

# Akana API Hook

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[Akana.com](http://Akana.com)

## Twitter-API-Hook

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API Hook using SOA Software's Products to interact with the Twitter API. Also, integrates with Twitter's OAuth authorization steps.

## Twitter API

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### About the API

- The Twitter API.
- API Documentation: [Twitter API Documents](#)

### Pre-Reqs

- Create a Twitter Developer account at [Twitter Developers](#) and define your application.
  - Click on the 'Create New App' button.
  - Enter the name of your application.
  - Enter a description for your application.
  - Enter the Website of your application.
  - If necessary, enter the Callback URL that if required for OAuth 1.0a
  - Accept the agreement and click on 'Create your Twitter application' button.
- You must install the pso extension custom policies
  - unzip the com.akana.pso.apihooks.extensions\_7.2.0.zip (available in this repository) into the /sm70 directory.
  - unzip the com.akana.pso.apihooks.technology.preview\_7.2.90.zip (available in this

repository) into the /sm70 directory.

- unzip the com.akana.pso.persistence\_7.2.0.zip (available in this repository) into the /sm70 directory.
- stop all PM and ND nodes
- Run the configurator in update mode for all PM and ND instances:
  - Run this command, depending on your environment:
    - Windows: <Gateway base dir>\sm70\bin\startup.bat configurator -  
Dsilent=true -DdeploymentName=Standalone -  
Dproperties=C:\\myprops.properties
    - UNIX/Linux: <Gateway base dir>/sm70/bin/startup.sh configurator -  
Dsilent=true -Dproperties=/export/home/username/myprops.properties
    - The myprops.properties path must be the fully qualified path, and the file contents will look like:
 

```
container.instance.name=<instance name, e.g. PM>
wizard.mode=update
```
- Using the SOA Admin Console, install the following Plug-ins in each PM container:
  - Akana PSO Persistence
- Using the SOA Admin Console, install the following Plug-ins in each ND container:
  - Akana APIHooks Enhancements
- Restart all PM and ND containers.

## Getting Started Instructions

### Download and Import

- Download org\_Twitter\_API\_Hook\_export.zip
- Download the migration.properties file, and edit it to replace the text with the 'Container Key' of the ND or ND cluster in your target PM.
  - The container key is found by going to the 'Details Tab' of the ND, or ND Cluster, defined in the Policy Manager Console. Looking at the 'Container Overview' tab on that page, copy the 'Container Key:' value.

The screenshot displays the SOA Policy Manager interface. On the left is the 'Organization Tree' showing a hierarchy of folders including Policies, Containers, Google to Trello Integration, SOA, SOA Software Policy Manager, SmartyStreetOrg, Processes, Scripts, OpenAPI-Common, Services, Contracts, Compliance Policies, Operational Policies, QoS Policies, and ND-Cluster. The 'ND-Cluster' folder is selected. On the right, the 'ND-Cluster' details panel is shown with the following information:

- Container Overview**
  - Container Type: SOA Software Container Cluster
  - Instance Name: ND-Cluster
  - Container Key: ND-Cluster** (highlighted with a red circle)
  - State: Started
  - Status: Normal
  - Description:
- Cluster Nodes**

Status	Container Key
	359f1c5a-d2e2-4d05-8ba3-c8247864
- Inbound Listeners**

Listener Name	URL
default-http0	http://win7-64-vm:80
- Outbound Configuration**

Outbound HTTPS certificate has not been provided. Select "Manage PKI"

- Login to Policy Manger, example: <https://>:
- Select the root 'Registry' organization and click on the 'Import Package' from the Action Portlet window on the right side of the screen
  - Click on the button to browse for the org\_Twitter\_API\_Hook\_export.zip archive file
  - Make sure to select the migrations.properties file.
  - Click OK button to start the importation of the hook.
- This will create a 'Twitter API Hook Organization' with the requisite artifacts to run the API.

