Web app end-to-end demonstration

Overview

The purpose of this demonstration is to experience an end-to-end flow:

1. A sample application that is pre-bundled with the MobileFirst client SDK is registered and downloaded from the MobileFirst Operations Console.
2. A new or provided adapter is deployed to the MobileFirst Operations Console.
3. The application logic is changed to make a resource request.

End result:

- Successfully pinging the MobileFirst Server.
- Successfully retrieving data using a MobileFirst Adapter.

Prerequisites:

- A modern web browser
- *Optional*. MobileFirst CLI (download (file:////home/travis/build/MFPSamples/DevCenter/_site/downloads))
- *Optional*. Stand-alone MobileFirst Server (download (file:////home/travis/build/MFPSamples/DevCenter/_site/downloads))

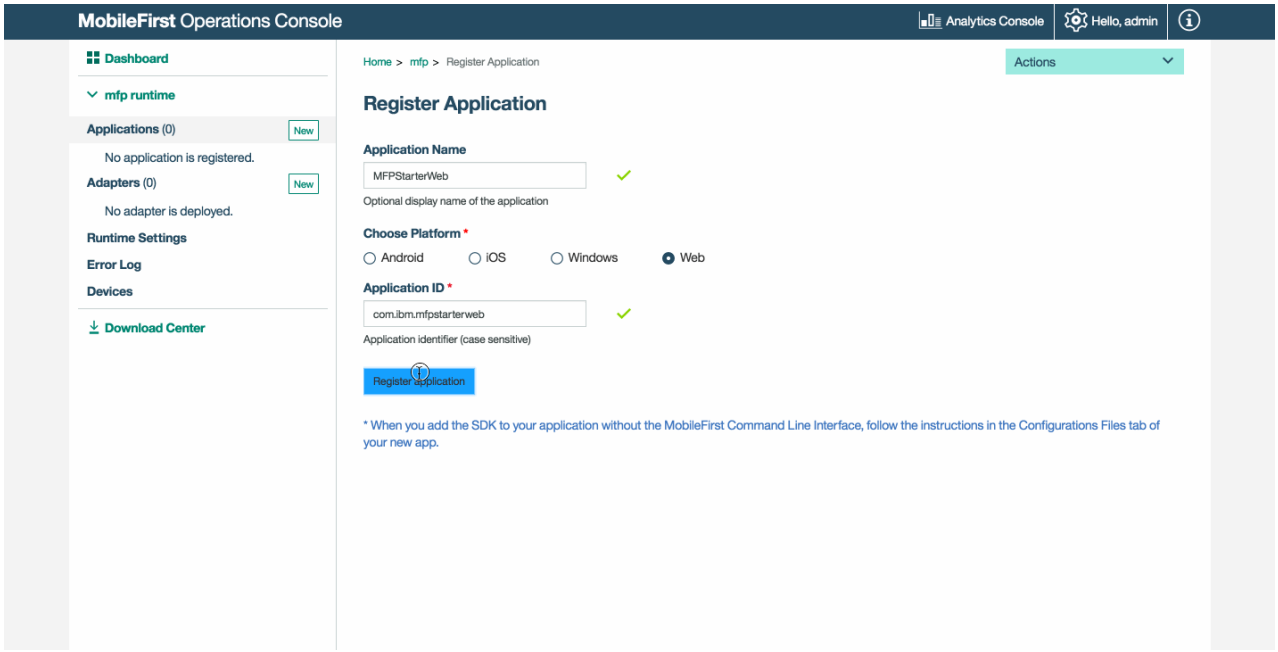
1. Starting the MobileFirst Server

Make sure you have created a Mobile Foundation instance (../../bluemix/using-mobile-foundation), or If using the MobileFirst Foundation Development Kit (../../installation-configuration/development/mobilefirst), navigate to the server's folder and run the command: `./run.sh` in Mac and Linux or `run.cmd` in Windows.

