



Infor CloudSuite Business & Industrial Migration Utility User Guide

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Migration Utility Overview

Use the Infor CloudSuite migration utility to map, transform and import data from another application's SQL database tables into Infor CloudSuite database tables in a migration database. From there, the migrated, validated tables can be copied into other Infor CloudSuite databases.

The migration focuses on the master data and open transactions of the external application, as well as the integrity of the data. This ensures that you can resume business activity with minimal disruption.

These forms are used in the migration:

- **Import Parameters**
- **Import Source Tables**
- **Import Target Tables**
- **Import Steps**
- **Import Rule Definition**
- **Import Table Column Rule Definition**
- **Import Data Transfer**

Requirements

The source database for the external application must use SQL Server 2008 or later. This database must be able to communicate with the target database.

The target Infor CloudSuite database must be a new, initialized database. This database must have the Infor CloudSuite Migration Utility pack installed.

You must have appropriate licenses and authorizations for the Infor CloudSuite forms that you will access during the migration. See the Form-License and Form-Group-Authorizations spreadsheets in the DataMap.

CAUTION: You must plan carefully before you start. See Planning for the Migration for more information.

Source and Target Tables

The **Import Source Tables** form defines the tables and columns in the external database that can be imported. Many tables and columns are already predefined for the migration process. However, you can select additional tables or columns from the external database, which are then included in the Source Table and Column drop-down fields on the **Import Steps** form.

The **Import Target Tables** form defines the tables and columns in the target database that can be used to hold the imported data. Only tables whose data can be modified are included in the drop-down lists. Many tables and columns are already predefined for the migration process. However, you can select additional tables or columns from the target database, which are then included in the Target Table and Column drop-down fields on the **Import Steps** form.

Import Steps

The **Import Steps** form maps the source table and column to the target table and column, and specifies the sequence in which this mapping should be performed.

Many sequences, or steps, of source to target mappings are predefined for the migration process. You can specify additional mappings and sequences here.

For more information, see Defining Table Mappings.

Sequence

The import uses sequence numbers to specify the order in which you import tables and columns. The order in which data is imported is important because of data dependencies: certain data must exist in the database before other data can be loaded. Otherwise, errors occur during the data transfer. For example, **Unit of Measure Codes** must be defined before you can add **Unit of Measure Conversion** data. We recommend that you perform the preliminary data transfers using the sequences that are predefined in the **Import Steps** form. You must perform the final data transfers in the specified sequence. If you add sequences to transfer additional data, ensure that they take into account the data dependencies.

Some target tables are included in more than one sequence, because some columns in the table are prerequisites for other tables, while other columns must wait for prerequisite data from other tables.

Source Filters

Sometimes you want to import only some records from the source table. For example, you only want to import source operation records where the WORKORDER_TYPE value is M into the target job table. To handle this, you can specify a filter for the sequence (WORKORDER_TYPE = "M") in the **Import Steps** form.

Manual Data Entry

Some data in Infor CloudSuite does not have equivalent data in the external application, so that data cannot be mapped. It must be manually entered in the Infor CloudSuite forms. We recommend that you perform most of the manual data entry before you start the import process. However, some manual entry forms require data that will be imported in one of the defined sequences. In that case, you will perform the final data transfer for that sequence, then perform the manual data entry, then continue with the next import sequence. See Example Migration: VISUAL for an illustration of this.

Rules

In many cases, just mapping the data is not sufficient, because the data properties are different. For example, both systems have a customer order number, but the field length is different. Or both systems have a flag that indicates whether to include tax in prices, but the source system uses Y and N values, while the target system uses a check box (1 or 0 values in the database). You can specify general types of rules in the **Import Rule Definition** form, and then specific instances of the rules in the **Import Table Column Rule Definition** form.

For more information, see [Defining Import Rules](#).

Stored Procedures

Stored procedures are predefined in this utility to map tables. The stored procedure name format is `SourceDL_SourceTableNameImportSp` or `TargetDL_TargetTableNameImportSp`. If necessary, you can work with Infor Consulting Services to create a custom stored procedure to move other data that the utility cannot move with the existing stored procedures.

Preliminary and Final Data Transfer

In the **Import Data Transfer** form, you perform a preliminary data transfer to test whether a sequence can be imported. That is, can the data from the source tables and columns defined in the sequence transfer to the target tables and columns defined in that sequence without any errors? If the data transfers successfully, you can proceed directly to the final data transfer.

If there are errors, the migration utility automatically attempts to create a rule that fixes the problem and displays the error in the **Log** tab of the **Import Data Transfer** form. You can supply appropriate values for the new rule in the **Import Table Column Rule Definition** form.

Rerun the preliminary data transfer, continuing to find and fix problems, until no errors are found. Then you can run the final data transfer to commit the data to the target table.

For more information, see [Performing the Data Transfer](#).

Data Assessment Report

Use the Data Assessment Report to validate the data to be imported before it is committed into the target table. This report is a .CSV file that can be shared with the appropriate departments for verification.

For more information, see [Generating the Import Data Assessment Report](#).

