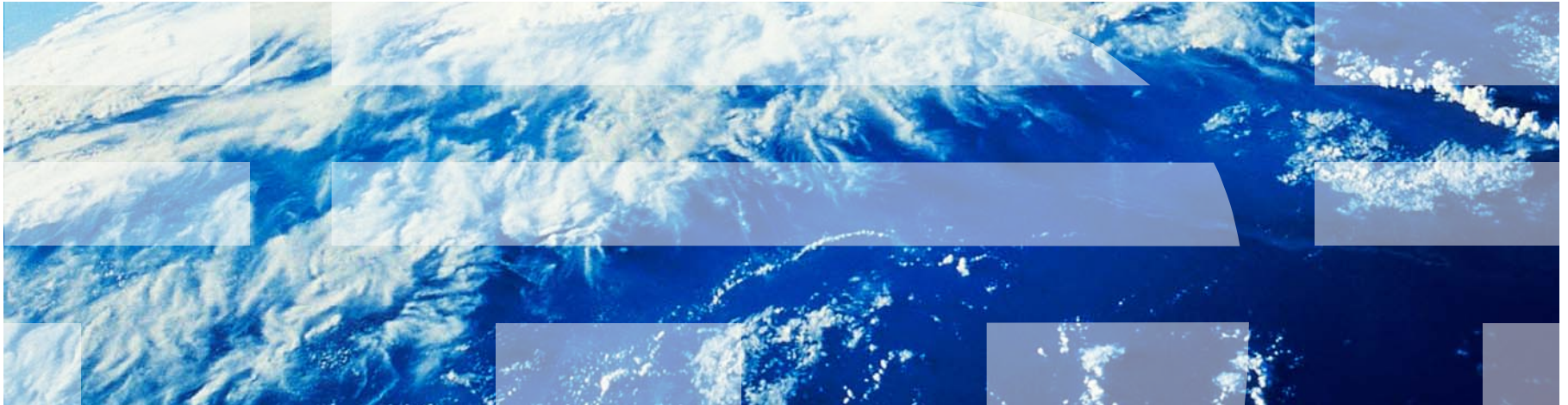


IBM Worklight V6.1.0 Getting Started

**Introducing Worklight Server and Application
Center on IBM PureApplication System and Smart
Cloud Orchestrator**



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Agenda

- Introduction
- Installation of Worklight Pattern Type
- Installation of Worklight Database Workload Standards
- Create and deploy Worklight Virtual Application Pattern
- Work with PureApplication System in Worklight Studio
- Build and deploy by using the command line interface
- Deploy Application Center

Overview

- IBM Worklight® provides the capability to deploy and manage Worklight Server and applications on IBM PureApplication™ System and IBM SmartCloud® Orchestrator.
- This cloud solution eases the efforts for developers and administrators throughout the whole lifecycle of mobile applications.
- In this module, you learn the basic scenarios of using IBM Worklight on PureApplication System.
- In this module, you also learn how to deploy Application Center onto PureApplication System
 - For information about integrating Tivoli® Directory Server, see module *Integrating Tivoli Directory Server on IBM PureApplication System* and the IBM Worklight user documentation.

Agenda

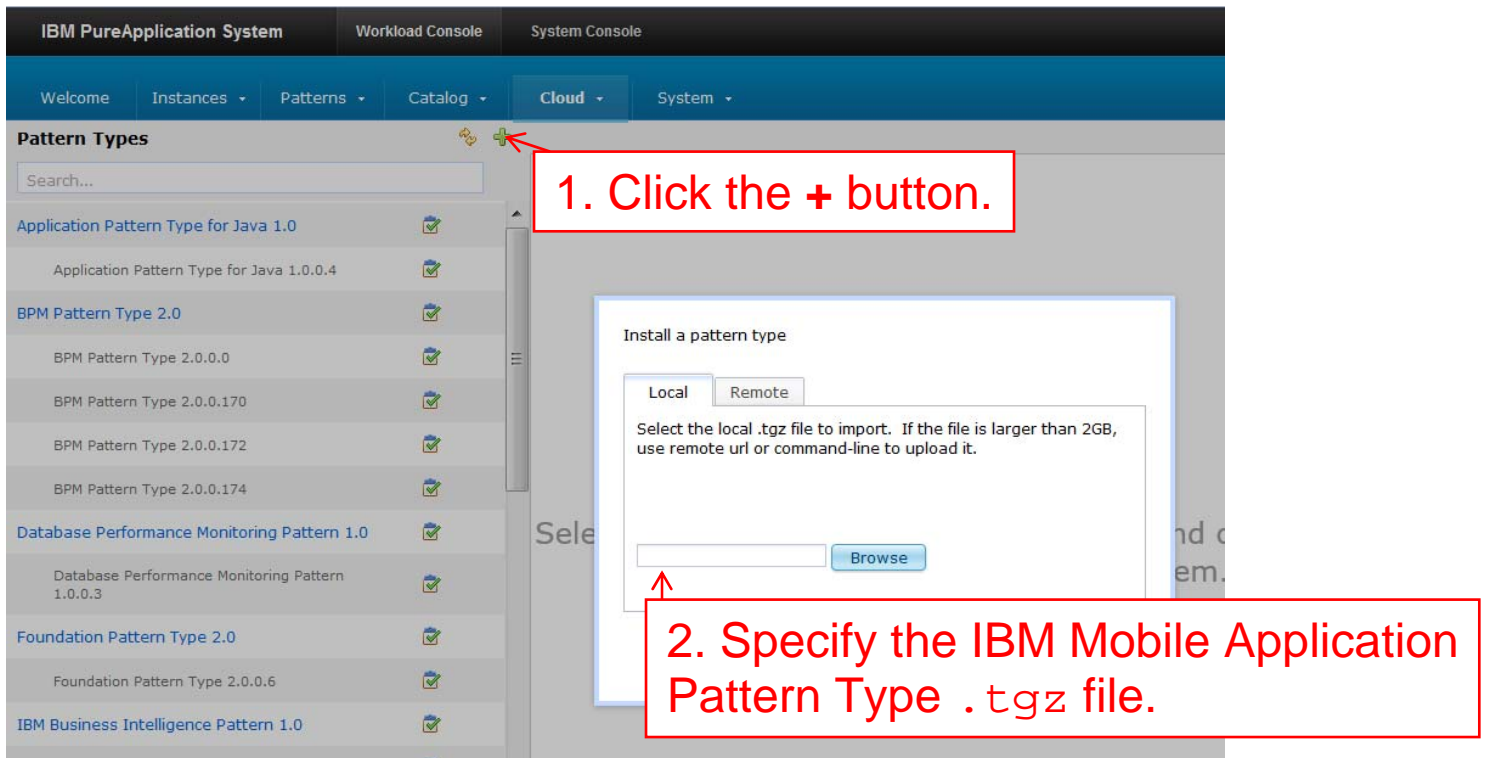
- Introduction
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- Build and deploy by using the command line interface
- Deploy Application Center

Prerequisites

- Before you start the installation, get the IBM Mobile Application Platform Pattern Type `.tgz` file from the installation of IBM Mobile Application Platform Pattern.

Upload the Pattern Type file

- Log in to PureApplication System, and ensure that your account has the right to upload a new pattern type.
- Go to **Workload Console > Cloud > Pattern Types**.
- Upload the IBM Mobile Application Platform Pattern Type .tgz file.



Accept the license (1 of 2)

- After the upload process completes, go to the uploaded pattern type, and enable it.