## Verify Import

- Expand the service folder in the 'Twitter API Hook' you imported and find

'Twitter\_API\_vs0'

## Activate Anonymous Contract

- Expand the contracts folder in the 'Twitter API Hook' you imported and find the 'Twitter Anonymous' contract under the 'Provided Contracts' folder.
- Click on the 'Activate Contract' workflow activity in the right hand Activities portlet.
- Ensure that the status changes to 'Workflow is Completed'

## Configure Security

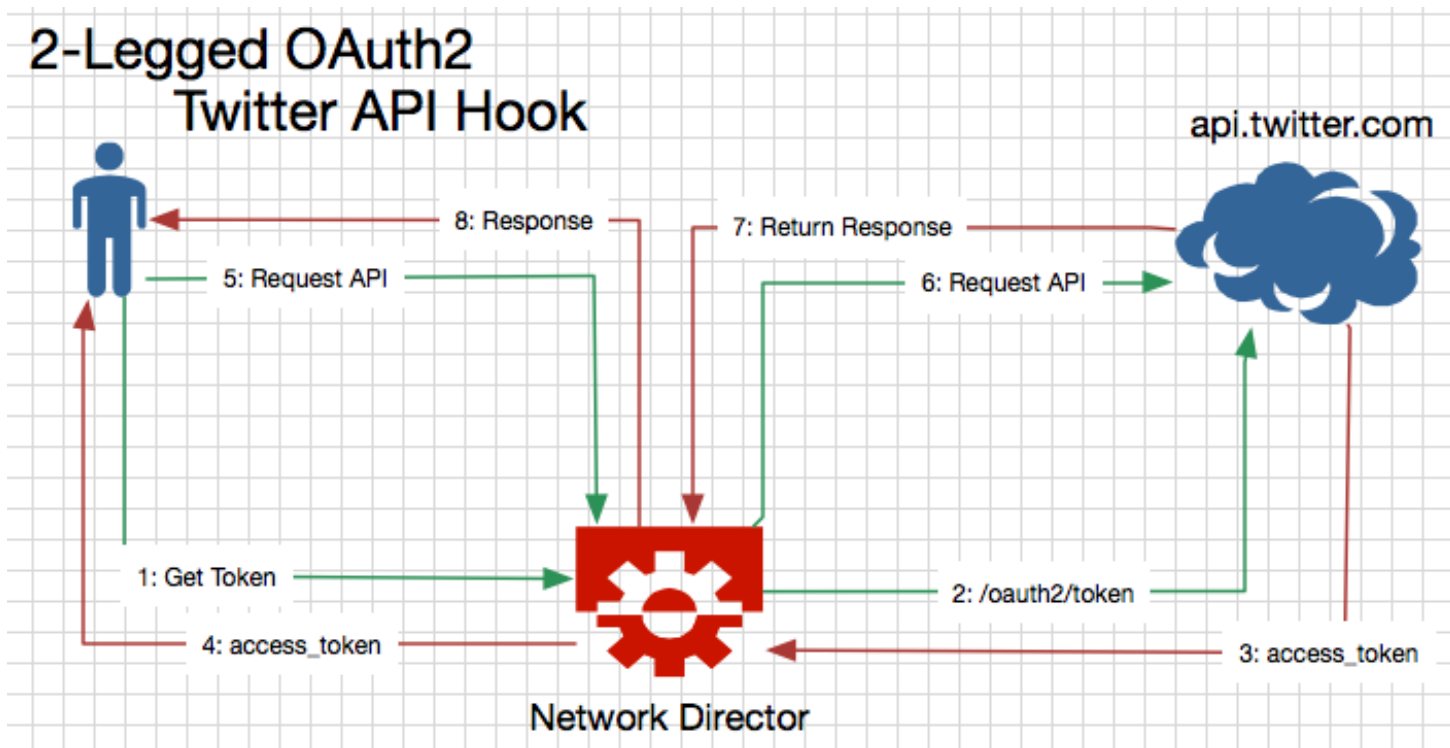
- Go to Twitter API Hook --> Policies --> Operational Policies --> ProcessVariables policy
  - Click 'modify' in the XML Policy Tab. An XML Policy content editor dialog will be displayed.
  - Change the value of the 'redirectURI' element to be the 'Redirect URL' value you added in the Twitter Developers Application Console, from above.
  - Save the changes
  - Click on the 'Activate Policy' workflow activity in right hand Activities portlet.
  - Validate that the status changes to 'State: Active'

## Verify Connectivity

Twitter API offers using 2-legged OAuth2 to consume specific API's. Akana Software's Twitter API Hook are successfully authenticated using Twitter's OAuth2 API's.

