



Business Process Manager Sample for Digital Data Connector in WebSphere Portal

IBM Digital Data Connector (DDC) is used to integrate data from external data sources on your portal pages by using IBM Web Content Manager Presentation components. External data means that the data does not need to be stored directly in IBM Web Content Manager; in this case the data is coming from IBM Business Process Manager.

Installation of this PAA will create a new WCM library called 'BPM'. This library contains 4 content items which provide sample code to get you started with this DDC integration of WebSphere Portal and Business Process Manager.

The CSS for the content items is included in the library in a component. This can be removed and placed in the portal theme at any time depending on requirements.

For more information on themes and WebDAV see:

http://www-10.lotus.com/ldd/portalwiki.nsf/dx/Connecting_to_the_Portal_WebDAV_with_8.5

For a more in-depth explanation of DDC see:

http://www-01.ibm.com/support/knowledgecenter/SSHRKX_8.5.0/mp/social/plrf_ovu.dita?lang=en/

Hardware and Software Requirements

You should refer to the appropriate hardware and software requirement information for each of the components with which the sample integrates.

The following software components are required for the installation of the Business Process Manager sample PAA.

Pre-requisite software:

- IBM WebSphere Portal 8.5 CF04+
<http://www.ibm.com/developerworks/websphere/zones/portal/proddoc/>

- IBM Business Process Manager 8.5.5
<http://www.ibm.com/developerworks/offers/lp/demos/summary/ws-IBMBPMv8.5.html>

- LDAP, such as Tivoli Directory Server:
http://www-01.ibm.com/support/knowledgecenter/SSVJJU_6.3.0/com.ibm.IBMDS.doc/welcome.htm

Installation and Required Configuration

1. Configure SSO between WebSphere Portal and IBM Business Process Manager

1.1 Configure WebSphere Portal to use your LDAP server

http://www-01.ibm.com/support/knowledgecenter/SSHRKX_8.5.0/mp/config/config_user_registry.dita

1.2 Configure IBM Business Process Manager to use your LDAP server

http://www.ibm.com/developerworks/bpm/library/techarticles/1308_yang/1308_yang.html

1.3 Retrieve the BPM SSL certificate

http://infolib.lotus.com/resources/portal/8.0.0/doc/en_us/PT800ACD022/catalog/install/social_ssl.html

The screenshot shows a web console interface for 'SSL certificate and key management'. The breadcrumb trail is: **SSL certificate and key management** > **Key stores and certificates** > **NodeDefaultTrustStore** > **Signer certificates** > **Retrieve from port**. Below the breadcrumb, there is a description: 'Makes a test connection to a Secure Sockets Layer (SSL) port and retrieves the signer from the server during the handshake.' The 'General Properties' section contains the following fields: 'Host' with the value 'yourserver.ibm.com', 'Port' with the value '443', and 'SSL configuration for outbound connection' with a dropdown menu set to 'NodeDefaultSSLSettings'. There is also an 'Alias' field with the value 'bpm cert'. At the bottom of the form, there is a 'Retrieve signer information' button and a row of control buttons: 'Apply', 'OK', 'Reset', and 'Cancel'.

1.4 Update Proxy config

Locate **proxy-config.xml** on your WebSphere Portal server, e.g.

```
/opt/IBM/WebSphere/wp_profile/config/cells/<wpCell>/applications/AJAX Proxy Configuration.ear  
/deployments/AJAX Proxy Configuration/wp.proxy.config.war/WEB-INF/proxy-config.xml
```

Find the `digital_data_connector_policy` section and add the cookie rule for the LTPA Token and the JSESSIONID:

```
<policy url="{digital_data_connector_policy}" basic-auth-support="true" name="digital_data_connector">  
  <actions>  
    <method>GET</method>  
    <method>HEAD</method>  
    <method>POST</method>  
    <method>DELETE</method>  
    <method>PUT</method>  
  </actions>  
  <headers>  
    <header>User-Agent</header>  
    <header>Accept*</header>  
    <header>Content*</header>  
    <header>Authorization*</header>  
    <header>Set-Cookie</header>  
    <header>If-Modified-Since</header>  
    <header>If-None-Match</header>  
    <header>If-Unmodified-Since</header>  
    <header>X-Method-Override</header>  
    <header>Set-Cookie</header>  
  </headers>  
  <cookie-rule name="bpm">  
    <cookie>LtpaToken2</cookie>  
    <cookie>JSESSIONID</cookie>  
  </cookie-rule>  
  <meta-data>  
    <name>forward-http-errors</name>  
    <value>true</value>  
  </meta-data>  
  <meta-data>  
    <name>forward-credentials-from-vault</name>  
    <value>true</value>  
  </meta-data>  
</policy>
```

Save the file.

