How-To Library

Manually Defining Constraints in Enterprise Data Manager

© Copyright Informatica LLC 2014, 2019. Informatica Corporation. No part of this document may be reproduced or transmitted in any form, by any means (electronic, photocopying, recording or otherwise) without prior consent of Informatica Corporation. All other company and product names may be trade names or trademarks of their respective owners and/or copyrighted materials of such owners.

Abstract

You can use Enterprise Data Manager to manually define constraints between tables that do not have physical constraints at the database level. This article explains how to define constraints between tables and create an archive entity that contains the related tables.

Supported Versions

- Data Archive 6.2 HotFix 1

Table of Contents

Overview. 2
Airline Customer Example. 3
Step 1. Start Enterprise Data Manager. 4
Step 2. Create an Application Version. 4
Step 3. Import Metadata from the Source Database 5
Step 4. Define the Primary Key 9
Step 5. Define the Foreign Keys. 10
Step 6. View the Association Tree. 13
Step 7. Create an Entity. 15

Overview

Before you create archive entities and schedule an archive project, create logical constraints between the application tables that you want to archive.

The ILM repository stores primary, referential, and unique constraint types for source database metadata. If the source database does not contain constraints at the database level, or if the constraints cannot be imported with the source metadata, you must manually define the constraints.

After you define constraints, you can use the auto-create entity wizard to create one or more entities. When you use the auto-create entity wizard, the wizard adds all related child tables for the parent table you select and adds all related tables to the entity.

You must add constraints to search the Data Vault through the data discovery portal. When you search for data, you see the parent-child relationship for the transactions in your search results.

To manually define constraints and create an archive entity in Enterprise Data Manager, perform the following tasks:

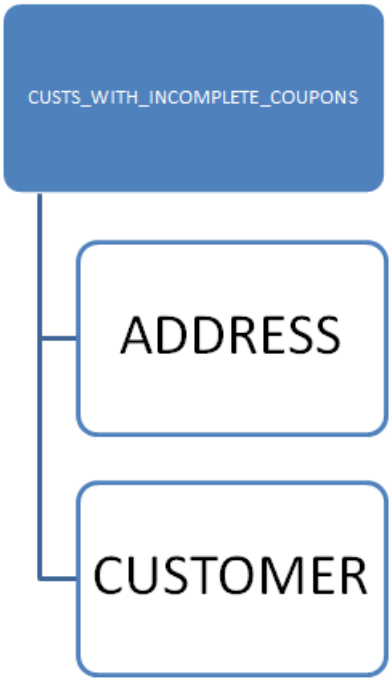
1. Start Enterprise Data Manager.
2. Create an application version.
3. Import metadata from the source database.
4. Define the primary key.
5. Define the foreign keys.
6. View the association tree.
7. Create the archive entity.

Airline Customer Example

You use an application called Airline for airline ticket details. The application contains 11 tables and resides on an Oracle source database. To improve source database performance, you want to archive some of the application data related to customers with incomplete coupons.

You also want to maintain access to the archived data through the data discovery portal. Periodically you want query all of the customers with incomplete coupons to obtain their address and membership status. Based on their membership status, you plan to either continue mailing them coupons or remove them from your mailing list.

Because the application database does not have constraints defined at the database level, you must manually define constraints between the tables ADDRESS, CUSTOMER, and CUSTS_WITH_INCOMPLETE_COUPONS.



In order to define constraints you must have access to the Enterprise Data Manager and be familiar with the Airline application data model.

After you define constraints, you generate an entity to archive the data and conduct data discovery searches.

The following table lists the tables and columns in the application where you want to define constraints:

Table	Columns
CUSTS_WITH_INCOMPLETE_COUPONS	- CUST_ID - FIRST_NAME - LAST_NAME
ADDRESS	- CUST_ID - ADDRESS_TYPE - ADDRESS - CITY - STATE - ZIP_CODE - EFFECTIVE_DATE - INEFFECTIVE_DATE
CUSTOMER	- CUST_ID - MEMBERSHIP_STATUS - MEMBER_SINCE_DATE - LAST_ACTIVITY_DATE - MILEAGE_BALANCE - LAST_NAME - FIRST_NAME

Step 1. Start Enterprise Data Manager

Open Enterprise Data Manager from Data Archive.

1. In Data Archive, select **Accelerators** > **Enterprise Data Manager**.

   The **Save As** window opens.
2. Save `RunEdm.jnlp` on the local machine.
3. To open Enterprise Data Manager, run `RunEdm.jnlp`.

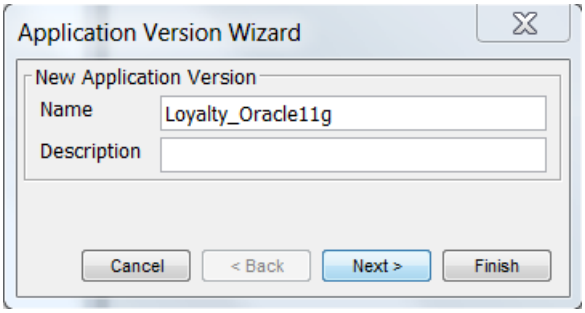
   Note: You must have Java 7 installed on the machine where you run Enterprise Data Manager.

Step 2. Create an Application Version

Create an application version of the application that you plan to archive.

