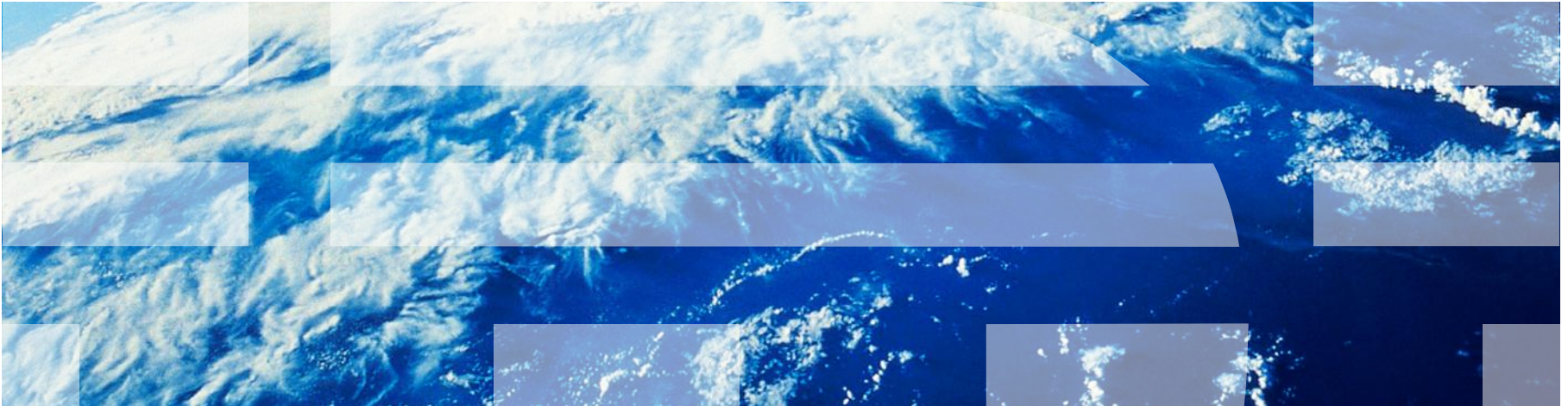# IBM Worklight Foundation Cloud Edition V6.2.0 Getting Started

Testing a Worklight mobile application with IBM Worklight Foundation Cloud Edition

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- Importing the sample project

- Building the adapter and application artifacts

- Logging in to the PureApplication Service

- Deploying the Worklight Analytics Server

- Configuring the basic template deployment

- Configuring the endpoint link

- Testing the mobile application

- For more information

Prerequisites

- You must install IBM Worklight® Foundation Developer Edition to follow the steps in this module. For more information about how to install Worklight Developer Edition, see https://www14.software.ibm.com/webapp/iwm/web/signup.do?source=swg-worklight&S_PKG=ov1268&S_CMP=web_dw_rt_swd

- To follow the steps in this module, you must use the Worklight Starter sample project from IBM developerWorks®. To download the sample project, see http://public.dhe.ibm.com/software/mobile-solutions/worklight/docs/v620/WorklightStarter.zip

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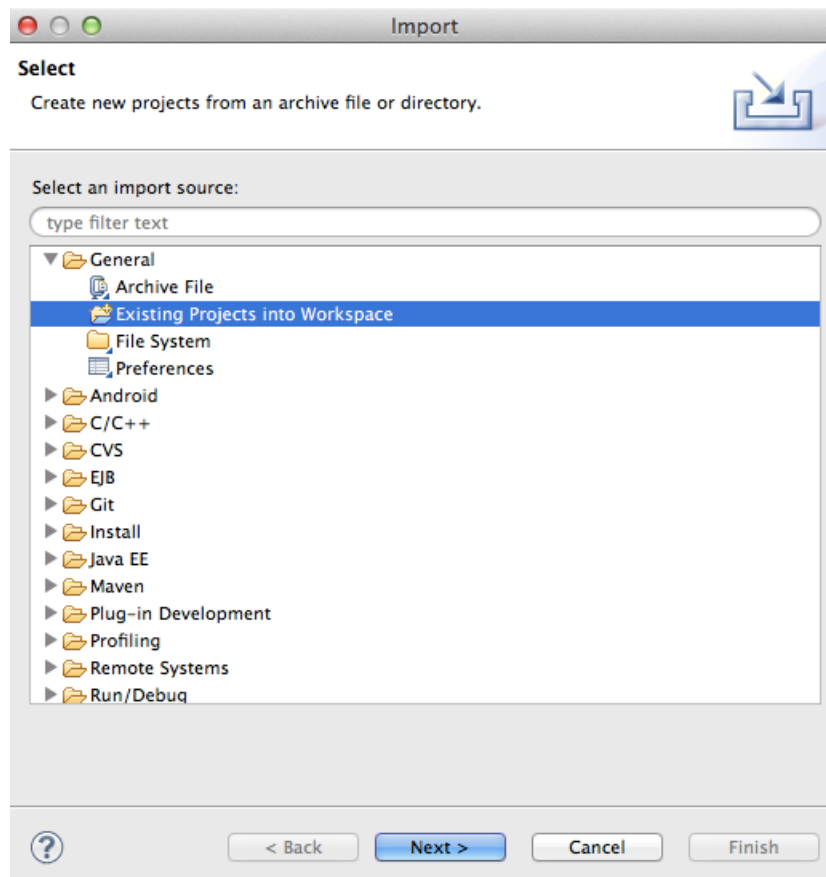- Testing the mobile application

- For more information

- Open a new workspace in the Eclipse installation where you installed Worklight Developer Edition. When the new workspace opens, click **File > Import** in the toolbar.
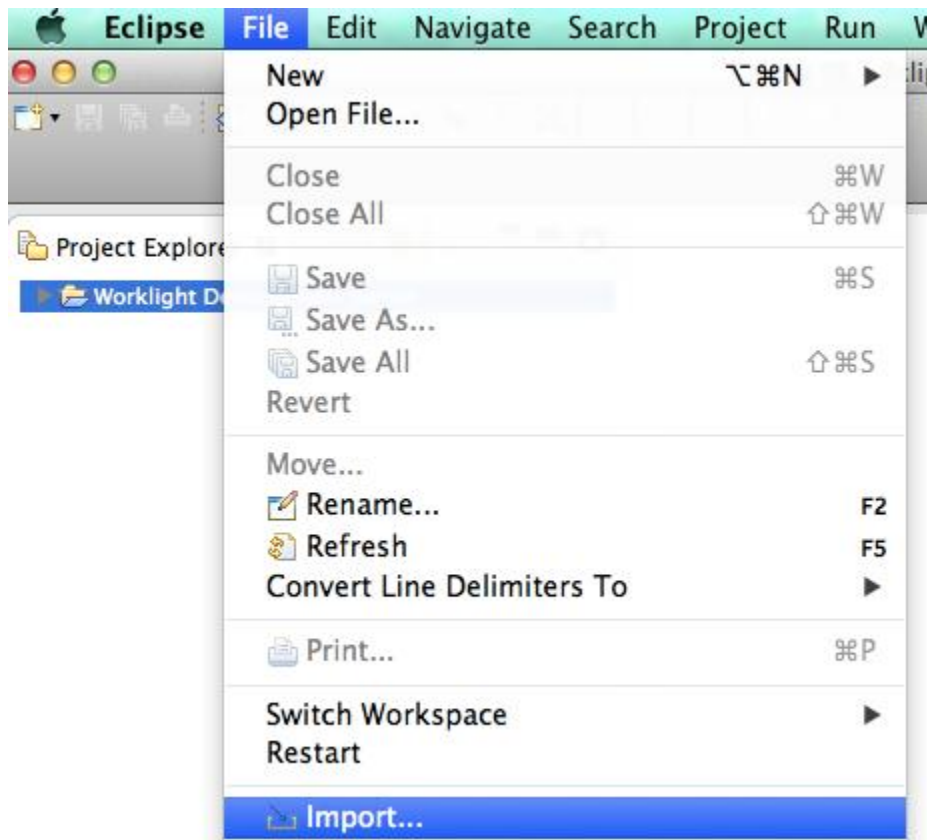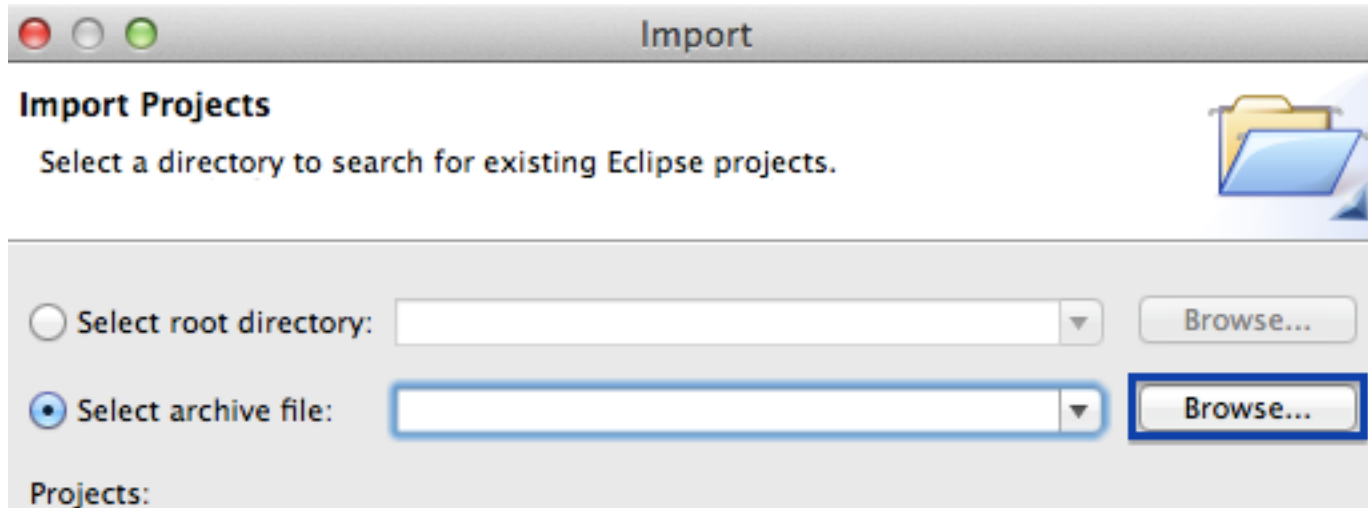
Importing the sample project (2 of 5)