Run the following command to update the proxy file.

```
ConfigEngine.<bat | sh> update-outbound-http-connection-config  
-DConfigFileName=</path to your proxy config file/proxy-config.xml>  
-DPortalAdminId=<userid>  
-DPortalAdminPwd=<password>  
-DWasUserId=<userid>  
-DWasPassword=<password>
```

1.5 Ensure that SSO is working.

- Open a browser.
- Login to Portal.
- Open a new tab and enter your Business Process Manager server URL. You should be logged in with the same user.

2. Download the PAA and install on your WebSphere Portal Server

For the Business Process Manager sample PAA we have included some extra parameters on the install and deploy commands. These parameters are used to configure the AJAX proxy. If they are not passed on the command line at install and deploy time they will have to be set manually in the WAS Administration console.

For more information on these PAA tasks:

http://www-01.ibm.com/support/knowledgecenter/SSYJ99_8.0.0/config/int_sol_installer.dita

2.1 Run the install-paa task

```
ConfigEngine.<bat | sh> install-paa
-DPAALocation=bpmIntegration.paa
-DWasPassword=<password>
-DPortalAdminPwd=<password>
-DProxyHTTPBPM="http://<yourbpmserver.com>*"
-DProxyHTTPSIBM="https://<yourbpmserver.com>*"
```

Where:

DProxyHTTPBPM: The http bpm server name to configure Ajax proxy
DProxyHTTPSIBM: The https bpm server name to configure Ajax proxy
DWasPassword: The WAS admin password
DPortalAdminPwd: The Portal admin password

2.2 Run the deploy-paa task

```
ConfigEngine.<bat | sh> deploy-paa
-DappName=bpmIntegration
-DWasPassword=<password>
-DPortalAdminPwd=<password>
-DProxyHTTPBPM="http://<yourbpmserver.com>*"
-DProxyHTTPSIBM="https://<yourbpmserver.com>*"
```

Where:

DProxyHTTPBPM: The http bpm server name to configure Ajax proxy
DProxyHTTPSIBM: The https bpm server name to configure Ajax proxy
DWasPassword: The WAS admin password
DPortalAdminPwd: The Portal admin password

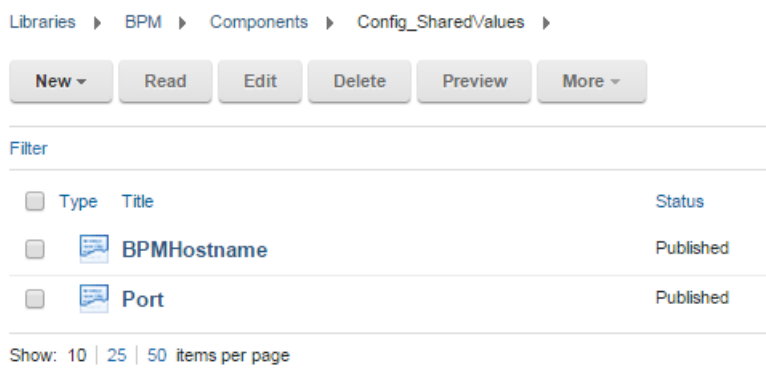
2.3 Check that the command ran successfully and restart your WebSphere Portal server:

Further information on installing and deploying a PAA on portal can be found here:

http://www-01.ibm.com/support/knowledgecenter/SSYJ99_8.0.0/config/inst_paa.dita

3. Add your BPM hostname and Port to the WCM BPM library

- Login to WebSphere Portal as an administrator.
- Navigate to the WCM content authoring portlet.
- Ensure that you can see the BPM Library
- Navigate through the Libraries > BPM> Components > Config_SharedValues
- Open and edit **BPMHostname** - add the host name of your BPM server, eg. yourbpmserver.com
- Save your changes



