Oracle Utilities Customer Self Service

Whitepaper:
Consuming OUCSS Taskflows in Custom Portals

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Functional Overview

This whitepaper describes the steps required to consume OUCSS taskflows in custom (ADF/WebCenter) portal applications in a WebLogic 11g environment.

Additional Resources

For additional details on functionality and procedures described in this document, see the *Oracle Utilities Customer Self Service Installation Guide* and the *Oracle Utilities Customer Self Service Implementation Guide*. Both documents are available on the Oracle Technology Network (OTN) in the Oracle Utilities Documentation section (http://www.oracle.com/technetwork/documentation/utilities-155272.html, expand **Oracle Utilities Customer Self Service**, then choose **View Library** or **Download** part number E36170-01).

Abbreviations

CCB - Oracle Utilities Customer Care and Billing

MDM - Oracle Utilities Meter Data Management

DDL – Data Definition Language

MDS – Metadata Services

OUCSS – Oracle Utilities Customer Self Service

NMS – Network Management System

Preparation and Procedures

Software Requirements

Please refer to the Oracle Utilities Customer Self Service Installation Guide for product-specific versions and the current patch level.

Pre-Installation Tasks

The following should be completed before you can consume OUCSS taskflows in custom portals.

- Ensure that your Oracle JDeveloper version is 11gR1 PS5 (11.1.1.6.0).
  - Ensure that the WebCenter Extension bundle is enabled in JDeveloper.
- Ensure that your custom portal has the required MDS configuration (for customization).

Assumptions

- The custom portal is built using the “WebCenter Portal Application” template.
- The custom portal will be deployed onto an Oracle WebLogic (10.1.6) server.

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- Required base components are created/installed on a target application server (Integrated Managed Server if running or testing the Portal application from Oracle JDeveloper). To install OUCSS artifacts see Appendix A.
- OUCSS Shared Library oracle.ugbu.ss_2.0.1 (11.1.1, 11.1.1.6.0) is installed.
- The OUCSS Schema is created and populated with seed data. A data source with jndi name "jdbc/OUCSSDS" is also created.
- For taskflows that require the sending of emails (e.g., Registration, Invite, etc.), a mail session with the jndi name "mail/OUCSS" is created.
- CSF-Key required for authenticating CCB and/or Integration SOA Web Services are created.
- The Offers WebService application is deployed.

Note: The following information is not within the scope of this document:

- Setup of database and MDS or other schemas required by the custom portal.
- Detailed security of the custom portal to restrict access to taskflows or portal pages.
- Designing navigation or site template or other portal resources.

Steps

The following steps describe consuming OUCSS taskflows using WebCenter Portal Framework.

Consuming Taskflows in a Custom Portal

Before consuming the portal, it is recommended that you create the required site templates on which the portal pages will be based.

Note: This procedure does not describe security-related settings that may be required by the portal to restrict access to certain pages (such as Admin). Please refer to the WebCenter Portal Application guide to learn more about how to configure security for your portal.

Additional information on creating custom WebCenter portal applications can be found in the Creating a WebCenter Portal Application at
http://docs.oracle.com/cd/E23943_01/webcenter.1111/e10148/jpsdg_app_create.htm#BABJBGJA

1. Create a Custom Portal application in JDeveloper using the WebCenter Portal Application template. Override the Application Name, Directory, and Package settings per your requirements.

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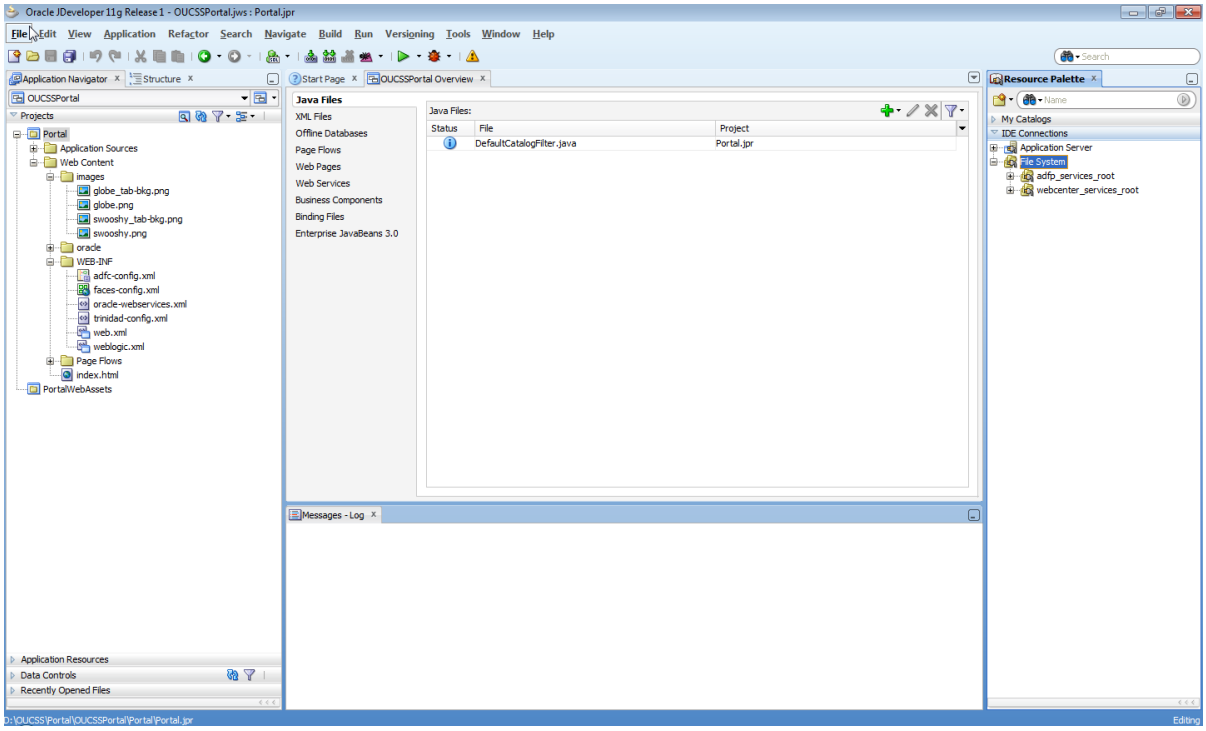
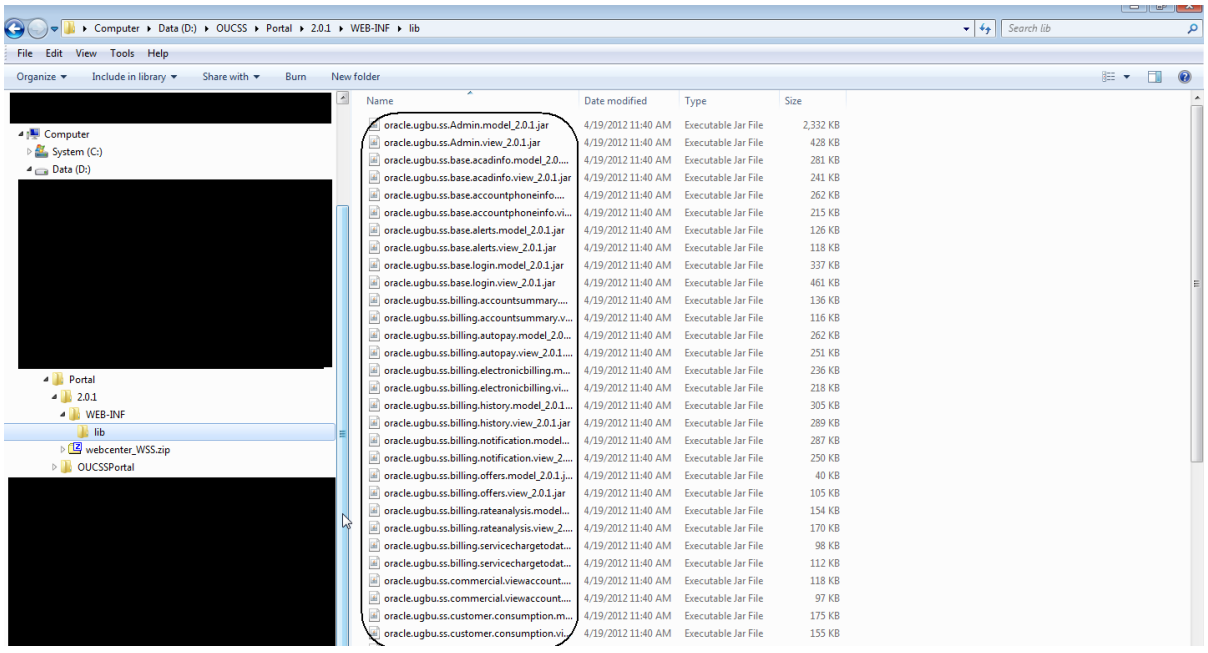


2 Unjar/unzip the OUCSS_Extension.war file located at \\OUCSSARTIFACTS\Install\application\OUCSS_Extension\WEB-INF\lib into a folder.



