WebSphere Portal 8.5
Manual Full Deployment

****

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1 Information

This document will help deploy the different WebSphere Portal and WebSphere application server artifacts from one environment to another manually.

Useful links:

- WebSphere Portal 8.5 Infocenter
  http://www-01.ibm.com/support/knowledgecenter/#!/SSHRKX_8.5.0/welcome/wp_welcome.html

- WebSphere Portal 8.5 Detailed System Requirements
  http://www-01.ibm.com/support/docview.wss?uid=swg27007791

- WebSphere Application Server 8.5.5 Infocenter
  http://www-01.ibm.com/support/knowledgecenter/?lang=en#!/SSAW57_8.5.5/as_ditamaps/was855_welcome_ndmp.html

This document is not written or supported by IBM Support

Name	Date	Version	Description
Loc Dang	May 11,2017	V1	WebSphere Portal 8.5 Manual Full Deployment

2 Backup - Target

This section will help with the backup of the WebSphere Portal environment pages and Portal references. This step is optional but is helpful if you decide you would like to revert back to the original pages and portlets.

1. Login to the WebSphere Portal target environment.
2. Navigate to the bin directory of the WebSphere Portal home

```
<WP_HOME>/bin
```

Example:

WIN
```
E:\IBM\WebSphere\PortalServer\bin
```
UNIX
```
/opt/IBM/WebSphere/PortalServer/bin
```

3. Run the following xmlaccess command on one line to do a full export release

```
xmlaccess.(bat/sh) -in <WP_HOME>/doc/xml-samples/ExportRelease.xml -
user <WPADMIN> -password <WPPWD> -url
http://<HOSTNAME>:<PORT>/wps/config -out <EXPORT_FILE>
```

Example: WINDOWS

```
xmlaccess.bat -in E:\IBM\WebSphere\PortalServer\doc\xml-
samples\ExportRelease.xml -user wpadmin -password passw0rd -url
http://localhost:10039/wps/config -out E:\tmp\EXPORT_tgt.xml
```

Example: UNIX

```
xmlaccess.sh -in /opt/IBM/WebSphere/PortalServer/doc/xml-
samples/ExportRelease.xml -user wpadmin -password passw0rd -url
http://localhost:10039/wps/config -out /tmp/EXPORT_tgt.xml
```

4. Backup the WebSphere Portal archive directory. When running the empty-portal ConfigEngine command it will delete all war files being used by WebSphere Portal

```
<WP_PROFILE>/PortalServer/deployed/archive
```

Examples:

WIN
```
E:\IBM\WebSphere\wp_profile\PortalServer\deployed\archive
```
UNIX
```
/opt/IBM/WebSphere/wp_profile/PortalServer/deployed/archive
```

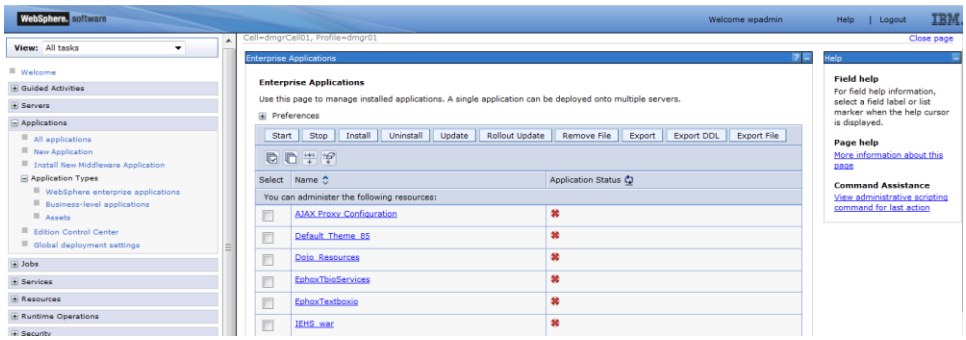
3 WebSphere Application Server Artifacts

These are the common customizations made when using WebSphere Portal. This section might not be all the changes but it will be a good starting point of what to look for.

1. WebSphere Enterprise Applications (Ear)
2. Resource Environment Variables
3. JDBC Providers
4. Datasource
5. Shared Libraries
6. JVM Configurations
7. Jar files

3.1 WebSphere Enterprise Applications (Ear)

The WebSphere Enterprice Appilcation includes the WebSphere Portal custom theme, external servlets, or services.



1. Login to the WebSphere Application Console of the target environment

   `http://<HOSTNAME>:<PORT>/ibm/console`

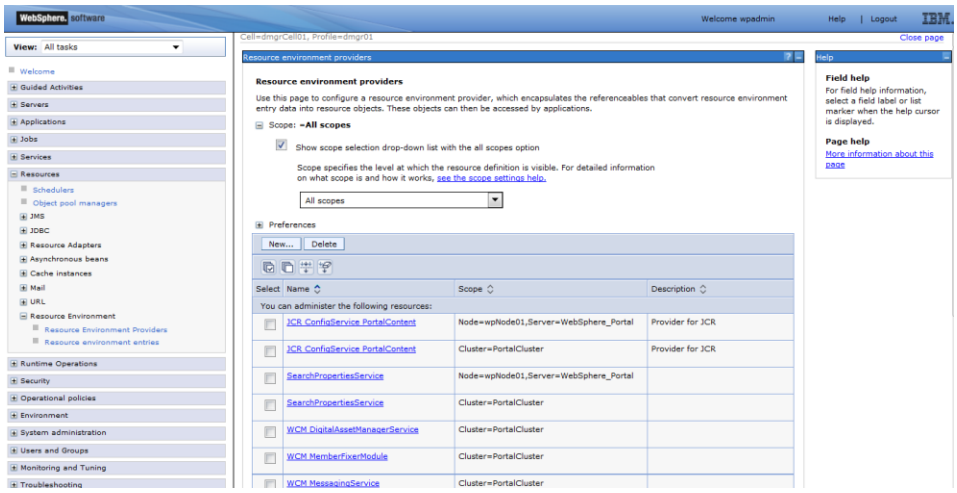
   Example: http://wpstgt.ibm.com:9043/ibm/console

2. Navigate to Applications > Application Types > WebSphere enterprise applications

3. Verify all Enterprise Applications other then PA_* matches the source environment. PA_* are usually WebSphere Portal web modules installed using the WebSphere Portal Server Administration or xmlaccess