2. View the license and accept it.

Pattern Types

Search...

- IBM Messaging Extension for Web Application Pattern 2.0
- IBM Messaging Extension for Web Application Pattern 2.0.0.1
- IBM Mobile Application Platform Pattern Type 5.0
- IBM Mobile Application Platform Pattern Type 5.0.6.0
- IBM Transact...
- IBM Tran...

IBM Mobile Application Platform Pattern Type

Description: IBM Mobile Application Platform Pattern Type

License Agreement: Not Accepted [License...]

Status: Not Accepted [Enable All...]

Required: Web Application Pattern Type (2.0.0.5 or above)

System Plug-ins: Show me all plug-ins in this pattern type

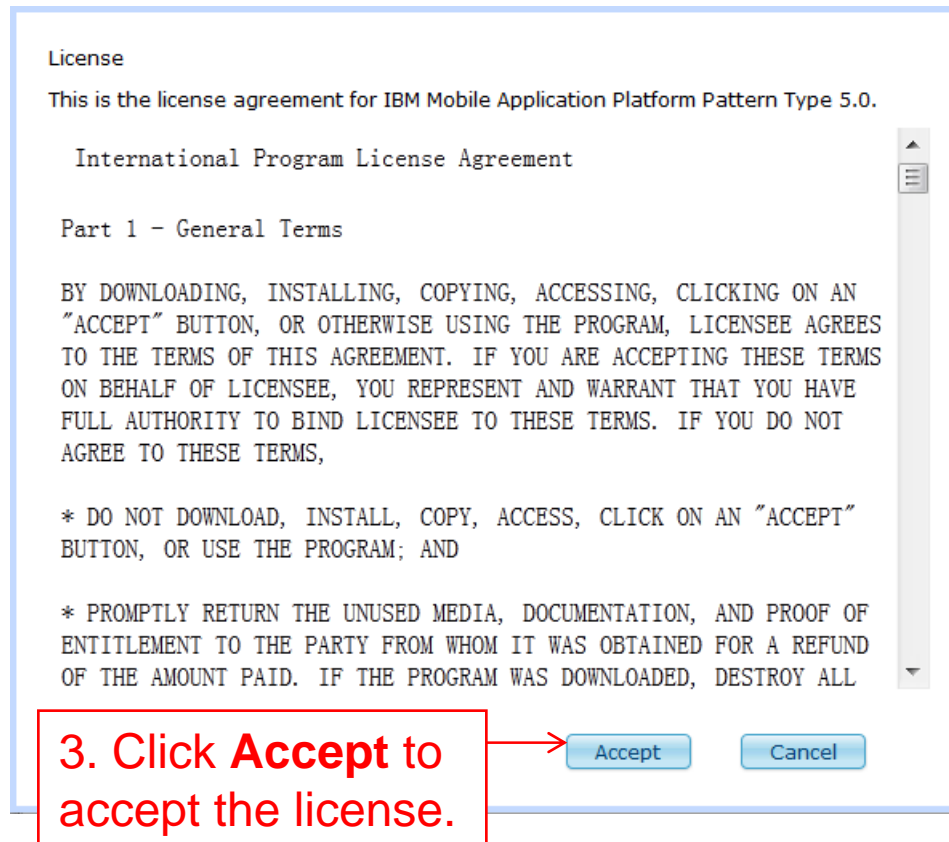
Dependency

prerequisites that need to be enabled first. In order to enable this pattern type, you must enable the prerequisites in sequence. Press "Enable All" to enable the patt

1. Notice that the Pattern Type is not enabled after the Installation.

Accept the license (2 of 2)

- Accept the license.



License

This is the license agreement for IBM Mobile Application Platform Pattern Type 5.0.

International Program License Agreement

Part 1 - General Terms

BY DOWNLOADING, INSTALLING, COPYING, ACCESSING, CLICKING ON AN "ACCEPT" BUTTON, OR OTHERWISE USING THE PROGRAM, LICENSEE AGREES TO THE TERMS OF THIS AGREEMENT. IF YOU ARE ACCEPTING THESE TERMS ON BEHALF OF LICENSEE, YOU REPRESENT AND WARRANT THAT YOU HAVE FULL AUTHORITY TO BIND LICENSEE TO THESE TERMS. IF YOU DO NOT AGREE TO THESE TERMS,

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3. Click **Accept to accept the license.**

Accept Cancel

Installation complete

- After the installation completes, the pattern is enabled.

IBM Mobile Application Platform Pattern Type	
Description:	IBM Mobile Application Platform Pattern Type
License Agreement:	Accepted [View...]
Status:	Unavailable [Enable...]
Required:	Web Application Pattern Type (2.0.0.5 or above)
System Plug-ins:	Show me all plug-ins in this pattern type
Dependency	
This pattern type has one or more prerequisites that need to be enabled first. In order to change the status of this pattern type(s) need to be enabled in sequence. Press "Enable All" to enable the pattern type(s).	

4. The Pattern Type is accepted.

5. Enable it.

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- **Installation of Worklight Database Workload Standards**
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Prerequisites

- Before you start the installation, get the `WLRTDB.zip` file and the `WLRPTDB.zip` file from the installation of IBM Mobile Application Platform Pattern.

Create Worklight database workload standards (1 of 2)

- Log in to PureApplication System, and ensure that your account has the right to create custom database workload standards.
- Go to **Workload Console > Catalog > Database Workload Standards**.
- You must create Worklight database workload standards for:
 - Worklight runtime database
 - Worklight reports database

Create Worklight database workload standards (2 of 2)

- Follow the steps indicated here to upload the WLRTDB.zip file.
- By using similar steps, upload the WLRPTDB.zip file for the Worklight reports database.

The screenshot shows the IBM PureApplication System Workload Console interface. The 'Catalog' menu is open, and a '+' icon is highlighted with a red box and the text '1. Click +.'. Below this, a dialog box titled 'Specify options for your customized database workload standard.' is displayed. The dialog contains the following fields and options:

- Name:** W_RUNTIMEDB (highlighted with a red box and '2. Specify the name')
- Description:** Departmental Transactional (highlighted with a red box and '3. Select Departmental Transactional')
- Workload type:** Departmental Transactional
- Initial disk size (GB):** 1
- Storage multiplier (User data to physical disk ratio):** 3
- Upload file (.zip):** WLRTDB.zip (highlighted with a red box and '4. Specify the WLRTDB.zip file.')

Buttons for 'Save' and 'Cancel' are visible at the bottom of the dialog.

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Create Worklight Server

- Create a Virtual Application Pattern.
- Drag an Enterprise Application (WebSphere Application Server) component.
- Upload the `Worklight.ear` file onto it.
 - You can generate this EAR file from Worklight Studio or by using the command line interface (CLI).

The screenshot shows the IBM PureApplication System - Virtual Application Builder interface. The 'Assets' panel on the left lists various components, with 'Enterprise Application (WebSphere Application Server)' highlighted. A red arrow points from this component to the main workspace. A red box with the text '1. Drag a WebSphere Application Server Component.' is positioned over the workspace. Another red box with the text '2. Upload the EAR file that is built by Worklight Studio or CLI.' is positioned over the 'Add policy for application' button. A red arrow points from this box to the 'EAR file' field in the configuration panel on the right, which contains the text 'artifacts/module_21_'. The configuration panel also shows fields for 'Name' (Worklight Server), 'Total transaction lifetime timeout (seconds)' (120), 'Async response timeout (seconds)' (120), and 'Client inactivity timeout (seconds)' (60).