3 Using the JDeveloper Resource Palette, create a File System Connection with the name, "OUCSS_Taskflows" using the <<Unzip_Folder>>\WEB-INF\lib directory created in the previous step.

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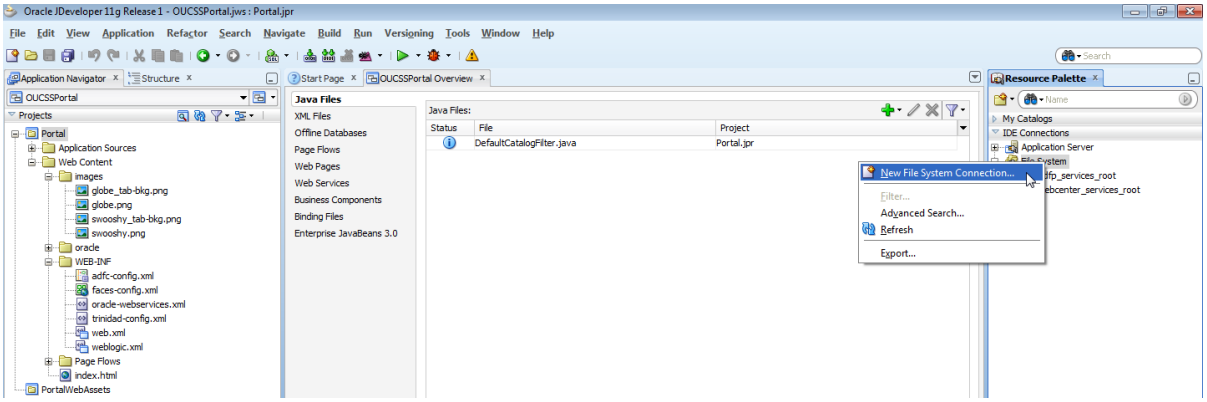
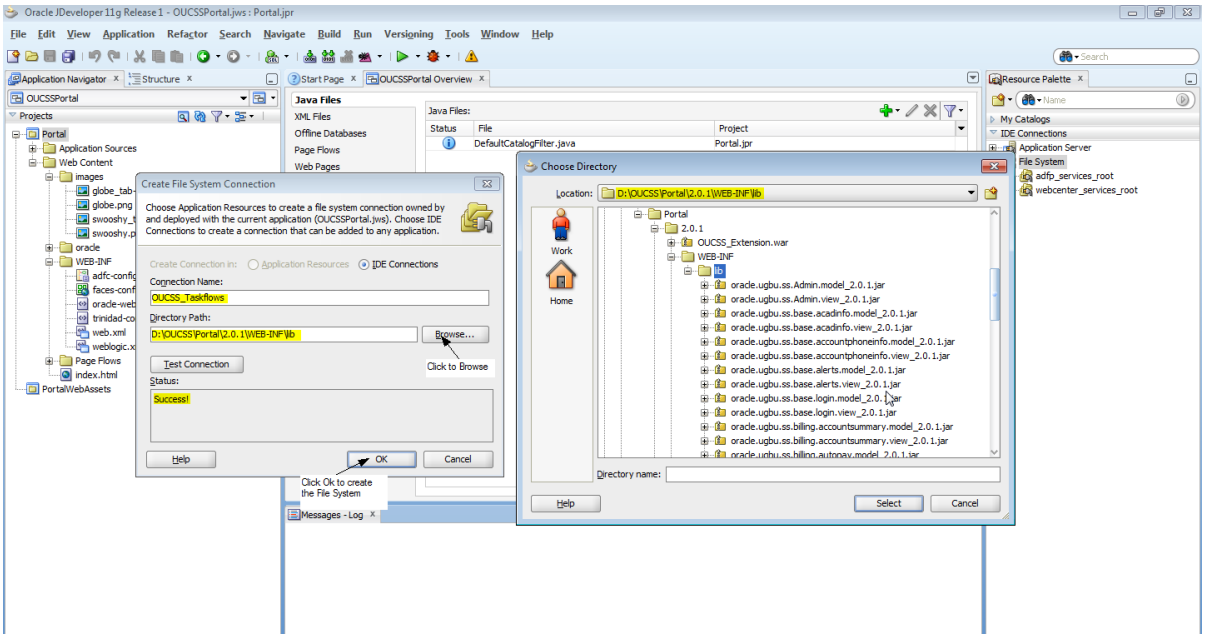


4 Click the **Test Connection** button to validate the connection.



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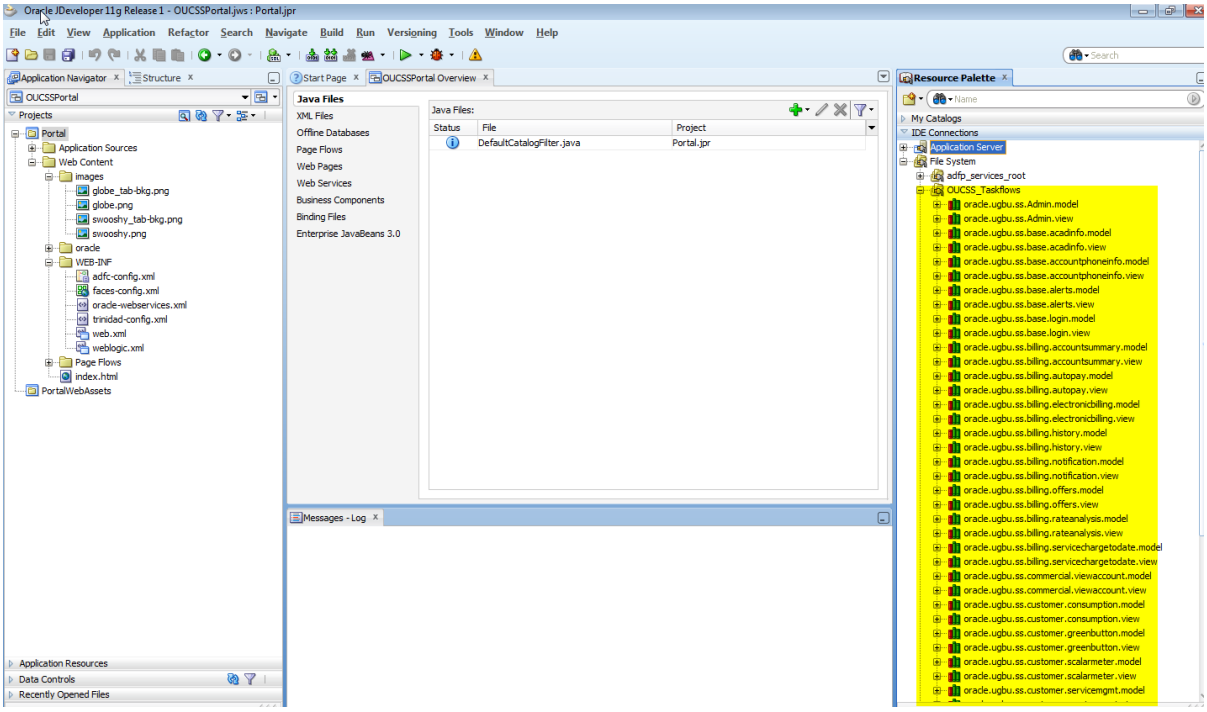

5 Create a site/page template for the custom portal. This site/page template can be used to create pages for a consistent look and feel for the portal. Alternatively, the out-of-box page template pageTemplate_globe (Global Page Template) can also be used by making any necessary modifications to the template. For this whitepaper, we shall use the provided global template.

6 Create a page under <<PortalProject>>\public_html\oracle\webcenter\portalapp\pages\<<customFolders>> for the OUCSS taskflow. For example, create an Account List page (AccountList.jspx) for the Account List taskflow.

Note: More than one taskflow can be dropped on the same page.

