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**Table of Contents** [-]

Duration:  30 minutes

The following exercises will help you to sharpen basic skills needed to use the webMethods SAP Adapter. Exercises include discussions of the steps involved in performing the tasks listed. Finished packages are provided to show how services are built.

## Prerequisites #

To get the most value out of this tutorial, a basic working knowledge of webMethods ESB services is helpful. Please complete the introductory tutorial:

- *webMethods Flow Tutorial*
- 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.

In addition, a basic knowledge of Software AG Designer is helpful, but not required.

## Step Outline #

You use the webMethods SAP Adapter to communicate with SAP systems. The steps for establishing this communication are:

- Create a new IS Package and Folders
- Create an RFC Connection to SAP
- Create an SAP adapter service
- Run the adapter service

## Step 1: Create a new IS Package and Folders #

**In this Step:**  You will create a package to hold the SAP tutorial assets

1.  Open Software AG Designer and go to the **Service Development** perspective by selecting the **Service Development** perspective toolbar button or by selecting **Service Development** from the **Window -> Open Perspective -> Other…** dialog and click **OK**.

2.  From the **Package Navigator** view, right-click on **Default**, then select **File -> New -> Package**
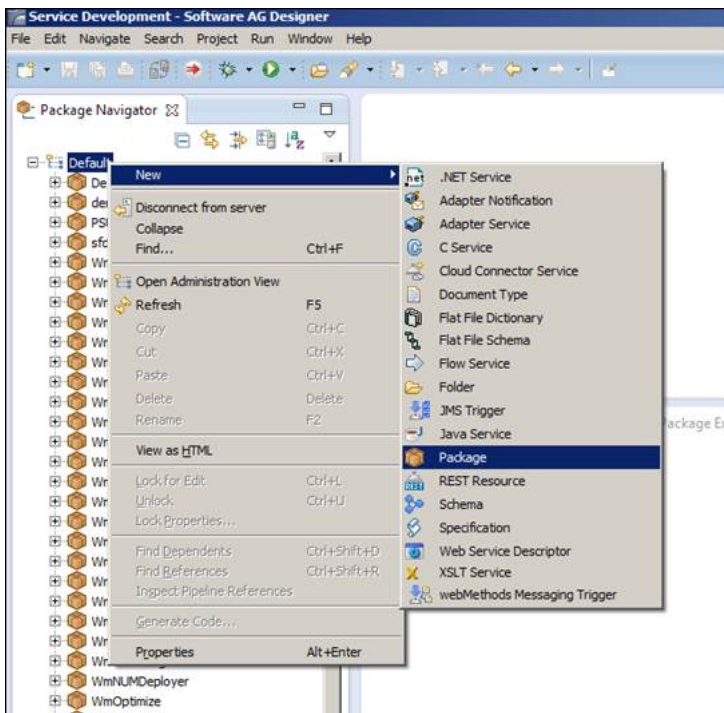


3.  In the **New Integration Server Package** dialog enter **demoSAP** in the **Package name:** field and click **Finish**.

