Executing BAPI in JAVA

Applies to:
SAP Enterprise Portal 6.0

Summary
This document contains sample code on how to execute BAPI in java.

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Creating a Abstract Portal Component

1. Open NWDS File ➔ new ➔ Project ➔ Enter the Name of the Project (for example BAPIProject) ➔ Choose Finish

2. Right Click , New ➔ other ➔ Select “Create a new Portal Application Object” ➔ select BAPIProject ➔ Select “ AbstractPortalComponent” and give the Name and package Name and click on finish as shown in the below snap shot.

3. Add the following jar files in the Build Path:
   a. com.sap.portal.ivs.connectorserviceapi.jar
   b. connector.jar
   c. GenericConnector.jar
   d. Jcoclientapi.jar
   e. sapjco.jar
Code to Connect Backend System.

Connector Framework
The connector framework provides the infrastructure to create platform independent connectors, which constitute the middleware that enable access to Web applications, whether these be the back-end applications of your organization or applications available through external Web services. The connectors comply with the Java 2 Platform Enterprise Edition (J2EE) standard which includes the J2EE Connector Architecture (JCA) specifications.

Sample code to connect SAP System using Connector Framework.
This code has to be written in the “doContent” method of AbstractPortalComponent or Write a separate java class (SAPConnection.java) and has to be called in the “doContent” method.

```java
IConnection connection = null;
try {
    // get the Connector Gateway Service
    Object conservice = PortalRuntime.getRuntimeResources().getService(IConnectorService.KEY);
    IConnectorGatewayService cgService = (IConnectorGatewayService) conservice;
    if (cgService == null) {
        response.write("Error in get Connector Gateway Service <br>");
    }
    try {
        connection = cgService.getConnection(<SAP SYSTEM >, request);
    }
    catch (Exception e) {
        response.write("Connection to SAP system failed <br>");
    }
}
```
Executing BAPI

Getting the Input Parameters that has to be passed to BAPI

1. Logon to SAP GUI and run transaction SE37, the user will be asked for the function Module as shown in the below snap shot.

2. Give BAPI in the function Module text box and click on display as shown in the below snap shot

3. The below window will be seen once clicked on display button.
4. Click on Import tab to see the parameters that has to be passed into BAPI while executing as shown in the below snap shot.

5. Click on the Export tab to see the output parameters.
6. Click on the Tables tab to see the output Tables.

7. Double click on the Associated Type of the Table to get the columns in that respective table.
8. Sample code to execute the BAPI

// Get the Interaction interface for executing the command
IInteraction ix = connection.createInteractionEx();
// Get interaction spec and set the name of the command to run
IInteractionSpec ixspec = ix.getInteractionSpec();
// the well known example BAPI EMPLOYEE LIST
String functionName = "Z_BAPI_PT_IV_GET_EE_SHIFT_MGR";
// Put Function Name into interaction Properties.
ixspec.setPropertyValue("Name", functionName);
// return structure
String eelist_out = "EE_LIST";
String return_out = "RETURN";
RecordFactory rf = ix.getRecordFactory();
MappedRecord input = rf.createMappedRecord("input");
// put function input parameters
input.put("USERNAME", <passing the user name>);
input.put("PERIODDATE", <Passing the period >);
MappedRecord output = (MappedRecord) ix.execute(ixspec, input);
try
{
    Object result = output.get(eelist_out);
    Object ret = output.get(return_out);
    startDate = (Date)output.get("FROMDATE");
    if(startDate == null)
        startDate = new Date();
    if(result != null && (result instanceof IRecordSet))
    {
        rsEEList = (IRecordSet)result;
    }
}
catch(Exception ex)
{
    printException(ex, "Error getting function result");
}
return rsEEList;
Displaying the content in JSP

Once we execute the BAPI in doContent method of the AbstractPortalComponent we will set the IRecordSet object in request/session scope and forward the control to JSP page where we will display the content to the user.

- The below example shows the display of data in JSP, the below code displays only the LAST Name of the Employee from the output Table.

```jsp
<% while(rsEEList.next()) {
  %>
  EMPLOYEE NAME : <%= rs.getString("FIRST_NAME") %>
  <% } %>
```

Build and Deploy the PAR

1. Build project by selecting Project and click on Build Project as shown in the below snapshot.

2. Deploy the par file using create/Export Par file link in NWDS(Netweaver Developer Studio)
Create an iView

1. Login in to Portal as an Admin.
2. Go in to ContentAdministration
3. Go to the folder where you want to create an iView
4. Right click on the folder we will see option “New from PAR” select that as shown in the below snap shot.

5. We can see the par file which we have deployed in SAP Web Application server as shown in the below snap shot.

6. Select that and create an iView.
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