4. If an application is not installed, install it by clicking **Install** and follow the steps on the screen

3.2 Resource Environment Variables



1. Login to the WebSphere Application Console of the target environment
   `http://<HOSTNAME>:<PORT>/ibm/console`

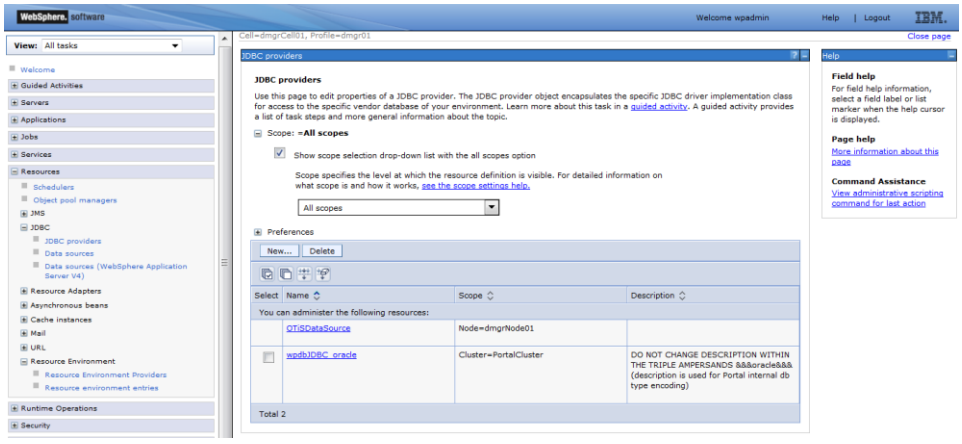
   Example: `http://wpstgt.ibm.com:9043/ibm/console`

2. Navigate to Resources > Resource Environment > Resource Environment providers

3. Review each Resource Environment provider and verify it matches the source environment.

3.3 JDBC Provider

If a JDBC Provider is required, copy the database driver to all WebSphere Portal environments.



1. Login to the WebSphere Application Console of the target environment

```
http://<HOSTNAME>:<PORT>/ibm/console
```

Example: http://wpstgt.ibm.com:9043/ibm/console

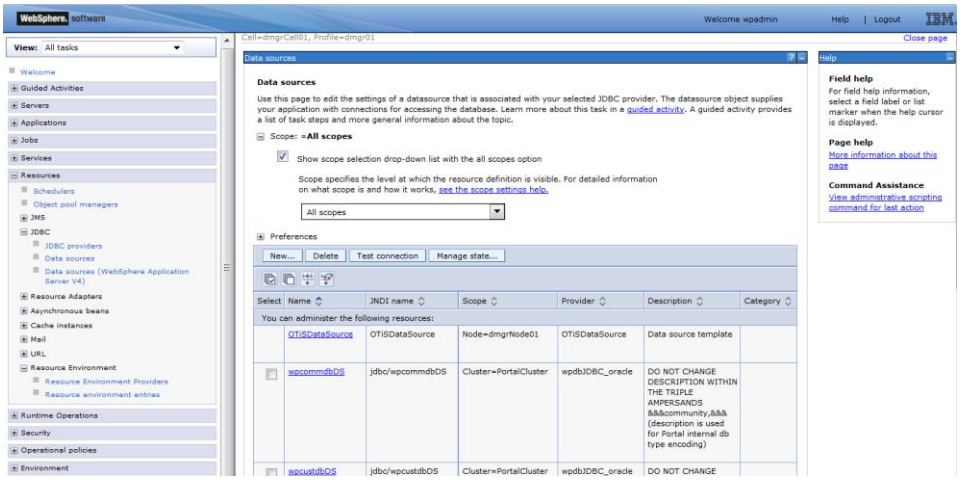
2. Navigate to Resources > JDBC > JDBC providers

3. Review the JDBC provider to verify it matches the source environment

4. If there is a new JDBC provider, place the database driver on each of the WebSphere Portal environment.

5. Click **New** and follow the steps on the screen to create the datasource

3.4 Datasource



1. Login to the WebSphere Application Console of the target environment

```
http://<HOSTNAME>:<PORT>/ibm/console
```

Example: http://wpstgt.ibm.com:9043/ibm/console

2. Navigate to Resources > Data sources

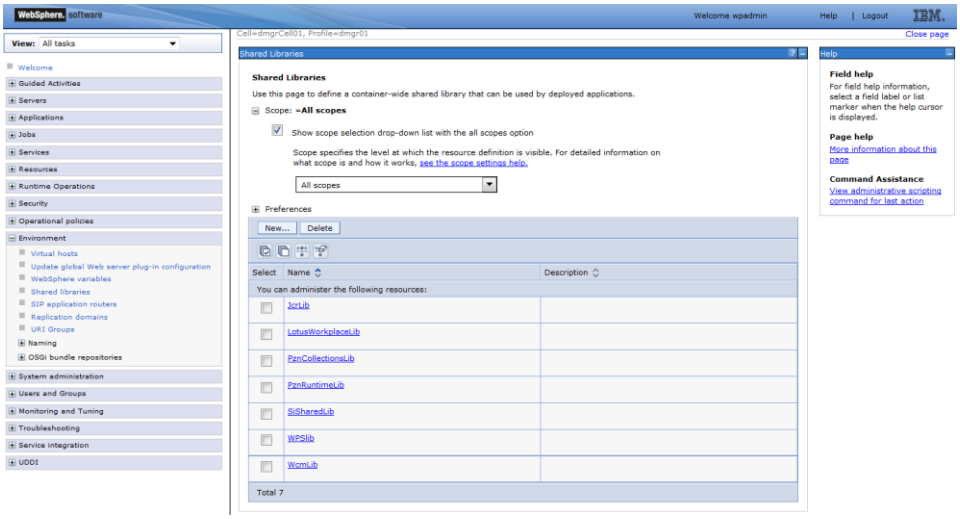
3. Review the list of Data sources and verify it matches the source environment.

4. If a new Data source is required, verify the database username and password to connect to the database is created in the J2C authentication data Security > Global security > Java Authentication and Authorization Server > J2C authentication data

5. Create the Data source by clicking **New** and following the steps on the screen

3.5 Shared Libraries

If changes are required, verify all files are copied to all WebSphere Portal environment



1. Login to the WebSphere Application Console of the target environment

   `http://<HOSTNAME>:<PORT>/ibm/console`

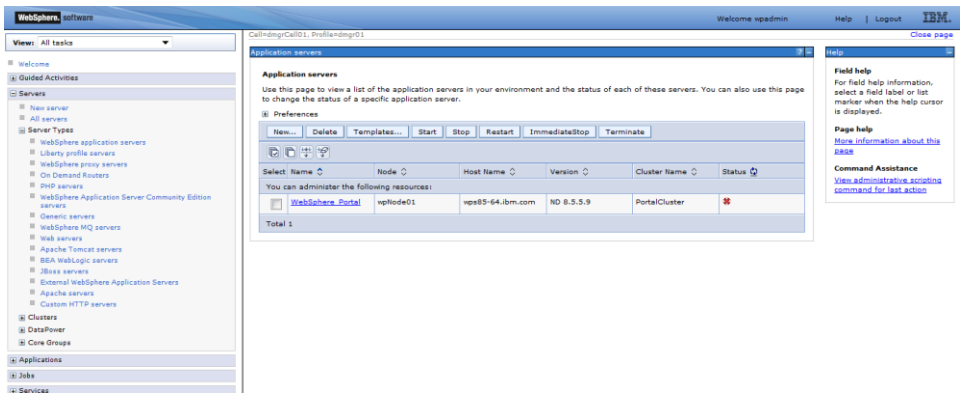
   Example: `http://wpstgt.ibm.com:9043/ibm/console`

