

# 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 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](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 **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 "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-clicking the **.xcworkspace** file.
2. Select the **[project-root]/ViewController.m/swift** file and 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 "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. Alternatively, download this prepared .adapter artifact and deploy it from the MobileFirst Operations Console using the **Actions → Deploy adapter** action.

MobileFirst Operations Console

Analytics Console

Hello, demo

Dashboard

Runtimes

mfp

Settings

Applications

MyBankApp

Adapters

No adapter deployed

Devices

Client Logs

Error Log

Create new

Create new

Create new

Home > mfp > Get Starter Code

Get Starter Code

ApplicationAdapter

Java Adapter Samples

Select the sample that you would like to download

JavaJava-security check

Javascript Adapter Samples

Select the sample that you would like to download

Javascript-SQLJavascript-SAPJavascript-JMSJavascript-HTTP

Next Step



Go to Adapter Quickstart

- mfpdev adapter build

- ## 5. Testing the application

- 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";

Response Data:
{"access_token": "eyJhbGciOiJIUzI1NiIsInp1IjE9ImNpYyIeYmV1IiwiaWF0Ij01VF8wMGIiLCJ0eXAiOiBTTEZBZDQ4NR2kgeWtMN3I4cUNMZUEtM0kyazS0NXpwnHREFZFScxzhmdmSZZmcRvcTjvRfMnQ0T2dHOENWNUNLNDPQTkXjd3JlMDNEwdWIjWmSzMaShhvWVLGY01TYU9LSXFVZSl5KEdwpIdzJySGh5bmVjNWxkbmZlZW61Zj009zC2VldHUiOUB93JkSMVucOU3LVkr3TZ1LzZkTzUpdiAdapters/javax.servlet.http.HttpServlet", "token_type": "Bearer", "expires_in": 3599, "scope": ""}

Status code=200
2016-01-19 08:14:40.418 MyApplication[93738:36590517] +[OCLogger printMessage:withMetadata:andLevelTag:andPackage:] [Line 1005] [DEBUG] [WL_AFHTTPSessionManagerWrapper_PACKAGE] ~[WLAFHTTPSessionManagerWrapper start]
2016-01-19 08:14:40.418 MyApplication[93738:36590517] Starting the request with URL http://9808/fmp/adapters/javax.servlet.http.HttpServlet
2016-01-19 08:14:40.448 MyApplication[93738:36590517] +[OCLogger printMessage:withMetadata:andLevelTag:andPackage:] [Line 1005] [DEBUG] [WL_AFHTTPSessionManagerWrapper_PACKAGE] ~[WLAFHTTPSessionManagerWrapper requestFinished:responseObject:] in WLAFHTTPSessionManagerWrapper.m:388 : Request Success
2016-01-19 08:14:40.448 MyApplication[93738:36590517] +[OCLogger printMessage:withMetadata:andLevelTag:andPackage:] [Line 1005] [DEBUG] [WL_AFHTTPSessionManagerWrapper_PACKAGE] ~[WLAFHTTPSessionManagerWrapper requestFinished:responseObject:] in WLAFHTTPSessionManagerWrapper.m:391 : Response Status Code : 200
2016-01-19 08:14:40.448 MyApplication[93738:36590517] -[WLAFHTTPSessionManagerWrapper requestFinished:responseObject:] [Line 393] Response Content : Hello world
2016-01-19 08:14:40.441 MyApplication[93738:36590517] 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](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](#))