The figure below shows the entire OAuth2 2-Legged Application-Only flow:

## 2-Legged OAuth2 Twitter API Hook



Steps:

1-4) The consuming application requests an access token to use Twitter API's via Akana Software's API Gateway. Twitter expects the api key and api secret to be passed in a Basic Authentication header on the message. The grant type is a required parameter with the value of 'client\_credentials':

- Request:

```

POST /oauth2/token HTTP/1.1
Accept-Encoding: gzip,deflate
Content-Type: application/x-www-form-urlencoded
Authorization: Basic eHlXeTUxZmFiYnpaMlBRRktvTVlJUDJVd3p2d2dxbjFRcU91d3E2UWdvRE54
Content-Length: 29
Host: enord-macbook-pro.local:9920
Connection: Keep-Alive
User-Agent: Apache-HttpClient/4.1.1 (java 1.5)
  
```

- Response:

```

HTTP/1.1 200 OK
Content-Type: application/json;charset=utf-8
Cache-Control: no-cache, no-store, must-revalidate, pre-check=0, post-check=0
content-disposition: attachment; filename=json.json
Date: Mon, 18 May 2015 13:25:32 GMT
Expires: Tue, 31 Mar 1981 05:00:00 GMT
  
```

```

Last-Modified: Mon, 18 May 2015 13:25:32 GMT
ml: A
Set-Cookie: guest_id=v1%3A143195553271495424;Domain=.twitter.com;Path=/;Expires=
status: 200 OK
strict-transport-security: max-age=631138519
x-connection-hash: 367252cdcf4c0f282032293078848c3c
x-content-type-options: nosniff
x-frame-options: SAMEORIGIN
x-response-time: 17
x-transaction: ef6f24c4ddbfc530
x-tsa-request-body-time: 0
x-twitter-response-tags: BouncerCompliant
x-ua-compatible: IE=edge,chrome=1
x-xss-protection: 1; mode=block
Transfer-Encoding: chunked
Server: Jetty(7.6.10.v20130312)

```

```

{"token_type":"bearer","access_token":"AAAAAAAAAAAAAAAAAAAAArPfgAAAAAAEbfGdNpuD]

```

5-8) The consuming application requests an actual API using the access token that was returned from Twitter's OAuth2 call:

- Request:

```

GET /twitterapihook/statuses/user_timeline.json?count=100&screen_name=twitterapi
Authorization: Bearer AAAAAAAAAAAAAAAAAAAAAArPfgAAAAAAEbfGdNpuD1%2FYCIC7Dx0%2FGgk
Accept-Encoding: gzip
Host: enord-macbook-pro.local:9920
Connection: Keep-Alive
User-Agent: Apache-HttpClient/4.1.1 (java 1.5)

```

- Response:

```

[
  {
    "created_at": "Tue Apr 21 08:57:15 +0000 2015",
    "id": 590439141420224512,
    "id_str": "590439141420224512",
    "text": "API updates for Direct Message options https://t.co/RXjGMkCbbi",
    "source": "<a href=\"http://itunes.apple.com/us/app/twitter/id409789998?mt=12\"'
    "truncated": false,
    "in_reply_to_status_id": null,

```

data:text/html;charset=utf-8,%3Ch1%20style%3D%22box-sizing%3A%20border-box%3B%20font-size%3A%202.25em%3B%20margin-top%3A%200px%20!impo... 7/8

```

    "profile_link_color": "0084B4",
    "profile_sidebar_border_color": "C0DEED",
    "profile_sidebar_fill_color": "DDEEF6",
    "profile_text_color": "333333",
    "profile_use_background_image": true,
    "default_profile": false,
    "default_profile_image": false,
    "following": null,
    "follow_request_sent": null,
    "notifications": null
  },
  "geo": null,
  "coordinates": null,
  "place": null,
  "contributors": null,
  "retweet_count": 95,
  "favorite_count": 99,
  "entities": {
    "hashtags": [],
    "symbols": [],
    "user_mentions": [],
    "urls": [
      {
        "url": "https://t.co/RXjGMkCbbi",
        "expanded_url": "https://twittercommunity.com/t/api-updates-for-direct-me",
        "display_url": "twittercommunity.com/t/api-updates-...",
        "indices": [
          39,
          62
        ]
      }
    ]
  },
  "favorited": false,
  "retweeted": false,
  "possibly_sensitive": false,
  "lang": "en"
}
]

```

## Reference

### Twitter Application-Only