- In the import wizard, expand the **General** section and select **Existing Projects into Workspace**. Click **Next**.
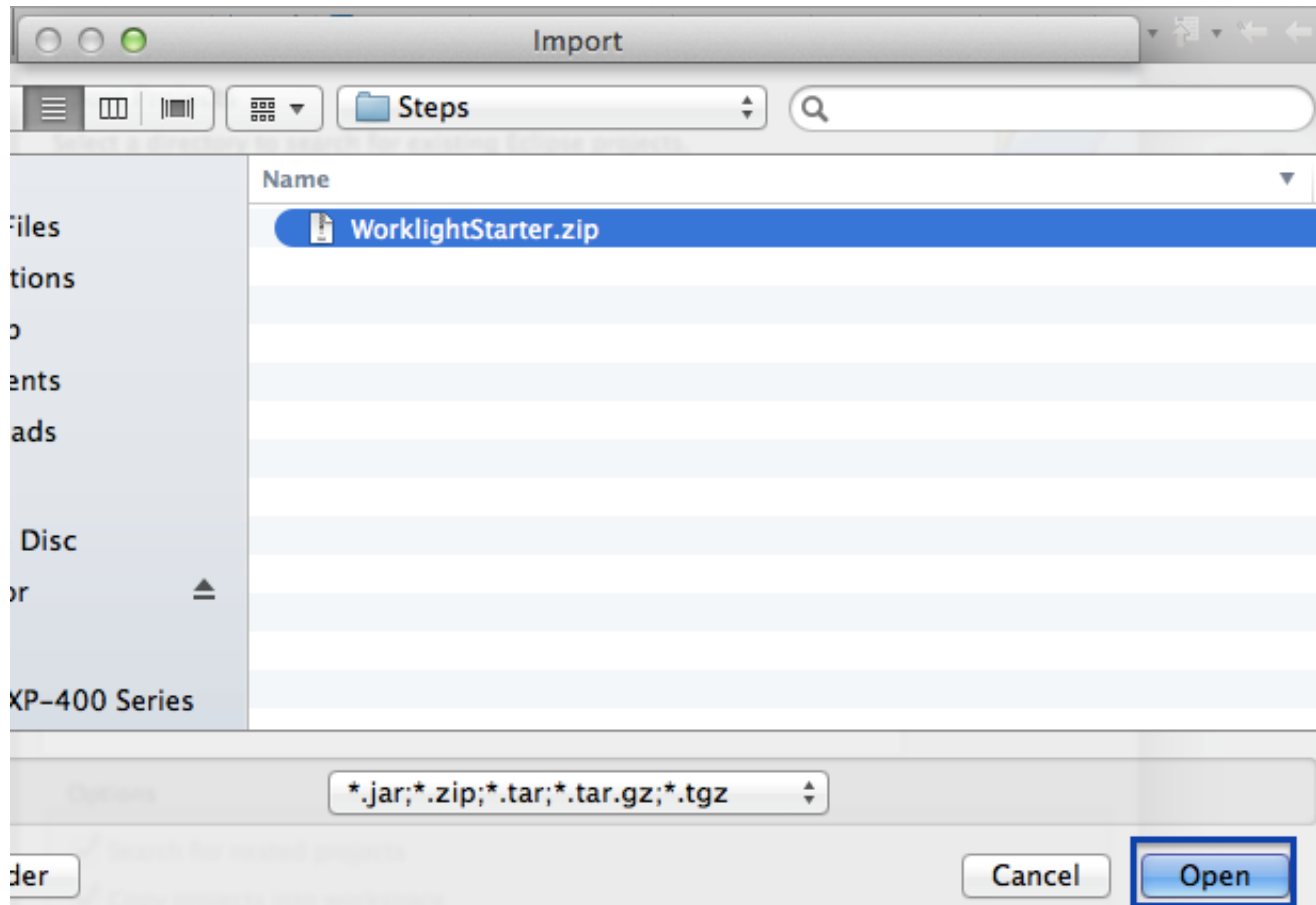
- Select the **Select archive file** option and then click **Browse**.

Importing the sample project (4 of 5)

- Navigate to the location where you downloaded the archive file earlier. Select the `WorklightStarter.zip` file and click **Open**.

Importing the sample project (5 of 5)

- Click **Finish** in the import wizard to import the sample project. When the import completes, The **WorklightStarter** project is in your workspace. Expand the project folder as well as the `adapters` and `apps` folders.
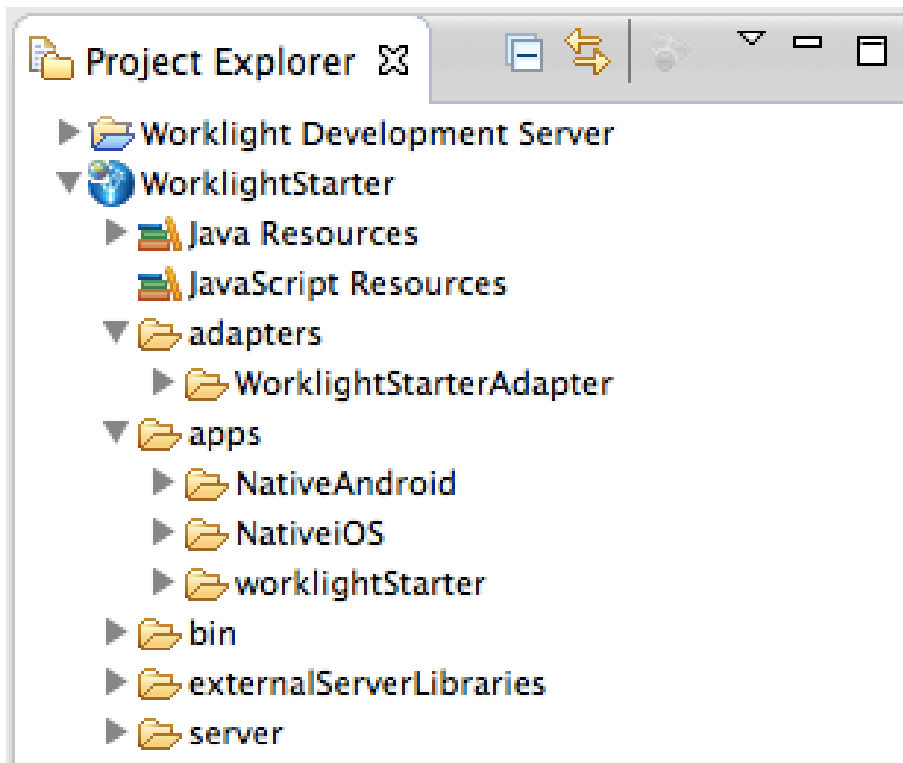
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- You must build and deploy the adapter and application artifacts to deploy to the cloud. In this context, *build* means to create the executable version of the WorklightStarter adapter and application. Deploying an adapter or application automatically creates the executable code and deploy it. Right-click **WorklightStarterAdapter** and select **Run As > Deploy Worklight Adapter**.
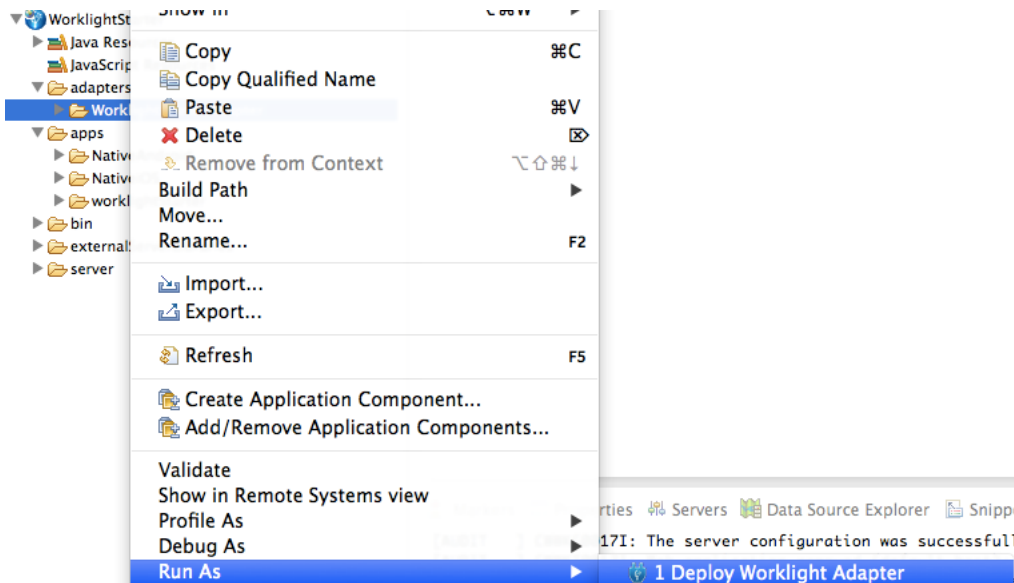
Building the adapter and application artifacts (2 of 5)

- When the adapter build is complete, a message is displayed in the Eclipse console.

```
Servers   Data Source Explorer   Snippets   Console

Starting adapter deployment on Worklight Server
Starting build of adapter: WorklightStarterAdapter
Deploying adapter: WorklightStarterAdapter
Server host: 192.168.1.74
Server port: 10080
Adapter build and deploy finished.
```

Building the adapter and application artifacts (3 of 5)

