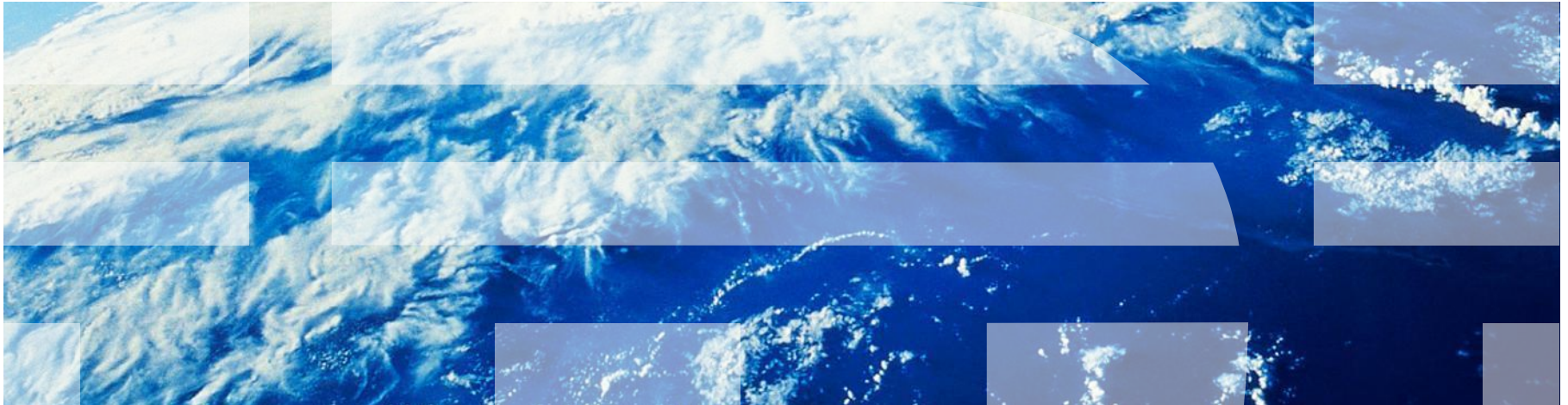


IBM Worklight Foundation V6.2.0 Getting Started

Form-based authentication in native Android applications



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Agenda

- Introduction to form-based authentication
- Configuring the authenticationConfig.xml file
- Creating the server-side authentication components
- Creating the client-side authentication components
- Examining the result
- Exercise

Introduction to form-based authentication

- In form-based authentication, the HTML code of a login form is returned in the server response when the application tries to access a protected resource.
- Although form-based authentication is best suited for desktop and web environments, where you actually display and use the returned login form, you can also use this authentication mode in mobile applications.
- To use form-based authentication, you must use a login module to validate the received credentials.
- In this module, you implement a simple form-based authentication mechanism that is based on a user name and a password.

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Configuring the authenticationConfig.xml file (1 of 2)

- The default **authenticationConfig.xml** file already contains a sample realm that is configured to use a form-based authenticator.

```
<realm loginModule="StrongDummy" name="SampleAppRealm">  
  <className>com.worklight.core.auth.ext.FormBasedAuthenticator</className>  
</realm>
```

- Notice the **StrongDummy** login module that is used for this realm.

```
<loginModule name="StrongDummy">  
  <className>com.worklight.core.auth.ext.NonValidatingLoginModule</className>  
</loginModule>
```

- **NonValidatingLoginModule** means that the user credentials are not validated. In other words: any combination of user name and password is valid.

For more information about additional login module types, see [Configuring login modules](#) in the product user documentation.

