

CREATE A CUSTOM THEME WEBSPHERE PORTAL 8.0.0.1

WITHOUT TEMPLATE LOCALIZATION,
WITHOUT WEBDAV AND IN ONE WAR
FILE

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Introduction

The Portal product documentation describes how to create custom themes with static components in WebDAV and dynamic components in a WAR file. This article describes how you can create a theme with all the components together in one WAR file, to enable fast deployment in any environment (development, production). Also, this custom theme will be compatible with all the functionality of the CTC4.

Moreover, the Portal 8.0 theme out-of-box uses localized templates for both the theme and skin. A localized template is a static HTML template that has translated text for the locale which is specified. These templates are required for proper globalization of the Portal. This means that the template being displayed in the browser is not the template located in the root folder for the theme, but rather a localized version in the "nls" folder. For some businesses, displaying content in one locale is the only requirement. This article will explain how to remove the use of localized templates.

Finally, this article details the instructions to maintain your theme, using IBM Rational Application Developer (RAD), and deploy it as a single EAR file. This choice is linked to the possibility of connecting RAD with a portal of development, so to speed the customization in development.

Extract theme dynamic and static resources

Usually, a common way when creating a new theme is the one of starting from an existing one. To be sure to keep all the functionality of the standard theme of the portal, we will create a copy of the Portal theme 8.

This theme will be the basis from which to create a custom theme

To set up your custom theme in an EAR file you need to retrieve the source files from the **Default Portal Theme**. Basically we need two kind of resources: **Static Resources**(Cascaded Style Sheets, JavaScriptTM accessed via WebDAV) and **Dynamic Resources** (JavaServer Pages).

So, the first step in creating a new custom theme is the one of copying the static and dynamic resources in two temp folders called "**DynamicResources**" and "**StaticResources**".

Dynamic resources

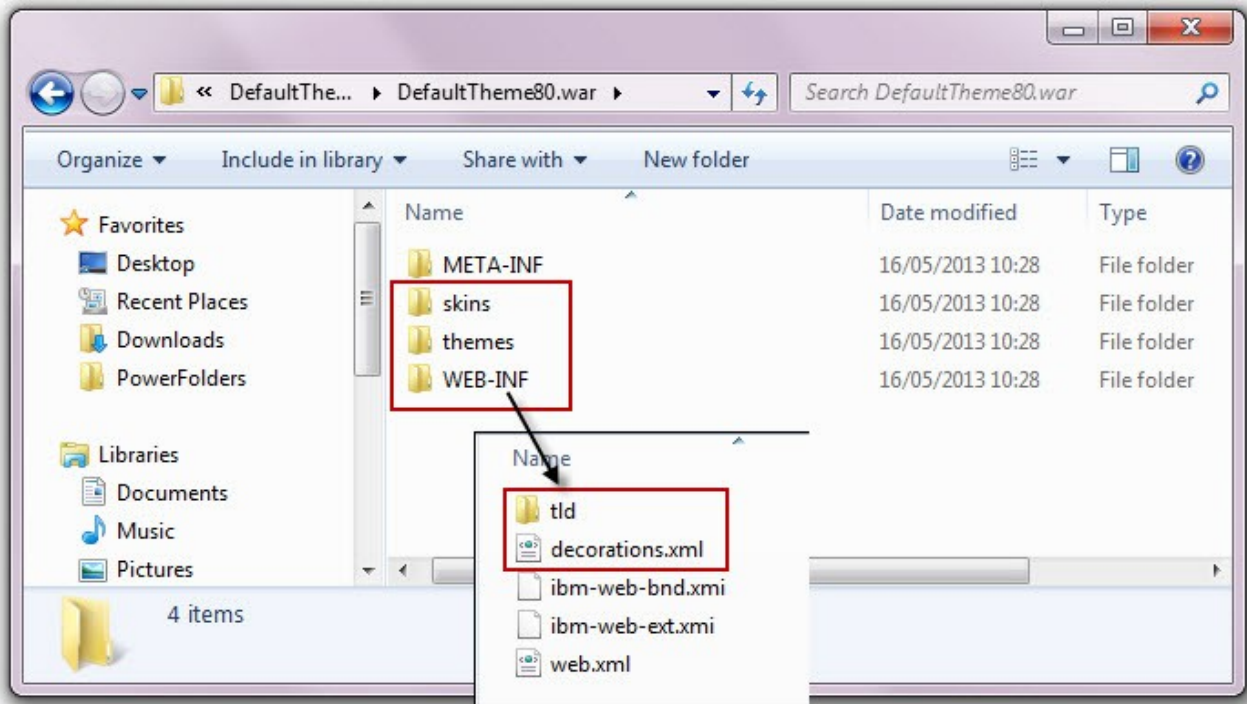
These are located in:

PortalServer_root\theme\wp.theme.themes\default80\installedApps\DefaultTheme80.ear\DefaultTheme80.war

You need copy the following resources in the temporary **DynamicResources** folder:

- ◆ **themes** folder
- ◆ **skins** folder
- ◆ **WEB-INF** folder

Now open the folder **WEB-INF** folder and delete all resources except **decoration.xml** and **tld** folder.



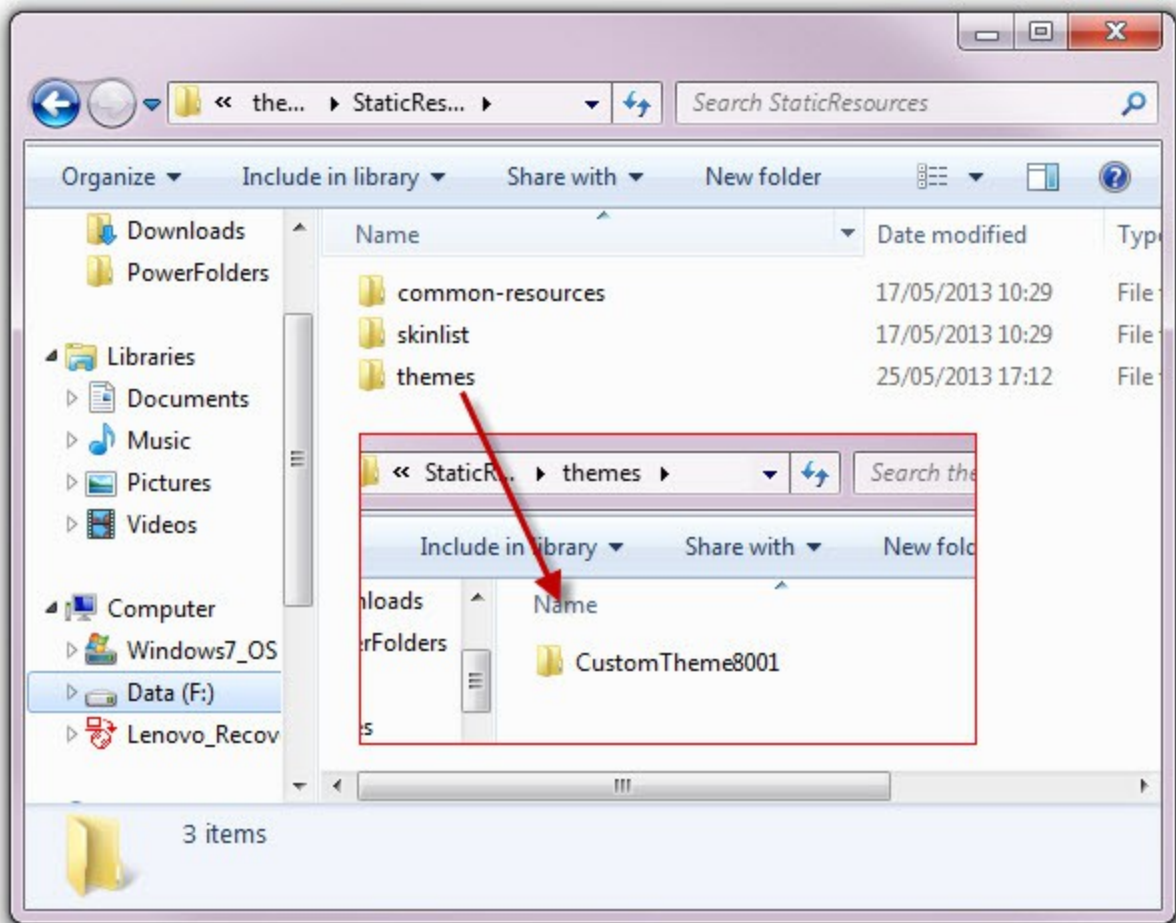
Static resources

To retrieve the static resources you can connect to the portal using a WebDAV client. An easier option is to retrieve the content via the browser using the following URLs:

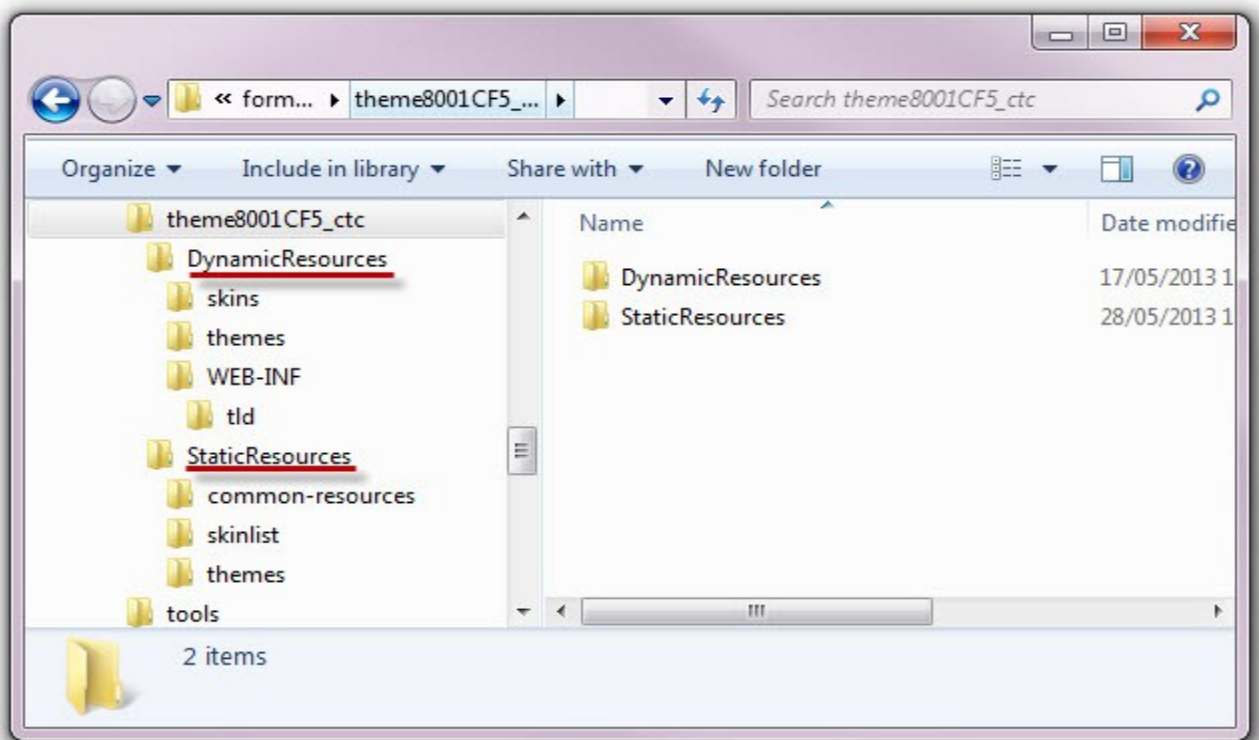
- ◆ **Themes:** <http://host:port/wps/mycontenthandler/dav/fs-type1/themes/?mime-type=application/zip>
- ◆ **Skins:** <http://host:port/wps/mycontenthandler/dav/skinlist/?mime-type=application/zip>
- ◆ **Common-resources:** <http://host:port/wps/mycontenthandler/dav/fs-type1/common-resources/?mime-type=application/zip>

Now, you need to unzip the retrieved zip files in the temporary **StaticResources** folder. Then, you need to expand **themes** folder and rename the **Portal 8.0** folder in **CustomTheme8001**.