Data Transfer Log

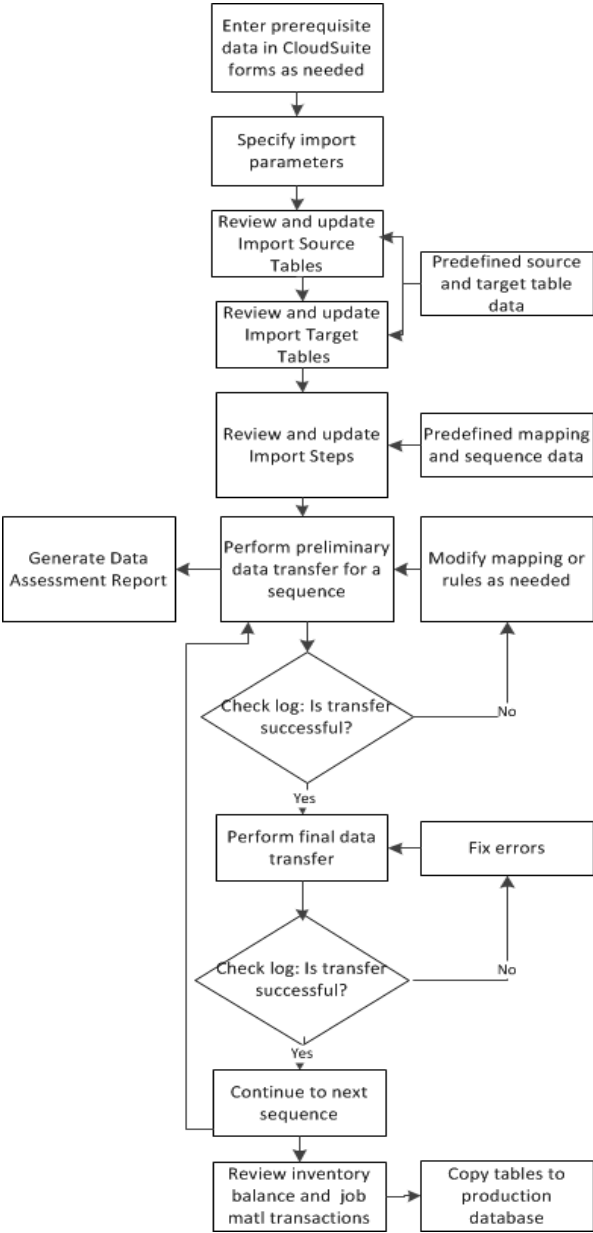
This log is generated during the data transfer and is displayed on the Log tab of the **Import Data Transfer** form. The log contains the details of transfers from the source table into data load tables

and finally into the target table, and it also records errors during the transfer. Use this log to verify the data transfer status and transfer detail, and also to determine whether you can proceed with the transfer.

For more information, see [Analyzing the Data Transfer Log](#).

Migrating External Application Data to Infor CloudSuite

This diagram shows the process flow:



Use these general steps to migrate data from an external application to Infor CloudSuite.

- 1 Plan your migration process as described in Planning the migration.

- 2 If there is any prerequisite data that cannot be migrated through this utility, specify it in the appropriate Infor CloudSuite forms. For example, if the source database does not contain tax parameters or billing codes, those must be entered manually.
- 3 Set up the database as described in [Creating and configuring the migration database](#).
- 4 Specify the import parameters to connect to the external application database. See [Specifying Import Parameters](#).
- 5 To include tables or fields that are not included in the predefined migration, if necessary:
 - Use the **Import Source Tables** form to specify those tables and columns.
 - Use the **Import Target Tables** form to specify any Infor CloudSuite tables and columns.
- 6 On the **Import Steps** form, click the filter-in-place button to review the preconfigured mappings and sequences. These mappings and sequences should only be modified by a qualified consultant. You can add mappings and sequences if you want to include external source tables or columns that are not part of the standard migration or that are part of a custom stored procedure. For more information, see [Defining Table Mappings](#).
- 7 **Note:** Some of the migration is done by importing mapped tables; however, for required data that has no counterpart in the external application, you must also manually enter data into Infor CloudSuite forms. The sequence in which data is entered is important, so you must be aware of any manual steps that must take place between the sequenced imports of tables. For a sample migration sequence that takes into account these manual steps, see [Example Migration: VISUAL](#).
- 8 On the **Import Data Transfer** form, select the first defined sequence, select **Preliminary Data Transfer**, select **Generate Data Assessment Report**, and click **Process**.

This process assesses the data records and creates applicable new rules for the sequence that attempt to address any problems with the source data or inconsistencies between the source and target data formats.

For more information, see [Performing the Data Transfer](#).
- 9 Review the Data Assessment Report with the appropriate people. See [Generating the Data Assessment Report](#).
- 10 Click the **Log** tab on the **Import Data Transfer** form, click in the grid, and then click the refresh toolbar button to display the most recent transaction. Review the information. See [Analyzing the Data Transfer Log](#).
- 11 If the transfer was not successful:
 - Check the error message on the Log tab to see if a new rule was created.
 - Click the **Table Column Rule Definition** button to open the **Import Table Column Rule Definition** form and review the rules that were added. You can specify rule values or add rules as needed. See [Defining Import Rules](#).
 - Perform the preliminary data transfer again for the sequence.
 - Repeat these steps for this sequence until all mapped columns are successfully transferred to the Target Data Load table.

- 12 When the preliminary data transfer produces no errors and the Data Assessment Report has been reviewed, select **Final Data Transfer** and click **Process**.

This loads the transformed data into the Infor CloudSuite table. If errors occur:

- Correct the errors.
- Reset the sequence status to **Not Started**.
- Rerun the preliminary data transfer.
- Rerun the final data transfer.

