

Resource request from native Android applications

fork and edit tutorial (<https://github.ibm.com/MFPSamples/DevCenter/tree/master/tutorials/en/foundation/7.1/server-side-development/invoking-adapter-procedures-native-android-applications.html>) | report issue (<https://github.ibm.com/MFPSamples/DevCenter/issues/new>)

Overview

To create and configure an Android native project, first follow the [Configuring a native Android application with the MobileFirst Platform SDK \(../hello-world/configuring-a-native-android-application-with-the-mfp-sdk/\)](#) 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. Create an instance of the `WLClient` class.

The `WLClient` instance requires a reference to the activity in which it is running.

```
WLClient client = WLClient.createInstance(context);
```

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

The `WLClient` instance tries to connect to the MobileFirst Server according to the properties of the `wlclient.properties` file.

After the connection is established, it invokes one of the methods of the `MyConnectListener` class.

3. Specify that the `MyConnectListener` class implements the `WLResponseListener` interface.

```
public class MyConnectListener implements WLResponseListener {
```

The `WLResponseListener` interface defines two methods:

```
- public void onSuccess (WLResponse response) { }  
- public void onFailure (WLFailResponse response) { }
```

4. Use these 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 `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}
```

```
URI adapterPath = new URI("/adapters/RSSReader/getFeed");
```

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

```
WLResourceRequest request = new WLResourceRequest(adapterPath,WLResourceRequest.GET);
```

3. Add the required parameters.

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

```
request.setQueryParameter("params",["MobileFirst_Platform"]);
```

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

```
request.setQueryParameter("param1","value1");  
request.setQueryParameter("param2","value2");
```

- Trigger the request with `.send()`.

Specify a `MyInvokeListener` class instance as a parameter.

You learn how to define this class instance in the next section.

```
request.send(new MyInvokeListener());
```

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.

Receiving a procedure response

After the procedure invocation is completed, the framework calls one of the methods of the `MyInvokeListener` class.

1. Specify that the `MyInvokeListener` class implements the `WLResponseListener` interface.

```
public class MyInvokeListener implements WLResponseListener {
```

The `WLClient` instance invokes the `onSuccess` and `onFailure` methods.

If the procedure invocation is successful, the `onSuccess` method of `MyInvokeListener` is invoked.

2. Use that method to get the data that is retrieved from the adapter. The `response` object contains the response data.

You can use its methods and properties to retrieve the required information.

```
public void onSuccess(WLResponse response) {
    String responseText = response.getResponseText();
    AndroidNativeApp.updateTextView("Adapter Procedure Invoked Successfully\n" + responseText);
}

public void onFailure(WLFailResponse response) {
    String responseText = response.getResponseText();
    AndroidNativeApp.updateTextView("Failed to Invoke Adapter Procedure\n" + responseText);
}
```

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/InvokingAdapterProceduresAndroid/tree/release71>) the Native project.

- The `InvokingAdapterProcedures` project contains a MobileFirst Native API to deploy to your MobileFirst Server instance.
- The `InvokingAdapterProceduresAndroid` project contains a native Android application that uses a MobileFirst native API library to communicate with MobileFirst Server.
- Make sure to update the `wlclient.properties` file in the native Android project with the required server settings.

