aws

AWS Supply Chain

AWS Supply Chain: User Guide

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What is AWS Supply Chain?

AWS Supply Chain is a cloud-based supply chain management application that works with your existing enterprise resource planning (ERP) and supply chain management systems. Using AWS Supply Chain, you can connect and extract your inventory, supply, and demand related data from existing ERP or supply chain systems into one unified AWS Supply Chain data model.
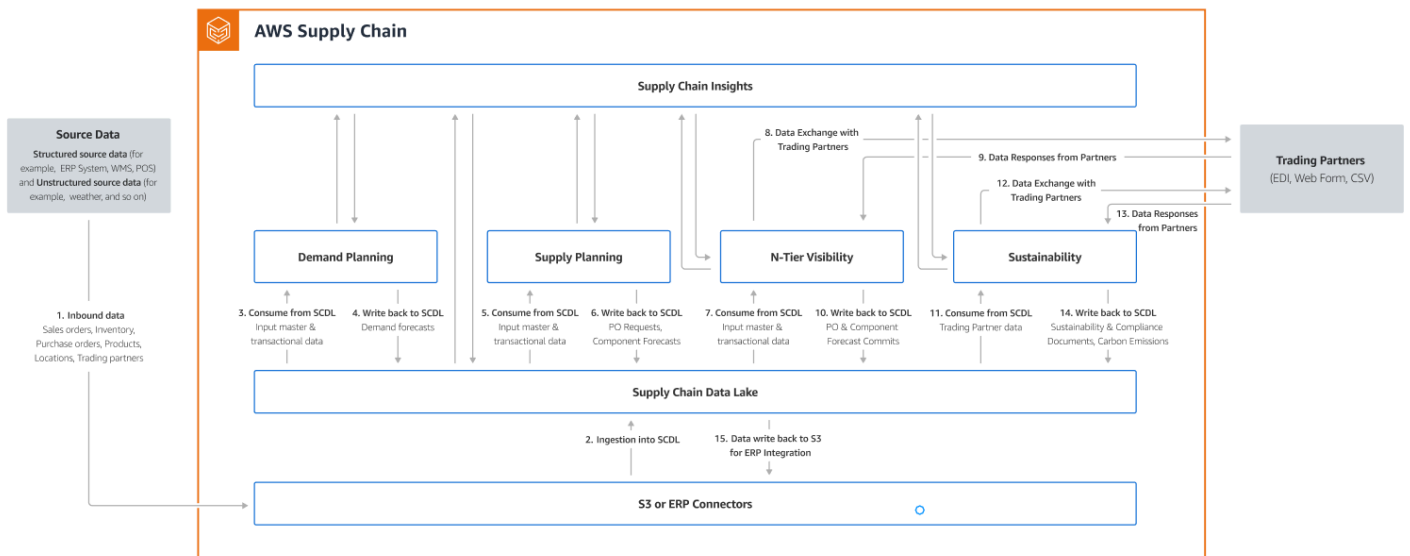
Topics

- [Features of AWS Supply Chain](#)
- [Signing into AWS Supply Chain](#)
- [User permissions](#)

Features of AWS Supply Chain

AWS Supply Chain supports the following features:

- **Data Lake** – The AWS Supply Chain data lake simplifies the process of aggregating data from your supply chain systems in one place, using an extensible data model built for supply chain management. The data lake consumes data from any structured data source, including your existing ERP and supply chain management systems. To connect to any of the other Warehouse management systems, you can use the Amazon S3 connector. Once the data source is connected, you can review and confirm the data mapping between your data source to AWS Supply Chain's

data model. Once the data fields are mapped, you can start importing your data from your data source. For more information, see Data lake.

- **Insights** – AWS Supply Chain insights uses the supply chain data in the data lake to automatically generate insights of potential supply chain risks (for example, stockouts). After the data is imported, AWS Supply Chain automatically computes the projected inventory based on the inventory snapshots, current order and in-transit supply and expected demand in-terms of customer orders or forecast. AWS Supply Chain proactively alerts inventory managers to potential inventory risks that include both below and above the target stock levels and provides rebalance recommendations to resolve stockout where available. Inventory managers are also alerted when there is a lead time deviation and AWS Supply Chain recommends how to resolve the deviation. For more information, see Insights.

- **Work order insights** – You can use Work Order Insights to view work order status, expected time of arrival (ETA) predictions, delivery risk and recommendations for each work order. For more information, see Work Order Insights.

- **Demand planning** – You can use AWS Supply Chain Demand Planning to create demand forecasts, adjust the forecasts according to market conditions, and allow demand planners to collaborate across teams. For more information, see Demand Planning.

- **Supply planning** – You can use Supply planning to plan and forecast purchases of raw materials, components, and finished goods. Supply planning supports two types of supply plans, *Auto replenishment* and *Manufacturing plans*. For more information, see Supply Planning.

- **Sustainability** – You can invite partners by using the AWS Supply Chain data lake connectors and by mapping the partner information to Partners or Partner's point-of-contact from Amazon S3 or other ERP systems. For more information, see Sustainability.

- **N-Tier Visibility** – N-Tier Visibility extends visibility and insights beyond your organization to your external trading partners. For more information, see N-Tier Visibility.

Signing into AWS Supply Chain

AWS Supply Chain has a web-based client so you can access your AWS Supply Chain account from a web browser. To get started with the AWS Supply Chain, you need a broadband internet connection and one of the web browsers listed in the following table.

Browser	Supported Versions
Google Chrome	Latest three versions.

Browser	Supported Versions
Mozilla Firefox Extended Support Release (ESR)	All versions are supported until the version's [end-of-life date](#). For more information, see the [Firefox ESR release calendar](#).
Mozilla Firefox	Latest three versions.
Microsoft Edge and Edge Chromium	Version 84 and later.
Safari	Safari 10 or later on macOS.

Your AWS Supply Chain system administrator provides you with a unique AWS Supply Chain web client URL. To recover a lost or forgotten password, contact your administrator.

> ⓘ **Note**
>
> The AWS Supply Chain dashboard is customized according to your permission role. For more information, see [User permissions](#).

1. In your web browser, enter the **web client URL** provided by your AWS Supply Chain administrator. For example, https://alias.awsapps.com.
2. For **Username** and **Password**, enter your **AWS IAM Identity Center SSO credentials** (formerly known as AWS SSO).
3. Choose **Sign In**.

User permissions

AWS Supply Chain supports the following default user permission roles. Additionally, you can create custom user permission roles that include multiple permission roles. You can also add specific locations and products.

- **Administrator** – Access to create, view, and manage all data and user permissions.
- **Data Analyst** – Access to create, view, and manage all data connections.
- **Inventory Manager** – Access to create, view, and manage Insights.

- **Planner** – Access to create, view, and manage forecasts and overrides, and also publish demand plans.

- **Partner Data Manager** – Access to manage and view partners, manage and view data requests, and view sustainability data.

- **Supply Planner** – Access to manage and view supply plans.

AWS Supply Chain dashboard

Your default dashboard view depends on the permission the AWS Supply Chain administrator assigns you. You can view your data connections and inventory visibility, add users or groups, and monitor your watchlists and key performance indicators (KPIs) directly from the dashboard.

Customizing the AWS Supply Chain dashboard

To customize your dashboard

1. On the AWS Supply Chain dashboard, choose **Manage dashboard**.

    The **Build your dashboard** page appears.

2. Depending on your user permission role, you see cards that you can use for customizing your dashboard. For each card that you want to add to your dashboard, select its check box.

3. Choose **Save**.

Enabling KPIs

To monitor KPIs in AWS Supply Chain

1. On the AWS Supply Chain dashboard, under **Monitor KPIs**, choose **Enable**.

    The AWS Supply Chain dashboard updates to display the KPIs for the current dataset.

2. To view the actual value or percentage, hover over the KPI.

Managing KPIs

To view or remove KPIs from the AWS Supply Chain dashboard

1. On the AWS Supply Chain dashboard, choose **Manage dashboard**.

2. Choose the KPIs that you want to see or remove from the AWS Supply Chain dashboard.

3. Choose **Save**.

Monitoring KPIs

AWS Supply Chain administrator supports the following KPIs:

- On-Time in-full
- Customer order cycle time
- Supplier fill rate
- Sell-through rate

On-Time in-full

On-time In-Full (OTIF) measures the effectiveness of customer fulfillment operations, such as, picking, packing and shipping orders on-time and in full. This metric is measured by adding the total number of orders shipped in-full, on or before the expected ship date divided by the total number of shipments with an expected ship date for the month.

OTIF requires the following entities to be populated and mapped in AWS Supply Chain Data lake:

Dataset	Entity
Outbound_Shipment	Shipped_Qty
Outbound_Order_Line	Quantity_Promised
Outbound_Shipment_Records	Actual_Ship_Date
Outbound_Shipment	Expected_Ship_Date

To calculate OTIF, AWS Supply Chain uses the following formula:

SUM (outbound_shipment.shipped_qty = outbound_order_line.Quantity promised AND outbound_shipment_records.actual_ship_date ≤ outbound_shipment.expected_ship_date) ÷ by total number of orders with outbound_shipment.expected_ship_date for a given month.

Customer order cycle time

Customer order cycle time measures the efficiency of the supply chain fulfillment process. This metric is calculated by the average number of days between the order date and when the order is shipped.

Customer order cycle time requires the following entities to be populated and mapped in AWS Supply Chain data lake.

Dataset	Entity
Outbound_Order_Line	Order_Date
Outbound_Shipment_Records	Actual_Ship_Date

AWS Supply Chain uses the following formula to calculate customer order cycle time:

Average number of days between Outbound_order_Line.order_date and Outbound_Shipment.actual_ship_date for all outbound order lines during a given month.

Supplier fill rate

The supplier fill rate measures your supplier's commitment to your organization. This metric is calculated by adding all the inbound orders where the quantity received matches the quantity requested by the expected delivery date.

The supplier fill rate requires the following entities to be populated and mapped in AWS Supply Chain data lake.

Dataset	Entity
Inbound_Order_Line	Quantity_Submitted
Inbound_Order_Line	Quantity_Received
Inbound_Order_Line	Received_Date
Inbound_Order_Line	Expected_Delivery_Date

To calculate supplier fill rate, AWS Supply Chain uses the following formula :

Sum (inbound_order_line.Quantity Submitted = inbound_order_line.quantity_recieved and inbound_order_line.order.recieve.date ≤ inbound_order_line.expected_delivery_date) ÷ by the total number of lines with inbound_order_line.expected_delivery_date within a given month.

Sell-through rate

A sell-through rate measures the percentage of available inventory sold in a given month. This metric is calculated by adding all outbound shipment quantities for a given month divided by the sum of current inventory at the beginning of the month and the inventory received during the month.

The sell-through rate requires the following entities to be populated and mapped in AWS Supply Chain data lake.

Dataset	Entity
Outbound_Shipment	Shipped_Qty
Outbound_Shipment_Records	Actual_Ship_Date
Inventory_Level_Records	On_Hand_Inventory
Inbound_Order_Line	Expected_Delivery_Date
Inbound_Order_Line	Quantity_Received
Inbound_Order_Line	Received_Date

To calculate sell-through rate, AWS Supply Chain uses the following formula:

SUM outbound_shipment_records.quantity_shipped for a given month ÷ by SUM(InventoryLevel_records.on_hand_inventory at start of month+ inbound_order_line.quantity_recieved during the month).

Data lake

This chapter provides information on how you can use AWS Supply Chain to connect to your data source.

Topics

- [Terminology used in data lake](#)
- [Prerequisites](#)
- [Getting started](#)
- [Adding a new data source](#)
- [Adding a new outbound source](#)
- [Ingesting data](#)

Terminology used in data lake

The following terms are used in data lake:

- **Entity** – Information about a data object for each category. For example, company, geography, and trading_partner are entities for an organization. For more information, see [Data entities and columns used in AWS Supply Chain](#).

- **Dataset** – Information related to the entity. You can have only one dataset per entity.

- **Connector** – A way to import data into AWS Supply Chain.

- **Recipe** – A set of steps that describes how to map source data into one dataset.

- **Source Flows**[1] – Displays the datasets and fields you uploaded.

- **Destination Flows**[1] – Associates the data from your dataset to the AWS Supply Chain data entities in data lake.

- **Source system**[1] – Your existing Enterprise resource planning (ERP) system, Warehouse Management System (WMS), or any supply chain data management system.

[1] – These terms are only displayed when you ingest data through Amazon S3 (or the **Upload any CSV** option in the web application).

Prerequisites

Note the following before uploading your datasets for ingestion:

- The file that you upload should be less than 5 GB.

- The content in the dataset should follow the UTF-8 Encoding format.

- The file type must be supported by the connector. The connectors for SAP systems supports CSV, EDI connector supports .txt and .edi formats, and Amazon S3 supports CSV.

- Data rows must contain non-null values for required fields.

- The date and time format should follow the ISO8601 standards. For example, 2020-07-10 15:00:00.000, represents the 10th of July 2020 at 3 pm.

- The column names in the dataset shouldn't contain spaces or special characters. Column names should be separated by an underscore (_) between two words.

- When using the Amazon S3 source path,, AWS Supply Chain will create a parent folder named after the source system you selected. Sub-folders are named after the source table you selected. Make sure the filenames are unique. The file structure you build will be used to create the Amazon S3 path.

- AWS Supply Chain follows a multi-step upload process with pre-assigned URLs. Due to browser security restrictions, to upload your dataset, your Amazon S3 bucket (created during instance creation) cross-origin resource sharing (CORS) permissions must allow *PUT* requests and return an *Etag* header. To update the CORS policy, on your Amazon S3 bucket, under **Connections**, scroll-down to CORS and paste the following policy:

```
[
{
"AllowedHeaders": [
"*"
],
"AllowedMethods": [
"PUT"
],
"AllowedOrigins": [
"https://instance-id.scn.global.on.aws"
],
"ExposeHeaders": [
"Etag"
```

```
    ]
  }
]
```

Getting started

You can use AWS Supply Chain data lake to ingest your data from various data sources. For information on supported data sources, see Adding a new data source.

Topics

- Data Ingestion
- Viewing datasets
- Data Quality

Data Ingestion

You can view the current connections, source, and destination flows.

1. On the AWS Supply Chain dashboard, on the left navigation pane, choose **Data Lake** and then choose the **Data Ingestion** tab.

   The **Data Ingestion** page appears.

2. Choose the **Source Flows** tab.

   - Source Flow – Displays the file or folder structure of the dataset uploaded.

   - S3 path – Displays the Amazon S3 path where the source files are uploaded.

   - Status – Displays the source files upload status.

   - Last Sync – Displays when the files were last synced or updated.

   - Actions – You can view the following:

     - Manage Flow – You can update the data mapping.

     - Upload Files – You can add additional source files to your existing source flows.

     - Delete Flow – You can delete the source flow completely.

3. Choose the **Destination Flows** tab.

4.   Under **Actions**, choose **Manage Flow** to view and update the data mappings.

The **Manage Destination Flows** page appears.

5.   Move any unassociated source columns under **Source Columns** to **Destination Columns**.

6.   Choose **Exit and Review Destination Flows** to go back to the **Destination Flows** page to review the destination flows.

7.   Choose the **Connections** tab.

You can view all the existing connections.

Viewing datasets

To view the data schema uploaded to the existing connections, follow the procedure below.

1.   On the AWS Supply Chain dashboard, on the left navigation pane, choose **Data Lake** and then choose the **Datasets** tab.

The **Datasets** page appears.

2.   To view a dataset, choose **View**.

3.   Under the **Dataset Fields** tab, you can view all the existing dataset fields in the dataset. To add a new destination field as an optional field, choose **Add Field**.

4.   Under the **Source Connections** tab, you can view the connections feeding that dataset.

Data Quality

To view the data ingestion or AWS Supply Chain module errors, follow the procedure below.

1.   On the AWS Supply Chain dashboard, on the left navigation pane, choose **Data Lake** and then choose the **Data Quality** tab.

2.   Choose the **Connection Errors** tab. A summary of all the errors that impact data ingestion into data lake is listed.

You can filter the errors by **Connection** or **Dataflow**.

3.   Choose the **Module Errors** tab. You can view the data ingestion errors for the AWS Supply Chain modules.

Adding a new data source

You can use AWS Supply Chain to ingest your data stored in the following data sources and extract your supply chain information. AWS Supply Chain can store the extracted information in your Amazon S3 buckets and use the data for *Demand planning*, *Insights*, *Supply Planning*, *N-Tier Visibility*, *Work Order Insights*, and *Sustainability*.

- **Amazon S3 source data** – You can use the Amazon S3 data source flow option if you don't have an ERP system, or if you use another extraction tool. You can extract raw data from your data source, map the data fields with AWS Supply Chain data model, and upload them to Amazon S3 with an integration tool of your choice. You can only upload CSV files to Amazon S3 when you are using Auto-association.

- **Electronic data interchange (EDI)** – AWS Supply Chain supports X12 ANSI version 4010 for EDI messages 850, 860, and 856. Supported data formats are .edi or .txt. You can add your raw EDI messages to Amazon S3 using an integration tool of your choice. AWS Supply Chain can extract and associate your raw EDI messages using default templates by Natural Language Processing (NLP) for EDI 856. NLP templates are not supported for EDI 850 and 860 and come with pre-defined but customizable recipes in AWS Supply Chain.

- **SAP S/4HANA** – To extract your supply chain data from an SAP S/4HANA data source, AWS Supply Chain can use the Amazon AppFlow connector to connect to this source. AWS Supply Chain can associate your supply chain data stored in SAP S/4HANA system to the AWS Supply Chain data model using AWS Glue DataBrew.

- **SAP ECC 6.0** – To extract your supply chain data from an SAP ECC 6.0 system, you can use an integration tool (for example, ETL, iPaaS) to extract your supply chain data stored in the SAP ECC 6.0 system into the Amazon S3 bucket using an API. AWS Supply Chain can associate your supply chain data stored in the SAP ECC 6.0 system to the AWS Supply Chain data model using DataBrew.

Uploading files for the first time

You can use the AWS Supply Chain Auto-association feature to upload your raw data and automatically associate your raw data with AWS Supply Chain data model. You can also view the *required* columns and tables for each AWS Supply Chain module within the AWS Supply Chain web application.

> ⓘ **Note**
>
> You can only upload CSV files to Amazon S3 when you are using Auto-association.

After the source columns from your dataset are associated with the destination columns, AWS Supply Chain will automatically generate the SQL recipe.

> ⓘ **Note**
>
> AWS Supply Chain uses Amazon Bedrock for Auto-association and it is not supported on all the regions AWS Supply Chain is available. Hence, AWS Supply Chain will call Amazon Bedrock endpoint from the closest available region, Europe (Ireland) Region – Europe (Frankfurt) and Asia Pacific (Sydney) Region – US West (Oregon).

> ⓘ **Note**
>
> Auto-association using the Large Language Models (LLM) is only supported when data is ingested through Amazon S3.

1. On the AWS Supply Chain dashboard, on the left navigation pane, choose **Data Lake** and then choose the **Data Ingestion** tab.

    The **Data Ingestion** page appears.

2. Choose **Add New Source**.

    The **Select your data source** page appears.

3. On the **Select your data source** page, choose **Upload files**.

4. Choose **Continue**.

5. On the **Which capabilities do you want to run** page, choose the AWS Supply Chain modules you want to use. You can choose more than one module.

6. Under **Upload your source files** section, add a suffix to the **Source system name**. For example, oracle_test.

7. To upload your source dataset, choose **files** or drag and drop files.

    The source tables with name and status is displayed.

8. Choose **Upload to S3**. The *upload status* will change to display the status.

9. Under **Review data requirements**, review all the required data entities and columns for the selected AWS Supply Chain feature. All the required primary and foreign keys are displayed.

10. Choose **Continue**.

11. Under **Manage your source tables**, the source tables and the columns listed below will be auto associated and imported into data lake.

Choose **Delete table** to delete any of the source tables before importing into data lake.
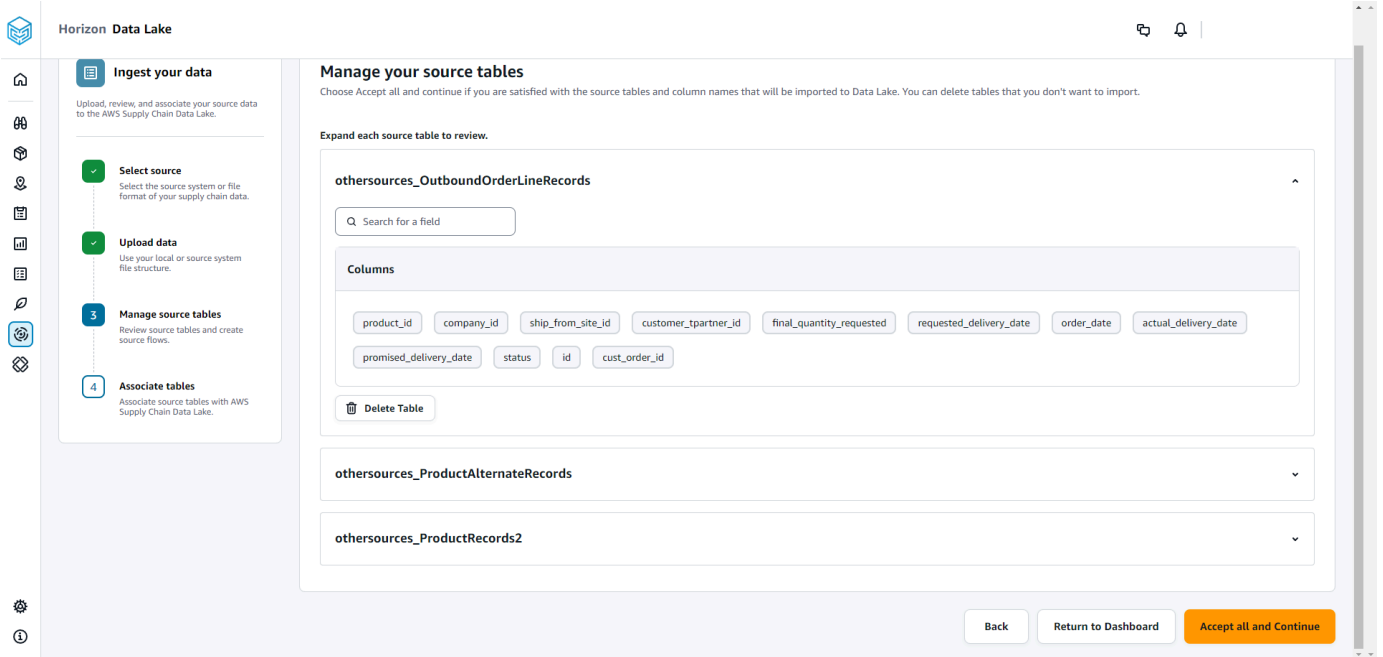
12. Choose **Accept all and Continue**.

    A message on auto-associating your tables to AWS Supply Chain data lake is displayed.
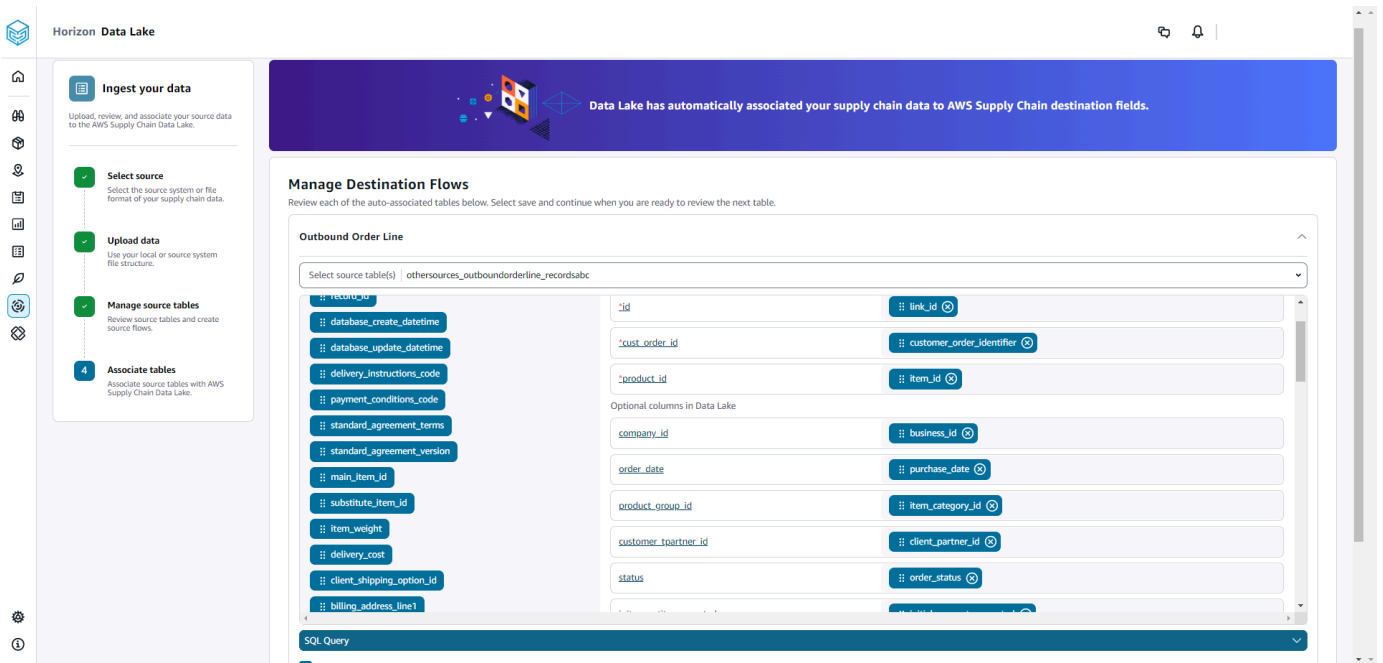
13. Under **Manage Destination Flows**, you can review each auto-associated table.

By default, **Auto-Association** is enabled and the source columns are auto-associated with the destination columns. To update the auto-associated columns, you can update the SQL recipe to create your custom recipe.

14. Under **Source Columns**, all the unassociated source columns are listed. Drag and drop the unassociated columns to the **Destination Columns** on the right.

15. Follow the above step for each auto-associated table.

16. Choose **Submit**.

17. Choose **Exit and Review Destination Flows**.

Uploading subsequent files to an existing source

For subsequent dataset uploads to an existing source, you can upload the dataset on the Amazon S3 path displayed under the **Source Flows** tab or under **Actions**, you can choose **Upload files**.

If you are using an automated connector, executing scripts, or using a middleware solution to ingest the dataset into AWS Supply Chain, you must make sure to update the Amazon S3 path with the Amazon S3 path displayed under the **Source Flows** tab.

> ⓘ **Note**
>
> If an existing file with the same filename is reuploaded to Amazon S3, AWS Supply Chain will overwrite the file on Amazon S3.

Connecting to an EDI

To ingest data from an EDI data source, perform the following procedure.

1. On the AWS Supply Chain dashboard, on the left navigation pane, choose **Data Lake**.

2. On the **Data lake** page, choose **Add New Source**.

   The **Select your supply chain data source** page appears.

3. Choose **EDI**.

4. In the **EDI Connection Details** page, under **Name your connection**, enter a name for your connection.

5. (Optional) Under **Connection description**, enter a description for your connection.

6. Under **Amazon S3 Bucket Billing**, review the Amazon S3 billing information, and then select **Acknowledge**.

7. Choose **Next**.

8. Under **Data Mapping**, choose **Get started**.

9.
   > ℹ️ **Note**
   >
   > EDI 850, EDI 860, and EDI 856 are supported in AWS Supply Chain.

> **ⓘ Note**
>
> The required fields are already mapped. Perform this step only if you want to make specific changes to the default transformation recipe.

On the **Mapping Recipe** page, you can view the default transformation recipe under **Field mappings**.

Choose **Add mapping**, to map any additional destination field. The **Required Destination Fields** are mandatory. Choose **Destination field** to add an additional custom destination field.

> **ⓘ Note**
>
> Review all the entities (for example, Inbound Order, Inbound Order Line, and Inbound Order Line Schedule for EDI 850 Entity Group) under each Entity Group.

10. To view the source field values and data mappings from the transformation recipe, you can upload sample data. On the **Mapping Recipe** page, under **Upload sample data**, choose **browse files** or drag and drop files. The sample data file must contain the required parameters and include the source field names.

11. Choose **Accept all and continue**.

12. Under **Review and confirm**, you can view the data connection summary. To edit your data field mapping, choose **Go back to Data Mapping**.

13. To review the Amazon S3 paths where your source data must be uploaded to start the ingestion process, choose **Confirm and configure data ingestion**.

14. Choose **Confirm and configure data ingestion later** if you want to ingest data later. You can ingest data anytime after creating the connection from the AWS Supply Chain dashboard.

15. On the AWS Supply Chain dashboard, choose **Open Connections**. Select the connection dataflow that you want to ingest data, choose the vertical ellipsis, and select **Ingestion setup**.

Connecting to S/4 HANA

Before you can connect to your S/4 HANA data source, you must complete the following prerequisites. After that, AWS Supply Chain automatically creates the Amazon S3 paths and ingests data from the SAP source tables.

Prerequisites to connect to S/4 HANA

To connect to S/4 HANA data source, the following prerequisites must be completed before ingesting data.

1. Configure your SAP S/4 HANA system to turn on ODP-based data extraction through the SAP OData connector for Amazon AppFlow. For more information, see SAP OData connector for Amazon AppFlow.

2. Configure your SAP data sources or extractors, and generate ODP based OData services for AWS Supply Chain to connect and extract information. For more information, see SAP data sources.

3. Configure your SAP system with one of the following types of authentication:

   - Basic
   - OAuth

4. Configure security roles in SAP system to turn on data extraction.

5. Set up network connectivity to SAP S/4 HANA. If your SAP instance is in a secure VPN and you can't open a port for AWS Supply Chain to connect, we recommend that you use AWS PrivateLink. To manually setup AWS PrivateLink, see AWS for SAP and to automatically setup using AWS CloudFormation, see AWS CloudFormation.

Configuring S/4 HANA connection

To ingest data from an SAP S/4HANA data source, perform the following procedure.

1. On the AWS Supply Chain dashboard, on the left navigation pane, choose **Data Lake**.

2. On the **Data lake** page, choose **Add New Source**.

   The **Select your supply chain data source** page appears.

3. Choose **SAP S/4HANA**.

4. Choose **Next**.

5. Under **SAP S/4HANA Connection Details**, enter the following:

    - **Connection name** – Enter a name for this connection.

    - (Optional) **Connection description** – Enter a name for this connection.

    - **Use Existing AppFlow Connector** – Choose **Yes**, if you want to use an existing AppFlow connector.

    - **Application Host URL** – Enter the SAP account's URL.

    - **Application Service Path** – Enter the SAP application service path.

    - **Port Number** – Enter the SAP port number.

    - **Client Number** – Enter the SAP client number.

    - **Logon Language** – Enter the SAP language code. For example, EN for English.

    - **PrivateLink** – Choose **Enabled** to enable a private connection between the SAP server and your AWS account hosting AWS Supply Chain.

    - **Username** – Enter the username of the SAP account.

    - **Password** – Enter the password of the SAP account.

    > ⓘ **Note**
    >
    > Amazon AppFlow uses the SAP **Username** and **Password** provided by you to connect to SAP.

6. Choose **Connect to SAP**.

    If the SAP username and password are entered correctly, a **Connection Successful** message appears.

7. (Optional) Under **Optional AppFlow Configuration**, **Step 1 - Download the JSON template file**, choose **Download the existing JSON template file** to modify the appflow ingestion settings.

    > ⓘ **Note**
    >
    > You can use your own editor to edit the .json file. You cannot edit the .json file in AWS Supply Chain.

Once you have an updated .json file, under **Step 2 - Upload the modified JSON template file**, choose **browse files** to upload.

> ⓘ **Note**
>
> If this upload is unsuccessful, the **Upload summary** will display the errors or conflicts in the .json file. You can update the .json file to fix the issues and reupload the file.

Here is a sample .json file with the required schedule, dataflows, and source tables.

```
{
    "schedule" : {
        "scheduleExpression"  : "rate(1days)", // scheduleExpression key should be
 available and the value cannot be null/empty. Format starts with rate and having
 time values in minutes, hours, or days. For example, rate(1days)
        "scheduleStartTime" : null // Supported format - "yyyy-MM-
dd'T'hh:mm:ss[+|-]hh:mm". For example, 2022-04-26T13:00:00-07:00. ScheduleStartTime
 should atleast be 5 minutes after current time. A null value will automatically
 set the start time as 5 minutes after the connection creation time
    },
    "dataFlows" : [ // DataFlows cannot be null or empty. Make sure to choose from
 the list below
        "Company-Company",
        "Geography-Geography",
        "Inventory-Inventory Level",
        "Inventory-Inventory Policy",
        "Outbound-Outbound Order Line",
        "Outbound-Outbound Shipment",
        "Product-Product",
        "Product-Product Hierarchy",
        "Production Order-Inbound Order",
        "Production Order-Inbound Order Line",
        "Purchase Order-Inbound Order",
        "Purchase Order-Inbound Order Line",
        "Purchase Order-Inbound Order Line Schedule",
        "Reference-Reference Fields",
        "Shipment-Shipment",
        "Site-Site",
```

```
            "Site-Transportation Lane",
            "Trading Partner-Trading Partner",
            "Transfer Order-Inbound Order Line",
            "Vendor Management-Vendor Lead Time",
            "Vendor Management-Vendor Product",
            "Product-Product UOM"
    ],
    "sourceTables" : [   // sourceTables cannot be empty
        {
            "tableName" : "SomeString", // Should be an existing table name from
  the SAP instance
            "extractType" : "DELTA",        // Should either be DELTA or FULL
            "tableCols" : [     // TableCols cannot be empty. Enter valid column
  names for the table
                "col1",
                "col2",
                "col3"
            ],
            "filters" : [// Optional field
                    "colName" : "col1", // colName value should be part of
  tableCols
                    "dataType" : "String",  // Should contain values `STRING` or
  `DATETIME`
                    "value" : "String",
                    "operator" : "String"  // Choose a string
  value from the pre-defined value of "PROJECTION", "LESS_THAN",
  "CONTAINS","GREATER_THAN","LESS_THAN_OR_EQUAL_TO","GREATER_THAN_OR_EQUAL_TO","EQUAL_TO","N
  "VALIDATE_NUMERIC","NO_OP";
            ]
        },
        {

            // sourceTables with same keys - tableName, extractType, tableCols,
  filters(not mandatory)

        }
    ]
}
```

8. Under **Amazon S3 Bucket Billing**, review the Amazon S3 billing information, and then select **Acknowledge**.

9. Choose **Next**.

10. Under **Data Mapping**, choose **Get started**.

11.
> **ⓘ Note**
>
> The required fields are already mapped. Perform this step only if you want to make specific changes to the default transformation recipe.

On the **Mapping Recipe** page, you can view the default transformation recipe under **Field mappings**.

Choose **Add mapping**, to map any additional destination field. The **Required Destination Fields** are mandatory. Choose **Destination field** to add an additional custom destination field.

12. To view the source field values and data mappings from the transformation recipe, you can upload sample data. On the **Mapping Recipe** page, under **Upload sample data**, choose **browse files** or drag and drop files. The sample data file must contain the required parameters and include the source field names.

13. Choose **Accept all and continue**.

14. Under **Review and confirm**, you can view the data connection summary. To edit your data field mapping, choose **Go back to Data Mapping**.

15. (Optional) Under **Recipe Actions**, you can do the following:

- **Download recipe file** - Select **Download** to edit your recipe files in SQL as a text file.

  > **ⓘ Note**
  >
  > For information about built-in SQL functions, see [Spark SQL](#).

- **Upload recipe file** - Choose **browse files** or drag and drop your edited recipe text files. Select **Confirm upload** to upload the edited recipe file and modify your data field mappings.

16. To review the Amazon S3 location paths where you must upload your SAP source data for ingestion, choose **Confirm and configure data ingestion**. Alternatively, you can choose **Confirm and configure data ingestion later**. You can view the data ingestion information anytime. From the AWS Supply Chain dashboard, select **Connections**. Select the connection dataflow that you want to ingest data, choose the vertical ellipsis, and select **Ingestion setup**.

SAP data sources

Configure the following SAP table sources for AWS Supply Chain to connect and extract information.

> ⓘ **Note**
>
> When you search for an SAP data source, prefix the data source name with *EntityOf*.
> For example, for the data source *0BP_DEF_ADDRESS_ATTR*, the entity name should be
> *EntityOf0BP_DEF_ADDRESS_ATTR*.
> When Amazon AppFlow extracts each SAP data source, the entity name format is used to
> extract information. For example, to extract data from *0BP_DEF_ADDRESS_ATTR*, the data
> is extracted from the entity path */sap/opu/odata/sap/Z0BP_DEF_ADDRESS_ATTR_SRV/*
> *EntityOf0BP_DEF_ADDRESS_ATT*.

SAP data source	SAP data source description	SAP source table	OData service name	BW data source	SAP data	Delta/Full
0BP_DEF_ADDRESS_ATTR	BP standard address extraction	NA	Z0BP_DEF_ADDRESS_ATTR_SRV	Data source	Master data	Delta
0BPARTNER_ATTR	BP: BW Extraction Central Data	NA	Z0BPARTNER_ATTR_SRV	Data source	Master data	Delta
0BPARTNER_TEXT	BP: DataSource for Business	NA	Z0BPARTNER_TEXT_SRV	Data source	Master data	Delta

SAP data source	SAP data source description	SAP source table	OData service name	BW data source	SAP data	Delta/Full
	Partner Texts					
0CO_PC_ACT_05	Material Valuation : Prices	NA	Z0CO_PC_ACT_05_SRV	Data source	Master data	Full
0COMP_CODE_TEXT	Company Code Text	NA	Z0COMP_CODE_TEXT_SRV	Data source	Master data	Full
0CUSTOMER_ATTR	Customer	NA	Z0CUSTOMER_ATTR_SRV	Data source	Master data	Delta
0MAT_VEND_ATTR	Material or Vendor	NA	Z0MAT_VEND_ATTR_SRV	Data source	Master data	Delta
0MATERIAL_ATTR	Material	NA	Z0MATERIAL_ATTR_SRV	Data source	Master data	Delta
0MATERIAL_TEXT	Material text	NA	Z0MATERIAL_TEXT_SRV	Data source	Master data	Delta
0PURCH_ORG_TEXT	Purchasing org text	NA	Z0PURCH_ORG_TEXT_SRV	Data source	Master data	Full
0VENDOR_ATTR	Vendor	NA	Z0VENDOR_ATTR_SRV	Data source	Master data	Delta

SAP data source	SAP data source description	SAP source table	OData service name	BW data source	SAP data	Delta/Full
2LIS_02_HDR	Purchasing Data (Header Level)	NA	Z2LIS_02_HDR_SRV	Data source	Transactional	Delta
2LIS_02_ITM	Purchasing Data (Item Level)	NA	Z2LIS_02_ITM_SRV	Data source	Transactional	Delta
2LIS_02_SCL	Purchasing Data (Schedule Line Level)	NA	Z2LIS_02_SCL_SRV	Data source	Transactional	Delta
2LIS_02_SCN	Confirmation of Schedule Lines	NA	Z2LIS_02_SCN_SRV	Data source	Transactional	Delta
2LIS_03_BF	Goods Movements from Inventory Management	NA	Z2LIS_03_BF_SRV	Data source	Transactional	Delta
2LIS_04_P_MATNR	Material View from PP/PP-PI	NA	Z2LIS_04_P_MATNR_SRV	Data source	Transactional	Delta

SAP data source	SAP data source description	SAP source table	OData service name	BW data source	SAP data	Delta/Full
2LIS_08TRFKP	Shipment Costs at Item Level	NA	Z2LIS_08TRFKP_SRV	Data source	Transactional	Delta
2LIS_08TRTLP	Shipment: Delivery Item Data by Section	NA	Z2LIS_08TRTLP_SRV	Data source	Transactional	Delta
2LIS_08TRTK	Shipment: Header Data	NA	Z2LIS_08TRTK_SRV	Data source	Transactional	Delta
2LIS_11_VAHDR	Sales Document Header	NA	Z2LIS_11_VAHDR_SRV	Data source	Transactional	Delta
2LIS_11_VAITM	Sales Document Item	NA	Z2LIS_11_VAITM_SRV	Data source	Transactional	Delta
2LIS_12_VCITM	Delivery Item Data	NA	Z2LIS_12_VCITM_SRV	Data source	Transactional	Delta
ZADRC	Addresses	ADRC	ZADRC_SRV	Table	Master data	Full
ZBUT021_FS	Partner Address	BUT021_FS	ZBUT021_FS_SRV	Table	Master data	Full

SAP data source	SAP data source description	SAP source table	OData service name	BW data source	SAP data	Delta/Full
ZCDHDR	Change document header	CDHDR	ZCDHDR_SRV	Table	Master data	Delta
ZEINA	Purchasing Info Record: General Data	EINA	ZEINA_SRV	Table	Master data	Full
ZEINE	Purchasing Info Record: Purchasing Organization Data	ZV_EINE	ZEINE_SRV	Table	Master data	Full
ZEKKO	Purchasing Document Header	ZV_EKKO	ZEKKO_SRV	Table	Transactional	Delta
ZEKPO	Purchasing Document Item	ZV_EKPO	ZEKPO_SRV	Table	Transactional	Delta
ZEQUI	Equipment master data	EQUI	ZEQUI_SRV	Table	Master data	Full

SAP data source	SAP data source description	SAP source table	OData service name	BW data source	SAP data	Delta/Full
ZGEOLOC	Geo Location	GEOLOC	ZGEOLOC_SRV	Table	Master data	Full
ZLIKP	Delivery Header Data	LIKP	ZLIKP_SRV	Table	Transactional	Delta
ZLIPS	Delivery: Item Data	ZV_LIPS	ZLIPS_SRV	Table	Transactional	Delta
ZMDRP_NODTT	Node Type for DRP Network	MDRP_NODT	ZMDRP_NODTT_SRV	Table	Master data	Full
ZMARC	Plant Data for Material	ZQ_MARC	ZMARC_SRV	Table	Master data	Full
ZMARD	Storage Location Data for Material	ZQ_MARD	ZMARD_SRV	Table	Master data	Full
ZMCHB	Batch Stocks	ZQ_MCHB	ZMCHB_SRV	Table	Master data	Full
ZT001W	Plant	T001W	ZT001W_SRV	Table	Master data	Full
ZT005T	Country Names	T005T	ZT005T_SRV	Table	Master data	Full

SAP data source	SAP data source description	SAP source table	OData service name	BW data source	SAP data	Delta/Full
ZT141T	Descriptions of Material Status	T141T	ZT141T_SRV	Table	Master data	Full
ZT173T	Shipping Type of Transport Texts	T173T	ZT173T_SRV	Table	Master data	Full
ZT179	Materials : Product Hierarchies	T179	ZT179_SRV	Table	Master data	Full
ZT179T	Materials : Product Hierarchies Text	T179T	ZT179T_SRV	Table	Master data	Full
ZT370U	Equipment Category Text	T370U	ZT370U_SRV	Table	Master data	Full
ZT618T	Mode of Transport Descriptions	T618T	ZT618T_SRV	Table	Master data	Full
ZTVRAB	Route Stages	TVRAB	ZTVRAB_SRV	Table	Master data	Full

SAP data source	SAP data source description	SAP source table	OData service name	BW data source	SAP data	Delta/Full
ZTVRO	Routes	TVRO	ZTVRO_SRV	Table	Master data	Full
ZVALW	Route Schedule	VALW	ZVALW_SRV	Table	Master data	Full
ZVBBE	Sales Requirements: Individual Records	VBBE	ZVBBE_SRVs	Table	Master data	Full
ZINB_SHIPMENT	Shipment Header and Item (Inbound)	ZV_INB_SHIPMENT based with join condition: VTTK.MANDT = VTTP.MANDT and VTTK.TKNUM = VTTP.TKNUM	ZINB_SHIPMENT_SRV	Table	Transactional	Full
ZAUFK	Order Master Data	AUFK	ZAUFK_SRV	Table	Master data	Full

SAP data source	SAP data source description	SAP source table	OData service name	BW data source	SAP data	Delta/Full
ZMARM	Unit of Measure for Material	MARM	ZMARM_SRV	Table	Master data	Full
ZEBAN	Purchase requisitions	EBAN	ZEBAN_SRV	Table	Transactional data	Delta

Connecting to SAP ECC 6.0

To extract your data from SAP ECC 6.0, perform the following procedure.

1. On the AWS Supply Chain dashboard, on the left navigation pane, choose **Data Lake**.

2. On the **Data lake** page, choose **Add New Source**.

   The **Select your supply chain data source** page appears.

3. Choose **SAP ECC**.

4. Under **SAP ECC Connection Details**, enter the following:

   - **Connection name** – Enter a name for your connection. Connection names can only contain letters, numbers, and dashes.

   - **Connection description** – Enter a description for your connection.

5. Under **Amazon S3 Bucket Billing**, review the Amazon S3 billing information, and then select **Acknowledge**.

6. Choose **Next**.

7. Under **Data Mapping**, choose **Get started**.

8.

> ⓘ **Note**
>
> The required fields are already mapped. Perform this step only if you want to make specific changes to the default transformation recipe.

On the **Mapping Recipe** page, you can view the default transformation recipe under **Field mappings**.

Choose **Add mapping** to map any additional destination field. The **Required Destination Fields** are mandatory. Choose **Destination field** to add an additional custom destination field.

9.

> ⓘ **Note**
>
> You can only use AWS Glue DataBrew to edit the recipes for transactional entities. Use AWS Supply Chain to download your recipes, and edit them in DataBrew. Then upload the recipes back into AWS Supply Chain. You can't use the AWS Supply Chain web application to edit the transactional data fields in a recipe.

(Optional) Under **Recipe Actions**, you can do the following:

- **Download recipe file** - Select **Download** to edit your recipe files offline with DataBrew.

- **Upload recipe file** - Choose **browse files**, or move (drag and drop) your edited recipe files. Select **Confirm upload** to upload the edited recipe file and modify your data field mappings.

- **Reset to default recipe** - Select **Yes, reset my recipe** to remove all your custom mappings and revert to the default recipe recommended by AWS Supply Chain.

10. To edit your source field mappings and validate you transformation recipe, you can upload sample data. On the **Mapping Recipe** page, under **Upload sample data**, choose **browse files**, or move (drag and drop) files. The sample data file must contain the required parameters and include the source field names.

11. Choose **Accept all and continue**.

12. Under **Review and confirm**, you can view the data connection summary. To edit your data field mapping, choose **Go back to Data Mapping**.

13. To review the Amazon S3 paths where you must upload your SAP source data for ingestion, choose **Confirm and configure data ingestion**. Alternatively, you can choose **Confirm and configure data ingestion later**. You can view the data ingestion information anytime. From

the AWS Supply Chain dashboard, select **Connections**. Select the connection dataflow that you want to ingest data, choose the vertical ellipsis, and select **Ingestion setup**.

14. If you are not using the Amazon S3 API to ingest data, create the Amazon S3 path manually on the Amazon S3 console. For more information on how to create paths, see Uploading data to an Amazon S3 bucket.

15. Review the following table to map the AWS Supply Chain data entity with SAP source.

> ⚠️ **Important**
>
> On the **Amazon S3 path** page, you must upload the parent entity before the child entity. You can first upload all the parent entities and then upload all the child entities together.

Data entity	SAP source	Hierarchy	Data entity action
Company – company	0COMP_CODE_TEXT	Parent	Replace
Geography – geography	ADRC	Parent	Replace
Inventory – inv_level	MARD	Parent	Update
	MCHB	Parent	Update
	VBBE	Child	Update
Inventory – inv_policy	MARC	Parent	Replace
	0MATERIAL_ATTR	Child	Update
Outbound – outbound_order_line	2LIS_11_VAITM	Parent	Update
	0BP_DEF_A DDRESS_ATTR	Child	Update
	0MATERIAL_ATTR	Child	Update
	2LIS_11_VAHDR	Child	Update

Data entity	SAP source	Hierarchy	Data entity action
Outbound – outbound_shipment	2LIS_08TRTLP	Parent	Update
	2LIS_08TRFKP	Child	Update
	2LIS_08TRTK	Child	Update
	2LIS_12_VCITM	Child	Update
Product – product	0MATERIAL_ATTR	Parent	Replace
	0MATERIAL_TEXT	Child	Update
Product – product_hierarchy	T179	Parent	Replace
Purchase order – inbound_order	2LIS_02_HDR	Parent	Update
	CDHDR	Child	Update
	EKKO	Child	Update
Purchase order – inbound_order_line	2LIS_02_ITM	Parent	Update
	0MATERIAL_ATTR	Child	Update
	2LIS_03_BF	Child	Update
	EKPO	Child	Update
	LIPS	Child	Update
	LIKP	Child	Update
	INB-SHIPMENT	Child	Update
Purchase order – inbound_order_line_schedule	2LIS_02_SCL	Parent	Update
	2LIS_02_SCN	Child	Update

Data entity	SAP source	Hierarchy	Data entity action
Production order – inbound_order	2LIS_04_P_MATNR	Parent	Update
Production order – inbound_order_line	2LIS_04_P_MATNR	Parent	Update
	0CO_PC_ACT_05	Child	Update
	0MATERIAL_ATTR	Child	Update
Reference – reference_field	0PURCH_ORG_TEXT	Parent	Update
	MDRP_NODTT	Parent	Update
	T005T	Parent	Update
	T141T	Parent	Update
	T173T	Parent	Update
	T179T	Parent	Update
	T370U	Parent	Update
	T618T	Parent	Update
Shipment – shipment	INB-SHIPMENT	Parent	Replace
	EQUI	Parent	Replace
	LIKP	Parent	Replace
	LIPS	Parent	Replace
	0MATERIAL_TEXT	Parent	Replace
	0MAT_VEND_ATTR	Parent	Replace
	0MATERIAL_ATTR	Parent	Replace
	EKPO	Parent	Replace

Data entity	SAP source	Hierarchy	Data entity action
	T001W	Parent	Replace
	ADRC	Parent	Replace
	0VENDOR_ATTR	Parent	Replace
	BUT021_FS	Parent	Replace
Site – site	T001W	Parent	Replace
	ADRC	Child	Update
	GEOLOC	Child	Update
Trading partner – trading_partner	0BPARTNER_ATTR	Parent	Update
	0BPARTNER_TEXT	Child	Update
	0VENDOR_ATTR	Child	Update
	0CUSTOMER_ATTR	Child	Update
	0BP_DEF_ADDRESS_ATTR	Child	Update
Transfer order – inbound_order_line	2LIS_03_BF	Parent	Update
	0MATERIAL_ATTR	Child	Update
Transportation – transportation_lane	TVRO	Parent	Replace
	TVRAB	Child	Update
	VALW	Child	Update
Vendor management – vendor_lead_time	EINA	Parent	Replace
	EINE	Child	Update
	0MATERIAL_ATTR	Child	Update

Data entity	SAP source	Hierarchy	Data entity action
Vendor management – [vendor_product](#)	EINA	Parent	Replace
	0MATERIAL_ATTR	Child	Update

Adding a new outbound source

You can use the new outbound source to upload the updated *Supply Planning* purchase order requests or plan enhancements.

1. On the AWS Supply Chain dashboard, on the left navigation pane, choose **Data Lake** and then choose the **Data Ingestion** tab.

   The **Data Ingestion** page appears.

2. Choose **Add Outbound Source**.

   The **Amazon S3 Connection details** page appears.

3. Under **Connection name**, enter a name for your Amazon S3 connection.

4. Under **Outbound Data**, select the outbound dataflow you want to export. Purchase order request and Supply forecast dataflows are supported.

5. Choose **Confirm**.

   The new outbound source is created and the **Connections** page appears.

Ingesting data

The following are the ingestion options if you are using Amazon S3:

- **Append** – To append the ingestion data or for incremental ingestions, all files from the source path are combined together into a single dataset before being ingested into data lake. This method ensures completeness of data for files spanning multiple days. When you remove files from the source path in your Amazon S3 bucket, the files that are only available in the source path are picked for ingestion and are ingested into data lake. The *Append* option ensures your files in Amazon S3 are replicated and synchronized in data lake.

- **Overwrite** – During replace, data files are ingested into data lake as they are updated in the source path. Each new file replaces the dataset entirely.

> **ⓘ Note**
>
> You can delete source flows and corresponding data in both the *Append* and *Overwrite* options.

The following are the ingestion operation options for *EDI SAP S/4 HANA*, and *SAP ECC*:

- **Update** – Update existing rows of data using the same fields that are used in the recipe.
- **Replace** – Delete existing, uploaded data and replace it with the new, incoming data.
- **Delete** – Delete one or more rows of data by using the primary IDs.

To start data ingestion, follow the procedure below:

1. On the AWS Supply Chain dashboard, on the left navigation pane, choose **Data Lake**.

2. On the **Data Ingestion** tab, choose **Connections**.

3. Select the connection to ingest data and choose **Data Ingestion**.

   The **Data Ingestion Configuration** page appears.

4. Choose **Get started**.

5. On the **Data Ingestion Details** page, select if you would like to *Update*, *Replace*, or *Delete* the data. Copy the Amazon S3 path by choosing **Copy**.

Uploading data to an Amazon S3 bucket

> **ⓘ Note**
>
> Follow this procedure for SAP ERP Component Central (ECC) connector, and the EDI connector to manually ingest data in the S3 bucket associated with the AWS Supply Chain instance. If you are using the Amazon S3 API to upload data, see Connecting to SAP ECC 6.0, or Connecting to an EDI.

To upload data to an Amazon S3 bucket associated with the AWS Supply Chain instance

1. On the AWS Supply Chain dashboard, on the left navigation bar, choose **Open Connections**.

2. Select the required connection.

3. On the **Connection Details** page, note down the Amazon S3 path or choose **Copy** to copy the Amazon S3 path.

4. Open the Amazon S3 console at https://console.aws.amazon.com/s3/ and sign in.

5. Under **Buckets**, select the name of the bucket (the first name in the Amazon S3 path) that you want to upload your folders or files to.

6. Navigate to the Amazon S3 path you copied from the AWS Supply Chain dashboard.

7. Choose **Upload**.
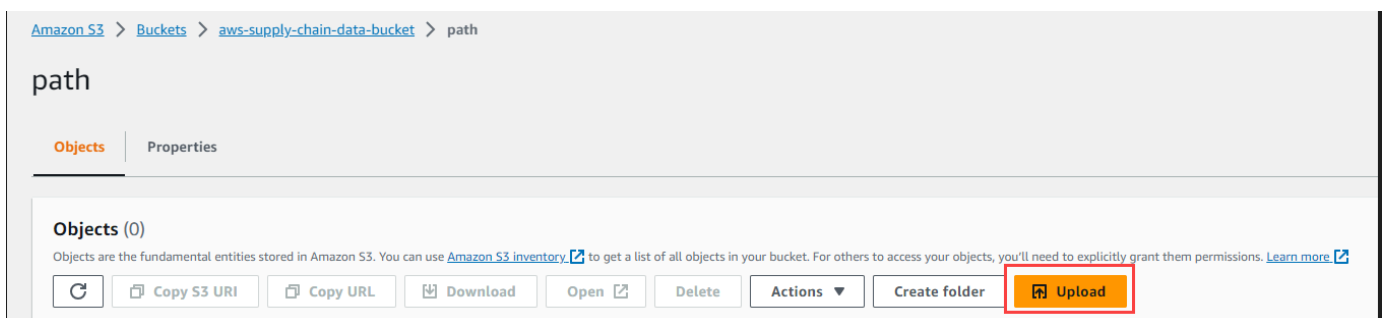
Insights

You can view the the current and projected inventory for products and locations that you are authorized to access. Locations appear in clusters, and the total number of locations appear under each cluster. AWS Supply Chain generates insights based on the insight watchlist that you create and recommends how to resolve the insights. AWS Supply Chain scans for Inventory Risk insights every six hours, and Lead Time deviation insights every 24 hours.