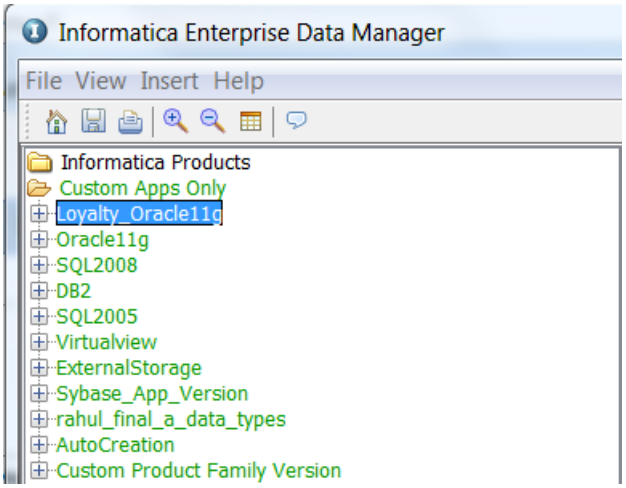
1. In Enterprise Data Manager, right-click **Custom Apps Only** on the **Explorer** pane.
2. Select **New Application Version**.
3. Enter the application version name.

   In this example, the application version name is "Loyalty_Oracle11g."



4. Click **Finish**.
5. Click the **Save** icon.

   The Loyalty_Oracle11g application version appears below the Custom Apps Only application.



Step 3. Import Metadata from the Source Database

To import table metadata for the Airline application, first define a connection to the source database and then specify the application module or schema to import.

When you import metadata, you import a list of tables and other metadata from the source database.

1. In Enterprise Data Manager, expand the application **Custom Apps Only** in the **Explorer** pane.

   The list of application versions appear.
2. Click the application version that you created.
3. Click **File** > **Import Metadata from Database**.

   The **Connect to Import Metadata from Database** window appears.
4. In the **Connect to Import Metadata from Database** window, create a connection to the Airline source database. Configure the following parameters to create a connection:

   Database Type

   The type of database that you want to connect to.

   Database Host

   The name of the machine that hosts the source data.

   Database Port

   The port number that the source database uses.

   Service Name

   Unique identifier or system identifier for the source database server.

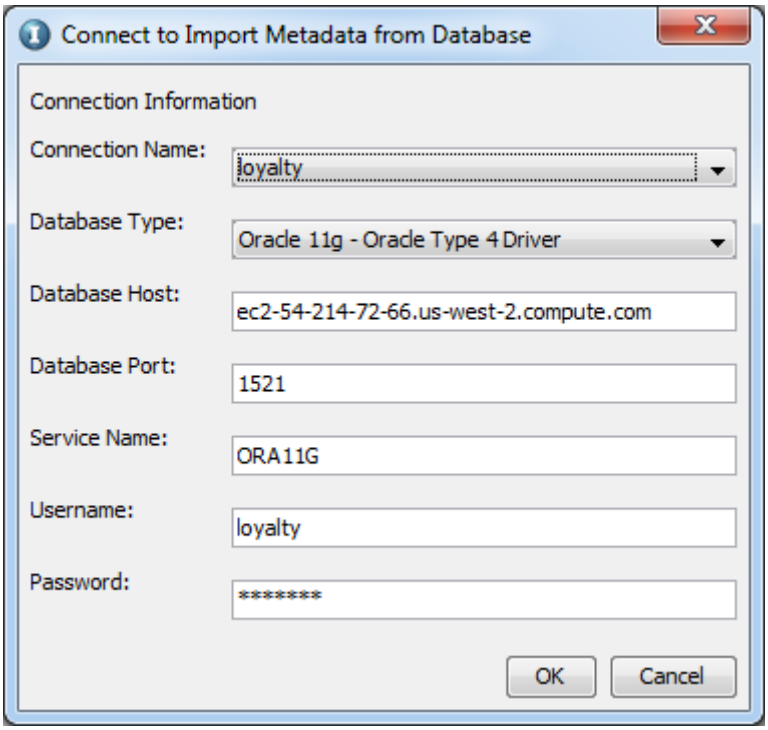
   User Name

   The name of the user that connects to the source database. The user is the owner of the application module and tables that you want to import the metadata for.
   For Oracle, the user name is the same as the name of the application module.

Password

The password for the database user name.

In this example, the connection is named "loyalty."

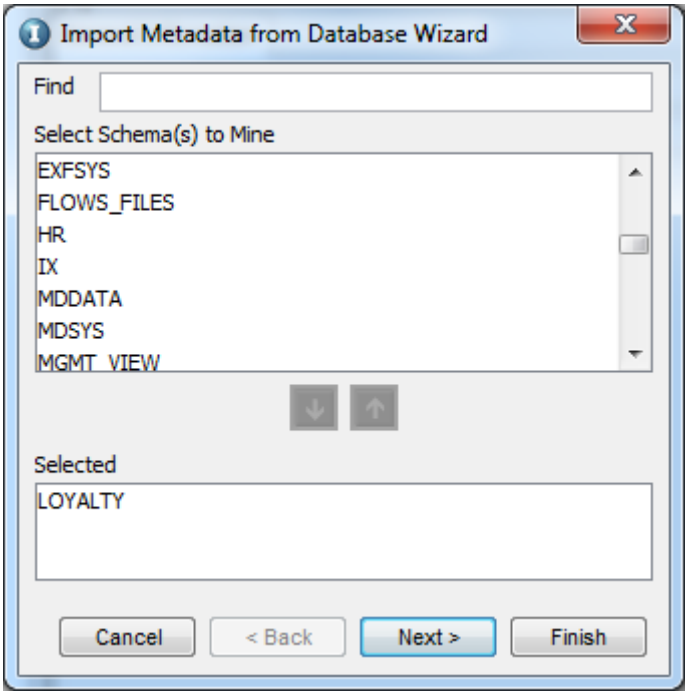


5. Click **OK**.

   The **Import Metadata from Database Wizard** opens.

