

# Adapter-based authentication in native Windows 8 applications

## Overview

This tutorial illustrates the native Windows 8 Universal client-side authentication components for adapter-based authentication.

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

## Creating the client-side authentication components

Create a native Windows 8 Universal application and add the MobileFirst native APIs as explained in the documentation.

## CustomAdapterChallengeHandler

Create a `CustomAdapterChallengeHandler` class as a subclass of `ChallengeHandler`. Your `CustomAdapterChallengeHandler` class must implement the `isCustomResponse` and `handleChallenge` methods.

- The `isCustomResponse` method checks every custom response received from MobileFirst Server to verify whether this is the expected challenge.

```
public override bool isCustomResponse(WLResponse response)
{
    JObject responseJSON = response.getResponseJSON();
    if (response == null ||
        response.getResponseText() == null ||
        responseJSON["authStatus"] == null || String.Compare(responseJSON["authStatus"].ToString(), "complete", StringComparison.OrdinalIgnoreCase) == 0)
    {
        return false;
    }
    else
    {
        return true;
    }
}
```

- The `handleChallenge` method is called after the `isCustomResponse` method returns `true`. Use this method to present the login form. Different approaches are available.

```

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 `CustomAdapterChallengeHandler` class. The `submitAdapterAuthentication()` method is used to send input data to the authenticator.

```

public void sendResponse(String username, String password)
{
    WLProcedureInvocationData invData = new WLProcedureInvocationData("NativeAdapterBasedAda
pter", "submitAuthentication");
    invData.setParameters(new Object[] { username, password });
    submitAdapterAuthentication(invData, new WLRequestOptions());
}

```

## MainPage

Within the `MainPage` class, connect to MobileFirst Server, register your `challengeHandler` class, and invoke the protected adapter procedure.

The procedure invocation triggers MobileFirst Server to send a challenge that will trigger our `challengeHandler`.

```

WLClient wClient = WLClient.getInstance();
CustomAdapterChallengeHandler ch = new CustomAdapterChallengeHandler();
wClient.registerChallengeHandler((BaseChallengeHandler<JObject>)ch);
MyResponseListener mylistener = new MyResponseListener(this);
wClient.connect(mylistener);

```

Because the native API is not protected by a defined security test, no login form is presented during server connection.

Invoke the protected adapter procedure. The login form is presented by the challenge handler.

```

WLResourceRequest adapter = new WLResourceRequest("/adapters/AuthAdapter/getSecretData", "G
ET");
MyInvokeListener listener = new MyInvokeListener(this);
adapter.send(listener);

```

## Sample application

Click to download (<https://github.com/MobileFirst-Platform-Developer-Center/AdapterBasedAuth>) the MobileFirst project.

Click to download (<https://github.com/MobileFirst-Platform-Developer-Center/AdapterBasedAuthWin8>) the Native project.

- The AdapterBasedAuth project contains a MobileFirst native API that you can deploy to your MobileFirst server.
- The AdapterBasedAuthWin8 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.

