

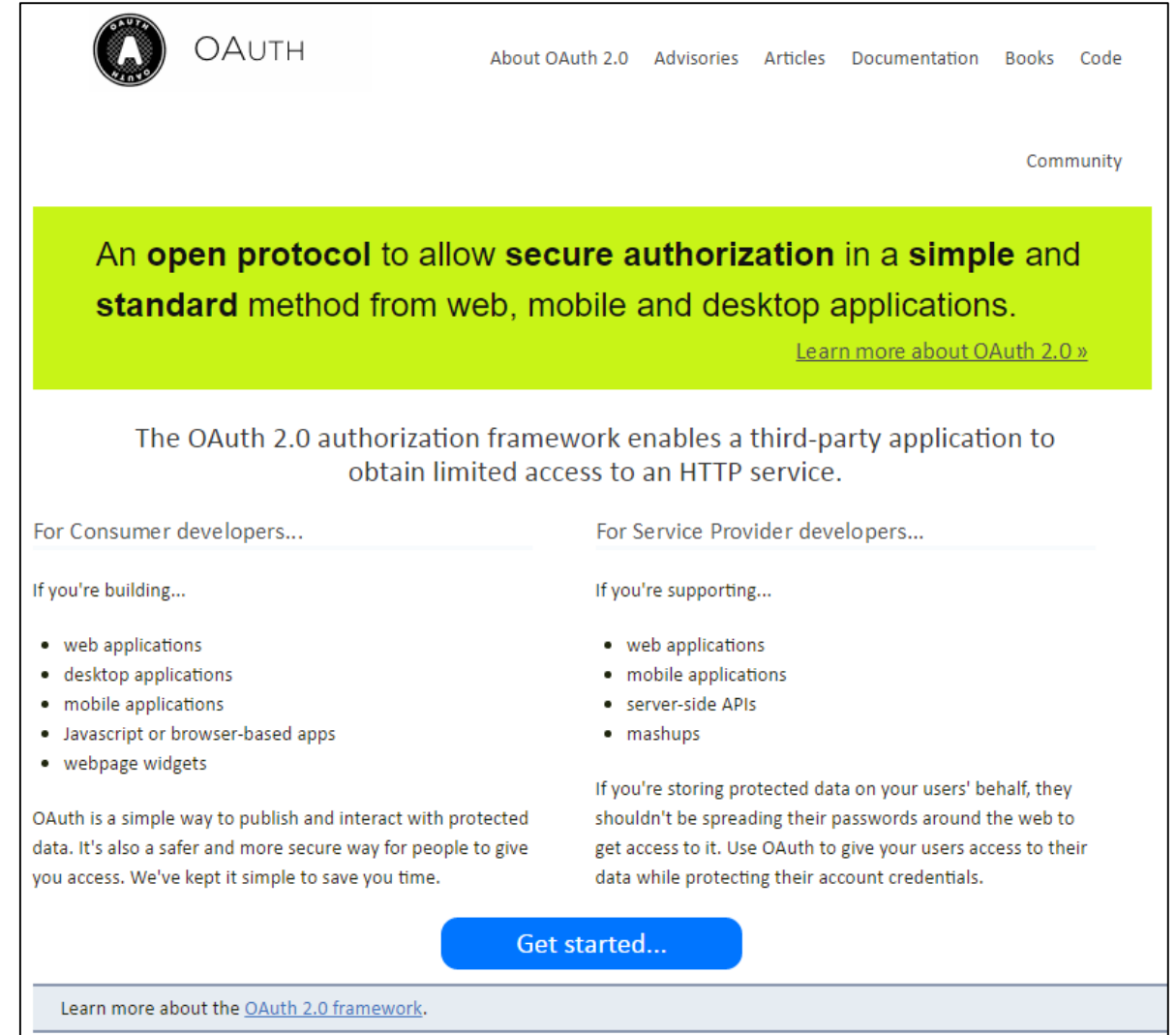
Week 4 Unit 5: More Engagement with Gamification

More Engagement with Gamification

OAuth fundamentals

OAuth fundamentals

- Open protocol
- Enables applications to obtain limited access to an HTTP service in a simple and standard method
- Delegates user authentication to the service that hosts the user account
- e.g. Facebook, Twitter,...