6. Select the schemas that you want to import metadata from. Double-click a schema to move it to the **Selected** box. Alternatively, select the schema and use the **Down** arrow.

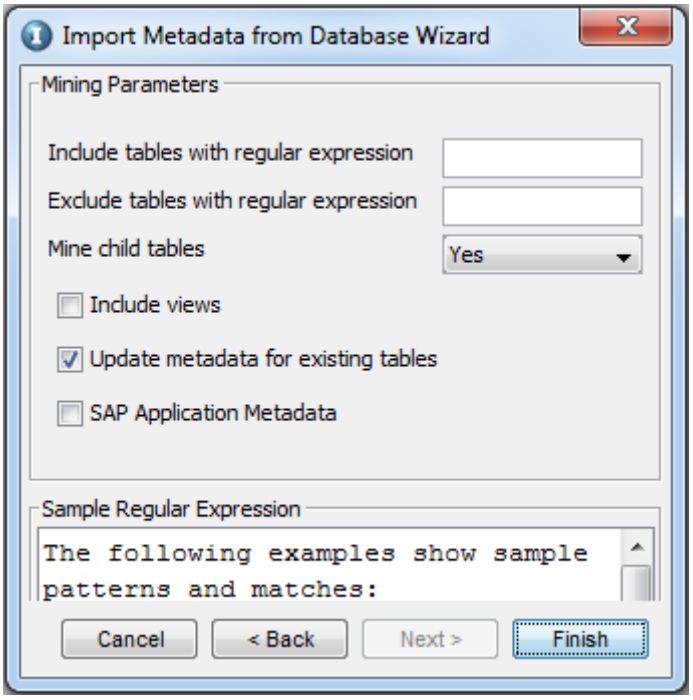
In this example, the legacy application contains one schema called LOYALTY.



7. Click **Next**.
8. Choose one of the following options:
   - **Submit Import Metadata as a Background Job**.
     Runs the job in the background. If you run the job in the background, you can continue to perform other tasks.
   - **Continue Import Metadata through EDM**.
     Runs the job in the foreground. If you run the job in the foreground, you must wait until the job completes to perform another task. Additionally, if you run the job in the foreground and you have a large volume of metadata to import, you might receive memory errors. You might want to run the job in the foreground if you have a low volume of metadata to import.

   In this example, you submit the metadata as a background job so that you can continue to perform other tasks.
9. Click **Next**.

10. Select **Update metadata for existing tables**.



11. Click **Finish**.

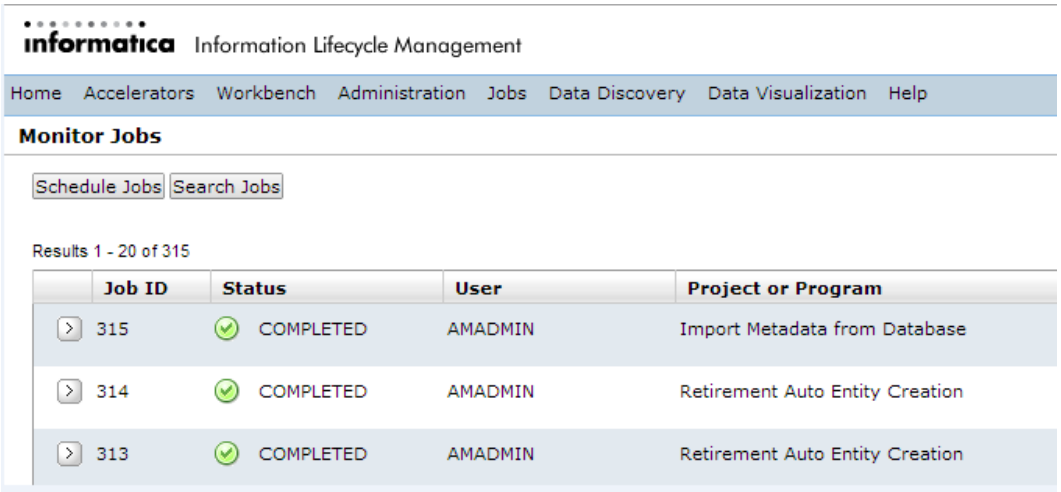
    You receive a message that the wizard started the Import Metadata from Database job. You can use the job ID in the message to monitor the job status in Data Archive.

12. Click **OK** to close the message window.

13. To view the status of the job, go to the Data Archive user interface.

14. Click **Jobs** > **Monitor Jobs**.

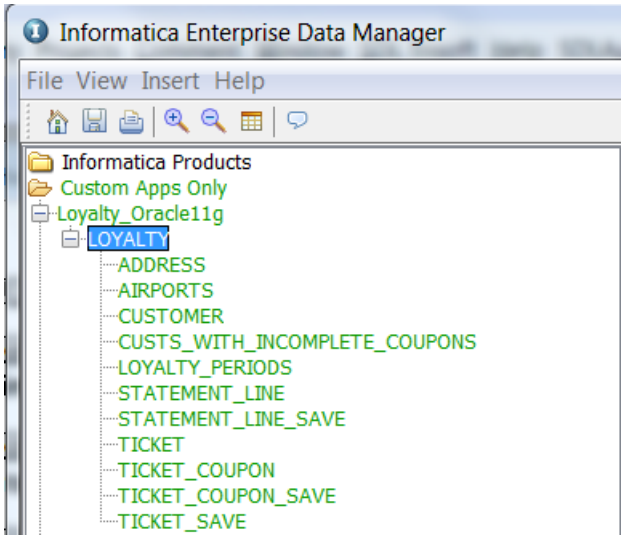
    When the job is complete, the job status is COMPLETED. You can expand the job icon on the left to view job details.



