

# Windows 8.1 Universal and Windows 10 UWP end-to-end demonstration

fork and edit tutorial (<https://github.ibm.com/MFPSamples/DevCenter/tree/master/tutorials/en/foundation/8.0/quick-start/windows-8-10/index.md>) | report issue (<https://github.ibm.com/MFPSamples/DevCenter/issues/new>)

## Overview

The purpose of this demonstration is to experience an end-to-end flow where an application and an adapter are registered using the MobileFirst Operations Console, an "skeleton" Visual Studio project is downloaded and edited to call the adapter, and the result is printed to the log - verifying a successful connection with the MobileFirst Server.

### Prerequisites:

- Configured Visual Studio 2013/5
- MobileFirst Developer CLI (download  
([file:///home/travis/build/MFPSamples/DevCenter/\\_site/downloads](file:///home/travis/build/MFPSamples/DevCenter/_site/downloads)))
- *Optional.* Stand-alone MobileFirst Server (download  
([file:///home/travis/build/MFPSamples/DevCenter/\\_site/downloads](file:///home/travis/build/MFPSamples/DevCenter/_site/downloads)))

## 1. Starting the MobileFirst Server

If a remote server was already set-up, skip this step.

From a **Command-line** window, navigate to the server's folder and run the command: `run.bat`.

## 2. Creating an application

In a browser window, open the MobileFirst Operations Console by loading the URL: `http://your-server-host:server-port/mfpconsole`. If running locally, use: `http://localhost:9080/mfpconsole` (`http://localhost:9080/mfpconsole`). The username/password are *admin/admin*.

1. Click on the "New" button next to **Applications**
  - Select a **Windows** platform
  - Enter **MFPStarterCSharp.Windows** as the **application identifier** for Windows, or **MFPStarterCSharp.WindowsPhone** for Windows Phone.
  - Enter **1.0.0** as the **version** value



- Click on the **Get Starter Code** tile and select to download the Windows 8.1 or Windows 10 mobile app scaffold.



### 3. Editing application logic

- Open the Visual Studio project.
- Select the solution's **MainPage.xaml.cs** file and paste the following code snippet:

```

IWorklightClient _newClient = WorklightClient.CreateInstance();

StringBuilder uriBuilder = new StringBuilder().Append("/adapters/javaAdapter/users/world");

WorklightResourceRequest rr = _newClient.ResourceRequest(uriBuilder.ToString(), "GET");

WorklightResponse resp= return Task.Run<WorklightResponse> (() => {
    rr.send();
});

if (resp.success) {
    Debug.WriteLine("Success: " + resp.ResponseText);
} else {
    Debug.WriteLine("Failure: " + resp.error);
}

```

## 4. Creating an adapter

Click on the "New" button next to **Adapters**.

Alternatively, download this prepared .adapter artifact (../javaAdapter.adapter) and deploy it from the MobileFirst Operations Console using the **Actions → Deploy adapter** action.

1. Select the **Actions → Download sample** option. Download the "Hello World" **Java** adapter sample.

If Maven and MobileFirst Developer CLI are not installed, follow the on-screen **Set up your development environment** instructions.

2. From a **Command-line** window, navigate to the adapter's Maven project root folder and run the command:

```
mfpdev adapter build
```

3. When the build finishes, deploy it from the MobileFirst Operations Console using the **Actions → Deploy adapter** action. The adapter can be found in the **[adapter]/target** folder.

The screenshot shows the MobileFirst Operations Console interface. The top navigation bar includes 'MobileFirst Operations Console', 'Analytics Console', and user information 'Hello, admin'. The left sidebar contains a menu with 'Dashboard', 'Runtimes', 'Applications', 'Adapters', 'Settings', 'Devices', and 'Error Log'. The 'Adapters' section is highlighted, showing 'No adapter deployed' and a 'New' button. The main content area is titled 'Create a new Adapter' and includes a 'Deploy Adapter' button. Below the title, there is a description: 'Adapters are used to securely connect back-end systems to client applications and cloud services. Adapters are built as Maven projects and can be written in JavaScript or Java.' A section titled 'Follow these steps to create an adapter' lists five steps: 1. Set up your development environment, 2. Create, 3. Develop, 4. Build, and 5. Deploy. Step 2 is currently selected. Under step 2, there is a sub-section 'There are three ways to start developing adapter projects:' with tabs for 'Console', 'CLI', and 'Maven'. The 'Console' tab is active, showing a text input field with the placeholder 'Start with one of the packaged sample projects'.

## 5. Testing the application

1. In Visual Studio, select the **mfpclient.resw** file and edit the **host** property with the IP address of the MobileFirst Server.
2. Press the **Run App** button.

### Results

- Clicking on the **Test Server Connection** button will display **Obtained Access Token Successfully**.
- If the application was able to connect to the MobileFirst Server, a resource request call using the Java adapter will take place.