2. Navigate to Environment > Shared libraries

3. Review each Shared library and verify it matches the source environment. The Shared libraries are mapped to a specific directory on the file system. Verify the directory exist and the content in the directory matches on both target and source environment. If it does not, copy the source files to the target environment. To create a Shared library, click new and follow the steps on the screen

3.6 JVM Configurations

If changes are required, make sure all WebSphere Portal jvm's are updated

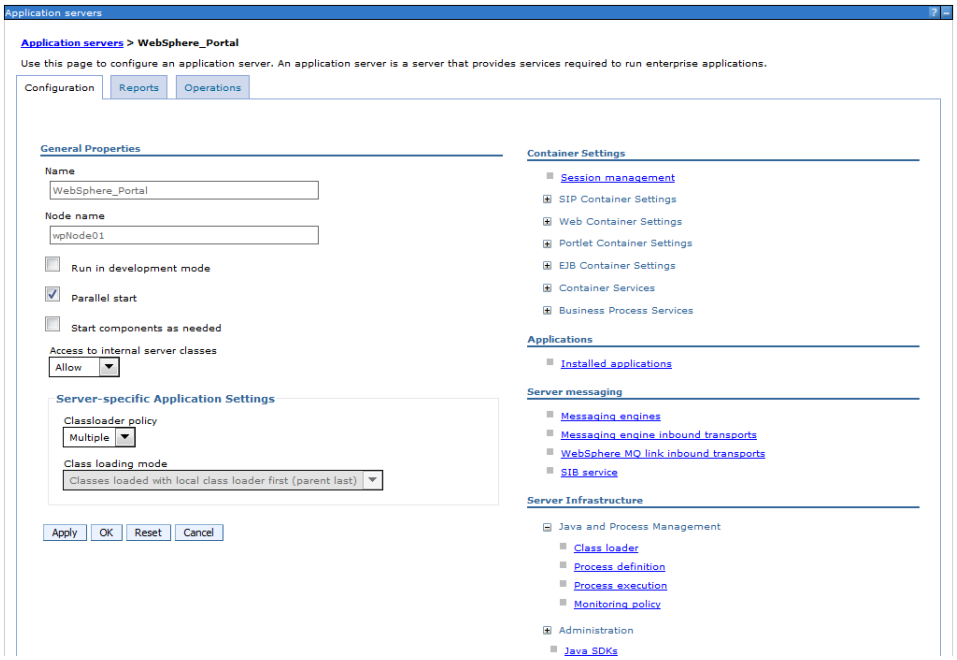


1. Login to the WebSphere Application Console of the target environment
   `http://<HOSTNAME>:<PORT>/ibm/console`

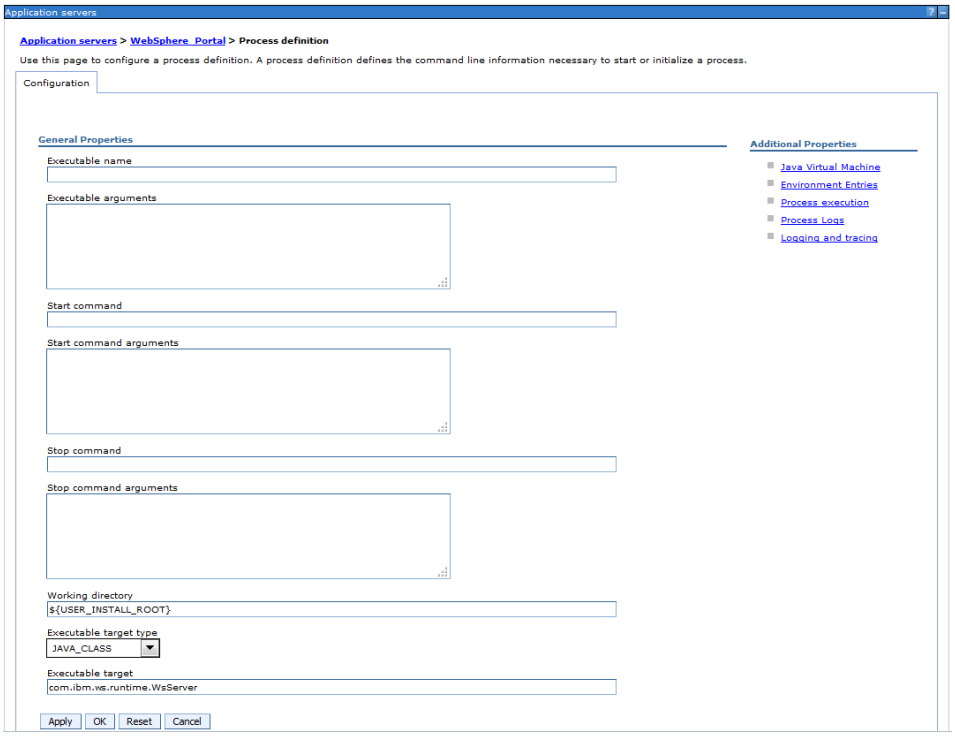
   Example: `http://wpstgt.ibm.com:9043/ibm/console`

