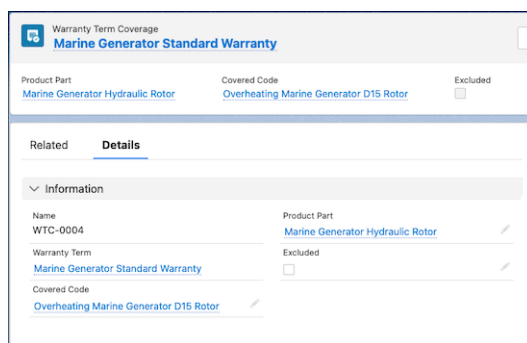
👁 **Example:** The warranty manager at Thomas Railways Equipment, Inc., a manufacturer, defines a warranty term called Pneumatic Drill Standard Warranty to cover their Pneumatic Drill product. She creates a product warranty term to assign the warranty term to the Pneumatic Drill product.

To exclude the motor unit part of the Pneumatic Drill product from the coverage of the warranty term, she creates a warranty term coverage with the following details:

- Warranty Term: Pneumatic Drill Standard Warranty
- Product Part: Pneumatic Drill Motor Head
- Excluded: True

To include assembly unit repairs to the coverage of the warranty term, she creates a warranty term coverage with the following details:

- Warranty Term: Pneumatic Drill Standard Warranty
- Covered Code: Drill Assembly Unit Repair
- Excluded: True

Create a Product Warranty Term

To assign a warranty term to a product or product family, create a product warranty term. The standard warranty terms assigned to a product or product family apply to all assets for that product or product family.

1. From a Warranty Term record, on the Product Warranty Terms related list of the Related tab, click **New**.

2. To change the warranty term, specify a Warranty Term.

3. To associate the warranty term with a product or product family, specify the Covered Product or Covered Product Family.

   For each Product Warranty Term record, you can associate a warranty term to either a product or a product family.

4. Save your changes.

Example: The warranty manager at Thomas Railways Equipment, Inc., a manufacturer, defines a warranty term called Pneumatic Drill Standard Warranty. To assign the Pneumatic Drill product and the Underwater Drills family to warranty term, she creates two product warranty terms with the following details:

- Product Warranty Term 1

  - Warranty Term: Pneumatic Drill Standard Warranty
  - Covered Product: Pneumatic Drill

- Product Warranty Term 2

  - Warranty Term: Pneumatic Drill Standard Warranty
  - Covered Product Family: Underwater Drills

The warranty term is assigned to all assets for the Pneumatic Drill product and for the products under the Underwater Drills product family.

Create an Asset Warranty

To assign a warranty term to an asset, create an asset warranty. Specify any extensions or exclusions
for the assigned warranty term.

1. From an Asset record, on the Asset Warranties related list of the Related tab, click **New**.

2. Provide these details.

Field	Description
Warranty Term	The warranty term that this asset warranty term extends.
Start Date	The date on which cover under this asset warranty term starts.
End Date	The date on which this asset warranty term expires.
Asset	The asset this asset warranty term applies to.
Price Book	The price book associated with this asset warranty term.
Warranty Type	The type of the warranty.
Exclusions	Description of any exclusions.
Exchange Type	The type of exchange offered by this asset warranty term.
Transferable	Indicates whether the warranty term can be transferred to a new owner.
Labor Covered	The percentage of labor covered.
Labor Covered End Date	The date on which cover for labor ends.
Parts Covered	The percentage of parts covered.
Parts Covered End Date	The date on which cover for parts ends.
Expenses Covered	The percentage of expenses covered.
Expenses Covered End Date	The date on which cover for expenses ends.

3. Save your changes.

Example: The warranty manager at Thomas Railways Equipment, Inc., a manufacturer, defines a warranty term to cover all assets for their Pneumatic Drill product with the following details.

- Warranty Term Name: Pneumatic Drill Standard Warranty
- Active: True
- Warranty Type: Standard
- Labor Covered: 60%
- Expenses Covered: 50%

She creates a product warranty term to assign the warranty term to the Pneumatic Drill product. After a partner requests the warranty manager to extend the labor coverage for their Pneumatic Drill B62 asset to 85%, the warranty manager creates an asset warranty term. She specifies the following details for the asset warranty:

- Warranty Term: Pneumatic Drill Standard Warranty
- Asset: Pneumatic Drill B62
- Labor Covered: 85%

The asset warranty extends the labor covered for the Pneumatic Drill B62 asset to 85% but the expenses covered for the asset remain 50% as specified in the standard warranty term.

Create a Code Set

Establish a robust set of service standards that can be accurately and consistently used in various operations performed by your company. Define a code set to standardize the definition of a situation or an activity, for example for code sets for labor activities, product defects, and expenses.

1. From the App Launcher, find and select **Code Set**.

2. Click **New**.

3. Provide these details.

Field	Description
Name	The name of the code.
Source System	The system that defines the context and the meaning for the code.
System Version	The version of the source system the code belongs to.
Code	The code that represents this code set.
Code Set Type	The type of the code set.
Effective Date	The start date of the code set's effective period.
End Date	The end date of the code set's effective period.
Active	Indicates whether the code set is active.
Primary	Indicates whether the code set is the primary code set for the concept. That is, it was selected manually by a user instead of being selected by an automated process.
Custom Code	Indicates whether the code set is defined by a specific organization, as opposed to being recognized across the industry.
Code Description	Description of the code set.

4. Save your changes.
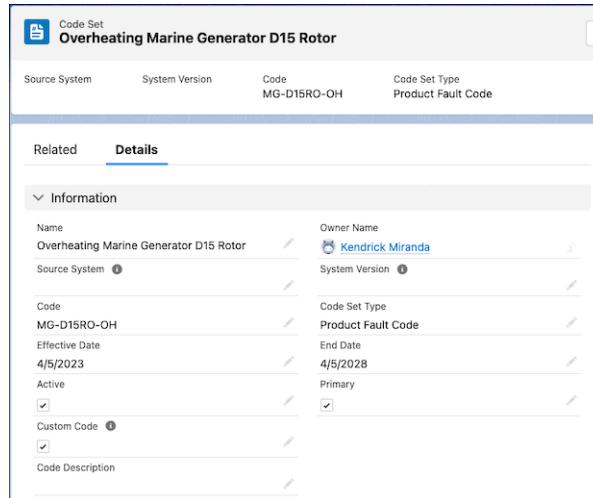
Create a Product Fault Code

Create product fault codes to establish standardized descriptions of the typical faults in a product. Use product fault codes to easily identity the defects in a product and sort products repairs and replacements based their faults.

1. From the App Launcher, find and select **Product Fault Codes**.

2. Click **New**.

3. For Fault Code, specify a code set.

4. Specify the product or product family to be associated with the product fault code.

5. Save your changes.
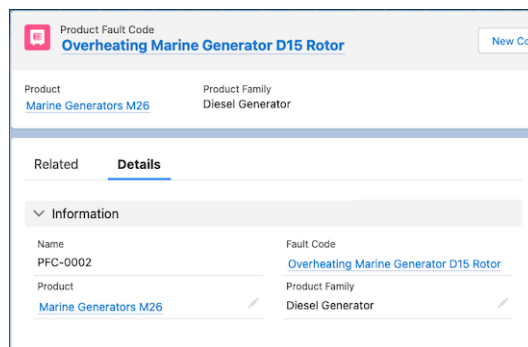
👁 **Example:** The warranty manager at Thomas Railways Equipment, Inc., a manufacturer, defines a two product fault codes.

- Product Fault Code 1
  - Fault Code: Overheating Drill Head

– Product: Pneumatic Drill

- Product Fault Code 2

    – Fault Code: Malfunctioning Torque Control

    – Product Family: Hydraulic Drill

Create a Product Labor Code

Define product labor code to standardize the type of labor services your company offers with their estimated effort. You can specify product labor codes in warranty term coverages to extend or restrict the labor services that are covered under a warranty term.

1. From the App Launcher, find and select **Product Labor Codes**.

2. Click **New**.

3. For Labor Code, specify a code set.

4. Specify the product or product family to be associated with the product labor code.

5. To specify the estimated hours of labor effort, enter an estimated effort.

6. Save your changes.
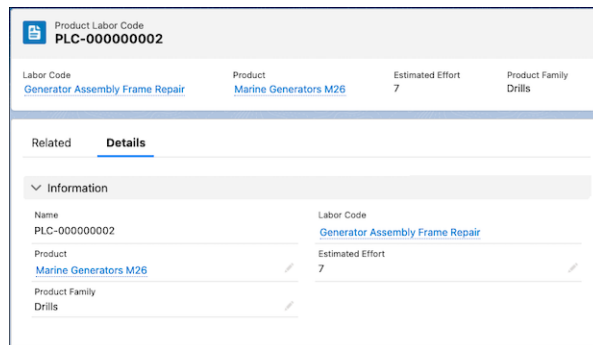
Example: The warranty manager at Thomas Railways Equipment, Inc., a manufacturer, defines two product labor codes.

- Product Labor Code 1

    – Labor Code: Drill Head Replacement

    – Product: Pneumatic Drill

    – Estimated Effort: 12

- Product Labor Code 2

    – Fault Code: Torque Control Repair

    – Product Family: Hydraulic Drill

    – Estimated Effort: 8

Create a Codeset Relationship

Define codeset relationships to associate a code set with another code set. For example, create codeset relationships between product fault codes and product labor codes to map the combinations of product defects with the different labor services that can rectify them.

📝 **Note:** To select a Codeset Type and a Related Codeset Type for a Codeset Relationship, ensure that your admin has added picklist values for the Code Set Type field on the Code Set object.

1. From the App Launcher, find and select **Codeset Relationships**.

2. Click **New**.

3. For Codeset, specify a code set.

   For example, specify a product fault code.

4. For Codeset Type, select the type of the code set.

5. For Related Codeset, specify the code set that's to be associated with the other code set.

   For example, specify a product labor code.

6. For Related Codeset Type, specify the type of the code set that's to be associated with the other code set.

7. Save your changes.
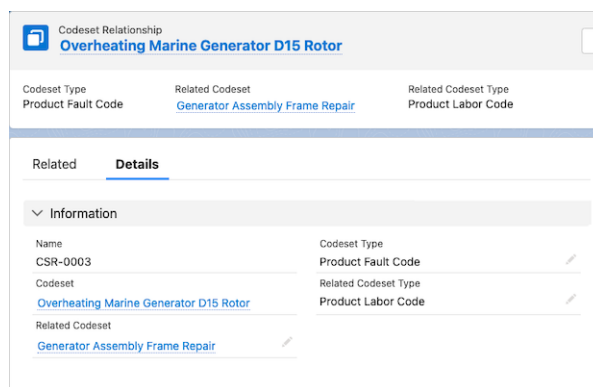
👁 **Example:** The warranty manager at Thomas Railways Equipment, Inc., a manufacturer, defines two codeset relationships.

- Codeset Relationship 1
  - Codeset: Overheating Drill Head
  - Codeset Type: Product Fault Code
  - Related Codeset: Drill Head Replacement
  - Related Codeset Type: Product Labor Code

- Codeset Relationship 2
  - Codeset: Malfunctioning Torque Control
  - Codeset Type: Product Fault Code
  - Related Codeset: Torque Control Repair
  - Related Codeset Type: Product Labor Code

Capture Warranty Claims from Partners and Distributors

With detailed warranty claim information, warranty adjudicators can accurately investigate product defects, swiftly verify claim coverages and expenses, and reduce follow-ups for additional information. Capture information about defective assets, existing warranties, causal parts, expenses incurred, and claim stakeholders by creating Claim, Claim Item, Claim Coverages, Claim Coverage Payment Details, and Claim Participant records. Partners can easily submit warranty claims and closely track their status from the Manufacturing Experience Cloud site. Manufacturers can also create claims on behalf of partners.

How Warranty Claim Information Is Represented in Manufacturing Cloud

Learn how you can capture information about warranty claims, defective assets, existing warranty coverage, and expenses incurred to repair defective assets.

Submit Warranty Claims from Your Manufacturing Portal

Partners and distributors can effortlessly submit warranty claims to the manufacturer and track claim status and approved amounts using the Manufacturing Experience Cloud site. Partners can capture details about the warranty claim by creating Claim, Claim Item, Claim Coverages, Claim Coverage Payment Details, and Claim Participant records. Manufactures can also create records on behalf of their partners when partners give warranty claim information through channels like chat, mobile, and email.

Claim Fields in Manufacturing Cloud

A warranty claim is a request made by a partner, dealer, or distributor to the manufacturer to repair, replace, or provide a refund for a defective asset. Capture high-level information about a warranty claim such as its type, reason, and account in Claim records. Review the fields available on the Claim record.
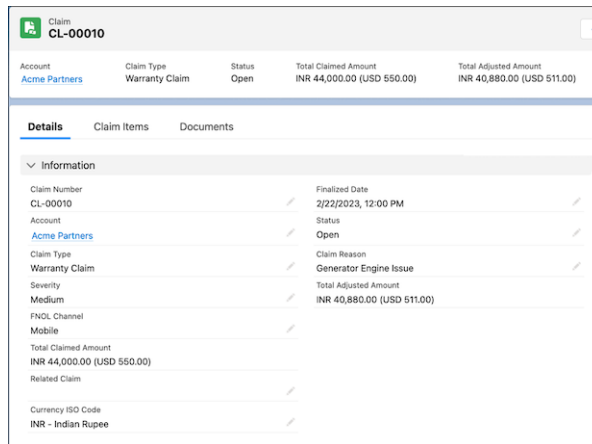
Claim Item Fields in Manufacturing Cloud

Create Claim Item records to capture information about the work to be performed on a defective asset related to a claim. Record granular information about a defective asset such as its usage, fault date, and repair date. Review the fields available on the Claim Item record.
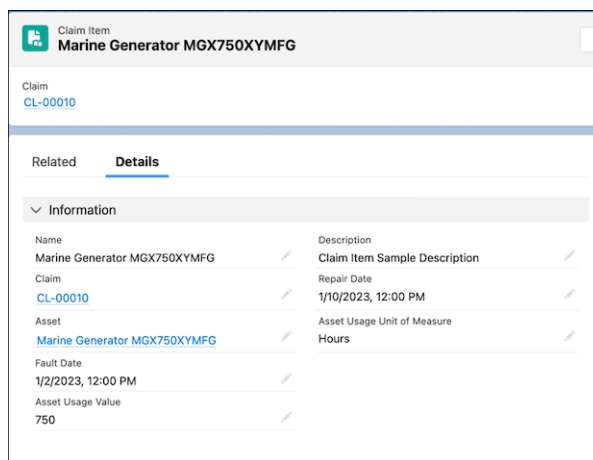
Claim Coverage Fields in Manufacturing Cloud

There can be multiple parts in a defective asset that cause the issues related to a claim. Create a claim coverage for each causal part in a defective asset that requires repair or replacement. Capture detailed information about the defective asset such as its associated warranty, fault code, and coverage type. Review the fields available on the Claim Coverage record.

Claim Coverage Payment Detail Fields in Manufacturing Cloud

To rectify a causal part in a defective asset for a warranty claim, your company can incur multiple expenses, perform different labor services, and replace various parts. Create a Claim Coverage Payment Detail record to capture detailed information about each expense, repair, and labor service for a causal part. Warranty claim adjudicators can adjudicate warranty claims by determining the adjusted amount on a claim coverage payment detail. Review the fields available on the Claim Coverage record.

Claim Participant Fields in Manufacturing Cloud

Associate multiple stakeholders with a warranty claim using Claim Participant records, for example, a dealer representative, an end customer, and a service technician. By capturing information about the stakeholders related to a warranty claim, warranty claim adjudicators can easily contact them to solicit additional information or request clarification. Review the fields available on the Claim Participant record.

How Warranty Claim Information Is Represented in Manufacturing Cloud

Learn how you can capture information about warranty claims, defective assets, existing warranty coverage, and expenses incurred to repair defective assets.

<table>
<tr><td>EDITIONS</td></tr>
<tr><td>Available in: Enterprise, Unlimited, and Developer Editions</td></tr>
</table>

Requirement	Action	Example
A partner wants to request a manufacturer to authorize the labor services to be performed and the parts to be replaced to rectify defective products before performing the labor.	Create Claim records of the Pre Warranty Authorization type.	Oyster World Drillers, a partner, submits a warranty claim to Marine Exploration Corporation, a manufacturer.
A partner wants to submit a warranty claim to be reimbursed for the labor services performed and parts replaced to rectify multiple defective assets.	Create Claim records of the Warranty Claim type.	Oyster World Drillers, a partner, submits a warranty claim for their malfunctioning generators to Marine Exploration Corporation, a manufacturer.
A partner wants to specify the asset on which the claim is made with details like usage and fault date.	Create Claim Item records.	Oyster World Drillers creates the following claim items: • A claim item for their Marine Generator Gold Y JS0609 asset. • A claim item for their Marine Generator Silver Z MS2605 asset.
A partner wants record information about multiple causal parts in each defective asset and the asset's associated warranties.	Create Claim Coverage records.	Oyster World Drillers creates the following claim coverages: • A claim coverage for the overheating rotor control in the Generator Gold Y JS0609 asset. • A claim coverage for the malfunctioning generator regulator in the Generator Gold Y JS0609 asset. • A claim coverage for the jammed air filter in the Marine Generator Silver Z MS2605 asset.
A partner wants to describe the labor services and part replacements that are made to rectify the issues caused by a causal part in a defective asset.	Create Claim Coverage Payment Detail records.	Oyster World Drillers creates the following claim coverage payment details: • A claim coverage payment detail for the replacement of the rotor in the Generator Gold Y JS0609 asset, with a claimed amount of $1,080. • A claim coverage payment detail for the labor charge for the repair of the generator regulator in the Generator Gold Y JS0609 asset, with a claimed amount of $1,930. • A claim coverage payment detail for the expense for a technician visit to repair the air filter in the Marine Generator Silver Z MS2605 asset, with a claimed amount of $3,800.

Requirement	Action	Example
		• A claim coverage payment detail for the cleaning of the piston set in the Marine Generator Silver Z MS2605 asset, with a claimed amount of $600.
A partner wants to associate stakeholders that are involved with the warranty claim.	Create Claim Participant records.	Oyster World Drillers, a partner creates claim participants to associate a service technician and a claim expert to the warranty claim.

Submit Warranty Claims from Your Manufacturing Portal

Partners and distributors can effortlessly submit warranty claims to the manufacturer and track claim status and approved amounts using the Manufacturing Experience Cloud site. Partners can capture details about the warranty claim by creating Claim, Claim Item, Claim Coverages, Claim Coverage Payment Details, and Claim Participant records. Manufactures can also create records on behalf of their partners when partners give warranty claim information through channels like chat, mobile, and email.

1. Log in to your Manufacturing Experience Cloud site.

2. To record high-level information about a warranty claim, create a claim.

   a. On the Claims tab, click **New**.

   b. Provide the required details.

   See Claim Fields in Manufacturing Cloud.

   c. Save your changes.

3. To record information about the work to be performed on a defective asset, create a claim item.

   a. From a Claim record, on the Claim Items related list of the Related tab, click **New**.

   b. Provide the required details.

   See Claim Item Fields in Manufacturing Cloud.

   c. Save your changes.

4. To record information about a causal part in a defective asset, create a claim coverage.

   a. On the Claim Coverage tab, click **New**.

   b. Provide the required details.

   See Claim Coverage Fields in Manufacturing Cloud.

   c. Save your changes.

5. To record information about an expense, labor service, or part replacement for a causal part in a defective asset, create a claim coverage payment detail.

   a. From a Claim Coverage record, on the Claim Coverage Payment Details related list of the Related tab, click **New**.

   b. Provide the required details.

   See Claim Coverage Payment Detail Fields in Manufacturing Cloud.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create and update Claims, Claim Items, Claim Coverages, Claim Coverage Payment Details, and Claim Participants
• Warranty Management for Experience Cloud permission set

    c. Save your changes.

6. To associate a stakeholder with a warranty claim, create a claim participant.

    a. From a Claim record, on the Claim Participant related list of the Related tab, click **New**.

    b. Provide the required details.

       See Claim Participant Fields in Manufacturing Cloud.

    c. Save your changes.

Claim Fields in Manufacturing Cloud

A warranty claim is a request made by a partner, dealer, or distributor to the manufacturer to repair, replace, or provide a refund for a defective asset. Capture high-level information about a warranty claim such as its type, reason, and account in Claim records. Review the fields available on the Claim record.

Warranty claims adjudicators and partners can use Claim records to capture information for different purposes. To determine the level of access of each persona to different fields, customize the Claim record page layout and field-level security settings.

Field	Description	Usage
Claim Number	The claim number in the claims management system.	Specified by claim adjudicators or auto-populated based on any predefined rules.
Account	The account related to the claim.	Specified by partners while submitting a claim.
Status	The status of the claim. • Draft • Submitted • Manual Review Needed • Under Review • Requested Information • Approved • Rejected	Specified by partners or claim adjudicators, or auto-populated based on any predefined rules.
Claim Type	The type of the claim. • Pre Warranty Authorization • Warranty Claim	Specified by partners while submitting a claim. To request manufacturers to authorize a repair or replacement for a product before submitting a warranty claim, select Pre Warranty Authorization. To submit a warranty claim, select Warranty Claim.

Field	Description	Usage
Claim Reason	The reason for initiating the claim.	Specified by partners while submitting a claim.
Claim Reason Type	The category that the claim reason belongs to. For example, natural disaster and accident.	Specified by partners while submitting a claim.
Severity	The severity of the claim. • High • Medium • Low	Specified by partners or claim adjudicators, or auto-populated based on any predefined rules.
FNOL Channel	The channel through which the loss was reported. • Chatbot • Mobile • Phone • Web	Specified by partners or claim adjudicators, or auto-populated based on any predefined rules.
Closed	Indicates whether the claim has been closed.	Specified by claim adjudicators or auto-populated based on any predefined rules.
Related Claim	The claim that's related to this claim.	Specified by partners or claim adjudicators.
Currency ISO Code	The ISO code of the currency related to the claim.	Specified by partners while submitting a claim.
Summary	The description of the claim.	Specified by claim adjudicators or auto-populated based on any predefined rules.
Total Adjusted Amount	The claim amount that was approved.	Auto-populated based on claim coverages.
Total Claimed Amount	The total amount that's being claimed.	Auto-populated based on claim coverages.
Finalized Date	The date on which the claim was marked resolved, with claim status as approved or rejected.	Specified by claim adjudicators or auto-populated based on any predefined rules.

Claim Item Fields in Manufacturing Cloud

Create Claim Item records to capture information about the work to be performed on a defective asset related to a claim. Record granular information about a defective asset such as its usage, fault date, and repair date. Review the fields available on the Claim Item record.

Warranty claims adjudicators and partners can use Claim Item records to capture information for different purposes. To determine the level of access of each persona to different fields, customize the Claim Item record page layout and field-level security settings.

Field	Description	Usage
Name	Name of the item that's included in the claim.	Specified by partners while submitting a claim item.
Description	The description of the claim item.	Specified by partners while submitting a claim item.
Asset	The asset that's associated with the claim.	Specified by partners while submitting a claim item.
Claim	The parent claim that includes this claim item.	Specified by partners while submitting a claim item.
Claim Participant	The claim participant that's associated with the claim item.	Specified by partners while submitting a claim item.
Category	Specifies the category of the claim item. • Parent Asset • Claim Asset • Damaged Property • Involved Injury	Specified by partners while submitting a claim item.
Current Address	The location of the claim item.	Specified by partners while submitting a claim item.
Fault Date	The date of occurrence of the fault in the asset.	Specified by partners while submitting a claim item.

Field	Description	Usage
Repair Date	The date of repair of the asset.	Specified by partners or claim adjudicators, or auto-populated based on any predefined rules.
Asset Usage Value	The usage value for the asset at the time of occurrence of the fault.	Specified by partners while submitting a claim item.
Asset Usage Unit of Measure	The unit of measure for the usage value of the asset.	Specified by partners while submitting a claim item.

Claim Coverage Fields in Manufacturing Cloud

There can be multiple parts in a defective asset that cause the issues related to a claim. Create a claim coverage for each causal part in a defective asset that requires repair or replacement. Capture detailed information about the defective asset such as its associated warranty, fault code, and coverage type. Review the fields available on the Claim Coverage record.

Warranty claims adjudicators and partners can use Claim Coverage records to capture information for different purposes. To determine the level of access of each persona to different fields, customize the Claim Coverage record page layout and field-level security settings.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions

Field	Description	Usage
Name	The name of the claim coverage.	Specified by partners while submitting a claim.
Claim	The claim that's associated with this claim coverage.	Specified by partners while submitting a claim.
Claim Item	The claim item that's associated with the claim coverage.	Specified by partners while submitting a claim.
Claim Participant	The claim participant that's associated with this claim coverage.	Specified by partners while submitting a claim.

Field	Description	Usage
Asset Warranty	The asset warranty that's associated with the asset selected in the claim item.	Specified by partners or claim adjudicators, or auto-populated based on any predefined rules.
Causal Part	The product part that causes the issues related to the claim.	Specified by partners while submitting a claim.
Product Related Material	The Product Related Material record that defines the association between the causal part and the product associated with the claim item.	Specified by partners or claim adjudicators, or auto-populated based on any predefined rules.
Status	The status of the claim coverage. • Approved • Denied	Specified by partners or claim adjudicators, or auto-populated based on any predefined rules.
Description	The description of the coverage for the claim.	Specified by partners while submitting a claim.
Coverage Type	The type of the warranty coverage for the causal part. • None • Standard Warranty • Extended Warranty	Specified by partners or claim adjudicators, or auto-populated based on any predefined rules.
Fault Code	The code set that uniquely identifies the fault caused by the part.	Specified by partners or claim adjudicators, or auto-populated based on any predefined rules.
External Work Order Reference	The external identifier of the work order that's related to this claim coverage.	Specified by or claim adjudicators or auto-populated based on any predefined rules.
Total Claimed Amount	The total amount for the claim coverage that's being claimed.	Auto-populated based on claim coverage payment details.
Total Adjusted Amount	The total amount for the claim coverage that's approved.	Auto-populated based on claim coverage payment details.
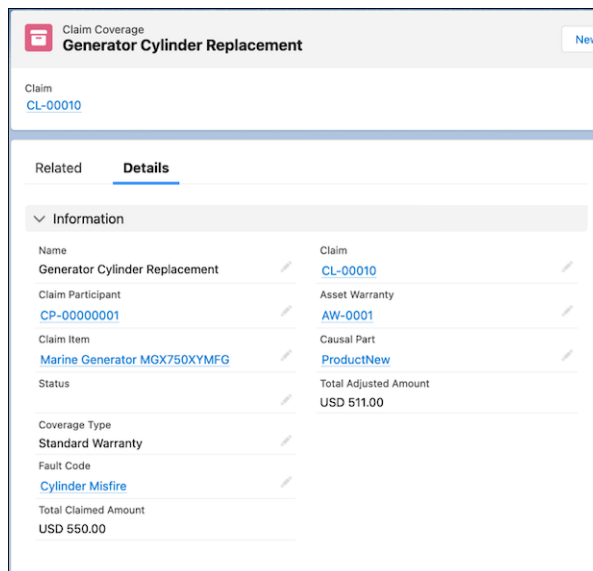
Claim Coverage Payment Detail Fields in Manufacturing Cloud

To rectify a causal part in a defective asset for a warranty claim, your company can incur multiple expenses, perform different labor services, and replace various parts. Create a Claim Coverage Payment Detail record to capture detailed information about each expense, repair, and labor service for a causal part. Warranty claim adjudicators can adjudicate warranty claims by determining the adjusted amount on a claim coverage payment detail. Review the fields available on the Claim Coverage record.

Warranty claims adjudicators and partners can use Claim Coverage Payment Detail records to capture information for different purposes. To determine the level of access of each persona to different fields, customize the Claim Coverage Payment Detail record page layout and field-level security settings.

Field	Description	Usage
Name	The name of the claim coverage payment detail.	Specified by claim adjudicators or auto-populated based on any predefined rules.
Claim Coverage	The claim coverage that's associated with the claim coverage payment detail.	Specified by claim adjudicators or auto-populated based on any predefined rules.
Status	The status of the Claim Coverage Payment Details record. For example, None, Approved, and Rejected.	Specified by partners while submitting a claim.
Quantity	The quantity of parts replaced or the number of labor hours.	Specified by partners or claim adjudicators, or auto-populated based on any predefined rules.
Description	The description for the claim coverage payment detail.	Specified by partners while submitting a claim.

Field	Description	Usage
Replacement Part	The product part that's a replacement for the defective part.	Specified by partners or claim adjudicators, or auto-populated based on any predefined rules.
Charge Type	The type of charge. • Expense • Labor • Replaced Part	Specified by claim adjudicators or auto-populated based on any predefined rules.
Charge Type Code	The code set that identifies the labor charge or expense.	Specified by partners while submitting a claim.
Price Book Entry	The entry of the product that's related to the replacement part in the price book.	Specified by partners or claim adjudicators.
Claimed Amount	The amount claimed by the claimant for the repair or replacement.	Specified by partners while submitting a claim.
Actual Expense	The actual expense of the repair or replacement.	Specified by claim adjudicators or auto-populated based on any predefined rules.
Adjusted Amount	The amount for the repair or replacement that's approved.	Specified by claim adjudicators or auto-populated based on any predefined rules.
Comment	Comments provided by the adjudicator while adjudicating the claim coverage payment detail.	Specified by claim adjudicators or auto-populated based on any predefined rules.

Claim Participant Fields in Manufacturing Cloud

Associate multiple stakeholders with a warranty claim using Claim Participant records, for example, a dealer representative, an end customer, and a service technician. By capturing information about the stakeholders related to a warranty claim, warranty claim adjudicators can easily contact them to solicit additional information or request clarification. Review the fields available on the Claim Participant record.

To determine the level of access of each persona to different fields, customize the Claim Participant record page layout and field-level security settings.

Field	Description	Usage
Claim	The claim in which this participant has one or more roles.	Specified by partners or claim adjudicators.
Name	An auto-generated number that's assigned to this record.	Auto-populated by Salesforce.
Participating Account	The account of the claim participant.	Specified by partners or claim adjudicators.
Participating Contact	The contact of the claim participant.	Specified by partners or claim adjudicators.
Role	The roles that the claim participant can have in the claim. For example, dealer representative, end customer, and service technician.	Specified by partners or claim adjudicators.
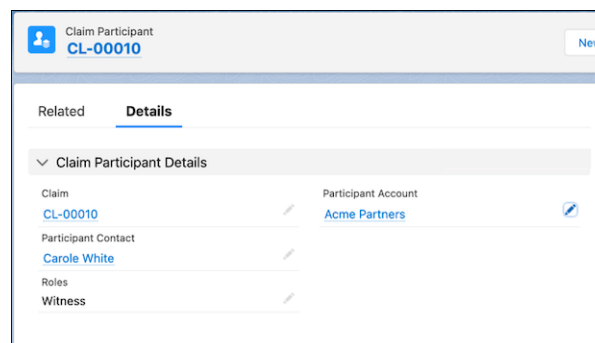
Adjudicate Warranty Claims

Adjudicate warranty claims by examining defective assets and their causal parts, by checking existing warranty coverages, and by verifying labor services, part replacements, and expenses incurred to rectify the asset. Warranty claim adjudicators can get a holistic view of every aspect of the warranty claim and manually adjudicate the claim on the preconfigured Claims record page. Admins can set up a warranty claim adjudication process by using process automation tools such as Flow Builder and Business Rules Engine.

Manual Adjudication of Warranty Claims

Warranty claim adjudicators can adjudicate warranty claims by examining information on the defective assets, by checking asset warranties and warranty terms, and by tracking their causal parts on the preconfigured Claims record page. The Claims record page pulls relevant information from various sources to give warranty claim adjudicators a view of every aspect of the warranty claim. Warranty claim adjudicators can drill down to the required information by opening records as subtabs and can determine the approved amount for each claim coverage payment detail.

Automated Adjudication of Warranty Claims

Build an end-to-end warranty claim adjudication process to make warranty claim adjudicators more productive, to reduce claim processing time, and to prevent errors. Set up an automated claim adjudication process by using Flow Builder, Business Rule Engine, and Context Service.

Product Warranty Claim Approval Predictions by Using Scoring Framework

Use Scoring Framework to get predictions about the likelihood of product warranty claims getting approved, based on previously approved claims. Adjudicate warranty claims by reviewing these scores to determine whether you can approve the claims as they are, or must verify the claims further.

Warranty Claim Insights by Using CRM Analytics for Warranty Lifecycle Management

The CRM Analytics for Warranty Lifecycle Management app features Claims Analytics dashboards that provide in-depth analysis of warranty claims. Use trend analysis, location insights, past claims trends, and SLA management to address warranty claims quickly and ensure efficient claim resolutions.

Manual Adjudication of Warranty Claims

Warranty claim adjudicators can adjudicate warranty claims by examining information on the defective assets, by checking asset warranties and warranty terms, and by tracking their causal parts on the preconfigured Claims record page. The Claims record page pulls relevant information from various sources to give warranty claim adjudicators a view of every aspect of the warranty claim. Warranty claim adjudicators can drill down to the required information by opening records as subtabs and can determine the approved amount for each claim coverage payment detail.

Warranty claim adjudicators can use these tabs on the Claims record page.

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EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions

</div>

Details

The Details tab on the Claim record page shows information about the warranty claim, including its reason, type, status, total claimed amount, and total adjusted amount.

Claim Items

The Claim Items tab on the Claim record page shows information about the related claim item, asset warranties, claim coverages, and claim coverage payment details as different cards. Claim adjudicators can expand and collapse these cards and open a record as a subtab. They can determine the approved amount for the claim by editing the Adjusted Amount value. Claim adjudicators can view these cards on the Claim Items tab.