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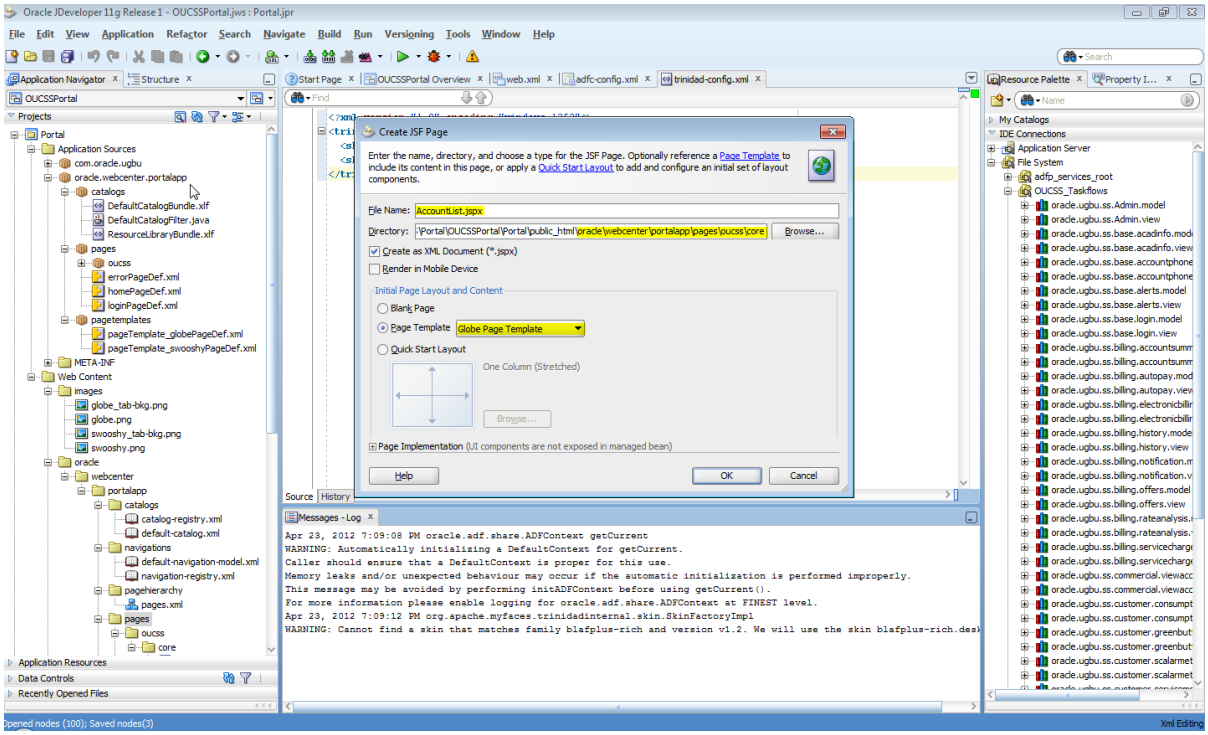
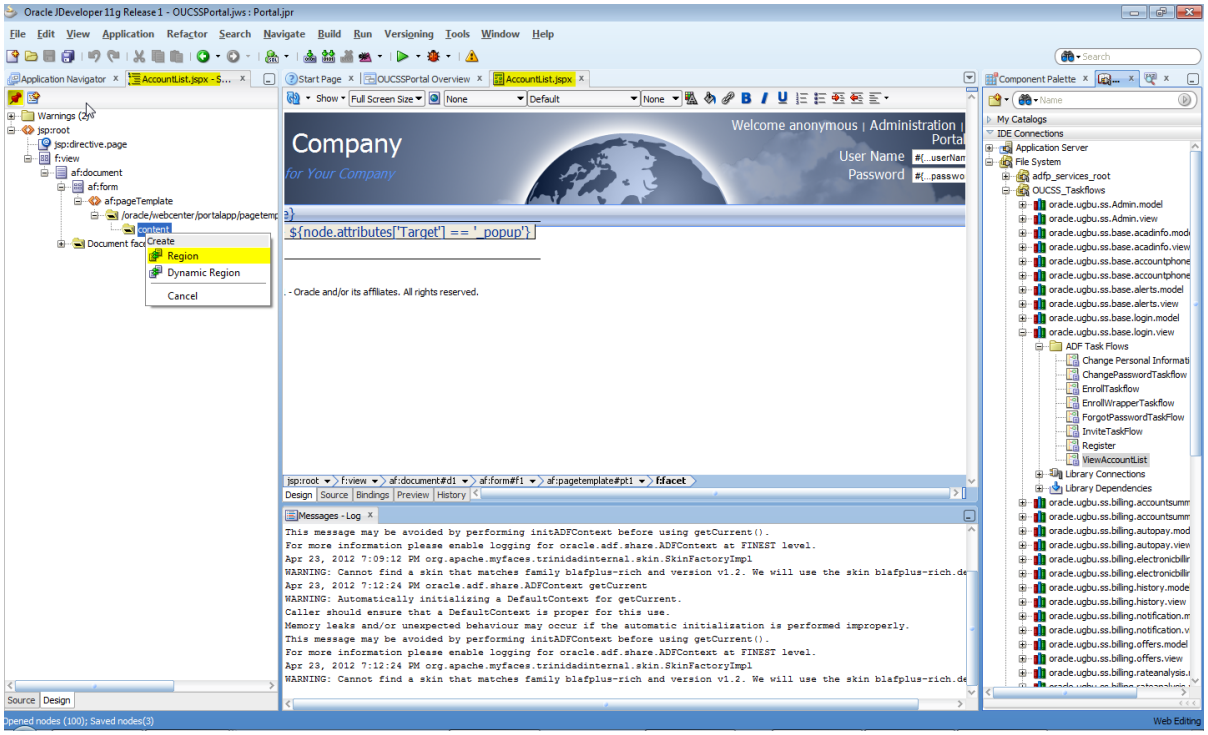


7 From the Resource Palette, expand the oracle.ugbu.ss.base.login.view ADF Library, then drag and drop the ViewAccountList taskflow onto the newly-created page.



Note that when a taskflow is dropped onto a page, JDeveloper requests confirmation that you want to add the library to the project. Click "Add Library" to confirm.

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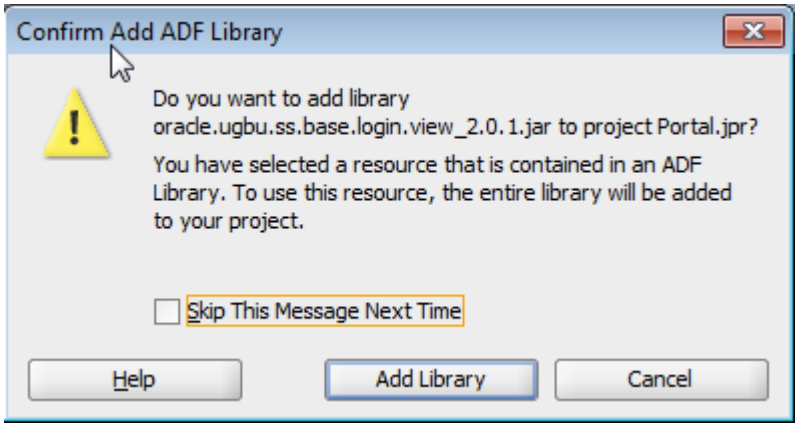
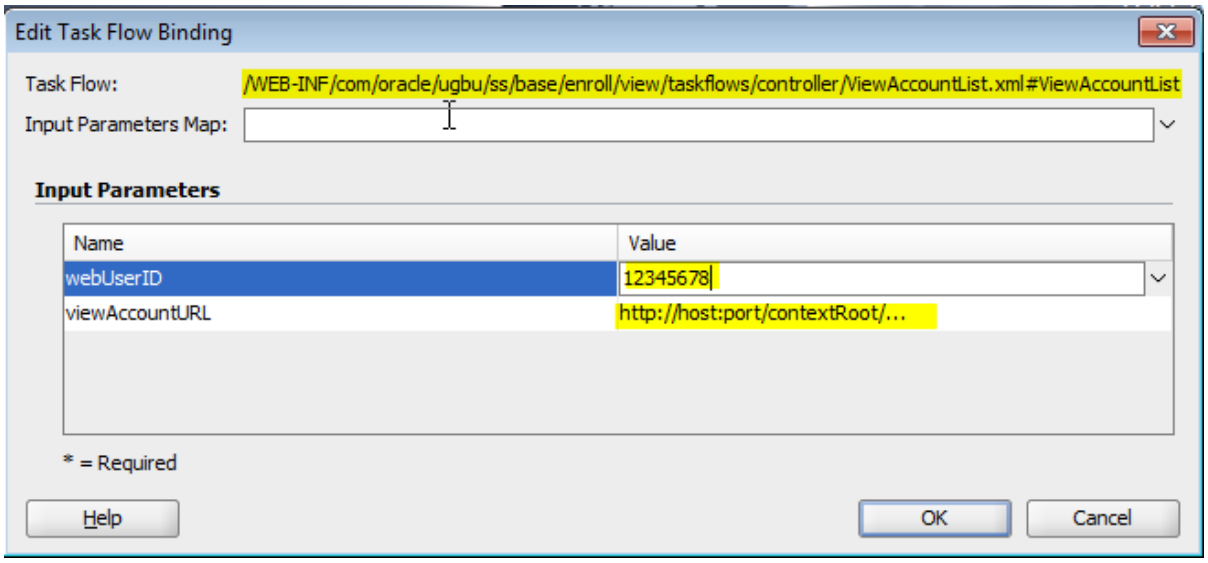


8 A dialog requesting taskflow parameters appears. The parameter values can be either static or dynamic (using an EL expression). In this example, static values are used.