Create Worklight database

- Drag a DB2® component and then apply a database workload standard for Worklight runtime database
 - Ensure that you select the database workload standard that you created in previous steps.

The screenshot shows the IBM Worklight console interface. On the left, the 'Assets' panel is expanded to 'Database Components', where a 'Database DB2' component is highlighted. A red arrow points from this component to a red-bordered box containing the text '1. Drag a DB2 component.' In the center workspace, a 'Worklight Runtime DB' component is shown in a dashed box, indicating it has been dragged. A red arrow points from this component to another red-bordered box containing the text '2. Apply a database workload standard.' On the right, the configuration panel for the 'Database DB2' component is shown. The 'Name' field is 'Worklight Runtime DB', the 'Database name' is 'WLRTIME', and the 'Purpose' is 'Production'. Under the 'Source' section, a dropdown menu is set to 'Apply a database workload standard', and a table lists several workload standards. The 'WL_RUNTIMEDB' standard is selected with a radio button.

Name	Description
<input type="radio"/> WL_REPORTSDB	
<input checked="" type="radio"/> WL_RUNTIMEDB	
<input type="radio"/> BPM_BPMDB	Using for BPM v85 Patterns
<input type="radio"/> BPM_PDWDB	Using for BPM v85 Patterns
<input type="radio"/> BPM_CMNDB	Using for BPM v85 Patterns

Configure database connection

- Link Worklight server and DB2.
- Specify the resource that is referenced as `jdbc/WorklightDS`.

The screenshot shows the IBM PureApplication System - Virtual Application Builder interface. The main workspace displays a diagram with two components: 'Worklight Server' (Enterprise Application) and 'Worklight Runtime Database' (Database). A red box labeled '3. Create a link.' points to a connection line between the two components. Another red box labeled '4. Select jdbc/WorklightDS.' points to a dropdown menu that is open, showing two options: 'jdbc/WorklightDS in module helloworld.war' (which is selected) and 'jdbc/WorklightReportsDS in module helloworld.war'. To the right, the configuration panel for the 'Enterprise Application → Database' connection is visible, showing fields for 'JNDI Name of Data Source', 'Resource References of Data Source' (containing 'helloworld.war#jdbc/WorklightDS'), 'Connection timeout' (180), and 'Transaction Type for JDBC Provider' (Connection Pool data source). The left sidebar shows a list of assets, including 'Database Components' like 'Data Studio web console', 'Database DB2', 'Existing Database DB2', 'Existing Database Informix', 'Existing Database Oracle', and 'Existing IMS Database'.

Configure Report database

- Create and connect the report database by following the same steps as in the previous slide with the following changes:
 - Select the database workload standard for reports database.
 - Select the resource reference as jdbc/WorklightReportsDS.

Repeat the previous steps to create the **report** database.

The screenshot shows the IBM Worklight console interface. On the left, the 'Assets' panel lists 'Database Components' including 'Database DB2'. The central diagram shows a 'Worklight Server' connected to two databases: 'WL Runtime DB' and 'WL Reports DB'. The 'WL Reports DB' is highlighted with a red dashed box and a red arrow pointing to the configuration panel on the right. The configuration panel for 'Database DB2' includes the following fields:

- Name:** WL Reports DB
- Database name:** mydb
- Database description:** (empty)
- Purpose:** Production
- Source:** Departmental Transactional

Configure Worklight Server

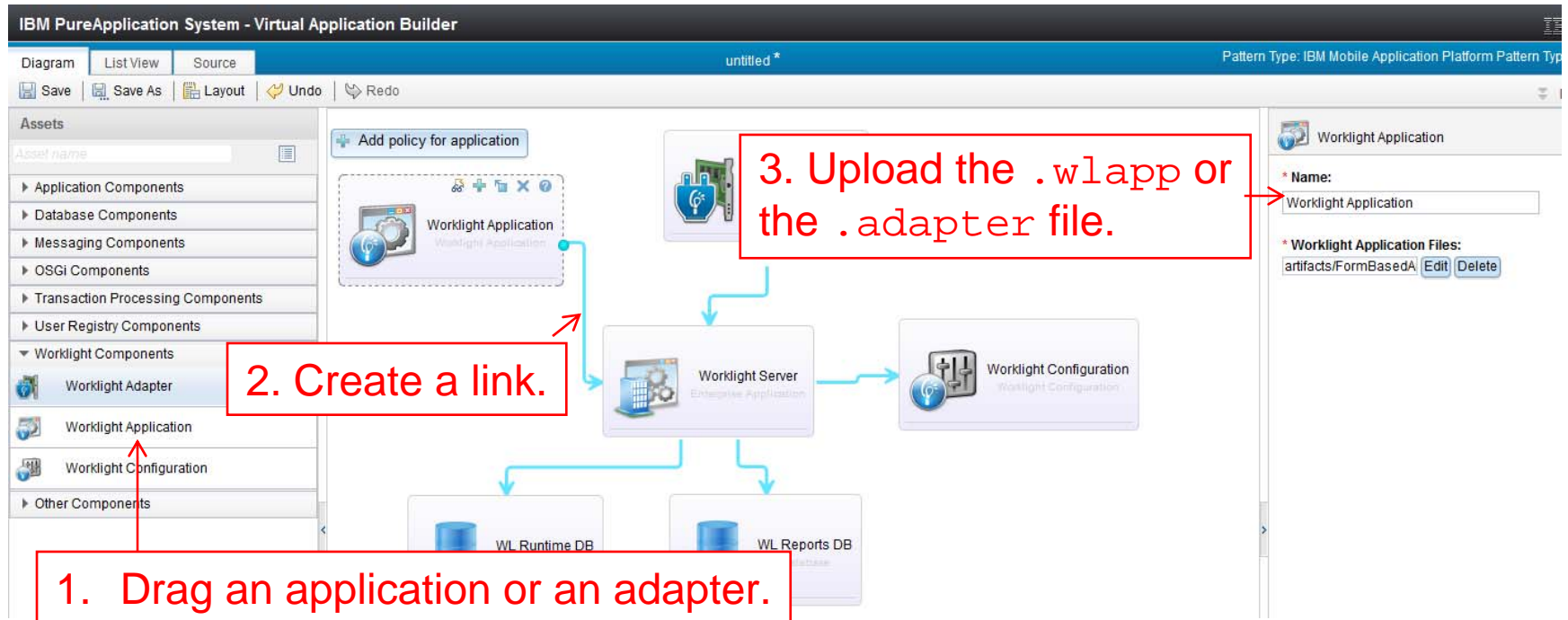
- Finally, drag a Worklight Configuration component, link it to Worklight Server, and specify the security of the Worklight Console.

The screenshot shows the IBM PureApplication System - Virtual Application Builder interface. The top bar indicates the current pattern type is 'IBM Mobile Application Platform Pattern Type'. The main workspace is divided into three sections:

- Assets Panel (Left):** Lists various components under 'Worklight Components', including 'Worklight Adapter', 'Worklight Application', and 'Worklight Configuration'. A red callout box labeled '1. Drag a Configuration component.' points to the 'Worklight Configuration' component in this list.
- Diagram Area (Center):** Displays a visual representation of the application architecture. A 'Worklight Server' component is connected to a 'Worklight Configuration' component. A red callout box labeled '2. Create a link.' points to the connection line between these two components.
- Configuration Panel (Right):** Shows the configuration details for the selected 'Worklight Configuration' component. Fields include:
 - Name:** Worklight Configuration
 - Worklight Console Protection:**
 - Worklight Console Username:** worklight
 - Worklight Console Password:** Two masked password fields. A red callout box labeled '3. Specify the login credentials.' points to these fields.

