Informatica®
10.5

Mapping Specification Getting Started Guide

Informatica Mapping Specification Getting Started Guide
10.5
March 2021

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Publication Date: 2021-04-09

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Preface

Follow the instructions in the *Informatica® Mapping Specification Getting Started Guide* to learn how to use Informatica Analyst to create data objects and mapping specifications.

Informatica Resources

Informatica provides you with a range of product resources through the Informatica Network and other online portals. Use the resources to get the most from your Informatica products and solutions and to learn from other Informatica users and subject matter experts.

Informatica Network

The Informatica Network is the gateway to many resources, including the Informatica Knowledge Base and Informatica Global Customer Support. To enter the Informatica Network, visit https://network.informatica.com.

As an Informatica Network member, you have the following options:

- Search the Knowledge Base for product resources.
- View product availability information.
- Create and review your support cases.
- Find your local Informatica User Group Network and collaborate with your peers.

Informatica Knowledge Base

Use the Informatica Knowledge Base to find product resources such as how-to articles, best practices, video tutorials, and answers to frequently asked questions.

To search the Knowledge Base, visit https://search.informatica.com. If you have questions, comments, or ideas about the Knowledge Base, contact the Informatica Knowledge Base team at KB_Feedback@informatica.com.

Informatica Documentation

Use the Informatica Documentation Portal to explore an extensive library of documentation for current and recent product releases. To explore the Documentation Portal, visit https://docs.informatica.com.

If you have questions, comments, or ideas about the product documentation, contact the Informatica Documentation team at infa_documentation@informatica.com.

Informatica Product Availability Matrices

Product Availability Matrices (PAMs) indicate the versions of the operating systems, databases, and types of data sources and targets that a product release supports. You can browse the Informatica PAMs at https://network.informatica.com/community/informatica-network/product-availability-matrices.

Informatica Velocity

Informatica Velocity is a collection of tips and best practices developed by Informatica Professional Services and based on real-world experiences from hundreds of data management projects. Informatica Velocity represents the collective knowledge of Informatica consultants who work with organizations around the world to plan, develop, deploy, and maintain successful data management solutions.

You can find Informatica Velocity resources at http://velocity.informatica.com. If you have questions, comments, or ideas about Informatica Velocity, contact Informatica Professional Services at ips@informatica.com.

Informatica Marketplace

The Informatica Marketplace is a forum where you can find solutions that extend and enhance your Informatica implementations. Leverage any of the hundreds of solutions from Informatica developers and partners on the Marketplace to improve your productivity and speed up time to implementation on your projects. You can find the Informatica Marketplace at https://marketplace.informatica.com.

Informatica Global Customer Support

You can contact a Global Support Center by telephone or through the Informatica Network.

To find your local Informatica Global Customer Support telephone number, visit the Informatica website at the following link:
https://www.informatica.com/services-and-training/customer-success-services/contact-us.html.

To find online support resources on the Informatica Network, visit https://network.informatica.com and select the eSupport option.

CHAPTER 1

Getting Started with Informatica Analyst

This chapter includes the following topics:

- Introducing Informatica Analyst, 6
- Informatica Analyst Tutorial, 6

Introducing Informatica Analyst

Informatica Analyst is a web-based application client that data integration analysts can use to perform data integration tasks in an enterprise.

Analysts and developers use the Analyst tool for data-driven collaboration. Use the Analyst tool to create a mapping specification to define business logic that transforms and moves data from source to target.

Informatica Analyst Tutorial

During this tutorial, an analyst logs into the Analyst tool, creates a project and folder, creates data objects, and creates a mapping specification.

The following table describes the lessons you will perform in the tutorial:

Lesson	Description
Lesson 1. Setting up Informatica Analyst	Log in to the Analyst tool and create a project and folder for the tutorial lessons.
Lesson 2. Creating Data Objects	Import flat files and a table as data objects and preview the data.
Lesson 3. Creating a Mapping Specification	Create a mapping specification to develop the business logic that transforms and moves data from source to target and populates a target table.