The screenshot shows the OAuth 2.0 website. At the top, there is a navigation bar with the OAuth logo, the word "OAUTH", and links for "About OAuth 2.0", "Advisories", "Articles", "Documentation", "Books", and "Code". A "Community" link is also present on the right. Below the navigation bar, a large green banner contains the text: "An **open protocol** to allow **secure authorization** in a **simple** and **standard** method from web, mobile and desktop applications." followed by a link "Learn more about OAuth 2.0 »". Below the banner, a paragraph states: "The OAuth 2.0 authorization framework enables a third-party application to obtain limited access to an HTTP service." The page is divided into two columns. The left column is titled "For Consumer developers..." and contains a sub-section "If you're building..." with a bulleted list: "web applications", "desktop applications", "mobile applications", "Javascript or browser-based apps", and "webpage widgets". Below this list, a paragraph explains: "OAuth is a simple way to publish and interact with protected data. It's also a safer and more secure way for people to give you access. We've kept it simple to save you time." The right column is titled "For Service Provider developers..." and contains a sub-section "If you're supporting..." with a bulleted list: "web applications", "mobile applications", "server-side APIs", and "mashups". Below this list, a paragraph explains: "If you're storing protected data on your users' behalf, they shouldn't be spreading their passwords around the web to get access to it. Use OAuth to give your users access to their data while protecting their account credentials." At the bottom of the page, there is a blue button labeled "Get started..." and a link "Learn more about the OAuth 2.0 framework."

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Scenario: Twitter integration for the ESPM application



Customer

User enters ESPM application and is redirected to Twitter login page



Sign up for Twitter

Authorize Dev_Testingg to use your account?

Username or email
Password
☐ Remember me [Forgot password?](#)

[Sign in](#) [Cancel](#)

This application will be able to:

- Read Tweets from your timeline.
- See who you follow, and follow new people.
- Update your profile.
- Post Tweets for you.
- Access your direct messages.

Will not be able to:

- See your Twitter password.

You can revoke access to any application at any time from the Applications tab of your Settings page.
By authorizing an application you continue to operate under Twitter's Terms of Service. In particular, some usage information will be shared back with Twitter. For more, see our Privacy Policy.

On authentication, user is redirected back from Twitter to the application with the Twitter Callback service. The service in turn calls the ESPM main page.

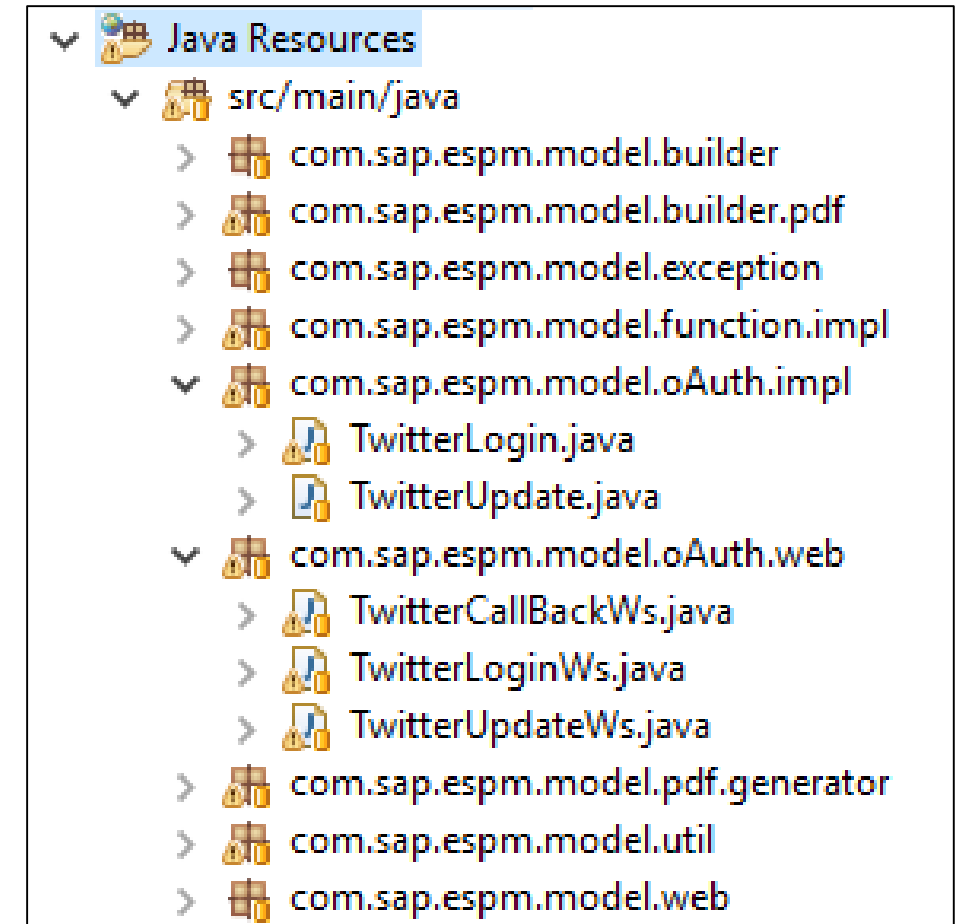


Customer

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Twitter integration for the ESPM application

- Use of the Twitter4j library
- Register ESPM Webshop application and receive “client credentials”
- Create Twitter Login service
- Create Twitter Callback service
- Create Twitter Update service
- Package under src/main/java: com.sap.espm.model.oAuth