The adapter response is then printed in Visual Studio's Output console.



```
Output
Show output from: Debug
/adapters/JavaAdapter/users/world
'ResourceRequestWin8.Windows.exe' (CLR v4.0.30319: Immersive Application Domain): Loaded 'C:\WINDOWS\Microsoft.Net\assembly\GAC_MSIL\System.Net.Requests\v4.0.4.0.0__b03f5f7f11d50a3a\System.Net.Requests.dll'. Skipped loading
'ResourceRequestWin8.Windows.exe' (CLR v4.0.30319: Immersive Application Domain): Loaded 'C:\WINDOWS\Microsoft.Net\assembly\GAC_MSIL\System.Net.Primitives\v4.0.4.0.0__b03f5f7f11d50a3a\System.Net.Primitives.dll'. Skipped loa
'ResourceRequestWin8.Windows.exe' (CLR v4.0.30319: Immersive Application Domain): Loaded 'C:\WINDOWS\Microsoft.Net\assembly\GAC_MSIL\System.Net.Http\v4.0.4.0.0__b03f5f7f11d50a3a\System.Net.Http.dll'. Skipped loading symbols
'ResourceRequestWin8.Windows.exe' (CLR v4.0.30319: Immersive Application Domain): Loaded 'C:\WINDOWS\system32\WinMetadata\Windows.Foundation.winmd'. Skipped loading symbols. Module is optimized and the debugger option 'Just My C
'ResourceRequestWin8.Windows.exe' (CLR v4.0.30319: Immersive Application Domain): Loaded 'C:\WINDOWS\Microsoft.Net\assembly\GAC_MSIL\System.Runtime.Extensions\v4.0.4.0.0__b03f5f7f11d50a3a\System.Runtime.Extensions.dll'. Ski
'ResourceRequestWin8.Windows.exe' (CLR v4.0.30319: Immersive Application Domain): Loaded 'C:\WINDOWS\Microsoft.Net\assembly\GAC_MSIL\System.Threading\v4.0.4.0.0__b03f5f7f11d50a3a\System.Threading.dll'. Skipped loading symbo
'ResourceRequestWin8.Windows.exe' (CLR v4.0.30319: Immersive Application Domain): Loaded 'C:\WINDOWS\Microsoft.Net\assembly\GAC_MSIL\System.IO\v4.0.4.0.0__b03f5f7f11d50a3a\System.IO.dll'. Skipped loading symbols. Module is o
'ResourceRequestWin8.Windows.exe' (CLR v4.0.30319: Immersive Application Domain): Loaded 'C:\WINDOWS\system32\WinMetadata\Windows.Security.winmd'. Skipped loading symbols. Module is optimized and the debugger option 'Just My C
'ResourceRequestWin8.Windows.exe' (CLR v4.0.30319: Immersive Application Domain): Loaded 'C:\WINDOWS\Microsoft.Net\assembly\GAC_MSIL\System.Globalization\v4.0.4.0.0__b03f5f7f11d50a3a\System.Globalization.dll'. Skipped loadin
'ResourceRequestWin8.Windows.exe' (CLR v4.0.30319: Immersive Application Domain): Loaded 'C:\WINDOWS\Microsoft.Net\assembly\GAC_MSIL\System.Linq\v4.0.4.0.0__b03f5f7f11d50a3a\System.Linq.dll'. Skipped loading symbols. Module
'ResourceRequestWin8.Windows.exe' (CLR v4.0.30319: Immersive Application Domain): Loaded 'C:\WINDOWS\Microsoft.Net\assembly\GAC_MSIL\System.Reflection\v4.0.4.0.0__b03f5f7f11d50a3a\System.Reflection.dll'. Skipped loading sym
'ResourceRequestWin8.Windows.exe' (CLR v4.0.30319: Immersive Application Domain): Loaded 'C:\WINDOWS\Microsoft.Net\assembly\GAC_MSIL\System.Runtime.Serialization.Primitives\v4.0.4.0.0__b03f5f7f11d50a3a\System.Runtime.Serial
'ResourceRequestWin8.Windows.exe' (CLR v4.0.30319: Immersive Application Domain): Loaded 'C:\WINDOWS\system32\WinMetadata\Windows.System.winmd'. Skipped loading symbols. Module is optimized and the debugger option 'Just My Co
'ResourceRequestWin8.Windows.exe' (CLR v4.0.30319: Immersive Application Domain): Loaded 'C:\WINDOWS\Microsoft.Net\assembly\GAC_MSIL\System.Text.Encoding\v4.0.4.0.0__b03f5f7f11d50a3a\System.Text.Encoding.dll'. Skipped loadin
'ResourceRequestWin8.Windows.exe' (CLR v4.0.30319: Immersive Application Domain): Loaded 'C:\Users\worklight\Documents\Visual Studio 2015\Projects\ResourceRequestWin8\ResourceRequestWin8\ResourceRequestWin8.Windows\bin\x64\Del
'ResourceRequestWin8.Windows.exe' (CLR v4.0.30319: Immersive Application Domain): Loaded 'C:\WINDOWS\Microsoft.Net\assembly\GAC_MSIL\System.Text.Encoding.Extensions\v4.0.4.0.0__b03f5f7f11d50a3a\System.Text.Encoding.Extensions
Adapter invocation response: Hello world
```

## Next steps

Learn more on using adapters in applications, and how to integrate additional services such as Push Notifications, using the MobileFirst security framework and more:

- Review the Using the MobileFirst Platform Foundation (../using-the-mfpf-sdk/) tutorials
- Review the Adapters development (../adapters/) tutorials
- Review the Authentication and security tutorials (../authentication-and-security/)
- Review the Notifications tutorials (../notifications/)
- Review All Tutorials (../all-tutorials)