The Tutorial Story

HypoStores Corporation is a national retail organization with headquarters in Boston and stores in several states. It integrates operational data from stores nationwide with the data store at headquarters on regular basis. It recently opened a store in Los Angeles.

The headquarters includes a central ICC team of administrators, developers, and architects responsible for providing a common data services layer for all composite and BI applications. The BI applications include a CRM system that contains the master customer data files used for billing and marketing.

HypoStores Corporation wants to integrate the Boston and Los Angeles data sets. HypoStores wants to create mapping specifications to develop business logic that transforms and moves data from sources to a target. Hypostores can then leverage the data in the target to run reports.

CHAPTER 2

Lesson 1. Setting Up Informatica Analyst

This chapter includes the following topics:

- Setting Up Informatica Analyst Overview, 8
- Task 1. Log In to Informatica Analyst, 9
- Task 2. Create a Project, 9
- Task 3. Create a Folder, 9
- Setting Up Informatica Analyst Summary, 10

Setting Up Informatica Analyst Overview

Before you start the lessons in this tutorial, you must set up the Analyst tool. To set up the Analyst tool, log in to the Analyst tool and create a project and a folder to store your work.

The Informatica domain is a collection of nodes and services that define the Informatica environment. Services in the domain include the Analyst Service and the Model Repository Service. The Analyst Service runs the Analyst tool, and the Model Repository Service manages the Model repository. When you work in the Analyst tool, the Analyst tool stores the assets that you create in the Model repository.

You must create a project before you can create assets in the Analyst tool. A project contains assets in the Analyst tool. A project can also contain folders that store related assets, such as data objects that are part of the same business requirement.

Objectives

In this lesson, you complete the following tasks:

- Log in to the Analyst tool.
- Create a project to store the assets that you create in the Analyst tool.
- Create a folder in the project that can store related assets.

Prerequisites

Before you start this lesson, verify the following prerequisites:

- An administrator has configured a Model Repository Service and an Analyst Service in the Administrator tool.

- You have the host name and port number for the Analyst tool.
- You have a user name and password to access the Analyst Service. You can get this information from an administrator.

Timing

Set aside 5 to 10 minutes to complete this lesson.

Task 1. Log In to Informatica Analyst

Log in to the Analyst tool to begin the tutorial.

1. Start a Microsoft Internet Explorer or Google Chrome browser.
2. In the Address field, enter the URL for Informatica Analyst:

   ```
   http[s]://<fully qualified host name>:<port number>/analyst
   ```

3. If the domain uses LDAP or native authentication, enter your user name and password on the login page.
4. Select **Native** or the name of a specific security domain.

   The Security Domain field appears when the Informatica domain uses LDAP or Kerberos authentication. If you do not know the security domain that your user account belongs to, contact the Informatica domain administrator.
5. Click **Log In**.

   The Analyst tool opens on the **Start** workspace.

Task 2. Create a Project

In this task, you create a project to contain the assets that you create in the Analyst tool. Create a tutorial project to contain the folder for the project.

1. On the **Manage** header, click **Projects**.

   The **Projects** workspace appears.
2. From the **Actions** menu, click **New** > **Project**.

   The **New Project** window appears.
3. Enter your name prefixed by "Tutorial_" as the name of the project.
4. Click **OK**.

Task 3. Create a Folder

In this task, you create a folder to store related assets. You can create a folder in a project or another folder. Create a folder named Customers to store the assets related to the data quality project.

1. In the **Projects** panel, select the tutorial project.

2. From the **Actions** menu, click **New** > **Folder**.

   The **New Folder** window appears.
3. Enter Customers for the folder name.
4. Click **OK**.

   The folder appears under the tutorial project.

Setting Up Informatica Analyst Summary

In this lesson, you learned that the Analyst tool stores assets in projects and folders. A Model repository contains the projects and folders. The Analyst Service runs the Analyst tool. The Model Repository Service manages the Model repository. The Analyst Service and the Model Repository Service are application services in the Informatica domain.

