Java Web Start Installation Guide for Windows
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1 About Java Web Start

Java Web Start allows you to use SAP BusinessObjects Predictive Analytics in a client/server mode. The server application can be launched from a local computer via the web interface. When the user accesses SAP BusinessObjects Predictive Analytics Java Web Start for the first time, the client install script runs and installs the client version of SAP BusinessObjects Predictive Analytics Java Web Start.

1.1 Requirements

The following components are required to install SAP BusinessObjects Predictive Analytics to run on Java Web Start.

On the server:

- A web server such as Apache Web Server or Windows Internet Information Services (IIS).
- A valid full installation of SAP BusinessObjects Predictive Analytics Server. For more information, please refer to the server installation documentation provided on the SAP Help Portal at http://help.sap.com/pa/.
- A valid SAP BusinessObjects Predictive Analytics License.

On the client machine(s):

- A Java Runtime Environment installed on the client machine to connect to the server.

To run the client application with Java Web Start, configure the network connection between the server and the client machine(s). To configure the connection, open the following TCP ports:

- The HTTP port (usually, 80).
- The Name Server (usually port 12345).
- The server port (by default: 12347 for the authenticated server).

Java Web Start must be installed by a web server administrator, who can administrate and install a web server.
2 Installing the Web Server

You can install an Apache Server, or Windows Internet Information Services (IIS). How you install Windows IIS depends on the Windows Operating System you have. You might also require your original Windows installation media if IIS was not included at install time.

2.1 Installing Microsoft IIS

Internet Information Services (IIS) provides a platform for hosting websites, services and applications. IIS is not turned on by default when Windows is installed. Access the IIS Manager through the Microsoft Management Console or Administrative Tools in the Control Panel, depending on your Windows Operating System.

1. Go to Windows Control Panel and access the panel for configuring Features (Windows 2008 Enterprise Server) or Internet Information Services.
2. Check the box Web Server (IIS)/Internet Information Services (the name for this option depends on your OS).
3. Click Next.
   ○ In Windows 2008 Enterprise Server OS, an installation wizard appears, follow the instructions from the wizard to complete the installation of IIS.
   ○ On a non-Windows 2008 Enterprise Server OS, IIS will launch automatically

2.2 Installing Apache Server

1. Download the package from the Apache HTTP Server Project (http://httpd.apache.org/)
2. Install the downloaded Apache Server package according to the Apache documentation (http://httpd.apache.org/docs/current/en/platform/windows.html).
3 Setting Up the Web Server

3.1 Publishing with Microsoft IIS

By default, SAP BusinessObjects Predictive Analytics is installed in `c:\Program Files\SAP BusinessObjects Predictive Analytics\Server <version number>\`. This folder should contain the following sub-folders:

- `EXE\WebStart\`
- `EXE\Clients\KJWizardCORBA\`
- `Help\`

Since the application will be accessible at `http://<myserver.com>/PredictiveAnalytics/`, these local folders must be published by the web server as follows:

<table>
<thead>
<tr>
<th>Local Directory</th>
<th>Published as...</th>
<th>Gives access to...</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>EXE\WebStart\</code></td>
<td><code>http://&lt;myserver.com&gt;/PredictiveAnalytics/</code></td>
<td>The home page of SAP BusinessObjects Predictive Analytics Web Start.</td>
</tr>
<tr>
<td><code>EXE\Clients\KJWizardCORBA\</code></td>
<td><code>http://&lt;myserver.com&gt;/PredictiveAnalytics/KJWizard</code></td>
<td>The SAP BusinessObjects Predictive Analytics Remote Assistant.</td>
</tr>
<tr>
<td><code>Help\</code></td>
<td><code>http://&lt;myserver.com&gt;/PredictiveAnalytics/Documentation</code></td>
<td>The documentation.</td>
</tr>
</tbody>
</table>

**Note**
If you cannot see the above directories, you probably did not perform a full install of the SAP BusinessObjects Predictive Analytics Server software.

When typing the URL in a web browser, the index page of *SAP BusinessObjects Predictive Analytics Web Start* displays (with links to the documentation, the *SAP BusinessObjects Predictive Analytics Remote Assistant* and the *Administration Console*).

**Note**
- `<myserver.com>` refers to the domain name of your website. For instance if the application is deployed on a local computer, by default the domain name is `<localhost>`. So the URL to type is: `http://localhost/PredictiveAnalytics/`.
- The final slash (`"/"`) is mandatory when typing the URL.
3.1.1 To Publish the Web Start Folders on Windows

Publish the SAP BusinessObjects Predictive Analytics Web Start index page and the KJWizardCORBA and Help folders.

1. Open IIS Manager: Go to the Windows Administrative Tools panel and click Internet Information Services (IIS) Manager/Internet Information Services (depending on your OS). The Internet Information Services (IIS) Manager displays.