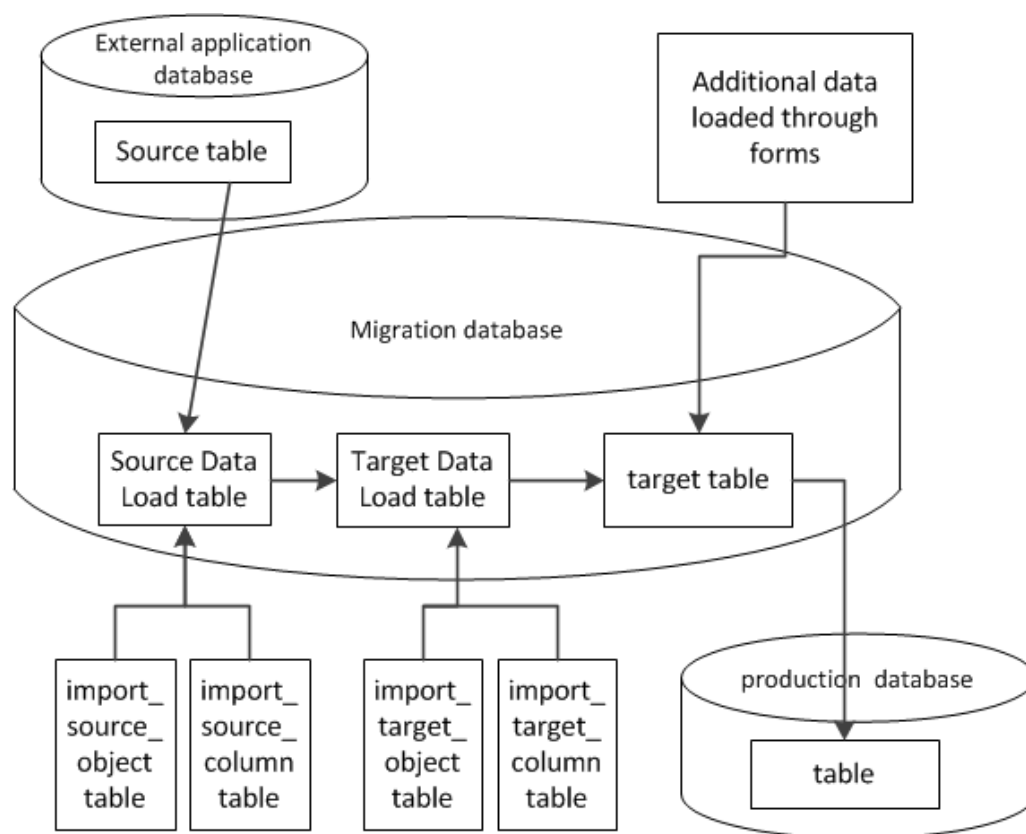
- 13 Repeat steps 7 - 11 for each sequence.

Notes:

- We strongly recommend that you run this utility for one mapped table at a time, in the specified sequence, allowing for any required manual data loads between the mapped table sequences.
 - If prerequisite data is required before a sequence, manually enter that data in the appropriate form before proceeding. For an example of how the prerequisites and sequencing might be set up, see Example Migration: VISUAL or Example Migration: Fourth Shift.
- 14 Review and correct the source data that will be used to enter inventory into Infor CloudSuite. See Reviewing Inventory Balances.
- 15 Review and correct the source data that will be used to enter job material issue transactions into Infor CloudSuite. See Reviewing Job Material Transactions.
- 16 Copy the Infor CloudSuite tables from the migration database to the final database or site. See Copying the Tables to a New Site.

Behind the Scenes: Data Flow and Intermediate Tables

This diagram shows the data flow for migrating data. This information is intended for consultants and others who need to understand the underlying structure that is used in the migration.



These tables are created in the migration database to hold the data during transformations:

- The Source Data Load tables hold the data from the tables in the external application database. The structure of each Source Data Load table is determined by the `import_source_object` and `import_source_column` tables. The `import_source_object` table stores table or view names from the source database. The `import_source_column` table stores column names from tables in the source database. The information in these tables is predefined by Infor through scripts. You can use the `Import Source Tables` form to manually add other source tables and columns to be mapped, or tables/columns that are used in your custom stored procedures. The first time that you perform a preliminary data transfer, the Source Data Load tables are built.
- The Target Data Load tables are based on the Infor CloudSuite tables but only contain a subset of the columns. These tables are generated based on the `import_target_object` and

import_target_column tables, whose contents are predefined by Infor through initialized data scripts. You can use the **Import Target Tables** form to manually add other target tables or columns to be mapped. The data in each Target Data Load table is truncated after the data is transferred successfully into the target table.

The import_mapping table is also predefined by Infor. This table stores data from the viewpoint of a target table name, sequence, and target column name. You can transfer data to a given Target Data Load table multiple times, allowing for multiple sequences that include the target table. For each target table/sequence instance, the import_mapping table defines the target columns that are mapped, and it defines which source object/column maps to them. Thus records exist in this table only where a column-to-column mapping actually exists.

Planning for the Migration

Before you begin importing data, ensure that you have performed these planning tasks.

Determining Where to Place the External Application and Migration Databases

Data will be migrated from the external application database into an Infor CloudSuite migration database. These databases can exist on the same SQL server or they can reside on different servers. After the migration is complete, you can copy the target table data from the migration database into an Infor CloudSuite production database.

Determining What Data is Required in Infor CloudSuite

Use a spreadsheet to list the forms in Infor CloudSuite where data must be entered, and, where possible, the Infor CloudSuite tables underlying those forms. If your external application has a matching table whose data can be mapped to an Infor CloudSuite table, specify the external table name in the spreadsheet.