Create application and adapter

- Now you can create Worklight applications and adapters by dragging the corresponding components, and link them to Worklight Server.
 - For applications, upload the `.wlappr` file.
 - For adapters, upload the `.adapter` file.



Manage Worklight VAP instance (1 of 2)

- After you create an IBM Worklight VAP, you can deploy it like any other VAP.
- You can manage the running instances by going to **Workload Console > Instances**.
- Select **IBM Mobile Application Platform Pattern Type 6.1** to filter.
- Select your instance, and click **Manage**.

The screenshot shows the IBM PureApplication System Workload Console interface. At the top, there are tabs for 'Workload Console' and 'System Console'. Below the navigation bar, there are several dropdown menus for 'Welcome', 'Instances', 'Patterns', 'Catalog', 'Cloud', and 'System'. The main content area is divided into two sections: 'Virtual Application Instances' on the left and the details for a selected instance on the right.

In the 'Virtual Application Instances' list, the instance 'module_21_0_FormBasedAuthentication' is selected. A red box with an arrow points to this instance, labeled '1. Select the instance.'.

The details for the selected instance are shown on the right. The instance name is 'module_21_0_FormBasedAuthentication'. It was created by 'deploy35' and started on 'Feb 27, 2013 2:34:43 PM'. The status is 'Launching' with a progress bar at 80% (Preparing middleware). A red box with an arrow points to the 'Manage' button in the top right corner of the instance details, labeled '2. Click Manage.'.

Manage Worklight VAP instance (2 of 2)

- Click **Operations**, and select **Worklight**.
- On the right panel, you can do the following operations:
 - Install or update applications and adapters.
 - Set security protection of the Worklight Console.

The screenshot shows the Virtual Application Console interface. The top navigation bar includes 'Monitoring', 'Logging', 'Operations', 'Links', and 'Main Console'. The 'Operations' tab is selected. Below the navigation bar, there is a table of operations. The 'Worklight_Server-was.WORKLIGHT' operation is selected. To the right, the 'Worklight Security' configuration panel is visible, showing 'Worklight Console Protection' checked, 'Worklight Console Username' set to 'worklight', and 'Worklight Console Password' masked with dots. A 'Submit' button is at the bottom of the configuration panel.

1. Click **Operations**.

2. Select **WORKLIGHT**.

3. Configure the login credentials.

4. Click **Submit** to save.

Agenda

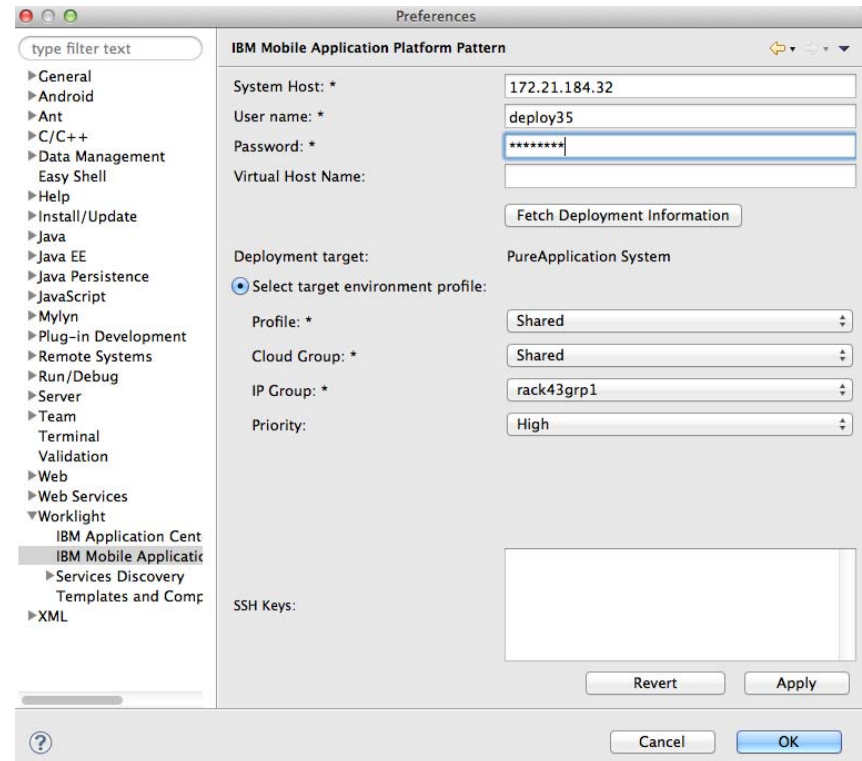
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Set IBM Mobile Application Platform Pattern preference in Worklight Studio

- The IBM Mobile Application Platform Pattern extension is integrated in Worklight Studio.
- Before using the IBM Mobile Application Platform Pattern capability, you must set up some preferences.
 - See next slide.