Configuring the authenticationConfig.xml file (2 of 2)

- Define a security test that uses the **SampleAppRealm**.
- You must use this security test to protect the adapter procedure, so make it a **<customSecurityTest>**.

```
<customSecurityTest name="DummyAdapter-securityTest">  
  <test isInternalUserID="true" realm="SampleAppRealm"/>  
</customSecurityTest>
```

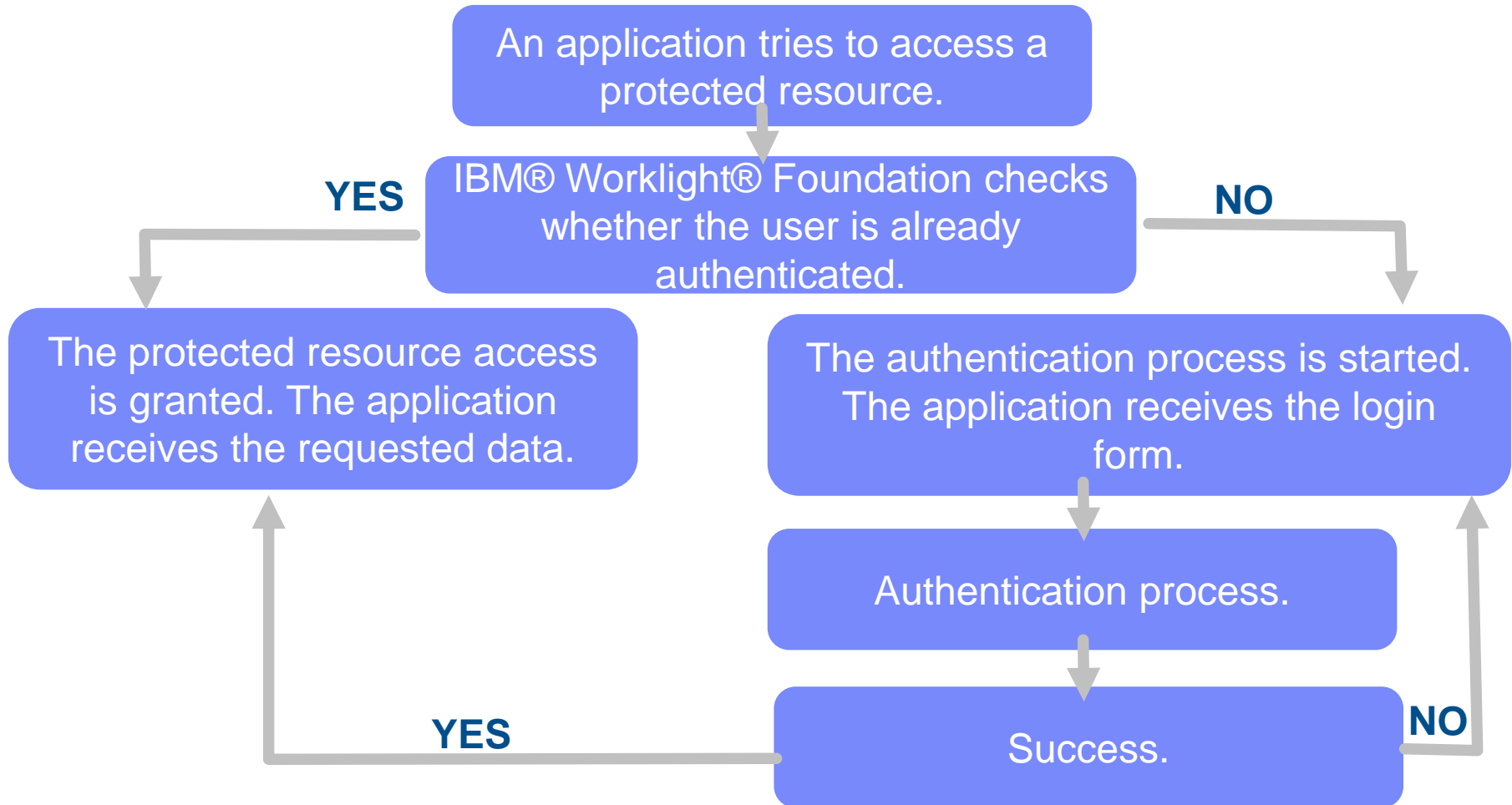
- Remember the security test name: you use it in the subsequent steps.