Card	Usage	Information Shown	Information Source
Claim Item (1)	View details of the defective assets related to the warranty claim.	Asset Name	Asset field on the Claim Item record
		Fault Date	Fault Date field on the Claim Item record
		Repair Date	Repair Date field on the Claim Item record
		Asset Usage	Asset Usage Value and Asset Usage Unit of Measure fields on the Claim Item record
Asset Warranty (2)	Examine the warranty terms associated with the defective asset.	Asset Warranty	Asset Warranty Number field on the Asset Warranty record
		Warranty Type	Warranty Type field on the Asset Warranty record
		Warranty Term	Warranty Term field on the Asset Warranty record
		Start Date	Start Date field on the Asset Warranty record
		End Date	End Date field on the Asset Warranty record
		Active	Active field on the Warranty Term record associated with this Asset Warranty record

Card	Usage	Information Shown	Information Source
Claim Coverage (3)	Track each causal part in the defective asset, along with the total claimed and approved amount to rectify it.	Causal Part	Causal Part field on the Claim Coverage record
		Fault Code	Fault Code field on the Claim Coverage record
		Asset Warranty	Asset Warranty field on the Claim Coverage record
		Coverage Type	Coverage Type field on the Claim Coverage record
		Total Claim Amount	Total Claimed Amount field on the Claim Coverage record
		Total Adjusted Amount	Total Adjusted Amount field on the Claim Coverage record
Claim Coverage Payment Detail (4)	Review each expense incurred, labor service performed, and part replaced to rectify a causal part. Determine the approved amount by editing the Adjusted Amount value.	Name	Name field on the Claim Coverage Payment Detail record
		Charge Type	Charge Type field on the Claim Coverage Payment Detail record
		Charge Type Code	Charge Type Code field on the Claim Coverage Payment Detail record
		Replaced Part	Replacement Part field on the Claim Coverage Payment Detail record
		Quantity	Quantity field on the Claim Coverage Payment Detail record
		Claimed Amount	Claimed Amount field on the Claim Coverage Payment Detail record
		Adjusted Amount	Adjusted field on the Claim Coverage Payment Detail record

Documents
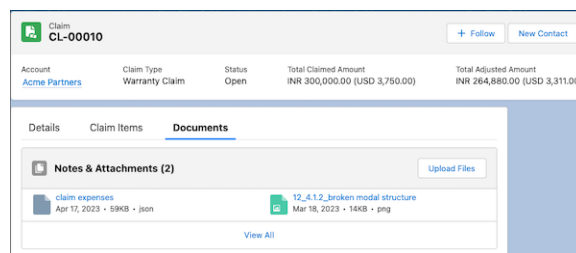
The Documents tab on the Claim record page helps claim adjudicators view and manage the supporting documents submitted by partners.

> **Note:** Admins can design company-specific pages to adjudicate warranty claims by using the preconfigured Omnistudio FlexCards, Integration Procedures, and DataRaptors available in Warranty Lifecycle Management.

SEE ALSO:

How Warranty Claim Information Is Represented in Manufacturing Cloud

Automated Adjudication of Warranty Claims

Build an end-to-end warranty claim adjudication process to make warranty claim adjudicators more productive, to reduce claim processing time, and to prevent errors. Set up an automated claim adjudication process by using Flow Builder, Business Rule Engine, and Context Service.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions

Workflow of Warranty Claim Adjudication Process

To set up a warranty claim adjudication process with scalable and comprehensive rules, use Flow Builder, Business Rules Engine, and Context Service. Learn how these capabilities work together, the key steps in a typical adjudication process, and the decisions to be made before building the process.

Create an Expression Set for Your Warranty Claim Adjudication Process

Define the rules to process the warranty claims in an expression set. Use expression sets in combination with lookup tables to perform complex lookups and calculations.

Create a Flow for Your Warranty Claim Adjudication Process

Create a record-triggered flow to retrieve warranty claim details by using Context Service, invoke an expression set to adjudicate warranty claims, and perform actions based on the adjudication of the claim.

Context Definition for Warranty Claim Adjudication Processes

Warranty Lifecycle Management has a predefined context definition called Claim Details that enables the efficient retrieval and consumption of warranty claims data in various applications. The Claim Details context definition consists of a data structure for claims data, mappings to data sources, and context tags to enable consuming applications to use claims data.

Claim Validation Element in Expression Sets

Add the Claim Validation business element to an expression set to validate a warranty claim against the business rules in the expression set. The business element uses the ID of a claim record to process the claim and specifies if the claim is approved. If the claim isn't approved, the business element specifies the products that aren't covered under a warranty. Use the element with other meaningful elements in the expression set to build a comprehensive warranty claim adjudication process.

SEE ALSO:

Flow Builder

Business Rules Engine

Workflow of Warranty Claim Adjudication Process

To set up a warranty claim adjudication process with scalable and comprehensive rules, use Flow Builder, Business Rules Engine, and Context Service. Learn how these capabilities work together, the key steps in a typical adjudication process, and the decisions to be made before building the process.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions

Learn About the Capabilities of an Adjudication Process

Understand the capabilities that you can use to build an automated adjudication process.

- Context Service: Context Service enables easy retrieval and consumption of information in tools such as Business Rules Engine. It comprises context definitions, which is a structured set of data required to execute a process. Warranty Lifecycle Management has a predefined context definition called Claim Detail that can be used in adjudication processes.

- Business Rules Engine: Business Rules Engine is a suite of components, services, and objects that are used to automate complex decision-making processes. Expression sets are the key components in the Business Rules Engine and consist of a sequential set of steps to run a process. In an expression set, you can add step elements to decide the operations to be performed, and can add variables and constants as placeholders for values. See Business Rules Engine .

- Flow Builder: Flow Builder is a declarative tool for building complex workflows. Elements in a flow can run various actions, such as aggregate data, create or update records, and assign values to resources. See Flow Builder .

How do the different pieces fit together? You can use Context Service to consolidate all information related to a warranty claim, and pass the information into process automation tools. Use Business Rules Engine components to validate claims against eligibility rules, to determine approved claim expenses, and to decide their approval status. Use flows to invoke the Business Rules Engine components, to update the relevant claim records, and to perform other actions.

Explore the Key Steps in a Warranty Claim Adjudication Process

Review the key steps in a warranty claim adjudication process built by using the predefined Claim Details context definition, an expression set, and a record-triggered flow.

1. Experience Cloud users, warranty adjudicators, or an automated process create warranty claim records.

2. When a Claim record meets the predefined conditions, a flow is triggered. For example, a flow can be triggered when the status of a Claim record is Submitted and the claim type is Warranty Claim.

3. To retrieve all information related to a Claim record, the flow invokes the Build Context invocable action. The invocable action consolidates and caches the claims data associated with a context definition. The cached claims data is used in succeeding steps.

4. The flow invokes an expression set and passes the required input values to the expression set.

5. The expression set validates the warranty claim by using business rules. It passes its output values—such as the adjusted amount in a claim coverage payment detail record or the status of a claim record—back to the flow.

6. The flow performs operations based on the values from the expression set. For example, if a claim is rejected, the flow updates the status of the claim record and emails the claim participants.

Determine How Claims Data is Passed into Expression Sets

Warranty Lifecycle Management has an extensible data model to store warranty claims information. Before you build an expression set to specify adjudication rules, decide how data is passed from the claims objects to expression sets. You can choose one of these options, or do a mix of both.

- Use Context Definitions: Add context tags from the predefined Claim Details context definition to expression sets. A context tag acts like a local variable in an expression set. To populate a context definition with the information about a specific warranty claim, add the Build Context invocable action to a flow. Clone and modify the predefined context definition if you've extended the claims data model or have other custom requirements. See Context Definition for Warranty Claims on page 367.

- Use Object and Field Aliases: Add fields from objects as variables in expression sets. To use field aliases, first create object and field aliases of the Warranty Claim usage type. See Create Source Field Aliases.

Create an Expression Set for Your Warranty Claim Adjudication Process

Define the rules to process the warranty claims in an expression set. Use expression sets in combination with lookup tables to perform complex lookups and calculations.

Based on how you want to pass claims data into the expression set, ensure that you create the required object and field aliases or activate the required context definition.

You can add step elements to define the rules to validate warranty claims. For example, you validate a claim against these details from warranty claim records.

- Products or their components, such as products, product families, assets, or product-related materials
- Existing warranty coverages, such as the asset warranties related to an asset
- Entitlements offered by existing warranties, such as labor covered, parts covered, and expenses covered in warranty terms or warranty term coverages
- Duration of existing warranties, such as the duration of the asset warranties, warranty terms, and warranty term coverages
- Significant dates, such as the repair date and fault date of the claim item
- Condition of the asset, such as its usage, causal part, and fault code
- Claimed amount for expenses, labor services, or part replacements

1. Create an expression set.

   a. From the App Launcher, find and select **Business Rules Engine**.

   b. Click the app navigation menu, and select **Expression Sets**.

   c. Click **New**.

   d. Enter a name for the expression set.

   e. For Usage Type, select **Warranty Claim**.

   f. For Context Definition, select **Claim Details**.

   See Context Definition for Warranty Claims Adjudication Processes

   g. Save your work.

2. Add rules to your expression set version.

   a. On the record page of your new expression set, on the Related tab, click the action menu for the expression set version, and select **Open in Expression Set Builder**.

   b. Define the resources for the inputs, outputs, and values used by and passed between the steps of the expression set.

   c. To process a warranty claim in the expression set, add the Claim Validation elements.

   See Claim Validation Element in Expression Sets on page 370.

   d. To conditionally filter and iterate over different Claim Coverage Payment Detail records associated with a Claim record, add the List Group element. Add other elements to the list group to perform further operations on the filtered records.

   See List Group and List Filter .

   e. Add other step elements as appropriate.

   See Step Elements in Expression Sets.

   f. To supply data to your expression set, specify the source field aliases, context tags, or a mix of both in the step elements.

   g. To ensure that your expression set is working as expected, simulate the expression set with test values.

h. Save your work and activate the expression set version.

Build a process by using Flow Builder, OmniStudio components, or custom tools to invoke the expression set.

Create a Flow for Your Warranty Claim Adjudication Process

Create a record-triggered flow to retrieve warranty claim details by using Context Service, invoke an expression set to adjudicate warranty claims, and perform actions based on the adjudication of the claim.

1. Create a record-triggered flow that triggers when a Claim record with the Submitted status is created or updated.

2. Add an Action element that invokes the Build Context action to populate the context with the warranty claim information.

3. Add an Action element that invokes the expression set version, and specify appropriate resources as input and output values in the action element.

4. Add an Action element that invokes the Persist Context Data action to store the cached context data about the warranty claim.

   Storing the cached context data lets you use the warranty claims information in downstream processes.

5. Add other elements in the flow to determine how the output from the expression set version is returned or processed.

6. Save and activate the flow.

Context Definition for Warranty Claim Adjudication Processes

Warranty Lifecycle Management has a predefined context definition called Claim Details that enables the efficient retrieval and consumption of warranty claims data in various applications. The Claim Details context definition consists of a data structure for claims data, mappings to data sources, and context tags to enable consuming applications to use claims data.

Claim Details Context Definition

The Claim Details context definition includes these elements.

• A canonical, hierarchical structure of warranty claim information. The structure is defined with nodes and attributes.

• A mapping of the context structure to the Salesforce objects that the claims data must be fetched from. The nodes and attributes in the structure are mapped to the Claim, Claim Item, Claim Coverage, and Claim Coverage Payment Detail objects.

• Context tags that help applications consume and update the required claims data in the context definition. Context tags in the Claim Details context definition represent specific pieces of information about a warranty claim. For example, the ClaimItemFaultDate context tag represents the date of occurrence of the fault in a defective asset.

Context Tags in the Claim Details Context Definition

Use the context tags from the context definition in applications such as Expression Set Builder to supply appropriate claims data in the application. Context tags can also be used to update the context definition. To add context tags from the Claim Details Context Definition in an expression set, create an expression set and specify Warranty Claim as its usage type and Claim Details as its context definition. Use context tags as list variables in step elements.

Review the context tags in the Claim Details context definition.

Node	Context Tag	Tag Type	Description
Claim	Claim	Node Tag	Information about a claim.
	Account	Attribute Tag	Name of the account that initiates the claim.
	ClaimType	Attribute Tag	The type of the claim.
	ClaimApproved	Attribute Tag	Indicates if the claim is approved or not.
	ClaimTotalClaimedAmount	Attribute Tag	Total amount being claimed in the claim record.
	ClaimReasonType	Attribute Tag	Reason for initiating the claim.
	ClaimStatus	Attribute Tag	Status of the claim.
Claim Item	ClaimItem	Node Tag	Information about the claim item.
	ClaimItemParentClaimId	Attribute Tag	ID of the claim related to the claim item.
	Asset	Attribute Tag	Name of the defective asset.
	RepairDate	Attribute Tag	Date of repair of the defective asset.
	ProductFamily	Attribute Tag	Product family of the defective asset.
	AssetUsage	Attribute Tag	Usage value of the asset at the time of occurrence of the fault.
	AssetUsageUnitOfMeasure	Attribute Tag	Unit of measure for the usage value of the asset.
	FaultDate	Attribute Tag	Date of occurrence of the fault in the defective asset.
	ProductCode	Attribute Tag	Product code of the defective asset.
	Product	Attribute Tag	Product of the defective asset.
Claim Coverage	ClaimCoverage	Node Tag	Information about a claim coverage.
	FaultCode	Attribute Tag	Code set that uniquely identifies the fault caused by the part.
	CausalPart	Attribute Tag	ID of the product part that causes the issues related to the claim.

Node	Context Tag	Tag Type	Description
	CausalPartCode	Attribute Tag	Code of the product part that causes the issues related to the claim.
	ClaimCvrTotalClaimedAmount	Attribute Tag	Total amount being claimed in the claim coverage record.
Claim Coverage Payment Detail	ClaimCoveragePaymentDetail	Node Tag	Information about the claim coverage payment detail.
	ChargeType	Attribute Tag	Type of labor charge or expense.
	ChargeTypeCode	Attribute Tag	Unique code that identifies the labor charge or expense.
	ReplacementPart	Attribute Tag	Product part that's a replacement for the defective part.
	ReplacementPartCode	Attribute Tag	ID of the product part that's a replacement for the defective part.
	PaymentDetailQuantity	Attribute Tag	Quantity of parts replaced or the number of labor hours.
	PaymentDetailClaimedAmount	Attribute Tag	Amount claimed by the claimant as a part of the claim coverage payment detail.
	PaymentDetailApproved	Attribute Tag	Indicates if the claim coverage payment detail is approved or not.
	PaymentDetailAdjustedAmount	Attribute Tag	Amount the manufacturer intends to pay to the claimant for the repair, replacement, or labor service to rectify a causal part in the claim coverage payment detail.
	PaymentDetailStatus	Attribute Tag	Status of the claim coverage payment detail.
	PaymentDetailActualExpense	Attribute Tag	Actual expense of the part replacement or labor service in the claim coverage payment detail.

Claim Validation Element in Expression Sets

Add the Claim Validation business element to an expression set to validate a warranty claim against the business rules in the expression set. The business element uses the ID of a claim record to process the claim and specifies if the claim is approved. If the claim isn't approved, the business element specifies the products that aren't covered under a warranty. Use the element with other meaningful elements in the expression set to build a comprehensive warranty claim adjudication process.

Review the parameters in the element and the data type of the variables to be used for each parameter.

Parameter Name	Type	Description	Data Type of Variable
ClaimId	Input	Uses the ID of the Claim record to be validated.	Text
IsClaimApproved	Output	Returns a boolean value specifying if the claim was approved (true) or not (false).	Boolean
ProductsWithoutWarranty	Output	Returns a string with comma-separated names of the products that aren't covered by an associated warranty term.	Text
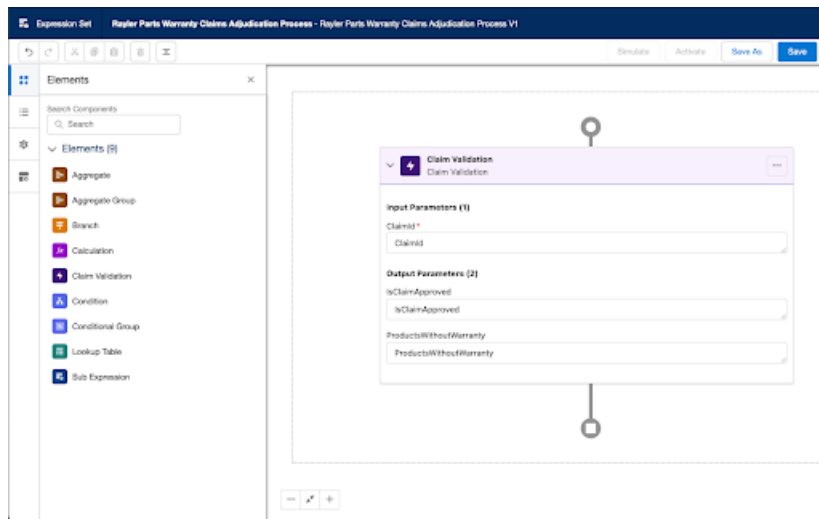
Product Warranty Claim Approval Predictions by Using Scoring Framework

Use Scoring Framework to get predictions about the likelihood of product warranty claims getting approved, based on previously approved claims. Adjudicate warranty claims by reviewing these scores to determine whether you can approve the claims as they are, or must verify the claims further.

Create a CRM Analytics Template Configuration to Predict Product Warranty Claim Approvals

Create and set up a template configuration in Scoring Framework to install a customizable CRM Analytics app that generates predictions about the likelihood of product warranty claims getting approved.

Input Features to Get Product Warranty Claim Approval Predictions

Select input features from a set of calculated values.

CRM Analytics App Assets to Predict Product Warranty Claim Approvals

The CRM Analytics app by the template configuration that you created to predict product warranty claim approvals contains preconfigured recipes that generate datasets, and a model.

Create a CRM Analytics Template Configuration to Predict Product Warranty Claim Approvals

Create and set up a template configuration in Scoring Framework to install a customizable CRM Analytics app that generates predictions about the likelihood of product warranty claims getting approved.

> 📝 **Note:** To get these predictions, you don't need to select the prediction duration and historical datasets. As a result, the Select Prediction Duration & CRM Analytics Datasets step doesn't appear when you select Warranty Claim Approval Score (Manufacturing or Automotive Cloud) as the template configuration type.

1. In Scoring Framework, create a CRM Analytics template configuration that uses Warranty Claim Approval Score (Manufacturing or Automotive Cloud) as the template configuration type.

2. Select **Claim** as the object to train your model and get predictions for.

3. To better analyze your data, include input features that are in a CRM Analytics dataset.

4. Define the target variable for your model.

   - To define a predefined target variable, select **Warranty Claim with 50 Percent Claimed Amount Approved** or **Warranty Claim with 70 Percent Claimed Amount Approved**.

   - To define a custom target variable, add conditions.

5. Select input features from a CRM Analytics dataset, a predefined set of fields, or from the object that you selected for training and scoring.

6. To focus your predictions on a specific subset of the claims data, define filter conditions.

7. To display your generated predictions in records, select a preconfigured output connector, and then select one of these objects and its field to store the prediction.

   - Claim

   - Claim Coverage

   - Claim Coverage Payment Detail

   - Claim Item

- Claim Participant

8. To show prediction scores, suggestions and insights about prediction scores, and Next Best Action recommendations, create an AI Accelerator use case.

9. Show predictions on Claim record pages.

SEE ALSO:

Create and Set Up a CRM Analytics Template Configuration for Predictions

Input Features to Get Product Warranty Claim Approval Predictions

Input Features to Get Product Warranty Claim Approval Predictions

Select input features from a set of calculated values.

Input Feature Label	Description
Account Billing City	The billing city of the account for which predictions are generated.
Approval Rate For Approved 50 Percent Claimed Amount Claims	The claim approval rate for each account. The rate is calculated based on the claim's created date when the predefined target variable is Warranty Claim with 50 Percent Claimed Amount Approved.
Approval Rate For Approved 70 Percent Claimed Amount Claims	The claim approval rate for each account. The rate is calculated based on the claim's created date when the predefined target variable is Warranty Claim with 70 Percent Claimed Amount Approved.
Asset Name	The asset for which predictions are generated.
Claim Item Category	The category of the claim item related to the warranty claim for which predictions are generated.
First Claim Coverage Type	The first coverage type in the Get Example Dataset recipe that has the maximum total claimed amount from claim coverage for each claim.
First Causal Part	In the Get Example Dataset recipe, the first causal part is the first causal part that has the maximum total adjusted amount from claim coverage for each claim. In the Get Prediction Dataset recipe, it's the first causal part that has the maximum total claimed amount from claim coverage for each claim.
First Product Fault Code	In the Get Example Dataset recipe, the first product fault code is the first fault code that has

Input Feature Label	Description
	the maximum total adjusted amount from claim coverage for each claim. In the Get Prediction Dataset recipe, it's the first fault code that has the maximum total claimed amount from claim coverage for each claim.
First Warranty Term Name	The first warranty term name in the Get Example Dataset recipe that has the maximum total claimed amount from claim coverage for each claim.
First Warranty Term Type	The first warranty term type in the Get Example Dataset recipe that has the maximum total claimed amount from claim coverage for each claim.
Product Category Code	The category code of the product for which predictions are generated.
Product Family	The product family for which the predictions are generated.
Product Name	The product for which predictions are generated.

SEE ALSO:

Select Input Features to Get Accurate Predictions

CRM Analytics App Assets to Predict Product Warranty Claim Approvals

The CRM Analytics app by the template configuration that you created to predict product warranty claim approvals contains preconfigured recipes that generate datasets, and a model.

Recipes and Datasets

The CRM Analytics app installed based on the template configuration that you created contains these preconfigured recipes.

Recipe	Description	Output
Get Example Dataset	The recipe creates a dataset that Einstein learns from by evaluating existing accounts, claims, claim coverages, claim items, code sets, assets, asset warranties, warrant terms, and products.	Example Dataset
Get Prediction Dataset	The recipe creates a dataset that Einstein uses to generate predictions. The recipe evaluates existing accounts, claims, claim coverages, claim items, code sets, assets, asset	Prediction Dataset

Recipe	Description	Output
	warranties, warrant terms, and products.	
Get Predicted Claim Approval Scores	The recipe evaluates the prediction dataset and then generates predictions about the likelihood of warranty claims getting approved and the top three factors that possibly affect the predictions. The recipe then writes details of the predicted warranty claim approval score and the top three predictors to the relevant records of the writeback object that's selected for the template configuration in Scoring Framework.	Predicted Warranty Claim Approval Score Dataset

Modify the recipes for any of these circumstances.

- Your schema deviates from the Manufacturing Cloud schema.
- A custom field of an existing entity changes.
- The storage of feature data changes from an existing entity to a custom entity.
- The data doesn't load properly.
- The app stops working because of incorrect data values.

Model

The CRM Analytics app installed based on the template configuration that you created contains the Warranty Claim Approval Predictions model. The Predict Likelihood of Warranty Claim Approval node of the Get Predicted Claim Approval Scores recipe uses this model to generate predictions.

SEE ALSO:

Manage Recipes

Build Models in Einstein Discovery

Warranty Claim Insights by Using CRM Analytics for Warranty Lifecycle Management

The CRM Analytics for Warranty Lifecycle Management app features Claims Analytics dashboards that provide in-depth analysis of warranty claims. Use trend analysis, location insights, past claims trends, and SLA management to address warranty claims quickly and ensure efficient claim resolutions.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions

SEE ALSO:

Set Up CRM Analytics for Warranty Lifecycle Management

Use CRM Analytics for Warranty Lifecycle Management Dashboards

Manage Product and Part Inventory in Manufacturing Cloud

Empower inventory mangers, service technicians, and service reps to plan inventory transfers and returns better with near real-time visibility into inventory at different inventory locations such as warehouses and distribution lots. Track information about your inventory with the inventory management data model. Design your inventory search experience to track and manage your inventory across its entire lifecycle by using the powerful Criteria-Based Search and Filter feature. Set up a search experience for users to search and track inventory by using fields from multiple objects. Decide the way the results are shown and what users can do with the results.

How Inventory Information is Represented in Manufacturing Cloud

Track the entire lifecycle of your inventory and increase the traceability of inventory stock and movement by using objects in Manufacturing Cloud.

Inventory Search in Manufacturing Cloud

Build a search experience to help inventory managers and service technicians get visibility into their inventory stock and movement. You can control how users can search inventory units, how results appear, and how users can act upon search results. Set up a search framework by configuring a searchable object that consolidates all searchable inventory data, configuring the search query criteria, and define actions that can be taken on the search results.

How Inventory Information is Represented in Manufacturing Cloud

Track the entire lifecycle of your inventory and increase the traceability of inventory stock and movement by using objects in Manufacturing Cloud.

Review the objects that can be used to store the required inventory information.

Requirement	Action
A manufacturer wants to model the stock-keeping units it sells. A product has a commercial value and can be sold to a customer.	Create Product records.
A manufacturer wants to track the quantity of a product at a particular inventory location. Product item records represent your inventory. A product item is associated with an inventory location, such as a warehouse or a distribution lot, and a product.	Create Product Item records.
A manufacturer wants to track when a product is consumed, replenished, adjusted, or transferred. Product item transactions represent actions taken on a product item. Product item transactions are auto-generated records that specify the quantity of products impacted by the action.	Create Product Item Transaction records.

Requirement	Action
A manufacturer wants to track product shipments that have been ordered or requested. A product request represents a product shipment that's requested, and can include one or more products. A product request line item is each product that's requested as a part of a product request.	Create Product Request and Product Request Line Item records.
A manufacturer wants to track the transfer or the movement of a product item between two inventory locations. A product transfer record represents a transfer of one or more product items from a particular location to another. Product transfers track the destination and source locations, the quantity of products sent, and the details of the shipment. A product transfer state represents an action taken to associate a serialized product with a product transfer. The new state is a result of the action. A product transfer state record is created when serialized products are attached to the product transfer.	Create Product Transfer and Product Transfer State records.
A manufacturer wants to track a product item while it's in transit between two inventory locations. A shipment represents the transport of one or more inventory units. A shipment record stores the source and destination locations of a product shipment, its tracking details, and more. A shipment item record represents a product that's included in a shipment.	Create Shipment and Shipment Line Item records.
A manufacturer wants to track the product items required to complete a work order. A product required record represents the quantity of a specific product that's required to complete a work order or work order line item.	Create Product Required records.
A manufacturer wants to track products consumed to complete a work order. It also wants to track the products' state after being consumed. A product consumed record represents the product used to complete a work order or work order line item. A product consumed state record represents the new state of the product after it's consumed.	Create Product Consumed and Product Consumed State records.
A manufacturer wants to track the repair, return, or recall of product items. It wants to track the price adjusted in lieu of the returned product items. A return order represents one or more products being returned. A return order line item represents the quantity of each product	Create Return Order, Return Order Line Item, and Return Order Item Adjustment records.

Requirement	Action
in the return order . Return order line item records specify the processing plan for the returned items, the source and destination of the returned items, the reason for return, and more. A return order item adjustment represents a price adjustment for a returned product.	
A manufacturer wants to track the serial number of each product in an inventory at a particular location. They also want to track the status of a serialized product. A serialized product represents a product with a serial number in an inventory. If the associated product record was marked as serialized, you can associate the serial numbers with the product item to identify how many units of each serialized product are available at a specific location. A serialized product transaction represents a change in the state of a serialized product.	Create Serialized Product and Serialized Product Transactions records.

Inventory Search in Manufacturing Cloud

Build a search experience to help inventory managers and service technicians get visibility into their inventory stock and movement. You can control how users can search inventory units, how results appear, and how users can act upon search results. Set up a search framework by configuring a searchable object that consolidates all searchable inventory data, configuring the search query criteria, and define actions that can be taken on the search results.

Turn On the Feature

You must enable these features to set up inventory search.

- Criteria-Based Search and Filter
- Data Pipelines
- Features that give users access to source objects

Assign Permissions to Users

You must provide users the permissions to use the Criteria-Based Search and Filter feature and the required object and field level access to the objects used in the search. You must provide users the permissions to use the mechanism with which the search data is transformed and updated in the searchable object.

Set Up a Searchable Object

A searchable object consolidates inventory data that's spread across multiple objects and is the basis of the search experience. You must create a searchable object with fields from other objects that users want to use as search criteria, result display columns, and aggregation criteria.

For example, you can set up a searchable object for inventory search with these fields that are mapped to fields in the source objects.

Field in the Searchable Object	Source Object	Field in the Source Object
Asset	Asset	Asset ID
Business Brand	Business Brand	Business Brand ID
Business Brand Name		Business Brand Name
Customer Name	Account	Account Name
Customer Account Number		Account Number
Make Name	Product	Make Name
Model Year		Model Year
Product Code		Product Code
Product Family		Product Family
Product Type		Product Type
Product Name		Product Name
Serialized		Serialized
Universal Product Code		Universal Product Code
Manufacturer Part Number		Manufacturer Part Number
Inventory Location	Product Item	Location ID
Total Quantity Unit Of Measure		Quantity Unit Of Measure
Total Quantity At Location		Quantity On Hand
Product Item Owner		Owner
Inventory Location Name	Location	Location Name
Inventory Location Type		Location Type
Parent Inventory Location		Parent Location
Inventory Location Coordinates		Location
Customer Account	Associated Location	Account

Populate and Update Searchable Data

You must set up a mechanism to populate and update data from the source search objects to the searchable object. Create a data processing engine (DPE) definition, an external system integration technique, or manually create records in the searchable object.

For example, you can create a DPE definition that combines the fields from the Asset, Business Brand, Account, Product, Product Item, Location, and Associated Location object. Then, it applies filters, formulas, and aggregation logic to write back data into the searchable object that you create.

Create a Searchable Object Configuration

You must create a searchable object configuration to define a searchable object for the inventory search. Select the data synchronization job that populates and updates data in the object.

You can also set up criteria and result field mappings. Define criteria field mappings to let users select a search criteria value from a picklist rather than typing it out. For example, say you create a searchable object with the Product Family and Inventory Location Type fields. And, you use these fields as search criteria in a search criteria configuration. Then, you can map these fields with their source fields.

Criteria Field Mapping			Explanation
Searchable Object Field	**Source Object**	**Source Object Field**	
Product Family	Product	Product Family	Product Family is a picklist field on the Product object. You map it with the Product Family field on the searchable object. With mapping, users can select a product family, such as diesel generator and petrol generator, as a search criteria by selecting a value from a picklist.
Inventory Location Type	Location	Location Type	Location is a picklist field on the Location Type object. You map it with the Inventory Location Type field on the searchable object. With this mapping, users can select a location type, such as distribution lot and warehouse, as a search criteria by selecting a value from a picklist.

Define result field mappings to let users click the hyperlink of a search result to navigate to its record. For example, say you create a searchable object called Inventory Searchable Field with the Inventory Location Name and Business Brand fields. And, you use these fields as result fields in a search criteria configuration. Then, you can map these fields with their source fields.

Result Field Mapping			Explanation
Searchable Object Field	**Source Object**	**Source Object Field**	
Inventory Location Name	Inventory Searchable Field	Inventory Location	Inventory Location Name is a field on the Inventory Searchable Field object and is derived from the Location ID field on the Location object.

Result Field Mapping			Explanation
Searchable Object Field	**Source Object**	**Source Object Field**	
			With this mapping, users can click the inventory location name of a result record to navigate to the corresponding location record.
Business Brand Name	Inventory Searchable Field	Business Brand	Business Brand Name is a field on the Inventory Searchable Field object and is derived from the Business Brand ID field on the Business Brand object.
			With this mapping, users can click the business brand name of a result record to navigate to the corresponding business brand record.

Create Search Action Configurations

You can define the set of actions that users can take on the search results. You can configure search actions by creating flows or lightning components.

Create a Search Criteria Configuration

You must create a search criteria configuration to build the inventory search experience for users. A search criteria configuration determines how users can the criteria users can search results by, how results are shown, and what actions can be taken on the search results.

Review the ways in which you can configure the search criteria and examples of what you can configure for inventory search.

Configuration	Example
Select fields used as search criteria	You can select these fields from the searchable object to be used as the search criteria. • Product Name • Product Code • Product Family • Universal Product Code • Make Name • Model Year • Manufacturer Part Number
Select the fields displayed for the search results	You can select these fields from the searchable object as columns where the search results details will be displayed.

Configuration	Example
	• Inventory Location Name
	• Product Item Owner
	• Inventory Location Type
	• Total Quantity At Location
Configure how distance is used as a search criterion	You can configure the distance specifications for filtering results by specifying these values.
	• Unit of Measure: Kilometers (Km)
	• Values: 10, 25, 50, 100
	• Inventory Location Coordinates
	With this configuration, users can search for inventory units that are 10 km, 25 km, 50 km, and 100 km away from the inventory location.
Select fields to group and aggregate search results	You can select these fields from the searchable object as search result grouping and aggregating criteria.
	• Product Family
	• Business Brand
	If a user selects Product Family as the Grouping and Aggregation Criteria while performing a search, they'll be able to see results grouped by the product family of the inventory units, such as Diesel Generators and Petrol Generators. They'll also be able to see the number of records for each product family. They can click a product family to focus on records with the product family.
Select fields to sort search results	You can select these fields from the searchable object as search result sorting criteria.
	• Total Quantity At Location
	• Business Brand
	• Model Year
	If a user sorts the results by Total Quantity At Location, they'll be able to see the results with the most or least total quantities at inventory locations.
Add the types of actions taken on the search results	You can create a screen flow to transfer product items from one inventory location to another, and create a search action configuration for it. You can select this action configuration for this search criteria configuration.

Add the Search Component to a Page

You must add the Criteria-Based Search and Filter component to the layout of the page where users use the inventory search.

For example, you can add the component to the Home page in the Manufacturing app so that inventory managers and service technicians can search inventory data.

Analyze Your Manufacturing Business Trends

Learn how to set up and work with analytics for Manufacturing Cloud.

Learn and Explore

⛰ *Trailhead:* CRM Analytics Administration for Manufacturing Cloud

⛰ *Trailhead:* CRM Analytics for Sales Agreements and Forecasting

⛰ *Trailhead:* CRM Analytics Dashboards for Account Manager Targets

Get Started

Enable the Default Analytics Dashboard for Manufacturing (Beta)

Key account managers can compare planned and actual revenue values, understand account performance, and track planned revenue from sales agreements with the Default Analytics Dashboard. Enable the dashboard so that key account managers can view it on the Manufacturing home page.