Topics

- Insight settings
- Viewing the network map
- Viewing inventory visibility
- Creating insight watchlist
- Viewing the generated insights
- Resolving an inventory risk insight
- Lead time insights

Insight settings

Under **Insight settings**, you define the thresholds on when AWS Supply Chain should notify you.

1. In the left navigation pane on the AWS Supply Chain dashboard, choose the **Settings** icon. Choose **Organization** and then choose **Insights**.

   The **Insight Settings** page appears.

   > **ⓘ Note**
   >
   > You only have to set the insight settings the first time you log into AWS Supply Chain web application and before you create an Insight watchlist.

2. Under **Stockout Threshold**, select percentage below minimum inventory levels to generate stock out risks.

3. Under **Excess Threshold**, select the percentage above maximum inventory levels to generate excess stock.

4. Under **Projection Period**, use the **Up/down** arrow to enter the projection timeline in days, weeks, and months.

5. Under **Rebalancing Recommendations Options**, use the **Up/down** arrow to select the maximum distance that can be considered in identifying sourcing location for inventory rebalancing/transfers. Under **Max time**, from the drop-down, select the number of future days the system should consider in identifying the rebalancing recommendations.

6. Under **Rebalancing Recommendations Score Weights**, use the **Up/down** arrow to enter the core weight values to determine how ranking is calculated for rebalance recommendations.

Viewing the network map

After you connect the data source, the network map displays the current and projected inventory for products and locations that you are authorized to access. Locations appear in clusters, and the total number of locations appear under each cluster. You can zoom in on each cluster to see individual locations. Each icon represents a location type.

The colored ring shows the inventory health for each location or cluster. Inventory health status depends on the stock out and excess thresholds that you defined in Insight settings. The ring colors are defined as follows:

> ⓘ **Note**
>
> The color code definitions remain the same throughout Insights.

- **Red** – Products in this location are at a stock out risk.
- **Green** – Products in this location are in balanced state.
- **Purple** – Products in this location have an excess stock risk.

To view the network map, perform the following procedure.

1. In the left navigation pane on the AWS Supply Chain dashboard, choose **Inventory** and then choose **Network Map**.

   The **Network Map** page appears.

2. Select a ring and zoom in on a location that you need. You can view the details of the current and projected inventory for one or more particular items.

3. Use the timeslider on the bottom left of the page to view the projected inventory for the current map view. The slider defaults to current date representing current inventory health.

4. Click the **+/-** symbol to zoom in and out of a particular location in the network map.

5. Click the **Filter** icon to filter by **Locations** and **Products**. Your permissions determine your level of access.

Viewing inventory visibility

You can use Inventory Visibility to view the inventory projections for a specified time. You can group the projections by product or by location.

> ⓘ **Note**
>
> Information from the data source that you connected remains the same between Network Map and Inventory Visibility. With the Inventory Visibility view, you see the current and projected inventory by numbers and colors in a tabular format.

- **Grouped by product** – You can filter by products to see the inventory health of all the products across all locations.
- **Grouped by location** – You can filter by location to see the inventory health of all the products under that location.

You see the aggregated inventory health as colored rings that highlight the number of locations or products with stocked out, in-balance, or excess inventory.

To view the inventory visibility, perform the following procedure.

1. In the left navigation pane on the AWS Supply Chain dashboard, choose **Inventory** and then choose **Inventory Visibility**.

   The **Inventory Visibility** page appears with the inventory visibility for the current dataset.

2. Select the **Pivot by** dropdown to filter the inventory by **Location** or **Product**.

3. Click the **Filter** icon to filter by **Locations** and **Products**. Your permissions determine your level of access.

Creating insight watchlist

> **ⓘ Note**
>
> AWS Supply Chain only supports 1000 insights per watchlist and 100 watchlists per instance. To increase the limit, contact AWS Support.

You can create an insight watchlist to track and notify you on supply chain risks and deviations.

1. In the left navigation pane on the AWS Supply Chain dashboard, choose **Insights**.

   The **Insights** page appears.

2. If you are a first-time user, select an insight type to create an insight watchlist. See Creating an inventory risk watchlist and Creating a lead time deviation watchlist.

   To view existing watchlists, see Viewing the generated insights.

Creating an inventory risk watchlist

You can create an inventory risk insight watchlist to view all projected stock out and excess stock risks that AWS Supply Chain discovers.

1. In the left navigation pane on the AWS Supply Chain dashboard, choose **Insights**.

   The **Insights** page appears.

2. Choose **New Insight Watchlist**.

   The **Create an Insight Watchlist** page appears.

3. Under **Select an insight type**, choose **Inventory Risk**.

4. Under **Name the watchlist**, enter a name to track your insight watchlist.

5. Under **Select location(s)**, select the locations from the drop-down that you want to add to your watchlist.

6. Under **Select product(s)**, select the products from the dropdown that you want to add to your watchlist.

7. Under **Tracking Parameters**, choose what you want to track. The options are Stock Out Risk, Excess Stock Risk, or Both.

8. Under **Excess beyond safety stock**, select the excess percentage for the safety stock limit.

9. Under **Stockout beyond**, select the stockout percentage beyond the minimum safety stock limit.

10. Under **Time Horizon**, enter the timeline to create insights.

11. Under **Watchers**, you can add other users who you think might benefit from this insight. The users within this insight can track and collaborate to resolve risks.

    All the settings you chose are displayed on the right.

12. Choose **Save** to save and create an inventory risk watchlist.

Creating a lead time deviation watchlist

You can view all lead time deviations that AWS Supply Chain discovers. You can select any insight, and AWS Supply Chain recommends how to address it.

1. In the left navigation pane on the AWS Supply Chain dashboard, choose **Insights**.

    The **Insights** page appears.

2. Choose **New Insight Watchlist**.

    The **Create an Insight Watchlist** page appears.

3. Under **Select an insight type**, choose **Lead Time Deviation**.

4. Under **Name the watchlist**, enter a name to track your insight watchlist.

5. Under **Select location(s)**, select the locations from the drop-down to add to your watchlist.

6. Under **Select product(s)**, select the products from the drop-down to add to your watchlist.

7. Under **Tracking Parameters**, **Standard deviation**, select the lead time deviation frequency from the drop-down. When the frequency is met, AWS Supply Chain will generate an insight for lead time deviation.

8. Under **Tracking Parameters**, **Historical time period to track miss frequency**, select the timeline from the drop-down to analyze lead time deviations.

9. Under **Watchers**, you can add other users who you think might benefit from this insight. The users withing this insight can track and collaborate to resolve risks.

    All the settings you chose are displayed on the right.

10. Choose **Save** to save and create an inventory risk watchlist.

Viewing the generated insights

You can view all the insights that AWS Supply Chain generated for a watchlist that you created. You can select an insight for more details. An insight goes through the following stages:

- **New Insights** – This section shows all new insights that AWS Supply Chain discovers after you created your Insight Watchlist. AWS Supply Chain scans for Inventory Risk Insights every 6 hours, and Lead Time Insights every 24 hours.

- **In Review** – This section shows all insights that are currently under review.

- **Resolved** – This section shows resolved insights.

You can view your watchlist in two ways:

- **Cards** – Shows insights as New Insights, In Review, and Resolved.

- **Table** – Shows insights in a tabular format.

Resolving an inventory risk insight

AWS Supply Chain recommends one or more ways to resolve an inventory risk insight. AWS Supply Chain might recommend that you transfer inventory from other locations within a certain distance. This would resolve an inventory risk in the location under review. AWS Supply Chain recommendations are based on the distance and time horizon settings that you've configured under Insight settings.

1. In the left navigation pane on the AWS Supply Chain dashboard, choose **Insights**.

   The **Insights** page appears.

2. Under **New Insights**, select an insight to resolve the inventory risk.

   An overview of the inventory risk with the current and projected inventory, and the rebalance options are displayed.

3. Under **Rebalance Options**, choose **Select** against the rebalance option recommended by AWS Supply Chain.

   Once you select the rebalance option, you can view current and projected inventories before and after you rebalance.

4. On the **Confirm Resolution** page, the rebalance option that you chose is shown under **Resolution Option**.

5. Under **Message the team**, select the **After clicking...** check box to notify the team on the selected rebalance option.

6. Choose **Confirm**.

Lead time insights

For every lead time deviation insight, AWS Supply Chain gives you an overview of the lead time deviation for a particular product in a particular location. You can also compare the historical purchase order lead times averaged monthly for the same product and location, and calculate the expected and recommended lead times for your current and upcoming purchase orders . You can review the deviation, and plan your supply chain operations accordingly.

For all purchase orders that are in progress, you can view the status of the purchase order. You can determine the predicted estimated date with low and high confidence levels based on the insight learnings.

The learning model can be trained on a user-configurable timeframe ranging from 1 - 5 years in the past, determined during the watchlist creation.

> ⓘ **Note**
>
> The x-axis in the Historical Purchase Orders chart shows months according to the UTC timezone regardless of your location. This means that the beginning of the month coincides with 00h:00m:00s UTC of the first day of the month and the end of the month coincides with 23h:59m:59s UTC of the last day of the month.

On the Insights dashboard page, choose **Export All Recommendations** to export the vendor lead time recommendations for the ingested product, site, or vendor combinations in a .csv file to your Amazon S3 bucket. Once the export is completed, you will receive an email and notification on the AWS Supply Chain web application with a link to the Amazon S3 bucket where the recommendations are exported.
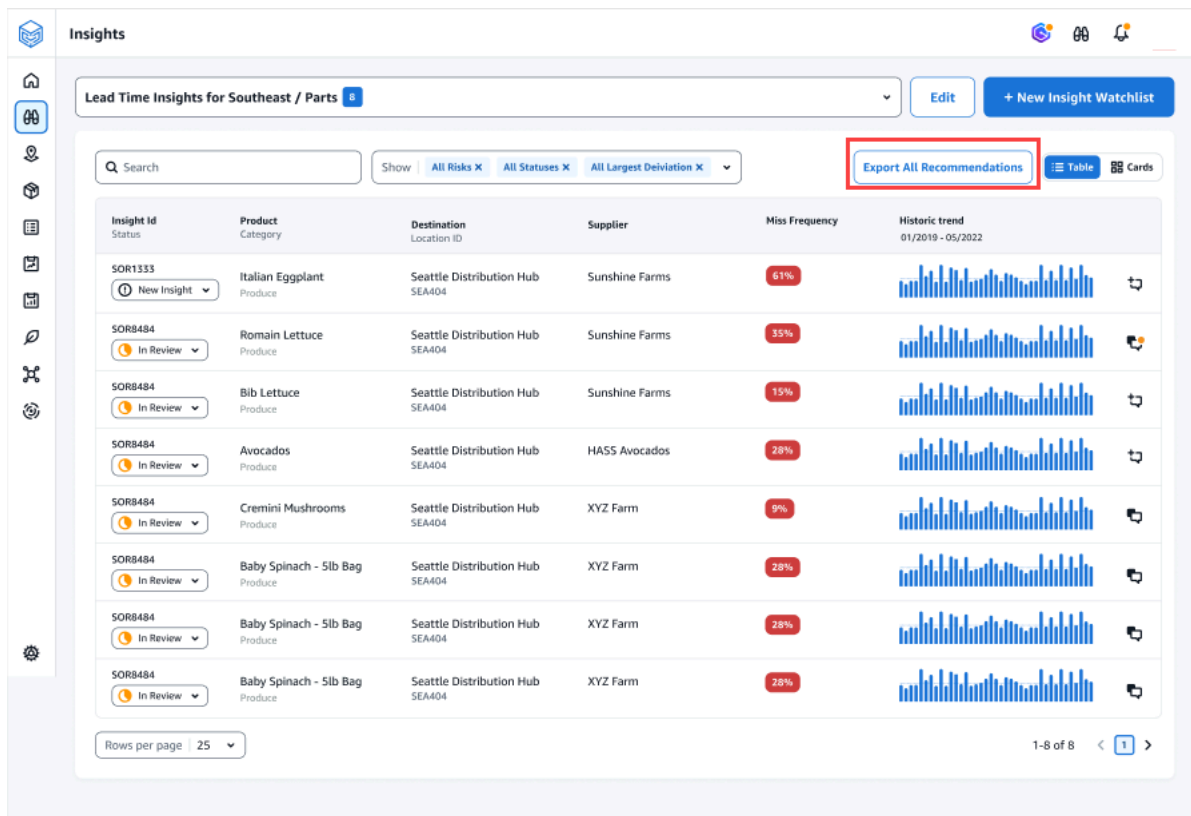
The **Historical Purchase Orders** graph displays the historical average lead times by month calculated by taking the average from the historical purchase order lead times using the submitted and delivery dates. The line graphs represent *expected*, that is, current planned lead time value and the *recommended* lead time for the vendor at site for the given product. The actual lead time will be equal or lower than the recommended lead time for future purchase order deliveries 50% of the time.

The **Upcoming Purchase Orders** graph displays the future purchase order lead time trend by day, calculated by viewing the purchase order's submitted date and delivery dates. The line graphs represent *expected*, that is, current planned lead time value and the *recommended* lead time for the vendor at site for the given product. The actual lead time will be equal or lower than the recommended lead time for future purchase order deliveries 50% of the time.

The **Purchase Orders in Progress** table displays granular information of the current or upcoming purchase orders that are at risk with intended delivery dates based on the model predictions by learning the historical data for the given vendor, product, and site.

The table at the bottom of the **Lead time insights** page displays the granular view of all open purchase orders with details such as purchase order quantity, the expected delivery date available at the purchase order line level, the *Estimated - Low*, that is the system predicted delivery date

for the given purchase order with a lower probability and the *Estimated – High*, that is the system predicted delivery date for the given purchase order with a high probability. The *deviation* determines how far off the estimated high dates are, that is, the delivery dates available at the purchase order line level.

Collaborating with other AWS Supply Chain users

You can collaborate with other AWS Supply Chain users to discuss supply chain related issues.

In the left navigation pane on the AWS Supply Chain dashboard, choose **Collaboration**. The **Collaboration** page appears.

You can do the following on the **Collaboration** dashboard.

- Under **Team Conversations**, you can see all the individual users you have chatted with.

- Under **Insight Conversations**, all the conversations within the team for an Insight are listed.

- Once you select a particular Insight conversation, you can view the Insight risk on the right with recommendations to resolve the risk. You can also choose **View Insight Details** to view the Insight risk page.

- Choose **Start Conversation**. The **New Conversation** dialog box appears.

  From the **Add User(s)** drop-down, select the user to start the conversation and choose **Start Conversation**.

- Slide the **Get notifications for this thread** button to activate in-app notifications for the conversation.

Notifications

You can receive an in-app or email notification in AWS Supply Chain.

Turn on notifications

To enable notifications, perform the following procedure:

1. In the left navigation pane on the AWS Supply Chain dashboard, choose the **Settings** icon.

    The **Settings** page appears.

2. Choose **Notifications**.

    The **Notification Preferences** page appears.

3. Under **Insights**, slide the **In-app** and **Email** button to receive notifications when a lead time deviation or inventory risk insights is generated.

    > **ⓘ Note**
    >
    > You can choose to receive an email, in-app notification, or both.

4. Under **Forecast Collaboration**, slide the **In-app** button to receive a notification in AWS Supply Chain when there is an update to the forecast or if the forecast request is decline by the Partner.

    You can also use the **Email** button to receive a summarized email once a day on all the forecast updates.

5. Under **Purchase Orders**, slide the **In-app** button to receive a notification in AWS Supply Chain when there is a purchase order update by the Partner.

    You can also use the **Email** button to receive a summarized email once a day on all the purchase order updates.

6. Under **Disclosure Data Requests**, slide the **In-app** button to receive a notification in AWS Supply Chain when a data request is submitted or declined or to track the status of the data request. For example, in progress, rework requested, canceled, and so on.

7. Choose **Save**.

8.   On the AWS Supply Chain dashboard, choose the **Bell** icon on the top-right to view the in-app
     notifications.

Work Order Insights

You can use Work Order Insights to view work order status, expected time of arrival (ETA) predictions, delivery risk and recommendations for each work order. AWS Supply Chain uses real-time data from your ERP system and provides in-depth visibility into each work order for better planning.

Topics

- Configuring Work Order Insights for the first time

- Work Orders settings

- Work Orders

- Procurement

- Logistics

Configuring Work Order Insights for the first time

As an administrator, you can create multiple processes and milestones to track your work orders.

> **ⓘ Note**
>
> To generate a work order insight, in addition to configuring the processes and milestones for your work orders, you must ingest the required data entities and columns. For more information on the required data entites, see Work Order Insights.

1. Open the AWS Supply Chain web application.

2. In the left navigation pane on the AWS Supply Chain dashboard, choose **Work Order Insights**. The **Manage your work orders** page appears.

3. Choose **Setup**.

4. On the **Work Orders Setup** page, under **Getting Started with Work Orders**, choose **Create Process**.
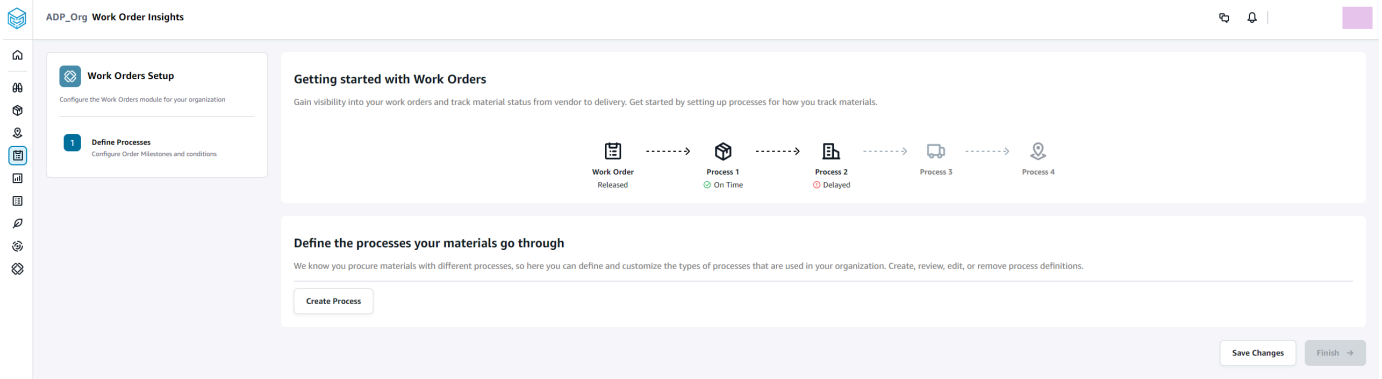
The **Edit Process** page appears.
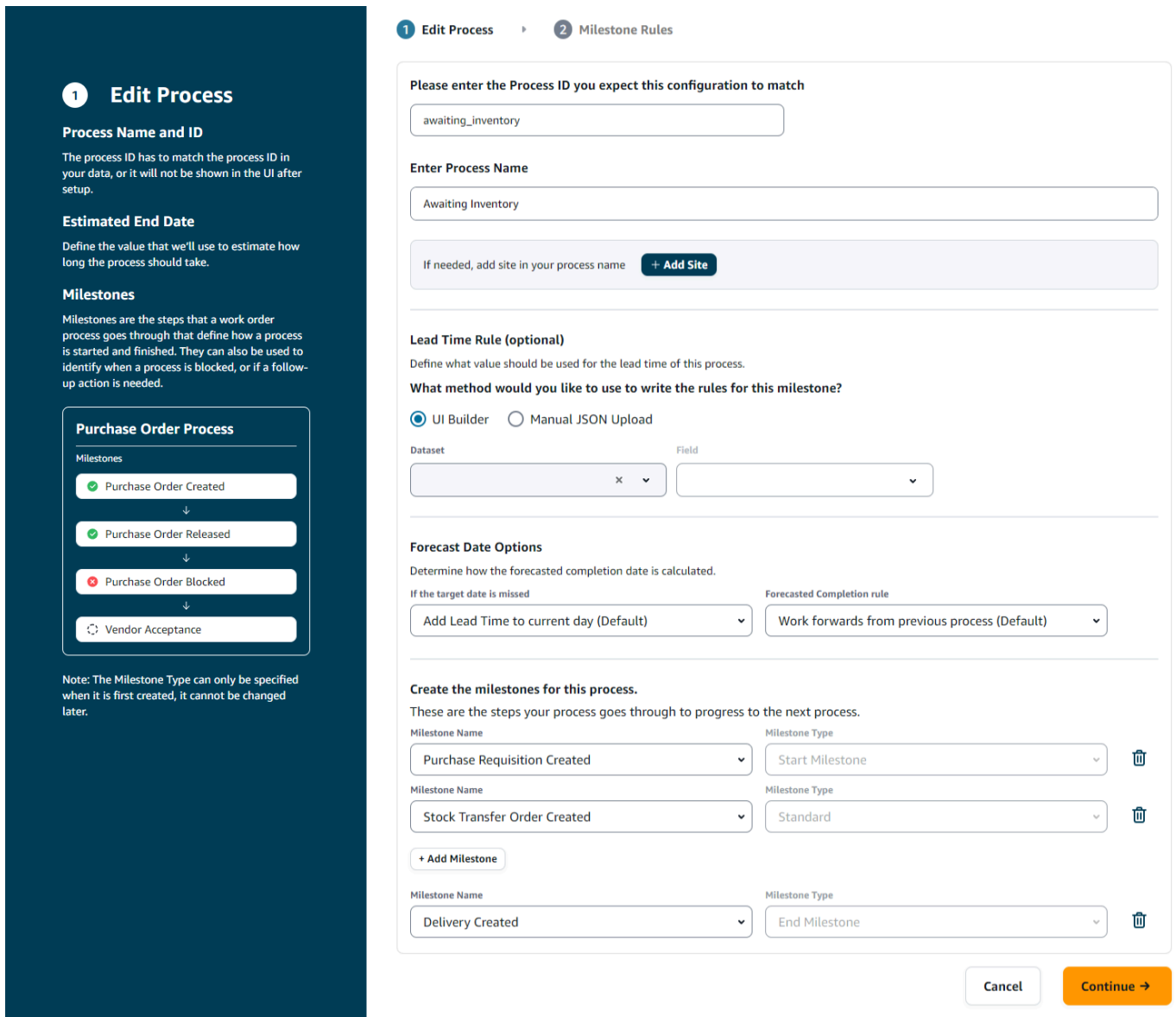
5. Under **Please enter the Process ID you expect this configuration to match** – Enter the Process ID. If the *work_order_plan* data entity is uploaded, the *Process ID* is derived from the *work_order_plan* data entity or AWS Supply Chain will generate an UUID that you can modify to match the process ID you know will be ingested.

6. Under **Enter Process Name** – Enter a name for the process.

   If you have multiple sites that uses the same process name, choose **Add Site** to add a site with your process. The site value can be determined from any of the entities (process_header, process_operation, process_product, product, site, vendor_product) that have a one-to-one relationship with the work order line (process_product).

7. (Optional) Under **Lead Time Rule** > **What method would you like to use to write the rules for this milestone?**, choose one of the following:

   - *UI Builder* – Select the dataset and the corresponding columns that should be included in the lead time process. Make sure the dataset you select is ingested into data lake.

   - *Manual JSON Upload* – Paste the process and rule definitions in .json format.

8. Under **Forecast Date Options**, you can specify how you want the forecast completion date to be calculated.

   - *If the target date is missed* – Select *Add Lead Time to current day* if you want the forecast completion date to be the next day. Select *Add 1 day to current day* to add one day to the forecast completion target.

   - *Forecasted completion rule* – Select *Work forward from previous process* if you want the forecast calculation to work forward from the previous process completion date plus the duration of the current process. This means that the process is trying to complete as soon as possible. Select *Work backwards from required on site date* for the forecast calculation to subtract the duration from the process target date. This mean the process is trying to complete by the process target date.

9. **Create the milestones for this process** – Select the milestone name and type from the dropdown.

10. Choose **Add Milestone** to add a new milestone.

11. Choose **Continue**.

    The **Milestone Rules** page appears.

    Review the milestone rules you created.

12. Choose **Save and Exit**.

Work Orders settings

1. In the left navigation pane on the AWS Supply Chain dashboard, choose the **Settings** icon.

2. Under **Organization**, choose **Work Orders** .

   The **Work Order** setting page appears.

3. Under the **Process List** tab, you can view all the configured processes or processes that need to be configured. You can delete or create new processes.

4. Choose **Import/Export**.

5. Under **Import / Export Work Order Configuration**, choose **Save** to copy the *Milestone Definitions*, *Process Definitions*, and *Default Work Order Plans* in JSON format. You can use this feature to setup the configuration in one instance (for example, pre-production instance) and then copy the same configuration to another instance (for example, production instance).

6. (Optional) Under the **Default Work Order Plans** tab, you can setup fallback lead times for processes that don't match the work order plan data.

   By default, work order insights uses the lead time information from the *work_order_plan* dataset. If work order insights can't find the material to process combination in the w*work_order_plan* dataset, work order insights will use the default work order plan configuration for matching lead times. Work order plans are segmented by the *reservation_type* in the *reservation* dataset. To use the default work order configuration, the *reservation* dataset must be ingested. The reservation types are displayed under the work order configuration and you can setup the work order plan for each reservation type by adding processes and defining lead times for each process.

7. (Optional) Under the **Procurement and Logistics** tab, expand **Procurement** and **Logistics**.

8. Under **Procurement** and **Logistics**, choose **Add Process** to add the processes that should be listed on the Procurement and Logistics page.

> **ⓘ Note**
>
> When there are no processes added under **Procurement** or **Logistics**, the Procurement and Logistics tab will display the details of all the processes.

9. On the **Select an existing process** page, select an existing process from the drop-down.

10. Choose **Add**.

11. Choose **Save**.

Organization Labels

As an administrator, you can customize the work order labels.

1. In the left navigation pane on the AWS Supply Chain dashboard, choose the **Settings** icon.

2. Under **Organization**, choose **Organization Labels** .

   The **Organization Labels** page appears.

3. Under **Change to Label**, enter the preferred name for each **Default Label**.

> **ⓘ Note**
>
> Changing the default label will update your entire organization with the new label for Work Orders. For example, you will see the **Work Orders** table updated when you update the *Work Order*, *Work Order Description*, *Main Work Center*, and *Planner Group* labels under **Orgainzation Labels** (see screenshot above).
>
>

4. Choose **Save**.

5. To change the customized labels to the default labels, choose **Reset all to Defaults**.

Work Orders

You can view all the work orders that are late, on time, at-risk, watch, or delivered. You can expand the work order to view the materials under each work order.

In the left navigation pane on the AWS Supply Chain dashboard, choose **Work Order Insights**. The **Work Order Insights** page appears.

AMZN **Work Order Insights**								🔔			

Work Orders Procurement Logistics

[ⓧ Filters]

	Work Order	Campaign / Revision	Main Work Center	Planner Group	Work Order Description	Work Order End Date	Work Order Priority	Recommendation	Required on Site	Site Delivery Forecast	
∨	WO-01↗	Campaign001 Revision1	Main001	Plan001	Work order for well 1 maintenance	12/23/2023 DEVIATION	1		12/18/2023	12/3/2023	Late -84d
∨	WO-03↗	Campaign003 Revision1	Main002	Plan003	Work order for well 3 maintenance	9/22/2023 DEVIATION	1		9/13/2023	11/18/2023	Late -69d
∨	WO-02↗	Campaign002 Revision1	Main001	Plan002	Work order for well 2 maintenance	9/25/2023 DEVIATION	1		9/17/2023	11/18/2023	Late -69d
∨	WO-04↗	Campaign004 Revision1	Main002	Plan004	Work order for well 4 maintenance	9/10/2023 REQUIRED	1		9/10/2023	11/18/2023	Late -69d
∨	WO-05↗	Campaign005 Revision1	Main002	Plan005	Work order for well 5 maintenance	9/16/2023	1		9/12/2023	10/5/2023	Delivered

Search by Work Order Reference or Material   [All 5]   On Time 0   Delivered 1   Watch 0   At Risk 0   Late 4

Rows per page 20 ⌄   1–5 of 5 ‹ ›

Choose **Filters** to filter the work orders based on **Country/Location**, **Campaign**, **Revision** , **Main Work Center**, **Process Name**, and **Planner Group**. Once you set your filters, choose **Apply**. You can also choose **Save filter group** to save your filters.

You can also filter the work orders by **All**, **On Time**, **Watch**, **At Risk**, **Late**, and **Delivered** status. For example, if you choose **Late**, you will see all the work orders that are currently late or delayed.

You can use the **Search** field to search by work order or material and use the *Sort* option to sort the work orders. You can sort them by any of the headers but by default, the work orders are sorted first by **Site Delivery Forecast** and second by **Work Order Priority**.

The **Work Orders** page, displays the following from your ERP or source system:

- **Work Order** – Display the work order number. You can select the work order to view your ERP or source system. You can expand each work order to view the materials in the work order.
- **Campaign/Revision** – Displays the campaign and/or the revision of the work order.
- **Main Work Center** – Displays the main work center defined in the source system.
- **Planner Group** – Displays the planning group for each work order.
- **Work Order Description** – Displays a brief reasoning of the work order.
- **Work Order End Date** – Displays the date by which the work order should me completed.

- **Work Order Priority** – Displays the priority of the work order. AWS Supply Chain will only accept a numerical value for this field. For example, 1,2,3, and so on. If your ERP system doesn't contain a numerical value for this field, you will not be able to sort the work order by priority.

- **Recommendation** – Displays all actionable items and is linked to a milestone. For example, if the work order is blocked with a PO blocked milestone, the recommendation text will display to look for alternate products.

- **Required on Site** – The date when all the materials are required on-site before starting the work.

- **Site Delivery Forecast** – Displays one of the following:

  - **Late** – Displayed when the work order is running late due to the underlying work order material with the latest delivery date estimated to arrive late. This item is displayed in Red.

  - **On-time** – Displayed when the materials under the work order is reaching the site within the required on-site date. This item is displayed in Green.

  - **At risk** – Displayed when the material with the latest arrival date has a process that is either delayed or is in a blocked milestone. This item can still make the required date and is displayed in Yellow.

  - **Watch** – Displayed when the material with the latest date is either blocked or late in a current supply chain process.

  - **Delivered** – Displayed after the last milestone of the last process is initiated indicating the completion of the process.

Viewing work order materials

You can view all the materials related to a work order.

1. In the left navigation pane on the AWS Supply Chain dashboard, choose **Work Order Insights**.

   The **Work Order Insights** page appears.

2. Expand the work order you would like to view.

   The **Materials in Work Order** page appears.

   - **Material** – Displays the material number.

   - **Description** – Provides a description of the material.

   - **QTY/UoM** – Lists the quantity of the material. If UoM is available, UoM value is displayed. For example, 2 eaches.

- **Material Source** – Displays if the material is in inventory or direct purchase.

- **Current Process** – Displays the current supply chain process for the work order material.

- **Recommendation** – Displays all actionable items and is linked to a milestone.

- **Required on Site** – Displays the date on which the material is required on-site.

- **Site Delivery Forecast** – Displays the site delivery forecast and status.

3. Choose the **Material** you would like to view in-detail. The **Material Summary** page appears and displays the summary of the material.

You can view the current milestone for the material and the recommendation AWS Supply Chain provides for each milestone.

4. Slide the **Show Completed Milestones** button to view all the completed milestones for a material.

↩ **Product 6** [Late -19d]   Show Completed Processes 🟢

Material ID: Product6   Quantity/UoM: 1 eaches   Required on Site: [11/29/2023]   Site Delivery Forecast: [12/18/2023]

| ✓ | **Work Order Release** | Completed | WO-WorkOrder1 ↗ |

| ✓ | **Purchase Requisition** | Completed | |

| ✓ | **Request For Quote** | Completed | |

→ **Purchase Order**   Forecasted Completion   [Late -19d]
                                              11/8/2023

Milestones: Recommendation:
✔ RFQ Created Milestone
✔ Purchase Order Created Milestone
⟳ Purchase Order Released Milestone
⟳ Vendor Accepted Milestone

Vendor Lead Time   Forecasted Completion
Planned: 5 day(s)   11/13/2023

In-Transit To Supply Plant   Forecasted Completion
Planned: 5 day(s)   11/18/2023

Good Receipting At Supply Plant   Forecasted Completion
Planned: 5 day(s)   11/23/2023

Ready To Ship From Supply Plant   Forecasted Completion
Planned: 5 day(s)   11/28/2023

In-Transit To Demand Plant   Forecasted Completion
Planned: 5 day(s)   12/3/2023

Processing At Demand Plant   Forecasted Completion
Planned: 5 day(s)   12/8/2023

In-Transit To Demand Plant   Forecasted Completion
Planned: 5 day(s)   12/13/2023

Material Consumed At Demand Plant   Forecasted Completion
Planned: 5 day(s)   12/18/2023

Material Summary

Source
Direct Purchase

Vendor
Partner1
Partner 1

Purchase Order Delivery Date
[10/10/2023]

Vendor Request Status
New

Campaign
Campaign001

Work order reference
WorkOrder1 ↗

PO / Line Number
PO006 - POLine006 ↗

PR / Line Number
PR006 - PRLine001

RFQ / Line Number
RFQ006 - RFQLine006 ↗

Procurement

You can view the procurement details for all the items ordered as part of a work order. By default, you can view the supply chain processes for procurement and you can use the filters to view a subset of procurement processes. You can select the **Material Name** to view the corresponding procurement summary.

In the left navigation pane on the AWS Supply Chain dashboard, choose **Work Order Insights**. The **Work Order Insights** page appears. Choose the **Procurement** tab.

AMZN Work Order Insights **Work Order Insights**

Work Orders   **Procurement**   Logistics   ⑦

▽ **Filters**

🔍 Search by Reference or Material   All 5   On Time 1   Delivered 0   Watch 0   At Risk 0   Late 4

Work Order	PR/Line	RFQ/Line	PO/Line	Work Order Priority	Material Name		QTY / UoM	Source	Current Process	Required on Site	Site Del
WorkOrder1 ↗	PR003 - PRLi... ↗	RFQ003 - RF... ↗	PO003 - POLi... ↗	1	Product3 Product 3	◇	1 eaches	Partner 1 - Partner1	Purchase Order	11/29/2023	12/18/2
WorkOrder1 ↗	PR004 - PRLi... ↗	RFQ004 - RF... ↗	PO004 - POLi... ↗	1	Product4 Product 4	◇	1 eaches	Partner 1 - Partner1	Purchase Order	11/29/2023	12/18/2
WorkOrder1 ↗	PR005 - PRLi... ↗	RFQ005 - RF... ↗	PO005 - POLi... ↗	1	Product5 Product 5		1 eaches	Partner 1 - Partner1	Purchase Order	11/29/2023	12/18/2
WorkOrder1 ↗	PR006 - PRLine001	RFQ006 - RF... ↗	PO006 - POLi... ↗	1	Product6 Product 6		1 eaches	Partner 1 - Partner1	Purchase Order	11/29/2023	12/18/2
WorkOrder1 ↗	PR001 - PRLi... ↗	RFQ001 - RF... ↗	PO001 - POLi... ↗	1	Product1 Product 1b	◇	1 eaches	Partner 1 - Partner1	Purchase Order	2/28/2025	5/10/20

Rows per page 20 ⌄   1–5 of 5   ‹   ›

You can choose **Filters** to filter the work orders based on **Country/Location**, **Campaign**, **Revision**, **Main Work Center**, **Process Name**, and **Planner Group**. Once you set your filters, choose **Apply**. You can also choose **Save filter group** to save your filters.

You can also filter the work orders by **All**, **On Time**, **Delivered**, **Watch**, **At Risk**, and **Late** status. For example, if you choose **Late**, you will see all the work orders that are currently late or delayed.

You can use the **Search** field to search for the required work orders. You can sort them by any of the headers but by default, the work orders are sorted first by **Site Delivery Forecast** and second by **Work Priority**.

The **Procurement** page, displays the following from your ERP or source system:

- **Work Order** – Display the work order number. You can select the work order to view your ERP or source system.
- **PR/Line** – You can select the procurement or line number to view in your ERP or source system.
- **RFQ/Line** – You can select the RFQ or line number to view in your ERP or source system.
- **PO/Line** – You can select the purchase order (PO) or line number to view in your ERP or source system.

- **Work Order Priority** – Displays the priority of the work order. AWS Supply Chain will only accept a numerical value for this field. For example, 1,2,3, and so on. If your ERP system doesn't contain a numerical value for this field, you will not be able to sort the work order by priority.

- **Material Name** – Displays the name of material that is being procured. If a material is marked *Hazmat* in your ERP system, AWS Supply Chain will display the Hazmat sign next to the material.

  You can select the material name to view the current work order milestone. Slide the **Show Completed Milestones** button to view all the completed milestones for a material.

- **Quantity/UoM** – Displays the quantity of the material that is being procured.

- **Source** – Display the source from which the material is being procured.

- **Current Process** – Displays the current process of the work order.

- **Required on Site** – Displays the date the product is required at the work order site.

- **Site Delivery Forecast** – Displays one of the following:

  - **Late** – Displayed when the work order is running late due to the underlying work order material with the latest delivery date estimated to arrive late. This item is displayed in Red.

  - **On-time** – Displayed when the materials under the work order is reaching the site within the required on-site date. This item is displayed in Green.

  - **At risk** – Displayed when the material with the latest arrival date has a process that is either delayed or is in a blocked milestone. This item can still make the required date and is displayed in Yellow.

  - **Watch** – Displayed when the material with the latest date is either blocked or late in a current supply chain process.

  - **Delivered** – Displayed after the last milestone of the last process is initiated indicating the completion of the process.

- **Recommended Action Due Date** – Displays the actions that needs to be completed by the forecast completion date for the supply chain process linked to the recommendation.

- **Recommendation** – Displays all actionable items and is linked to a milestone.

Logistics

You can view the logistics details for all the items ordered as part of a work order. You can select the **Material Name** to view the corresponding material summary for any supply chain process.

In the left navigation pane on the AWS Supply Chain dashboard, choose **Work Order Insights**.

The **Work Order Insights** page appears. Choose the **Logistics** tab.

You can choose **Filters** to filter the work orders based on **Country/Location**, **Campaign**, **Revision**, **Main Work Center**, **Process Name**, and **Planner Group**. Once you set your filters, choose **Apply**. You can also choose **Save filter group** to save your filters.

You can also filter the work orders by **All**, **On Time**, **Delivered**, **Watch**, **At Risk**, and **Late** status. For example. if you choose **Late**, you will see all the work orders that are currently late or delayed.

You can use the **Search** field to search for the required work orders. You can sort them by any of the headers but by default, the work orders are sorted first by **Site Delivery Forecast** and second by **Work Priority**.

The **Logistics** page, displays the following from your ERP or source system:

- **Work Order** – Display the work order number. You can select the work order to view your ERP or source system.

- **PR/Line** – You can select the procurement or line number to view in your ERP or source system.

- **PO/Line** – You can select the purchase order (PO) or line number to view in your ERP or source system.

- **STO/Line** – You can select the standard transfer order (STO) or line number to view in your ERP or source system.

- **Work Order Priority** – Displays the priority of the work order. AWS Supply Chain will only accept a numerical value for this field. For example, 1,2,3, and so on. If your ERP system doesn't contain a numerical value for this field, you will not be able to sort the work order by priority.

- **Material Name** – Displays the name of material that is being procured.

  You can select the material name to view the current work order milestone. Slide the **Show Completed Milestones** button to view all the completed milestones for a material.

- **Quantity/UoM** – Displays the quantity of the material that is being procured.

- **Source** – Display the source from which the material is being procured.

- **Current Process** – Displays the current milestone.

- **Required on Site** – Displays the date on which the material is required on-site.

- **Site Delivery Forecast** – Displays one of the following:

  - **Late** – Displayed when the work order is running late due to the underlying work order material with the latest delivery date estimated to arrive late. This item is displayed in Red.

  - **On-time** – Displayed when the materials under the work order is reaching the site within the required on-site date. This item is displayed in Green.

  - **At risk** – Displayed when the material with the latest arrival date has a process that is either delayed or is in a blocked milestone. This item can still make the required date and is displayed in Yellow.

  - **Watch** – Displayed when the material with the latest date is either blocked or late in a current supply chain process.

  - **Delivered** – Displayed after the last milestone of the last process is initiated indicating the completion of the process.

- **Recommended Action Due Date** – Displays the actions that needs to be completed by the forecast completion date for the supply chain process linked to the recommendation.

- **Recommendation** – Displays all actionable items and is linked to a milestone.

Demand Planning

Demand Planning is a web-based demand planning application that allows business users to create, collaborate, and publish demand plans. Demand Planning generates forecasts using proprietary machine learning algorithms based on historical forecasting experience.

> ⓘ **Note**
>
> Demand Planning is only supported in US East (N. Virginia), US West (Oregon), Asia Pacific (Sydney) Region, and Europe (Frankfurt) Regions. Demand Planning is not supported in Europe (Ireland) Region.

Topics

- [Terminology](#)
- [Configuring Demand Planning](#)
- [Overview](#)
- [Viewing your demand plan](#)
- [Forecast validation](#)
- [Product lifecycle](#)
- [Product lineage](#)
- [Forecast based on demand drivers](#)
- [Adding an override](#)
- [Exporting files](#)
- [Publish demand plan](#)
- [Modifying Demand Plan settings](#)

Terminology

The following is the common terminology that you may frequently use in Demand Planning.

- **Enterprise demand plan** – A single planning workbook that consolidates forecast input from multiple stakeholders to create a unified forecast. It can consist of multiple planning

cycles, enabling iterative refinement of forecast based on evolving forecast input dataset. The enterprise demand plan displays two status points:

- **Active** – The planning cycle is open and you can edit your forecast.

- **Published** – The planning cycle is closed, and you cannot edit your forecast. However, you can view the demand plan.

- **Demand planning cycle** – The time taken to create and finalize demand plans, which include forecast generation, and collaborating with stakeholders to adjust and publish demand plans.

- **Dataset** – A collection of data used for generating forecasts, such as historical sales orders or product information.

- **Forecast granularity** – Defines how you want to create and manage the forecast. You can use a combination of product, location, customer, and channel dimensions. You can also choose the time interval for the forecast data to be aggregated by day, week, month, or year for each product in the dataset. For example, if your forecast granularity is set as Daily, you will see the forecast daily for each product in the dataset.

> **ⓘ Note**
>
> Demand Planning uses the Gregorian calendar for planning. The default start day of the week is Monday.

- **Forecast configuration** – The set of configurations for forecast generation. This includes the planning cycle configuration, time horizon granularity, and that hierarchy configuration that influences how Demand Planning will generate the forecast.

- **System generated forecast** – This is also known as the baseline forecast. It refers to the use of the historical data by the system to generate a forecast. It provides initial demand prediction before you apply any overrides.

- **Override** – A modification that you make to the system generated forecast.

- **Published demand plan** – The final output of the planning workbook. You can choose to publish the finalized demand plan to downstream inventory and supply planning systems for implementation.

- **Product lineage** – You can establish links between products and their previous versions or alternate products and set rules around the extent of history that needs to be used for forecasting. For more information, see Product lineage.

- **Product lifecycle** – The product lifecycle refers to the various stages of a product from introduction to End of Life (EoL). For more information on product lifecycle, see Product lifecycle.

- **Demand driver** – Factors that directly influence the level of demand for a particular product. For example, advertising and marketing efforts, pricing strategies, and so on. For more information on demand drivers, see Forecast based on demand drivers.

Configuring Demand Planning

You can create demand plans to forecast your inventory demand accurately across your organization.

> **ⓘ Note**
>
> When you log into Demand Planning for the first time, you'll be able to view the onboarding pages that highlight the key features. This helps you to get familiar with the Demand Planning capabilities. Once Demand Planning is configured, you can view or modify the demand plan configuration settings under *Settings > Organization > Demand Planning*.

The Enterprise Demand Plan is derived from single forecast configuration settings. Make sure that someone in your organization has used the following steps to complete the forecast configuration settings. If they have already been already set up by someone else in your organization, then you won't need to complete these steps. Instead, you will be directed to the **Demand Planning** page where you can start reviewing the forecast.

1. On the **Demand planning** page, choose **Next**.

   You can read through to understand what Demand Planning offers, or choose **Next** until you get to the **Configure Demand Planning** page.

2. On the **Configure Demand Planning** page, there are five steps to configure Demand Planning.

   - **Scope** – Defines the dimensions and the time frame for Demand Planning to generate forecasts.

   - **Configure your dataset** – Defines the outbound_order_line dataset. This option is mandatory for Demand Planning to generate an accurate forecast. You also define how

you want Demand Planning to handle negative quantity values in the outbound_order_line dataset. For more information about mandatory and optional Demand Planning fields, see [Data entities and columns used in AWS Supply Chain](#).

- **Forecast Settings** – Set global parameters to determine the forecast period, minimum forecast value, and initialization values for new products with no alternate data.

- **Scheduler** – You can define how and when forecasts should be refreshed and published.

- **Organization Settings** – Defines where your Demand Plans will be published. It also shows other configuration options within the application.

3. Under **Scope**, **Planning Horizon**, select the following:

- **Time Interval** – Select the time interval from the choice of daily, weekly, monthly, or yearly options. The time interval is used to aggregate and analyze data. Choose a time interval based on the nature of your business, availability, and granularity of historical data.

- **Time Horizon** – Time horizon is the specific period for when a forecast is generated. The value should be a whole number with a minimum value of 1 and maximum of 500. The amount of historical data available also will dictate the Time Horizon. Make sure that at least one product in the outbound_order_line dataset has sales history at least four times the time horizon set. For example, if you set **Time Horizon** to 26 and **Time Interval** as *weekly*, the minimum order data requirement is 26*4 = 104 weeks.

The planning cycle start date is based on the last order date in the outbound order line dataset. If the time interval configuration is:

- **Daily** – Planning cycle start date will be the day after the last order date. For example, if the last order date is October 30, 2023, the planning cycle start date will be October 31, 2023.

- **Weekly or Monthly** – When the last order date is the same as the time boundary, the planning cycle start date will be after a week or month. For example, when the last order date is October 29, 2023 (which is a Sunday and Demand Planning's week time boundary), the planning cycle start date will be October 30, 2023.

  When the last order date falls within the time boundary, Demand planning will trim the order history for the last time window and create forecast from the new period. For example, when the last order date is November 01, 2023 (which is a Wednesday and not in the Demand Planning's week time boundary), the planning cycle start date will be October 30, 2023. Demand Planning will ignore the order history from October 30, 2023 to November 01, 2023.

Under **Forecast Granularity**, **Required Hierarchy**, select the parameters to define your forecast hierarchy. Product ID attribute is mandatory and is automatically selected as the last level in the hierarchy. You can choose **Add level** to add additional hierarchy levels between product_group_id, product_type, brand_name, color, display_desc, and parent_product_id. Make sure that the required hierarchy attributes have information in the product dataset, because you can use these attributes to filter the demand plan.

Under **Optional Hierarchy**, choose **Add level** to add up to five attributes from **Site**, **Channel**, and **Customer** to better manage your forecast. The supported columns from the *outbound_order_line* dataset are:

- Site hierarchy = ship_from_site_id, ship_to_site_id, ship_to_site_address_city, ship_to_address_state, ship_to_address_country

- Channel hierarchy = channel_id

- Customer hierarchy = customer_tpartner_id

Make sure that the required hierarchy attributes have information in the product dataset since these attributes are used to filter demand plans.

4. Choose **Continue**.

5. On the **Configure your dataset** page, under **Configure Forecast Input**, you should configure the required and recommended datasets.

    - Required Datasets – The *outbound_order_line* and *product* data entities are required to generate a forecast.

    - Recommended Datatsets – The *product_alternate* and *supplementary_time_series* data entities are optional. You can generate a forecast without these data entities but when provided, the forecast quality will be improved.

6. Under **Required Datasets**, expand **Historical Demand** and choose **Configure** to set the negative value for missing data. *outbound_order_line* dataset is the primary source of historical demand.

    - **Ignore** – Select if you want AWS Supply Chain to ignore the products with missing order_date before creating the forecast.

    - **Replace with zero** – Select if you want AWS Supply Chain to replace the missing order_date fields with zero by default to the final requested quantity.

7. No additional configuration is required for *product* data entity. Product attributes are used for filters, configure hierarchy, and for training the learning model.

8. Under **Recommended Datatsets**, no additional configuration is required for *product_lineage*. You can use the *product_alternate* data entity to provide information on alternate or previous version of the product. For more information on product lineage, see Product lineage.

9. Select **Demand Drivers** if you have demand drivers information such as promotions, price changes, and so on, you can use *supplementary_time_series* data entity to ingest data. You can select up to 13 demand drivers and configure aggregation and missing data filling strategy. For more information on demand drivers, see Forecast based on demand drivers.

10. Choose **Continue**.

11. On the **Forecast Settings** page, under **Configure Forecast Start and End Date**, enter the time period on when you would want the forecast to start for new products and end for end-of-life products.

    Under **New Product Initial Forecast**, enter an initial forecast value that should be considered for forecast and the time period the minimum forecast value should be applied for products with no alternates.

    > ⓘ **Note**
    >
    > The time period displayed will depend on the time period you chose under **Time intervals** in the **Planning Horizon** page. For example, if you chose *Monthly* under **Time intervals**, you will be able to specify the number of months before or after to start and stop the forecast, and for products with no demand history.

12. Choose **Continue**.

13. On the **Demand Plan Publish Scheduler** page, under **Recurring Forecast Runs**, setup the forecast recurring cycle. *Manual* is the default Demand Plan publish schedule option. When you select **Manual**, you have to manually enter the planning cycle. Under **Forecast interval**, choose how you would like to setup the forecast. Choose **Auto** for AWS Supply Chain to automatically start the next planning cycle.

    If you choose **Auto**, you will see when your next forecast plan will be published on the Demand Planning page.

14. Choose **Continue**.

15. Under **Configure Enterprise Settings**, note the Amazon Simple Storage Service (Amazon S3) path where the demand plans are published.

> **ⓘ Note**
>
> You can also find the Amazon S3 path for the published demand plans on the **Settings** page. For more information, see [Modifying Demand Plan settings](#).

16. Choose **Complete**.

    The **Enterprise Demand Plan** page displays. To start using Demand Planning, choose **Create Forecast**.

> **ⓘ Note**
>
> Forecast is generated only when you ingest data into AWS Supply Chain. Make sure that all the required and optional attributes that you chose have information in the dataset.

After you set the forecast settings, you can generate the forecast and demand plan for the time horizon that you set. On the **Enterprise Demand Plan** page, choose **Create Forecast**.

Overview

> **ⓘ Note**
>
> You can only view the **Overview** page after the forecast is generated for the first time.

> **ⓘ Note**
>
> AWS Supply Chain recommends uploading two to three years of outbound order line history as input to generate an accurate forecast. This duration allows the forecasting models to capture your business cycles and ensure a more robust and reliable prediction. For improved forecast accuracy, it is also recommended to include product attributes such as *brand*, *product_group_id*, and *price* in the product dataset.

After the forecast is generated, you can view the overall influence factors and accuracy metrics on the **Demand Planning**, **Overview** page.

- **Overall Influence Factors** – Indicates the impact score of product metadata attributes and demand drivers (if any), used to generate forecast in the current planning cycle. You can view the influence factors after the first successful forecast generation. A negative value indicates the attributes caused the forecast to go down and vice versa. A zero value indicates that the attribute has no influence on the forecast result. For information on forecast based on demand drivers, see [Forecast based on demand drivers](#).

- **Accuracy Metrics** – After you update the dataset (outbound_order_line) that contains the actual demand for the forecast period, choose **Recalculate**. You can view the accuracy metrics for the latest demand plan under the **Demand Plan** tab. Accuracy metrics measure how the accuracy of the current demand plan aligns with the actual demand.

  Accuracy metrics are available at **plan (aggregate)** and **granular lowest** level during forecast generation. The **Overview** page displays the aggregate level metrics and under **Accuracy Metrics**, you can choose **Download** to download the granular metrics.

  The following are the formulas used to calculate the metrics displayed on the web application.

  - **Mean Absolute Percentage Error (MAPE)** – MAPE takes the absolute value of the percentage error between observed and predicted values for each unit of time and averages those values.

    The formula at granular and plan level is below:

    $$\frac{1}{n} \sum_{t=1,n} \left| \frac{A_t - F_t}{A_t} \right|$$

    A MAPE less than 5% indicates the forecast is acceptably accurate. A MAPE greater than 10% but less than 25% indicates low, but acceptable accuracy, and MAPE greater than 25% indicates very low accuracy and the forecast is not acceptable.

  - **Weighted Average Percentage Error (WAPE)** – WAPE measures the overall deviation of forecasted values from observed values. WAPE is calculated by taking the sum of observed values and the sum of predicted values, and calculating the error between those two values. A lower value indicates a more accurate model.

    The formula at granular and plan level is below:

    $$r \; \frac{\sum_{t=1,n} |A_t - F_t|}{\sum_{t=1,n} |A_t|}$$

A WAPE less than 5% is considered as acceptably accurate. A WAPE greater than 10% but less than 25% indicates low, but acceptable accuracy and WAPE greater than 25% indicates very low accuracy.

See the following example:

	A	B	C	D	E	F
4						
5	**Timestamp**	**Product ID**	**Forecast**	**Actual**	**MAPE**	**WAPE**
6	5/5/2023 12:05	FC01	74	69	7.25	7.25
7	5/5/2023 12:05	FC02	41	35	17.14	17.14
8	5/5/2023 12:05	FC03	82	77	6.49	6.49
9	5/5/2023 12:05	SN01	82	70	17.14	17.14
10		Total	279.00	251.00		
11						
12						
13				Overall MAPE	12.01	=AVERAGE(E6:E9)
14				Overall WAPE	11.16	=ABS(D10-C10)/ABS(D10)*100
15						

The metrics are not calculated when actual is zero or null. When a new forecast is generated subsequently, the previous reported metrics will no longer be available on the web application. Make sure the latest outbound_order_line dataset is updated and choose **Recalculate** to view the updated metrics.

The accuracy metrics reflect the accuracy of the current demand plan for all time periods that have an actual demand value in the current executed forecast.

For example, if your current planning cycle has forecast from January to December 2023 with monthly forecasts and you updated the actual data for January 2023, accuracy metrics will be computed for January 2023. Similarly, if your current planning cycle has forecast from January to December 2023 with monthly forecasts and you updated the actual data for January 2023 and February 2023, accuracy metrics will be computed for January 2023 and February 2023. The Demand Planning web application will display the aggregated metric for Jan-Feb-2023 and the export file will display the granular details.

> ⓘ **Note**
>
> When you modify the *Time interval* or *Hierarchy* configuration and regenerate the forecast, the accuracy metrics will not be displayed since the accuracy metric values are not relevant.

Viewing your demand plan

After the forecast is generated, you can review the forecast values on the **Demand Planning**, **Forecast** page. The **Enterprise demand plan** is a single workbook that serves as a collaborative platform to work together. It provides a centralized location for you to consolidate and synchronize the forecasting effort.

The Demand Plan table displays the following information:

- **Forecasted Demand** – Displays the system generated forecast and includes the following three values:

  - **Lower Bound** – Forecast prediction that is typically higher than the actual demand around 90 percent of the time.

  - **Median Demand** – Forecast prediction that is typically higher than the actual demand 50 percent of the time (central estimate).

  - **Upper Bound** – Forecast prediction that is typically higher than the actual demand 10 percent of the time.

> ℹ️ **Note**
>
> *Lower and Upper Bound* information is only displayed when a *product_id* is selected. *Median Demand* is displayed at both aggregate level and when a single *product id* is selected.

- **Demand Plan** – Median Demand is replicated in this row to allow for overrides.
- **Actual Demand** – Displays demand history for the current and prior years.