You logged in to the Analyst tool and created a project and a folder.

Now, you can use the Analyst tool to complete other lessons in this tutorial.

CHAPTER 3

Lesson 2. Creating Data Objects

This chapter includes the following topics:

- Creating Data Objects Overview, 11
- Task 1. Create the Customers Flat File Data Object, 12
- Task 2. Create the Accounts Flat File Data Object, 12
- Task 3. Create the Customer_Accounts Table Data Object, 13
- Task 4. Preview the Data Object, 14
- Creating Data Objects Summary, 14

Creating Data Objects Overview

In the Analyst tool, a data object is a representation of data based on a flat file or relational database table. You create a flat file or table data object and then use the flat file and table data objects in a mapping specification.

Story

HypoStores keeps its customer data in flat files and relational tables. HypoStores needs to analyze the data and perform data integration tasks.

Objectives

In this lesson, you complete the following tasks:

1. Upload the flat files to the flat file cache location and create flat file data objects.
2. Import a target table data object into the Analyst tool.
3. Preview the data for the data objects.

Prerequisites

Before you start this lesson, verify the following prerequisites:

- You have completed lesson 1 in this tutorial.
- You have the MySupport account to download the flat files and SQL script file to use in the lesson.
- You have the Accounts.txt and Customers.txt flat files. You can download the Accounts.txt file here and the Customers.txt file here.
- You have the Oracle client installed to create the Customer_Accounts target table data object.
- You have the connection to the Oracle database.

- You have the target.sql table. You can download the script here. Use Oracle SQL Plus to run SQL statements to create a target table.

Timing

Set aside 10 to 15 minutes to complete this lesson.

Task 1. Create the Customers Flat File Data Object

In this task, you use the **Add Flat File** wizard to create a flat file data object from Customers.csv.

1. On the **New** header, click **Flat File Data Object**.

   The **Add Flat File wizard** appears.
2. Select **Browse and Upload**, and click **Choose File** to browse to the location of Customers.csv.
3. Accept the default **Delimited** option.
4. Click **Next**.
5. Under **Specify lines to import**, select **Import from first line** to import column names from the first non-blank line.
6. Click **Show**.

   The details panel updates to show the column headings from the first row.
7. Click **Next**.

   The **Column Attributes** panel shows the datatype, precision, scale, and format for each column.
8. Edit the following column attributes:

Column Name	Datatype	Precision	Scale
CHECKING_BALANCE	Number	38	0
SAVINGS_BALANCE	Number	38	0

9. Click **Next**.
10. Select the Customers folder in the **Folders** panel where you want to add the flat file.

    The **Flat Files** panel displays the flat files that exist in a project or folder.
11. Click **Finish**.

    The Analyst tool displays the data preview for the Customers flat file data object on the **Data Preview** tab. View the properties for the flat file on the **Properties** tab.

Task 2. Create the Accounts Flat File Data Object

In this task, you use the **Add Flat File** wizard to create a flat file data objects from the Accounts data file.

1. On the **New** header, click **Flat File Data Object**.

   The **Add Flat File wizard** appears.

2. Select **Browse and Upload**, and click **Choose File** to browse to the location of Accounts.csv.
3. Accept the default **Delimited** option.
4. Click **Next**.
5. Under **Specify lines to import**, select **Import from first line** to import column names from the first non-blank line.
6. Click **Show**.

   The details panel updates to show the column headings from the first row.
7. Click **Next**.

   The **Column Attributes** panel shows the datatype, precision, scale, and format for each column.
8. Click **Next**.
9. Select the Customers folder in the **Folders** panel where you want to add the flat file.

   The **Flat Files** panel displays the flat files that exist in a project or folder.
10. Click **Finish**.

    The Analyst tool displays the data preview for the Accounts flat file data object on the **Data Preview** tab. View the properties for the flat file on the **Properties** tab.