View Your Business Performance in a Single Dashboard (Beta)

Stay on top of your Manufacturing business with an at-a-glance view of your organization's performance. Use the Business Overview dashboard to compare planned and actual revenue values, understand account performance, and track upcoming renewals from sales agreements.

Deploy CRM Analytics for Manufacturing

CRM Analytics for Manufacturing lets account managers visualize all aspects of their business to keep them on top of sales agreements, orders, and contracts.

Deploy Statistical Order Forecasting Predictions for Manufacturing

Use statistical order forecasting predictions for advanced account forecast sets. These predictions are generated using the Multiplicative model of time series forecasting. The statistically predicted forecast data includes order quantity values and order revenue values with a confidence level of 95%. With the out-of-the-box (OOTB) template, you can define dimensions and period groups that require forecast data.

Deploy and Use CRM Analytics for Warranty Lifecycle Management

The CRM Analytics for Warranty Lifecycle Management app provides insights to analyze your claims and warranty lifecycle data.

SEE ALSO:

Deploy Advanced Account Forecasting Analytics for Manufacturing

Enable the Default Analytics Dashboard for Manufacturing (Beta)

Key account managers can compare planned and actual revenue values, understand account performance, and track planned revenue from sales agreements with the Default Analytics Dashboard. Enable the dashboard so that key account managers can view it on the Manufacturing home page.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions.

USER PERMISSIONS

To enable Default Analytics Dashboard:
- Customize Application

1. Assign the Analytics View Only Embedded App permission set to your users.

   a. In Setup, enter *Users* in the Quick Find box, and then select **Permission Sets**.

   b. Click **Analytics View Only Embedded App**.

   c. Click **Manage Assignments** and then **Add Assignments**. Select the checkboxes next to the names of the users you want assigned to this permission set, and click **Assign**.

2. Enable CRM Analytics.

   a. In Setup, enter *Analytics* in the Quick Find box, and then select **Getting Started**.

   b. Enable CRM Analytics.

3. Set field-level security for the Analytics Cloud Integration User profile.

   a. In Object Manager, select Account.

   b. In Fields & Relationships, select Account Number, and then click **Set Field-Level Security**.

   c. Provide Visible and Read-Only for the Analytics Cloud Integration User profile.

   d. Repeat these steps for the Ownership and Rating fields.

4. Enable the Default Analytics Dashboard.

   Note: The Manufacturing Default Analytics Dashboard does not work if there are no records in the Sales Agreement, Sales Agreement Product, and Sales Agreement Product Schedule objects. Create a sales agreement, add a product to the sales agreement, and activate it before enabling the dashboard.

   a. In Setup, enter *Manufacturing* in the Quick Find box, and then select **Sales Agreements**.

   b. Enable Default Analytics Dashboards.

SEE ALSO:

View Your Business Performance in a Single Dashboard (Beta)

Field-Level Security

View Your Business Performance in a Single Dashboard (Beta)

Stay on top of your Manufacturing business with an at-a-glance view of your organization's performance. Use the Business Overview dashboard to compare planned and actual revenue values, understand account performance, and track upcoming renewals from sales agreements.

Note: As a beta feature, the Manufacturing Default Analytics Dashboard is a preview and isn't part of the "Services" under your Main Services Agreement with Salesforce. Use this feature at your sole discretion, and make your purchase decisions only on the basis of generally available products and features. Salesforce doesn't guarantee general availability of this feature within any particular time frame or at all, and we can discontinue it at any time. This feature is for evaluation purposes only, not for production use. It's offered as is and isn't supported, and Salesforce has no liability for any harm or damage arising out of or in connection with it. All restrictions, Salesforce reservation of rights, obligations concerning the Services, and terms for related Non-Salesforce Applications and Content apply equally to your use of this feature.

The dashboard appears on the Manufacturing home page with three sections.

- Revenue Realization: View revenue realization trends for the current year.
- Account Performance: Identify accounts with less than 100% revenue realization.
- Upcoming renewals: Track planned revenue from sales agreements that are up for renewal, pending approval, and under revision.

1. On the Manufacturing home page, select the wheel icon at upper right, and then click **Edit Page**.
2. On the Lightning App Builder page, drop the CRM Analytics Dashboard component on to the Manufacturing home page.
3. From the Dashboard dropdown list, select Manufacturing Home Page.
4. Save your page and activate it.

   You can activate the page from the Save dialog when you save it for the first time or later using the Activation button.
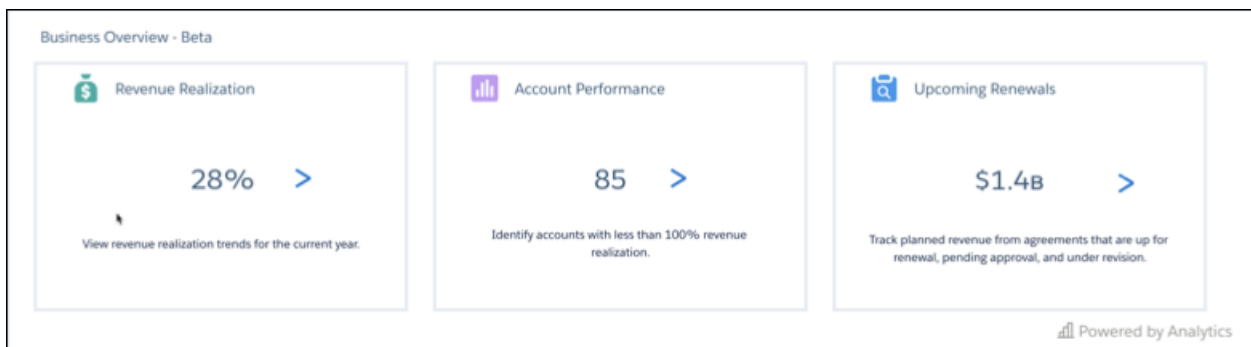
SEE ALSO:

Enable the Default Analytics Dashboard for Manufacturing (Beta)

Deploy CRM Analytics for Manufacturing

CRM Analytics for Manufacturing lets account managers visualize all aspects of their business to keep them on top of sales agreements, orders, and contracts.

> 📝 **Note:** CRM Analytics for Manufacturing is only for Salesforce Manufacturing Cloud and Health Cloud users. It requires that you have either the Manufacturing Analytics Apps add-on license or Healthcare Analytics Apps add-on license. It also requires that you have deployed the Manufacturing and Health data models. CRM Analytics for Manufacturing is available as part of the Manufacturing Cloud Intelligence.

> 💡 **Tip:** Follow the steps in the order shown to deploy CRM Analytics for Manufacturing. If you haven't used CRM Analytics before, learn about it from Salesforce Help.

EDITIONS

Available for an extra charge in Lightning Experience in **Enterprise** and **Unlimited** editions that have Manufacturing Cloud enabled.

1. Set Up Analytics for Manufacturing

   You can easily complete all the actions required to set up the Analytics for Manufacturing app using the one-page setup flow.

2. Enable CRM Analytics

   Before you create an app from the CRM Analytics for Manufacturing template, enable CRM Analytics in your Salesforce org.

3. Assign Analytics for Manufacturing Admin Permissions

   Enable admins to create and manage the Analytics for Manufacturing app by assigning the relevant permissions.

4. Assign Analytics for Manufacturing User Permissions

   Enable users to view the Analytics for Manufacturing app by assigning the relevant permissions.

5. Data Required to Create the Analytics for Manufacturing App

   Before you create Analytics for Manufacturing app, ensure that your data meets these specific requirements. Otherwise, the data fails the CRM Analytics check and you see an error message.

6. Set Field-Level Security to Enable Creation of the Analytics for Manufacturing App

   Before you create the Analytics for Manufacturing app, make sure that the Analytics Integration User profile has access to all fields used in the app.

7. Create and Share an App from the Analytics for Manufacturing Template

   Create an app from the Analytics for Manufacturing template and share it with your users.

8. Schedule the Dataflow for the App

   The app creation process includes a dataflow that imports the latest data to CRM Analytics. Schedule the app to refresh daily to ensure that it uses up-to-date data.

9. Embed Analytics for Manufacturing Dashboards in Lightning Pages

   The Analytics for Manufacturing app includes dashboards you can embed and access in Lightning Experience pages.

10. Get Actionable Insights from Your Data with Analytics for Manufacturing

    Analytics for Manufacturing dashboards visualize all aspects of your business to help you stay on top of sales agreements, orders, and contracts.

11. Understand Analytics for Manufacturing Limitations

    Analytics for Manufacturing gives you access to most CRM Analytics capabilities and features, but with limitations.

Set Up Analytics for Manufacturing

You can easily complete all the actions required to set up the Analytics for Manufacturing app using the one-page setup flow.

To enable CRM Analytics and set up Analytics for Manufacturing:

1. From Setup, in the Quick Find box, enter `Set Up CRM Analytics for Manufacturing`, and select **Set Up CRM Analytics for Manufacturing**.

2. To get CRMA analytics admin and Analytics for Manufacturing admin permissions to set up Analytics, click **Assign Permission Set** in the Get Started with CRM Analytics for Manufacturing section. Assign CRMA Analytics Plus Admin and Analytics for Manufacturing Plus Admin permission sets.

   You can assign the Manufacturing Analytics Admin permission set to users who manage analytics and assign the Manufacturing Analytics User permission set to users who view analytics, from the Get Started with CRM Analytics for Manufacturing section.

3. To enable CRM Analytics in Salesforce, click **Enable CRM Analytics.**

   After assigning permission sets and enabling CRM Analytics, you can check the Analytics for Manufacturing app's installation status in the Requests tab. From Setup, select Auto-Installed Apps, and open the Requests tab. When the installation is complete, open the Applications tab to view the Analytics for Manufacturing app. You can also access the dashboards from the App Launcher. From Analytics Studio, select Analytics for Manufacturing, and then select Dashboards.

4. To add Analytics for Sales Agreements to your app, follow the instructions in the Get Analytics on Sales Agreements section.

5. To add Analytics for Account Manager Targets to your app, follow the instructions in the Get Analytics on Account Manager Targets section.

6. To add Analytics for Account Forecasts to your app, follow the instructions in the Get Analytics for Account Forecasts section.

7. To select the required Manufacturing Einstein Discovery stories to your app, follow the instructions in the Add an Einstein Discovery Story to Your App section.

   Select Einstein Discovery stories only if you have sufficient data to install them successfully. If not, the app creation fails. Install with Einstein Discovery stories when you have minimum 300 rows of data.

8. To add Rebate Analytics to your app, follow the instructions in the Get Analytics for Rebate section.

9. To select a security predicate to determine users' access to sales agreements and account forecasts data, follow the instructions in the Configure Data Access for Sales Agreements and Account Forecasts Analytics section.

10. To select a currency for your app, follow the instructions in the Select a Currency section.

11. After you complete all the required steps, turn on Install to install the CRM Analytics for Manufacturing App. If the app doesn't have sufficient prerequisites, the installation is skipped with a message explaining the steps to meet the prerequisites.

To see your data in the dashboards after you install the Analytics for Manufacturing app, you must schedule your app to refresh.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions where Manufacturing Cloud and CRM Analytics are enabled

USER PERMISSIONS

To set up Analytics for Manufacturing and assign permission sets to users:
- CRM Analytics Plus Admin AND Analytics for Manufacturing Admin

Enable CRM Analytics

Before you create an app from the CRM Analytics for Manufacturing template, enable CRM Analytics in your Salesforce org.

> **Note:** If you see the **Launch CRM Analytics** button, CRM Analytics is already enabled. You can skip to Assign CRM Analytics for Manufacturing Administrator Permissions.

1. From Setup, in the Quick Find box, enter *Getting Started*, and then select **Getting Started** under Analytics.

2. Click **Enable CRM Analytics**.

Assign Analytics for Manufacturing Admin Permissions

Enable admins to create and manage the Analytics for Manufacturing app by assigning the relevant permissions.

1. From Setup, enter *Users* in the **Quick Find** box, and then select **Users**.

2. Click the name of a user with the System Administrator profile.

3. Click **Permission Set Assignments**, and then click **Edit Assignments**.

4. Select both the **CRM Analytics Plus Admin** and **Manufacturing Analytics Admin** permission sets.

5. Click **Add**, and then click **Save**.

6. Repeat Steps 2–5 for all users who create and manage the Analytics for Manufacturing app.

Assign Analytics for Manufacturing User Permissions

Enable users to view the Analytics for Manufacturing app by assigning the relevant permissions.

1. From Setup, enter *Users* in the **Quick Find** box, and then select **Users**.

2. Click the name of a user who requires access to Manufacturing Analytics.

3. Click **Permission Set Assignments**, and then click **Edit Assignments**.

4. Select both the **CRM Analytics Plus User** and **Manufacturing Analytics User** permission sets.

5. Click **Add**, and then click **Save**.

6. Repeat Steps 2–5 for all users who view the Analytics for Manufacturing app.

   Users with the CRM Analytics Plus User permission set and Editor or Manager access to CRM Analytics apps can create, edit, and delete app assets.

Data Required to Create the Analytics for Manufacturing App

Before you create Analytics for Manufacturing app, ensure that your data meets these specific requirements. Otherwise, the data fails the CRM Analytics check and you see an error message.

- Ensure to use record types in Salesforce.
- Ensure that the user has access to these objects:
  - Order Item

- – Product
- – Pricebook
- – Account
- – Opportunity Line Item

- To create and view data for sales agreements and account forecasts, ensure that the user has access to these objects:
  - – Sales Agreement
  - – Sales Agreement Product
  - – Sales Agreement Product Schedule
  - – Account Forecast
  - – Account Forecast Period Metric
  - – Account Product Forecast
  - – Account Product Period Forecast

- To create and view data for account manager targets, ensure that the user has access to these objects:
  - – Account Manager Target
  - – Account
  - – Account Manager Target Measure
  - – Account Manager Target Distribution
  - – Account Manager Periodic Target Distribution
  - – User
  - – Order

- To create and view data for rebates, ensure that the user has access to these objects:
  - – Rebate Program Member
  - – Account
  - – Rebate Member Product Aggregate
  - – Rebate Program Payout Period
  - – Rebate Program
  - – Order
  - – Order Product
  - – Opportunity
  - – User
  - – Transaction Journal
  - – ProgramRebateTypPayoutSrc
  - – ProgramRebateTypeBenefit

Set Field-Level Security to Enable Creation of the Analytics for Manufacturing App

Before you create the Analytics for Manufacturing app, make sure that the Analytics Integration User profile has access to all fields used in the app.

1. In Setup, go to **Object Manager**.

2. In the Quick Find search box, enter the name of the object whose field-level security you want to edit.

3. Select the object, then select **Fields & Relationships**.

4. Select the field you want to edit, then select **Set Field-Level Security**.

5. For the Analytics Cloud Integration User profile, select **Visible**, and click **Save**.

6. Repeat Steps 5 and 6 for all the fields you want to use.

7. Refresh your browser cache.

   You can now create the Analytics for Manufacturing app.

> **EDITIONS**
>
> Available for an extra charge in **Developer**, **Enterprise**, and **Unlimited** editions that have Manufacturing Cloud enabled.

Create and Share an App from the Analytics for Manufacturing Template

Create an app from the Analytics for Manufacturing template and share it with your users.

1. Navigate to **CRM Analytics Studio**.

2. Click **Create**, then select **App**.

3. Select **Analytics for Manufacturing**, then click **Continue**.

4. Take a quick look at the preview page, then click **Continue** to open the configuration wizard.

5. CRM Analytics performs a compatibility check of your Salesforce org's data. If it uncovers any issues, you see error messages with instructions for how to address them. Fix the issues, and try app creation again. If it's completed successfully, click **Looks good, next**.

> **EDITIONS**
>
> Available for an extra charge in **Developer**, **Enterprise**, and **Unlimited** editions that have Manufacturing Cloud enabled.

6. Select the objects that you want to add to your app. To add sales agreement data to your app, select **Sales Agreement**. To add account-based forecasting to your dashboards, select **Account Forecast**. To add sales targets data to your dashboards, select **Sales Target**. To add rebate data to your dashboards, select **Rebates**.

7. The next page of the wizard asks you to make three selections.

   a. The first wizard question asks you to select a security predicate to apply to your sales agreements and forecasts. To make data visible to a user based on their hierarchical role, select **User Role Hierarchy**. To let a user view data that belongs to users below them in the hierarchy, select **User Manager Hierarchy**. To make all data visible to anyone viewing the app, select **None**.

   > 📝 Note: User Manager Hierarchy determines users' access to data based on their Manager Id. User Role Hierarchy determines users' access to data based on their hierarchical role.

   b. Next, select the preconfigured Einstein Discovery stories that you want to add to the app. To get predictions on the likelihood of sales agreement product renewals, select **Maximize Sales Agreement Product Renewals**. To get price recommendations for sales agreement products and schedules, select **Get Price Recommendations for Products and Schedules**.

   > 📝 Note: You can create an app without adding preconfigured Einstein Discovery stories.

   c. Next, select a currency for your app. By default, your Salesforce org's currency is applied to the app.

8. Click **Looks good, next**.

9. The next page of the wizard asks you to make three selections.

    a. The first wizard question asks you to select a hierarchy to apply to your sales targets. Select the hierarchy that you selected in the setup of Team Manager Hierarchy in Account Manager Targets.

    b. The next question asks if you want to apply security predicates to your sales targets. To make the sales target data visible to a user based on the setup of Team Member Hierarchy in Account Manager Targets, select **Yes**. To make all data visible to anyone viewing the app, select **No**.

    c. Next, the wizard asks who gets credit for the orders. To credit all orders to the account owner's actual revenue, select **Account Owner**. To credit all orders to the order owner's actual revenue, select **Order Owner**. To credit all orders to a custom user's actual revenue, select **Other User**

    📝 **Note:** You see these questions only if sales target data is added to your app.

10. Click **Looks good, next**.

11. The next page of the wizard asks you to make two selections.

    a. Select the custom fields for analyzing rebate programs. Select custom fields from the Rebate Member Product Aggregate object to analyze rebates based on criteria such as region, product, or product category.

    b. Select the preconfigured Rebates Einstein Discovery story that you want to include in your app.

    📝 **Note:** To create an app with the Rebate Analytics module, you must have Rebate Management, Rebate Management User, and Manufacturing Analytics Plus add-on licenses.

12. Name your app, and click **Create**.

View the status of app creation on the next screen. The process takes a minute or two. After it's complete, refresh your browser to see your app.

    📝 **Note:** If you see an error that the Analytics Integration User doesn't have access to selected fields, edit Salesforce field-level security.

Share the app with your users. You can share it only with users assigned the CRM Analytics Platform and Manufacturing Analytics admin or user permission sets.

1. Open your app if it's not already open. If you've navigated away from Analytics Studio, go back to it, select **All Items**, find your app, and click it.

2.
Click the Share icon [icon] at upper right.

3. In the next screen, use the search field under **Invite others:** to find other users in your org.

4. Select whether you want to make the selected user a Viewer, Editor, or Manager of the app.

    ⛔ **Important:** Users with the "Use Analytics Templated Apps" permission and Editor or Manager access to the app can create, edit, and delete assets in the app.

5. Click **Add**, then click **Save**.

Schedule the Dataflow for the App

The app creation process includes a dataflow that imports the latest data to CRM Analytics. Schedule the app to refresh daily to ensure that it uses up-to-date data.

To schedule your app, see Schedule Data Refresh for a CRM Analytics App. Select a time outside normal work hours so the data refresh doesn't interrupt business activities.

Embed Analytics for Manufacturing Dashboards in Lightning Pages

The Analytics for Manufacturing app includes dashboards you can embed and access in Lightning Experience pages.

For general instructions, see Embed Dashboards in Lightning Pages. You can embed the Manufacturing Home, Manufacturing Agreement Performance, and Manufacturing Product Performance dashboards on any manufacturing page without setting up filters. We recommend that you set the dashboards' height to 450 pixels.

These examples use dashboards from the Analytics for Manufacturing app.

📝 **Note:** When setting up filters, make sure that the dataset name in the filter string is the same as the dataset name in your app.

👁 **Example:** Embed the Sales Agreement Revenue Realization dashboard on a Sales Agreement page. Set the dashboard height to 120 pixels and use the following string in the Filter String box:

{"datasets":{"MG_SalesAgreementProductSchedule":[{"fields":["SalesAgreementProduct.SalesAgreementId"],"filter":{"operator":"in","values":["$Id"]},"locked":null,"hidden":null}]}}

👁 **Example:** Embed the Sales Agreement Product and Pricing dashboard on a Sales Agreement page. Set the dashboard height to 400 pixels and use the following string in the Filter String box:

{"datasets":{"MG_SalesAgreementProductSchedule":[{"fields":["SalesAgreementProduct.SalesAgreementId"],"filter":{"operator":"in","values":["$Id"]},"locked":null,"hidden":null}]}}

👁 **Example:** Embed the Embedded Operational Insights on Account dashboard on an Account page. Set the dashboard height to 800 pixels and use the following string in the Filter String box:

{"datasets":{"RebateProgramMemberMaster":[{"fields":["Account.Name"],"filter":{"operator":"in","values":["$Name"]},"locked":null,"hidden":null}]}}

👁 **Example:** Embed the Order Rebates Embedded dashboard on an Orders page. Set the dashboard height to 520 pixels and use the following string in the Filter String box:

{"datasets":{"OrderMaster":[{"fields":["OrderId"],"filter":{"operator":"in","values":["$Id"]},"locked":null,"hidden":null}],"RebateProgramMemberMaster":[{"fields":["AccountId"],"filter":{"operator":"in","values":["$AccountId"]},"locked":null,"hidden":null}]}}

👁 **Example:** Embed the Sales Agreement Rebates Embedded dashboard on a Sales Agreement page. Set the dashboard height to 980 pixels and use the following string in the Filter String box:

{"datasets":{"MG_SalesAgreement":[{"fields":["Id"],"filter":{"operator":"in","values":["$Id"]},"locked":null,"hidden":null}],"MG_SalesAgreementProductSchedule":[{"fields":["SalesAgreementProduct.SalesAgreementId"],"filter":{"operator":"in","values":["$Id"]},"locked":null,"hidden":null}]}}

👁 **Example:** Embed the Rebate Program Embedded dashboard on a Rebate Program page. Set the dashboard height to 800 pixels and use the following string in the Filter String box:

{"datasets":{"RebateProgram":[{"fields":["Id"],"filter":{"operator":"in","values":["$Id"]},"locked":null,"hidden":null}]}}

👁 **Example:** Embed the Target Attainment dashboard on an Account Manager Targets page. Set the dashboard height to 280 pixels and use the following string in the Filter String box:

```
{"datasets":{"MFG_AccountManagerPeriodicTargetDistribution":[{"fields":["AcctMgrTargetId"],"filter":{"operator":"in","values":["$Id"]},"locked":null,"hidden":null}]}}
```

👁 **Example:** Embed the Team Performance dashboard on an Account Manager Targets page. Set the dashboard height to 420 pixels and use the following string in the Filter String box:

```
{"datasets":{"MFG_AccountManagerPeriodicTargetDistribution":[{"fields":["AcctMgrTargetId"],"filter":{"operator":"in","values":["$Id"]},"locked":null,"hidden":null}]}}
```

Get Actionable Insights from Your Data with Analytics for Manufacturing

Analytics for Manufacturing dashboards visualize all aspects of your business to help you stay on top of sales agreements, orders, and contracts.
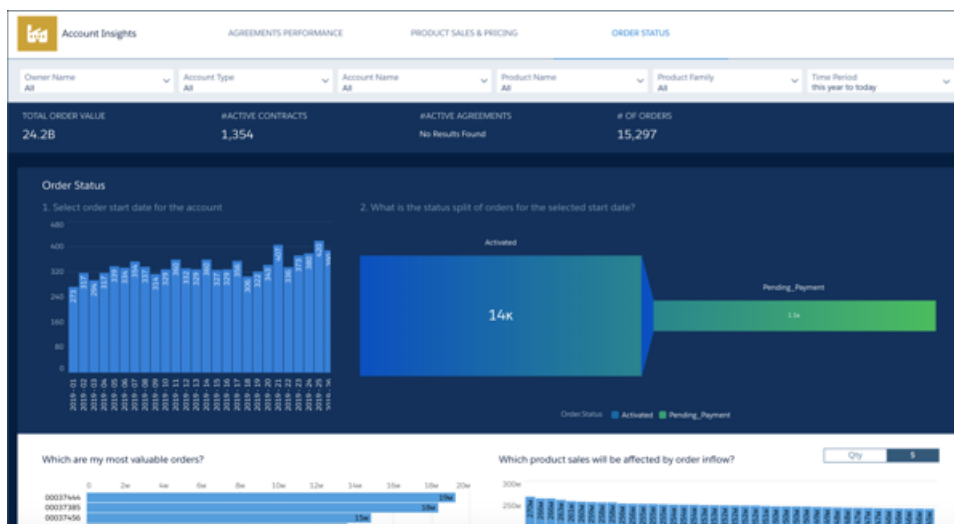
📝 **Note:** If the CRM Analytics for Manufacturing app isn't available in your org, direct your administrator to Deploy CRM Analytics for Manufacturing.

The CRM Analytics for Manufacturing app includes two types of dashboards:

- Dashboards accessed through the app in Analytics Studio.
- Embedded dashboards that deliver insights from within the context of Salesforce objects you work with.

They're designed to answer key questions about your business.

In-App Dashboards

Open CRM Analytics for Manufacturing to see dashboards accessed through Analytics Studio.

1. From App Launcher, select **Analytics Studio** to open the Analytics home page.

2. Under **Browse** in the left column, select **All Items**.

3. Select the **Apps** tab, then click your app. If you can't immediately find it, consult your Salesforce administrator to find out the name they gave it when creating the app.

Now that your app is open, click the **Dashboards** tab to see a list of all the app's dashboards. Find the **Key Account Manager Home** dashboard, and open it. The home dashboard gives account managers at-a-glance insight into top-level metrics. Begin your analysis of manufacturing cloud data in the context of broader business goals. Learn the health of your accounts, products' performance, product pricing, forecast accuracy, agreement compliance rates, and other key performance indicators (KPIs) that impact your business.

Accounts Health

Helps you improve the health of your accounts. The charts on the Overview page show how revenue is doing against plan and forecasts for all your accounts, and how revenue is trending over time. Other pages answer key questions about your accounts.

- **Overview**

    – How's my business doing against the plan?

    – How's my business doing against the forecast?

- **Accounts in Focus**

    – Which accounts can increase incoming orders?

    – Which accounts are performing well and which accounts are at risk of churn?

- **Relationship With my Accounts**

    – What's the current and planned length of relationship of my accounts?

    – What's the customer lifetime value of my accounts?

Account Insights

View KPIs about each of your accounts. Open the **Account Name** menu, and select an account. Then get answers to the following questions about that account from the dashboard's three pages.

- **Agreements Performance**

    – How has the account's revenue grown over time and will it achieve its goal?

    – How is planned revenue trending for the account?

    – How is the account performing against its commitments?

    – What is the missed revenue over time for the account?

- **Product Sales & Pricing**

    – Which products have sold the most to this account and at what price?

    – How is the account performing against product demand goals?

- **Order Status**

    – What is the status of orders for the account?

    – Which orders need attention?

- **Sales Forecast**

    – How's my account performing against the forecast?

    – What's in the forecast?

Statistical Order Forecasting

Work on an effective manufacturing plan by analyzing statistical order forecasts for an advanced account forecast set. The statistical forecast data includes order quantity and order revenue values. Plan better at a granular level by selecting an account, the order's status, and a product.

- What's the trend of forecasted order quantity and revenue over the course of the specified time period?

- What's the distribution of forecasted order quantity and revenue for a specific product based on the order's status?
- What's the accuracy of the forecasted order quantity and revenue values?

Product Performance

Track your top-selling products and get insights into supply and demand across your product line through the dashboard's two pages.

- **Sales Trend**

  - What are my top-selling products and product families?

  - Which products are trending up or down for my accounts?

  - Which accounts contribute most to a product's sales?

  - How has the product mix changed over time for my accounts?

- **Actual vs. Planned**

  - What are the demand realization levels of the products?

  - Which account is contributing most to the demand shortfall of a product?

- **Actual vs. Forecast**

  - How are products performing against forecasted demand?

Product Demand

Helps you optimize your inventory based on the planned and forecasted demand of products.

- **Planned Demand**

  - What's the planned demand for my products?

  - Which are my top performing accounts and agreements based on planned revenue?

  - Which accounts and agreements contribute most to the planned demand of a product?

- **Forecasted Demand**

  - What's the forecasted demand for my products?

  - Which are my top performing accounts and agreements based on forecasted revenue?

  - Which accounts contribute most to the forecasted demand of a product?

Forecast Analysis

Analyze changes in forecasts, and improve accuracy and demand planning.

- How accurate are my forecasts?
- What's the trend of the forecast accuracy?
- What's the change in the forecast?

Pricing Insights

The dashboard's two main charts answer key questions to help you determine optimal product pricing.

- **Price Trend**

  - What is the price trend for a product across all accounts?

  - What is the product priced for my account vs all accounts?

- **Price Elasticity**

  - What is the price elasticity for a product across all accounts?

Sales Agreements

Get instant insight into the state of all your sales agreements, and identify agreements that need immediate action through the dashboard's two pages.

- **Performance**
  - What are the realization and compliance levels of all my agreements?
  - What are my best and worst performing agreements?
  - When have I experienced the highest demand shortfall this year?

- **Pipeline**
  - What does my sales agreement pipeline look like?
  - Which agreements need my attention?
  - How have cancellations impacted revenue loss?

My Targets

Track your performance against revenue targets, and identify accounts and products that need attention.

- How am I performing against revenue targets?
- Which accounts need my attention?

Team Targets

Monitor your team's performance against revenue targets, and assign targets to team members based on historical trends and forecasts.

- How's my team performing against revenue targets?
- Who are the top performers in my team?
- Who needs attention?

Whitespace Analysis

The dashboard's two pages help you uncover opportunities to grow your business by selling new agreements and cross-selling to existing accounts.

- **Accounts Whitespace**
  - Which accounts do not have active agreements?
  - What are the cross-sell opportunities for those accounts?

- **Product Recommendations**
  - What product combinations work best?
  - How can I expect the number of products sold to increase through cross-sell opportunities?

Distributor Performance

Identify your top-performing distributors and get insights into supply and demand across your product line through the Distributor Performance dashboard.

- **Sales Trend**
  - What are my top-selling products and product families?
  - Which products are trending up or down for my distributors?
  - Which distributors contribute most to a product's sales?
  - How has the product mix changed over time for my distributors?

- **Actual vs. Planned**

- – What are the demand realization levels of the products?

- – Which distributors contribute most to the demand shortfall of a product?

- **Actual vs. Forecast**

    - – How are products performing against forecasted demand?

Embedded Dashboards

CRM Analytics for Manufacturing includes dashboards that can be embedded in Lightning Experience pages. They provide detailed insights into product performance, sales agreements, and other aspects of your business. Your Salesforce admin embeds these dashboards in specific Salesforce pages, as described here. After that, go to the specific pages to view the dashboards.

Dashboards Embedded in a Sales Agreement Page

These dashboards can be viewed from Sales Agreement pages in the Manufacturing Cloud.

- **Sales Agreement Product Performance**

    - – How is the agreement performing?

    - – How are the products offered in the agreement performing against their planned numbers?

    - – What are the best prices for the products offered in the agreement?

- **Sales Agreement Revenue Realization**

    - – What's the probability that the agreement is renewed?

    - – What are the most important factors contributing to renewal?

Dashboards Embedded in other Manufacturing Cloud Pages

These dashboards can be viewed from the Manufacturing Cloud Home page, or any other page your admin embeds them in.

- **Manufacturing Product Performance**

    - – What are my best and worst performing products?

- **Manufacturing Home Page**

    - – What is my current revenue and revenue projection?

    - – Which of my accounts need attention?

    - – What accounts can help me get more business?

- **Manufacturing Agreement Performance**

    - – What are my best and worst performing agreements?

    - – What agreements are pending approval or need renewal?

- **Target Attainment**

    - – What's my target attainment?

    - – What's the projected attainment?

- **Team Performance**

    - – How are my team members performing against revenue targets?

    - – How did my team perform last year?

Analytics for Manufacturing Auto-Embedded Dashboards

The Analytics for Manufacturing app includes dashboards that are auto-embedded in the Lightning Experience pages.

Pre-Configured Einstein Discovery Stories

The pre-configured Einstein Discovery stories give you intelligent insights that help you maximize the sales agreement product renewals and offer better pricing for products and schedules.

Calculate Key Performance Indicators Using CRM Analytics
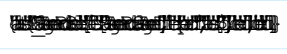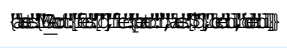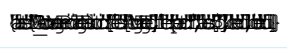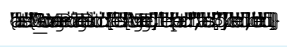
Learn the definitions of key metrics shown in Manufacturing Analytics dashboards.

Analytics for Manufacturing Auto-Embedded Dashboards

The Analytics for Manufacturing app includes dashboards that are auto-embedded in the Lightning Experience pages.

Dashboard	Dashboard-Embedded Page	Filter String for Manual Addition
Revenue Realization	Sales Agreement page	
Pricing Analysis	Sales Agreement page	
Product Performance	Sales Agreement page	
Account Performance	Account page	
Whitespace Analysis	Account page	Not Applicable
Sales Target Attainment	Account Manager Targets page	
Targets Analysis	Account Manager Targets page	
Home Page	Home page	Not Applicable

Revenue Realization

Use the dashboard on the Sales Agreement page to track the performance of sales agreements based on the actual revenue. Here are examples of questions that the dashboard can answer:

- Which are the high-performing and low-performing sales agreements based on revenue realization?
- What's the actual sales quantity and revenue associated with a specific sales agreement and the difference compared to the planned values?

Pricing Analysis

Use the dashboard on the Sales Agreement page to analyze the price of a specific product. Here are examples of questions that the dashboard can answer:

- What is the price trend for a product?
- What is the maximum, average, and minimum price for the selected product?