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Creating the server-side authentication components (1 of 2)

- The following diagram illustrates the form-based authentication process.



Creating the server-side authentication components (2 of 2)

- Create an adapter and name it **DummyAdapter**.
- Add a **getSecretData** procedure and protect it with the security test that you created in previous slides.

```
<procedure name="getSecretData" securityTest="DummyAdapter-securityTest"/>
```

- In this module, the **getSecretData** procedure returns some hardcoded value:

```
function getSecretData(){  
    return {  
        secretData: '123456'  
    };  
}
```

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Creating the client-side authentication components (1 of 5)

1. Create a native Android application and add the Worklight native APIs by following the documentation
2. Add an Activity, `LoginFormBasedAuth`, that handles and presents the login form
 - *Remember to add this Activity to the `AndroidManifest.xml` file, too.*
3. Create a `MyChallengeHandler` class as a subclass of `ChallengeHandler`.
`MyChallengeHandler` must implement 2 main methods:
 - `isCustomResponse`
 - `handleChallenge`Moreover, in the sample, the `submitLogin` method is added to present and handle the data from the form.

Creating the client-side authentication components (2 of 5)

- The `isCustomResponse` method

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

- This method checks every custom response that is received from Worklight Server to verify whether that is the expected challenge.

Creating the client-side authentication components (3 of 5)

- The `handleChallenge` method

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

- This method is called after the `isCustomResponse` method returns `true`.
Use this method to present the login form.

Creating the client-side authentication components (4 of 5)

- The `submitLogin` method

```
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");
    }
}
```

- If the user asks to abort this action, use the `submitFailure` method. Otherwise, use the `submitLoginForm` method to send the input data to the authenticator.

Creating the client-side authentication components (5 of 5)

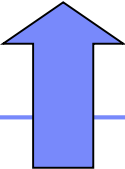
- In the Main Activity class, connect to Worklight Server, register your challengeHandler, and call the protected adapter procedure.

```
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) {
    WLProcedureInvocationData invocationData = new
WLProcedureInvocationData("DummyAdapter", "getSecretData");
    WLRequestOptions options = new WLRequestOptions();
    options.setTimeout(30000);
    client.invokeProcedure(invocationData, new MyResponseListener(), options);
}
});
```

