

I have written this document to supplement the documentation on OAuth authentication with the Twitter endpoint which can be found here: <http://developer.twitter.com/pages/auth>. I found that when following the instructions in the referenced document it would have been very useful for me to also see example HTTP traces that go along with the authentication headers of the requests. So I traced out the HTTP requests for a successful authentication handshake and have included those in this document. This is a trace for an OOB handshake. They are the only traces I have as I am implementing an application that uses the OOB mechanism. Email me any questions: mikedice417@gmail.com

Step 1 - Request a request token from Twitter

Step 1 - Signing Base String

```
POST&https%3A%2F%2Fapi.twitter.com%2Foauth%2Frequest_token&oauth_callback%3Dooob%26oauth_consumer_key%3Dxxxxxxxxxxxxxxxxxxxxx%26oauth_nonce%3DWAUPOWYUPTMJUEZPMCEMGHVQKNZXRPPGECFCDEWX%26oauth_signature_method%3DHMAC-SHA1%26oauth_timestamp%3D1274724304%26oauth_version%3D1.0
```

Step 1 - HTTP Request

```
POST https://api.twitter.com/oauth/request_token HTTP/1.1
Authorization: OAuth oauth_callback="oob", oauth_consumer_key="xxxxxxxxxxxxxxxxxxxxx",
oauth_nonce="WAUPOWYUPTMJUEZPMCEMGHVQKNZXRPPGECFCDEWX", oauth_signature_method="HMAC-SHA1",
oauth_timestamp="1274724304", oauth_version="1.0",
oauth_signature="xsB2C0P6RzAt7p4w7IyCJty6UQ4%3D"
Host: api.twitter.com
Connection: Keep-Alive
```

Step 1 - HTTP Response – the payload contains the information needed for the next step.

```
HTTP/1.1 200 OK
Date: Mon, 24 May 2010 18:05:08 GMT
Server: hi
Status: 200 OK
X-Transaction: 1274724308-52100-8296
ETag: "4b0da13cdeb624d7111031a447ffa1db"
Last-Modified: Mon, 24 May 2010 18:05:08 GMT
X-Runtime: 0.01808
Content-Type: text/html; charset=utf-8
Content-Length: 147
Pragma: no-cache
X-Revision: DEV
Expires: Tue, 31 Mar 1981 05:00:00 GMT
Cache-Control: no-cache, no-store, must-revalidate, pre-check=0, post-check=0
Set-Cookie: k=131.107.0.108.1274724308143928; path=/; expires=Mon, 31-May-10 18:05:08 GMT; domain=.twitter.com
Set-Cookie: guest_id=127472430815252630; path=/; expires=Wed, 23 Jun 2010 18:05:08 GMT
Set-Cookie:
_twitter_sess=BAH7CToRdHJhbnNfcHJvbXB0MDoPY3JlYXRlZF9hdGwrCLlUfcsoAToHawQi%250AJTQ1YzE1ZmVh
NzEzYTc5ZDBmYWQ1NWZiMWFjNDg3ODI0IgpmbGFzaE1ld0idB%250AY3Rpb25Db250cm9sbGVyOjppGbfZaDo6Rmxhc2
hiYXNoewAGogpAdXNlZhsA--b9fccd32610969b877809b5652b7976436bc2349; domain=.twitter.com;
path=/
Vary: Accept-Encoding
Connection: close

oauth_token=7u7qY5avtFBP009h1rJnmoEgfp2g3avTb7pHEBDPw&oauth_token_secret=xxxxxxxxxaz0j6a
2CmphaEbmYGl6to2t7J8Ms&oauth_callback_confirmed=true
```

Step 2 – Navigate to sign-on page with user's browser.

The user needs to navigate a URL in their browser and log in to Twitter with their twitter credentials. Notice the URL was constructed with data I got back in the first step above (see yellow highlight). If the user logs in successfully, Twitter will return a pin code to the user. They need the PIN code for the next step. This is the URL the user logs into. Since this is done in the browser, I do not have HTTP traces for this step

`https://api.twitter.com/oauth/authorize?oauth_token=7u7qY5avtFBP009h1rJnmoEgfp2g3avTb7pHEBDPw`

Step 3 – Use the PIN code from Step 2 to request an Access Token.

