iOS end-to-end demonstration

fork and edit tutorial (https://github.ibm.com/MFPSamples/DevCenter/tree/master/tutorials/en/foundation/8.0/quick-start/ios/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:

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))

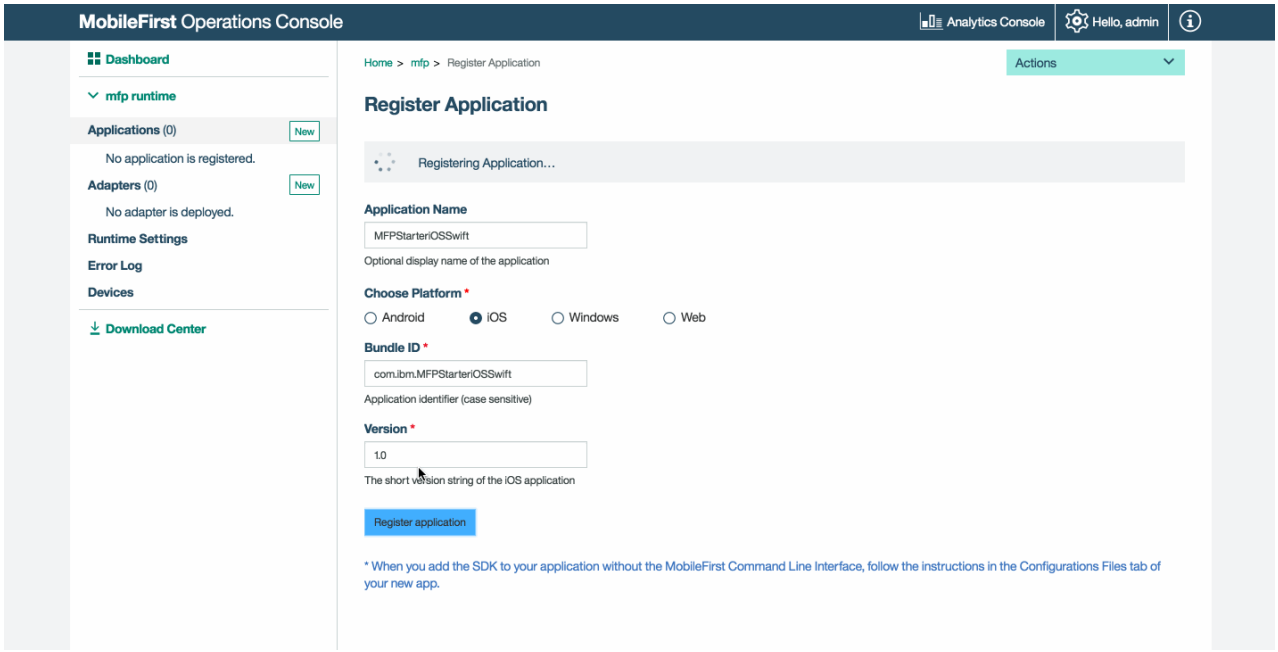
1. Starting the MobileFirst Server

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

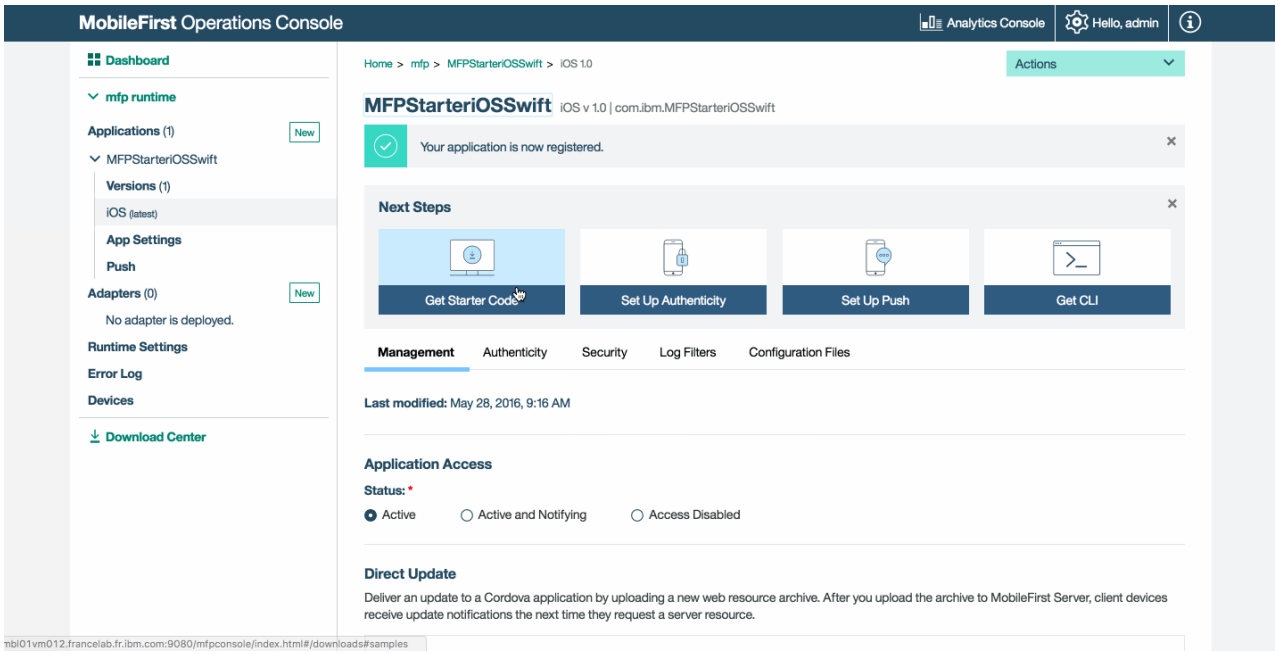
2. Creating an application

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 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 server...\n%@", serve
rURL];

NSLog(@"Testing Server Connection");
[[WLAuthorizationManager sharedInstance] obtainAccessTokenForScope:@""
                                        withCompletionHandler:^(AccessToken *token, NSError *error) {
    if (error != nil) {
        _titleLabel.text = @"Bummer...";
        _connectionStatusLabel.text = [NSString stringWithFormat:@"Failed to connect to MobileFirst
Server\n%@", serverURL];
        NSLog(@"Did not receive an access token from server: %@", error.description);
    } else {
        _titleLabel.text = @"Yay!";
        _connectionStatusLabel.text = [NSString stringWithFormat:@"Connected to MobileFirst Serv
er\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:WLHttpM
ethodGet];

        [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 MobileFirst Server\n\(serverURL)"
            print("Did not recieve an access token from server: " + error.description)
        } else {
            self.titleLabel.text = "Yay!"
            self.connectionStatusLabel.text = "Connected to MobileFirst Server\n\(serverURL)"
            print("Recieved the following access token value: " + token.value)

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

            request.setQueryParameterValue("world", forName: "name")
            request.sendWithCompletionHandler { (response, error) -> Void in
                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**.