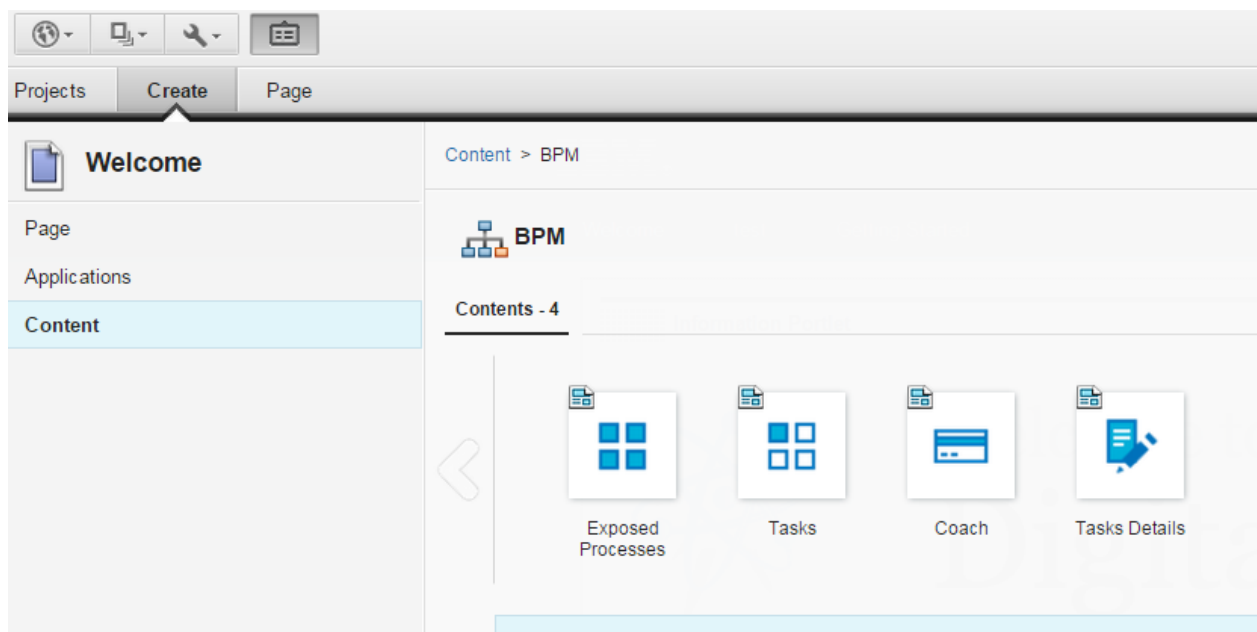
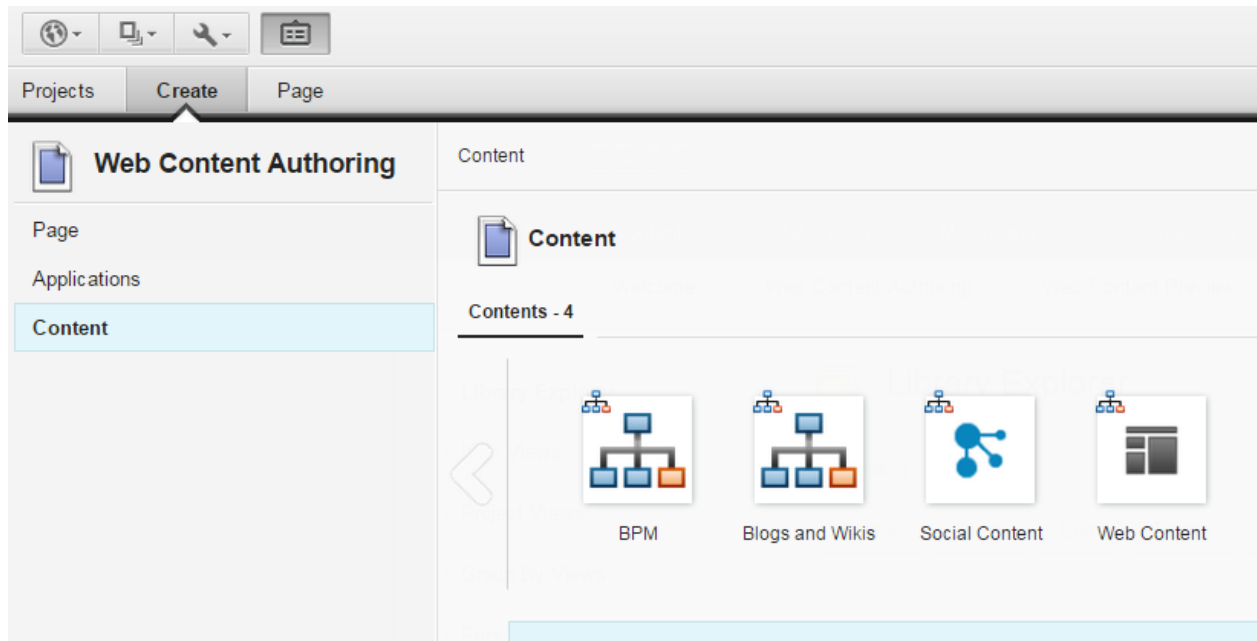
- Open and edit **Port**- add the secure port number of your BPM server, eg. 9443
- Save your changes

You should now be ready to use the IBM Business Process Manager Integration components.

Using the sample components

4. Add components to your page

Switch into Edit mode on your page and open the Toolbar. You should now see a new section under Content called BPM.



These components have been designed to provide commonly used functionality with a Business Process server. To use these components drag and drop them on to your portal page.

Exposed Processes:

Displays a list of exposed processes on the BPM server. Processes can be filtered by process application. A user may start a new process by clicking on the 'Start this process' button.

