



Edge Management

Infrastructure operation

Agenda

- Open source component management
- Apache Cassandra
- Apache Zookeeper
- Apache Qpid
- Other components



Open source component management

Open Source component management

Apigee leverages multiple leading open source technologies. In all cases, we don't modify the actual open source software. If fixes or improvement are needed, we work with the open source community and contribute to it.

Any available documentation for these products as well as applicable third party tools for those, will be compatible with Apigee open source technology distributions.



CS

ZK

PG

OL

QD



Apache Cassandra

Cassandra – Nodetool informational commands

Cassandra provides an administration command line utility called nodetool. Nodetool is located here:
`/opt/apigee/apigee-cassandra/bin/nodetool`

Below some of the available commands supported by nodeool:

Check ring status:

```
nodetool -h0 ring
```

Check ring status:

```
nodetool -h0 status
```

Check compaction statistics:

```
nodetool -h0 compactionstats
```

Check node info:

```
nodetool -h0 info
```

Check Gossip info:

```
nodetool -h0 gossipinfo
```

Status of the thrift server:

```
nodetool -h0 statusthrift
```

Check reads/writes/drops:

```
nodetool -h0 tpstats
```

Displays statistics for every keyspace and column family:

```
nodetool -h0 cfstats
```

Cassandra – Nodetool operational commands

Stop compactions:

```
nodetool -h0 stop COMPACTION
```

Disable Thrift:

```
nodetool -h localhost disablethrift
```

Disable Gossip:

```
nodetool -h localhost disablegossip
```

Flush all memtables from the node to SSTables on disk:

Drain command will flush the memtables but will stop listening to all the clients and won't serve any request until the node is restarted:

```
nodetool -h localhost drain
```

Flush: Flushes table and/or keyspaces from the memtables

```
nodetool -h localhost flush
```

use with caution!



Apache Zookeeper

Zookeeper - Four Letter Commands

Apache ZooKeeper has a number of "four-letter commands" that can be helpful in determining the current status of ZooKeepers voter and observer nodes. These commands can be invoked using "nc", "telnet" or another utility that has the ability to send commands to a specific port.

ruok

Usage : echo ruok | nc <host> 2181

Example:

```
echo ruok | nc localhost 2181
```

```
imok
```

stat

Usage : echo stat | nc <host> 2181

Example:

```
echo stat | nc localhost 2181
```

```
Latency min/avg/max: 0/0/26
```

```
Connections: 8
```

```
Outstanding: 0
```

```
Zxid: 0x1000007e0
```

```
Mode: follower
```

```
Node count: 470
```

Zookeeper 4 letter command reference

http://zookeeper.apache.org/doc/r3.1.2/zookeeperAdmin.html#sc_zkCommands



Apache Qpid

Apache Qpid

Edge provides a number of utilities to interact with Apache Qpid. Qpid utilities are located here: `/opt/apigee/apigee-qpidd/bin`. Below we describe two of the most useful commands.

Displaying qpid statistics:

```
qpid-stat -q
```

OUTPUT:

```
Queues
queue                                dur  autoDel  excl  msg  msgIn  msgOut  bytes  bytesIn  bytesOut  cons  bind
=====
afe2b8db-467f-4134-8e27-4a7170e51edf:0.0      Y      Y      0      0      0      0      0      0      0      1      2
ax-q-axgroup-001-consumer-group-001      Y      0      5.11k  5.11k      0      667m  667m      12      2
ax-q-axgroup-001-consumer-group-001-dl  Y      444    444      0    52.4m  52.4m      0      0      2
```

Checking queue depth:

```
python check_queue_depth.py
```

OUTPUT:

```
QueueName: ax-q-axgroup-001-consumer-group-001
queue depth: 0
```

Other Components

Apigee Edge Operations Guide provides additional information regarding the management of all Edge components.

Typical commands, recurrent activities and others are covered under Apigee Edge Operations Guide.

<http://docs.apigee.com/private-cloud/latest/operations-and-configuration>



Thank You