List the Infor CloudSuite forms in sequential order in the spreadsheet. The sequence indicates the order that the data must be specified because of data dependencies. For example, you must generate lists of certain codes before you can use those codes in master data such as a **Customers** form.

Note: This spreadsheet might already be available for your external application; check with your Infor consultant.

Comparing External Application Data to Infor CloudSuite Data

Note: For the Infor VISUAL migration, a sample set of mappings, transformations and rules has been predefined.

Compare the Infor CloudSuite table schema (column names, data types, and valid values) to your external application table schema:

- Use the Infor CloudSuite Database Schema Report (generated through a form in the application) and the Infor CloudSuite DataMap Schema-Properties spreadsheet (available on Infor Xtreme) to see the columns and data types for each table, so that you understand the Infor CloudSuite schema.

- For areas where your table data can be mapped to Infor CloudSuite tables, determine the transformations (changes to data types, length, etc.) that are required. Later, you can use the Preliminary Data Transfer process to help you determine other required transformation rules.
- For areas where Infor CloudSuite requires initial data, but the external application does not provide it, you can enter the data manually in the forms. Where possible, you can generate spreadsheets from Infor CloudSuite form grids, using the **Export to Excel** option. Fill in your data and then paste the updated spreadsheet data back into the form. See the Infor CloudSuite online help for information about pasting into forms from a spreadsheet.

You are not required to use the migration utility to import data into Infor CloudSuite tables. You can manually load data into an Infor CloudSuite table if you want to create new records that are not dependent on the existing data in the external application.

Determining the Migration Sequence

Infor CloudSuite data must be loaded in a certain order. Some data is dependent on the existence of other data. See the sequences on the **Import Steps** form. These sequences were tested with a sample database.

See each mapped target table's dependencies and then set up the import sequence for the mapping tables based on those dependencies. If there is any prerequisite data that must be manually loaded into the target table (because the prerequisite data does not exist in any source table), ensure that the prerequisite data is loaded before you import the source table's data.

Preparing the External Application Data Before the Migration

In the external application, you must perform steps to complete and post all transactions before the migration, to ensure that Infor CloudSuite has the most up-to-date information and that no transactions are missed. For example, post all unposted invoices, vouchers, journals, and job transactions, and print and post A/P and payroll checks.

After these steps are performed, no new transactions should be created in the external application. Any new transactions should be created in Infor CloudSuite after the migration is completed.

Defining the Future Storage Environment

Determine the SQL Server and Infor CloudSuite production database/site where the transformed migrated data will reside.

Developing the Pre- and Post-Migration Verification Plan

A detailed verification plan must be prepared before you proceed with the data migration. This plan should be shared with members of other departments that will use the data.

Documenting your migration process can help you train your staff and simplify or streamline the next migration you perform, reducing both expense and risk.

After the data is successfully transferred into the Infor CloudSuite database, have a plan in place to verify that all of the data was correctly transferred. If some data did not transfer as you expected, analyze the mapping and related functions that were performed in database triggers. Determine any additional configuration or processes that must be performed to complete the migration.

When the data transfer is verified, perform a backup of the existing database.

Creating and Configuring the Migration Database

Use the instructions in the Infor CloudSuite product installation guide to create an initialized Infor CloudSuite database. This database will be used to import the external application data into the source tables and to transform and store the data in the target tables.

Use the instructions in the *Industry Packs Installation Guide* to install the Migration Utility pack on that database. This pack includes the forms and stored procedures you need for the migration.

Connecting the Databases

Use the **Import Parameters** form to specify connection information between the external application database and the migration database. See [Specifying Import Parameters](#).

If the migration database is created in a separate SQL server from the external application database, the migration database must be able to connect to the external application database server. Connectivity between the servers is tested in the **Import Parameters** form when you save the connection information. You can click the **Test Connection** button to test this. If different servers are involved, the migration utility creates a linked server when you save the parameter settings.

Multi-Site Options

The Infor CloudSuite migration database and the final target database both support copying the data from multiple sites into a single database. This is not required; if multiple sites exist in separate databases in the external application, they can remain as separate Infor CloudSuite databases.

You can set up a migration database server on which you create one or more migration databases, and then create an associated migration configuration for each site that you will migrate from an external application to Infor CloudSuite.

If the table mappings are the same for all sites, you could use one migration database for all migrating sites. This eliminates the need to copy table mappings from one migration database to another migration database for each migrating site. You would just copy the site with the transferred data in the migration database into the target Infor CloudSuite databases.

Specifying Import Parameters

Use these steps to set up the connection information to the external application database:

- 1 In the **Import Parameters** form, specify this information about the external database:

Server

Specify the name of the SQL server that contains the external application database.

Source Database

Specify the external application database name.

Schema

Specify the external database schema name. This value defaults to **dbo** but can be modified for your external application.

Login and Password

Specify the user name and password used to log into the SQL server that contains the external application database.

Source Site

Specify the name of the site from which data will be imported into the Infor CloudSuite target database through the **Import Data Transfer** form.

Source Data Imported

This field indicates whether the source data from this connection has been imported. This field is selected after the initial run of the Preliminary Data Transfer has completed. Wait until the field is selected (indicating that the transfer is complete) before you continue with the next step. Preliminary Data Transfer can be performed only when this field is not selected. If an incorrect rule was applied during a data transfer (and the imported data is therefore wrong), or if any change occurs to data in the source database, clear this field and run the Preliminary Data Transfer again to fetch the source data again.

- 2 Specify the folder path where the Data Assessment Report is saved when it is generated on the **Import Data Transfer** form. For more information, see [Generating the Data Assessment Report](#).