Exposed Processes

Filter By:

BPMBAL Samples
process
Int_LaptopOrder_EditAndFile
[Start this process](#)

BPMBAL Samples
process
LaptopOrder_Deliver
[Start this process](#)

BPMBAL Samples
process
LaptopOrder_EditAndFile
[Start this process](#)

BPMBAL Samples
process
LaptopOrder_Modify
[Start this process](#)

Hiring Sample
process
Standard HR Open New Position
[Start this process](#)

[First](#) | [Previous](#) | [1](#) | [Next](#) | [Last](#)

Filter tasks by process application. In edit mode, edit the Process content item. Enter the name of the application that you would like to filter the list by, and save. The Process list will now only show applications for this process.

▼ **processAppToFilter**

processAppToFilter

| |
|----------------|
| BPMBAL Samples |
|----------------|

Tasks:

Displays a list of tasks that the user has permission to see, based on group permissions on the BPM server.

Tasks can be filtered by process application. Tasks can be sorted by name, id, due date etc.

A user may claim or unclaim a task. Clicking on a task will cause the coach portlet to populate with the corresponding coach from the BPM server.

Tasks

Filter by Process Application :

| Task name | Task Id | Due Date | Owner | State |
|------------------------|---------|-----------|------------|-------------------------|
| Submit job requisition | 106 | 6/22/2015 | unassigned | Claim |
| File Laptop Order | 132 | 6/23/2015 | testadmin | Unclaim |
| Edit Laptop Order | 133 | 6/24/2015 | testadmin | Unclaim |

One way to filter the task list by application, is to open the Task content item in edit mode. Enter the name of the application that you want to filter the task list by, and save. The task list will now only show tasks available to the user from this process application.

Process application name (only show tasks from this app)

Process application name (only show tasks from this app)

BPMBAL Samples

Task Details :

Displays the details of a particular task if they exist.

Tasks Details

Order ID : 45353453

Order Item Name : IBM Thinkpad w300

Order Item Nr Of Pieces : 1

Order Total Price : 1000

Coach :

Displays the coach from the BPM server using an iframe. Clicking on a task causes the coach to populate. The user can then fill out the form and submit the task.

Coach

Verify Order

Order - File your laptop order to initiate the delivery of your new laptop

Order ID: 45353453

Order Total Price: 1,000

Order Item Name: IBM Thinkpad w300

Order Item Nr Of Pieces: 1

Employee ID: 846129

Employee Department: 7134

Employee Geography: Germany

Employee Department Discount Factor: 0.1

The coach content item can be configured to go via the proxy or direct connection to the bpm server depending on the required configuration. This can be done by choosing an option on the coach content item. For example in edit mode , edit the Coach content item. Choose the required connection method , and save.

▼ Use proxy or direct connection?

Use proxy or direct connection?

- Proxy
- Direct

Removing the Sample components

5. Remove the components and pages

In order to remove the library you will need to remove all references items within the library, which means deleting the components you have dropped on to your Portal pages. You can also just delete the pages if you do not need them.

5.1 Remove the library

- Go to Portal Administration > Web Content Libraries
- Find the BPM library and delete it

5.2 Run the remove-paa task:

```
ConfigEngine.<bat | sh> remove-paa
-DappName=bpmIntegration
-DforceRemove=true
-DWasPassword=<password>
-DPortalAdminPwd=<password>
```

Where:

DWasPassword: The WAS admin password

DPortalAdminPwd: The Portal admin password

Note: To remove the package from a virtual portal, you need to include the context root or host name parameters for the virtual portal. Add the -DVirtualPortalHostName or -DVirtualPortalContext parameters to the tasks.

5.3 Run the uninstall-paa task:

```
ConfigEngine.<bat | sh> uninstall-paa
-DappName=bpmIntegration
-DforceUninstall=true
-DWasPassword=<password>
-DPortalAdminPwd=<password>
```

Where:

DWasPassword: The WAS admin password

DPortalAdminPwd: The Portal admin password

5.4 Run the delete-paa task:

After running the uninstall-paa task and removing the assembly from the ConfigEngine registry, the PAA content remains in the PAA directory. To remove any remaining content run the delete-paa command. This command inspects the PAA directory and removes content that is not registered.

```
ConfigEngine.<bat | sh> delete-paa  
-DassemblyList=bpmIntegration  
-DforceRemove=true  
-DWasPassword=<password>  
-DPortalAdminPwd=<password>
```

Where:

DWasPassword: The WAS admin password

DPortalAdminPwd: The Portal admin password

For more information on these PAA tasks:

http://www-01.ibm.com/support/knowledgecenter/SSYJ99_8.0.0/config/int_sol_installer.dita