- Right-click the **WorklightStarter** folder under the `apps` folder. Select **Run As > Build All Environments**.
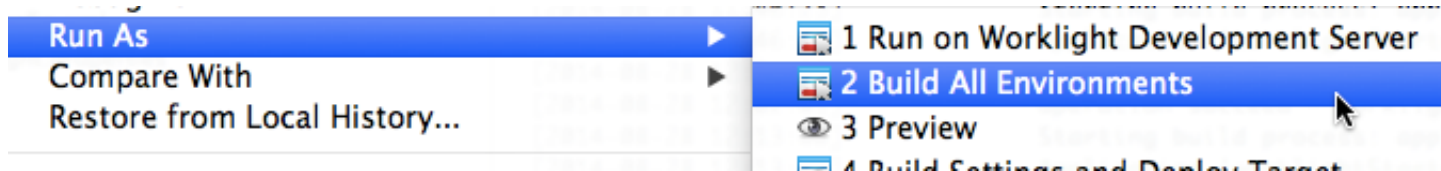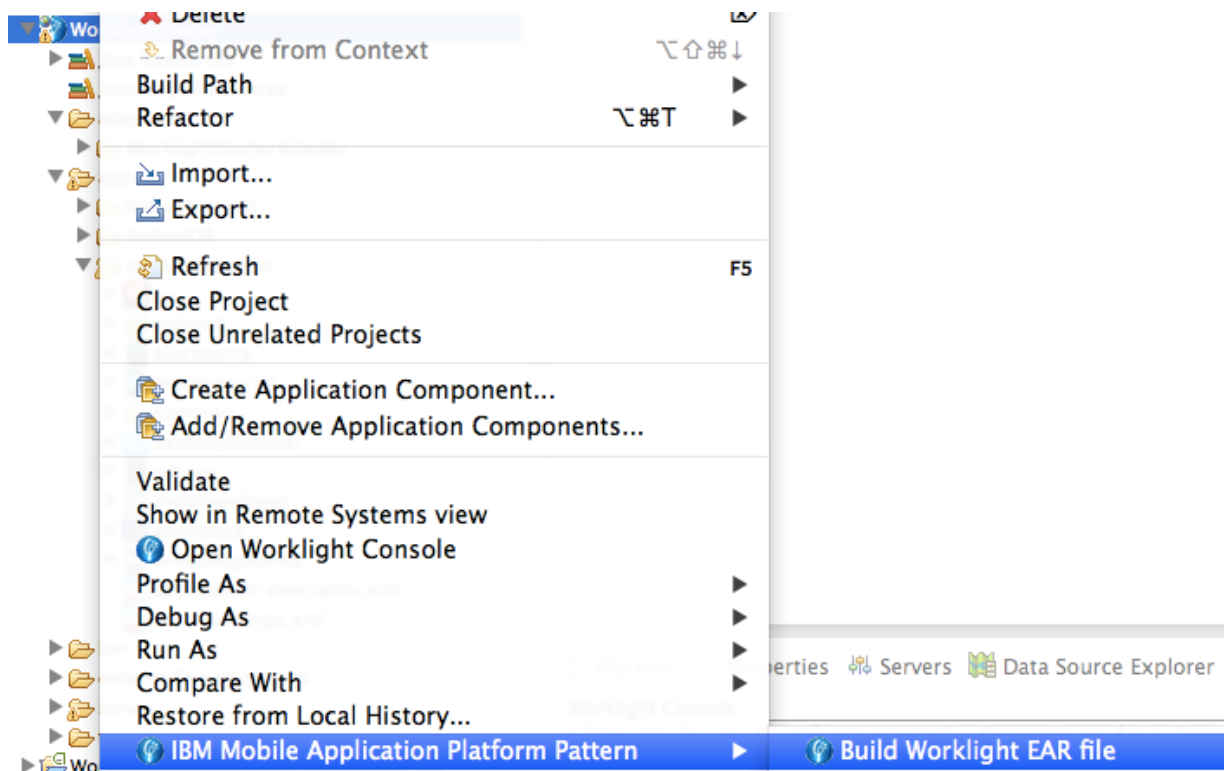

- When the application build is complete, a message is displayed in the Eclipse console. You can safely ignore errors that are related to specific environments, such as Android, AIR, and Windows 8.

- The final step before you deploy your mobile application to the cloud is to build the EAR file to use in the Worklight mobile application pattern. Right-click the **WorklightStarter** project and select **IBM Mobile Application Platform Pattern > Build Worklight EAR file**.

Building the adapter and application artifacts (5 of 5)

- When the EAR file build completes, a message is displayed in the Eclipse console.

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Logging in to the PureApplication Service

- Log in to the PureApplication® Service to build and deploy your Worklight mobile application pattern. Open the `http://<SERVICE_IP>/login` URL in your browser. The value of `SERVICE_IP` is the IP address of the PureApplication Service instance that you are using.

- Log in to the PureApplication Service with the credentials that were provided to you after you registered.
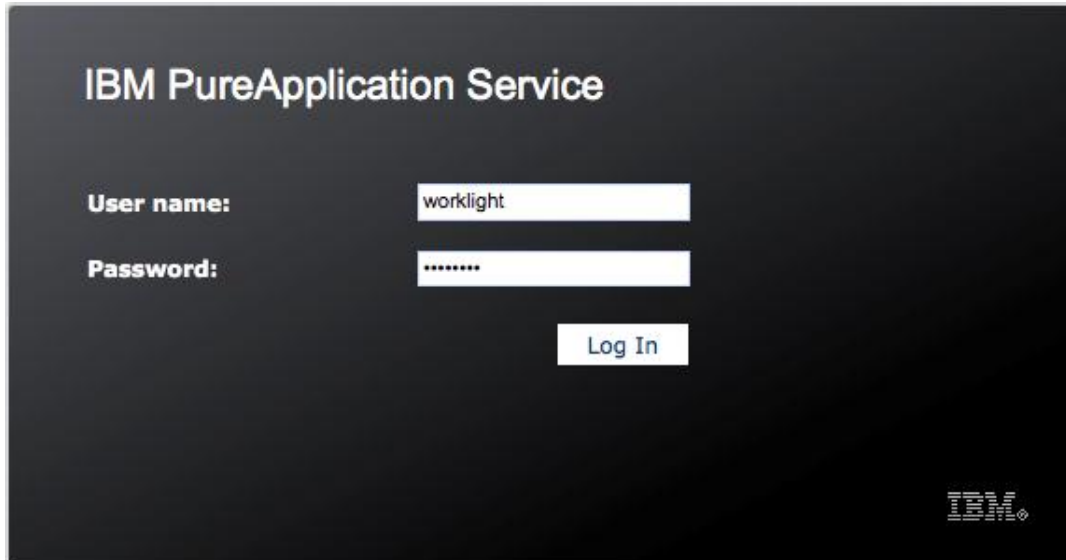
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- There are two deployment options in this module. You can deploy just the Worklight Server itself to run the application. Optionally, you can deploy the Worklight Analytics Server. The Worklight Analytics Server provides information about application usage, mobile OS usage, service integration performance, and more. To deploy the Worklight Analytics Server, follow the steps that are described in the **Deploying the Worklight Analytics Server** section of this module. Otherwise, skip to the **Configuring the basic template deployment** section.

- From the PureApplication Service home page, click **Patterns > Virtual Application**.

- On the Virtual Application Patterns page, select the **IBM Mobile Application Platform Pattern Type 6.2** entry from the drop-down list.
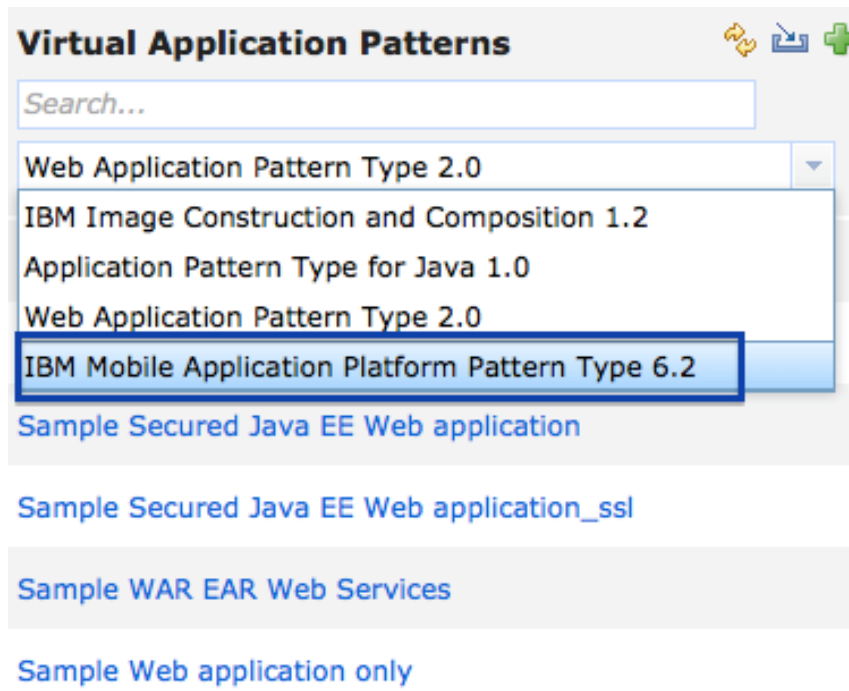
- Select the **Worklight Starter – Analytics** pattern. Click the **Deploy** link in the upper right toolbar.

Worklight Starter - Analytics		Deploy
Application ID:	a-ccc4d931-5550-4610-bbcd-f7198d1795b8	
Description:		
Created by:	cbadmin	
Updated by:	cbadmin	
Created on:	Aug 27, 2014, 4:39:06 PM	
Updated on:	Aug 27, 2014, 10:51:18 PM	
Preview:		

- In the deployment dialog, click **OK** to begin the deployment process. **Important**: Make sure that the **Select target environment profile** option is selected in the deployment dialog. If you do not select this option, your deployment fails.

