Custom Authentication in native Windows 8 applications

Overview

This tutorial illustrates the native Windows 8 Universal client-side authentication components for custom authentication. Make sure you read Custom Authentication (../) first.

Creating the client-side authentication components

Create a native Windows 8 Universal application and add the MobileFirst native APIs following the documentation.

CustomChallengeHandler

Create a `CustomChallengeHandler` class as a subclass of `ChallengeHandler`. `CustomChallengeHandler` should implement

- `isCustomResponse`
- `handleChallenge`

`isCustomResponse` checks every custom response received from MobileFirst Server to see if this is the challenge we are expecting.

```
public override bool isCustomResponse(WLResponse response)
{
    if (!(response.getResponseJSON()["authStatus"] == null) && response.getResponseJSON()["authStat
us"].ToString().CompareTo("required") == 0)
    {
        return true;
    }
    else
    {
        return false;
    }
}
```

`handleChallenge` method, is called after the `isCustomResponse` method returned true.
Within this method we present our login form. Different approaches may be adopted to present the login form.

```
public override void handleChallenge(JObject response)
{
  CoreApplication.MainView.CoreWindow.Dispatcher.RunAsync(CoreDispatcherPriority.Normal
,
async () =>
  {
    MainPage._this.LoginGrid.Visibility = Visibility.Visible;
  });
}
```

From the login form , credentials are passed to the `CustomChallengeHandler` class. The `submitLoginForm()` method is used to send our input data to the authenticator.

```
public void sendResponse(String username, String password)
{
   Dictionary<String, String> parms = new Dictionary<String, String>();
   parms.Add("username", username);
   parms.Add("password", password);
   submitLoginForm("/my_custom_auth_request_url", parms, null, 0, "post")
;
}
```

MainPage

Within the MainPage class connect to MobileFirst server, register your `challengeHandler` and invoke the protected adapter procedure.
The procedure invocation will trigger MobileFirst server to send a challenge that will trigger our `challengeHandler`.

```
WLClient wlClient = WLClient.getInstance();
CustomChallengeHandler ch = new CustomChallengeHandler();
wlClient.registerChallengeHandler((BaseChallengeHandler<JObject>)ch);
MyResponseListener mylistener = new MyResponseListener(this);
wlClient.connect(mylistener);
```

Since the native API not protected by a defined security test, there is no login form presented during server connection.
Invoke the protected adapter procedure and the login form is presented by the `challengeHandler`.

```
 WLResourceRequest adapter = new WLResourceRequest("/adapters/AuthAdapter/getSecretData", "GE
T");
 MyInvokeListener listener = new MyInvokeListener(this);
 adapter.send(listener);
```

Worklight Protocol

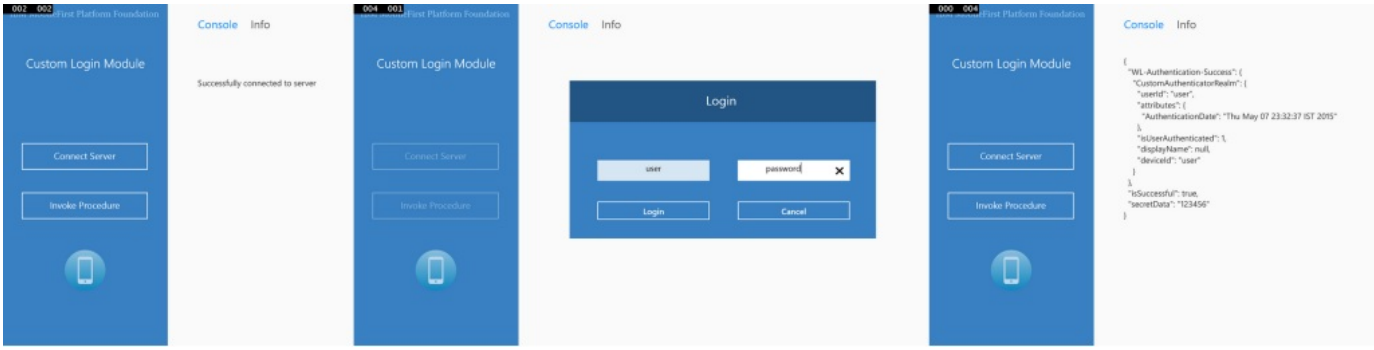
If your custom authenticator uses `WorklightProtocolAuthenticator`, some simplifications can be made:

- Subclass your challenge handler using `WLChallengeHandler` instead of `ChallengeHandler`. Note the `WL`.
- You no longer need to implement `isCustomResponse` as the challenge handler will automatically check that the realm name matches.
- `handleChallenge` will receive the challenge as a parameter, not the entire response object.
- Instead of `submitLoginForm`, use `submitChallengeAnswer` to send your challenge response as a JSON.
- There is no need to call `submitSuccess` or `submitFailure` as the framework will do it for you.

> For an example that uses `WorklightProtocolAuthenticator`, see the Remember Me (../../../advanced-topics/remember-me/) tutorial or this video blog post (file:////home/travis/build/MFPSamples/DevCenter/_site/blog/2015/05/29/ibm-mobilefirst-platform-foundation-custom-authenticators-and-login-modules/).

Sample application

Click to download (https://github.com/MobileFirst-Platform-Developer-Center/CustomAuth/tree/release71) the MobileFirst project.

Click to download (https://github.com/MobileFirst-Platform-Developer-Center/CustomAuthWin8/tree/release71) the Native project.

- The `CustomAuth` project contains a MobileFirst native API that you can deploy to your MobileFirst server.
- The `CustomAuthWin8` project contains a native Windows 8 Universal application that uses a MobileFirst native API library.
- Make sure to update the `worklight.plist` file in the native project with the relevant server settings.