Note: JDeveloper will create the connections required to run the taskflow in the portal application's connections.xml file. The connections should then be modified as appropriate for the environment.



Page view after dropping the Account List taskflow

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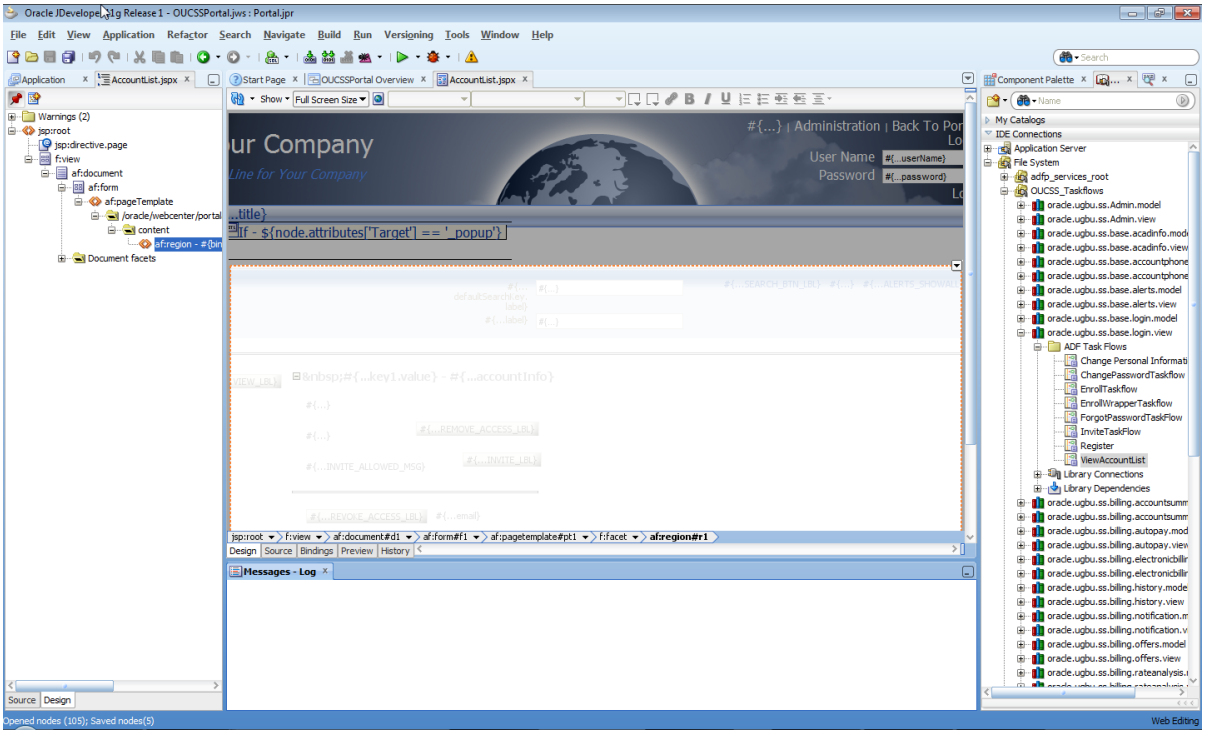

9 Click **Save All** to save your changes.

10 The OUCSS taskflows UI is built with ADF WebService data controls. These data controls are packed in the <<module_name>>_model_2.0.1.jar files (from the OUCSS shared library). The web service connection and csf-key needs to be replaced for the taskflows to render.

A. After adding the taskflow to the page, open connections.xml.

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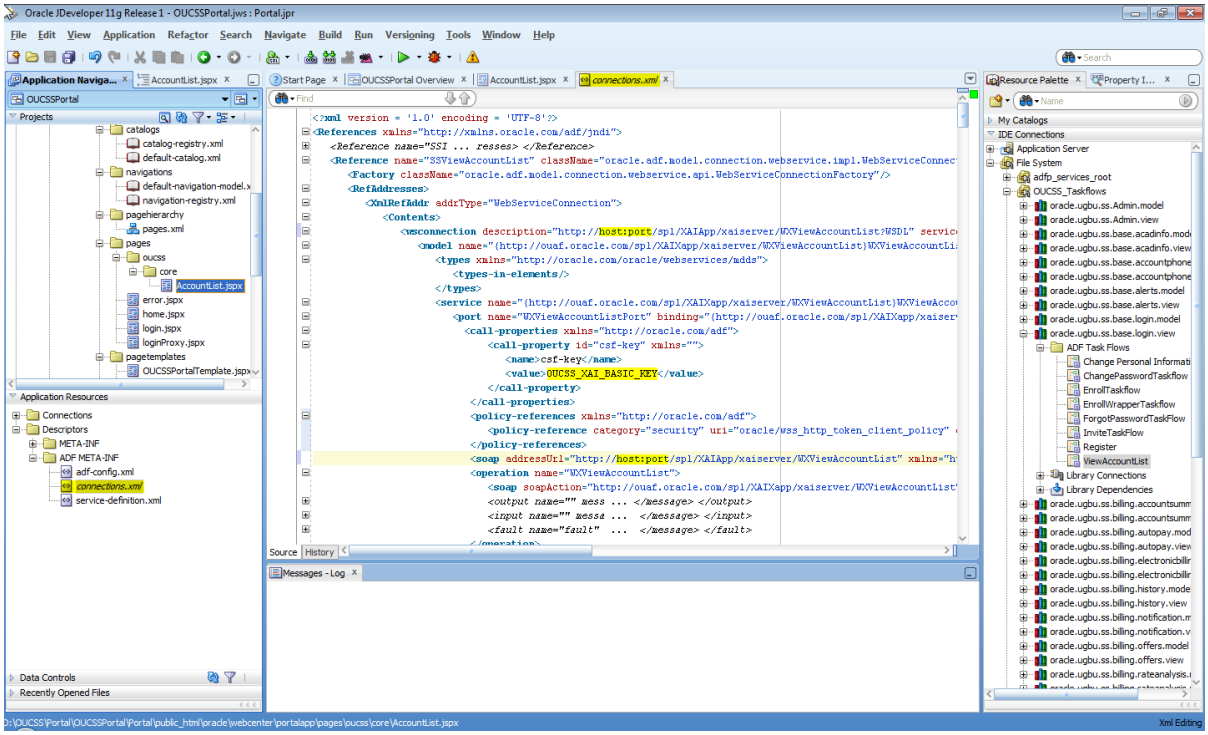

B. The WSDL URL and SOAP endpoint URL used by the WebService data controls should be replaced with the target CCB Web Service URL as installed in your environment.

C. By default, data controls used by OUCSS taskflows use OUCSS_XAI_BASIC_KEY to authenticate CCB web services, and use OUCSS_INTG_BASIC_KEY for BPEL/Integration Web Services. You can create a new csf-key in the domain's oracle.wsm.security Credential Map, and replace csf-key in connections.xml for all related connections. For this whitepaper, "OUCSS_XAI_BASIC_KEY" is used for reference (for CCB connections).

D. Click **Save All** in to save the changes.

11 The Oracle WebCenter portal application is secured using ADF security by default. Thus, both the page and taskflows dropped on the page require permission to render at runtime. To add the required permission:

A. Right-click on the page and click **Edit Authorization** to open the jazn-data.xml file.

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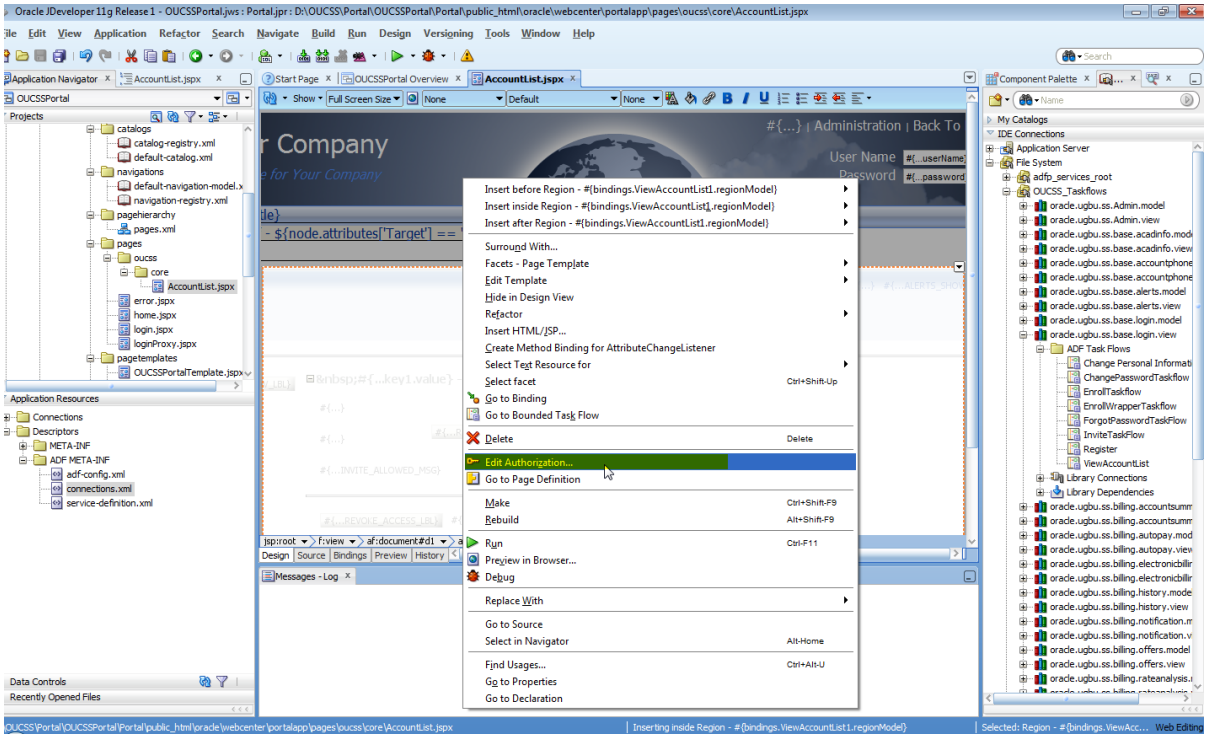
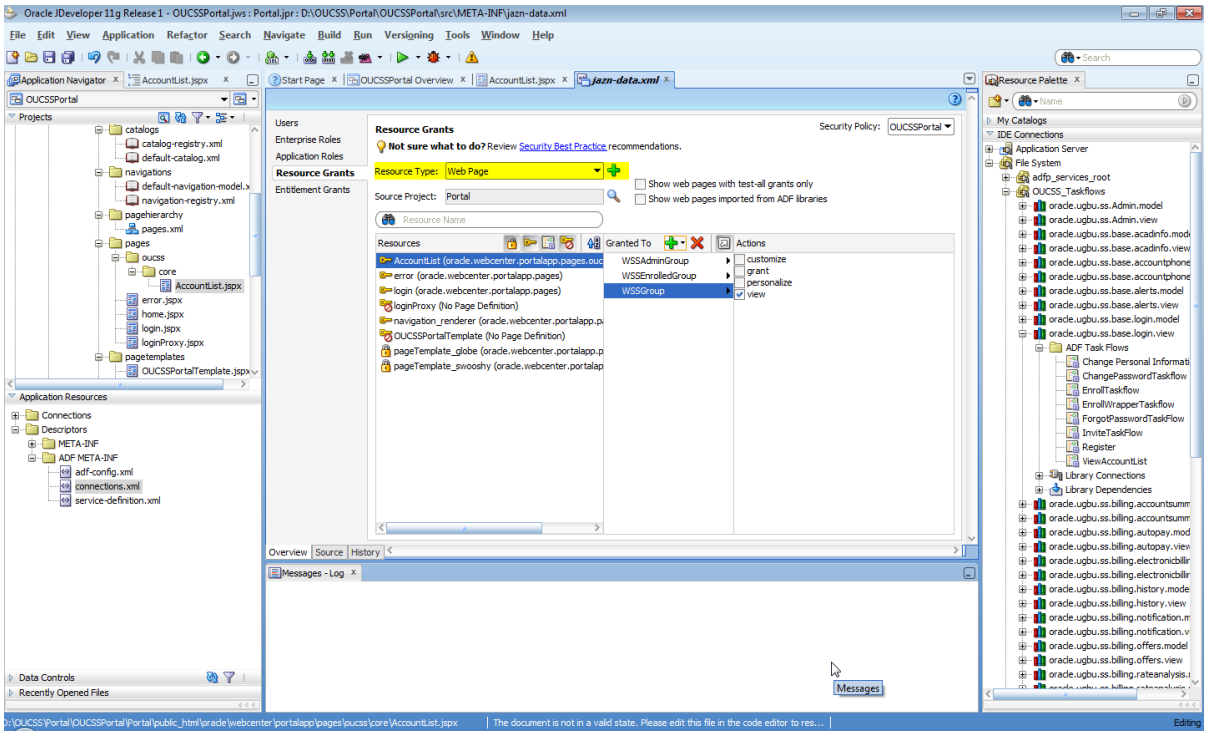


B. Add the required permission to the newly-added page. In the following example, WSSGroup (Enterprise Role) is granted permission to the AccountList page. This means that any user who is part of WSSGroup will be able to access that page.



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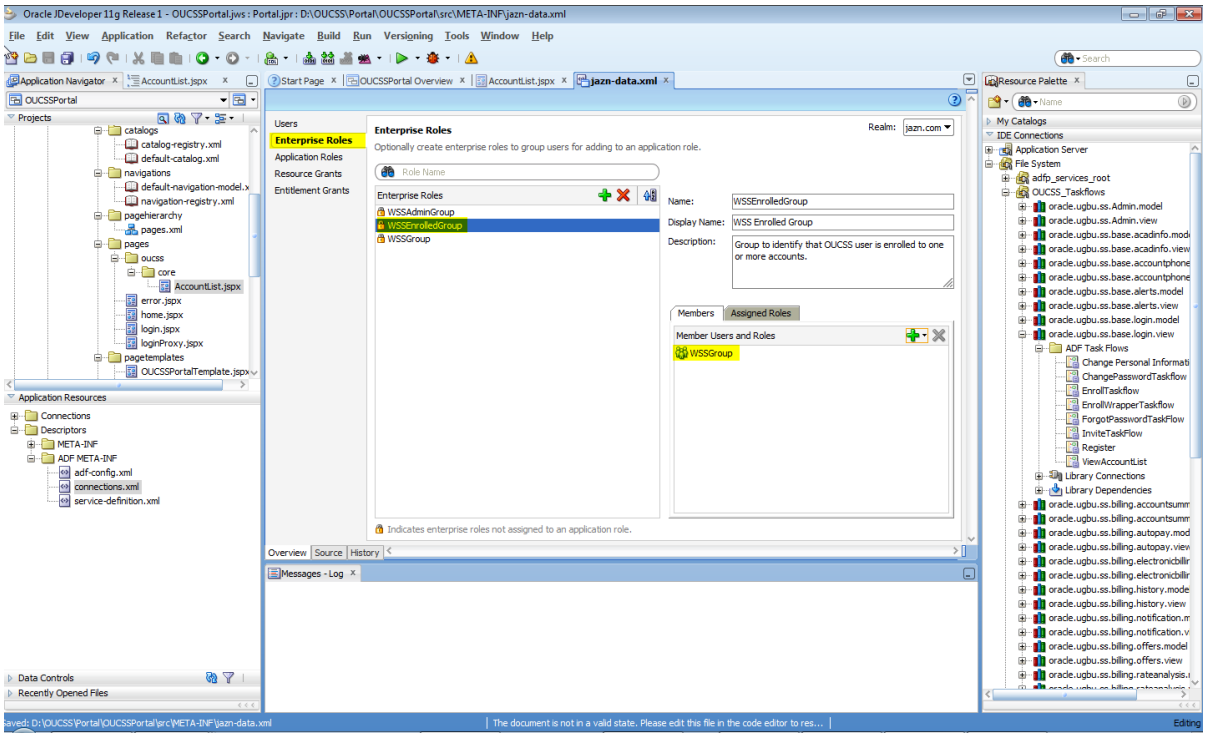
Note: Permissions can be provided to Application Roles, Enterprise Group, or any individual user, as required. You can, for example, add Enterprise Group using the Enterprise Roles tab of jazn-data.xml.



C. After providing the permissions to the web page containing the taskflows (per the ADF security requirements), the taskflow must also be provided with the same permissions in order to render.

   i. Select Taskflows in the Resource Type dropdown and check Show task flows imported from ADF libraries to display the OUCSS taskflows.

   ii. Select the taskflow from the Resources list and grant permission to the required role/group/user.

   iii. Permission must be provided for all dependent taskflows as well. For example, the ViewAccountList taskflow uses InviteTaskflow internally, and so both must have the same permissions.