Step 4. Define the Primary Key

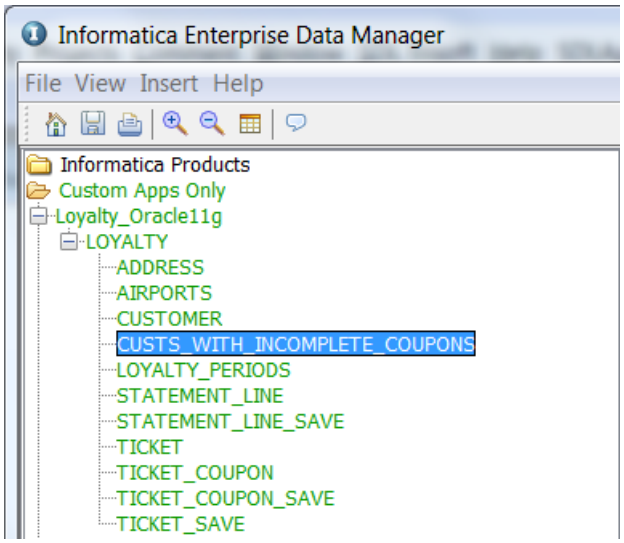
To create a primary key constraint, define a primary key on the table that you want to designate as the parent table.

1. Click **View** > **Refresh**.
2. Click **View** > **Constraints**.
3. Expand the application version that contains the parent table.
4. To view the tables, expand the application module.



5. Select the parent table.

   In this example, the parent table is CUSTS_WITH_INCOMPLETE_COUPONS.



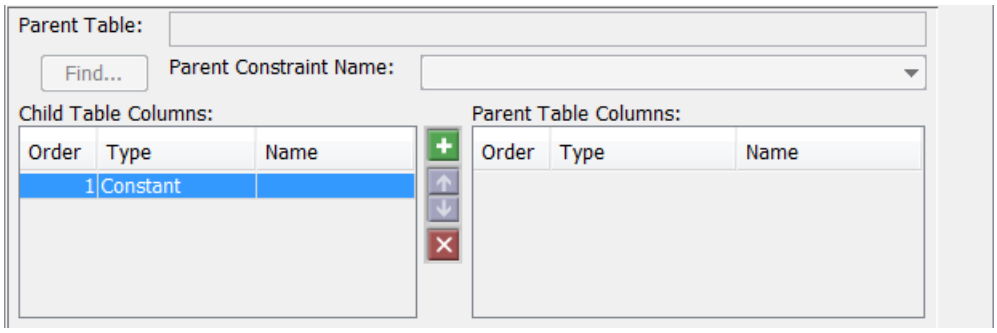
6. In the **Canvas** pane, click the **Constraints** tab.
7. Click the **Add** icon.

   A row appears in the constraints table.
8. Double-click the **Name** column and enter a name for the constraint.

   In this example, the constraint is named "Primary Key CUST_ID."

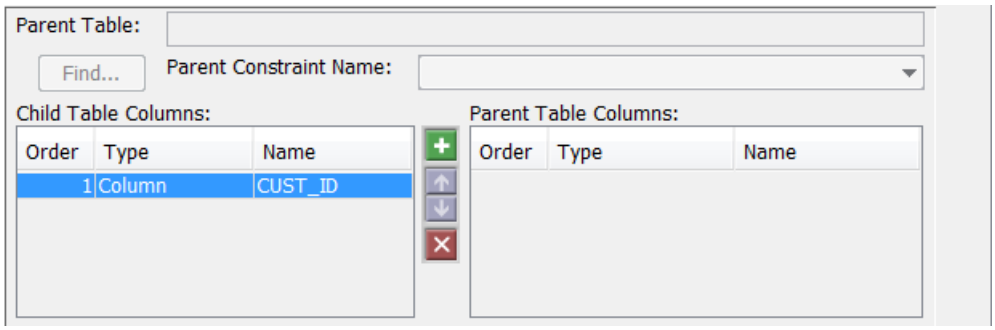
9. Click the **Type** column and select **Primary**.
10. Click **Enabled**.
11. In the **Details** pane, click the **Add** icon.

    A row appears in the **Child Table Columns** table.



12. Click the **Type** column and select column as the type of primary key.
13. Click the **Name** column and select the column to use as the primary key.

    In this example, the column is CUST_ID.



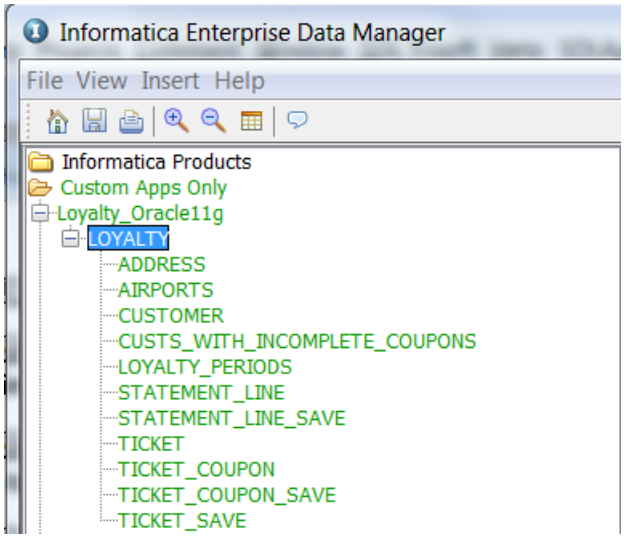
14. Click **Save**.