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Hands-on

Let's tweet a bit

- Checkout Commit of the Twitter Integration branch
- Register your ESPM Webshop application with your Twitter account and receive "client credentials"
- Modify TwitterUpdateWs class statusMessage variable and put in a fixed string, e.g. ". @openSAP @saphcp @svenkohlhaas #developingjavabasedappsonsaphcprocks"
- Build and deploy to the cloud
- Create destination in the cockpit called twitterOAuth with your client credentials as properties
 - consumerApplicationKey
 - consumerApplicationSecret
- Log in with your Twitter account, go through the buying process, tweet about it and check your Twitter account

```
*TwitterUpdateWs.java
39
40 protected void doPost(HttpServletRequest request, HttpServletResponse response)
41     throws ServletException, IOException {
42     String body = null;
43     StringBuilder stringBuilder = new StringBuilder();
44     BufferedReader bufferedReader = null;
45     try {
46         InputStream inputStream = request.getInputStream();
47         if (inputStream != null) {
48             bufferedReader = new BufferedReader(new InputStreamReader(inputStream));
49             char[] charBuffer = new char[128];
50             int bytesRead = -1;
51             while ((bytesRead = bufferedReader.read(charBuffer)) > 0) {
52                 stringBuilder.append(charBuffer, 0, bytesRead);
53             }
54             } else {
55                 stringBuilder.append("");
56             }
57         } catch (IOException ex) {
58             throw ex;
59         } finally {
60             if (bufferedReader != null) {
61                 try {
62                     bufferedReader.close();
63                 } catch (IOException ex) {
64                     throw ex;
65                 }
66             }
67         }
68         body = stringBuilder.toString();
69         System.out.println("body");
70         try {
71             JSONObject statusObject = new JSONObject(body);
72             String statusMessage = statusObject.getString("status");
73             System.out.println(statusMessage);
74             TwitterUpdate.tweet(TwitterCallBackWs.accessToken, statusMessage);
75             System.out.println("Successfully updated the status in Twitter.");
76         } catch (twitter4j.JSONException e) {
77             System.out.println("JSON Request Object Error");
78         }
79     }
80 }
```


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What you've learned in this unit

- What the fundamentals of OAuth are
- How to integrate Twitter in the ESPM application
 - Scenario
 - Implementation
- How to work with the ESPM application when Twitter is integrated

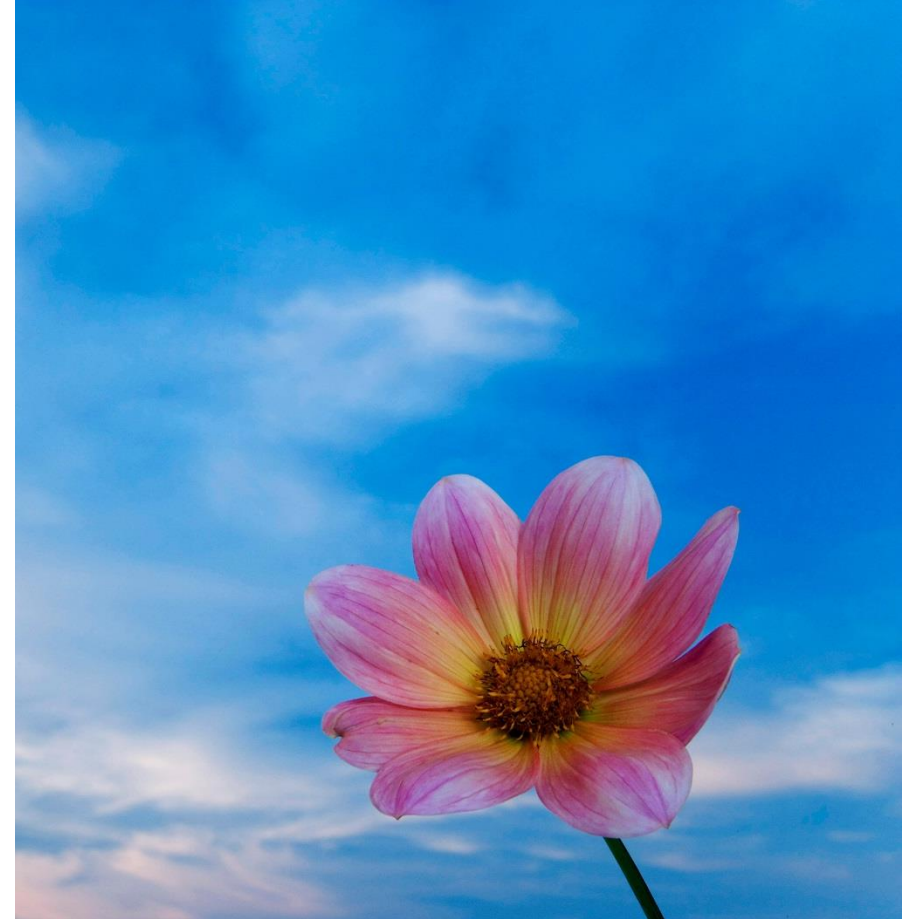


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Further reading

 Additional
Material

- [OAuth Community Site](#)





Thank you

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