# Adding the MobileFirst Platform Foundation SDK to Windows 10 UWP Applications

#### **Overview**

To serve a native Windows 8 Universal application, MobileFirst Server must be aware of it. For this purpose, IBM MobileFirst Platform Foundation provides a Native API library, which contains a set of APIs and configuration files.

This tutorial explains how to generate the Windows 8 Universal Native API and how to integrate it with a native Windows Universal application. These steps are necessary for you to be able to use it later on for tasks such as connecting to MobileFirst Server, invoking adapter procedures, implementing authentication methods, and so on.

**Prerequisite:** Developers are expected to be proficient with Microsoft developer tools.

## Creating and deploying a MobileFirst native API

#### **CLI**

- 1. Using the CLI (../../advanced-client-side-development/using-cli-create-build-manage-project-artifacts/), create a new MobileFirst project: \$ mfp create HelloWorldNative
- 2. Go to the newly created project directory: \$ cd HelloWorldNative/
- 3. Add a new Windows Universal native API: \$ mfp add api Win8HelloWorld -e windows8
- 4. Navigate into the native API folder and run the command: \$ mfp push. **Note:** This action is required for MobileFirst Server to recognize the application if it attempts to connect.

#### **Studio**



(https://developer.ibm.com/mobilefirstplatform/wp-content/uploads/sites/32/2015/04/Windows8UniversalProject.png)

- 1. In MobileFirst Studio, create a MobileFirst project and add a MobileFirst Native API.
- 2. In the **New MobileFirst Native API** dialog, enter your application name and select **Windows Universal** for the **Environment** field.
- 3. Right-click the generated NativeAPI folder (located in *your-projects/apps/your-nativeapi-app-name*) and select **Run As > Deploy Native API**.

**Note:** This action is required in order for MobileFirst Server to recognize the application if it attempts to connect.

The MobileFirst native API contains several components:

- worklight-windows8.dll is a MobileFirst API library that you must copy to your native Windows 8
   Universal project. This is contained within the "buildtarget" folder, under the respective hardware
   architecture.
- Newtonsoft.Json.dll is a library that provides JSON support.
- SharpCompress.dll is a library that provides compression support.
- application-descriptor.xml defines application metadata and security settings that MobileFirst Server enforces.
- wlclient.properties contains connectivity settings that a native Windows Universal application uses. You must copy this file to your native Windows Universal project.
- As with any MobileFirst project, you create the server configuration by modifying the files that are in the server\conf folder.

## wlclient.properties

You can edit the *wlclient.properties* file to set connectivity information.

- wlServerProtocol The communication protocol to MobileFirst Server, which is either http or https.
- wlServerHost The host name of the MobileFirst Server instance.
- wlServerPort The port of the MobileFirst Server instance.
- wlServerContext The context root path of the application on MobileFirst Server.
- wIAppId The application ID as defined in the application-descriptor.xml file.
- wlAppVersion The application version.
- wlEnvironment The target environment of the native application.
- wlPlatformVersion The MobileFirst Studio version.
- languagePreferences The list of preferred locales.

## Creating and configuring a Windows Universal native application

- 1. Create a Windows Universal Application project or use an existing one.
- 2. Add as a *reference* worklight-windows8.dll, Newtonsoft.Json.dll and SharpCompress.dll files.Choose the right worklight-windowsphone8.dll from the folder that matches the architecture of the target device (ARM/x64/x86).
- 3. Copy the wlclient.properties file to the root of the native project.
- 4. In Visual Studio, open the **Properties** window of the wlclient.properties file and set the **Copy to Output Directory** option to **Copy always**.

 Add the following capabilities to the Package.appxmanifest: Internet (Client & Server)
 Private Networks (Client & Server)

For more information, see the topic about developing native C# applications for Windows Universal, in the user documentation.

### **Tutorials to follow next**

Now that your application contains the Native API library, you can follow the tutorials in the Native Windows 8 Development (../../native/windows8/) section to learn more about authentication and security, server-side development, advanced client-side development, notifications and more.