Setting up the Environment for Creating or Extending SAP Fiori Apps

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## Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copyright</td>
<td>2</td>
</tr>
<tr>
<td>Setting Up the Developer Environment for Creating or Extending SAP Fiori Apps</td>
<td>4</td>
</tr>
<tr>
<td>1. Target Audience</td>
<td>4</td>
</tr>
<tr>
<td>2. Downloading Eclipse</td>
<td>4</td>
</tr>
<tr>
<td>3. Installing Eclipse IDE for Java EE Developer</td>
<td>5</td>
</tr>
<tr>
<td>4. Specifying Proxy and JDK Settings in Eclipse</td>
<td>6</td>
</tr>
<tr>
<td>5. Installing the Required Software</td>
<td>7</td>
</tr>
<tr>
<td>6. Configuring the Local Tomcat Server</td>
<td>8</td>
</tr>
<tr>
<td>6.1. Procedure</td>
<td>8</td>
</tr>
<tr>
<td>7. Enabling Backend Access for local testing</td>
<td>9</td>
</tr>
<tr>
<td>8. Creating or Extending an SAP Fiori App</td>
<td>10</td>
</tr>
<tr>
<td>9. Troubleshooting</td>
<td>10</td>
</tr>
<tr>
<td>9.1. Setup HTTPS</td>
<td>10</td>
</tr>
</tbody>
</table>
Setting Up the Developer Environment for Creating or Extending SAP Fiori Apps

This document explains the steps required to set up the UI developer environment to create an SAP Fiori App from scratch and to extend an SAP Fiori app.

Note: This document focuses on creating or extending the UI for transactional apps and for analytical apps that use HANA Live and XS Odata.

To see the general SAP Fiori Extensibility documentation, see the Help Portal at help.sap.com.

The SAP Fiori Toolkit provides templates for creating SAP Fiori apps and automated extensibility options. For more information see http://scn.sap.com/docs/DOC-50112.

SAP Fiori app extensibility or creation involves the following phases:

<table>
<thead>
<tr>
<th>Phase</th>
<th>Description</th>
</tr>
</thead>
</table>
| 1     | Setting up the UI developer environment  
|       | a. Eclipse installation  
|       | b. SAP NetWeaver Gateway Productivity Accelerator (GWPA)  
|       | c. UI Development Toolkit for HTML5  
|       | d. Fiori Toolkit  
|       | e. Configuration |
| 3     | Extending the original application and testing it. See SAP Fiori Extensibility documentation. |

This document covers setting up the UI developer environment.

1 Target Audience

This document is targeted at UI developers. Some experience of working in Eclipse and in ABAP is required.

2 Downloading Eclipse

We recommend you use the Eclipse integrated development environment (IDE) when you are developing Fiori apps.

To download Eclipse, first go to www.eclipse.org, choose Downloads \ Eclipse IDE for Java EE Developer \ Juno Packages.

Note: This is important because the Gateway (GW) tools require Juno, and not Kepler.
Change the end of the url from sr1 to sr2, and press Enter. Alternatively, use the following link (Eclipse). Then choose Eclipse IDE for Java EE Developer – 32 or 64 bit options, depending on your system.

Download the zip file to your local machine. Extract it to a specified location.

Note: You can also access the UI5 Tools via HANA Studio. However, this is not covered in this document. You either use standard Eclipse or the SAP HANA Studio as basis installation and install the SAPUI5 and Gateway Tools on top. A link to the HANA Studio Download is available at https://tools.hana.ondemand.com/.

3 Installing Eclipse IDE for Java EE Developer

Open the extracted files location, and then run Eclipse.exe. Specify a suitable workspace location.
4 Specifying Proxy and JDK Settings in Eclipse

You may need to specify the proxy settings according to your organization’s policies. You do this in the Preferences dialog box. Choose Window → Preferences → Search, and then type Proxy and choose Network Connections.

JDK Configuration

You also need to select the JDK directory in Eclipse. To do this, open Eclipse and choose Windows → Preferences → Java → Installed JREs → Add → Standard VM, and choose the JDK directory.
5 Installing the Required Software

Now you want to use Eclipse to install the software required for extending and creating SAP Fiori apps. This software includes the SAP NetWeaver Gateway Productivity Accelerator (GWPA) and the UI Development Toolkit for HTML5.

When Eclipse opens, you need to specify the location to install the required software to begin creating Fiori apps. To begin, choose Help → Install New Software…. In the Work with: field, add the following address: https://tools.hana.ondemand.com/juno/ and then choose Add.

Add the name SAP Juno Updates in the Add Repository pop-up and choose OK.
Select the following two options: SAP NetWeaver Gateway Productivity Accelerator (GWPA) and Ul Development Toolkit for HTML5, and choose Next.

Choose Next and Next again.

On the subsequent screen, review and accept the terms of the license agreement, and then select Finish.

If security pop-ups appear, select Ignore.

Finally, restart Eclipse when prompted.

6 Configuring the Local Tomcat Server

The next task is to ensure the local Tomcat webserver is configured to work with SAPUI5 Eclipse.

Although a Jetty server is embedded in the Eclipse package, we recommend that you set up a Tomcat server for testing purposes. Install the Tomcat server before configuring it in Eclipse.

6.1 Procedure

- First download the Tomcat server from http://tomcat.apache.org/download-70.cgi.
• In the Java EE perspective (the default perspective), click the Servers tab. If there are no servers available, choose the new server wizard link. Alternatively, right-click and select New → Server
• Choose Apache → Tomcat 7.0
• Add a new server runtime by specifying the folder where you unzipped the Tomcat files.
• When you finish the wizard you should see a Tomcat v7.0 server in the Servers view.
• Finally, open the configuration overview by double-clicking the Tomcat v7.0 server in the Servers view.
• There you need to select the server option: Serve modules without publishing, and then save the changes.

Note: Alternatively, open the New Server wizard, choose Apache, choose the latest Tomcat version, and then choose Next. Click Download and Install and follow the instructions. This does not work for Macs.

Adding Arguments to the Tomcat Server
You also need to add some arguments to the local Tomcat server for testing a SAP-delivered app. The arguments to be added are:
-Dsun.net.http.allowRestrictedHeaders=true
-Dorg.apache.tomcat.util.buf.UDecoder.ALLOW_ENCODED_SLASH=true
To add them, double-click the Tomcat server in the Servers view. Then open the Launch Configuration and paste the two arguments directly into the file. You then need to restart the server.

7 Enabling Backend Access for local testing

To successfully test on the local system, you have to set up a proxy to access an OData service in a ABAP system.

For instructions on how to do this, see UI5 docu here.

Also, see chapter 1.1.3.20.2 Test Your SAPUI5 Application on a Java Web Server in the Developer's Guide (http://help.sap.com/nw-uiadd#section3 ).
8 Creating or Extending an SAP Fiori App

For creating an SAP Fiori project from scratch, see the SAP Fiori Toolkit documentation at: http://scn.sap.com/docs/DOC-50112.

For extending an SAP Fiori app, see SAP Fiori Extensibility documentation.

9 Troubleshooting

9.1 Setup HTTPS

You may need to make configure access to HTTPS systems. For more information, see https://sapui5.hana.ondemand.com/sdk/docs/guide/TestingInEclipse.html#https.