Flume Set Up on Cloudera CDH3

Download flume:

Command:wget http://apache.mirrors.hoobly.com/flume/1.4.0/apache-flume-1.4.0-bin.tar.gz

```
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cloudera@cloudera-vm:~$ wget http://apache.mirrors.hoobly.com/flume/1.4.0/apache-flume-1.4.0-bin.tar.gz

© © cloudera@cloudera-vm:~

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cloudera@cloudera-vm:~$ wget http://apache.mirrors.hoobly.com/flume/1.4.0/apache-flume-1.4.0-bin.tar.gz

--2013-08-05 02:57:07-- http://apache.mirrors.hoobly.com/flume/1.4.0/apache-flume-1.4.0-bin.tar.gz

Resolving apache.mirrors.hoobly.com... 66.160.172.98

Connecting to apache.mirrors.hoobly.com|66.160.172.98|:80... connected.

HTTP request sent, awaiting response... 200 0K

Length: 60965956 (58M) [application/x-gzip]

Saving to: `apache-flume-1.4.0-bin.tar.gz'

| 101,890 | 11.4K/s eta 89m 17s |
```

Check whether the flume tar is present or not:

Command: Is

```
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cloudera@cloudera-vm:~$ ls

apache-flume-1.4.0-bin.tar.gz

cloudera

mysql-connector-java-5.0.8.tar.gz

oraosch-2.2.0.zip

oraloader-2.2.0.x86_64.zip

student
```

Create flume-ng directory:

Command:sudomkdir /usr/lib/flume-ng

```
❷ □ cloudera@cloudera-vm:~

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cloudera@cloudera-vm:~$ sudo mkdir /usr/lib/flume-ng
```

Copy the flume tar to flume-ng directory:

Command:sudocp -r apache-flume-1.4.0-bin.tar.gz /usr/lib/flume-ng/

```
⊗ □ cloudera@cloudera-vm: ~

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cloudera@cloudera-vm:~$ sudo cp -r apache-flume-1.4.0-bin.tar.gz /usr/lib/flume-ng/
```

Check whether flume tar is copied or not:

Command: ls /usr/lib/flume-ng/

Change directory to flume-ng:

Command: cd /usr/lib/flume-ng/

```
⊗ □ ■ cloudera@cloudera-vm: ~

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cloudera@cloudera-vm:~$ cd /usr/lib/flume-ng/
```

Extract file from flume tar:

Command:sudo tar –xvf /usr/lib/flume-ng/apache-flume-1.4.0-bin.tar.gz

```
❷ெ@ cloudera@cloudera-vm:/usr/lib/flume-ng

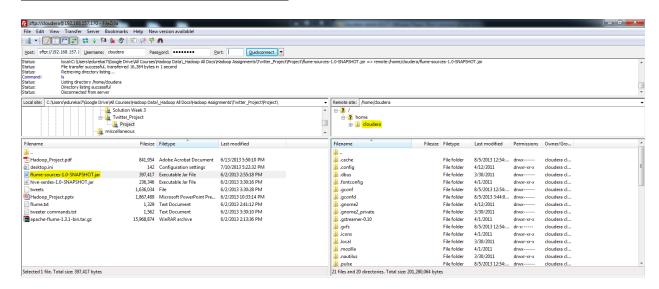
File Edit View Search Terminal Help

cloudera@cloudera-vm:/usr/lib/flume-ng$ sudo tar -xvf /usr/lib/flume-ng/apache-flume-1.4.0-bin.tar.gz
```

Check whether flume files are extracted or not:

Command: Is

Move flume-sources-1.0-SNAPSHOT.jar to cloudera directory using FTP client from your Windows



Move the file from cloudera directory to lib directory of apache flume:

Command:sudo mv /home/cloudera/flume-sources-1.0-SNAPSHOT.jar /usr/lib/flume-ng/apache-flume-1.4.0-bin/lib/

```
cloudera@cloudera-vm:/usr/lib/flume-ng

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cloudera@cloudera-vm:/usr/lib/flume-ng$ sudo mv /home/cloudera/flume-sources-1.0-SNAPSHOT.jar /usr/lib/flume-ng/apache-flume-1.4.0-bin/lib/
```