- 3 Click **Test Connection**.

The login connection to the database is tested. If the test succeeds, the message "Test connection succeeded" is displayed. If a failure message is displayed, correct, save and retest the information.

- 4 Specify a **Miscellaneous Receipt Reason Code** that is applied to all receipt transactions during the preliminary data transfer.

- 5 Specify a **Miscellaneous Issue Reason Code** that is applied to all issue transactions during the preliminary data transfer.

- 6 Select the appropriate options to allow during the import:
 - Select **Allow Job WIP to add Job Materials on the go** if you want to add new job materials into the job BOM.
 - Select **Allow non-inventory Items on Current Materials** if you want to add non-inventory items to the current BOM.
 - Select **Allow non-inventory Items on Customer Orders** if you want to add non-inventory items to customer orders.
 - Select **Allow non-inventory Items on Job Materials** if you want to add non-inventory items to the job BOM.
 - Select **Allow non-inventory Items on Purchase Orders** if you want to add non-inventory items to purchase orders.
 - Select **Use Cost on Job Materials** if you want to use the cost from the job materials record, instead of the cost from the item record.
 - Select **Vendor required on Purchase Orders** if you want to require a vendor on imported purchase orders.
- 7 Save your changes.

Defining Table Mappings and Import Sequences

Use the **Import Steps** form to view the predefined steps, or sequences, in the data transfer.

You can also use this form to map additional source or target table/columns, set filters on the source data, and reset the data transfer status for the step.

Viewing Existing Mappings and Sequences

Click the filter-in-place button. The existing mapping records are listed, showing the source table, target table, the mapped columns in the source and target tables, any filters on the source data, and the sequence in which this mapping is performed.

For the selected source/target table sequence, the grid displays a list of the columns that are defined on the **Import Source Table** and **Import Target Table** forms. The list is sorted by the source column. Non-mapped columns are not displayed.

Updating Existing Mappings and Sequences

Caution: The predefined mappings and sequences listed in the drop-down fields were configured and tested by Infor for the VISUAL migration. These predefined mappings and sequences are stored in migration database tables and should only be modified by a qualified consultant.

To update table mappings:

- 1 Select the source table record. You can see the mapped target table and the mapped columns in the source and target. You cannot edit the existing mappings or the sequence number. However, you can add mappings between columns in the tables, or delete existing mappings.
- 2 Optionally, specify a SQL "Where" clause in the **Source Filter** to use for filtering the source table data, as shown in the Filter Example below.
- 3 Set the status to **Not Started** so that the preliminary data transfer will process this step.
- 4 When your changes are complete, save the record.

Adding a New Mapping and Sequence

- 1 In the **Import Source Tables** form, select a **Source Table** from your external application that is not already mapped. The list of source tables is determined by the database you specify in the **Import Parameters** form.

- 2 Select the columns from the table that you want to map.
- 3 In the **Import Target Tables** form, select a Target Table. Only Infor CloudSuite tables whose data can be modified are listed.
- 4 Select the columns from the table that you want to map.
- 5 On the **Import Steps** form, click the filter-in-place button.
- 6 Add a new record.
- 7 Select the **Source Table** you added in step 1 and the **Target Table** you added in step 3.
- 8 The next available sequence number is assigned. You can change this number; however, use extreme caution if you insert this sequence between two existing sequence numbers.
Note: The sequence is extremely important and must be planned carefully to avoid problems with missing dependencies in the data. See Planning for the Migration.
- 9 The status is set to **Not Started**. See Changing the Data Transfer Status, below.
- 10 Optionally, specify a SQL "Where" clause in the **Source Filter** to use for filtering the source table data, as shown in the Filter Example below.
- 11 For the selected source and target tables, use the grid to select and map the source table columns to the target table columns. Only columns that are defined on the **Import Source Table** and **Import Target Table** forms are listed.
- 12 When all source columns are mapped, save your changes.

NOTE: Be aware of any differences in the allowed lengths in mapped columns. If a decimal value imported from the external application contains more decimal places than are allowed in the mapped column in the target database, the data is rounded by SQL Server default precision. If this rounding is not appropriate for this value, you must correct it in the target database after the final data transfer is complete.

Filter Example

Your external application has an OPERATION table that you are mapping to the Infor CloudSuite job table. However, you only want to import operation records where the WORKORDER_TYPE value is M into the job table. In the sequence record where the OPERATION table is mapped to the job table, specify this in the **Source Filter** field: **WORKORDER_TYPE="M"**

Changing the Data Transfer Status

Initially, the status indicates **Not Started**. The data from this step has not been processed in the **Import Data Transfer** form.

When this step has been processed in the **Import Data Transfer** form, its status changes to one of these values: In Progress, Preliminary Success, Preliminary Failed, or Final Failed.

When the data has been successfully moved from the source to the target during a final data transfer, the sequence is marked as Completed.

If you need to perform the final data transfer again for a step, change its status to **Not Started**.

Notes

The migration utilities support these types of mapping:

- One table maps to one table. One record from the source table/column is mapped to one record in the target table/column.
- One table maps to multiple tables. To support this type of mapping, a source table filter string is used to build the source table's data set. The migration utility can then move different data sets from the same source table into different target tables, by using different filter strings and sequences.

Defining Import Rules

Import rules are used to transform data from the external application to a format that is appropriate in Infor CloudSuite.