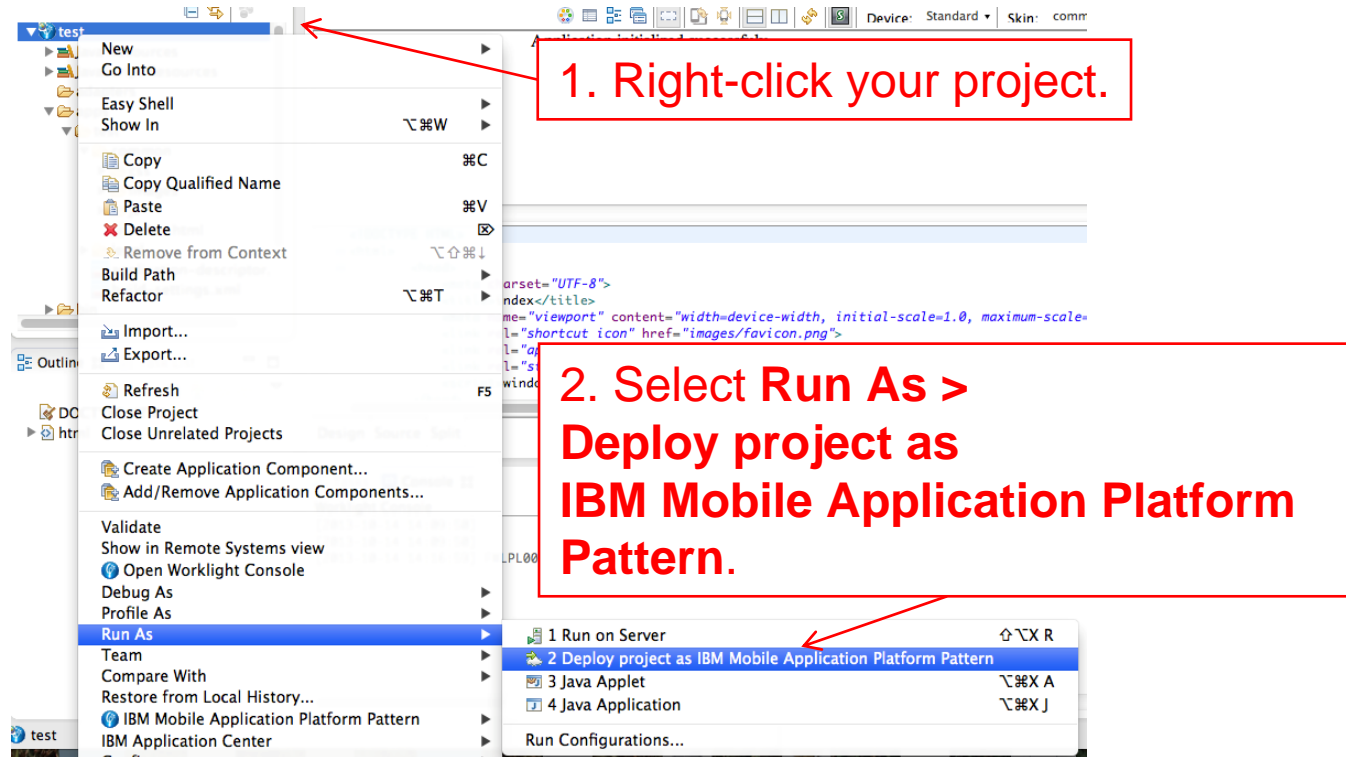
Specify the cloud environment

1. Click **Window > Preference**.
2. Go to **Worklight > IBM Mobile Application Pattern**.
3. Enter the values of the following fields:
 - **System Host**
 - **User name**
 - **Password**
4. Click **Fetch Deployment Information**.
5. Select the target profile.
6. Click **Apply** to save the settings.



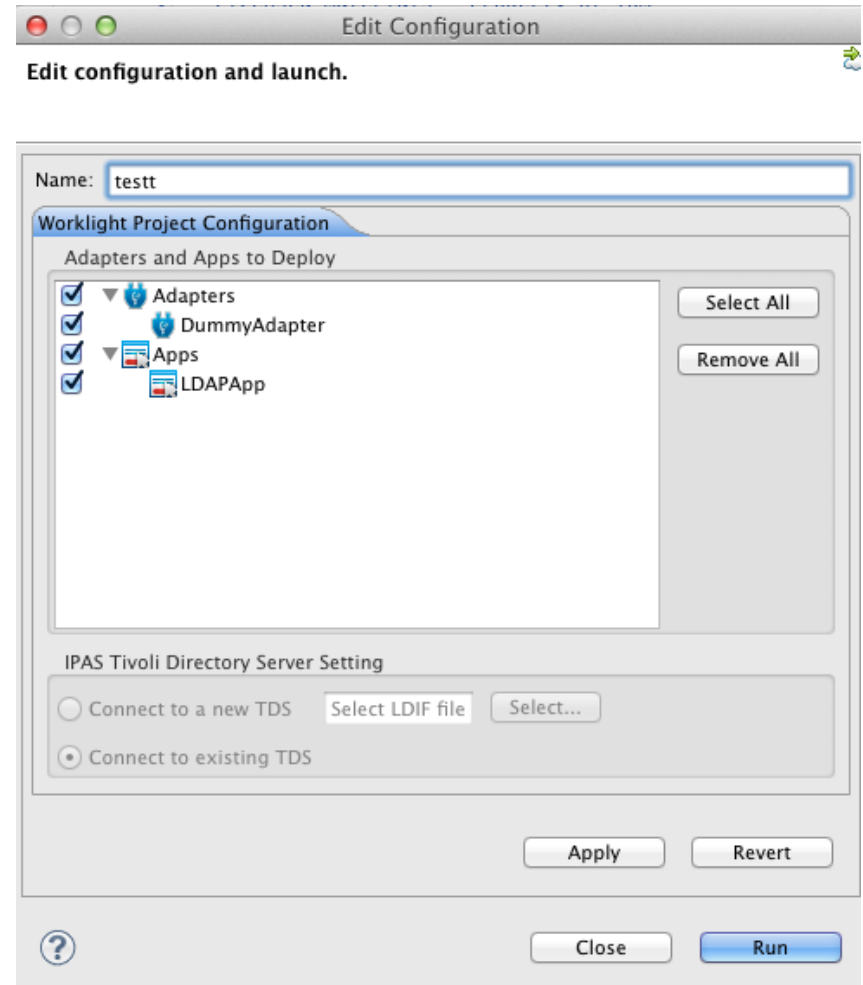
Deploy the Worklight project to PureApplication System

- To deploy your IBM Worklight project to PureApplication System, right-click the project, and then select **Run As > Deploy project as IBM Mobile Application Platform Pattern**.



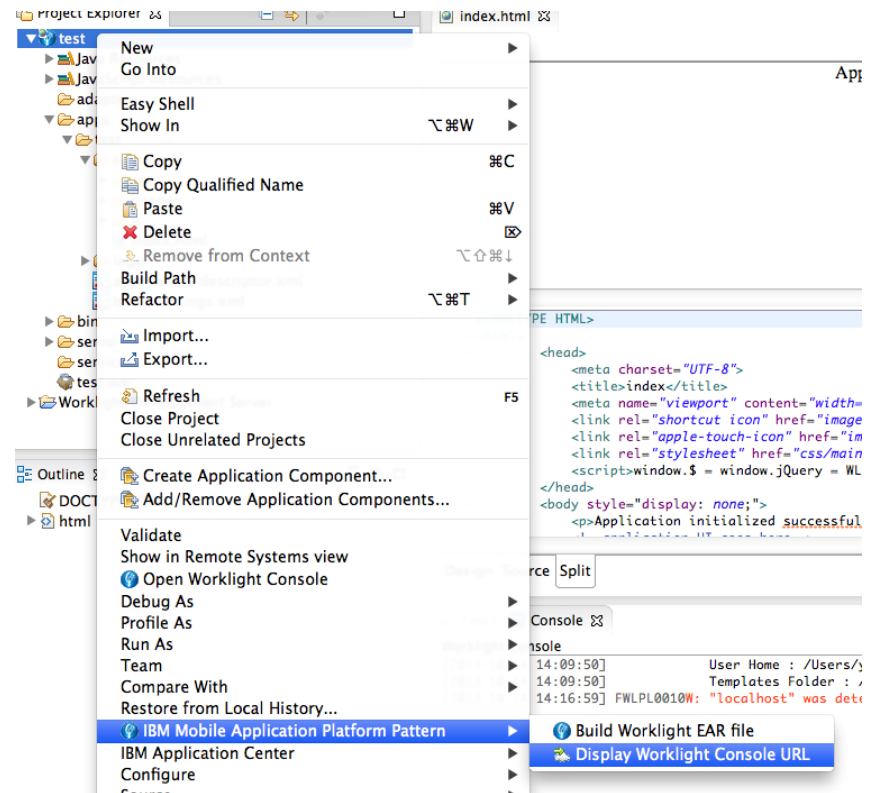
Select the assets to deploy

- In the **Edit Configuration** dialog, select the applications and adapters that you want to deploy.
- Check the status in the Worklight Console.
- A window opens when the deployment is complete.



Get the Worklight Console URL

- You can get the URL of the Worklight Console of the deployed project.
- Right-click your Worklight project, and select **IBM Mobile Application Platform Pattern > Display Worklight Console URL**.
- A window displays the URL.



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Prerequisites

- Get the Ant task JAR file from the installation of IBM Mobile Application Platform Pattern.