2. Navigate to Servers > Server Types > WebSphere application servers

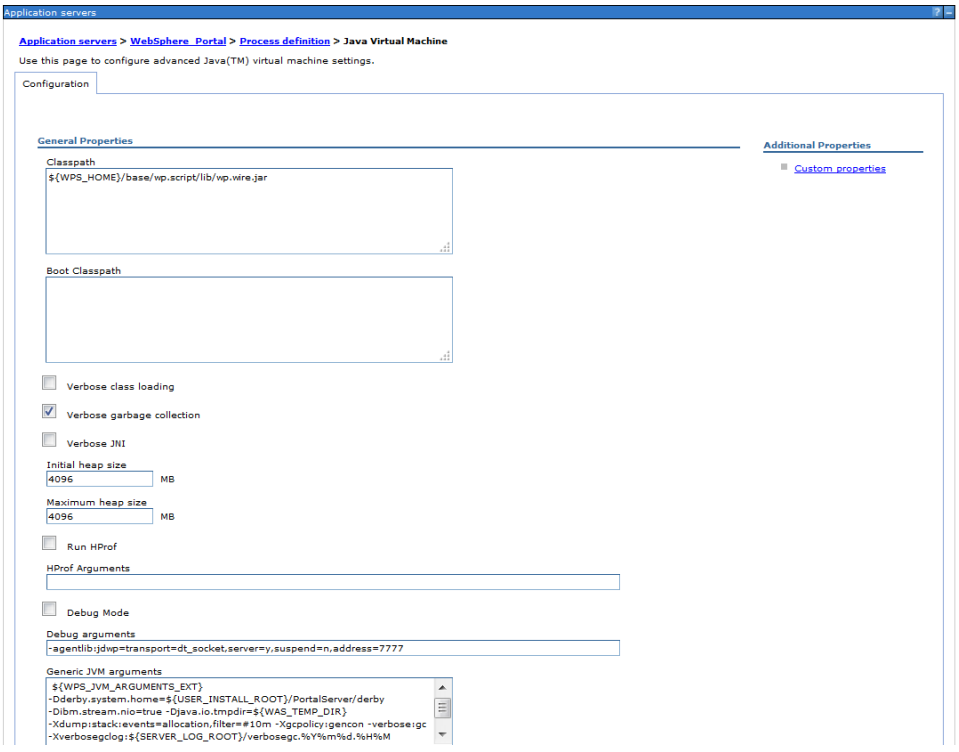
3. Click on WebSphere_Portal



4. Under **Server Infrastructure**, expand **Java and Process Management**
5. Click **Process definition**

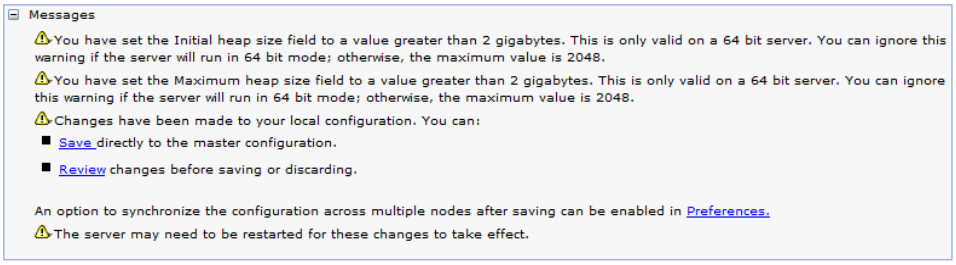


6. Under Additional Properties, click Java Virtual Machine



7. Compare the **Initial heap size/Maximum heap size** with the source environment
8. Compare the **Generic JVM arguments** with the source environment
9. Compare the **Verbose garbage collection** with the source environment

10. If no changes are required, the rest of the steps in this section can be skipped
11. If changes are required, update the changes
12. Click **OK**



13. Click Save to save to the master configuration

3.7 Jar files

If additional jar files are required, make sure all WebSphere Portal environments are udpated

1. Login to the target environment file system
2. Navigate to the **ext** directory of the WebSphere Application Server home

```
<WAS_HOME>/lib/ext
```

Example:

WIN
```
E:\IBM\WebSphere\AppServer\lib\ext\
```
UNIX
```
/opt/IBM/WebSphere/Appserver/lib/ext/
```

3. Compare the files and directory with the source environment
4. If there are any differences, update the target environment with the updates

4 PZN Rules

If there are PZN Rules that needs to be deployed from the source to target environment, follow the section.

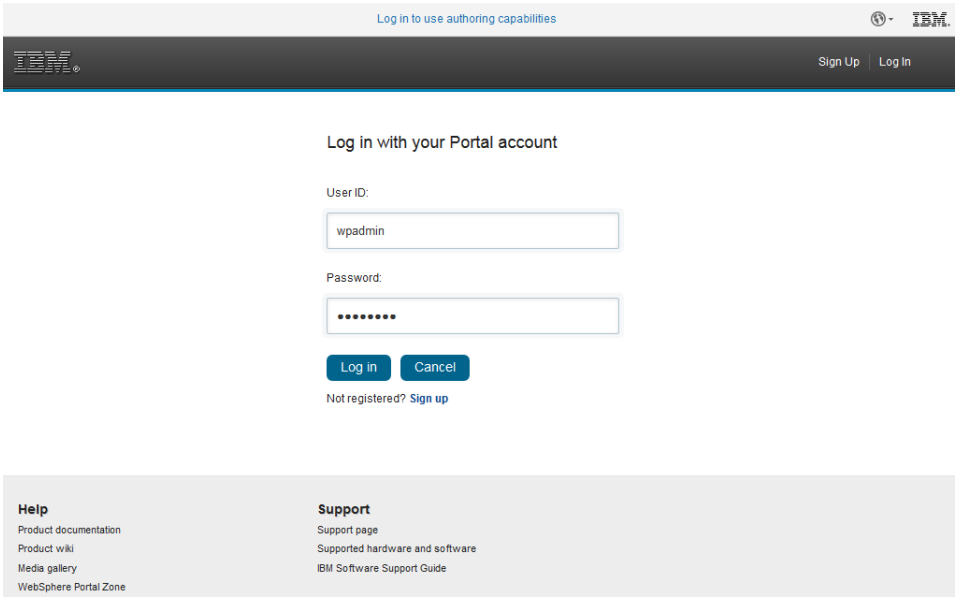
4.1 Export PZN Rule – Source

1. Open a browser and set the URL to the WebSphere Portal Server Personalization page of the source environment

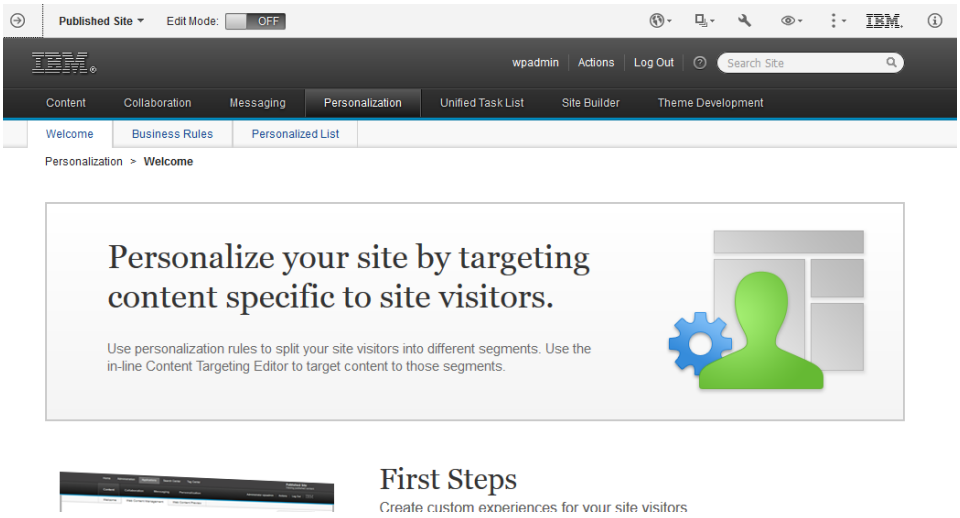
```
http://<HOSTNAME>:<PORT>/wps/myportal/Applications/Peronsalization
```

   Example:

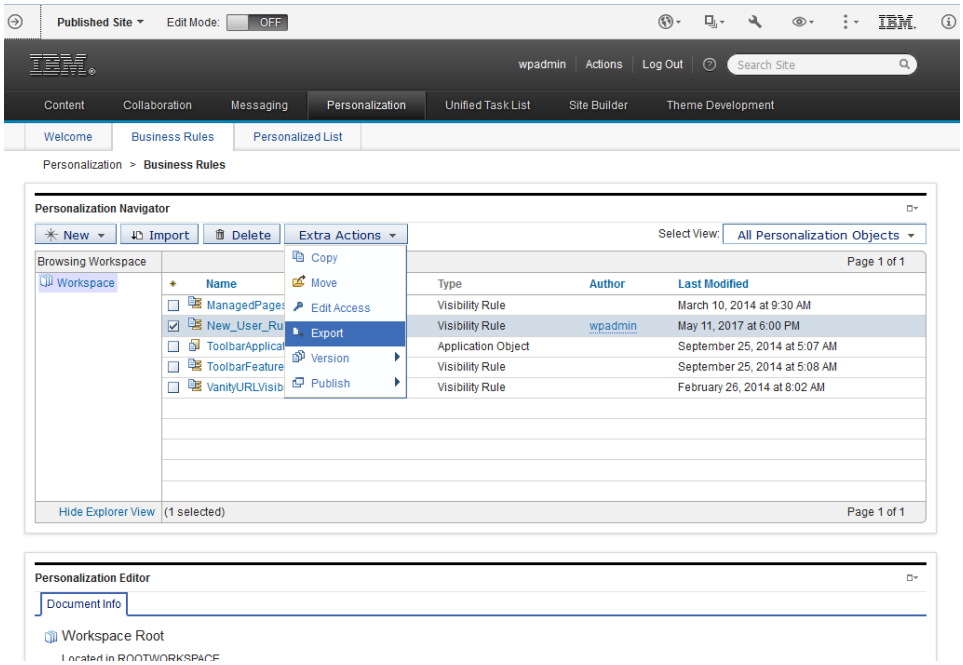
```
http://wpsrc.ibm.com:10039/wps/myportal/Applications/Personalization
```



2. Enter the Administrator (wpadmin) username/password and click Log in



3. Click Business Rules



4. Check the checkbox by the PZN Rule

   Example: `New_User_Rule`

5. Click Extra Actions > Export
6. Save the file to your local system

   Example: `New_User_Rule.nodes`

   NOTE: This file will be used to import the PZN Rule

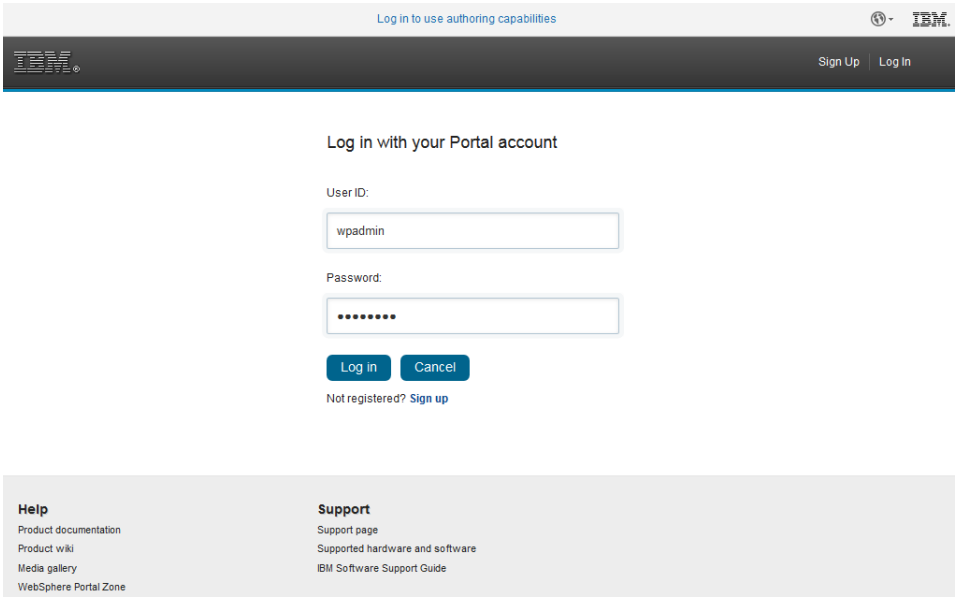
4.2 Import PZN Rule – Target

1. Open a browser and set the URL to the WebSphere Portal Server Personalization page of the target environment

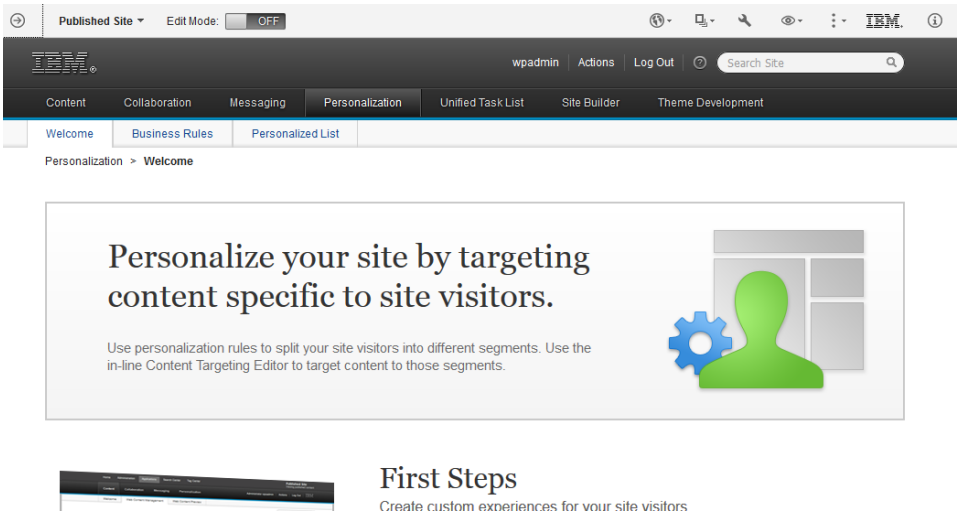
```
http://<HOSTNAME>:<PORT>/wps/myportal/Applications/Peronsalization
```

Example:

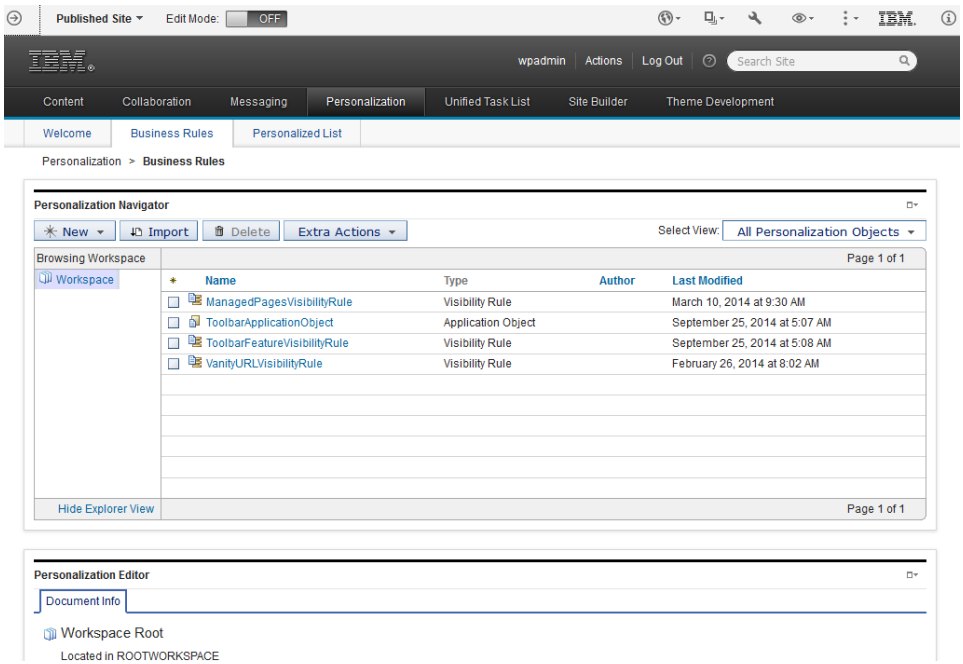
```
http://wpstgt.ibm.com:10039/wps/myportal/Applications/Personalization
```



2. Enter the Administrator (wpadmin) username/password and click Log in



3. Click Business Rules

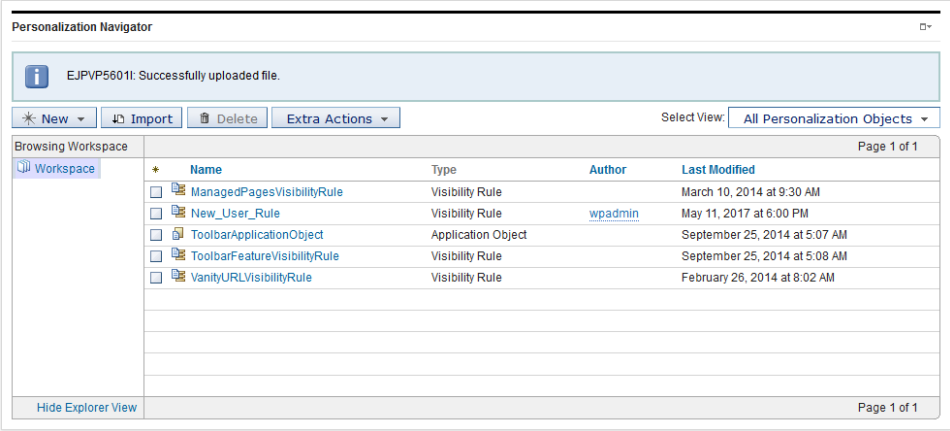


4. Click Import

5. Click Browse
6. Browser on the local system for the exported PZN rule

   Example: `New_User_Rule.nodes`

7. Click Import



8. Verify the success message

```
Successfully uloaded file.
```

9. Verify the PZN rule is present

   Example: `New_User_Rule`

5 WCM Library

https://www.ibm.com/support/knowledgecenter/en/SSYJ99_8.5.0/wcm/wcm_config_wcmlibrary_export.html

5.1 Export WCM Library – Source

1. Open a browser and set the URL to the WebSphere Portal Server Administration page of the target environment

```
http://<HOSTNAME>:<PORT>/wps/myportal/Administration
```

   Example:

```
http://wpstgt.ibm.com:10039/wps/myportal/Administration
```

2. Navigate to the ConfigEngine directory of the WebSphere_Portal profile

```
<WP_PROFILE>/ConfigEngine
```

   Example:

WIN
```
E:\IBM\WebSphere\wp_profile\ConfigEngine
```
UNIX
```
/opt/IBM/WebSphere/wp_profile/ConfigEngine
```

3. Run the following command on one line to export the WCM Library

```
ConfigEngine.(bat/sh) -Dexport.directory=<EXPORT_LOCATION> -
Dexport.libaryname=<NAME_OF_LIBRARY> -
Dexport.singledirectory=<true/false> export-wcm-data –
DPortalAdminPwd=<WP_PWD> -DWasPassword=<WAS_PWD>
```

   Example: Single Directory

```
ConfigEngine.bat -Dexport.directory=F:\WCM\Library -
Dexport.libaryname="WCMLib_1;WCMLib_2" -Dexport.singledirectory=true
export-wcm-data –DPortalAdminPwd=passw0rd -DWasPassword=passw0rd
```

   Results:

```
F:\WCM\Export\554ee7f5\...
```

   Example: Multiple Library Directory

```
ConfigEngine.sh -Dexport.directory=/opt/WCM/Library -
Dexport.libaryname="WCMLib_1;WCMLib_2" -Dexport.singledirectory=false
export-wcm-data –DPortalAdminPwd=passw0rd -DWasPassword=passw0rd
```

   Results:

```
/opt/WCM/Library/wcmlib_1
/opt/WCM/Library/wcmlib_2
```

4. Compress the Library directory. On windows, do not use the conpression program that comes with windows. Use an 3rd part program such as winzip, winrar, and 7zip,

Example:

Zip `wcmExport.zip`
Tar `wcmExport.tar`

5. Copy the compress media file to the target server

Example:

From WIN `F:\WCM\Export\wcmExport.zip`
From UNIX `/opt/WCM/Export/wcmExport.tar`

Example:

To WIN `F:\WCM\Import\wcmExport.zip`
To UNIX `/opt/WCM/Import/wcmExport.tar`

5.2 Import WCM Library – Target

1. Login to the WebSphere Portal file system
2. Extract the exported library from the source environment

Example: Single Directory

WIN `F:\WCM\Library\554ee7f5\...`
UNIX `/opt/WCM/Library/554ee7f5/...`

Example: Multiple Library Directory

WIN
```
F:\WCM\Library\wcmlib_1
F:\WCM\Library\wcmlib_2
```

UNIX
```
/opt/WCM/Library/wcmlib_1
/opt/WCM/Library/wcmlib_2
```

3. Navigate to the ConfigEngine directory of the WebSphere_Portal profile

`<WP_PROFILE>/ConfigEngine`

Example:

WIN `E:\IBM\WebSphere\wp_profile\ConfigEngine`
UNIX `/opt/IBM/WebSphere/wp_profile/ConfigEngine`

4. Run the following command on one line to import the WCM Library

- Single Directory

```
ConfigEngine.(bat/sh) -Dimport.directory=<IMPORT LOCATION> import-wcm-data -DPortalAdminPwd=<WP_PWD> -DWasPassword=<WAS_PWD>
```