4.  Create a folder hierarchy by right-clicking on the **demoSAP** package, select **New -> Folder**, enter **demosap** in the **Folder name:** field and click **Finish**.  Do this 2 more times to create 2 subfolders called **sap** and **services** by right-clicking on the **demosap** folder.  The package should look like the following:
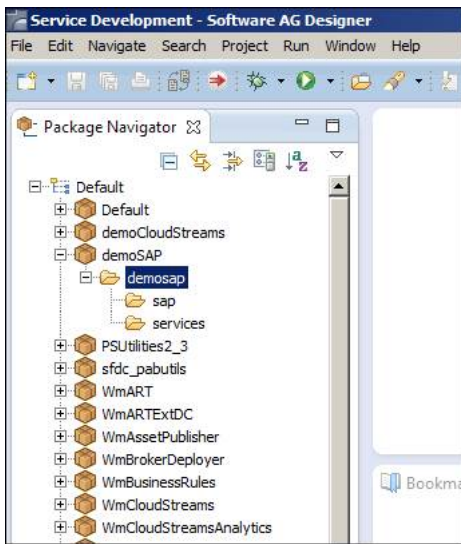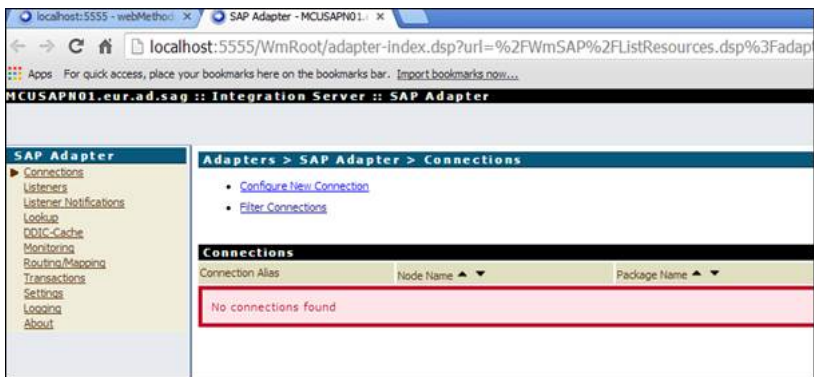
## Step 2: Configure an RFC connection to SAP #

**In this Step:** You will configure a synchronous RFC connection with your SAP system.

1. Open a web browser and navigate to the Integration Server administrator page located at **<webMethods Integration Server (localhost)>:5555.**
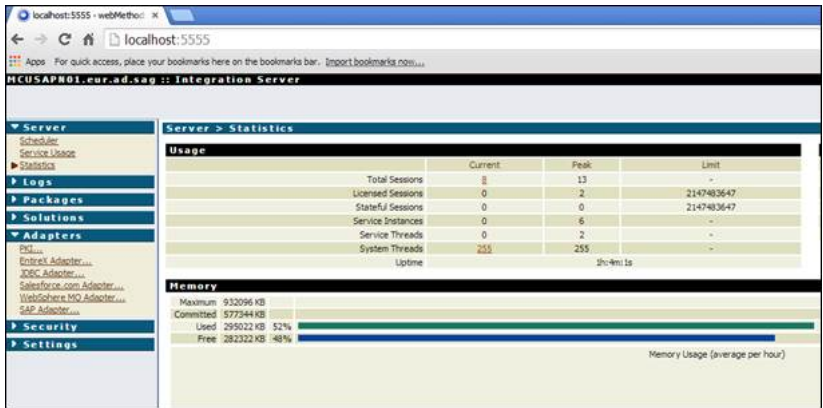


2. Expand the **Adapters** menu header on the left menu bar and click the **SAP Adapter…** link.



3. In the **SAP Adapter Administration** page click the **Configure New Connection** link to create a new SAP Adapter Connection to your SAP System. This starts a wizard that walks the user through creating a new connection.

