JDBC Adapter Service

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Duration: 30 minutes

In this tutorial you will create a JDBC Adapter Service to select customer data from the Persons table in an SQL Server database.

Prerequisites

1. **MS SQL Server 2008** or **2012** (any type, including the free **Express**) is installed and running on the local computer or one that is network accessible to the host that the **webMethods ESB (Integration Server)** free download is installed on. Refer to the MS SQL Server installation instructions that come with the MS product.

2. The **Persons** table is created and at least one row is entered in the table:

a.   Create the **Persons** table by executing the following SQL in your SQL Server database.

CREATE TABLE Persons(

PersonID int,

LastName varchar(255),

FirstName varchar(255),

Address varchar(255),

City varchar(255));

b.   Run the following INSERT statement to add a row to the Persons table:

INSERT INTO Persons VALUES(1, 'Doe', 'John', '100 Main St', 'Leesburg');

 3.   Put the appropriate MS SQL Server JDBC Driver jar file in the **<Software AG Installation Directory>\IntegrationServer\lib\jars\custom** directory and restart the Integration Server (IS).

4.   webMethods Integration Server & Software AG Designer are installed.

5.   webMethods Integration Server is up and running. Instructions on how to start the IS are found in the **Prerequisites** part of the 1. Create an IS Package and Folders (http://techcommunity.softwareag.com/pwiki/-/wiki/Main/webMethods+Flow+Tutorial+-+Create+an+IS+Package+and+Folders) FLOW tutorial.

6.   You must import the package: Start JDBC_Tutorial.zip (http://techcommunity.softwareag.com/protected/download/developer-communities/webmethods/FreeTrial/Start JDBC_Tutorial.zip) using these instructions: **Import an IS Package**

For this tutorial, it helps to have a basic knowledge of the Software AG Designer and the SQL Database language. Also, any JDBC Compliant DBMS can be used for this exercise. This tutorial assumes MS SQL Server. If another one is used, you would have to download the appropriate JDBC Driver from your database vendor and put it in the directory specified in prerequisite 3 above.

Step Outline

You create a JDBC Adapter Service with the following steps:

- Update a JDBC Adapter Connection
- Create the JDBC Adapter service
- Test the JDBC Adapter service

## Step 1: Update a JDBC Adapter Connection #

In this step: You update a JDBC Adapter Connection for a SQL Server database by logging into the Integration Server Administrator.

To log into the Integration Server from Firefox:

- select the **Firefox** browser icon next to the **Start** menu or select it from the Start Menu or open another browser:

- Direct your browser to http://<host>:<port> (http://<host>:<port>) e.g. http://localhost:5555 (http://localhost:5555)
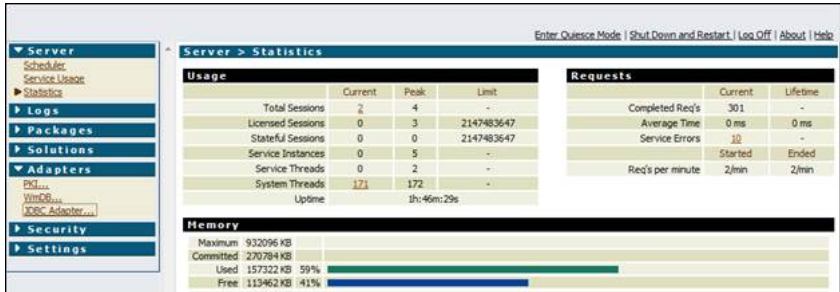- Firefox displays the Integration Server **Authentication** dialog:
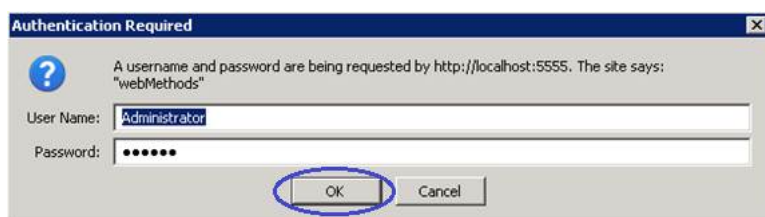
- Use the following values to log into the Integration Server:

Field	Value
Username:	Administrator
Password:	manage (default password for IS)

Note: These values may be stored from previous sessions. In this case, select OK.