See the image below:

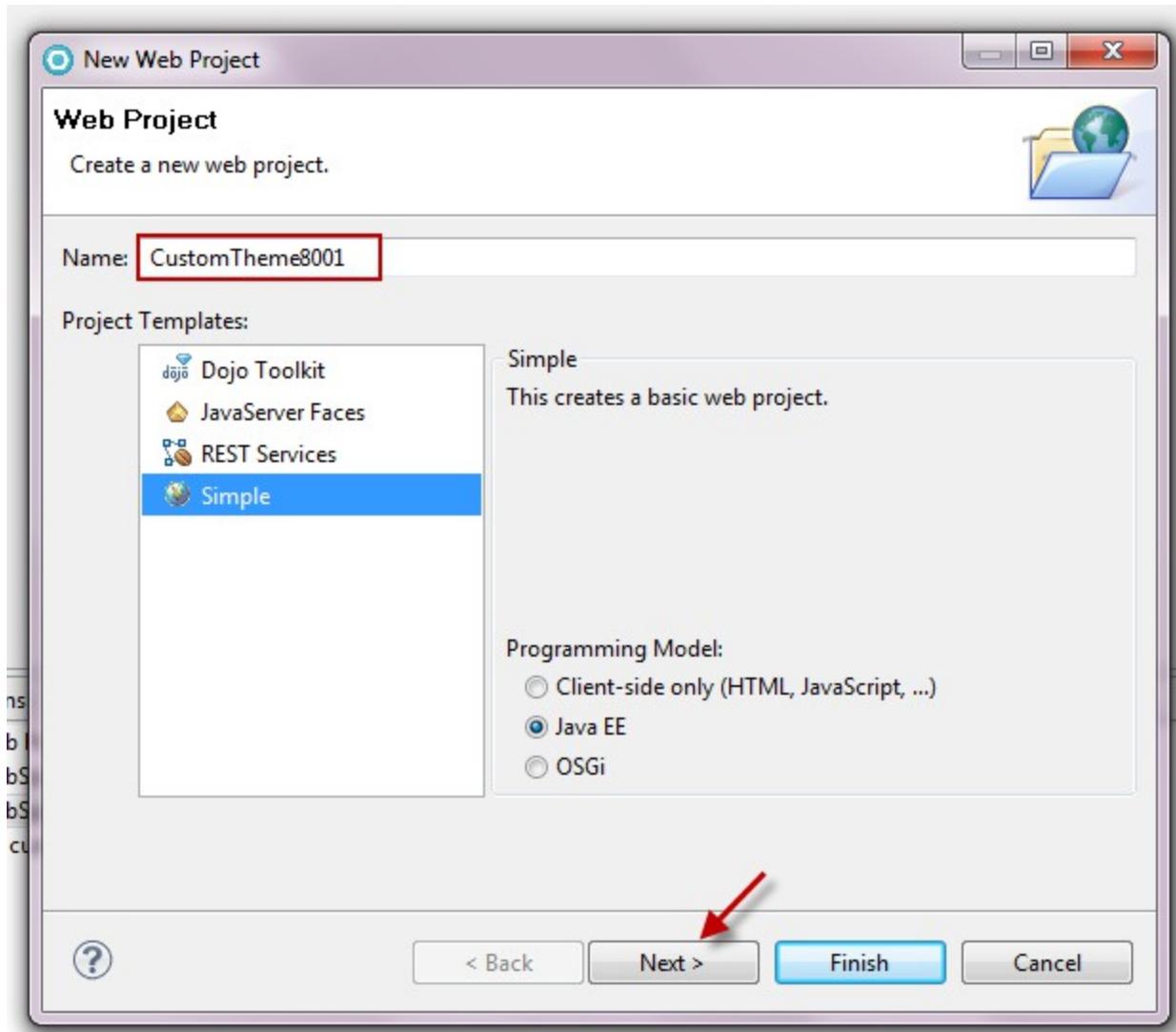


After downloaded all the necessary resources (see image below), the next step will be to combine these "**DynamicResources**" and "**StaticResources**" in a **single "WAR"** (RAD project).

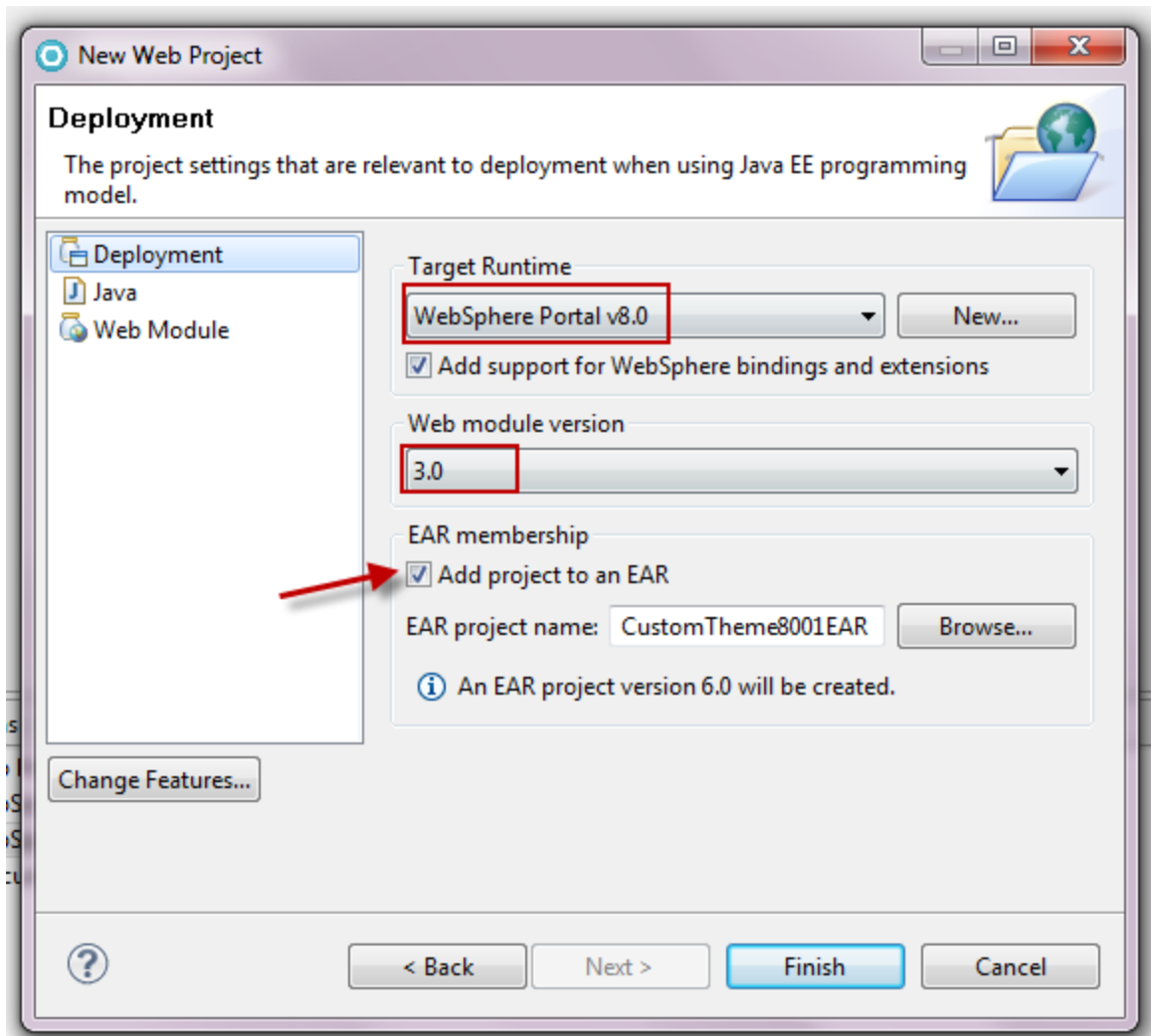


Setting up the development environment

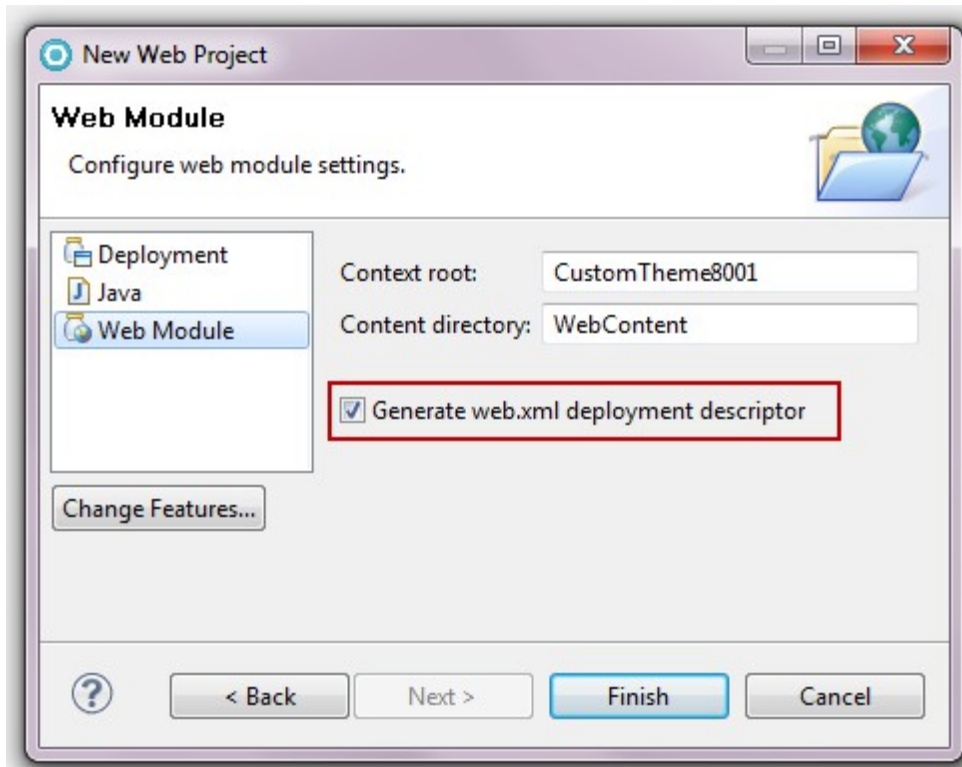
1. Open RAD and create a new web project. Set the project **Name** to **CustomTheme8001**
2. Be sure to select "**Simple**" and "**Java EE**" and click **Next** button



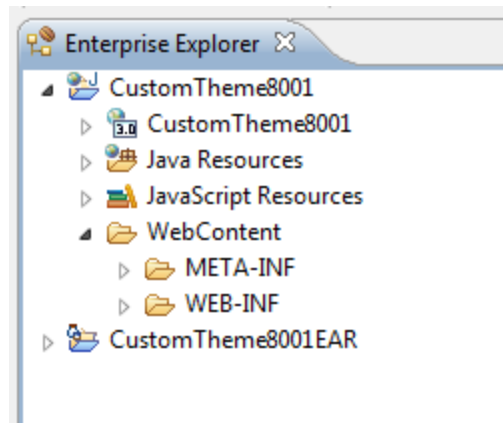
3. In the **Target Runtime**, select **Websphere Portal 8.0**; then select **Web module version 3.0** and check **Add project to an EAR**:



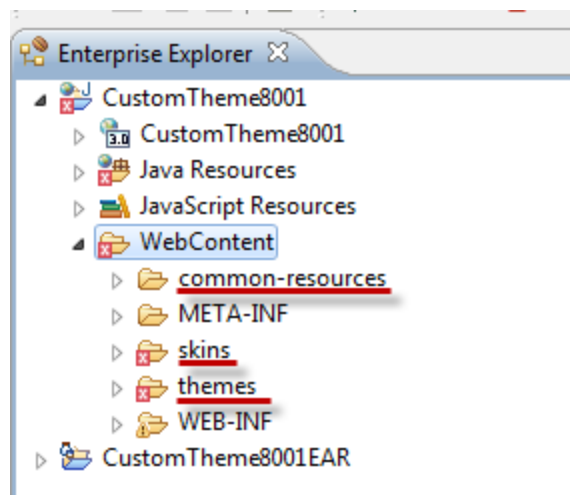
4. Click on **Web Module** and check **Generate web.xml deployment descriptor**; then click **Finish**.