Example: Windows

```
ConfigEngine.bat -Dimport.directory=F:\WCM\Library\ import-wcm-data -
DPortalAdminPwd=passw0rd -DWasPassword=passw0rd
```

Example: UNIX

```
ConfigEngine.sh -Dimport.directory=/opt/WCM/Library/ import-wcm-data -
DPortalAdminPwd=passw0rd -DWasPassword=passw0rd
```

- Multiple Library Directory

```
ConfigEngine.(bat/sh) -Dimport.directory=<LIB_LOCATION>;<LIB_LOCATION>;
import-wcm-data -DPortalAdminPwd=<WP_PWD> -DWasPassword=<WAS_PWD>
```

Example: Windows

```
ConfigEngine.bat -
Dimport.directory="F:\WCM\Import\wcmlib 1;F:\WCM\Import\wcmlib 2"
import-wcm-data -DPortalAdminPwd=passw0rd -DWasPassword=passw0rd
```

Example: UNIX

```
ConfigEngine.sh -
Dimport.directory="/opt/WCM/Import/wcmlib_1;/opt/WCM/Import/wcmlib_2"
import-wcm-data -DPortalAdminPwd=passw0rd -DWasPassword=passw0rd
```

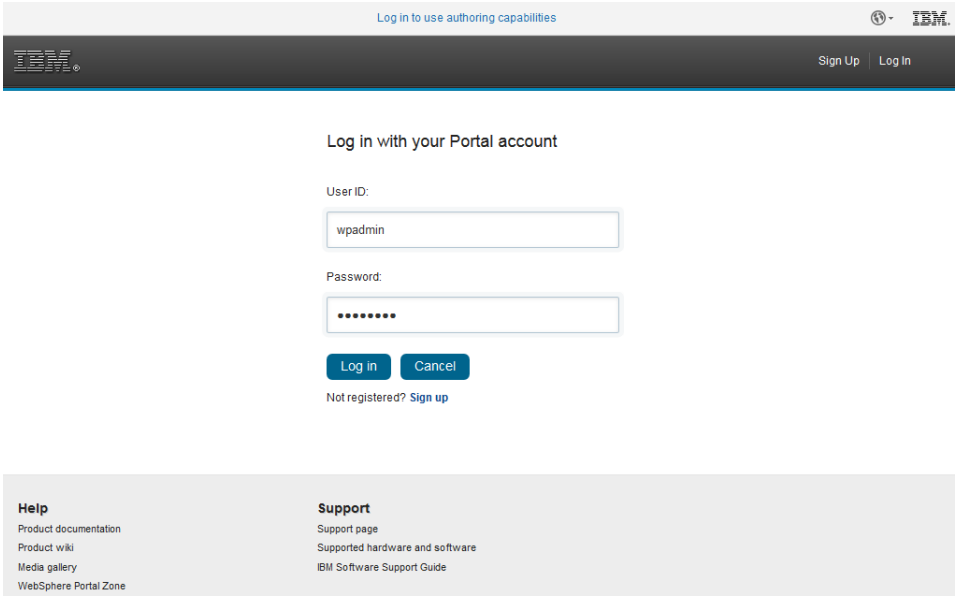
5.3 Validate

1. Open a browser and set the URL to the WebSphere Portal Server Administration page of the target environment

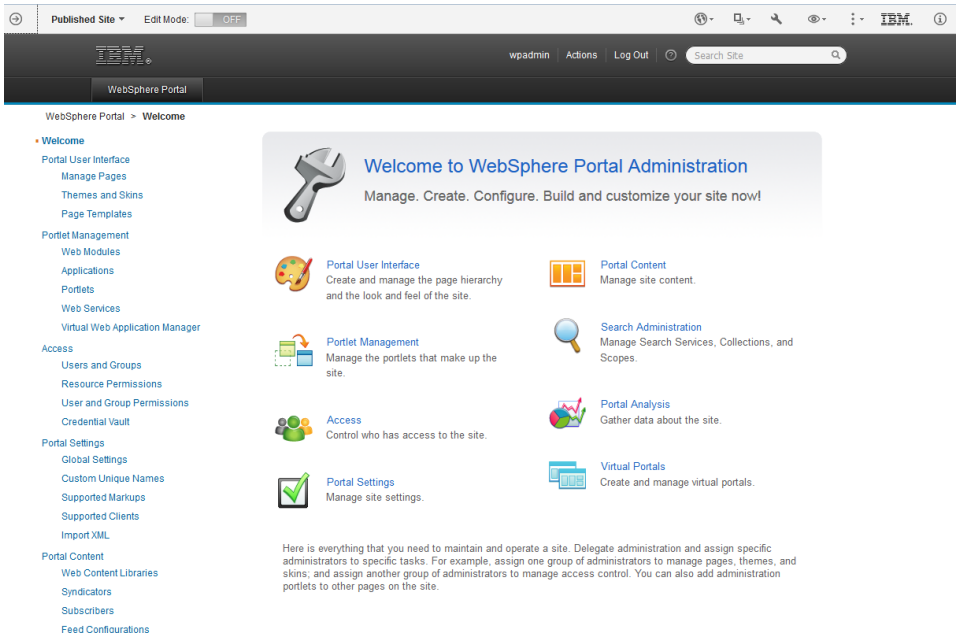
```
http://<HOSTNAME>:<PORT>/wps/myportal/Administration
```

Example:

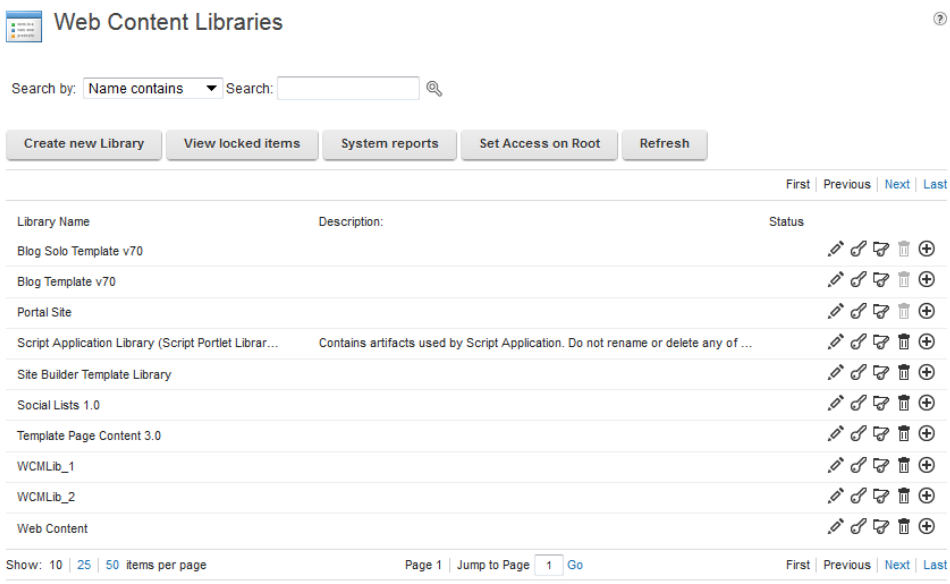
```
http://wpstgt.ibm.com:10039/wps/myportal/Administration
```