<u>Check whether flume SNAPSHOT has moved to the lib folder of apache flume:</u>

Command: ls /usr/lib/flume-ng/apache-flume-1.4.0-bin/lib/flume-*

```
cloudera@cloudera-vm:/usr/lib/flume-ng$ ls /usr/lib/flume-ng/apache-flume-1.4.0-bin/lib/flume-x/
    /usr/lib/flume-ng/apache-flume-1.4.0-bin/lib/flume-avro-source-1.4.0.jar
    /usr/lib/flume-ng/apache-flume-1.4.0-bin/lib/flume-file-channel-1.4.0.jar
    /usr/lib/flume-ng/apache-flume-1.4.0-bin/lib/flume-irc-sink-1.4.0.jar
    /usr/lib/flume-ng/apache-flume-1.4.0-bin/lib/flume-jdbc-channel-1.4.0.jar
    /usr/lib/flume-ng/apache-flume-1.4.0-bin/lib/flume-jdbc-channel-1.4.0.jar
    /usr/lib/flume-ng/apache-flume-1.4.0-bin/lib/flume-ng-configuration-1.4.0.jar
    /usr/lib/flume-ng/apache-flume-1.4.0-bin/lib/flume-ng-core-1.4.0.jar
    /usr/lib/flume-ng/apache-flume-1.4.0-bin/lib/flume-ng-elasticsearch-sink-1.4.0.jar
    /usr/lib/flume-ng/apache-flume-1.4.0-bin/lib/flume-ng-hbase-sink-1.4.0.jar
    /usr/lib/flume-ng/apache-flume-1.4.0-bin/lib/flume-ng-log4jappender-1.4.0.jar
    /usr/lib/flume-ng/apache-flume-1.4.0-bin/lib/flume-ng-morphline-solr-sink-1.4.0.jar
    /usr/lib/flume-ng/apache-flume-1.4.0-bin/lib/flume-ng-sdk-1.4.0.jar
    /usr/lib/flume-ng/apache-flume-1.4.0-bin/lib/flume-scribe-source-1.4.0.jar
    /usr/lib/flume-ng/apache-flume-1.4.0-bin/lib/flume-scribe-source-1.4.0.jar
    /usr/lib/flume-ng/apache-flume-1.4.0-bin/lib/flume-sources-1.0-SNAPSHOT.jar
    /usr/lib/flume-ng/apache-flume-1.4.0-bin/lib/flume-sources-1.0-SNAPSHOT.jar
    /usr/lib/flume-ng/apache-flume-1.4.0-bin/lib/flume-sources-1.0-SNAPSHOT.jar
    /usr/lib/flume-ng/apache-flume-1.4.0-bin/lib/flume-sources-1.0-SNAPSHOT.jar
    /usr/lib/flume-ng/apache-flume-1.4.0-bin/lib/flume-sources-1.0-SNAPSHOT.jar
```

Create flume.env.sh file in the conf directory of apache flume:

 $\label{lem:command:sudocp / usr/lib/flume-ng/apache-flume-1.4.0-bin/conf/flume-env.sh.template / usr/lib/flume-ng/apache-flume-1.4.0-bin/conf/flume-env.sh$

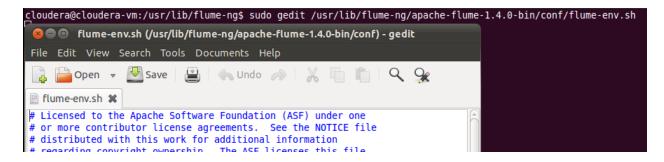
```
© □ cloudera@cloudera-vm:/usr/lib/flume-ng

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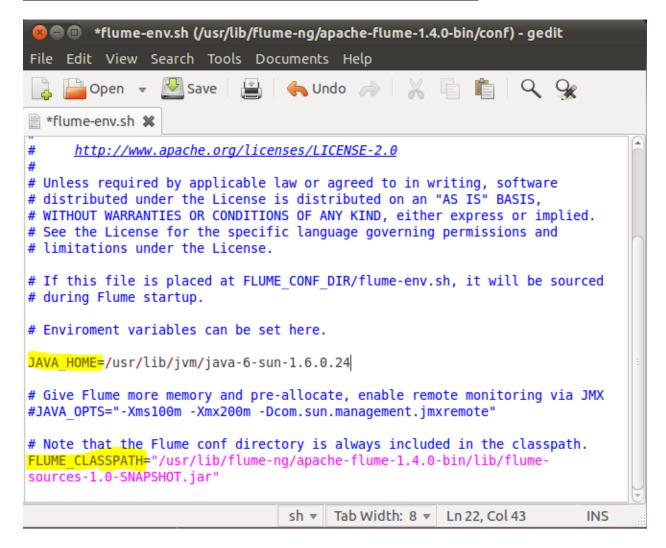
cloudera@cloudera-vm:/usr/lib/flume-ng$ sudo cp /usr/lib/flume-ng/apache-flume-1.4.0-bin/conf/flume-env.sh.template /usr/lib/flume-ng/apache-flume-1.4.0-bin/conf/flume-env.sh
```