Task 3. Create the Customer_Accounts Table Data Object

In this task, you use the **Add Tables Wizard** to add a table to a project. To add a table, select the connection, select the schema and tables, and add the table.

1. On the **New** header, click **Table Data Object**.

   The **New Table** wizard appears.
2. Select a connection.
3. Select the Customer_Accounts table.
4. Click **Next**.
5. Select the Customers folder in the **Folders** panel where you want to add the table.

   The **Tables** panel displays the tables that exist in the project or folder.
6. Click **Finish**.

   The Customer_Accounts table data object appears in the folder contents for the Customers folder.

Task 4. Preview the Data Object

In this task, you preview the data for the table flat file data object to review the structure and content of the data.

1. Open the **Library** workspace, and expand the **Projects** panel to select a flat file or table data object from a project or folder.

   For example, select the Customers flat file data object from the Customers folder in the tutorial project.

   The Analyst tool displays the data preview for the flat file or table on the **Data Preview** tab.

2. Click the **Properties** tab.

   The Analyst tool displays the name, type, description, and location or file path of the flat file data object in the project or folder in the **Properties** panel. The Analyst tool displays the connection name, Data Object Model name, table name, and schema name for the table object in the project or folder in the **Properties** panel. You can preview column metadata for tables and flat files and data quality results for other object types in the **Columns** panel.

Creating Data Objects Summary

In this lesson, you learned that flat file and table data objects are representations of data based on a flat file. You learned that you can create flat file and table data objects and preview the data in it.

You uploaded two flat files and created flat file data objects. You imported a relational table and created a table data object. You previewed the data for the data objects, and viewed the properties for the data objects.

After you create a flat file data object, you can use it as a source in a mapping specification in Lesson 3. After you create a table data object, you can use it as a target in a mapping specification in Lesson 3.

CHAPTER 4

Lesson 3: Creating a Mapping Specification

This chapter includes the following topics:

- Mapping Specification Overview, 15
- Task 1. Create a Mapping Specification, 16
- Task 2. Edit the Customer_Accounts Target, 17
- Task 3. Add a Simple Filter, 17
- Task 4. Create a Rule, 17
- Task 5. Load the Mapping Specification Results to the Target, 18
- Creating a Mapping Specification Summary, 18

Mapping Specification Overview

A mapping specification is an asset that describes the movement and transformation of data from a source to a target. Use a mapping specification to define business logic that populates a target table with data that you can leverage to report on the target table.

Story

HypoStores wants to develop business logic that can populate a target table with the current balance for each branch in a financial organization. You are the analyst who is responsible for developing a mapping specification that generates current balance data for active customer accounts for a set of financial products in the target table.

Objectives

In this lesson, you complete the following tasks:

1. Create a mapping specification with two sources and a target.
2. Add a simple filter to the mapping specification.
3. Add a rule to the mapping specification.
4. Load the results of the mapping specification to a target.

Prerequisites

Before you start this lesson, verify the following prerequisites:

- You have completed Lessons 1 and 2 in this tutorial.

Timing

Set aside 10 to 15 minutes to complete this lesson.

Task 1. Create a Mapping Specification

In this task, you create a mapping specification with two sources and a target. You specify a normal join between the sources.

1. From the **New Assets** panel in the **Design** workspace, click **Mapping Specification**.

   The **New Mapping Specification** window appears.
2. Enter Customer_Data as the mapping specification name.
3. Select the Customers folder in your tutorial project.
4. Click **Next**.
5. On the **Sources** panel, click the **Add Source Object** icon and select the Accounts and Customers sources from the Customers folder.

   Use the check boxes to select both sources.
6. Click **OK**.
7. Click **Next**.
8. On the **Joins** panel, click the **New Join** icon to create a join and select the edit options to configure the join.
9. In the **Name** field, enter CustomerData.
10. In the **Join Type** field, accept the default **Normal**.
11. Select Accounts as the Master table and Customers as the Detail table.
12. Select **Simple Join**.
13. On the **Join Conditions** panel, modify the join condition to display those customer accounts that have purchased financial products.