  When comparing historical data on a weekly basis, Demand Planning will reference the closest Monday in the previous year. This is because Demand Planning considers Monday as the starting day of the week. Due to variations between years and leap years, the corresponding week in the previous year might not have the exact same date. For example, to compare if historical sales data for the week of 6/3/2023 is available, which is a Monday, Demand Planning will reference the week with the closest Monday in the previous year, which is 7/2/2022.

- **Prior Forecast Versions** – The last published demand plan displays. This will be blank during the first forecast creation because no history is available.
- **Lifecycle and Events** – Displays the products in the demand plan that are New Product Introductions (NPI) or products that are nearing End of Life (EoL). When you hover over the **NPI**

or **EoL** icons, when more than one product is selected, you can view the number of products and the list of products. When only one product is selected, you can view the product metadata. , product available day in case of NPI, discontinue day in case of EoL, and forecast start and stop date.

> **ⓘ Note**
>
> You will only see the number of products that are new or nearing EoL listed when the product category is set to all or when a higher level in product hierarchy is selected.

You can use the **Graph** toggle button to hide or show the graph view. You can hide or show the specific value by choosing the eye icon. When you filter by products, you can hover over the *i* help icon to view the product description, unit of measure (UoM), product available date, and discontinue date.

To view the forecast, complete the following steps:

1. On the **Enterprise demand plan** page, you can see the timestamp of the forecast generated. If the **Enterprise demand plan** is in *active* state, you can use the filters and make adjustments.

2. On the **Enterprise demand plan** page, under **All**, choose **Change category/product** to change the generated forecast view. By default, the forecast displayed represents the total forecast demand for all products within the defined scope or time horizon.

3. On the **Select Category/Product** page, you can select the product from the list or use the search box to search for a particular product by *Product ID* or *Description*.

4. Choose **Apply**. You can now view the filtered forecast for the selected product or category.

   > **ⓘ Note**
   >
   > If you had chosen optional hierarchies during forecast configuration, the summary box will display the count of site, customer, and channel the selected product is sold.

5. Under **Refine your search**, if you chose optional hierarchies during forecast configuration, you can filter for **Site**, **Channel**, or **Customer** to further refine your forecast. For example, if you chose **Site** and **Channel** hierarchy during forecast configuration, the filters for Site and Channel will be available on the **Demand Planning** page.

6. Choose **Apply** to apply the filters.

7. In the **Time interval** dropdown list, select the time interval to view the forecast. You can use this filter to adjust the time hierarchy and view the forecast in both table and graph form. The lowest value corresponds to the forecast granularity time interval setting. For example, if the time interval is *Weekly*, you can view the forecast at *Weekly*, *Monthly* and *Yearly*.

    You can also use the **Planning horizon start** and **Planning horizon end** to narrow down the period that you want to view in the forecast, both in table and graph view.

Time interval example 1

Demand Plan is generated at daily time-intervals per configuration. You can view the Demand Plan at weekly time interval by selecting the option on the Time Interval filter on the Demand Plan page. The system will aggregate values into weeks with Monday as the starting day of the week.

You can also view the demand plan in monthly time interval by using the Time Interval filter and selecting the monthly option. System will aggregate values into Gregorian calendar month with start day as 1, because demand plan is available at daily granularity.

Time interval example 2

Demand plan is generated at weekly time-interval per configuration. You can view the Demand plan at monthly time interval by selecting the Time Interval filter. The time boundaries for month will not be strict Gregorian calendar month.

Forecast validation

By default, forecast validation is enabled. To make sure the forecast generated is accurate, Demand Planning will monitor and update you on the forecast quality or accuracy. If Demand Planning determines the forecast requires additional validation, Demand Planning will delay publishing the forecast and you will see a message that displays the date and time when the forecast will be published on the AWS Supply Chain web application.

You can also opt-out and Demand Planning will not monitor your forecast. For more information on how to opt-out, see Opt-out preference.

You can view the last published demand plan in read-only mode.

Product lifecycle

Product lifecycle describes the lifecycle of a product from introduction to End of Life (EoL). AWS Supply Chain supports forecasting products through it's lifecycle. To enable the Product lifecycle feature, populate the *product_introduction_day* and *discontinue_day* columns in the *Product* data entity. Demand planning uses the data from these columns to create forecast for a product when the product is active. For more information data entities, see Data entities and columns used in AWS Supply Chain.

To enable product lifecycle, make sure the columns *id*, *description*, *product_available_day*, *discontinue_day*, and *is_deleted* are populated in the *Product* data entity.

The example below displays how Demand planning works when data is ingested in the Product data entity.

Column name	Required for Data Lake	Required for Demand Planning	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7
id	Yes	Yes	Product 123	Product 123	Product 123	Product 123	Product 123	Product 123	Product 123
description	Yes	Yes	Bottle	Bottle	Bottle	Bottle	Bottle	Bottle	Bottle
product_available_day	No	No	5/1/2023	5/1/2023	5/1/2023	NULL	NULL	5/1/2022	5/1/2022
discontinue_day	No	No	NULL	12/31/2023	12/31/2023	NULL	NULL	5/1/2023	(past)
is_deleted	No	No	No	No	Yes	No	NULL	No	No
Expected behavior			Forecast will be created starting 3 months prior(or as configured) prior to 5/1/2023 to the end of the planning horizon since there is no discontinue date.	Forecast will be created starting 3 months prior(or as configured) prior to 5/1/2023 until the discontinue date (or as configured).	Forecast will not be created since the product is considered inactive.	Forecast will be created for the entire planning horizon.	Assumed that the product is active.	Forecast will be created for one day (5/1).	In case of conflict between is_deleted and discontinue_day, is_deleted is considerd.

For information on how to configure Product lifecycle, see Configuring Demand Planning.

Under Demand Planning settings, you can set your forecast start date depending on the *product_available_day* in the Product data entity. By default, the forecast starts on the

product_available_day. *Period* refers to the time interval set under **Scope** (daily, weekly, monthly, or yearly). You can adjust the start date to optimize inventory management.

Similar to start date, you can set an end date for your forecast depending on the *product_discontinue_day* in the Product data entity. By default, forecast will end on the *product_discontinue_day*. You can adjust the end date to prevent inaccurate forecasting beyond the product shelf life and avoid excess inventory cost. Enter zero if you want the forecast to match the *product_available_day* and *product_discontinue_day*. This global setting will apply to all eligible products.

When *product_available_day* and *product_discontinue_day* are not available, the forecast is created for the entire planning horizon.

You can also configure your system to initialize forecast values for products without historical data or alternate product links. The default value is zero. You can also set the period until which your system should use the initialize product forecast value based on the time interval set under **Scope** (daily, weekly, monthly, or yearly). The default value is three periods. This global setting will apply to all eligible products at the intersection of site, customer and channel dimensions, if they are selected as additional forecast granularity. For example, when forecast is set to weekly with an initialized value of 10 for 12 periods, and the start forecast is set to three periods before the *product_available_day*, for a Product X with October 2, 2023 product_available_date, the initialized value of 10 will be applied for each week from September 11, 2023 to December 3, 2023.

To change the *product_available_day* and *product_discontinue_day*, update the Product data entity in AWS Supply Chain data lake. You can also update the forecast start and stop date. When you change the initialization value and period settings, the changes are applied to all eligible products, including those which were initialized with a different value in the previous planning cycles. All the updates are applied to the next forecast creation cycle.

Product lineage

Product lineage refers to the relationship established between products and their previous versions or alternate products. Demand Planning uses the product lineage information to create surrogate history for such products, which serves as a forecast input for demand predictions.

Product lineage supports the following patterns:

- A single product has one lineage or alternate product = 1:1

One to one relationship: Demand history of Product A is used to create a 'surrogate' history for Product Z for forecasting

The following example shows an 1:1 scenario.

Product entity	id	product_available_day	discontinue_day						
	Generic medication	8/1/2020		>> Substitute for Branded medication					
	Branded medication	10/1/2023							

Product_alternate entity	product_id	alternative_product_id	alternate_type	alternate_product_qty	alternate_product_qty_uom	eff_start_date	eff_end_date	Status
	Branded medication	Generic medication	similar_demand_product	100	percentage			Active

100% of entire order history for Generic medication available in the outbound_order_line data will be considered to create a *surrogate* order history for Branded medication.

- A single product has more than one product as lineage or alternate = Many:1
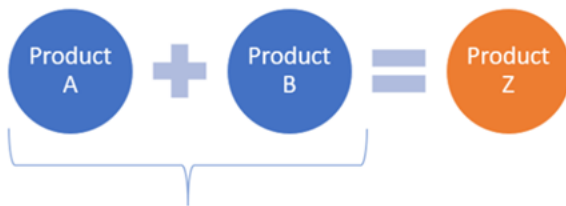
Many to one relationship: Demand histories of Product A and Product B are aggregated to create a 'surrogate' history for Product Z for forecasting

The following example shows an Many:1 scenario.

Product entity	id	product_available_day	discontinue_day						
	Shoe - Small Size	8/1/2020		>> Predecessor version					
	Shoes - Large Size	8/1/2022		>> Predecessor version					
	Shoes - Medium Size	8/1/2023		>>> New version					

Product_alternate entity	product_id	alternative_product_id	alternate_type	alternate_product_qty	alternate_product_qty_uom	eff_start_date	eff_end_date	Status
	Shoes - Medium Size	Shoe - Small Size	similar_demand_product	70	percentage	8/1/20 0:00	7/31/22 23:59	Active
	Shoes - Medium Size	Shoes - Large Size	similar_demand_product	50	percentage	8/1/22 0:00	7/31/22 23:59	Active

Order date	8/1/2020	9/1/2023	....	8/1/2022	...	7/31/2022
	70% of Shoes - Small Size's order history					
Add				50% of Shoes - Large Size's order history		
	Surrogate order history for Shoes - Medium Size to create forecast					

- A single product can be lineage or alternate for more than 1 product = 1 : Many

One to one relationship: Demand history of Product A is used to create a 'surrogate' history for Product Z and Product Y for forecasting

To enable the product lineage feature, you can define the lineage relationship for the different versions of the products or alternates/substitutes in the *product_alternate* data entity. For more information, see [Demand Planning](#).

If your instance was created on or after September 11, 2023, you will see *product_alternate* data entity in the AWS Supply Chain data Connection module. If your instance was created before September 11, 2023, create a new data connection to enable the *product_alternate* data entity for ingestion.

To ingest data into the *product_alternate* data entity, follow the guidelines below:

- *product_id* – The primary product to create the forecast.

- *alternative_product_id* – Previous version of the product or alternate/substitute product.

  To consider multiple *alternative_product_id* for a single *product_id*, enter them in separate rows.

- Demand Planning will consider the data ONLY when the values are provided in the following format.

  - *alternate_type* is *similar_demand_product*.

  - *status* is *active*.

  - *alternate_product_qty_uom* is the text *percentage*.

  - *alternate_product_qty* – Enter the proportion of history of the alternate product you want to use for forecasting new products in the *alternate_product_qty* data field. For example, if it is 60%, enter 60. When you have multiple *alternative_product_id* for a single *product_id*, the *alternate_product_qty* does not have to add up to 100.

- The *eff_start_date* and *eff_end_date* data fields are required. As an example, it is recommended to format the date fields as 9999-12-31 23:59:59 to prevent data loss during transformation.

When the forecast is created using product lineage data, you will see an indicator *Forecast is based on alternate product's history* on the Demand Planning page when you filter by *product ID*.

The following table shows an example of how Demand Planning Product lineage feature works based on the data ingested into the *product_alternate* data entity.

Colum	Requir or Optior	Examp 1	Examp 2	Examp 3	Examp 4	Examp 5	Examp 6	Examp 7	Examp 8	Examp 9	Examp 10	Example 11
produ d	Requir	Produ 123	Produ 123	Produ 123	Produ 123	Produ 123	Produ 123	Produ 123	Produ 123	Produ 123	Null	Product 123
altern ve_pr t_id	Requir	Produ XYZ	Null	Produ XYZ	Produ XYZ	Produ XYZ	Produ XYZ	Produ XYZ	Produ XYZ	Produ XYZ	Null	Product XYZ
altern _type	Requir	Simila emand duct	Simila emand duct	Null or a differe value	Simila emand duct	Simila emand duct	Simila emand duct	Simila emand duct	Simila emand duct	Simila emand duct	Simila emand duct	Similar_D emand_Pro duct
status	Requir	active	active	active	inactiv	active	active	Null	active	active	active	active
altern _prod qty	Requir	100	60	100	100	Null	100	100	100	100	100	60
altern _prod qty_u	Requir	percer e	percer e	percer e	percer e	percer e	Null or a differe value	percer e	percer e	percer e	percer e	percentag e
eff_st _date	Requir	2023- 1 00:00:	2023- 1 00:00:	2023- 1 00:00:	2023- 1 00:00:	2023- 1 00:00:	2023- 1 00:00:	2023- 1 00:00:	Null	2023- 1 00:00:	2023- 1 00:00:	Null

Colum	Requir or Optior	Examp 1	Examp 2	Examp 3	Examp 4	Examp 5	Examp 6	Examp 7	Examp 8	Examp 9	Examp 10	Example 11
eff_en ate	Requir	2025- 1 23:59:	2025- 1 23:59:	2025- 1 23:59:	2025- 1 23:59:	2025- 1 23:59:	2025- 1 23:59:	2025- 1 23:59:	2025- 1 23:59:	Null	2025- 1 23:59:	Null
Expec behav	NA	100% of produ XYZ's history from 1/1/2 to 31/12 5 will be used to foreca produ 123.	Invalic mappi since altern: ve_prc t_id is missin	Invalic mappi since altern: _type is not 'simila demar oduct'	Inactiv mappi	Invalic mappi since altern: _prodi qty is missin	Invalic mappi since altern: _prodi qty_u is missin or not percer e.	Invalic mappi since status is missin	Ingest will fail.	Ingest will fail.	Invalic mappi since produ d and altern: ve_prc t_id are missin	Ingestion will fail.

Forecast based on demand drivers

To enhance forecast accuracy while configuring your forecast, you can use demand drivers. *Demand drivers* are related time series inputs that capture product trends and seasons. Instead of depending on historical demand, you can use demand drivers to influence the supply chain based on various factors. For example, promotions, price changes, and marketing campaigns. Demand Planning supports both historical and future demand drivers.

Using demand drivers

To use demand drivers, complete the following steps:

- Make sure to ingest the demand drivers data in the *supplementary_time_series* data entity. You can provide both historical and future demand driver information. For information about the data entities that Demand Planning requires, see [Demand Planning](#).

- Select a minimum of 1 and a maximum of 13 demand drivers. Make sure that the aggregation and filling methods are configured. For more information on filling methods, see [Demand drivers data filling method](#). You can modify the settings at any time. Demand Planning will apply the changes in the next forecast cycle.

Ingesting data for demand drivers

Before ingesting data for demand drivers, make sure that the data meets the following conditions:

- If you cannot locate the *supplementary_time_series* data entity, your instance might be using an earlier data model version. You can contact AWS Support to upgrade your data model version or create a new data connection.

- Make sure that the following columns are populated in the *supplementary_time_series* data entity.

  - *id* – This column is the unique record identifier and is required for a successful data ingestion.

  - *order_date* – This column indicates the timestamp of the demand driver. It can be both past and future dated.

  - *time_series_name* – This column is the identifier for each demand driver. The value of this column must start with a letter, should be 2–56 characters long, and may contain letters, numbers, and underscores. Other special characters are not valid.

  - *time_series_value* – This column provides the data point measurement of a particular demand driver at a specific point in time. Only numerical values are supported.

The following example illustrates how Demand Planning generates a when the required demand driver columns are ingested in the *supplementary_time_series* data entity. Demand Planning recommends providing both historical and future demand driver data (if available). This data helps the learning model to learn and apply the pattern to the forecast.

Column name	Required or Optional	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
id	Required	Null				1	1	1	1	1	1	1
order_date	Required		Null			12/1/2023	12/1/2023	12/1/2023	12/1/2023	12/1/2023	12/1/2023	12/1/2023
time_series_name	Required			Null		sale_event	Price	Inventory	Price	Price	promotional_event	promotional event
time_series_value	Required				Null	1	56	204	-30	56	back_to_school	1
product_id	Optional					Null	Product A	Product A	Product A	Product A	Product A	Product A
site_id	Optional					Null	Null	Site_001	Site_001	Site_001	Null	Null
channel_id	Optional					Null	Null	Null	ECommerce	ECommerce	Null	Null
customer_tpartner_id	Optional					Null	Null	Null	Null	ACME_Ltd	Null	Null
Expected behavior		Data ingestion fails				Applied to all products, sites, channels and customers (as configured as forecast granularity).	Applied to only 'Product A' across all sites, channels and customers (as configured as forecast granularity).	Applied to only 'Product A' and 'Site_001' across all channels and customers (as configured as forecast granularity).	Applied to only 'Product A', 'Site_001' and 'Ecommerce' across customers (as configured as forecast granularity).	Applied to only 'Product A', 'Site_001' and 'Ecommerce' and 'ACME Ltd' only.	Invalid data. The demand driver is ignored as categorical value in the time_series_value field is not supported. Recommend modelling it as '1' indicating the presence of the event.	Invalid data. A valid time_series_name must start with a letter, be 2 to 56 characters long, and may contain letters, numbers, and underscores, but no spaces or other special characters.

The following example illustrates how you can set up some common demand drivers in your dataset.

id	order_date	product_id	site_id	customer_tpartner_id	channel_id	time_series_name	time_series_value	Scenario
1	9/24/2023	Sorting Hat				Price	50	Model price or price changes at various granularity levels - national, site, channel and/or customer .
2	9/24/2023	Invisibility Cloak	Seattle DC			Price	30	
3	9/24/2023				E-commerce	Price	20	
4	9/24/2023	Hogwarts Lego		ACME Ltd		Price	30	
...								
501	2/15/2021					Marquee_Events	1	Model the presence of sales events, promotions, marketing campaigns as '1'. The absence of events can be inferred inherently, eliminating the need for '0' entry records.
502	5/24/2021					Marquee_Events	1	
...								
1001	2/1/2021					Holiday_Tier	3	Model importance tiers of holidays or promotions in the descending order of importance, with higher numerical values indicating greater significance.
1002	2/8/2021					Holiday_Tier	2	
1003	6/28/2021					Holiday_Tier	1	
...								
2001	1/4/2021	Griffindor Pillow	Phoenix DC			Inventory	972	Model closing inventory for product at a site.
2002	1/4/2021	Griffindor Pillow	Seattle DC			Inventory	252	

When you provide leading indicators, Demand Planning highly recommends that you adjust the time series date. For example, say that a particular metric serves as a 20-day leading indicator with a 70% conversion rate. In this case, consider shifting the date in the time series by 20 days and then applying the appropriate conversion factor. While the learning model can learn patterns without such adjustments, aligning leading indicator data with corresponding outcome is more effective in pattern recognition. The magnitude of the value plays a significant role in this process, enhancing the model's ability to learn and interpret patterns accurately.

Demand driver configuration

To use demand drivers, you must configure them. You can configure demand drivers only when you've ingested data in the *supplementary_time_series* data entity.

> ### ⓘ Note
>
> If you don't configure the demand drivers, you can still generate a forecast. However, Demand Planning won't use the demand drivers.

Demand drivers data filling method

A *filling method* represents (or "fills") missing values in a time series. Demand Planning supports the following filling methods. The filling method that Demand Planning applies depends on the location of the gap in the data.

- Back filling – Applied when the gap is between a product's earlier recorded date and the last recorded date.

- Middle filling – Applied when the gap is between the last recorded data point for a given product and the global last recorded date.

- Future filling – Applied when the demand driver has at least one data point in the future and there is a gap in the future time horizon.

Demand Planning utilizes the last 64 data points from the *supplementary_time_series* data entity corresponding to the demand driver for consideration. Demand Planning supports *zero*, *median*, *mean*, *maximum*, and *minimum* options for all three filling methods.

The following example illustrates how demand drivers handle missing data when data is ingested to the *price* column in the *supplementary_time_series* data entity for Product 1, that includes both history and future data.

id	order_date	product_id	site_id	customer_tpartner_id	channel_id	time_series_name	time_series_value
1	1/29/2024	Product 1				Price	32
2	2/5/2024	Product 1				Price	38
History							
3	2/19/2024	Product 1				Price	26
4	3/4/2024	Product 1				Price	40
5	3/11/2024	Product 1				Price	35
Future							
6	3/25/2024	Product 1				Price	29
7	4/1/2024	Product 1				Price	30

2/12/2024
2/26/2024   Periods missing data
3/18/2024

Demand Driver Configuration:

Back filling	Mean
Middle filling	Mean
Future filling	Mean

Pre-processing:

	History						Forecast Horizon				
	1/22/2024	1/29/2024	2/5/2024	2/12/2024	2/19/2024	2/26/2024	3/4/2024	3/11/2024	3/18/2024	3/25/2024	4/1/2024
Product 1		32	38	35	26	32	40	35	34.2	29	30

Earliest date available for 'price' across ALL products. There is no data available for 'Product -1'. No

Middle Filling: (32 + 38)/2 =

Back Filling: (32 + 38 + 26)/3 =

Future Filling: (32 + 38 + 26 + 40 + 35)/5 =

Aggregation method

Demand Planning uses the aggregation method to facilitate the integration of demand drivers at various levels of granularity by consolidating data over specific periods and granularity levels.

Time period aggregation – For example, when the *Inventory* demand driver is available at daily level but the forecast is at weekly level, demand planning will apply the aggregation method configured under the demand plan settings for inventory to use the information for forecasting.

id	order_date	product_id	site_id	customer_tpartner_id	channel_id	time_series_name	time_series_value
1	2/19/2024	Product 1	Site 1			Inventory	34
2	2/20/2024	Product 1	Site 1			Inventory	58
3	2/21/2024	Product 1	Site 1			Inventory	39
4	2/22/2024	Product 1	Site 1			Inventory	30
5	2/23/2024	Product 1	Site 1			Inventory	51
6	2/24/2024	Product 1	Site 1			Inventory	27
7	2/25/2024	Product 1	Site 1			Inventory	73
8	2/26/2024	Product 1	Site 1			Inventory	22
9	2/27/2024	Product 1	Site 1			Inventory	29
10	2/28/2024	Product 1	Site 1			Inventory	64
10	2/29/2024	Product 1	Site 1			Inventory	66
10	3/1/2024	Product 1	Site 1			Inventory	70
10	3/2/2024	Product 1	Site 1			Inventory	65
10	3/3/2024	Product 1	Site 1			Inventory	57

Week 1 starting 2/19/2024

Week 2 starting 2/26/2024

Configuration:

Time Interval	Weekly
Demand Driver Aggregation	Sum

Pre-processing:

order_date	product_id	site_id	time_series_name	time_series_value
2/19/2024	Product 1	Site 1	Inventory	312
2/26/2024	Product 7	Site 1	Inventory	373

Granularity level aggregation – Here is an example of how demand planning uses the granularity level aggregation. *out_of_stock_indicator* is available daily at product-site level but forecast granularity is only available at product level. Demand Planning will apply the aggregation method configured under the demand plan settings for this demand driver.

id	order_date	product_id	site_id	customer_tpartner_id	channel_id	time_series_name	time_series_value
1	2/19/2024	Product 1	Site 1			out_of_stock_indicator	1
2	2/19/2024	Product 1	Site 2			out_of_stock_indicator	1
3	2/20/2024	Product 6	Site 1			out_of_stock_indicator	1
4	2/26/2024	Product 7	Site 1			out_of_stock_indicator	1
5	2/27/2024	Product 8	Site 2			out_of_stock_indicator	1
6	2/28/2024	Product 9	Site 1			out_of_stock_indicator	1
7	3/1/2024	Product 9	Site 2			out_of_stock_indicator	1
8	3/1/2024	Product 9	Site 1			out_of_stock_indicator	1
9	3/1/2024	Product 9	Site 5			out_of_stock_indicator	1

Configuration:

Forecast Granula	Product
Demand Driver A	Sum

Pre-processing:

order_date	product_id	time_series	time_series_value
2/19/2024	Product 1	out_of_stoc	2
2/20/2024	Product 6	out_of_stoc	1
2/26/2024	Product 7	out_of_stoc	1
2/27/2024	Product 8	out_of_stoc	1
2/28/2024	Product 9	out_of_stoc	1
3/1/2024	Product 9	out_of_stoc	3

Demand driver recommendations

While configuring aggregation and filling methods for demand drivers, a general guideline is to assign *mean* aggregation for both boolean and continuous data types. To fill a missing value, use *zero* filling for boolean data while *mean* filling is suitable for continuous data.

Note that the choice of aggregation and filling method configuration depends on the data characteristics and assumptions about missing values. Here is an example.

Demand Driver	Data Type	Aggregation	Back Filling	Middle Filling	Future Filling
Price	Continuous	Mean	Mean	Mean	Mean
Marquee_Events	Boolean	Maximum	Zero	Zero	Zero
Holiday_Tier	Ordinal	Maximum	Zero	Zero	Zero
Inventory	Continuous	Sum	Zero	Zero	Zero

Demand Planning recommends adjusting the demand driver configuration to best suit your dataset needs. The demand driver configuration will impact the forecast accuracy.

On the AWS Supply Chain web application, under **Demand planning**, **Overview**, you will view the impact scores associated with demand drivers, aggregated at the demand plan level. These impact scores measure the relative influence of demand drivers on forecast. A low impact score does not indicate that the demand driver has a minimal effect on forecast values. Instead, it suggests that its influence on forecast value is comparatively lower than the other demand drivers. When the impact score is zero under certain circumstances, it should be interpreted as the demand driver has no impact on the forecast values. Demand Planning recommends revisiting the aggregation and filling method configuration applied to that particular demand driver.

Adding an override

This section describes how to manually edit the forecast to override the projected demand.

> **ⓘ Note**
>
> Manual forecast overrides from one planning cycle are automatically saved and reapplied on the next planning cycle.

1. Under **Demand Plan**, you can add overrides on the graph by moving the dot to the desired value or update the values directly on the Demand Plan row in the table.

   The **Edit Quantity** page appears.

2. On the **Edit Quantity** page, under **Change**, select if you want to increase, decrease, or fixed amount the demand.

3. Under **Quantity**, use the up or down arrows to increase or decrease the demand, or enter a value.

4. Under **Reason Code**, select from one of the options between *Promotion*, *Holiday*, *Seasonal*, *New Product*, *Product Rampdown* or *Others*. The reason code is mandatory to successfully process the override. It is optional to add more descriptive notes to a forecast override.

5. Choose **Save and Update**.

   When you create an override, the impact can be viewed throughout the relevant levels of hierarchies. You can create many overrides but only the last override will be considered. After an override is created, a *clock* icon appears under **Demand Plan**. When you choose the *clock* icon, you can view the most recent change in the planning cycle. Choose **View more changes** to view past updates.

6. To make multiple overrides at the same time, from the **Edit Quantity**, choose **Go to bulk editing**. You can also choose **Bulk Edit** against **Demand Plan**.

   > **ⓘ Note**
   >
   > You can bulk edit only from the table.

7. On the **Edit your forecast** page, you can select all check boxes or a check box for each time period that you want to update, and then enter the updates.

8.   Choose **Save and Update**.

      The **Forecasted Demand** is updated.

Exporting files

You can export **Demand Plan**, **Forecast Demand**, **Prior Forecast Versions**, and **Actual Demand History** from Demand Planning as individual .csv files.

> ⓘ **Note**
>
> The exported .csv file will contain the entire demand plan, despite which filters were active on the **Demand Planning** page at the time of export.

1.   On the **Edit Quantity** page, choose **Export**.

      The **Export** page appears.

2.   Select the file you that you want to download, and choose **Export**.

      The file is downloaded on your local computer.

Publish demand plan

You can use the published demand plan in Amazon S3 for inventory or supply planning or for reporting and analytics. Follow these steps to publish a demand plan.

When you are ready to publish the demand plan, on the **Enterprise demand plan** page, choose **Publish**.

The finalized demand plan is published to Amazon S3. You can choose the Amazon S3 path on the publish success message or find the link on the **Enterprise Settings**, **Demand Plan** settings page.

After you publish the demand plan, the **Enterprise Demand Plan** moves to the *Published* state. You can't make further changes to the forecast. Instead, you must create a new a new forecast to create another demand plan.

Modifying Demand Plan settings

After you publish the demand plan, you can view or modify the forecast configuration. You can update the Demand Planning settings anytime to make sure that your forecasts are more accurate, and that they will be in effect when the forecast successfully generates.

> ⓘ **Note**
>
> Your prior forecast versions will be unavailable when you modify the *Time Interval* and *Hierarchy levels* on the **Demand Plan** page, because those prior versions will no longer align with the new forecast settings.
> When you modify the *Time interval* or *Hierarchy* configuration and when you regenerate the forecast, the accuracy metrics will not be displayed since the accuracy metric values are not relevant.

1. In the left navigation pane on the AWS Supply Chain dashboard, choose the **Settings** icon.

2. Under **Organization**, choose **Demand Planning**.

   The **Demand Planning Setting** page appears.

   Use the steps in [Configuring Demand Planning](#) to edit the Demand Planning configuration settings.

Supply Planning

AWS Supply Chain supports two types of supply plans to help you accurately plan inventory to meet demand.

> **ⓘ Note**
>
> Supply Planning is only supported in the following Regions: US East (N. Virginia), US West (Oregon), Asia Pacific (Sydney) Region, and Europe (Frankfurt). Supply Planning is not supported in Europe (Ireland) Region.

> **ⓘ Note**
>
> You can only choose one supply plan per AWS Supply Chain instance to configure in AWS Supply Chain. To create multiple supply plans, you can create a new AWS Supply Chain instance under the same AWS account.

- Auto Replenishment
- Manufacturing Plan

Topics

- [Auto Replenishment](#)
- [Manufacturing Plans](#)
- [Data entities required for Supply Planning](#)

Auto Replenishment

You can use the Auto Replenishment feature to determine the amount of inventory to hold and when to order more inventory by automating inventory management. Auto Replenishment streamlines the inventory management process by monitoring inventory, forecasted demand, and automatically reordering items based on configured inventory policy, ordering schedules, minimum order quantities, and vendor lead times.

You can use Auto Replenishment to generate purchase order requests that can be imported into your ERP or purchasing systems to create purchase orders (POs) for your suppliers.

Key inputs

Auto Replenishment relies on the following inputs to make accurate and informed calculations for inventory replenishment:

- **Demand** – Demand data is the fundamental input for replenishment calculations. This data helps AWS Supply Chain understand the demand either in terms of past sales or future forecasts to be able to determine inventory requirements for future time buckets. You can provide demand forecasts or past sales history as an input for demand data. If demand forecasts are not available, you can provide sales history, and AWS Supply Chain will use historical consumption rate for replenishment calculations.

- **Inventory** – Auto Replenishment uses on-hand inventory and on-order inventory as an input for replenishment calculations. On-hand inventory is the available inventory at locations that can be used to fulfill demands. On-order inventory is the open purchase or transfer orders that are inbound to the stocking location. Demand will be calculated from on-hand and on-order inventory to determine net supply requirements.

- **Lead time** – Lead time is the time it takes for an order to be placed and the items to be received. Lead time helps AWS Supply Chain determine how far in advance it must place orders. For items that are ordered or procured from suppliers, lead time will refer to supplier/vendor lead time, which is the time it takes for a supplier to fulfill an order and deliver the goods. Any time required for internal order processing, quality checks, or handling should be included as part of the lead time. For items or products that are transferred from an enterprise's internal locations, such as distribution centers or fulfillment centers, lead time will refer to transportation time, which is the time required for transportation and delivery from a source location to a destination location.

- **Sourcing rules** – You can use sourcing rules to model supply chain network topology. Use sourcing rules to define relationships between different levels of locations (for example, regional DC to central DC) or relationships between suppliers and their sites. These relationships can be modeled at a product group or region level, or at a product or site level.

- **Sourcing schedules** – Use Auto Replenishment to regularly monitor and replenish items with every run, or configure predefined schedules for items to be replenished. Use a sourcing schedule to define ordering schedules based on suppliers or shipping schedules, and on transportation schedules. You can define a sourcing schedule to replenish items multiple times a week, once a week, or during specific weeks of the month.

- **Inventory policy** – Inventory policy is a key input to determine the target inventory level that is used to drive replenishment requirements. You can configure inventory policy at the most detailed product level, site level, or at an aggregate level such as product group, product segment, site, or region. Auto Replenishment supports absolute inventory level, days of cover, and service level inventory policies. You can define the target value for the configured inventory policy, and AWS Supply Chain uses the target value to determine the target inventory level.

  For more information on data fields required for supply planning, see Supply Planning.

Planning process

Replenishment requirements are calculated based on the configured network topology for an item. The following is a sample network topology that we use to describe various calculations involved in generating replenishment orders.
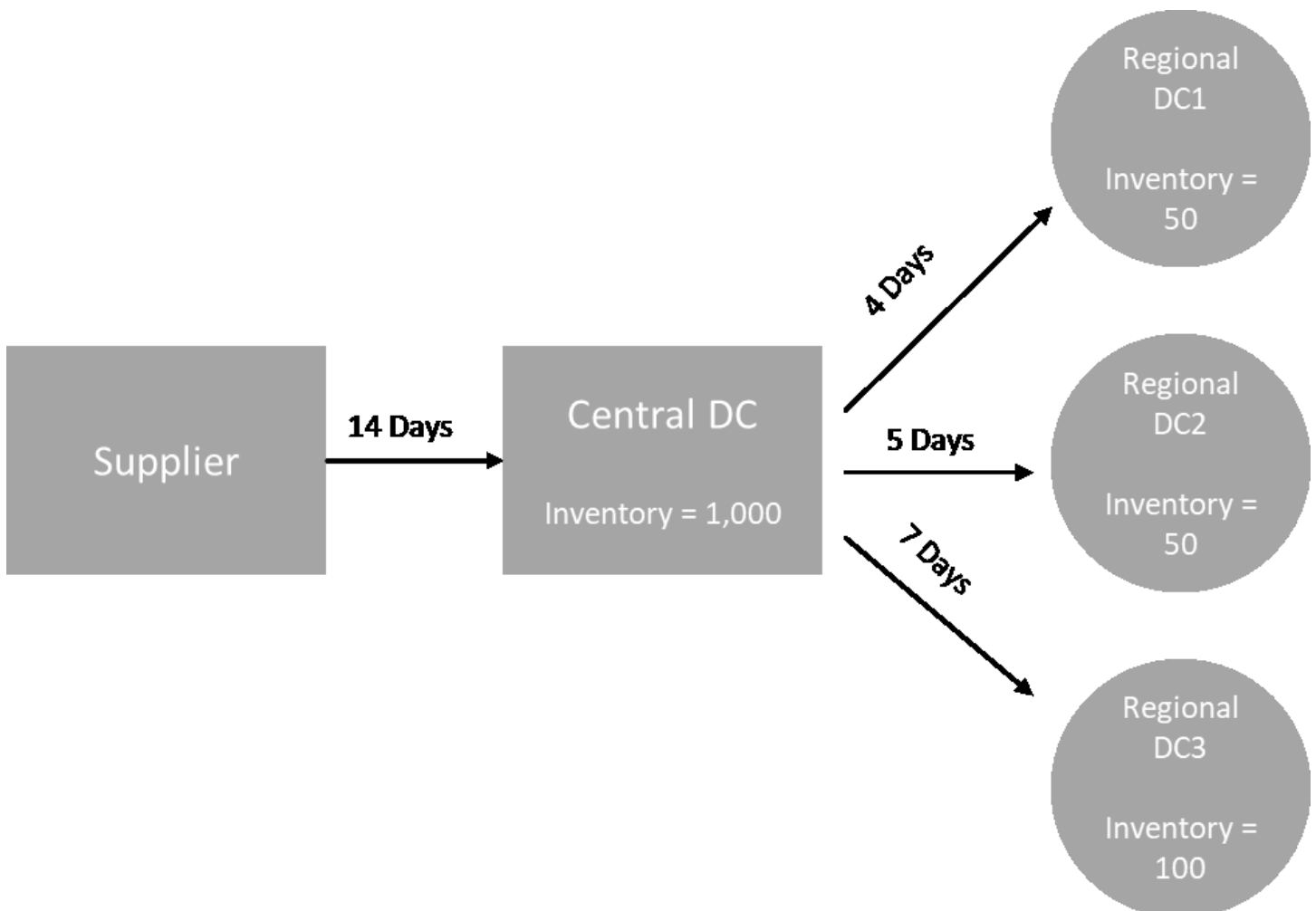
Auto Replenishment generates transfer requirements from spoke nodes to hub nodes (for example, regional DCs to the central DC), and it generates purchase requirements from hub nodes to suppliers (for example, central DC to suppliers). The following steps are involved in generating replenishment orders. These steps are repeated for each product and site combination that is in scope for replenishment planning. Requirements from downstream nodes are propagated upstream based on sourcing rules information, and the process repeats at the upstream node until it reaches the root node for that item.

```
┌─────────────┐     ┌─────────────────┐     ┌─────────────────┐     ┌─────────────────┐
│             │     │    Calculate    │     │   Determine     │     │   Propagate     │
│   Process   │ ──► │ Target Inventory│ ──► │  Transfer or    │ ──► │  Requirements   │
│   Demand    │     │     Level       │     │   Purchase      │     │  to Upstream    │
│             │     │                 │     │  Requirements   │     │     nodes       │
└─────────────┘     └─────────────────┘     └─────────────────┘     └─────────────────┘
      ▲ │
      └─┘
```
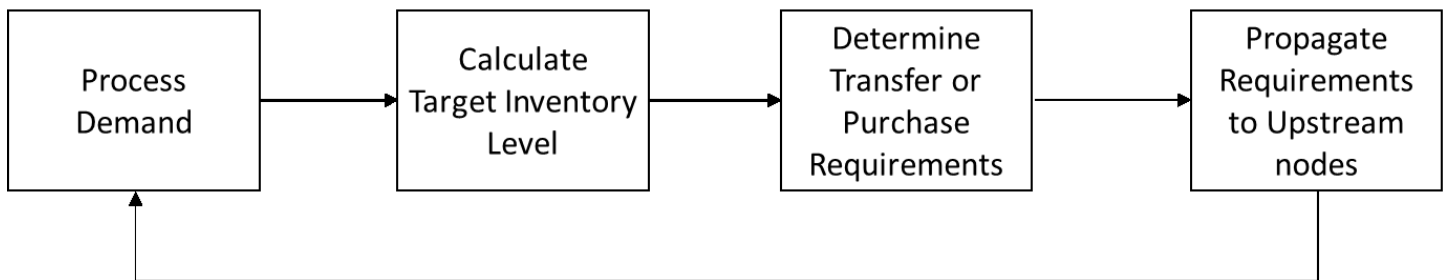
- **Demand processing** – AWS Supply Chain prepares the historical demand or forecast data based on the replenishment plan configuration. Demand or forecasts are processed at the level of product, site, day, or week based on the replenishment plan configuration settings. Sales history or forecast data are aggregated at the product and site level if they are provided at a more detailed level, such as product, site, customer or product, site, channel. Similarly, day to week aggregation occurs if a replenishment plan is configured at the week level. In the preceding example, demand is taken from spoke nodes, which are regional DCs, and it is aggregated at the product, site, and day/week level. If consumption or demand based inventory policy is used, the last 30 days of demand (sales history) is used to calculate average consumption.

- **Target inventory level** – Use the demand or forecasts along with the configured inventory policy to determine target inventory level for a specific time period. Auto Replenishment supports two different replenishment models.

  - Forecast-driven replenishment

  - Consumption-based replenishment

  AWS Supply Chain generates inventory targets based on the forecast. These inventory targets are determined based on lead time and sourcing schedules to ensure inventory levels account for the variability in demand and supply lead times.

- **Transfer or purchase requirements** – AWS Supply Chain nets demand in each period from the supply (on-hand + on-order inventory) to project inventory into future time. AWS Supply Chain maintains the projected inventory levels at the same level as the target inventory level calculated in the previous step. The difference between projected inventory level and

target inventory level is the net supply requirement or reorder quantity (RoQ). AWS Supply Chain applies minimum order quantity, or it orders multiples to generate the final transfer requirements or purchase requirement (POR). AWS Supply Chain uses the transfer or vendor lead time to determine the order by date. The default for lot size is 1.0, and the minimum order quantity is 0.

Calculation logic

```
rounding=f(RoQ,MOQ,Lot_Size)

=Lot_Size×Max(RoQ,MOQ)
```

The preceding formula describes the rounding logic in Auto Replenishment. AWS Supply Chain first compares the reorder quantity RoQ and minimum order quantity MOQ, gets the final order proposal, and then multiplies by the lot size factor for the actual quantity. The lot size is configured in the sourcing rules entity with the field *qty_multiple*.

- **Requirement propagation** – For spoke nodes, AWS Supply Chain uses sourcing rules to look up parent nodes and propagate transfer requirements to the upstream node. AWS Supply Chain offsets the required delivery date by transfer lead time to determine the required date at the parent node. AWS Supply Chain only supports single sourcing. When this step is completed for all child or spoke nodes under a hub node, AWS Supply Chain repeats the previous steps on the hub node. This process is repeated until it reaches the root node in an item's topology.

Auto Replenishment only shows purchase order requests for vendor-facing sites. There are two kinds of vendor-facing sites:

- Vendor-facing sites that supply other sites

- Vendor-facing sites that don't supply other sites
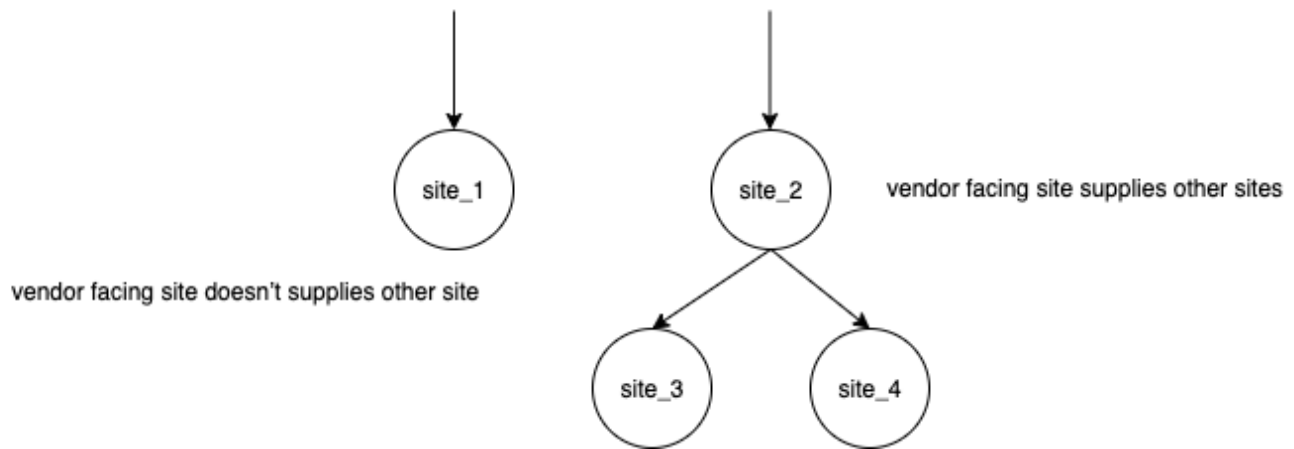
For vendor facing-sites that supply other sites, the reorder quantity is the reorder quantity from its child sites, plus the independent reorder quantity from its own demand. For vendor-facing sites that don't supply other sites, the reorder quantity is computed based on the demand forecast of the site. The independent reorder quantity for vendor-facing sites follows the same logic in the reorder quantity computation. The dependent demand is the summation of all the child sites. If the days of coverage is 7, the RoQ is the summation of the quantity of all orders in the covered period. The following example shows a scenario in the planning horizon where there is only one order for each site, and it explains the computation.
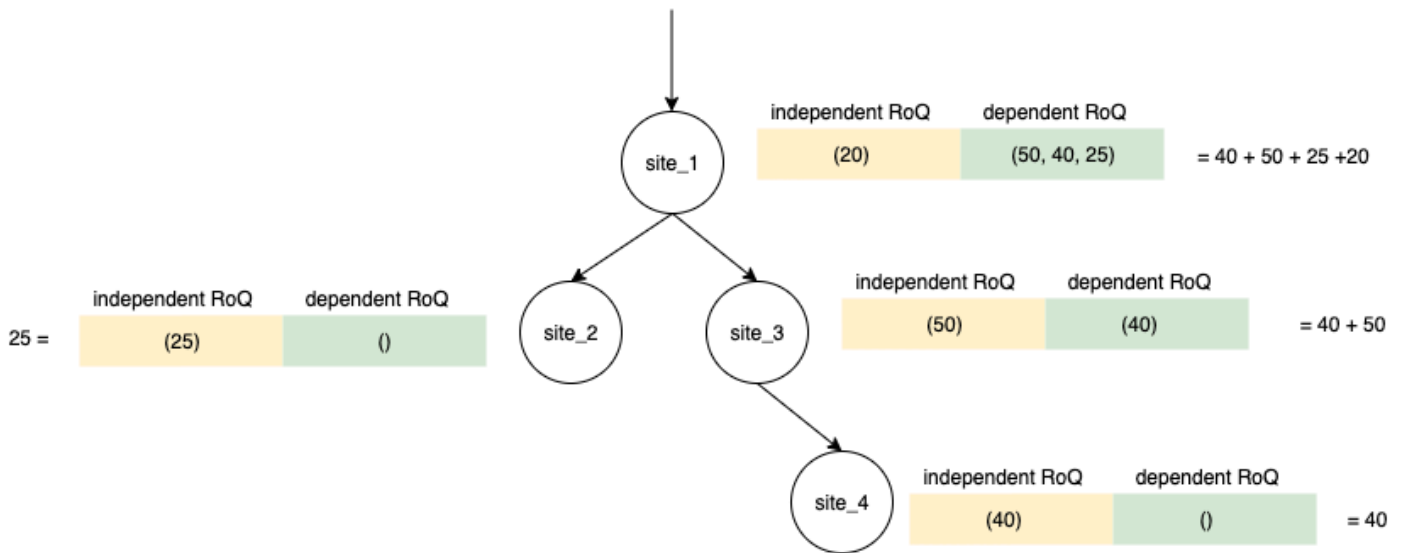
Inventory policies

Auto Replenishment supports three different inventory policies. Each policy computes a plan based on a different algorithm, and each policy requires different inputs.

Absolute inventory level

If you use *absolute quantities* to manage your inventory levels, you can use this policy setting to calculate target inventory level and RoQ. The absolute inventory level policy uses the configured target inventory level instead of computed inventory level (position). The target inventory level is the value of *target_inventory_qty* .

Inputs and defaults

The absolute inventory level policy requires forecast, lead time, and configuration for absolute inventory level policy, as shown in the following table.

Data required	Entity	Field	Value	Notes
Inventory policy	inventory_policy	ss_policy	abs_level	NA >
Inventory policy	inventory_policy	target_in ventory_qty	Inventory level quantity	NA >
Forecast	forecast	NA	NA	Mean or forecast quantities. >
Lead time	transport ation_lane	NA	NA	Lead time from a source location to a destination.
Lead time	vendor_le ad_time	NA	NA	Lead time from a vendor to a destination location.

target_inventory_qty from *inventory_policy* data entity used at the target inventory level

Calculating reorder quantity

The inputs for the reorder quantity (RoQ) calculation is the target inventory level and the current inventory level. If the inventory level record is missing, AWS Supply Chain generates a plan exception to review.

Calculation logic

$$RoQ_{P,S,D} = Max(TIL_{P,S,D+R_{P,S,D}} + Max((\sum_{d=D+LT_{P,S,D}}^{D+R_{P,S,D}} Demand_{P,S,d}) - IL_{D+LT_{P,S,D}}, 0) - IL_{P,S,D+R_{P,S,D}}, 0)$$

The reorder quantity is the difference between the target inventory level and the current inventory level. If the current inventory level is higher than the target inventory level, the reorder quantity is 0.

The goal of absolute policy is to make sure that on each review date there is enough on-hand inventory to match the desired inventory level. The inner max function computes the extra demand before the target review date (the first review date after delivery). The covering period starts from the expected deliver date and ends with the target review date. If the current on-hand inventory or delivery date is able to cover demand for a specific period, the reorder quantity is 0. The max function determines if you must order extra. The outer max function computes the deficit of inventory and determines whether an order should be placed. The reorder quantity calculation for sites that supply to other sites is calculated according to the logic explained in the Days of Cover (DOC) inventory policy.

Days of Cover

If you use Days of Cover (DoC) to manage your inventory levels, then this would be an appropriate policy setting to drive the calculation of target inventory levels and RoQ. DoC inventory policy uses the configured days of coverage. This policy doesn't consider sourcing schedule (vendor review calendar) or vendor lead times to compute DOC. DOC is based on the *target_doc_limit* field in the *inventory_policy* data entity. Note that, for weekly planning, *target_doc_limit* still uses unit of day. A coverage of 2 weeks translates to 14 days. DoC policy can be used with forecast (*doc_fcst*) or demand (*doc_dem*). The difference between *doc_fcst* and *doc_dem* is the forecast source. *doc_fcst* is based on forecast, while *doc_dem* is based on the demand history in *outbound_order_line*. The

forecast based days of coverage uses P50 of forecast, while the demand based planning uses the last 30 days of demand history to calculate average consumption rate.

Inputs and defaults

Target inventory level or Target inventory position (TIP) is the desired inventory position or level on a given date. Inventory position includes inventory on hand, in-transit, or on-order, while the inventory level is only the inventory on-hand. Inventory position is used for service level (sl) inventory policy, and inventory level is used for *doc_fcst*, *doc_dem*, and *abs_level* inventory policies. DOC policy requires forecast, lead time, and configuration for inventory policy.

For *doc_fcst* policy, you must provide the following information:

Data required 1	Entity	Field	Value	Notes
Inventory policy	inventory_policy	ss_policy	doc_fcst	NA >
Inventory policy	inventory_policy	target_doc_limit	Number of days	NA >
Forecast	forecast	NA	NA	Mean or forecast quantities. >
Lead time	transport ation_lane	NA	NA	Lead time from a source location to a destination.
Lead time	vendor_le ad_time	NA	NA	Lead time from a vendor to a destination location.

For inventory policy based on days of coverage, the days to cover is the *target_doc_limit* value.

Calculation logic for DOC_fcst policy

$$RoQ_{P,S,D} = Max(TIL_{P,S,D+R_{P,S,D}} + Max((\sum_{d=D+LT_{P,S,D}}^{D+R_{P,S,D}} Demand_{P,S,d}) - IL_{D+LT_{P,S,D}}, 0) - IL_{P,S,D+R_{P,S,D}}, 0)$$

Calculation Logic for doc_dem policy

$$TIL_{P,S,D+R_{P,S,D}} =$$

$$DOC_{P,S} \times Avg(Consumption_{P,S}|_{D_{start}-\delta}^{D_{start}})$$
$$+Max((R_{P,S,D} - LT_{P,S,D}) \times Avg(Consumption_{P,S}|_{D_{start}-\delta}^{D_{start}}) - IL_{D+LT_{P,S,D}}, 0)$$

The goal of days of coverage policy is to make sure on each review date that there is enough on-hand inventory to cover the configured days of coverage. The first part of the formula computes the days of coverage from the next review date until the end of days of coverage configured. The total covering period is *DOCP,S* for product *P* and site *S*. The second part of the formula computes the extra demand before the target review date (the first review date after delivery). The covering period starts from the expected deliver date and ends with the target review date. If the current on-hand inventory on the delivery date is able to cover demand of this period, the system reorders 0. The max function determines whether we must order extra.

Calculating reorder quantity

The input for the reorder quantity calculation is the target inventory level and the current inventory level. If the inventory level record is missing, the system generates plan exceptions for you to review.

$$RoQ_{P,S,D} = Max(TIL_{P,S,R_{P,S,D}} - IL_{P,S,D+R_{P,S,D}}, 0)$$

The reorder quantity of product *P*, site *S*, and date *D* is the difference between the target inventory level and the current inventory level. If the current inventory level is higher than the target inventory level, the reorder quantity is 0.

Service level

If you use in-stock percentage to manage your inventory levels, you can use this policy setting to drive the calculation of target inventory level and replenishment.

Inputs and defaults

For *sl* policy, Supply Planning requires the following fields. If these fields are empty, the default value is set to *null*, and the application throws an exception.

Data required	Entity	Field	Value	Notes
Inventory policy	inventory_policy	ss_policy	sl	Service level is abbreviated as *sl*. >
Inventory policy	inventory_policy	target_sl	percentage value	For example, 0.8 >
Forecast	forecast	NA	NA	Mean or forecast quantities. >
Lead time	transport ation_lane	NA	NA	Lead time from a source location to a destination.
Lead time	vendor_le ad_time	NA	NA	Lead time from a vendor to a destination location.
Sourcing schedule or Vendor schedule	sourcing_ schedule and sourcing_ schedule_details	NA	NA	Defines the calendar or days during which vendors accept orders.

Calculating target inventory level

Target Inventory Position (TIP) is used for service level (sl) inventory policy. TIP represents the desired inventory position on a given date. TIP includes on-hand and on-order inventory. The inputs required for service-level policy are forecast, lead time, sourcing schedule (plus sourcing schedule details), and configuration for service level.

$$TIP_{P,S,D+R_{P,S,D}} = \sum_{d=D+LT_{P,S,D}}^{D+LT_{P,S,D}+LT_{P,S,D+R_{P,S,D}}} Demand_{P,S,d}$$

TIP is based on forecast distribution. Supply Planning applies the critical ratio (CR or service_level) to forecast distribution, computes the demand, and sums up on days to cover. The available method to apply the critical ratio (service level) to forecast distribution is listed in the following.