Step 5. Define the Foreign Keys

To create referential constraints, define foreign keys on the tables that you want to designate as child tables.

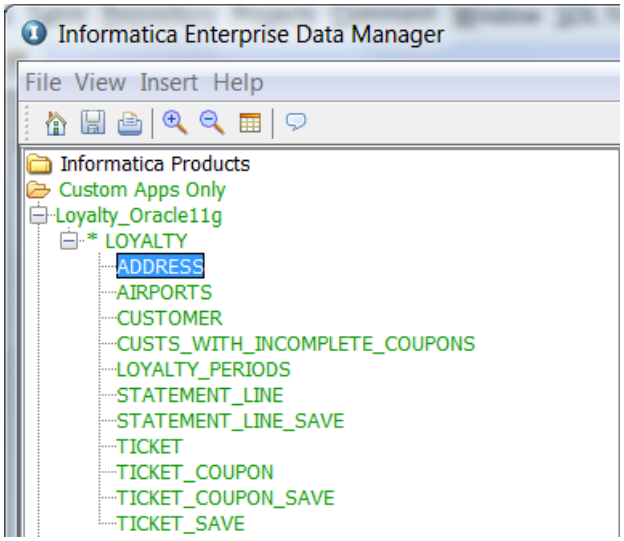
1. Click **View** > **Constraints**.
2. Expand the application version that contains the child table.

3. To view the tables, expand the application module.



4. Select the child table.

   In this example, you select the table ADDRESS.

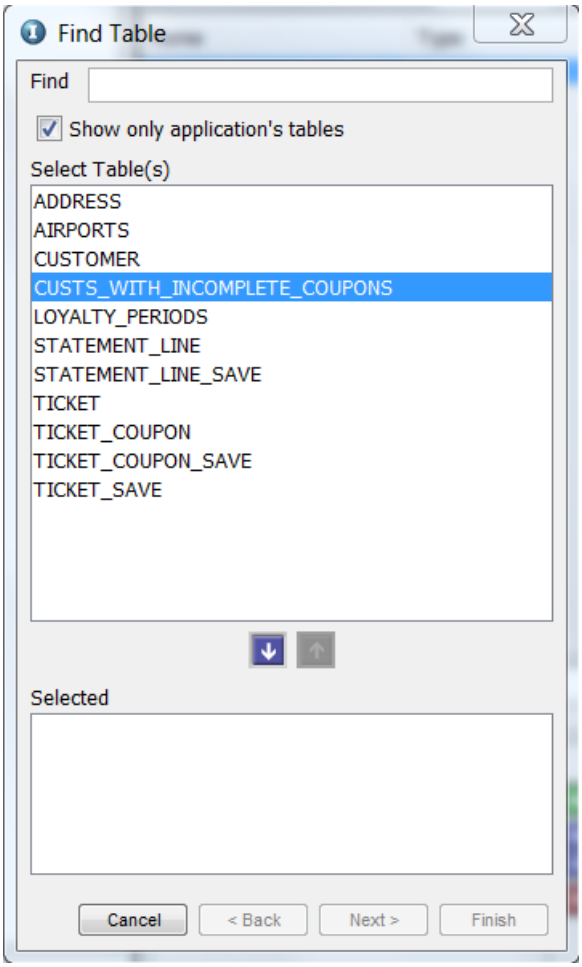


5. In the **Canvas** pane, click the **Constraints** tab.
6. Click the **Add** icon.

   A row appears in the constraints table.
7. Double-click the **Name** column and enter a name for the constraint.

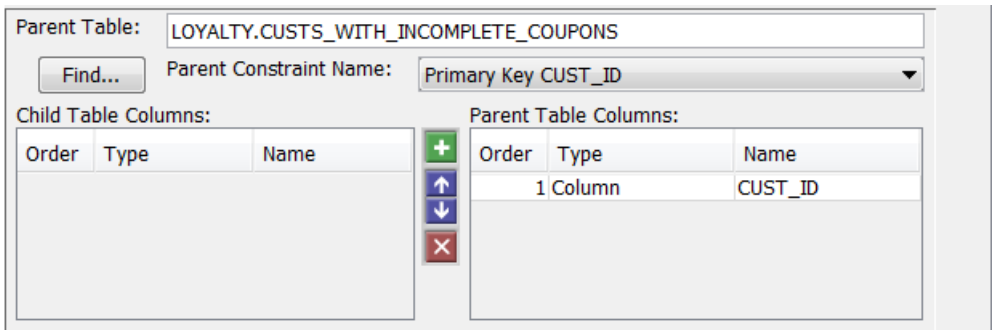
   In this example, the constraint is named "Address Foreign Key CUST_ID."
8. Click the **Type** column and select **Referential**.
9. Click **Enabled**.
10. In the **Details** pane, click **Find** to select the parent table with the primary key that you created.

The **Find Table** window appears.



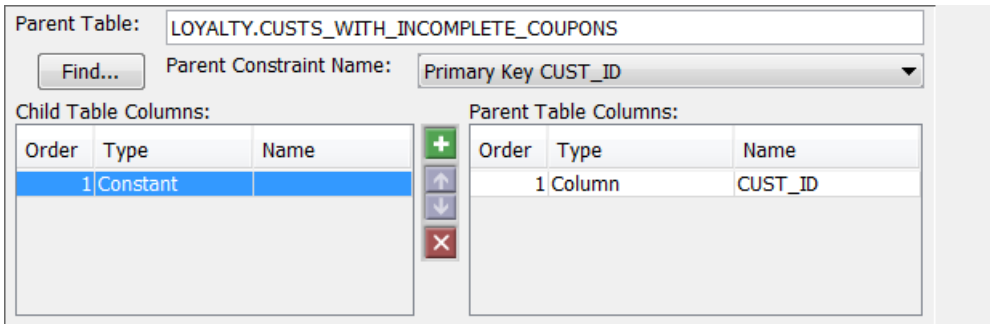
11. To move the table to the Selected box, select the parent table and click the **Down** arrow.
12. Click **Finish**.