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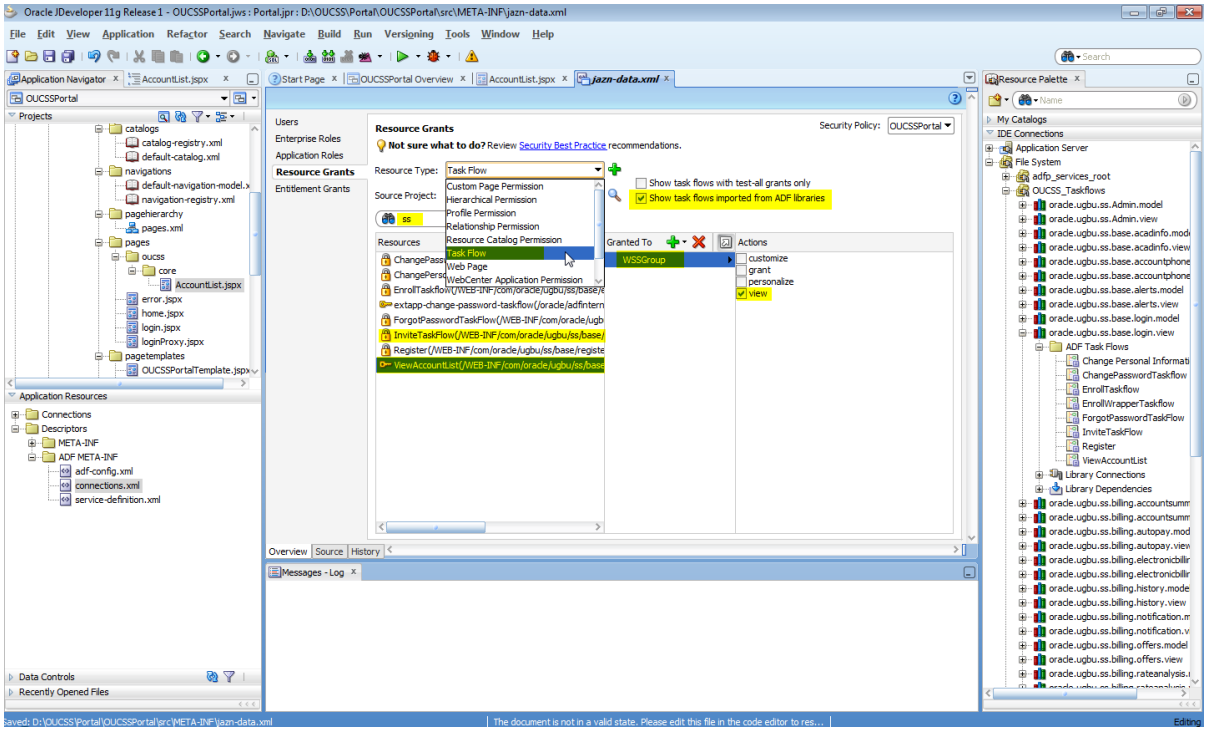
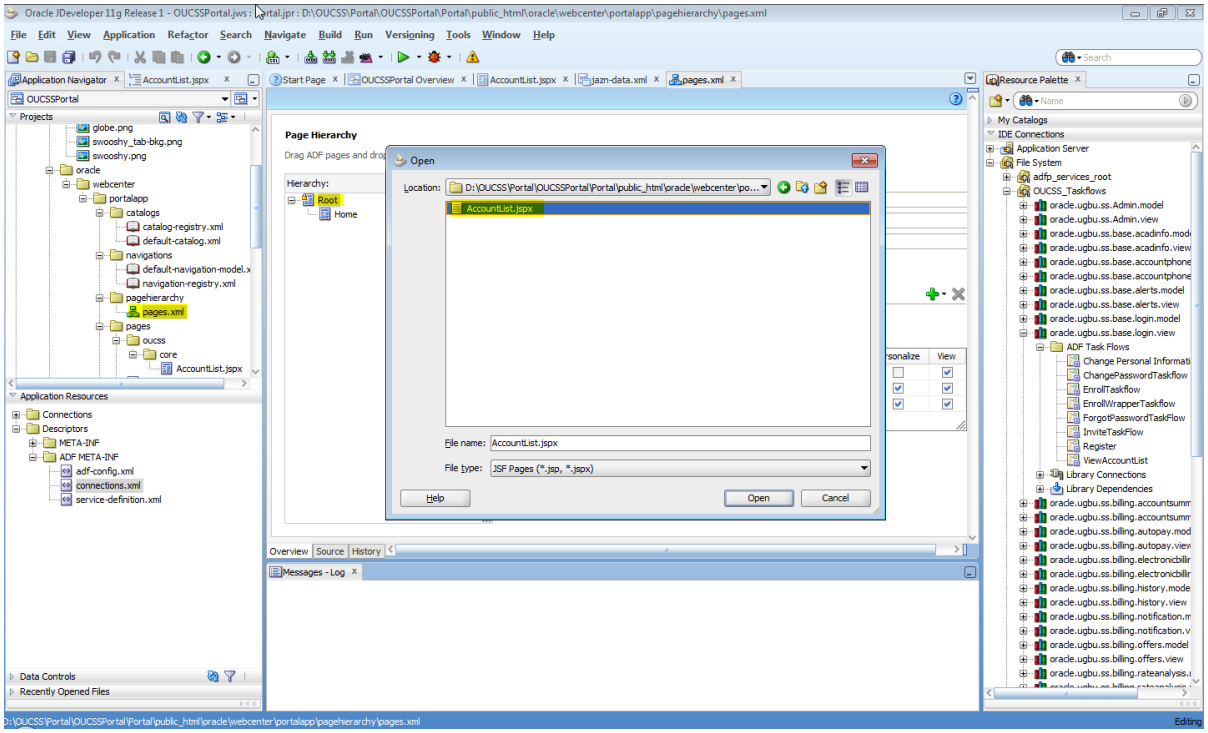


D. Click Save All to save your changes.

12 Add the newly-created page to the Navigation model:

A. Open pages.xml under **Page Hierarchy**:



B. Make the necessary changes to Security to allow access to authenticated users only.

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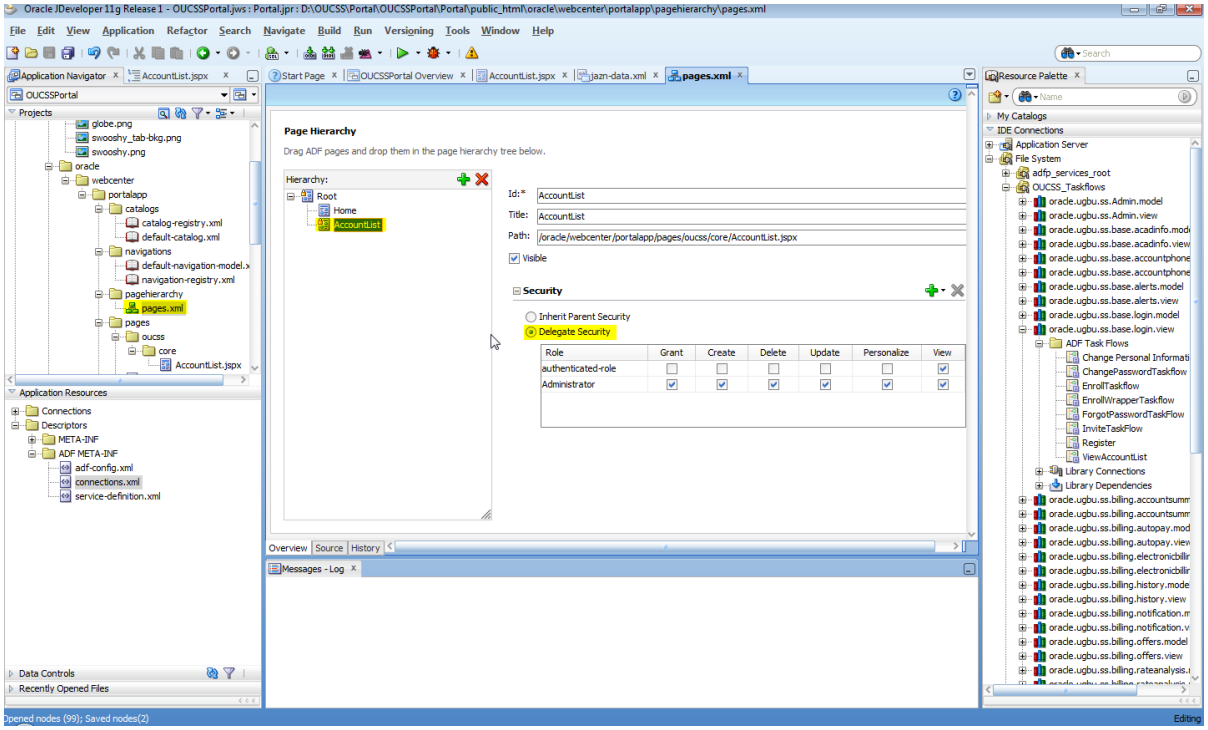
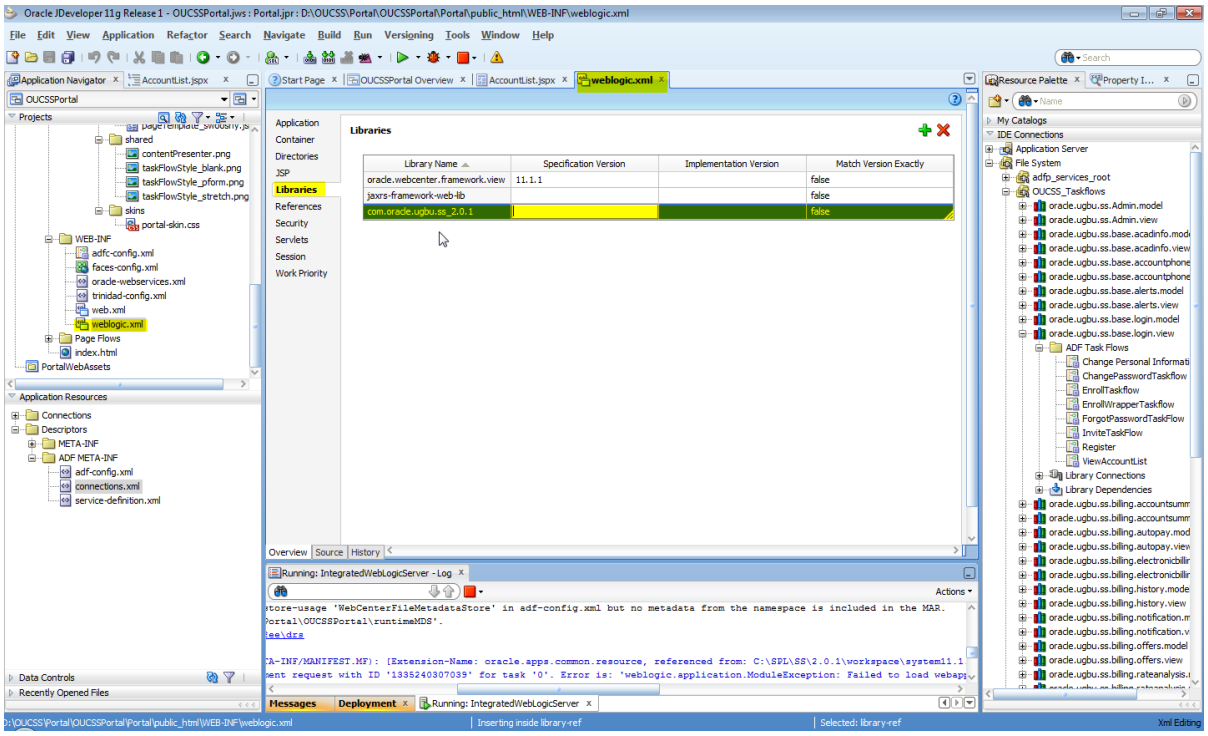