First, Supply Planning applies a CR to distribution in forecast (P10/P50/P90) by using linear interpolate.
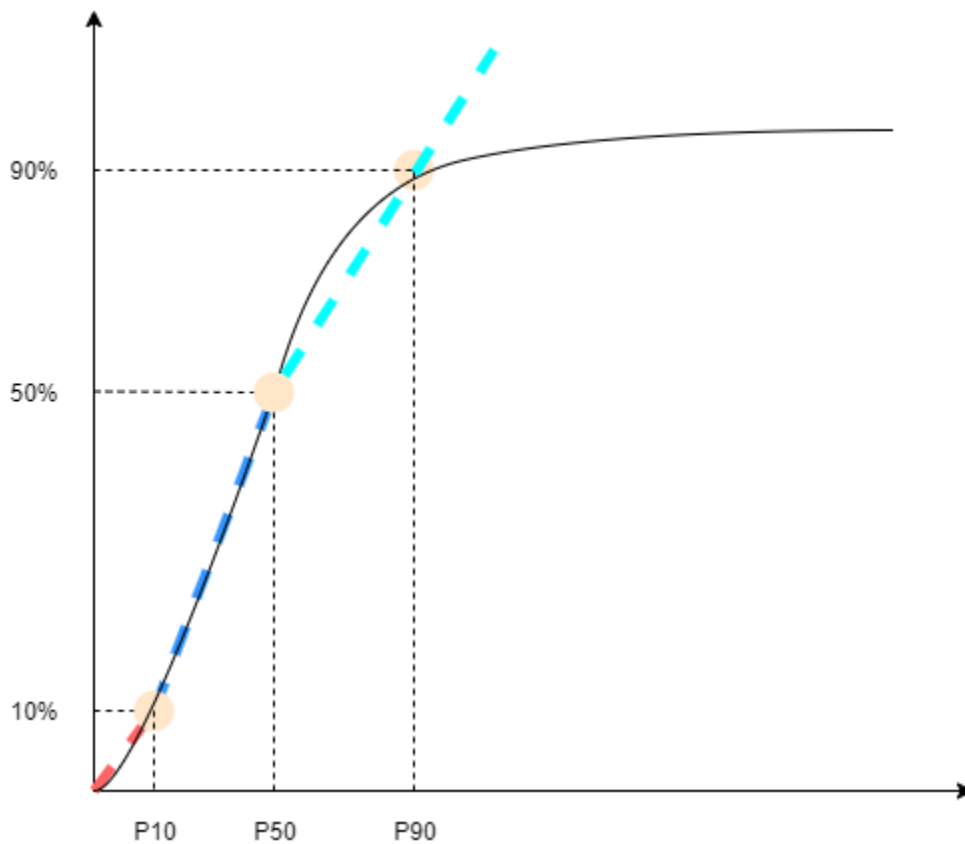
Supply Planning uses P10 for target_sl=0.1, P50 for target_sl=0.5, and P90 for target_sl=0.9. For a percentile that doesn't exist in the forecast entity, Supply Planning uses a linear interpolate approach. Supply Planning computes other percentiles of demand forecast based on P10/P50/P90. Here are formulas for computing P40 (target_sl=0.4) and P75 (target_sl=0.75): P40=50−1040−10 ×(P50−P10)+P10 P75=90−5075−50×(P90−P50)+P50

When Supply Planning gets demand, the demand is summed up to use arbitrary summation by days to cover. Days to cover starts from the upcoming deliver date until the deliver date after the upcoming deliver date.
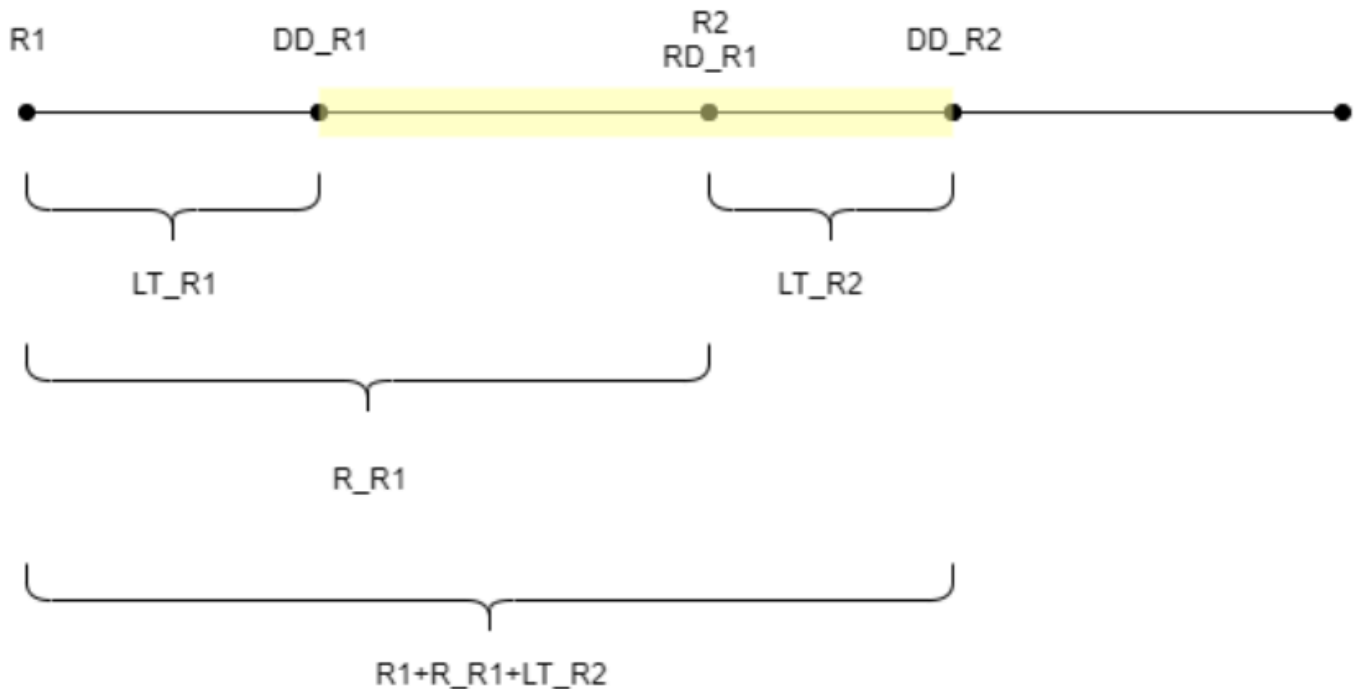
As shown in the previous figure, the yellow period is the days to cover. The beginning of the days to cover does not start from the first day of the planning horizon. The reason is that Supply Planning doesn't order for days that cannot be covered. Supply Planning assumes that all lost sales are not recoverable. R1: the first review date based on the sourcing schedule. R2: the second review date based on the sourcing schedule. LT_R1: the lead time for putting order on R1. LT_R2: the lead time for putting order on R2. R_R1: the review period based on sourcing schedule. RD_R1: the first review date after R1, equaled to R1+R_R1. DD_R1: the deliver date if submit order is on R1; DD_R1 = R1 + LT_R1. DD_R2: the deliver date if submit order is on R2; DD_R2 = R2 + LT_R2.

The following example shows the TIP computation.

TIP : summation of (traget_sl=0.8) from 6/20 till 6/28 = 392
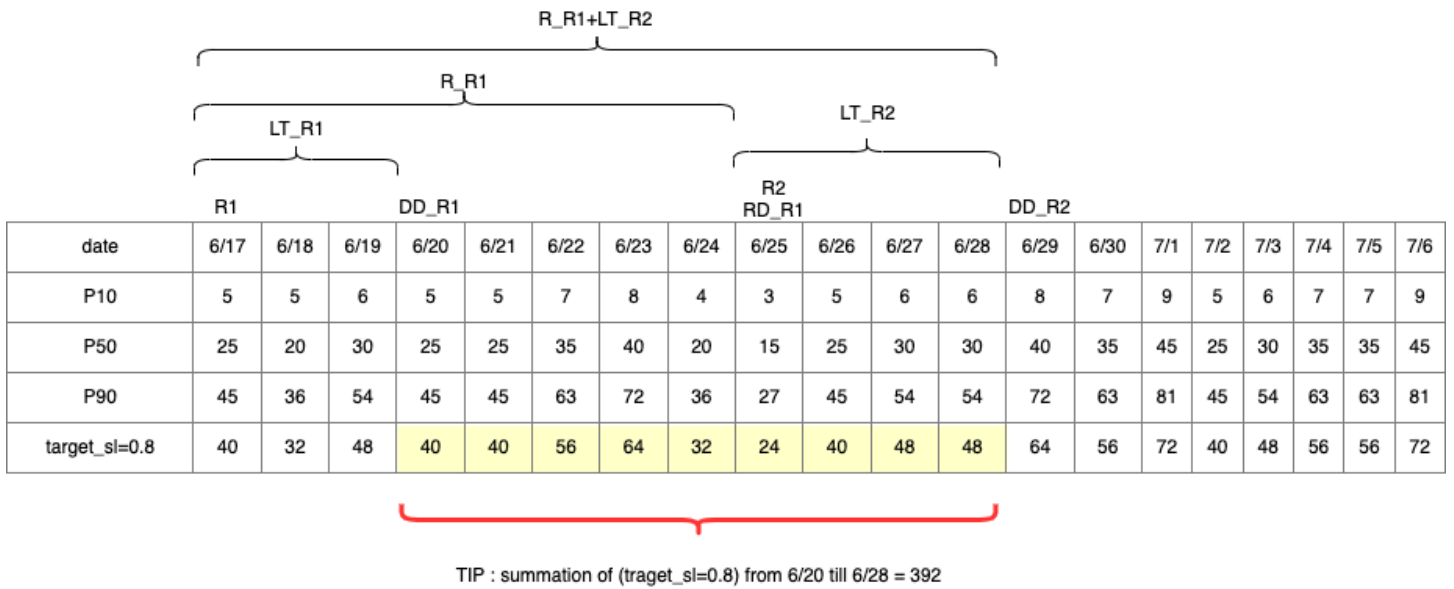
Calculating reorder quantity

The inputs for the *sl* reorder quantity calculation are the target inventory level and the current inventory level. Supply Planning throws an exception if the inventory level record is missing.

$$RoQ_{P,S,D} = Max(TIP_{P,S,D+LT_{P,S,D}} - IP_{P,S,D+LT_{P,S,D}}, 0)$$

The reorder quantity is the difference between the target inventory position and the current inventory level. If the current inventory position is higher than the target inventory position, then the reorder quantity is set to 0.

Business workflow

Auto Replenishment provides the following workflow for you to manage your inventory replenishment process.
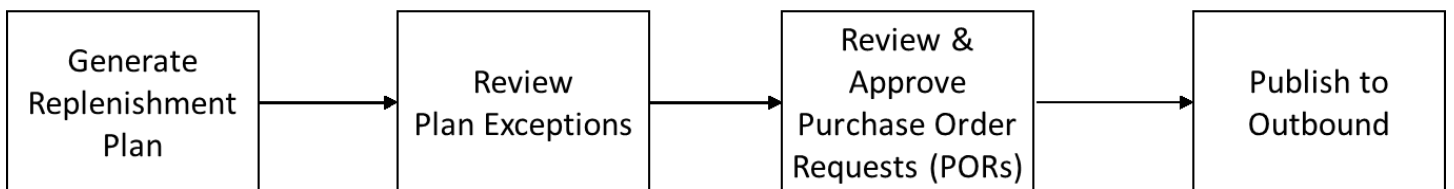
- Generate replenishment plan – Supply Planning generates the replenishment plan according to the configured schedule. Recent input data required to generate replenishment plans is

retrieved from the AWS Supply Chain data lake. Supply Planning uses configuration data, transactional data, and plan settings to generate the replenishment plan that includes purchase order requests.

- Review plan exceptions – Supply Planning generates *Plan Exceptions* for products and site combinations that do not have either required configuration data (lead time, sourcing schedule, and so on) or required transactional data, such as on-hand inventory. Planners can review exceptions and provide required data before the next planning cycle in order to correct the issues and generate the replenishment plan.

- Review and approve purchase order requests – Generated purchase order requests are either auto-approved or flagged for manual approval, depending on the configured approval criteria in the plan settings. Planners can review, override, or approve purchase order requests by using AWS Supply Chain.

- Publish to outbound – Approved (auto or manual) purchase order requests are published to the outbound Amazon S3 at the configured schedule in Plan Settings. You can integrate these purchase order requests to your ERP or purchasing systems for execution. Purchase order requests that get converted to purchase orders are ingested back to the AWS Supply Chain data lake by using inbound connectors. AWS Supply Chain expects these purchase orders to carry the reference to the original purchase order request. This reference helps in tracking the conversion of purchase order requests to purchase orders.

Configuring Auto Replenishment

By using Auto Replenishment, you can view the amount of inventory to hold and when to order more inventory by automating inventory management.

Topics

- [Using Supply Planning for the first time](#)
- [Overview](#)
- [Purchase order requests](#)
- [Plan exceptions](#)
- [Supply planning settings](#)

Using Supply Planning for the first time

You can define how and when you want to plan your supply chain.

> ⓘ **Note**
>
> When you log in to Supply Planning for the first time, you can view the onboarding pages that highlight its key features. This helps you to get familiar with the Supply Planning capabilities.

1. In the left navigation pane on the AWS Supply Chain dashboard, choose **Supply Planning**.

   The **Supply Planning** page appears.

2. Choose **Get Started**.

3. On the **Choose your plan** page, select **Auto Replenishment**.

4. Choose **Get Started**.

5. On the **Supply Planning** page, choose **Next**.

   You can read through the description to understand what Supply Planning offers, or you can choose **Next** to the **Supply Planning Setup** page.

6. On the **Supply Planning Setup** page, there are four steps to configure Supply Planning:

   - **Name and Scope** – Enter the name of the supply plan, and select the products and regions to be included in the supply plan.

   - **Horizon and Schedule** – Define the time frame for Supply Planning to generate plan schedules.

   - **Inputs** – Define how you want Supply Planning to use process demand forecasts.

   - **Output** – Choose the Supply Planning output to publish to your Amazon S3 connector. You can also use material deviation percentage for material plans.

7. Under **Horizon and Schedule**, you can do the following:

   - **Planning Horizon** – You can set the planning period by defining the following:

     - **Start day of the week** – You can define your weekly supply planning. For example, if your **Start day of the week** is Monday, and today is July 3, then the supply planning period will be from July 3 to 9.

     - **Time Bucketization** – Define the time details. Daily and Weekly options are supported.

     - **Time Horizon** – Define the planning time horizon. The supported range is from 1 to 90 days, or from 1 to 104 weeks.

- **Plan Schedule** – Define when your supply plans must be executed.

    - **Planning Frequency** – Define how frequently you want to execute the supply plan.

    - **Start Time** – Define when to start planning on a scheduled day.

    - **Release Times** – Define the time Supply Planning releases the approved purchase orders into the ERP system.

- **Demand and Forecast** – Define the source for demand forecasts.

    - **Demand Planning** – Supply Planning will use the published forecasts from *Demand Planning* .

    - **External** – Supply Plannning with use the demand forecasts ingested into the *Forecast* data entity in data lake.

- **Past days for average demand calculation in consumption-based planning** – For product, site combinations with inventory policy set as *doc_dem*, Supply Planning looks at the past days of sales history from the *OutboundOrderLine* data entity to determine the average daily demand. You can choose between 30, 60, 90, 180, 270, or 365 days and Supply Planning will consider the corresponding number of days of historical sales data when generating the average.

- **Supply** – Define your supply related inputs.

    - **Past Due Orders** – When an order in the *InboundOrderLine* data entity is not delivered and the expected delivery date is before the execution date, by default, Supply Planning ignores this order. However, you can configure the number of past due days to be considered for inbound inventory to reorder stock. For example, if you set the *Past Due Orders* for 7 days and if an order was expected 4 days ago, the item will still be considered for inbound inventory.

8. Choose **Continue**.

9. Choose **Finish**.

Overview

You can view the overall supply plan for your organization, as shown in the following example page.

- **Supply Network** – Under supply network, you can view the current products, sites, and suppliers in the current supply plan.

- **Inventory and Orders** – Displays the total inventory across sites, including inventory on-hand and the inventory that is currently on-order with the suppliers.

- **Purchase Plan** – Displays the system-generated purchase order requests to replenish inventory at sites.

  - **Need Approval** – Supply Planning uses the approval criteria you set under **Settings** to flag purchase order requests for approval.

  - **Scheduled for Release** – Approved or auto-approved purchase order requests scheduled to be released to outbound connectors at the time you scheduled under **Settings**.

- **Plan to Purchase Order Conversion** – Purchase order requests converted to POs in your ERP or purchasing systems. To calculate the accurate metrics, Purchase Order data coming from your source system must carry the reference back to the Purchase Order Request ID published to the outbound. This metric helps planners identify purchase order requests that are not converted to POs and take corrective actions.

- **Purchase Order Automation Percentage** – Percentage of Purchase Order Requests that are auto-approved and released to outbound without user overrides to order quantity.

- **Supply Insights** – You can view all the purchase orders that are currently in-progress or awaiting approval. You can choose each insight to view and take action on. For more information, see Plan exceptions.

You can download the supply plan report, which includes the inputs, intermediate calculations, and outputs for an auto-replenishment plan to your local computer.

1. On the Supply Planning **Overview** page, choose **Export**.

   The **Export Supply Plan** window appears.

2. Choose **Download**.

Purchase order requests

You can view current purchase order request details and status.

1. You can use the **Filters** option to filter your purchase orders according to your search criteria. Your can search purchase orders based on vendors, products, sites, order value, order quantity, and requested delivery date.

2. Choose **Apply** to apply your filter criteria to the current purchase orders, and choose **Save filter group** to save the search filter.

3. Under **Order Quantity**, choose **Edit** to view and update the quantity.

   You can update the quantity based on the following inputs:

   - **On-Hand** – Inventory currently in-stock.
   - **On-Order** – Total product quantity of released purchase orders in the selected site.
   - **Reorder Quantity** – The product quantity required to meet the inventory.
     - **Required** – Reorder quantity required to meet the inventory and fulfill the forecast.
     - **Minimum** – Minimum order quantity defined under *VendorProduct.min_order_unit* in the dataset. Supply Planning rounds the number to meet the minimum quantity.
     - **Suggested** – Final reorder quantity after adjustment.
     - **Days of Cover** – Number of days to replenish.

4. Choose **Update** to update the quantity request.

5. Under **Product**, choose the product to view the planned demand for the product.

6. Under **Planned Demand**, select the site to view the replenishment plan.

7. The **Replenishment Plan** tab appears.

> ⓘ **Note**
>
> The **Replenishment Plan** page will appear empty. Make sure to select the product and site to view the demand forecast.

8. Choose **Change Product/Site**.

The **Choose a product and site combination** page appears.

9. Under **Product**, enter the product.

10. Under **Site**, enter the site.

11. Choose **Apply**.

12. Under **Enter order quantity**, you can update the suggested **Order Quantity**.

13. Choose **Update and Approve**.

14. Under **Actions**, choose **Approve** to approve a purchase order.

15. You can also use the **Show** dropdown to filter your purchase orders based on status and release time.

Plan exceptions

You can view the list of product-site combinations that could not be planned. The **Exception Type** column displays the root cause of the exemption. You can provide the missing information, such as inventory policy-related attributes or lead times through data connectors, or you can upload the updated dataset in Amazon S3.

Supply Planning

Overview   Purchase Order Requests   **Plan Exceptions**

⏷ **Filters**

◈ **Exceptions**

Show ▾

Product ▴ Product ID ▾	Site ▴ Site ID ▾	Impact ▴ ▾	Exception Type ▴ Root Cause ▾
6 Outlet Extending Surge Protec… 24-UG03	The Phoenix Site MN5	$0	⚠ Missing Supply Plan Missing Forecast
6 Outlet Extending Surge Protec… 24-UG04	The Atlanta Site IL1	$0	⚠ Missing Supply Plan Missing Forecast
6 Outlet Extending Surge Protec… 24-UG06	The Boston Site WI0	$0	⚠ Missing Supply Plan Missing Begin Inventory
6 Outlet Extending Surge Protec… 24-UG03	The Atlanta Site IL1	$0	⚠ Missing Supply Plan Missing Forecast
6 Outlet Extending Surge Protec… 24-UG05	The Baltimore Site MI6	$0	⚠ Missing Supply Plan Missing Begin Inventory
7 Outlet Extending Surge Protec… 24-UG07	The Anaheim Site TX0	$0	⚠ Missing Supply Plan Missing Cluster
7 Outlet Extending Surge Protec… 24-UG07	The Atlanta Site IL1	$0	⚠ Missing Supply Plan Missing Cluster
6 Outlet Extending Surge Protec… 24-UG06	The Atlanta Site IL1	$0	⚠ Missing Supply Plan Missing Begin Inventory
6 Outlet Extending Surge Protec… 24-UG04	The Baltimore Site MI6	$0	⚠ Missing Supply Plan Missing Forecast
6 Outlet Extending Surge Protec… 24-UG04	The Anaheim Site TX0	$0	⚠ Missing Supply Plan Missing Forecast
6 Outlet Extending Surge Protec… 24-UG03	The Baltimore Site MI6	$0	⚠ Missing Supply Plan Missing Forecast
6 Outlet Extending Surge Protec… 24-UG03	The Boston Site WI0	$0	⚠ Missing Supply Plan Missing Forecast
7 Outlet Extending Surge Protec… 24-UG07	The Baltimore Site MI6	$0	⚠ Missing Supply Plan Missing Cluster
6 Outlet Extending Surge Protec… 24-UG06	The Phoenix Site MN5	$0	⚠ Missing Supply Plan Missing Begin Inventory
7 Outlet Extending Surge Protec… 24-UG07	The Phoenix Site MN5	$0	⚠ Missing Supply Plan Missing Cluster
6 Outlet Extending Surge Protec… 24-UG04	The Phoenix Site MN5	$0	⚠ Missing Supply Plan Missing Forecast
6 Outlet Extending Surge Protec… 24-UG04	The Boston Site WI0	$0	⚠ Missing Supply Plan Missing Forecast
6 Outlet Extending Surge Protec… 24-UG03	The Anaheim Site TX0	$0	⚠ Missing Supply Plan Missing Forecast
6 Outlet Extending Surge Protec… 24-UG06	The Anaheim Site TX0	$0	⚠ Missing Supply Plan Missing Begin Inventory
6 Outlet Extending Surge Protec… 24-UG05	The Boston Site WI0	$0	⚠ Missing Supply Plan Missing Begin Inventory
3 Outlet Extending Surge Protec… 24-UG03	The Atlanta Site IL1	$0	⚠ Missing Supply Plan Missing Sourcing Schedule
5 Outlet Extending Surge Protec… 24-UG05	The Boston Site WI0	$0	⚠ Missing Supply Plan Missing Sourcing Schedule
6 Outlet Extending Surge Protec… 24-UG06	The Atlanta Site IL1	$0	⚠ Missing Supply Plan Missing Sourcing Schedule
5 Outlet Extending Surge Protec… 24-UG05	The Atlanta Site IL1	$0	⚠ Missing Supply Plan Missing Sourcing Schedule
4 Outlet Extending Surge Protec… 24-UG04	The Anaheim Site TX0	$0	⚠ Missing Supply Plan Missing Sourcing Schedule

Rows per page	25 ▾

‹ 1 ›

Supply planning settings

You can define how and when you want to plan and execute purchase orders.

1. In the left navigation pane on the AWS Supply Chain dashboard, choose the **Settings** icon. Choose **Enterprise and Configuration**, and then choose **Supply Planning**.

    The **Plan Settings** page appears.

2. Follow the steps in [Using Supply Planning for the first time](#) to edit the Supply Planning configuration settings.

3. Under **Reset Plan**, choose **Reset Plan** to delete the existing plan and start a new supply plan.

    > ⓘ **Note**
    >
    > Only an adminstrator can reset a supply plan.

    The **Reset entire plan** page appears.

4. Choose **Yes, reset the plan** to delete the current supply plan and all the existing purchase orders requests.

5. Choose **Save**.

Manufacturing Plans

Manufacturing Plans helps you to determine production, transfer, and material requirements for multiple levels of subassemblies and components in a bill of material (BOM). Manufacturing Plans uses finished goods forecasts, BOMs, sourcing rules, on-hand inventory, on-order inventory, and lead times to determine net material, transfer, and production requirements. Manufacturing Plans propagates finished goods forecasts through the BOMs and applies sourcing rules to determine production, transfer, and material requirements. You can use this capability if you have in-house manufacturing or use outsourced manufacturers to make finished products or subassemblies. You can input plans to your purchasing systems to help create purchase orders for components with suppliers, production planning systems for detailed production scheduling and performance, and labor and production capacity planning systems to manage mid- to long-term capacities.

Material plans (also called component forecasts) can also be shared with your contract manufacturers or with component suppliers through N-Tier Visibility. By sharing or publishing

the Material Plans, you can provide better demand signals to upstream suppliers so that they can plan their inventory to meet future demand. By using N-Tier Visibility, suppliers can provide commitments on component forecasts back to you. For information on N-Tier Visibility, see N-Tier Visibility.

Key inputs

Manufacturing Plans depends on various inputs to make accurate and informed calculations for generating material, transfer, and production plans. Manufacturing Plans uses the same list of inputs as Auto Replenishment for inventory target calculation and net requirements determination for a product or site combination. For information on Auto Replenishment inputs, see Key inputs. In addition, Manufacturing Plans also requires the following inputs:

- **Bill of Material (BOM)** – The BOM data entity is used to capture relationships between finished goods and various subassemblies and components that are required to make the finished goods. BOMs can contain multiple levels of components under a finished good, including alternates. Alternate or substitute components can be modeled under the same parent by using the *alternate_group* field. AWS Supply Chain only supports priority-based alternates. Components with the lowest priority are selected by the planning process. Suppliers or vendors that supply components are not part of the BOM. This information is derived from sourcing rules and vendor management-related data entities.

- **Production process** – This process is used to model the production step for manufacturing finished goods. The sourcing rule contains a reference to the production process that's used to support the *Manufacture* type of rule. AWS Supply Chain only supports a single step manufacturing process. The component requirement date is determined based on production lead time and setup time, as defined in the production process entity. Lead time is the offset from the finished goods demand date, which is used to determine the requirement date for components.

  For information on data fields required for Supply Planning, see Supply Planning.

Planning process

Manufacturing Plans include material, transfer, and production plans. These plans are created based on the configured network topology for an item. The following illustration shows the steps involved in generating these plans. These steps are repeated for each product or site combination that is in the scope of a Manufacturing Plan.
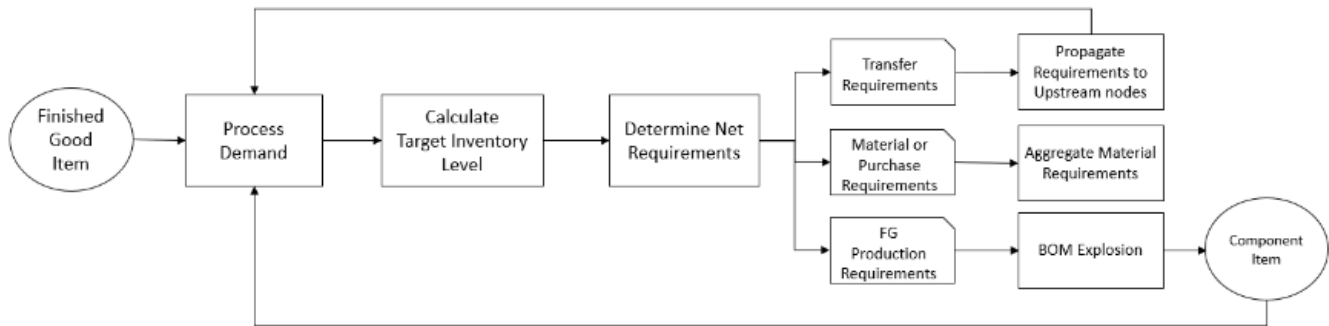
The steps and logic for Demand Processing, Inventory Target calculation, and Net Requirements calculation are common between Manufacturing Plans and Auto Replenishment. For more information, see Planning process and Inventory policies.

- **Production requirements** – For products with site combinations with sourcing rule type *Manufacture*, Supply Planning uses the production process referenced in the sourcing rule to calculate production requirements. Make type should be used for finished goods or subassemblies that go through a production process. Lead times and setup times from the *production_process* data entity, along with the BOM, is used to determine the material or component requirements. Supply Planning also applies the frozen horizon defined in the production process or the default setting to freeze supply during this time period and move all requirements to the first time period after the frozen time horizon.

- **BOM explosion** – For products or sites with sourcing rules of type *Manufacture*, Supply Planning uses the BOM defined in the *product_bom* entity to determine production requirements for subassemblies and material requirements for component items. Supply Planning traverses the tree structure defined in the BOM for the finished good or subassembly item. If there are multiple components for a parent item with the same alternate group, Supply Planning prioritizes one of the component items that belong to the same alternate group. Component material requirements are calculated from the start date until the end date of the planning horizon, as defined in the planning settings. After component requirements are determined, Supply Planning applies Demand Processing and Target Inventory level calculation steps to determine net component requirements by considering inventory policy, lead times, and on-hand and on-order inventories.

Configuring Manufacturing Plans

Configure Manufacturing Plans to generate material, transfer, and production requirements for components and finished good items.

Using Supply Planning for the first time

You can define how and when you want to plan your supply chain.

When you log in to Supply Planning for the first time, you can view the onboarding pages that highlight its key features. This helps you to get familiar with the Supply Planning capabilities.

> ⓘ **Note**
>
> Make sure that the required data is ingested before configuring Manufacturing Plans. For information on the data fields required for Supply Planning, see Supply Planning.

1. In the left navigation pane on the AWS Supply Chain dashboard, choose **Supply Planning**.

   The **Supply Planning** page appears.

2. Choose **Get Started**.

3. On the **Choose your plan** page, select **Manufacturing Plans**.

4. Choose **Get Started**.

5. On the **Supply Planning** page, choose **Next**.

   You can read through the description to understand what Supply Planning offers, or you can choose **Next** to get to the **Supply Planning Set-up** page.

6. On the **Material Plan Changes** page, you can view all the material plans that deviated from the predefined supply plan.

   Under **Supply Insights**, you can search for a particular material plan in the **Search** box, by **Required Date** and **Insight Type**.

   You can also choose a particular material plan to view more details.

7. Choose **Get Started**.

8. On the **Supply Planning Set-up** page, there are four steps to configure Manufacturing Plans:

   - Name and Scope

- Horizon and Schedule

- Inputs

- Output

9. On the **Name and Scope** page, under **Plan Name**, enter a name for your plan.

   Under **Supply Planning Scope**, select all the product groups and regions that must be included in the supply plan.

   > **ⓘ Note**
   >
   > If you do not see the Product Groups or Regions that you ingested through Supply Chain data lake, ingest the Product BOM through the API and make sure that all the other datasets, such as Product, ProductHierarchy, Site, Geography, and SourcingRule, are already ingested.

10. Choose **Continue**.

11. On the **Horizon and Schedule** page, you can do the following:

- **Planning Horizon** – You can set the planning period by defining the following:

  - **Start day of the week** – You can define your weekly supply planning. For example, if your **Start day of the week** is Monday, and today is July 3, then the supply planning period will be from July 3 to 9.

  - **Time Bucketization** – Define the time details. Daily and Weekly options are supported.

  - **Time Horizon** – Define the planning time horizon. The supported range is from 1 to 90 days, or from 1 to 104 weeks.

- **Plan Schedule** – Define when your supply plans must be executed.

  - **Planning Frequency** – Define how frequently you want to execute the supply plan.

  - **Start Time** – Define when to start planning on a scheduled day.

  - **Release Times** – Define the time Supply Planning releases the approved purchase orders into the ERP system.

- **Demand and Forecast** – Define the demand forecast for Supply Planning.

  - *Demand Planning* – Supply Planning will use the forecast information from the demand plan generated from *Demand Planning* .

  - *External* – Supply Plannning with use the *Forecast* data entity to extract the demand forecasts for Supply Planning.

- **Past days for average demand calculation in consumption-based planning** – For each product-site combination, Supply Planning looks at the past 30 days of sales history from the *OutboundOrderLine* data entity to determine the average daily demand. You can choose between 30, 60, 90, 180, 270, or 365 days and Supply Planning will consider the corresponding number of days of historical sales data when generating the average.

- **Supply** – Define your supply related inputs.

  - **Past Due Orders** – When an order in the *InboundOrderLine* data entity is not delivered and the expected delivery date is before the execution date, by default, Supply Planning ignores this order. However, you can configure the number of past due days to be considered for inbound inventory to reorder stock. For example, if you set the *Past Due Orders* for 7 days and if an order was expected 4 days ago, the item will still be considered for inbound inventory.

12. Choose **Continue**.

13. On the **Output** page, you can do the following:

- **Plan Outputs** – Select the type of supply plan that you want Supply Planning to generate.

- **Plan Insights** – Set the deviation criteria to generate supply plan insights.

14. Choose **Finish**.

15. (Optional) Choose **Invite Partners** to invite suppliers into your supply plan.

    You can also choose **Skip for now** to return to Supply Planning.

Plan overview

You can view the overall manufacturing plan for your organization.

1. In the left navigation pane on the AWS Supply Chain dashboard, choose **Supply Planning**.

   The **Supply Planning** page appears.

2. Choose **Get Started**.

3. On the **Choose your plan** page, select **Manufacturing Plan**.

   The **Manufacturing Plan** page appears.

4. Choose **Export** to download the *Material Plans*, *Production Plans*, or *Transfer Plans* to your Amazon S3 bucket.

5. Choose the **Plan Overview** tab.

- **Plan Summary** – Displays the overall manufacturing plan.

> **Note**
>
> Plan Summary metrics will not be available for new users. You can view the Plan Summary metrics after the next suppply planning cycle.

- **Inventory On-hand** – Displays the current inventory on-hand in dollars.

- **Open POs** – Displays the current open purchase orders and the required dollars.

- **Suppliers** – Displays the total number of active suppliers.

- **Purchase Requirements** – Displays the total quantity of end components required and their total cost.

- **Plan Exceptions** – Displays exceptions for missing datasets or issues in any of the data entities.

- **Supply Insights** – Supply Insights are only generated for all Material Plan changes end components when they satisfy the deviation percent change compared with the previous plan. You can select each insight to view it and take action it.

  You can use the **Search** box to search based on *Product Name* or *Site Name*, or you can search for specific supply insights by using the **Required Date Start** and **Required Date End**.

Plan outputs

You can view the overall manufacturing plan for your organization.

1. In the left navigation pane on the AWS Supply Chain dashboard, choose **Supply Planning**.

    The **Supply Planning** page appears.

2. Choose **Get Started**.

3. On the **Choose your plan** page, select **Manufacturing Plans**.

    The **Manufacturing Plan** page appears.

4. Choose the **Plan Outputs** tab.

    Choose **Filters** to filter the list based on Products or Sites.

-   **Material Plan** – Displays the overall material plan for end components from the supply plan generated.

-   **Transfer Plan** – Displays the overall transfer plan for any materials or finished goods between sites from the supply plan generated.

-   **Production Plan** – Displays the overall production plan for finished goods from the supply plan generated.

5. Under **Material Plan** and **Material Requirements**, you can view the supply details for each item.

6.   Under **Item**, choose the **Supply Plan Details** for the selected item.

     The **Supply Plan Details** page appears.

SP_Dec18 **Supply Planning**

Supply Plan Details: 24-UG05 | **The Boston Site** W10

Item Details

component1_desc s a two-stage splash lubricated Quincy QT series piston air compressor model is designed to deliver higher volumes of air while consuming less energy.

Inventory Policy
- Min   -
- Target   80%
- Max   -

Attribute	Value
Unit Cost	$50
Lead Time	2 Days
Order Schedule	Monday

View all attributes ↗

Supply Plan

Start Date: 01/08/2024

End Date: 06/24/2024

MEASURES
- Demand Forecast
- Inventory
- Open Order
- Inventory Target
- Planned Supply
- Total Supply
- Projected Ending On Hands
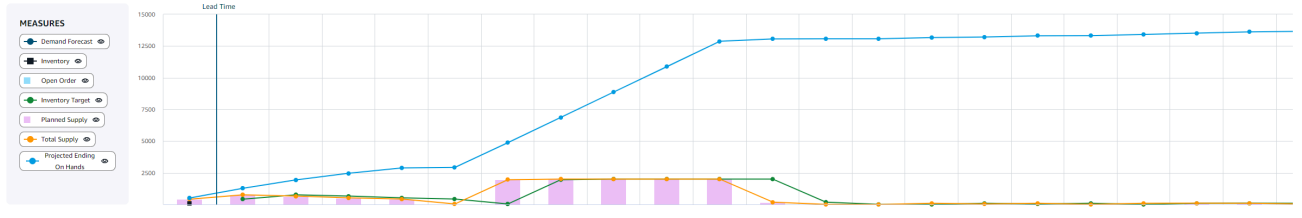
Time Bucket (Weekly)	01/08/2024	01/15/2024	01/22/2024	01/29/2024	02/05/2024	02/12/2024	02/19/2024	02/26/2024	03/04/2024	03/11/2024	03/18/2024	03/25/2024	04/01/2024	04/08/2024	04/15/2024	04/22/2024	04/29/2024	05/06/2024	05/13/2024	05/20/2024	05/27/2024	06/
Demand																						
Demand Forecast	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Supply																						
Inventory	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Open Orders	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Inventory Target	-	416	760	660	524	424	40	1,952	2,000	2,000	2,000	2,000	184	10	2	96	40	100	10	96	106	
Planned Supply	416	760	660	524	424	40	1,952	2,000	2,000	2,000	2,000	184	10	2	96	40	100	10	96	106	100	
Total Supply	416	760	660	524	424	40	1,952	2,000	2,000	2,000	2,000	184	10	2	96	40	100	10	96	106	100	
Projected Ending On Hand	516	1,276	1,936	2,460	2,884	2,924	4,876	6,876	8,876	10,876	12,876	13,060	13,070	13,072	13,168	13,208	13,308	13,318	13,414	13,520	13,620	1

Material Plan | Transfer Plan | Production Plan | Purchase Orders | Transfer Orders | Production Orders

Material Requirements

Required Date Start: mm/dd/yyyy

Required Date End: mm/dd/yyyy

All | Material Plan Change

Item / Item ID	Required Date / Lead Time	Required Qty. / % Change	Status	Supplier / Supplier ID	Location / Location ID	Value
component1 / 24-UG05	01/10/2024 / 2 Days	416 / 0%	-	Mary Golden Pilot Supplies / TPartner_37	The Boston Site / W10	$20,800
component1 / 24-UG05	01/17/2024 / 2 Days	760 / 0%	-	Mary Golden Pilot Supplies / TPartner_37	The Boston Site / W10	$38,000
component1 / 24-UG05	01/24/2024 / 2 Days	660 / 0%	-	Mary Golden Pilot Supplies / TPartner_37	The Boston Site / W10	$33,000
component1 / 24-UG05	02/07/2024 / 2 Days	424 / 0%	-	Mary Golden Pilot Supplies / TPartner_37	The Boston Site / W10	$21,200
component1 / 24-UG05	02/14/2024 / 2 Days	40 / 0%	-	Mary Golden Pilot Supplies / TPartner_37	The Boston Site / W10	$2,000
component1 / 24-UG05	02/21/2024 / 2 Days	1,952 / 0%	-	Mary Golden Pilot Supplies / TPartner_37	The Boston Site / W10	$97,600
component1 / 24-UG05	02/28/2024 / 2 Days	2,000 / 0%	-	Mary Golden Pilot Supplies / TPartner_37	The Boston Site / W10	$100,000
component1 / 24-UG05	03/06/2024 / 2 Days	2,000 / 0%	-	Mary Golden Pilot Supplies / TPartner_37	The Boston Site / W10	$100,000
component1 / 24-UG05	03/13/2024 / 2 Days	2,000 / 0%	-	Mary Golden Pilot Supplies / TPartner_37	The Boston Site / W10	$100,000
component1 / 24-UG05	03/20/2024 / 2 Days	2,000 / 0%	-	Mary Golden Pilot Supplies / TPartner_37	The Boston Site / W10	$100,000
component1 / 24-UG05	03/27/2024 / 2 Days	184 / 0%	-	Mary Golden Pilot Supplies / TPartner_37	The Boston Site / W10	$9,200
component1 / 24-UG05	04/03/2024 / 2 Days	10 / 0%	-	Mary Golden Pilot Supplies / TPartner_37	The Boston Site / W10	$500
component1 / 24-UG05	04/10/2024 / 2 Days	2 / 0%	-	Mary Golden Pilot Supplies / TPartner_37	The Boston Site / W10	$100
component1 / 24-UG05	04/17/2024 / 2 Days	96 / 0%	-	Mary Golden Pilot Supplies / TPartner_37	The Boston Site / W10	$4,800
component1 / 24-UG05	04/24/2024 / 2 Days	40 / 0%	-	Mary Golden Pilot Supplies / TPartner_37	The Boston Site / W10	$2,000
component1 / 24-UG05	05/01/2024 / 2 Days	100 / 0%	-	Mary Golden Pilot Supplies / TPartner_37	The Boston Site / W10	$5,000
component1 / 24-UG05	05/08/2024 / 2 Days	10 / 0%	-	Mary Golden Pilot Supplies / TPartner_37	The Boston Site / W10	$500
component1 / 24-UG05	05/15/2024 / 2 Days	96 / 0%	-	Mary Golden Pilot Supplies / TPartner_37	The Boston Site / W10	$4,800
component1 / 24-UG05	05/22/2024 / 2 Days	106 / 0%	-	Mary Golden Pilot Supplies / TPartner_37	The Boston Site / W10	$5,300
component1 / 24-UG05	05/29/2024 / 2 Days	100 / 0%	-	Mary Golden Pilot Supplies / TPartner_37	The Boston Site / W10	$5,000
component1 / 24-UG05	06/05/2024 / 2 Days	42 /	-	Mary Golden Pilot Supplies / TPartner_37	The Boston Site / W10	$2,100

Rows per page: 25

< 1 >

Configuring Manufacturing Plans

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The **Supply Plan Details** section displays item details and attributes. Choose **View all attributes** to view all the attributes of an item.

Under **Supply Plan**, you can view the supply plan for the selected item. You can view the supply plan for a specific date range by using **Start Date** and **End Date**.

- Demand Forecast – Displays the demand forecast or dependent demand related to an item or site.

- Inventory – Displays the on-hand inventory level related to an item or site.

- Open Order – Displays open order quantities based on the *expected_delivery_date* for an item or site. Supported order types are Purchase order, Transfer order, or Manufacturing order.

- Inventory Target – Target inventory level calculated based on the inventory policy and order schedule. For more information, see [Inventory policies](#).

- Planned Supply – Displays the planned supply.

- Total Supply – The sum of open orders and planned supply.

- Projected Ending on Hand – The projected order ending on hand.

  Projected Ending On Hand (EOH) is calculated based on Demand, Supply, and Inventory.
  EOH(T0) = Inventory(T0) + Open Orders(T0) + Planned Supply(T0) - Demand Forecast(T0)
  EOH(T1) = EOH(T0) + Open Orders(T1) + Planned Supply(T1) - Demand Forecast(T1).

7. You can also view the overall Supply Planning for an item:

- Material Plan – Displays the material plan related to an item or site.

- Transfer Plan – Displays the transfer plan related to an item or site.

- Production Plan – Displays the production plan related to an item or site.

- Purchase Orders – Displays the input purchase orders used in generating the supply plan.

- Transfer Orders – Displays the input transfer orders used in generating the supply plan.

- Production Orders – Displays the input production orders used in generating the supply plan.

Plan exceptions

You can view the overall manufacturing exceptions for your organization.

1. In the left navigation pane on the AWS Supply Chain dashboard, choose **Supply Planning**.

   The **Supply Planning** page appears.

2. Choose **Get Started**.

3. On the **Choose your plan** page, select **Manufacturing Plans**.

   The **Manufacturing Plans** page appears.

4. Choose the **Plan Exceptions** tab.

You can use the **Filters** icon to filter exceptions based on Product and Site. Choose **View all** to view all the available filters.

Importing product_bom data

To import *product_bom* data using the AWS CLI, follow the procedure below:

> ⓘ **Note**
>
> You can only use AWS CLI to import *product_bom* data into AWS Supply Chain.

1. Make a note of your instance ID where you want to import your *product_bom* data. Your *URI* format for your supply chain data bucket will be **"s3://aws-supply-chain-data-*INSTANCE_ID*/product_bom.csv"**.

2. Use the following command to upload your *product_bom* data to the Amazon S3 instance bucket.

   aws s3 cp *Path To Local Product BOM CSV* **$S3_BOM_URI "s3://aws-supply-chain-data-*INSTANCE_ID*/product_bom.csv"**.

3. Use the following command to invoke the *create bill of materials* import job.

   aws supplychain create-bill-of-materials-import-job --instance-id $*INSTANCE_ID* --s3uri "s3://aws-supply-chain-data-*INSTANCE_ID*/product_bom.csv"

   > ℹ️ **Note**
   >
   > Make sure to use the same destination Amazon S3 URI that you used when uploading the CSV in step 2.

4. Make a note of the *job ID* returned.

5. Use the following command to view the imported result.

   aws supplychain get-bill-of-materials-import-job --instance-id $*INSTANCE_ID* --job-id *job-id from step 4*

For more information on AWS Supply Chain API see the [AWS Supply Chain API Reference](#).

Business workflow

Supply Planning provides the following workflow to manage your manufacturing plans.
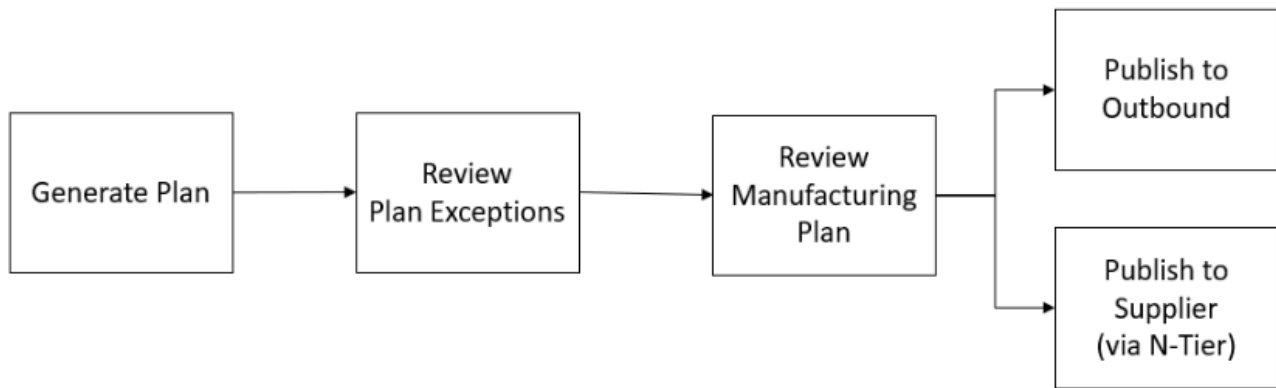
- **Generate plan** – Supply Planning generates the manufacturing plan according to the configured schedule. The latest input data required to generate the plan is received from the AWS Supply Chain data lake. Supply Planning uses configuration data, transactional data, and plan settings to generate the manufacturing plan, which includes material, transfer, and production plans. The Manufacturing Plan is generated for the configured planning horizon in terms of the number of time periods. You can create plans with either daily or weekly details, and you can create them on a daily or weekly frequency. If multiple plans are created within the same planning cycle (daily or weekly), new plans will override the existing plans. Existing plans are versioned after a new plan is generated at the beginning of a new planning cycle (for example, a new week).

- **Review plan exceptions** – Supply Planning generates plan exceptions for products or site combinations that do not have either required configuration data (lead time, sourcing schedule, and so on) or required transactional data, such as on-hand inventory. Planners can review exceptions and provide required data, and then they can rerun the plan to correct the issues and generate the supply plan for relevant product and site combinations.

- **Review Manufacturing Plan** – Supply planners can review material, transfer, and production plans by using the **Plan Overview**, **Plan Outputs**, and **Supply plan details Overview** pages on the AWS Supply Chain web application. Supply Planning generates *Material Plan Change* insights for products and sites that have a required quantity deviation above the configured threshold when compared to the most recent plan. Planners can specify the view of details in terms of inputs (for example, forecast, inventory, orders, and so on) that are used to calculate the plan output. The Supply Plan details page provides a timeline view of forecast, inventory, open orders, and planned supply.

- **Publish to Outbound** – Supply plans are published to the outbound Amazon S3 connector at the configured time scheduled under *Plan Settings*. You can integrate these plans into your ERP, purchasing, or production planning systems for execution.

- **Publish to N-Tier Visibility** – Material plans can optionally be published to the suppliers through N-Tier Visibility. Material plans are published to N-Tier Visibility based on the schedule that's configured under *Plan Settings*. N-Tier Visibility further publishes the material plan to onboarded suppliers based on collaboration settings.

Data entities required for Supply Planning

This section lists all the required fields used by Supply Planning and describes how each field is used. For information on data fields required for Supply Planning, see Supply Planning.

Planning configuration data

Topics

- Product
- Site
- Trading Partner
- Vendor product
- Vendor lead time
- Sourcing rule
- Inventory policy
- Sourcing schedule
- Bill of Material (BOM)
- Production process

Product

The product entity defines the list of items or products that must be included in the planning. The purchase order requests use *unit_cost field* from the *Product* entity to determine the order value or amount. The *Product* entity also contains the product group corresponding to a specific product, which is a foreign key into a *product_hierarchy* entity. Product groups can be used in configuring inventory policies, sourcing schedules, lead times, and so on, at the aggregate level.

Site

The *Site* entity defines the list of sites or locations that must be included in the planning. The *Site* entity also contains Regions corresponding to a specific site, which is a foreign key into a Geography entity. Regions can be used in configuring inventory policies, sourcing schedules, lead times, and so on, at the aggregate level.

Trading Partner

The *Trading_partner* entity defines the list of suppliers. *tpartner_type* should be set to *Vendor* when uploading supplier information.

Vendor product

Products supplied by each supplier are defined in the *vendor_product* entity. This entity also contains vendor-specific cost information.

Vendor lead time

Vendor lead time is the time period between placing an order to a vendor and receiving the order. This data is defined in the *VendorMgmt* category under the *vendor_lead_time* data entity. Vendor lead time follows the following override logic:

- Product level vendor lead time overrides product group level vendor lead time.
- Site level vendor lead time overrides region level vendor lead time.
- Region level vendor lead time overrides company level vendor lead time.

To look for a record, Supply Planning uses the following fields:

- company_id
- region_id
- site_id
- product_group_id
- product_id

The following is an example of the override logic:

company_id	1	1	1	1	1	1	
region_id		TX	TX	TX	TX	TX	
site_id				TX0	TX1	TX0	
product_group_id	electronics	electronics	electronics	electronics	electronics	electronics	
product_id			laptop			laptop	
planned_lead_time	5	4	10	3	2	1	

The following is an example of how Supply Planning calculates vendor lead time:

company_id	region_id	site_id	product_group_id	product_id	planned_lead_time
1	TX	TX0	electronics	laptop	1
1	TX	TX0	electronics	cell phone	3
1	TX	TX1	electronics	laptop	10
1	TX	TX1	electronics	cell phone	2
1	TX	TX2	electronics	laptop	10
1	TX	TX2	electronics	cell phone	4
1	CA	CA0	electronics	laptop	5

Prioritization order is *product > product_group > site > dest_geo (region) > product segment > company*.

Sourcing rule

Supply Planning generates a plan based on the supply chain network topology defined under the *sourcing_rules* entity.

The supported sourcing rule types are transfer, buy, and manufacture.

Sourcing rules follow the *product_id > product_group_id > company_id* override logic.

- *site* – Site defines the site entity in the network.
- *transportation_lane* – Supply Planning looks up *transit_time* in *transportation_lane by transportation_lane_id*.
- *sourcing_rules* – Supply Planning uses the topology stored in *sourcing_rules* as the sourcing network.

Supply Planning generates the plan based on the network in *sourcing_rules*, not *transportation_lane*. Sourcing rules follow the *product_id > product_group_id > company_id* override logic.

There are two steps to retrieve the transfer lead time.

1. Find *transporation_lane_id* based in *sourcing_rules*. Only the sourcing rules that have both *to_site_id* and *from_site_id* are eligible for retrieving *transfer_lead_time*.

2. Use *transporation_lane_id* to look up *transportation_lane* by using the following fields:

   - *to_site_id*

   - *product_id* or *product_group_id*

   - *sourcing_priority*

When there are multiple records with the same *to_site_id* and *product_id* (*product_group_id*) in the *sourcing_rule* entity, and when there are multiple sourcing rules for the same product and site combination, then the least sourcing priority is selected.

Sourcing rules example:

from_site_id	to_site_id	product_id	product_group_id	sourcing_priority	transportation_lane_id
IL0	TX0	laptop	electronics	1	transportaion_lane_9
NJ1	TX0	laptop	electronics	2	transportaion_lane_21
IL0	TX0		electronics	1	transportaion_lane_11

Based on the preceding definition, Supply Planning selects the following:

product_id	product_group_id	site_id	transportation_lane_id
laptop	electronics	TX0	transportaion_lane_9
cell phone	electronics	TX0	transportaion_lane_11

Supply Planning uses *transportation_lane_id* to look up the *transporation_lane* entity to get the transportation lead time by reading the *transit_time* field.

Inventory policy

Supply Planning searches for a record in the dataset byusing the following fields:

- *site_id*

- *des_geo_id*

- *company_id*

- *product_id*

- *product_group_id*

- *segment_id*

Supply Planning uses *ss_policy* to determine the inventory policy. The override logic uses the following priority: *product_id* > *product_group_id* > *site_id* > and *dest_geo_id* > *segment_id* > *company_id*.

The supported *ss_policy* values are *abs_level*, *doc_dem*, *doc_fcst*, and *sl*.

The following example displays the override priority logic.

comany_id	segment_id	des_geo_id	site_id	product_group_id	product_id	ss_policy
a.com						abs_level
a.com	seg1					doc_dem
a.com	seg1	TX				abs_level
a.com	seg1	TX	TX0			doc_fcst
a.com	seg1	TX	TX0	electronics		abs_level
a.com	seg1	TX	TX0	electronics	laptop	sl
a.com		TX				doc_dem

The following is an example of the *ss_policy* value based on the override logic.

product_id	segment_id	des_geo_id	site_id	product_group_id	ss_policy
laptop	seg1	TX	TX0	electronics	sl
cell phone	seg1	TX	TX0	electronics	abs_level
diaper	seg2	TX	TX0	baby	doc_dem
laptop	seg1	NY	NY2	electronics	doc_dem
PS4	seg3	TX	TX0	game	doc_fcst

Sourcing schedule

> **Note**
>
> Sourcing schedule is an optional entity. If this entity is not provided, Supply Planning uses a continuous review process to generate *required_date* based on when products are needed.

Supply Planning uses sourcing schedule to generate purchase plans by using the following steps:

- Find *sourcing_schedule_id* in *sourcing_schedule*.

- Find the schedule by *using sourcing_schedule_id* in *sourcing_schedule_details*.

Supply Planning searches for the following fields in *sourcing_schedule_id* under *sourcing_schedule*.

- *to_site_id*

- *tpartner_id* or *from_site_id*

Based on the sourcing path in sourcing rules, Supply Planning determines whether to use *from_site_id* or *tpartner_id*. Supply Planning reads the value in the *sourcing_schedule_id* field to determine the next step.

Supply Planning reads the schedule details under *sourcing_schedule_details* with the following fields:

- *sourcing_schedule_id*

- *company_id*

- *product_group_id*

- *product_id*

sourcing_schedule_details follows the override logic, *product_id > product_group_id > company_id*.

The following is an example of the override logic in *sourcing_schedule_details*.

sourcing_schedule_id	company_id	product_group_id	product_id	day_of_week
sourcing_schedule_1	a.com			1
sourcing_schedule_1	a.com	electronics		2
sourcing_schedule_1	a.com	electronics	laptop	3
sourcing_schedule_1	a.com		diaper	4

The following are the selected schedules after applying the override logic.

sourcing_schedule_id	company_id	product_group_id	product_id	day_of_week
sourcing_schedule_1	a.com	game	PS4	1
sourcing_schedule_1	a.com	baby	diaper	4
sourcing_schedule_1	a.com	electronics	laptop	3
sourcing_schedule_1	a.com	electronics	cell phone	2

The actual schedule can be from one row to multiple rows, based on the complexity of the schedule. For the field *week_of_month*, only one number is allowed in each row. For multiple weeks of the month, multiple records are required (see the following example). For the field *day_of_week*, both integer and name of day are allowed (Sun: 0, Mon: 1, Tue: 2, Wed: 3, Thu: 4, Fri: 5, Sat: 6). In the sourcing schedule details, weekly planning requires *week_of_month*. While in daily planning, *week_of_month* can be empty, which means every week. See the following examples.

date	day_of_week	week_of_month
8/16/2023		
	1	
	4	2
	4	4
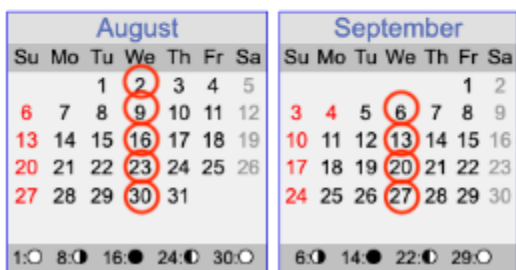
date	day_of_week	week_of_month
	3	1
	3	2
	3	3
	3	4
	3	5

Note that for weekly planning, *week_of_month* is required if *day_of_week* is provided.

The following example shows the dates that can be used for daily planning.

Date	Day of the week	Week of the month
8/1/2023	NA	NA
8/12/2023	NA	NA
NA	2	NA
NA	5	NA

The following example can be used for both daily and weekly planning.