    The selected parent table appears in the **Details** pane.
13. Next to **Parent Constraint Name**, select the primary constraint that you created.

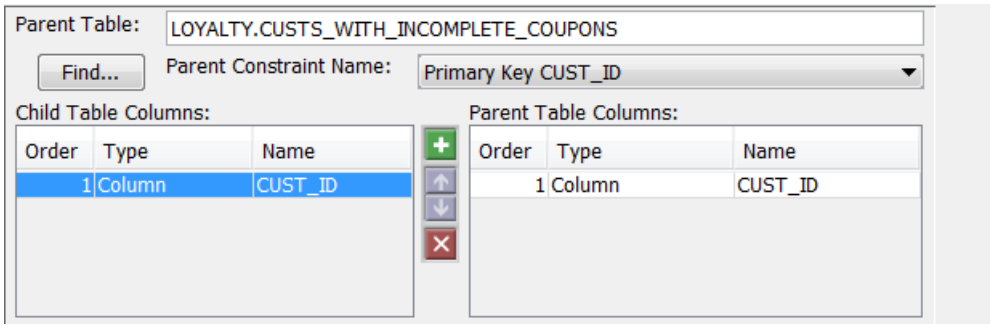


14. Click the **Add** icon.

A row appears in the Child Table Columns table.



15. Click the **Type** column and select column as the type of foreign key.
16. Click the **Name** column and select the column to use as the foreign key.



17. Click **Save**.
18. Repeat the process for each child table that you want to include in the entity.

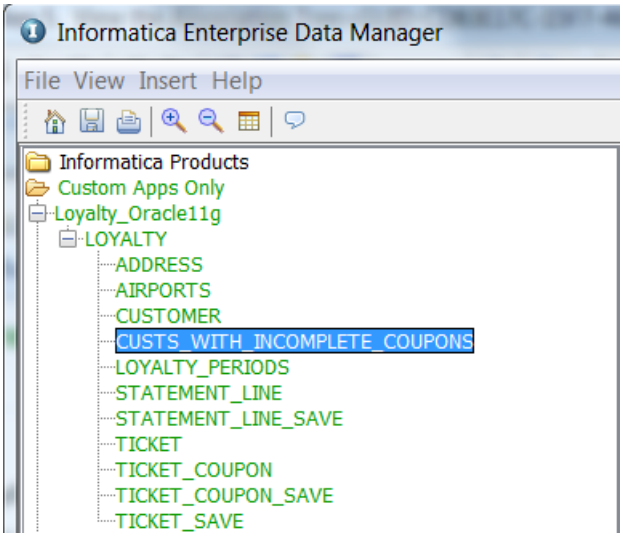
    In this example, you create referential constraints on the ADDRESS and CUSTOMER tables.

Step 6. View the Association Tree

After you create constraints, you can view a graphical representation of the table relationships.

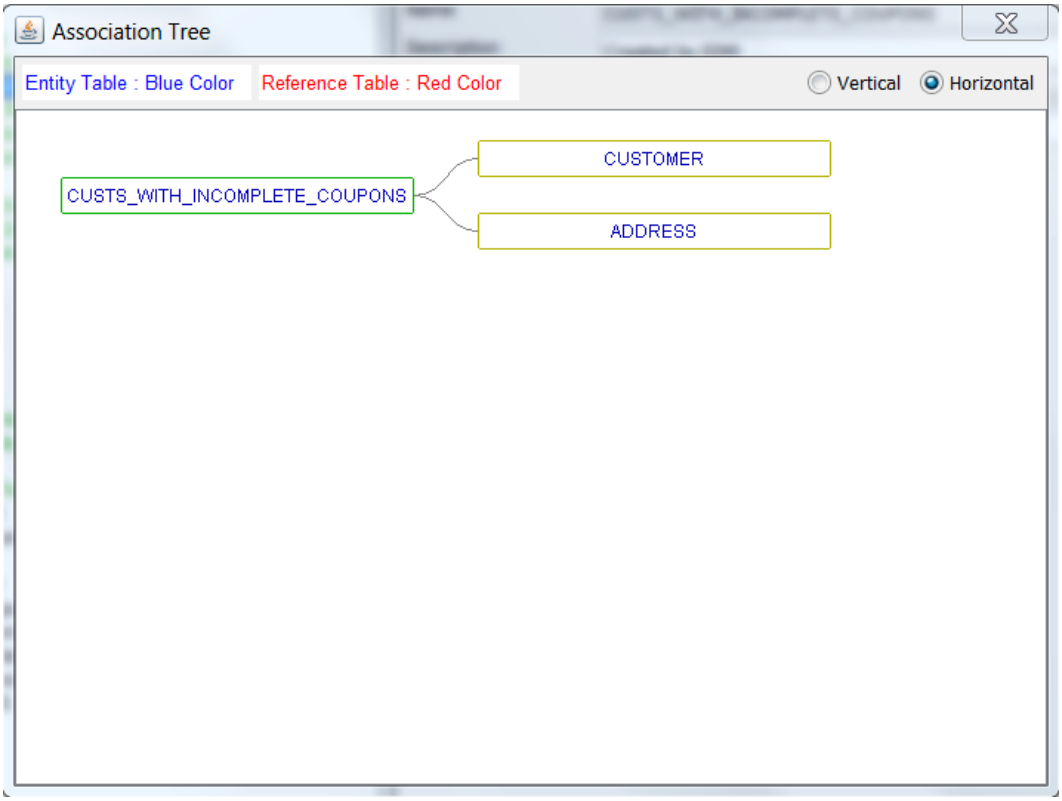
1. Click **View** > **Refresh**.
2. Click **View** > **Constraints**.

