iOS 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:

- Xcode
- *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))

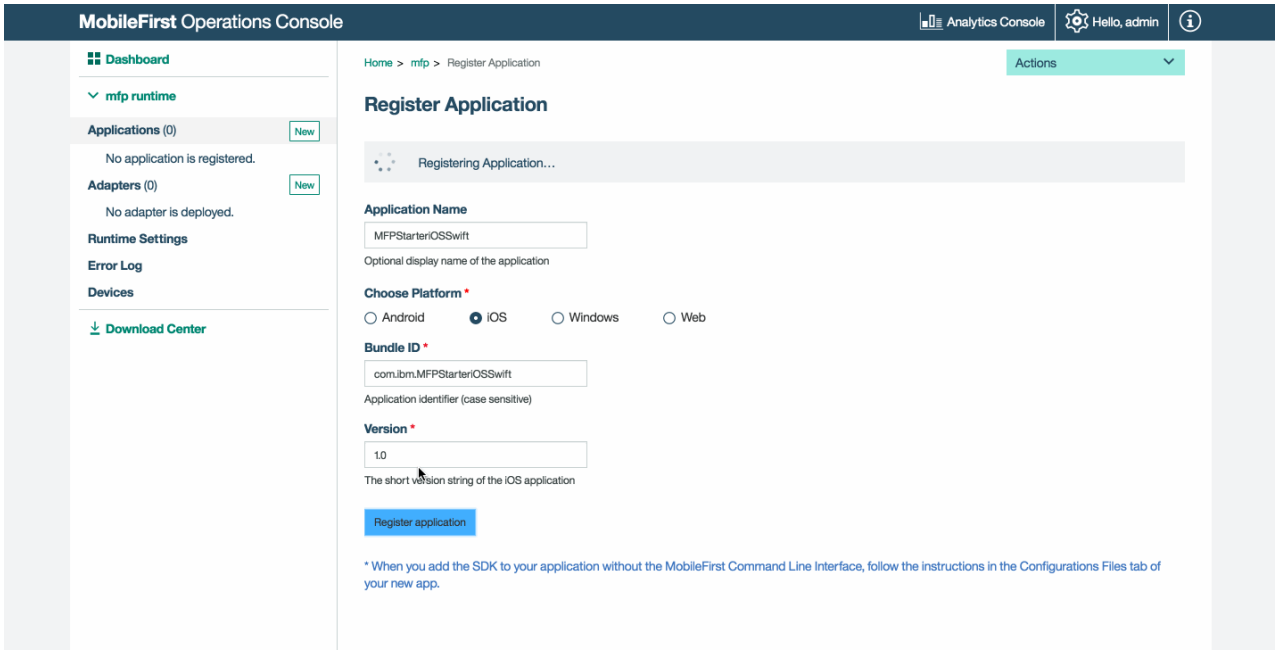
1. Starting the MobileFirst Server

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.