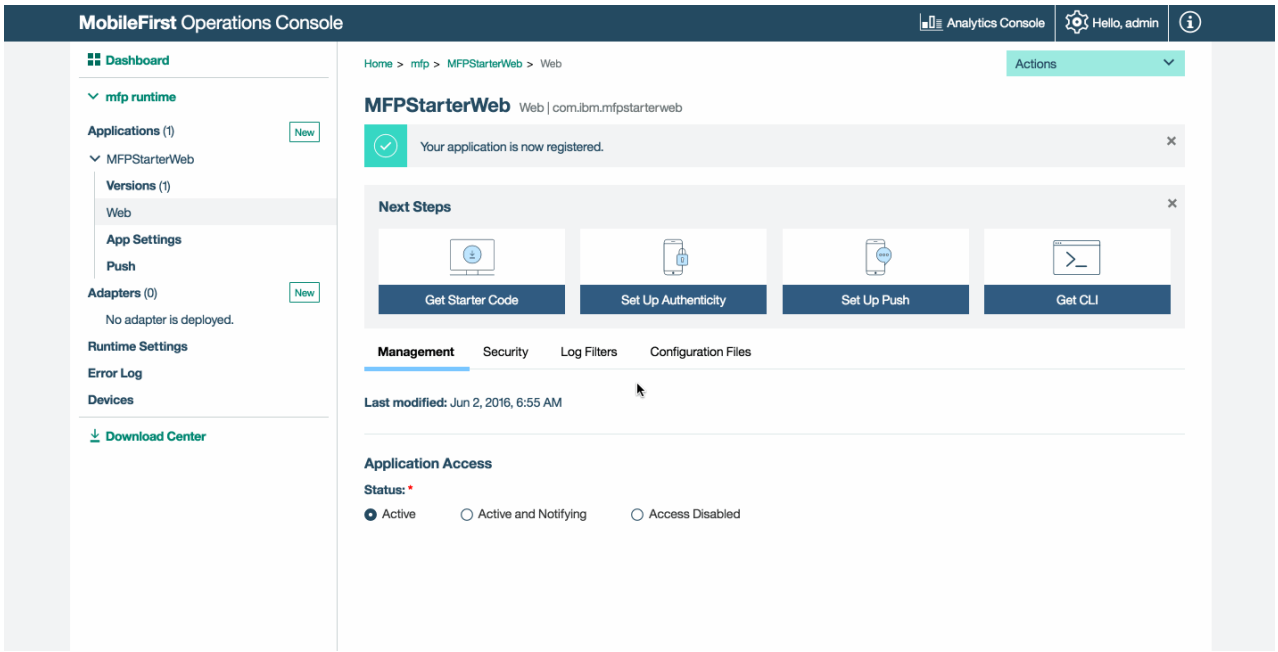
2. Creating and registering an application

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 the **New** button next to **Applications**
    - Select the **Web** platform
    - Enter **com.ibm.mfpstarterweb** as the **application identifier**
    - Click on **Register application**



2. Click on the **Get Starter Code** tile and select to download the Web sample application.



3. Editing application logic

1. Open the project in your code editor of choice.
2. Select the **client/js/index.js** file and paste the following code snippet, replacing the existing `WLAuthorizationManager.obtainAccessToken()` function:

```
WLAuthorizationManager.obtainAccessToken()
   .then(
      function(accessToken) {
         titleText.innerHTML = "Yay!";
         statusText.innerHTML = "Connected to MobileFirst Server";

         var resourceRequest = new WLResourceRequest(
            "/adapters/javaAdapter/resource/greet/",
            WLResourceRequest.GET
         );

         resourceRequest.setQueryParameter("name", "world");
         resourceRequest.send().then(
            function(response) {
               // Will display "Hello world" in an alert dialog.
               alert("Success: " + response.responseText);
            },
            function(response) {
               alert("Failure: " + JSON.stringify(response));
            }
         );
      },

      function(error) {
         titleText.innerHTML = "Bummer...";
         statusText.innerHTML = "Failed to connect to MobileFirst Server";
      }
   );
```

4. Deploy an adapter

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

Alternatively, click the **New** button next to **Adapters**.

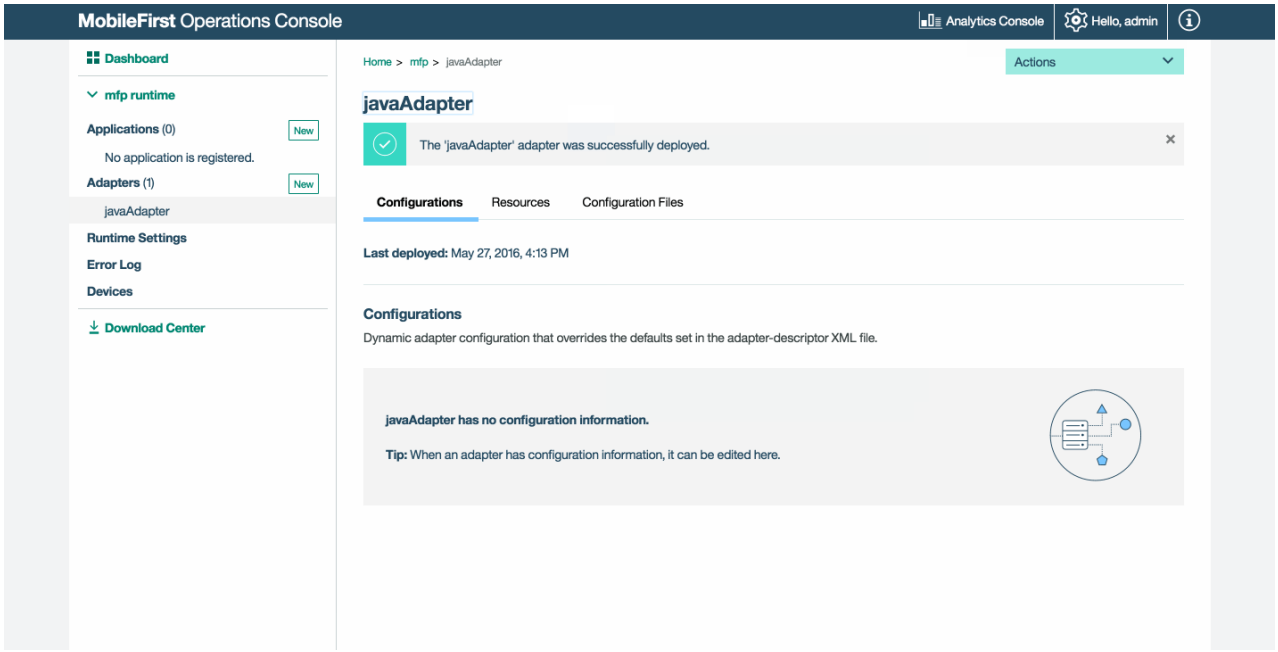
1. Select the **Actions → Download sample** option. Download the "Hello World" **Java** adapter sample.