13 Repeat Steps 6 to 12 to consume all the required OUCSS taskflows into the Portal.

14 Open WEB-INF/weblogic.xml and add a reference to the OUCSS shared library (com.oracle.ugbu.ss_2.0.1) to enable loading of the taskflows at runtime.



15 Click **Save All**, then **Run** login.jspx to start the application.

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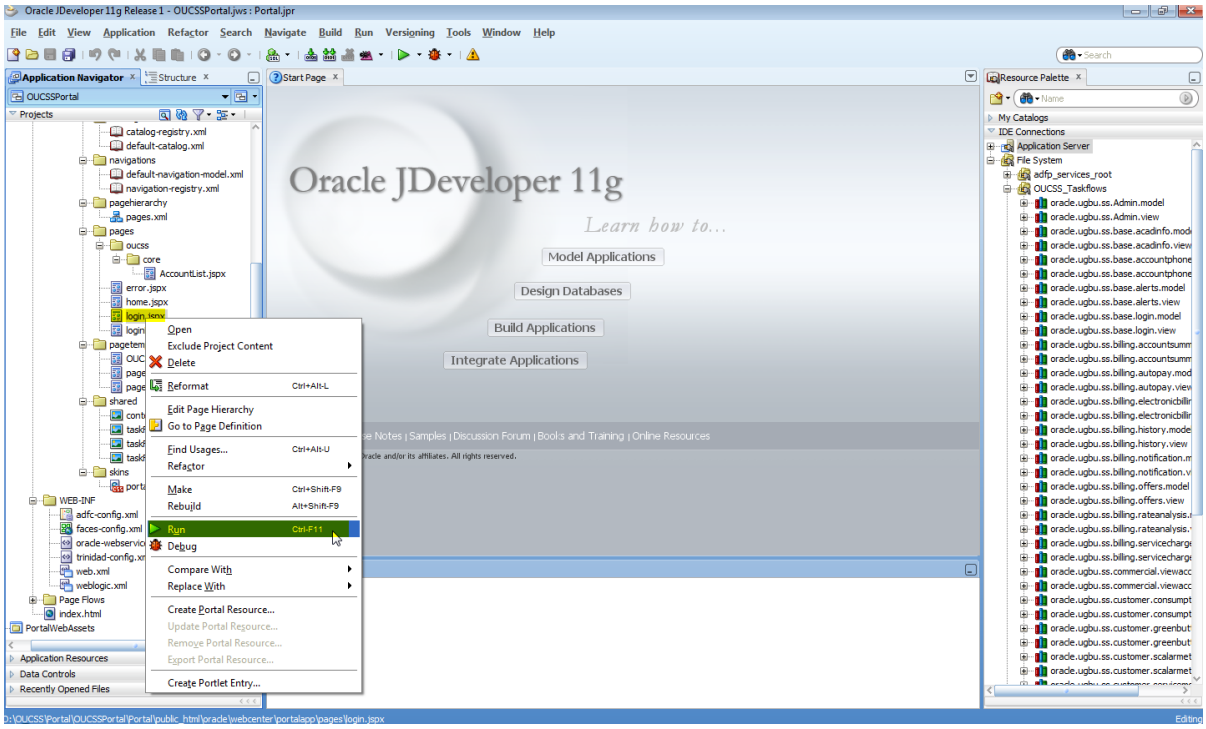
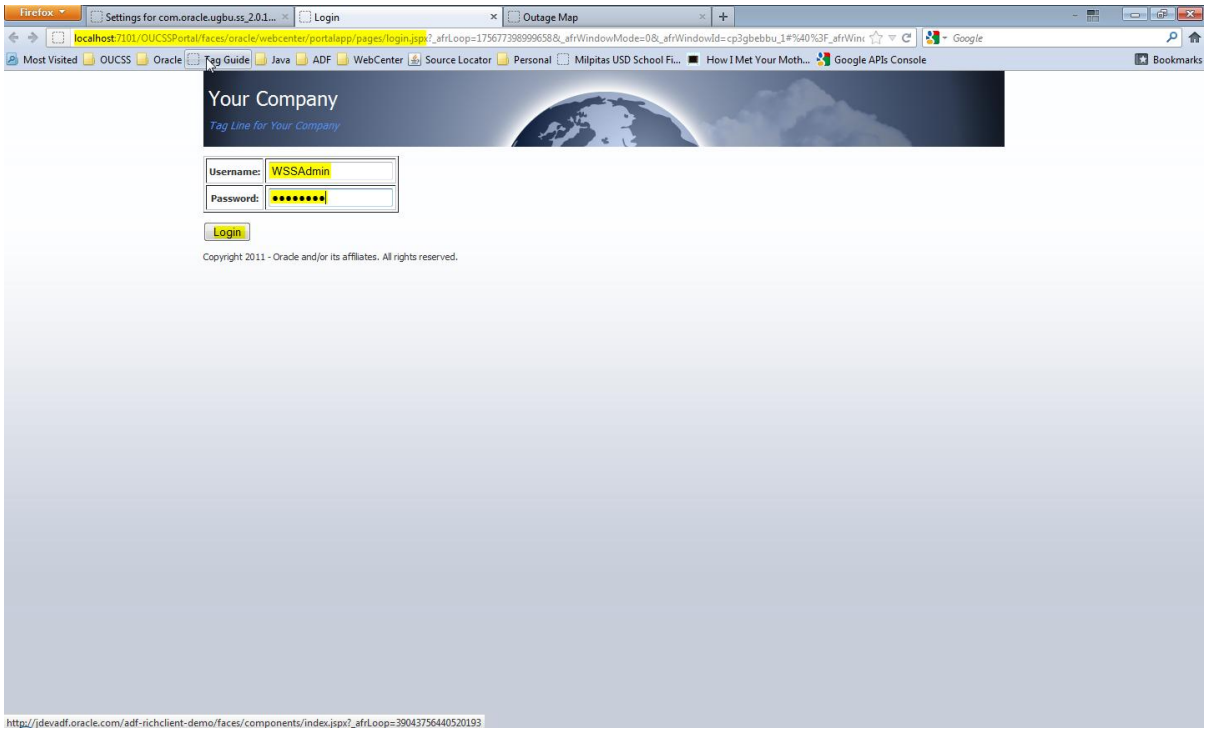
Note: In order to test the application in JDeveloper, required elements (described in the Assumptions section of this document) must be created/ installed in JDeveloper's Integrated Managed Server.



