

How-to Guide  
SAP NetWeaver '04



# How To... Use the BI Java SDK in a Web Dynpro Application

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SAP NetWeaver '04

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# 1 Scenario

You want to build a Java application that performs analytics on data in an XMLA provider and displays this data in a Web Dynpro application. You use the BI Java SDK to custom build this application and you establish the connection with the BI XMLA Connector. All you need for this scenario is included in SAP NetWeaver '04.

## 2 Introduction

This document provides detailed instructions on how to use the BI Java SDK and its BI Java Connectors in a Web Dynpro Application. It contains step-by-step instructions for adding the required library references required to use the BI Java SDK, and for establishing a connection using one of the BI Java Connectors in the Web Dynpro and J2EE environment.

After you establish this connection, refer to the tutorials and documentation for the BI Java SDK and Web Dynpro to expand upon your scenarios.

### 3 The Step By Step Solution

In the first section below you prepare your system, and in the second step you create your Web Dynpro application.

#### 3.1 Prepare the System

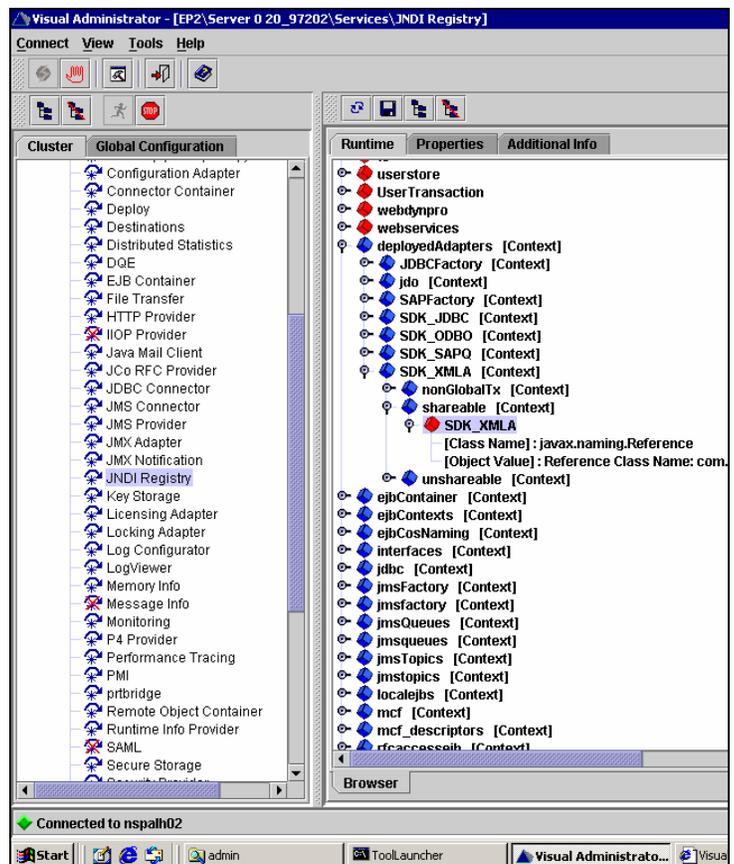
To prepare the system, you first look up the JNDI name of your connector in the J2EE Visual Administrator, and then configure the connection properties.

In this example, we use the BI XMLA Connector to connect to an SAP BW system and retrieve a list of schemas.

Use the J2EE Visual Administrator to determine the JNDI name of the BI XMLA Connector:

1. Select <server node> → Services → JNDI Registry. On the Runtime tab, in the registry list, locate *deployedAdapters* → *SDK\_XMLA* → *shareable* → *SDK\_XMLA*. This path, from the root to the SDK\_XMLA leaf node, indicates the fully-qualified JNDI name of the BI XMLA Connector, which is:

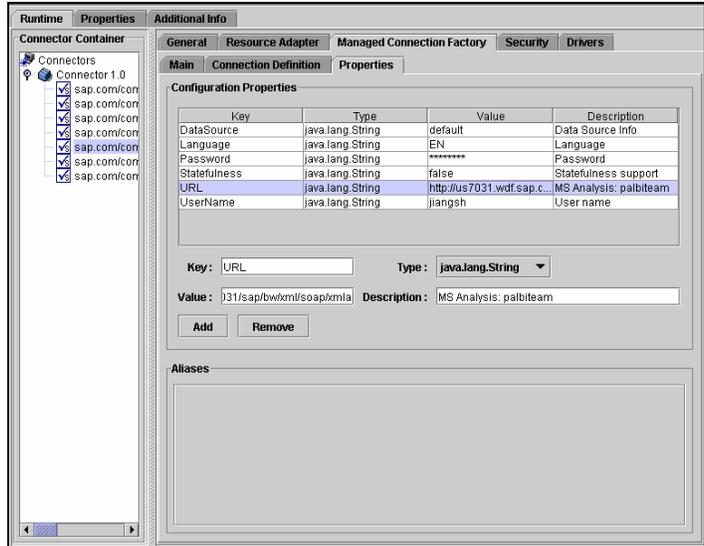
*deployedAdapters/SDK\_XMLA/shareable/SDK\_XMLA*