Table column rules can be created automatically or manually:

- Rules are created automatically when you perform a preliminary data transfer. The migration utility compares the source table column attributes such as length and data type with the target table column attributes. If the utility determines that the existing data cannot be moved into the target table column because of a mismatch in attributes, the utility tries to create a rule based on the properties of the Source and Target columns that allows it to move the data.

These types of rules can be automatically created by the migration utility, as needed:

- 1: Renew value. This rule is set when the existing value in the external application table column is not appropriate for the mapped Infor CloudSuite table column's data type. A new value is created when the data is saved in Infor CloudSuite. For this type of rule, the existing values from the source table/column are displayed in the **Import Table Column Rule Definition** form, and you specify replacement values for each existing value.
- 2: Default value. This rule is set when the data in the external application table column is not required but data is required in the mapped Infor CloudSuite table column. For this type of rule in the **Import Table Column Rule Definition** form, you specify a default value to use in the target table column when a value is not provided by the external application.
- 3: Update references to modified data. This rule is used to update columns that reference data in another table. If the original value is changed, then all reference values can be changed to the new value. For example, an account number is used in multiple tables. When you update the account number in the acct table, the referenced table column's value is also updated if it is defined in this rule.
- 4: Set up account number and unit codes. This rule is used to define the mappings to the Infor CloudSuite account number and unit codes.

During the preliminary data transfer, if a possible problem is discovered while mapping external application data into the target table, the table column is flagged and one of the three system import rules is assigned to rectify the offending data. You can see the new rule in the **Import Table Column Rule Definition** form. If the **System Default** flag is selected for a rule on the **Import Rule Definition** form, that rule was generated by the system during the preliminary data transfer.

- If the generated system rule does not solve the problem, repeating the data transfer will not be possible. In that case, you can create an additional import rule manually on the **Import Rule Definition** form, and then define the specific table columns that the rule applies to in the **Import Table Column Rule Definition** form. In order to support the transfer when you create a manual rule, you must also provide additional custom stored procedures to handle the new rule. Then execute your stored procedures inside the specified block of the ApplyImportRuleSp stored

procedure. Contact Infor Consulting Services to create new custom stored procedures to support the new rule.

Example

In this example, the utility attempts to transfer data from Table A, Column A to the mapped Table B, Column B:

Source data (Column A)	Column A data type	Target data (Column B)	Column B data type	Transfer successful?
CO1	nvarchar(10)	CO1	nvarchar(5)	Yes
CO2	nvarchar(10)	CO2	nvarchar(5)	Yes
CO11111	nvarchar(10)		nvarchar(5)	No

Because it could not transfer all of the data from Column A to Column B, the transfer for this sequence fails and generates a rule of type 1. In the **Import Table Column Rule Definition** form, you then provide a replacement value that will work. In this example, you would rename the CO11111 value to something that is five characters or less. Ensure that no other record uses that value and that it is not a primary or unique key column.

Performing the Data Transfer

Use the preliminary data transfer process to test and correct the mapping of data. Then use the final data transfer process to actually transfer the data from the external application database to the target database.

The data transfer is handled through background tasks. As each sequence is processed, a background task is created that moves the data from the external application database into the target database, validates the data, applies any import rules, and logs any problems that were encountered.

Performing the Preliminary Data Transfer

Use this process to test the transfer and determine what additional rules need to be created to move the data from the source table into the target table. During the preliminary transfer, the source table column properties such as length and data type are compared to the properties in the target table column. If the data cannot be moved from source to target due to incompatible properties, the system tries to create a rule for the column transfer, based on the available system rules. These rules show how the source data must be transformed in order to be accepted in the target database. You must update the values in the **Import Table Column Rules Definition** form for the newly applied rules, and then rerun the preliminary data transfer to apply the rule. Continue this until no errors are encountered.

In the preliminary data transfer, no data is moved to the target table.

To perform the preliminary data transfer:

- 1 In the **Import Data Transfer** form, select the starting and ending sequence numbers of the tables you want to transfer. The sequence numbers are defined on the **Import Steps** form.
Note: You can specify a range of tables. However, we strongly recommend that you transfer one sequence at a time.
- 2 Select **Generate Data Assessment Report** to generate a report for data validation. Send this report to the appropriate department for validation.
- 3 Specify the **On Error** setting:
 - **Stop:** If multiple sequences are imported at one time and an error occurs, the utility stops the import at the sequence that encountered an error.
 - **Continue:** If multiple sequences are imported at one time and an error occurs, the utility tries to import the later sequences.

In either case, the Final Data Transfer option is disabled until all of the specified sequences are imported successfully.
- 4 Select **Preliminary Data Transfer**.

5 Click Process.

The prompt Task Submitted is displayed, and you are prompted to open the report folder and view the Data Assessment Report.

6 Check the Log tab during processing for messages. Processing might take several minutes to complete. See Analyzing the Data Transfer Log.

7 After correcting all errors, rerun the Preliminary Data Transfer until all mapped columns have a status of Preliminary Success.

Performing the Final Data Transfer

The **Final Data Transfer** option is disabled for a sequence until the preliminary data transfer runs without errors.

To perform the final transfer of data from the source table to the target table:

1 In the Import Data Transfer form, select the starting and ending sequences of the tables you want to import. The sequence numbers are defined on the Import Steps form.

Note: You can specify a range of tables. However, we strongly recommend that you transfer one table at a time.

2 Use the On Error field to specify whether to stop or continue if an error occurs.

3 Select Final Data Transfer.

4 Click Process.

Any errors that are raised here are related to business requirements, so each error should be carefully handled. If some data was missed in attempting to transfer the current table data, you must add a new mapping or create a new rule. If you see the error message **Data is invalid**, see Troubleshooting the Data Transfer.

