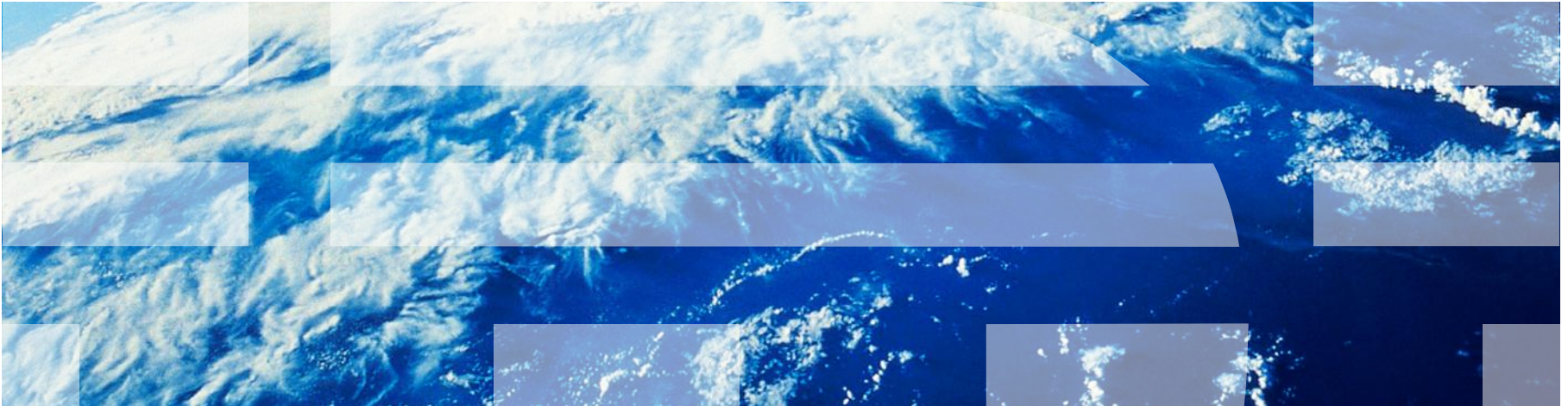


IBM Worklight Foundation V6.2.0 Getting Started

Creating your first Native Android Worklight application



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For more information

- For more information about developing native Android applications, see the Worklight user documentation topic: "Developing native applications for Android"

Agenda

- Creating a Worklight native API
- Creating and configuring an Android native application

Creating a Worklight native API (1 of 4)

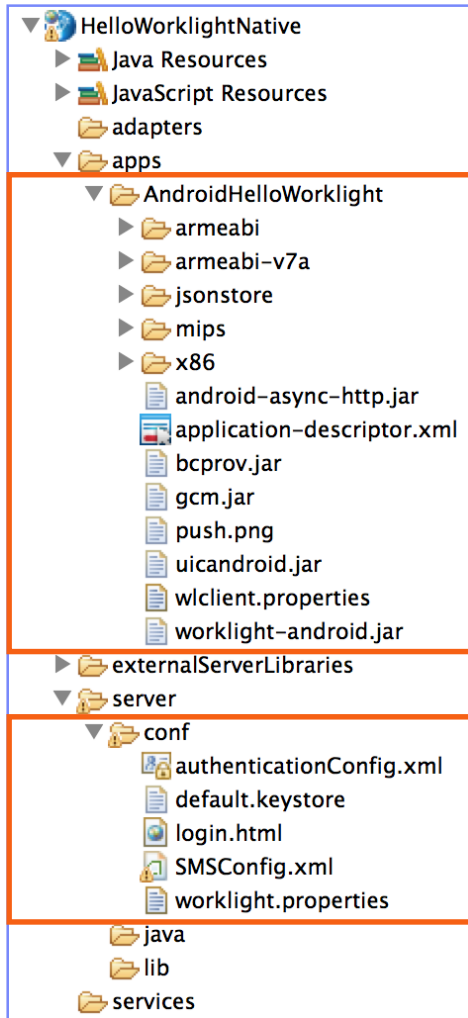
- IBM Worklight® Foundation provides the ability for the native Android applications to communicate with a Worklight Server by using the Worklight native API library.
- To serve a native Android application, the Worklight Server must be aware of it.
- The Worklight native API is in the `apps` folder of your Worklight project.
- The Worklight native API folder serves two purposes:
 - It contains a native API library and configuration file that you must copy to your native Android project.
 - It contains the `application-descriptor.xml` file, which you must deploy to a Worklight Server as an entry point, similar to a Worklight application.
- In this module, you learn how to create a Worklight native API and how to use its components in your native Android application.