Configure the connection properties using the J2EE Visual Administrator:

2. Select the server node, and choose *<server node>* → *Services* → *Connector Container*.
3. Locate and double-click the entry for the BI XMLA Connector, `sap.com/com.sap.ip.bi.sdk.dac.connector.xmla.BI_SDK_XMLA`, to open the connector definition.
4. Select *Managed Connection Factory* → *Properties*, and set the required connection properties as shown to the right.

Refer to the documentation for the BI XMLA Connector in its `howto.html` file or in the BW Installation Guide for more information on the properties.

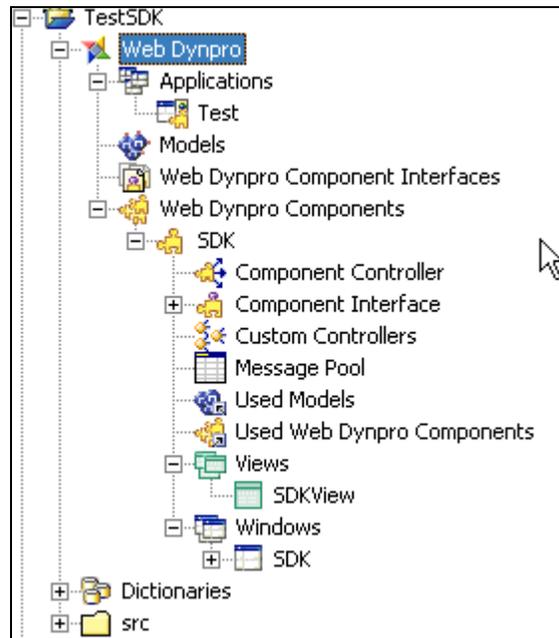


Property	Setting
DataSource	default
Statefulness	false
Language	EN
Password	(password)
UserName	(username)
URL	http://server:port/sap/bw/xml/soap/xmla

5. Save the settings.

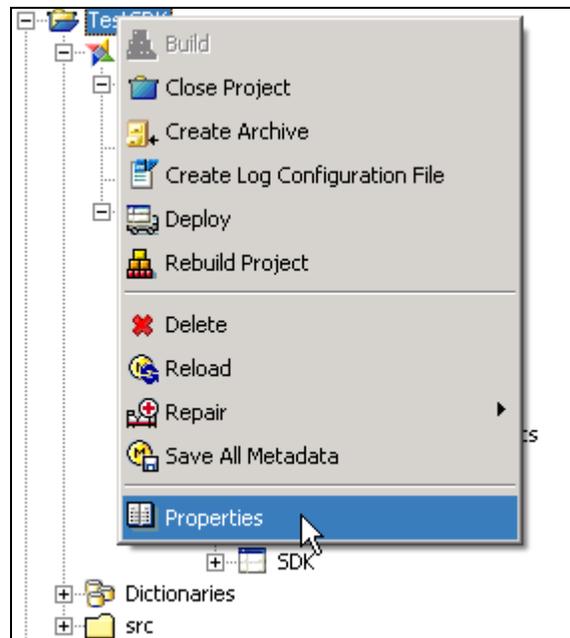
### 3.2 Create the Sample Web Dynpro Application