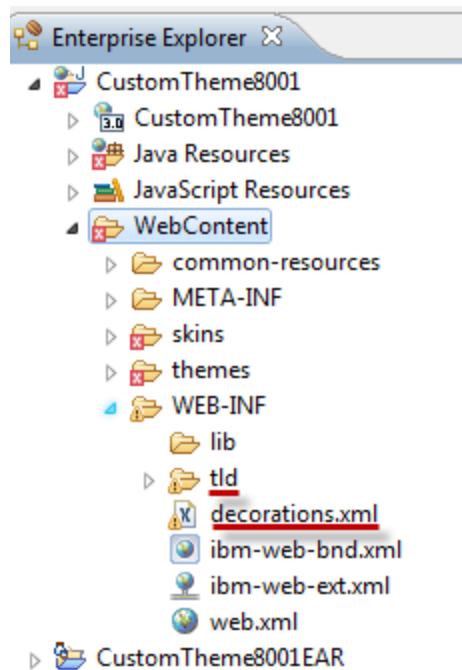
- Expand your new **CustomTheme8001** project and then find and expand the **WebContent** folder



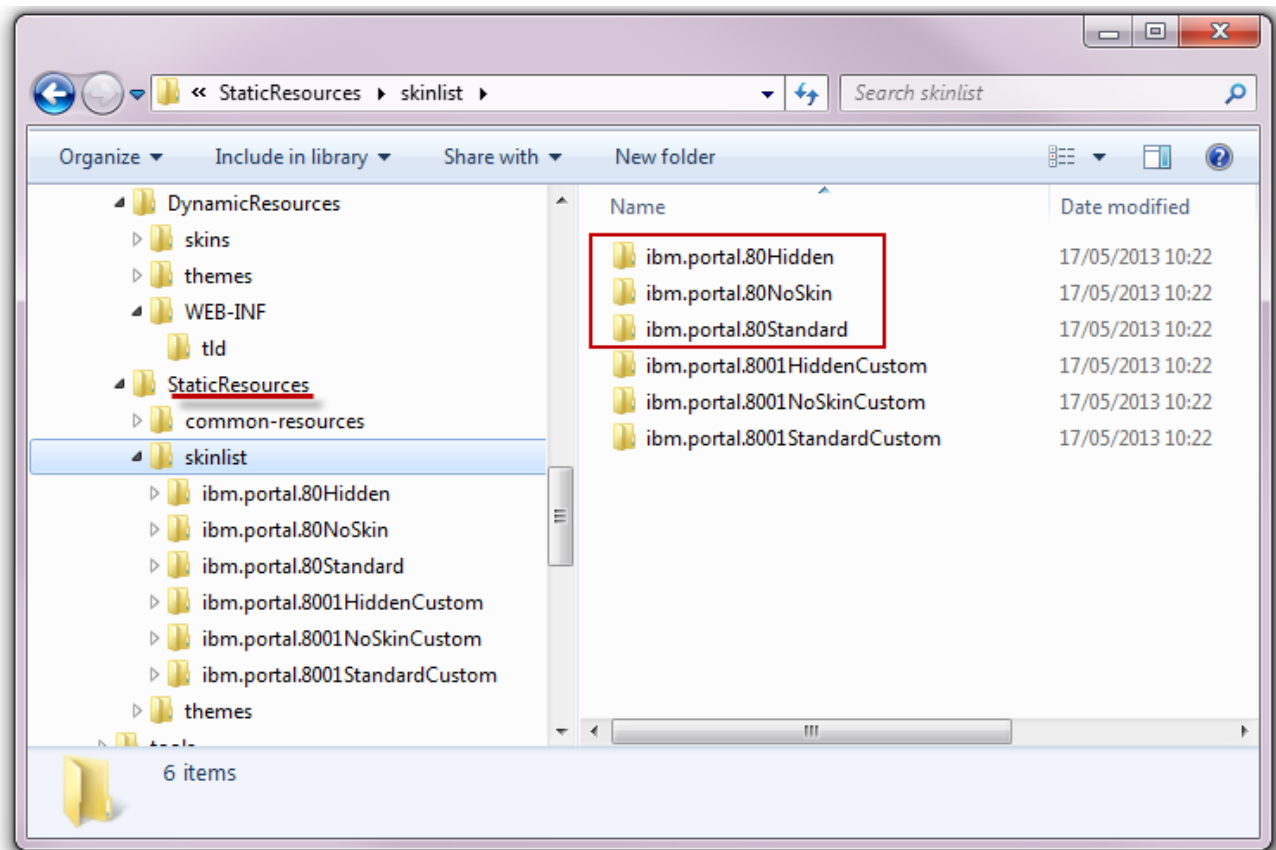
- In the **WebContent** folder:
 - copy both the **skins** and **themes** folder from the temporary **DynamicResources** folder
 - copy the **Common-resources** folder from the temporary **StaticResources** folder

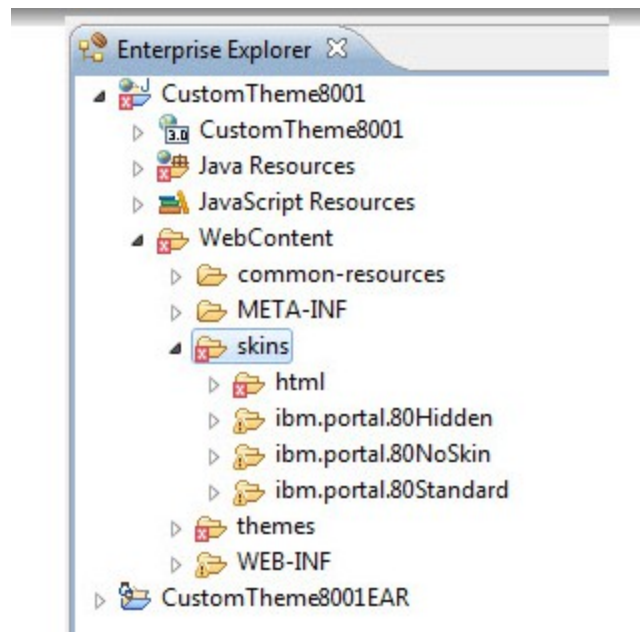


- Expand **WEB-INF** folder and copy **decoration.xml** and **tld** folder (located in **DynamicResources** folder → WEB-INF)

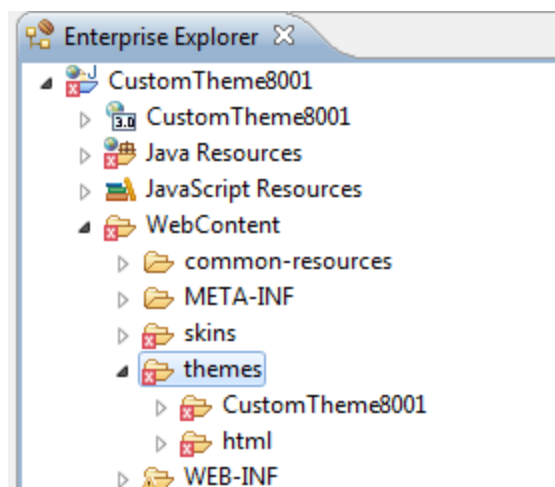


8. Expand **skins** folder and copy the following folders from **skinlist** located in **StaticResources** folder:
- ibm.portal.80Hidden
 - ibm.portal.80NoSkin
 - ibm.portal.80Standard





- Expand **theme** folder and copy **CustomTheme8001** folder (located in **StaticResources** folder → themes)



- Finally, to allow access to the resources, add the highlighted code to the **WEB-INF/web.xml** file

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

```
<web-app id="WebApp_ID" version="3.0" xmlns="http://java.sun.com/xml/ns/javaee"  
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"  
xsi:schemaLocation="http://java.sun.com/xml/ns/javaee http://java.sun.com/xml/ns/javaee/web-  
app_3_0.xsd">
```

```
    <display-name>CustomTheme8001</display-name>
```

```
    <welcome-file-list>
```

```
        <welcome-file>index.html</welcome-file>
```

```
        <welcome-file>index.htm</welcome-file>
```

```
        <welcome-file>index.jsp</welcome-file>
```

```
        <welcome-file>default.html</welcome-file>
```

```
        <welcome-file>default.htm</welcome-file>
```

```
        <welcome-file>default.jsp</welcome-file>
```

```
    </welcome-file-list>
```

```
    <context-param>
```

```
        <description>A regular expression that defines which of the resources in the WAR file can  
        be served by the portal war datasource.</description>
```

```
        <param-name>com.ibm.portal.whitelist</param-name>
```

```
        <param-value>.*</param-value>
```

```
    </context-param>
```

```
    <context-param>
```

```
        <description>A regular expression that defines which of the resources in the WAR file  
        cannot be served by the portal war datasource.</description>
```

```
        <param-name>com.ibm.portal.blacklist</param-name>
```

```
        <param-value>WEB-INF/.*</param-value>
```

```
    </context-param>
```

```
</web-app>
```

Replace Dynamic Content Spots

The dynamic resources for your theme must be linked to the static resources.

The static template files (theme.html) use **dynamic content spots** to reference JSP files or other dynamic resources.

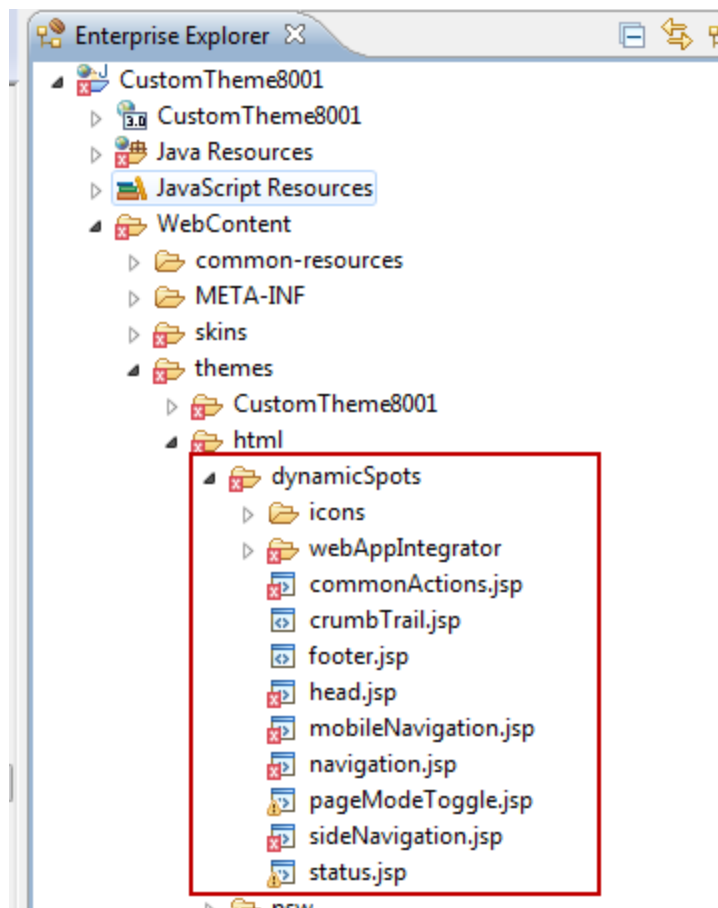
In the Default Portal Theme the Dynamic Content Spots in the static template files are linked as follows:

```
<link rel="dynamic-content" href="dyn-cs:id:80theme_head">
```

and each href point to a specific custom property defined at WAS level as a custom property in the file resource provider

WPDynamicContentSpotMappings.

In our custom theme, we imported the dynamic resources into the new theme, so, before deploying the custom theme, we must ensure that the dynamic content spots point to the dynamic resource in the custom WAR file.