5 After all errors in the final data transfer of a sequence are resolved, reset the status for that sequence in the Import Steps form to Not Started. Then rerun the preliminary data transfer and the final data transfer for the sequence.

6 After the final data transfer completes successfully, verify that all of the data was correctly transferred into the target database. If some data did not transfer as you expected, analyze the mapping and related functions that were performed in database triggers. Determine any additional configuration or processes that must be performed to complete the migration.

7 After all sequences have been successfully transferred and verified, perform a backup of the existing database.

Reviewing Inventory Balances

The item, warehouse, and location quantity on-hand values from the source system are imported into Infor CloudSuite through miscellaneous issues or miscellaneous receipts, using the default reason codes and the settings that are specified in the **Import Parameters** form.

This allows the corresponding material transactions and journal entries to be created in Infor CloudSuite. The corresponding costing, lot and serial data for the items is also created.

After the source data is imported through the preliminary data transfer, you can use the **Import Inventory Balances** form to review and correct this item data as it will appear in Infor CloudSuite. Do this before you run the final transfer.

Prerequisites

- 1 On the **Import Parameters** form, ensure that a **Miscellaneous Receipt Reason Code** and a **Miscellaneous Issue Reason Code** are specified. These codes are applied to all receipt or issue transactions.
- 2 On the **Import Data Transfer** form, perform the preliminary data transfer of source tables that contain item, warehouse, and location on-hand quantities.

Reviewing and Correcting the Data

- 1 On the **Import Inventory Balances** form, review these values for each of the listed items:
 - Item number, description and unit of measure
 - Warehouse and location where the item will be placed, and the quantity on-hand in that location
 - Lot or serial number of the item
 - Material, labor, fixed overhead, variable overhead, and outside cost of the item
 - Unit cost of the item
 - Inventory account used for the item
- 2 Save any changes.

At this point, you can perform the final data transfer on the **Import Data Transfer** form.

Notes

Because the journal entries created through these processes already exist in the source system, these accounts should not be included in the beginning balances. An Opening Balance account ensures that accounts are balanced after all data has been migrated.

The inventory balances that are migrated into Infor CloudSuite already contain the changes caused by the issue or receipt of items for released jobs.

Reviewing Job Material Transactions

If released jobs are imported from the source system into Infor CloudSuite, the material issue transactions must be re-created in Infor CloudSuite, so that the correct material transactions, journal entries and supporting data such as WIP are also created.

After the source data is imported through the preliminary data transfer, you can review and correct this job data as it will appear in Infor CloudSuite. Do this before you run the final transfer.

Prerequisites

- 1 On the **Import Parameters** form, ensure that a **Miscellaneous Receipt Reason Code** and a **Miscellaneous Issue Reason Code** are specified. These codes are applied to all receipt or issue transactions.
- 2 On the **Import Data Transfer** form, perform the preliminary data transfer of source tables that contain data that will be used to add job material issue transactions.

Reviewing and Correcting the Data

- 1 On the **Import Job Material Transactions** form, review these values for each of the listed items:
 - Transaction date
 - Job and job suffix to which the material is issued
 - Job operation and sequence number for the material
 - Item number, description, and unit of measure of the material that is issued
 - Quantity issued
 - Lot from which the item is issued
 - Serial number that is issued for the item
 - Warehouse and location from which the item is issued
 - Material, labor, fixed and variable overhead, and outside cost of the item
 - Cost of the item, which is the sum of the above costs
 - Planned material cost
 - If the material is a non-inventory item, the account associated with the item, and the unit codes for that account
- 2 Save any changes.

At this point, you can perform the final data transfer on the **Import Data Transfer** form.

Generating the Data Assessment Report

Use the Data Assessment Report to assess the mapping of the external application database table to the target database table. This report actually shows the mapping of the source Data Load table to the target Data Load table. One report is generated for each mapped table, and each report is one worksheet in the spreadsheet. The report is saved under a file name that uses this format:

[Task_Number][Source_Table_Name][Target_Table_Name][DateTime].csv

For example, a typical file name is 1001_PART_item_201407120212.csv.

The first and second rows of the report display the source and target columns, respectively. The other rows show the data that is to be transferred.

To generate this report:

- 1 Set up source and target table mappings on the **Import Steps** form. Include the sequence numbers for loading the tables.
- 2 On the **Import Data Transfer** form, specify the starting and ending sequence numbers for the tables you want to transfer.
- 3 The source and target tables for each selected sequence are displayed in the grid.
- 4 Select **Generate Data Assessment Report**.
- 5 Select **Preliminary Data Transfer**.
- 6 Click **Process**. You are prompted to open the report folder, where you can view the report.

The .CSV file is placed in the folder path that is specified in the **Import Parameters** form.

Analyzing the Data Transfer Log

When you perform either a **Preliminary Data Transfer** or a **Final Data Transfer** on the **Import Data Transfer** form, the Log tab contains the transfer status and details about the transfer, as well as messages that are generated during processing.

Select **View History** to see details of previous transfers. Click the grid and then click the refresh button on the tool bar to display the most recent information.

View the records for the selected sequences to check the transfer status and look for errors. If the status is Failed, select the sequence in the log to display the related error messages in the Error grid below.

Handling Errors

You can select a row from the Error grid and click **Table Column Rule Definition** to open the **Import Table Column Rule Definition** form, filtered on the table for the selected error.