Deploy Virtual Application

Name:	Worklight Starter - Analytics

◉ Select target environment profile:

Filter by IP type:	◉ IPv4 ○ IPv6
Filter by environment profile type:	All
Profile:	Trial User Profile
Cloud group:	SoftLayerVCenter
IP group:	75.x

○ Select target cloud group:

IP Version:	◉ IPv4 ○ IPv6
Cloud group:	SoftLayerVCenter

⊞ Advanced

[OK] [Cancel]

- After several seconds, a message is displayed that indicates the start of the deployment. Go to the **Virtual Application Instances** page by clicking the **clicking here** link.

- Monitor the **Status** field for updates on the deployment progress. After approximately 10 minutes, the deployment completes and the **Status** field changes to a **Running** state, which indicates successful deployment.

- Scroll down to the **Middleware perspective** section and click the **Endpoint** link next to the **WAS** entry.

Endpoint information

ENDPOINT: http://173.193.227.140:9080/_analytics/

Cancel
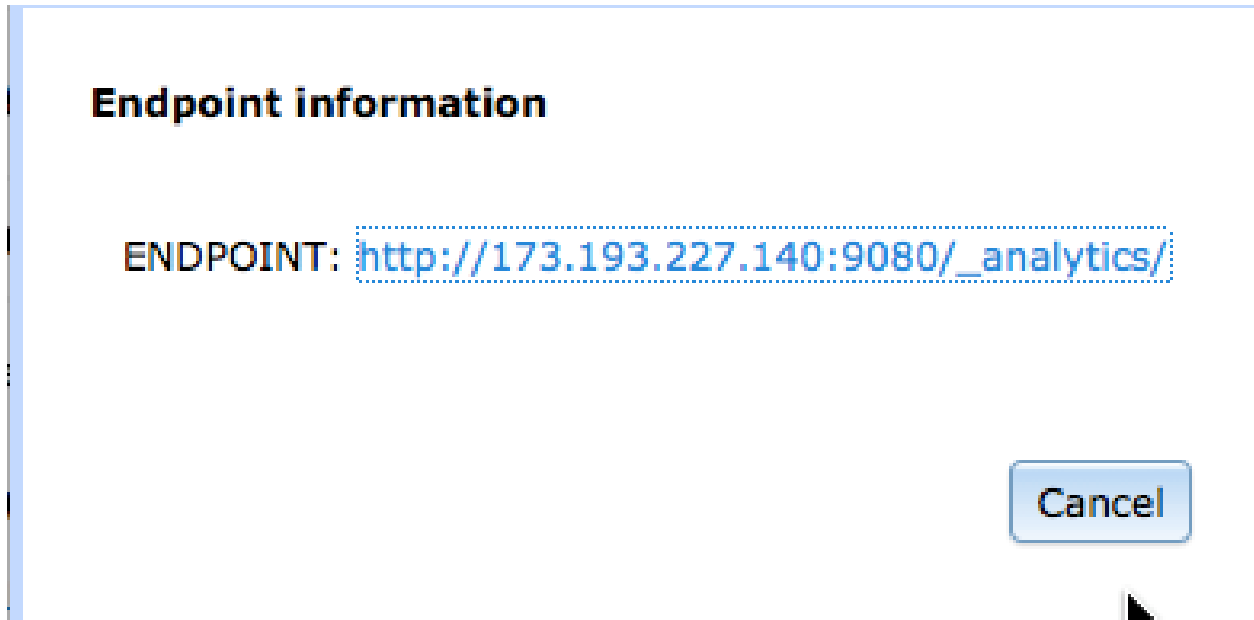
- Copy the URL in the dialog, and then return to the **Worklight Studio** environment. Expand the **WorklightStarter** project and then navigate to the `worklight.properties` file in the `server/conf` folder.

WorklightStarter
- Java Resources
- JavaScript Resources
- adapters
- apps
- bin
- externalServerLibraries
- server
  - conf
    - authenticationConfig.xml
    - default.keystore
    - login.html
    - SMSConfig.xml
    - worklight.properties
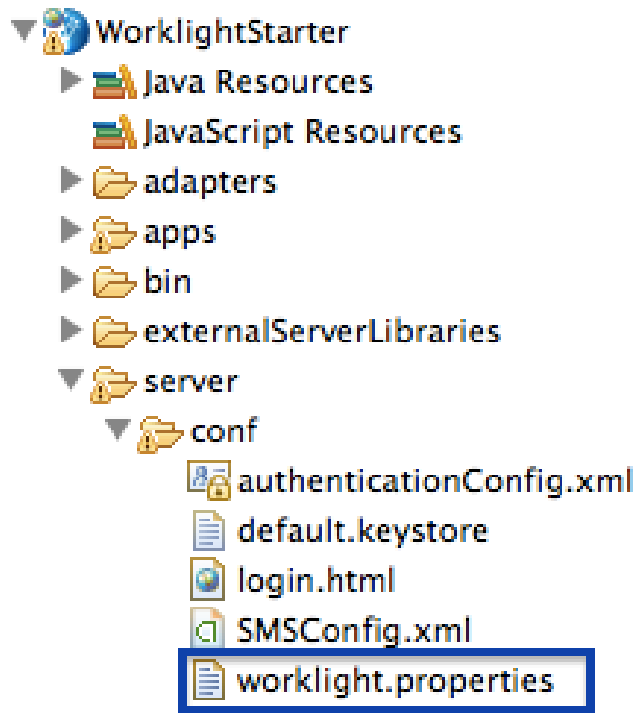
- Find the **Worklight Analytics** section in the
  `worklight.properties` file. Uncomment the following properties:
  `wl.analytics.logs.forward`, `wl.analytics.url`,
  `wl.analytics.queues`, `wl.analytics.queue.size`, and
 `wl.analytics.forwardIntervalInSeconds`.

```
######################################################################
#      Worklight Analytics
######################################################################
wl.analytics.logs.forward=true
wl.analytics.url=http://173.193.227.139:9080/_analytics/data
#wl.analytics.username=${iwap.server.username}
#wl.analytics.password=${iwap.server.password}
wl.analytics.queues=1
wl.analytics.queue.size=1
wl.analytics.forwardIntervalInSeconds=3
```

- Set the `wl.analytics.logs.forward` property to `true`.

- Set the `wl.analytics.url` property to `http://<IP_ADDRESS>:9080/_analytics/data` where `IP_ADDRESS` is the value that you copied on slide 26. In this example, the URL that you copied is `http://173.193.227.140:9090/_analytics/data`.

- Set the `wl.analytics.queues` and `wl.analytics.queue.size` properties to a value of `1`.

- Set the `wl.analytics.forwardIntervalInSeconds` property to a value of `3`.

- Save your work and rebuild the EAR file by right-clicking on the **WorklightStarter** project and selecting **IBM Mobile Application Platform Pattern > Build Worklight EAR file**.
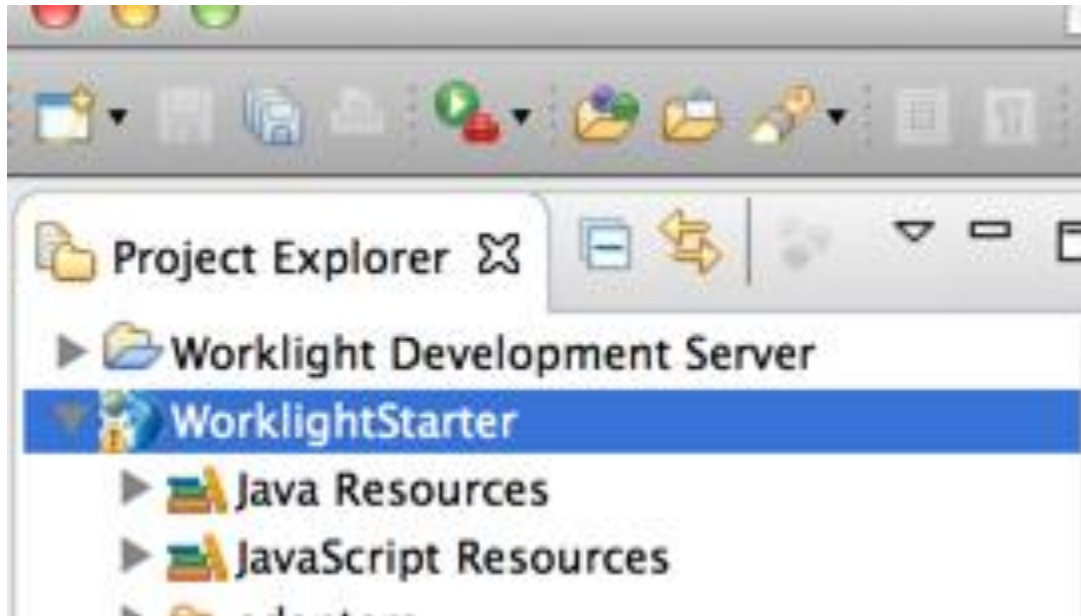
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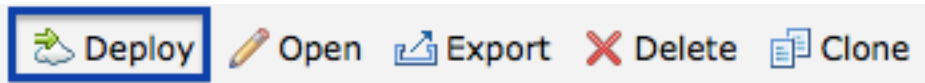
- Testing the mobile application

- For more information

Configuring the basic template deployment (1 of 12)

