

# Resource Request from Native iOS Swift Applications

## Overview

MobileFirst applications can access resources using the `WLResourceRequest` REST API. The REST API works with all adapters and external resources.

**Prerequisite:** Ensure you have added the MobileFirst Platform SDK (../adding-the-mfpf-sdk/adding-the-mfpf-sdk-to-ios-applications) to your Native iOS project.

## WLResourceRequest

The `WLResourceRequest` class handles resource requests to adapters or external resources.

Create a `WLResourceRequest` object and specify the path to the resource and the HTTP method. Available methods are: `WLHttpMethodGet`, `WLHttpMethodPost`, `WLHttpMethodPut` and `WLHttpMethodDelete`.

```
let request = WLResourceRequest(URL: NSURL(string: "/adapters/RSSReader/getFeed"), method: WLHttpMethodGet)
```

- For **JavaScript adapters**, use `/adapters/{AdapterName}/{procedureName}`
- For **Java adapters**, use `/adapters/{AdapterName}/{path}`. The `path` depends on how you defined your `@Path` annotations in your Java code. This would also include any `@PathParam` you used.
- To access resources outside of the project, use the full URL as per the requirements of the external server.

## Sending the request

Request the resource by using the `sendWithCompletionHandler` method. Supply a completion handler to handle the retrieved data:

```
request.sendWithCompletionHandler { (WLResponse response, NSError error) -> Void in
    var resultText = ""
    if(error != nil){
        resultText = "Failed to call the resource"
        resultText += error.description
    }
    else if(response != nil){
        resultText = "Successfully called the resource"
        resultText += response.responseText
    }
    self.updateView(resultText)
}
```

Use the `response` and `error` objects to get the data that is retrieved from the adapter.

The `response` object contains the response data and you can use its methods and properties to retrieve the required information. Commonly used properties are `responseText -> String`, `responseJSON -> Dictionary` (if the response is in JSON) and `status -> Int` (the HTTP status of the response).

Alternatively, you can use `sendWithDelegate` and provide a delegate that conforms to both the `NSURLConnectionDataDelegate` and `NSURLConnectionDelegate` protocols. This will allow you to handle the response with more granularity, such as handling binary responses.

## Parameters

Before sending your request, you may want to add parameters as needed.

### Path parameters

As explained above, **path** parameters (`/path/value1/value2`) are set during the creation of the `WLResourceRequest` object.

### Query parameters

To send **query** parameters (`/path?param1=value1...`) use the `setQueryParameter` method for each parameter:

```
request.setQueryParameterValue("value1", forName: "param1")
request.setQueryParameterValue("value2", forName: "param2")
```

### Form parameters

To send **form** parameters in the body, use `sendWithFormParameters` instead of the simple `sendWithCompletionHandler`:

```
//@FormParam("height")
let formParams = ["height": "175"]

//Sending the request with Form parameters
request.sendWithFormParameters(formParams) { (response, error) -> Void in
    if(error == nil){
        NSLog(response.responseText)
    }
    else{
        NSLog(error.description)
    }
}
```

### Header parameters

To send a parameter as an HTTP header use the `setHeaderValue` API:

```
//@HeaderParam("Date")
request.setHeaderValue("2015-06-06", forName: "Date")
```

### Other custom body parameters

- `sendWithBody` allows you to set an arbitrary String in the body.
- `sendWithJSON` allows you to set an arbitrary dictionary in the body.
- `sendWithData` allows you to set an arbitrary `NSData` in the body.

## Javascript Adapters

JavaScript adapters use ordered nameless parameters. To pass parameters to a Javascript adapter, set an array of parameters with the name `params`:

```
request.setQueryParameterValue("['param1', 'param2']", forName: "params")
```

## For more information

For more information about `WLResourceRequest`, refer to the user documentation.

## Sample application

The `ResourceRequestSwift` project contains a native iOS Swift application that makes a resource request using a Java adapter.

The adapter Maven project contains the Java adapter to be used during the resource request call.

Click to download (<https://github.com/MobileFirst-Platform-Developer-Center/ResourceRequestSwift/tree/release80>) the Native project.

Click to download (<https://github.com/MobileFirst-Platform-Developer-Center/Adapters/tree/release80>) the adapter Maven project.

## Sample usage

- Make sure to update the **mfpclient.plist** file in the Xcode project with the server properties.
- The sample uses the `JavaAdapter` contained in the Adapters Maven project. Use either Maven or MobileFirst Developer CLI to build and deploy the adapter (`../../creating-adapters/`).

The screenshot shows an iPhone 6 screen with the title "Resource Request". The app contains several input fields for parameters:   
- `@PathParam("first")`: John   
- `@PathParam("middle")`: M   
- `@PathParam("last")`: Smith   
- `@QueryParam("age")`: 42   
- `@FormParam("height")`: 175   
- `@HeaderParam("Date")`: 1974-05-05   
Below the inputs is a blue "Submit" button. Underneath the button, the app displays the results of the request:   
Name = John M Smith   
Age = 42   
Height = 175   
Date = 1974-05-05