Open flume-env.sh:

Command:sudogedit /usr/lib/flume-ng/apache-flume-1.4.0-bin/conf/flume-env.sh

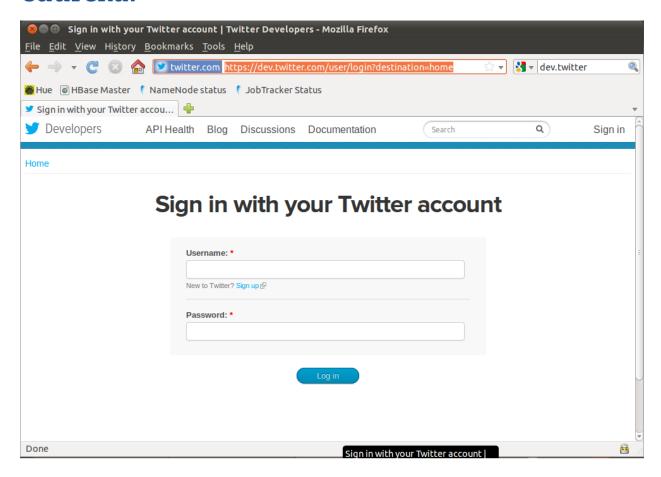


Edit flume-env.sh according to the below snapshot:



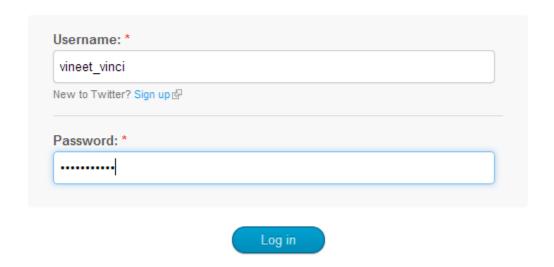
Open a Browser and go to the below URL:

URL:https://dev.twitter.com/user/login?destination=home

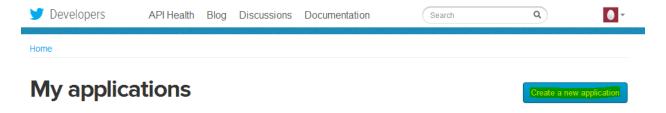


Enter your Twitter account credentials:

Sign in with your Twitter account



Create a new application:

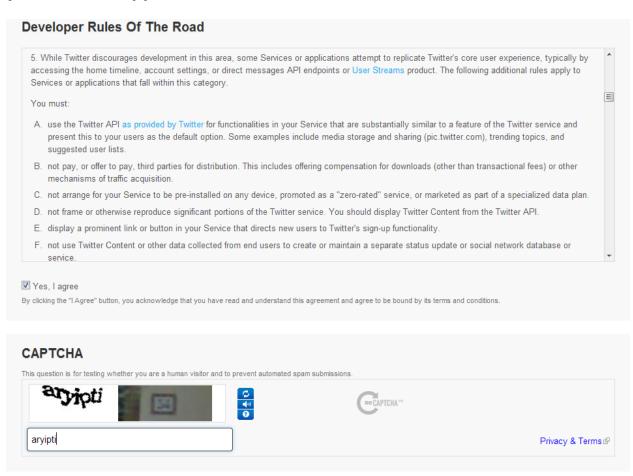


Enter all the details in the application:

Create an application

Name: " MyApp_Edureka| Your application name. This is used to attribute the source of a tweet and in user-facing authorization screens. 32 characters max. Description: " Give a Brief Description Your application description, which will be shown in user-facing authorization screens. Between 10 and 200 characters max. Website: " http://www.yahoo.com/ Your application's publicly accessible home page, where users can go to download, make use of, or find out more information about your application. This fully-qualified URL is used in the source attribution for tweets created by your application and will be shown in user-facing authorization screens. (If you don't have a URL yet, just put a placeholder here but remember to change it later.) Callback URL: Where should we return after successfully authenticating? For @Anywhere applications, only the domain specified in the callback will be used. OAuth 1 0a applications should explicitly specify their cauxth_callback URL on the request token step, regardless of the value given here. To restrict your application from using callbacks, leave this field blank.