16 To access the account and account details, log in with the credentials of a user who has been assigned WSSGroup and/or WSSEnrolledGroup roles.



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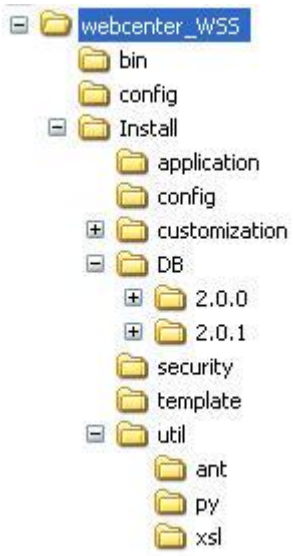
Appendix A

Installing Prerequisite Components to Consume OUCSS Taskflows in a Custom Portal

1. Download <OUCSS-ProductInstall>.zip from the Oracle Software Delivery Cloud (edelivery.oracle.com) and unzip into a target installation directory (e.g., `/spl/OUCSS-ProductInstall` on Linux or `D:\OUCSS-ProductInstall` on Windows).
2. Locate *webcenter_WSS.zip* in the installation folder and unzip the contents to a *webcenter_WSS* subfolder under the installation folder.

   Note: The webcenter_WSS folder contains your OUCSS program, configuration, and installation folders and files (/bin, /config, /Install).



3. Set the PRODUCT_HOME environment variable to point to `webcenter_WSS`:

   Windows example:

   ```
   SET PRODUCT_HOME=D:\OUCSS\webcenter_WSS
   echo %PRODUCT_HOME%
   ```

   Echo should return PRODUCT_HOME as `D:\OUCSS\webcenter_WSS`.

   Linux example:

   ```
   export PRODUCT_HOME=/spl/OUCSS/webcenter_WSS
   echo $PRODUCT_HOME
   ```

   Echo should return PRODUCT_HOME as `/spl/OUCSS/webcenter_WSS`.

4. Set the WebLogic server environment by running the *setWLSEnv.cmd* script (on Windows) or *setWLSEnv.sh* script (on Linux). The scripts are located in `<WebCenter_Home>\wlserver_10.3\server\bin` (where WebCenter_Home is the directory in which WebCenter is installed). After running the script setWLSEnv, verify that the **wlserver** environment is set in your **classpath** and **path** environment variables

   Windows example:

   ```
   run D:\webcenter\wlserver_10.3\server\bin\setWLSEnv.cmd
   ```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Linux example:

```
source /spl/wctest/webcenter/wlserver_10.3/server/bin/setWLSEnv.sh
```

5 Update the `<PRODUCT_HOME>/config/InstallProperties.xml` file with values appropriate to your environment (refer to *Appendix D* in the OUCSS Installation Guide for a sample *InstallProperties.xml* file and an explanation of the properties and elements available in the file). For deploying on Custom Portal Managed Server, update <WSS></WSS> elements with details for the managed server on which the custom portal will be deployed.

6 Execute following command to change to PRODUCT_HOME/bin:

On UNIX/Linux

```
cd $PRODUCT_HOME/bin
```

On Windows:

```
cd %PRODUCT_HOME%\bin
```

IMPORTANT: Before proceeding with Step 7 ensure that Admin and the managed servers are up and running.

7 The default OUCSS Installation is targeted for a WebCenter Space-specific solution. To install non-WebCenter Spaces-specific components, InstallBuild.xml packaged under need updated with a special target. Open/Edit <<PRODUCT_HOME>>/bin/InstallBuild.xml and add the following target.

```
<target name="BaseInstall">
        <antcall target="sqldetokenize"/>
        <antcall target="DBTask"/>
        <DataSourceLifeCycle
wladminserverhost="${WSS2.WSS.AdminServer.hostname}"
wladminserverport="${WSS2.WSS.AdminServer.portnumber}"
wlusername="${WSS2.WSS.AdminServer.username}"
wlpassword="${WSS2.WSS.AdminServer.password}" jdbcdsname="${WSS2.datasource-
name}"
wlsoamgdservername="${WSS2.WSS.ManagedServer.servername},${WSS2.WSS.ManagedSer
ver.servername}" db.host.name="${WSS2.WSS.DB.dbhostname}"
db.port="${WSS2.WSS.DB.dbportnumber}" db.sid="${WSS2.WSS.DB.dbsid}"
db.user="${WSS2.WSS.DB.dbusername}"
db.user.pwd="${WSS2.WSS.DB.dbuserpassword}" action="create"/>
        <CredentialLifeCycle Edge.Application.Username="${WSS2.CCB.username}"
Edge.Application.Password="${WSS2.CCB.password}"
Server.Hostname="${WSS2.WSS.AdminServer.hostname}"
Server.PortNumber="${WSS2.WSS.AdminServer.portnumber}"
Server.Username="${WSS2.WSS.AdminServer.username}"
Server.Password="${WSS2.WSS.AdminServer.password}"
Map.Name="${WSS2.CSFkeys.CCBKeyName}"
Map.Description="${WSS2.CSFkeys.CCBKeyName}" action="add"/>
        <CredentialLifeCycle
Edge.Application.Username="${WSS2.WSS.NMS.username}"
Edge.Application.Password="${WSS2.WSS.NMS.password}"
Server.Hostname="${WSS2.WSS.AdminServer.hostname}"
Server.PortNumber="${WSS2.WSS.AdminServer.portnumber}"
Server.Username="${WSS2.WSS.AdminServer.username}"
Server.Password="${WSS2.WSS.AdminServer.password}"
Map.Name="${WSS2.CSFkeys.NMSKeyName}"
Map.Description="${WSS2.CSFkeys.NMSKeyName}" action="add"/>
```

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```
        <deployApplication Server.Hostname="${WSS2.WSS.AdminServer.hostname}"
Server.PortNumber="${WSS2.WSS.AdminServer.portnumber}"
Server.Username="${WSS2.WSS.AdminServer.username}"
Server.Password="${WSS2.WSS.AdminServer.password}"
application.name="${WSS2.offersapplication-name}"
ear.FileName="${PRODUCT_HOME}/Install/application/${WSS2.offersearFileName}"
targetserver="${WSS2.WSS.ManagedServer.servername}" deploymentOrder="100"/>
        <deployApplication Server.Hostname="${WSS2.WSS.AdminServer.hostname}"
Server.PortNumber="${WSS2.WSS.AdminServer.portnumber}"
Server.Username="${WSS2.WSS.AdminServer.username}"
Server.Password="${WSS2.WSS.AdminServer.password}"
application.name="${WSS2.extapplication-name}"
ear.FileName="${PRODUCT_HOME}/Install/application/${WSS2.extearFileName}"
targetserver="${WSS2.WSS.ManagedServer.servername}" deploymentOrder="100"
libraryModule="true"/>
        <MailSessionLifecycle
Server.Hostname="${WSS2.WSS.AdminServer.hostname}"
Server.PortNumber="${WSS2.WSS.AdminServer.portnumber}"
Server.Username="${WSS2.WSS.AdminServer.username}"
Server.Password="${WSS2.WSS.AdminServer.password}"
mail.session.name="${WSS2.MailSession.name}"
mail.session.jndi.name="${WSS2.MailSession.jndiName}"
csv.properties="mail.smtp.host=${WSS2.WSS.MailServer.send.hostname},mail.smtp.
port=${WSS2.WSS.MailServer.send.portnumber},mail.from=${WSS2.WSS.MailServer.se
nd.fromAddress},mail.transport.protocol=${WSS2.WSS.MailServer.send.protocol},m
ail.host=${WSS2.WSS.MailServer.send.hostname}"
targetservers="${WSS2.WSS.ManagedServer.servername}" action="create"/>
  </target>
```

8 Run the installation command to deploy the following OUCSS artifacts:

- OUCSS shared library (oracle.ugbu.ss_2.0.1) is deployed. This shared library contains OUCSS taskflows and data controls.
- *oracle.ugbu.ss.billing.offers.ws.model_2.0.1.ear* is deployed only if your environment uses the offer service.
- New DB Schema and required tables for OUCSS are created in the database.
- Security Credentials (CSF-Key).
- Create Mail Session.

On Windows:

```
ant -f InstallBuild.xml BaseInstall -
DInstallProperties=%PRODUCT_HOME%\config\InstallProperties.xml -l
installCustomOUCSS.log
```

On UNIX/Linux

```
ant -f InstallBuild.xml BaseInstall -
DInstallProperties=$PRODUCT_HOME/config/InstallProperties.xml -l
installCustomOUCSS.log
```

After running the command check *installCustomOUCSS.log* for any build errors. If "BUILD SUCCESSFUL" does not appear at the end of the file, fix any errors listed in the log before proceeding.

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