    Specify the following join condition:

    - Master Column Name. Select the ACCOUNTS.ACCOUNT_CUSTOMER column.
    - Operator. Select the "=" operator.
    - Detail Column Name. Select the CUSTOMERS.CUSTOMER column.
14. Click **OK**.
15. Click **Next**.
16. On the **Target Object** panel, select the Customer_Accounts table data object.
17. Click **Finish**.

    The Customer_Data mapping specification opens on the **Column Mapping** tab.

Task 2. Edit the Customer_Accounts Target

In this task, you map source and target columns in a mapping specification based on column names.

1. From the **Actions** menu, click the **Automap Columns** icon.

   The **Automap** window appears.
2. Accept the default **Simple** option.
3. Select **Automap by column name**.
4. Click **Save**.

   The Analyst tool maps the columns by name on the **Transformations and Target Columns** panel.
5. From the **Actions** menu, click **Validate Mapping Specification** to validate the mapping specification.

   The Analyst tool displays a message that states the mapping specification is valid.
6. Click **OK**.

Task 3. Add a Simple Filter

In this task, you add a simple filter to the mapping specification to hide the "B" accounts that have the Bronze status and are no longer valid.

1. On the **Column Mapping** tab, click **Actions** > **Edit** > **Filter**.

   The **Edit Mapping Specification** window appears.
2. Click the **New Filter** icon.

   The **New Filter** window appears.
3. Accept the default **Simple** filter.
4. On the **Condition** panel, configure the following filter condition:

   ```
   ACCOUNTS.ACCOUNTS_TYPE != B
   ```
5. Click **Refresh** to preview the data.
6. Click **OK**.
7. Click **Save**.
8. From the **Actions** menu, click **Validate Mapping Specification** to validate the mapping specification.

   The Analyst tool displays a message that states the mapping specification is valid.
9. Click **OK**.

Task 4. Create a Rule

In this task, you create a rule that sums up the current balances from the checking and savings accounts that have increased by 15 percent.

1. On the **Column Mapping** tab, click **Actions** > **Edit** > **Rules**.

   The **Edit Mapping Specification** window appears.

2. Select the **New Rule** icon.

   The **New Rule** window appears.
3. Select **Create a rule**.
4. Click **Next**.
5. Enter CurrentBalance as the rule name.
6. On the Target Column Name, select the CURRENT_BALANCE target column.
7. Enter the following expression in the Expression Editor:

   ```
   (CUSTOMERS.CHECKING_BALANCE+CUSTOMERS.SAVINGS_BALANCE)*1.15
   ```
8. Click the **Validate** icon to validate the expression.

   The Analyst tool displays a message that states the expression is valid.
9. Click **OK**.
10. Click **Finish**.
11. Click **Save**.

Task 5. Load the Mapping Specification Results to the Target

In this task, you load the results of the mapping specification to the Customer_Accounts target table in the Model repository. The Customer_Accounts target matches the structure and properties of the target in the mapping specification.

1. From the **Actions** menu, click **Export**.

   The **Export** window appears.
2. Select **Table**.
3. Click **Next**.

   The name for the mapping specification run is Customer_Data.
4. Click **Next**.
5. In the **Target Object** panel, select the CUSTOMER_ACCOUNTS target.
6. Click **Finish**.

   The Analyst tool displays a message that states you can click the job status tab link to monitor the mapping specification run.

Creating a Mapping Specification Summary

In this lesson, you learned that you can create a mapping specification to develop business logic that can populate a target table.

You created a mapping specification with two sources. When you created the mapping specification, you performed a normal join between the sources. You edited the target to map the source columns to the target columns and added a new row in the target to define the column properties for a new column. You renamed a row to match the name of a target table column. You added a simple filter to a target column. You created a

rule for another target column. You also validated the mapping specification during the development cycle. Finally, you loaded the results of the mapping specification to the target data object.

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