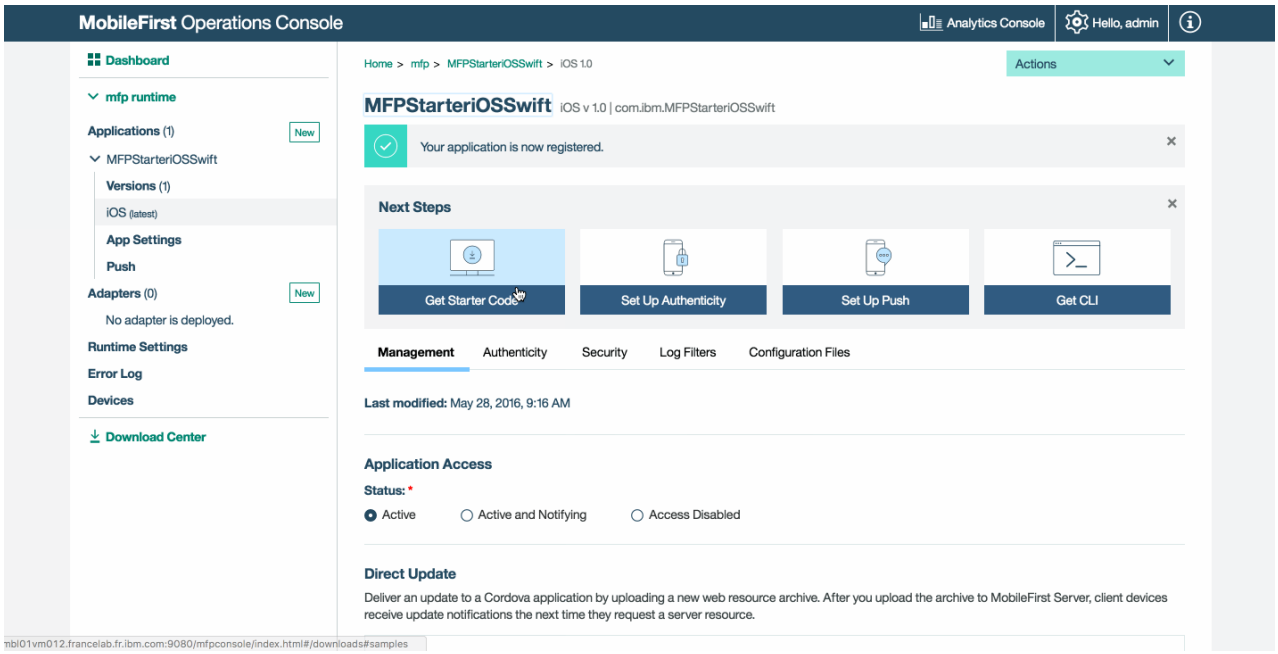
2. Creating an application

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 **iOS** platform
    - Enter **com.ibm.mfpstarteriosobjectivec** or **com.ibm.mfpstarteriosswift** as the **application identifier** (depending on the application scaffold you will download in the next step)
    - Enter **1.0** as the **version** value
    - Click on **Register application**



2. Click on the **Get Starter Code** tile and select to download the iOS Objective-C or iOS Swift sample application.



3. Editing application logic

1. Open the Xcode project by double-clicking the **.xcworkspace** file.
2. Select the **[project-root]/ViewController.m/swift** file and paste the following code snippet, replacing the existing `getAccessToken()` function:

   In Objective-C:

```
- (IBAction)getAccessToken:(id)sender {
_testServerButton.enabled = NO;
NSURL *serverURL = [[WLClient sharedInstance] serverUrl];
_connectionStatusLabel.text = [NSString stringWithFormat:@"Connecting to ser
ver...\n%@", serverURL];

NSLog(@"Testing Server Connection");
[[WLAuthorizationManager sharedInstance] obtainAccessTokenForScope:@"" withC
ompletionHandler:^(AccessToken *token, NSError *error) {
     if (error != nil) {
         _titleLabel.text = @"Bummer...";
         _connectionStatusLabel.text = [NSString stringWithFormat:@"Failed t
o connect to MobileFirst Server\n%@", serverURL];
         NSLog(@"Did not receive an access token from server: %@", error.des
cription);
     } else {
         _titleLabel.text = @"Yay!";
         _connectionStatusLabel.text = [NSString stringWithFormat:@"Connecte
d to MobileFirst Server\n%@", serverURL];
         NSLog(@"Received the following access token value: %@", token.value
);

         NSURL* url = [NSURL URLWithString:@"/adapters/javaAdapter/resource/
greet/"];
         WLResourceRequest* request = [WLResourceRequest requestWithURL:url
method:WLHttpMethodGet];

         [request setQueryParameterValue:@"world" forName:@"name"];
         [request sendWithCompletionHandler:^(WLResponse *response, NSError
*error) {
             if (error != nil){
                 NSLog(@"Failure: %@",error.description);
             }
             else if (response != nil){
                 // Will print "Hello world" in the Xcode Console.
                 NSLog(@"Success: %@",response.responseText);
             }
         }];
     }

     _testServerButton.enabled = YES;
 }];
}
```