4. Click the **RFC connection** link.
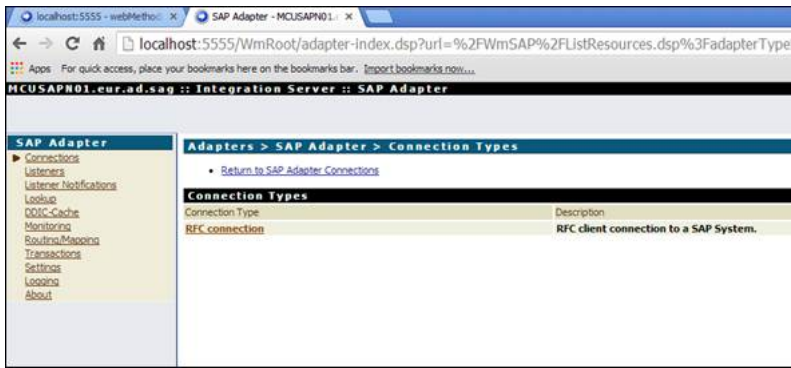
5.  The SAP adapter connection configuration page is now displayed. This page has many fields that support many SAP deployment architectures including clustered and SAP sec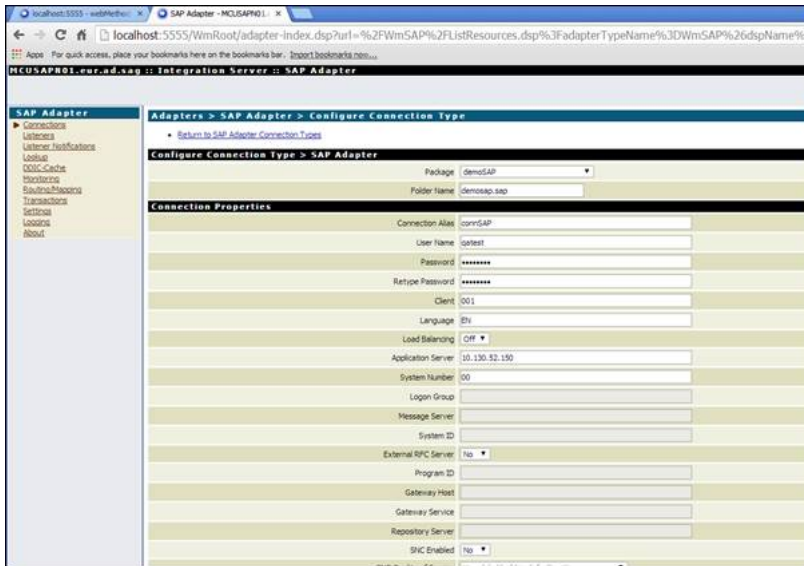urity. In this case, we will configure a simple SAP RFC connection to one server. Using the screenshot as an example, edit the values that conform to your SAP server.



6.  Click the **Save Connection** link at the bottom of the page. This saves the connection information and creates an SAP adapter connection object that is viewable from the Software AG Designer.

7.  Enable the connection by clicking the **No** link under the **Enabled** column.  Click the **OK** button to confirm you want to enable the connection.
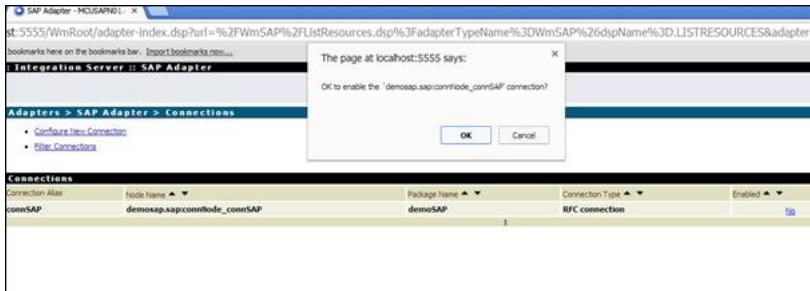


8.  The SAP adapter connection should now be enabled.
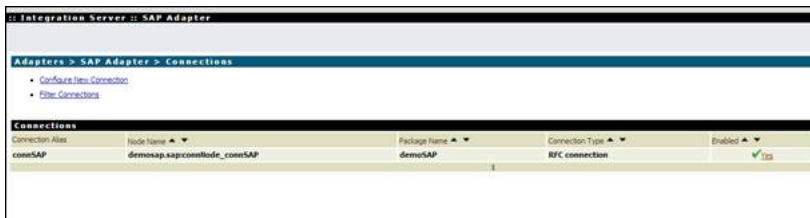


9.  To see how the adapter connection is displayed in the IDE, go to Software AG Designer. Right click the **demoSAP** package and select **Refresh**. The package contents and structure should appear as shown.
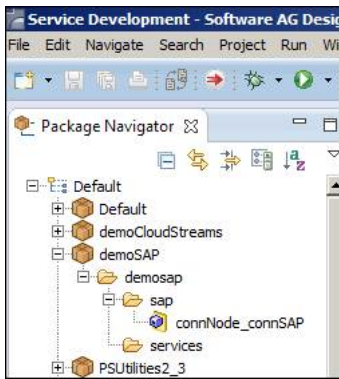
## Step 3: Create an SAP adapter service #

**In this Step:** You will leverage the SAP adapter connection that we created in the first step and create an adapter service.