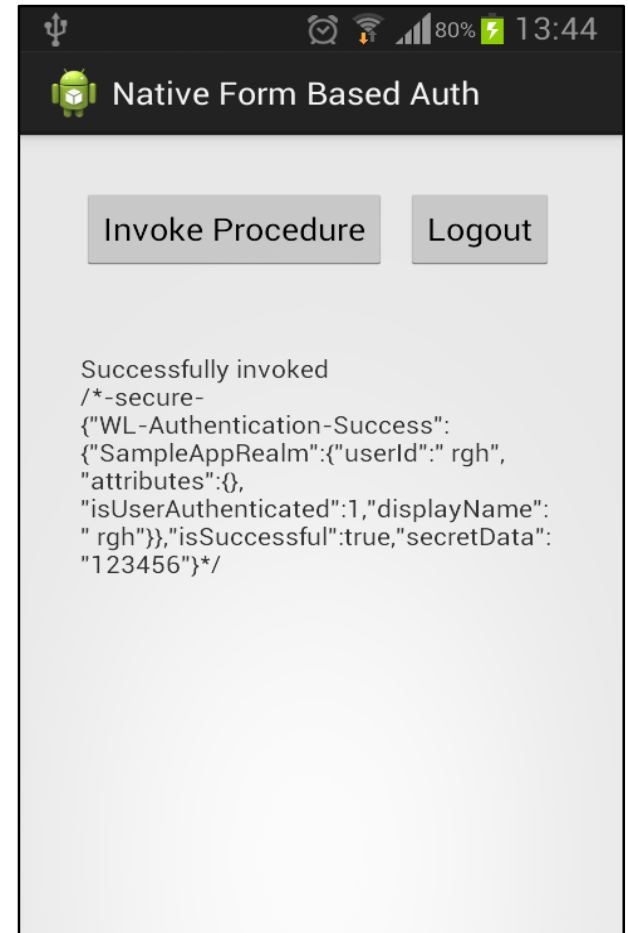
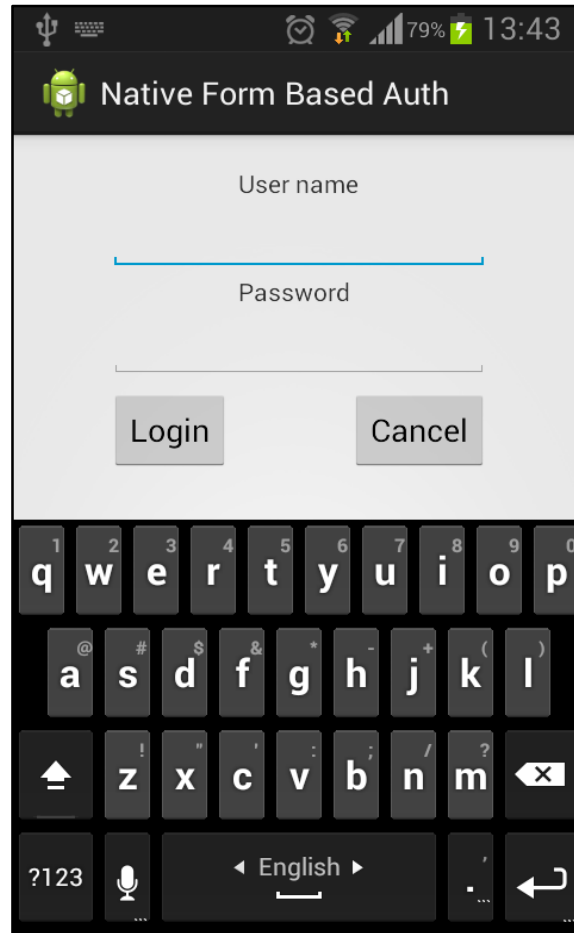
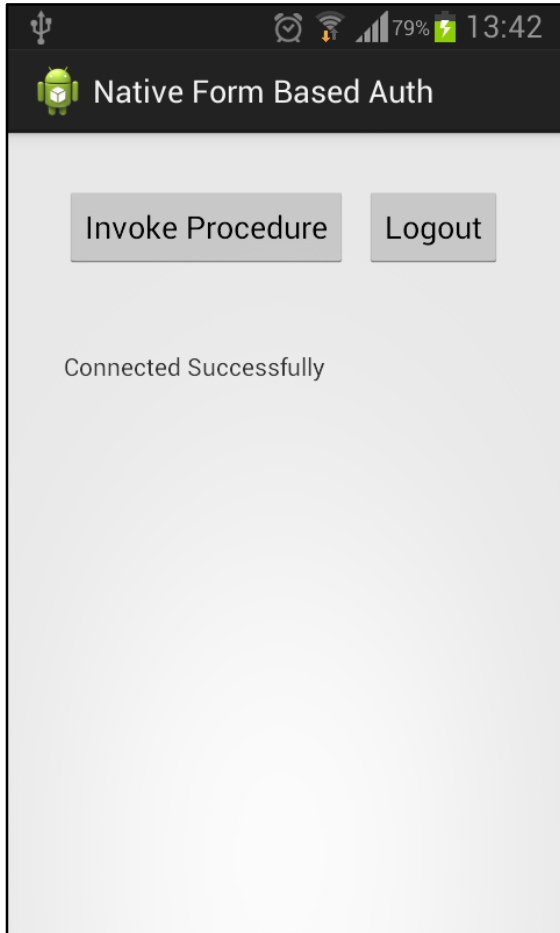


- The Procedure call triggers Worklight Server to send a challenge that triggers the challengeHandler.

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Examining the result



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Exercise

- Implement the form-based authentication that is described in this module.
- You can find the sample for this training module in the Getting Started page of the documentation website at <http://www.ibm.com/mobile-docs>

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