- Click **Catalog > Virtual Application Templates**.
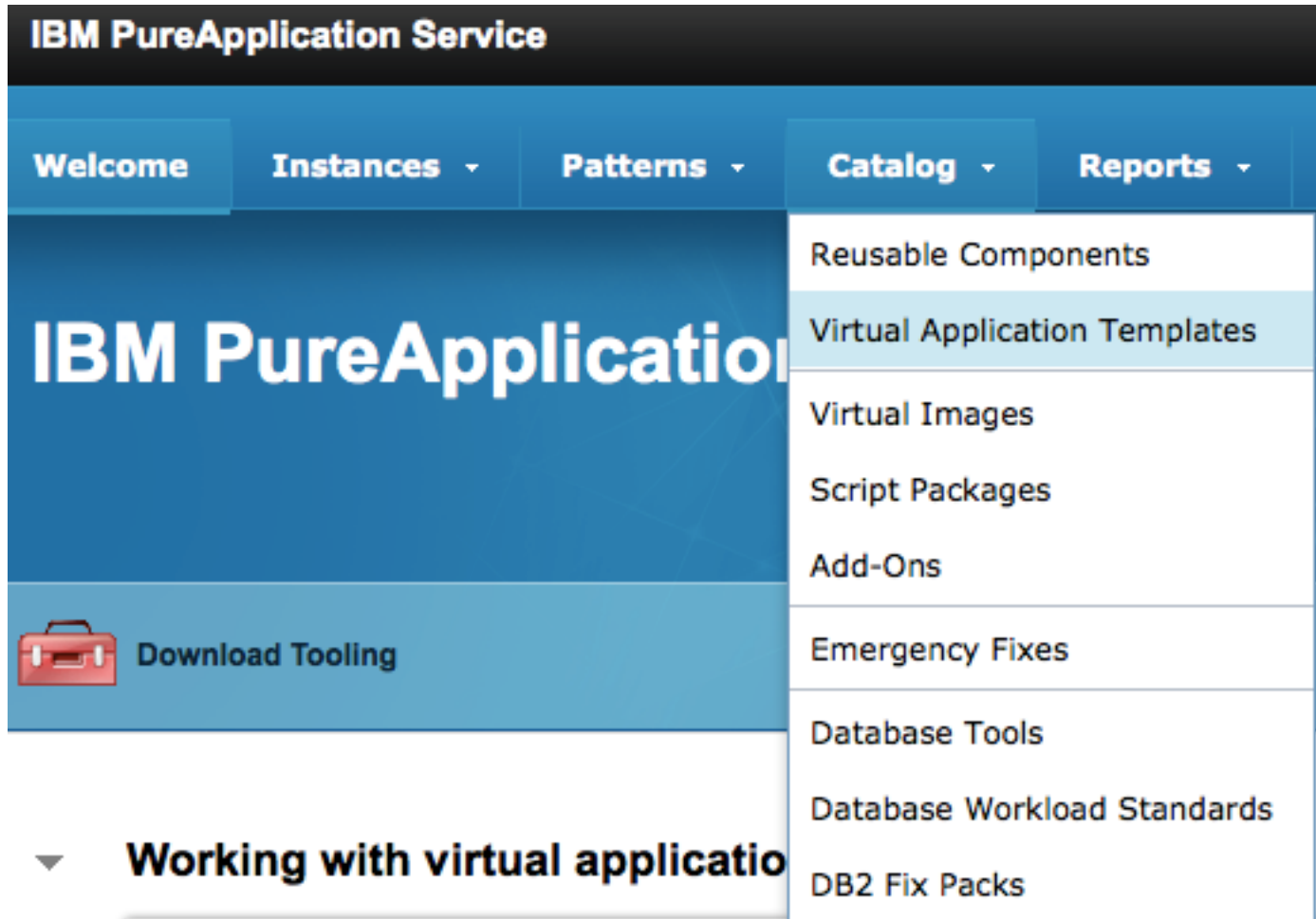
- Select the **Worklight Basic Template**. Click **Deploy** in the upper right toolbar.

- On the Configure and Deploy Application dialog in the **Application name** field, enter `Worklight Custom` (or a name of your choice). Now you must configure the template with the artifacts that you previously built in Worklight Studio in the project that you imported.

- A sample LDIF file is provided for the User Registry configuration. You can also upload your own LDIF file, but you must update the other configuration, such as **Base DN**.

* Application name	Worklight Custom

▼ User Registry ˉ User Registry (Tivoli Directory Server)

* Base DN	o=acme,c=us	
* LDIF file	artifacts/ldap-counter.ldif	Edit Delete
Custom schema file		Edit
Admin DN password	*Password*	
	Verify password	
Instance password	*Password*	
	Verify password	

- Scroll down to the **Worklight Adapter** and **Worklight Application** sections.

- Click **Edit** next to the **Worklight Adapter Files** field and then click **Browse** in the file dialog. Navigate to the directory of the Eclipse workspace that you opened earlier. From the workspace directory, navigate to the `WorklightStarter/bin` directory. Select the `WorklightStarterAdapter.adapter` file and click **Open** and then click **OK**.
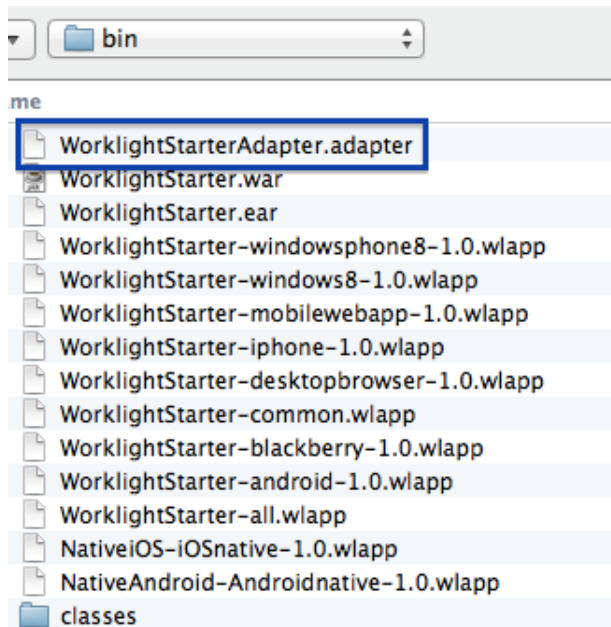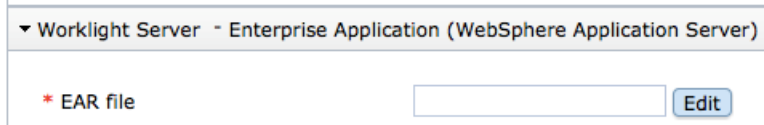
- Click **Edit** next to the **Worklight Application Files** field and then click **Browse** in the file dialog. Navigate to the directory of the Eclipse workspace that you opened earlier. From the workspace directory, navigate to the `WorklightStarter/bin` directory. Select the `WorklightStarter-all.wlapp` file and click **Open** and then click **OK**.
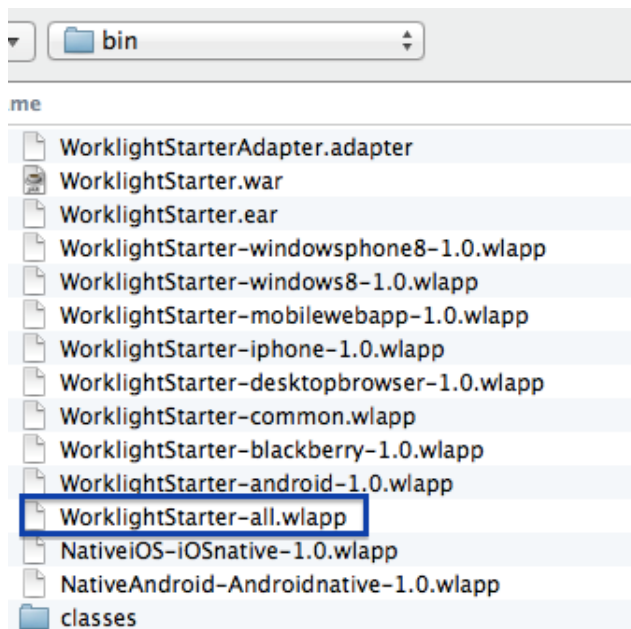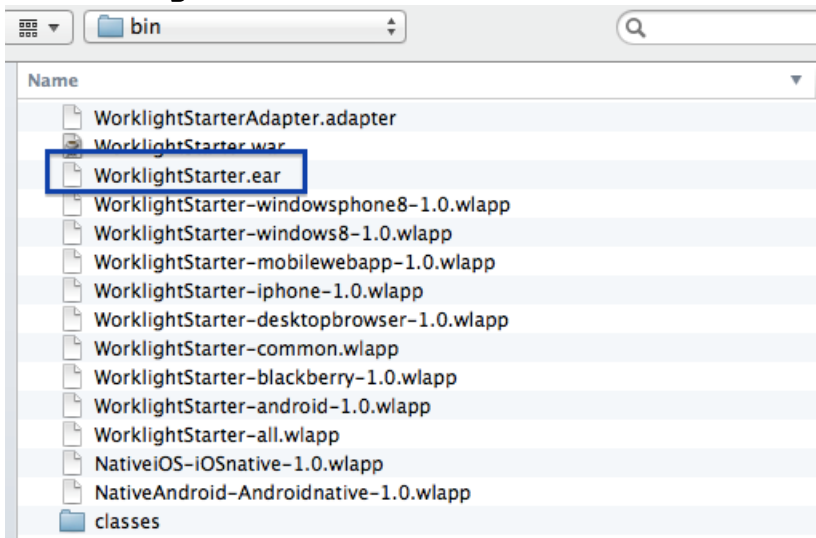
- Scroll down to the **Worklight Server** section.

- Click **Edit** next to the **EAR file** field and then click **Browse** in the file dialog. Navigate to the directory of the Eclipse workspace that you opened earlier. From the workspace directory, navigate to the `WorklightStarter/bin` directory. Select the `WorklightStarter.ear` file, click **Open**, and then click **OK**.

- Wait for the EAR file to finish uploading, which might take several minutes. When the upload is complete, scroll to the <u>first</u> **Worklight Server > User Registry – Remote LDAP Registry** section.

- In the **Role name** field, enter `worklightadmin`.