<u>Check Yes, I agree and after entering the CAPTCHA click on Create your Twitter application:</u>



Create your Twitter application

Click on Create my access token:

OAuth settings

Your application's OAuth settings. Keep the "Consumer secret" a secret. This key should never be human-readable in your application.

| Access level | Read-only About the application permission model |
|----------------------|--|
| Consumer key | Op8DkYUhQmn8uRt7C71w |
| Consumer secret | G04dAE5OaHeqUEh6VZoF0MAC2YMcgkgu8VpWaJam8 |
| Request token URL | https://api.twitter.com/oauth/request_token |
| Authorize URL | https://api.twitter.com/oauth/authorize |
| Access token URL | https://api.twitter.com/oauth/access_token |
| Callback URL | None |
| Sign in with Twitter | No |

Your access token

It looks like you haven't authorized this application for your own Twitter account yet. For your convenience, we give you the opportunity to create your OAuth access token here, so you can start signing your requests right away. The access token generated will reflect your application's current permission level.

Create my access token

Refresh the Page: The highlighted part in the snapshot will be used in flume.conf:

OAuth settings

Your application's OAuth settings. Keep the "Consumer secret" a secret. This key should never be human-readable in your application.

| Access level | Read-only About the application permission model |
|----------------------|--|
| Consumer key | Op8DkYUhQmn8uRt7C71w |
| Consumer secret | G04dAE5OaHeqUEh6VZoF0MAC2YMcgkgu8VpWaJam8 |
| Request token URL | https://api.twitter.com/oauth/request_token |
| Authorize URL | https://api.twitter.com/oauth/authorize |
| Access token URL | https://api.twitter.com/oauth/access_token |
| Callback URL | None |
| Sign in with Twitter | No |
| | |

Your access token

Use the access token string as your "oauth_token" and the access token secret as your "oauth_token_secret" to sign requests with your own Twitter account. Do not share your oauth_token_secret with anyone.

| Access token | 1635433267-HvStt9EggeUhrxNTTJhc4DKrDymxfHGi3oroJpc |
|---------------------|--|
| Access token secret | gBX9kFeM1K7zSrOIMhUUYfQmvLeuWv7msOEgyhLls |
| Access level | Read-only |

Recreate my access toker

Edit flume.conf:

Command:sudo gedit /usr/lib/flume-ng/apache-flume-1.4.0-bin/conf/flume.conf

```
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 File Edit View Search Terminal Help
cloudera@cloudera-vm:~$ sudo gedit /usr/lib/flume-ng/apache-flume-1.4.0-bin/conf/flume.conf
 😢 🖨 💿 *flume.conf (/usr/lib/flume-ng/apache-flume-1.4.0-bin/conf) - gedit
🖺 朣 Open 🔻 🛂 Save 🛮 🖺 🛮 🦍 Undo 🧀 🗎 🥫 🖺 🖺 🗘 🦠
*flume.conf *
TwitterAgent.sources = Twitter
TwitterAgent.channels = MemChannel
TwitterAgent.sinks = HDFS
TwitterAgent.sources.Twitter.type = com.cloudera.flume.source.TwitterSource
TwitterAgent.sources.Twitter.channels = MemChannel
TwitterAgent.sources.Twitter.consumerKey =[Required-Copy from twitter App]
TwitterAgent.sources.Twitter.consumerSecret = [Required-Copy from twitter App]
TwitterAgent.sources.Twitter.accessToken = [Required-Copy from twitter App]
TwitterAgent.sources.Twitter.accessTokenSecret = [Required-Copy from twitter App]
TwitterAgent.sources.Twitter.keywords = vineet, hisham, hadoop, big data, analytics, bigdata, cloudera, data science, data
scientist, business intelligence, mapreduce, data warehouse, data warehousing, mahout, hbase, nosql, newsql,
businessintelligence, cloudcomputing
TwitterAgent.sinks.HDFS.channel = MemChannel
TwitterAgent.sinks.HDFS.type = hdfs
TwitterAgent.sinks.HDFS.hdfs.path = hdfs://localhost:8020/user/flume/tweets/
TwitterAgent.sinks.HDFS.hdfs.fileType = DataStream
TwitterAgent.sinks.HDFS.hdfs.writeFormat = Text
TwitterAgent.sinks.HDFS.hdfs.batchSize = 1000
TwitterAgent.sinks.HDFS.hdfs.rollSize = 0
TwitterAgent.sinks.HDFS.hdfs.rollCount = 10000
TwitterAgent.sinks.HDFS.hdfs.rollInterval = 600
TwitterAgent.channels.MemChannel.type = memory
TwitterAgent.channels.MemChannel.capacity = 10000
TwitterAgent.channels.MemChannel.transactionCapacity = 100
```