Open **theme.html** and change all links to dynamic content spot from

```
<link rel="dynamic-content" href="dyn-cs:id:80theme_head">
```

to

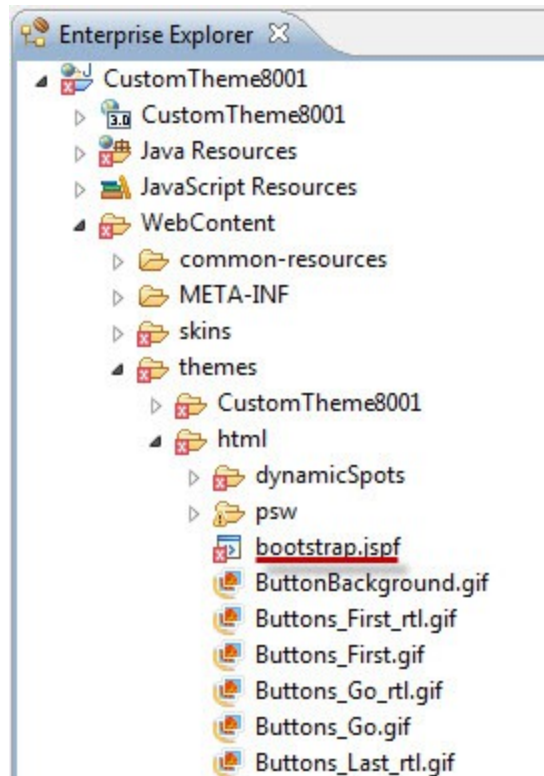
```
<link rel="dynamic-content"  
href="res:/CustomTheme8001/theme/themes/html/dynamicSpots/head.jsp">
```

where **CustomTheme8001** is the **context root** of the project.

Refer to the following table for the correspondence with the jsp:

Name	Value
customTheme_asa	res:/wps/themeModules/modules/asa/jsp/asa.jsp, wp_analytics
customTheme_asaHead	res:/wps/themeModules/modules/asa/jsp/head.jsp, wp_analytics
customTheme_asaPortlet	res:/wps/themeModules/modules/asa/jsp/asaPortlet.jsp
customTheme_commonActions	res:/CustomTheme8001/themes/html/dynamicSpots/commonActions.jsp
customTheme_crumbTrail	res:/CustomTheme8001/themes/html/dynamicSpots/crumbTrail.jsp? rootClass=wpthemeCrumbTrail&startLevel=2
customTheme_footer	res:/CustomTheme8001/themes/html/dynamicSpots/footer.jsp
customTheme_head	res:/CustomTheme8001/themes/html/dynamicSpots/head.jsp
customTheme_layout	lm:template
customTheme_pageModeToggle	res:/CustomTheme8001/themes/html/dynamicSpots/pageModeToggle.jsp
customTheme_portletLink	res:/CustomTheme8001/skins/html/portletLink.jsp
customTheme_preview	res:/wps/themeModules/modules/pagebuilder/jsp/preview.jsp
customTheme_primaryNav	res:/CustomTheme8001/themes/html/dynamicSpots/navigation.jsp? rootClass=wpthemePrimaryNav %20wpthemeLeft&startLevel=1
customTheme_projectMenu	res:/wps/themeModules/modules/pagebuilder/jsp/projectMenu.jsp
customTheme_search	res:/wps/themeModules/themes/html/dynamicSpots/modules/search/search.jsp
customTheme_secondaryNav	res:/CustomTheme8001/themes/html/dynamicSpots/navigation.jsp? rootClass=wpthemeSecondaryNav&startLevel=2&levelsDisplayed=2
customTheme_sideNav	res:/CustomTheme8001/themes/html/dynamicSpots/sideNavigation.jsp?startLevel=2
customTheme_status	res:/CustomTheme8001/themes/html/dynamicSpots/status.jsp
customTheme_toolbar	res:/wps/themeModules/modules/pagebuilder/jsp/toolbar.jsp
customTheme_topNav	res:/CustomTheme8001/themes/html/dynamicSpots/navigation.jsp? rootClass=wpthemeHeaderNav&startLevel=0&primeRoot=true

After these changes you need to change the **bootstrap.jspf**



Change

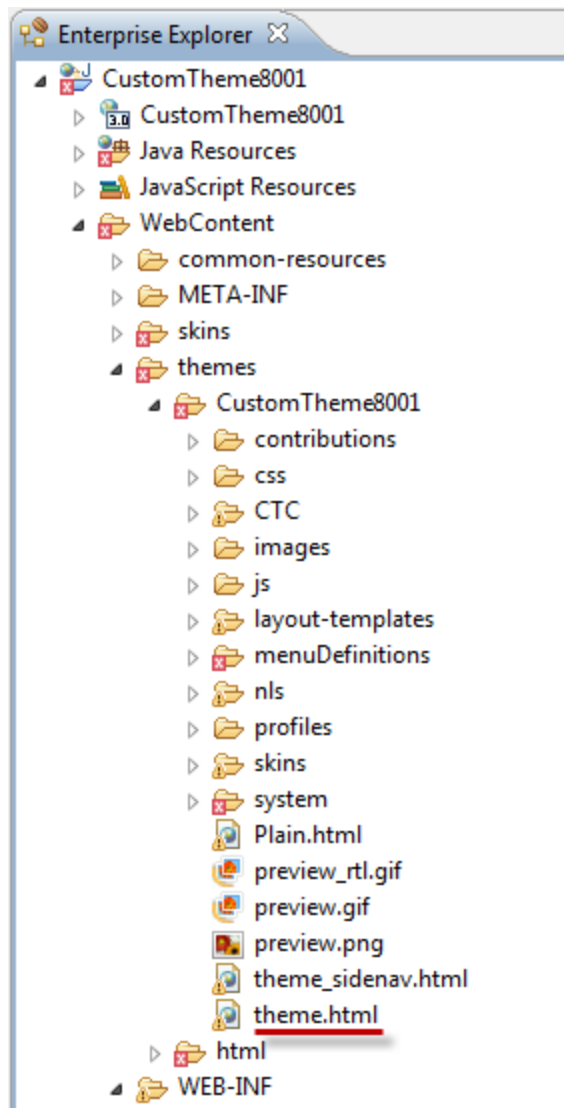
```
URI davURI = pocSvc.createURI("dav","fs-type1/common-resources/ibm/css/portal/ibmPortlets.css");
```

In

```
URI davURI = pocSvc.createURI("war", pageContext.getServletContext().getContextPath() + "/common-resources/ibm/css/portal/ibmPortlets.css");
```

Remove Localization from the Theme Template

1. Open the **theme.html** template



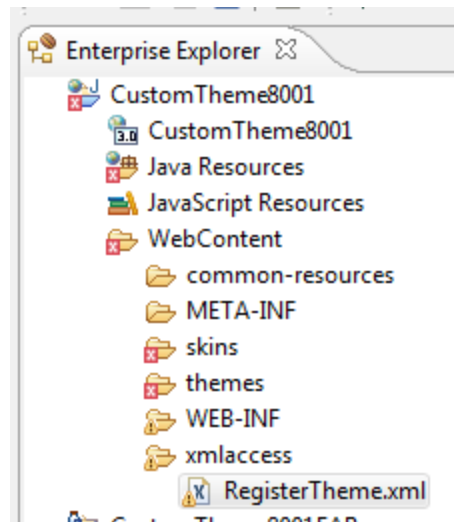
2. Locate the line "`<!--START LOCALE LINKS-->`" in the root template. Between the start line and the end line denoted by "`<!--END LOCALE LINKS-->`" there are references to the 32 localized templates. Remove the 32 lines of localized references that are using this syntax:

`<link rel="alternate" href="nls/theme_<locale>.html" hreflang="<locale>">`

Deploy and register theme

For convenience, you can create a folder "**xmlaccess**" within the WebContent folder and save the file **RegisterTheme.xml** that you will need later to register the theme to the Portal once it is installed.

After installing the theme, registration is a fundamental step, so have the **RegisterTheme.xml** within the project allows you to have the file to register the theme in the same environment where you install the theme.



Below the **RegisterTheme.xml**:

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

```
<!-- Contesto: webtheme -->
```

```
<request type="update" version="8.0.0.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:noNamespaceSchemaLocation="PortalConfig_8.0.0.xsd">
```

```
  <portal action="locate">
```

```
    <skin action="locate" domain="rel" objectid="ibm.portal.80Standard.objectID" uniqueness="ibm.portal.80Standard"/>
```

```
    <skin action="locate" domain="rel" objectid="ibm.portal.80NoSkin.objectID" uniqueness="ibm.portal.80NoSkin"/>
```

```
    <skin action="locate" domain="rel" objectid="ibm.portal.80Hidden.objectID" uniqueness="ibm.portal.80Hidden"/>
```

```
  <theme action="update" active="true" context-root="/CustomTheme8001" default="false" defaultskinref="ibm.portal.80Hidden.objectID" domain="rel" resourceroot="dynamicSpots" uniqueness="portal.customtheme8001">
```

```
    <localedata locale="en">
```

```
      <title>customtheme8001</title>
```

```
    </localedata>
```

```
    <localedata locale="it">
```

```
      <title>customtheme8001</title>
```

```
    </localedata>
```

```
  <allowed-skin skin="ibm.portal.80Standard.objectID" update="set"/>
```



```

        <allowed-skin skin="ibm.portal.80NoSkin.objectID" update="set"/>
            <allowed-skin skin="ibm.portal.80Hidden.objectID" update="set"/>
                <parameter name="com.ibm.portal.theme.dnd.sources" type="string"
update="set"><![
CDATA[ibmDndColumn:com.ibm.pb.dnd.layout.LayoutColumnSource:vertical,ibmDndRow:com
.ibm.pb.dnd.layout.LayoutRowSource:horizontal]]></parameter>

                <parameter name="com.ibm.portal.theme.aggregationmodes" type="string"
update="set"><![CDATA[ssa]]></parameter>

                <parameter name="com.ibm.portal.layout.template.href" type="string"
update="set"><![CDATA[war:CustomTheme8001/themes/CustomTheme8001/layout-
templates/1Column/]]></parameter>

                <parameter name="com.ibm.portal.theme.template.ref" type="string"
update="set"><![
CDATA[war:CustomTheme8001/themes/CustomTheme8001/]]></parameter>

                <parameter name="resourceaggregation.profile" type="string" update="set"><![
CDATA[profiles/profile_ctc_deferred.json]]></parameter>
            </theme>

</portal>
</request>

```

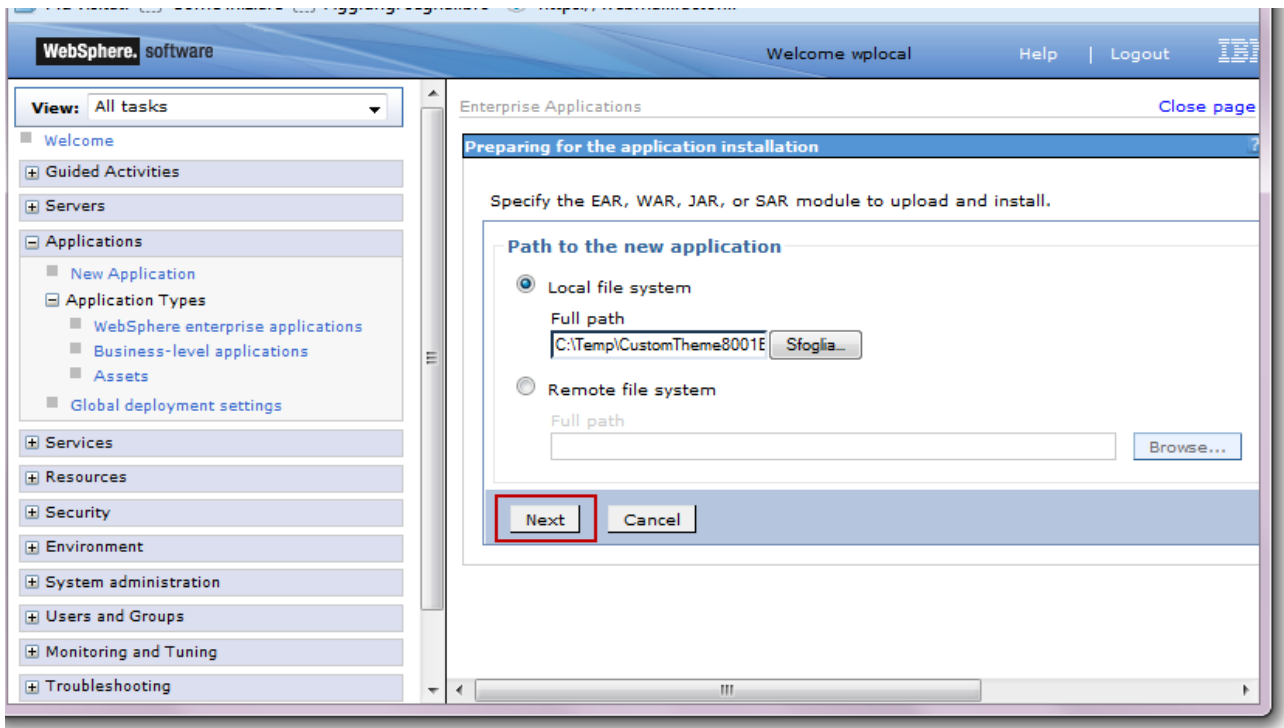
This xml can be used to register any theme. The parameters that need to be checked / modified are:

1. Ensure that the "**default**" attribute on the element is set to **false**
2. Change the "**context-root**" and "**uniquename**" attributes to match your custom theme WAR
3. Change the theme title on the **<localedata />** tags for the locales in which your Portal supports.
4. Change the "**com.ibm.portal.layout.template.href**" parameter to point to your layout template.
5. Change the "**com.ibm.portal.theme.template.ref**" parameter to point to your new custom theme context root.

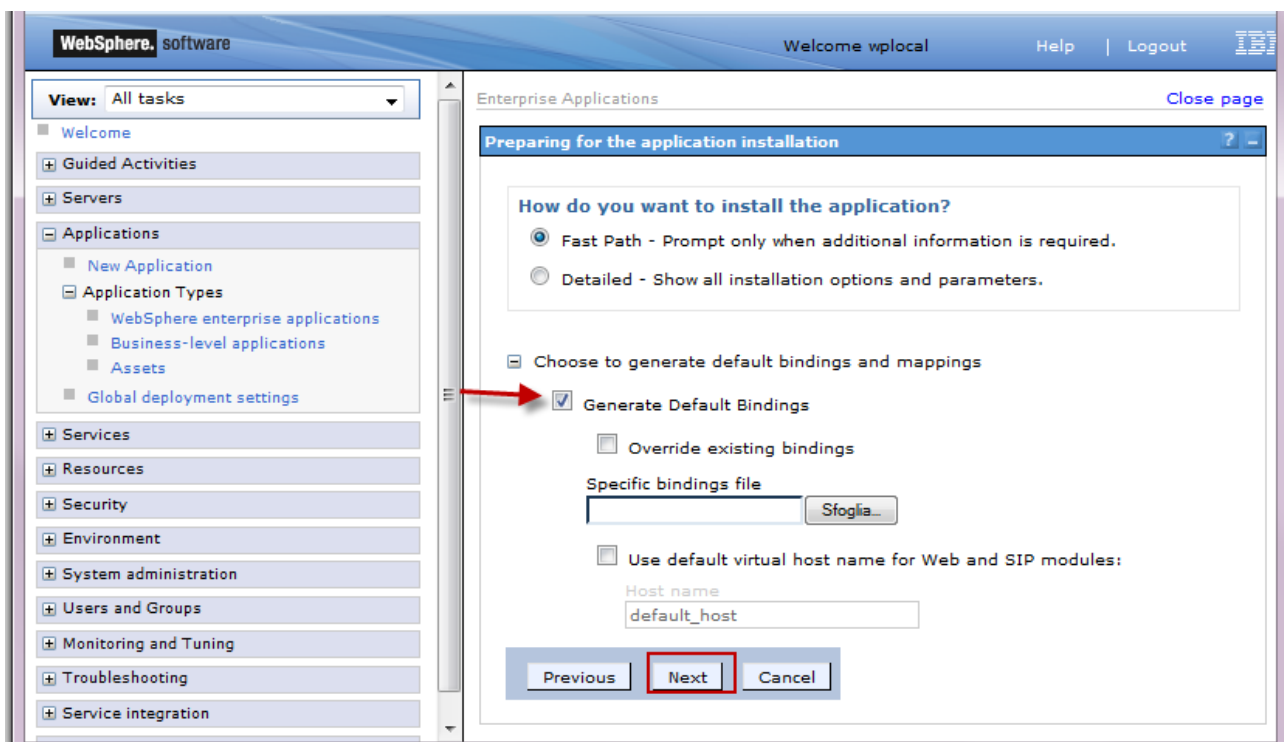
Save all changes for you project, and export the EAR.

Log in to the WebSphere console and go to **Applications -> Application Types -> WebSphere enterprise applications** and click **Install**.

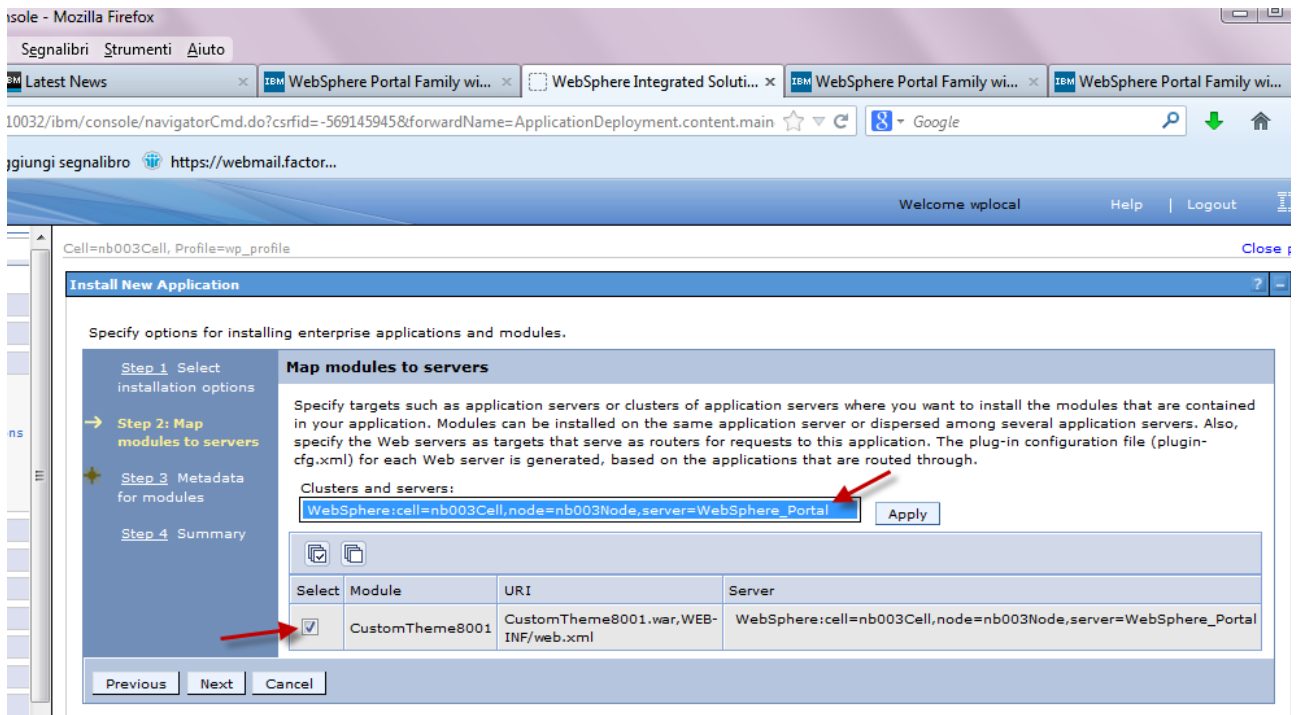
Click **Browse ...** select your EAR and click **Next**.



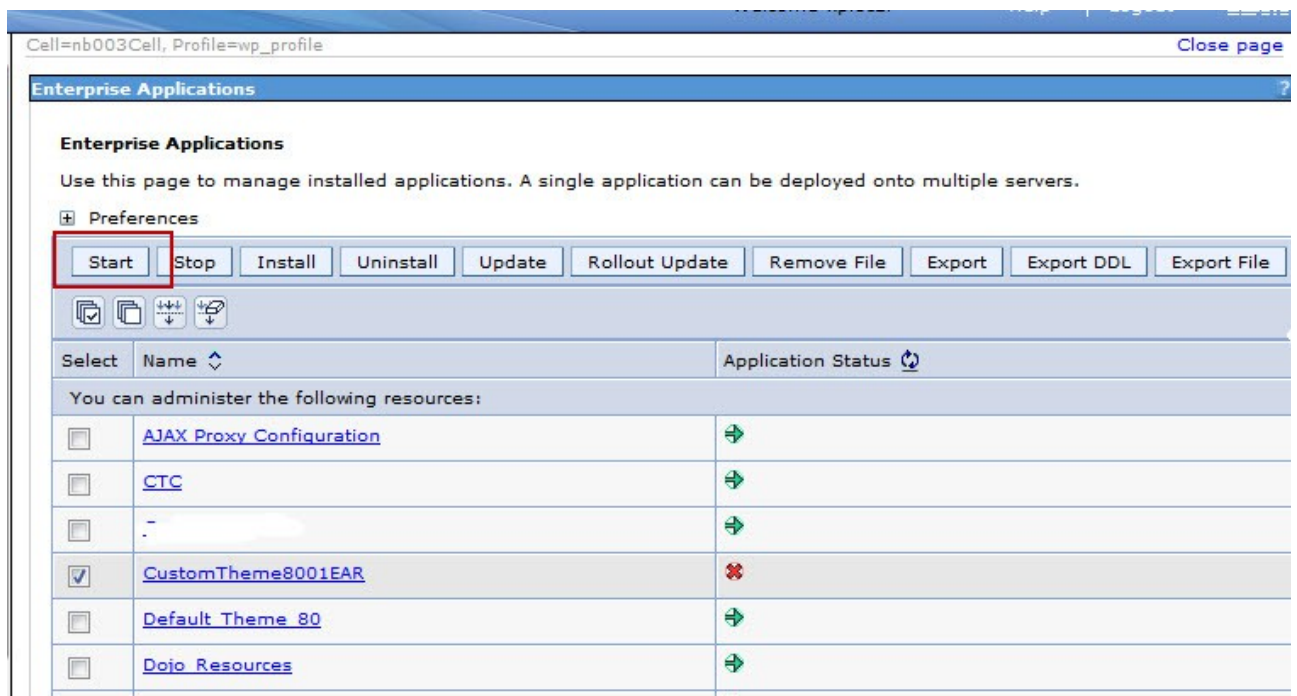
select **Fast Path**, expand **Choose to generate default bindings and mappings** and check **Generate Default Bindings**, click **Next**



in **Map Modules to Servers** window, select your Custom Theme module, select be sure to deploy the module in the WebSphere_Portal application server. Click **Apply**, then **Next**, **Finish** and finally **Save** to master configuration.