Date	Day of the week	Week of the month
8/1/2023	NA	NA
8/12/2023	NA	NA
NA	2	1
NA	2	2
NA	2	3
NA	2	4
NA	2	5
NA	5	1
NA	5	2
NA	5	3
NA	5	4
NA	5	5

Bill of Material (BOM)

Product BOM is used in Manufacturing Plans when *sourcing_rule* is set to Manufacture. For information on how to ingest Product BOM, see the AWS Supply Chain API Reference document.

Production process

production_process_id is referenced in the *sourcing_rule* and *product_bom* entities. These fields are used to consume lead time information to make or assemble a BOM.

Transactional data

Topics

- [Forecast](#)
- [Sales history or demand](#)
- [Inventory level](#)
- [Inbound orders](#)

Forecast

Supply Planning uses two different sources and types of forecast. You can use the following source systems to retrieve forecast source:

- *External* – Supply Planning uses the data that is being ingested into the data lake forecast entity.
- *Demand Planning* – Supply Planning uses the forecasts from Demand Planning.
- *None* – Supply Planning uses the sales or demand history data from the outbound order line.

Supply Planning supports two types of forecast: deterministic and stochastic. Deterministic forecasts contain only the mean of the forecast. Stochastic forecasts contain P10/P50/P90, sometimes along with mean. When mean is not provided with stochastic forecasts, Supply Planning uses P50(median) as mean.

Each forecast record has four fields to represent the demand forecast:

- mean(double)
- p10(double)

- p50(also known as median, double)

- p90(double)

Based on the configured inventory policy, different fields in this entity are required. For *sl*, p10/ p50/90 is required; for *doc_fcst*, policy p50 or mean is required. Supply Planning uses p50 as an approximation of the mean, and for *doc_dem* and *abs_level*, none of the forecast fields are required.

Daily planning

Forecasts may be different for daily planning compared to weekly planning. Here is an example of the daily and weekly planning forecast requirement.

date	8/12/2022	8/13/2022	8/14/2022	8/15/2022	8/16/2022	8/17/2022	8/18/2022	8/19/2022
mean	4	3	5	7	12	7	5	4
p10	2	1	3	4	8	4	3	2
p50	4	3	5	7	12	7	5	4
p90	8	5	7	9	16	9	8	8

Weekly planning

You can use the daily planning forecast example for weekly planning, or you can also use the following example for weekly planning.

date	8/12/2022	8/13/2022	8/14/2022	8/15/2022	8/16/2022	8/17/2022	8/18/2022	8/19/2022
mean	43	0	0	0	0	0	0	51
p10	25	0	0	0	0	0	0	23
p50	43	0	0	0	0	0	0	49
p90	62	0	0	0	0	0	0	71

Sales history or demand

Inventory policy *doc_dem* requires demand history to compute the historical average demand. Supply Planning gets the demand history from the *outbound_order_line* entity under the *Outbound* category. Supply Planning uses the following fields:

- *ship_from_site_id*(string)

- *product_id*(string)

- *actual_delivery_date*(timestamp); when missing, use *promised_delivery_date*(timestamp)

As part of the calculation, Supply Planning uses historical outbound order lines with delivery dates in the past 30 days. The target field used for quantity is *quantity_delivered*; when missing, use *quantity_promised*.

For example, if you use Supply Planning for product "laptop" at site "TX0" on July 1, 2023, the record in *outbound_order_line* where *product_id=laptop*, *ship_from_site_id=TX0*, and *actual_delivery_date* is from June 1, 2023 to June 30, 2023. Supply Planning adds all the records and divides by 30 days to get the daily demand.

Inventory level

Supply Planning requires a beginning inventory level to start the planning process. Supply Planning searches for the inventory level under the *entity inv_level* data entity. Supply Planning searches for a record with the following fields:

- *product_id*
- *site_id*

Supply Planning uses *on_hand_inventory* to determine the inventory level.

Inbound orders

Supply Planning uses *inbound_order_line* to retrieve the in-flight order quantity. If an order is delivered during the planning horizon, the quantity is considered as part of the existing supply.

Supply Planning searches for a record under *inbound_order_line* with the following fields:

- *order_receive_date*; when missing, use *expected_delivery_date*
- *product_id*
- *to_site_id*

The following are the supported Order Types: PO (Purchase), TO (Transfer), and MO (Production or Manufacturing).

Supply Planning uses the *quantity_received*; when missing, use *quantity_confirmed* then *quantity_submitted* to determine the on-order quantity.

N-Tier Visibility

You can use N-Tier Visibility for the following:

- Forecast collaboration allows you to share component level forecasts generated from a supply plan with your trading partners and get their supply commitments. AWS Supply Chain only supports component forecasts generated by Supply Planning to be published to trading partners.

- Purchase Order (PO) collaboration allows you to share purchase orders and obtain confirmations from your trading partners on quantities and delivery dates. Purchase order collaboration is enabled only on POs associated with Work Orders that are part of Work Order Insights.

> ⓘ **Note**
>
> N-Tier Visibility is only supported in US East (N. Virginia), US West (Oregon), Europe (Frankfurt) and Asia Pacific (Sydney) Region . N-Tier Visibility is not supported in Europe (Ireland) Region.

Topics

- [Using N-Tier Visibility for the first time](#)
- [N-Tier Visibility](#)
- [Reviewing and accepting partner invites](#)
- [Purchase orders](#)
- [Reviewing and accepting purchase orders](#)
- [Forecast commits](#)
- [Reviewing and accepting forecast commits](#)
- [N-Tier Visibility settings](#)
- [Viewing forecast commits when EDI is enabled](#)
- [Viewing purchase orders in EDI format](#)

If you are an AWS Supply Chain partner, you can do the following:

1. [Reviewing and accepting partner invites](#)

2. [Reviewing and accepting purchase orders](#)

3. [Reviewing and accepting forecast commits](#)

Using N-Tier Visibility for the first time

You can configure the collaboration mode and threshold for N-Tier Visibility.

> ⓘ **Note**
>
> You can update the Forecast Commits and Purchase Orders response timeline anytime in AWS Supply Chain. On the AWS Supply Chain web application, choose the **Settings** icon, **Organization**, **Forecast Commits**, or **Purchase Orders** to update.

> ⓘ **Note**
>
> When you use N-Tier Visibility for the first time, you'll be able to view the onboarding pages that highlight the key features. This helps you to get familiar with the N-Tier Visibility capabilities.

1. Open the AWS Supply Chain web application.

2. In the left navigation pane on the AWS Supply Chain dashboard, choose **N-Tier Visibility**.

3. On the **Connect with your partners** page, choose **Next**.

   You can read through to understand what N-Tier Visibility offers, or choose **Next** until you get to the **Configure N-Tier Visibility Settings**.

4. Under **Setup forecast response time**, you can do the following:

   - **Set response timeline** – Define the number of days by when the Partner should respond to your data request.

   - **Auto accept responses** – Define a threshold limit for which you can let N-Tier Visibility auto accept responses from the Partner.

   - **Auto reject responses** – Define a threshold limit for which you can let N-Tier Visibility auto reject responses from the Partner.

- **EDI connection settings** – Define if you would like N-Tier Visibility to use EDI for collaboration on forecast commits with partners.

5. Choose **Continue**.

6. Under **Setup your Purchase Order response timeline**, you can do the following:

- **Set response timeline** – Define the number of days by when the Partner should respond to your purchase order requests.

- **Auto accept responses** – Define a threshold limit for which you can let N-Tier Visibility auto accept responses from the Partner.

- **Auto reject responses** – Define a threshold limit for which you can let N-Tier Visibility auto reject responses from the Partner.

- **EDI connection settings** – Define if you would like N-Tier Visibility to use EDI for collaboration on purchase orders with partners.

7. Choose **Finish**.

N-Tier Visibility

You can navigate through partner onboarding and collaboration.

1. Open the AWS Supply Chain web application.

2. In the left navigation pane on the AWS Supply Chain dashboard, choose **N-Tier Visibility**.

   The N-Tier Visibility dashboard appears and shows the following tabs:

- **Partner Network** – Displays the summary and onboarding status of your partners. You can also invite partners to onboard to N-Tier Visibility.

- **Purchase Orders** – Displays purchase orders and receive confirmations from your partners on quantities and delivery dates.

- **Forecast Commits** – Displays component-level forecasts generated from a supply plan with your partners and supply commitments.

3. Under **Partner Overview**, you can view the following:

- **Onboarded** – Displays the number of partners who have accepted the invite and are Onboarded into the AWS Supply Chain network.

- **Pending invites** – Displays the number of partners who have not yet accepted the invite.

- **Expired invites** – Displays the number of partners who were invited but whose invite has expired due to no response.

- **Accept rate** – Displays the overall partner invite accept rate.

4. Under **Partners**, you can view the partners that are imported through the AWS Supply Chain data lake into the AWS Supply Chain network.

   You can use the **Search** field to search for a specific partner, and you can use the **Show**, **Product Group** or **Finished Good** dropdown to filter your partners based on the invite status, partner group, or finished goods.

   - **Partner name** – Displays the partner name.

   - **Partner ID** – Displays the partner ID.

   - **DUNS** – Displays the supplier DUNS number.

   - **Open Supplier ID** – Displays the open partner hub ID.

   - **Contact name** – Displays the partner's contact name.

   - **Contact email** – Displays the partner's contact email.

   - **Invite date** – Displays the date when the partner was invited.

   - **Onboard status** – Displays the partner invite status.

     - **Not invited** – The partner is yet to be invited.

     - **Pending sign up** – The partner is invited but has not yet responded.

     - **Active** – The partner has accepted the invite and is active in the AWS Supply Chain network.

     - **Invite expired** – The partner was invited but the invite expired due to no response.

     - **Invite declined** – The partner declined the invite.

5. To view your partners in a list or map view, use the **List** or **Map** toggle button on the right.

6. Choose **Invite partners** to invite new partners from the dataset into the AWS Supply Chain network. For more information on inviting partners, see Inviting partners.

Reviewing and accepting partner invites

As a **Partner**, you should have received an email to join the AWS Supply Chain network. Select the link on the email to review and accept the invite.

> ⓘ **Note**
>
> When you are accepting invites for the first time, you can view the onboarding pages that highlight the key features. This helps you to get familiar with the AWS Supply Chain capabilities.

1. On the AWS Supply Chain login page, enter the *username*.

   You will be sent a verification code to the same email address from which you received the invite to join.

2. On the **Additional verification required** page, under **Verification code**, enter the verification code from the email.

3. On the **Choose your password** page, create a password to sign into AWS Supply Chain.

4. Choose **Create AWS Builder ID**.

5. On the **Complete your user profile** page, the *firstname* and *lastname* are auto-populated. Enter your *Job title* and *timezone*.

6. Choose **Next**.

7. On the **Let's add your organization's information** page, choose **Upload logo** to upload your organization's logo and enter the **Organization name**.

8. Choose **Complete setup**.

   The **N-Tier Visibility** page appears.

9. On the **N-Tier Visibility** page, under **Partner Network**, you can view all the invites that you have received.

10. Select a partner to accept or decline the invite.

    The **N-Tier Visibility** page is displayed with the partner details.

11. Choose **Accept connection**. You will see the **Invite accepted** message.

    > ⓘ **Note**
    >
    > If you choose to decline the invite, you must provide a reason on the **Decline connection invite** page.

Purchase orders

You can view the list of purchase order data requests that are published to your partners. Purchase orders collaboration can only be enabled through Work Orders. For more information, see [Work Order Insights](#).

1. In the left navigation pane on the AWS Supply Chain dashboard, choose **N-Tier Visibility**.

   The **N-Tier Visibility** page appears.

2. Choose the **Purchase Orders** tab.

3. Under **Purchase Orders**, you can view the details of all the purchase order data requests that are published to your partners from the generated order insight.

   You can select any purchase order to review the purchase order details.

4. Select the **Status** dropdown to filter purchase orders based on collaboration status.

5. Choose **Review** for purchase orders with a *For review* collaboration status. These purchase orders require your review if the partner's response on date or quantity deviate from configured acceptance threshold.

   The **Purchase Order** details page appears.

6. Under **Review the Purchase Order Update**, review the purchase order quantity and delivery date submitted by the partner, and then you can accept or reject the response.

   You can read the reason for the update under **Update details from the partner**.

7. To accept the purchase order update, choose **Accept response**.

   The **Accept update** window appears. Choose **Accept update**.

8. To reject the purchase order update, choose **Reject and send**.

   The **Reject PO update and send feedback** window appears. Enter the rejection details and choose **Reject and send**. The purchase orders will be sent back to your partner and provided an updated response.

Reviewing and accepting purchase orders

As a **Partner**, you should have received an email to review the purchase orders. Select the link on the email to review and accept the purchase orders.

> ⓘ **Note**
>
> When you are accepting invites for the first time, you'll be able to view the onboarding pages that highlight the key features. This helps you to get familiar with the AWS Supply Chain capabilities.

- Open Requests – Displays all the purchase orders that are still pending review or awaiting a response.
- Completed Requests – Displays all the purchase orders that are completed.
- Purchase Order Import – Displays all the purchase orders that are imported.
- Purchase Order Export – Displays all the purchase orders that are exported to edit offline.

1. In the left navigation pane on the AWS Supply Chain dashboard, choose **N-Tier Visibility**.

   The **N-Tier Visibility** page appears.

2. Choose the **Purchase Orders** tab.

3. Under **Review Purchase Orders**, you can view all the purchase orders that must be reviewed and confirmed.

4. Choose **Confirm** to accept the purchase order update.

5. Choose **Update** to update the purchase order quantity and delivery date.

   The **Update the Purchase Order** window appears. Enter the reason for the purchase order and details, and choose **Confirm**.

6. You can choose **Collaboration history** to read the purchase order updates and reason for the purchase order.

Forecast commits

You can view the forecast commit data requests that are published to your partners. These data requests are triggered from AWS Supply Chain supply planning. For more information, see Supply Planning.

1. In the left navigation pane on the AWS Supply Chain dashboard, choose **N-Tier Visibility**.

   The **N-Tier Visibility** page appears.

2. Choose the **Forecast Commits** tab.

   The **Forecast Commit** page appears.

3. Under **Forecast commit**, you can view the details of all the forecast data requests from the generated supply plan.

   You can select any forecast commit to review the forecast commit details.

4. Select the **Status**, **Partner**, or **Site** dropdown to filter the forecast commits based on the collaboration status, partner, or site.

5. Choose **Review** for forecast commits with a *For review* collaboration status.

   The **Forecast commit** details page appears.

6. Under **Review the Forecast Commit update**, review the committed forecast and deviation. You can decide to accept or reject the response, or you can decline and close the forecast commit.

   You can read the reason for the update under **Latest update details from the partner**.

7. If you want to accept the forecast commit update, choose **Accept response**.

   The **Accept update** window appears. Choose **Accept update**.

8. If you want to reject the forecast commit update, choose **Reject and send**.

   The **Reject Forecast update and send feedback** window appears. Enter the rejection details and choose **Reject and send**.

9. If you want to decline and close the forecast commit request, choose **Decline and close**.

   The **Decline and close Forecast Commit** window appears. Enter the details and choose **Decline and close**.

Reviewing and accepting forecast commits

As a **Partner**, you should have received an email to review the forecast commits. Select the link on the email to respond to the request.

1. In the left navigation pane on the AWS Supply Chain dashboard, choose **N-Tier Visibility**.

   The **N-Tier Visibility** page appears.

2. Choose the **Forecast Commits** tab.

3. Under **Review Forecast Commits**, you can view all the forecasts based on the status.

   - Forecast Requests – Displays all the forecast commit requests that are still pending review or awaiting response.

   - Forecasts Import – Displays all the forecasts that are imported.

   - Forecasts Export – Displays all the forecasts that are exported to edit offline. After you update, import the changes back.

4. Select the **Status**, **Requester**, or **Site** dropdown to filter the forecasts based on the collaboration status, requester, or site.

5. Choose **Review** for forecast commits with a *For review* collaboration status.

   The **Forecast commit** details page appears.

6. Select the blue link on the specific date to edit the forecast, or you can bulk edit the committed forecast for the complete forecast timeline.

   The **Edit quantity** page appears. Under the **Change** dropdown, select the reason for the edit, and under **Quantity**, enter the quantity.

7. Choose **Save and update**.

8. Choose **Save and confirm** to accept the forecast commit.

9. Choose **Decline** to decline the forecast commit request.

N-Tier Visibility settings

You can update the forecast commits and purchase orders response settings in AWS Supply Chain.

1. In the left navigation pane on the AWS Supply Chain dashboard, choose the **Settings** icon.

   The **Settings** page appears.

2. Choose **Organization**, **Forecast Commits**, or **Purchase Orders**, depending on what you want to edit.

   For information on how to update the settings, see Using N-Tier Visibility for the first time.

Viewing forecast commits when EDI is enabled

> **ⓘ Note**
>
> You will only see this configuration if you selected *Yes* to use **EDI Connection Settings** when setting up N-Tier Visibility.

You can only export forecast commits data in EDI format.

1. In the left navigation pane on the AWS Supply Chain dashboard, choose **N-Tier Visibility**.

   The **N-Tier Visibility** page appears.

2. Choose the **Forecast Commits** tab.

   The **Confirm or Update Forecast Commits** page appears.

3. From the **Actions** drop-down, choose **Export EDI data**.

   The .json file with the forecast commits information is downloaded to your local computer and also downloaded to the Amazon S3 folder created as part of the outbound connection setup for Supply Planning.

Viewing purchase orders in EDI format

> **ⓘ Note**
>
> You will only see this configuration if you selected *Yes* to use **EDI Connection Settings** when setting up N-Tier Visibility.

You can view the Purchase Orders data received through EDI.

1. In the left navigation pane on the AWS Supply Chain dashboard, choose **N-Tier Visibility**.

   The **N-Tier Visibility** page appears.

2. Choose the **Purchase Orders** tab.

   The **Confirm or Update Pending Purchase Orders** page appears.

3.   Select the required purchase order. The **Purchase Order** update page appears.

You can view the purchase order update.

Sustainability

You can invite partners by using the AWS Supply Chain data lake connectors and by mapping the partner information to Partners or Partner's point-of-contact from Amazon S3 or other ERP systems. Make sure that the partner list or partner point-of-contact does not contain duplicate information and that it is up-to-date before you upload the partner information dataset. You can also manually add and invite partners. For more information on how to upload your data, see [Data lake](#).

Using Sustainability, you can request data from your partners who have accepted your invitation to join your network. You can use the *Simple reporting* feature to request different types of data from your partner network. You can enter detailed information on the type of data you are requesting from your partners. Responses to your data requests are downloaded to your Amazon S3 bucket everyday at 9 am.

Topics

- [Using Sustainability for the first time](#)
- [Sustainability dashboard](#)
- [Inviting partners](#)
- [Data requests](#)
- [Creating data requests](#)
- [Reviewing and accepting partner invites](#)
- [Reviewing or responding to data requests](#)
- [Partner settings](#)

If you are a AWS Supply Chain partner, you can do the following:

1. [Reviewing and accepting partner invites](#)
2. [Reviewing or responding to data requests](#)

Using Sustainability for the first time

You can use Sustainability to request and collect carbon emissions data and other compliance data from suppliers.

> ⓘ **Note**
>
> When you use Sustainability for the first time, you'll be able to view the onboarding pages that highlight the key features. This helps you to get familiar with the Sustainability capabilities.

1. Open the AWS Supply Chain web application.

2. In the left navigation pane on the AWS Supply Chain dashboard, choose **Sustainability**.

3. On the **Compliance and Sustainability** page, choose **Next**.

   You can read through the page to understand what Sustainability offers, or you can choose **Next** to go the Sustainability dashboard.

Sustainability dashboard

You can view or invite new partners.

1. In the left navigation pane on the AWS Supply Chain dashboard, choose **Sustainability**.

    The Sustainability page appears.

2. On the **Sustainability** dashboard page, choose the **Partner Network** tab.

    -   **Getting Started** – You can choose **Invite Partners** to invite Partners into your AWS Supply
        Chain network, and you can choose **Create data requests** to request data from your
        partners.

- **Partner Overview** – The **Onboarding metrics** section displays the partners who are currently onboarding, invites that are pending acceptance by partners, expired invites and acceptance rate. The **Data requests** section displays data request details from the partners, including the status of data requests.

- **Partners** – You can view the list of partners that were imported through data lake, or you can invite new partners.

  Under **Partners**, you can use the **Search** field to search for a specific partner, and you can use the **Show** dropdown to filter your partners based on invite status.

  - **Partner name** – Displays the partner name.

  - **Partner ID** – Displays the partner ID. The partner ID link to your source system.

  - **Supplier DUNS** – Displays the partner DUNS.

  - **Open Supplier ID** – Displays the open partner hub ID.

  - **Contact name** – Displays the partner's contact name.

  - **Contact email** – Displays the partner's contact email.

  - **Invite date** – Displays the date when the partner was invited.

  - **Portal status** – Displays the status of the invitation.

    - **Not invited** – Partner is not yet invited.

    - **Pending sign up** – Partner is invited but hasn't responded to the invite.

    - **Active** – Partner has accepted the invite and is active. Partner has to be active to receive data requests.

    - **Invite expired** – Partner was sent the invite but the invite expired without any response.

    - **Invite declined** – Partner declined the invitation.

You can choose a partner under **Partner name** to view partner details and details of the data request that are specific to the partner.

To resend a partner invite, choose a partner with an *Expired* portal status and, under the **Actions** dropdown, choose **Resend invite**.

Inviting partners

You can invite or add new partners from the dataset into the AWS Supply Chain network.

1. In the left navigation pane on the AWS Supply Chain dashboard, choose **Sustainability**.

   The Sustainability page appears.

2. Choose the **Partner Network** tab.

3. On the **Partner Network** page, choose **Invite partners**.

   The **Invite Partners** page appears.

4. Under **Select partners to invite**, to add an existing partner, under **Partner name**, select the partner from the list.

5. To add a new partner, choose **Add new partner**.

   On the **Enter new partner details** page, enter the **Partner details** and **Account administrator** information, and then choose **Add new partner**.

6. On the **Select partners to invite** page, you will see the partners that you added manually under **New partners**.

7. Choose **Continue**.

8. On the **Selected partners** page, review the partner details under **Partners selected from the dataset**, and then choose **Send Invites**.

> ⓘ **Note**
>
> If you added new partners manually, you will see the new partners under **New partners**.

Data requests

You can request data from your partners that have accepted your invite and are in the AWS Supply Chain network. The **Portal status** under **Partners** must display *Active* before you request data.

1. In the left navigation pane on the AWS Supply Chain dashboard, choose **Sustainability**.

    The Sustainability page appears.

2. Choose the **Data Requests** tab.

    You can view the current partners and the data request status, or you can create a new data request.

3. Under **Data Requests**, you can view the overall status of your data requests to partners.

    *   **Total requests** – Displays the total number of data requests that you have submitted.

    *   **Total partners** – Displays the total number of suppliers from which you have requested data.

    *   **In progress** – The data request has been created or will be worked on by the data provider (supplier).

    *   **Submitted** – Displays the data requests submitted to partners.

    *   **Rework requested** – Displays the number of data request responses that you rejected and sent back to the partner to edit their response and resubmit.

    *   **Reviewed** – Displays the total number of data requests reviewed by partners.

    *   **Declined** – Displays the number of partners who declined your data request.

    *   **Canceled** – Displays the number of data requests that have been canceled because they are not needed.

4. You can use the **Search** field to search for a partner.

5. You can use the **Show** dropdown to filter partners depending on the status of the data request.

6. Choose **Due date risk** to view all the partners who haven't responded to the data request and are nearing the due date.

7. Choose **Overdue** to view all the partners who haven't responded to the data request and the due date has passed.

8. From the **Partner** list, you can choose a partner with a *Pending* status, and you can use the **Actions** dropdown to send a reminder.

Creating data requests

You can use the simple reporting template to request any type of data from your partners. For example, you can request compliance information such as product brochure, safety report, or lab testing results of a product. You can also upload your own form for the partner to download, update information, and repload to answer the data requst.

To create a data request, do the following:

1. In the left navigation pane on the AWS Supply Chain dashboard, choose **Sustainability**.

    The Sustainability page appears.

2. Choose the **Data Requests** tab.

3. On the **Data Requests** page, choose **Create data request**.

    The **Create data requests** page appears.

4. On the **Create data requests** page, under **Select data request type**, select the data request type.

5. Under **Select data request options**, enter the details for the data request.

6. Under **Select the task input options**, select **Ask for a text response** to receive the data request response in a text field.

7. Select **Ask for a file response** if you want your partners to upload a response file to your data request.

8. Choose **Save template** to save the details you entered and reuse again for additional data requests (due date and notes field will not be saved, as these change per data request).

   The **Save template** page appears.

9. Enter the name and description for your new template and choose **Save template**. Make sure you enter a name and description that is meaningful since you will use the name and description to find the template, understand it's usage, and reuse to request data.

   Under **Saved templates**, you will see the template listed under **Data request type**.
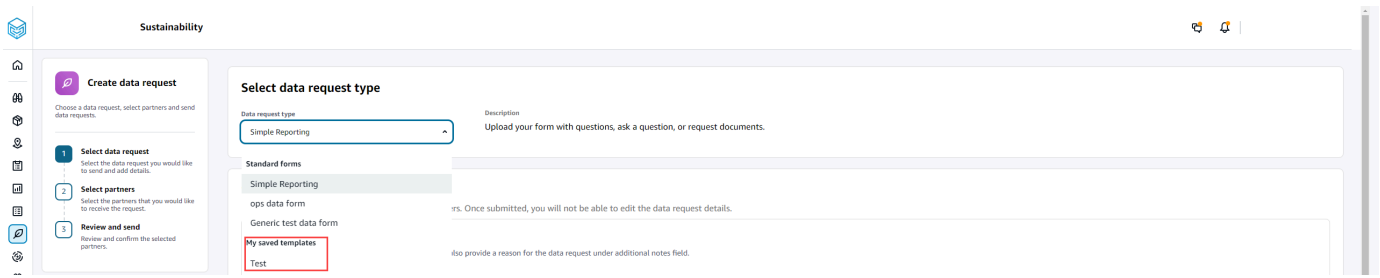
10. Choose **Continue** to send the data request.

11. Choose **Cancel** if you only want to create a new template for you and your team. The create data request flow will be canceled.

12. On the **Select partners to request data** page, under **Partner name**, select the partner to request data.

    You can choose from the partners listed under **Partner name** or invite a new partner. For information on how to invite partners, see Inviting partners.

13. Under **Selected partners**, review the partner details and choose **Send Request**.

    The invited partner will receive an email invite requesting data.

Data requests examples

To collect compliance documents from your partners, here are some examples on how you can structure the Simple Reporting dataform to meet your needs.

Select data request options

Enter the data request details to share with the partners. Once submitted, you will not be able to edit the data request details.

Simple Reporting

Enter a name and due date for the data request. You can also provide a reason for the data request under additional notes field.

Data request name

Q1 2023 Compliance Document Collection		Due date
		01/27/2024 🗓

Additional notes (optional)

We are collecting compliance artifacts needed to maintain regulatory compliance on the products you provide to use. During this round we will be collecting "XX" from you. Please see the sample document attached that you can download as a reference.	249/255

Data request information

Enter specific questions or instructions on your data request. You can upload a file to provide or ask specific information.

Task instructions

Please Upload "XX" for the products we purchased from you in Q1 2023. The information your provide should be similar to the reference document you can download. In the Task Response Field, please provide us any additional comments about your document.	251/255

File upload (optional)

📄 **Sample Compliance Document.pdf** 🗑
● Upload Successful   File size: 14 KB

Select the task input options

☑ Ask for a text response
    Partners will have the ability to type the answer in an input field.
    Mandatory/required field?
    ○ Yes   ⊙ No

☑ Ask for a file response
    Partners will have the ability to upload a file.
    Mandatory/required field?
    ⊙ Yes   ○ No

- Title: Q1 2023 Sample Compliance Document Collection

- Additional Notes: We are collecting [name of document] from our suppliers to fulfill our Q1 2023 compliance documents needed for [purpose for collecting documents] for the products we buy from you.

- Task instructions: Please upload [name of document] for the products we have purchased from you in Q1 2023. The information on this document should be similar to the reference document we have uploaded for you to review. In the Task Response field, provide us any comments you have about the document provided.

- Ask for a text response: Select *No* to make this field mandatory.

- Ask for a file response: Select *Yes* to make this field mandatory.

To collect emissions information, you can do the following:

- Title: 2023 Emissions Collection

- Additional Notes: To achieve our Climate Pledge Goals, we are collecting emissions data so that we have the information needed to understand our carbon footprint. Providing us with carbon data on the services your provide are needed for us to fully disclose our carbon emission.

- Task instructions: Please download the provided Emissions form, answer the questions in the form, and upload it when complete. Please ensure that you are only providing emissions information for the year 2023 and ensure that the form is signed.

- Ask for a text response: Not selected

- Ask for a file response: Select *Yes* to make this field mandatory.

To collect pilot ESG data, you can do the following:

Simple Reporting
Enter a name and due date for the data request. You can also provide a reason for the data request under additional notes field.

Data request name

| ESG Pilot Questionnaire V1 |

Due date

| 01/27/2024 | 🗓 |

Additional notes (optional)

| Thank you for agreeing to pilot our ESG questionnaire. In Q2 next year we will need to disclose our impact on environmental and social indicators to meet compliance requirements. We will need information from you so that we can complete our report. | 248/255 |

Data request information
Enter specific questions or instructions on your data request. You can upload a file to provide or ask specific information.

Task instructions

| Please download the provided questionnaire, answer the questions in the form, and upload it when complete. Please indicate in the task response box how much time it took you to complete the questionnaire. | 204/255 |

File upload (optional)

📄 **Sample Emissions Form.docx** 🗑
⬤ Upload Successful   File size: 11 KB

Select the task input options

☑ Ask for a text response
Partners will have the ability to type the answer in an input field.

Mandatory/required field?
◉ Yes   ○ No

☑ Ask for a file response
Partners will have the ability to upload a file.

Mandatory/required field?
◉ Yes   ○ No

- Title: ESG Pilot Questionnaire V1

- Additional Notes: Thank you for agreeing to pilot our ESG questionnaire. In Q2 next year, we must disclose our impact on environmental and social indicators to meet compliance requirements. We need information from you so that we can complete our report.

- Task instructions: Download the provided questionnaire, answer the questions in the form, and upload it when complete. Indicate in the task response box how much time it took you to complete the questionnaire.

- Ask for a text response: Select *Yes* to make this field mandatory.

- Ask for a file response: Select *Yes* to make this field mandatory.

Reviewing and accepting partner invites

As a **Partner**, you should have received an email to join the AWS Supply Chain network. Select the link on the email to review and accept the invite.

> ⓘ **Note**
>
> When you are accepting invites for the first time, you can view the onboarding pages that highlight the key features. This helps you to get familiar with the AWS Supply Chain capabilities.

1. On the AWS Supply Chain login page, enter the *username* which is the partner's email address.

   You will be sent a verification code to the same email you received the invite to join.

2. On the **Additional verfication required** page, under **Verification code**, enter the verification code from the email.

   > ⓘ **Note**
   >
   > If you plan to use the same computer to log into AWS Supply Chain, after you use the verification code to access AWS Supply Chain for the first time, choose **Trusted device** on your computer to access AWS Supply Chain without the verification code the next time.

3. On the **Choose your password** page, create a password to sign into AWS Supply Chain.

4. On the **Complete your user profile** page, the *firstname* and *lastname* are auto-populated. Enter your *title* and *timezone*.

5. Choose **Next**.

6. On the **Let's add your organization's information** page, choose **Upload logo** to upload your organization's logo, and then enter the **Organization name**.

7. Choose **Complete setup**.

   The **Sustainability** page displays.

8. On the **Sustainability** page, under **Partner Network**, you can view all the invites that you have received.

9. Review and select a partner to accept or decline the invite.

   The **Sustainability** page displays with the partner details.

10. Choose **Accept connection**. You will see the **Invite accepted** message.

> **ⓘ Note**
>
> If you choose to decline the invite, you must provide a reason on the **Decline connection invite** page.

Reviewing or responding to data requests

You will receive a daily digest letting you know if you have received any data requests within the last 24 hour period. Select the link in the email to view any new data requests.

1. On the **Sustainability** page, under **Data Requests**, you will see all the data requests from your partners.

2. Under **Title**, choose the data request that you want to view or take action on.

3. On the **Sustainability** page, under **Please complete the following sections**, review and provide the requested information.

4. Choose **Submit response**.

5. You can choose to **Download** the data request. The download option downloads the template requested by the partner.

6. You can also choose to **Decline** to answer the data request. You will be prompted to provide a reason for choosing to decline to answer.

Partner settings

To enhance your account security, you can use multi-factor authentication.

1. In the left navigation pane on the AWS Supply Chain dashboard, choose the **Settings** icon.

    The **Settings** page appears.

2. Choose **Account Profile**.

3. Under **Multi-factor authentication**, choose **Multifactor Authentication Setup**.

    You will be redirected to *AWS Access Portal*. For information on AWS Access Portal, see [Using the AWS acess portal.](#).

Data entities and columns used in AWS Supply Chain

This chapter describes the data entities and columns supported by each AWS Supply Chain module.

Topics

- [Sustainability](#)
- [N-Tier Visibility](#)
- [Supply Planning](#)
- [Insights](#)
- [Work Order Insights](#)
- [Demand Planning](#)

Sustainability

The table below list the data entities and columns used by Sustainability for partner invitations and onboarding.

> **ⓘ Note**
>
> **How to read the table:**
>
> - **Required** – The column name is mandatory in your dataset and you must populate the column name with values.
> - **Optional** – The column name is optional. For enhanced feature output, it is recommended to add the column name with values.
> - **Not required** – Data entity not required.

Data entity	Column	Is the column used by Sustainability?
trading_partner	id	Required
	tpartner_type	Required – When you ingest data from SAP or EDI, the

Data entity	Column	Is the column used by Sustainability?
		default value for string is SCN_RESERVED_NO_ VALUE_PROVIDED. When you upload data using the Amazon S3 connector, you must enter a value or use SCN_RESERVED_NO_ VALUE_PROVIDED for successful ingestion.
	geo_id	Required – When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_ VALUE_PROVIDED. When you upload data using the Amazon S3 connector, you must enter a value or use SCN_RESERVED_NO_ VALUE_PROVIDED for successful ingestion.
	eff_end_date	Required – You must enter a value for eff_start_date and eff_end_date. If you don't have a value, enter **1900-01-01 00:00:00** for eff_start_date, and **9999-12-31 23:59:59** for eff_end_date.

Data entity	Column	Is the column used by Sustainability?
	eff_start_date	Required – You must enter a value for eff_start_date and eff_end_date. If you don't have a value, enter **1900-01-01 00:00:00** for eff_start_date, and **9999-12-31 23:59:59** for eff_end_date.
trading_partner_poc	tpartner_id	Required
	email	Required

N-Tier Visibility

The table below list the data entities and columns used by N-Tier Visibility.

> **ⓘ Note**
>
> **How to read the table:**
>
> - **Required** – The column name is mandatory in your dataset and you must populate the column name with values.
>
> - **Optional** – The column name is optional. For enhanced feature output, it is recommended to add the column name with values.
>
> - **Not required** – Data entity not required.

Data entity	Column	Is the column used by N-Tier Visibility?
trading_partner	id	Required

Data entity	Column	Is the column used by N-Tier Visibility?
	description	Optional
	company_id	Optional
	tpartner_type	Required – When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_ VALUE_PROVIDED. When you upload data using the Amazon S3 connector, you must enter a value or use SCN_RESERVED_NO_ VALUE_PROVIDED for successful ingestion.
	geo_id	Required – When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_ VALUE_PROVIDED. When you upload data using the Amazon S3 connector, you must enter a value or use SCN_RESERVED_NO_ VALUE_PROVIDED for successful ingestion.

Data entity	Column	Is the column used by N-Tier Visibility?
	eff_end_date	Required – You must enter a value for eff_start_date and eff_end_date. If you don't have a value, enter **1900-01-01 00:00:00** for eff_start_date, and **9999-12-31 23:59:59** for eff_end_date.
	eff_start_date	Required – You must enter a value for eff_start_date and eff_end_date. If you don't have a value, enter **1900-01-01 00:00:00** for eff_start_date, and **9999-12-31 23:59:59** for eff_end_date.
trading_partner_poc	tpartner_id	Required
	email	Required
product	id	Required – Data entity is optional but *id* is used to generate Partner Network View.
product_hierarchy	id	
site	id	
sourcing_rules	sourcing_rule_id	Required – Data entity is optional but *sourcing_rule_id* is used to generate Partner Network View.

Supply Planning

The table below list the data entities and columns used by Supply Planning.

> **ⓘ Note**
>
> **How to read the table:**
>
> - **Required** – The column name is mandatory in your dataset and you must populate the column name with values.
>
> - **Optional** – The column name is optional. For enhanced feature output, it is recommended to add the column name with values.
>
> - **Not required** – Data entity not required.

Data entity	Column	Is the column used for Auto Replenishment?	Is the column used for Manufacturing Plan?
site	id	Required	Required
	description	Required	Required
	geo_id	Required - Without this field, filters cannot group sites by category such as region, country, state, zip code and so on.	Required - Without this field, filters cannot group sites by category such as region, country, state, zip code and so on.
	site_type	NA	NA
	company_id	Optional	Optional
	latitude	NA	NA
	longitude	NA	NA

Data entity	Column	Is the column used for Auto Replenishment?	Is the column used for Manufacturing Plan?
	is_active	Required - Identifies if a site needs to be considered for planning. Note, set the value to *False* if a site should not to be considered. If the field is kept blank or null, the site will be considered.	Required - Identifies if a site needs to be considered for planning. Note, set the value to *False* if a site should not to be considered. If the field is kept blank or null, the site will be considered.
	open_date	NA	NA
	end_date	NA	NA
transportation_lane	id	Required	Required
	from_site_id	Required	Required
	to_site_id	Required	Required
	product_group_id	Required	Required
	transit_time	Required	Required
	time_uom	Required - Supported values include Day.	Required - Supported values include Day.
	distance	Not required	Not required
	distance_uom	Not required	Not required
	eff_start_date	Optional	Optional
	eff_end_date	Optional	Optional

Data entity	Column	Is the column used for Auto Replenish ment?	Is the column used for Manufacturing Plan?
	product_id	Optional	Optional
	emissions_per_unit	Not required	Not required
	emissions_per_weight	Not required	Not required
	company_id	Optional	Optional
	from_geo_id	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_ VALUE_PROVIDED. When you upload data using the Amazon S3 connector , you must enter a value or use SCN_RESERVED_NO_ VALUE_PROVIDED for successful ingestion.	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_ VALUE_PROVIDED. When you upload data using the Amazon S3 connector , you must enter a value or use SCN_RESERVED_NO_ VALUE_PROVIDED for successful ingestion.

Data entity	Column	Is the column used for Auto Replenish ment?	Is the column used for Manufacturing Plan?
	to_geo_id	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_ VALUE_PROVIDED. When you upload data using the Amazon S3 connector , you must enter a value or use SCN_RESERVED_NO_ VALUE_PROVIDED for successful ingestion.	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_ VALUE_PROVIDED. When you upload data using the Amazon S3 connector , you must enter a value or use SCN_RESERVED_NO_ VALUE_PROVIDED for successful ingestion.
	carrier_tpartner_id	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_ VALUE_PROVIDED. When you upload data using the Amazon S3 connector , you must enter a value or use SCN_RESERVED_NO_ VALUE_PROVIDED for successful ingestion.	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_ VALUE_PROVIDED. When you upload data using the Amazon S3 connector , you must enter a value or use SCN_RESERVED_NO_ VALUE_PROVIDED for successful ingestion.

Data entity	Column	Is the column used for Auto Replenish ment?	Is the column used for Manufacturing Plan?
	service_type	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_ VALUE_PROVIDED. When you upload data using the Amazon S3 connector , you must enter a value or use SCN_RESERVED_NO_ VALUE_PROVIDED for successful ingestion.	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_ VALUE_PROVIDED. When you upload data using the Amazon S3 connector , you must enter a value or use SCN_RESERVED_NO_ VALUE_PROVIDED for successful ingestion.
	trans_mode	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_ VALUE_PROVIDED. When you upload data using the Amazon S3 connector , you must enter a value or use SCN_RESERVED_NO_ VALUE_PROVIDED for successful ingestion.	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_ VALUE_PROVIDED. When you upload data using the Amazon S3 connector , you must enter a value or use SCN_RESERVED_NO_ VALUE_PROVIDED for successful ingestion.
	cost_per_unit	Optional	Optional
	cost_currency	Optional	Optional

Data entity	Column	Is the column used for Auto Replenishment?	Is the column used for Manufacturing Plan?
product	id	Required	Required
	description	Required	Required
	product_group_id	Required - Without this field, filters cannot group by product category such as dairy, clothes, and so on.	Required - Without this field, filters cannot group by product category such as dairy, clothes, and so on.
	is_deleted	Required - Identifies if a product needs to be considered for planning. Set the field to *False* to consider this product and *True* to not consider the product. If this field is left blank or null, then the value will be defaulted to *True*.	Required - Identifies if a product needs to be considered for planning. Set the field to *False* to consider this product and *True* to not consider the product. If this field is left blank or null, then the value will be defaulted to *True*.
	product_type	Not required	Not required
	parent_product_id	Optional	Optional
	base_uom	Optional	Optional
	unit_cost	Optional	Optional
	unit_price	Optional	Optional

Data entity	Column	Is the column used for Auto Replenishment?	Is the column used for Manufacturing Plan?
product_hierarchy	id	Required	Required
	description	Required – This field is used by filters to group by a product category such as dairy, clothes, and so on.	Required – This field is used by filters to group by a product category such as dairy, clothes, and so on.
	parent_product_group_id	Optional – This field is used by filters to support multiple product category hierarchy such as dairy, full fat milk and so on.	Optional – This field is used by filters to support multiple product category hierarchy such as dairy, full fat milk and so on.
geography	id	Required	Required
	description	Required	Required
	parent_geo_id	Optional – This field is used by filters to support multiple location hierarchy such as USA → USA-EAST.	Optional – This field is used by filters to support multiple location hierarchy such as USA → USA-EAST.
trading_partner	id	Required	Required
	description	Optional	Optional
	country	Optional	Optional

Data entity	Column	Is the column used for Auto Replenish ment?	Is the column used for Manufacturing Plan?
	eff_start_date	Required – You must enter a value for eff_start_date and eff_end_date. If you don't have a value, enter **1900-01-0 1 00:00:00** for eff_start_date, and **9999-12-3 1 23:59:59** for eff_end_date.	Required – You must enter a value for eff_start_date and eff_end_date. If you don't have a value, enter **1900-01-0 1 00:00:00** for eff_start_date, and **9999-12-3 1 23:59:59** for eff_end_date.
	eff_end_date	Required – You must enter a value for eff_start_date and eff_end_date. If you don't have a value, enter **1900-01-0 1 00:00:00** for eff_start_date, and **9999-12-3 1 23:59:59** for eff_end_date.	Required – You must enter a value for eff_start_date and eff_end_date. If you don't have a value, enter **1900-01-0 1 00:00:00** for eff_start_date, and **9999-12-3 1 23:59:59** for eff_end_date.
	time_zone	Optional	Optional
	is_active	Optional	Optional

Data entity	Column	Is the column used for Auto Replenish ment?	Is the column used for Manufacturing Plan?
	tpartner_type	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_ VALUE_PROVIDED. When you upload data using the Amazon S3 connector , you must enter a value or use SCN_RESERVED_NO_ VALUE_PROVIDED for successful ingestion.	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_ VALUE_PROVIDED. When you upload data using the Amazon S3 connector , you must enter a value or use SCN_RESERVED_NO_ VALUE_PROVIDED for successful ingestion.
	geo_id	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_ VALUE_PROVIDED. When you upload data using the Amazon S3 connector , you must enter a value or use SCN_RESERVED_NO_ VALUE_PROVIDED for successful ingestion.	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_ VALUE_PROVIDED. When you upload data using the Amazon S3 connector , you must enter a value or use SCN_RESERVED_NO_ VALUE_PROVIDED for successful ingestion.
inbound_o rder	id	Required	Required
	order_type	Required	Required

Data entity	Column	Is the column used for Auto Replenish ment?	Is the column used for Manufacturing Plan?
	order_status	Not required	Not required
	to_site_id	Not required	Not required
	submitted_date	Optional	Optional
	tpartner_id	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_VALUE_PROVIDED. When you upload data using the Amazon S3 connector, you must enter a value or use SCN_RESERVED_NO_VALUE_PROVIDED for successful ingestion.	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_VALUE_PROVIDED. When you upload data using the Amazon S3 connector, you must enter a value or use SCN_RESERVED_NO_VALUE_PROVIDED for successful ingestion.
inbound_order_line	id	Required	Required
	order_id	Required	Required
	order_type	Required	Required
	status	Not required	Not required
	product_id	Required	Required
	to_site_id	Required	Required
	from_site_id	Not required	Not required

Data entity	Column	Is the column used for Auto Replenishment?	Is the column used for Manufacturing Plan?
	quantity_submitted	Required – You must set one quantity field.	Required – You must set one quantity field.
	quantity_confirmed	Optional – You must set one quantity field.	Optional – You must set one quantity field.
	quantity_received	Optional – You must set one quantity field.	Optional – You must set one quantity field.
	expected_delivery_date	Required	Required
	submitted_date	Not required	Not required
	incoterm	Not required	Not required
	company_id	Optional	Optional
	tpartner_id	Required – This field is required for successful ingestion.	Required – This field is required for successful ingestion.
	quantity_uom	Not required	Not required
	reservation_id	Not required	Not required
	reference_object_type	Optional – This field is used for associating purchase order requests to purchase orders to track plan to PO conversion in the ERP.	Optional – This field is used for associating purchase order requests to purchase orders to track plan to PO conversion in the ERP.

Data entity	Column	Is the column used for Auto Replenishment?	Is the column used for Manufacturing Plan?
	reference_object_id	Optional – This field is used for associating purchase order requests to purchase orders to track plan to PO conversion in the ERP.	Optional – This field is used for associating purchase order requests to purchase orders to track plan to PO conversion in the ERP.
inv_policy	site_id	Required	Required
	id	Required	Required
	product_id	Optional – Either product_id or product_group_id is required.	Optional – Either product_id or product_group_id is required.
	product_group_id	Optional – Either product_id or product_group_id is required.	Optional – Either product_id or product_group_id is required.
	eff_start_date	Required	Required
	eff_end_date	Required	Required
	company_id	Optional	Optional
	ss_policy	Required – The accepted values for this field are abs_level, doc_dem, doc_fcst, and sl.	Required – The accepted values for this field are abs_level, doc_dem, doc_fcst, and sl.

Data entity	Column	Is the column used for Auto Replenishment?	Is the column used for Manufacturing Plan?
	target_inventory_qty	Required – This field is required when ss_policy is set to abs_level.	Required – This field is required when ss_policy is set to abs_level.
	target_doc_limit	Required – This field is required when ss_policy is set to doc_dem or doc_fcst.	Required – This field is required when ss_policy is set to doc_dem or doc_fcst.
	target_sl	Required – This field is required when ss_policy is set to sl.	Required – This field is required when ss_policy is set to sl.
sourcing_rules	sourcing_rule_id	Required	Required
	company_id	Optional	Optional
	product_id	Optional – Either product_id or product_group_id is required.	Optional – Either product_id or product_group_id is required.
	product_group_id	Optional – Either product_id or product_group_id is required.	Optional – Either product_id or product_group_id is required.
	from_site_id	Optional – This field is required for sourcing_rule types transfer.	Optional – This field is required for sourcing_rule types transfer.
	to_site_id	Required	Required

Data entity	Column	Is the column used for Auto Replenishment?	Is the column used for Manufacturing Plan?
	sourcing_rule_type	Required – The allowed values for this field are transfer, buy, and manufacture.	Required – The allowed values for this field are transfer, buy, and manufacture.
	tpartner_id	Optional – This field is required for sourcing_rule types buy.	Optional – This field is required for sourcing_rule types buy.
	transportation_lane_id	Optional – This field is required for sourcing_rule types transfer.	Optional – This field is required for sourcing_rule types transfer.
	production_process_id	Optional – This field is required for sourcing_rule types manufacture.	Optional – This field is required for sourcing_rule types manufacture.
	sourcing_priority	Optional	Optional
	min_qty	Optional	Optional
	max_qty	Optional	Optional
	qty_multiple	Optional	Optional
	eff_start_date	Required	Required
	eff_end_date	Required	Required
sourcing_schedule	sourcing_schedule_id	Required	Required

Data entity	Column	Is the column used for Auto Replenish ment?	Is the column used for Manufacturing Plan?
	company_id	Optional	Optional
	tpartner_id	Optional – This field is required for schedule_type InboundOrdering.	Optional – This field is required for schedule_type InboundOrdering.
	status	Required	Required
	from_site_id	Optional – This field is required for schedule_type OutboundShipping.	Optional – This field is required for schedule_type OutboundShipping.
	to_site_id	Required	Required
	schedule_type	Required – The allowed values for this field are InboundOrdering and OutboundShipping.	Required – The allowed values for this field are InboundOrdering and OutboundShipping.
	eff_start_date	Required	Required
	eff_end_date	Required	Required
sourcing_ schedule_ details	sourcing_schedule_detail_id	Required	Required
	sourcing_schedule_id	Required	Required
	company_id	Optional	Optional

Data entity	Column	Is the column used for Auto Replenishment?	Is the column used for Manufacturing Plan?
	product_id	Optional – Either product_id or product_group_id is required.	Optional – Either product_id or product_group_id is required.
	product_group_id	Optional – Either product_id or product_group_id is required.	Optional – Either product_id or product_group_id is required.
	day_of_week	Optional	Optional
	week_of_month	Optional	Optional
	time_of_day	Optional	Optional
	date	Optional	Optional
product_bom	id	Not required	Required
	product_id	Not required	Required
	company_id	Optional	Optional
	site_id	Not required	Required
	production_process_id	Not required	Required
	component_product_id	Not required	Required
	component_quantity_per	Not required	Required
	assembly_cost	Not required	Optional
	assembly_cost_uom	Not required	Optional
	priority	Not required	Optional

Data entity	Column	Is the column used for Auto Replenish ment?	Is the column used for Manufacturing Plan?
	eff_start_date	Not required	Required
	eff_end_date	Not required	Required
productio n_process	production_process_id	Not required	Required
	production_process_name	Not required	Optional
	product_id	Not required	Required
	site_id	Not required	Required
	company_id	Optional	Optional
	setup_time	Not required	Optional
	setup_time_uom	Not required	Optional
	operation_time	Not required	Optional
	operation_time_uom	Not required	Optional
inv_level	snapshot_date	Required	Required
	site_id	Required	Required
	product_id	Required	Required
	company_id	Optional	Optional
	on_hand_inventory	Required	Required
	allocated_inventory	Not required	Not required
	bound_inventory	Not required	Not required

Data entity	Column	Is the column used for Auto Replenishment?	Is the column used for Manufacturing Plan?
	lot_number	Required – When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_VALUE_PROVIDED. When you upload data using the Amazon S3 connector, you must enter a value or use SCN_RESERVED_NO_VALUE_PROVIDED for successful ingestion.	Required – When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_VALUE_PROVIDED. When you upload data using the Amazon S3 connector, you must enter a value or use SCN_RESERVED_NO_VALUE_PROVIDED for successful ingestion.
	expiry_date	Not required	Not required
forecast	site_id	Required	Required
	product_id	Required	Required
	mean	Optional	Optional
	p10	Optional	Optional
	p50	Optional	Optional
	p90	Optional	Optional
	forecast_start_dttm	Required	Required
	forecast_end_dttm	Required	Required

Data entity	Column	Is the column used for Auto Replenish ment?	Is the column used for Manufacturing Plan?
	snapshot_date	Required – When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_ VALUE_PROVIDED. When you upload data using the Amazon S3 connector , you must enter a value or use SCN_RESERVED_NO_ VALUE_PROVIDED for successful ingestion.	Required – When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_ VALUE_PROVIDED. When you upload data using the Amazon S3 connector , you must enter a value or use SCN_RESERVED_NO_ VALUE_PROVIDED for successful ingestion.
	region_id	Required – When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_ VALUE_PROVIDED. When you upload data using the Amazon S3 connector , you must enter a value or use SCN_RESERVED_NO_ VALUE_PROVIDED for successful ingestion.	Required – When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_ VALUE_PROVIDED. When you upload data using the Amazon S3 connector , you must enter a value or use SCN_RESERVED_NO_ VALUE_PROVIDED for successful ingestion.

Data entity	Column	Is the column used for Auto Replenish ment?	Is the column used for Manufacturing Plan?
	product_group_id	Required – When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_ VALUE_PROVIDED. When you upload data using the Amazon S3 connector , you must enter a value or use SCN_RESERVED_NO_ VALUE_PROVIDED for successful ingestion.	Required – When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_ VALUE_PROVIDED. When you upload data using the Amazon S3 connector , you must enter a value or use SCN_RESERVED_NO_ VALUE_PROVIDED for successful ingestion.
vendor_pr oduct	company_id	Optional	Optional
	vendor_tpartner_id	Required	Required
	product_id	Required	Required
	eff_start_date	Required	Required
	eff_end_date	Required	Required
vendor_le ad_time	company_id	Optional	Optional
	vendor_tpartner_id	Required	Required
	product_id	Optional	Optional
	site_id	Required	Required
	planned_lead_time	Required	Required

Data entity	Column	Is the column used for Auto Replenish ment?	Is the column used for Manufacturing Plan?
	eff_start_date	Required	Required
	eff_end_date	Required	Required
	product_group_id	Required – When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_ VALUE_PROVIDED. When you upload data using the Amazon S3 connector , you must enter a value or use SCN_RESERVED_NO_ VALUE_PROVIDED for successful ingestion.	Required – When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_ VALUE_PROVIDED. When you upload data using the Amazon S3 connector , you must enter a value or use SCN_RESERVED_NO_ VALUE_PROVIDED for successful ingestion.
	region_id	Required – When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_ VALUE_PROVIDED. When you upload data using the Amazon S3 connector , you must enter a value or use SCN_RESERVED_NO_ VALUE_PROVIDED for successful ingestion.	Required – When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_ VALUE_PROVIDED. When you upload data using the Amazon S3 connector , you must enter a value or use SCN_RESERVED_NO_ VALUE_PROVIDED for successful ingestion.

Data entity	Column	Is the column used for Auto Replenishment?	Is the column used for Manufacturing Plan?
outbound_order_line	id	Required – This field determines the outbound shipment id.	Required – This field determines the outbound shipment id.
	product_id	Required – This field determines the id of the product shipped.	Required – This field determines the id of the product shipped.
	cust_order_id	Required – This field determines the id of the outbound order.	Required – This field determines the id of the outbound order.
	ship_from_site_id	Required – This field determines the site from where the product units are requested.	Required – This field determines the site from where the product units are requested.
	ship_to_site_id	Not required	Not required
	init_quantity_requested	Optional – This field determines the final quantity after any cancellations and changes.	Optional – This field determines the final quantity after any cancellations and changes.
	quantity_promised	Optional	Optional
	quantity_delivered	Optional – This field displays the actual quantity delivered.	Optional – This field displays the actual quantity delivered.

Data entity	Column	Is the column used for Auto Replenishment?	Is the column used for Manufacturing Plan?
	status	Optional – This field determines the status of the order line, that is, canceled, open, closed, and so on.	Optional – This field determines the status of the order line, that is, canceled, open, closed, and so on.
	requested_delivery_date	Required	Required
	promised_delivery_date	Optional	Optional
	actual_delivery_date	Optional	Optional
segmentation	segment_id	Required	Required
	creation_date	Required	Required
	company_id	Optional	Optional
	site_id	Required	Required
	product_id	Required	Required
	segment_description	Optional	Optional
	segment_type	Optional	Optional
	segment_value	Optional	Optional
	source	Optional	Optional
	eff_start_date	Required	Required
	eff_end_date	Required	Required

Data entity	Column	Is the column used for Auto Replenish ment?	Is the column used for Manufacturing Plan?
company	id	Required	Required
Note This data entity is optional.	description	Optional	Optional
	address_1	Optional	Optional
	address_2	Optional	Optional
	address_3	Optional	Optional
	city	Optional	Optional
	state_prov	Optional	Optional
	postal_code	Optional	Optional
	country	Optional	Optional
	phone_number	Optional	Optional
	time_zone	Optional	Optional
	calendar_id	Optional	Optional

Insights

The table below list the data entities and columns used by Insights.