Creating a Worklight native API (2 of 4)

1. In Worklight Studio, create a Worklight project, and add a Worklight Native API.
2. In the **New Worklight Native API** dialog, enter your application name, and select **Android** for the **Environment** field.
3. Right-click the **Worklight native app** folder and select **Run As > Deploy Native API**.
 - This action is required in order for the Worklight Server to recognize the application if it attempts to connect to the server, similar to Hybrid applications.

Creating a Worklight native API (3 of 4)

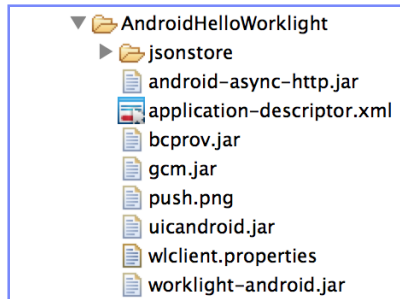
- A Worklight native API contains several components:



- You use the `application-descriptor.xml` file to define application metadata and to configure security settings that the Worklight Server enforces.
- The `wlclient.properties` file contains the connectivity settings that a native Android application uses.
- The `worklight-android.jar` is the Worklight API library.
- You use the `gcm.jar` and `push.png` files for Google push notification services.
- The JSONStore folder is for optional JSONStore support in native applications.
- The `armabi`, `armabi-v7a`, `mips`, and `x86` folders are for optional Application Authenticity Protection in native applications.
- Like with any Worklight project, you can create server configuration by modifying the files that are in the `server\conf` folder.

Creating a Worklight native API (4 of 4)

- Edit the `wlclient.properties` file, which holds server configuration:



```
wlServerProtocol = http
wlServerHost =
wlServerPort = 10080
wlServerContext = /HelloWorklightNative/
wlAppId = AndroidHelloWorklight
wlAppVersion = 1.0
wlEnvironment = Androidnative
wlUid = wY/mbnwKTDDYQUvuQCdSgg==
wlPlatformVersion = 6.2.0.00.20140515-0417
#languagePreferences = Add locales in order of preference (e.g. en, fr, fr-CA)
#For Push Notifications, uncomment below line and assign value to it
#GcmSenderId =
```

- `wlServerProtocol` – The communication protocol to the Worklight Server, which can be either `http` or `https`.
- `wlServerHost` – The hostname of the Worklight Server.
- `wlServerPort` – The port of the Worklight Server.
- `wlServerContext` – The context root path of the application on the Worklight Server.
- `wlAppId` – The application ID as defined in the `application-descriptor.xml` file.
- `wlAppVersion` – The application version.
- `wlEnvironment` – The target environment of the native application (Android/iOS).
- `wlUid` – This property is used by MTWW to identify this as a Worklight application.
- `wlPlatformVersion` – The Worklight Studio version.
- `languagePreferences` – List of preferred locales.
- `GcmSenderId` – This property defines the GCM Sender ID to be used for push notifications. By default, this property is commented.

Agenda

- Creating a Worklight native API
- Creating and configuring an Android native application

Creating and configuring an Android native application

- Create a native Android application or use an existing one.
 - Copy the `worklight-android.jar`, `uicandroid.jar`, `bcprov.jar`, and `android-async-http.jar` files from the Worklight native API folder to the new native Android application, in the `/libs` directory.
 - Copy the file `wlclient.properties` from the Worklight native API folder to the new native Android application, in the `/assets` directory.
 - Add the following permissions to the `AndroidManifest.xml` file:

```
<uses-permission android:name="android.permission.INTERNET"/>
<uses-permission android:name="android.permission.ACCESS_WIFI_STATE"/>
<uses-permission android:name="android.permission.GET_TASKS"/>
```
 - Add the Worklight UI activity:

```
<activity android:name="com.worklight.wlclient.ui.UIActivity" />
```

For more information, see the Worklight user documentation topic “**Developing native applications for Android**”.

Creating and configuring an Android native application

- After you run the application in Eclipse, the final result will be a native application that contains the Worklight API library.
- In the next training module, Native Worklight API will be implemented and demonstrated.
- A sample project with pre-defined Worklight API library is supplied for this training module.



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