3. In the **Explorer** pane, select the parent table that you want to view table relationships for.



4. Click **View** > **Association Tree**.

   The **Association Tree** window appears.



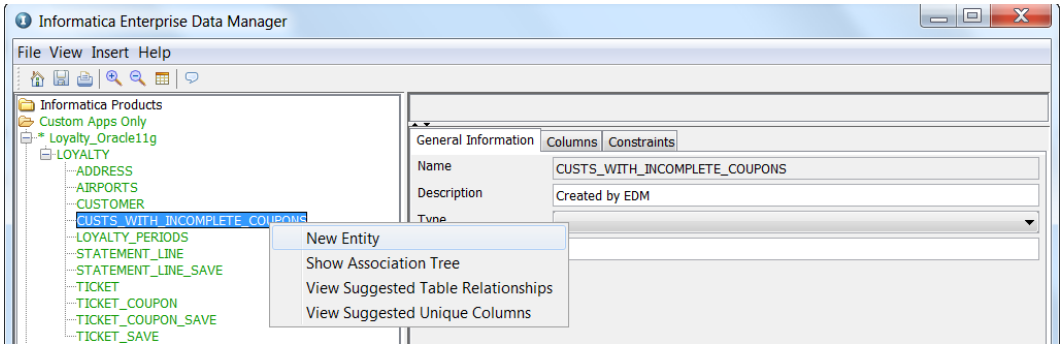
5. Verify that the constraints you created between the tables are correct.

Step 7. Create an Entity

After you define constraints, create an entity that includes the tables that you want to archive.

1. Click **View** > **Constraints**.
2. In the **Explorer** pane, select the application version that contains the entity tables.
3. Select and expand the application module that contains the entity tables.
4. Right-click the parent table that you created a primary constraint on.

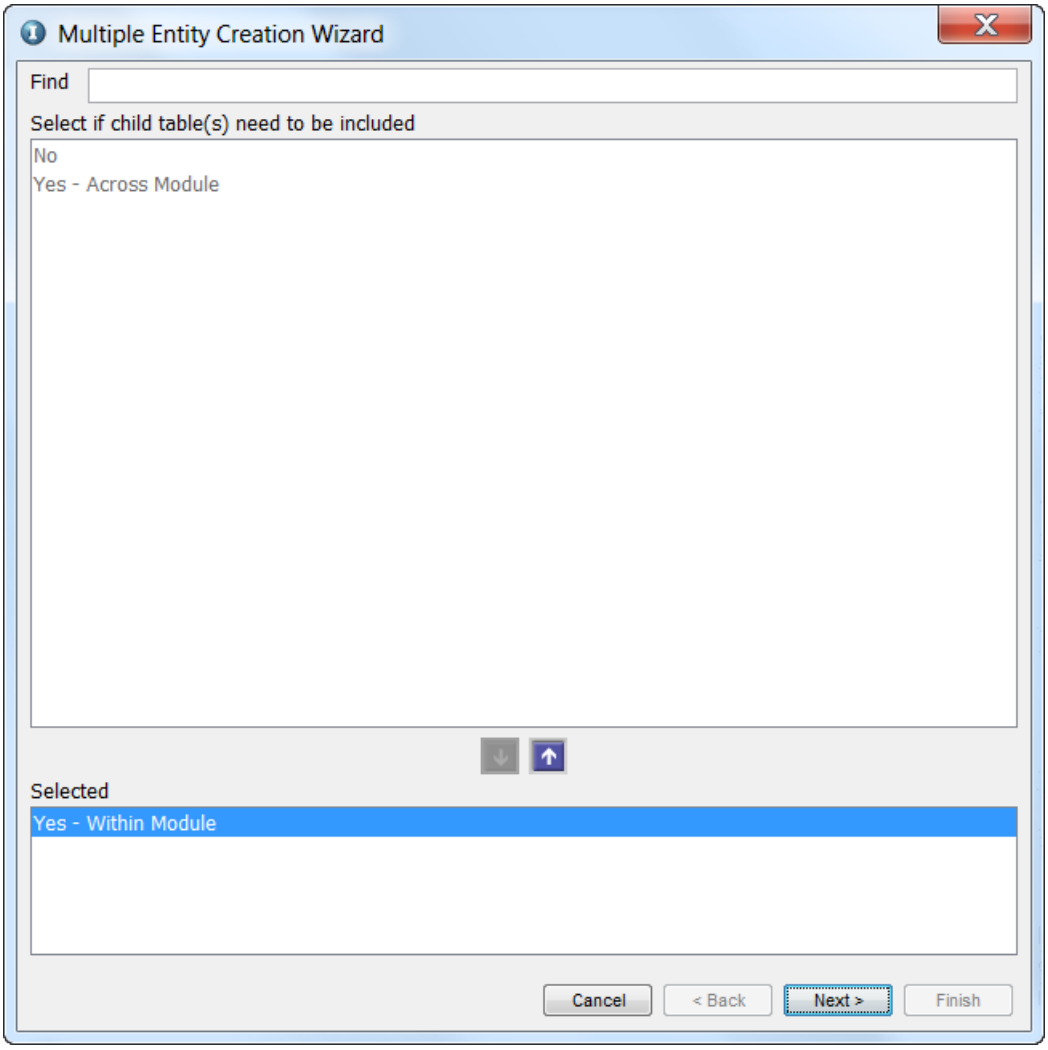
   This table will become the entity driving table.