2. Enter the Administrator (wpadmin) username/password and click Log in



3. Under Portal Content, click Web Content Library



4. Verify the imported WCM Content library is present

   Example: `WCMLib_1, WCMLib_2`

6 Export - Source

6.1 Create Source XML File

1. Login to the WebSphere Portal source file system
2. Navigate to the bin directory of the WebSphere Portal home

```
<WP_HOME>/bin
```

Example:

WIN
```
E:\IBM\WebSphere\PortalServer\bin
```
UNIX
```
/opt/IBM/WebSphere/PortalServer/bin
```

3. Run the following xmlaccess command on one line to do a full export of the source environment

```
xmlaccess.(bat/sh) -in <WP_HOME>/doc/xml-samples/ExportRelease.xml -
user <WPADMIN> -password <WPPWD> -url
http://<HOSTNAME>:<PORT>/wps/config -out <EXPORT_FILE>
```

Example: WINDOWS

```
xmlaccess.bat -in E:\IBM\WebSphere\PortalServer\doc\xml-
samples\ExportRelease.xml -user wpadmin -password passw0rd -url
http://localhost:10039/wps/config -out E:\tmp\EXPORT_src.xml
```

Example: UNIX

```
xmlaccess.sh -in /opt/IBM/WebSphere/PortalServer/doc/xml-
samples/ExportRelease.xml -user wpadmin -password passw0rd -url
http://localhost:10039/wps/config -out /tmp/EXPORT_src.xml
```

6.2 Compress Archive

1. Login to the WebSphere Portal source file system
2. Compress the WebSphere Portal archive directory.

```
<WP_PROFILE>/PortalServer/deployed/archive
```

Examples:

WIN
```
E:\IBM\WebSphere\wp_profile\PortalServer\deployed\archive
```
UNIX
```
/opt/IBM/WebSphere/wp_profile/PortalServer/deployed/archive
```

Result:

WIN
```
WP_Archive_src.zip
```
UNIX
```
WP_Archive_src.tar
```

6.3 Copy Files - SOURCE to TARGET

1. Login to the WebSphere Portal source file system
2. Copy the Export file and compressed archive directory to the target environment

    - EXPORT_src.xml
    - WP_Archive_src.(zip/tar)

    Example: WINDOWS - TO

```
F:\tmp\EXPORT_src.xml
F:\tmp\WP_Archive_src.zip
```

    Example: UNIX – TO

```
/tmp/EXPORT src.xml
/tmp/WP_Archive_src.zip
```

7 Import - Target

7.1 Empty-Portal

1. Login to the WebSphere Portal target file system
2. Run the following ConfigEngine command on one line to remove the Portal pages, Portal references and uninstall of Portal portlets

```
<WP_PROFILE>/ConfigEngine/ConfigEngine.(bat/sh) empty-portal -
DWasPassword=<WAS_PWD>
```

Example: WINDOWS

```
E:\IBM\WebSphere\wp_profile\ConfigEngine.bat empty-portal -
DWasPassword=passw0rd
```

Example: UNIX

```
/opt/IBM/WebSphere/wp_profile/ConfigEngine.sh empty-portal -
DWasPassword=passw0rd
```

NOTE: This will empty out the WebSphere Portal archive directory when complete

```
<WP_PROFILE>/PortalServer/deployed/archive/
```

Example:

WIN `E:\IBM\WebSphere\wp_profile\PortalServer\deployed\archive`
UNIX `/opt/IBM/WebSphere/wp_profile/PortalServer/deployed/archive`

7.2 Archive Directory

1. Login to the WebSphere Portal target file system
2. Extract the archive media from the source environment to the **archive** directory of the target environment

Results:

```
<WP_PROFILE>/PortalServer/deployed/archive/…
```

Example:

WIN `E:\IBM\WebSphere\wp_profile\PortalServer\deployed\archive\…`
UNIX `/opt/IBM/WebSphere/wp_profile/PortalServer/deployed/archive/…`

7.3 Update Import XML

If the users/groups in the source environment is different then the users/groups in the target environment this section should be completed. If it is not, warnings will occur during the import

1. Login to the WebSphere Portal target file system

2. Open the source export file with an editor

   Example:

WIN
```
F:\tmp\EXPORT_src.xml
```
UNIX
```
/tmp/EXPORT_src.xml
```

3. Replace all WebSphere Portal source user/groups with the WebSphere Portal target users/groups

   Example:

```
<role actionset="Administrator" update="set">
        <mapping subjectid="uid=wpadmin,o=defaultwimfilebasedrealm"
subjecttype="user" update="set"/>
        <mapping subjectid="cn=wpsadmins,o=defaultwimfilebasedrealm"
subjecttype="user_group" update="set"/>
</role>
```

4. Save EXPORT_src.xml

7.4 Import XML

1. Login to the WebSphere Portal target file system
2. Navigate to the bin directory of the WebSphere Portal home

```
<WP_HOME>/bin
```

   Example:

WIN
```
E:\IBM\WebSphere\PortalServer\bin
```
UNIX
```
/opt/IBM/WebSphere/PortalServer/bin
```

3. Run the following xmlaccess command on one line to do a full export release

```
xmlaccess.(bat/sh) -in EXPORT_src.xml -user <WPADMIN> -password <WPPWD>
-url http://<HOSTNAME>:<PORT>/wps/config -out <EXPORT_FILE>
```

   Example: WINDOWS

```
xmlaccess.bat -in EXPORT_src.xml -user wpadmin -password passw0rd -url
http://localhost:10039/wps/config -out E:\tmp\EXPORT_src.log
```

   Example: UNIX

```
xmlaccess.sh -in EXPORT_src.xml -user wpadmin -password passw0rd -url
http://localhost:10039/wps/config -out /tmp/EXPORT_src.log
```

7.5 Activate Portlets

This is only required when the target environment is a cluster

1. Login to the WebSphere Portal target file system

2. Run the following ConfigEngine command on one line to activate all portlets

```
<WP_PROFILE>/ConfigEngine/ConfigEngine.(bat/sh) activate-portlets -
DPortalAdminPwd=<WP_PWD> -DWasPassword=<WAS_PWD>
```

Example: WINDOWS

```
E:\IBM\WebSphere\wp_profile\ConfigEngine.bat activate-portlets -
DPortalAdminPwd=passw0rd -DWasPassword=passw0rd
```

Example: UNIX

```
/opt/IBM/WebSphere/wp_profile/ConfigEngine.sh activate-portlets -
DPortalAdminPwd=passw0rd -DWasPassword=passw0rd
```