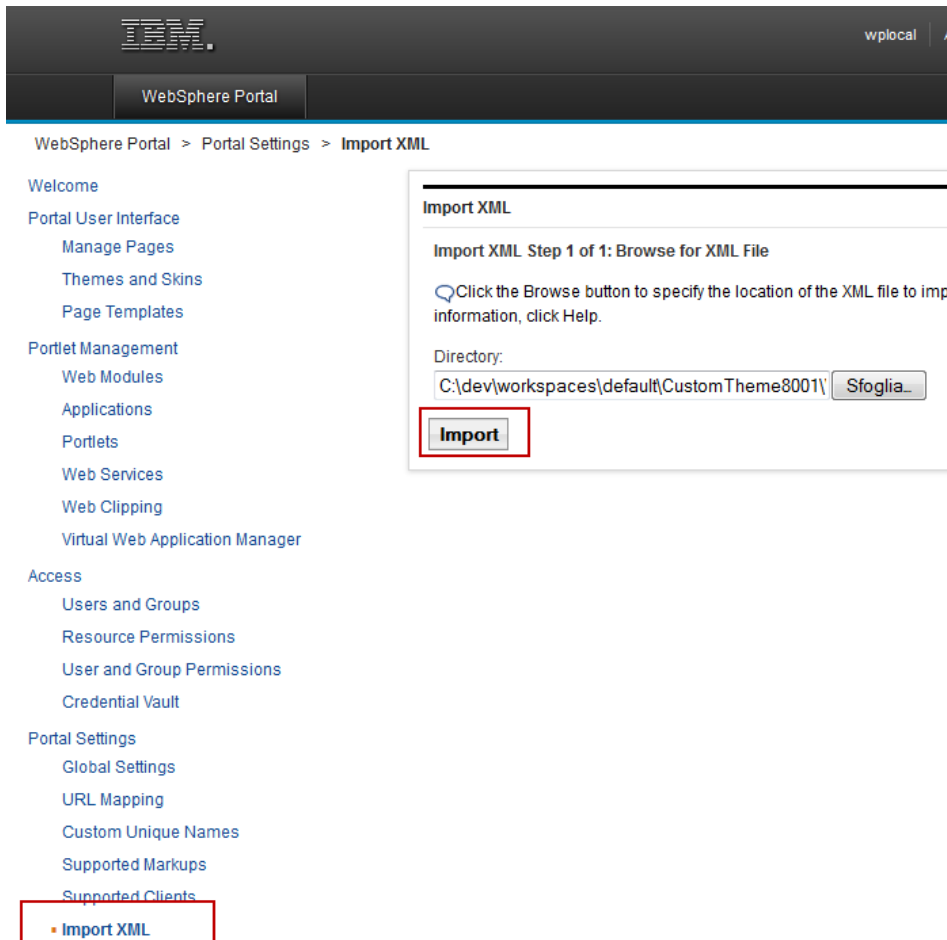


Start the application

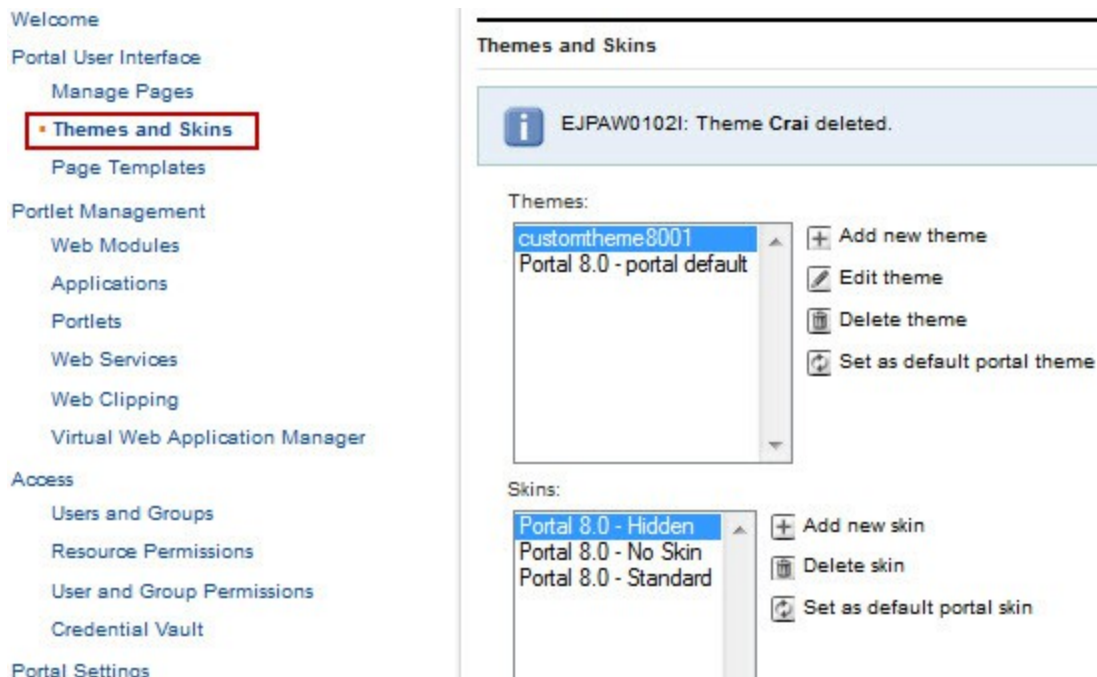


Now you can **register** your theme to the Portal.

Log in (as portal administration) to the WebSphere Portal, go to **Import XML** page and **register** the **CustomTheme8001**, by choosing the **RegisterTheme.xml** file deployed with the theme application in the above steps.



If you click in **Theme and Skins** page you can see your custom theme in the **Themes** list:



Testing the theme in a portal page

We have created a theme that is a copy of the default portal theme, now we have to verify that everything is working properly by creating a new page and applying the custom theme.

You can create a page from a CTC page template in order to verify that both CTC and new features of Portal 8.0.0.1 works correctly.

See images below:

The screenshot shows the 'Manage Pages' interface in WebSphere Portal. The breadcrumb trail is 'WebSphere Portal > Portal User Interface > Manage Pages'. A search bar is present with the text 'Search by: Title starts with' and a 'Search' button. Below the search bar, there are buttons for 'New Page', 'New Label', 'New URL', and 'New Page from...'. A table lists existing pages with columns for Title, Unique name or identifier, and Status. The table contains the following data:

Title	Unique name or identifier	Status
Welcome	ibm.portal.Home.Welcome	Active
Getting Started	ibm.portal.Home.Getting Started	Active
test-theme	Id:Z6_PQG8H380JGI530I7JCVHIP2GV4	Active
article01	Id:Z6_PQG8H380JG4SC0I7JLDTVJ1023	Active
test-theme8001	Id:Z6_PQG8H380J803D0IFNIKDC92006	Active
test2	Id:Z6_PQG8H380J803D0IFNIKDC920P5	Active

The screenshot shows the 'New template-based page / New Web Content page:Home' dialog box. It contains the following fields and options:

- Title: test-theme8001
- Friendly URL name: test-theme8001
- Aggregation - Render Mode: Inherit Parent Render Mode (selected)
- Client Side Aggregation - Rendering (unselected)
- Server Side Aggregation - Rendering (unselected)
- I want to make this page my private page (unselected)
- Page Template: News Index (selected in a dropdown menu)
- Web Content Associations: Web Content folder: Select
- Buttons: OK, Cancel

Index Page Signpost and Promotions Slideshow (Specified)

+ Create new item

Cras elit tortor, varius sit amet tristique non, eleifend ut leo. Vivamus sed lectus et justo mollis fermentum et eu.

1 2 3

Latest News (Specified)

+ Create new test-theme9001 item

Latest News

Body

Title: Edit

Show Non-displaying fields

Index List (Specified)

Search for: From: 5/29/2012 To: 5/29/2013 Search

No Results

No Results

Connect Tools (Specified)

CONNECT

Latest News published

- Open Read Form
- Open Edit Form
- Delete

Edit Content Spot

Sidebar Featured Slideshow List (Specified)

FEATURED NEWS

No Results

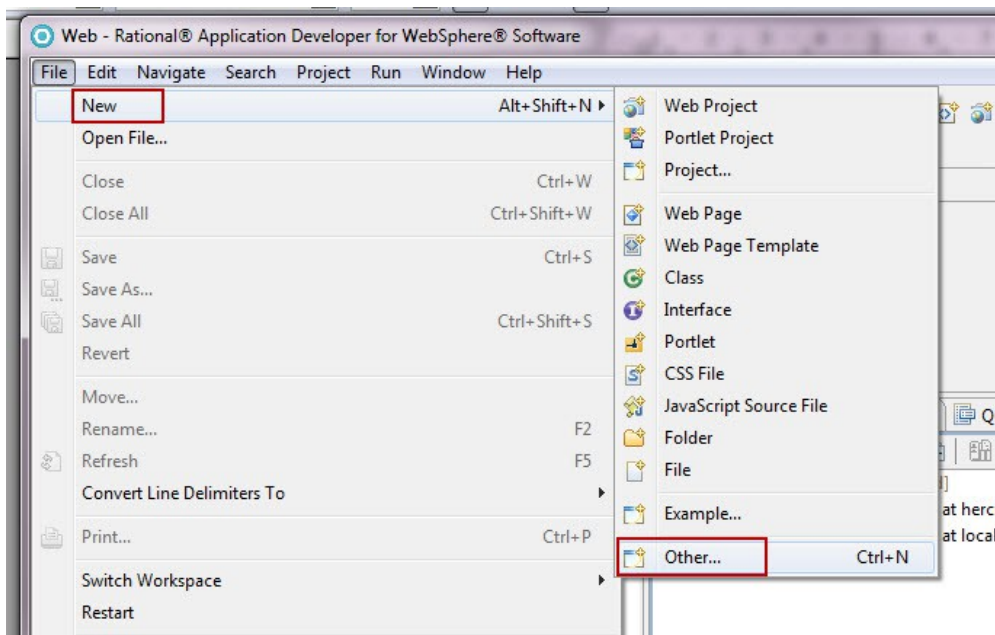
How to customize your new Custom Theme

You created the custom theme as a project in RAD, now let's see how to connect it to our development portal , and to see in real time the changes made to the theme.

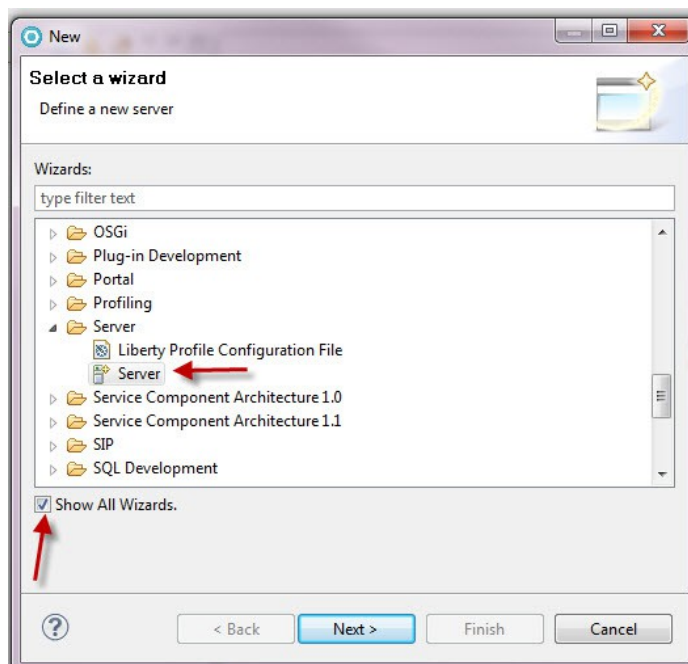
To do this you must create a **server** to identify the **run-time environment** that you want to use for testing your project resources. The term creating a server defines creating a pointer from the workbench.