Build VAP by Ant script (1 of 3)

- Use the following Ant script as a template to build the VAP with Ant:

```
<taskdef resource="com/worklight/ant/defaults.properties"
  classpath="{taskdefClasspath}" />
<target
  name="buildIPAS_VAP"
  depends="buildAll" >
  <vap-builder
    worklightWar="{worklightWar}"
    destinationFolder="{wlProjectDestDir}"
    artifactsFolder="{artifactsFolder}"
    elbHost="{elbHost}" />
</target>
```


Build VAP by ANT script (2 of 3)

- Specify the following attributes:

Attributes	Description
worklightWar	Required. This file is the Worklight Console WAR file – make sure to include the full file path.
destinationFolder	Optional. The destination folder. Default value: <code>\${projectfolder}/bin</code>
artifactsFolder	Optional. This folder is where adapters and apps are stored by Worklight Studio or CLI.
elbHost	Optional. Host name for elastic load balancer.
createVAPFlag	Optional. If set to true , the Virtual Application Pattern compressed file is generated. Default value: true
isConnectNewTDS	Optional. Use this attribute to define whether there is a need to connect a new Tivoli Directory Server.

- (continued on next slide)

Build VAP by ANT script (3 of 3)

- Specify the following attributes
 - (continued from previous slide)

Attributes	Description
<code>ldifFile</code>	Optional. Set this attribute if <code>isConnectNewTDS</code> is true to define the LDIF file.
<code>ipasModel</code>	Optional. Possible values are the following ones: <ul style="list-style-type: none"> •W1500: when PureApplication System runs on Intel •W1700: when PureApplication System runs on Power system. If not specified, the default value is W1500 .
<code>ipasHost</code>	Optional. The URL of PureApplication System – required if <code>createVAPFlag</code> is true .
<code>username</code>	Optional. The user name to access the PureApplication System console – required when <code>createVAPFlag</code> is true .
<code>password</code>	Optional. The password to access the PureApplication System console – required when <code>createVAPFlag</code> is true .

Deploy VAP by ANT script (1 of 2)

- Use the following Ant script as a template to deploy the VAP with Ant:

```
<taskdef resource="com/worklight/ant/defaults.properties"
  classpath="${taskdefClasspath}" />
<target name="deployVAP" depends="buildVap4IPAS">
  <ipas-deployer
    vapZipFile="${vapFile}"
    ipasHost="${ipasHost}"
    username="${username}"
    password="${password}"
    profileName="${profileName}"
    cloudGroupName="${cloudGroupName}"
    ipGroupName="${ipGroupName}"
    priority="${ipasPriority}" />
</target>
```

Deploy VAP by ANT script (2 of 2)

- Specify the following attributes:

Attributes	Description
vapZipFile	Required. The path to the *.zip file that the vap-builder built.
ipasHost	Required. The URL of PureApplication System.
username	Required. The user name that is required to access the PureApplication System console.
password	Required. The password that is required to access the PureApplication System console.
deploymentTarget	Optional. The deployment target type that is used to deploy VAP. The value can be either "environment profile" (default value) or "cloud group".
profileName	Required when deploymentTarget is equal to "environment profile". The environment profile name that is used to deploy VAP.
cloudGroupName	Required. The cloud group name that is used to deploy VAP.
ipGroupName	Required when deploymentTarget is equal to "environment profile". The IP group name that is used to deploy VAP.
priority	Required when deploymentTarget is equal to "environment profile". The priority that is used to deploy VAP.
IPVersion	Required when deploymentTarget is equal to "cloud group". The IP version that is used to deploy VAP. The value can be either "IPv4" or "IPv6".

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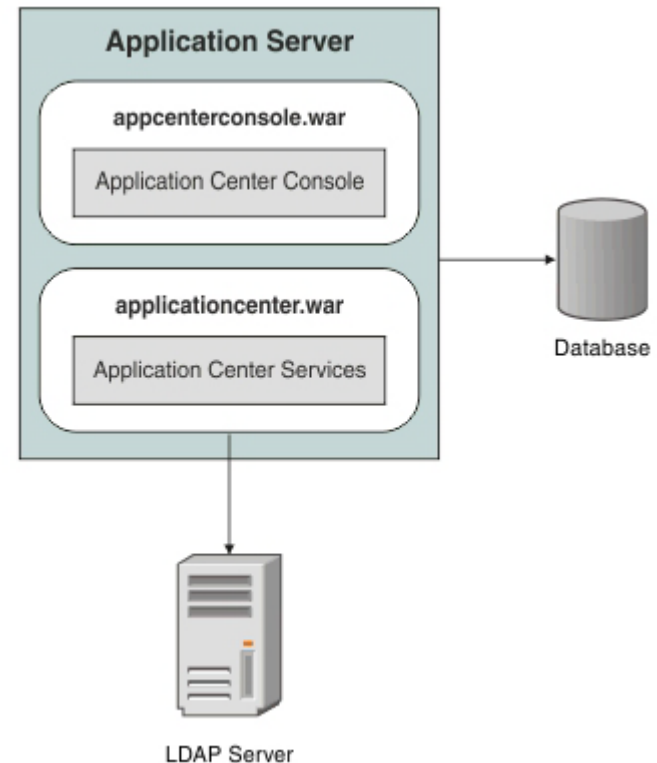
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- **Deploy Application Center**

Introduction to Application Center

- The Application Center is provided as an enterprise application store.
- It is similar to the Apple App Store or Google Play, except that it targets only private usage within a company.
- For more information, see the Application Center topic in the IBM Worklight user documentation.

Typical operation model

- Here is a typical operation model of Application Center:
 - The Application Server hosts the Application Center console and services.
 - The LDAP Server is responsible for authentication and user management.
 - The database is the repository for tracking information such as users, apps, or feedback.



Prerequisites

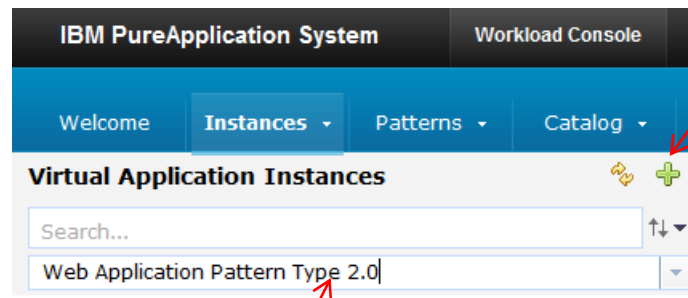
- Before you start to deploy Application Center to PureApplication System, ensure that it is installed.
- The Application Center is part of IBM Worklight Server. You can install it either through IBM Installation Manager or through manual installation. For more information, see the IBM Worklight user documentation.
 - Take note of the IBM Worklight installation folder `{worklight_install_folder }`.
 - When you install the Worklight Server with the Installation Manager, the Application Center artifacts are installed in the `{worklight_install_folder }/ApplicationCenter`.
- You must have an PureApplication System environment with privilege to create Virtual Application Pattern and run Virtual Application instances.

Get Application Center EAR file

- Since IBM Worklight V5.0.6, the App Center is divided into two WAR files: the Console and the Services.
- The pre-built EAR file is available in `{worklight_install_folder}/ApplicationCenter/console`.
- The paths of the WAR files in this EAR file are as follows:
 - Console: `/applicationconsole`
 - Services: `/applicationcenter`
- For information about how to build this EAR file yourself, see the IBM Worklight user documentation.

Create Virtual Application Pattern (1 of 2)

- Log in to PureApplication System
- Go to **Workload Console > Patterns > Virtual Applications.**
- In the list on the left, select **Web Application Pattern Type 2.0**, and then click **+**.

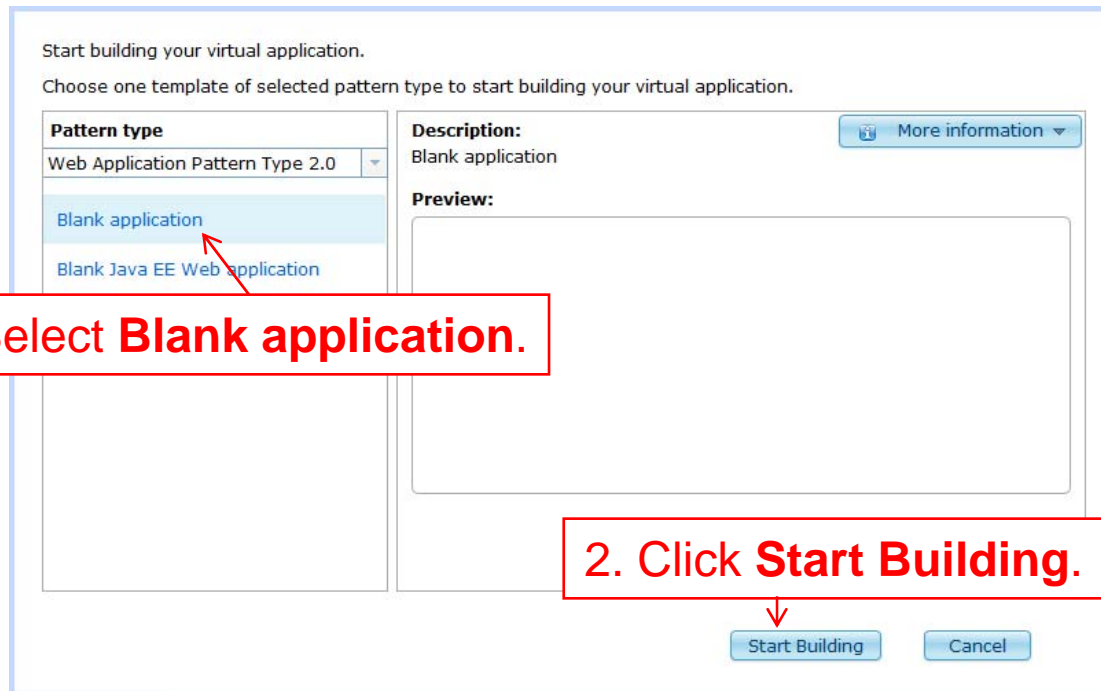


2. Click **+** to add.

1. Select **Web Application Pattern Type 2.0**.

Create Virtual Application Pattern (2 of 2)

- In the dialog, select a template to start from, then click **Start Building**.
 - Select the template that is convenient for you.
 - You must create one web application component, one database component, and one user registry component.
 - For this module, select the **Blank Application** template.



Start building your virtual application.

Choose one template of selected pattern type to start building your virtual application.

Pattern type	Description:
Web Application Pattern Type 2.0	Blank application More information
Blank application	Preview:
Blank Java EE Web application	

1. Select **Blank application**.

2. Click **Start Building**.

Start Building Cancel

Add an Enterprise Application component

- On the Diagram pane on the left, expand **Application Components**.
- Drag an **Enterprise Application** (WebSphere Application Server) component.
- On the property pane on the right, select the component, and specify the EAR file for the application center.

The screenshot displays the IBM PureApplication System - Virtual Application Builder interface. The top navigation bar includes 'Diagram', 'List View', and 'Source' tabs, with 'Diagram' selected. The main workspace shows a diagram with an 'Enterprise Application' component being added. The left pane shows the 'Assets' list, with 'Enterprise Application' selected. The right pane shows the properties for the selected component, including 'Name' and 'EAR file' fields. Red annotations highlight the steps: '1. Drag and Drop a WAS Component.' points to the 'Enterprise Application' asset in the left pane, and '2. Specify the EAR file.' points to the 'EAR file' field in the right pane.

IBM PureApplication System - Virtual Application Builder

Diagram | List View | Source | untitled* | Pattern Type: Web Application Pattern Type 2.0

Save | Save As | Layout | Undo | Redo

Assets

Asset name

Application Components

- Additional archive file
- Enterprise Application (WebSphere Application Server)
- Existing Web Service Provider Endpoint
- Policy set
- Web Application (WebSphere Application Server)

Database Components

+ Add policy for application

2. Specify the EAR file.

Enterprise Application (WebSphere Application Server)

* Name: Enterprise Application

* EAR file: artifacts/appcenter.ear [Edit] [Delete]

Total transaction lifetime timeout (seconds): 120

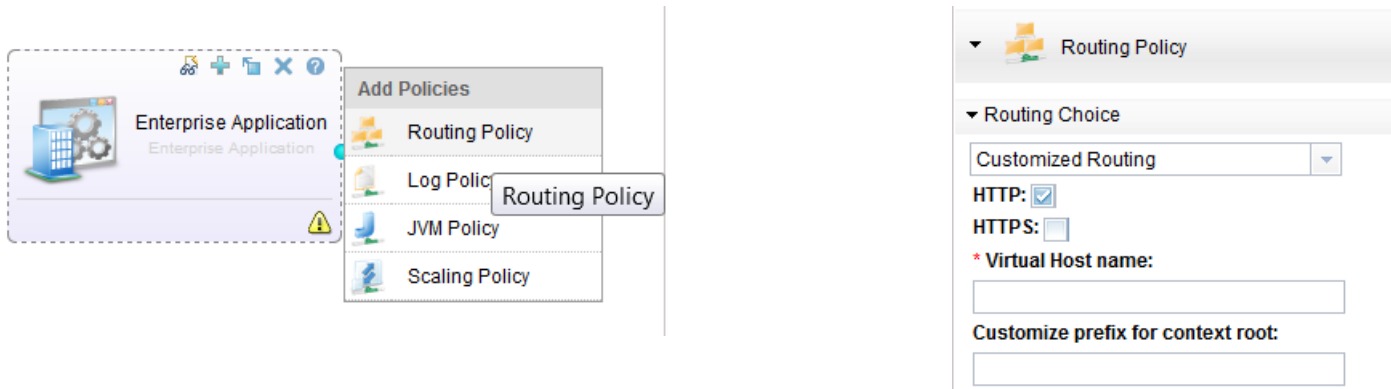
Async response timeout (seconds): 120

Client inactivity timeout (seconds): 60

1. Drag and Drop a WAS Component.

Add a routing policy

- From the menu of the Enterprise Application component, click the **+** (add) icon, and then select **Routing Policy**.
- In the property pane of the Routing Policy component, specify the **Virtual Host name**.



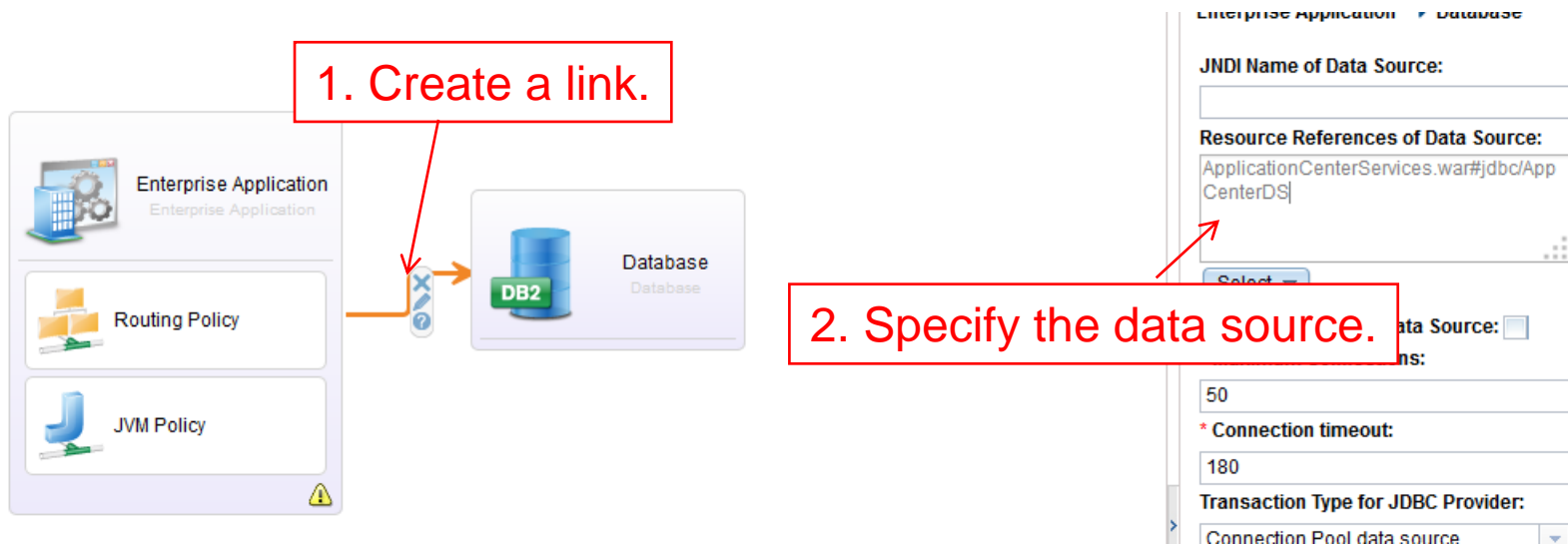
Add a database component

- On the left pane, expand **Database Components**.
- Drag a database (for this module, select **Database DB2**).
- Click the database and, on the property panel, specify the **Schema file**.
 - You can get the `create-appcenter-{db}.sql` in the `{worklight_install_folder}/ApplicationCenter/database` folder.

The screenshot illustrates the steps to add a database component in the IBM Worklight console. On the left, the 'Assets' pane shows 'Database Components' expanded, with 'Database DB2' selected. A red arrow points from this selection to the main workspace. In the workspace, an 'Enterprise Application' is shown with a 'Database DB2' component being added. A red box labeled '1. Drag a DB2 component.' points to this action. On the right, the 'Property Panel' shows the 'Database version' set to 'Departmental Transactional' and the 'Schema file' set to 'artifacts/create-appce'. A red box labeled '2. Specify the Schema file.' points to this property.

Connect the application and the database

- From the Enterprise Application component, click and hold the solid circle on the right edge, move the mouse to the database component, and then release.
 - You created a connection (link) between the web application and the database.
- Click the connection line, and specify the data source as `jdbc/AppCenterDS`.



Add a user registry component

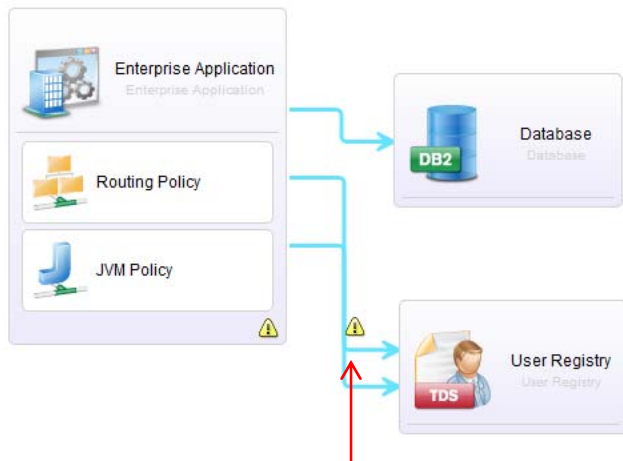
- On the left pane, expand **User Registry Components**.
- Drag a User Registry component.
- Select the User Registry component, and, on the property pane, specify the values of the **Base DN** and **LDIF file** fields.

The screenshot illustrates the configuration process in the IBM WebSphere console. On the left, the 'Assets' pane shows a tree view where 'User Registry Components' is expanded, and the 'User Registry' component is selected. A red arrow points from this selection to a red box containing the instruction: "1. Drag a User Registry component." The main workspace shows a diagram of an 'Enterprise Application' connected to a 'Database' (DB2) and a 'User Registry' component. A red box with the instruction "2. Specify the values of the Base DN and LDIF file fields." has arrows pointing to the 'Base DN' and 'LDIF file' fields in the configuration pane on the right. The configuration pane shows the following fields:

- * Base DN:**
- * LDIF file:**
- Custom schema file:**
- Admin DN password:**
- Instance password:**
- * User filter:**
- * Group filter:**

Connect the application and the user registry

- Create two links between the Enterprise Application and the User Registry component.
- Configure the user role mapping for these links:
 - For the first link, set the **Role name** to **appcenteradmin**, and set **Mapping special subjects** to **All AuthenticatedUsers**.
 - For the second link, set the **Role name** to **appcenteruser**, and set **Mapping special subjects** to **All AuthenticatedUsers**.



1. Create 2 links.

This screenshot shows the configuration page for the first link between the Enterprise Application and the User Registry. The page title is "Enterprise Application → User Registry". The configuration fields are as follows:

- * Role name:** A dropdown menu with "appcenteruser" selected.
- User role mapping:** An empty text input field.
- Group role mapping:** An empty text input field.
- * Mapping special subjects:** Radio buttons for "None", "AllAuthenticatedUsers", and "Everyone". "AllAuthenticatedUsers" is selected.

This screenshot shows the configuration page for the second link between the Enterprise Application and the User Registry. The page title is "Enterprise Application → User Registry". The configuration fields are as follows:

- * Role name:** A dropdown menu with "appcenteradmin" selected.
- User role mapping:** An empty text input field.
- Group role mapping:** An empty text input field.
- * Mapping special subjects:** Radio buttons for "None", "AllAuthenticatedUsers", and "Everyone". "AllAuthenticatedUsers" is selected.

2. Specify the Role name.

Save and deploy

- Save the virtual application. You can give it a name.
- Back to the Virtual Application Patterns page, you now see the pattern that you created.
- Click **Deploy**.

The screenshot shows the IBM Worklight Application Center interface. On the left, there is a form for creating a virtual application with the following fields:

- Name:** Worklight Application Center
- Description:** Blank application

Below the form is a list of virtual application patterns. The pattern "Worklight Application Center" is selected and highlighted in blue. A red box highlights this pattern name, and a red arrow points from it to the "Deploy" button in the top right corner of the details pane.

The details pane for the selected pattern shows the following information:

Application ID:	a-577d7e1c-c71f-4d72-9aa6-df0057bdef05
Description:	Blank application
Created by:	deploy35
Updated by:	deploy35
Created on:	Feb 28, 2013 6:22:04 PM
Updated on:	Feb 28, 2013 6:31:16 PM
Preview:	Fetching the thumbnail, please wait ...
Access granted to:	admin [all] [remove]

At the top of the details pane, there is a toolbar with the following buttons: Deploy, Open, Export, Delete, and Clone. The "Deploy" button is highlighted with a red box.

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