In Swift:

```
@IBAction func getAccessToken(sender: AnyObject) {
     self.testServerButton.enabled = false

     let serverURL = WLClient.sharedInstance().serverUrl()

     connectionStatusLabel.text = "Connecting to server...\n\(serverURL)"
     print("Testing Server Connection")
     WLAuthorizationManager.sharedInstance().obtainAccessTokenForScope(nil)
{ (token, error) -> Void in

         if (error != nil) {
             self.titleLabel.text = "Bummer..."
             self.connectionStatusLabel.text = "Failed to connect to MobileF
irst Server\n\(serverURL)"
             print("Did not recieve an access token from server: " + error.d
escription)
         } else {
             self.titleLabel.text = "Yay!"
             self.connectionStatusLabel.text = "Connected to MobileFirst Ser
ver\n\(serverURL)"
             print("Recieved the following access token value: " + token.val
ue)

             let url = NSURL(string: "/adapters/javaAdapter/resource/greet/"
)
             let request = WLResourceRequest(URL: url, method: WLHttpMethodG
et)

             request.setQueryParameterValue("world", forName: "name")
             request.sendWithCompletionHandler { (response, error) -> Void i
n
                 if (error != nil){
                     NSLog("Failure: " + error.description)
                 }
                 else if (response != nil){
                     NSLog("Success: " + response.responseText)
                 }
             }
         }

         self.testServerButton.enabled = true
     }
}
```

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**.

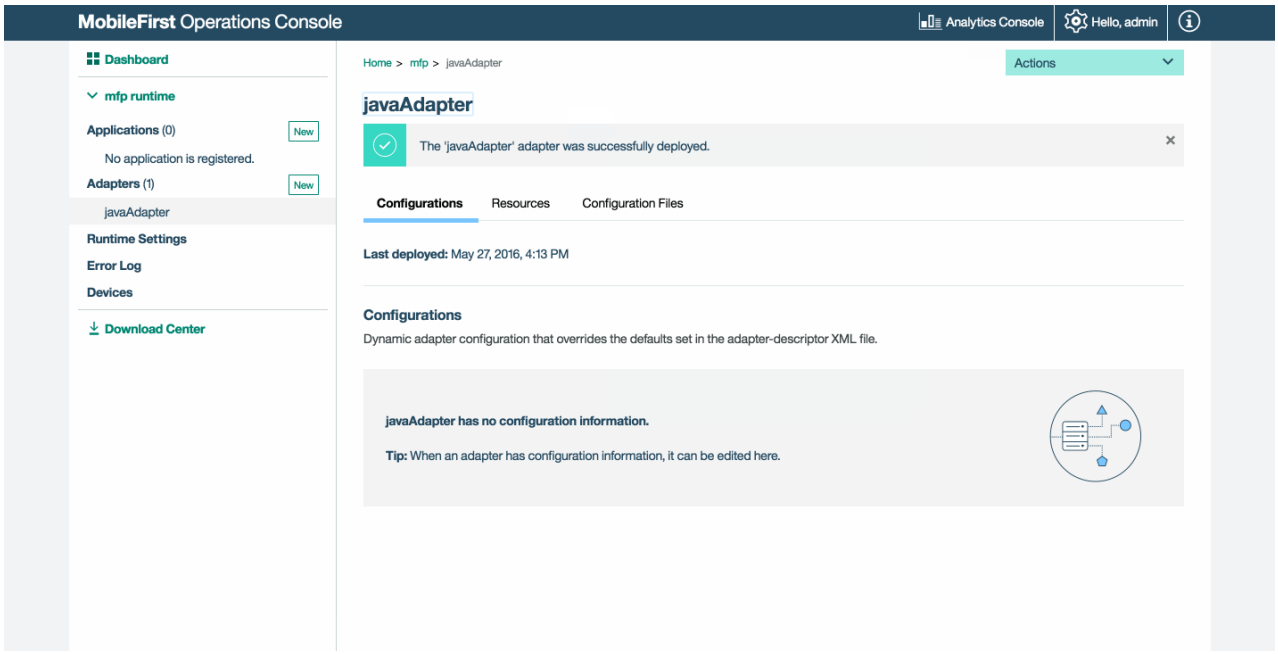
1. Select the **Actions → Download sample** option. Download the “Hello World” **Java** adapter sample.