- If the error message states that new rules were created, use the **Import Table Column Rule Definition** form to view the new rules and verify that they will handle the problem correctly. Provide appropriate default or replacement values to be used with the rules.
- If the error message states that a new rule could not be created for the sequence, look at the rules that were generated in the **Import Table Column Rule Definition** form for the specified tables. Create an appropriate rule type and/or set values that allow the rule to correct the problem.
- If you have the appropriate SQL permissions, look at the Data Load tables to see where the data transfer stopped. Otherwise, contact Infor Support for assistance.

Log Fields

The log includes this information:

Task Number

Number of the background task from the **Background Task History** form that was used to run the utility.

Seq

Sequence number from the **Import Steps** form.

Source Table

Table name in the source database.

Target Table

Table name in the target database.

Status

One of these values:

- Not Started: The data transfer has not been performed for the current step.
- In Progress: Data is transferring from the source to the target.
- Failed: The data transfer failed.
- Success: The data transfer succeeded.

Percentage

Percentage of records that were successfully migrated. This value is calculated as number of records transferred / number of records processed x 100.

Transfer Type

- Preliminary indicates preliminary data transfer.
- Final indicates final data transfer.

User Name

User who performed the utility transaction.

Source

Total number of records in the source table.

Target

Total number of records in the target table.

Processed

Number of records that were processed.

Transferred

Number of records that were successfully transferred into the target table.

Error

Number of records that encountered errors.

Error grid

The grid at the bottom of the form includes this information about the errors that occurred for a selected sequence in the Log:

Line

Line number in the grid.

Source Column

Column name in the source table where the error occurred.

Target Column

Column name in the target database where the error occurred.

Error Message

Message that indicates the transfer detail of the current table import transaction. During final data transfer, if you see the error message **Data is invalid**, see Troubleshooting the Data Transfer.

Select a row from the Error grid and click **Table Column Rule Definition** to launch the **Import Table Column Rule Definition** form, filtered on the table for the selected error.

Troubleshooting the Data Transfer

Use these procedures to correct problems that occur during the data transfer.

Correcting Values That Were Entered with an Import Table Column Rule

If a rule was used in the **Import Table Column Rule Definition** form to enter incorrect values for a sequence, and the Preliminary Data Transfer has been successfully run for that sequence, then the incorrect values have been applied to the Source Data Load table. To recover the source table data and run the transfer again:

- 1 Delete the transferred data in the appropriate target table, if partial data was transferred.
- 2 Run this script against the source database to reload the data into the Source Data Load table. Set `@SourceObjectName` to the appropriate source table.

```
DECLARE @return_value int,  
        @Infobar InfobarType  
EXEC    @return_value = [dbo].[FetchSingleSourceTableDataSp]  
        @isTruncateTable = 1,  
        @BGTaskID = NULL,  
        @SourceObjectName = '', --Set your source table name  
        @Infobar = @Infobar OUTPUT  
  
SELECT  @Infobar as N'@Infobar'  
SELECT  'Return Value' = @return_value  
  
GO
```

- 3 Correct the data for the rule and sequence in the **Table Column Rule Definition** form.
- 4 Clear the **Source Data Imported** field in the **Import Parameters** form.
- 5 Run the preliminary data transfer again for that sequence in the **Import Data Transfer** form.

Finding and Correcting Invalid Data During Final Data Transfer

If the final data transfer fails and the **Data is invalid** error message is displayed, this usually indicates that the business logic validation in the target application found invalid data. For example, if you are transferring item data to the target table, and an item from the source database has a product code that is not defined in the target application, the transfer fails and this message is displayed. You must find and correct the data in the Target Data Load table in order to successfully complete the final data transfer.

Use this SQL query statement to find the invalid data:

```
SELECT *
FROM TargetDL_[target-table-name]Load
WHERE ErrCode <> 0
```

For example, if the error occurred during final data transfer into the item table, use this query:

```
SELECT *
FROM TargetDL_itemLoad
WHERE ErrCode <> 0
```

After you find the list of columns where data is invalid, you must modify the data in the TargetDL_*[target-table-name]*Load table. Then clear the **Source Data Imported** field in the **Import Parameters** form and run the **Final Data Transfer** again.

CAUTION: In this case, you must run the Final Data Transfer, not the Preliminary Data Transfer. If you run the Preliminary Data Transfer, the TargetDL_*[target table name]*Load data is deleted and your modifications are lost.

Copying the Tables to a New Site

After the migration is completed and the results are verified as correct, the final step is to copy the new data in the Infor CloudSuite migration database to the production database. The steps to copy a site are described in the *Multi-Site Implementation Guide*. The method described there produces a clean database without the migration work data.

If additional databases from the application are to be migrated, change the **Import Parameters** settings to point to the other database and repeat all the steps in Migrating External Data to Infor CloudSuite.

Example Migration: VISUAL

A sample migration procedure is described in the *Infor CloudSuite Infor VISUAL Migration Example*, available on Infor Xtreme.

This sample migration process applies to a specific version of Infor VISUAL and Infor CloudSuite. The migration is not intended to bring all data from VISUAL into Infor CloudSuite; it migrates only data that is pertinent to continue business operations in Infor CloudSuite.

Example Migration: Fourth Shift

A sample migration procedure is described in the *Infor CloudSuite Infor Fourth Shift Migration Example*, available on Infor Xtreme.

This sample migration process applies to a specific version of Infor Fourth Shift and Infor CloudSuite. The migration is not intended to bring all data from Fourth Shift into Infor CloudSuite; it migrates only data that is pertinent to continue business operations in Infor CloudSuite.