2. Publish the SAP BusinessObjects Predictive Analytics Web Start index page: Expand the Hostname and Sites folder, right-click the folder in which you want to deploy SAP BusinessObjects Predictive Analytics Java Web Start (for instance, Default Web Site), and in the contextual menu, choose Add Virtual Directory and do the following:

<table>
<thead>
<tr>
<th>For Windows 2008 Enterprise Server OS</th>
<th>Other Windows OS</th>
</tr>
</thead>
<tbody>
<tr>
<td>○ Expand the Hostname and Sites folder,</td>
<td>○ Open Local computer Web Sites</td>
</tr>
<tr>
<td>○ Right-click the folder in which you want to deploy SAP BusinessObjects Predictive Analytics Java Web Start (for instance, Default Web Site), and in the contextual menu, choose Add Virtual Directory and enter the information shown in the table below:</td>
<td>○ Right-click the folder in which you want to deploy SAP BusinessObjects Predictive Analytics Web Start (for instance, Default Web Site) and in the contextual menu, select New Virtual Directory</td>
</tr>
<tr>
<td></td>
<td>○ In the Virtual Directory Creation Wizard, click Next and enter the information shown in the table below:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Field</th>
<th>Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alias</td>
<td>Predictive Analytics</td>
</tr>
<tr>
<td>Physical path</td>
<td>c:\Program Files\SAP BusinessObjects Predictive Analytics\Server &lt;version number&gt;\EXE\WebStart</td>
</tr>
</tbody>
</table>

3. Click OK. The folder Predictive Analytics displays.

4. Set the permissions for the directory as follows:

<table>
<thead>
<tr>
<th>For Windows 2008 Enterprise Server OS</th>
<th>Other Windows OS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right-click the folder Predictive Analytics and choose Edit permissions and make sure that the Read-Only box is checked in the Attributes area.</td>
<td>○ Click Next and in the Access permissions panel, verify that the boxes Read Scripts and Run Scripts are checked. ○ Click Next ○ Click Finish</td>
</tr>
</tbody>
</table>

5. Publish the KJWizardCORBA and Help folders as follows:

<table>
<thead>
<tr>
<th>For Windows 2008 Enterprise Server OS</th>
<th>Other Windows OS</th>
</tr>
</thead>
<tbody>
<tr>
<td>In IIS, right-click the Predictive Analytics folder and enter the following information:</td>
<td>In IIS, right-click the Predictive Analytics folder, select New Virtual Directory and enter the following information:</td>
</tr>
</tbody>
</table>
### To Configure IIS to Search For the index.html File

By default, IIS searches for an index.htm file first. In the Default Documents pane of IIS, you can define the file index.html and move it in the search order to ensure that IIS searches for the index.html file first.

1. In the IIS Administrative Tools pane, click Internet Information Services (IIS) Manager.
2. In the Connections pane, expand the server name, expand Sites, and then navigate to the Home pane of the Web site you want to configure default documents, and double-click Default Document. In the Documents tab, click Add.
3. In the Actions pane, you can either select Add Default Document and add the file name index.html or, if the file already exists in the default documents list, select the index.html file and then click Move Up to force IIS to search for index.html first.

### To Configure the MIME Types

A MIME type indicates to the server what kind of file is associated with a particular extension. The application/x-java-jnlp-file file must be associated with the jnlp extension (so the application can be launched), and the application/json-file file must be associated with the json extension.

In IIS Manager, Add the following MIME types:

<table>
<thead>
<tr>
<th>File Name Extension</th>
<th>MIME Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>jnlp</td>
<td>application/x-java-jnlp-file</td>
</tr>
<tr>
<td>File Name Extension</td>
<td>MIME Type</td>
</tr>
<tr>
<td>---------------------</td>
<td>----------------------</td>
</tr>
<tr>
<td>json</td>
<td>application/json-file</td>
</tr>
</tbody>
</table>

The MIME types are configured. To remove a MIME type: select the MIME type in the MIME types list and click Remove in the Actions pane.

## 3.2 Publishing with Apache HTTP Server

We assume you have installed *SAP BusinessObjects Predictive Analytics* in [path_to_Predictive_Analytics]. This folder should contain the following sub-folders:

- EXE/WebStart
- EXE/Clients
- Help

Since the application will be accessible at http://<myserver.com>/PredictiveAnalytics/, these local folders must be published by the web server as follows:

<table>
<thead>
<tr>
<th>Local Directory</th>
<th>Published as...</th>
<th>Gives access to...</th>
</tr>
</thead>
</table>

When typing the URL in a web browser, the index page of *SAP BusinessObjects Predictive Analytics Web Start* displays (with links to the documentation, the *SAP BusinessObjects Predictive Analytics Remote Assistant* and the *Administration Console*).

**Note**

- `<myserver.com>` refers to the domain name of your website. For instance if the application is deployed on a local computer, by default the domain name is `<localhost>`. So the URL to type is: http://localhost/PredictiveAnalytics/.
- The final slash (“/”) is mandatory when typing the URL.
3.2.1 Publishing the Web Start Folders

In the following commands, replace [path_to_Predictive_Analytics] with the installation path.

