Invoking adapter procedures from native Windows 8 applications

To create and configure a Windows 8 native project, first follow Tutorial Creating your first Native Windows 8 MobileFirst application (../../hello-world/creating-first-native-windows-8-mobilefirst-application/).

Initializing WLClient

```
WLClient client = WLClient.getInstance();
```

1. To establish a connection to MobileFirst Server, use the `connect` method by specifying the `MyConnectResponseListener` class instance as a parameter.

   ```
   client.connect(new MyConnectResponseListener(this));
   ```

   The `WLClient` instance tries to connect to the MobileFirst Server instance according to the properties of the `wlclient.properties` file.
   After the connection is established, it invokes one of the methods of the `MyConnectResponseListener` class.

2. Specify that the `MyConnectResponseListener` class implements the `WLResponseListener` interface.

   ```
   public class MyConnectResponseListener : WLResponseListener
   ```

   The `WLResponseListener` interface defines two methods:
   - `public void onSuccess (WLResponse response) { }`
   - `public void onFailure (WLFailResponse response) { }`

3. Use the previous methods to process connection success or connection failure.

Invoking an adapter procedure

After the connection is established with a MobileFirst Server instance, you can use the `WLClient` instance to invoke adapter procedures.

1. Create a `WLProcedureInvocationData` object with the adapter and procedure names.
2. Add the required parameters as an object array and set request options (for example: Invocation Context).
3. Get the existing `WLClient` instance and use it to invoke an adapter procedure.
4. Specify the `MyInvokeListener` class instance as a parameter.

   ```
   WLProcedureInvocationData invocationData = new WLProcedureInvocationData("RSSReader", "getStories");
   invocationData.setParameters(new Object[]{});
   String myContextObject = "InvokingAdapterProceduresWin8";
   WLRequestOptions options = new WLRequestOptions();
   options.setInvocationContext(myContextObject);
   WLClient.getInstance().invokeProcedure(invocationData, new MyInvokeListener(this), options);
   ```

Receiving a procedure response

After the procedure invocation is completed, the `WLClient` instance calls one of the methods of the `MyInvokeListener` class.
As before, you must specify that the `MyInvokeListener` class implements the `WLResponseListener` interface.

```
using IBM.Worklight;
namespace InvokingAdapterProceduresWin8{
   public class MyInvokeListener : WLResponseListene
r
   { }
{
```

The `onSuccess` and `onFailure` methods are invoked by the `WLClient` instance. The response object contains the response data. You can use its methods and properties to retrieve the required information.

```
public void onSuccess(WLResponse response)
{
   WLProcedureInvocationResult invocationResponse = ((WLProcedureInvocationResult) response)
;
   JObject items;
   try
   {
      items = invocationResponse.getResponseJSON();
      await dispatcher.RunAsync(CoreDispatcherPriority.Normal, () =>
      {
         myMainPage.AddTextToReceivedTextBlock("Response Success: " + items.ToString());
      });
   }
   catch (JsonReaderException e)
   {
       Debug.WriteLine("JSONException : " + e.Message);
   }<
}

public void onFailure(WLFailResponse response)
{
   await dispatcher.RunAsync(CoreDispatcherPriority.Normal, () =>
   {
      myMainPage.AddTextToReceivedTextBlock("Response failed: " + response.ToString());
   });
}
```

Sample application

Click to download (http://public.dhe.ibm.com/software/products/en/MobileFirstPlatform/docs/v700/InvokingAdapterProceduresNativeProject.zip) the Studio project.
Click to download (http://public.dhe.ibm.com/software/products/en/MobileFirstPlatform/docs/v700/InvokingAdapterProceduresWin8Project.zip) the Native project.

The sample contains two projects:
- The `InvokingAdapterProceduresNativeProject.zip` file contains a **MobileFirst Native API** to deploy to MobileFirst Server.
- The `InvokingAdapterProceduresWin8project.zip` file contains a **native Windows 8 application** that uses a MobileFirst native API library to communicate with a MobileFirst Server instance.

Make sure to update the `wlclient.properties` file in **InvokingAdapterProceduresWin8** with the relevant server settings.

Hello World
Connect
Invoke
Invoking Procedure...
Response Success: {
"statusCode": 200,
"errors": [],
"isSuccessful": true,
"statusReason": "OK",
"rss": {
"channel": {
"pubDate": "Thu, 15 Jan 2015 09:20:06 EST",
"title": "CNN.com - Top Stories",
"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": "image/jpeg",