

# Adapter-based authentication in native iOS applications

This tutorial explains how to implement the client-side of adapter-based authentication in native iOS.

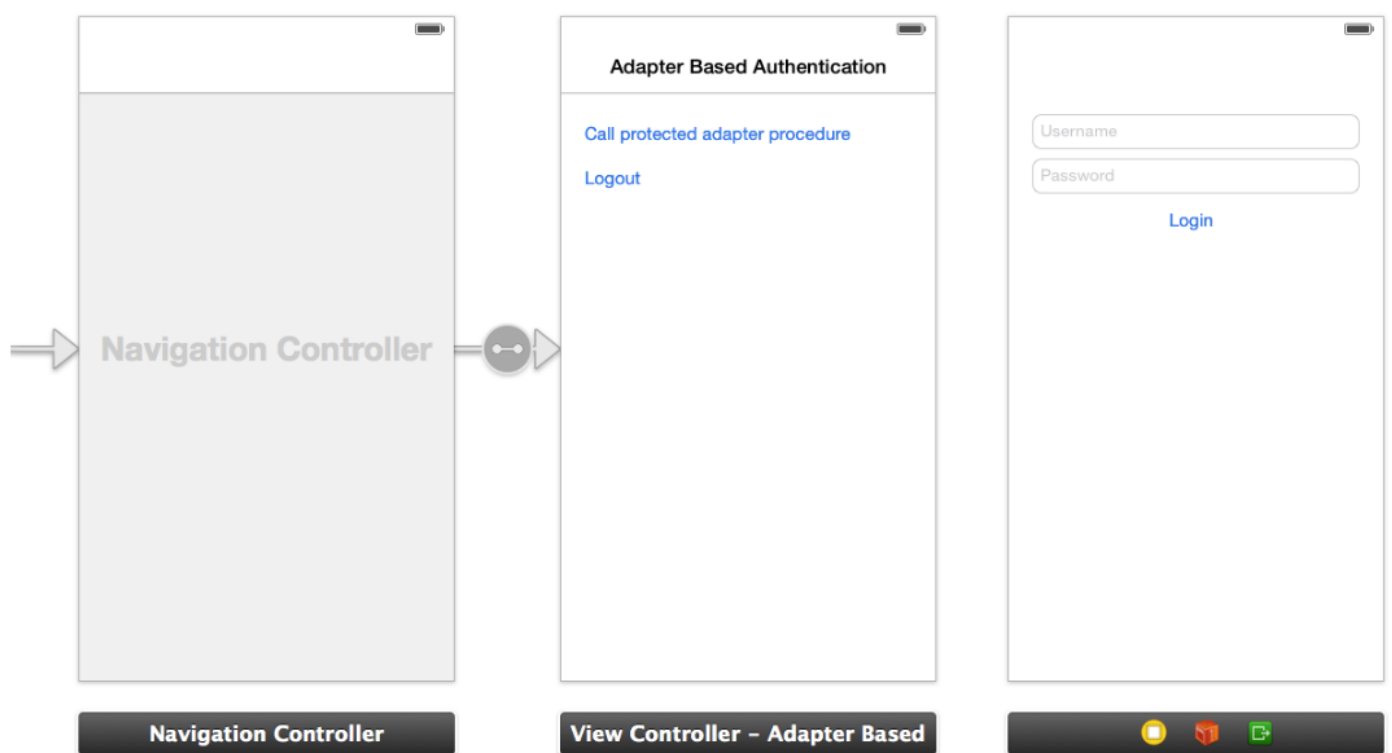
**Prerequisite:** Make sure that you read Adapter-based authentication (../) first.

## Implementing the client-side authentication

Create a native iOS application and add the MobileFirst native APIs as explained in Configuring a native iOS application with the MobileFirst Platform SDK (../hello-world/configuring-a-native-ios-with-the-mfp-sdk/).

### Storyboard

In your storyboard, add a view controller containing a login form.



### Challenge Handler

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

```
1 | @interface MyChallengeHandler : ChallengeHandler
```

- Call the `initWithRealm` method:

```
1 | @implementation MyChallengeHandler
2 | //...
3 | -(id)init{
4 |     self = [self initWithRealm:@"NativeAdapterBasedAuthRealm"];
5 |     return self;
6 | }
```

- Add implementation of the following `ChallengeHandler` methods to handle the adapter-based challenge:
  1. **`isCustomResponse` method:**

The `isCustomResponse` method is invoked each time a response is received from the MobileFirst Server. It is used to detect whether the response contains data that is related to this challenge handler. It must return either `true` or `false`.

```
1  @implementation MyChallengeHandler
2  //...
3  -(BOOL) isCustomResponse:(WLResponse *)response {
4      if(response && [response getResponseJson]){
5          if ([[response getResponseJson] objectForKey:@"authRequired"]) {
6              NSString* authRequired = (NSString*) [[response getResponseJson] objectForKey:@"authRequired"];
7              return [authRequired boolValue];
8          }
9      }
10     return false;
11 }
12 @end
```

## 2. `handleChallenge` method:

If `isCustomResponse` returns `true`, the framework calls the `handleChallenge` method. This function is used to perform required actions, such as hiding the application screen and showing the login screen.

```
1  @implementation MyChallengeHandler
2  //...
3  -(void) handleChallenge:(WLResponse *)response {
4      NSLog(@"A login form should appear");
5      LoginViewController* loginController = [self.vc.storyboard instantiateViewControllerWithIdentifier:@"LoginV
6      loginController.challengeHandler = self;
7      [self.vc.navigationController pushViewController:loginController animated:YES];
8  }
9  @end
```

## 3. `onSuccess` and `onFailure` methods:

At the end of the authentication flow, `onSuccess` or `onFailure` will be triggered

Call the `submitSuccess` method in order to inform the framework that the authentication process completed successfully and for the `onSuccess` handler of the invocation to be called.

Call the `submitFailure` method in order to inform the framework that the authentication process failed and for the `onFailure` handler of the invocation to be called.

```
1  @implementation MyChallengeHandler
2  //...
3  -(void) onSuccess:(WLResponse *)response {
4      NSLog(@"Challenge succeeded");
5      [self.vc.navigationController popViewControllerAnimated:YES];
6      [self submitSuccess:response];
7  }
8  -(void) onFailure:(WLFailResponse *)response {
9      NSLog(@"Challenge failed");
10     [self submitFailure:response];
11 }
```

In your login View Controller, when the user taps to submit the credentials, call the `submitAdapterAuthentication` method to send the credentials to the your adapter procedure.

```
1  @implementation LoginViewController<
2  //...
3  - (IBAction)login:(id)sender {
4      WLProcedureInvocationData *myInvocationData = [[WLProcedureInvocationData alloc]
5          initWithAdapterName:@"NativeAdapterBasedAdapter"
6          procedureName:@"submitAuthentication"];
7      myInvocationData.parameters = @[self.username.text, self.password.text];
8      [self.challengeHandler submitAdapterAuthentication:myInvocationData options:nil];
9  }
```

## Registering the challenge handler

Before calling the protected adapter, in order to listen to incoming challenges, make sure to register the challenge handler by using the `registerChallengeHandler` method of the `WLClient` class.

```
1  [[WLClient sharedInstance] registerChallengeHandler:[MyChallengeHandler alloc] initWithViewController:self ];
```

## Sample application

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(<http://public.dhe.ibm.com/software/products/en/MobileFirstPlatform/docs/v700/NativeAdapterBasedAuthProject.zip>)

the Studio project.

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the Swift project.