If you have installed the Apache server in APACHE_HOME, edit the APACHE_HOME/conf/httpd.conf

1. Add the following lines:

   Alias /PredictiveAnalytics/KJWizard/ "[path_to_Predictive_Analytics]/EXE/Clients/
   Alias /PredictiveAnalytics/Documentation/"[path_to_Predictive_Analytics]/Help/
   Alias /PredictiveAnalytics/Documentation/"[path_to_Predictive_Analytics]/Exe/WebStart/"

2. To define the access rights for those folders for the entire web directory (and all its sub-folders) use the following syntax:

   <Directory "[path_to_Predictive_Analytics]/">
     Order allow,deny
     Allow from all
   </Directory>

3. To define specific access rights for each sub-folder of your web directory, use the following syntax:

   <Directory "[path_to_Predictive_Analytics]/KJWizardCORBA/">
     Order allow,deny
     Allow from all
   </Directory>
   <Directory "[path_to_Predictive_Analytics]/WebStart/">
     Order allow,deny
     Allow from all
   </Directory>
   <Directory "[path_to_Predictive_Analytics]/Doc/">
     Order allow,deny
     Allow from all
   </Directory>

- For specific access rights, indicate if you want to allow or deny access for each of the folders.
- The final slash ("/") is mandatory when typing the folders location.

3.2.2 Configuring the MIME Types

A MIME type indicates to the server what kind of file is associated with a particular extension. The JNLP MIME type allows launching the application, whereas the JSON MIME type allows displaying the online help.

Edit the APACHE_HOME/conf/mime.types file.

- To associate the application/x-java-jnlp-file with the jnlp extension, add the following line:

  application/x-java-jnlp-file  jnlp
To associate the `application/json-file` with the `json` extension, add the following line:

```
application/json-file    json
```

**Note**

On Apache, this JNLP MIME type will be applied on all the web sites hosted on the server.
4 Configuring the Remote Assistant

Optionally, you may want to change some parameters of the launcher such as the default connection port (see the `ORBInitialPort` value).

Refer to the Client Installation Guide, which describes how to modify default settings in the installation according to your needs.
5 Setting the SSL Certificates

Certificates allow clients to authenticate the server they are connected to. If there is a certificate deployed on one of the authenticated servers, you must activate it.

For more information on using SSL with SAP BusinessObjects Predictive Analytics please refer to the SSL Support Documentation.

1. Edit the file KJWizard_auth.jnlp.
2. Remove the comment tags <!-- and --> in the following line:

```
<!-- <argument>-checkcertificates</argument> -->
```

Should look like this:

```
<argument>-checkcertificates</argument>
```
6 FireWall Settings

In order to ensure a good communication between SAP BusinessObjects Predictive Analytics Client application and the Authenticated Server, the firewall must be set to allow communication between the different software (HTTP Server, Name Server and Authenticated Server).

To configure the firewall, proceed as follows:

1. Open the FireWall Settings panel. By default, the firewall should be ON and should allow exceptions (if it is not the case, uncheck Don’t allow exceptions).
2. In the Exceptions tab, add the following ports:

<table>
<thead>
<tr>
<th>Port Name to Add</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>HTTP</td>
<td>80</td>
</tr>
<tr>
<td>Name Server</td>
<td>12345</td>
</tr>
<tr>
<td>Predictive Analytics Authenticated Server</td>
<td>12347</td>
</tr>
</tbody>
</table>

Note that the port may have been changed in the Registry. In this case the port number should be set accordingly.
Starting the Remote Assistant and the Administration Console

Make sure your web server and your SAP BusinessObjects Predictive Analytics server are running.

1. Point your web browser to the defined URL, in our example:
   http://myserver.com/PredictiveAnalytics/
2. Click Start Predictive Analytics Client.
3. Click Start Predictive Analytics Administration Console.
4. After the installation and configuration are complete, please read the chapter How to Launch Predictive Analytics Java Web Start for the First Time provided in the documentation.
8 Allowing Client Access to SAP BusinessObjects Predictive Analytics Java Web Start Interface

Here is the information you should provide to your users that want to access the SAP BusinessObjects Predictive Analytics Server from a client machine.

Provide your users with the following information: To access the SAP BusinessObjects Predictive Analytics Java Web Start Interface, go to the following URL:

http://<myserver.com>/PredictiveAnalytics.

**Note**

*myserver.com* refers to the domain name of your website. For instance, if SAP IniniteInsight is deployed on a local computer, by default the domain name is *localhost*. So the URL to type is http://localhost/InfiniteInsight/.

The final slash character ("/") is mandatory when typing the URL.

The client installation program will run and install the client software. The user can start SAP BusinessObjects Predictive Analytics from the client machine by clicking *Start SAP BusinessObjects Predictive Analytics Client*. 
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