- Firefox displays the **Integration Server Administrator** page:

- select **JDBC Adapter** from the **Adapters** menu:

- The Integration Server displays the **JDBC Adapter Administration** page.
- The **JDBC Adapter Administration** page lists the JDBC adapter connections configured for this server.
- select the **Edit** icon for the **JDBC_Tutorial:MyConnection** adapter connection to update it based on your database

credentials:

- Add your environment specific information to connect to your SQL Server database and save the

JDBC_Tutorial:MyConnection by clicking **Save Changes**:

Parameter	Value
serverName	Server that the DB is installed on: localhost, IP Address, or hostname
user	Database username (schema name) used to login to the DB
password and **Retype password**	Database password associated with the user above to login to the DB
databaseName	Database name that you created the **Person** table in

Note: If you use another DB Vendor, you will have to use the appropriate **DataSource Class** and **portNumber**.

- On the next page select the **No** link in the **Enabled** column to enable the **JDBC_Tutorial:MyConnection** JDBC

Adapter Connection:

- If the JDBC Adapter Connection enables successfully, you can move forward to Step 2. If not, read the error message

that displays and fix the issue before moving forward.

Step 2: Create a JDBC Adapter Service

In this step: You create a new JDBC Adapter service using the **New Adapter Service** wizard in the Software AG Designer application.

To create the JDBC Adapter service:

- Start **Software AG Designer** from the **Start Menu -> All Programs -> Software AG -> Tools -> Software AG Designer 9.5**.
- In the **Software AG Designer Welcome** page, click on the **Open the Service Development Perspective** link:
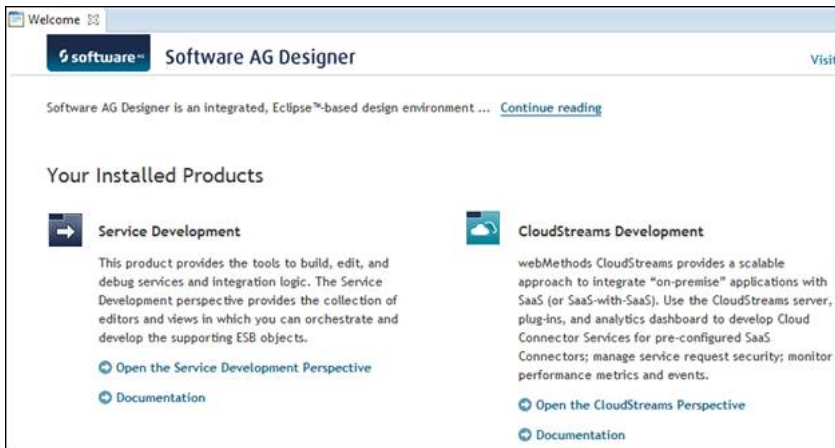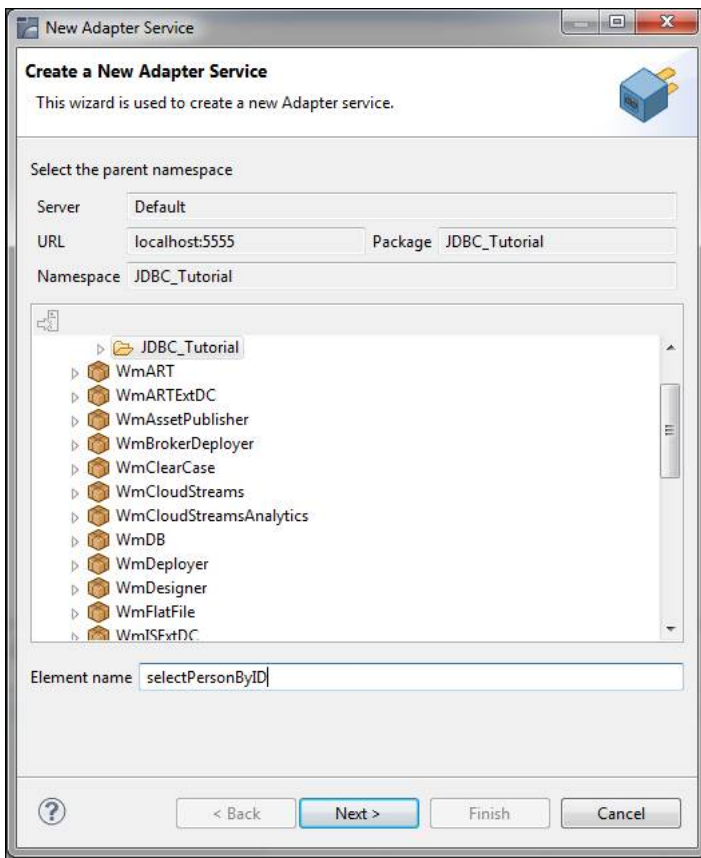
- In the **Package Navigator** view, expand **Default -> JDBC_Tutorial -> JDBC_Tutorial** to view the package's
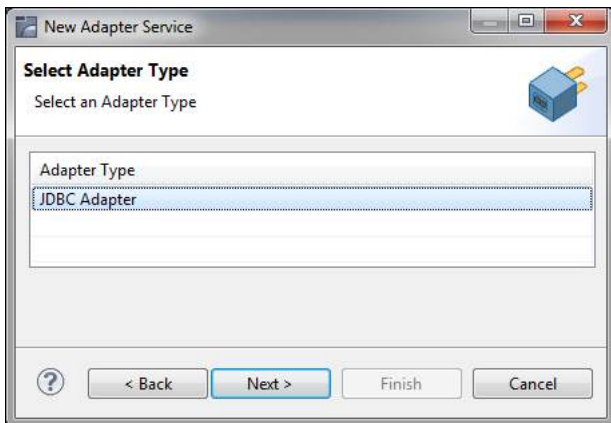
contents:
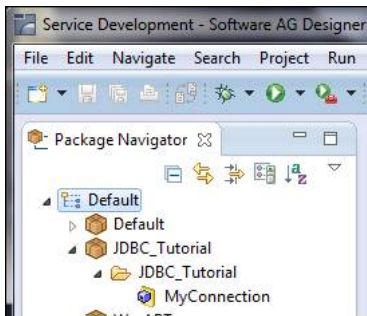
- Right click on the **JDBC_Tutorial** folder and select **New -> Adapter Service**
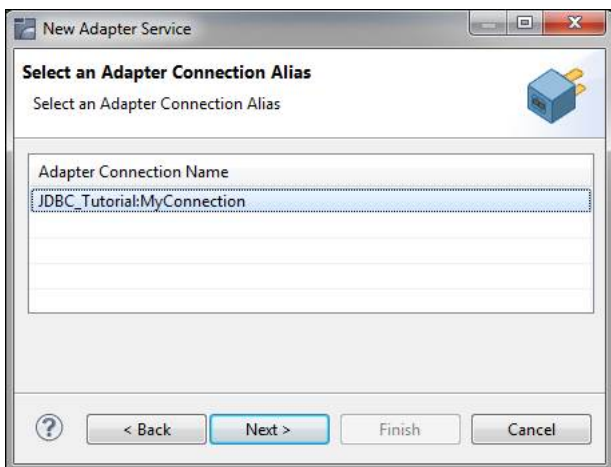