Creating a server on RAD

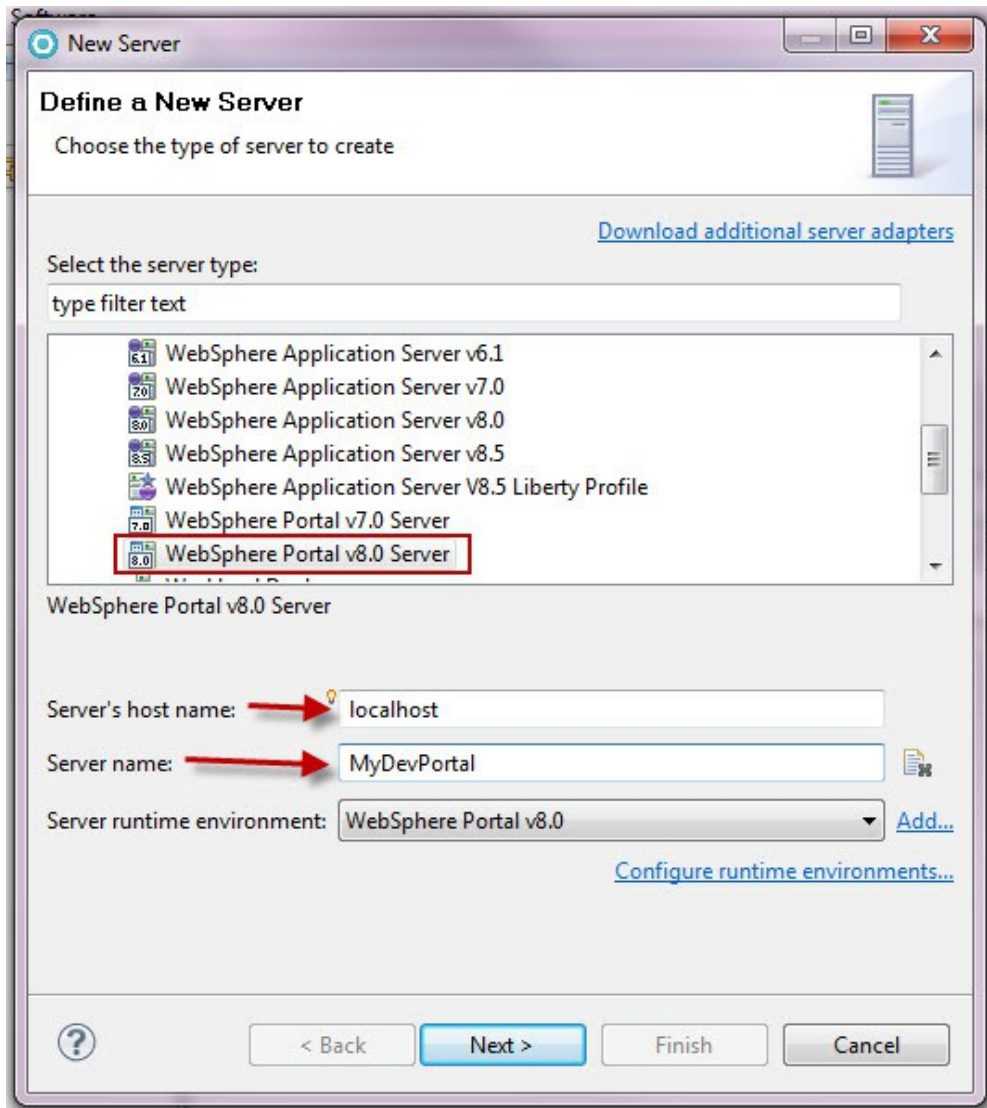
Open RAD and in the menu bar, click **File > New > Other**.



Select the **Show All Wizards** check box and expand the **Server** folder and then select **Server**.



Click **Next**. The **New Server** wizard opens. This wizard defines a new server, that contains information required to point to a specific run-time environment for local or remote testing, or for publishing to an application server.

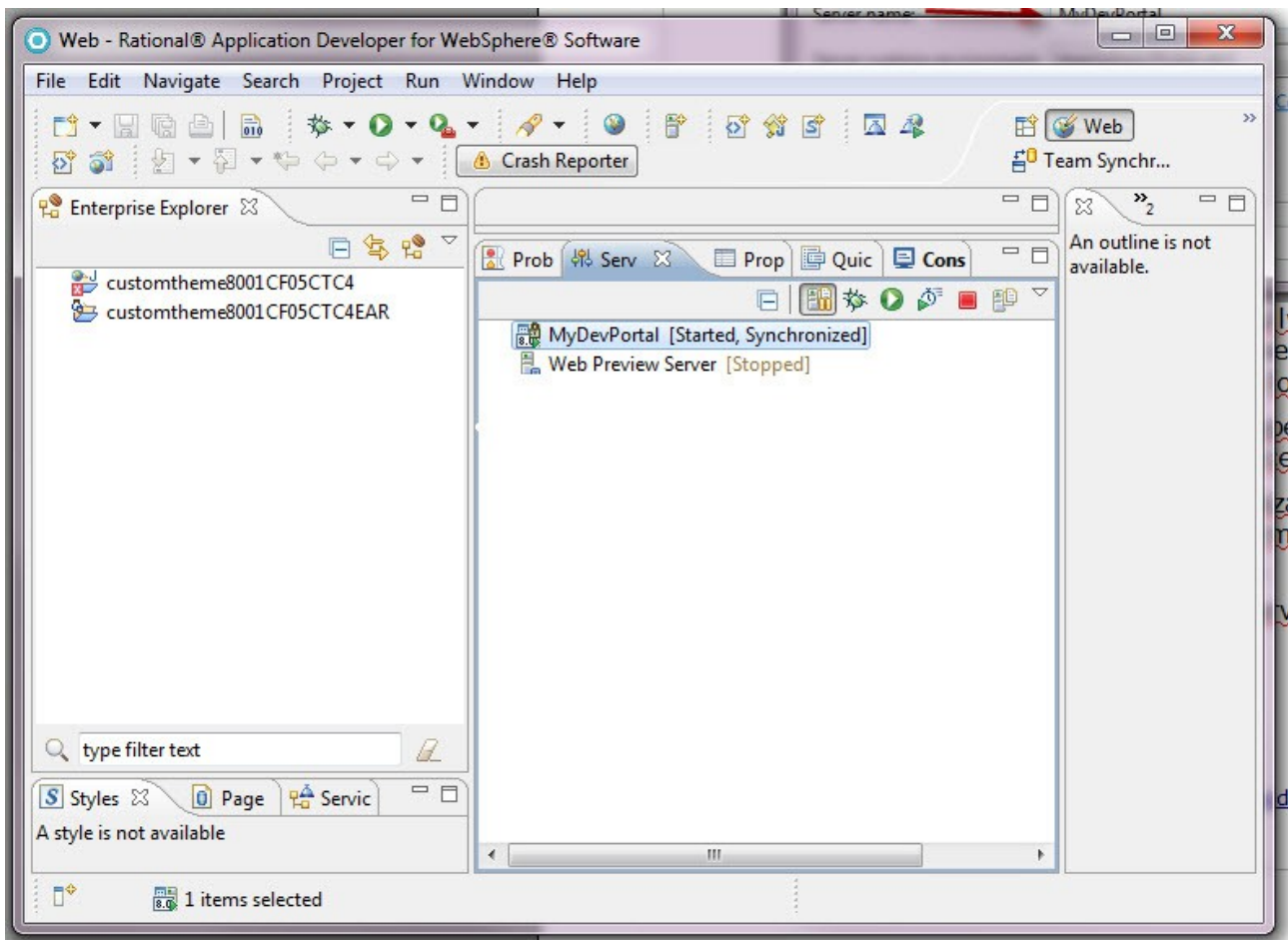


In the **Host** name field, you can provide the fully qualified DNS name or IP address of the remote host machine that the server is running on. By default, this field is pre-filled with the default address for the local host (127.0.0.1).

From the **Server runtime environment** list, select the type of server or test environment where you want to publish or test your resources.

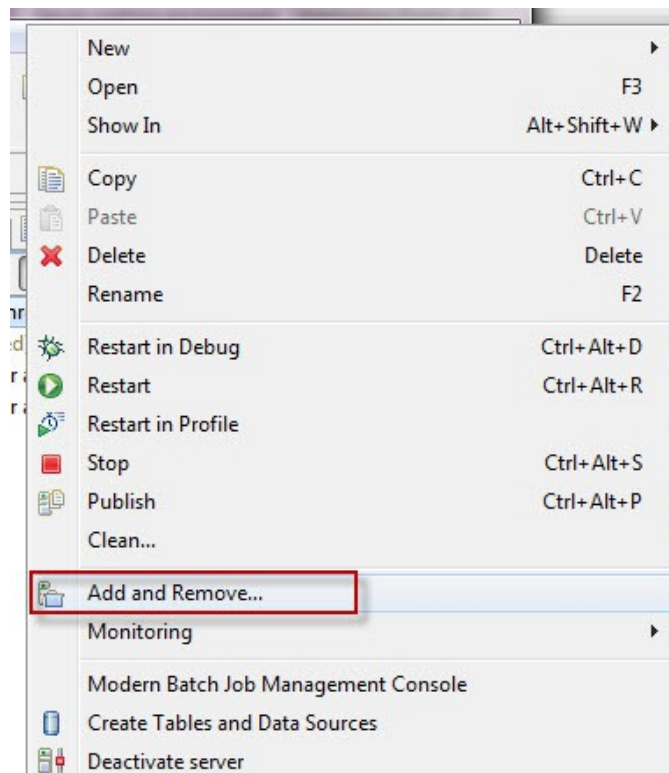
Click **Next** and follow the instructions in the wizard to specify the details of the server that you want to create. For more information about any of the fields on this wizard, select the field and then press F1.

Click **Finish**. The new server appears in the **Servers** view under the **Server** column.

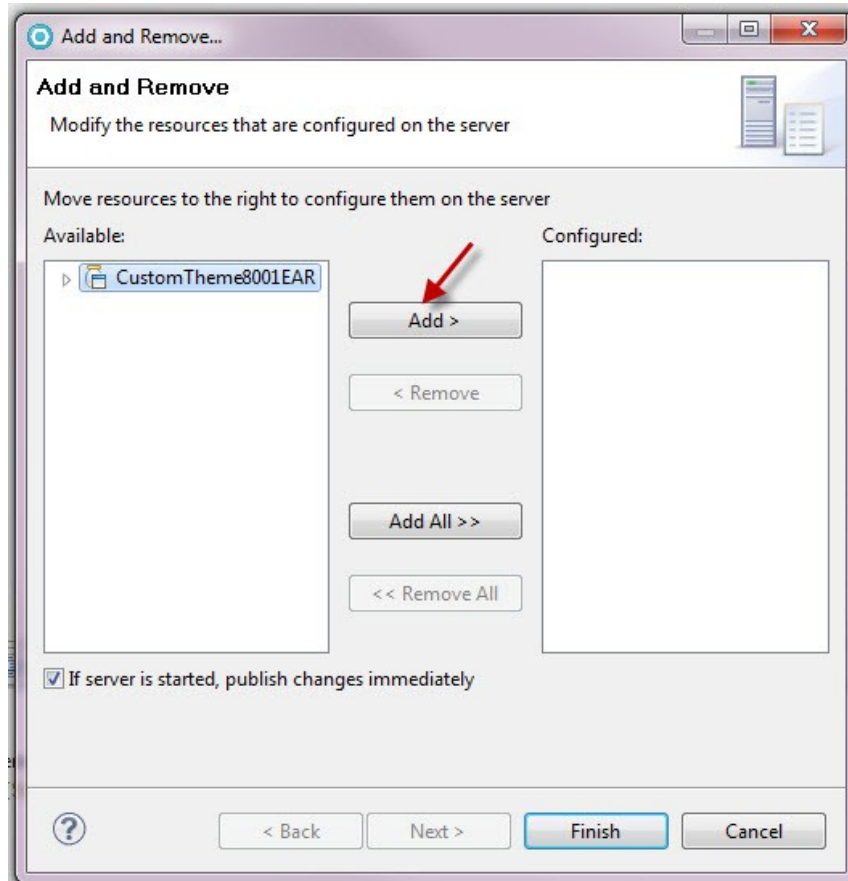


Now you have to add the resources on the server.