Product Performance

Use the dashboard on the Sales Agreement page to analyze the performance of products based on the revenue realization. Here are examples of questions that the dashboard can answer:

- Which are my high and low-performing products?
- What's the actual sales quantity and revenue of a product and the difference compared to the planned values?

Account Performance

Use the dashboard on the Account page to get a quick understanding of how your accounts perform based on the actual revenue. You can filter the analytics data based on product, product family, and duration. Here are examples of questions that the dashboard can answer:

- What's the actual revenue for the selected time period?
- What's the revenue projection for the selected time period?
- What's the difference in actual revenue when compared to the planned or forecasted value?

Whitespace Analysis

Use the dashboard on the Account page to identify the revenue growth opportunities for your products. You can filter the analytics data based on a specific duration. Here are examples of questions that the dashboard can answer:

- What's the available whitespace for selling more products in each account?
- Which account generates the highest revenue?
- Which accounts have the whitespace to sell a specific product?

Sales Target Attainment

Use the dashboard on the Account Manager Target page to analyze the sales based on target revenue. Here are examples of questions that the dashboard can answer:

- What's my target revenue and the difference in revenue compared to the previous year?
- What's my current attainment and projected attainment?
- What's my actual revenue and the difference in revenue compared to the previous year?
- What's my projected revenue and the difference in revenue compared to the previous year?

Target Analysis

Use the dashboard on the Account Manager Target page to track the account and team members' performance based on the target attainment. Here are examples of questions that the dashboard can answer:

- How are my team members performing against revenue targets?
- How did my team perform last year?
- Which are the high and low-performing accounts based on target attainment?
- Which are the high and low-performing products based on target attainment?

Home Page

Use the dashboard on the home page to get quick insights into the overall performance of accounts, forecasts, agreements, and products. The dashboard consists of the Agreement Performance page and Forecasts Analysis page:

- Agreement Performance
  - What's the actual and planned revenue for the current year and the difference in revenue compared to the previous year?
  - What's the revenue realization for the current year and the difference in revenue compared to the previous year?
  - What's the outstanding revenue for the schedules that end in the current month for each account?
  - What's the compliance rate based on the revenue?
  - Which are the high-performing and low-performing accounts and agreements based on the revenue realization?
  - Which are the high-performing products based on revenue realization?
  - Which are the upcoming renewals that need attention based on the revenue?
  - Which are the upcoming renewals within a selected number of days?Which are the top expired or canceled agreements based on the revenue
  - Which are the top expired or canceled agreements based on the revenue?

- Forecasts Analysis
  - What's the trend in account revenue growth over time, based on actual revenue and forecast revenue, and how does it compare to previous periods?
  - Which products have the highest actual revenue and forecast revenue, and how does this compare to other products?
  - Which products have experienced the most significant revenue growth based on actual revenue and forecast revenue, and what factors contributed to this growth?
  - Are there any products that have experienced a decline in revenue, and how does this compare to previous periods?
  - How accurate are the revenue forecasts, and what is the variance between actual revenue and forecast revenue?

Pre-Configured Einstein Discovery Stories

The pre-configured Einstein Discovery stories give you intelligent insights that help you maximize the sales agreement product renewals and offer better pricing for products and schedules.

You can add the Einstein Discovery stories while creating the app from the Analytics for Manufacturing template. For instructions, see Create and Share an App. To learn more about using Einstein Discovery stories, see Explore Story Insights

Maximize Sales Agreement Product Renewals

Use this Einstein Discovery story to predict the likelihood of sales agreement product renewals. Intelligent insights from the story help you focus on accounts with high renewal probability agreements and identify the top contributing factors. You can also follow up with accounts that have agreements with low renewal probability.

Get Price Recommendations for Products and Schedules

Use this Einstein Discovery story to get price recommendations for products and schedules based on their historical data. With guidance on pricing, you can offer better pricing for new products and schedules and reprice agreements as they're revised.

Calculate Key Performance Indicators Using CRM Analytics

Learn the definitions of key metrics shown in Manufacturing Analytics dashboards.

This table lists the key metrics and dashboards where they appear.

Metric	Description	Available in Dashboards
Planned Revenue	Revenue planned for an account, agreement, product, or product family in the selected time frame.	• Embedded Home Page • Embedded Agreement Performance • Account Insights • Accounts Health • Product Performance • Sales Agreement Insights
Revenue Realization	Actual revenue as a percentage of planned revenue.	
Compliance	Actual revenue as a percentage of planned revenue to date.	
Actual vs Planned Difference (Revenue)	Difference in revenue generated and planned revenue in the selected time frame.	
Actual Revenue	Revenue generated from an account, agreement, product, or product family in the selected time frame.	• Embedded Home Page • Embedded Agreement Performance • Account Insights • Accounts Health • Product Performance • Sales Agreement Insights • Product Demand • Forecast Analysis
Planned Quantity	Planned number of units of a product or product family to be sold to an account in the selected time frame.	• Embedded Product Performance • Accounts Insights - Product Sales and Pricing • Product Performance • Sales Agreement Insights
Actual Quantity	Actual number of units of a product or product family sold to an account in the selected time frame.	
Demand Realization (Revenue or Quantity)	Actual demand (quantity or revenue) as a percentage of the planned demand for a product or product family.	
Actual vs Planned Difference (Quantity)	Difference in units of a product or product family sold and units planned to be sold.	

Metric	Description	Available in Dashboards
Pending Approvals	Planned revenue from agreements that are pending approval in the selected time frame.	• Embedded Home Page - Grow My Business • Sales Agreement Insights - Pipeline
Upcoming Renewals	Planned revenue from agreement renewals in the next 60 days.	
Approved	Planned revenue from approved agreements in the selected time frame.	
Under Revision	Planned revenue from agreements that are being revised.	
Outstanding Revenue	Difference between planned revenue and actual revenue for an agreement or agreement schedule.	• Accounts Health • Sales Agreements Insights
Max Price	Maximum price at which the product was sold to an account in the selected time frame.	• Account Insights - Product Sales and Pricing • Pricing Insights
Min Price	Minimum price at which the product was sold to an account in the selected time frame.	
Avg Price	Average price at which the product was sold to an account in the selected time frame.	
Discount ($ or %)	Discount offered on the list price of the selected product.	
Orders (Revenue)	Revenue generated from orders placed in the selected time frame.	Account Insights - Orders Status
Orders (#)	Number of orders placed in the selected time frame.	
Length of Relationship (To Date)	Duration between today and the start date of the first sales agreement with an account.	Accounts Health - Relationship With my Accounts
Future Length of Relationship (Agreed Upon)	Duration between today and the expiry date of the planned agreement that ends last.	
Total Length of Relationship	Total duration of current and planned relationship based on sales agreements.	
Customer Lifetime Value	Total of revenue generated to date and revenue anticipated from the account. To calculate anticipated revenue, multiply planned revenue with historical performance of the account (past realization).	

Metric	Description	Available in Dashboards
Avg. Customer Lifetime Value	Average of customer lifetime values of all the accounts.	
Active Days	Number of days the agreement is active.	Sales Agreement Insights
Days Remaining	Number of days remaining before the agreement ends.	
Forecasted Revenue	Revenue forecasted for an account, agreement, product, or product family in the selected time frame.	• Embedded Home Page • Account Insights • Accounts Health • Product Performance • Product Demand • Forecast Analysis
Attainment	Actual revenue as a percentage of forecasted revenue.	
Actual vs Forecast Difference (Revenue)	Difference in revenue generated and forecasted revenue in the selected time frame.	
Gross Forecasted Revenue	Total forecasted revenue for a product or product family for the selected time frame.	Product Demand
Net Forecasted Revenue	Net forecasted revenue for a product or product family for the selected time frame.	
Forecasted Revenue (Adjusted)	Adjusted forecasted revenue for an account, product, or product family in the selected time frame.	Forecast Analysis
MAPE (Adjusted)	Adjusted mean absolute percentage error in the forecast.	
MAPE	Mean absolute percentage error in the forecast.	
Actual vs Forecasted Revenue (Adjusted)	Difference in revenue generated and adjusted forecasted revenue in the selected time frame.	
Actual vs Forecasted Revenue	Difference in revenue generated and forecasted revenue in the selected time frame.	

Understand Analytics for Manufacturing Limitations

Analytics for Manufacturing gives you access to most CRM Analytics capabilities and features, but with limitations.

Table 5: CRM Analytics for Manufacturing Limitations

Capability	Supports
Data sources	Salesforce and external data

Capability	Supports
Object support	Standard and custom objects
Data volume	CRM Analytics Plus: 10 billion rows
Customize existing dashboards?	Yes
Create dashboards?	Yes
Customize existing datasets?	Yes
Create datasets?	Yes
Create custom CRM Analytics apps?	Yes
Supports Einstein Discovery and Community Cloud integration?	Yes
Supports bulk actions and APEX steps?	Yes
Supports Sales Cloud Einstein artificial intelligence?	No
Supports Salesforce Inbox?	No

Deploy Statistical Order Forecasting Predictions for Manufacturing

Use statistical order forecasting predictions for advanced account forecast sets. These predictions are generated using the Multiplicative model of time series forecasting. The statistically predicted forecast data includes order quantity values and order revenue values with a confidence level of 95%. With the out-of-the-box (OOTB) template, you can define dimensions and period groups that require forecast data.

Enable CRM Analytics and Assign Permission Sets

Enable CRM Analytics, assign permission sets to admins and users, and set field-level security for all the required fields.

Create the Order Forecasting for Manufacturing App

Generate statistical order forecasting for advanced account forecast sets using a custom app. With the Order Forecasting for Manufacturing template, you can create a custom app to deploy a preconfigured recipe that generates statistical order forecasts. The preconfigured recipe uses a Time Series Forecasting Transformation node with the Multiplicative model to generate these forecasts.

Out-of-the-Box Recipe

Salesforce provides a customizable, out-of-the-box Order Forecasting for Manufacturing recipe that generates statistical order forecasts for advanced account forecast sets. The forecasting is based on accounts, orders, products, product categories, periods, and advanced account forecast set partners.

Add the Order Forecasting Dashboard to the Home Page

Show interactive visualizations of statistical order forecasting data for advanced account forecast sets by adding the Statistical Order Forecasting dashboard to the Manufacturing Home page.

Enable CRM Analytics and Assign Permission Sets

Enable CRM Analytics, assign permission sets to admins and users, and set field-level security for
all the required fields.

1. Assign admins the permissions required to create and manage the Advanced Account
   Forecasting Analytics for Manufacturing apps.

2. Assign users the permissions required to view the Advanced Account Forecasting Analytics for
   Manufacturing apps.

3. Enable CRM Analytics.

4. To give the Analytics Cloud Integration User profile access to all the fields that the app uses,
   perform these steps for all the fields on all the objects that the template uses:

   a. From Setup, in Object Manager, click an object that's used in the Order Forecasting for
      Manufacturing template.

   b. Click **Fields & Relationships**.

   c. Click the field name, and then click **Set Field-Level Security**.

   d. For the Analytics Cloud Integration User profile, select **Visible**, and then save your changes.

You can create the app using the out-of-the-box template to generate statistical order forecasts.

SEE ALSO:

Assign Admin Permissions for Advanced Account Forecasting Analytics for Manufacturing

Assign User Permissions for Advanced Account Forecasting Analytics for Manufacturing

Enable CRM Analytics

EDITIONS

Available in: Lightning
Experience

Available in: **Enterprise**,
Unlimited, and **Developer**
Editions

USER PERMISSIONS

To assign permission sets:
- Assign Permission Sets
  AND View Setup and
  Configuration

To set field-level security:
- Manage Profiles and
  Permission Sets

  AND

  Customize Application

Create the Order Forecasting for Manufacturing App

Generate statistical order forecasting for advanced account forecast sets using a custom app. With
the Order Forecasting for Manufacturing template, you can create a custom app to deploy a
preconfigured recipe that generates statistical order forecasts. The preconfigured recipe uses a Time
Series Forecasting Transformation node with the Multiplicative model to generate these forecasts.

📝 Note: To generate statistical order forecasting, your Salesforce org must have more than 24
months of data at the account and product granularity level.

1. In Analytics Studio, click **Create**, and then select **App**.

2. Select the **Order Forecasting for Manufacturing** template, and then click **Continue**.

3. Review the preview page, and then click **Continue**.

4. Choose to create an app or to use settings from an existing app, and then click **Continue**.
   Analytics runs a compatibility check of the data in Salesforce.

5. If the compatibility check reports any issues, follow the instructions in the error messages to resolve them, and then try to create the
   app again.

6. If the compatibility check completes successfully, click **Looks good, next**.

7. In the next setup flow window, make these selections:

   a. Advanced Account Forecast Set: Select an advanced account forecast set for which you want to forecast orders.

EDITIONS

Available in: Lightning
Experience

Available in: **Enterprise**,
Unlimited, and **Developer**
Editions

    b. Advanced Account Forecast Dimensions: Specify the forecast dimensions for the selected advanced account forecast set. You can specify up to two forecast dimensions.

    c. Order Fields: Select order fields that map to the specified forecast dimensions when the specified dimensions don't include product or product category.

8. Click **Looks good, next**.

9. In the next setup flow window, make these selections:

    a. Forecast Frequency: Select the forecast frequency for the selected advanced account forecast set.

    b. Example Set Period Count: Specify the period for which you want to train the model using the example dataset.

    c. Forecast Period Count: Specify the period for which you want to generate forecasts for the selected advanced account forecast set. Ensure that this value is less than the Example Set Period Count value.

10. Click **Looks good, next**.

11. Name your app, and then click **Create**.
    The process takes a few minutes. When the process is completed, refresh the page.

SEE ALSO:

    Time Series Forecasting Transformation: Forecast Measures

Out-of-the-Box Recipe

Salesforce provides a customizable, out-of-the-box Order Forecasting for Manufacturing recipe that generates statistical order forecasts for advanced account forecast sets. The forecasting is based on accounts, orders, products, product categories, periods, and advanced account forecast set partners.

You can modify the default recipe in these scenarios:

- Your schema deviates from the Manufacturing schema.
- There's a change in a custom field of an existing entity.
- There's a change of use from an existing entity to a custom entity.
- The data doesn't load properly.
- An app stopped working because of incorrect data values.

SEE ALSO:

    Manage Recipes

    Run Data Sync and Recipes to Create and Refresh Datasets

> **EDITIONS**
>
> Available in: Lightning Experience
>
> Available in: **Enterprise**, **Unlimited**, and **Developer** Editions

> **USER PERMISSIONS**
>
> To edit a recipe:
> - Edit CRM Analytics Dataflows OR Edit Dataset Recipes

Add the Order Forecasting Dashboard to the Home Page

Show interactive visualizations of statistical order forecasting data for advanced account forecast sets by adding the Statistical Order Forecasting dashboard to the Manufacturing Home page.

> **EDITIONS**
>
> Available in: Lightning Experience
>
> Available in: **Enterprise**, **Unlimited**, and **Developer** Editions

Deploy and Use CRM Analytics for Warranty Lifecycle Management

The CRM Analytics for Warranty Lifecycle Management app provides insights to analyze your claims and warranty lifecycle data.

Set Up CRM Analytics for Warranty Lifecycle Management

You can easily complete all the actions required to set up the CRM Analytics for Warranty Lifecycle Management using the one-page setup flow.

Use CRM Analytics for Warranty Lifecycle Management Dashboards

The CRM Analytics for Warranty Lifecycle Management app includes dashboards to help you analyze your claims and warranty lifecycle data. The app provides claim analysis dashboards that you can embed in the Warranty Lifecycle Management Home and Claims pages.

Set Up CRM Analytics for Warranty Lifecycle Management

You can easily complete all the actions required to set up the CRM Analytics for Warranty Lifecycle Management using the one-page setup flow.

To enable CRM Analytics and CRM Analytics for Warranty Lifecycle Management:

1. From Setup, in the Quick Find box, enter `Set Up CRM Analytics for Warranty Lifecycle Management`, and select **Set Up CRM Analytics for Warranty Lifecycle Management**.

2. To get CRMA analytics admin and Analytics for Manufacturing admin permissions to set up Analytics, click **Assign Permission Set** in the Get Started with CRM Analytics for Manufacturing section. Assign CRMA Analytics Plus Admin and Analytics for Manufacturing Plus Admin or RI for Manufacturing Admin permission sets.

   You can assign the Manufacturing Analytics Admin or RI for Manufacturing Admin permission set to users who manage analytics and assign the Manufacturing Analytics User or RI for Manufacturing User permission set to users who view analytics, from the Get Started with CRM Analytics for Warranty Lifecycle Management Setup section.

3. To enable CRM Analytics in Salesforce, click **Enable CRM Analytics.**

4. To select a security predicate to determine users' access to warranty lifecycle data, follow the instructions in the Configure Data Access for Warranty Lifecycle Management Analytics section.

5. After you complete all the required steps, turn on Install to install the CRM Analytics for Warranty Lifecycle Management app. If the app doesn't have sufficient prerequisites, the installation is skipped with a message explaining the steps to meet the prerequisites.

   After assigning permission sets and enabling CRM Analytics, you can check the CRM Analytics for Warranty Lifecycle Management app's installation status in the Requests tab. From Setup, select Auto-Installed Apps, and open the Requests tab. When the installation is complete, open the Applications tab to view the CRM Analytics for Warranty Lifecycle Management app. You can also access the dashboards from the App Launcher. From Analytics Studio, select CRM Analytics for Warranty Lifecycle Management, and then select Dashboards.

To see your data in the dashboards after you install the CRM Analytics for Warranty Lifecycle Management app, you must schedule your app to refresh.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions where Manufacturing Cloud and CRM Analytics are enabled

USER PERMISSIONS

To set up CRM Analytics for Warranty Lifecycle Management and assign permission sets to users:
- CRM Analytics Plus Admin AND Analytics for Manufacturing Admin or RI for Manufacturing Admin

Use CRM Analytics for Warranty Lifecycle Management Dashboards

The CRM Analytics for Warranty Lifecycle Management app includes dashboards to help you analyze your claims and warranty lifecycle data. The app provides claim analysis dashboards that you can embed in the Warranty Lifecycle Management Home and Claims pages.

Claims Analysis for Warranty Lifecycle Management Home Page

Use the Claims Analysis dashboard embedded in the Warranty Lifecycle Management Home page for a comprehensive view and insights into your warranty claims.

Claims Analysis for Claims Page

Use the Claims Analysis dashboard embedded in the Claims page to get a quick view on the trends of claims filed in the past. Use the insights to understand the patterns and trends and take decisions on approving or rejecting a claim.

Claims Analysis for Warranty Lifecycle Management Home Page

Use the Claims Analysis dashboard embedded in the Warranty Lifecycle Management Home page for a comprehensive view and insights into your warranty claims.

The Claims Analysis dashboard includes three pages - Claims Deepdive, Claim Distribution, and SLA Management. Filter the charts in the dashboard based on region, dealer, product, part, claim status, and a specific period. Also select a period to compare the data and analyze the progress of your claims.

- Claims Deepdive: Use the page to gain insights into your warranty claims based on dealers, parts, and costs. You can analyze the dealers based on the value of the claims, identify the parts that cause higher claim counts, and focus on high-value claims that need attention.

- Claim Distribution: Use the page to analyze your claims distribution based on specific geographical locations and various stages of claim processing. Gain insights to identify dealer locations that generate the highest claim volumes, assess the efficiency of the claim processing workflow, and understand claims trends to identify areas that need immediate attention.

- SLA Management: Use the page to analyze the claim transition time within your warranty lifecycle process. Select claim stages to view the average time for a claim to move from the first selected stage to the next and the average time the claims stays in these stages. These insights help to develop strategies to minimize transition time and improve SLA adherence.

Use the Claim Detail section to view the details of all your claims. Filter the claim details based on claim status and select a specific period to compare and analyze the progress.

You can embed the Claims Analysis dashboard in the Warranty Lifecycle Management Home page for easy access or open the dashboard directly from the CRM Analytics for Warranty Management app.

For general instructions on embedding the dashboards, see Embed Dashboards in Lightning Pages.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions where Manufacturing Cloud and CRM Analytics for Warranty Lifecycle Management are enabled

USER PERMISSIONS

To access CRM Analytics for Warranty Lifecycle Management dashboards:
- CRM Analytics Plus User AND Analytics for Manufacturing User or RI for Manufacturing User

Claims Analysis for Claims Page

Use the Claims Analysis dashboard embedded in the Claims page to get a quick view on the trends of claims filed in the past. Use the insights to understand the patterns and trends and take decisions on approving or rejecting a claim.

Filter the charts on the Claims Analysis - Embedded dashboard based on causal part and a specific period. You can view the values for various KPIs and see the trend chart for each KPI to analyze the progress over time. The dashboard also shows the current claim processing time and the average days to process claims.

Embed the Claims Analysis dashboard in the Claims page using the following filter string information:

```
{"datasets":{"Warranty_ClaimCoverage":[{"fields":["ClaimItem.ClaimId"],
"filter":{"operator":"in","values":["$Id"]},"locked":null,"hidden":null}]}}
```

For general instructions on embedding the dashboards, see Embed Dashboards in Lightning Pages.

Automate Your Business Processes in Manufacturing Cloud

Automate complex processes and decision-making with low- to no-code tools. Use the suitable Flow for Manufacturing tool to meet your unique business needs. Create branded experiences with OmniStudio. Use the default actions that are available with Manufacturing Cloud in Process Builder and Flow Builder.

Flow for Manufacturing
Build customer-focused digital experiences quickly with Flow for Manufacturing, a toolset for workflow automation and orchestration.

OmniStudio for Manufacturing Cloud
OmniStudio is a suite of services, components, and data model objects that you can use to build guided brand experiences, applications, and workflows. It's a managed package of application components built on the Salesforce platform that you can download and install in Manufacturing Cloud.

Flow Builder and Process Builder Actions for Manufacturing Cloud
Manufacturing Cloud provides default actions to use in Process Builder and Flow Builder. These actions can help you automate sales agreements, account forecasting, advanced account forecasting, and account manager targets.

Flow for Manufacturing

Build customer-focused digital experiences quickly with Flow for Manufacturing, a toolset for workflow automation and orchestration.

> 📝 **Note:** Flow for Manufacturing is different from Flow Builder, previously Salesforce Flow. While Flow for Manufacturing is used for automation, Flow Builder is used to create automated workflows.

Flow for Manufacturing includes these tools.

Flow Builder

A point-and-click tool for building complex workflows to automate repetitive, manual, and error-prone business processes.

See Flow Builder.

OmniStudio

A suite of services, components, and objects for creating personalized, fully branded, guided consumer experiences that can be delivered across multiple channels and devices. Includes OmniScripts, DataRaptors, Integration Procedures, and FlexCards.

See OmniStudio.

Data Processing Engine

An extract-transform-load tool to transform your data end-to-end. Create high-performance rollups with aggregations, filters, and joins on large datasets.

See Data Processing Engine.

For information on how Data Processing Engine works with Advanced Account Forecasting in Manufacturing Cloud, see Data Processing Engine on page 93.

Business Rules Engine

A tool for automating complex decision-making processes, such as determining eligibility and qualification. Key components are expression sets and lookup tables.

See Business Rules Engine.

Document Generation

A tool for unifying document creation and management. You can design Microsoft Word (.docx) and Microsoft PowerPoint (.pptx) documents and merge fields from objects to generate documents, such as contracts, proposals, quotes, and reports.

See OmniStudio Document Generation.

Intelligent Form Reader

A tool for extracting data from faxed documents. Eliminates error-prone manual data entry and improves accuracy via automatic text extraction.

See Intelligent Form Reader.

OmniStudio for Manufacturing Cloud

OmniStudio is a suite of services, components, and data model objects that you can use to build guided brand experiences, applications, and workflows. It's a managed package of application components built on the Salesforce platform that you can download and install in Manufacturing Cloud.

OmniStudio includes OmniScripts, DataRaptors, Integration Procedures, and FlexCards.

Install the latest version of the OmniStudio package and then complete the post-installation steps. See OmniStudio Release Summary to get the link for downloading the OmniStudio managed

package, release notes, installation instructions, and upgrade instructions. When you update the OmniStudio package, the upgrades are automatically available in your org.

Make sure that you have the OmniStudio Admin, OmniStudio Runtime for Communities, and OmniStudio User permission set licenses in your org.

SEE ALSO:

OmniStudio

Get to Know Omnistudio

Flow Builder and Process Builder Actions for Manufacturing Cloud

Manufacturing Cloud provides default actions to use in Process Builder and Flow Builder. These actions can help you automate sales agreements, account forecasting, advanced account forecasting, and account manager targets.

Action in Process Builder and Flow Builder	Description
Calculate Advanced Account Forecasts	Calculate forecasts for an account based on the formulas associated with the forecast set.
Refresh Actuals Calculation	Recalculate actual values of an active sales agreement.
Recalculate Forecasts Actions	Recalculate forecasts for a single account or for all accounts in your Salesforce org.
Update Account Manager Target Values	Update the assignment values of an account manager target to reflect the changes in the target value.
Update Advanced Account Forecast Set Partner	Update the status of the Advanced Account Forecast Set Partner record after the forecast data for a given combination of account and forecast set has been generated.

SEE ALSO:

Flow Builder

Process Builder

Manufacturing Cloud Developer Guide: Standard Invocable Actions

Extend Manufacturing Cloud with Prebuilt Apps

Manufacturing Cloud provides prebuilt apps to help you get started with your implementation and explore proof-of-concept configurations. Prebuilt apps include metadata, tools, and workflows for nuanced, process-specific needs.

Learn About Prebuilt Apps for Manufacturing Cloud

Implement custom business use cases by using the prebuilt apps for Manufacturing Cloud. Explore the prebuilt apps in the Manufacturing Cloud learning trial orgs or deploy and use the prebuilt apps in your org.

Sign up for a learning trial org and use the prebuilt apps directly. For instructions, see Create a Manufacturing Cloud Trial Org. When you deploy the prebuilt apps into your org, make sure that your org has the appropriate licenses and permissions for Manufacturing Cloud.

Here's the list of prebuilt apps for Manufacturing Cloud.

Prebuilt App	Description	Learn More
Advanced Account Forecast Product Category	Customize the default Data Processing Engine (DPE) templates to get advanced account forecasts at any level in the product category hierarchy.	Generate Forecasts for Product Categories
Advanced Account Forecast Revenue Measures	Customize the default DPE templates to get advanced account forecasts of key revenue measures.	Generate Forecasts for Key Revenue Measures
Object Hierarchy Mapping	Define field mappings between objects that are used during the conversion of opportunities to sales agreements or between the objects that are used in Rebate Management.	Map Fields with the Object Hierarchy Mapping Package
Data Processing Engine Debug	Get the count of records that pass through the nodes of a DPE definition to enhance your DPE definitions. Visualize a DPE definition to get a deeper understanding of its structure.	Debug Your Data Processing Engine Definitions
Product Registration	Register assets and assign asset warranties swiftly by using preconfigured OmniStudio components.	Register Products and Assign Warranties Quickly
Actuals Calculation Using Data Processing Engine	Calculate the actual revenue and quantity for sales agreements by using a DPE definition and get the latest values updated on agreement terms by using a scheduled flow.	Calculate Actuals for Sales Agreements Using the Data Processing Engine on page 463

Prebuilt App	Description	Learn More
Order Visibility	Get a comprehensive view of the key details of a contact's orders, order products, and cases by using preconfigured OmniStudio components.	Track a Contact's Orders, Order Products, and Cases Easily on page 472
Advanced Account Forecasts with Opportunity Line Item Schedules	Generate advanced account forecasts based on opportunity line item schedules by using four predefined DPE definitions.	Generate Forecasts Based on Opportunity Product Schedules on page 480
Advanced Account Forecasts with Account Hierarchy	Track forecast data for each account in a hierarchy by using four predefined DPE definitions. The forecast data for all child accounts is aggregated and rolled up at each parent account level.	Calculate Forecasts for Accounts in a Hierarchy on page 467
Actionable Relationship Center Templates for Manufacturing	Use Actionable Relationship Center templates to quickly create graphs to visualize the key relationships of accounts and assets.	Visualize Your Commercial and Service Relationships

Prebuilt Apps for Manufacturing Cloud

Use the prebuilt apps tailored for Manufacturing Cloud to implement custom business use cases and to meet process-specific requirements.

🛑 **Important:** The Manufacturing Cloud Prebuilt Apps is a Non-SFDC Application as defined under, and subject to the terms of, your Main Services Agreement (f/k/a the Master Subscription Agreement) with Salesforce. https://www.salesforce.com/company/legal/agreements.jsp

📝 **Note:** To install some of these apps, you need a special Learning trial org. See Create a Manufacturing Cloud Trial Org.

Generate Forecasts for Product Categories

Extend the default Data Processing Engine templates that work with Advanced Account Forecasting to generate forecasts at any level in the product category hierarchy. Help your account managers, regional managers, and financial analysts get better demand visibility. View granular forecasts that help you identify high and low performers in each product category.

Generate Forecasts for Key Revenue Measures

Extend the default Data Processing Engine templates that work with Advanced Account Forecasting to allow your users to view forecasts for key revenue measures. Help your account managers, regional managers, and financial analysts understand the key revenue measures to improve sales and manage gross margin percentage at a product level. View forecasts for revenue measures along with net profit and sales visibility at a product level and take the steps required to improve profitability.

Map Fields with the Object Hierarchy Mapping Package

Create field mappings between objects for the ConvertToSalesAgreement and EligibleProgramRebateType usage types, to help you set up your data in Manufacturing Cloud. These mappings can help account managers define relationships between Opportunities and Sales Agreement objects used during the conversion of opportunities to sales agreements. Or define relationships between Transaction Journal and aggregate objects used in Rebate Management.

Debug Your Data Processing Engine Definitions

Optimize your Data Processing Engine (DPE) definitions by using the Data Processing Engine Debug prebuilt app. Get the count of records that pass through the nodes of a DPE definition to verify how interlinked nodes behave, to test new customizations, and to investigate errors. Get a visual representation of a DPE definition to explore its nodes and their connections, to plan customizations, and to troubleshoot issues.

Register Products and Assign Warranties Quickly

Sales and service representatives swiftly register assets, associate assets with accounts and contacts, and assign asset warranties using the Product Registration prebuilt app. The Product Registration prebuilt app is made up of OmniStudio components, Lightning Web Component bundles, a Lightning Page, and a tab. The prebuilt app can be used in the Salesforce desktop site and in the Salesforce mobile app.

Calculate Actuals for Sales Agreements Using the Data Processing Engine

The Calculate Actuals Using Data Processing Engine prebuilt app helps you automatically calculate actual quantity and actual revenue of sales agreements using a Data Processing Engine definition. You can calculate actual quantities and revenues for past, current, and future schedules of one or more sales agreements. You can also specify the status of orders that are considered for the calculation. You can also schedule the calculation via a predefined scheduled flow, and customize the actuals calculation logic by customizing the predefined Data Processing Engine template.

Calculate Forecasts for Accounts in a Hierarchy

Generate forecasts for all accounts in a hierarchy and see the rolled up forecast values at a parent account level. Use Data Processing Engine templates, custom fields, and a sample forecast set to calculate and roll over forecast for all child accounts and display the cumulative data at the parent account level. Empower your country managers, regional managers, and account managers to collaborate on forecasts and review the adjusted values.

Track a Contact's Orders, Order Products, and Cases Easily

The Order Visibility prebuilt app gives sales and service representatives a holistic view into a contact's orders and track orders' key details, associated order products, and associated cases. They can also launch an intuitive flow to swiftly create cases associated with an order. With this prebuilt app, admins can add a preconfigured flexcard that shows these details to the Service Console for Manufacturing, an Experience Cloud site, or a contact record page. The prebuilt app is made up of OmniStudio components, permission sets, and a custom field.

Generate Forecasts Based on Opportunity Product Schedules

The Advanced Account Forecasts with Opportunity Line Item Schedules prebuilt app extends the default Data Processing Engine (DPE) templates to generate forecasts based on opportunity products schedules. With these forecasts, sales and finance teams can get better visibility into realized revenue on opportunities and potential opportunity quantity and revenue over time. They can create more informed sales timelines and plan their work better.

Visualize Commercial and Service Relationships

Get an intuitive, interactive view of the key relationships in your commercial and service operations by using Actionable Relationship Center (ARC) in Manufacturing Cloud. Easily design ARC relationship graphs tailored to your needs by using the templates available in the Actionable Relationship Center Templates for Manufacturing prebuilt app. Sales teams at a manufacturer can visualize account hierarchies and drill into relevant sales agreements, transactions, and rebate programs. Service teams can get a snapshot of an account's assets, cases filed by the account, and work orders logged for the account. Service teams can also view an asset's activities, including its related cases, work orders, and asset warranties.

Generate Forecasts for Product Categories

Extend the default Data Processing Engine templates that work with Advanced Account Forecasting to generate forecasts at any level in the product category hierarchy. Help your account managers, regional managers, and financial analysts get better demand visibility. View granular forecasts that help you identify high and low performers in each product category.

To set up product categories for Advanced Account Forecasting in your org, you must create and update various components, such as custom fields, Data Processing Engine definitions, flows, and more. To help you get started quickly, the Manufacturing Cloud Learning trial org includes all the components you need. Using this trial org, you can package all the components and then install the package into your Salesforce org.

To sign up for a Learning trial org, see Create a Manufacturing Cloud Trial Org.

Get Started

Create and Upload Packages for Advanced Account Forecast Product Category

Create and upload packages in your Learning trial org with the required assets for Advanced Account Forecast Product Category.

Install Packages for Advanced Account Forecast Product Category

Install the packages that you created in your Learning trial org into your Salesforce org.

Set Up Advanced Account Forecast Product Category

To work with Advanced Account Forecast Product Category, set up and configure the provided components that you installed from the Learning trial org packages.

Run DPE Definitions Using Flows to Generate Forecasts for Product Categories

The Advanced Account Forecast Product Category package includes schedule-triggered flows and screen flows to run the provided Data Processing Engine (DPE) definitions. After configuring the package assets, use the flows to run the DPE definitions to generate forecasts at the product category level.

Considerations for Advanced Account Forecast Product Category

Note these considerations when using the Advanced Account Forecast Product Category app to generate forecasts for product categories.

