

iOS end-to-end demonstration

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" Xcode 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:

- Xcode
- MobileFirst Developer 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

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

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

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 "Create new" button next to **Applications** and select the desired *platform*, *identifier* and *version* values.



2. Click on the **Get Starter Code** tile and select to download the iOS Starter Code.





3. Editing application logic

1. Open the Xcode project project by double-clickign the **.xcworkspace** file.
2. Select the **[project-root]/ViewController.m/swift** file and:

- Add the following header:

In Objective-C:

```
#import <IBMMobileFirstPlatformFoundation/IBMMobileFirstPlatformFoundation.h>
```

In Swift:

```
import IBMMobileFirstPlatformFoundation
```

- Paste the following code snippet, replacing the existing `viewDidLoad()` function:

In Objective-C:

```
- (void)viewDidLoad {
    [super viewDidLoad];

    NSURL* url = [NSURL URLWithString:@"~/adapters/javaAdapter/users/world"];
    WLResourceRequest* request = [WLResourceRequest requestWithURL:url method:WLHttpMethodGet];

    [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);
        }
    }];
}
```

In Swift:

```
override func viewDidLoad() {
    super.viewDidLoad()

    let url = NSURL(string: "~/adapters/javaAdapter/users/world")
    let request = WLResourceRequest(URL: url, method: WLHttpMethodGet)

    request.sendWithCompletionHandler { (WLResponse response, NSError error) -> Void in
        if (error != nil){
            NSLog("Failure: " + error.description)
        }
        else if (response != nil){
            NSLog("Success: " + response.responseText)
        }
    }
}
```

4. Creating an adapter

1. Click on the "Create new" button next to **Adapters** and download the **Java** adapter sample.

If Maven and MobileFirst CLI are not installed, follow the on-screen **Setting up your environment** instructions to install.



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, run the command:

```
mfpdev adapter deploy
```

If using a remote MobileFirst Server, run the command:

```
mfpdev adapter deploy Replace-with-remote-server-name
```

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.
2. Press the **Play** button.

The adapter response is then printed in the Xcode Console.

```
<!-->  
Date = "Tue, 19 Jan 2016 06:14:40 GMT";  
"Transfer-Encoding" = Identity;  
"X-Powered-By" = "Servlet/3.1.2";  
}  
  
Response Data:  
{  
    "access_token": "eyJhbGciOiJIUzI1NiIsInp1cyI6eyJmIlkiOiIwVFB0IiwiaW40Ij01BTTBEZDQ0WRnNkgtleWMWN3RlYyZWZDUeU0Mkeys2bnNKpnhwREZF9xczhndmsSZ2mRpCvRTVJRfMnQ0T0dHOENWNUNLNDQFTXB3JDJ1MDNDEWDLJWns2aahvwVLGY0TYU9LSXFvZS1YSKewDVpdz  
JsYShgVjXNVKNzIS2VBGVLTz0892CIrFOLMK5zbTcNozxLNxMZHVFDizH0893DKjsHMVoCUtLVKR3ZTLzZJKtUsdHeVCyI8azmtOWkkTSFU0BBpiSLICKSe5IXJa0ITZELMPLOTDVB63NW7KEHXKZQL0btuadXCIG1BTJTJTFuKHGNIZCMHR9SB9URUVEqUGLo9oNmLUSS0znLJHW  
zYU0PzTQO3JOVLVS991ZYtE5ve-dKLeDIuLzCNZXNMWSp3-CRLMMVD0ULJmTVRCedTQH0mwWLI4dejeFqhDUMATLiwa3RSJzi0ILNB1iwja2IA1ji0Y2HZDUMMeITOTTLINy0BM0ZjTK5ZNMQRTE-nGRLLGU0QT3i3is_eyp3pLMGL1jb2b0wJLEIncrcITniYL16tm  
iznmJTIHLTK5YjicnCDA2Y9BS0WWKLTXmrK3RJRNDSKn1YsIFZIC216MNvb5SPmbubNZwiuzixhJijoxHDNUKmg3VnjyWALC2zy2vSwSIE1J9_r96Ad4VFN3qjWxyQuStf_6C7WX3DP7VPnp_gswMLVknnZkuUY_ExiEdkcIdTJ3qPsnRzeBIHQ6LBSTFuwb_qqb9KoodyNaMX2  
ITcrxvyMnoovUG6LPCidipvj1tsqeqlMpKJCirFnepPalbp7zo8-wR84ZPB64IKcnvGsdL6TlQoSzcgPLMGCPso2dn-q3pgvcUKwpSK3QgoZiyAbbkftXHs_96EAEMER4ny8jdBNiLCF7SzFG2bgkbzEB4ZIDLvOKuixY7nGHdJKqXKK1jYmJ0LDNdzc_w  
_4yk6pfjrm1LKrs6ZhSG64gy8BMVGD2ba7TjFPnLGd3gj","token_type":"Bearer","expires_in":3599,"scope":""}  
}  
  
Status code:200  
2016-01-19 08:14:40.410 MyApplication[93738:3659517] [OCLogger printMessage:withMetadata:andLevelTag:] [Line 1005] [DEBUG] [WL_AFHHTTPSessionManagerWrapper_PACKAGE] - [WLAFHTTPSessionManagerWrapper start]  
in WLAFHTTPSessionManagerWrapper.m:372 : Starting the request with URL http://9080/nfp/api/adapters/javaAdapter/users/world  
2016-01-19 08:14:40.448 MyApplication[93738:3659517] [OCLogger printMessage:withMetadata:andLevelTag:] [Line 1005] [DEBUG] [WL_AFHHTTPSessionManagerWrapper_PACKAGE] - [WLAFHTTPSessionManagerWrapper  
requestFinished:responseObject:] in WLAFHTTPSessionManagerWrapper.m:388 : Request Success  
2016-01-19 08:14:40.448 MyApplication[93738:3659517] [OCLogger printMessage:withMetadata:andLevelTag:] [Line 1005] [DEBUG] [WL_AFHHTTPSessionManagerWrapper_PACKAGE] - [WLAFHTTPSessionManagerWrapper  
requestFinished:responseObject:] in WLAFHTTPSessionManagerWrapper.m:391 : Response Status Code : 200  
2016-01-19 08:14:40.448 MyApplication[93738:3659517] [-WLAFHTTPSessionManagerWrapper requestFinished:responseObject:] [Line 393] Response Content : Hello world  
2016-01-19 08:14:40.441 MyApplication[93738:3659517] Adapter invocation response: Hello world
```

Note: Xcode 7 enables Application Transport Security (ATS)

(https://developer.apple.com/library/ios/releasenotes/General/WhatsNewIniOS/Articles/iOS9.html#//apple_ref/doc/uid/TP40016198-SW14) by default.

To complete the tutorial, disable ATS (<http://iosdevtips.co/post/121756573323/ios-9-xcode-7-http-connect-server-error>).

1. In Xcode, right-click the **[project]/info.plist** file → **Open As** → **Source Code**
2. Paste the following:

```
<key>NSAppTransportSecurity</key>
<dict>
  <key>NSAllowsArbitraryLoads</key>
  <true/>
</dict>
```

3. Press the **Play** button.

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 Server-side development tutorials (../adapters/)
- Review the Authentication and security tutorials (../authentication-and-security/)
- Review the Notifications tutorials (../notifications/)
- Review All Tutorials (../all-tutorials)