- Enter the **Element name** of **selectPersonByID** and click **Next>**:
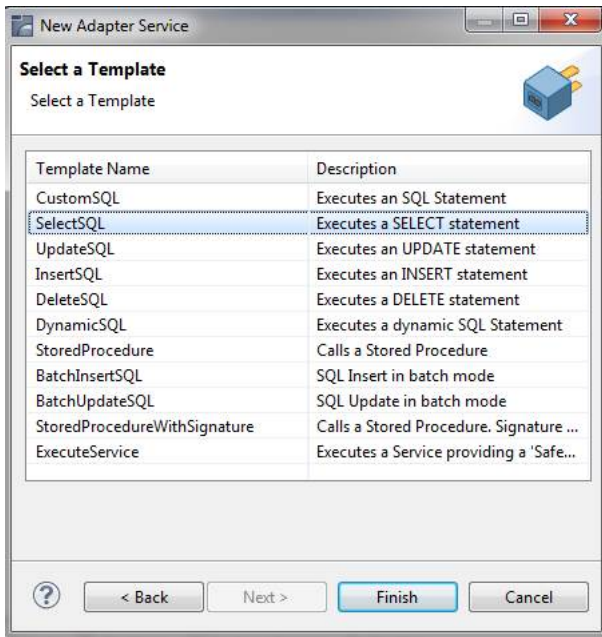
- In the New Adapter Service dialog, select **JDBC Adapter** and click the **Next >** button.

- Select your **JDBC_Tutorial:MyConnection** JDBC Adapter Connection that you updated in Step 1 and click **Next >**:


- Click the **SelectSQL** template to create an adapter service based on a database SELECT query and select the Finish **button:**

Note: You can specify a wide variety of database operations on the template selection list, including SQL, Stored Procedures, and Batch operations.

- Designer creates the new JDBC Adapter service based on the **SelectSQL** template and opens it in the editor:
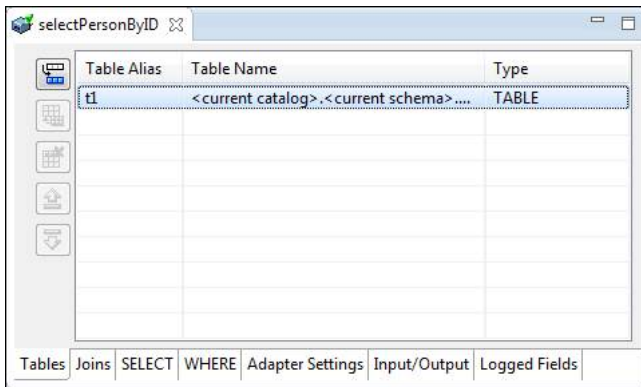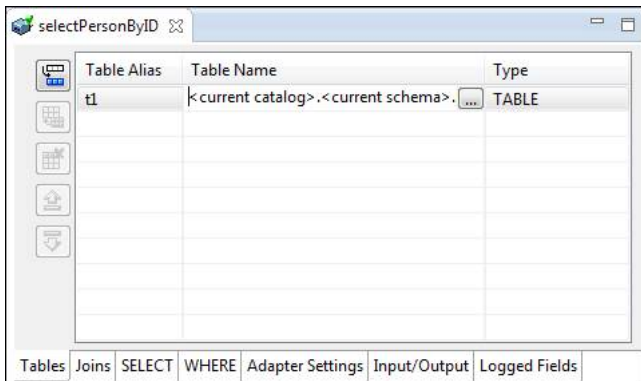

- You can now configure the adapter service.

Step 2: Configure the JDBC Adapter Service

In this step: You configure the JDBC Adapter service to return all the rows in the **Persons** database table.
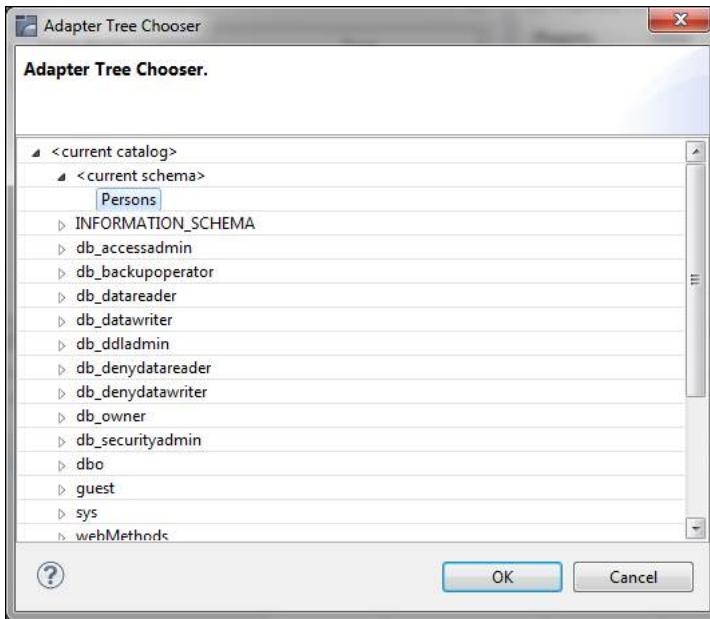
To configure the JDBC Adapter service:

- Click inside the cell under the **Table Name** column in the **t1** row and select the button that appears in the
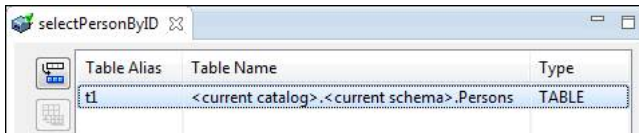
cell with the ellipsis on it:

- In the **Adapter Tree Chooser** dialog expand **<current catalog> -> <current schema>**, select the **Persons** table

and click **OK**:

Note: Designer displays a drop-down a list of all the SQL Server databases and tables that the user defined in the Adapter Connection has the authority to access.

- Your Adapter Service should look like the following:
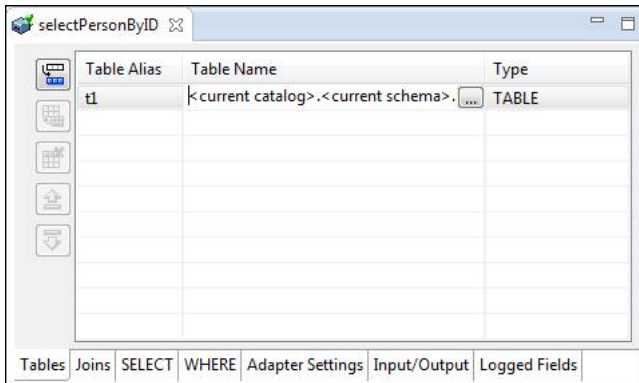

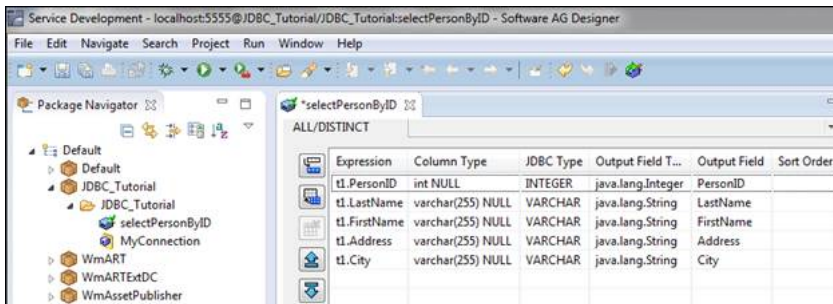- Click the **SELECT** tab and the **Fill in all rows to the table**

  button. Your completed Adapter

Service should look as follows:

- Click the **Save** button in the toolbar of Designer to save your work:

Note: You can delete columns from the query by highlighting the row and selecting the Remove Row

button. Also, you can specify a where clause in the **WHERE** tab to limit the rows returned from the table.

You have configured the JDBC Adapter service, and can now test the service.

## Step 3: Test the JDBC Adapter Service #

In this step: You test the JDBC Adapter service by running the service to return all the rows from the **Persons** table.
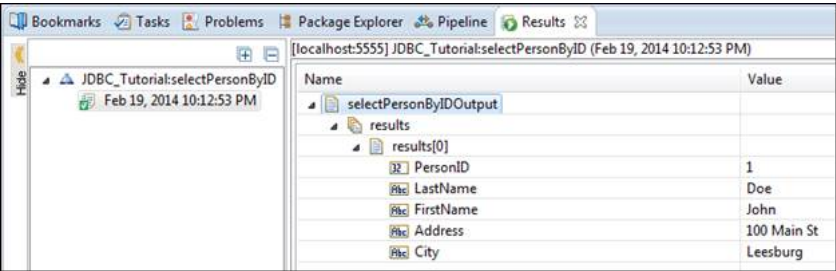
To test the JDBC Adapter service:

- Right-click on the **selectPersonByID** adapter service in the **Package Navigator** view and select **Run As -> 2 Run Service**:
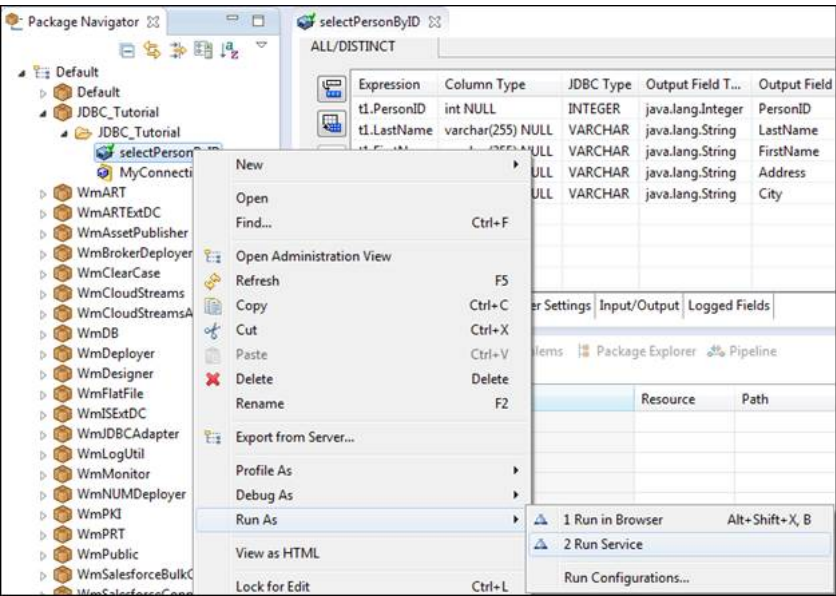
- Designer prompts you for any optional inputs. Click the **OK** button to test your adapter service:
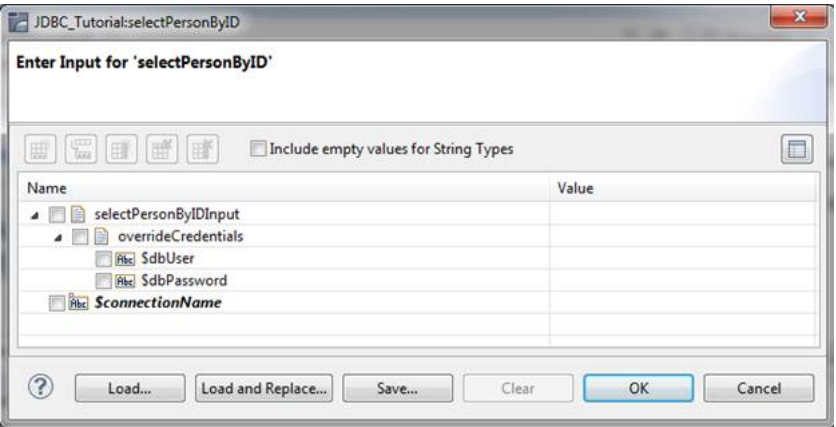
- You should see all the rows in the **Persons** database table in the **Results** view:

Note: You can also create JDBC Adapter Services to insert, update and/or delete rows from the **Persons** table.

Conclusion

You have updated a JDBC Adapter Connection to connect to your database, created a JDBC adapter service based on the SelectSQL template that returns all rows from the Persons table, and tested it.

To import the solution of this tutorial download End JDBC_Tutorial.zip (http://techcommunity.softwareag.com/protected/download/developer-communities/webmethods/FreeTrial/End JDBC_Tutorial.zip) (http://techcommunity.softwareag.com/protected/download/developer-communities/webmethods/End JDBC_Tutorial.zip) and follow the directions in the **Import an IS Package tutorial.** You will still have to enter the DB credentials and enable the JDBC Adapter Connection in the solution import according to Step 1 in this tutorial.