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

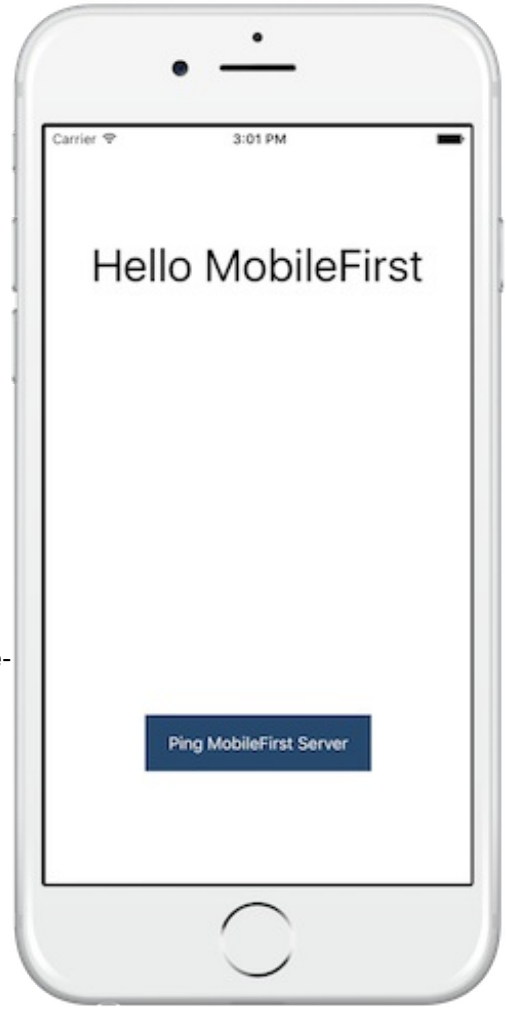
2. From a **Command-line** window, navigate to the adapter's Maven project root folder and run the command:

```
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



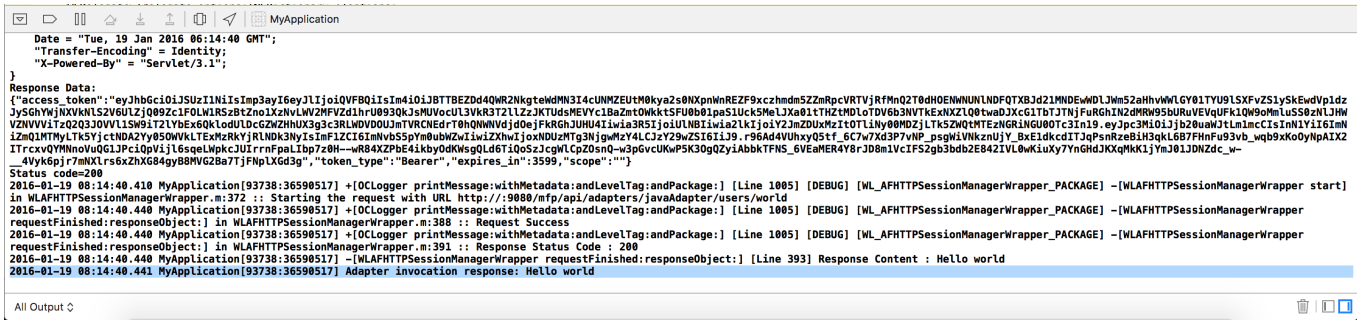
1. In Xcode, select the **mfpclient.plist** file and edit the **protocol**, **host** and **port** properties with the correct values for your MobileFirst Server.
    - If using a local MobileFirst Server, the values are typically **http**, **localhost** and **9080**.
    - If using a remote MobileFirst Server (on Bluemix), the values are typically **https**, **your-server-address** and **443**.

    Alternatively, if you have installed the MobileFirst CLI, then navigate to the project root folder and run the command `mfpdev app register`. If a remote MobileFirst Server is used, run the command `mfpdev server add` (../../application-development/using-mobilefirst-cli-to-manage-mobilefirst-artifacts/#add-a-new-server-instance) to add the server, followed by for example: `mfpdev app register myBluemixServer`.
2. Press the **Play** button.

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 printed in the Xcode Console.



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 the Notifications tutorials (../../notifications/)
- Review All Tutorials (../../all-tutorials)

Last modified on November 17, 2016