Resource request from native iOS Swift 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.

If you are developing Swift-based applications, make sure that you follow the additional steps.

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 calling the `WLClient.sharedInstance` method 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:

   ```
   let connectListener = MyConnectListener(vc: self)
   WLClient.sharedInstance().wlConnectWithDelegate(connectListener)
   ```

3. Make sure that your Bridging Header includes the `WLSwiftBridgingHeader.h` file for access to MobileFirst APIs.
4. To specify the delegate object, create a delegate for the `wlConnectWithDelegate` method and receive the response from the MobileFirst Server instance. Name the class `MyConnectListener`.
   For your `MyConnectListener` class, the header file must specify that it implements the `WLDelegate` protocol.
   Note: To avoid a compiler error raising that your delegate does not conform to `NSObjectProtocol`, make your class a subclass of `NSObject`.

   ```
   class MyConnectListener: NSObject, WLDelegate{
   //...
   }
   ```

   The `WLDelegate` protocol specifies that the class implements the following methods:
   - The **onSuccess** method: `func onSuccess(response: WLResponse!)`
   - The **onFailure** method: `func onFailure(response: WLFailResponse!)`
   After `wlConnectWithDelegate` finishes, the `onSuccess` method or the `onFailure` method of the supplied `MyConnectListener` instance is called.
   In both cases, the response object is passed as an argument.
5. Use this object to operate data that is retrieved from the server.

```
func onSuccess(response: WLResponse!) {
    var resultText = "Connection success. "
    if(response != nil){
        resultText += response.responseText
    }
    self.vc.updateView(resultText)
}

func onFailure(response: WLFailResponse!) {
    var resultText = "Connection failure. "
    if(response != nil){
        resultText += response.errorMsg
    }
    self.vc.updateView(resultText)
}
```

Calling an adapter procedure

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

1. To call a procedure, create a `WLResourceRequest` object and specify the path to the adapter and the HTTP method.

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

2. 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")
     ```

3. Call the procedure by using the `sendWithCompletionHandler` method. Supply a completion handler to manage the retrieved data.

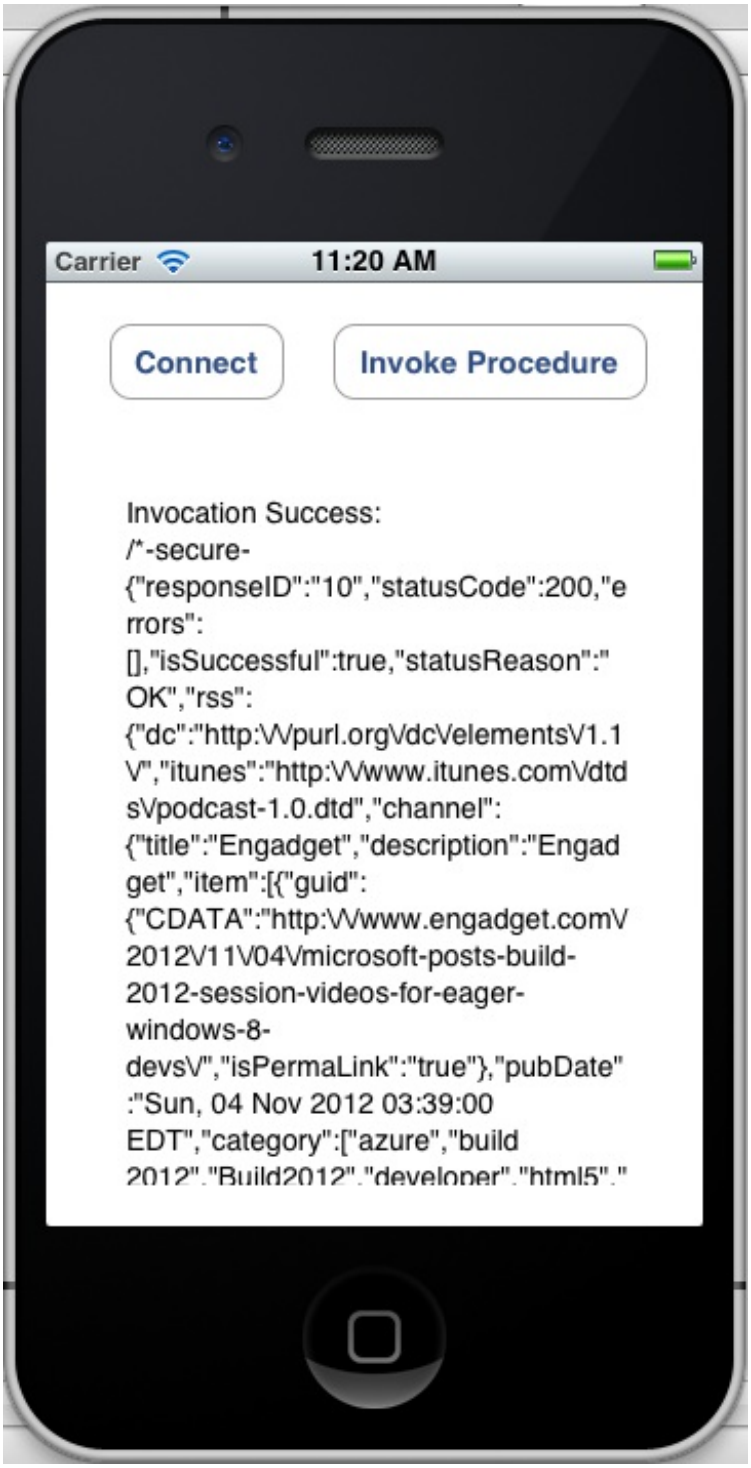
```
request.sendWithCompletionHandler { (WLResponse response, NSError error) -> Void in
    var resultText = ""
    if(error != nil){
        resultText = "Invocation failure."
        resultText += error.description
    }
    else if(response != nil){
        resultText = "Invocation success."
        resultText += response.responseText
    }
    self.updateView(resultText)
}
```

For more granular management of the retrieved data (such as non-text responses, PDF, etc), you can use the `sendWithDelegate` method and provide a delegate that conforms to both the `NSURLConnectionDataDelegate` and `NSURLConnectionDelegate` protocols.
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.

> Learn more about `WLResourceRequest` in the user documentation.

Sample application

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/InvokingAdapterProceduresSwift/tree/release71) the Native project.
- The `InvokingAdapterProcedures` project contains a **MobileFirst native API** that you can deploy to your MobileFirst Server instance.
- The `InvokingAdapterProceduresSwift` project contains a **native iOS Swift 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.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