- In the three remaining **Worklight Server > User Registry – Remote LDAP Registry** sections, enter the following names in the **Role name** fields in no particular order:

  – `worklightoperator`

  – `worklightdeployer`

  – `worklightmonitor`

- After you configure the **Worklight Server > User Registry – Remote LDAP Registry** sections, scroll to the first **Worklight Server → WL Database – DB2® Data Source** section. In the **Resource References of Data Source** field, enter:

  `worklightadmin.war#jdbc/WorklightAdminDS`

▼ Worklight Server ➡ WL Database ‧ DB2 Data Source

Resource References of Data Source	worklightadmin.war#jdbc/WorklightAdminDS
* Maximum Connections	50
* Connection timeout	180
Transaction Type for JDBC Provider	Connection Pool data sour ▼
JDBC Driver	[Edit]

- Scroll to the second **Worklight Server → WL Database – DB2 Data Source** section. In the **Resource References of Data Source** field, enter: `WorklightStarter.war#jdbc/WorklightDS`

- The configuration of the template is now complete. Click **OK** in the configuration dialog. In the **Deploy Virtual Application** dialog, click **OK** again to begin the deployment.

- After several seconds, a status message is displayed that indicates that the deployment began. Go to the **Virtual Application Instances** page by clicking the **clicking here** link in the status message.

Deploying the virtual application 'Worklight Custom'. You can check the status by <u>clicking here</u>

- Monitor the **Status** field for updates on deployment progress. After several minutes, the **Status** field changes to a **Running** state, which indicates successful deployment.

Worklight Custom		🔴 Stop
Name:	Worklight Custom	
Created by:	cbadmin	
Started on:	Aug 6, 2014, 5:10:15 PM	
Access granted to:	Administrator [all]	
	Add more... ▾	
ID:	d-8b6e2334-9d9c-4207-b52e-681f4f937cd1	
Status:	Running ▶	

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Configuring the endpoint link (1 of 2)

- Scroll down to the **Middleware perspective** section and click the **Endpoint link** next to the **WAS** entry.

Configuring the endpoint link (2 of 2)

- Click the URL that ends in `/worklightconsole/` to open the Worklight Console. Important: Record the URL that ends with `/WorklightStarter/` to use later.

Endpoint information

ENDPOINT: http://173.193.227.134:9080/WorklightStarter/

ENDPOINT: http://173.193.227.134:9080/worklightadmin/

ENDPOINT: http://173.193.227.134:9080/worklightconsole/

Cancel

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- On the Worklight Console login page, enter your user name and password. If you did not change the LDIF file that was included in the pattern, the user name is `demo` and the password is `demo`.
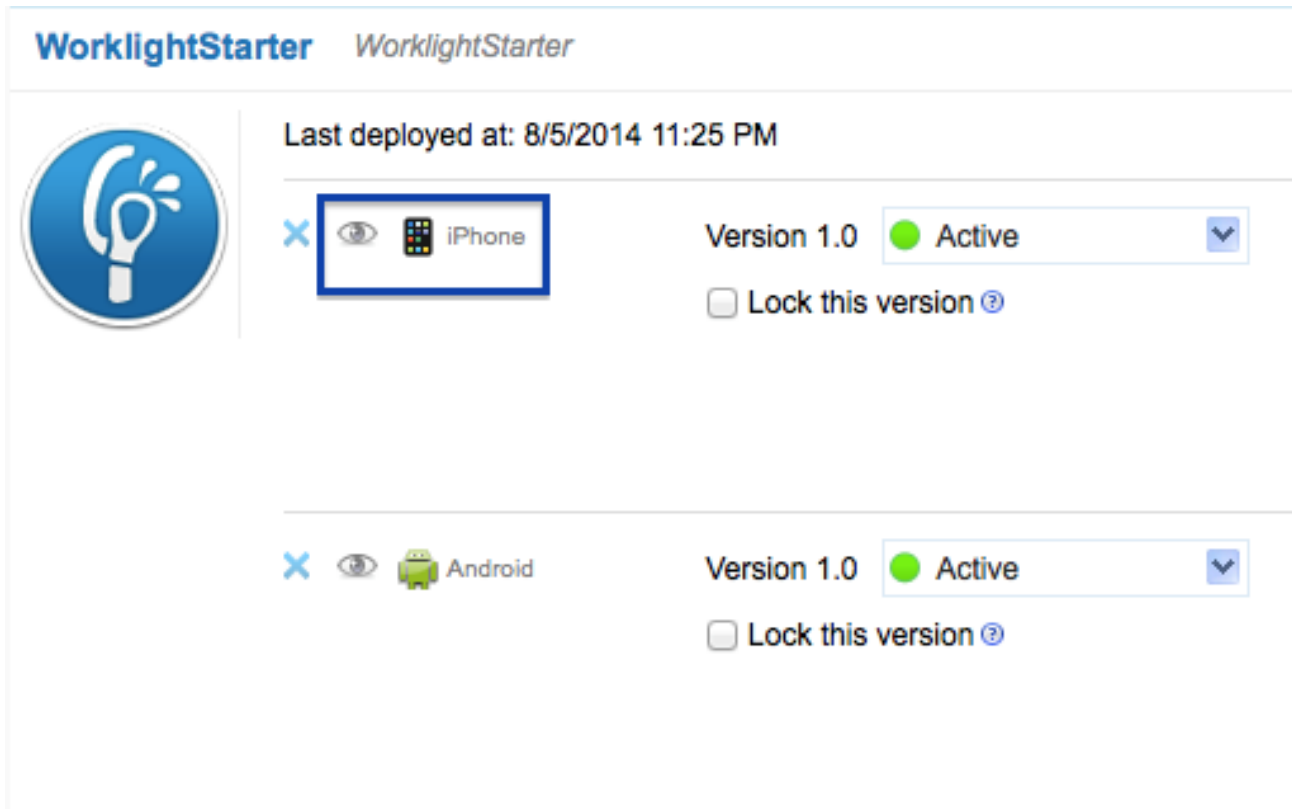
Testing the mobile application (2 of 13)

- In the console, the WorklightStarter application and WorklightStarterAdapter adapter are available. To test the application, click the preview icon for the iPhone environment.

- A mobile application screen with a list of news feeds from engadget.com is displayed.
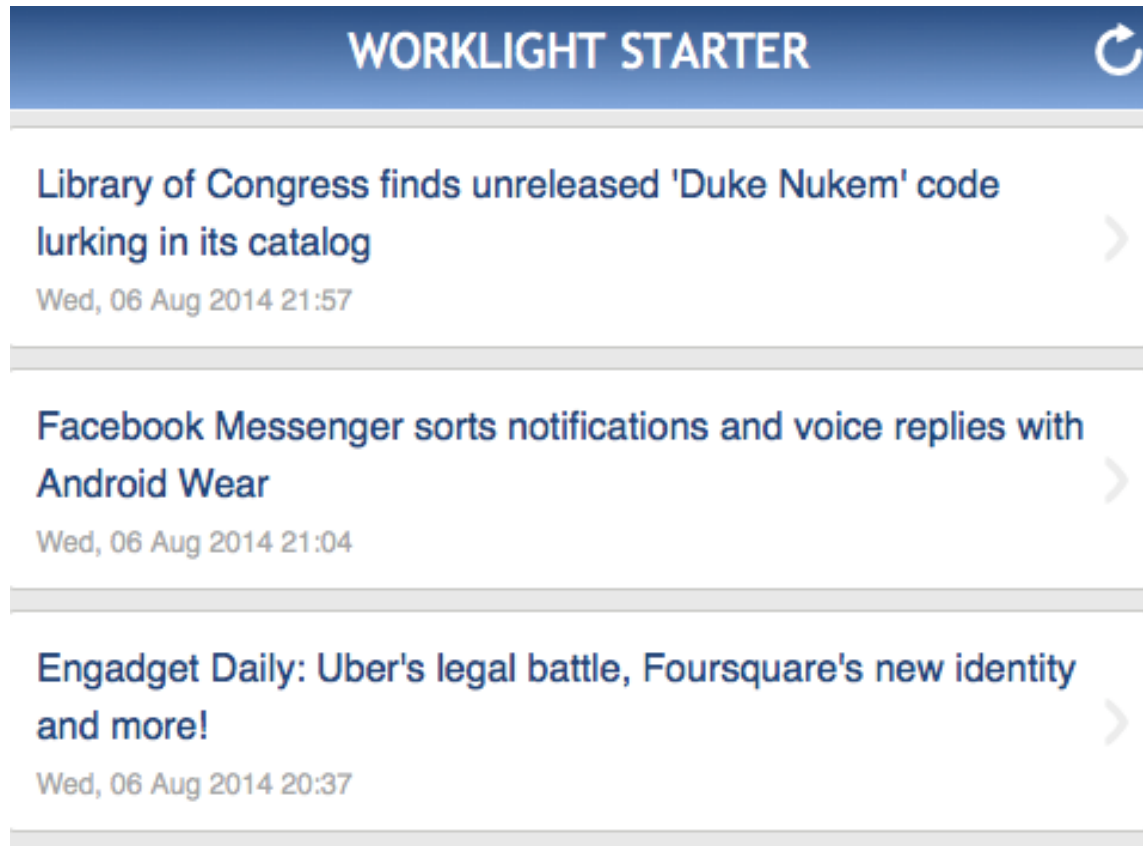
Testing the mobile application (4 of 13)