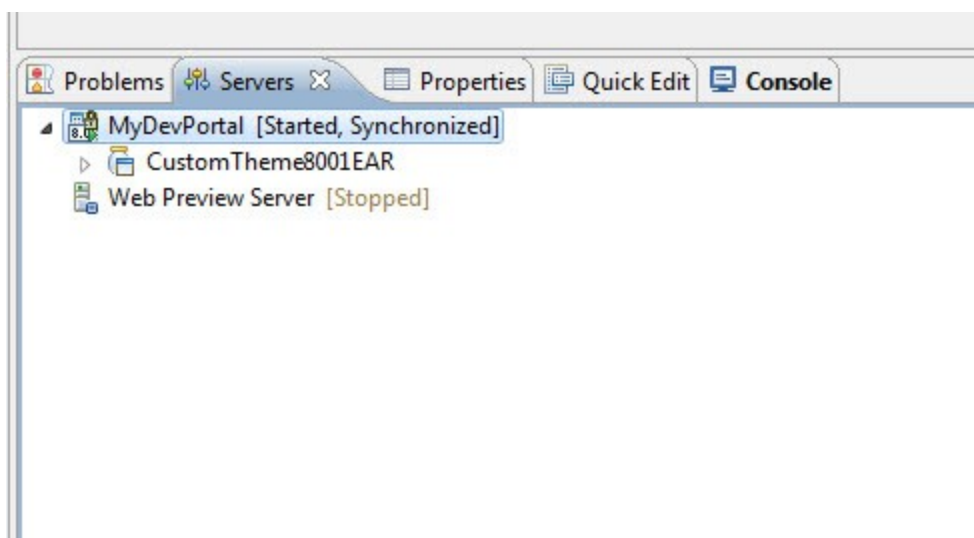
Right click on the server name (**MyDevPortal**) and click **“Add and Remove...”**



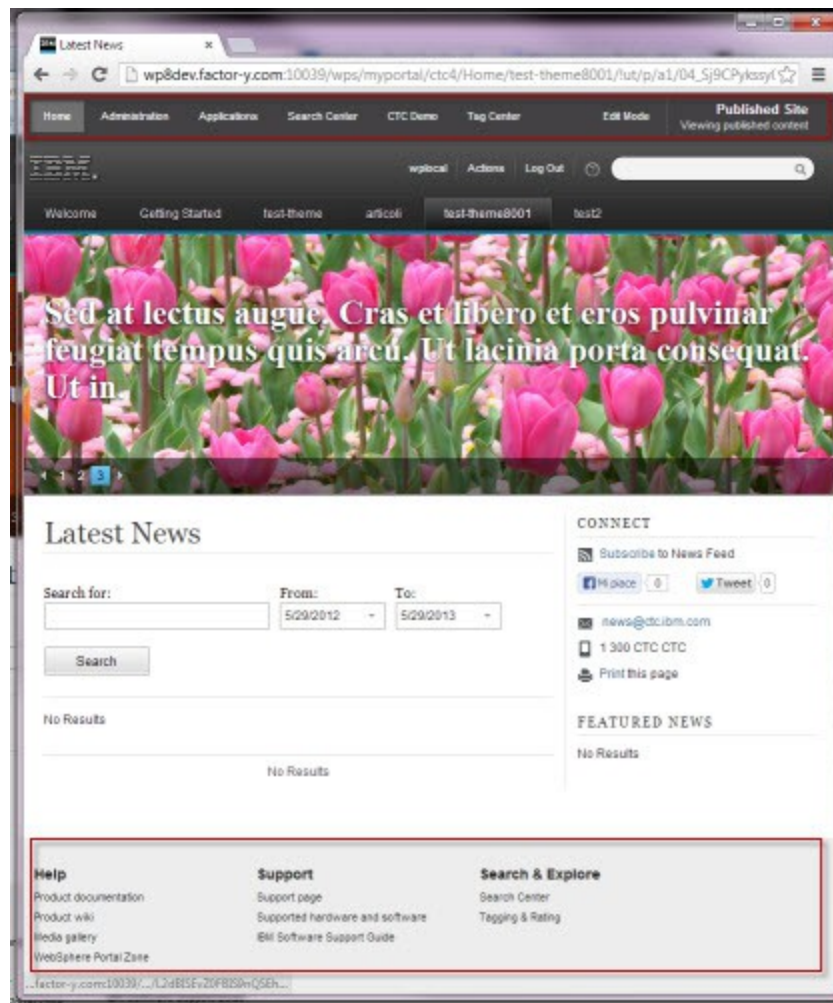
In the next window select CustomTheme8001EAR, click **Add** and then **Finish**



Now in **Server** view you can see the resource (**CustomTheme8001EAR**)



Now any changes you make to the theme will be automatically published on the development server and displayed on pages where you applied the theme. For example, you can change the background color of the header and footer.



Debugging

In development for to work with the theme more efficiently and to make changes visible without restarting the WebSphere Portal Server you must add the following parameter to the Default.jsp (CustomTheme8001/WebContent/themes/html/Default.jsp):

```
--%><r:param name="max-age" value="2"/><%--
```

insert this parameter after `--%><r:param name="mime-type" value="text/html"/><%--`

Also, make sure that

CustomTheme8001/WebContent/WEB-INF/**ibm-web-ext.xmi**

and

CustomTheme8001/WebContent/WEB-INF/**ibm-web-ext.xmi**

are set to the following:

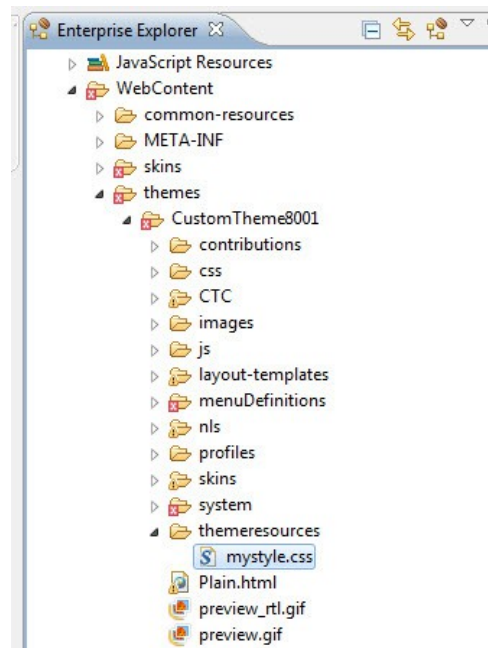
```
<enable-reloading value="true"/>
```

IMPORTANT: This configurations must be removed for production!

In RAD expand the **WebContent > themes > CustomTheme8001** and create new folder **themeresources**, that will contain all the resources related to my new style.

I do this because I prefer to separate the custom resources by the resources of the default theme.

In the **themeresources** folder creates the file **mystyle.css**



Open the theme.html file (WebContent > themes > CustomTheme8001) and before </head> insert the link to the new css (mystyle.css)

```
<link rel="stylesheet" href="/customtheme8001/themes/CustomTheme8001/themeresources/mystyle.css" type="text/css" />
```

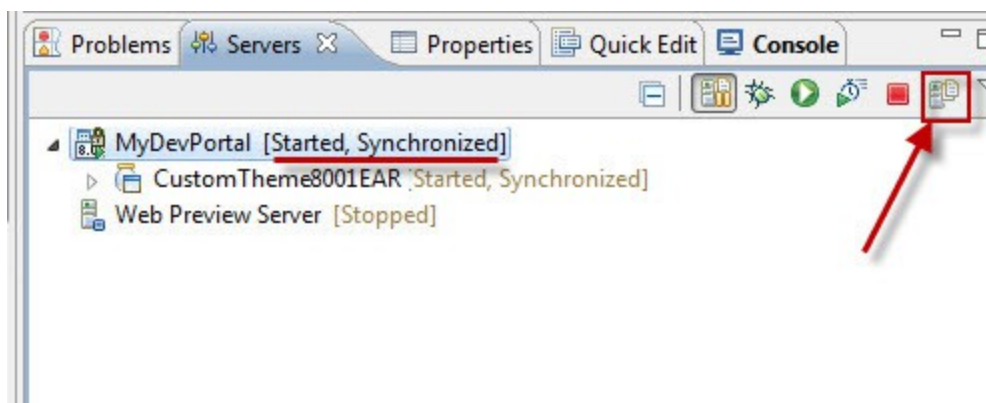
Save and close.

Now open mystyle.css and insert the styles you need to change the theme:

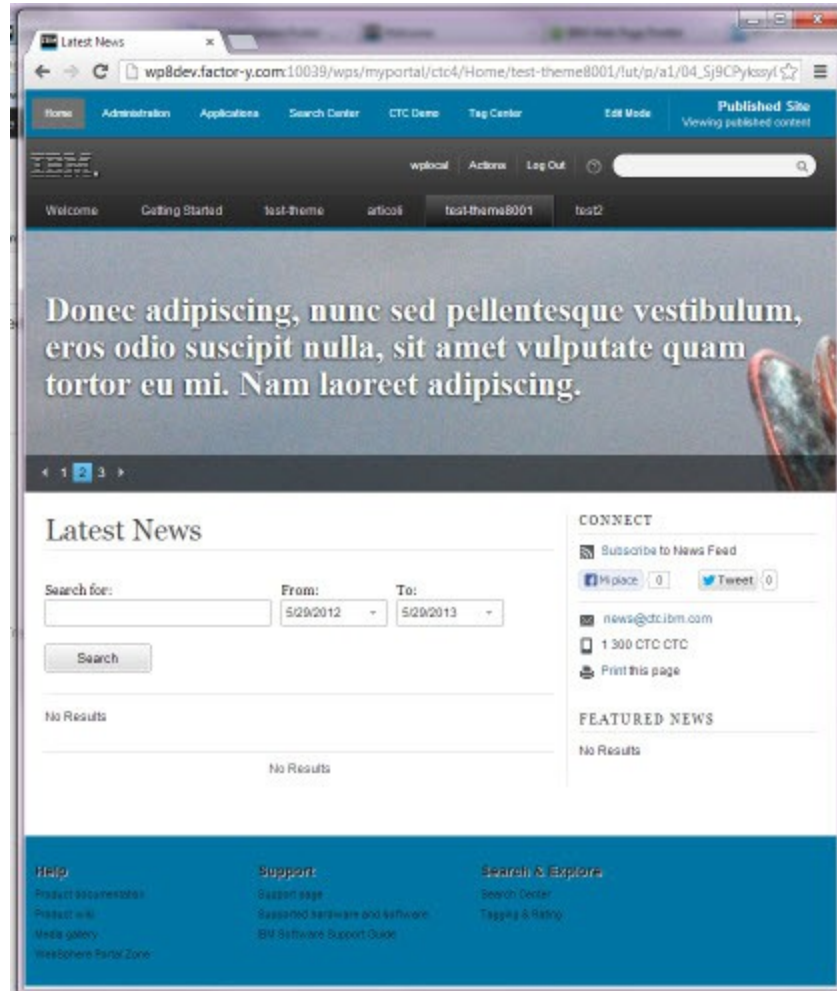
```
.wpthemeHeader {  
    background-color: #0075A3;  
}  
.wpthemeFooter {  
    background-color: #0075A3;  
}
```

And **Save**.

Now you can expect few minutes or force the publish to the server; to force the publish to the server click on the icon "Publish to the server" in server view. When you see the word "**Synchronized**" next to the name server, all changes are published and visible.



Go to the test page and see the changes applied.



For more information about theme customization wait the next article....

Documentation

- ◆ http://www-10.lotus.com/ldd/portalwiki.nsf/dx/Deploying_and_developing_IBM_WebSphere_Portal_8_themes_A_step-by-step_guide
- ◆ http://www-10.lotus.com/ldd/portalwiki.nsf/dx/Removing_template_localization_for_the_theme_and_skin_with_8.0
- ◆ http://www-10.lotus.com/ldd/portalwiki.nsf/dx/Create_a_custom_theme_without_WebDAV_with_8.0
- ◆ http://www-10.lotus.com/ldd/portalwiki.nsf/xpDocViewer.xsp?lookupName=IBM+WebSphere+Portal+8+Product+Documentation#action=openDocument&res_title=Creating_a_dynamic_content_spot_wp8&content=pdcontent
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- ◆ http://www-10.lotus.com/ldd/portalwiki.nsf/xpDocViewer.xsp?lookupName=IBM+WebSphere+Portal+Express+8+Product+Documentation#action=openDocument&res_title=Copy_the_static_resources_for_your_theme_exp8&content=pdfcontent
- ◆ http://infolib.lotus.com/resources/portal/8.0.0/doc/en_us/PT800ACD002/dev/themeopt_cust_config_metadata.html