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

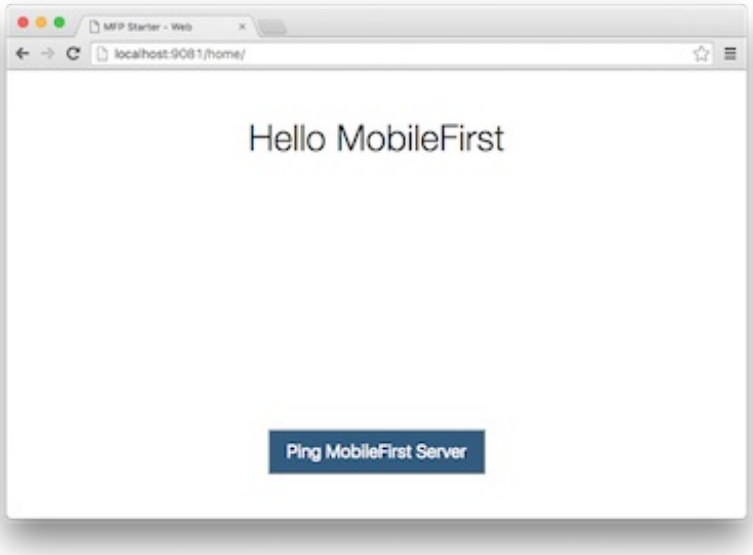
2. From a **Command-line** window, navigate to the adapter's Maven project root folder and run the command:

   ```
   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.



5. Testing the application



1. From a **Command-line** window, navigate to the **[project root] → node-server** folder.
2. Run the command: `npm start` to install required Node.js configuration and start the Node.js server.
3. Open the **[project root] → node-server → server.js** file and edit the **host** and **port** variables with the correct values for your MobileFirst Server.
    - If using a local MobileFirst Server, the values are typically **http**, **localhost** and **9080**.
    - If using a remote MobileFirst Server (on Bluemix), the values are typically **https**, **your-server-address** and **443**.

    For example:

    ```
    var host = 'https://mobilefoundation-xxxx.mybluemix.net'; // The Mobile Foundation server address
    var port = 9081; // The local port number to use
    var mfpURL = host + ':443'; // The Mobile Foundation server port number
    ```

4. In your browser, visit the URL: http://localhost:9081/home (http://localhost:9081/home).

Secure Origins Policy

When using Chrome during development, the browser may not allow an application to load if using both HTTP and a host that **is not** "localhost". This is due to the Secure Origins Policy implemented and used by default in this browser.

To overcome this, you can start the Chrome browser with the following flag:

```
--unsafely-treat-insecure-origin-as-secure="http://replace-with-ip-address-or-host:port-number" --user-data-dir=/test-to-new-user-profile/myprofile
```

- Replace "test-to-new-user-profile/myprofile" with the location of a folder that will act as a new Chrome user profile for the flag to work.

Results

- Clicking the **Ping MobileFirst Server** button will display **Connected to MobileFirst Server**.
- If the application was able to connect to the MobileFirst Server, a resource request call using the deployed Java adapter will take place.

The adapter response is then displayed in an alert.

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 Foundation (../../application-development/) tutorials
- Review the Adapters development (../../adapters/) tutorials
- Review the Authentication and security tutorials (../../authentication-and-security/)
- Review All Tutorials (../../all-tutorials)