**Chapter 1. Using the library with Vaadin 6**

You have to make the steps as follows:

1. Download the latest version of our library Freecode Charts and D3 Wrapper
2. Create your Vaadin 6 project and place our library, javascripts and css file into your project
3. Create a wrapper of the ApplicationServlet to load javascripts and css stylesheet and set up your web.xml file for the new ApplicationServlet wrapper.
4. Configure your widgetset.gwt.xml file and at least once run the Vaadin widget compilation (which also includes updating the web.xml if it is necessary).
5. In your code, create an instance (or many instances) of ua.net.freecode.chart.Chart component, set its properties, and add this component to Vaadin panel, layout or window.
6. Set up the colors in the css file.
7. Write the other code of your application and run the application

In this chapter we will discuss in detail steps 1,2,3 and 4. The steps 5 and 6 are discussed in the next chapters. Step 7 is up to you.

1. *Download the latest version of our library Freecode Charts and D3 Wrapper*

You can find the latest version of our library at <https://vaadin.com/directory>

We are going to provide new versions with new features, so you can verify the site from time to time.

1. *Create your Vaadin 6 project and place our library, javascripts and css file into your project*

Upon creating Vaadin 6 project, copy the following files from our library to your project as follows:

1. Copy chartlib/libforvaadin6/fchart\_1.0.jar to <YOUR PROJECT>/WebContent/WEB-INF/lib/

If you use Eclipse, left-click on the project -> F5(refresh), right-click on the project ->Properties -> Java Build Path -> Libraries -> Add Jars -> <YOUR PROJECT>/WebContent/WEB-INF/lib/fchart\_1.0.jar,

Right-click on the project ->Properties -> Java Build Path -> Libraries -> Add Jars -> <YOUR PROJECT>/WebContent/WEB-INF/lib/fchart\_1.0.src.jar

In Order and Export (here in Java Build Path), check the fchart\_1.0.jar

1. Create folder <YOUR PROJECT>/WebContent/VAADIN/charts

Copy the following files to this folder:

Chartlib/charts/d3.v3.min.js

Chartlib/charts/fchart-1.0.js

Chartlib/charts/fchart.css

1. *Create a wrapper of the ApplicationServlet to load javascripts and css stylesheet and set up your web.xml file for the new ApplicationServlet wrapper.*
2. Create a wrapper of the ApplicationServer to load javascripts. The example is given below:

**package** ua.net.freecode.vaadin6.demo;

**import** java.io.BufferedWriter;

**import** java.io.IOException;

**import** javax.servlet.ServletException;

**import** javax.servlet.http.HttpServletRequest;

**import** com.vaadin.Application;

**import** com.vaadin.terminal.gwt.server.ApplicationServlet;

**import** com.vaadin.ui.Window;

**public** **class** JavascriptRunnerServlet **extends** ApplicationServlet {

**private** **static** **final** **long** *serialVersionUID* = 1L;

@Override

**protected** **void** writeAjaxPageHtmlVaadinScripts(Window window,

String themeName, Application application, BufferedWriter page,

String appUrl, String themeUri, String appId,

HttpServletRequest request) **throws** ServletException, IOException {

page.write("<link href=\""+ appUrl + "/VAADIN/charts/fchart.css\" rel=\"stylesheet\" type=\"text/css\" />");

page.write("<script type=\"text/javascript\" src=\""+ appUrl + "/VAADIN/charts/d3.v3.min.js\" charset=\"utf-8\"></script>");

page.write("<script type=\"text/javascript\" src=\""+ appUrl + "/VAADIN/charts/fchart-1.0.js\" charset=\"utf-8\"></script>");

**super**.writeAjaxPageHtmlVaadinScripts(window, themeName, application,

page, appUrl, themeUri, appId, request);

}

}

Note: if you use Google App Engine, class JavascriptRunnerServlet should extend com.vaadin.terminal.gwt.server.GAEApplicationServlet instead of com.vaadin.terminal.gwt.server.ApplicationServlet.

1. In your web.xml file replace the reference to com.vaadin.terminal.gwt.server.ApplicationServlet with the reference to your wrapper of the ApplicationServlet, for example, ua.net.freecode.vaadin6.demo.JavascriptRunnerServlet.

So, the final code in web.xml will look as follows:

<servlet>

<servlet-name>Chart Demo 1 Application</servlet-name>

<servlet-class>ua.net.freecode.vaadin6.demo.JavascriptRunnerServlet</servlet-class>

<init-param>

<description>…<description>

In the next step (4.) we will discuss additional parameters to be inserted here.

1. *Configure your widgetset.gwt.xml file and at least once run the Vaadin widget compilation.*

When you created the Vaadin6 application, the file which name ended with widgetset.gwt.xml is created automatically, but if it is not so, create a file in some of your source folders.

For example, we can decide to create this file in src/ua/net/freecode/vaadin6/widgetset and call it FreecodeChartWidgetset.gwt.xml. (If you have no own widget-level code, it does not matter where you place this file (provided that it is in the source folder) and does not matter how you call this file (provided that it ends with Widgetset.gwt.xml).

The content of this file should be as follows:

<?xml version=*"1.0"* encoding=*"UTF-8"*?>

<!DOCTYPE module PUBLIC "-//Google Inc.//DTD Google Web Toolkit 1.7.0//EN" "http://google-web-toolkit.googlecode.com/svn/tags/1.7.0/distro-source/core/src/gwt-module.dtd">

<module>

<inherits name=*"com.vaadin.terminal.gwt.DefaultWidgetSet"* />

<inherits name=*"ua.net.freecode.chart.widgetset.FreecodeWidgetset"* />

</module>

If you have other widget-level libraries, they also should be referenced here.

Now first compile your Java code in eclipse as usual, make sure that there is no errors in your code during the compilation. If you have internal validation error, please see our Trouble-Shooting Guide. If it is ok, in Eclipse click the button Compile Vaadin Widgets. It is necessary to compile it only once if you do not add other libraries. Also it will be necessary to recompile it again if you receive an update of our library in the future.

It is very important to check your web.xml and if no such entry, insert the entry, as follows into the <servlet> entry:

<init-param>

<description>Application widgetset</description>

<param-name>widgetset</param-name>

<param-value>ua.net.freecode.vaadin6.widgetset.MyWidgetset</param-value>

</init-param>

If you miss this step, you will experience the error as follows:

Widgetset does not contain implementation for ua.net.freecode.chart.impl.ChartComponent.

The full <servlet> entry now should look like as follows:

<servlet>

<servlet-name>Chart1</servlet-name>

<servlet-class>ua.net.freecode.vaadin6.demo.JavascriptRunnerServlet</servlet-class>

<init-param>

<description>Vaadin application class to start</description>

<param-name>application</param-name>

<param-value>ua.net.freecode.vaadin6.demo.FreecodeChartApplication</param-value>

</init-param>

<init-param>

<description>Application widgetset</description>

<param-name>widgetset</param-name>

<param-value>ua.net.freecode.vaadin6.widgetset.MyWidgetset</param-value>

</init-param>

</servlet>

The next step is the use of the Chart component in your code. It will be discussed in chapter 3. In Chapter 4 it will be discussed how to manage chart colors.