Create and Upload Packages for Advanced Account Forecast Product Category

Create and upload packages in your Learning trial org with the required assets for Advanced Account Forecast Product Category.

1. Log in to your Learning trial org.

2. From Setup, in the Quick Find box, enter *Package Manager*, and then select **Package Manager**.

3. Click **New**.

4. Enter these details.
   - Package Name: *ProdCatgField_pkg1*
   - Description: Custom fields for Advanced Account Forecasting Product Categories.

5. Click **Save**.

6. Click **Add** to define components.

7. Select **Custom Field** in Component Type and select these fields on the Advanced Account Forecast Fact object.

- Adjusted Forecasted Quantity
- Adjusted Forecasted Revenue
- Parent Category
- Product Category
- Sales Agreement Quantity from Products
- Sales Agreement Quantity from Categories
- Sales Agreement Revenue from Products
- Sales Agreement Revenue from Categories

8. Click **Add to Package**.
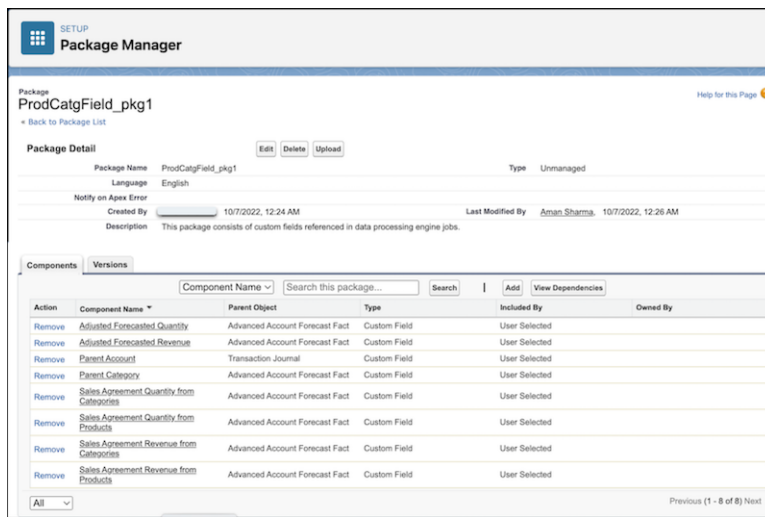
9. Click **Upload**.

10. Enter these details and click **Upload**.

- Version Name: *ProdCategory*
- Version Number: *1.0*

An installation package URL is generated.
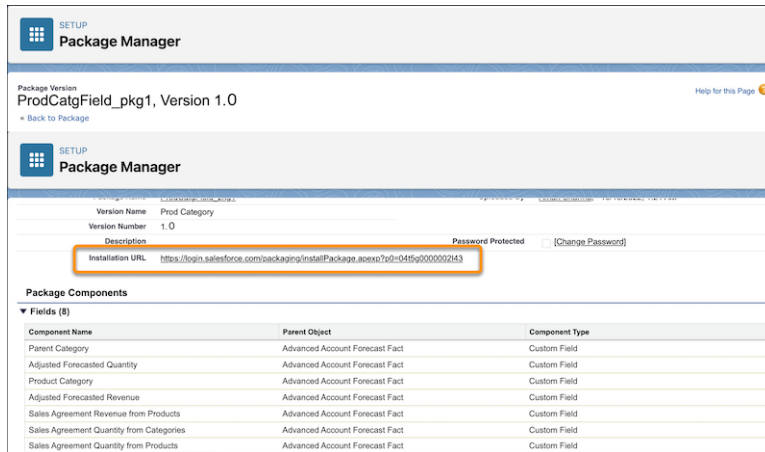
11. Make a note of the installation package URL. This URL is used to install the custom fields into your org.

12. In Package Manager, click **New** to create another package with these details.

- Package Name: `ProdCatgField_pkg2`
- Description: Custom Data Processing Engine templates and flows for Advanced Account Forecasting Product Categories.

13. Add these components in the ProdCatgField_pkg2 package.

Component Type	Component API Name	Description
Aura Component Bundle	CH_InstallationPage	Component used on a Lightning page to create a forecast set record for Product Category Hierarchy.
Batch Calculation Job Definition	Generate_Category_Forecast_Sample	DPE definition to generate a forecast with product categories.
Batch Calculation Job Definition	Recalculate_Category_Forecast_Sample	DPE definition to recalculate a forecast with product categories.
Batch Calculation Job Definition	Regenerate_Account_Forecast_Sample	DPE definition to regenerate a forecast with product categories.
Batch Calculation Job Definition	Rollover_Category_Forecast_Sample	DPE definition to rollover a forecast with product categories.
Lightning Page	CreateCategoryHierarchyMetadata	Lightning page to set up the Product Category Hierarchy metadata and components.
Tab	Create_Category_Hierarchy_Metadata	Custom tab available on the App Launcher to create the forecast set data.
Flow Definition	Install_AAF_Product_Category_Hierarchy_Forecast_Set	A flow to create the forecast set record.
Flow Definition	industries_mfg_GenerateForecastDPESampleScheduleFlow	Scheduled flow for the Generate Category Forecast Sample DPE.
Flow Definition	industries_mfg_RecalculateForecastDPESampleScheduleFlow	Scheduled flow for the Recalculate Category Forecast Sample DPE.

Component Type	Component API Name	Description
Flow Definition	industries_mfg_RegenerateForecastDPESampleScheduleFlow	Scheduled flow for the Regenerate Category Forecast Sample DPE.
Flow Definition	industries_mfg_RolloverForecastDPESampleScheduleFlow	Scheduled flow for the Rollover Category Forecast Sample DPE.
Flow Definition	industries_mfg_GenerateForecastDPESampleScreenFlow	Screen flow for the Generate Category Forecast Sample DPE.
Flow Definition	industries_mfg_RecalculateForecastDPESampleScreenFlow	Screen flow for the Recalculate Category Forecast Sample DPE.
Flow Definition	industries_mfg_RegenerateForecastDPESampleScreenFlow	Screen flow for the Regenerate Category Forecast Sample DPE.
Flow Definition	industries_mfg_RolloverForecastDPESampleScreenFlow	Screen flow for the Rollover Category Forecast Sample DPE.
Permission Set	Manufacturing_AAF_Product_Category_Hierarchy	Permission set with the required permissions for Product Category Hierarchy.

14. Enter these details and upload the package.

- Version Name: *ProdCategory 2*
- Version Number: *1.0*

15. Make a note of the installation package URL. This URL is used to install the additional assets for Advanced Account Forecast Product Category into your org.

Install Packages for Advanced Account Forecast Product Category

Install the packages that you created in your Learning trial org into your Salesforce org.

Before installing the packages, ensure Advanced Account Forecasting and Data Pipelines are enabled in your org. For more information, see Enable Advanced Account Forecasting.

1. Log in to your Salesforce org where you want to install the packages.

2. For each Installation URL that you wrote down, replace the domain in the installation URL with your Salesforce (target org) domain name. Then open the links.

For example, if the Installation URL is

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions.

USER PERMISSIONS

To install the package:
- Download AppExchange Packages

`https://login.salesforce.com/packaging/installPackage.apexp?p0=04tBxxxxxxx17x` and your target org domain name is `https://curious-einstein-dev-ed.my.salesforce.com`, then the installer page URL is
`https://curious-einstein-dev-ed.my.salesforce.com/packaging/installPackage.apexp?p0=04tBxxxxxxx17x`.

3. On the install page, choose whether to install the package for admins only, all users, or specific profiles.

4. Click **Install**.

The packages can take a while to install. An email is sent when the installation completes.

5. Click **Done**.

After installation is complete, verify that the packages were installed. Look for the packages on the Installed Packages page in Setup.

Set Up Advanced Account Forecast Product Category

To work with Advanced Account Forecast Product Category, set up and configure the provided components that you installed from the Learning trial org packages.

1. Prerequisites for Advanced Account Forecast Product Category

   Complete these prerequisites before you start using the Advanced Account Forecast Product Category app.

2. Assign the Permission Set for Advanced Account Forecast Product Category

   Assign the provided Advanced Account Forecast Product Category permission set to users who you want to work with product category forecasts.

3. Create the Forecast Set for Advanced Account Forecast Product Category

   Create the provided Advanced Account Forecast Product Category forecast set using a Lightning page.

4. Configure the Forecast Set with DPE Definitions for Product Category

   Configure the provided forecast set to use the Data Processing Engine (DPE) definitions for Advanced Account Forecast Product Category.

5. Activate the Forecast Set for Advanced Account Forecast Product Category

   Activate the provided forecast set for Advanced Account Forecast Product Category.

Prerequisites for Advanced Account Forecast Product Category

Complete these prerequisites before you start using the Advanced Account Forecast Product Category app.

- Use the Category, Product Category, and Product Category Product objects to store the product and category data for generating forecasts.

- Use the Is Primary Category field on Product Category Product to define the primary category for the product. Forecasts only for products with a primary category are generated and shown in the grid.

- Define a parent category for the highest level category to be considered for generating forecasts. For example, to generate forecasts for Top Category (parent category for all other categories), define its parent category as Super Category.

Assign the Permission Set for Advanced Account Forecast Product Category

Assign the provided Advanced Account Forecast Product Category permission set to users who you want to work with product category forecasts.

1. From Setup, in the Quick Find box, enter `Users`, and then select **Users**.

2. Select a user.

3. In the Permission Set Assignments related list, click **Edit Assignments**.

4. Select the **Manufacturing AAF Product Category Hierarchy** permission set and click **Add**.

5. Save your work.

Create the Forecast Set for Advanced Account Forecast Product Category

Create the provided Advanced Account Forecast Product Category forecast set using a Lightning page.

To view product categories in your forecasts, you need a forecast set configured to show this data. To help you get started, one of the packages that you installed from the Learning trial org includes a preconfigured Product Category Forecast Set. When you installed the package, this forecast set was made available in your org. All you need to do is add it to your org.

⚠️ **Warning:** You can install this metadata only once in your org.

1. From the App Launcher, find and select **Create Category Hierarchy Metadata**.

2. Click **Create Product Category Forecast Set** .
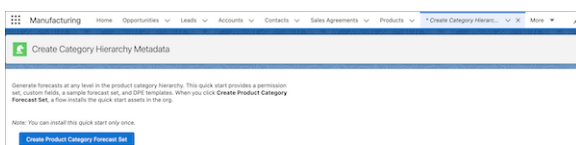
The forecast set for Advanced Account Forecast Product Category is created in your org.

SEE ALSO:

[Create and Configure Forecast Sets](#)

Configure the Forecast Set with DPE Definitions for Product Category

Configure the provided forecast set to use the Data Processing Engine (DPE) definitions for Advanced Account Forecast Product Category.

1. From Setup, enter `Manufacturing` in the Quick Find box, and then select **Advanced Account Forecasting**.
2. Click **Edit** next to Sample Forecast Set for Category Hierarchy.
3. Expand the Building Blocks section.
4. Click **Edit** next to Data Processing Engine Definitions.
5. Select the Data Processing Engine definitions for Advanced Account Forecast Product Category in the Generation Definition, Regeneration Definition, Recalculation Definition, and Rollover Definition fields, and click **Save**.

Activate the Forecast Set for Advanced Account Forecast Product Category

Activate the provided forecast set for Advanced Account Forecast Product Category.

1. In the Forecast Set setup page, click the **Forecast Set** tab.
2. Click **Activate** next to the Sample Forecast Set for Category Hierarchy forecast set. The forecast set is now ready to use.

Run DPE Definitions Using Flows to Generate Forecasts for Product Categories

The Advanced Account Forecast Product Category package includes schedule-triggered flows and screen flows to run the provided Data Processing Engine (DPE) definitions. After configuring the package assets, use the flows to run the DPE definitions to generate forecasts at the product category level.

Look for these flows:

- GenerateForecastDPESampleScheduleFlow
- RecalculateForecastDPESampleScheduleFlow
- RegenerateForecastDPESampleScheduleFlow
- RolloverForecastDPESampleScheduleFlow
- GenerateForecastDPESampleScreenFlow
- RecalculateForecastDPESampleScreenFlow
- RegenerateForecastDPESampleScreenFlow
- RolloverForecastDPESampleScreenFlow

Run the flows based on your business needs.

Run a Schedule-Triggered Flow for Advanced Account Forecast Product Category
Schedule flows to generate forecasts at the product category level.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions.

USER PERMISSIONS

To configure a forecast set:
- Manufacturing Advanced Account Forecasting

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions.

USER PERMISSIONS

To activate a forecast set:
- Manufacturing Advanced Account Forecasting

Run the screen flows with the DPE definitions to generate forecasts at the product category level.

SEE ALSO:

Run a Schedule-Triggered Flow for Advanced Account Forecast Product Category

Schedule flows to generate forecasts at the product category level.

1. From Setup, in the Quick Find box, enter *Flows*, and then select **Flows**.

2. Click to open a schedule-triggered flow for Advanced Account Forecast Product Category.

3. In the Start node, click **Edit**.

4. Specify a start date, start time, and frequency for the flow, and click **Done**.

5. Double-click to open the Run Data Processing Job node.

6. Enter the AccountId and AdvAccountForecastSetId.

7. Click **Done**.

8. Click **Activate**.

The flow runs as per the specified schedule.

<div style="float:right;">

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions.

USER PERMISSIONS

To run a flow in Flow Builder:
• Manage Flow

</div>

Run a Screen Flow for Advanced Account Forecast Product Category

Run the screen flows with the DPE definitions to generate forecasts at the product category level.

1. From Setup, in the Quick Find box, enter *Flows*, and then select **Flows**.

2. Click to open a screen flow for Advanced Account Forecast Product Category.

3. Click **Run**.

4. Enter the AccountId and AdvAccountForecastSetId.

5. Click **Next**.

6. Click **Finish**.

Use Monitor Workflow Services in Setup to track the progress, success, and failure of the flow run.

<div style="float:right;">

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions.

USER PERMISSIONS

To run a flow in Flow Builder:
• Manage Flow

</div>

Considerations for Advanced Account Forecast Product Category

Note these considerations when using the Advanced Account Forecast Product Category app to generate forecasts for product categories.

• Adjustments to measure values in the forecast grid for categories at a higher level don't reflect automatically for the lower-level categories in the hierarchy and vice versa.

• Measures values for a product roll up only at the product's primary category level and its parent categories in the hierarchy.

Generate Forecasts for Key Revenue Measures

Extend the default Data Processing Engine templates that work with Advanced Account Forecasting to allow your users to view forecasts for key revenue measures. Help your account managers, regional managers, and financial analysts understand the key revenue measures to improve sales and manage gross margin percentage at a product level. View forecasts for revenue measures along with net profit and sales visibility at a product level and take the steps required to improve profitability.

To set up revenue measures for Advanced Account Forecasting in your org, you must create and update various components, such as custom fields, Data Processing Engine definitions, and flows. To help you get started quickly, the Manufacturing Cloud Learning trial org includes all the components you need. Using this trial org, you can package all the components and then install the package into your Salesforce org.

To sign up for a Learning trial org, see Create a Manufacturing Cloud Trial Org.

Get Started

Create and Upload Packages for Advanced Account Forecast Revenue Measures

Create and upload packages in your Learning trial org with the required assets for Advanced Account Forecast Revenue Measures.

Install Packages for Advanced Account Forecast Revenue Measures

Install the packages that you created in your Learning trial org into your Salesforce org.

Create the Forecast Set for Advanced Account Forecast Revenue Measures

Create the provided Advanced Account Forecast Revenue Measure forecast set using a predefined flow.

Configure the Forecast Set with DPE Definitions for Revenue Measures

Configure the provided forecast set to use the Data Processing Engine (DPE) definitions for Advanced Account Forecast Revenue Measures.

Activate the Forecast Set for Advanced Account Forecast Revenue Measures

Activate the provided forecast set for Advanced Account Forecast Revenue Measures.

Run DPE Definitions Using Flows to Generate Forecasts for Key Revenue Measures

The Advanced Account Forecast Product Category package includes schedule-triggered flows and screen flows to run Data Processing Engine (DPE) definitions. You can customize these flows to run the DPE definitions to generate forecasts for key revenue measures.

SEE ALSO:

Example: Analyze Product Cost and Profit Margins with Advanced Account Forecasting and Data Processing Engine

Create and Upload Packages for Advanced Account Forecast Revenue Measures

Create and upload packages in your Learning trial org with the required assets for Advanced Account Forecast Revenue Measures.

1. Log in to your Learning trial org.

2. From Setup, in the Quick Find box, enter *Package Manager*, and then select **Package Manager**.

3. Click **New**.

4. Enter these details.

   - Package Name: *Revenue Measures Custom Fields and Permissions*

   - Description: Custom fields and permissions for Advanced Account Forecasting Revenue Measures.

5. Click **Save**.

6. Click **Add** to define components.

7. Select **Custom Field** in Component Type and select these fields on the Advanced Account Forecast Fact object.

   - Actual Gross Margin Percent

   - Actual Profit

   - Cost Per Unit

   - Fixed Cost

   - Forecasted Gross Margin Percent

   - Total Cost

8. Click **Add to Package**.

9. Select **Permission Set** in Component Type and select the Manufacturing AAF Revenue Measures permission set.

10. Click **Add to Package**.

11. Click **Upload**.

12. Enter these details and click **Upload**.

- Version Name: *Revenue Measures Fields*

- Version Number: *1.0*

An installation package URL is generated.

13. Make a note of the installation package URL. This URL is used to install the custom fields into your org.

14. In Package Manager, click **New** to create another package with these details.

- Package Name: `Revenue Measures DPEs and Flow`
- Description: Custom Data Processing Engine templates and flows for Advanced Account Forecasting Revenue Measures.

15. Add these components in the Revenue Measures DPEs and Flow package.

Component Type	Component API Name	Description
Batch Calculation Job Definition	GenerateAccountForecastWithRevenueMeasures	DPE definition to generate a forecast with revenue measures.
Batch Calculation Job Definition	RecalculateAccountForecastWithRevenueMeasures	DPE definition to recalculate a forecast with revenue measures.
Batch Calculation Job Definition	RegenerateAccountForecastWithRevenueMeasures	DPE definition to regenerate a forecast with revenue measures.
Batch Calculation Job Definition	RolloverAccountForecastWithRevenueMeasures	DPE definition to rollover a forecast with revenue measures.
Flow Definition	CreateForecastSetforRevenueMeasures	A flow to create the forecast set record.
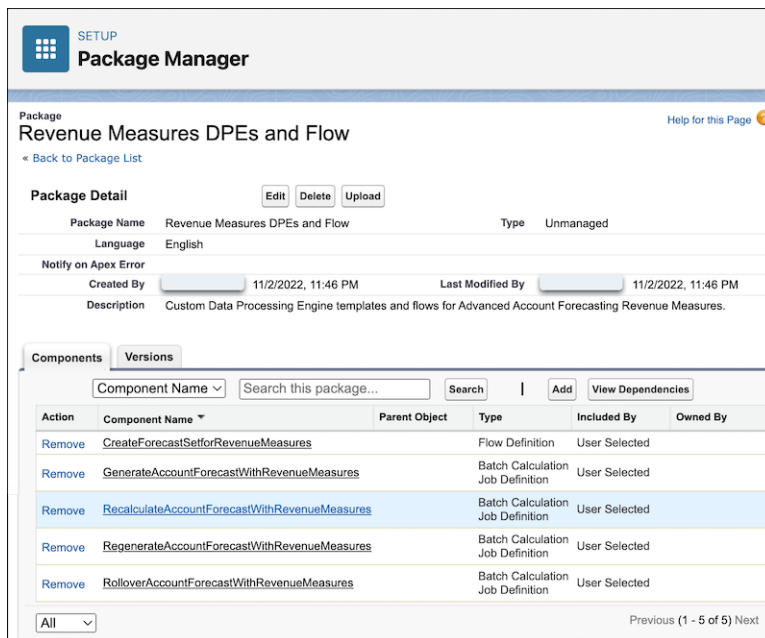
16. Enter these details and upload the package.

- Version Name: `Revenue Measures DPEs`
- Version Number: `1.0`

17. Make a note of the installation package URL. This URL is used to install the additional assets for Advanced Account Forecast Revenue Measures into your org.
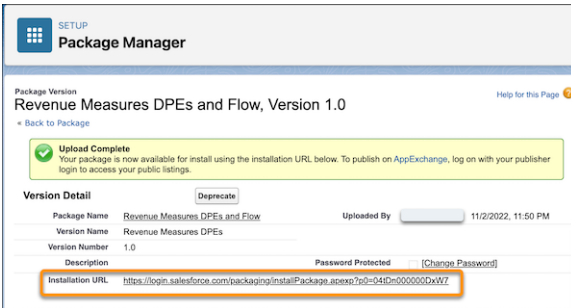
Install Packages for Advanced Account Forecast Revenue Measures

Install the packages that you created in your Learning trial org into your Salesforce org.

Before installing the packages, ensure Advanced Account Forecasting and Data Pipelines are enabled in your org. For more information, see Enable Advanced Account Forecasting.

1. Log in to your Salesforce org where you want to install the packages.

   🛇 **Important:** Install the Revenue Measures Custom Fields and Permissions package first. Then, assign the Manufacturing AAF Revenue Measures permission set to the logged-in user and Integration user. Next, install the Revenue Measures DPEs and Flow package.

2. For each Installation URL that you wrote down, replace the domain in the installation URL with your Salesforce (target org) domain name. Then open the links.

   For example, if the Installation URL is

   `https://login.salesforce.com/packaging/installPackage.apexp?p0=04tBxxxxxxx17x` and your target org domain name is `https://curious-einstein-dev-ed.my.salesforce.com`, then the installer page URL is

   `https://curious-einstein-dev-ed.my.salesforce.com/packaging/installPackage.apexp?p0=04tBxxxxxxx17x`.

3. On the install page, choose whether to install the package for admins only, all users, or specific profiles.

4. Click **Install**.

   The packages can take a while to install. An email is sent when the installation completes.

5. Click **Done**.

After installation is complete, verify that the packages were installed. Look for the packages on the Installed Packages page in Setup.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions.

USER PERMISSIONS

To install the package:
- Download AppExchange Packages

Create the Forecast Set for Advanced Account Forecast Revenue Measures

Create the provided Advanced Account Forecast Revenue Measure forecast set using a predefined flow.

To view key revenue measures in your forecasts, you need a forecast set configured to show this data. To help you get started, one of the packages that you installed from the Learning trial org includes a preconfigured revenue measures forecast set. When you installed the package, this forecast set was made available in your org. All you need to do is add it to your org.

⚠️ **Warning:** You can install this metadata only once in your org.

1. From Setup, in the Quick Find box, enter `Flows`, and then select **Flows**.

2. Click to open the **Create Forecast Set for Revenue Measures** flow.
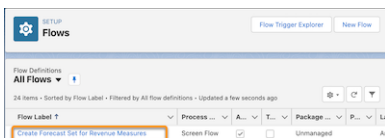
3. Click **Run**.

SEE ALSO:

Create and Configure Forecast Sets

Configure the Forecast Set with DPE Definitions for Revenue Measures

Configure the provided forecast set to use the Data Processing Engine (DPE) definitions for Advanced Account Forecast Revenue Measures.

1. From Setup, enter `Manufacturing` in the Quick Find box, and then select **Advanced Account Forecasting**.

2. Click **Edit** next to Sample Forecast Set with Revenue Measures.

3. Expand the Building Blocks section.

4. Click **Edit** next to Data Processing Engine Definitions.

5. Select the Data Processing Engine definitions for Advanced Account Forecast Revenue Measures in the Generation Definition, Regeneration Definition, Recalculation Definition, and Rollover Definition fields, and click **Save**.

Activate the Forecast Set for Advanced Account Forecast Revenue Measures

Activate the provided forecast set for Advanced Account Forecast Revenue Measures.

1. In the Forecast Set setup page, click the **Forecast Set** tab.

2. Click **Activate** next to the Sample Forecast Set with Revenue Measures forecast set.
   The forecast set is now ready to use.

Run DPE Definitions Using Flows to Generate Forecasts for Key Revenue Measures

The Advanced Account Forecast Product Category package includes schedule-triggered flows and screen flows to run Data Processing Engine (DPE) definitions. You can customize these flows to run the DPE definitions to generate forecasts for key revenue measures.

Look for these flows:

- GenerateForecastDPESampleScheduleFlow

- RecalculateForecastDPESampleScheduleFlow

- RegenerateForecastDPESampleScheduleFlow

- RolloverForecastDPESampleScheduleFlow

- GenerateForecastDPESampleScreenFlow

- RecalculateForecastDPESampleScreenFlow

- RegenerateForecastDPESampleScreenFlow

- RolloverForecastDPESampleScreenFlow

Clone these DPE templates in the Advanced Account Forecast Revenue Measures package to create DPE definitions for revenue measures.

- GenerateAccountForecastWithRevenueMeasures

- RegenerateAccountForecastWithRevenueMeasures

- RecalculateAccountForecastWithRevenueMeasures

- RolloverAccountForecastWithRevenueMeasures

Then, update the flows to run these DPE definitions to generate forecasts for revenue measures. Schedule or run the flows based on your business needs.

SEE ALSO:

> Run a Data Processing Engine Definition in Flows
>
> Generate Forecasts for Product Categories
>
> Run a Schedule-Triggered Flow for Advanced Account Forecast Product Category
>
> Run a Screen Flow for Advanced Account Forecast Product Category

Map Fields with the Object Hierarchy Mapping Package

Create field mappings between objects for the ConvertToSalesAgreement and EligibleProgramRebateType usage types, to help you set up your data in Manufacturing Cloud. These mappings can help account managers define relationships between Opportunities and Sales Agreement objects used during the conversion of opportunities to sales agreements. Or define relationships between Transaction Journal and aggregate objects used in Rebate Management.

The Object Hierarchy Mapping package lets you:

- Define mappings for the ConvertToSalesAgreement and EligibleProgramRebateType usage types in the provided Configure Mappings tab.
- Save and download your mappings to a ZIP file containing the .settings and package.xml files.
- Deploy your mappings directly in your org using the ObjectHierarchyRelationship Metadata API.

To install the Object Hierarchy Mapping package, you need a special Learning trial org. See Create a Manufacturing Cloud Trial Org.

Get Started

Install the Object Hierarchy Mapping Package

To get started, install the Object Hierarchy Mapping unmanaged package in your org.

Set Up and Configure Object Hierarchy Mapping

To use Object Hierarchy Mapping, create a connected app enabled for OAuth. With this connected app, you can create, save, and deploy your mappings. Basically, you're creating an app to use an app. Don't worry, we walk you through the steps.

Create and Deploy Field Mappings with Object Hierarchy Relationship

Use the Configure Mappings tab to create field mappings between objects, including custom ones, and deploy the mappings in your org.

Install the Object Hierarchy Mapping Package

To get started, install the Object Hierarchy Mapping unmanaged package in your org.

1. Log in to Salesforce.

2. Go to one of the package installer pages and provide your Salesforce log in details.

   Click one of these links depending on whether you want to download and install the package for your production or sandbox environment.

   - Production:
     https://login.salesforce.com/packaging/installPackage.apexp?p0=04t5j000000IK45

   - Sandbox: https://test.salesforce.com/packaging/installPackage.apexp?p0=04t5j000000IK45

3. Select to install the package for admins only, all users, or specific users only.

4. Click **Install**.

   The package can take a while to install. An email is sent when the installation completes.

5. Click **Done**.

After installation is complete, verify that the package called SOMSampleApp is installed. Look for this package on the Installed Packages page in Setup.

Set Up and Configure Object Hierarchy Mapping

To use Object Hierarchy Mapping, create a connected app enabled for OAuth. With this connected app, you can create, save, and deploy your mappings. Basically, you're creating an app to use an app. Don't worry, we walk you through the steps.

1. Create a Connected App for Object Hierarchy Mapping

   Create a connected app after you install the Object Hierarchy Mapping package.

2. Configure the Authentication Provider for Object Hierarchy Mapping

   Configure the authentication provider for the connected app used with Object Hierarchy Mapping.

3. Update the Connected App Configuration for Object Mapping Hierarchy

   Update the connected app configuration with the Callback URL from the authentication provider.

4. Configure the Named Credentials for Object Hierarchy Mapping

   Named credential are used to specify the URL of a callout endpoint and its required authentication parameters in one definition. Update the named credentials for the connected app for Object Hierarchy Mapping.

Create a Connected App for Object Hierarchy Mapping

Create a connected app after you install the Object Hierarchy Mapping package.

1. From Setup, in the Quick Find box, enter `Apps`, and then select **App Manager**.

2. Click **New Connected App**.

3. Create a connected app.

   a. For Connected App Name, enter `ApexMDAPIApp`.

   b. For API Name, press Tab to populate the name.

   c. For Contact Email, enter your email address.

   d. For Description, enter `Connected App for Object Hierarchy Mapping`.

   e. Select **Enable OAuth Settings**.

   f. For Callback URL, enter `https://login.salesforce.com` as a placeholder for now.

      We'll change this later.

   g. For Selected OAuth Scopes, select and add **Full access (full)** AND **Perform requests at any time (refresh_token, offline_access)**.

4. Click **Save** and **Continue**.

5. Click **Manage Consumer Details**.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions.

USER PERMISSIONS

To create a connected app:
- Customize Application AND either

  Modify All Data OR Manage Connected Apps
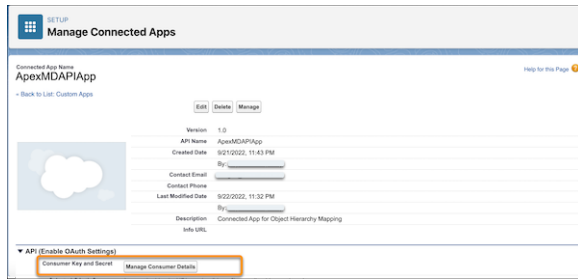
6. Enter the verification code sent to your registered email address and click **Verify**.

7. Make a note of the Consumer Key and Consumer Secret. These details are used to update the authentication provider for the connected app.

SEE ALSO:

Configure the Authentication Provider for Object Hierarchy Mapping

Configure the authentication provider for the connected app used with Object Hierarchy Mapping.

> **Note:** The Object Hierarchy Mapping package provides a default Authentication Provider configuration. Update the authentication provider with the Consumer key and Consumer secret of the connected app.

1. From Setup, in the Quick Find box, enter *Identity*, and then select **Auth. Providers**.

2. Click **Edit** in the dropdown menu next to ApexMDAPIAuth.

3. Specify the Consumer Key and Consumer Secret that you copied from the ApexMDAPIApp connected app.

4. Click **Save**.

5. Make a note of the Callback URL. You'll update the connected app configuration with this information next.
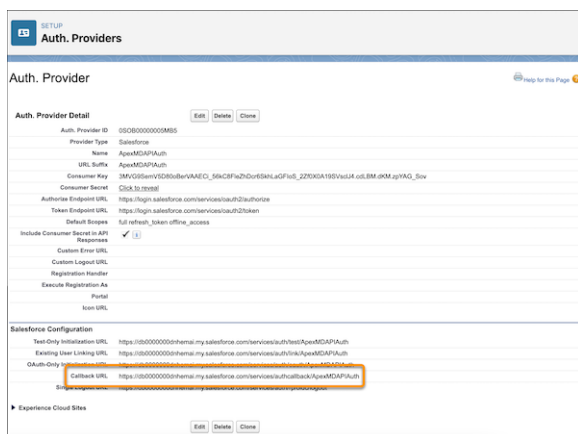
EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions.

USER PERMISSIONS

To view the settings:
- View Setup and Configuration

To edit the settings:
- Customize Application AND Manage Auth. Providers

Update the Connected App Configuration for Object Mapping Hierarchy

Update the connected app configuration with the Callback URL from the authentication provider.

1. From Setup, in the Quick Find box, enter `Apps`, and then select **App Manager**.

2. Click **Edit** in the quick action menu next to ApexMDAPIApp.

3. Update the Callback URL with the URL that you copied from the Auth Provider.

4. Remove the path `services/authcallback/ApexMDAPIAuth` from the URL.

5. Click **Save**.

Configure the Named Credentials for Object Hierarchy Mapping

Named credential are used to specify the URL of a callout endpoint and its required authentication parameters in one definition. Update the named credentials for the connected app for Object Hierarchy Mapping.

1. From Setup, in the Quick Find box, enter `Security`, and then select **Named Credentials**.

2. Click **Edit** in the quick action menu next to ApexMDAPI.

3. Update the URL to match the Callback URL for the ApexMDAPIApp connected app.

4. Click **Save**.

5. To finish setting up the named credential, enter your Salesforce username and password.

6. Click **Allow**.

The Object Hierarchy Mapping connected app is now ready to use.

SEE ALSO:

Define a Legacy Named Credential

Create and Deploy Field Mappings with Object Hierarchy Relationship

Use the Configure Mappings tab to create field mappings between objects, including custom ones, and deploy the mappings in your org.

Create a mapping definition record for the source to target mapping at each level in the hierarchy. Define a parent mapping to transform the header of the source object to the header of the target object. For example, Opportunity to Sales Agreement. Define child mappings to transform the child in a source object to a child in the target object. For example, Opportunity Line Item to Sales Agreement Product.

1. From App Launcher, find and select **Configure Mappings**.

   The Configure Mappings tab shows a list of your existing mappings.
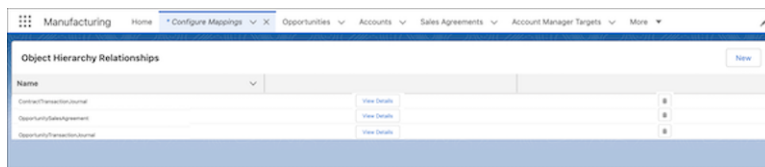
2. Click **New**.

3. Select one of these supported usage types for the mapping.

   - ConvertToSalesAgreement
   - ConvertToSalesAgreement

   The Settings Field Name is automatically generated based on the selected input and output object names. You can modify it if required.

4. In the Parent Mapping section, select the input and output objects.

5. Click **Add Row** to specify a field mapping between the input and output objects.

6. Repeat the step to specify additional mappings.

7. Select **Child Mappings** if you want to create field mappings between the child objects for the specified input and output objects.