6. In the SAP NetWeaver Developer Studio, use the *New Project* wizard to create a Web Dynpro project.



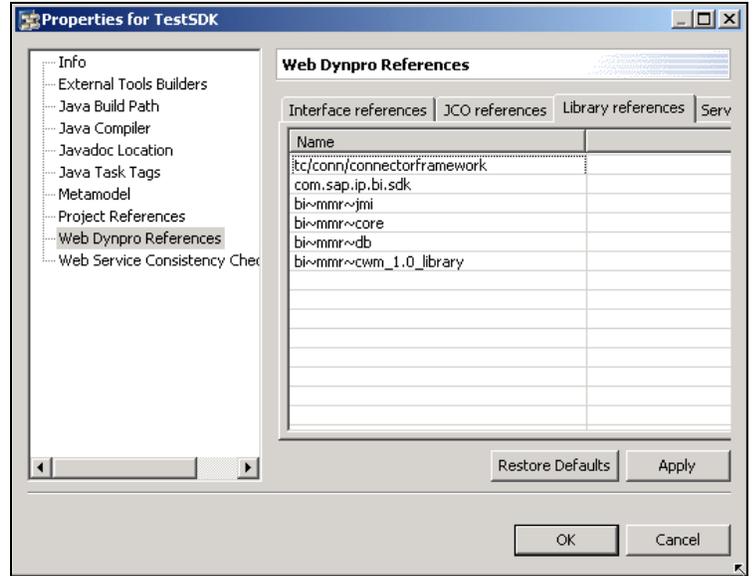
To use the BI Java SDK to create a Web Dynpro application, you need to add library references and a sharing reference:

7. In the *Web Dynpro Explorer*, select your Web Dynpro project, right-click, and choose *Properties* from the context menu.



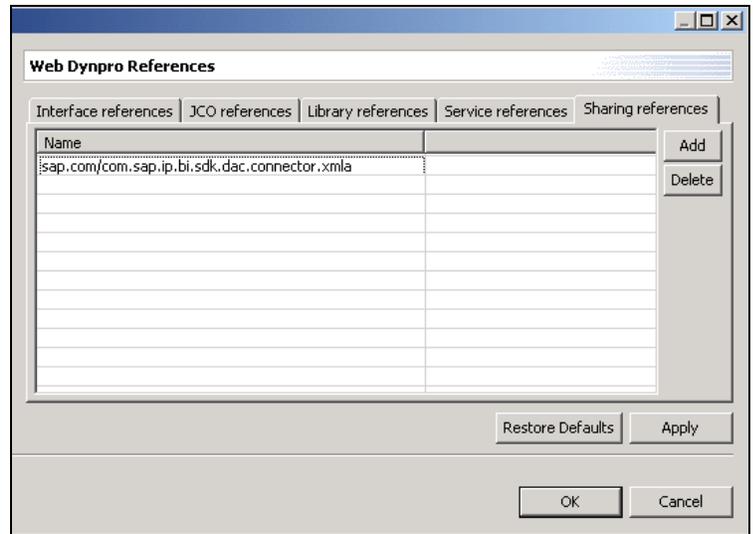
8. To add the library references, select *Web Dynpro References*, and select the *Library references* tab. Add the libraries listed below:

```
tc/conn/connectorframework  
com.sap.ip.bi.sdk  
bi~mmr~jmi  
bi~mmr~core  
bi~mmr~db  
bi~mmr~cwm_1.0_library
```



9. To add the sharing reference to the BI XMLA Connector, select the *Sharing references* tab, and add the reference listed below:

```
sap.com/com.sap.ip.bi.sdk.dac.connector.xml  
.connector.xml
```



10. Use the code below to get the connection and retrieve schemas, using the JNDI name retrieved in Step 1, above.

**Note:** The BI Java SDK libraries are required to compile this scenario, and can be found in *<your NetWeaver Developer Studio installation folder>\eclipse\tools\bi\_sdk\bi\_sdk.zip*, or can be downloaded from the SAP Developer Network at <http://www.sdn.sap.com/>.

```

IConnectionFactory connectionFactory = null;
IConnectionSpec connectionSpec = null;
IBIConnection connection = null;
try {
    Context initctx = new InitialContext();
    // perform JNDI lookup to obtain connection factory
    connectionFactory =
        (IConnectionFactory) initctx.lookup(
            "deployedAdapters/SDK_XMLA/shareable/SDK_XMLA");

    connectionSpec = connectionFactory.getConnectionSpec();

    // establish connection using default connection properties
    connection =
        (IBIConnection) connectionFactory.getConnectionEx(null);

    IBIOlap olap = ((IBIConnection) connection).getOlap();

    List schemas = olap.getSchema();
    Schema schema = null;

    for (int i = 0; i < schemas.size(); i++) {
        schema = (Schema) schemas.get(i);
        message += schema.getName();
    }
} catch (Exception e) {
    message += e.getMessage();
    e.printStackTrace();
} finally {
    connection.close();
}

```

11. Deploy and test your Web Dynpro application. When you run it, you should retrieve a list of schemas in your system.

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