> **ⓘ Note**
>
> **How to read the table:**
>
> - **Required** – The column name is mandatory in your dataset and you must populate the column name with values.
> - **Optional** – The column name is optional. For enhanced feature output, it is recommended to add the column name with values.

- **Not required** – Data entity not required.

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommend ations?	Is the column used for Lead time Insights?
site	id	Required	Required	Required	Required	Required
	description	Required	Required	Required	Required	Optional
	geo_id	Required – This field is required for filters to group sites by geographi cal groups such as region/co untry/sta te and so on.	Required – This field is required for filters to group sites by geographi cal groups such as region/co untry/sta te and so on.	Required – This field is required for filters to group sites by geographi cal groups such as region/co untry/sta te and so on.	Required	Required – This field is required for filters to group sites by geographi cal groups such as region/co untry/sta te and so on.
	site_type	Optional – Populatin g this column will display the site type on the inventory	Optional	Optional	Optional	Optional

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
		visibility page such as RDC, CDC, manufacturing site and so on.				
	company_id	Optional	Optional	Optional	Optional	Column name *company_id* should be available in your dataset. Value for the column name is not required for Lead Time Insights.

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
	latitude	Optional	Required – This field is used to view the *site* on the Network Map page.	Optional	Optional	Column name *latitude* should be available in your dataset. Value for the column name is not required for Lead Time Insights.

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
	longitude	Optional	Required – This field is used to view the *site* on the Network Map page.	Optional	Optional	Column name *longitude* should be available in your dataset. Value for the column name is not required for Lead Time Insights.

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
	is_active	Required – Identifies if the site needs to be considered for Insights computation. **Note:** If you want a site to be excluded from the Insights computation, make sure you set the column value to *False*. If the column is blank or null, the site is considered active.	Required – Identifies if the site needs to be considered for Insights computation. **Note:** If you want a site to be excluded from the Insights computation, make sure you set the column value to *False*. If the column is blank or null, the site is considered active.	Required – Identifies if the site needs to be considered for Insights computation. **Note:** If you want a site to be excluded from the Insights computation, make sure you set the column value to *False*. If the column is blank or null, the site is considered active.	Required – Identifies if the site needs to be considered for Insights computation. **Note:** If you want a site to be excluded from the Insights computation, make sure you set the column value to *False*. If the column is blank or null, the site is considered active.	Required – Identifies if the site needs to be considered for Insights computation. **Note:** If you want a site to be excluded from the Insights computation, make sure you set the column value to *False*. If the column is blank or null, the site is considered active.

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommend ations?	Is the column used for Lead time Insights?
	open_date	Optional	Optional	Optional	Optional	Column name *open_date* should be available in your dataset. Value for the column name is not required for Lead Time Insights.

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommend ations?	Is the column used for Lead time Insights?
	end_date	Optional	Optional	Optional	Optional	Column name *end_date* should be available in your dataset. Value for the column name is not required for Lead Time Insights.
[transp ation e](#)	id	Not required	Not required	Not required	Required	Required

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
	from_site_id	Not required	Not required	Not required	Required	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_VALUE_PROVIDED. When you upload data using the Amazon S3 connector, you must enter a value or use SCN_RESERVED_NO_VALUE_PROVIDED for successful ingestion.

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
	to_site_id	Not required	Not required	Not required	Required	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_ VALUE_PROVIDED. When you upload data using the Amazon S3 connector, you must enter a value or use SCN_RESERVED_NO_ VALUE_PROVIDED for successful ingestion.

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
	product_group_id	Not required	Not required	Not required	Required	Column name *product_group_id* should be available in your dataset. Value for the column name is not required for Lead Time Insights.

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
	transit_time	Not required	Not required	Not required	Required	Column name *transit_time* should be available in your dataset. Value for the column name is not required for Lead Time Insights.

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
	time_uom	Not required	Not required	Not required	Required – Supports day or days as units.	Column name *time_uom* should be available in your dataset. Value for the column name is not required for Lead Time Insights.

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
	distance	Not required	Not required	Not required	Required	Column name *distance* should be available in your dataset. Value for the column name is not required for Lead Time Insights.

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
	distance_uom	Not required	Not required	Not required	Required – Supports mile(s), km(s), or Kilometer (s) as units.	Column name *distance_ uom* should be available in your dataset. Value for the column name is not required for Lead Time Insights.

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommend ations?	Is the column used for Lead time Insights?
	eff_start_date	Not required	Not required	Not required	Optional	Column name *eff_start _date* should be available in your dataset. Value for the column name is not required for Lead Time Insights.

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
	eff_end_date	Not required	Not required	Not required	Optional	Column name *eff_end_date* should be available in your dataset. Value for the column name is not required for Lead Time Insights.

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
	product_id	Not required	Not required	Not required	Optional – Either *product_id* or *product-group-id* is required. When the lane is linked with a product, this field is mandatory.	Column name *product_id* should be available in your dataset. Value for the column name is not required for Lead Time Insights.

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
	emissions_per_unit	Not required	Not required	Not required	Optional	Column name *emissions_per_unit* should be available in your dataset. Value for the column name is not required for Lead Time Insights.

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
	emissions _per_weight	Not required	Not required	Not required	Optional	Column name *emissions _per_unit* should be available in your dataset. Value for the column name is not required for Lead Time Insights.

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
	company_id	Not required	Not required	Not required	Optional	Column name *company_id* should be available in your dataset. Value for the column name is not required for Lead Time Insights.

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
	from_geo_id	Not required	Not required	Not required	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_VALUE_PROVIDED. When you upload data using the Amazon S3 connector, you must enter a value or use SCN_RESERVED_NO_VALUE_PROVIDED for successful ingestion.	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_VALUE_PROVIDED. When you upload data using the Amazon S3 connector, you must enter a value or use SCN_RESERVED_NO_VALUE_PROVIDED for successful ingestion.

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
	to_geo_id	Not required	Not required	Not required	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_VALUE_PROVIDED. When you upload data using the Amazon S3 connector, you must enter a value or use SCN_RESERVED_NO_VALUE_PROVIDED for successful ingestion.	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_VALUE_PROVIDED. When you upload data using the Amazon S3 connector, you must enter a value or use SCN_RESERVED_NO_VALUE_PROVIDED for successful ingestion.

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
	carrier_tpartner_id	Not required	Not required	Not required	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_ VALUE_PROVIDED. When you upload data using the Amazon S3 connector, you must enter a value or use SCN_RESERVED_NO_ VALUE_PROVIDED for successful ingestion.	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_ VALUE_PROVIDED. When you upload data using the Amazon S3 connector, you must enter a value or use SCN_RESERVED_NO_ VALUE_PROVIDED for successful ingestion.

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
	service_type	Not required	Not required	Not required	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_VALUE_PROVIDED. When you upload data using the Amazon S3 connector, you must enter a value or use SCN_RESERVED_NO_VALUE_PROVIDED for successful ingestion.	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_VALUE_PROVIDED. When you upload data using the Amazon S3 connector, you must enter a value or use SCN_RESERVED_NO_VALUE_PROVIDED for successful ingestion.

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
	trans_mode	Not required	Not required	Not required	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_VALUE_PROVIDED. When you upload data using the Amazon S3 connector, you must enter a value or use SCN_RESERVED_NO_VALUE_PROVIDED for successful ingestion.	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_VALUE_PROVIDED. When you upload data using the Amazon S3 connector, you must enter a value or use SCN_RESERVED_NO_VALUE_PROVIDED for successful ingestion.

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommend ations?	Is the column used for Lead time Insights?
	cost_per_unit	Not required	Not required	Not required	Optional – You can view the shipping cost unit by lane during rebalance recommend ations.	Column name *cost_per_ unit* should be available in your dataset. Value for the column name is not required for Lead Time Insights.

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
	cost_currency	Not required	Not required	Not required	Optional – You can view the shipping cost unit by lane during rebalance recommendations.	Column name *cost_curr ency* should be available in your dataset. Value for the column name is not required for Lead Time Insights.
[product]d		Required	Required	Required	Required	Required
	description	Required	Required	Required	Required	Required

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommend ations?	Is the column used for Lead time Insights?
	product_group_id	Required – Using this field, you can group products by product category such dairy, clothes, and so on.	Required – Using this field, you can group products by product category such dairy, clothes, and so on.	Required – Using this field, you can group products by product category such dairy, clothes, and so on.	Required	Required – Using this field, you can group products by product category such dairy, clothes, and so on.

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
	is_deleted	Required – Identifies if the product needs to be considered for Insights computation. **Note:** If you want the product to be excluded from the Insights computation, make sure you set the column value to *True* and set to *False* to include this product for Insights	Required – Identifies if the product needs to be considered for Insights computation. **Note:** If you want the product to be excluded from the Insights computation, make sure you set the column value to *True* and set to *False* to include this product for Insights	Required – Identifies if the product needs to be considered for Insights computation. **Note:** If you want the product to be excluded from the Insights computation, make sure you set the column value to *True* and set to *False* to include this product for Insights	Required – Identifies if the product needs to be considered for Insights computation. **Note:** If you want the product to be excluded from the Insights computation, make sure you set the column value to *True* and set to *False* to include this product for Insights	Required – Identifies if the product needs to be considered for Insights computation. **Note:** If you want the product to be excluded from the Insights computation, make sure you set the column value to *True* and set to *False* to include this product for Insights

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
		computation. If the column is left blank or null, the system considers the default value of *True*.	computation. If the column is left blank or null, the system considers the default value of *True*.	computation. If the column is left blank or null, the system considers the default value of *True*.	computation. If the column is left blank or null, the system considers the default value of *True*.	computation. If the column is left blank or null, the system considers the default value of *True*.
	product_type	Optional – This field is required to support multiple product levels such as planning and fulfillment product.	Optional – This field is required to support multiple product levels such as planning and fulfillment product.	Optional – This field is required to support multiple product levels such as planning and fulfillment product.	Optional – This field is required to support multiple product levels such as planning and fulfillment product.	Column name *product_type* should be available in your dataset. Value for the column name is not required for Lead Time Insights.

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
	parent_product_id	Optional – This field is required to support multiple product levels such as planning and fulfillment product.	Optional – This field is required to support multiple product levels such as planning and fulfillment product.	Optional – This field is required to support multiple product levels such as planning and fulfillment product.	Optional – This field is required to support multiple product levels such as planning and fulfillment product.	Column name *parent_product_id* should be available in your dataset. Value for the column name is not required for Lead Time Insights.

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
	base_uom	Optional – This field is required for Insights to calculate the default base uom for a given product.	Optional – This field is required for Insights to calculate the default base uom for a given product.	Optional – This field is required for Insights to calculate the default base uom for a given product.	Optional – This field is required for Insights to calculate the default base uom for a given product.	Column name *base_uom* should be available in your dataset. Value for the column name is not required for Lead Time Insights.
product_hierarchy		Required	Required	Required	Required	Required
	description	Required – Using this field, you can filter groups by product category such dairy, clothes, and so on.	Required – Using this field, you can filter groups by product category such dairy, clothes, and so on.	Required – Using this field, you can filter groups by product category such dairy, clothes, and so on.	Required – Using this field, you can filter groups by product category such dairy, clothes, and so on.	Required – Using this field, you can filter groups by product category such dairy, clothes, and so on.

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
	parent_product_group_id	Optional – This field is used by filters to support multiple product hierarchy category such as dairy, frozen diary products, fresh diary and so on.	Optional – This field is used by filters to support multiple product hierarchy category such as dairy, frozen diary products, fresh diary and so on.	Optional – This field is used by filters to support multiple product hierarchy category such as dairy, frozen diary products, fresh diary and so on.	Column name *parent_product_group_id* should be available in your dataset. Value for the column name is not required for Rebalance Recommendations.	Optional – This field is used by filters to support multiple product hierarchy category such as dairy, frozen diary products, fresh diary and so on.

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
product_uom	product_uom_id	Required – This field is required to perform the product uom conversion.	Required – This field is required to perform the product uom conversion.	Required – This field is required to perform the product uom conversion.	Required – This field is required to perform the product uom conversion.	Not required
Note This data entity is optional. For product uom conversions, data is *required* in either *product-*	product_id	Required	Required	Required	Required	Not required
	uom	Required – This field is required for conversion to units.	Required – This field is required for conversion to units.	Required – This field is required for conversion to units.	Required – This field is required for conversion to units.	Not required
	description	Optional	Optional	Optional	Optional	Not required
	quantity	Required – This field contains the conversion factor.	Required – This field contains the conversion factor.	Required – This field contains the conversion factor.	Required – This field contains the conversion factor.	Not required

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommend ations?	Is the column used for Lead time Insights?
	quantity_uom	Required – This field is required for conversion from units.	Required – This field is required for conversion from units.	Required – This field is required for conversion from units.	Required – This field is required for conversion from units.	Not required
	eff_start_date	Optional	Optional	Optional	Optional	Not required
	eff_end_date	Optional	Optional	Optional	Optional	Not required
	company_id	Optional	Optional	Optional	Optional	Not required

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommend ations?	Is the column used for Lead time Insights?
uom_conve rsion	uom	Required – This field is required for conversion from units.	Required – This field is required for conversion from units.	Required – This field is required for conversion from units.	Required – This field is required for conversion from units.	Not required
Note This data entity is *optional*. For product uom conversio ns, data	company_id	Optional	Optional	Optional	Optional	Not required
	conversio n_uom_id	Required – This field is required for conversion to units.	Required – This field is required for conversion to units.	Required – This field is required for conversion to units.	Required – This field is required for conversion to units.	Not required
	conversion_factor	Required – This field contains the conversion factor.	Required – This field contains the conversion factor.	Required – This field contains the conversion factor.	Required – This field contains the conversion factor.	Not required
geogr	id	Required	Required	Required	Required	Required

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
	description	Required	Required	Required	Required	Required
	parent_geo_id	Optional – This field is used to support multiple location hierarchy such as USA, USA-East, and so on.	Required – This field is used to support multiple location hierarchy such as USA, USA-East, and so on.	Optional	Optional	Required – This field is used to support multiple location hierarchy such as USA, USA-East, and so on.
[trading_p artner](#)	id	Required	Required	Required	Required	Required
	description	Optional	Optional	Optional	Optional	Required
	country	Optional	Optional	Optional	Optional	Optional

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
	eff_start_date	Required – You must enter a value for eff_start_date and eff_end_date. If you don't have a value, enter **1900-01-01 00:00:00** for eff_start_date, and **9999-12-31 23:59:59** for eff_end_date.	Required – You must enter a value for eff_start_date and eff_end_date. If you don't have a value, enter **1900-01-01 00:00:00** for eff_start_date, and **9999-12-31 23:59:59** for eff_end_date.	Required – You must enter a value for eff_start_date and eff_end_date. If you don't have a value, enter **1900-01-01 00:00:00** for eff_start_date, and **9999-12-31 23:59:59** for eff_end_date.	Required – You must enter a value for eff_start_date and eff_end_date. If you don't have a value, enter **1900-01-01 00:00:00** for eff_start_date, and **9999-12-31 23:59:59** for eff_end_date.	Column name *eff_start_date* should be available in your dataset. Value for the column name is not required for Lead Time Insights.

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
	eff_end_date	Required – You must enter a value for eff_start_date and eff_end_date. If you don't have a value, enter **1900-01-01 00:00:00** for eff_start_date, and **9999-12-31 23:59:59** for eff_end_date.	Required – You must enter a value for eff_start_date and eff_end_date. If you don't have a value, enter **1900-01-01 00:00:00** for eff_start_date, and **9999-12-31 23:59:59** for eff_end_date.	Required – You must enter a value for eff_start_date and eff_end_date. If you don't have a value, enter **1900-01-01 00:00:00** for eff_start_date, and **9999-12-31 23:59:59** for eff_end_date.	Required – You must enter a value for eff_start_date and eff_end_date. If you don't have a value, enter **1900-01-01 00:00:00** for eff_start_date, and **9999-12-31 23:59:59** for eff_end_date.	Column name *eff_end_date* should be available in your dataset. Value for the column name is not required for Lead Time Insights.

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommend ations?	Is the column used for Lead time Insights?
	time_zone	Optional	Optional	Optional	Optional	Column name *time_zone* should be available in your dataset. Value for the column name is not required for Lead Time Insights.

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommend ations?	Is the column used for Lead time Insights?
	is_active	Optional	Optional	Optional	Optional	Column name *is_active* should be available in your dataset. Value for the column name is not required for Lead Time Insights.

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommend ations?	Is the column used for Lead time Insights?
	tpartner_type	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESER VED_NO_ VALUE_PRO VIDED. When you upload data using the Amazon S3 connector , you must enter a value or use SCN_RESER VED_NO_ VALUE_PRO VIDED for successful ingestion.	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESER VED_NO_ VALUE_PRO VIDED. When you upload data using the Amazon S3 connector , you must enter a value or use SCN_RESER VED_NO_ VALUE_PRO VIDED for successful ingestion.	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESER VED_NO_ VALUE_PRO VIDED. When you upload data using the Amazon S3 connector , you must enter a value or use SCN_RESER VED_NO_ VALUE_PRO VIDED for successful ingestion.	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESER VED_NO_ VALUE_PRO VIDED. When you upload data using the Amazon S3 connector , you must enter a value or use SCN_RESER VED_NO_ VALUE_PRO VIDED for successful ingestion.	Column name *tpartner_ type* should be available in your dataset. Value for the column name is not required for Lead Time Insights.

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
	geo_id	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_VALUE_PROVIDED. When you upload data using the Amazon S3 connector, you must enter a value or use SCN_RESERVED_NO_VALUE_PROVIDED for successful ingestion.	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_VALUE_PROVIDED. When you upload data using the Amazon S3 connector, you must enter a value or use SCN_RESERVED_NO_VALUE_PROVIDED for successful ingestion.	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_VALUE_PROVIDED. When you upload data using the Amazon S3 connector, you must enter a value or use SCN_RESERVED_NO_VALUE_PROVIDED for successful ingestion.	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_VALUE_PROVIDED. When you upload data using the Amazon S3 connector, you must enter a value or use SCN_RESERVED_NO_VALUE_PROVIDED for successful ingestion.	Column name *geo_id* should be available in your dataset. Value for the column name is not required for Lead Time Insights.

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommend ations?	Is the column used for Lead time Insights?
inbound_o rder	id_o	Not required	Not required	Not required	Not required	Required
	order_type	Not required	Not required	Not required	Not required	Optional – Data can be used by indound order line.
	order_status	Not required	Not required	Not required	Not required	Optional
	to_site_id	Not required	Not required	Not required	Not required	Column name *site_id* should be available in your dataset. Value for the column name is not required for Lead Time Insights.
	submitted_date	Not required	Not required	Not required	Not required	Required

Note

This data entity is *optional.*

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
	tpartner_id	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_VALUE_PROVIDED. When you upload data using the Amazon S3 connector, you must enter a value or use SCN_RESERVED_NO_VALUE_PROVIDED for successful ingestion.	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_VALUE_PROVIDED. When you upload data using the Amazon S3 connector, you must enter a value or use SCN_RESERVED_NO_VALUE_PROVIDED for successful ingestion.	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_VALUE_PROVIDED. When you upload data using the Amazon S3 connector, you must enter a value or use SCN_RESERVED_NO_VALUE_PROVIDED for successful ingestion.	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_VALUE_PROVIDED. When you upload data using the Amazon S3 connector, you must enter a value or use SCN_RESERVED_NO_VALUE_PROVIDED for successful ingestion.	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_VALUE_PROVIDED. When you upload data using the Amazon S3 connector, you must enter a value or use SCN_RESERVED_NO_VALUE_PROVIDED for successful ingestion.

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommend ations?	Is the column used for Lead time Insights?
inbound_o rder_line	id	Required	Required	Required	Required	Required
	order_id	Required	Required	Required	Required	Required
	order_type	Required	Required	Required	Required	Optional
	status	Required	Required	Required	Required	Optional
	product_id	Required	Required	Required	Required	Required
	to_site_id	Required	Required	Required	Required	Required
	from_site_id	Required	Required	Required	Required	Required
	quantity_ submitted	Required – One quantity field should be set.	Required – One quantity field should be set.	Required – One quantity field should be set.	Required – One quantity field should be set.	Required – One quantity field should be set.
	quantity_ confirmed	Optional – One quantity field should be set.	Optional – One quantity field should be set.	Optional – One quantity field should be set.	Optional – One quantity field should be set.	Optional – One quantity field should be set.

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
	quantity_received	Optional – This field should be blank for open orders.	Optional – This field should be blank for open orders.	Optional – This field should be blank for open orders.	Optional – This field should be blank for open orders.	Optional – This field should be blank for open orders.
	quantity_uom	Required – This field is required to determine the unit for quantity fields.	Required – This field is required to determine the unit for quantity fields.	Required – This field is required to determine the unit for quantity fields.	Required – This field is required to determine the unit for quantity fields.	Column name *quantity_uom* should be available in your dataset. Value for the column name is not required for Lead Time Insights.
	expected_delivery_date	Required	Required	Required	Required	Required

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
	submitted_date	Column name *submitted_date* should be available in your dataset. Value for the column name is not required for Inventory visibility.	Column name *submitted_date* should be available in your dataset. Value for the column name is not required for Network map.	Column name *submitted_date* should be available in your dataset. Value for the column name is not required for Inventory Insights.	Column name *submitted_date* should be available in your dataset. Value for the column name is not required for Rebalance Recommendations.	Required

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommend ations?	Is the column used for Lead time Insights?
	incoterm	Column name *incoterm* should be available in your dataset. Value for the column name is not required for Inventory visibility.	Column name *incoterm* should be available in your dataset. Value for the column name is not required for Network map.	Column name *incoterm* should be available in your dataset. Value for the column name is not required for Inventory Insights.	Column name *incoterm* should be available in your dataset. Value for the column name is not required for Rebalance Recommend ations.	Optional

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
	product_group_id	Column name *product_group_id* should be available in your dataset. Value for the column name is not required for Inventory visibility.	Column name *product_group_id* should be available in your dataset. Value for the column name is not required for Network map.	Column name *product_group_id* should be available in your dataset. Value for the column name is not required for Inventory Insights.	Column name *product_group_id* should be available in your dataset. Value for the column name is not required for Rebalance Recommendations.	Optional

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
	company_id	Column name *company_id* should be available in your dataset. Value for the column name is not required for Inventory Insights.	Column name *company_id* should be available in your dataset. Value for the column name is not required for Network map.	Column name *company_id* should be available in your dataset. Value for the column name is not required for Inventory Insights.	Column name *company_id* should be available in your dataset. Value for the column name is not required for Rebalance Recommendations.	Optional

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
	tpartner_id	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_VALUE_PROVIDED. When you upload data using the Amazon S3 connector, you must enter a value or use SCN_RESERVED_NO_VALUE_PROVIDED for successful ingestion.	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_VALUE_PROVIDED. When you upload data using the Amazon S3 connector, you must enter a value or use SCN_RESERVED_NO_VALUE_PROVIDED for successful ingestion.	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_VALUE_PROVIDED. When you upload data using the Amazon S3 connector, you must enter a value or use SCN_RESERVED_NO_VALUE_PROVIDED for successful ingestion.	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_VALUE_PROVIDED. When you upload data using the Amazon S3 connector, you must enter a value or use SCN_RESERVED_NO_VALUE_PROVIDED for successful ingestion.	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_VALUE_PROVIDED. When you upload data using the Amazon S3 connector, you must enter a value or use SCN_RESERVED_NO_VALUE_PROVIDED for successful ingestion.

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
	reservation_id	Optional – This field is used to determine the connection between order line and order line schedule. For example, 1001 - A, where 1001 is the order_id and A is the order_line_id in the inbound_order_line_schedule table.	Optional – This field is used to determine the connection between order line and order line schedule. For example, 1001 - A, where 1001 is the order_id and A is the order_line_id in the inbound_order_line_schedule table.	Optional – This field is used to determine the connection between order line and order line schedule. For example, 1001 - A, where 1001 is the order_id and A is the order_line_id in the inbound_order_line_schedule table.	Optional – This field is used to determine the connection between order line and order line schedule. For example, 1001 - A, where 1001 is the order_id and A is the order_line_id in the inbound_order_line_schedule table.	Column name *resservation_id* should be available in your dataset. Value for the column name is not required for Lead Time Insights.

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
	order_receive_date	Column name *order_receive_date* should be available in your dataset. Value for the column name is not required for Inventory visibility.	Column name *order_receive_date* should be available in your dataset. Value for the column name is not required for Network map.	Column name *order_receive_date* should be available in your dataset. Value for the column name is not required for Inventory Insights.	Column name *order_receive_date* should be available in your dataset. Value for the column name is not required for Rebalance Recommendations.	Optional

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
inbound_order_line_sched ⓘ	id_o	Required	Required	Required	Required	Required
	order_id	Required – This field is required to link back to an order line along with the order_line_id.	Required – This field is required to link back to an order line along with the order_line_id.	Required – This field is required to link back to an order line along with the order_line_id.	Required – This field is required to link back to an order line along with the order_line_id.	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_VALUE_PROVIDED. When you upload data using the Amazon S3 connector, you must enter a value or use SCN_RESERVED_NO_VALUE_PROVIDED for

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
	entity. For custom					successful ingestion.
	order_line_id	Required – This field is required to link back to an order line along with order_id.	Required – This field is required to link back to an order line along with order_id.	Required – This field is required to link back to an order line along with order_id.	Required – This field is required to link back to an order line along with order_id.	Column name *order_line_id* should be available in your dataset. Value for the column name is not required for Lead Time Insights.

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
	company_id	Column name *company_id* should be available in your dataset. Value for the column name is not required for Lead Time Insights.	Column name *company_id* should be available in your dataset. Value for the column name is not required for Lead Time Insights.	Column name *company_id* should be available in your dataset. Value for the column name is not required for Lead Time Insights.	Column name *company_id* should be available in your dataset. Value for the column name is not required for Lead Time Insights.	Column name *company_id* should be available in your dataset. Value for the column name is not required for Lead Time Insights.
	product_id	Required	Required	Required	Required	Required
	expected_ delivery_date	Optional – *delivery_ date* or *expected_ delivery date* must be provided.	Optional – *delivery_ date* or *expected_ delivery date* must be provided.	Optional – *delivery_ date* or *expected_ delivery date* must be provided.	Optional – *delivery_ date* or *expected_ delivery date* must be provided.	Optional

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
	delivery_date	Optional – *delivery_date* or *expected_delivery date* must be provided.	Optional – *delivery_date* or *expected_delivery date* must be provided.	Optional – *delivery_date* or *expected_delivery date* must be provided.	Optional – *delivery_date* or *expected_delivery date* must be provided.	Column name *delivery_date* should be available in your dataset. Value for the column name is not required for Lead Time Insights.

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
	ship_date	Optional – Date when the order was shipped.	Optional – Date when the order was shipped.	Optional – Date when the order was shipped.	Optional – Date when the order was shipped.	Column name *ship_date* should be available in your dataset. Value for the column name is not required for Lead Time Insights.

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommend ations?	Is the column used for Lead time Insights?
	quantity_ submitted	Required – One quantity field should be set. This field uses the uom set at the line level.	Required – One quantity field should be set. This field uses the uom set at the line level.	Required – One quantity field should be set. This field uses the uom set at the line level.	Required – One quantity field should be set. This field uses the uom set at the line level.	Column name *quantity_ submitted* should be available in your dataset. Value for the column name is not required for Lead Time Insights.

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
	quantity_ confirmed	Required – One quantity field should be set. This field uses the uom set at the line level.	Required – One quantity field should be set. This field uses the uom set at the line level.	Required – One quantity field should be set. This field uses the uom set at the line level.	Required – One quantity field should be set. This field uses the uom set at the line level.	Column name *quantity_ confirmed* should be available in your dataset. Value for the column name is not required for Lead Time Insights.

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
	quantity_received	Required – One quantity field should be set. This field uses the uom set at the line level.	Required – One quantity field should be set. This field uses the uom set at the line level.	Required – One quantity field should be set. This field uses the uom set at the line level.	Required – One quantity field should be set. This field uses the uom set at the line level.	Column name *quantity_ received* should be available in your dataset. Value for the column name is not required for Lead Time Insights.
[shipment](#) id		Required	Required	Required	Required	Optional
	order_id	Required – This field is required to calculate the *in-transit* and *on-order* values for projected inventory visibility.	Required	Required – This field is required to calculate the *in-transit* and *on-order* values for projected inventory visibility.	Required – This field is required to calculate the *in-transit* and *on-order* values for projected inventory visibility.	Required

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommend ations?	Is the column used for Lead time Insights?
	order_line_id	Required – This field is required to calculate the *in-transit* and *on-order* values for projected inventory visibility.	Required	Required – This field is required to calculate the *in-transit* and *on-order* values for projected inventory visibility.	Required – This field is required to calculate the *in-transit* and *on-order* values for projected inventory visibility.	Required
	product_id	Required	Required	Required	Required	Required
	supplier_ tpartner_id	Required	Required	Required	Required	Required
	ship_to_site_id	Optional – Derived from inbound order line.	Optional – Derived from inbound order line.	Optional – Derived from inbound order line.	Optional – Derived from inbound order line.	Required

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
	actual_delivery_date	Optional – *planned_delivery_date* or *actual_delivery_date* must be provided.	Optional – *planned_delivery_date* or *actual_delivery_date* must be provided.	Optional – *planned_delivery_date* or *actual_delivery_date* must be provided.	Optional – *planned_delivery_date* or *actual_delivery_date* must be provided.	Required
	units_shipped	Optional – Derived from inbound order line.	Optional – Derived from inbound order line.	Optional – Derived from inbound order line.	Optional – Derived from inbound order line.	Optional – Derived from inbound order line.
	uom	Optional – This field is used to determine the unit for quantity fields.	Optional – This field is used to determine the unit for quantity fields.	Optional – This field is used to determine the unit for quantity fields.	Optional – This field is used to determine the unit for quantity fields.	Optional – This field is used to determine the unit for quantity fields.

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommend ations?	Is the column used for Lead time Insights?
	planned_ship_date	Optional – *planned_ship_date* or *actual_ship_date* must be provided.	Optional – *planned_ship_date* or *actual_ship_date* must be provided.	Optional – *planned_ship_date* or *actual_ship_date* must be provided.	Optional – *planned_ship_date* or *actual_ship_date* must be provided.	Column name *planned_ship_date* should be available in your dataset. Value for the column name is not required for Lead Time Insights.

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
	actual_ship_date	Optional – *planned_ship_date* or *actual_ship_date* must be provided.	Optional – *planned_ship_date* or *actual_ship_date* must be provided.	Optional – *planned_ship_date* or *actual_ship_date* must be provided.	Optional – *planned_ship_date* or *actual_ship_date* must be provided.	Column name *actual_ship_date* should be available in your dataset. Value for the column name is not required for Lead Time Insights.

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
	planned_delivery_date	Optional – *planned_delivery_date* or *actual_delivery_date* must be provided.	Optional – *planned_delivery_date* or *actual_delivery_date* must be provided.	Optional – *planned_delivery_date* or *actual_delivery_date* must be provided.	Optional – *planned_delivery_date* or *actual_delivery_date* must be provided.	Column name *planned_delivery_date* should be available in your dataset. Value for the column name is not required for Lead Time Insights.
	ship_from_site_id	Optional – Derived from inbound order line.	Optional – Derived from inbound order line.	Optional – Derived from inbound order line.	Optional – Derived from inbound order line.	Optional

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
	supplier_ tpartner_id	Column name *supplier_ tpartner_id* should be available in your dataset. Value for the column name is not required for Inventory visibility.	Column name *supplier_ tpartner_id* should be available in your dataset. Value for the column name is not required for Network map.	Column name *supplier_ tpartner_id* should be available in your dataset. Value for the column name is not required for Inventory Insights.	Column name *supplier_ tpartner_id* should be available in your dataset. Value for the column name is not required for Rebalance Recommendations.	Optional

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
	transportation_mode	Column name *transportation_mode* should be available in your dataset. Value for the column name is not required for Inventory visibility.	Column name *transportation_mode* should be available in your dataset. Value for the column name is not required for Network map.	Column name *transportation_mode* should be available in your dataset. Value for the column name is not required for Inventory Insights.	Column name *transportation_mode* should be available in your dataset. Value for the column name is not required for Rebalance Recommendations.	Optional

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
	ship_from _site_add ress_country	Column name *ship_from _site_add ress_coun try* should be available in your dataset. Value for the column name is not required for Inventory visibility.	Column name *ship_from _site_add ress_coun try* should be available in your dataset. Value for the column name is not required for Network map.	Column name *ship_from _site_add ress_coun try* should be available in your dataset. Value for the column name is not required for Inventory Insights.	Column name *ship_from _site_add ress_coun try* should be available in your dataset. Value for the column name is not required for Rebalance Recommend ations.	Optional

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommend ations?	Is the column used for Lead time Insights?
	ship_to_s ite_addre ss_country	Column name *ship_to_s ite_addre ss_country* should be available in your dataset. Value for the column name is not required for Inventory visibility.	Column name *ship_to_s ite_addre ss_country* should be available in your dataset. Value for the column name is not required for Network map.	Column name *ship_to_s ite_addre ss_country* should be available in your dataset. Value for the column name is not required for Inventory Insights.	Column name *ship_to_s ite_addre ss_country* should be available in your dataset. Value for the column name is not required for Rebalance Recommend ations.	Optional

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
	carrier_id	Column name *carrier_id* should be available in your dataset. Value for the column name is not required for Inventory visibility.	Column name *carrier_id* should be available in your dataset. Value for the column name is not required for Network map.	Column name *carrier_id* should be available in your dataset. Value for the column name is not required for Inventory Insights.	Column name *carrier_id* should be available in your dataset. Value for the column name is not required for Rebalance Recommendations.	Optional

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
	package_id	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_VALUE_PROVIDED. When you upload data using the Amazon S3 connector, you must enter a value or use SCN_RESERVED_NO_VALUE_PROVIDED for successful ingestion.	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_VALUE_PROVIDED. When you upload data using the Amazon S3 connector, you must enter a value or use SCN_RESERVED_NO_VALUE_PROVIDED for successful ingestion.	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_VALUE_PROVIDED. When you upload data using the Amazon S3 connector, you must enter a value or use SCN_RESERVED_NO_VALUE_PROVIDED for successful ingestion.	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_VALUE_PROVIDED. When you upload data using the Amazon S3 connector, you must enter a value or use SCN_RESERVED_NO_VALUE_PROVIDED for successful ingestion.	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_VALUE_PROVIDED. When you upload data using the Amazon S3 connector, you must enter a value or use SCN_RESERVED_NO_VALUE_PROVIDED for successful ingestion.

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
inv_policy	id	Required	Required	Required	Required	Required
	site_id	Required	Required	Required	Required	Required
	product_id	Required	Required	Required	Required	Required
	min_safety_stock	Required	Required	Required	Required	Required
	max_safety_stock	Required	Required	Required	Required	Required
	qty_uom	Optional – This field is used to determine the UOM for inventory policy.	Optional – This field is used to determine the UOM for inventory policy.	Optional – This field is used to determine the UOM for inventory policy.	Optional – This field is used to determine the UOM for inventory policy.	Optional – This field is used to determine the UOM for inventory policy.

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
	min_doc_limit	Optional – This field is required if you want to see the days of cover.	Optional – This field is required if you want to see the days of cover.	Optional – This field is required if you want to see the days of cover.	Optional – This field is required if you want to see the days of cover.	Column name *min_doc_limit* should be available in your dataset. Value for the column name is not required for Lead Time Insights.

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
	max_doc_limit	Optional – This field is required if you want to see the days of cover.	Optional – This field is required if you want to see the days of cover.	Optional – This field is required if you want to see the days of cover.	Optional – This field is required if you want to see the days of cover.	Column name *max_doc_limit* should be available in your dataset. Value for the column name is not required for Lead Time Insights.

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
	eff_start_date	Required – You must enter a value for eff_start_date and eff_end_date. If you don't have a value, enter **1900-01-01 00:00:00** for eff_start_date, and **9999-12-31 23:59:59** for eff_end_date.	Required – You must enter a value for eff_start_date and eff_end_date. If you don't have a value, enter **1900-01-01 00:00:00** for eff_start_date, and **9999-12-31 23:59:59** for eff_end_date.	Required – You must enter a value for eff_start_date and eff_end_date. If you don't have a value, enter **1900-01-01 00:00:00** for eff_start_date, and **9999-12-31 23:59:59** for eff_end_date.	Required – You must enter a value for eff_start_date and eff_end_date. If you don't have a value, enter **1900-01-01 00:00:00** for eff_start_date, and **9999-12-31 23:59:59** for eff_end_date.	Required – You must enter a value for eff_start_date and eff_end_date. If you don't have a value, enter **1900-01-01 00:00:00** for eff_start_date, and **9999-12-31 23:59:59** for eff_end_date.

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
	eff_end_date	Required – You must enter a value for eff_start_date and eff_end_date. If you don't have a value, enter **1900-01-01 00:00:00** for eff_start_date, and **9999-12-31 23:59:59** for eff_end_date.	Required – You must enter a value for eff_start_date and eff_end_date. If you don't have a value, enter **1900-01-01 00:00:00** for eff_start_date, and **9999-12-31 23:59:59** for eff_end_date.	Required – You must enter a value for eff_start_date and eff_end_date. If you don't have a value, enter **1900-01-01 00:00:00** for eff_start_date, and **9999-12-31 23:59:59** for eff_end_date.	Required – You must enter a value for eff_start_date and eff_end_date. If you don't have a value, enter **1900-01-01 00:00:00** for eff_start_date, and **9999-12-31 23:59:59** for eff_end_date.	Required – You must enter a value for eff_start_date and eff_end_date. If you don't have a value, enter **1900-01-01 00:00:00** for eff_start_date, and **9999-12-31 23:59:59** for eff_end_date.
	company_id	Optional	Optional	Optional	Optional	Optional
	ss_policy	Required – *abs_level* when there is no value.	Required – *abs_level* when there is no value.	Required – *abs_level* when there is no value.	Required – *abs_level* when there is no value.	Required – *abs_level* when there is no value.

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
	fallback_policy_1	Optional	Optional	Optional	Optional	Column name *fallback_policy_1* should be available in your dataset. Value for the column name is not required for Lead Time Insights.

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
	product_group_id	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_VALUE_PROVIDED. When you upload data using the Amazon S3 connector, you must enter a value or use SCN_RESERVED_NO_VALUE_PROVIDED for successful ingestion.	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_VALUE_PROVIDED. When you upload data using the Amazon S3 connector, you must enter a value or use SCN_RESERVED_NO_VALUE_PROVIDED for successful ingestion.	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_VALUE_PROVIDED. When you upload data using the Amazon S3 connector, you must enter a value or use SCN_RESERVED_NO_VALUE_PROVIDED for successful ingestion.	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_VALUE_PROVIDED. When you upload data using the Amazon S3 connector, you must enter a value or use SCN_RESERVED_NO_VALUE_PROVIDED for successful ingestion.	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_VALUE_PROVIDED. When you upload data using the Amazon S3 connector, you must enter a value or use SCN_RESERVED_NO_VALUE_PROVIDED for successful ingestion.

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
	dest_geo_id	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_VALUE_PROVIDED. When you upload data using the Amazon S3 connector, you must enter a value or use SCN_RESERVED_NO_VALUE_PROVIDED for successful ingestion.	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_VALUE_PROVIDED. When you upload data using the Amazon S3 connector, you must enter a value or use SCN_RESERVED_NO_VALUE_PROVIDED for successful ingestion.	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_VALUE_PROVIDED. When you upload data using the Amazon S3 connector, you must enter a value or use SCN_RESERVED_NO_VALUE_PROVIDED for successful ingestion.	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_VALUE_PROVIDED. When you upload data using the Amazon S3 connector, you must enter a value or use SCN_RESERVED_NO_VALUE_PROVIDED for successful ingestion.	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_VALUE_PROVIDED. When you upload data using the Amazon S3 connector, you must enter a value or use SCN_RESERVED_NO_VALUE_PROVIDED for successful ingestion.

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommend ations?	Is the column used for Lead time Insights?
	vendor_tp artner_id	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESER VED_NO_ VALUE_PRO VIDED. When you upload data using the Amazon S3 connector , you must enter a value or use SCN_RESER VED_NO_ VALUE_PRO VIDED for successful ingestion.	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESER VED_NO_ VALUE_PRO VIDED. When you upload data using the Amazon S3 connector , you must enter a value or use SCN_RESER VED_NO_ VALUE_PRO VIDED for successful ingestion.	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESER VED_NO_ VALUE_PRO VIDED. When you upload data using the Amazon S3 connector , you must enter a value or use SCN_RESER VED_NO_ VALUE_PRO VIDED for successful ingestion.	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESER VED_NO_ VALUE_PRO VIDED. When you upload data using the Amazon S3 connector , you must enter a value or use SCN_RESER VED_NO_ VALUE_PRO VIDED for successful ingestion.	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESER VED_NO_ VALUE_PRO VIDED. When you upload data using the Amazon S3 connector , you must enter a value or use SCN_RESER VED_NO_ VALUE_PRO VIDED for successful ingestion.

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
inv_level	snapshot_date	Required	Required	Required	Required	Required
	site_id	Required	Required	Required	Required	Required
	product_id	Required	Required	Required	Required	Required
	company_id	Optional	Optional	Optional	Optional	Optional
	on_hand_inventory	Required	Required	Required	Required	Required
	allocated_inventory	Optional	Optional	Optional	Optional	Column name *allocated_inventory* should be available in your dataset. Value for the column name is not required for Lead Time Insights.

Note

Enter the on-hand inventory at

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
	quantity_uom	Optional – This field is used to determine the quantity UOM for inventory records.	Optional – This field is used to determine the quantity UOM for inventory records.	Optional – This field is used to determine the quantity UOM for inventory records.	Optional – This field is used to determine the quantity UOM for inventory records.	Column name *quantity_uom* should be available in your dataset. Value for the column name is not required for Lead Time Insights.

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
	inv_condition	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_VALUE_PROVIDED. When you upload data using the Amazon S3 connector, you must enter a value or use SCN_RESERVED_NO_VALUE_PROVIDED for successful ingestion.	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_VALUE_PROVIDED. When you upload data using the Amazon S3 connector, you must enter a value or use SCN_RESERVED_NO_VALUE_PROVIDED for successful ingestion.	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_VALUE_PROVIDED. When you upload data using the Amazon S3 connector, you must enter a value or use SCN_RESERVED_NO_VALUE_PROVIDED for successful ingestion.	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_VALUE_PROVIDED. When you upload data using the Amazon S3 connector, you must enter a value or use SCN_RESERVED_NO_VALUE_PROVIDED for successful ingestion.	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_VALUE_PROVIDED. When you upload data using the Amazon S3 connector, you must enter a value or use SCN_RESERVED_NO_VALUE_PROVIDED for successful ingestion.

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
	lot_number	Required – Insights expects one inventory level record per site and product for the given snapshot date. When you upload data using the Amazon S3 connector, you must enter a value or use SCN_RESERVED_NO_VALUE_PROVIDED for successful ingestion.	Required – Insights expects one inventory level record per site and product for the given snapshot date. When you upload data using the Amazon S3 connector, you must enter a value or use SCN_RESERVED_NO_VALUE_PROVIDED for successful ingestion.	Required – Insights expects one inventory level record per site and product for the given snapshot date. When you upload data using the Amazon S3 connector, you must enter a value or use SCN_RESERVED_NO_VALUE_PROVIDED for successful ingestion.	Required – Insights expects one inventory level record per site and product for the given snapshot date. When you upload data using the Amazon S3 connector, you must enter a value or use SCN_RESERVED_NO_VALUE_PROVIDED for successful ingestion.	Required – Insights expects one inventory level record per site and product for the given snapshot date. When you upload data using the Amazon S3 connector, you must enter a value or use SCN_RESERVED_NO_VALUE_PROVIDED for successful ingestion.

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
forecast	site_id	Required	Required	Required	Required	Not required
	product_id	Required	Required	Required	Required	Not required
	mean	Required	Required	Required	Required	Not required
	forecast_start_dttm	Required	Required	Required	Required	Not required
	forecast_ end_dttm	Required	Required	Required	Required	Not required
	quantity_uom	Optional – This field is used to determine the quantity UOM for forecast.	Optional – This field is used to determine the quantity UOM for forecast.	Optional – This field is used to determine the quantity UOM for forecast.	Optional – This field is used to determine the quantity UOM for forecast.	Column name *quantity_ uom* should be available in your dataset. Value for the column name is not required for Lead Time Insights.

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommend ations?	Is the column used for Lead time Insights?
	snapshot_date	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESER VED_NO_ VALUE_PRO VIDED. When you upload data using the Amazon S3 connector , you must enter a value or use SCN_RESER VED_NO_ VALUE_PRO VIDED for successful ingestion.	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESER VED_NO_ VALUE_PRO VIDED. When you upload data using the Amazon S3 connector , you must enter a value or use SCN_RESER VED_NO_ VALUE_PRO VIDED for successful ingestion.	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESER VED_NO_ VALUE_PRO VIDED. When you upload data using the Amazon S3 connector , you must enter a value or use SCN_RESER VED_NO_ VALUE_PRO VIDED for successful ingestion.	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESER VED_NO_ VALUE_PRO VIDED. When you upload data using the Amazon S3 connector , you must enter a value or use SCN_RESER VED_NO_ VALUE_PRO VIDED for successful ingestion.	Not required

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
	region_id	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_VALUE_PROVIDED. When you upload data using the Amazon S3 connector, you must enter a value or use SCN_RESERVED_NO_VALUE_PROVIDED for successful ingestion.	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_VALUE_PROVIDED. When you upload data using the Amazon S3 connector, you must enter a value or use SCN_RESERVED_NO_VALUE_PROVIDED for successful ingestion.	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_VALUE_PROVIDED. When you upload data using the Amazon S3 connector, you must enter a value or use SCN_RESERVED_NO_VALUE_PROVIDED for successful ingestion.	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_VALUE_PROVIDED. When you upload data using the Amazon S3 connector, you must enter a value or use SCN_RESERVED_NO_VALUE_PROVIDED for successful ingestion.	Not required

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommend ations?	Is the column used for Lead time Insights?
	product_group_id	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESER VED_NO_ VALUE_PRO VIDED. When you upload data using the Amazon S3 connector , you must enter a value or use SCN_RESER VED_NO_ VALUE_PRO VIDED for successful ingestion.	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESER VED_NO_ VALUE_PRO VIDED. When you upload data using the Amazon S3 connector , you must enter a value or use SCN_RESER VED_NO_ VALUE_PRO VIDED for successful ingestion.	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESER VED_NO_ VALUE_PRO VIDED. When you upload data using the Amazon S3 connector , you must enter a value or use SCN_RESER VED_NO_ VALUE_PRO VIDED for successful ingestion.	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESER VED_NO_ VALUE_PRO VIDED. When you upload data using the Amazon S3 connector , you must enter a value or use SCN_RESER VED_NO_ VALUE_PRO VIDED for successful ingestion.	Not required

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
vendor_le ad_time	company_id	Not required	Not required	Not required	Not required	Optional
	vendor_tp artner_id	Not required	Not required	Not required	Not required	Required
	product_id	Not required	Not required	Not required	Not required	Required
	site_id	Not required	Not required	Not required	Not required	Required
	planned_l ead_time	Not required	Not required	Not required	Not required	Required
	eff_start_date	Not required	Not required	Not required	Not required	Optional
	eff_end_date	Not required	Not required	Not required	Not required	Optional

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
	product_group_id	Not required	Not required	Not required	Not required	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_VALUE_PROVIDED. When you upload data using the Amazon S3 connector, you must enter a value or use SCN_RESERVED_NO_VALUE_PROVIDED for successful ingestion.

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
	region_id	Not required	Not required	Not required	Not required	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_VALUE_PROVIDED. When you upload data using the Amazon S3 connector, you must enter a value or use SCN_RESERVED_NO_VALUE_PROVIDED for successful ingestion.

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommend ations?	Is the column used for Lead time Insights?
outbound_order_line	id_	Required. Determines the outbound shipment ID.	Required. Determines the outbound shipment ID.	Required. Determines the outbound shipment ID.	Required. Determines the outbound shipment ID.	Not required
Note This data entity is *optional*. Insights will use the demand data from the *forecast* entity. If you ingest information	cust_order_id	Required. Determines the outbound order ID.	Required. Determines the outbound order ID.	Required. Determines the outbound order ID.	Required. Determines the outbound order ID.	Not required
	product_id	Required. Determines the product ID shipped.	Required. Determines the product ID shipped.	Required. Determines the product ID shipped.	Required. Determines the product ID shipped.	Not required
	ship_from_site_id	Required. Determines the site from where the units are shipped.	Required. Determines the site from where the units are shipped.	Required. Determines the site from where the units are shipped.	Required. Determines the site from where the units are shipped.	Not required
	ship_to_site_id	Optional. Site where the products	Optional. Site where the products	Optional. Site where the products	Optional. Site where the products	Not required

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
e entity, make sure the shipment information is also ingested for the *outbound_ shipment* entity to gather the demand for the		should be shipped.	should be shipped.	should be shipped.	should be shipped.	
	final_quantity_req uested	Optional. Final quantity after all updates and cancellat ions.	Optional. Final quantity after all updates and cancellat ions.	Optional. Final quantity after all updates and cancellat ions.	Optional. Final quantity after all updates and cancellat ions.	Not required
	quantity_ promised	Required. Quantity agreed to be delivered.	Required. Quantity agreed to be delivered.	Required. Quantity agreed to be delivered.	Required. Quantity agreed to be delivered.	Not required
	quantity_ delivered	Optional. Actual quantity delivered.	Optional. Actual quantity delivered.	Optional. Actual quantity delivered.	Optional. Actual quantity delivered.	Not required
	status	Optional. Displays the status of the order line. For example, cancelled	Optional. Displays the status of the order line. For example, cancelled	Optional. Displays the status of the order line. For example, cancelled	Optional. Displays the status of the order line. For example, cancelled	Not required

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
		, open, closed, and so on.	, open, closed, and so on.	, open, closed, and so on.	, open, closed, and so on.	
	quantity_uom	Optional. Unit of measure for quantity. For example, eaches, cases.	Optional. Unit of measure for quantity. For example, eaches, cases.	Optional. Unit of measure for quantity. For example, eaches, cases.	Optional. Unit of measure for quantity. For example, eaches, cases.	Not required
	requested _delivery_date	Optional	Optional	Optional	Optional	Not required
	promised_ delivery_date	Optional	Optional	Optional	Optional	Not required

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommend ations?	Is the column used for Lead time Insights?
outbound_ shipment	id_	Required. Determine s the outbound shipment ID.	Required. Determine s the outbound shipment ID.	Required. Determine s the outbound shipment ID.	Required. Determine s the outbound shipment ID.	Not required
Note This data entity is *optional*. AWS Supply Chain will use the demand data from the outbound_ order_lin	from_site_id	Required. Determine s the site from where the units are shipped.	Required. Determine s the site from where the units are shipped.	Required. Determine s the site from where the units are shipped.	Required. Determine s the site from where the units are shipped.	Not required
	product_id	Required. Determine s the product ID of the product shipped.	Required. Determine s the product ID of the product shipped.	Required. Determine s the product ID of the product shipped.	Required. Determine s the product ID of the product shipped.	Not required
	cust_order_id	Required. Determine s the outbound order ID.	Required. Determine s the outbound order ID.	Required. Determine s the outbound order ID.	Required. Determine s the outbound order ID.	Not required

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
	cust_order_line_id	Required. Determines the outbound order line ID.	Required. Determines the outbound order line ID.	Required. Determines the outbound order line ID.	Required. Determines the outbound order line ID.	Not required
	expected_ ship_date	Required. Determines when the products exit the from_site.	Required. Determines when the products exit the from_site.	Required. Determines when the products exit the from_site.	Required. Determines when the products exit the from_site.	Not required
	actual_ship_date	Optional. Determines the actual date when the product exits the from_site.	Optional. Determines the actual date when the product exits the from_site.	Optional. Determines the actual date when the product exits the from_site.	Optional. Determines the actual date when the product exits the from_site.	Not required
	shipped_qty	Required. Determines the quantity shipped from the from_site.	Required. Determines the quantity shipped from the from_site.	Required. Determines the quantity shipped from the from_site.	Required. Determines the quantity shipped from the from_site.	Not required

Data entity	Column	Is the column used for Inventory visibility?	Is the column used for Network map?	Is the column used for Inventory Insights?	Is the column used for Rebalance recommendations?	Is the column used for Lead time Insights?
	cust_shipment_status	Optional. Status of the shipment. For example, cancelled, open, closed, and so on.	Optional. Status of the shipment. For example, cancelled, open, closed, and so on.	Optional. Status of the shipment. For example, cancelled, open, closed, and so on.	Optional. Status of the shipment. For example, cancelled, open, closed, and so on.	Not required
	to_site_id	Optional. Site where products should be shipped.	Optional. Site where products should be shipped.	Optional. Site where products should be shipped.	Optional. Site where products should be shipped.	Not required
	expected_delivery_date	Optional	Optional	Optional	Optional	Not required
	actual_delivery_date	Optional	Optional	Optional	Optional	Not required

Work Order Insights

> **ⓘ Note**
>
> To generate a work order insight, in addition to ingesting the required data entities and columns, you must configure your milestone and process definitions. For more information on configuring work orders, see Configuring Work Order Insights for the first time.

The table below lists the required data entites and columns to generate a work order insight.

Data entity	Column	Is the column used by Work Order Insights?
site **ⓘ Note** The *site* data entity columns not listed in this table are *optional* for work order insights. AWS Supply Chain	id	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_ VALUE_PROVIDED. When you upload data using the Amazon S3 connector, you must enter a value or use SCN_RESERVED_NO_ VALUE_PROVIDED for successful ingestion.

Data entity	Column	Is the column used by Work Order Insights?
highly recommends ingesting data for the *optional* columns to enhance the feature output. When data is ingested for the *optional* columns, you can use them to configure rules to evaluate the process		

Data entity	Column	Is the column used by Work Order Insights?
milestones.		

Data entity	Column	Is the column used by Work Order Insights?
[product](#)	id	
ⓘ Note The *product* data entity columns not listed in this table are *optional* for work order insights. AWS Supply Chain highly recommends ingesting data for the *optional* columns to enhance		

Data entity	Column	Is the column used by Work Order Insights?
the feature output. When data is ingested for the *optional* columns, you can use them to configure rules to evaluate the process milestones.		

Data entity	Column	Is the column used by Work Order Insights?
vendor_product	vendor_tpartner_id	
	product_id	
	eff_start_date	
	eff_end_date	

> **ⓘ Note**
>
> The *vendor_product* data entity columns not listed in this table are *optional* for work order insights. AWS Supply Chain highly recommends ingesting data for the *optional* columns

Data entity	Column	Is the column used by Work Order Insights?
to enhance the feature output. When data is ingested for the *optional* columns, you can use them to configure rules to evaluate the process milestones.		
[geography](#)	id	Required – This column is used by conditional filters to display regions or country.

Data entity	Column	Is the column used by Work Order Insights?
inbound_order	id	Required
	tpartner_id	Required

> **ⓘ Note**
>
> The *inbound_order* data entity columns not listed in this table are *optional* for work order insights. AWS Supply Chain highly recommends ingesting data for the *optional* columns

Data entity	Column	Is the column used by Work Order Insights?
to enhance the feature output. When data is ingested for the *optional* columns, you can use them to configure rules to evaluate the process milestones.		