8. Click **Add Row** to specify a field mapping between the child input and output objects.

9. Repeat the step to specify additional mappings.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions.

USER PERMISSIONS

To create field mappings between objects:
- Customize Application

10. Click **Download** to download the mappings file. You can use the downloaded ZIP file to verify the mappings and fix any issues.

11. Click **Deploy** to use the ObjectHierarchyRelationship Metadata API to deploy the mappings into your org.

SEE ALSO:

Manufacturing Cloud Developer Guide: ObjectHierarchyRelationship

Rebate Management Developer Guide: ObjectHierarchyRelationship

Debug Your Data Processing Engine Definitions

Optimize your Data Processing Engine (DPE) definitions by using the Data Processing Engine Debug prebuilt app. Get the count of records that pass through the nodes of a DPE definition to verify how interlinked nodes behave, to test new customizations, and to investigate errors. Get a visual representation of a DPE definition to explore its nodes and their connections, to plan customizations, and to troubleshoot issues.

Capabilities of the Data Processing Engine Debug App

Use the Data Processing Engine Debug app to track the number of records that are processed by nodes in a Data Processing Engine (DPE) definition. Use the app also to visualize a DPE definition and to get a deeper understanding of the DPE definition's structure.

Set Up and Configure the Data Processing Engine Debug App

To get started with the Data Processing Engine Debug app, install the unmanaged package in your org, and then create custom labels and a connected app. Finally, configure the authentication provider and the named credential associated with the connected app.

Work with the Data Processing Engine Debug App

Refine a Data Processing Engine (DPE) definition by tracking the number of records that pass through its nodes. Start by associating debug nodes with existing nodes in the DPE definition. Download the JSON file of the modified DPE definition and upload it in the DPE builder. View the record count for the nodes in the Data Processing Engine Node Metrics object. Visualize a DPE definition to get a high-level view of its nodes and their connections.

Capabilities of the Data Processing Engine Debug App

Use the Data Processing Engine Debug app to track the number of records that are processed by nodes in a Data Processing Engine (DPE) definition. Use the app also to visualize a DPE definition and to get a deeper understanding of the DPE definition's structure.

How Does the Data Processing Engine Debug App Work?

Track the number of records that are processed by a node

Associate debug nodes with existing nodes in a DPE definition to get the count of the records that pass through it.

To add debug nodes to a DPE definition, select the DPE definition on the Data Processing Engine Debug tab. Choose the nodes that you want to associate the debug nodes with. Then, download the modified file of the definition and upload it in the DPE builder.

Get a visual representation of a DPE definition

To visualize a DPE definition, select the DPE definition on the Data Processing Engine Debug tab.

What Are the Benefits of Tracking the Number of Records Processed by a Node?

Track the number of records that pass through a node to:

- Monitor the performance of a DPE definition.
- Test new DPE definitions or new customizations in existing definitions.
- Plan how to extend and fine-tune a DPE definition.
- Examine the issues in a DPE definition.
- Track the flow of data across different nodes.
- Understand how interlinked nodes behave.
- Verify the filter conditions set in a Filter node.
- Check the count of the records that are transformed by the Join and Group and Aggregate nodes.
- Validate the results written back.

What Are the Benefits of Visualizing a DPE Definition?

Visualize a DPE definition to:

- Get a high-level view of the nodes in a DPE definition and their connection.
- Track the different types of nodes and input variables.
- Understand the sequence of steps that the data is transformed in.
- Identify the nodes that you must associate debug nodes with.
- Plan how to optimize and extend a DPE definition.
- Investigate issues in a DPE definition.

Set Up and Configure the Data Processing Engine Debug App

To get started with the Data Processing Engine Debug app, install the unmanaged package in your org, and then create custom labels and a connected app. Finally, configure the authentication provider and the named credential associated with the connected app.

To configure and use the Data Processing Engine Debug app, first install the Data Processing Engine Debug unmanaged package in Salesforce.

Create custom labels for the objects and fields in the Data Processing Engine Debug app. Custom labels are custom text values that enable developers to create multilingual applications.

Create a connected app after you install the Data Processing Engine Debug package. A connected app is a framework that enables an external application to integrate with Salesforce by using APIs and standard protocols.

Update the authentication provider for the Data Processing Engine Debug app with the consumer details of the ToolingAppDPE connected app.

Update the ToolingAppDPE connected app configuration with the callback URL from the associated authentication provider.

Named credentials specify the URL of a callout endpoint and its required authentication parameters in one definition. Update the named credentials for the connected app for the Data Processing Engine Debug app.

Install the Data Processing Engine Debug Package

To configure and use the Data Processing Engine Debug app, first install the Data Processing Engine Debug unmanaged package in Salesforce.

1. In a browser, enter the installation URL.

   Choose the installation URL based on where you want to install the package:

   - Production:
     https://login.salesforce.com/packaging/installPackage.apexp?p0=04t5i000000lfY7
   - Sandbox: https://test.salesforce.com/packaging/installPackage.apexp?p0=04t5i000000lfY7

2. Enter your username and password for the Salesforce org where you want to install the package, and then click **Log In**.

3. Select **Install for All Users**, and click **Install**.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To install the package:
- Download AppExchange Packages
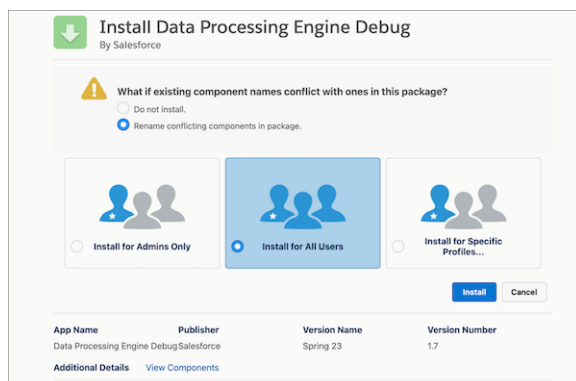
The package can take a while to install. An email is sent when the installation is completed.

4. Click **Done**.

Check the Installed Packages page in Setup to verify that the Data Processing Engine Debug package is installed.
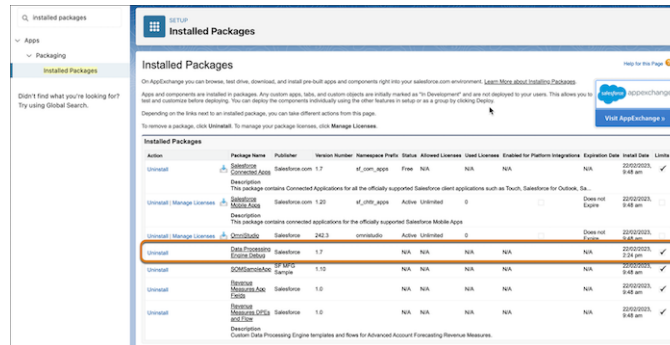
Create Custom Labels for the Data Processing Engine Debug App

Create custom labels for the objects and fields in the Data Processing Engine Debug app. Custom labels are custom text values that enable developers to create multilingual applications.

1. From Setup, in the Quick Find box, enter *Custom Labels*, and then select **Custom Labels**.

2. Click **New Custom Label**.

3. Create a label for the Data Processing Engine Node Metrics object.

    a. Enter *Debug DPE Object* as the short description.

    b. Press Tab to fill the name.

    c. Enter *Data_Processing_Engine_Node_Metric__c* as the value.

    d. Click **Save & New**.

4. Create a label for the Record Count field in the Data Processing Engine Node Metrics object.

    a. Enter *DPE Data Count* as the short description.

    b. Press Tab to fill the name.

    c. Enter *Record_Count__c* as the value.

    d. Click **Save & New**.

5. Create a label for the Data Processing Engine Name field in the Data Processing Engine Node Metrics object.

    a. Enter *DPE Name* as the short description.

    b. Press Tab to fill the name.

    c. Enter *Name* as the value.

    d. Save your changes.

Create the ToolingAppDPE Connected App

Create a connected app after you install the Data Processing Engine Debug package. A connected app is a framework that enables an external application to integrate with Salesforce by using APIs and standard protocols.

1. From Setup, in the Quick Find box, enter `App Manager`, and then select **App Manager**.

2. Click **New Connected App**.

3. Provide these details.

    a. Enter `ToolingAppDPE` as the connected app name.

    b. Press Tab to fill the API name.

    c. Enter your email address.

    d. Enter `Connected App for Data Processing Engine Debug` as the description.

    e. Select **Enable OAuth Settings**.

    f. Enter `https://login.salesforce.com` as a placeholder for the callback URL. You must change the callback URL later.

    g. From Available OAuth Scopes, select **Full access (full)** and **Perform requests at any time (refresh_token, offline_access)** and add them to Selected OAuth Scopes.

4. Save your changes.

5. Click **Continue**.

6. Click **Manage Consumer Details**.
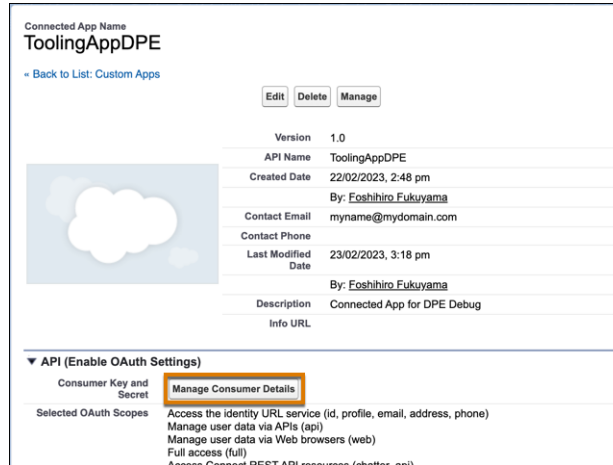
A new window opens and a verification code is sent to your registered email address.

7. Enter the verification code, and click **Verify**.
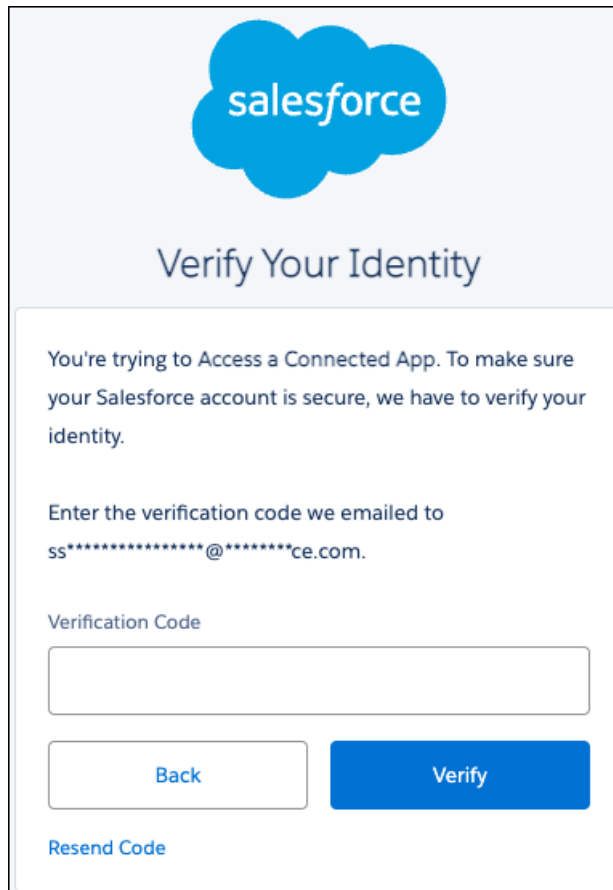
Note the consumer key and consumer secret. You'll update the authentication provider for the connected app with these details.

Update the Authentication Provider for the Data Processing Engine Debug App

Update the authentication provider for the Data Processing Engine Debug app with the consumer details of the ToolingAppDPE connected app.

Note the consumer key and consumer secret of the ToolingAppDPE connected app.

1. From Setup, in the Quick Find box, enter `Auth. Providers`, and then select **Auth. Providers**.

2. Click **Edit** next to the ToolingAPIAuthDPE connected app.

3. Enter the consumer key value from the connected app definition.

4. Enter the consumer secret value from the connected app definition.

5. Save your changes.

Update the connected app configuration with the callback URL.

Update the ToolingAppDPE Connected App Configuration

Update the ToolingAppDPE connected app configuration with the callback URL from the associated authentication provider.

Note the callback URL in the authentication provider associated with the ToolingAppDPE connected app.

1. From Setup, in the Quick Find box, enter `App Manager`, and then select **App Manager**.

2. Click **Edit** in the quick action menu next to ToolingAppDPE.

3. In the API Enable OAuth Setting section, enter the callback URL from the authentication provider.

4. Save your changes.

Configure the Named Credentials for Data Processing Engine Debug

Named credentials specify the URL of a callout endpoint and its required authentication parameters in one definition. Update the named credentials for the connected app for the Data Processing Engine Debug app.

Note the callback URL in the authentication provider associated with the ToolingAppDPE connected app.

1. From Setup, in the Quick Find box, enter `Named Credentials`, and then select **Named Credentials**.

2. Click **Edit** in the quick action menu next to ToolingRestDPE.

3. Enter the callback URL from the authentication provider. Then, replace the "authcallback/ToolingAPIAuthDPE" part of the URL with `services/data/v53.0/tooling/`.

    The URL looks like this: https://yourdomain.salesforce.com/services/data/v53.0/tooling/.

4. Select **Named Principal** as the identity type.

5. Select **OAuth 2.0** as the authentication protocol.

6. Search for and select **ToolingAPIAuthDPE** as the authentication provider.

7. Enter `refresh_token full` as the scope.

8. Save your changes.

9. To finish setting up the named credential, enter your Salesforce username and password.
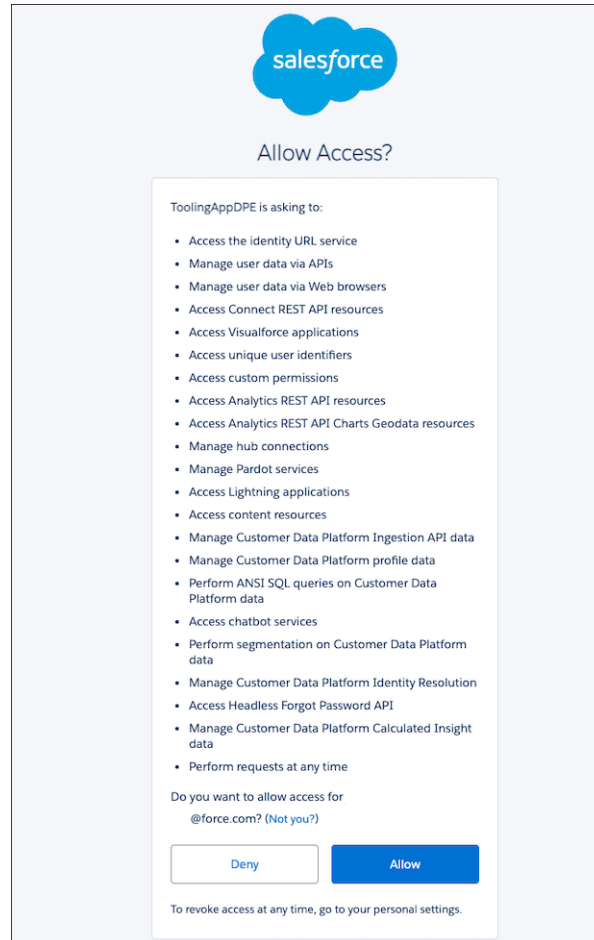
10. Click **Allow**.

The Data Processing Engine Debug app is now ready for use.

Work with the Data Processing Engine Debug App

Refine a Data Processing Engine (DPE) definition by tracking the number of records that pass through its nodes. Start by associating debug nodes with existing nodes in the DPE definition. Download the JSON file of the modified DPE definition and upload it in the DPE builder. View the record count for the nodes in the Data Processing Engine Node Metrics object. Visualize a DPE definition to get a high-level view of its nodes and their connections.

Add a Debug Node to a Data Processing Engine Definition

To track the number of records that pass through specific nodes in a Data Processing Engine (DPE) definition, add debug nodes to the DPE definition by using the Data Processing Engine Debug object. Then, download the modified DPE definition as a JSON file.

Upload the JSON File of a Modified Data Processing Engine Definition

Upload the modified JSON file of the Data Processing Engine (DPE) definition that contains the debug nodes in the Data Processing Engine builder.

View the Record Count of Data Processing Engine Definition Nodes

After you run a Data Processing Engine (DPE) definition, track the number of records that go through the nodes. Each debug node in the DPE definition updates the record count in the Data Processing Engine Node Metric object.

Visualize a Data Processing Engine (DPE) definition to explore the definition's nodes and their connections, to plan where to add debug nodes, and to investigate the issues in the definition.

Use the Data Processing Engine Debug app to plan where to add the debug nodes in a Data Processing Engine definition, to add the debug nodes, to download the modified definition, and to view the number of records that go through the nodes.

Add a Debug Node to a Data Processing Engine Definition

To track the number of records that pass through specific nodes in a Data Processing Engine (DPE) definition, add debug nodes to the DPE definition by using the Data Processing Engine Debug object. Then, download the modified DPE definition as a JSON file.

Associate a debug node with an existing node in a DPE definition to count the number of records that pass through the existing node.

1. From the App Launcher, find and select **Data Processing Engine Debug**.

2. Select the DPE definition that you want to add the debug nodes to.

3. To select the nodes that you want to add a corresponding debug node for, expand the relevant node type picklist, and select the nodes.

   You can add a debug node for nodes of these node types.

   - Data Sources
   - Filters
   - Joins
   - Groups and Aggregates

4. To view the path of nodes with their source and target, select **Show Mappings**.
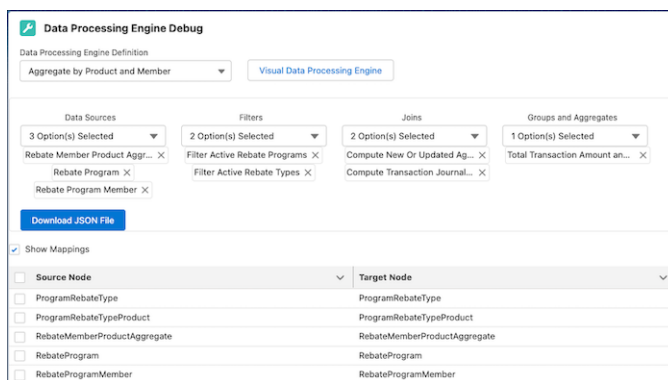
5. Click **Download JSON File**.

> 💡 **Tip:** To plan where to add debug nodes, visualize the nodes of a DPE definition and their connections.

Upload the JSON File of a Modified Data Processing Engine Definition

Upload the modified JSON file of the Data Processing Engine (DPE) definition that contains the debug nodes in the Data Processing Engine builder.

1. From Setup, in the Quick Find box, enter `Data Processing Engine`, and then select **Data Processing Engine**.

2. Open the Data Processing Engine definition that you want to replace.

3. Ensure that the DPE definition is deactivated.

4.

   Click [upload icon], and then click **Upload File**.

5. Select the JSON file of the modified DPE definition from your system.
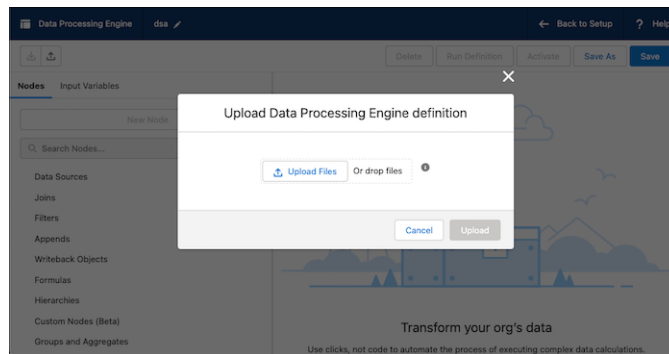
6. Click **Upload**.

7. Click **Save**.

Activate this DPE definition and run it as required.

View the Record Count of Data Processing Engine Definition Nodes

After you run a Data Processing Engine (DPE) definition, track the number of records that go through the nodes. Each debug node in the DPE definition updates the record count in the Data Processing Engine Node Metric object.

1. From the App Launcher, find and select **Data Processing Engine Node Metric**.

2. Open the record of the Data Processing Engine definition node that you want to see the record count of.

   📝 Note: The name of the node metric record is in this structure: <Name of the node>-<Name of the DPE Definition>. For example, the name of a node metric record for the Program Rebate Type node in the Acme Partners Aggregate by Member definition is ProgramRebateType-Acme_Partners_Aggregate_by_Member.

3. Check the Record Count field.
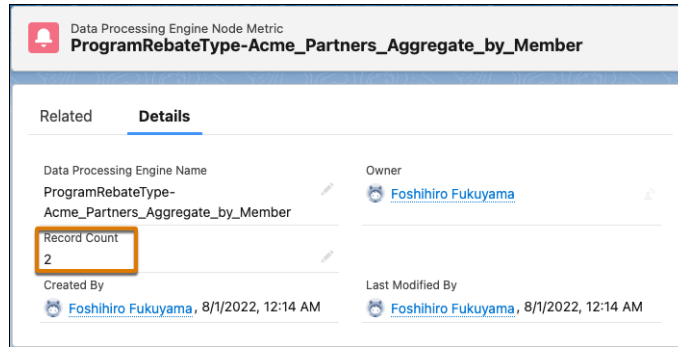
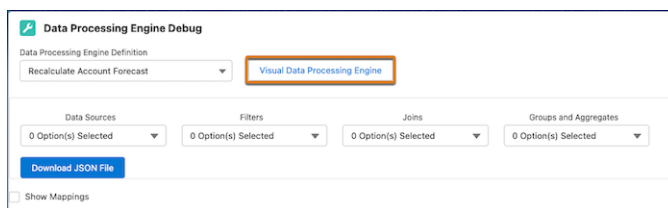## Visualize a Data Processing Engine Definition

Visualize a Data Processing Engine (DPE) definition to explore the definition's nodes and their connections, to plan where to add debug nodes, and to investigate the issues in the definition.
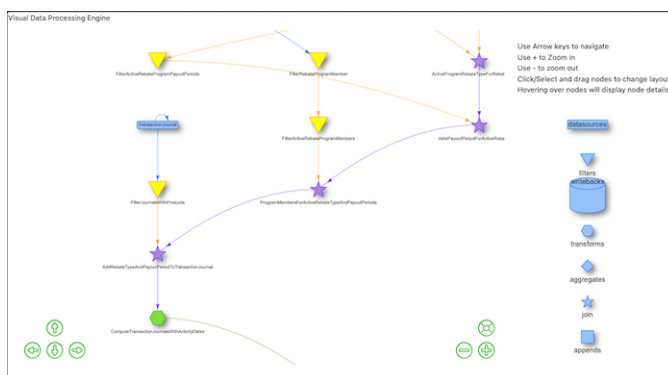
1. From the App Launcher, find and select **Data Processing Engine Debug**.

2. Select the DPE definition that you want to visualize.

3. Click **Visual Data Processing Engine**.

4. Use the navigation controls to view the visualized DPE definition.

   Hover over a node to view its details.

Record Count of a Data Processing Engine Node

Use the Data Processing Engine Debug app to plan where to add the debug nodes in a Data Processing Engine definition, to add the debug nodes, to download the modified definition, and to view the number of records that go through the nodes.

This example shows how you can use the Data Processing Engine Debug app.

Understand the Requirements

Acme Partners is a manufacturing company that uses rebate programs to incentivize partners for their repeat business with the company. It uses the Data Processing Engine (DPE) to aggregate transactions for rebate payouts. The admin at Acme Partners has cloned and customized the Aggregate by Member DPE template to create a definition. The DPE definition aggregates transaction data for each member by rebate type and payout period.

To verify if the transaction data is accurately processed by the DPE, the admin wants to verify the count of records in some nodes. They use the Data Processing Engine Debug app to track the count of records for different nodes.

Plan Where to Add Debug Nodes

To plan where to add the debug nodes in a DPE definition, the admin can view its visual representation or check its list of nodes. The admin decides to visualize the Acme Partners Aggregate by Member DPE definition.
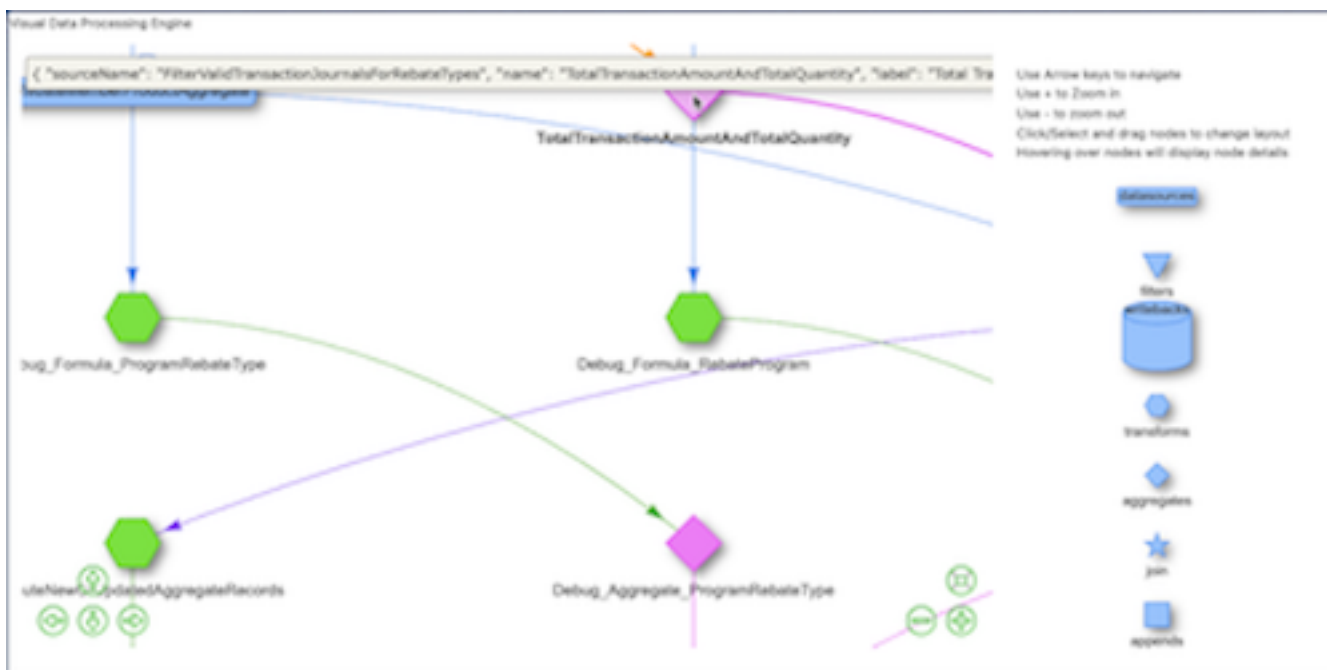
After the admin explores the nodes of the definition and their connections, they choose to add debug nodes to count the number of records that pass through these nodes:

- Transaction Journal (Data Source node type)
- Total Transaction Amount And Total Quantity (Group and Aggregate node type)

Add the Debug Nodes to the Data Processing Engine Definition

Here's how the admin adds the debug nodes to the DPE definition and downloads the modified definition. On the Data Processing Engine Debug tab, they specify:

- Data Processing Engine Definition: Acme Partners Aggregate by Member
- Nodes to which they add a corresponding debug node:
  - Transaction Journal (Data Sources node type)
  - Total Transaction Amount And Total Quantity (Groups and Aggregates node type)

They download the JSON file of the modified DPE definition.
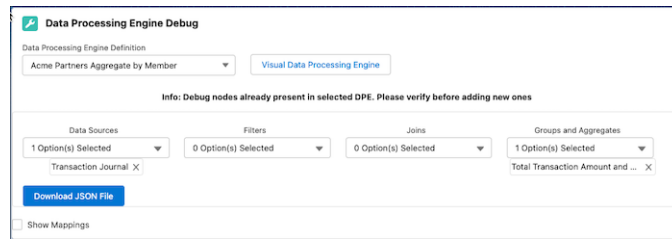
Upload the Data Processing Engine Definition and Run It

The admin uploads the modified JSON file of the DPE definition that contains the debug nodes in the DPE builder.
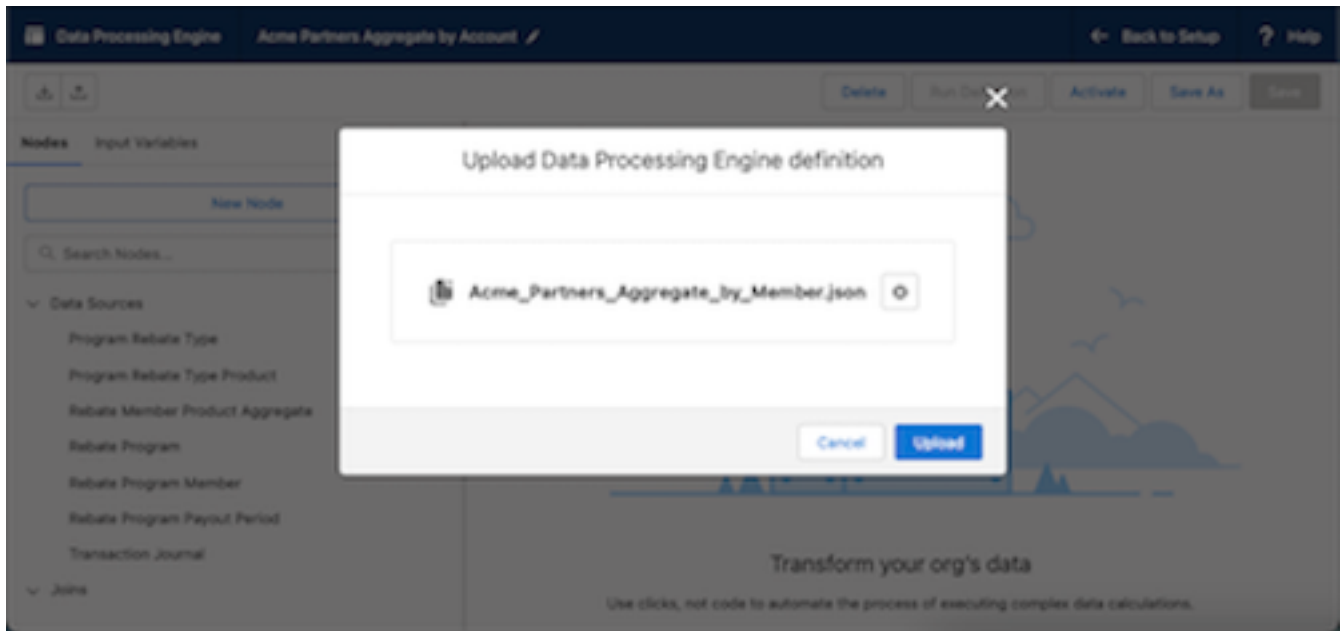
They activate the DPE definition and run it by using the Rebate Orchestration 2 flow.

View the Node Metrics

After the DPE definition is run, the admin can view the count of records that pass through the nodes that the debug nodes were associated with. They open the record for the Transaction Journal node and see that 25 records passed through it.
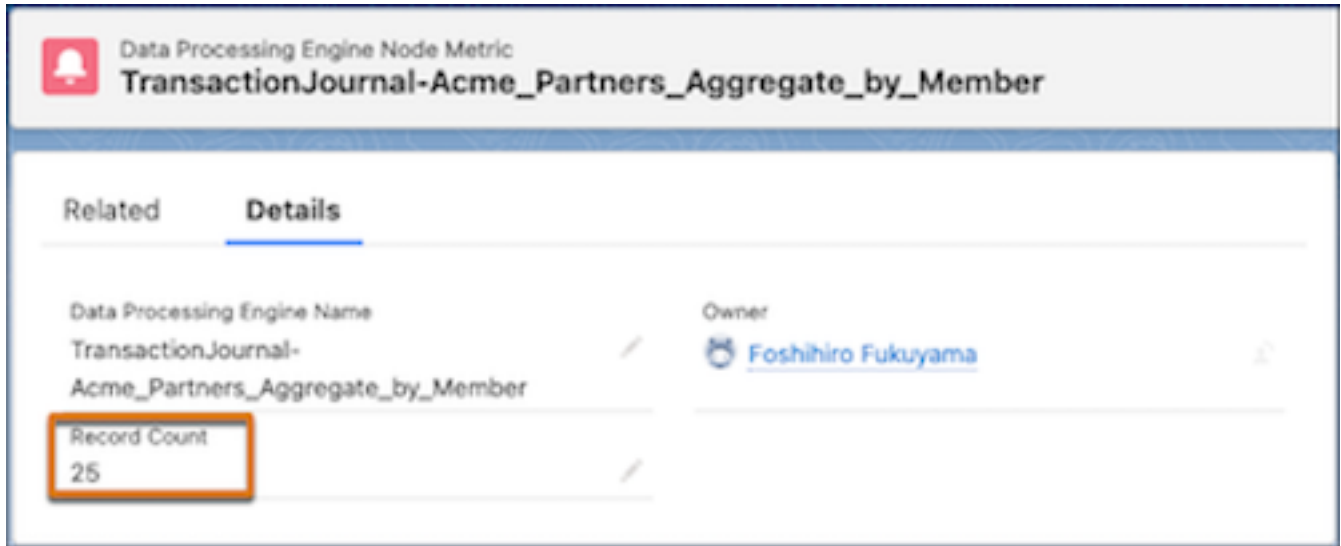
Then, they open the record for the Total Transaction Amount and Total Quantity node and see that seven records passed through it.

Register Products and Assign Warranties Quickly

Sales and service representatives swiftly register assets, associate assets with accounts and contacts, and assign asset warranties using the Product Registration prebuilt app. The Product Registration prebuilt app is made up of OmniStudio components, Lightning Web Component bundles, a Lightning Page, and a tab. The prebuilt app can be used in the Salesforce desktop site and in the Salesforce mobile app.