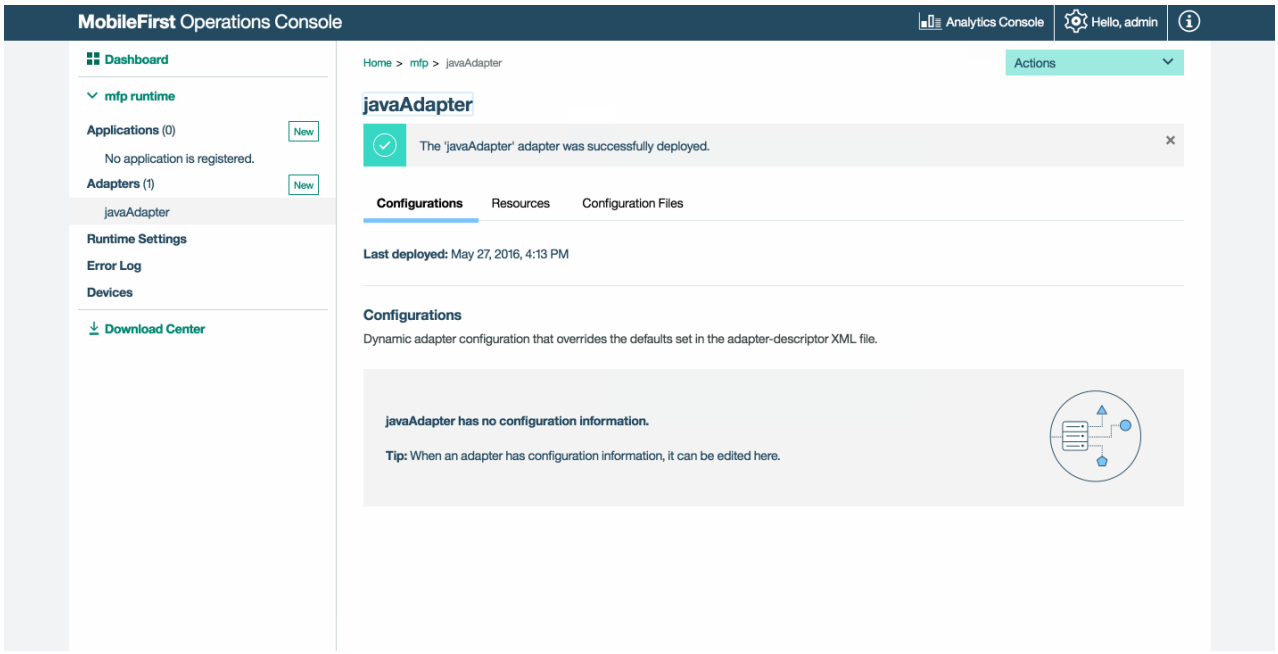
1. Select the **Actions → Download sample** option. Download the "Hello World" **Java** adapter sample.

   > 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

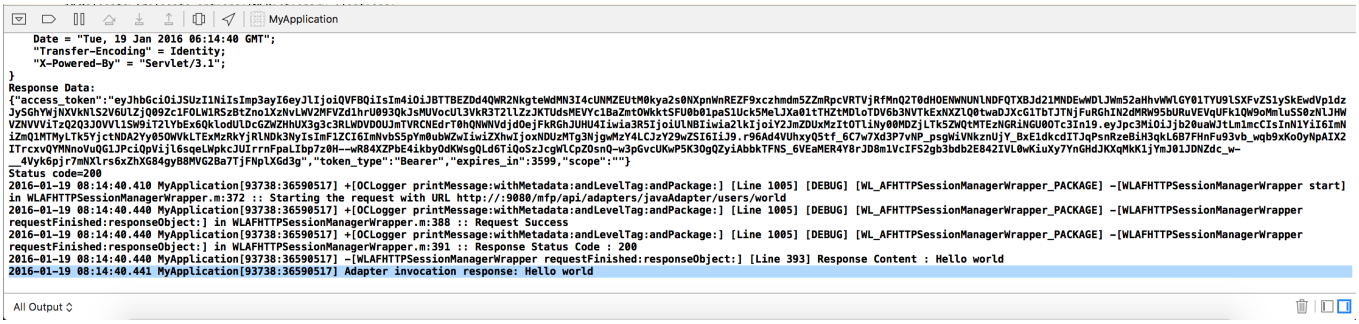
1. In Xcode, select the **mfpclient.plist** file and edit the **host** property with the IP address of the MobileFirst Server. Alternatively, if you have installed the MobileFirst CLI then navigate to the project root folder and run the command `mfpdev app register`. If a remote server is used, use the command `mfpdev server add` (../../using-the-mfpf-sdk/using-mobilefirst-cli-to-manage-mobilefirst-artifacts/#add-a-new-server-instance) to add it.
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 (../../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)