Data entity	Column	Is the column used by Work Order Insights?
inbound_order_line	id	Required. When you ingest data from SAP or EDI, the default value for string is SCN_RESERVED_NO_ VALUE_PROVIDED. When you upload data using the Amazon S3 connector, you must enter a value or use SCN_RESERVED_NO_ VALUE_PROVIDED for successful ingestion.
	order_id	
	tpartner_id	
	product_id	

> ⓘ **Note**
>
> The *inbound_order_line* data entity columns not listed in this table are *optional* for work order insights. AWS Supply Chain highly recommends ingesting data for the *optional* columns

Data entity	Column	Is the column used by Work Order Insights?
to enhance the feature output. When data is ingested for the *optional* columns, you can use them to configure rules to evaluate the process milestones.		

Data entity	Column	Is the column used by Work Order Insights?
shipment	id	
Note The *shipment* data entity columns not listed in this table are *optional* for work order insights. AWS Supply Chain highly recommends ingesting data for the *optional* columns to enhance	supplier_tpartner_id	
	product_id	
	order_id	
	order_line_id	
	package_id	

Data entity	Column	Is the column used by Work Order Insights?
the feature output. When data is ingested for the *optional* columns, you can use them to configure rules to evaluate the process milestones.		

Data entity	Column	Is the column used by Work Order Insights?
reservation ⓘ **Note** The *reservation* data entity columns not listed in this table are *optional* for work order insights. AWS Supply Chain highly recommends ingesting data for the *optional* columns to	reservation_id	Required – This column is a required key for the *reservation_id* column in the *process_product* data entity.
	reservation_type	Required – This column is used when defining a default work order plan.
	reservation_detail_id	Required – This column is a required key for the *reservation_detail_id* column in the *process_product* data entity.

Data entity	Column	Is the column used by Work Order Insights?
enhance the feature output. When data is ingested for the *optional* columns, you can use them to configure rules to evaluate the process milestones.		

Data entity	Column	Is the column used by Work Order Insights?
process_header	process_id	Required
	site_id	Required – This column is used by the *site_id* column in the *process_header* data entity. For example, this column can be referenced in the milestone rules for specific processes.
	status	Required
	planned_start_date	Required – The field is displayed as *Required on site date* in the AWS Supply Chain web application. This date is required to calculate the forecast completion date and to determine the Work order line status.

> ⓘ **Note**
>
> The *process_header* data entity columns not listed in this table are *optional* for work order insights. AWS Supply Chain highly recommends ingesting data for the *optional* columns

Data entity	Column	Is the column used by Work Order Insights?
to enhance the feature output. When data is ingested for the *optional* columns, you can use them to configure rules to evaluate the process milestones.		

Data entity	Column	Is the column used by Work Order Insights?
process_product ⓘ **Note** The *process_product* data entity columns not listed in this table are *optional* for work order insights. AWS Supply Chain highly recommends ingesting data for the *optional* columns	process_product_id	Required – This column is part of the primary key in the *process_product* data entity and is used as a reference in other entities.
	process_id	Required – This column is part of the primary key in the *process_product* data entity and is used to associate the header with the line.
	product_id	Required
	reservation_id	Required
	reservation_detail_id	Required
	requested_availability_date	Required – The field is displayed as *Required on site date* in the AWS Supply Chain web application. This date is required to calculate the forecast completion date and to determine the Work order line status. When you ingest data, you must enter a value for *requested_availability_date*. When information is not available for the *requested_availability_date* column, work order insights will use the column values from *process_header > planned_start_date*

Data entity	Column	Is the column used by Work Order Insights?
to enhance the feature output. When data is ingested for the *optional* columns, you can use them to configure rules to evaluate the process milestones.		to calculate the forecast completion date.
work_order_plan	process_id	Required
	product_id	Required
	business_process_id	Required
	business_process_sequence	Required

Data entity	Column	Is the column used by Work Order Insights?
	preferred_source	Required
	duration	Required – This column provides the process lead time to determine the target date of the process completio n.

The following table describes the data entities that are *not* required to generate work order insights. If these data entities are included in your dataset, the required columns are listed in the table below.

Data entity	Column	Is the column used by Work Order Insights?
trading_p artner	id	Required – This column is used to link the trading partner.
	tpartner_type	
	geo_id	
	eff_start_date	
	eff_end_date	
process_o peration	process_operation_id	Required
	process_id	

> ⓘ **Note**
> The *process_o peration* data entity

Data entity	Column	Is the column used by Work Order Insights?
columns not listed in this table are *optional* for work order insights. AWS Supply Chain highly recommends ingesting data for the *optional* columns to enhance the feature output. When data is ingested for		

Data entity	Column	Is the column used by Work Order Insights?
the *optional* columns, you can use them to configure rules to evaluate the process milestones.		

Demand Planning

How to read the table:

- **Required** – The columns in this data entity are mandatory to execute a demand forecast without any failures.

- **Conditionally required** – The columns in this data entity are required depending on the configurations set under demand plan settings. For more information, see Modifying Demand Plan settings.

- **Recommended for forecast quality** – The columns in this data entity are required for the quality for the forecast.

- **Optional** – The column name is optional. For enhanced feature output, it is recommended to add the column name with values.

The following table lists the data entities and columns used by Demand Planning.

Data entity name	Is this data entity required?	How is this data entity used?
product	Required	Demand Planning uses the product attributes to establish hierarchy filters for demand plan review and for model training.
outbound_order_line	Required	Demand Planning uses this data as the primary source of historical demand for forecast. Additionally, fields selected as granularity are sent for training and are available as filters to review the demand plan.
product_alternate	Recommended for forecast quality	Demand Planning uses the data of product's predecessor(s) or alternate(s) to create forecast for new products. When data is ingested into the *product_alternate* data entity, Product lineage support for forecast is enabled. For more information, see Product lineage. You can skip ingesting data into the *product_alternate* data entity and the forecast can still be generated.
supplementary_time_series	Recommended for forecast quality	Demand Planning uses this data as the primary source for tagging casual factors such as promotional events, discounts, holidays, and so on.

Prequisites before uploading your dataset

To successfully generate a forecast, make sure your dataset adheres to the following.

- Atleast one *product_id* has a sales history of atleast four times the forecast time horizon provided in the *outbound_order_line* dataset. For example, if the forecast time horizon is 26 weeks, the minimum order data requirement is 26*4 = 104 weeks.

- *Product_id* under the product data entity should not contain any incomplete data (null or empty string) or duplicates.

- All the additional columns selected for granularity in the forecast configuration (that are *conditionally required* ') does not contain incomplete data (null or empty string).

- The column *id* across all data entities (for example, product_id, site_id, ship_from_site_id) does not contain special characters, such as asterisk (*) and double quotes (" ").

- The *order_date* does not contain invalid date. For example, 2/29/2023, that is 29th February 2023 is only valid on a leap year.

To improve forecast accuracy, Demand Planning highly recommends the following.

- Upload two to three years of outbound order line history as input to generate an accurate forecast. This duration allows the forecasting models to capture your business cycles and ensure a more robust and reliable prediction.

- For improved forecast accuracy, it is also recommended to include product attributes such as *brand*, *color*, *product_group_id*, *product_introduction_day* and *discontinue_day* in the product data entity.

- You can provide additional demand drivers information through the *supplementary_time_series* data entity. Note, only numerical values are supported.

- You provide alternate product mapping when you have similar products or previous version for a new product.

- Remove any non-recurring or one-time event such as COVID before uploading the historical sales data.

Data mapping example for fulfillment

Below is an example to map brick and mortar or online sales to outbound order line dataset and optimize the historical demand setup. Use this example to structure your data for accurate forecasting. Review the configurations in this example to make sure your forecasting models capture the different fulfillment scenarios.

> **ⓘ Note**
>
> If the data fields *ship_from_site_id*, *ship_to_site_id*, and *channel_id* are selected for forecast granularity, make sure they have values or enter *NULL* as the value. The forecast will fail if the fields are blank.

Data field	Description	Scenario 1 – Store sales (POS)	Scenario 2 – E-commerce demand fulfilled by store	Scenario 3 – E-commerce demand fulfilled by online fulfillment center (direct to customer)
ship_from _site_id	Site at which inventory is managed	Store ID	Store ID	Fulfillment Center ID
ship_to_s ite_id	Site that received the order	Enter *NULL* to avoid forecast failure	Country, Region, State, or Zip – as applicable	External retailer sore ID, or Country, Region, State, or Zip – as applicable
channel_i d	Map how an item is sold	Brick and mortar	E-commerce	E-commerce

The following table list the columns required in each data entity for Demand Planning.

Data entity	Column	Is the column required?	How is this column used in Forecasting?
outbound_ order_line	id	Required	Required for data ingestion into Supply Chain Data Lake (SCDL). Unique record identifier.

Data entity	Column	Is the column required?	How is this column used in Forecasting?
	cust_order_id	Required	Required for data ingestion into Supply Chain Data Lake (SCDL). Customer Order ID.
	product_id	Required	Required for data ingestion into SCDL and for forecast creation. Make sure the column values do not have invalid characters such as asterix and double-quotes.
	order_date	Required	Required for forecast creation. Identifies the period for time-series forecasting.
	final_quantity_requested	Required	Required for forecast creation. Identifies the quantity used for time-series forecasting. This column must not contain null values and must be *numerical*.

Data entity	Column	Is the column required?	How is this column used in Forecasting?
	ship_from_site_id	Conditionally required	This column is conditionally required for forecast creation *if* the column is selected for forecast dimension (Site Hierarchy). This column must have a value and is used for filtering and analysis of data. For information on how to map data for different fulfillment scenarios, see [Data mapping example for fulfillment]().
	ship_to_site_id	Conditionally required	
	channel_id	Conditionally required	This column is conditionally required for forecast creation *if* the column is selected for forecast dimension (Channel Hierarchy). This column must have a value and is used for filtering and analysis of data. For information on how to map data for different fulfillment scenarios, see [Data mapping example for fulfillment]().

Data entity	Column	Is the column required?	How is this column used in Forecasting?
	customer_tpartner_id	Conditionally required	This column is condition ally required for forecast creation *if* the column is selected for forecast dimension (Customer Hierarchy). This column must have a value and is used for filtering and analysis of data. For information on how to map data for different fulfillment scenarios, see [Data mapping example for fulfillment](#).
	ship_to_site_address_city	Conditionally required	This column is condition ally required for forecast creation *if* the column is selected for forecast dimension (Site Hierarchy). This column must have a value and is used for filtering and analysis of data. For information on how to map data for different fulfillment scenarios, see [Data mapping example for fulfillment](#).
	ship_to_site_address_state	Conditionally required	
	ship_to_site_address_country	Conditionally required	

Data entity	Column	Is the column required?	How is this column used in Forecasting?
	status	Recommended for forecast quality	This column is recommended for forecast quality. Orders with *cancelled* status are not considered as forecast input.
product	id	Required	Required for data ingestion into Supply Chain Data Lake (SCDL). Make sure the column values do not have duplicate IDs and special characters such as asterix and double-quotes.
	description	Required	Required for data ingestion into Supply Chain Data Lake (SCDL). This column can contain special characters such as asterix, hyphen, quotes, and double-quotes.
	parent_product_id	Conditionally required	This column is conditionally required for forecast creation *if* the column is selected for forecast dimensions (Product Hierarchy). Make sure the column has values and is used for filtering and analysis of data and model training.
	product_group_id	Conditionally required	
	product_type	Conditionally required	
	brand_name	Conditionally required	
	color	Conditionally required	
	display_desc	Conditionally required	

Data entity	Column	Is the column required?	How is this column used in Forecasting?
	product_available_day	Recommended for forecast quality	Recommended. The value in this column improves forecast quality by allowing the forecasting model to consider the timing of new product introductions.
	discontinue_day	Recommended for forecast quality	Recommended. The value in this column improves forecast quality by allowing the forecasting model to consider the timing for product retirements.
	base_uom	Recommended for forecast quality	Unit of measure for product. Default is Eaches.
	is_deleted	Recommended for forecast quality	Recommended. Enter *Y* if the product ID should be excluded from forecasting.
	pkg_height	Recommended for forecast quality	Recommended. The physical characteristics of the product that the forecasting models can understand.
	pkg_length	Recommended for forecast quality	
	pkg_width	Recommended for forecast quality	

Data entity	Column	Is the column required?	How is this column used in Forecasting?
	shipping_dimension	Recommended for forecast quality	
	casepack_size	Recommended for forecast quality	
product_alternate	alternative_product_id	Required	Required for data ingestion into Supply Chain Data Lake (SCDL). Unique record identifier.
	product_id	Required	Required for data ingestion into Supply Chain Data Lake (SCDL). ID of the new product or new version of the product.
	product_alternate_id	Required	Required for data ingestion into SCDL. Identifier for a similar product or previous version of the product. To consider multiple similar products as a single *product_id*, enter the products in separate rows.
	alternate_type	Required	Required for applying product supercession or lineage. Use the static value *similar_demand_product* in all the rows.

Data entity	Column	Is the column required?	How is this column used in Forecasting?
	alternate_product_qty	Required	Required for applying product supercession or lineage. Enter the proportion of history of the *alternate_product_id* you want to use for forecasting *product_id*. For example, if it is 60%, enter 60. When you have multiple *alternative_product_id* for a single *product_id*, the *alternate_product_qty* does not have to add up to 100.
	alternate_product_qty_uom	Required	Required for applying product supercession or lineage. Use the specific static value "percentage".
	eff_start_date	Required	Required for data ingestion into SCDL. Enter the start timeframe to consider the history of a similar product. To consider the history from the beginning, use this date - 1/1/1900 0:00. Make sure this date is on or before the *eff_end_date*.

Data entity	Column	Is the column required?	How is this column used in Forecasting?
	eff_end_date	Required	Required for data ingestion into SCDL. Enter the end timeframe to consider in history of a similar product. To consider the history till the end, use this date - '12/31/9999 23:59' Make sure this date is on or after the *eff_start _date*.
	status	Recommended for forecast quality	Recommended. Enter *Inactive* to ignore the product supercession or lineage mapping.
supplemen tary_time _series	id	Required	Required for data ingestion into Supply Chain Data Lake (SCDL). Unique record identifier.
	order_date	Required	Required for data ingestion into Supply Chain Data Lake (SCDL). Timestamp when the timeseries was recorded.

Data entity	Column	Is the column required?	How is this column used in Forecasting?
	time_series_name	Required	Required for data ingestion into Supply Chain Data Lake (SCDL). Name of the specific type of time series. The *time_series_name* column must start with a letter, be 2 to 56 characters long, and can contain letters, numbers, and underscores. No other special characters are allowed.
	time_series_value	Required	Required for data ingestion into SCDL. Value corresponding to the specific time series. Demand Planning only supports numerical input and time-series with categorical value is not considered.
	product_id	Optional	Recommended. Unique identifier for a specific product. Use this column if the demand driver is available at product level.

Data entity	Column	Is the column required?	How is this column used in Forecasting?
	site_id	Optional	Recommended. Unique identifier for a specific site or location. Use this column if the demand driver is available at site level. This column can represent either *ship_from_site_id* or *ship_to_site_id* based on the lowest level site hierarchy configuration.
	channel_id	Optional	Recommended. Unique identifier for a specific channel. Use this column if the demand driver is available at channel level.
	customer_tpartner_id	Optional	Recommended. Unique identifier for a specific customer. Use this column if the demand driver is available at customer level.

Data entities supported in AWS Supply Chain

The following is an overview of the data entities supported in AWS Supply Chain.

Category	Category type	Data entity and description	AWS Supply Chain entity group
Organization	Non-trans actional data	company - Entity to store the name and location of your company.	Company
	Non-trans actional data	geography - Entity stores geographical hierarchy of your company.	Geography
	Non-trans actional data	trading_partner - Contains the partners that have trading relationship with your company, such as vendors, 3PLs, channel partners, or distributors.	Trading Partner
	Non-trans actional data	trading_partner_poc - Contains informati on that can be identified about the point of contacts at the partners such as vendors, 3PLs, channel partners, or distributors, that have trading relationship with your company.	Trading Partner
Product	Non-trans actional data	product - Contains the key product attribute s, including name, description, brand, codes, category, business group, and price.	Product
	Non-trans actional data	product_hierarchy - Contains the product categories and sub-categories.	Product
	Non-trans actional data	product_uom - Contains the product packaging options and conversations between packages.	Product

Category	Category type	Data entity and description	AWS Supply Chain entity group
	Non-trans actional data	product_alternate - Contains information about alternative products, including type of alternative.	Product
Network	Non-trans actional data	site - Stores information for sites holding inventory such as Stores, Distribution Centres ,including ID, name, address, geographical region, and site type.	Site
	Non-trans actional data	transportation_lane - Contains information about transportation lanes, including from and to sites, transportation mode, and transit time.	Transport ation
Vendor management	Non-trans actional data	vendor_product - Contains the product information per vendor, including price, lead-time, and inbound sites.	Vendor Management
	Non-trans actional data	vendor_lead_time - Contains the planned and actual lead times from the vendor.	Vendor Management
	Non-trans actional data	vendor_holiday - Displays information on vendor outages due to holidays and shutdowns.	Vendor Management
Planning	Non-trans actional data	inv_policy - Contains inventory policies such as minimum and maximum safety stock policy, target inventory quantity, minimum or ma maximum order quantity and so on, for product, product-site, and other possible combinations.	Inventory

Category	Category type	Data entity and description	AWS Supply Chain entity group
	Non-trans actional data	segmentation - Used to store segments. Segments are used in conjunction with product, site, and effective dates for uniqueness. For example, HV1 for High Value, HLW for Halloween Products, seasonal, volatile and so on.	Reference
	Non-trans actional data	sourcing_rules - Defines rules at product-site level to specify the sourcing related attribute s (for example, rule type, to and from site, transportation lane, minimum and maximum quantity, priority, ratio, and so on).	Reference
	Non-trans actional data	sourcing_schedule - Sourcing schedule determines when to source. For example, source from vendors or transfer between sites.	Reference
	Non-trans actional data	sourcing_schedule_details - Provides sourcing schedule details. For example, the days in a week, a product be sourced from a vendor.	Reference
	Transactional data	reservation - Provides details about inventory reservation. For example, reservation ID, type, date, quantity, product ID.	Reference
	Transactional data	product_bom - Displays bill of material for product with type, level, ratios, quantities, and cost attributes.	Reference
Operation	Transactional data	process_header - Track execution activities within a plant or site. For example, manufactu ring, maintenance or repairs.	Operation

Category	Category type	Data entity and description	AWS Supply Chain entity group
	Transactional data	process_operation - Defines operation associated with an activity. For example, Stop machine, Oiling, and so on.	Operation
	Transactional data	process_product - Define the product or material associated with an activity.	Operation
	Transactional data	production_process - Defines attribute s associated with the manufacturing or production process.	Operation
Inventory Management	Transactional data	inv_level - A snapshot of the product's inventory condition in each site. For example, snapshot date, on-hand inventory, condition of the product.	Inventory
Inbound	Transactional data	inbound_order - Contains information about inbound orders into your companies locations . For example, for example, purchase orders (POs), blanket POs, production orders, or stock transfer orders).	Purchase Order
	Transactional data	inbound_order_line - Stores line level information for inbound_order, including product_id, and quantity.	Purchase Order
	Transactional data	inbound_order_line_schedule - Stores schedule-line level data within an inbound_o rder_line and is relevant only when schedules are used.	Purchase Order

Category	Category type	Data entity and description	AWS Supply Chain entity group
	Transactional data	shipment - Stores shipment information like origin, carrier code, ship date, product, quantity, ship from site, expected delivery date, and actual delivery date, or inbound orders (PO,TO etc) including ship date, product, quantity, ship from site, expected delivery date, and actual delivery date.	Shipment
	Transactional data	shipment_stop - Contains list of shipment stops with corresponding date and time. This field is used when there are multiple stops for shipments.	Shipment
	Transactional data	shipment_stop_order - Contains list of orders picked and dropped per shipment stop.	Shipment
Outbound fulfillment	Transactional data	outbound_order_line - Contains orders originating from your company and shipped to locations outside of the your network. Outbound_order_line contains order date, customer location, incoterms, and so on. It also includes product, price, discount, and units.	Outbound
	Transactional data	outbound_shipment - Stores shipment information for outbound orders, including ship date, product, quantity, ship from site, expected delivery date, and actual delivery date.	Outbound
Plan	Transactional data	supply_plan - Displays the supply plan generated by AWS Supply Chain Supply Planning.	Plan

Category	Category type	Data entity and description	AWS Supply Chain entity group
Forecast	Transactional data	forecast - Stores forecast over forecast horizon for product, product-site, or other combinations.	Forecast
	Transactional data	supplementary_time_series - Displays additional demand driver time series information such as price, promotions, and out-of-stock indicator to improve forecast quality.	Forecast
Reference	Non-trans actional data	reference_field - Contains mapping of any entity-field-value combination to a corresponding description, such as mapping specific inbound_order status code to status description.	Reference
	Non-trans actional data	calendar - Calendars can be used for many purposes by the application, such as planning, execution, and reporting.	Reference
	Non-trans actional data	uom_conversion - Contains conversions for unit of measure (UOM).	Reference
Insights	Transactional data	work_order_plan - Provides the supply chain process plan for a work order along with source type and duration to finish each supply chain process.	Forecast

> **ⓘ Note**
>
> - All fields marked as type *timestamp* should be in ISO 8601 format.
>
> - The dataset that you ingest into AWS Supply Chain can only include the following special characters: ASCII 35 (number sign: #), 36 (dollar sign: $), 37 (percent sign: %), 45 (hyphen:

-), 46 (period: .), 47 (slash: /), 94 (caret), 95 (underscore: _), 123 (left curly brace: {), and 125 (right curly brace: }).

Organization

This section lists the data entities within the organization category.

Topics

- [company](#)
- [geography](#)
- [trading_partner](#)
- [trading_partner_poc](#)

company

Primary key (PK)

The table below lists the column names that are uniquely identified in the data entity.

Name	Column
company_pk	id

The table below lists the column names supported by the data entity.

Column	Data type	Required	Description
id	string	Yes	ID of the company.
description	string	No	Description of the company.
address_1	string	No	Company address.
address_2	string	No	Company address.

Column	Data type	Required	Description
address_3	string	No	Company address.
city	string	No	City where the company is located.
state_prov	string	No	State where the company is located.
postal_code	string	No	Postal code of the company address.
country	string	No	Country where the company is located.
phone_number	string	No	Company's contact number.
time_zone	string	No	Company's local time zone.
calendar_id [1]	string	No	Default calendar that the company uses for planning.

[1]Foreign key

Foreign key (FK)

The table below lists the columns with the associated foreign key.

Column	Category	FK/Data entity	FK/Column
calendar_id	Reference	calendar	calendar_id

geography

Primary key (PK)

The table below lists the column names that are uniquely identified in the data entity.

Name	Column
geography_pk	id

The table below lists the column names supported by the data entity:

Column	Data type	Required	Description
id	string	Yes	Geographical ID. Referred to by other entities as geo_id or region_id.
description	string	No	Geographical location.
company_id [1]	string	No	Company ID.
parent_geo_id [1]	string	No	Stores parent geographical ID for this record. If blank, this is a top level region in the company.
address_1	string	No	City corresponding to this geo-region.

Column	Data type	Required	Description
address_2	string	No	City correspon ding to this geo-region.
address_3	string	No	City correspon ding to this geo-region.
city	string	No	Displays the city corresponding to this geo-regio n.
state_prov	string	No	State correspon ding to this geo-region.
postal_code	string	No	Postal code corresponding to this geo-regio n.
country	string	No	Country corresponding to this geo-regio n.
phone_number	string	No	Company's contact number.
time_zone	string	No	Company local time zone.

[1] Foreign key

Foreign key (FK)

The table below lists the columns with the associated foreign key.

Column	Category	FK/Data entity	FK/Column
company_id	Organization	company	id
parent_geo_id	Organization	geography	id

trading_partner

Primary key (PK)

The table below lists the column names that are uniquely identified in the data entity.

Name	Column
trading_partner_pk	id, tpartner_type, geo_id, eff_start_date, eff_end_date

The table below lists the column names supported by the data entity:

Column	Data type	Required	Description
id	string	Yes	Partner ID. Referred to by other entities as tpartner_ id unless explicitly stated otherwise.
description	string	No	Description of the trading partner.
company_id [2]	string	No	Company ID.
tpartner_type	string	Yes[1]	Type of partner, for example, vendor, channel partner, or 3PL.

Column	Data type	Required	Description
geo_id [2]	string	Yes[1]	Region of the company associated with the trading partner.
eff_start_date	timestamp	Yes[1]	The start timestamp of the relationship between the trading partner and the company.
eff_end_date	timestamp	Yes[1]	The end timestamp of the relationship between the trading partner and the company.
is_active	string	No	Indicates whether trading partner is active or inactive.
address_1	string	No	The address corresponding to the trading partner.
address_2	string	No	The address corresponding to the trading partner.
address_3	string	No	The address corresponding to the trading partner.
city	string	No	The city corresponding to the trading partner.
state_prov	string	No	The state corresponding to the trading partner.
postal_code	string	No	The postal code of the trading partner.
country	string	No	The country corresponding to the trading partner.

Column	Data type	Required	Description
phone_number	string	No	The trading partner's contact phone number.
time_zone	string	No	The trading partner's local time zone.
latitude	double	No	Latitude of trading partner location.
longitude	double	No	Longitude of trading partner location.
os_id	string	No	Organizational identifier issued by Open Supplier Hub.
duns_number	string	No	Unique nine-digit identific ation number provided by Dun and Bradstreet (D and B).

[1]You must enter a value. When you ingest data from SAP or EDI, the default value for *string* is SCN_RESERVED_NO_ VALUE_PROVIDED; and the default value for *timestamp* is 1900-01-01 00:00:00 for start date, and 9999-12-31 23:59:59 for end date.

[2]Foreign key

Foreign key (FK)

The table below lists the columns with the associated foreign key.

Column	Category	FK/Data entity	FK/Column
company_id	Organization	company	id
geo_id	Organization	geography	id

trading_partner_poc

Primary key (PK)

The table below lists the column names that are uniquely identified in the data entity.

Name	Column
trading_partner_poc_pk	tpartner_id, email

The table below lists the column names supported by the data entity:

Column	Data type	Required	Description
tpartner_id [1]	string	Yes	Partner ID. Referred to by other entities as tpartner_id unless explicitly stated otherwise.
email	string	Yes	Partner's email ID.
poc_first_name	string	No	Partner's first name.
poc_last_name	string	No	Partner's last name.
poc_org_unit_name	string	No	Name of the team or internal organizational unit.
poc_org_unit_description	string	No	AWS profile or description of the team's role in an organization to be shared with the customer to describe their team.

[1]Foreign key

Foreign key (FK)

The table below lists the columns with the associated foreign key.

Column	Category	FK/Data entity	FK/Column
tpartner_id	Organization	trading_partner	id

Product

This section lists the data entities within the product category.

Topics

- product
- product_hierarchy
- product_uom
- product_alternate

product

Primary key (PK)

The table below lists the column names that are uniquely identified in the data entity.

Name	Column
product_pk	id

The table below lists the column names supported by the data entity:

Column	Data type	Required	Description
id	string	Yes	Displays the product ID. Referred to by other

Column	Data type	Required	Description
			entities as product_id.
description	string	Yes	Displays the descripti on of the product.
company_id[1]	string	No	Displays the company ID.
product_group_id[1]	string	No	Displays the product group ID that this product belongs to.
product_type	string	No	Type of product, for example, finished good, component , service, or packaging.
thumbnail_url	string	No	URL for product image.
hts_code	string	No	Harmonize d Tariff Schedule code.

Column	Data type	Required	Description
is_hazmat	string	No	Displays whether product is Hazmat compliant.
is_flammable	string	No	Indicator of whether the product is flammable or not.
is_special_handling	string	No	Displays if the product requires special handling.
is_perishable	string	No	Displays if the product is perishable.
is_digital	string	No	Displays if the product is digital.
is_deleted	string	No	Indicates whether product is deleted ("true") or active ("false").

Column	Data type	Required	Description
is_lot_controlled	string	No	Indicates if the product is a lot-controlled product.
is_expiry_controlled	string	No	Indicates if the product is an expiry-date controlled product.
creation_date	timestamp	No	Product launch or release date.
brand_name	string	No	Product brand name.
parent_product_id[1]	string	No	If the product is part of a bundle, lists the ID of the parent product.
display_desc	string	No	External facing description of the product.

Column	Data type	Required	Description
discontinue_day	timestamp	No	Date when the product was discontin ued.
base_uom	string	No	Unit of measure for product. Default is Eaches.
unit_cost	double	No	Average unit cost of the product. Measured in currency_ uom per base_uom.
unit_price	double	No	Unit price, standard price, or MSRP of the product.
inventory_holding_cost	double	No	Average yearly holding cost of the product.

Column	Data type	Required	Description
currency_uom	string	No	Currency unit of measure for the price and other economic variables of this product.
product_available_day	timestamp	No	Date when the product is available for fulfillment.
shipping_weight	double	No	Default weight to be used by the carrier.
shipping_dimension	double	No	Dimensional weight to be used by the carrier.
unit_volume	double	No	Volume of product per base_uom.
pkg_length	double	No	Packaged length of the individual product.

Column	Data type	Required	Description
pkg_width	double	No	Packaged width of the individual product.
pkg_height	double	No	Packaged height of the individual product.
weight_uom	string	No	Unit of measure for product's weight.
dim_uom	string	No	Unit of measure for product's dimensions.
volume_uom	string	No	Product volume.
diameter	double	No	Diameter of an individual product.
color	string	No	Product color
casepack_size	int	No	Number of products in each casepack.

Column	Data type	Required	Description
gtin	int	No	Global Trade Item Number (GTIN). 14-digit number that includes various EAN/UCC numbering structures and is used to uniquely identify a product.
long_term_horizon	double	No	Long Term Horizon time window used to determine salvage value.
long_term_horizon_uom	string	No	UOM for Long Term Horizon time window used to determine salvage value.
salvage_value_percentage	double	No	Product cost expected to recover at the end of Long Term Horizon.

Column	Data type	Required	Description
sap_0material_attr__prdha	string	No	Product hierarchy . Predicate key for SAP mapping. Upsert key for T179.

[1]Foreign key

Foreign key (FK)

The table below lists the columns with the associated foreign key.

Column	Category	FK/Data entity	FK/Column
company_id	Organization	company	id
product_group_id	Product	product_hierarchy	id
parent_product_id	Product	product	id

product_hierarchy

Primary key (PK)

The table below lists the column names that are uniquely identified in the data entity.

Name	Column
product_hierarchy_pk	id

The table below lists the column names supported by the data entity:

Column	Data type	Required	Description
id	string	Yes	Product group ID.
description	string	No	Description of the product group.
company_id[1]	string	No	Company ID.
parent_product_group_id[1]	string	No	Parent of this product group. If null, it indicates this record is a top level product group.
creation_date	timestamp	No	Date when the product group was created.
update_date	timestamp	No	Date when the product group was updated.

[1]Foreign key

Foreign key (FK)

The table below lists the columns with the associated foreign key.

Column	Category	FK/Data entity	FK/Column
company_id	Organization	company	id
parent_product_group_id	Product	product_hierarchy	id

product_uom

Primary key (PK)

The table below lists the column names that are uniquely identified in the data entity.

Name	Column
product_bom	product_uom_id, eff_start_date, eff_end_date

The table below lists the column names supported by the data entity:

Column	Data type	Required	Description
product_uom_id	string	Yes	ID for product unit of measurement (UOM) combination.
product_id	string	No	Product associated with product-uom combination.
uom	string	No	UOM identifier.

Column	Data type	Required	Description
description	string	No	Description of product-uom.
company_id [1]	string	No	Company ID.
price	double	No	Price of product-uom.
cost	double	No	Cost of product-uom.
currency_uom	string	No	Unit of measure (UOM) of currency.
status	string	No	Status of record. For example, Active, Inactive and so on.
is_standard	string	No	Describe if this is a standard product-uom.
barcode_type	string	No	Type of barcode.
barcode_value	string	No	Value of barcode.

Column	Data type	Required	Description
type	string	No	Type of product-uom.
quantity	double	No	Displays the quantity for one product uom ID in terms of base UOM for the product.
quantity_uom	string	No	Unit of measure (UOM) of quantity in base UOM.
length	double	No	Length of the package.
width	double	No	Width of the package.
height	double	No	Height of the package.
dimension_uom	string	No	Unit of measure (UOM) of dimension.
volume	double	No	Volume of the package.

Column	Data type	Required	Description
volume_uom	string	No	Unit of measure (UOM) of volume.
weight	double	No	Package weight.
weight_uom	string	No	Unit of measure (UOM) of weight.
eff_start_date	timestamp	No	Displays the date and time the record becomes effective.
eff_end_date	timestamp	No	Displays the date and time the record ends.
source	string	No	Source of data.

[1]Foreign key

Foreign key (FK)

The table below lists the columns with the associated foreign key.

Column	Category	FK/Data entity	FK/Column
company_id	Organization	company	id

product_alternate

Primary key (PK)

The table below lists the colum names that are uniquely identified in the data entity.

Name	Column
product_alternate_pk	product_alternate_id, eff_start_date, eff_end_date

> ⓘ **Note**
>
> To avoid data ingestion failure, you must enter a value for *eff_start_date* and *eff_end_date*.

The table below lists the column names supported by the data entity:

Column name	Data type	Required	Description
product_alternate_id	string	Yes	Unique identifier for a record.
product_id [1]	string	Yes	Product ID.
alternative_product_id	string	Yes	Alternate product ID.
site_id	string	No	Site ID.
alternate_type	string	No	Alternate product type.

Column name	Data type	Required	Description
			For example, similar_d emand_val ue.
company_id [1]	string	No	Company ID.
priority	int	No	Priority or rank of alternatives.
alternate_group_id	string	No	Used to group interchan geable alternate products. Note, this field does not correspond to product_g roup in product_h ierarchy.
status	string	No	Status of the alternate product record. For example, Active, Inactive.

Column name	Data type	Required	Description
alternate_product_qty	double	No	Quantity of the alternate product. The conversion is done per base_UOM of primary product.
alternate_product_qty_uom	string	No	Unit of measure (UOM) of alternati ve product quantity.
eff_start_date	timestamp	No	Displays the date and time the record becomes effective.
eff_end_date	timestamp	No	Displays the date and time the record ends.
source	string	No	Source of data.

[1]Foreign key

Foreign key (FK)

The table below lists the columns with the associated foreign key.

Column	Category	FK/Data entity	FK/Column
product_id	Product	product	id
company_id	Organization	company	id

Network

This section lists the data entities within the network category.

Topics

- site
- transportation_lane

site

Primary key (PK)

The table below lists the colum names that are uniquely identified in the data entity.

Name	Column
site_pk	id

The table below lists the column names supported by the data entity:

Column	Data type	Required	Description
id	string	Yes	Site ID.
description	string	No	Description of the site.
company_id[1]	string	No	Company ID.
geo_id[1]	string	No	If the site belongs to a geography,

Column	Data type	Required	Description
			displays the ID of the geographical hierarchy.
address_1	string	No	Site address.
address_2	string	No	Site address.
address_3	string	No	Site address.
city	string	No	City in which the site is located.
state_prov	string	No	State where the site is located.
postal_code	string	No	Postal code of the site.
country	string	No	Country where the site is located.
phone_number	string	No	Contact number of the site.
email	string	No	Point of contacts email information.
time_zone	string	No	Local time zone of the site.
site_type	string	No	Type of site, for example, warehouse, delivery station, factory, store, and so on.

Column	Data type	Required	Description
unlocode	string	No	Standardized UN/LOCODE for the site.
latitude	double	No	Latitude of the site location.
longitude	double	No	Longitude of the site location.
is_active	string	No	Indicates whether site is deleted ("true") or active ("false")
site_calendar_id[1]	string	No	Site's operating and holiday calendar.
site_classifier	string	No	Information about site classification. For example, if a store is "high foot fall store" or if DC is Central DC vs Regional DC.
open_date	timestamp	No	Date when the site started operations.
end_date	timestamp	No	Date when the site discontinued operational perspective.

[1]Foreign key

Foreign key (FK)

The table below lists the columns with the associated foreign key.

Column	Category	FK/Data entity	FK/Column
company_id	Organization	company	id
geo_id	Organization	geography	id
site_calendar_id	Reference	calendar	calendar_id

transportation_lane

Primary key (PK)

The table below lists the colum names that are uniquely identified in the data entity.

Name	Column
transportation_lane_pk	id, from_site_id, to_site_id, from_geo_id, to_geo_id, carrier_tpartner_id, trans_mode, service_type, product_group_id

The table below lists the column names supported by the data entity:

Column	Data type	Required	Description
id	string	Yes	Lane ID.
from_site_id[2]	string	Yes[1]	Origin site location for the lane. You can exclude this field if the from_geo_id is populated.
to_site_id[2]	string	Yes[1]	Destination site location for the lane. You can exclude this field

Column	Data type	Required	Description
			if the to_geo_id is populated.
company_id[2]	string	No	Company ID.
from_geo_id[2]	string	Yes[1]	When lane definition is at geographical level, displays the 'from' or 'source' geographical region.
to_geo_id[2]	string	Yes[1]	When lane definition is at geographi cal level, displays the 'to' or 'source' geographical region.
carrier_tpartner_id[2]	string	Yes[1]	ID of the carrier.
trans_mode	string	Yes[1]	Transportation mode, for example, ship, water, rail, or truck.
service_type	string	Yes[1]	Provides information on the shipping method for the carrier.

Column	Data type	Required	Description
product_group_id[2]	string	Yes[1]	Product group ID if transit time varies by product group.
product_id[2]	string	No	Product ID is used when a lane has product-specific configuration.
transit_time	double	No	Transit time of products.
transit_time_sd	double	No	Standard deviation of transit time.
time_uom	string	No	Unit of measure of transit time.
distance	double	No	Distance traveled on the lane.
distance_uom	string	No	Unit of measure (UOM) of distance.
eff_start_date	timestamp	No	Date and time when this record becomes effective.

Column	Data type	Required	Description
eff_end_date	timestamp	No	Date and time till when this record becomes effective.
daily_start_time	string	No	Time when the lane begins operating.
daily_end_time	string	No	Time when the lane ends operation.
open_sun	string	No	Displays whether the lane is open on Sunday.
open_mon	string	No	Displays whether the lane is open on Monday.
open_tue	string	No	Displays whether the lane is open on Tuesday.
open_wed	string	No	Displays whether the lane is open on Wednesday.

Column	Data type	Required	Description
open_thu	string	No	Displays whether the lane is open on Thursday.
open_fri	string	No	Displays whether the lane is open on Thursday.
open_sat	string	No	Displays whether the lane is open on Saturday.
cost_per_unit	double	No	Cost per distance UOM.
cost_per_weight	double	No	Cost per weight UOM.
cost_currency	string	No	Currency UOM of costs.
weight_uom	string	No	Unit of measurement for weight.
emissions_per_unit	double	No	Carbon emissions emitted per unit distance UOM.
emissions_per_weight	double	No	Carbon emissions emitted per weight UOM.

Column	Data type	Required	Description
source	string	No	Source of data.
transportation_cost	double	No	Transportation cost related to the transport lane.
transportation_cost_uom	string	No	Transportation cost UOM related to the transport lane.

[1]You must enter a value. When you ingest data from SAP or EDI, the default value for *string* is: SCN_RESERVED_NO_ VALUE_PROVIDED.

[2]Foreign key

Foreign key (FK)

The table below lists the columns with the associated foreign key.

Column	Category	FK/Data entity	FK/Column
from_site_id, to_site_id	Network	site	id
company_id	Organization	company	id
from_geo_id, to_geo_id	Organization	geography	id
carrier_tpartner_id	Organization	trading_partner	id
product_group_id	Product	product_hierarchy	id
product_id	Product	product_id	id

Vendor management

This section lists the data entities within the vendor management category.

Topics

- vendor_product
- vendor_lead_time
- vendor_holiday

vendor_product

Primary key (PK)

The table below lists the colum names that are uniquely identified in the data entity.

Name	Column
vendor_product_pk	vendor_tpartner_id, product_id, eff_start_date, eff_end_date

The table below lists the column names supported by the data entity:

Column	Data type	Required	Description
company_id[2]	string	No	Company ID.
vendor_tpartner_id[2]	string	Yes	Trading partner ID of the vendor.
product_id[2]	string	Yes	Product ID.
vendor_product_code	string	No	Product identifier used by the vendor.

Column	Data type	Required	Description
vendor_product_desc	string	No	Product description used by the vendor.
vendor_cost	double	No	Cost of product from this vendor.
vendor_cost_uom	string	No	Unit of measure (UOM) of the product cost from this vendor.
status	string	No	Status of the product, for example, new product (NP), and obsolete (OB).
unit_volume	double	No	Volume of one unit of product.
volume_uom	string	No	Unit of measure (UOM) for volume.
unit_weight	double	No	Weight of one unit of product.

Column	Data type	Required	Description
weight_uom	string	No	Weight unit of measureme nt for weight.
release_date	timestamp	No	Date when the product was released by the vendor.
end_date	timestamp	No	Date when the vendor stopped supplying the product.
eff_start_date	timestamp	Yes[1]	Displays the date and time from when the vendor's product is active.
eff_end_date	timestamp	Yes[1]	Displays the date and time till when the vendor's product will be active.

Column	Data type	Required	Description
min_order_unit	double	No	Minimum order quantity for a product from this vendor.
country_of_origin	string	No	Country of origin by product.
sap_eina__infnr	string	No	Record on number of purchases . Predicate key for SAP mapping. Upsert key for EINE.
sap_eine__ebeln	string	No	Purchasing Document Number. Predicate key for SAP mapping. Upsert key for EKPO.

Column	Data type	Required	Description
sap_eine__ebelp	string	No	Item Number of Purchasing Document. Predicate key for SAP mapping. Upsert key for EKPO.

[1]You must enter a value. When you ingest data from SAP or EDI, the default value for *timestamp* date type value is 1900-01-01 00:00:00 for start date, and 9999-12-31 23:59:59 for end date.

[2]Foreign key

Foreign key (FK)

The table below lists the columns with the associated foreign key.

Column	Category	FK/Data entity	FK/Column
company_id	Organization	company	id
vendor_tpartner_id	Organization	trading_partner	id
product_id	Product	product_id	id

vendor_lead_time

Primary key (PK)

The table below lists the colum names that are uniquely identified in the data entity.

Name	Column
vendor_lead_time_pk	vendor_tpartner_id, product_id, product_group_id, site_id, region_id, eff_start_date, eff_end_date

The table below lists the column names supported by the data entity:

Column	Data type	Required	Description
company_id[2]	string	No	Company ID.
vendor_tpartner_id[2]	string	Yes	Trading partner ID of the vendor.
product_id[2]	string	Yes[1]	Product ID.
product_group_id[2]	string	Yes[1]	Used if lead time is set at product-group level.
site_id[2]	string	Yes[1]	Site where this product is being supplied.
region_id[2]	string	Yes[1]	Used if lead time is set at geographical region level. Site level values will override this value.
planned_lead_time	double	No	Planned lead time from vendor into company's site.

Column	Data type	Required	Description
planned_lead_time_dev	double	No	Standard deviation of lead time.
actual_lead_time_mean	double	No	Field to store actual lead time computed from transactional data.
actual_lead_time_sd	double	No	Standard deviation of actual lead time.
actual_p50	double	No	50th percentile of actual lead time.
actual_p90	double	No	90th percentile of actual lead time.
shipping_cost	double	No	Inbound shipping cost from vendor to company.
cost_uom	string	No	Unit of measure of shipping cost.

Column	Data type	Required	Description
we_pay	string	No	Yes or No indicator. Yes if company pays for inbound shipping, and No if vendor pays for shipping.
eff_start_date	timestamp	Yes[1]	Date and time from when this record is effective.
eff_end_date	timestamp	Yes[1]	Date and time till when this record is effective.
sap_eina__infnr	string	No	Record on number of purchases. Predicate key for SAP mapping. Upsert key for EINE.

[1]You must enter a value. When you ingest data from SAP or EDI, the default values for string and timestamp date type values are SCN_RESERVED_NO_ VALUE_PROVIDED for *string*; and for *timestamp*, 1900-01-01 00:00:00 for start date, and 9999-12-31 23:59:59 for end date.

[2]Foreign key

Foreign key (FK)

The table below lists the columns with the associated foreign key.

Column	Category	FK/Data entity	FK/Column
site_id	Network	site	id
company_id	Organization	company	id
region_id	Organization	geography	id
vendor_tpartner_id	Organization	trading_partner	id
product_group_id	Product	product_hierarchy	id
product_id	Product	product_id	id

vendor_holiday

Primary key (PK)

The table below lists the colum names that are uniquely identified in the data entity.

Name	Column
vendor_holiday_pk	vendor_tpartner_id, outage_start_date, outage_end_date

The table below lists the column names supported by the data entity:

Column	Data type	Required	Description
company_id[2]	string	No	Company ID.
vendor_tpartner_id[2]	string	Yes	Trading partner ID of the vendor.
outage_start_date	timestamp	Yes[1]	Outage start date.
outage_end_date	timestamp	Yes[1]	Outage end date.

Column	Data type	Required	Description
outage_type	string	No	Type of outage.
comment	string	No	Comment from the vendor.

[1]You must enter a value. When you ingest data from SAP or EDI, the default value for *timestamp* date type value is 1900-01-01 00:00:00 for start date, and 9999-12-31 23:59:59 for end date.

[2]Foreign key

Foreign key (FK)

The table below lists the column names with the associated data entity and category:

Column	Category	FK/Data entity	FK/Column
company_id	Organization	company	id
vendor_tpartner_id	Organization	trading_partner	id

Planning

This section lists the data entities within the planning category.

Topics

- product_bom
- inv_policy
- segmentation
- sourcing_rules
- sourcing_schedule
- sourcing_schedule_details
- reservation

product_bom

Primary key (PK)

The table below lists the colum names that are uniquely identified in the data entity.

Name	Column
product_bom_pk	id, product_id, component_product_id

The table below lists the column names supported by the data entity:

column	Data type	Required	Description
id	string	Yes	Displays the BOM ID.
product_id [2]	string	Yes	Product for which the BOM is defined.
site_id [2]	string	No	Site for which the BOM is defined.
company_id[2]	string	Yes [1]	Displays the company ID.
level	int	No	Displays the level of the BOM in multi-level BOM.
component_product_id	string	Yes [1]	Displays the component's product ID.
component_quantity_per	double	No	Quantity of component required to produce one unit of parent product.

column	Data type	Required	Description
component_quantity _uom	string	No	Unit of measurement of the component.
component_line_num ber	int	No	Line ID of the child record.
lifecycle_phase	string	No	Information about the life cycle phase associated with the BOM.
assembly_cost	double	No	UOM of the product.
assembly_cost_uom	string	No	Assembly cost of the product.
eff_start_date	timestamp	Yes [1]	Dates from when the record is effective.
eff_end_date	timestamp	Yes[1]	Dates till when the record is effective.
description	string	No	BOM description.
production_process _id	string	No	ID associated with a specific production process.
alternative_produc t_id	string	No[1]	ID of the alternate product used in the BOM.
priority	string	No	Priority of the product or components used in the BOM.

column	Data type	Required	Description
alternate_group_id	string	No	ID of the alternate product group.
alternate_product_qty	double	No	Quantity of the alternate product used in the BOM.
alternate_product_qty_uom	string	No	UOM associated with the quantity of the alternate product.
ratio	double	No	Ratio of the products in the BOM.
creation_date	timestamp	No[1]	Date when the BOM was created.
change_date	timestamp	No[1]	Date when the BOM was updated.

[1]You must enter a value. When you ingest data from SAP or EDI, the default values for string and timestamp date type values are: SCN_RESERVED_NO_ VALUE_PROVIDED for *string*; and for *timestamp* , 1900-01-01 00:00:00 for start date, and 9999-12-31 23:59:59 for end date.

[2]Foreign key

Foreign key (FK)

The table below lists the column names with the associated data entity and category:

Column	Category	FK/Data entity	FK/Column
company_id	Organization	company	id
product_id	Product	product	id
site_id	Network	site	id

Column	Category	FK/Data entity	FK/Column
production_process_id	Operation	production_process	production_process_id
alternative_product_id	Product	product_alternate	product_alternate_id

inv_policy

Primary key (PK)

The table below lists the colum names that are uniquely identified in the data entity.

Name	Column
inv_policy_pk	id, site_id, product_id, product_group_id, dest_geo_id, vendor_tpartner_id, eff_start _date, eff_end_date

The table below lists the column names supported by the data entity:

Column	Data type	Required	Description
id	string	Yes	Policy ID.
site_id[2]	string	Yes[1]	Site ID for the policy being defined.
product_id[2]	string	Yes[1]	Product ID for the policy being defined.
company_id[2]	string	No	Company ID.
product_group_id[2]	string	Yes[1]	Product group ID that the

Column	Data type	Required	Description
			policies are being defined for. Overridden at product level.
dest_geo_id[2]	string	Yes[1]	Sets default values at geo level of the destination.
vendor_tpartner_id[2]	string	Yes[1]	Trading partner ID of the vendor. This field is used when policies vary by vendor.
status	string	No	Status of the inventory policy record, for example, on-hold, or active.

Column	Data type	Required	Description
ss_policy	string	No	Type of safety stock policy. The safety stock policy is associated with corresponding data.
			abs_level – Uses units specified in min/max safety stock (SS). Source is customer system or external tool. Ordering is suggested whenever inventory falls below min SS level.
			sl – Targets inventory between min and max service level for in-stock percentages. For example, if min/max service level is 50% and 90%, ordering will be done to maintain inventory

Column	Data type	Required	Description
			between these percentiles of forecast over plan horizon. **DOC_dem** – Uses days of cover computed from historical demand as target level of inventory. **DOC_fcst** – Uses days of cover computed from forecast as target level of inventory.
fallback_policy_1	string	No	Fallback inventory policy.
repl_interval	double	No	Specifies the replenishment interval.
min_safety_stock	double	No	For safety stock policy "abs_level". This field is absolute value of minimum safety stock level.

Column	Data type	Required	Description
max_safety_stock	double	No	For safety stock policy "abs_level". This is absolute value of maximum safety stock level.
min_inventory_qty	double	No	Minimum inventory level quantity threshold.
max_inventory_qty	double	No	Maximum inventory level quantity threshold.
target_inventory_qty	double	No	Target inventory level quantity.
woc_limit	double	No	Provides the weeks of cover limit.
max_doc_limit	double	No	Provides the maximum days of cover value for safety stock policies "DOC_dem" and "DOC_fcst".

Column	Data type	Required	Description
min_doc_limit	double	No	Provides the minimum days of cover value for safety stock policies "DOC_dem" and "DOC_fcst".
target_doc_limit	double	No	Provides the target value for safety stock policies "DOC_dem" and "DOC_fcst".
permitted_var	double	No	Allowed variance used in policies where deviations from min,max, and target is allowed.
min_sl		No	Provides minimum service level (sl). Used for safety stock policy sl.
target_sl	double	No	Target service level used of policy sl.

Column	Data type	Required	Description
max_sl	double	No	Provides maximum service level (sl). Used for safety stock policy.
qty_uom	string	No	Quantity UOM associated with this inventory policy.
min_order_qty	double	No	Minimum order quantity.
max_order_qty	double	No	Maximum order quantity.
order_qty_multiple	double	No	Order quantity computed in multiples of this value.
holding_cost_percent	double	No	Annualized holding cost of inventory in percent.
eff_start_date	timestamp	Yes[1]	Dates from when the record is effective.
eff_end_date	timestamp	Yes[1]	Dates till when the record is effective.

Column	Data type	Required	Description
salvage_value_percentage	double	Yes[1]	Product cost that can be expected to recovered at the end of Long Term Horizon.
segment_id [2]	string	No	ID of segment associated with the inventory policy

[1]You must enter a value. When you ingest data from SAP or EDI, the default values for string and timestamp date type values are: SCN_RESERVED_NO_ VALUE_PROVIDED for *string*; and for *timestamp* , 1900-01-01 00:00:00 for start date, and 9999-12-31 23:59:59 for end date.

[2]Foreign key

Foreign key (FK)

The table below lists the column names with the associated data entity and category:

Column	Category	FK/Data entity	FK/Column
site_id	Network	site	id
segment_id	Planning	segmentation	segment_id
company_id	Organization	company	id
dest_geo_id	Organization	geography	id
vendor_tpartner_id	Organization	trading_partner	id
product_group_id	Product	product_hierarchy	id
product_id	Product	product	id

segmentation

Primary key (PK)

The table below lists the colum names that are uniquely identified in the data entity.

Name	Column
segmentation_pk	segment_id, creation_date, site_id, product_id, eff_start_date, eff_end_date

The table below lists the column names supported by the data entity:

Column	Data type	Required	Description
segment_id	string	Yes	Segment ID.
creation_date	timestamp	Yes	Date and time that the segment was created.
company_id[2]	string	No	Displays the company ID.
site_id[2]	string	No	Overrides policies specified for the region for this node in the product hierarchy.
product_id[2]	string	Yes[1]	Overrides policies specified for the product-group for this node in the geo hierarchy.

Column	Data type	Required	Description
segment_description	string	No	Segment description.
segment_type	string	No	Type of segmentation, for example, value based, demand variability based, or demand speed based.
segment_value	double	No	Metric associated with the segment calculated when the segment is generated. Value depends on segment_type.
source	string	No	Information about the segment creator.
eff_start_date	timestamp	Yes[1]	Effective start date of the calendar.
eff_end_date	timestamp	Yes[1]	Effective end date of the calendar.

[1]You must enter a value. When you ingest data from SAP or EDI, the default values for string and timestamp date type values are SCN_RESERVED_NO_ VALUE_PROVIDED for *string*; and for *timestamp* , 1900-01-01 00:00:00 for start date, and 9999-12-31 23:59:59 for end date.

[2]Foreign key

Foreign key (FK)

The table below lists the column names with the associated data entity and category:

Column	Category	FK/Data entity	FK/Column
site_id	Network	site	id
company_id	Organization	company	id
product_id	Product	product	id

sourcing_rules

Primary key (PK)

The table below lists the colum names that are uniquely identified in the data entity.

Name	Column
sourcing_rules_pk	sourcing_rule_id, eff_start_date, eff_end_date

The table below lists the column names supported by the data entity:

Column	Data type	Required	Description
sourcing_rule_id	string	Yes	Sourcing rule ID.
company_id[2]	string	No	Displays the company ID.

Column	Data type	Required	Description
product_id[2]	string	No	Product ID to be sourced.
to_site_id[2]	string	No	Site ID into which product will be sourced.
from_site_id[2]	string	No	Site ID from which product will be sourced.
product_group_id[2]	string	No	Product group ID.
sourcing_rule_type	string	No	Type of sourcing rule. For example, transfer, buy, manufacture.

Column	Data type	Required	Description
tpartner_id[2]	string	No	Trading partner ID is used depending on sourcing rule type. For example, when sourcing rule type is Buy, Buy is the Vendor ID and you can use this vendor ID along with other attributes to find additional details from vendor_product and other entities.
transportation_lane_id	string	No	Transportation lane ID is used depending on sourcing rule type. For example, when sourcing type is Transfer, you can use this ID along with other attributes to choose the correct transportation_lane.

Column	Data type	Required	Description
sourcing_priority[2]	integer	No	Priority of sourcing rule.
sourcing_ratio	double	No	Proportion of product to be sourced from this product/ group, to_site, from_site/ tpartner_id combination. All sources for a product, site should add to 1 for a specific time period (or application normalizes the ratio to 1).
qty_uom	string	No	Quantity UOM associated with sourcing rule.
min_qty	double	No	Minimum quantity for the sourcing rule.
max_qty	double	No	Maximum quantity for the sourcing rule.
qty_multiple	double	No	Quantity is in multiples of this value.

Column	Data type	Required	Description
eff_start_date	timestamp	Yes[1]	Effective start date of the calendar.
eff_end_date	timestamp	Yes[1]	Effective end date of the calendar.
source	string	No	Source of data.
production_process_id	string	No	Type of process operation. For example, stop machine.

[1]You must enter a value. When you ingest data from SAP or EDI, the default values for *timestamp* is, 1900-01-01 00:00:00 for start date, and 9999-12-31 23:59:59 for end date.

[2]Foreign key

Foreign key (FK)

The table below lists the column names with a foreign key:

	Category	FK/Data entity	FK/Column
to_site_id, from_site _id	Network	site	id
company_id	Organization	company	id
product_id	Product	product	id
product_group_id	Product	product_hierarchy	id
tpartner_id	Organization	trading_partner	id

	Category	FK/Data entity	FK/Column
transportation_lane_id	Network	transporatation_lane	id
production_process_id	Operation	production_process	production_process_id

sourcing_schedule

Primary key (PK)

The table below lists the colum names that are uniquely identified in the data entity.

Name	Column
sourcing_schedule_pk	sourcing_schedule_id, eff_start_date, eff_end_date

The table below lists the column names supported by the data entity:

Column	Data type	Required	Description
sourcing_schedule_id	string	Yes	Sourcing schedule ID.
company_id[2]	string	No	Displays the company ID.
tpartner_id[2]	string	No	Trading partner ID.
status	string	No	Status of the supply schedule. For example, active, inactive.

Column	Data type	Required	Description
from_site_id[2]	string	No	Origin site ID. For example, hub, vendor.
to_site_id[2]	string	No	Destination site ID. For example, hub or a customer in the network.
schedule_type	string	No	Type of schedule. For example, inbound ordering, outbound shipping.
eff_start_date	timestamp	Yes[1]	Date-time when schedule becomes effective.
eff_end_date	timestamp	Yes[1]	Date-time till when schedule is effective.

[1]You must enter a value. When you ingest data from SAP or EDI, the default values for *timestamp* is, 1900-01-01 00:00:00 for start date, and 9999-12-31 23:59:59 for end date.

[2]Foreign key

Foreign key (FK)

The table below lists the column names with the associated data entity and category:

Column	Category	FK/Data entity	FK/Column
from_site_id, to_site_id	Network	site	id
company_id	Organization	company	id
tpartner_id	Organization	trading_partner	id

sourcing_schedule_details

Primary key (PK)

The table below lists the colum names that are uniquely identified in the data entity.

Name	Column
sourcing_schedule_details_pk	sourcing_schedule_detail_id, sourcing_ schedule_id

The table below lists the column names supported by the data entity:

Column	Data type	Required	Description
sourcing_schedule_detail_id	string	Yes	Schedule detail ID.
sourcing_schedule_id	string	Yes	Sourcing schedule ID.
company_id[1]	string	No	Displays the company ID.
product_id[1]	string	No	Product ID used if schedule details are for a specific product.

Column	Data type	Required	Description
product_group_id[1]	string	No	Product group ID used if schedule details are for a product group.
day_of_week	string	No	Day of the week when the supply schedule is active. Values can be integer or string: Sun: 0 Mon: 1 Tue: 2 Wed: 3 Thu: 4 Fri: 5 Sat: 6
week_of_month	string	No	To be used when ordering X times in a month. To be used in conjunction with day_of_we ek. If used multiple times in a month, use multiple rows.

Column	Data type	Required	Description
time_of_day	timestamp	No	If supply schedule detail is for a specific time in a day, use this field to enter that information. Only time value is used.
date	timestamp	No	If supply schedule detail is for a specific date, use this field to enter that information. Only date value is used.

[1]Foreign key

Foreign key (FK)

The table below lists the column names with the associated data entity and category:

Column	Category	FK/Data entity	FK/Column
company_id	Organization	company	id
product_id	Product	product	id
product_group_id	Product	product_hierarchy	id

reservation

Primary key (PK)

The table below lists the colum names that are uniquely identified in the data entity.

Name	Column
reservation_pk	reservation_id, reservation_detail_id

The table below lists the column names supported by the *reservation* data entity:

Column	Data type	Required	Description
reservation_id	string	Yes	Reservation ID.
reservation_detail_id	string	Yes	Reservation detail ID.
reservation_type	string	No	Type of reservation. For example, procurement or build-to-stock.
company_id[1]	string	No	Company ID.
status	string	No	Status of the reservation.
product_id[1]	string	No	Product ID.
site_id[1]	string	No	Site ID.
quantity	double	No	Reservation quantity.
quantity_uom	string	No	Quantity UOM associated with reservation.

Column	Data type	Required	Description
reservation_date	timestamp	No	Date when the reservation is generated.
is_deleted	string	No	Yes or No indicator to indicate whether the reservation is deleted or not.
requisition_id[1]	string	No	Source object identifier reference to inbound order type.
requisition_line_id[1]	string	No	Source object identifier reference to inbound order line.
rfq_id[1]	string	No	Source object identifier reference to inbound order type RFQ.
rfq_line_id[1]	string	No	Source object identifier reference to inbound order line of type RFQ.

Column	Data type	Required	Description
order_id[1]	string	No	Source object identifier reference to inbound order.
order_line_id[1]	string	No	Source object identifier reference to inbound order line.
order_line_schedule_id[1]	string	No	Source object identifier reference to inbound order line schedule.
stock_transfer_1_order_id	string	No	Stock transfer order ID.
stock_transfer_1_order_line_id	string	No	Stock transfer order line ID.
stock_transfer_2_order_id	string	No	Stock transfer order ID.
stock_transfer_2_order_line_id	string	No	Stock transfer order line ID.
source_update_dttm	timestamp	No	Date time stamp of the update made in the source system.
source_event_id	string	No	ID of the event created in the source system.

Column	Data type	Required	Description
source	string	No	Source of data.

[1]Foreign key

Foreign key (FK)

The table below lists the column names with the associated data entity and category:

Column	Category	FK/Data entity	FK/Column
site_id	Network	site	id
company_id	Organization	company	id
product_id	Product	product	id
requisition_id, rfq_id	Inbound	inbound_order_line	order_id
requisition_line_id, rfq_line_id	Inbound	inbound_order_line	id
order_line_schedule_id	Inbound	inbound_order_line _schedule	id

Operation

This section lists the data entities within the operation category.

Topics

- [process_header](#)
- [process_operation](#)
- [process_product](#)
- [production_process](#)

process_header

Primary key (PK)

The table below lists the colum names that are uniquely identified in the data entity.

Name	Column
process_header_pk	process_id

The table below lists the column names supported by the data entity:

Column	Data type	Required	Description
process_id	string	Yes	Process ID. For example, process or work order, or maintenance order.
type	string	No	Type of process. For example, maintenance, repair.
company_id[1]	string	No	Company ID.
site_id[1]	string	No	Site or plant ID.
site_location	string	No	Name of the location or section in site or plant.
planning_group	string	No	Group planning the work. This field will be an

Column	Data type	Required	Description
			organization entity in the source system.
execution_group	string	No	Group executing the work. This field will be an organization entity in the source system.
program_group	string	No	Long running program or project name used for group work. For example, maintenance campaign.
status	string	No	Status of the process.
revision	string	No	Revision number associated with planning or program group.
latest_start_date	timestamp	No	Latest start date for the process.
description	string	No	Process description.
priority	string	No	Priority of the process.

Column	Data type	Required	Description
planned_cost	double	No	Total planned costs for the process.
currency_uom	string	No	Currency in which value is specified.
planned_completion_date	timestamp	No	Planned completion date of the process.
planned_closing_date	timestamp	No	Planned closing date of the process.
planned_release_date	timestamp	No	Date when the process is planned to be released.
planned_start_date	timestamp	No	Planned start date for the process.
actual_completion_date	timestamp	No	Actual completion date of the process.
actual_closing_date	timestamp	No	Actual close date of the process.
actual_release_date	timestamp	No	Actual release date for process.

Column	Data type	Required	Description
actual_start_date	timestamp	No	Actual start date for process.
process_url	string	No	URL to access process record in source system.
source_update_dttm	timestamp	No	Date time stamp of the update made in the source system.
source_event_id	string	No	ID of the event created in the source system.
source	string	No	Source of data.

[1]Foreign key

Foreign key (FK)

The table below lists the column names with the associated data entity and category:

Column	Category	FK/Data entity	FK/Column
site_id	Network	site	id
company_id	Organization	company	id

process_operation

Primary key (PK)

The table below lists the colum names that are uniquely identified in the data entity.

Name	Column
process_operation_pk	process_operation_id, process_id

The table below lists the column names supported by the *process_operation* data entity:

Column	Data type	Required	Description
process_operation_id	string	Yes	Type of process operation.
process_id[1]	string	Yes	Process ID. For example, process, work order, or maintenance order.
company_id[1]	string	No	Company ID.
type	string	No	Type of operation within the process. For example, open machine.
site_location	string	No	Name of the location or section in site or plant.
status	string	No	Status of the process.
operation_name	string	No	Name of the operation.

Column	Data type	Required	Description
operation_sequence	string	No	Sequence of the operation within the process.
planned_start_dttm	timestamp	No	Planned start date-time of operation.
planned_end_dttm	timestamp	No	Planned end date-time of operation.

[1]Foreign key

Foreign key (FK)

The table below lists the columns with the associated foreign key.

Column	Category	FK/Data entity	FK/Column
process_id	Operation	process_header	process_id
company_id	Organization	company	id

process_product

Primary key (PK)

The table below lists the colum names that are uniquely identified in the data entity.

Name	Column
process_product_pk	process_product_id, process_id

The table below lists the column names supported by the data entity:

Column	Data type	Required	Description
process_product_id[1]	string	Yes	ID associated with the process and product.
process_id[1]	string	Yes	Process ID. For example, process or work order, or maintenance order.
process_operation_id[1]	string	No	Process operational ID. This is an optional field.
company_id[1]	string	No	Company ID.
product_id[1]	string	No	Product ID of the requested product.
type	string	No	Type associated within the process. For example, consumption or production.
product_value	double	No	Monetary value of product being requested.
currency_uom	string	No	Currency UOM of the product.

Column	Data type	Required	Description
status	string	No	Status of the product process.
requested_availability_date	timestamp	No	Date when the material was requested to be available.
quantity_submitted	double	No	Quantity submitted as part of the process for product.
quantity_confirmed	double	No	Quantity confirmed against the request.
quantity_consumed	double	No	Quantity consumed against the quantity on this process/work order.
reservation_id[1]	string	No	Link to reservation ID associated with this record.
reservation_detail_id[1]	string	No	Link to reservation detail ID associated with this record.

Column	Data type	Required	Description
quantity_uom	string	No	Unit of measure for quantity.
process_product_url	string	No	URL to access process product record in source system.
source_update_dttm	timestamp	No	Date time stamp of the update made in the source system.
source_event_id	string	No	ID of the event created in the source system.

[1]Foreign key

Foreign key (FK)

The table below lists the columns with the associated foreign key.

Column	Category	FK/Data entity	FK/Column name
product_id	Product	product	id
company_id	Organization	company	id
process_id	Operation	process_header	process_id
process_operation_id	Operation	process_operation	process_operation_id
reservation_id	Planning	reservation	reservation_id
reservation_detail_id	Planning	reservation	reservation_detail_id

production_process

Primary key (PK)

The table below lists the colum names that are uniquely identified in the data entity.

Name	Column
production_process_pk	production_product_id

The table below lists the column names supported by the data entity:

Column	Data type	Required	Description
production_process_id	string	Yes	ID associated with the process and product.
production_process_type	string	No	Type of the specific production process. For example, assembly, machining.
production_process_name	string	No	Name of the specific production process. For example, milling, drilling, welding.
product_id[1]	string	No	Product associated with

Column	Data type	Required	Description
			the production process.
company_id[1]	string	No	Company ID associated with the production process.
site_id[1]	string	No	Site ID where the production process is taking place.
start_location	string	No	Location where the process starts.
end_location	string	No	Location where the process ends.
setup_time	double	No	Time to setup the process.
setup_time_uom	string	No	Unit of measure of the setup time.
operation_time	double	No	Total time to complete the process.
operation_time_uom	string	No	Unit of measure of the operation time.

Column	Data type	Required	Description
frozen_horizon	double	No	Time period when there are no changes to the production process.
frozen_horizon_uom	string	No	Unit of measure for the frozen horizon.
unit_cost	double	No	Cost of the production process.
cost_uom	string	No	Unit of measure of the productio n process cost.
source	string	No	Source of data.
source_update_dttm	timestamp	No	Date time stamp of the update made in the source system.

[1]Foreign key

Foreign key (FK)

The table below lists the columns with the associated foreign key.

Column	Category	FK/Data entity	FK/Column name
product_id	Product	product	id
company_id	Organization	company	id

Column	Category	FK/Data entity	FK/Column name
site_id	Network	site	id

Inventory management

This section lists the data entities within the inventory management category.

Topics

- inv_level

inv_level

Primary key (PK)

The table below lists the colum names that are uniquely identified in the data entity.

Name	Column
inv_level_pk	snapshot_date, site_id, product_id, inv_condition, lot_number

The table below lists the column names supported by the data entity:

Column	Data type	Required	Description
snapshot_date	timestamp	Yes[1]	Date and time when the inventory snapshot was taken.
site_id[2]	string	Yes[1]	Site ID of the inventory.

Column	Data type	Required	Description
product_id[2]	string	Yes[1]	Product ID of the inventory displayed.
company_id[2]	string	No	Company ID.
on_hand_inventory	double	Yes	Physical inventory available at the site.
allocated_inventory	double	No	Inventory allocated for some process.
bound_inventory	double	No	Inventory bound to some process.
quantity_uom	string	No	Quantity unit of measure for inventory.

Column	Data type	Required	Description
inv_condition	string	Yes [1]	Condition of the inventory. Inventory in different conditions are displayed in different rows. You can also enter your own value. Reserved inventory condition values in AWS Supply Chain are as follows: • Unrestricted - Inventory is available. • Inspection - Below quality or any other inspection. • Returns - Inventory goes to return area. • Blocked - Inventory is blocked for a reason.

Column	Data type	Required	Description
			• InTransfer - Used during inventory stock transfer. • Restricted - Restricted for other reasons but not blocked.
lot_number	string	Yes[1]	Lot number of the inventory.
expiry_date	string	No	Expiry date of the inventory.
source_update_dttm	timestamp	No	Date time stamp of the update made in the source system.
source_event_id	string	No	ID of the event created in the source system.

[1]You must enter a value. When you ingest data from SAP or EDI, the default value for *string* date type value is SCN_RESERVED_NO_ VALUE_PROVIDED.

[2]Foreign key

Foreign key (FK)

The table below lists the columns with the associated foreign key.

Column	Category	FK/Data entity	FK/Column
product_id	Product	product	id
company_id	Organization	company	id
site_id	Network	site	id

Inbound

This section lists the data entities within the inbound category.

Topics

- [inbound_order](#)
- [inbound_order_line](#)
- [inbound_order_line_schedule](#)
- [shipment](#)
- [shipment_stop](#)
- [shipment_stop_order](#)

inbound_order

Primary key (PK)

The table below lists the colum names that are uniquely identified in the data entity.

Name	Column
inbound_order_pk	id, tpartner_id

The table below lists the column names supported by the data entity:

Column	Data type	Required	Description
id	string	Yes [1]	Object ID.

Column	Data type	Required	Description
company_id[2]	string	No	Company ID.
order_creation_date	timestamp	No	Order creation date.
order_type	string	No	Displays the type of order. Reserved order types in AWS Supply Chain: • PO - Purchase order • TO - Transfer order • MO - Manufacturing order • BO - Blanket order • CO - Consumption order
order_status	string	No	Status of the order.
to_site_id[2]	string	No	Site where the order will arrive.
tpartner_id[2]	string	Yes[1]	Trading partner that the order will be sent to.

Column	Data type	Required	Description
order_currency_uom	string	No	Currency UOM that the company uses.
vendor_currency_uom	string	No	Currency UOM that the vendor uses.
exchange_rate	double	No	Exchange rate used for conversion.
exchange_rate_date	timestamp	No	Date and time when exchange rate was calculated.
incoterm	string	No	Three letter incoterm code.
incoterm2	string	No	Place of ownership transfer.
incoterm_location_1	string	No	Incoterm location 1. Can be a site_id or the location used on order/ EDI.

Column	Data type	Required	Description
incoterm_location_2	string	No	Incoterm location 2. Can be a site_id or the location used on order/EDI.
submitted_date	timestamp	No	Date and time when order was submitted to vendor.
agreement_start_date	datetime	No	If PO is associated with contract or agreement, then start datetime of contract.
agreement_end_date	datetime	No	If PO is associated with contract or agreement, then end datetime of contract.
shipping_instr_code	string	No	Code for shipping instructions.
payment_terms_code	string	No	Code for payment instructions.

Column	Data type	Required	Description
std_terms_agreement	string	No	Agreement between company and vendor.
std_terms_agreement_ver	string	No	Version of agreement between company and vendor.
agreement_number	string	No	Number associated with contract or agreement.
inbound_order_url	string	No	URL to access inbound order record in source system.
source_update_dttm	timestamp	No	Date time stamp of the update made in the source system.
source_event_id	string	No	ID of the event created in the source system.
source	string	No	Source of data.

[1]You must enter a value. When you ingest data from SAP or EDI, the default value for *string* is SCN_RESERVED_NO_ VALUE_PROVIDED.

[2]Foreign key

Foreign key (FK)

The table below lists the columns with the associated foreign key.

Column	Category	FK/Data entity	FK/Column
tpartner_id	Organization	trading_partner	id
company_id	Organization	company	id
to_site_id	Network	site	id

inbound_order_line

Primary key (PK)

The table below lists the colum names that are uniquely identified in the data entity.

Name	Column
inbound_order_line_pk	id, order_id, tpartner_id, product_id

The table below lists the column names supported by the data entity:

Column	Data type	Required	Description
id	string	Yes[1]	Order line ID. The value must be unique.
order_id[2]	string	Yes[1]	ID of parent order.
company_id[2]	string	No	Company ID.
tpartner_id[2]	string	Yes[1]	Partner that the order will be sent to.

Column	Data type	Required	Description
line_creation_date	timestamp	No	Line creation date.
product_id[2]	string	Yes[1]	Product ID.
product_group_id[2]	string	No	Product group ID.
supplier_product_id	string	No	Product number used by supplier.
order_type	string	No	Type of order.
external_line_number	string	No	Alternate line number if used by customer system.
status	string	No	Status of the line, for example, cancelled, closed, or open.
from_site_id[2]	string	No	Site where order line originates.
to_site_id[2]	string	No	Site where the order will arrive.
vendor_status	string	No	Status of the line in the vendor system..

Column	Data type	Required	Description
cost	double	No	Cost of the product in company's currency, after all discounts.
cost_uom	string	No	Cost UOM in company's currency.
submitted_cost	double	No	Cost of the product at the time of submission, in company's currency.
submitted_cost_vendor	double	No	Cost of the product at the time of submission, in vendor's currency.
shipping_cost	double	No	Inbound shipping cost from vendor to company.
tax_cost	double	No	Tax cost for the product.
quantity_submitted	double	Yes	Quantity submitted to vendor.

Column	Data type	Required	Description
quantity_confirmed	double	Yes	Quantity confirmed by the vendor.
quantity_received	double	Yes	Quantity received into inventory.
quantity_uom	string	No	Quantity UOM for the order line.
submitted_date	timestamp	No	Date and time when the order was submitted to vendor.
expected_delivery_date	timestamp	No	Date when the order is expected to be delivered.
confirmation_date	timestamp	No	Date and time when the order was confirmed by the vendor.
earliest_ship_date	timestamp	No	Earliest date and time when the vendor can ship products in this order.

Column	Data type	Required	Description
latest_ship_date	timestamp	No	Latest date and time when the vendor can ship products in this order.
earliest_delivery_date	timestamp	No	Earliest date and time when the vendor can deliver products in this order.
latest_delivery_date	timestamp	No	Latest date and time when the vendor can deliver products in this order.
incoterm	string	No	Three letter incoterm code.
incoterm2	string	No	Place of ownership transfer.
incoterm_location_1	string	No	Incoterm location 1. Can be a site_id or the location used on order/ EDI.

Column	Data type	Required	Description
incoterm_location_2	string	No	Incoterm location 2. Can be a site_id or the location used on order/EDI.
requisition_number	string	No	Requisition number.
order_receive_date	timestamp	No	Date and time when the order is unloaded into the company location.
reservation_id[2]	string	No	Reservation ID associated with the line.
reference_object	string	No	If record is created by or in response to another object / entity, then enter the entity name. For example, inbound_order, outbound_order

Column	Data type	Required	Description
reference_object_type	string	No	If activity is created by or in response to a specific type of object, specify the type here. For example, PO (Purchase Order) vs TO (Transfer Order)
reference_object_id	string	No	ID of associated reference object.
reference_detail_id	string	No	ID of associated reference object ID's detail/line, if any.
inbound_order_line_url	string	No	URL to access inbound order line record in source system.
source_update_dttm	timestamp	No	Date time stamp of the update made in the source system.
source_event_id	string	No	ID of the event created in the source system.
source	string	No	Source of data.

Column	Data type	Required	Description
sap_lips__vbeln	string	No	Delivery Number. Predicate key for SAP mapping. Upsert key for VTTP, LIKP.
sap_vttp__tknum	string	No	Shipment Number. Predicate key for SAP mapping. Upsert key for VTTK.

[1]You must enter a value. When you ingest data from SAP or EDI, the default value for *string* is SCN_RESERVED_NO_ VALUE_PROVIDED.

[2]Foreign key

Foreign key (FK)

The table below lists the columns with the associated foreign key.

Column	Category	FK/Data entity	FK/Column
tpartner_id	Organization	trading_partner	id
company_id	Organization	company	id
product_id	Product	product	id
from_site_id	Network	site	id
product_group_id	Product	product_hierarchy	id
order_id	Inbound	inbound_order	id

Column	Category	FK/Data entity	FK/Column
reservation_id	Planning	reservation	reservation_id

inbound_order_line_schedule

Primary key (PK)

The table below lists the colum names that are uniquely identified in the data entity.

Name	Column
inbound_order_line_schedule_pk	id, order_id, order_line_id, product_id

The table below lists the column names supported by the data entity:

Column	Data type	Required	Description
id	string	Yes [1]	Order line ID. The value must be unique.
order_id[2]	string	Yes [1]	ID of parent order.
order_line_id[2]	string	No	ID of parent order line.
company_id[2]	string	No	Company ID.
status	string	No	Status of line, for example, submitted, or confirmed. The following are the reserved

Column	Data type	Required	Description
			values for AWS Supply Chain.
			• Cancelled - Populated in SAP mapping. Also used for deleted.
			• Open - Not populated in SAP mapping.
			• Closed - Not populated in SAP mapping.
			• InTransit - Not populated in SAP mapping.
			• Confirmed - Not populated in SAP mapping.
			ⓘ **Note** Null is also an accepted value, or you can enter your own value.

Column	Data type	Required	Description
schedule_creation_date	timestamp	No	Schedule creation date.
product_id[2]	string	Yes [1]	Product ID.
external_line_number	string	No	External line number.
expected_delivery_date	timestamp	No	Expected delivery date of the products.
confirmation_date	timestamp	No	Date and time when the vendor confirmed the order line schedule, or order.
goods_issue_date	timestamp	No	Date and time when the material was available at origin to ship.
material_availability_date	timestamp	No	Date and time when the material was available at origin to ship.

Column	Data type	Required	Description
ship_date	timestamp	No	Date and time when vendor will ship products in this order-line-schedule.
delivery_date	timestamp	No	Date and time when the vendor can deliver products in this schedule.
quantity_submitted	double	No	Quantity submitted to vendor (POs) or for transfer.
quantity_confirmed	double	No	Quantity confirmed by the vendor.
quantity_received	double	No	Quantity received into inventory at the destination.
sap_lips__vbeln	string	No	Delivery Number. Predicate key for SAP mapping. Upsert key for VTTP

Column	Data type	Required	Description
sap_vttp__tknum	string	No	Shipment Number. Predicate key for SAP mapping. Upsert key for VTTK

[1]You must enter a value. When you ingest data from SAP or EDI, the default value for *string* is SCN_RESERVED_NO_ VALUE_PROVIDED.

[2]Foreign key

Foreign key (FK)

The table below lists the columns with the associated foreign key.

Column	Category	FK/Data entity	FK/Column
company_id	Organization	company	id
product_id	Product	product	id
order_id	Inbound	inbound_order	id
order_line_id	Inbound	inbound_order_line	id

shipment

Primary key (PK)

The table below lists the colum names that are uniquely identified in the data entity.

Name	Column
shipment_pk	id, supplier_tpartner_id, product_id, order_id, order_line_id, package_id

The table below lists the column names supported by the data entity:

Column	Data type	Required	Description
id	string	Yes	Shipment ID.
creation_date	timestamp	No	Creation date.
packaging_hierarchy_type	string	No	Information on how the shipment is structured, for example, container , pallet, carton, or pallet.
supplier_tpartner_id[2]	string	Yes[1]	Supplier partner ID of the vendor.
supplier_description	string	No	Partner description.
company_id[2]	string	No	Company ID.
customer_description	string	No	Customer description.
ship_from_site_id[2]	string	No	Site where this shipment starts from.
ship_from_site_description	string	No	Site description for outbound shipments.

Column	Data type	Required	Description
ship_from_site_address_1	string	No	Address of ship-from site.
ship_from_site_address_2	string	No	Address of ship-from site.
ship_from_site_address_city	string	No	Site shipping city.
ship_from_site_address_state	string	No	Site shipping state.
ship_from_site_address_country	string	No	Site shipping country.
ship_from_site_address_zip	string	No	Site shipping postal code.
ship_to_site_id[2]	string	No	Site where this shipment ends.
ship_to_site_description	string	No	Site description for inbound shipments.
ship_to_site_address_1	string	No	Address of ship-to site.
ship_to_site_address_2	string	No	Address of ship-to site.
ship_to_site_address_city	string	No	Site shipping city.

Column	Data type	Required	Description
ship_to_site_address_state	string	No	Site shipping state.
ship_to_site_address_country	string	No	Site shipping country.
ship_to_site_address_zip	string	No	Site shipping postal code.
origin_port	string	No	Port of loading.
destination_port	string	No	Port of destination.
transportation_mode	string	No	Mode of transport.
routing_sequence	string	No	Routing sequence ID from the ASN.
routing_description	string	No	Routing description.
carrier_id[2]	string	No	ID of the carrier.
carrier_description	string	No	Carrier description.
service_level	string	No	Service level of shipment.

Column	Data type	Required	Description
transportation_id	string	No	Vessel code or trailer number.
transportation_description	string	No	Vessel description.
conveyance_id	string	No	Trip number.
bill_of_lading_number	string	No	Bill of lading number.
master_bill_of_lading_number	string	No	Master bill of lading number.
carrier_reference_number	string	No	Carrier reference number.
shipper_reference_number	string	No	Shipper reference number.
equipment_code	string	No	Equipment code.
equipment_number	string	No	Equipment number.
seal_number	string	No	Seal number.
equipment_type	string	No	Type of equipment.
package_type	string	No	Type of package.

Column	Data type	Required	Description
package_quantity	double	No	Quantity of the package.
weight_qualifier	string	No	Code specifyin g the type of weight in EDI, for example, consolidated weight.
weight	double	No	Weight of the product.
weight_uom	string	No	Weight UOM of the product.
shipment_status	string	No	Status of the shipment.
planned_ship_date	timestamp	No	Planned shipping date.
actual_ship_date	timestamp	No	Actual shipping date.
planned_delivery_date	timestamp	No	Planned delivery date.
actual_delivery_date	timestamp	No	Actual delivery date.

Column	Data type	Required	Description
carrier_eta_date	timestamp	No	ETA date from the carrier.
latest_milestone	string	No	Text or string field required to capture event or status related to the milestone_date, for example, arrived at consolidation center.
latest_milestone_date	timestamp	No	Latest milestone date.
incoterms	string	No	Three letter incoterm code.
line_id	string	No	Shipment line ID.
product_id[2]	string	Yes	Product ID.
product_description	string	No	Product description.
tp_product_id	string	No	Trading partner product ID.

Column	Data type	Required	Description
upc	string	No	UPC
units_shipped	double	No	Units shipped.
uom	string	No	UOM.
hts_code	string	No	Harmonized Tariff Schedule code.
order_id[2]	string	Yes[1]	Order ID.
order_type	string	No	Order type.
order_customer_tpartner_id	string	No	Customer ID of the order.
order_supplier_tpartner_id	string	No	Supplier ID of the order.
order_line_id[2]	string	Yes[1]	Order line ID.
ship_to_site[2]	string	No	Final ship to location.
package_id	string	Yes[1]	Package ID.
source_update_dttm	timestamp	No	Date time stamp of the update made in the source system.

Column	Data type	Required	Description
source_event_id	string	No	ID of the event created in the source system.
source	string	No	Source of data.
volume	double	No	Volume of the shipment.
volume_uom	string	No	Volume unit of measurement of the shipment.
sap_vttp__vbeln	string	No	Delivery Number. Predicate key for SAP mapping. Upsert key for LIKP, LIPS.
sap_but021_fs__addrnumber	string	No	Address Number. Predicate key for ADRC (for Ship-to Address).

Column	Data type	Required	Description
sap_t001w__adrnr	string	No	Address Number. Predicate key for SAP mapping. Upsert key for ADRC.
sap_vttk__bev1_rpmowa	string	No	Vehicle number. Predicate key for SAP mapping. Upsert key for Equi.

[1]You must enter a value. When you ingest data from SAP or EDI, the default value for *string* is SCN_RESERVED_NO_ VALUE_PROVIDED.

[2]Foreign key

Foreign key (FK)

The table below lists the columns with the associated foreign key.

Column	Category	FK/Data entity	FK/Column
supplier_tpartner_id	Organization	trading_partner	id
company_id	Organization	company	id
ship_from_site_id, ship_to_site_id, ship_to_site	Network	site	id
product_id	Product	product	id

Column	Category	FK/Data entity	FK/Column
order_id	Inbound	inbound_order	id
order_line_id	Inbound	inbound_order_line	id

shipment_stop

Primary key (PK)

The table below lists the colum names that are uniquely identified in the data entity.

Name	Column
shipment_stop_pk	shipment_stop_id, shipment_id

The table below lists the column names supported by the data entity:

Column	Data type	Required	Description
shipment_stop_id	string	Yes	Shipment stop ID.
shipment_id[1]	string	Yes	Shipment ID.
sequence	integer	No	Sequence of the shipment.
company_id[1]	string	No	Company ID.
site_id[1]	string	No	Site ID.
planned_arrival_start_dttm	datetime	No	Planned start date and time for the

Column	Data type	Required	Description
			shipment arrival.
planned_arrival_end_dttm	datetime	No	Planned end date and time for the shipments arrival.
planned_departure_start_dttm	datetime	No	Planned start date and time for the shipment departure.
planned_departure_end_dttm	datetime	No	Planned end date and time for the shipment departure.
actual_arrival_start_dttm	datetime	No	Actual start date and time for the shipment arrival.
actual_arrival_end_dttm	datetime	No	Actual end date and time for the shipments arrival.

Column	Data type	Required	Description
actual_departure_start_dttm	datetime	No	Actual start date and time for the shipment departure.
actual_departure_end_dttm	datetime	No	Actual end date and time for the shipment departure.
appointment_number ⓘ **Note** AWS Supply Chain web application will display this column as *appoinment_number*.	string	No	Appointment number.
delivery_number	string	No	Delivery number of the shipment.

[1]Foreign key

Foreign key (FK)

The table below lists the columns with the associated foreign key.

Column	Category	FK/Data entity	FK/Column
company_id	Organization	company	id

Column	Category	FK/Data entity	FK/Column
site_id	Network	site	id
shipment_id	Inbound	shipment	id

shipment_stop_order

Primary key (PK)

The table below lists the colum names that are uniquely identified in the data entity.

Name	Column
shipment_stop_order_pk	shipment_stop_order_id, shipment_stop_id, shipment_id

The table below lists the column names supported by the data entity:

Column	Data type	Required	Description
shipment_stop_order_id	string	Yes	Shipment stop order ID.
shipment_stop_id[1]	string	Yes	Shipment stop ID.
shipment_id[1]	string	Yes	Shipment ID.
company_id[1]	string	No	Company ID.
site_id[1]	string	No	Site ID.
inbound_order_id[1]	string	No	Inbound order ID.
inbound_order_line_id[1]	string	No	Inbound order line ID.

Column	Data type	Required	Description
inbound_order_line_schedule_id[1]	string	No	Inbound order line schedule ID.
action	string	No	Pickup or drop off shipment.
quantity	double	No	Quantity associated with action and order.
quantity_uom	string	No	Quantity UOM of the shipment.

[1]Foreign key

Foreign key (FK)

The table below lists the columns with the associated foreign key.

Column	Category	FK/Data entity	FK/Column
company_id	Organization	company	id
site_id	Network	site	id
shipment_id	Inbound	shipment	id
shipment_stop_id	Inbound	shipment_stop	shipment_stop_id
inbound_order_id	Inbound	inbound_order_line	order_id
inbound_order_line _id	Inbound	inbound_order_line	id

Column	Category	FK/Data entity	FK/Column
inbound_order_line_schedule_id	Inbound	inbound_order_line_schedule	id

Outbound fulfillment

This section lists the data entities within the outbound fulfillment category.

Topics

- [outbound_order_line](#)
- [outbound_shipment](#)

outbound_order_line

Primary key (PK)

The table below lists the colum names that are uniquely identified in the data entity.

Name	Column
outbound_order_line_pk	id,cust_order_id, product_id

The table below lists the column names supported by the data entity:

Column	Data type	Required	Description
id	string	Yes[1]	Outbound order line ID.
cust_order_id	string	Yes[1]	Outbound order ID.
company_id[2]	string	No	Company ID.

Column	Data type	Required	Description
order_date	timestamp	No	Date and time when customer order was placed.
product_id[2]	string	Yes[1]	Product ID.
product_group_id[2]	string	No	Product group ID.
customer_tpartner_id[2]	string	No	Trading partner ID for customer.
status	string	No	Status of the customer order.
init_quantity_requested	double	No	Original order quantity.
final_quantity_requested	double	No	Final quantity after any cancellations or changes.
quantity_uom	string	No	Quantity unit of measure for the order line.
requested_delivery_date	timestamp	No	Requested delivery date for order line.

Column	Data type	Required	Description
promised_delivery_date	timestamp	No	Delivery date promised for order lines.
actual_delivery_date	timestamp	No	Actual delivery date for order line.
list_price	double	No	List price for product in order lines..
sold_price	double	No	Selling price for product in order line, after any promotion s, price changes, discounts, and so on.
discount	double	No	Discount applied for order line for this product.
discount_code	string	No	Discount code used on order line.
currency_uom	string	No	UUOM for currency.
tax	double	No	Tax amount for order line.

Column	Data type	Required	Description
incoterm1	string	No	Place of ownership transfer.
incoterm2	string	No	Place of ownership transfer.
ship_from_site_id^2	string	No	Site ID where the product is shipped from.
ship_to_site_id^2	string	No	Site ID where the product is shipped to.
ship_to_site_address_1	string	No	Address of ship-to site.
ship_to_site_address_2	string	No	Address of ship-to site.
ship_to_site_address_city	string	No	City of ship-to site.
ship_to_site_address_state	string	No	State of ship-to site.
ship_to_site_address_country	string	No	Country of ship-to site.
ship_to_site_address_zip	string	No	Postal code of ship-to site.

Column	Data type	Required	Description
availability_status	string	No	In-stock availability status of the product at the time of order.
quantity_promised	double	No	Quantity promised on order line.
quantity_delivered	double	No	Quantity delivered against this order line.
channel_id	string	No	Channel ID that was used to place this order.
shipping_instr_code	string	No	Code for shipping instructions.
payment_terms_code	string	No	Code for payment terms.
std_terms_agreement	string	No	Standard terms agreement between the company and the customer.

Column	Data type	Required	Description
std_terms_agreement_ver	string	No	Standard terms agreement version between the company and the customer.
parent_product_id	string	No	Displays the parent ID of the bundle the product belongs too.
alternate_product_id	string	No	Product for which alternate product was an alternati ve.
weight	double	No	Expected weight of the product.
fulfillment_cost	double	No	Expected cost of fulfillment.
customer_ship_option_id	string	No	Option chose by the customer among multiple ship options.

Column	Data type	Required	Description
bill_to_site_address_1	string	No	Site shipping address.
bill_to_site_address_2	string	No	Site shipping address.
bill_to_site_address_city	string	No	Site shipping city.
bill_to_site_address_state	string	No	Site shipping state.
bill_to_site_address_country	string	No	Site shipping country.
bill_to_site_address_zip	string	No	Site shipping postal code.
sap_2lis_11_vahdr__vbeln	string	No	Reference document number. Predicate key for SAP mapping. Upsert key for VEDA.
sap_2lis_11_vaitm__kunnr	string	No	Sold to party. Predicate key for SAP mapping. Upsert key for 0CUST_SALES_ATTR.

Column	Data type	Required	Description
sap_2lis_11_vaitm__vkorg	string	No	Sales organizat ion. Predicate key for SAP mapping. Upsert key for 0CUST_SAL ES_ATTR.
sap_2lis_11_vaitm__vtweg	string	No	Distribut ion channel. Predicate key for SAP mapping. Upsert key for 0CUST_SAL ES_ATTR.
sap_2lis_11_vaitm__spart	string	No	Division. Predicate key for SAP mapping. Upsert key for 0CUST_SAL ES_ATTR.
sap_2lis_11_vaitm__pkunre	string	No	Bill-to party. Predicate key for SAP mapping.

[1]You must enter a value. When you ingest data from SAP or EDI, the default value for *string* is SCN_RESERVED_NO_ VALUE_PROVIDED.

[2]Foreign key

Foreign key (FK)

The table below lists the columns with the associated foreign key.

Column	Category	FK/Data entity	FK/Column
company_id	Organization	company	id
product_id	Product	product	id
product_group_id	Product	product_hierarchy	id
customer_tpartner_id	Organization	trading_partner	id
ship_from_site_id, ship_to_site_id	Network	site	id

outbound_shipment

Primary key (PK)

The table below lists the colum names that are uniquely identified in the data entity.

Name	Column
outbound_shipment_pk	id, cust_order_id, cust_order_line_id, product_id

The table below lists the column names supported by the data entity:

Column	Data type	Required	Description
id	string	Yes [1]	Outbound shipment ID.
company_id[2]	string	No	Company ID.
cust_order_id[2]	string	Yes [1]	Customer order ID.
cust_order_line_id[2]	string	Yes [1]	Customer order line ID.
product_id[2]	string	Yes [1]	Product ID.
shipped_qty	double	No	Shipment quantity.
cust_shipment_status	string	No	Status of the shipment, for example, cancelled, open, closed, or delivered.
expected_ship_date	timestamp	No	Date product was expected to ship from the company location.
actual_ship_date	timestamp	No	Date product was actually shipped from the company location.

Column	Data type	Required	Description
from_site_id[2]	string	No	Site ID where the product is shipped from.
to_site_id[2]	string	No	Destination site ID for outbound shipments.
expected_delivery_date	timestamp	No	Expected delivery date of the products to the customer.
actual_delivery_date	timestamp	No	Displays when the product was actually delivered to the customer.
shipping_cost	double	No	Final shipping cost.
tracking_number	string	No	Tracking number associated with the shipment.
bill_weight	double	No	Shipped weight of product used for billing.
sap_2lis_08trtlp__vbeln	string	No	Delivery number. Predicate key for SAP mapping. Upsert key for 2LIS_12_VCITM.

Column	Data type	Required	Description
sap_2lis_08trtlp__posnr	string	No	Delivery item number. Predicate key for SAP mapping. Upsert key for 2LIS_12_VCITM.
sap_2lis_08trtlp__tknum	string	No	Shipment item number. Predicate key for SAP mapping. Upsert key for 2LIS_08TRTK.

[1]You must enter a value. When you ingest data from SAP or EDI, the default value for *string* is SCN_RESERVED_NO_ VALUE_PROVIDED.

[2]Foreign key

Foreign key (FK)

The table below lists the column names with the associated data entity and category:

Column	Category	FK/Data entity	FK/Column
company_id	Organization	company	id
product_id	Product	product	id
cust_order_line_id	OutboundFulfillment	outbound_order_line	id
cust_order_id	OutboundFulfillment	outbound_order_line	cust_order_id
from_site_id, to_site_id	Network	site	id

Plan

This section lists the data entities within the plan category.

Topics

- [supply_plan](#)

supply_plan

Primary key (PK)

The table below lists the colum names that are uniquely identified in the data entity.

Name	Column
supply_plan_pk	supply_plan_id

The table below lists the column names supported by the data entity:

Column	Data type	Required	Description
supply_plan_id	string	Yes	Supply plan ID.
company_id[1]	string	No	Company ID.
plan_uuid	string	No	Unique plan identifier generated by the application. To be only used if this ID is separate from supply_plan_id.
snapshot_date	timestamp	No	Date and time till when data is collected.

Column	Data type	Required	Description
creation_date	timestamp	No	Date and time till when plan was created.
status	string	No	Supply plan status.
tpartner_id[1]	string	No	Trading partner ID. For example, contract Manufacturer, or supplier in n-tier network.
product_id[1]	string	No	Product ID.
product_group_id[1]	string	No	Product group ID.
to_site_id[1]	string	No	Site where the order will arrive.
from_site_id[1]	string	No	Site where order line originates.
plan_need_by_date	timestamp	No	Future date and time by when supply is needed at *to_site_id*.
plan_quantity	double	No	Planned quantity
commit_date	timestamp	No	Date committed by tpartner against the plan_date.

Column	Data type	Required	Description
commit_quantity	double	No	Quantity committed by tpartner.
supply_upside	double	No	Upside capacity published by the supplier.
plan_type	string	No	Type of plan. For example, Forecast Commit, Supplier Plan.
plan_window_start	timestamp	No	If plan corresponds to a planning bucket or window in application, this field stores the start of the planning window.
plan_window_end	timestamp	No	If plan corresponds to a planning bucket or window in application, this field stores the end of the planning window.
source	string	No	Source of data.

Column	Data type	Required	Description
production_process_id[1]	string	No	ID associated with a specific production process.
plan_cycle_sequence	double	No	Sequence number of the plan cycle for a particular order.
quantity_uom	string	No	UOM associated with the quantity.
plan_id	string	No	Recurring plan that covers multiple supply plan records.

[1]Foreign key

Foreign key (FK)

The table below lists the columns with the associated foreign key.

Column	Category	FK/Data entity	FK/Column
company_id	Organization	company	id
product_id	Product	product	id
status	Organization	trading_partner	id
product_group_id	Product	product_hierarchy	id
to_site_id, from_site_id	Network	site	id

Column	Category	FK/Data entity	FK/Column
production_process _id	Operation	production_process	production_process _id

Forecast

This section lists the data entities within the forecast category.

Topics

- supplementary_time_series
- forecast

supplementary_time_series

> ⓘ **Note**
>
> If you cannot locate the supplementary_time_series data entity, your instance might be using an older data model version. You can contact AWS Support to upgrade your data model version or create a new data connection.

Primary key (PK)

The table below lists the colum names that are uniquely identified in the data entity.

Name	Column
forecast_supplementary_time_series_pk	id

The table below lists the column names supported by the data entity:

Column	Data type	Required	Description
id	string	Yes	Unique identifier with each

Column	Data type	Required	Description
			supplementary data entry.
product_id [2]	string	No	Unique identifier for a specific product. Corresponds to product_id in the outbound_ order_line dataset.
order_date [1]	timestamp	Yes	The timestamp indicating the date and time when the date for the respective time-series was recorded.
channel_id	string	No	Unique identifier for a specific product. Corresponds to product_id in the outbound_ order_line dataset.

Column	Data type	Required	Description
customer_tpartner_id [2]	string	No	Unique identifier for a specific user. Corresponds to customer_tpartner_id field in outbound_order_line dataset.
site_id [2]	string	No	Unique identifier for a specific site or location. Depending on the forecast configuration, this can represent either 'ship_from_site_id' or 'ship_to_site_id' at the lowest level from the outbound_order_line dataset.

Column	Data type	Required	Description
time_series_name	string	Yes	The *time_series_name* must start with a letter, should be 2 to 56 characters long, and can contain letters, numbers, and underscores. No other special characters are allowed.
time_series_value	string	Yes	Value corresponding to the specific time series. This could represent quantities, metric, or string that is relevant to the type of the data. Demand planning only supports numerical value as additional forecast input.

[1]You must enter a value. When you ingest data from SAP or EDI, the default value for *string* is SCN_RESERVED_NO_ VALUE_PROVIDED.

[2]Foreign key

Foreign key (FK)

The table below lists the columns with the associated foreign key.

Column	Category	FK/Data entity	FK/Column
product_id	Product	product	id
site_id	Network	site	id
customer_tpartner_id	Organization	trading_partner	id

forecast

Primary key (PK)

The table below lists the colum names that are uniquely identified in the data entity.

Name	Column
forecast_pk	snapshot_date, product_id, site_id, region_id , product_group_id, forecast_start_dttm, forecast_end_dttm

The table below lists the column names supported by the data entity:

Column	Data type	Required	Description
snapshot_date	timestamp	Yes	Date up to when data was captured to generate forecasts.
creation_date	timestamp	No	Date when a forecast was created.

Column	Data type	Required	Description
company_id[2]	string	No	Company ID.
product_id[2]	string	Yes[1]	Product or product group level for the forecast.
site_id[2]	string	Yes[1]	Site ID that the forecast is generated for .
source	string	No	Source of the data.
region_id[2]	string	Yes[1]	Geographical region ID.
product_group_id[2]	string	Yes[1]	Product group ID.
product_agg_type	string	No	Type of product aggregation, for example, product (no aggregation) or product group.
reg_agg_type	string	No	Type of regional aggregation.
mean	double	No	Mean value of forecast.
p10	double	No	P10 quantile of forecast.

Column	Data type	Required	Description
p50	double	No	P50 quantile of forecast.
p90	double	No	P90 quantile of forecast.
forecast_start_dttm	timestamp	Yes	Forecast start date and time.
forecast_end_dttm	timestamp	Yes	Forecast end date and time.
default_price	double	No	Default MSRP of the product that is forecast.
forecast_price	double	No	Price at which the ASIN was forecast to be sold.
num_causals	int	No	Number of casuals applied to forecast.
causal_start	timestamp	No	Start date of causal.
causal_end	timestamp	No	End date of causal.
user_override	double	No	User override of forecast quantity.

Column	Data type	Required	Description
user_id	string	No	ID of the user that overrode the forecast.
act_qty	double	No	Actual order quantity sold in the forecast period.
channel_id	string	No	Unique identifier for a specific channel. Corresponds to channel_id in the outbound_ order_line dataset.
tpartner_id [2]	string	No	Tpartner ID.
user_override_p10	double	No	Override value for the P10 quantile of forecast.
user_override_p50	double	No	Override value for the P50 quantile of forecast.
user_override_p90	double	No	Override value for the P90 quantile of forecast.

Column	Data type	Required	Description
postal_code	string	No	Trading partner's postal code.
tpartner_type	string	No	Trading partner type.
quantity_uom	string	No	Quantity unit of measure.

[1]You must enter a value. When you ingest data from SAP or EDI, the default value for *string* is SCN_RESERVED_NO_ VALUE_PROVIDED.

[2]Foreign key

Foreign key (FK)

The table below lists the columns with the associated foreign key.

Column	Category	FK/Data entity	FK/Column
company_id	Organization	company	id
product_id	Product	product	id
region_id	Organization	geography	id
product_group_id	Product	product_hierarchy	id
site_id	Network	site	id
tpartner_id	Organization	trading_partner	id

Reference

This section lists the data entities within the reference category.

Topics

reference_field

Primary key (PK)

The table below lists the colum names that are uniquely identified in the data entity.

Name	Column
reference_field_pk	object_name, object_field, object_field_value, object_desc

The table below lists the column names supported by the data entity:

Column	Data type	Required	Description
company_id[2]	string	No	Company ID.
object_name	string	Yes[1]	For example, sites, or transportation lanes.
object_field	string	Yes[1]	For example, site_type, or trans_mode.
object_field_value	string	Yes[1]	For example, site_type:01, or trans_mode:01.
object_field_desc	string	Yes[1]	For example, site_type:01:DC,

Column	Data type	Required	Description
			or trans_mod e:01:Surface.

[1]You must enter a value. When you ingest data from SAP or EDI, the default value for *string* is SCN_RESERVED_NO_ VALUE_PROVIDED.

[2]Foreign key

Foreign key (FK)

The table below lists the column names with the associated data entity and category:

Column	Category	FK/Data entity	FK/Column
company_id	Organization	company	id

calendar

Primary key (PK)

The table below lists the colum names that are uniquely identified in the data entity.

Name	Column
calendar_pk	calendar_id, date, eff_start_date, eff_end_date

The table below lists the column names supported by the data entity:

Column	Data type	Required	Description
calendar_id	string	Yes[1]	Calendar ID.
company_id[2]	string	No	Company ID.
name	string	No	Calendar name.

Column	Data type	Required	Description
calendar_type	string	No	Type of Calender, based on customer data.
description	string	No	Calendar description.
date	timestamp	Yes	Date associated with each calendar record.
year	int	No	Calendar year.
day	int	No	Calendar day.
week	int	No	Calendar week.
month	int	No	Calendar month.
is_working	string	No	Boolean value that checks if the date is working.
is_holiday	string	No	Boolean value that checks if this date is a holiday.
eff_start_date	timestamp	Yes[1]	Effective start date of the calendar.
eff_end_date	timestamp	Yes[1]	Effective end date of the calendar.
source	string	No	Source of data.

[1]You must enter a value. When you ingest data from SAP or EDI, the default values for string and timestamp date type values are SCN_RESERVED_NO_ VALUE_PROVIDED for *string*; and for *timestamp*, 1900-01-01 00:00:00 for start date, and 9999-12-31 23:59:59 for end date.

[2]Foreign key

Foreign key (FK)

The table below lists the column names with the associated data entity and category:

Column	Category	FK/Data entity	FK/Column
company_id	Organization	company	id

uom_conversion

Primary key (PK)

The table below lists the colum names that are uniquely identified in the data entity.

Name	Column
uom_conversion_pk	uom, conversion_uom_id, eff_start_date, eff_end_date

The table below lists the column names supported by the data entity:

Column	Data type	Required	Description
uom	string	Yes	Unit of measure (UOM). For example, weight_uom, currency_uom.
company_id[2]	string	No	Company ID.
uom_code	string	No	Alternate code for UOM.
uom_description	string	No	UOM description.

Column	Data type	Required	Description
uom_type	string	No	UOM type, for example, currency, weight, volume, or unit.
conversion_uom_id	string	Yes	UOM ID for conversion.
conversion_factor	double	Yes	Conversion factor.
eff_start_date	timestamp	Yes[1]	Effective start date and time.
eff_end_date	timestamp	Yes[1]	Effective end date and time.
source	string	No	Source of data.

[1]You must enter a value. When you ingest data from SAP or EDI, the default value for *timestamp* date type value is 1900-01-01 00:00:00 for start date, and 9999-12-31 23:59:59 for end date.

[2]Foreign key

Foreign key (FK)

The table below lists the column names with the associated data entity and category:

Column	Category	FK/Data entity	FK/Column
company_id	Organization	company	id

Insights

This section lists the data entities within the Insights category.

Topics

- [work_order_plan](#work_order_plan)

work_order_plan

Primary key (PK)

The table below lists the colum names that are uniquely identified in the data entity.

Name	Column
work_order_plan_pk	process_id, product_id, business_process_id, business_process_sequence

The table below lists the column names supported by the data entity:

Column	Data type	Required	Description
process_id[1]	string	Yes	Work order ID.
process_product_id	string	No	ID associated with the process and product.
preferred_source	string	No	Describes if the product is sourced from inventory (that is, stocked to forecasted) or from direct purchase (for non-stocked products).
product_id	string	Yes	Product ID (material) in the work order.

Column	Data type	Required	Description
business_process_id	string	Yes	Business process identifier. For example, PO, PR, RFQ and so on. Product ID (material) in the work order. The plan should include both the purchasing and distribution business processes.
site_id	string	No	The site linked to the business process. This field is optional for purchasing process and mandatory for distribution related processes.
business_process_sequence	integer	Yes	Business process sequence.
duration	integer	Yes	Unit in days.

[1]Foreign key

Foreign key (FK)

The table below lists the columns with the associated foreign key.

Column	Category	FK/Data entity	FK/Column
process_id	Insights	process_header	id

Get support for AWS Supply Chain

If you are an administrator and need to contact support for AWS Supply Chain, choose one of the following options:

- If you have an AWS Support account, go to Support Center and submit a ticket.
- Open the AWS Management Console and choose **AWS Supply Chain**, **Support**, **Create case**.

It's helpful to provide the following information:

- Your AWS Supply Chain instance ID/ARN.
- Your AWS Region.
- A detailed description of your issue.

Document history

The following table describes the documentation releases for AWS Supply Chain.

Change	Description	Date
[Organization Labels](#)	You can customize the work order labels.	April 30, 2024
[Forecast validation in Demand Planning](#)	Demand Planning will monitor and update you on the forecast quality or accuracy.	April 29, 2024
[Auto-association in Data lake](#)	You can use the AWS Supply Chain auto-association feature to upload your raw data and automatically associate your raw data with AWS Supply Chain data model.	March 27, 2024
[Multi-factor authentication](#)	As a Sustainability partner, you can use multi-factor authentication to enhance your account security.	March 20, 2024
[Configuring work order insights](#)	As an administrator, you can create multiple processes and milestones to track your work orders.	March 4, 2024
[Forecasts based on demand drivers in Demand Planning](#)	To enhance forecast accuracy while configuring your forecast, you can use demand drivers.	February 22, 2024

[Sustainability](#)	Using Sustainability, you can request data from your partners who have accepted your invitation to join your network.	January 15, 2024
[Supply Planning](#)	You can use Supply Planning to help accurately plan inventory to meet the demand.	January 15, 2024
[N-Tier Visibility](#)	N-Tier Visibility enables you to share component level forecasts generated from a supply plan, with your trading partners and get their supply commitments.	January 15, 2024
[Work Order Insights](#)	You can use the *Work Order Insights* to view the work orders for materials as they flow through your supply chain process and identify work orders with risks, resolve issues, or provide recommendations to increase the efficiency of the overall supply chain process.	November 8, 2023
[Demand Planning updates](#)	Added information on *Product lifecycle* in the Demand Planning chapter.	October 31, 2023
[Updated data entities used by Insights](#)	Consolidated all the required and optional data entities used by Insights in one table.	October 25, 2023

Demand Planning updates	Added information on *Product lineage* in the Demand Planning chapter.	October 2, 2023
Updated information on regions support	Demand Planning is now also supported in Asia Pacific (Sydney) Region.	September 12, 2023
Demand Planning updates	Added information on *Overall Influence Factors* and *Accuracy Metrics* in the Demand Planning chapter.	August 18, 2023
Demand Planning updates	Updated the Demand Planning chapter to match the new Demand Planning user interface.	July 24, 2023
Updated information on regions support	AWS Supply Chain is now also supported in Asia Pacific (Sydney) Region, and Europe (Ireland) Region Regions but AWS Supply Chain Demand Planning is not supported on these two new regions.	July 19, 2023
General availablity release	Added a chapter on data entities supported in AWS Supply Chain and updated the configuring to S/4 HANA and ECC sections.	April 3, 2023
Initial release	Initial release of the AWS Supply Chain User Guide	November 29, 2022