1. Right click on the **sap** folder of your tutorial package as shown and select **New -> Adapter Service**.
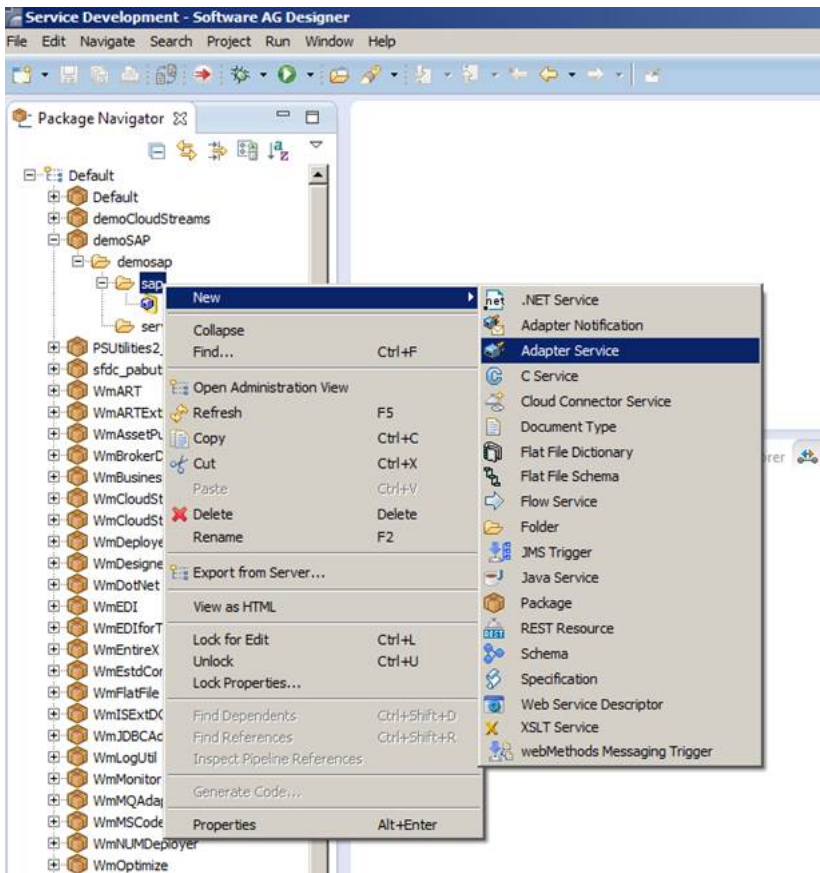