- If you configured the environment for analytics, an **Analytics Dashboard** link is available on the Worklight Console home page.
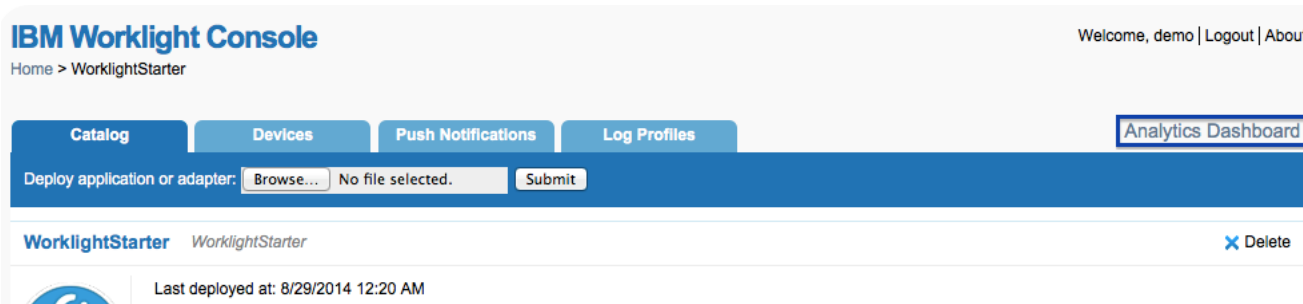
- Click the Analytics Dashboard link to view the Worklight Analytics console.
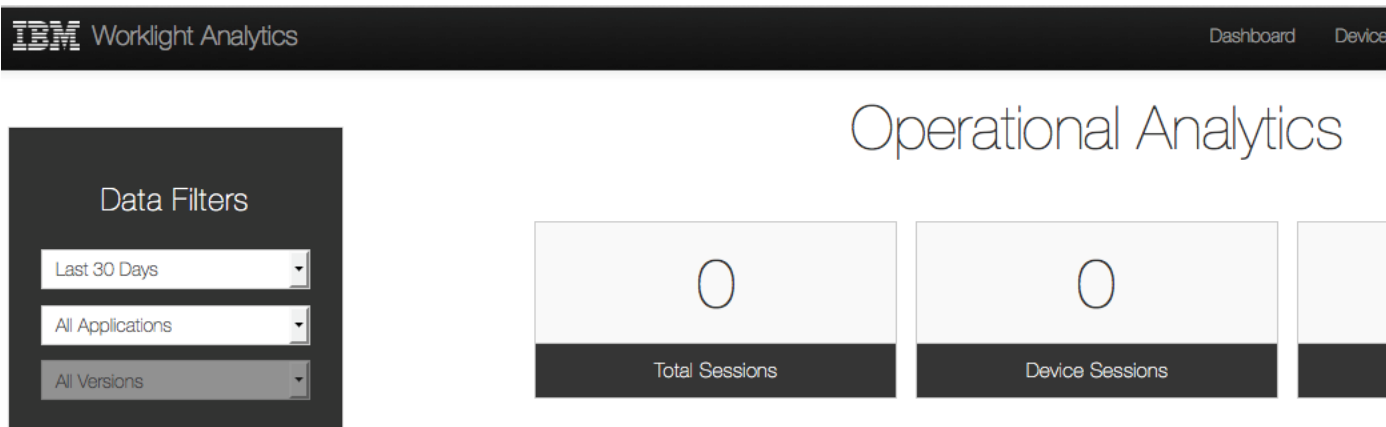
Testing the mobile application (5 of 13)

- You can test the mobile application by deploying to an actual device of simulator/emulator. The steps for testing vary based on the target mobile operating system. For more information about configuring for different environments, see the "Setting up your development environment" category of the Getting Started page on IBM developerWorks, at
https://www.ibm.com/developerworks/mobile/worklight/getting-started.html.

- Note: To deploy the mobile application to the iPhone simulator, you must have access to an XCode environment.

- Return to Worklight Studio and right-click the **worklightStarter** application. Click **Run As > Build Settings and Deploy Target**.
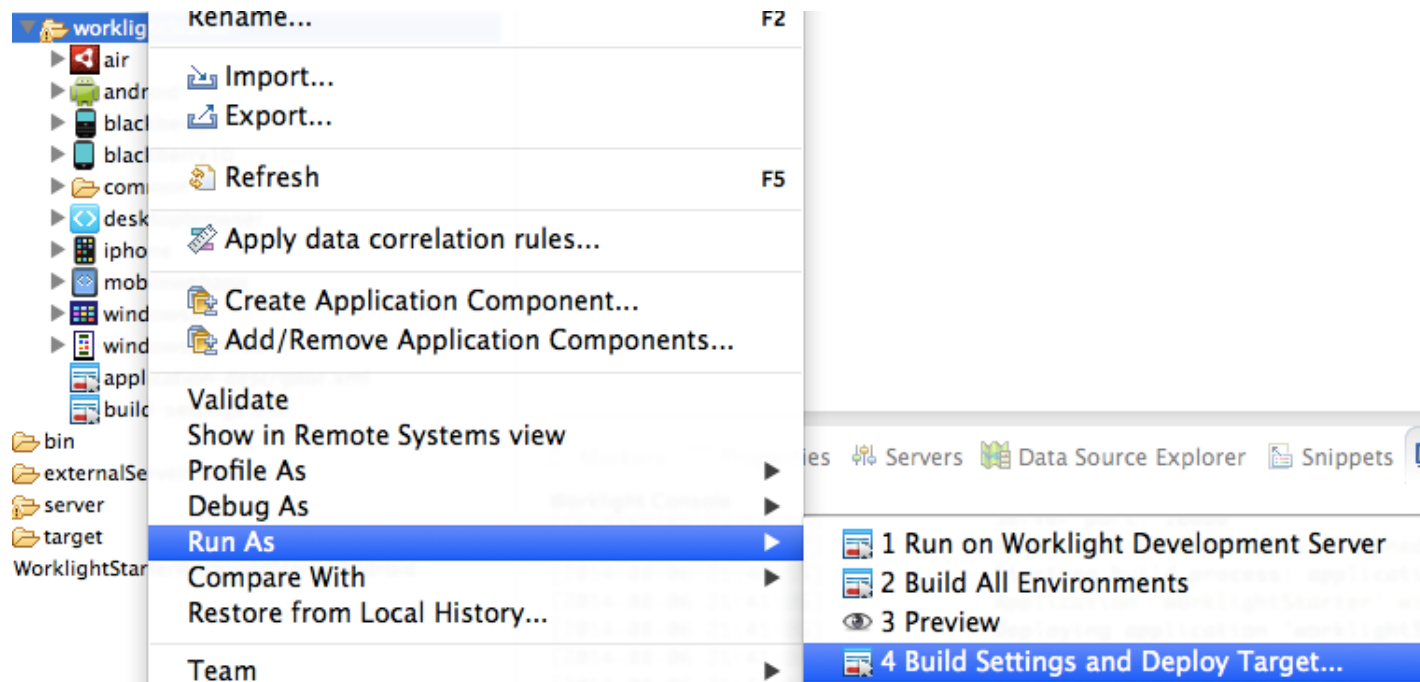
- In the **Configure Worklight Build and Deploy Target** dialog, select the **Build the application to work with a different Worklight server** option.

- In the **Server** field, enter the protocol, `host/IP`, and port from the URL that you copied on slide 45. In the **Context path** field, enter `/WorklightStarter/`.

- Click **OK** to apply the changes. Right-click the **worklightStarter** application project and click **Run As > Build All Environments**.
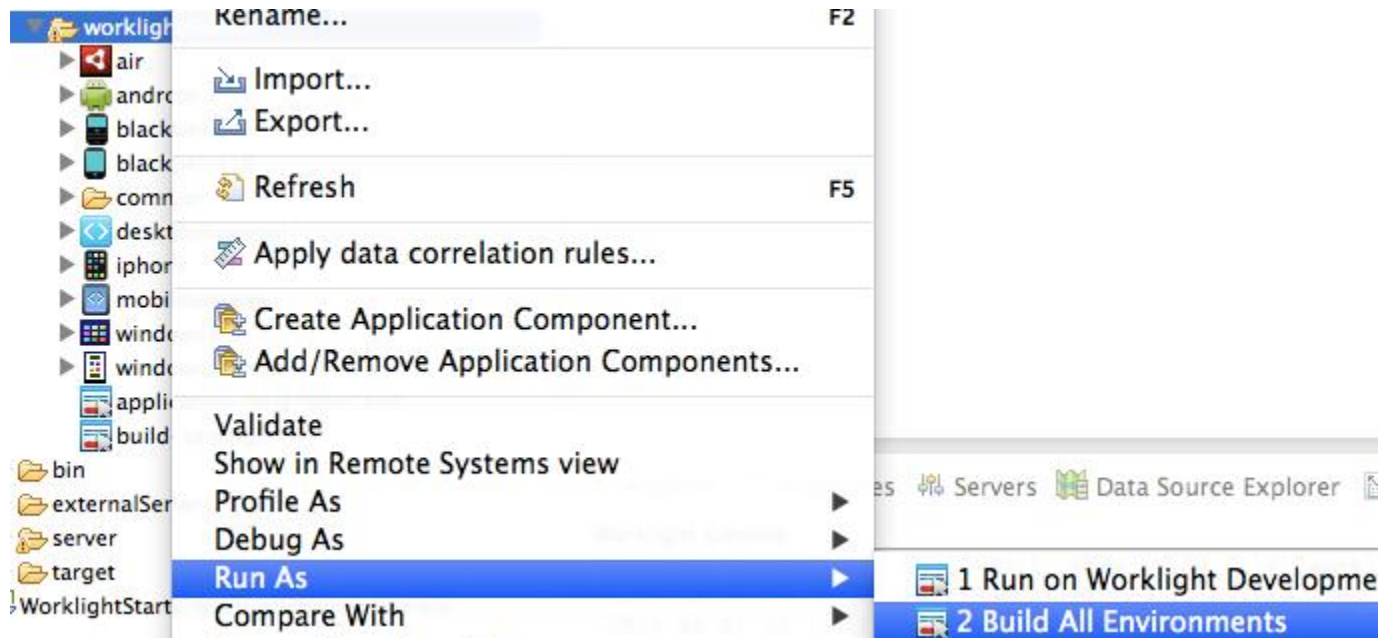
- Locate the **iphone** folder under the **worklightStarter** application.
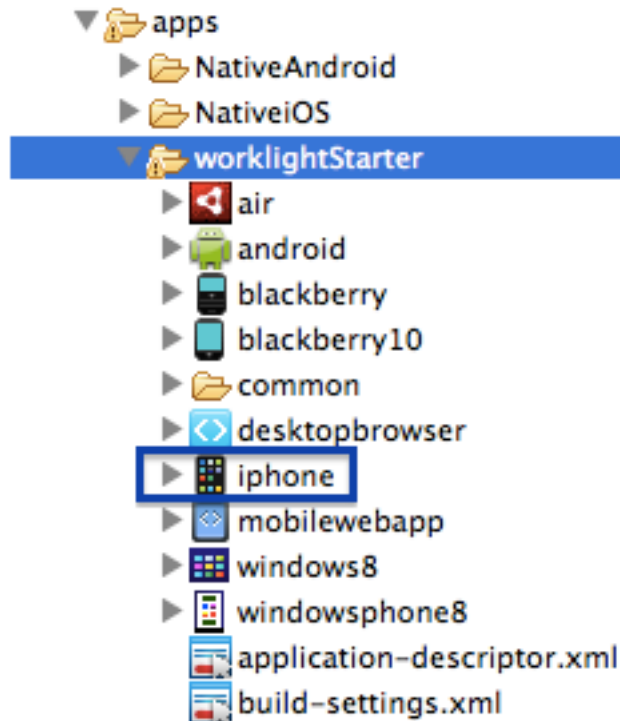
- Right-click the **iphone** folder and then click **Run As > XCode project**.
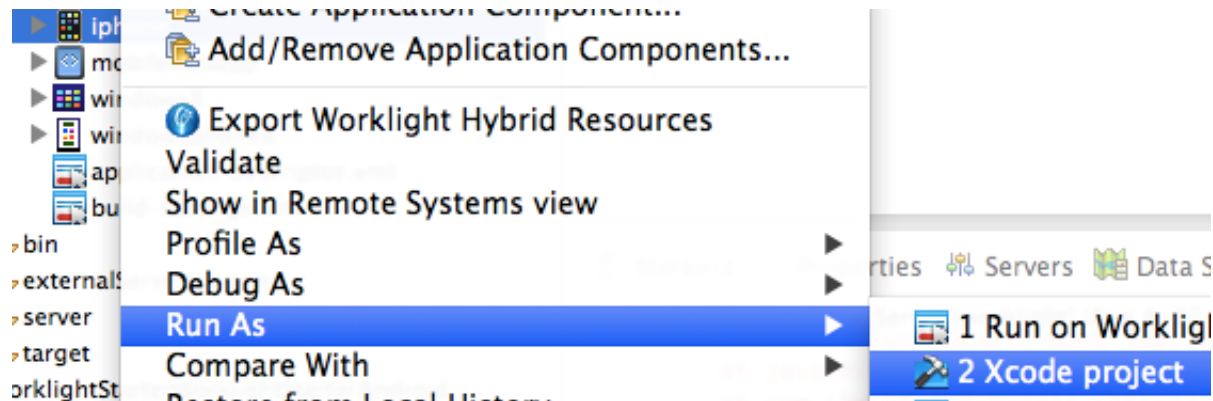
- After several seconds, a message is displayed in the Worklight Studio console that indicates that the XCode project was successfully opened.
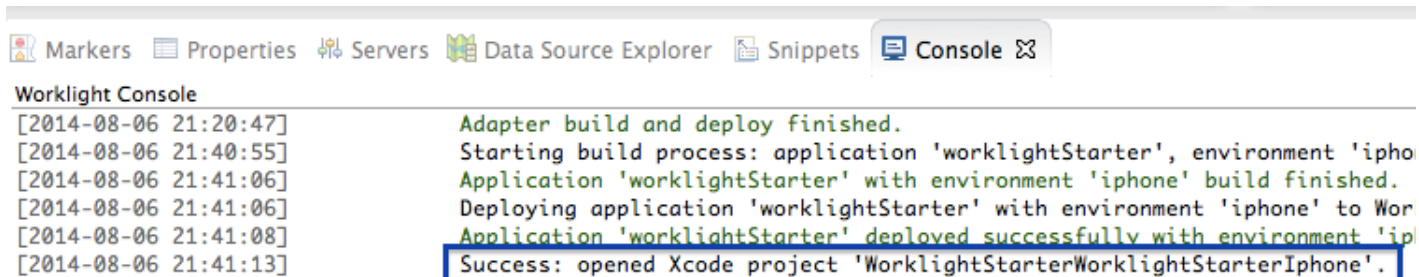
- Switch over to the XCode environment to see the **WorklightStarter** project. In the top toolbar, click **Product > Run** to build the project and deploy the application to a simulator.
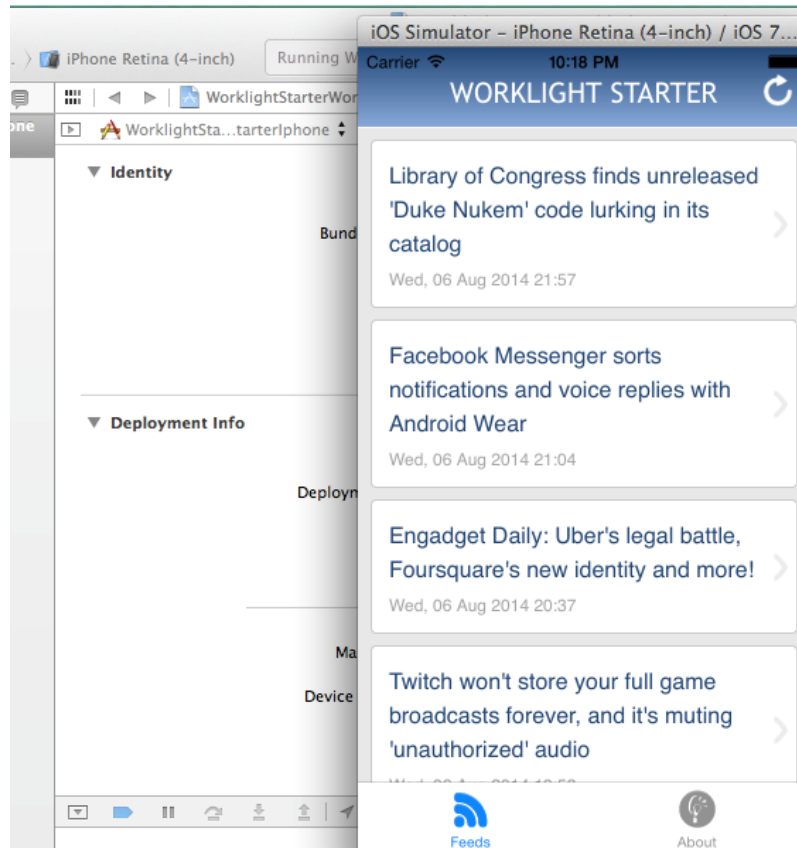
- If you configured the environment for analytics, return to the Worklight Analytics console. Refresh the page in your browser and then scroll down to the **Adapter calls** section. You can see that at least one call was made to the **WorklightStarter** adapter.
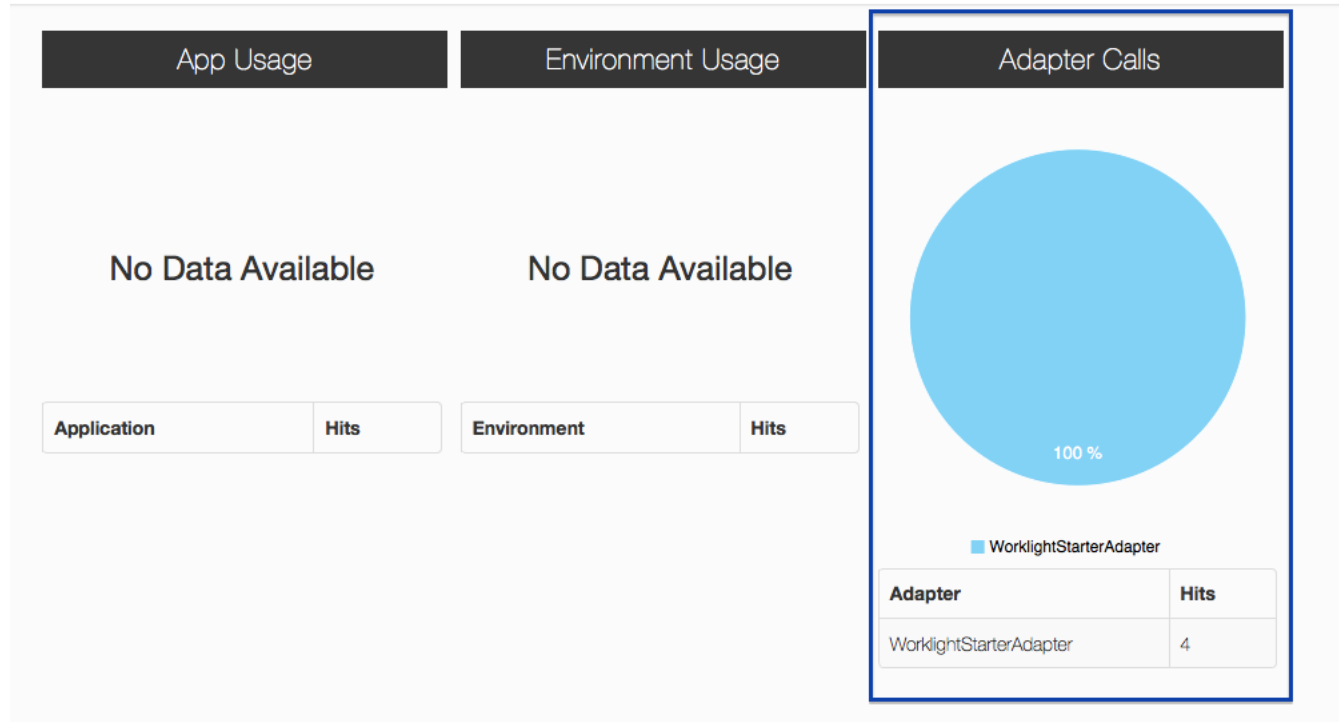
- You successfully tested a Worklight mobile application with IBM Worklight Foundation Cloud Edition.

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For more information

- For more information about deploying to the cloud, see the IBM Worklight user documentation at:

  – http://ibm.biz/knowctr#SSZH4A_6.2.0/com.ibm.worklight.deploy.doc/topics/c_pureapp.html

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