Capabilities of the Product Registration Prebuilt App

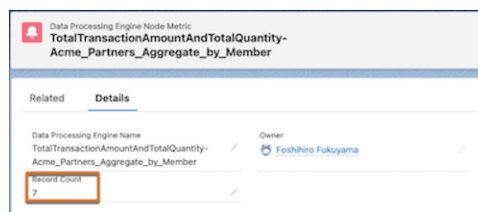Sales and service teams can use a simple setup flow in the Product Registration prebuilt app to quickly create Asset records and store details such as the asset's installation and purchase dates and the associated account and contact. They can also review warranty terms that cover an asset and can assign additional warranties to extend the asset's coverage.

Set Up and Configure the Product Registration Prebuilt App

To configure the Product Registration prebuilt app, first install the Product Registration package in your Salesforce org. Then, export the Product Registration OmniStudio components from your Learning trial org and import them to your Salesforce org. In your Salesforce org, add the Product Registration OmniScript to the Product Registration Lightning Page and your Experience Cloud site. Provide the appropriate level of access to your internal and external users.

Register Assets by Using Product Registration Prebuilt App

Sales and service representatives can register assets and assign the assets warranties by using the Product Registration prebuilt app. Use the prebuilt app in the Salesforce mobile app or in the Salesforce desktop site.

SEE ALSO:

Manage Warranties and Service Standards for Your Products and Assets

Capabilities of the Product Registration Prebuilt App

Sales and service teams can use a simple setup flow in the Product Registration prebuilt app to quickly create Asset records and store details such as the asset's installation and purchase dates and the associated account and contact. They can also review warranty terms that cover an asset and can assign additional warranties to extend the asset's coverage.

Sales and service reps can do these with the Product Registration prebuilt app:

- Register a new asset by specifying the product name or product code or by scanning a product's barcode.
- Store key details of the assets, such as their installation date, purchase date, and serial number.
- Associate existing accounts and contacts with the assets, or create accounts and contacts and associate them with the assets.
- Review the standard warranty terms that cover registered assets.
- Assign additional warranties to the assets from a list of warranties.

Set Up and Configure the Product Registration Prebuilt App

To configure the Product Registration prebuilt app, first install the Product Registration package in your Salesforce org. Then, export the Product Registration OmniStudio components from your Learning trial org and import them to your Salesforce org. In your Salesforce org, add the Product Registration OmniScript to the Product Registration Lightning Page and your Experience Cloud site. Provide the appropriate level of access to your internal and external users.

Prerequisites for Using Product Registration Prebuilt App

Review these prerequisites before you deploy and use the Product Registration prebuilt app.

Install Product Registration Package

To configure and use the Product Registration app, first install the Product Registration unmanaged package in your Salesforce org. The package contains Lightning Web Component bundles, a Lightning Page, a tab, and a permission set.

Export Product Registration OmniStudio Components

The Product Registration prebuilt app is made up of various OmniStudio components. To use the Product Registration app in your Salesforce org, first export the Product Registration OmniScript, FlexCard, Integration Procedures, and DataRaptors from your Learning trial org to your system.

Import Product Registration OmniStudio Components

Import the Product Registration OmniScript, FlexCard, Integration Procedures, and DataRaptors from your system to your Salesforce org.

Update Product Registration Lightning App Page

To let your users easily use the Product Registration prebuilt app, add the Product Registration OmniScript to the Product Registration Lightning Page.

Add Product Registration OmniScript to Your Experience Cloud Site

Partner users can use the Product Registration prebuilt app from your Experience Cloud site. Add the OmniScript component to your Experience Cloud site and edit its properties accordingly.

Permissions for Product Registration Prebuilt App

Assign the appropriate permission sets to give users access to the objects and components of the Product Registration prebuilt app. You must also assign users some additional object and system permissions that aren't included in the permission sets. You can specify these object and system permissions in users' profiles. Or, you can clone the standard permission sets, specify the appropriate permissions, and assign the cloned permission sets to users.

Sharing Rules for Product Registration Prebuilt App

Give Experience Cloud users access to the appropriate records to use the Product Registration prebuilt app using sharing rules. Create sharing rules to extend greater access to roles, territories, or public groups than that provided with your org-wide sharing settings.

SEE ALSO:

OmniStudio

Prerequisites for Using Product Registration Prebuilt App

Review these prerequisites before you deploy and use the Product Registration prebuilt app.

- To register an asset from a list of available products, create Product records.
- To review standard warranties and assign additional warranties, create Warranty Term and Product Warranty Term records.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions

Install Product Registration Package

To configure and use the Product Registration app, first install the Product Registration unmanaged package in your Salesforce org. The package contains Lightning Web Component bundles, a Lightning Page, a tab, and a permission set.

You can also manually create a package in the Learning trial org, add the components to the package, and then deploy the package in the target org. Unless you customize the prebuilt app in the Learning Trial org and want to deploy the customized version in your org, we recommend that you directly deploy the package in your org.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To install the Product Registration package:
- Download AppExchange Packages

1. In a browser, enter the installation URL.

   The installation URL varies depending on where you want to install the package:

   - Production:
     https://login.salesforce.com/packaging/installPackage.apexp?p0=04tB0000000R84p
   - Sandbox: https://test.salesforce.com/packaging/installPackage.apexp?p0=04tB0000000R84p

2. Enter your username and password for the Salesforce org where you want to install the package, and then click **Log In**.

3. Select **Install for All Users**, and click **Install**.

The package can take a while to install. An email is sent when the installation is completed.
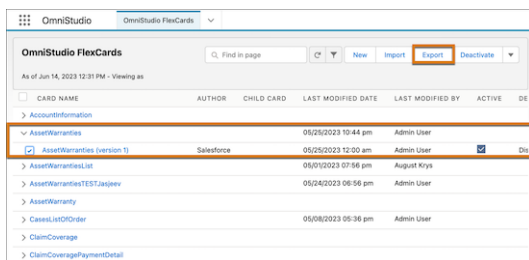
4. Click **Done**.

5. After the installation is complete, verify that the package is available in your org.

   a. From Setup, in the Quick Find box, enter `Installed Packages`, and then select **Installed Packages**.

   b. Verify that the Product Registration package is available on the page.

   c. Click the package name link.

   d. To view the list of the included metadata components and their type, click **View Components**.

Export Product Registration OmniStudio Components

The Product Registration prebuilt app is made up of various OmniStudio components. To use the Product Registration app in your Salesforce org, first export the Product Registration OmniScript, FlexCard, Integration Procedures, and DataRaptors from your Learning trial org to your system.

1. Log in to your Learning trial org on page 10.

2. From the App Launcher, find and select **OmniStudio**.

3. Export the AssetWarranties FlexCard.

   a. From the navigation menu, select **OmniStudio FlexCards**.

   b. Select the AssetWarranties (version 1) FlexCard.

   c. From the list view menu, click **Export**.

   d. Click **Next**, and click **Next**.

      e. Click **Done**.

4. Export the Product Registration OmniScript and the related DataRaptors and Integration Procedures.

      a. From the navigation menu, select **OmniScripts**.

      b.

      Click   next to the Product Registration (Version 1) OmniScript, and select **Export**.

      c. Click **Next**, and click **Next**.

      d. Click **Done**.

5. Export the CalculateAdditionalAssetWarrantyEndDate Integration Procedure.

      a. From the navigation menu, select **OmniStudio Integration Procedure**.

      b.

      Click   next to the CalculateAdditionalAssetWarrantyEndDate (Version 1) Integration Procedure, and select **Export**.

      c. Click **Next**, and click **Next**.

      d. Click **Done**.

6. Export the DREXGETProductInfo and DREXGetProductInfoUsingScanner DataRaptors.

      a. From the navigation menu, select **OmniStudio DataRaptors**.

      b. Select the DREXGETProductInfo (Version 1) and DREXGetProductInfoUsingScanner DataRaptors.

      c. From the list view menu, click ⬇.

    d. Click **Next**, and click **Next**.

    e. Click **Done**.

Import the Product Registration OmniStudio components to your Salesforce org. See Import Product Registration OmniStudio Components.

SEE ALSO:

    Exporting OmniScripts

Import Product Registration OmniStudio Components

Import the Product Registration OmniScript, FlexCard, Integration Procedures, and DataRaptors from your system to your Salesforce org.

Export the Product Registration OmniStudio components from the Learning trial org to your system. See Export Product Registration OmniStudio Components.

1. Log in to the Salesforce org where you want to set up the Product Registration app.

2. From the App Launcher, find and select **OmniStudio**.

3. Import the AssetWarranties FlexCard.

    a. From the navigation menu, select **OmniStudio FlexCards**.

    b. Click **Import**, and select the AssetWarranties.json file that you downloaded.

    c. Click **Next**, and click **Next**.

    d. Click **Next**, and click **Activate Now**.

    e. Click **Next**, and click **Done**.

4. Import the Product Registration OmniScript and the related DataRaptors and Integration Procedures.

    a. From the navigation menu, select **OmniScript**.

    b. Click **Import**, and select the Product Registration.json file that you downloaded.

    c. Click **Next**, and click **Next**.

    d. Click **Next**, and click **Activate Now**.

    e. Click **Next**, and click **Done**.

5. Import the CalculateAdditionalAssetWarrantyEndDate Integration Procedure.

    a. From the navigation menu, select **OmniStudio Integration Procedure**.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To import OmniStudio components
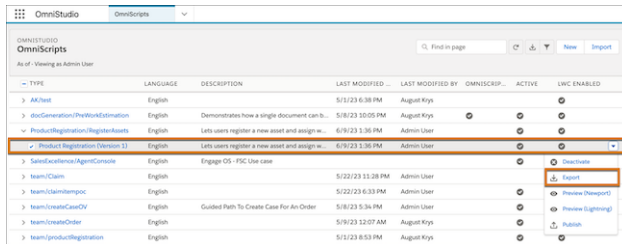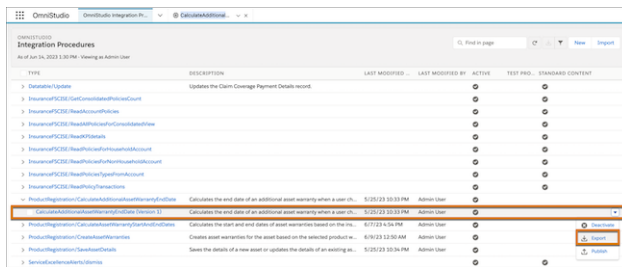- OmniStudio Admin permission set

b. Click **Import**, and select the CalculateAdditionalAssetWarrantyEndDate.json file that you downloaded.

c. Click **Next**, and click **Next**.

d. Click **Next**, and click **Activate Now**.

e. Click **Next**, and click **Done**.

6. Import the DREXGETProductInfo and DREXGetProductInfoUsingScanner DataRaptors.

a. From the navigation menu, select **OmniStudio DataRaptors**.

b. Click **Import**, and select the Omni Data Transformations Multipack.json file that you downloaded.

c. Click **Next**, and click **Next**.

d. Click **Next**, and click **Activate Now**.

e. Click **Next**, and click **Done**.

SEE ALSO:

[Importing OmniScripts](#)

Update Product Registration Lightning App Page

To let your users easily use the Product Registration prebuilt app, add the Product Registration OmniScript to the Product Registration Lightning Page.

1. From Setup, in the Quick Find box, enter `Lightning App Builder`, and then select **Lightning App Builder**.

2. Click **Edit** next to the Product Registration lightning page.

3. Drag the OmniScript component onto the canvas.

4. In the Properties panel, specify these details.

- Type: ProductRegistration
- SubType: RegisterAssets
- Theme: Lightning
- Display: Display OmniScript on page
- Button Variant: N/A
- Language: English
- Language Direction: Left to Right
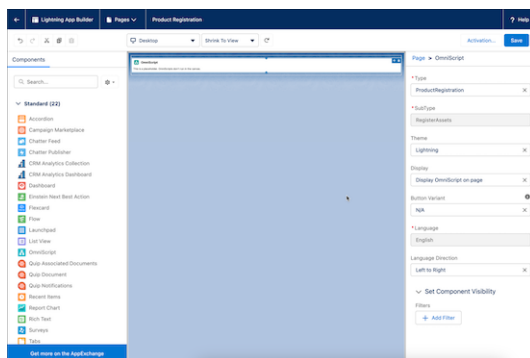
5. Save your changes.

6. Activate the lightning page.

SEE ALSO:

    Lightning App Builder

Add Product Registration OmniScript to Your Experience Cloud Site

Partner users can use the Product Registration prebuilt app from your Experience Cloud site. Add
the OmniScript component to your Experience Cloud site and edit its properties accordingly.

1. From Setup, in the Quick Find box, enter `Digital Experiences`, and then select **All Sites**.

2. Click **Builder** for the site that you want to customize.

3. Open the navigation menu item where you want to add the Product Registration app.

4. Click [⚡].

5. Drag the OmniScript onto the desired location on the canvas.

6. In the OmniScript panel, specify these details.

    a. For Type, select `ProductRegistration`.

    b. For SubType, select `RegisterAssets`.

    c. For Theme, select `lightning`.

    d. For Display, select `Display`.

    e. For Button Variant, select `N/A`.

    f. For Language, select `English`.

    g. For Language Direction, select `ltr`.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To customize an Experience Cloud site:

- Be a member of the site AND have the Create and Set Up Experiences permission

  OR

- Be a member of the site AND have the View Setup and Configuration permission AND be an experience admin, publisher, or builder in that site

To publish an Experience Cloud site:

- Be a member of the site AND have the Create and Set Up Experiences permission

  OR

- Be a member of the site AND be an experience admin or publisher in that site
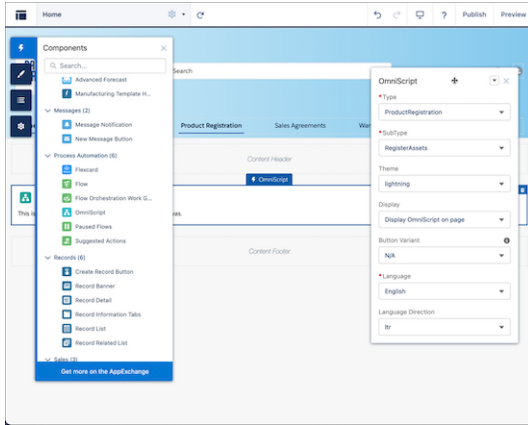
7. To publish your changes, click **Publish**, and click **Publish**.

8. Click **Got It**.

SEE ALSO:

Edit Pages and Components in Experience Builder

Permissions for Product Registration Prebuilt App

Assign the appropriate permission sets to give users access to the objects and components of the Product Registration prebuilt app. You must also assign users some additional object and system permissions that aren't included in the permission sets. You can specify these object and system permissions in users' profiles. Or, you can clone the standard permission sets, specify the appropriate permissions, and assign the cloned permission sets to users.

Permission Sets

Assign these permission sets to users based on their persona.

Persona	Permission Sets Required
Internal users who configure the Product Registration prebuilt app	• Warranty Lifecycle Management Psl • OmniStudio Admin
Internal users who use the Product Registration prebuilt app	• Warranty Lifecycle Management Psl • OmniStudio User
Experience Cloud users who use the Product Registration prebuilt app	• Warranty Management for Experience Cloud • OmniStudio for Experience Cloud Users (available with the Product Registration unmanaged package)

Object Permissions

Give users access to these objects to use the Product Registration prebuilt app. These object permissions aren't included in the permission sets.

Object	Access
Omni Data Transformation	Read
Omni Data Transformation Item	Read
Omni Electronic Signature Template	Read
Omni Process	Read
Omni Process Compilation	Read
Omni Process Element	Read
Omni Process Transient Data	Read
Omni UI Card	Read
OmniScript Saved Sessions	Read, Create, Edit
Product	Read

System Permissions

Give users access to these system permissions required to access the components in the Product Registration prebuilt app. These system permissions aren't included in the permission sets.

- Enables consumers and partners to execute OmniScripts, DRs, Cards through a Community or off platform.
- Grant users access to Industries Interaction Calculation features.

SEE ALSO:

Assign Permission Sets for Warranty Lifecycle Management

Sharing Rules for Product Registration Prebuilt App

Give Experience Cloud users access to the appropriate records to use the Product Registration prebuilt app using sharing rules. Create sharing rules to extend greater access to roles, territories, or public groups than that provided with your org-wide sharing settings.

You must give Experience Cloud users access to records in these objects to use the Product Registration prebuilt app.

- Omni Data Transformation
- Omni Process
- Omni UI Card

SEE ALSO:

Sharing Rules

Assign the OmniStudio Permission Set or Group to Standard Experience Site Users

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions

Register Assets by Using Product Registration Prebuilt App

Sales and service representatives can register assets and assign the assets warranties by using the Product Registration prebuilt app. Use the prebuilt app in the Salesforce mobile app or in the Salesforce desktop site.

1. Open the Salesforce mobile app.

2. Tap **Menu**, and then tap **Product Registration**.

3. To select the product, do one of these.

    - Search for the product by entering the product code or product name, and select the product.

    - Tap **Scan Barcode**, scan the product barcode, and select the product.
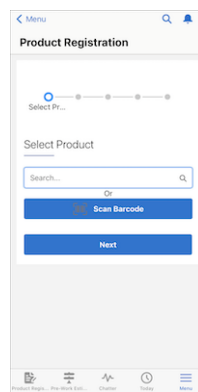
4. Specify the serial number, date of purchase, and date of installation of the asset.

5. Tap **Next**.

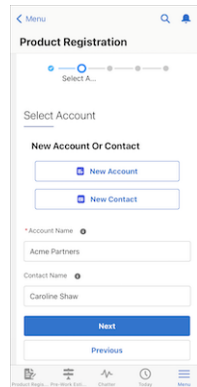6. To associate the asset with an account, do one of these.

- To associate the asset with an existing account, enter the name of the account.
- To associate the asset with a new account, tap **New Account**.

7. To associate the asset with a contact, do one of these.

- To associate the asset with an existing contact, enter the name of the contact.
- To associate the asset with a new contact, tap **New Contact**.

  📝 Note: To be able to associate a contact with the asset, you must associate an account with the asset.

8. Tap **Next**.

9. Review the details of the registered asset, and tap **Next**.

10. Review the standard warranties assigned to the asset, if any.

    You can search for a specific standard warranty from the list of standard warranties.

11. Depending on how you want to assign additional warranties, do one of these.

- To assign additional warranties now, select a warranty term from the Additional Warranties table, edit its start date and end date as appropriate, and click **Next**.
- To assign additional warranties later, tap **Assign Warranties Later**.

  You can search for a specific additional warranty from the list of additional warranties.
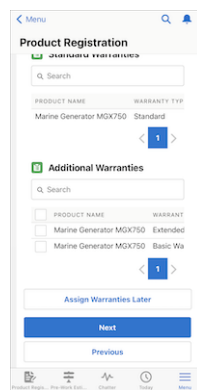
12. Review the assigned warranties.
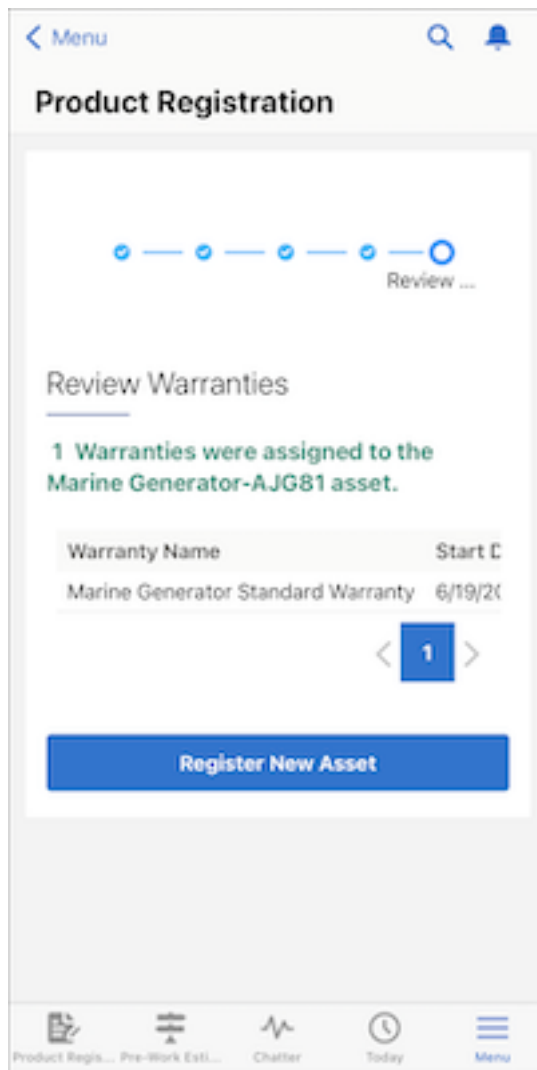
To register another asset, tap **Register New Asset**.

Calculate Actuals for Sales Agreements Using the Data Processing Engine

The Calculate Actuals Using Data Processing Engine prebuilt app helps you automatically calculate actual quantity and actual revenue of sales agreements using a Data Processing Engine definition. You can calculate actual quantities and revenues for past, current, and future schedules of one or more sales agreements. You can also specify the status of orders that are considered for the calculation. You can also schedule the calculation via a predefined scheduled flow, and customize the actuals calculation logic by customizing the predefined Data Processing Engine template.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions.

You can easily access all components of this sample app in the Manufacturing Cloud Learning Trial Org. Or, you can depoy the prebuilt app in your own org to seamlessly integrate with your existing business processes.

Workflow of the Actuals Calculation Prebuilt App
Review the high-level workflow of the Actuals Calculation Using Data Processing Engine prebuilt app.

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Prerequisites for Using the Actuals Calculation Prebuilt App

Review these prerequisites before you deploy and use the Calculate Actuals Using Data Processing Engine prebuilt app.

Install the Actuals Calculation Field and Permission Set Prebuilt App Package

To get access to a custom field and a permission set for the Calculate Actuals Using Data Processing Engine prebuilt app, first install an unmanaged package in Salesforce. The custom field Calculate actual values using DPE can be added to the Sales Agreement record page layout. The permission set Data Processing Engine Based Actuals Calculation for Sales Agreements can be assigned to admins, account managers, and sales managers who manage sales agreements.

Assign Permission Sets to Users for Using the Actuals Calculation Prebuilt App

After you deploy the Actuals Calculation Field and Permission Set package in your org, assign the Data Processing Engine Based Actuals Calculation for Sales Agreements permission set to your users as required. Make sure you assign the permission to the admin users and integration users at a minimum.

Install the Actuals Calculation Flow and DPE Prebuilt App Package

To get access to a Data Processing Engine template and a scheduled flow template for the Calculate Actuals Using Data Processing Engine prebuilt app, install an unmanaged package in Salesforce. The Data Processing Engine template Calculate Actual Products Quantity Revenue can be cloned and activated for use. The Calculate Actual Products Quantity Revenue Scheduled Flow can be saved and activated for use.

SEE ALSO:

Manage Sales Agreements Actuals

Workflow of the Actuals Calculation Prebuilt App

Review the high-level workflow of the Actuals Calculation Using Data Processing Engine prebuilt app.

Sales Agreements and Orders

When you create a sales agreement, make sure the following values are specified so that the Data Processing Engine considers them for calculation.

- Actuals Calculation Mode: Manually via API Upload
- Calculate actuals based on DPE is selected

Create orders and specify the effective start date because the actual quantity and actual revenue get reflected for the Sales Agreement Product Schedule which coincides with the order effective date. For example, if an order's effective start date is May 16, the actual quantity and revenue is updated for the May period of a monthly sales agreement.

Data Processing Engine

The Calculate Actual Product Quantity and Revenue Data Processing Engine (DPE) template identifies valid orders and sales agreements, applies filters,and joins fields from multiple data source objects to calculate actual revenue and actual quantity for sales agreements. The sales agreements can be at a product level or at a category level, but they must be active. Clone the template and activate the definition to either run it from the builder or via a flow.

If you don't use the Order object to derive actual quantities and revenues, make sure you customize all nodes in the definition to redirect the logic to the relevant data source.

Specify values for the following input variables before you run the definition:

- Sales Agreement: Enter All, or a specific sales agreement record ID, or a comma-separated list of record IDs

- Start Period: Enter zero to only calculate actuals for the current period. To calculate from a past period, enter a negative number. For example, to calculate from two months in the past, enter -2.

- End Period: Enter zero to only calculate actuals for the current period. To calculate until a future period, enter a positive number. For example, to calculate till two months in the future, enter 2.

- Order Status: Enter the status code name for orders depending on what you want to consider for the calculation. For example, enter Draft, Activated to consider draft and active orders in calculation.

Scheduled Flow

To automate the actuals calculation at regular intervals, run the Data Processing Engine via a scheduled flow. The Run Scheduled DPE Job to Calculate Actuals for Sales Agreements scheduled flow runs daily and by default it calculates actuals for the current period. But you can clone the flow template to create your own version and change the start and end date inputs to calculate actuals for multiple periods. This flow also requires an active DPE definition created from the Calculate Actual Product Quantity and Revenue template.

The scheduled flow sends an email to the flow user for the following scenarios:

- When an error occurred while executing the Data Processing Engine batch job

- When the details of a timed-out Data Processing Engine batch job are sent

- When the details of a timed-out Data Processing Engine can't be found

- When the details of a Data Processing Engine batch job that changes status are sent

- When the details of a Data Processing Engine batch job that changes status can't be found

Prerequisites for Using the Actuals Calculation Prebuilt App

Review these prerequisites before you deploy and use the Calculate Actuals Using Data Processing Engine prebuilt app.

- Enable the features Sales Agreements and Data Pipelines in your org where you deploy the prebuilt app packages.

- Use the prebuilt app to only calculate actuals for sales agreements where the actual calculation mode is selected as Manually via API upload.

- To customize the Data Processing Engine (DPE) definitions, you must be assigned the Data Pipelines Base User permission set.

- To use any object other than Order as the data source for calculating actual revenue and quantity, customize the Data Processing Engine (DPE) definition.

- To create and save changes to the Data Processing Engine definitions, you need the Customize Application and Modify All Data admin permissions.

- Add the Calculate actuals based on DPE field to the Sales Agreement record page layout.

- If you use the Recalculate Actuals quick action to calculate actuals for sales agreements after the Data Processing Engine has already updated the values, the values are overwritten for the future schedules.

Install the Actuals Calculation Field and Permission Set Prebuilt App Package

To get access to a custom field and a permission set for the Calculate Actuals Using Data Processing Engine prebuilt app, first install an unmanaged package in Salesforce. The custom field Calculate actual values using DPE can be added to the Sales Agreement record page layout. The permission set Data Processing Engine Based Actuals Calculation for Sales Agreements can be assigned to admins, account managers, and sales managers who manage sales agreements.

1. In a browser, enter the installation URL.

   Choose the installation URL based on where you want to install the package.

   - Production:
     https://login.salesforce.com/packaging/installPackage.apexp?p0=04tB0000000eM2b
   - Sandbox: https://test.salesforce.com/packaging/installPackage.apexp?p0=04tB0000000eM2b

2. Enter your username and password for the Salesforce org where you want to install the package, and then click **Log In**.

3. Select **Install for All Users**, and click **Install**.

   The package can take a while to install. An email is sent when the installation is completed.

4. Click **Done**.

   Check the Installed Packages page in Setup to verify that the Actuals Calculation Field and Permission Set package is installed.

Assign Permission Sets to Users for Using the Actuals Calculation Prebuilt App

After you deploy the Actuals Calculation Field and Permission Set package in your org, assign the Data Processing Engine Based Actuals Calculation for Sales Agreements permission set to your users as required. Make sure you assign the permission to the admin users and integration users at a minimum.

1. From Setup, search for and then select **Permission Sets**.

2. Select the **Data Processing Engine Based Actuals Calculation for Sales Agreements** permission set.

3. Click **Manage Assignments**.

4. Click **Add Assignments**.

5. Select the checkboxes next to the user records, and click **Assign**.

6. Click **Done**.

Install the Actuals Calculation Flow and DPE Prebuilt App Package

To get access to a Data Processing Engine template and a scheduled flow template for the Calculate Actuals Using Data Processing Engine prebuilt app, install an unmanaged package in Salesforce. The Data Processing Engine template Calculate Actual Products Quantity Revenue can be cloned and activated for use. The Calculate Actual Products Quantity Revenue Scheduled Flow can be saved and activated for use.

1. In a browser, enter the installation URL.

   Choose the installation URL based on where you want to install the package.

   - Production:
     https://login.salesforce.com/packaging/installPackage.apexp?p0=04tB0000000eM3K

   - Sandbox: https://test.salesforce.com/packaging/installPackage.apexp?p0=04tB0000000eM3K

2. Enter your username and password for the Salesforce org where you want to install the package, and then click **Log In**.

3. Select **Install for All Users**, and click **Install**.

   The package can take a while to install. An email is sent when the installation is completed.

4. Click **Done**.

   Check the Installed Packages page in Setup to verify that the Actuals Calculation Flow and DPE package is installed.

Calculate Forecasts for Accounts in a Hierarchy

Generate forecasts for all accounts in a hierarchy and see the rolled up forecast values at a parent account level. Use Data Processing Engine templates, custom fields, and a sample forecast set to calculate and roll over forecast for all child accounts and display the cumulative data at the parent account level. Empower your country managers, regional managers, and account managers to collaborate on forecasts and review the adjusted values.

Workflow of the Account Hierarchy Forecast Prebuilt App
Review the high-level workflow of the Calculate Forecasts for Accounts in a Hierarchy prebuilt app.

Prerequisites for Using the Account Hierarchy Forecast Prebuilt App
Review these prerequisites before you deploy and use the Calculate Forecasts for Accounts in a Hierarchy prebuilt app.

Install the Account Hierarchy Custom Fields and Permissions Prebuilt App Package
To get access to custom fields, permission sets, dimension sources, and apex classes and triggers for the Calculate Forecasts for Accounts in a Hierarchy prebuilt app, first install an unmanaged package in Salesforce. The custom fields are added to the Advanced Account Forecast Fact object when you install the package. The permission set can be assigned to admins and account managers who manage forecasts.

Install the Account Hierarchy DPEs and Forecast Set Prebuilt App Package
To get access to Data Processing Engine templates, a sample forecast set, and a sample period group for the Calculate Forecasts for Accounts in a Hierarchy prebuilt app, first install an unmanaged package in Salesforce. You can clone the Data Processing Engine templates and activate the new definitions after you install the package. The period group and the forecast set can be edited as per your business requirements.

Configure the Sample Forecast Set for Account Hierarchy

After you install the Account Hierarchy DPEs and Forecast Set package in your Salesforce org, edit the sample forecast set that's included as a component in the package. You must clone the Data Processing Engine (DPE) templates that are also part of the package to create and activate DPE definitions. You can then select these definitions in the sample forecast set, and make other changes as required. For example, you can add custom measures, add forecast dimensions, define additional forecast adjustment periods, and more.

Workflow of the Account Hierarchy Forecast Prebuilt App

Review the high-level workflow of the Calculate Forecasts for Accounts in a Hierarchy prebuilt app.

<div style="float:right;border:1px solid #ccc;padding:8px;">

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions.

</div>

Business Requirement and Personas

Multiple accounts can be related to each other in a hierarchical structure. For example, Neo Dealers US is a parent account with two child accounts: Neo California and Neo Dallas. Each of these accounts can in turn have their child accounts. For example, the Neo California account can have child accounts Neo San Jose and Neo San Diego.

The Calculate Forecasts for Accounts in a Hierarchy prebuilt app allows companies to generate and calculate forecast for each account, and then roll up the calculated values of all child accounts to their parent account. So, the Neo California account shows rolled up forecast values for both the Neo East California and Neo West California accounts. And, the Neo Dealers account shows rolled up forecast values for both the Neo California and Neo Dallas accounts.

While country managers focus more on forecasts at a parent account level, regional managers are more concerned about the account forecasts specific to their cities or territories. And account managers typically only focus on the forecasts for a few key accounts they manage. A country manager would look at the aggregate forecast data for the Neo Dealers US account, a regional manager looks at the aggregate forecast data for the Neo Dealers California account, and an account manager looks at the forecast for the Neo San Diego account.

Packages and Components

Two packages are available for the Calculate Forecasts for Accounts in a Hierarchy prebuilt app.

The Account Hierarchy Custom Fields and Permissions package contains the following components that you can deploy in your Salesforce org:

Component	Type
AcctHierAAFAdjustmentTriggerHandler	Apex Class
AcctHierAAFAdjustmentTriggerHandlerTest	Apex Class
AdvancedAccountForecastFactTrigger	Apex Trigger
Account Hierarchy Based Forecasting	Permission Set
Parent Account (added to the Advanced Account Forecast Fact object)	Custom Field
Child Account (added to the Advanced Account Forecast Fact object)	Custom Field
Country Manager Amount (added to the Advanced Account Forecast Fact object)	Custom Field

Component	Type
Country Manager Quantity (added to the Advanced Account Forecast Fact object)	Custom Field
Regional Manager Quantity (added to the Advanced Account Forecast Fact object)	Custom Field
Regional Manager Amount (added to the Advanced Account Forecast Fact object)	Custom Field
Adjusted Amount (added to the Advanced Account Forecast Fact object)	Custom Field
Adjusted Quantity (added to the Advanced Account Forecast Fact object)	Custom Field
ChildAccount (mapped to the Account object)	Advanced Account Forecast Dimension Source
ParentAccount (mapped to the Account object)	Advanced Account Forecast Dimension Source
Product (mapped to the Product2 object)	Advanced Account Forecast Dimension Source

The Account Hierarchy DPEs and Forecast Set package contains the following components that you can deploy in your Salesforce org:

Component	Type
AccountHierarchyBasedForecastSet	Advanced Account Forecast Set
SampleAccountHierarchyForecastPeriodGroup	Advanced Account Forecast Period Group
Generate_Forecasts_Based_on_Account_Hierarchy	Batch Calculation Job Definition
Recalculate_Forecasts_Based_on_Account_Hierarchy	Batch Calculation Job Definition
Rollover_Forecasts_Based_on_Account_Hierarchy	Batch Calculation Job Definition

Permissions and Access

You must enable the following features in your org to use the deployed prebuilt app:

- Sales Agreements
- Data Pipelines
- Advanced Account Forecasting

You must assign the following permissions to the users who use this prebuilt app:

- Data Pipelines Base User
- Manufacturing Sales Agreements
- Manufacturing Advanced Account Forecasting
- Account Hierarchy Based Forecasting (you get this permission set as part of the package you deploy)

Forecast Set and Data Processing Engine

Clone the following Data Processing Engine templates to create definitions that you can use in a forecast set:

- Generate Forecasts Based on Account Hierarchy
- Recalculate Forecasts Based on Account Hierarchy
- Rollover Forecasts Based on Account Hierarchy

You can customize the definitions as per your business requirements. Activate the definitions.