2. The adapter service wizard will prompt you for a name for the new service. We will be executing an SAP Remote Function Call (RFC) to get a listing of companies that are in the SAP system. In the **Element name** field, enter **sapCompanyList** and click **Next >**.
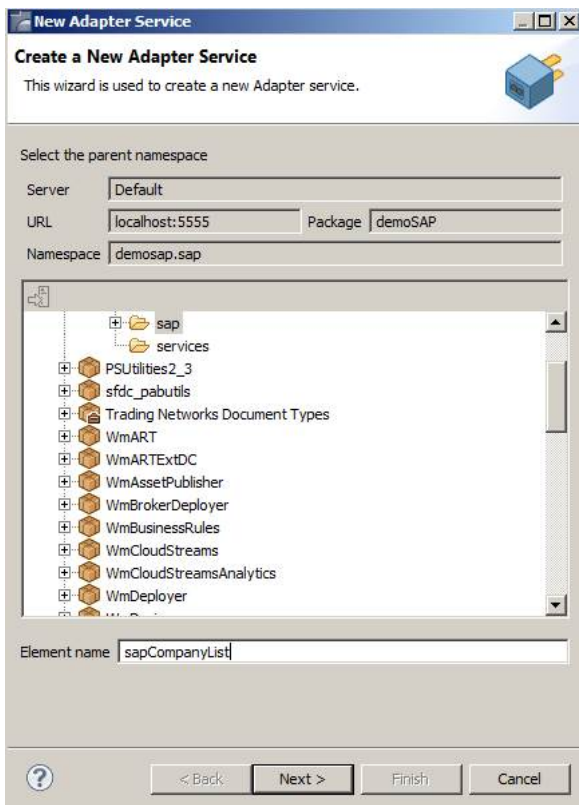
3. In the **Select Adapter Type** dialog, select **SAP Adapter** and click the **Next >** button.
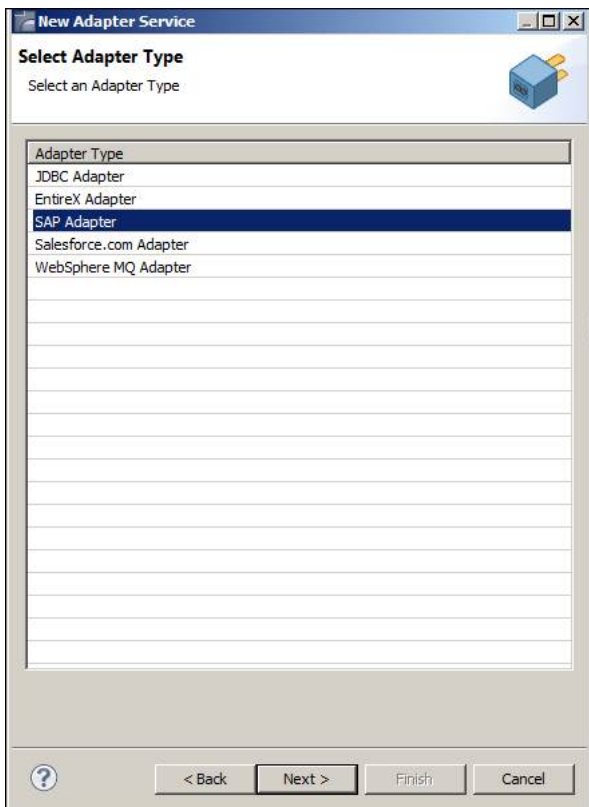


4. In the **Select an Adapter Connection Alias** dialog, you will see two connections displayed. The **emptyConnection** is used for advanced purposes. In our case, select the **demosap.sap:connNode_connSAP** connection which we created and enabled and click the **Next >** button.

5. In the **Select a Template** dialog select the **RFC Adapter Service** and click the **Finish >** button.



6. You now have a new SAP Adapter Service. Go back to Software AG Designer, right-click on the **demosap** package and click the **Refresh** menu item. Double-click on the **sapCompanyList** adapter service in the **Package Navigator** view under the **demosap.sap** folder. You can configure the various fields of the adapter service. Type in **BAPI*COMP*** in the **Function Pattern** field and then **Save** (Control-S). This dynamically saves the query but also sends to SAP for a list of RFCs which match the pattern you specified. This makes it much easier to find RFCs for certain functionality. Note that the RFCs that are visible are also determined by the credentials which are used when we create the SAP connection. Using the dropdown, select the function name **BAPI_COMPANYCODE_GETLIST**.



7. Once the function is selected, click **Save** (Control S). This queries SAP for the request and response signature. select the **Reply Field Selection** tab at the bottom of the adapter service editor. This shows the fields that the RFC has available to send back in a response. For our tutorial, select the two fields as shown by checking the checkbox under the **Use** column. Notice that these are arrays then **Save** (Control-S).

8.  The adapter service output tab will now reflect the fields which were selected. This makes mapping with other services very easy. The Software AG Designer IDE sometimes needs to be refreshed in order to reflect the changes. Select your service, right-click and click **Refresh**.



## Step 4: Run the adapter service #

**In this Step:** You will execute the synchronous RFC adapter service you created in Step 3.

1.  Right-click on the **sapCompanyList** adapter service, then select **Run As -> Run Service**.