After editing flume.conf will look like the below snapshot:

```
🚫 🖨 🕒 *flume.conf (/usr/lib/flume-ng/apache-flume-1.4.0-bin/conf) - gedit
File Edit View Search Tools Documents Help
🖺 🛅 Open 🔻 🛂 Save 📳 悔 Undo 🧀 🐰 🖺 📋 🔾 💃
*flume.conf *
TwitterAgent.sources = Twitter
TwitterAgent.channels = MemChannel
TwitterAgent.sinks = HDFS
TwitterAgent.sources.Twitter.type = com.cloudera.flume.source.TwitterSource
TwitterAgent.sources.Twitter.channels = MemChannel
TwitterAgent.sources.Twitter.consumerKey = <a href="mailto:0p8DkYUhQmn8uRt7C71w">0p8DkYUhQmn8uRt7C71w</a>
TwitterAgent.sources.Twitter.consumerSecret =G04dAE50aHeqUEh6VZoF0MAC2YMcgkgu8VpWaJam8
TwitterAgent.sources.Twitter.accessToken =1635433267-HvStt9EggeUhrxNTTJhc4DKrDymxfHGi3oroJpc
TwitterAgent.sources.Twitter.accessTokenSecret =gBX9kFeM1K7zSr0IMhUUYfQmvLeuWv7ms0EgyhLls
TwitterAgent.sources.Twitter.keywords = vineet, hisham, hadoop, big data, analytics, bigdata, cloudera, data science, data
scientist, business intelligence, mapreduce, data warehouse, data warehousing, mahout, hbase, nosql, newsql,
businessintelligence, cloudcomputing
TwitterAgent.sinks.HDFS.channel = MemChannel
TwitterAgent.sinks.HDFS.type = hdfs
TwitterAgent.sinks.HDFS.hdfs.path = hdfs://localhost:8020/user/flume/tweets/
TwitterAgent.sinks.HDFS.hdfs.fileType = DataStream
TwitterAgent.sinks.HDFS.hdfs.writeFormat = Text
TwitterAgent.sinks.HDFS.hdfs.batchSize = 1000
TwitterAgent.sinks.HDFS.hdfs.rollSize = 0
TwitterAgent.sinks.HDFS.hdfs.rollCount = 10000
TwitterAgent.sinks.HDFS.hdfs.rollInterval = 600
TwitterAgent.channels.MemChannel.type = memory
TwitterAgent.channels.MemChannel.capacity = 10000
TwitterAgent.channels.MemChannel.transactionCapacity = 100
```

Change Directory to the bin folder of apache flume:

Command:cd /usr/lib/flume-ng/apache-flume-1.4.0-bin/bin/

```
Cloudera@cloudera-vm: /usr/lib/flume-ng/apache-flume-1.4.0-bin/bin
File Edit View Search Terminal Help
cloudera@cloudera-vm:~$ cd /usr/lib/flume-ng/apache-flume-1.4.0-bin/bin/cloudera@cloudera-vm:/usr/lib/flume-ng/apache-flume-1.4.0-bin/bin$
```

Start fetching the data from twitter:

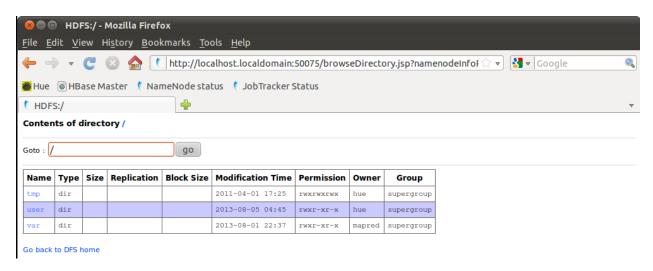
Command: ./flume-ng agent -n TwitterAgent -c conf -f /usr/lib/flume-ng/apache-flume-1.4.0-bin/conf/flume.conf

```
🔞 🖨 🗊 cloudera@cloudera-vm: /usr/lib/flume-ng/apache-flume-1.4.0-bin/bin
File Edit View Search Terminal Help
cloudera@cloudera-vm:/usr/lib/flume-ng/apache-flume-1.4.0-bin/bin$ ./flume-ng ag
ent -n TwitterAgent -c conf -f /usr/lib/flume-ng/apache-flume-1.4.0-bin/conf/flu
me.conf
 🙆 🖨 📵 cloudera@cloudera-vm: /usr/lib/flume-ng/apache-flume-1.4.0-bin/bin
File Edit View Search Terminal Help
ers:{Twitter=EventDrivenSourceRunner: {    source:com.cloudera.flume.source.Twitter
Source{name:Twitter,state:IDLE} }} sinkRunners:{HDFS=SinkRunner: { policy:org.ap
ache.flume.sink.DefaultSinkProcessor@1c247a0 counterGroup:{    name:null counters:{
} }} channels:{MemChannel=org.apache.flume.channel.MemoryChannel{name: MemChan
nel}} }
13/08/05 04:45:26 INFO node.Application: Starting Channel MemChannel
13/08/05 04:45:26 INFO instrumentation.MonitoredCounterGroup: Monitoried counter
group for type: CHANNEL, name: MemChannel, registered successfully.
13/08/05 04:45:26 INFO instrumentation.MonitoredCounterGroup: Component type: CH
ANNEL, name: MemChannel started
13/08/05 04:45:26 INFO node.Application: Starting Sink HDFS
13/08/05 04:45:26 INFO node.Application: Starting Source Twitter
13/08/05 04:45:26 INFO instrumentation.MonitoredCounterGroup: Monitoried counter
group for type: SINK, name: HDFS, registered successfully.
13/08/05 04:45:26 INFO instrumentation.MonitoredCounterGroup: Component type: SI
NK, name: HDFS started
13/08/05 04:45:26 INFO twitter4j.TwitterStreamImpl: Establishing connection.
13/08/05 04:45:28 INFO twitter4j.TwitterStreamImpl: Connection established.
13/08/05 04:45:28 INFO twitter4j.TwitterStreamImpl: Receiving status stream
13/08/05 04:45:33 INFO hdfs.HDFSDataStream: Serializer = TEXT, UseRawLocalFileSy
stem = false
13/08/05 04:45:33 INFO hdfs.BucketWriter: Creating hdfs://localhost:8020/user/fl
ume/tweets//FlumeData.1375703133212.tmp
```

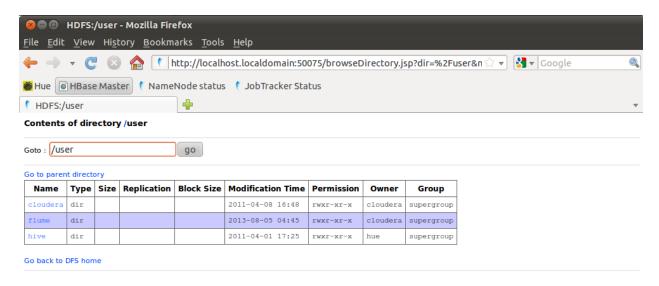
Open the Browser and click on NameNode status and then click on Browse the filesystem:



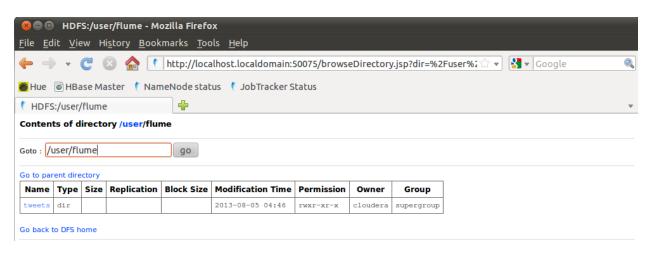
Click on user:



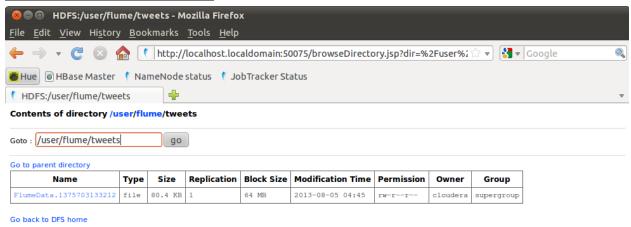
Click on flume:



Click on tweets:



Click on FlumeData file:



This is the data that has been downloaded from Twitter:

