



Infor Distribution SX.e Mass Maintenance User Guide

Release 11.20.6

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About this guide

This guide shows you how to use the mass maintenance function in Distribution SX.e to change, add, and delete records in database tables. This guide includes complete specific setup and maintenance tasks.

Intended audience

This guide is for the Distribution SX.e users, such as system administrators and data administrators, who are responsible for maintaining information in the database.

Prerequisite knowledge

To understand the information presented in this guide, you must understand the database table structure and schema, and the domain of values for common fields. You must also be familiar with the menu functions in Distribution SX.e that are associated with the values.

Related documents

This document is available on the Infor Xtreme Support portal.

The online help for Distribution SX.e can be found on docs.infor.com.

Contacting Infor

If you have questions about Infor products, go to Infor Concierge at <https://conciierge.infor.com/> and create a support incident.

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Chapter 1: Overview

Use **SA Mass Maintenance Administration** to perform mass maintenance of records in your Distribution SX.e database tables, and the associated table data in your database.

Using the mass maintenance function, you can extract copies of records from a database table into a set. You can change, add, or delete extraction records within the set, and then perform a final update to update the records in the database table. Standard rules and validations apply, based on the table.

You can perform some operations that are associated with mass maintenance in **SA Mass Maintenance Administration**. You can also use Microsoft Excel to change data and add records to a set, but the associated export and import operations are performed in **SA Mass Maintenance Administration**.

This list provides a high-level workflow for performing mass maintenance:

- Create a data set
- Manipulate the data
- Update the database
- Review results in SA Mass Maintenance Utility Report
- Manage data sets

The **SA Mass Maintenance Utility Report** is a background process that is performed through Report Scheduler. The report executes most operations that you perform in **SA Mass Maintenance Administration**. The report also generates output that contains information about the operation, such as record counts, processing times, and errors. Review the report after you perform an operation to verify that the records were processed correctly. The **SA Mass Maintenance Utility Report** is not intended to be run as a separate report.

Master versus transaction data tables

Currently, you can perform mass maintenance on most master data tables, such as ARSC, and certain transactional data tables, such as OEEH. To view the data tables that are available for mass maintenance, see the **Table Name** field in **SA Mass Maintenance Administration**. The field is available when you access the **Mass Maintenance Create Wizard** to create a set.

Not every field in a table is available for mass maintenance. This limitation minimizes risk. Available fields are displayed as you determine **Selection Criteria** and **Extraction Columns**.

Master data tables

You can perform mass maintenance on most of the data in master data tables, such as ARSC and ICSD. The data in one master table tends to be independent of data in another.

Transaction data tables

There are some characteristics of transaction data tables that differ from master data tables. You should consider these characteristics when planning your mass maintenance:

- Fewer columns and less of the data in a transactional table are available for mass maintenance. One reason is because of stage, such as Ordered or Shipped. Consideration of stage code is significant. We recommend that you perform operations primarily on open orders. In most cases, changes are not allowed for the majority of fields when a given order has been invoiced. To limit records or to target a specific stage, select the stage code column as one of the **Selection Criteria**. To update invoiced or paid orders, also specify the invoice date.
- Consider also that transactional data is more active. The likelihood for a stale record occurring is higher. For example, you are working on an order that is in an ordered stage. Another operator moves the order to a picked stage. The record becomes stale.
- Another consideration for transactional data is the affect one change may have on the rest of the system. For example, you can use mass maintenance for reassigning a customer or ship to number during order entry. Because reassigning this number influences tax jurisdictions and calculated tax amounts, we recommend that you create the set to reassign the number fields. Then, perform a final update before creating another set for other header level fields that may have changed during the reassignment process.
- There is no method to inactivate Business Object Documents (BODs) during mass maintenance.

Order entry data tables

You can perform mass maintenance on two sales orders tables: OEEH-Order Header and OEEL-Order Lines. For a given set, you can only operate on one of these tables at a time. For OEEH, additional related tables, such as ADDON and ARETT, are automatically updated based on related changes that are made. You should consider these characteristics when planning your mass maintenance:

- You cannot change the Order Type, such as stock order, quote, or Line Type, such as non-stock.
- Avoid changes to orders that are tied to a purchase order or transfer.
- When creating new sales order records, it is more prudent to use the SXAPI call, `sxapiOEFullOrderMnt*`. This allows header and line items, and other related data, to be sent in one call. Use of mass maintenance to create new line items is not allowed.
- Although you can delete some master records, when you delete a transactional record in sales orders with mass maintenance, that record is not deleted. It is canceled and set to lost business.

Purchase order data tables

You can perform mass maintenance on two purchase order tables: POEH-Purchase Order Header and POEL-PO Order Line Items. For a given set, you can only operate on one of these tables at a time. You should consider these characteristics when planning your mass maintenance:

- Avoid changes to orders that are tied to a sales order or transfer.

-
- When creating new warehouse transfer records, it is more prudent to use the SXAPI call, `sxapiPOPurchaseOrderMnt*`. This allows header and line items, and other related data, to be sent in one call. Use of mass maintenance to create new line items is not allowed.
 - Although you can delete some master records, when you delete a transactional record in purchase orders with mass maintenance, that record is not deleted. It is canceled. However, if you delete a line, that line is deleted.
 - Purchase order records cannot be updated after a purchase order has been received (Stage 5). It cannot be changed to pre-receiving or unreceived (correction).
 - Changing a Ship From address is not supported. You can change a Ship To address field, but the **Product Warehouse Description Setup** warehouse designation cannot be changed in mass maintenance.

Warehouse transfer data tables

You can perform mass maintenance on two warehouse transfer tables: WTEH-Transfer Order Header and WTEL-WT Line Items. For a given set, you can only operate on one of these tables at a time. You should consider these characteristics when planning your mass maintenance:

- Avoid changes to orders that are tied to a purchase order or sales order.
- When creating new warehouse transfer records, it is more prudent to use the SXAPI call, `sxapiWTTransferOrderMnt*`. This allows header and line items, and other related data, to be sent in one call. Use of mass maintenance to create new line items is not allowed.
- Although you can delete some master records, when you delete a transactional record in sales orders with mass maintenance, that record is not deleted. It is canceled. However, if you delete a line, that line is deleted.
- Warehouse transfer records cannot be updated after a warehouse transfer has been shipped (Stage 3).
- Changing processing notes that are attached to a transfer order, in the Notes table, is not supported for mass maintenance.

Product restriction data tables

You can perform mass maintenance on two product restriction tables: ICSPR and ICSPRC. The records maintained by **Product Restriction Setup** and **Product Sourcing Restriction Setup** are both stored in the ICSPR table. The **Product Certification/License Setup** records are stored in the ICSPRC table. You should consider these characteristics when planning your mass maintenance:

- Product Restriction records are differentiated by type: Product, Product Line, Product Category, Product Price Type, or Brand Code.
- The Product Restriction types are enabled or disabled in **SA Administrator Options-Products-Product Restrictions**. Any types that are disabled on this page are not available for mass maintenance.
- For **Product Restriction Setup** mass maintenance, if all five types are enabled, you must specify one of these five types in the Selection Criteria. You must scroll in the grid to the required **Field Name=restricttype**. In the Beginning Value cell, specify **PR**, **PL**, **PC**, **PT**, or **BC**. Each set only manages the set of records for that one type.
- In the Extraction Columns, have a goal for what you must do. Is your goal to change records from active to inactive, change an expiration date, or change one Restriction Code to a new Restriction

Code? This may influence the Selection Criteria. For example, you may be changing an expiration date. In the Selection Criteria grid, scroll to **Field Name=expiredt**. You can specify a specific date in both the Beginning Value and Ending Value, or specify a range of dates. Select only the Extraction Columns you intend to change, or that might help you make a decision about what to change.

- For **Product Sourcing Restriction Setup** mass maintenance, records are differentiated by type: Product, Product Line, and Product Category. You must specify one of these three types in the Selection Criteria. You must scroll in the grid to the required **Field Name=restricttype**. In the Beginning Value, specify **PR**, **PL**, or **PC**. Each set only manages the set of records for that one type.
- **Product Certification/License Setup** records are not differentiated by type. These records are attached to a **Customer Setup** or **Customer Ship To Setup** record. A restriction code, start and end date, and certificate ID are required fields on the setup record. These fields are important criteria when you work with the mass maintenance records.
- **Product Restrictions Setup-Customer Detail** records are not available for mass maintenance.
- Be aware of any constraints regarding deletion of records with associated product restrictions.

Environmental handling fee tables

You can perform mass maintenance on two product restriction tables: ICSPE and ICSOE. The records maintained by **Product Environmental Handling Fee Setup** are stored in the ICSPE table. The records maintained by **Product Environmental Handling Fee Exemption Setup** are stored in the ICSOE table. You should consider these characteristics when planning your mass maintenance:

- Environmental handling fees (EHF) are initially created in **SA Order Entry Addon Setup**.
- **Product Environmental Handling Fee Setup** is used to associate a product with an Addon number, to specify the amount of the EHF, and to specify the geographical location of the governmental entity requiring the fee. Each ICSPE record is either attached to a Master ICSP Product or Master ICSC Catalog record through the source row pointer.
- **Product Environmental Handling Fee Exemption Setup** is used to specify an exemption for a customer. Several fields are part of the Primary or Unique index and cannot be changed after an ICSOE record is created.

TWL

If you have implemented TWL, do not perform mass maintenance on orders that have been sent to and reside in TWL. Do not cancel orders that are in TWL. Do not change Ship Via. Do not make line item changes. Avoid changes that affect inventory, such as product, order quantity, ship quantity, or unit of measure.

Address validation

Address validation, a feature separate from tax calculation, is supported for the United States and Canada. Address validation ensures the address is valid for taxing when a record is saved. Be aware that this validation is not available within mass maintenance.

Pricing data

Do not use **SA Mass Maintenance Administration** to maintain pricing records. Use the **PD Mass Maintenance Entry** function to create and update customer pricing records and rebate records with pricing sets.

Product Import

Mass maintenance does not replace the Product Import function. You can continue to use Product Import.

Chapter 2: Prerequisites

These setups and operator requirements are required to use the mass maintenance function:

- Endpoint for the Service Interface REST API Service
- Function security for operators in **SA Operator Setup**
- Operator knowledge and skill requirements

Service Interface REST API Service

Endpoint authentication for the Service Interface REST API Service is set up in **SA Application Integration Endpoint**.

For CloudSuite Distribution, the endpoint is usually set up by the Infor Cloud Service.

See the *Infor CloudSuite Distribution Configuration Guide*.

If you use on-premises Distribution SX.e and you implement Distribution SX.e with Infor Operating Service in the cloud, the endpoint for this service is set up when Distribution SX.e is configured for you. If you do not use Infor OS in the cloud, you must set up the endpoint.

See the *Infor Distribution SX.e Configuration Guide for Infor Operating Service*.

Function security

Use of each mass maintenance function is controlled by function security. You must assign the appropriate level of function security for each operator that is responsible for performing mass maintenance of database records. Security should be defined for the appropriate operators for these functions:

- **SA Mass Maintenance Utility Report**
Function acronym: SAAMU
- **SA Mass Maintenance Administration**
Function Acronym: SAAMM
- **SA Mass Maintenance Set Deletion Report**

Function Acronym: SAAMD

- The menu function for each database table. If an operator does not have the security to access a function, such as Customer, the related table, ARSC, is not available in the **Table Name** field when creating a set in **SA Mass Maintenance Administration**. Limit an operator's access to only those menu functions the operator is maintaining.

For the **SA Mass Maintenance Utility Report**, you must have a security level of 3. If this level of security is not assigned, an error occurs each time you perform an operation in **SA Mass Maintenance Administration** that generates the report.

This table shows the security level that is required for these functions to perform each mass maintenance operation:

Operation	Required function	Required security level
Creating a set	Menu function for database table and SA Mass Maintenance Administration	3
Inquiring on a set	SA Mass Maintenance Administration	2
Changing data in a column	Menu function for database table and SA Mass Maintenance Administration	3
Changing data on a single extraction record	Menu function for database table and SA Mass Maintenance Administration	3
Exporting extraction records	Menu function for database table and SA Mass Maintenance Administration	3
Importing existing records	Menu function for database table and SA Mass Maintenance Administration	3
Importing new records	Menu function for database table and SA Mass Maintenance Administration	4
Deleting a record from the database table	Menu function for database table and SA Mass Maintenance Administration	5
Deleting an extraction record from a set	SA Mass Maintenance Administration	5
Performing the final update	SA Mass Maintenance Administration	3
Resetting the error status	SA Mass Maintenance Administration	3
Deleting a set	SA Mass Maintenance Administration	5
Deleting multiple sets	SA Mass Maintenance Administration and SA Mass Maintenance Set Deletion Report	3

Sub-function security is not observed in **SA Mass Maintenance Administration**. When data columns are extracted from database tables, the data columns are not associated with a sub-function. Each operator's level of function security for the main function for the database table applies to both the main function and sub-functions in **SA Mass Maintenance Administration**.

See information about operator function security in the online help.

Operator knowledge and skill requirements

Restrict security to system administrator- or database administrator-level operators who meet knowledge and skill requirements. The mass maintenance functions allow an operator to perform the steps needed for Mass Maintenance of master database tables and transactional database tables.

Use of these mass maintenance functions requires the operator have a solid understanding of the Distribution SX.e database table structure and schema [data dictionary]. The operator must make decisions as to how master and transactional database table source records are to be extracted and manipulated. The operator must also understand the ramifications of changing data in the database.

The user interface for these functions provides flexible lists of database column information. Therefore, the operator must also have a solid understanding of the domain of values for common fields; for example, Warehouse, Terms, Ship Via, Sales Reps. The operator must access the appropriate menu function to check the list of valid values. This is required to perform various steps within the Mass Maintenance processes.

The operator must also discern when another tool would be better to use for some changes. For example, when creating new order entry records, it is more prudent to use the SXAPI call, `sxapiOEFullOrderMnt*`. This allows header and line items, and other related data, to be sent in one call.

We recommend that you develop your own company-wide guidelines and restrictions to use mass maintenance based on your operations, business hours, performance requirements, and database.

Chapter 3: Creating data sets

Use this section to create and prepare your data sets.

Data sets

Data sets are a group of records that was extracted from a database table.

You create data sets in **SA Mass Maintenance Administration** when you select the database table from which to extract the records, and the database columns to extract. Optionally, you can specify values for database columns to determine which records to extract.

Key values are automatically extracted for each record, but you cannot change these values in the mass maintenance function. You must use the standard administrator change reports, such as the **Product Administration Change Product Report**, to change key values.

When you create a set, it is validated against this set of criteria:

- The set name must be unique. It cannot be in use by another set.
- At least one extraction column must be selected.
- If selection criteria is specified, values in the **Beginning Value** and **Ending Value** fields must meet **Data Type** requirements. For example, a date must be specified for fields with a **Data Type** of **Date**.

Additionally, record extraction from a database table is limited to one user at a time. If you attempt to create a set when another user is extracting records from the same database table, an error occurs.

If validation errors do not occur, the extraction records are created, based on the selected Extraction Columns.

The extracted records are placed in a temporary database table for the set. The temporary table contains the field values from the database when records were extracted. The temporary table contains the original value for the field and a new value for the field. When the record is extracted, the original and new value are the same. If you change the value for the field on the extraction record, the new value in the temporary table is updated with the change. The original value is maintained.

You can change the extraction records in a set, but you cannot change a set after it is created. You must create a new set if you require changes to a set, such as including additional extraction columns or changing the selection criteria.

In **SA Mass Maintenance Administration**, when you click **Create**, you access the **Mass Maintenance Create Wizard**. The wizard provides a graphical representation of your progress when you perform a series of dependent steps in a logical order to complete a task.

Locking

A mass maintenance set is accessed from **SA Mass Maintenance Administration** by specifying the Set Name in the Search pane. When a set is accessed, the Set Header record is updated to contain the operator's initials. This locks the set and prevents other operators from accessing this set at the same time.

If another set is accessed, the operator's initials are cleared from the first set. When the **SA Mass Maintenance Administration** menu function is closed, prior to closing the web browser, the last set accessed is updated and the operator's initials are cleared. Always close the **SA Mass Maintenance Administration** menu function prior to signing out of Distribution SX.e so the sets do not remain locked. This allows other operators to access the sets if they need to review the set or perform the Delete Set operation.

Selection criteria

Selecting criteria is optional.

In **SA Mass Maintenance Administration**, the rows that are displayed in the Selection Criteria grid are database columns from the database schema for the database table. The database columns represent fields on the database records.

User fields are included in the selection criteria, including fields that are displayed on the user interface and fields that are only in the database.

You can select database columns and then specify values for the columns to determine which records to extract from the database. For example, for the ARSS-Customer Ship To table, you can specify a customer number to only extract the ship to records for that customer. Additionally, you can specify a state to only extract the customer ship to records for that state. You can also use the Show Filter Row in the grid to find specific fields.

You can specify these types of values to extract records:

- Single value
Example: Back Order Ship Complete = **yes**
- Range of values
Example: Zip code = **80910** through **80919**
- Multiple, non-consecutive values
Example: Credit manager = **abc,mno,xyz**

- Greater than or equal to value
Example: Latest MSDS Change = or > 12/15/19
- Less than or equal to value
Example: Frozen months = or < 6

Extraction columns

In **SA Mass Maintenance Administration**, the rows that are displayed in the Extraction Columns grid are the database columns that you can extract for the set.

Select only the columns that you require to maintain or create a record. If you extract too many columns, you can hinder the record editing and creation process. Additionally, the temporary table for the set is stored in the database. Maintain smaller sets to conserve space in the database.

If you create a set to create new records, ensure that you extract the columns for required fields. Errors occur during import if you do not include the required information.

Creating a set

To find values on the **Selection Criteria** and **Extraction Columns** pages, use the sort and filter features that are available for each grid.

- 1 Select **System Administrator > Administration > Mass Maintenance**.
- 2 Click **Create**.
- 3 Specify this information:

Set Name

Specify a unique alpha-numeric value to identify the set.

Table Name

Select the database table from which to extract records. If you do not have the security to access a function, the related table is not available in the field. If you specify an existing set in the **Copy Set Name** field, the table name associated with the set is displayed.

Description

Specify a description that identifies the purpose and content of the set.

Report Count Limit

Specify a value to limit the number of records to extract. Leave the default value to set no limit. The maximum number of records that you can extract is 100,000.

Note: If more than 100,000 records are available for extraction, a warning is included on the **SA Mass Maintenance Utility Report**. You can create another set to extract the additional records.

- 4 To copy the Selection Criteria and Extraction Columns from an existing set, specify the existing set in the **Copy Set Name** field.
- 5 Click **Next**.
- 6 To select records to include in the set, select fields and then specify values to establish parameters. Use the Data Type and Format columns to determine the values that you can specify. You can specify these parameters:
 - Single value**
Specify the value in the **Beginning Value** and the **Ending Value** fields. For fields with logical values, such as yes or no, specify the value in the **Beginning Value** field only.
 - Range of values**
Specify the range in the **Beginning Value** and **Ending Value** fields.
 - Multiple values**
Specify the values in the **Comma Separated List** field. Separate the values by commas.
 - Greater than or equal to value**
Specify the value in the **Beginning Value** field. Leave the **Ending Value** field blank.
 - Less than or equal to value**
Specify the value in the **Ending Value** field. Leave the **Beginning Value** field blank.
- 7 Click **Next**.
- 8 Select the columns to extract from the database table.
To select a column, select a row and then click **Select/Deselect**.
- 9 Click **Next**.
- 10 Optionally, select a value in the **Create Tab Delimited Output File** field to create a tab-delimited file. If you select **Send To Email**, specify the email address.
- 11 Specify printing information for the **SA Mass Maintenance Utility Report**.
See information about printing reports in the online help.
- 12 Click **Finish**.
- 13 Review the **SA Mass Maintenance Utility Report**.

Set inquiry

After a set is created, you can conduct a search for the set to view the extraction records.

Caution: After you perform a search for a set, the set is locked. It cannot be accessed by another user. You must close **SA Mass Maintenance Administration** before you sign out of Distribution SX.e to unlock the set.

Extraction records that are contained in the set are displayed in the Extraction Records grid. The number of records that are displayed are based on the business rule that defines the default limit for returned

records. If a set contains numerous records, you can specify beginning and ending sequence numbers to limit the number of records that are displayed.

The columns that are included in the grid depend on the database table that the set is based on. The grid contains these columns or column types:

- **Seq #**
A unique number that is assigned to the extraction record to identify it within the set.
- **Status Operation**
The action that will be applied to the record during the final update. If a value is not displayed, the extraction record was not changed.
If you create a record through the import process, and then change a value on the new record, the Status Operation is **Create**. The value does not change to **Update**.
- **Status Type**
The status of the record. The column can be blank or contain one of these values:
 - **Pending** indicates that changes were made to the record, but the final update has not yet occurred.
 - **Completed** indicates that the final update has occurred. The record was updated, created, or deleted in the database table.
 - **Errors** indicates that a validation error occurred when the final update was performed. The record was not updated, created, or deleted in the database table.
- **Name/Description column**
An identifier that is associated with the record. This value is based on the database table from which the records were extracted. For example, the customer name is the identifier for records that are extracted from the ARSC table. The product description is the identifier for records that are extracted from the ICSP table.
- **Key columns**
The key values are associated with the Name/Description values.
For example, if the customer name is in the Name/Description column, the customer number is the key value. More than one key column can be included in the grid. For example, if a customer ship to is in the Name/Description column, both the customer number and the ship to number are key values.
Key columns are displayed after the Name/Description column.
- **Extraction data columns**
The database columns that were selected for extraction for the set. Up to 10 columns of extraction data can display.
- **Errors**
Validation errors that occurred when during the final update.

You can view the parameters for a set on the **Selection Criteria / Extractions Columns** page that is accessed through the **Action** menu.

The header section includes the Where Clause. The WHERE value is the company number. The AND values are based on the Selection Criteria. For example, suppose you selected this criteria for a set from the ARSS-Customer Ship To table in company 5000:

- Customer #: 8
- State: CO

The **Where Clause** field would then contain this information:

for each arss where arss.cono = 5000 and arss.custno = 8 and arss.state = 'co'

Inquiring on a set

- 1 Select **System Administrator > Administration > Mass Maintenance**.
- 2 Specify the set name.
- 3 Optionally, specify values in the **Beginning Sequence #** and **Ending Sequence #** field to view a range of records within the set.
- 4 Optionally, specify this information to view records that meet the selected criteria:
Status Operation
Select one of these values:
 - **Update**: Records that were changed.
 - **Create**: Records that were added to the set through the import process.
 - **Delete**: Records that are flagged for deletion from the database table.**Status Type**
Select one of these values:
 - **Pending**: The final update has not been performed.
 - **Completed**: The final update was performed, and the database table was updated.
 - **Errors**: The final was performed, but errors occurred.
- 5 Click **Search**.
- 6 To view the parameters for the set, select **Action > Selection Criteria / Extraction Columns**.

Chapter 4: Manipulating data

You can use these methods to change data in the records that you extracted from a database table:

- **Column update**

Use this method to change the value in a data column to another value. You can replace all values in a column with new value, or replace one value in a column with a new value.

For example, suppose you want to change the terms on every ship to record for a particular customer to 2n30. If your set only contains ship to records for that customer, you can use the replace option to replace all existing terms values to 2n30.

Optionally, suppose you only want to change the terms on ship to records with an existing terms value of 2n25 to 2n30. You can then use the search and replace option to find only those records with 2n25 and replace that value with 2n30.

- **Single record update**

Use this method to make changes to individual records.

For example, suppose you want to change the credit manager from abc to xyz on every customer record in a set except for one. On that one record, you want to change the credit manager to mno. Use the Column update method to change the credit manager on all records to xyz. Then, update the single record to change the credit manager to mno.

- **Export and import update**

Use this method to make multiple changes to multiple records, and to create new records. You export extracted records to create a tab-delimited file, change or add data to the file in Excel, and then import the file to update the set.

For example, suppose you must flag multiple existing products within a brand as an MSDS product, and then specify the related MSDS information. You create a set from the ICSP-Product Master table with this information:

- **Selection Criteria:** Select **Brand Code**, and then specify the brand. Select **MSDS Product**, and then specify **no** in the **Beginning Value** field.
- **Extraction columns:** Select **MSDS Product**, **MSDS Sheet #**, and **Last MSDS Change**.

After you create the tab-delimited file, you can change the MSDS information in the extracted columns for all products that met the selection criteria. You then import the file to update the MSDS information in the records in the set.

Changing data in a column

- 1 Select **System Administrator > Administration > Mass Maintenance**.
- 2 Specify the set name and other search criteria, and then click **Search**.
- 3 Click **Column Update**.
- 4 Specify this information:

Column

Specify the extraction column to change.

Change Value

Specify the new value.

Search Type

Select **Replace** to replace the existing value with the Change Value.

Select **Search and Replace** to replace the Search Value with the Change Value.

Search Value

If you selected **Search and Replace** in **Search Type**, specify the value to search for.

Row Selection

Select **All Rows in the Set** to apply the change to all rows in the set.

Select **Range of Sequence #s** to apply the change to only the rows that you specify in the **Beginning Sequence #** and **Ending Sequence #** fields.

Beginning Sequence #

If you selected **Range of Sequence #s** in the **Row Selection** field, specify the first record in the range.

Ending Sequence #

If you selected **Range of Sequence #s** in the **Row Selection** field, specify the last record in the range.

Source Records to Be Created

Select **Update** to apply the column update to new records that were added to the set through the import process. The new records must be included in the records to update, based on the selection criteria such Search Type and Row Selection.

Select **Ignore** to exclude the new records from the update.

- 5 Specify printing information for the **SA Mass Maintenance Utility Report**.
See information about printing reports in the online help.
- 6 Click **Save**.
- 7 Review the **SA Mass Maintenance Utility Report**.

Changing data on a single extraction record

- 1 Select **System Administrator > Administration > Mass Maintenance**.
 - 2 Specify the set name and other search criteria, and then click **Search**.
 - 3 Click the **drilldown** icon to open the record.
 - 4 Locate the row that contains the field value that you want to change.
 - 5 Specify a value in the **New Value** field.
The **Changed** check box is automatically selected.
 - 6 Click **Save**.
- Note:** A **SA Mass Maintenance Utility Report** is not generated when you update a single record.

Changing or adding data in Excel

To perform extensive changes to the extracted records, or to create new records, you can use the export and import function.

To use this method, you must perform these steps:

- 1 Export the extractions records to a tab-delimited file.
- 2 Edit the file in Excel to change existing records and create new records.
- 3 Import the file to update the set.

The data that you import into **SA Mass Maintenance Administration** only updates the extraction records. You must perform a final update to update the database.

You can create the tab-delimited file when you create the set. If the final update was not performed on a set, you can also create a tab-delimited file after a set is created. To include the most current values from the extraction records, create the tab-delimited file immediately before you edit the extraction records in Excel.

To avoid overriding changes that were previously made to extraction records, export the extraction records immediately before you edit the records in Excel. The latest updates to the extraction records are then included in the tab-delimited file.

The tab-delimited file contains a header row. Each row after the header row represents an extraction record. The tab-delimited file includes these columns and columns types:

- **extractseqno**
The sequence number for the extraction record.
- **Key columns**
Keys that are associated with extraction record. The file can contain multiple key columns.
- **source-desc-name**
The name or description that identifies the original record.
- **Extraction columns**

The database columns that are included in the set.

- rowpointer

The rowpointer for the original record.

You can create new records in a set that was created specifically to create new records, or in a set in which existing records were edited. In either type of set, ensure that you extract the fields that are required for a new record to avoid errors during final update. If you create a set specifically to create new records, extract at least one record from the database table. Use that record as an example of data types and formats for the new records.

Note: If you create a set specifically to create new records, save the set. You can then copy the set when you create subsequent sets to create additional records.

When you import the tab-delimited file, it is copied to the Print Directory that is specified in **SA Company Setup**. The file is then validated and the extraction records are updated in **SA Mass Maintenance Administration**.

Validation occurs in two phases. In the first phase, the format and contents of the tab-delimited file is validated.

See [Data validation for tab-delimited files](#) on page 35.

If errors occur during the first phase, they are included on the **SA Mass Maintenance Utility Report**. You must correct the errors before you can continue the import process.

In the second phase, the extraction records that were updated or created in Excel are processed. Field values from the original records are compared to the values in the tab-delimited file. If a value on a record is different, these Status values are assigned to the extraction record:

- Status Operation: **Update**
- Status Type: **Pending**

If a row is identified as a new record, it is added to the Extraction Records grid and assigned the next available sequence number. These Status values are assigned the new records:

- Status Operation: **Create**
- Status Type: **Pending**

Exporting data

- 1 Select **System Administrator > Administration > Mass Maintenance**.
- 2 Specify the set name and other search criteria, and then click **Search**.
- 3 Click **Export**.
- 4 Specify this information:

Row Selection

Select **All Rows In The Set** to export to all rows in the set.

Select **Range of Sequence #s** to export only the rows that you specify in the **Beginning Sequence #** and **Ending Sequence #** fields.

Beginning Sequence #

If you selected **Range of Sequence #s** in the **Row Selection** field, specify the first record in the range.

Ending Sequence #

If you selected **Range of Sequence #s** in the **Row Selection** field, specify the last record in the range.

Create Tab Delimited Output File

Select **Send To Email** or **Send To Dropbox**.
See information about Dropbox in the online help.

Email Address

If you selected **Send To Email** in the **Create Tab Delimited Output File** field, specify an email address.

Export Create Extraction Records

Select this option to export records with the Status Operation of **create**. These records are new records that were previously added to the set through the import process.

- 5 Specify printing information for the **SA Mass Maintenance Utility Report**.
See information about printing reports in the online help.
- 6 Click **Save**.

Editing data in Excel

Caution: When you open a tab-delimited file in Excel, you must format all columns in the file as text. Use these instructions to format the columns:

If you right-click a file to open it in Excel, the number format is applied to numerical values and the data can be changed. For example, the number format removes zeros from numerical values that start with zeros. This type of change corrupts the data and causes errors when the data is imported.

- 1 Open Excel.
- 2 Select **File > Open**.
- 3 Select the tab-delimited file, and then click **Open**.
- 4 Verify that **Delimited** is selected, and then click **Next**.
- 5 Verify that **Tab** is selected, and then click **Next**.
- 6 Select all columns in the Data Preview section, and then select **Text**.
To select all columns:
 - a Verify that the first column is highlighted.
 - b Scroll to the last column.
 - c Press **Shift**, and then click the last column.
- 7 Click **Finish**
- 8 Edit the file.

See [Rules for editing a tab-delimited file in Excel](#) on page 25.

9 Click **Save**.

10 Click **Yes**.

Rules for editing a tab-delimited file in Excel

You can edit existing records or create new records in Excel. The information that you change, add or delete in Excel does not affect the records in the database table until you perform the final update. Follow the editing rules to prevent validation errors when you import the file into **SA Mass Maintenance Administration**.

Perform these actions to facilitate editing:

- Delete an extraction record, which is a row.
- Delete an extraction column
- Change the order of the columns.
- Sort the data. Freeze the top row so you can sort by the column headings.

If you delete a row or column, the extraction records in the **SA Mass Maintenance Administration** are not affected when you import the data.

Refer to Microsoft documentation for information about editing an Excel spreadsheet.

Rules for editing extraction records

When you edit extracted records, follow these rules:

- Only edit the fields that you selected on the **Extracted Columns** page. Do not change the values in these columns, or delete these columns:
 - Extractseqno
 - Columns with key values
These columns vary, based on the data that you extracted. The key values columns are between the extractseqno column and the source-decsc-name column.
 - Rowpointer
- Do not delete the first row that contains the column headings.
- Specify the correct data type and format for the field.

Rules for creating new records

When you create new records, follow these rules:

- Specify 0 in the extractseqno cell, but leave the rowpointer cell blank. When you import the data, the values in these cells identify the record as a new record.
- Specify the correct key values. You cannot specify 0 or leave the field blank for most key values. This table shows the key values that are exceptions to the rule. You can leave the cells for these key values blank.

Table	Key value
OESSRE-Order Entry Setup Sales Rep Exceptions	custno shipto prodcating
ICSL-Product Line Master	whse

For new customer and vendor records, you must provide the customer and vendor numbers. If you created a new record in **Customer Setup** or **Vendor Setup**, the number can be automatically assigned. This feature is not available through the mass maintenance function.

- If the key value is a character data type, ensure that the value meets the character length requirements for the field.
- Specify a number in numeric columns. Specify 0 if you do not know the correct value.
- Specify values in the fields that are required to create a new record.

Importing data

- 1 Select **System Administrator > Administration > Mass Maintenance**.
- 2 Specify the set name, and then click **Search**.
- 3 Click **Import**.
- 4 Click the **File** icon, and then select the file to import.
- 5 Specify printing information for **SA Mass Maintenance Utility Report**.
See information about printing reports in the online help.
- 6 Click **Save**.
- 7 Review the **SA Mass Maintenance Utility Report**.
- 8 If errors occurred, correct them and perform the import again.

Extraction record and set deletion

After you create a set, you can delete extraction records from the set. You can use this feature to facilitate the editing process. Remove extraction records that you do not intend to change. When you delete an extraction record, the associated record is not deleted from the database table. If the Status Type of an extraction record is **Completed**, you cannot delete the extraction record from the set.

You can manually delete a set at any time, or you can automatically delete a set during the final update.

See [Performing the final update](#) on page 29.

If you delete a set before you perform the final update, the records in the database table are not updated. You cannot recall a set after it is deleted. Records of deleted sets are not maintained in Distribution SX.e.

Deleting extraction records from a set

- 1 Select **System Administrator > Administration > Mass Maintenance**.
- 2 Specify the set name and other search criteria, and then click **Search**.
- 3 Select the extraction records to delete.
- 4 Select **Action > Delete Extraction Records**.
- 5 Click **OK**.

Flagging a record for deletion

Use these instructions to flag a record for deletion. You must perform the final update to delete the record from the database table.

- 1 Select **System Administrator > Administration > Mass Maintenance**.
- 2 Specify the set name and other search criteria, and then click **Search**.
- 3 Select the record to delete.
- 4 Select **Action > Delete Source Records**.
- 5 Click **OK**.

Chapter 5: Updating the database

After you update the data in a set, you must perform the final update to update the records in the database table.

Extraction records with a **Status Type** of **Pending** are processed individually in this order, based on the **Status Operation**:

1 Update

Only the fields that meet this criteria are updated:

- The field was selected on the **Extracted Columns** page.
- The value of the field was changed through the mass maintenance function.

2 Create

3 Delete

If an extraction record is successfully processed, the Status Type changes to **Complete**. If an error occurs, the Status Type changes to **Errors**. The error is displayed in the Errors column.

These are some circumstances under which an error can occur:

- You attempt to delete a record that cannot be deleted, based on standard logic for that type of record. For example, you cannot delete a ARSC-Customer Master record if the customer has active transactions or open balances.
- The record contains bad data. An error can occur even if the bad data was not included in an extraction column for the set.

Errors can also occur because of values that are not in your database. The ICSC-Catalog Master table is not company-specific, but many of the fields in the table are entities that are company-specific, such as vendor number. The company in which the set was created is used for validation, but errors can occur for values that do not exist in the company. To correct this type of error, you must update the catalog record with your company-specific value.

If errors occur, the record in the database table is not updated. You can correct the error, reset the error status on the record, and then perform the final update for the corrected records. When you reset the error status, the **Status Type** changes to **Pending**.

Stale records

During the final update, the original values in the temporary table for the set are compared to the current values in the database table. If the values do not match, the extraction record is considered a stale record.

A stale record occurs when these conditions are met:

- A value on a record in the database table is changed by another user or through another process
- The final update on a record that contains that value was not performed.

Stale records cannot be processed in **SA Mass Maintenance Administration**. You cannot reset the error status for stale records. You must create another set to extract the most current values for record from the database table. Optionally, change the value in the menu function.

To avoid stale records, perform the final update shortly after you create the set.

Performing the final update

During final update, only extraction records with a Status Operation of **Update**, **Create**, or **Delete** affect the database table.

- 1 Select **System Administrator > Administration > Mass Maintenance**.
- 2 Specify the set name and other search criteria, and then click **Search**.
- 3 Click **Final Update**.
- 4 Optionally, select **Delete Set If No Errors**.
This option is displayed only if your function security level for **SA Mass Maintenance Administration** is 5.
- 5 Specify printing information for the **SA Mass Maintenance Utility Report**.
See information about printing reports in the online help.
- 6 Click **Save**.
- 7 Review the **SA Mass Maintenance Utility Report**.
- 8 Click **Search** to refresh the extraction records in the set.
Completed or **Errors** is displayed in the Status Type column for each record in which data was changed.
- 9 If errors occurred, correct the errors and then select the records with errors.
- 10 Select **Action > Reset Error Status**.
- 11 Click **Final Update**.

Chapter 6: Managing data sets

After you have created data sets, you can keep them and manage them as templates. You can also actively manage any closed and unused sets.

Template sets

The **SA Mass Maintenance Administration** menu function can be used to change master table records, such as ARSC Customer Master. A new set can be used essentially as a template. You can create a set with the desired set of **Extraction Columns**, yet have the minimum set of columns needed to create new source records. Then the set can be used as a template using the **Copy Set Name** field in the wizard.

The template set should be named so it can be identified for this purpose. It should be created with a small Record Count Limit, such as 1, because the updating of existing source records is not being performed. If you are using a set as template, do not delete that set when you are managing sets.

Closed and unused sets

When a new set is created, a series of records are stored in the Distribution SX.e database. This includes the data for the **Extraction Columns** for the source records, and the definitions of the **Selection Criteria**.

Sets that are not acted on can become stale, or can accumulate and use database space unnecessarily. To avoid stale records, perform the final update shortly after you create the set. After a set is completed, it is often no longer needed. If the set is never completed, that is, the Final Update is never run, then the set should be deleted.

Actively managing your sets in this manner minimizes the number of records stored for that set or on the database. It is up to you to decide whether to retain previously processed mass maintenance sets on file for auditing or inquiry purposes. Remember, you are deleting sets, not records.

See [Stale records](#) on page 29.

You can manually delete a set at any time, or you can automatically delete a set during the final update.

See [Performing the final update](#) on page 29.

If you delete a set before you perform the final update, the records in the database table are not updated. You cannot recall a set after it is deleted. Records of deleted sets are not maintained in Distribution SX.e.

These are the methods available to delete sets:

- The Delete Set functionality deletes one set at a time.
- The **SA Mass Maintenance Set Deletion Report** utility is recommended when you have multiple sets to delete at one time. Control the accumulation of existing sets, based on date, status, or table name.

Deleting a set

- 1 Select **System Administrator > Administration > Mass Maintenance**.
- 2 Specify the set name, and then click **Search**.
- 3 Click **Delete Set**.
- 4 Specify printing information for the **SA Mass Maintenance Utility Report**.
See information about printing reports in the online help.
- 5 Click **Save**.
- 6 Review the **SA Mass Maintenance Utility Report**.

Deleting multiple sets

Use the **SA Mass Maintenance Set Deletion Report** to delete multiple sets.

- 1 Select **System Administrator > Administration > SAA Reports > Mass Maintenance Set Deletion**.
- 2 Select **New > One Time**.
- 3 Specify the printing information and click **Next**.
- 4 On the **Options** page, specify these options:

Cutoff Date (Inclusive)

Specify a cutoff date, such as 01/31/20. All sets with an ending date that is less than or equal to the date that you specify are processed by the report.

Status (W)IP, (C)omplete, (B)oth

Specify a status for the set. Select WIP for sets that you may have been creating, but have not been acted on.

Table Name (Blank for All)

Optionally, specify the database table from which the set was created.

- 5 Click **Next**.
- 6 Click **Save**.

Appendix A: Data validation for column updates and single record updates

If you perform a column update or a single record update, these validations are performed:

1 Data types

Validations are performed on these data types:

- Integers: The field cannot be blank. The data must be numeric, but it cannot contain a decimal point and decimal digits.
- Decimals: The field cannot be blank. The data must be numeric, and it can contain a decimal and decimal digits.
- Character, or string: This field can be blank. If a value is specified, the length of the data is checked. If it exceeds the length that is established by the database schema and format, the warning is included on the **SA Mass Maintenance Utility Report**. This type of warning is not a validation error. It does not stop the import process.
- Logical, or boolean: The field cannot be blank. The data must be one of these values: yes, no, true, or false.
- Date: The field can be blank. If a value is specified, the data must be a valid Progress date, such as mm/dd/yy.

2 Common entities

Validations are performed on common entities. This table shows the records that are used to validated common entities and the data type.

Field name	Data Type	Record
arpvendno on the ICSW table	Decimal	APSV, if the value is not 0.
creditmgr	Character	SASOO
nontaxtype	Character	SASTA for Code ID = N This value is maintained in SA Table Code Value Setup .
pricetype	Character	SASTA for Code ID = J for ARSC and APSC, or Code ID = K for ICSW and ICSC This value is maintained in SA Table Code Value Setup .

Data validation for column updates and single record updates

Field name	Data Type	Record
prodcat	Character	SASTA for Code ID = C This value is maintained in SA Table Code Value Setup .
shipviaty	Character	SASTA for Code ID = S This value is maintained in SA Table Code Value Setup .
slsrepin	Character	SMSN This value is maintained in Sales Rep Setup .
slsreput	Character	SMSN This value is maintained in Sales Rep Setup .
speccostty	Character	Value must be blank, Y, T, or H. This value is maintained in Product Setup .
termstype	Character	SASTA for Code ID = T This value is maintained in SA Table Code Value Setup .
vendno for ICSC table	Decimal	APSV, if the value is not 0.
whse, not in the ICSD table	Character	ICSD

Appendix B: Data validation for tab-delimited files

When you import a tab-delimited file, validation criteria depends on the type of record and the type of data contained in the column.

These values are checked during the first phase of validation:

1 Column heading row

The column headings row must be the first row in the tab-delimited file. The row must contain these columns:

- extractseqno
- rowpointer
- original key columns

If the requirements for the column heading row are not met, import processing stops. You must fix the column heading row in Excel, and then import the file again.

2 Key column values

Each column within each row is validated. If double quotes (") were placed around the content of a cell in Excel, the quotes are removed before validation occurs.

Validations are performed on these data types:

- Integers: The field cannot be blank. The data must be numeric, but it cannot contain a decimal point and decimal digits.
- Decimals: The field cannot be blank. The data must be numeric, and it can contain a decimal and decimal digits.
- Character, or string: This field can be blank. If a value is specified, the length of the data is checked. If it exceeds the length that is established by the database schema and format, the warning is included on the **SA Mass Maintenance Utility Report**. This type of warning is not a validation error. It does not stop the import process.
- Logical, or boolean: The field cannot be blank. The data must be one of these values: yes, no, true, or false.
- Date: The field can be blank. If a value is specified, the data must be a valid Progress date, such as mm/dd/yy.

This table shows the key values that are exceptions to the rule. These fields can be blank.

Table	Key value
OESSRE-Order Entry Setup Sales Rep Exceptions	custno shipto prodcatering

Table	Key value
ICSL-Product Line Master	whse

3 Non-key column values

Each column within each row is validated. If double quotes (") were placed around the content of a cell in Excel, the quotes are removed before validation occurs.

a Validations are performed on these data types:

- Integers: The field cannot be blank. The data must be numeric, but it cannot contain a decimal point and decimal digits.
- Decimals: The field cannot be blank. The data must be numeric, and it can contain a decimal and decimal digits.
- Character, or string: This field can be blank. If a value is specified, the length of the data is checked. If it exceeds the length that is established by the database schema and format, the warning is included on the **SA Mass Maintenance Utility Report**. This type of warning is not a validation error. It does not stop the import process.
- Logical, or boolean: The field cannot be blank. The data must be one of these values: yes, no, true, or false.
- Date: The field can be blank. If a value is specified, the data must be a valid Progress date, such as mm/dd/yy.

b Validations are performed on common entities. This table shows the records that are used to validated common entities and the data type.

Field name	Data Type	Record
arpvendno on the ICSW table	Decimal	APSV, if the value is not 0.
creditmgr	Character	SASOO
nontaxtype	Character	SASTA for Code ID = N This value is maintained in SA Table Code Value Setup .
pricetype	Character	SASTA for Code ID = J for ARSC and APSC, or Code ID = K for ICSW and ICSC This value is maintained in SA Table Code Value Setup .
prodcats	Character	SASTA for Code ID = C This value is maintained in SA Table Code Value Setup .
shipviaty	Character	SASTA for Code ID = S This value is maintained in SA Table Code Value Setup .

Field name	Data Type	Record
slsrepin	Character	SMSN This value is maintained in Sales Rep Setup .
slsrepout	Character	SMSN This value is maintained in Sales Rep Setup .
speccostty	Character	Value must be blank, Y, T, or H. This value is maintained in Product Setup .
termstype	Character	SASTA for Code ID = T This value is maintained in SA Table Code Value Setup .
vendno for ICSC table	Decimal	APSV, if the value is not 0.
whse, not in the ICSD table	Character	ICSD

4 Record type

a The values in the extractseqno and rowpointer columns are checked. These two conditions are valid:

- The value for extractseqno is not zero and the rowpointer is not blank. This condition indicates that the record is an existing record.
- The value for extractseqno is zero and the rowpointer is blank. This condition indicates that the record is a new record.

b These validations are performed for existing and new records:

- Existing records that require updates are compared to the corresponding extraction records in the temporary database table for the set. A validation error occurs if one of these conditions are met:
 - One of these values from the tab-delimited file does not match the corresponding value for the extraction record in the temporary database table.
 - extractseqno
 - rowpointer
 - Key values
 - The Status Type of the record is **Completed**.
 - The record is flagged for deletion from the database.
 - The record was previously identified as a new record.
- For new records, this validation is performed:
 - Function security for the menu function for the database table. Level 4 is required to create a new record.
 - Common entities validation as previously described.