The user has retrieved their PIN and gives it back to your code so you can complete the next authentication step. The use of the PIN code in the signing base string is highlighted in red.

```
signing base string:
POST&https%3A%2F%2Fapi.twitter.com%2Foauth%2Faccess_token&oauth_consumer_key%3Dxxxxxxxxxxxxxxxxxxxx
xoauth_nonce%3DAMCKAZHRGDJOIUUVEHBBKQJAXNOOHPIJNFYHRIQY%26oauth_signature_method%3DHMAC-
SHA1%26oauth_timestamp%3D1274724326%26oauth_token%3D7u7qY5avtFBP009h1rJnmoEgfp2g3avTb7pHEBDPw%26
oauth_verifier%3D6810931%26oauth_version%3D1.0
```

HTTP Request – here the PIN is used in the request

```
POST https://api.twitter.com/oauth/access_token HTTP/1.1
Authorization: OAuth oauth_consumer_key="xxxxxxxxxxxxxxxxxxxx",
oauth_nonce="AMCKAZHRGDJOIUUVEHBBKQJAXNOOHPIJNFYHRIQY", oauth_signature_method="HMAC-SHA1",
oauth_timestamp="1274724326", oauth_token="7u7qY5avtFBP009h1rJnmoEgfp2g3avTb7pHEBDPw",
oauth_verifier="6810931", oauth_version="1.0",
oauth_signature="mg44s0rq0d%2BCqdQ0%2BU0IWzUB7Qg%3d"
Host: api.twitter.com
```

HTTP Response – the payload of this response contains the credential information needed to make requests to the API.

```
HTTP/1.1 200 OK
Date: Mon, 24 May 2010 18:05:27 GMT
Server: hi
Status: 200 OK
X-Transaction: 1274724327-49996-6077
ETag: "3ef37ecdd60cb18e007bc0a17adad63c"
Last-Modified: Mon, 24 May 2010 18:05:27 GMT
X-Runtime: 0.03570
Content-Type: text/html; charset=utf-8
Content-Length: 165
Pragma: no-cache
X-Revision: DEV
Expires: Tue, 31 Mar 1981 05:00:00 GMT
Cache-Control: no-cache, no-store, must-revalidate, pre-check=0, post-check=0
Set-Cookie: k=131.107.0.108.1274724327273087; path=/; expires=Mon, 31-May-10 18:05:27 GMT; domain=.twitter.com
Set-Cookie: guest_id=127472432728228322; path=/; expires=Wed, 23 Jun 2010 18:05:27 GMT
Set-Cookie: _twitter_sess=BAh7CToRdHJhbnNfcHJvbXB0MDoPy3JlYXRlZF9hdGwrCH0ffcs0AToHawQi%250AJTMxMTJjNTM2YzhmMjFmOGQ0YjJmZThknZcxNmQyNTNhIgpmbGFzaEldoIdB%250AY3Rpb25Db250cm9sbGVyOjpbGbfZaDo6Rmxhc2hiYXNoewAGogpAdXNlZhsA--cadba0da5a32b04a67570448b4e62a9d73bb672c; domain=.twitter.com; path=/
Vary: Accept-Encoding
Connection: close
```

```
oauth_token=136131415-1kvYKixUP8kS7yq39cGqmruDzvsF7uOoLPSK7Eh1&oauth_token_secret=xxxxxxxxxxxxxxxxxx5J9qFLdHgmughLijx8&user_id=xxxxxxxxxxxx&screen_name=xxxxxxxxxxxx
```

Step 4 – Make a tweet

Rejoice! I am now logged in and have the Access Token I need to make a tweet.

There is something important to note in the signing base string below. I am trying to tweet the following message:

```
"tweeting a test for the community"
```

If I escape this string, it escapes to:

```
"tweeting%20a%20test%20for%20the%20community"
```

In order to use it in the signing base string, you have to escape this again so the ‘%’ chars in the string above would be escaped to ‘%25’ (the ASCII code for a ‘%’ char) and this is what you would get in the signing base string:

```
tweeting%2520a%2520test%2520for%2520the%2520community
```

Also note that on this particular request, on some days inclusion of the Expect: 100-Continue header in the HTTP Request would result in a response from Twitter saying that it could not process Expect: 100-continue. On other days, Twitter seemed to accept that header. I just take the least common denominator approach and leave it out. That seems to work all the time.

Signing Base String

```
POST&http%3A%2F%2Fapi.twitter.com%2F1%2Fstatuses%2Fupdate.xml&oauth_consumer_key%xxxxxxxxxxxxIrGJYFq%26oauth_nonce%3DEEUKYEDFPSAAQBEEXOWIBHUPFDXNBDUKMPRDJXS%26oauth_signature_method%3DHMAC-SHA1%26oauth_timestamp%3D1274724327%26oauth_token%3D136131415-1kvYKixUP8kS7yq39cGqmruDzvsF7uOoLPSK7Eh1%26oauth_version%3D1.0%26status%3Dtweeting%2520a%2520test%2520for%2520the%2520community
```

