

# Form-based authentication in native Android applications

## Overview

This tutorial illustrates the native Android client-side authentication components for form-based authentication.

**Prerequisite:** Make sure that you read Form-based authentication (../) first.

This tutorial covers the following topics:

- Creating the client-side authentication components
- Sample application

## Creating the client-side authentication components

1. Create a native Android application and add the MobileFirst native APIs as explained in the documentation.
2. Add an activity, `LoginFormBasedAuth`, which handles and presents the login form.
3. Remember to add this activity to the `AndroidManifest.xml` file, too.

## MyChallengeHandler

Create a `MyChallengeHandler` class as a subclass of `ChallengeHandler`.

Your `MyChallengeHandler` class must implement `isCustomResponse`, which checks every custom response received from MobileFirst Server to verify whether this is the expected challenge.

```
public boolean isCustomResponse(WLResponse response) {
    if (response == null || response.getResponseText() == null ||
        response.getResponseText().indexOf("_security_check") == -1)
    {
        return false;
    }
    return true;
}
```

The `handleChallenge` method is called after the `isCustomResponse` method returns `true`. Here this method presents the login form.

```
public void handleChallenge(WLResponse response){
    if (!isCustomResponse(response)) {
        submitSuccess(response);
    } else {
        cachedResponse = response;
        Intent login = new Intent(parentActivity, LoginFormBasedAuth.class)
;
        parentActivity.startActivityForResult(login, 1);
    }
}
```

The `submitLogin` method is called by the login form. If the user asked to abort this action, use the `submitFailure()`

method, otherwise use the `submitLoginForm()` method to send input data to the authenticator.

```
public void submitLogin(int resultCode, String userName, String password, boolean back){  
    if (resultCode != Activity.RESULT_OK || back) {  
        submitFailure(cachedResponse);  
    } else {  
        HashMap<String, String> params = new HashMap<String, String>();  
        params.put("j_username", userName);  
        params.put("j_password", password);  
        submitLoginForm("/j_security_check", params, null, 0, "post");  
    }  
}
```

## Main activity

In the `MainActivity` class, connect to MobileFirst Server, register your `challengeHandler` object, and invoke the protected adapter procedure.

The procedure invocation triggers MobileFirst Server to send a challenge that will trigger the challenge handler.

```
final WLClient client = WLClient.createInstance(this)  
client.connect(new MyConnectionListener());  
challengeHandler = new AndroidChallengeHandler(this, realm);  
client.registerChallengeHandler(challengeHandler);  
invokeBtn = (Button) findViewById(R.id.invoke);  
invokeBtn.setOnClickListener(new View.OnClickListener() {  
    @Override  
    public void onClick(View v) {  
        //setMainText("Invoking...");  
        WLProcedureInvocationData invocationData = new WLProcedureInvocationData("DummyAdapter", "getSecretData");  
        WLRequestOptions options = new WLRequestOptions();  
        options.setTimeout(30000);  
        client.invokeProcedure(invocationData, new MyResponseListener(), options);  
    }  
});
```

## Sample application

Click to download

(<http://public.dhe.ibm.com/software/products/en/MobileFirstPlatform/docs/v700/NativeFormBasedAuthProject.zip>) the Studio project.

Click to download

(<http://public.dhe.ibm.com/software/products/en/MobileFirstPlatform/docs/v700/AndroidNativeFormBasedAuthProject.zip>) the Native project.