5. Select **New Entity**.

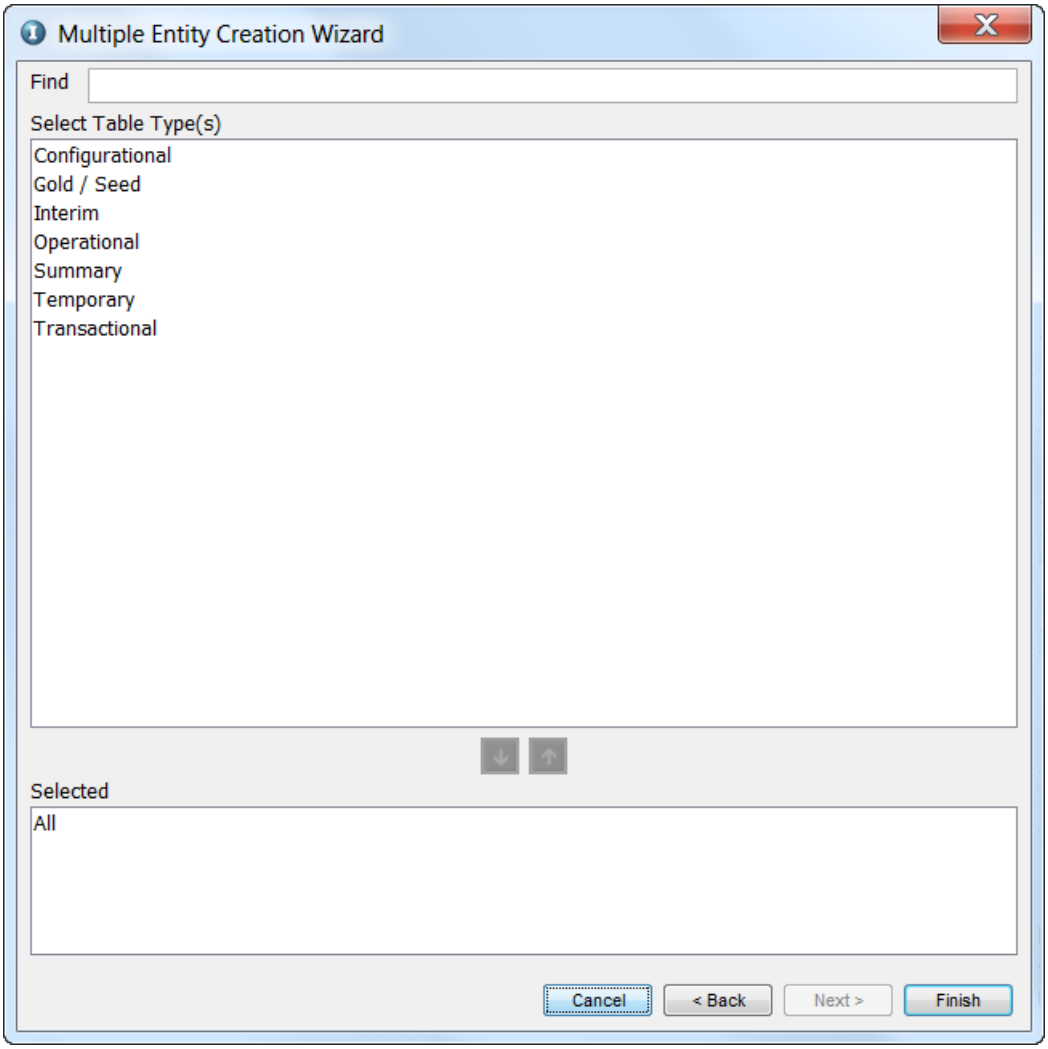
   The **Multiple Entity Creation Wizard** appears.

6. To ensure that the child tables you created are added to the entity, select **Yes - Within Module** and click the **Down** arrow.



7. Click **Next**.

8. Under Tables Types, select **All** and click the **Down** arrow.

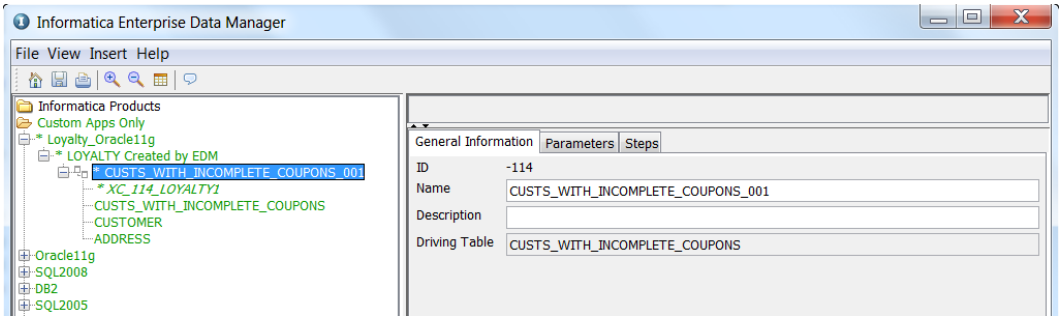


9. Click **Finish**.

   A message appears to inform you that the entity was successfully created.

10. Click **OK**.

11. To view the entity you created, expand the application version and module on the **Database Archive** tab.



12. Click **Save**.

Author