HTTP Request

```
POST http://api.twitter.com/1/statuses/update.xml HTTP/1.1
Authorization: OAuth oauth_consumer_key="bt7VuyYJ4adSHxIrGJYFq",
oauth_nonce="EEUKYEDFPSAAQBEEXOWIBHUPFDXNBDUKMPRDJXS", oauth_signature_method="HMAC-SHA1",
oauth_timestamp="1274724327", oauth_token="136131415-1kvYKixUP8kS7yq39cGqmruDzvsF7uOoLPSK7Eh1", oauth_version="1.0",
oauth_signature="JSouHKXnpAY1Pmph78gd1ZAbj%2Bw%3D"
Content-Type: application/x-www-form-urlencoded
Host: api.twitter.com
Content-Length: 50
```

```
status=tweeting%20a%20test%20for%20the%20community
```

HTTP Response

```
HTTP/1.1 200 OK
```

Via: 1.1 ADV-TMG-02
Connection: Keep-Alive
Proxy-Connection: Keep-Alive
Transfer-Encoding: chunked
Expires: Tue, 31 Mar 1981 05:00:00 GMT
Date: Mon, 24 May 2010 18:05:27 GMT
Content-Type: application/xml; charset=utf-8
ETag: "f31d0ba3bfe677be7e7c79f269cb7a28"-gzip
Server: hi
Status: 200 OK
X-Transaction: 1274724327-984-20842
Last-Modified: Mon, 24 May 2010 18:05:27 GMT
X-Runtime: 0.33024
Pragma: no-cache
X-Revision: DEV
Cache-Control: no-cache, no-store, must-revalidate, pre-check=0, post-check=0
Set-Cookie: k=131.107.0.108.1274724327543717; path=/; expires=Mon, 31-May-10 18:05:27 GMT; domain=.twitter.com
Set-Cookie: guest_id=127472432755157995; path=/; expires=Wed, 23 Jun 2010 18:05:27 GMT
Set-Cookie: lang=en; path=/
Set-Cookie:
_twitter_sess=BAH7CjoRdHJhbnNfcHJvbXB0MDoPY3JlYXRlZF9hdGwrCKKgfcsoAToMY3Ny%250AZl9pZCIlZmQ4NmQwOGY0OGMxNTMyOTM2ZjkxYTdkNTczY2JlOTk6B2lkIiV%250AZTc1ZjY2YjkxMDAxNDQ4YzFhZTU1MjNmNDgyZjUwYiIKZmxhc2hJQzonQWN0%250Aaw9uQ29udHJvbGxlcjo6Rmxhc2g6OkZsYXNoSGFzaHsABjokQHVzZWZWR7AA%253D%253D--c12eed2a14745982a7c38227f1b7d7a2b472dedd; domain=.twitter.com; path=/

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<?xml version="1.0" encoding="UTF-8"?>

<status>
 <created_at>Mon May 24 18:05:27 +0000 2010</created_at>
 <id>14638518811</id>
 <text>tweeting a test for the community</text>
 <source><a href="xxxxxxxxxxxxxxxxxxxxxxxx"
rel="nofollow">MikeDice417-Blog</source>
 <truncated>>false</truncated>
 <in_reply_to_status_id></in_reply_to_status_id>
 <in_reply_to_user_id></in_reply_to_user_id>
 <favorited>>false</favorited>
 <in_reply_to_screen_name></in_reply_to_screen_name>
 <user>
 <id>xxxxxxxxxx</id>
 <name>xxxxxx</name>
 <screen_name>xxxxxxxxxx</screen_name>
 <location>Estados Unidos</location>
 <description></description>

 <profile_image_url>http://a3.twimg.com/profile_images/844505539/xxxxxxxxx.jpg</profile_image_url>
 <url></url>
 <protected>>false</protected>
 <followers_count>1</followers_count>
 <profile_background_color>9ae4e8</profile_background_color>
 <profile_text_color>000000</profile_text_color>
 <profile_link_color>0000ff</profile_link_color>
 <profile_sidebar_fill_color>e0ff92</profile_sidebar_fill_color>
 <profile_sidebar_border_color>87bc44</profile_sidebar_border_color>
 <friends_count>8</friends_count>
 <created_at>Fri Apr 23 03:16:23 +0000 2010</created_at>
 <favourites_count>0</favourites_count>
 <utc_offset></utc_offset>
 <time_zone></time_zone>

 <profile_background_image_url>http://s.twimg.com/a/1274144130/images/themes/theme1/bg.png</profile_background_image_url>
 <profile_background_tile>>false</profile_background_tile>
 <notifications>>false</notifications>
 <geo_enabled>>false</geo_enabled>
 <verified>>false</verified>
 <following>>false</following>
 <statuses_count>36</statuses_count>
 <lang>en</lang>
 <contributors_enabled>>false</contributors_enabled>
</user>
<geo/>
<coordinates/>
<place/>

```
<contributors/>
</status>
0
```