

# Resource request from native iOS Objective-C applications

## Overview

To create and configure an iOS native project, first follow the “Configuring a native iOS application with the MobileFirst Platform SDK (../hello-world/configuring-a-native-ios-application-with-the-mfp-sdk/)” tutorial.

MobileFirst applications can access resources using the `WLResourceRequest` REST API. This tutorial explains how to use the `WLResourceRequest` API with an HTTP adapter.

## Initializing WLClient

1. Access the `WLClient` functionality by using `[WLClient sharedInstance]` anywhere in your application.
2. Initiate the connection to the server by using the `wlConnectWithDelegate` method. For most actions, you must specify a delegate object, such as a `MyConnectListener` instance in the following example:

```
MyConnectListener *connectListener = [[MyConnectListener alloc] initWithController:self];  
[[WLClient sharedInstance] wlConnectWithDelegate:connectListener];
```

**Note:** Remember to `#import` when using the MobileFirst SDK.

3. Create a delegate to be used in the `wlConnectWithDelegate` method and receive the response from the MobileFirst Server instance. Name the class `MyConnectListener`. The header file must specify that it implements the `WLDelegate` protocol.

```
@interface MyConnectListener : NSObject <WLDelegate> {  
    @private  
    ViewController *vc;  
}  
<p>
```

The `WLDelegate` protocol specifies that the class implements the following methods:

- The `onSuccess` method: `(WLResponse *) response`
- The `onFailure` method: `(WLFailResponse *) response`

After `wlConnectWithDelegate` finishes, the `onSuccess` method or the `onFailure` method of the supplied `MyConnectListener` instance is invoked.

In both cases, the response object is sent as an argument.

4. Use this object to operate data that is retrieved from the server.

```

-(void)onSuccess:(WLResponse *)response{
    NSLog(@"\nConnection Success: %@", response);
    NSString *resultText = @"Connection success. ";
    if ([response responseText] != nil){
        resultText = [resultText stringByAppendingString:[response responseText]]
    }
    [vc updateView:resultText];
}

-(void)onFailure:(WLFailResponse *)response{
    NSString *resultText = @"Connection failure. ";
    if ([response responseText] != nil){
        resultText = [resultText stringByAppendingString:[response responseText]]
    }
    [vc updateView:resultText];
}

```

## Invoking an adapter procedure

After the connection is established with a MobileFirst Server instance, you can use the `WLResourceRequest` class to invoke adapter procedures or call any REST resources.

1. Define the URI of the resource. For a JavaScript HTTP adapter:

```
/adapters/{AdapterName}/{ProcedureName}
```

```
NSURL* url = [NSURL URLWithString:@"adapters/RSSReader/getFeed"];
```

2. Create a `WLResourceRequest` object and choose the HTTP method (GET, POST, etc).

```
WLResourceRequest* request = [WLResourceRequest requestWithURL:url method:WLHttpMethodGet];
```

3. Add the required parameters.

- For JavaScript-based adapters, use the `params` parameter name to set an array of parameters.

```
[request setQueryParameterValue:@"['MobileFirst_Platform']" forName:@"params"];
```

- For Java adapters or other resources, you can use `setQueryParameterValue` for each parameter.

```
[request setQueryParameterValue:@"value1" forName:@"param1"];
[request setQueryParameterValue:@"value2" forName:@"param2"];
```

4. Trigger the request with a call to the `sendWithCompletionHandler` method.

Specify a `completionHandler` instance.

```
[request sendWithCompletionHandler:^(WLResponse *response, NSError *error) {
    NSString* resultText;
    if(error != nil){
        resultText = @"Invocation failure.";
        resultText = [resultText stringByAppendingString: error.description];
    }
    else{
        resultText = @"Invocation success.";
        resultText = [resultText stringByAppendingString:response.responseText];
    }
    [self updateView:resultText];
}];
```

Other signatures, which are not covered in this tutorial, exist for the `send` method. Those signatures enable you to set parameters in the body instead of the query, or to handle the response with a delegate instead of a completion handler. See the user documentation to learn more.

If you use Xcode 7 and iOS 9, read the [ATS and Bitcode](https://github.com/MobileFirst-Platform-Developer-Center/InvokingAdapterProcedures/tree/release71) blog post (file:///home/travis/build/MFPSamples/DevCenter/\_site/blog/2015/09/09/ats-and-bitcode-in-ios9/).

## Sample and result

Click to download (<https://github.com/MobileFirst-Platform-Developer-Center/InvokingAdapterProcedures/tree/release71>) the MobileFirst project.

Click to download (<https://github.com/MobileFirst-Platform-Developer-Center/InvokingAdapterProceduresObjC/tree/release71>) the Native project.

- The `InvokingAdapterProcedures` project contains a **MobileFirst native API** which you can deploy to your MobileFirst Server instance and required to deploy to the server.
- The `InvokingAdapterProceduresObjC` project contains a **native iOS application** that uses a MobileFirst native API library to communicate with the MobileFirst Server instance.
- Make sure to update the `worklight.plist` file in **NativeiOSInvoking** with the relevant server settings.

## Invoking Adapter Procedures

[Connect](#)[Invoke Procedure](#)

```
Invocation success.{"statusCode":
200,"errors":
[],"isSuccessful":true,"statusReason":"O
K","rss":{"feedburner":"http://
rssnamespace.org/feedburner/ext/
1.0","channel":{"pubDate":"Tue, 24 Mar
2015 13:43:23 EDT","title":"CNN.com -
Technology","description":"CNN.com
delivers up-to-the-minute news and
information on the latest top stories,
weather, entertainment, politics and
more."},"item":{"content":
{"height":"51","width":"90","type":"imag
e/jpeg","url":"http://i2.cdn.turner.com/
cnn/dam/assets/150324102800-iwatch-
luxury-baselworld-top-
tease.jpg","medium":"image"},"guid":
{"CDATA":"http://www.cnn.com/
2015/03/24/tech/apple-watch-
baselworld-2015/
index.html","isPermaLink":"false"},"pub
Date":"Tue, 24 Mar 2015 10:58:05
EDT","title":"'It's a fight for the
wrist'","thumbnail":
{"height":"51","width":"90","url":"http://
```

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