Add the definitions to the Account Hierarchy Based Forecast Set.

Customize the forecast set as required by adding other dimensions, forecast adjustment periods, and measures.

Three measure groups are available in the forecast set by default to be used by country managers, regional managers, and account managers.

You can run the generation Data Processing Engine definition to generate forecasts for all child accounts and aggregate the data at the parent levels.

At the start of each forecast period, you can also use the rollover Data Processing Engine definition to expire the forecast for a past period and add a new period to the display.

You can also run the calculation Data Processing Engine definition to calculate forecasts whenever there are new products added or when the measure values change.

Prerequisites for Using the Account Hierarchy Forecast Prebuilt App

Review these prerequisites before you deploy and use the Calculate Forecasts for Accounts in a Hierarchy prebuilt app.

- Enable the features Advanced Account Forecasting and Data Pipelines in your org where you deploy the prebuilt app packages.
- Enable Sales Agreements in your org where you deploy the prebuilt app packages if the forecast considers data from sales agreements.
- To customize the Data Processing Engine (DPE) definitions, you must be assigned the Data Pipelines Base User permission set.
- You must set up an account hierarchy in your Salesforce org by creating Account records and specifying the parent account for each child account. To see the hierarchy tree, use the View Account Hierarchy quick action on an Account record.
- Make sure you clone the three Data Processing Engine templates and activate the newly created definitions after you deploy the prebuilt app package.
- To create and save changes to the Data Processing Engine definitions, you need the Customize Application and Modify All Data admin permissions.
- The sample forecast set that's included in the package you deploy only has one forecast adjustment period defined for the Admin User profile. You can define additional forecast periods for other user profiles such as Account Manager, Regional Manager, and Country Manager.
- The adjustments made on the child accounts are automatically rolled up in the hierarchy. Depending on their role, users can use one of the three measure groups defined by default in the sample forecast set to adjust the forecast values.
- The packages for this prebuilt app don't contain a Data Processing Engine template for regenerating advanced account forecast data. To achieve the same result, admins can deactivate the existing forecast records for all child and parent accounts in a hierarchy and run the Data Processing Engine definition for generating forecast data.

> **EDITIONS**
>
> Available in: **Enterprise**, **Unlimited**, and **Developer** Editions.

Install the Account Hierarchy Custom Fields and Permissions Prebuilt App Package

To get access to custom fields, permission sets, dimension sources, and apex classes and triggers for the Calculate Forecasts for Accounts in a Hierarchy prebuilt app, first install an unmanaged package in Salesforce. The custom fields are added to the Advanced Account Forecast Fact object when you install the package. The permission set can be assigned to admins and account managers who manage forecasts.

1. In a browser, enter the installation URL.

   Choose the installation URL based on where you want to install the package.

   - Production:
     https://login.salesforce.com/packaging/installPackage.apexp?p0=04tB0000000eNva
   - Sandbox: https://test.salesforce.com/packaging/installPackage.apexp?p0=04tB0000000eNva

2. Enter your username and password for the Salesforce org where you want to install the package, and then click **Log In**.

3. Select **Install for All Users**, and click **Install**.

   The package can take a while to install. An email is sent when the installation is completed.

4. Click **Done**.

   Check the Installed Packages page in Setup to verify that the Account Hierarchy Custom Fields and Permissions package is installed.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions.

USER PERMISSIONS

To install the package:
- Download AppExchange Packages

Install the Account Hierarchy DPEs and Forecast Set Prebuilt App Package

To get access to Data Processing Engine templates, a sample forecast set, and a sample period group for the Calculate Forecasts for Accounts in a Hierarchy prebuilt app, first install an unmanaged package in Salesforce. You can clone the Data Processing Engine templates and activate the new definitions after you install the package. The period group and the forecast set can be edited as per your business requirements.

1. In a browser, enter the installation URL.

   Choose the installation URL based on where you want to install the package.

   - Production:
     https://login.salesforce.com/packaging/installPackage.apexp?p0=04tB0000000eNvA
   - Sandbox: https://test.salesforce.com/packaging/installPackage.apexp?p0=04tB0000000eNvA

2. Enter your username and password for the Salesforce org where you want to install the package, and then click **Log In**.

3. Select **Install for All Users**, and click **Install**.

   The package can take a while to install. An email is sent when the installation is completed.

4. Click **Done**.

   Check the Installed Packages page in Setup to verify that the Account Hierarchy DPEs and Forecast Set package is installed.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions.

USER PERMISSIONS

To install the package:
- Download AppExchange Packages

Configure the Sample Forecast Set for Account Hierarchy

After you install the Account Hierarchy DPEs and Forecast Set package in your Salesforce org, edit the sample forecast set that's included as a component in the package. You must clone the Data Processing Engine (DPE) templates that are also part of the package to create and activate DPE definitions. You can then select these definitions in the sample forecast set, and make other changes as required. For example, you can add custom measures, add forecast dimensions, define additional forecast adjustment periods, and more.

1. 1. From Setup, enter `Manufacturing` in the Quick Find box, and then select **Advanced Account Forecasting**.

2. Click **Edit** for Sample Forecast Set for Account Hierarchy.

3. Expand the **Building Blocks** section.

4. Click **Edit** for Data Processing Engine Definitions.

5. Select the cloned and activated DPE definitions in the Generation Definition, Recalculation Definition, and Rollover Definition fields.

6. Make other changes as required.

7. Click **Save**.

8. Click **Activate**.

Track a Contact's Orders, Order Products, and Cases Easily

The Order Visibility prebuilt app gives sales and service representatives a holistic view into a contact's orders and track orders' key details, associated order products, and associated cases. They can also launch an intuitive flow to swiftly create cases associated with an order. With this prebuilt app, admins can add a preconfigured flexcard that shows these details to the Service Console for Manufacturing, an Experience Cloud site, or a contact record page. The prebuilt app is made up of OmniStudio components, permission sets, and a custom field.

Set Up and Configure the Order Visibility Prebuilt App

To configure the Order Visibility prebuilt app, first install the Order Visibility package in your Salesforce org. Then, export the Order Visibility OmniStudio components from your Learning trial org and import them to your Salesforce org. In your Salesforce org, add the preconfigured flexcard to the Service Console for Manufacturing and your Experience Cloud site. Provide the appropriate level of access to your internal and external users.

View a Contact's Orders using the Order Visibility Prebuilt App

The Order Visibility prebuilt app helps sales and service representatives get visibility into key details about a contact's orders, order products, and cases - all in one place. They can also quickly create cases associated with orders.

Set Up and Configure the Order Visibility Prebuilt App

To configure the Order Visibility prebuilt app, first install the Order Visibility package in your Salesforce org. Then, export the Order Visibility OmniStudio components from your Learning trial org and import them to your Salesforce org. In your Salesforce org, add the preconfigured flexcard to the Service Console for Manufacturing and your Experience Cloud site. Provide the appropriate level of access to your internal and external users.

Prerequisites for Using Order Visibility Prebuilt App

Review these prerequisites before you deploy and use the Order Visibility prebuilt app.

Install Order Visibility Package

To configure and use the Order Visibility app, first install the Order Visibility unmanaged package in your Salesforce org. The package contains two permission sets, a custom field, and two Apex classes.

Export Order Visibility OmniStudio Components

The Order Visibility prebuilt app is made up of various OmniStudio components. To use the Order Visibility app in your Salesforce org, first export the Order Visibility OmniScript, FlexCard, Integration Procedures, and DataRaptors from your Learning trial org to your system.

Import Order Visibility OmniStudio Components

Import the Order Visibility OmniScript, FlexCard, Integration Procedures, and DataRaptors from your system to your target Salesforce org.

Add the Order Visibility Flexcard to Service Console for Manufacturing

To let customer service representatives quickly access to order information associated with a contact, add the OrderVisibilityOrderSearch flexcard to the Service Console for Manufacturing. You can also add the flexcard to a contact record page.

Add Order Visibility Flexcard to Your Experience Cloud Site

Partner users can use the Order Visibility prebuilt app site to view order information for a contact from your Experience Cloud. Add the OrderVisibilityOrderSearch flexcard to your Experience Cloud site.

Permissions for Order Visibility Prebuilt App

Assign the appropriate permission sets to give users access to the objects and components of the Order Visibility prebuilt app. You must also assign users some additional object and system permissions that aren't included in the permission sets. You can specify these object and system permissions in users' profiles. Or, you can clone the standard permission sets, specify the appropriate permissions, and assign the cloned permission sets to users.

Sharing Rules for Order Visibility Prebuilt App

Give Experience Cloud users access to the appropriate records to use the Order Visibility prebuilt app using sharing rules. Create sharing rules to extend greater access to roles, territories, or public groups than that provided with your org-wide sharing settings.

SEE ALSO:

OmniStudio

Prerequisites for Using Order Visibility Prebuilt App

Review these prerequisites before you deploy and use the Order Visibility prebuilt app.

- Download the latest version of the OmniStudio package and add the appropriate OmniStudio licenses to your org so that you can customize and use the preconfigured OmniStudio components.

- To add the Order Visibility flexcard to the Service Console for Manufacturing, turn on the Service Console for Manufacturing in Setup.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions

Install Order Visibility Package

To configure and use the Order Visibility app, first install the Order Visibility unmanaged package in your Salesforce org. The package contains two permission sets, a custom field, and two Apex classes.
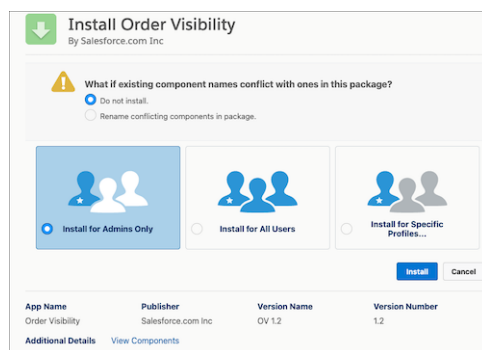
You can also manually create a package in the Learning trial org, add the components to the package, and then deploy the package in the target org. Unless you customize the prebuilt app in the Learning Trial org and want to deploy the customized version in your org, we recommend that you directly deploy the package in your org.

1. In a browser, enter the installation URL.

   The installation URL varies depending on where you want to install the package:

   - Production:
     https://login.salesforce.com/packaging/installPackage.apexp?p0=04tB0000000BlCD
   - Sandbox: https://test.salesforce.com/packaging/installPackage.apexp?p0=04tB0000000BlCD

2. Enter your username and password for the Salesforce org where you want to install the package, and then click **Log In**.

3. Select **Install for All Users**, and click **Install**.

   The package can take a while to install. An email is sent when the installation is completed.

4. Click **Done**.

5. After the installation is complete, verify that the package is available in your org.

   a. From Setup, in the Quick Find box, enter `Installed Packages`, and then select **Installed Packages**.

   b. Verify that the Order Visibility package is available on the page.

   c. Click the package name link.

   d. To view the list of the included components and their types, click **View Components**.

Add the Order custom field to the Case page layout and the Cases related list to the Order page layout.

Export Order Visibility OmniStudio Components

The Order Visibility prebuilt app is made up of various OmniStudio components. To use the Order Visibility app in your Salesforce org, first export the Order Visibility OmniScript, FlexCard, Integration Procedures, and DataRaptors from your Learning trial org to your system.

1. Log in to your Learning trial org on page 10.

2. From the App Launcher, find and select **OmniStudio**.

3. Export the OrderVisibilityOrderSearch FlexCard.

    a. From the navigation menu, select **OmniStudio FlexCards**.

    b. Select the OrderVisibilityOrderSearch (version 1) FlexCard.

    c. From the list view menu, click **Export**.

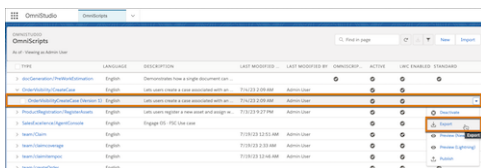   d. Click **Next**, and click **Next**.
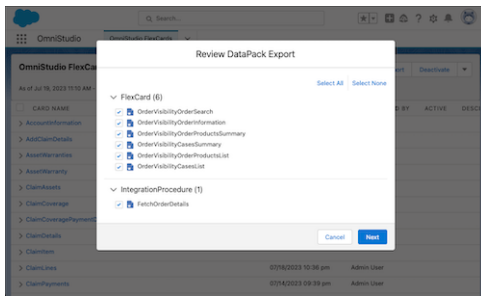
    e. Click **Done**.

4. Export the OrderVisibilityCreateCase OmniScript and the related DataRaptors and Integration Procedure.

    a. From the navigation menu, select **OmniScripts**.

    b. Click [▼] next to the OrderVisibilityCreateCase (Version 1) OmniScript, and select **Export**.

    c. Click **Next**, and click **Next**.

    d. Click **Done**.

5. Export the FetchOrderDetailsAndOrderStatusValues Integration Procedure.

    a. From the navigation menu, select **OmniStudio Integration Procedure**.

    b. Click [▼] next to the FetchOrderDetailsAndOrderStatusValues (Version 1) Integration Procedure, and select **Export**.
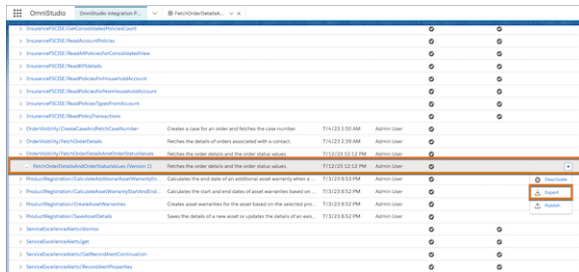
c. Click **Next**, and click **Next**.

d. Click **Done**.

Import the Order Visibility OmniStudio components to your Salesforce org. See Import Order Visibility OmniStudio Components.

Import Order Visibility OmniStudio Components

Import the Order Visibility OmniScript, FlexCard, Integration Procedures, and DataRaptors from your system to your target Salesforce org.

Export the Order Visibility OmniStudio components from the Learning trial org to your system. See Export Order Visibility OmniStudio Components.

1. Log in to the Salesforce org where you want to set up the Order Visibility prebuilt app.

2. From the App Launcher, find and select **OmniStudio**.

3. Import the OrderVisibilityOrderSearch FlexCard.

    a. From the navigation menu, select **OmniStudio FlexCards**.

    b. Click **Import**, and select the OrderVisibilityOrderSearch.json file that you downloaded.

    c. Click **Next**, and click **Next**.

    d. Click **Next**, and click **Activate Now**.

    e. Click **Next**, and click **Done**.

4. Import the OrderVisibilityCreateCase OmniScript and the related DataRaptors and Integration Procedure.

    a. From the navigation menu, select **OmniScript**.

    b. Click **Import**, and select the OrderVisibilityCreateCase.json file that you downloaded.

    c. Click **Next**, and click **Next**.

    d. Click **Next**, and click **Activate Now**.

    e. Click **Next**, and click **Done**.

5. Import the FetchOrderDetailsAndOrderStatusValues Integration Procedure.

    a. From the navigation menu, select **OmniStudio Integration Procedure**.

    b. Click **Import**, and select the FetchOrderDetailsAndOrderStatusValues.json file that you downloaded.

    c. Click **Next**, and click **Next**.

    d. Click **Next**, and click **Activate Now**.

    e. Click **Next**, and click **Done**.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To import OmniStudio components
- OmniStudio Admin permission set

Add the Order Visibility Flexcard to Service Console for Manufacturing

To let customer service representatives quickly access to order information associated with a contact, add the OrderVisibilityOrderSearch flexcard to the Service Console for Manufacturing. You can also add the flexcard to a contact record page.

Make sure that you added the Order custom field to the Case page layout and the Cases related list to the Order page layout.

1. From the App Launcher, find and select **Service Console for Manufacturing**.

2. Open a contact record in the Service Console for Manufacturing.

3. Click ⚙, and click **Edit Page**.

4. Drag the Flexcard component onto the canvas.

5. In the Properties panel, specify these details.

   a. For Flexcard Name, select **OrderVisibilityOrderSearch**.

   b. For Page Type, enter *lightning*.
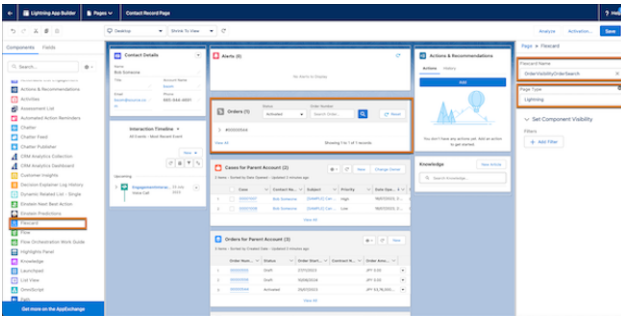
6. Save your changes.

7. Activate the lightning page.

Add Order Visibility Flexcard to Your Experience Cloud Site

Partner users can use the Order Visibility prebuilt app site to view order information for a contact from your Experience Cloud. Add the OrderVisibilityOrderSearch flexcard to your Experience Cloud site.

1. From Setup, in the Quick Find box, enter `Digital Experiences`, and then select **All Sites**.

2. Click **Builder** for the site that you want to customize.

3. Open the navigation menu item where you want to add the OrderVisibilityOrderSearch flexcard.

4. Click ⚡.

5. Drag the Flexcard onto the desired location on the canvas.

6. In the Flexcard panel, specify these details.

    a. For Flexcard Name, select **OrderVisibilityOrderSearch**.

    b. For Exposed Attributes, enter `{"PageType":"community"}`.

7. To publish your changes, click **Publish**, and click **Publish**.

8. Click **Got It**.

Permissions for Order Visibility Prebuilt App

Assign the appropriate permission sets to give users access to the objects and components of the Order Visibility prebuilt app. You must also assign users some additional object and system permissions that aren't included in the permission sets. You can specify these object and system permissions in users' profiles. Or, you can clone the standard permission sets, specify the appropriate permissions, and assign the cloned permission sets to users.

Permission Sets

Assign these permission sets to users based on their persona.

Persona	Permission Sets Required
Internal users who configure the Order Visibility prebuilt app	• Order Visibility Users (available with the Order Visibility unmanaged package) • OmniStudio Admin
Internal users who use the Order Visibility prebuilt app	• Order Visibility Users • OmniStudio User
Experience Cloud users who use the Order Visibility prebuilt app	• Order Visibility for Experience Cloud User (available with the Order Visibility unmanaged package)

Object Permissions

Give users access to these objects to use the Order Visibility prebuilt app. These object permissions aren't included in the permission sets.

Object	Access
Omni Data Transformation	Read
Omni Data Transformation Item	Read
Omni Electronic Signature Template	Read
Omni Process	Read
Omni Process Compilation	Read
Omni Process Element	Read
Omni Process Transient Data	Read
Omni UI Card	Read
OmniScript Saved Sessions	Read, Create, Edit
Product	Read
Cases	Read, Create
Orders	Read
PriceBook	Read

System Permissions

Give users access to these system permissions required to access the components in the Order Visibility prebuilt app. These system permissions aren't included in the permission sets.

• Enables consumers and partners to execute OmniScripts, DRs, Cards through a Community or off platform.
• Grant users access to Industries Interaction Calculation features.

Sharing Rules for Order Visibility Prebuilt App

Give Experience Cloud users access to the appropriate records to use the Order Visibility prebuilt app using sharing rules. Create sharing rules to extend greater access to roles, territories, or public groups than that provided with your org-wide sharing settings.

You must give Experience Cloud users access to records in these objects to use the Order Visibility prebuilt app.

- Omni Data Transformation
- Omni Process
- Omni UI Card

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions

View a Contact's Orders using the Order Visibility Prebuilt App

The Order Visibility prebuilt app helps sales and service representatives get visibility into key details about a contact's orders, order products, and cases - all in one place. They can also quickly create cases associated with orders.

Review the actions you can perform on the Order Visibility prebuilt that's added on the Service Console for Manufacturing page.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions

- Search for orders associated with a contact (1). You can filter orders by status and order number.
- Review the key details of an order, including status reason, purchase order number, and order amount (2). You can open the order record as a subtab by clicking the order ID.
- Track order products associated with the order (3). You can view important details of an order product like its quantity and unit price. You can open an order product record as a subtab by clicking its order product number.
- View cases associated with the order (4). You can check key details of a case like its subject and created date. You can open a case record as a subtab by clicking its case number.
- Click the New Case button to launch a simple wizard to create a case associated with the order (5).

Generate Forecasts Based on Opportunity Product Schedules

The Advanced Account Forecasts with Opportunity Line Item Schedules prebuilt app extends the default Data Processing Engine (DPE) templates to generate forecasts based on opportunity products schedules. With these forecasts, sales and finance teams can get better visibility into realized revenue on opportunities and potential opportunity quantity and revenue over time. They can create more informed sales timelines and plan their work better.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions

To get started with the prebuilt app, install the Advanced Account Forecasts with Opportunity Line Item Schedules package in your org and create a forecast set with the DPE templates. These DPE templates generate forecasts based on the schedule date of an opportunity product schedule, instead of closed dates of opportunities.

Prerequisites for Using Advanced Account Forecasts with Opportunity Line Item Schedules Prebuilt App
Review these prerequisites before you deploy and use the Advanced Account Forecasts with Opportunity Line Item Schedules prebuilt app.

Install Advanced Account Forecasts with Opportunity Line Item Schedules Package

To configure and use the Advanced Account Forecasts with Opportunity Line Item Schedules prebuilt app, first install the Advanced Account Forecasts with Opportunity Line Item Schedules unmanaged package in your Salesforce org. The package contains four Data Processing Engine (DPE) definition templates.

Data Processing Engine Templates with Advanced Account Forecasts with Opportunity Line Item Schedules Prebuilt App

Advanced Account Forecasts with Opportunity Line Item Schedules prebuilt app comes with four Data Processing Engine (DPE) templates. You must clone the DPE templates to create and activate DPE definitions and use them in forecast sets.

Create a Forecast Set for Advanced Account Forecasts with Opportunity Line Item Schedules Prebuilt App

To generate forecasts based on opportunity line item schedules, specify the necessary forecasting configurations in a forecast set. You must specify the data processing engine definitions that come with the Advanced Account Forecasts with Opportunity Line Item Schedules prebuilt app, create forecast dimensions and measures, and more.

Prerequisites for Using Advanced Account Forecasts with Opportunity Line Item Schedules Prebuilt App

Review these prerequisites before you deploy and use the Advanced Account Forecasts with Opportunity Line Item Schedules prebuilt app.

EDITIONS

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions

- To create advanced account forecasts, enable Advanced Account Forecasting in Setup. See Enable Advanced Account Forecasting on page 80.

- To create, manage, and run Data Processing Engine definitions, enable Data Pipelines in Setup. See Enable Advanced Account Forecasting.

- To create opportunity records, provide users the Create permission on Opportunities.

- To add or edit opportunity products, provide users the Edit permission on opportunities and Read permission on products and price books.

- To create schedules for products on opportunities, enable product schedules. See Enable Product Schedules.

- Ensure your Salesforce org contains opportunity products with schedules. You can create opportunity product schedules of type quantity, revenue, or both. See Establish Schedules for Products on Opportunities

- To customize the Data Processing Engine (DPE) definitions, you must be assigned the Data Pipelines Base User permission set.

- To create and save changes to the Data Processing Engine definitions, you need the Customize Application and Modify All Data admin permissions.

Install Advanced Account Forecasts with Opportunity Line Item Schedules Package

To configure and use the Advanced Account Forecasts with Opportunity Line Item Schedules prebuilt app, first install the Advanced Account Forecasts with Opportunity Line Item Schedules unmanaged package in your Salesforce org. The package contains four Data Processing Engine (DPE) definition templates.

You can also manually create a package in the Learning trial org, add the components to the package, and then deploy the package in the target org. Unless you customize the prebuilt app in the Learning Trial org and want to deploy the customized version in your org, we recommend that you directly deploy the package in your org.

1. In a browser, enter the installation URL.

   The installation URL varies depending on where you want to install the package:

   - Production:
     https://login.salesforce.com/packaging/installPackage.apexp?p0=04tB0000000eM0z

   - Sandbox: https://test.salesforce.com/packaging/installPackage.apexp?p0=04tB0000000eM0z

2. Enter your username and password for the Salesforce org where you want to install the package, and then click **Log In**.

3. Select **Install for All Users**, and click **Install**.

   The package can take a while to install. An email is sent when the installation is completed.

4. Click **Done**.

5. After the installation is complete, verify that the package is available in your org.

   a. From Setup, in the Quick Find box, enter `Installed Packages`, and then select **Installed Packages**.

   b. Verify that the Advanced Account Forecasts with Opportunity Line Item Schedules package is available on the page.

   c. Click the package name link.

   d. To view the list of the included components and their types, click **View Components**.

Data Processing Engine Templates with Advanced Account Forecasts with Opportunity Line Item Schedules Prebuilt App

Advanced Account Forecasts with Opportunity Line Item Schedules prebuilt app comes with four Data Processing Engine (DPE) templates. You must clone the DPE templates to create and activate DPE definitions and use them in forecast sets.

Template	Purpose
Generate Account Forecast with Opportunity Line Item Schedules	Generates forecasts for the given account and forecast set based on opportunity line item schedules.
Regenerate Account Forecast with Opportunity Line Item Schedules	Expires the existing forecast data and then regenerates forecasts for the given account and forecast set based on opportunity line item schedules.

Template	Purpose
Roll Over Account Forecast with Opportunity Line Item Schedules	Expires the existing forecast data and then recalculates forecasts for the given account and forecast set based on opportunity line item schedules.
Recalculate Account Forecast with Opportunity Line Item Schedules	Generates forecasts for new periods during rollover based on opportunity line item schedules.

Create a Forecast Set for Advanced Account Forecasts with Opportunity Line Item Schedules Prebuilt App

To generate forecasts based on opportunity line item schedules, specify the necessary forecasting configurations in a forecast set. You must specify the data processing engine definitions that come with the Advanced Account Forecasts with Opportunity Line Item Schedules prebuilt app, create forecast dimensions and measures, and more.

1. From Setup, in the Quick Find box, enter `Advanced Account Forecasting`, and then select **Advanced Account Forecasting**.

2. Click **New**.

3. Specify the details of the forecast set and select **Advanced Account Forecast Fact** as the forecast fact object.

4. Save your changes.

5. Expand the Building Blocks section.

6. Specify forecast fact field mappings.

   a. In the Forecast Fact Field Mappings section, click **Edit**.

   b. Specify these details and save your changes.

   - Forecast Context: Product ID

   - Period: Period ID

   - Forecast Quantity: Forecasted Quantity

   - Forecast Revenue: Forecasted Revenue

   - Forecast Status: Status

   - Forecast Set: Advanced Account Forecast Set Use ID

7. Specify forecast frequencies.

   a. In the Forecast Frequencies section, click **Edit**.

   b. Specify the forecast frequencies, and save your changes.

8. Specify data processing engine definitions.

   a. In the Data Processing Engine Definitions section, click **Edit**.

   b. Specify the data processing engine definitions for Advanced Account Forecasts with Opportunity Line Item Schedules prebuilt app in the Generation Definition, Regeneration Definition, Recalculation Definition, and Rollover Definition fields.

   c. Save your changes.

9. Create dimensions for the forecast set.

     a. Expand the Forecast Dimensions section, and click **New**.

     b. Create a forecast dimension with Product dimension and Product ID (Product) forecast fact dimension field.

     c. Save your changes.

     d. Create other dimensions as appropriate.

10. Create measures for the forecast set.

     a. Expand the Forecast Measures section, and click **New**.

     b. Create a forecast measure with these details, and save your changes.

Forecast Measure	Forecast Fact Measure Field	Measure Type
1	Opportunity Quantity	Quantity
2	Opportunity Revenue	Revenue

     c. Create other measures as appropriate.

11. Create forecast measure groups, forecast adjustment periods, and forecast formula as appropriate.

12. Activate the forecast set.

Visualize Commercial and Service Relationships

Get an intuitive, interactive view of the key relationships in your commercial and service operations by using Actionable Relationship Center (ARC) in Manufacturing Cloud. Easily design ARC relationship graphs tailored to your needs by using the templates available in the Actionable Relationship Center Templates for Manufacturing prebuilt app. Sales teams at a manufacturer can visualize account hierarchies and drill into relevant sales agreements, transactions, and rebate programs. Service teams can get a snapshot of an account's assets, cases filed by the account, and work orders logged for the account. Service teams can also view an asset's activities, including its related cases, work orders, and asset warranties.

Templates in the Actionable Relationship Center Templates for Manufacturing Prebuilt App

Help your sales and service teams explore key relationships between people, assets, and businesses by using the Actionable Relationship Center Templates for Manufacturing prebuilt app. Create a relationship graph by using a template, and customize the graph to meet your company's needs. You can customize card names, add new nodes, reconfigure the existing nodes, manage object and record actions, and so on.

Install the Actionable Relationship Center Templates for Manufacturing Prebuilt App

To use the templates available in the Actionable Relationship Center Templates for Manufacturing prebuilt app, first install the Actionable Relationship Center Templates for Manufacturing unmanaged package in your Salesforce org. The package contains four Actionable Relationship Center (ARC) relationship graph templates that you can use to create relationship graphs.

SEE ALSO:

Actionable Relationship Center for Manufacturing Cloud

Actionable Relationship Center (ARC)

Templates in the Actionable Relationship Center Templates for Manufacturing Prebuilt App

Help your sales and service teams explore key relationships between people, assets, and businesses by using the Actionable Relationship Center Templates for Manufacturing prebuilt app. Create a relationship graph by using a template, and customize the graph to meet your company's needs. You can customize card names, add new nodes, reconfigure the existing nodes, manage object and record actions, and so on.

You can find the templates on the Custom Templates tab when you create a relationship graph. After you create the relationship graph, add the graph to a record page or an Experience Cloud site page. Ensure that the graph has the same root node as the object record page.

Here are the templates in the prebuilt app.

Template	Description	Root Node
Manufacturing Account Commercial Relationships	The relationships of an account record with related account, contact, order, order product, sales agreement, sales agreement product, opportunity, rebate program member, and rebate program member payout records.	Account
Manufacturing Account Service Relationships	The relationships of an account record with related contact, asset, asset warranty, case, location, work order, and work order line item records.	Account
Manufacturing Asset Location Relationships	The relationships of a location record with related location, asset, and asset warranty records.	Location
Manufacturing Asset Relationships	The relationships of an asset record with related asset warranty, case, work order, work order line item, and asset records.	Asset

SEE ALSO:

Actionable Relationship Center (ARC)

Install the Actionable Relationship Center Templates for Manufacturing Prebuilt App

To use the templates available in the Actionable Relationship Center Templates for Manufacturing prebuilt app, first install the Actionable Relationship Center Templates for Manufacturing unmanaged package in your Salesforce org. The package contains four Actionable Relationship Center (ARC) relationship graph templates that you can use to create relationship graphs.

You can also manually create a package in the Learning trial org, add the components to the package, and then deploy the package in the target org. Unless you customize the prebuilt app in the Learning Trial org and want to deploy the customized version in your org, we recommend that you directly deploy the package in your org.

1. In a browser, enter the installation URL.

    The installation URL varies depending on where you want to install the package:

    - Production:
      https://login.salesforce.com/packaging/installPackage.apexp?p0=04t1Q0000010MMe
    - Sandbox:
      https://test.salesforce.com/packaging/installPackage.apexp?p0=04t1Q0000010MMe

2. Enter your username and password for the Salesforce org where you want to install the package, and then click **Log In**.

3. Select **Install for All Users**, and click **Install**.

    The package can take a while to install. You receive an email when the installation is completed.

4. Click **Done**.

5. After the installation is complete, verify that the package is available in your org.

    a. From Setup, in the Quick Find box, enter `Installed Packages`, and then select **Installed Packages**.

    b. Verify that the Actionable Relationship Center Templates for Manufacturing package is available on the page.

    c. Click the package name link.

    d. To view the list of the included components and their types, click **View Components**.

Use the templates available in the prebuilt app to create relationship graphs on the Actionable Relationship Center page in Setup. You can select these templates on the Custom Templates tab when you create a relationship graph.
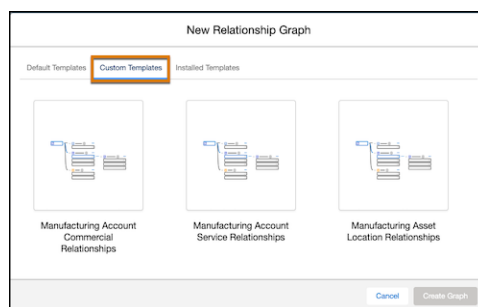
After you create the relationship graph, use Lightning App Builder to add the ARC Relationship Graph component to the appropriate object record pages and Experience Cloud site pages.

SEE ALSO:

Create a Custom ARC Relationship Graph

Add ARC Relationship Graph Component to Record Pages

Considerations for Manufacturing Cloud

Review these considerations before you start working with Manufacturing Cloud.

General Considerations

- Manufacturing Cloud is supported only on desktop devices.
- Manufacturing Cloud for Service includes usage entitlement of 300 survey responses per org for Salesforce Feedback Management and 7500 OmniStudio calls per user per month for Flow for Manufacturing Cloud. The usage entitlement of survey responses doesn't increase with the number of users as the entitlement is per org.
- When your org gets upgraded during a release, make sure you check the page layouts for all existing objects. The new fields added for a release don't get added to the existing page layouts automatically. You can customize the required page layout in Object Manager to add the new fields.

SEE ALSO:

Considerations for Sales Agreements

Considerations for Advanced Account Forecasting

Considerations for Account Forecasting

Considerations for Fleet Management in Manufacturing Cloud