



Edge Capacity Expansion

Add and remove Zookeeper

Agenda

- Add Zookeeper
- Remove Zookeeper



Adding Zookeeper Nodes

Add Zookeeper nodes 1/5

1. Add new Zookeeper nodes to response file

Update response file by adding the new Zookeeper nodes. Remember to keep an odd number of voters. On the example below, 5 voters are used. IP16 is tagged as observed.

Original response file:

```
IP1=10.10.0.1
IP2=10.10.0.2
IP3=10.10.0.3

HOSTIP=$(hostname -i)
ADMIN_EMAIL=opdk@apigee.com
...
ZK_HOSTS="$IP1 $IP2 $IP3"
ZK_CLIENT_HOSTS="$IP1 $IP2 $IP3"
...
BIND_ON_ALL_INTERFACES="y"
```

Updated response file:

```
IP1=10.10.0.1
IP2=10.10.0.2
IP3=10.10.0.3
IP14=10.10.0.14
IP15=10.10.0.15
IP16=10.10.0.16

HOSTIP=$(hostname -i)
ADMIN_EMAIL=opdk@apigee.com
...
ZK_HOSTS="$IP1 $IP2 $IP3 IP14 IP15 IP16:observer"
ZK_CLIENT_HOSTS="$IP1 $IP2 $IP3 IP14 IP15 IP16"
...
BIND_ON_ALL_INTERFACES="y"
```

Add Zookeeper nodes 2/5

2. Install new Zookeeper nodes

Install new Zookeeper nodes using the updated response file:

```
/opt/apigee/apigee-setup/bin/setup.sh -p zk -f /tmp/updatedConfigFile.txt
```

Note: In this video we focus on adding just Zookeeper nodes. A typical Edge installation may add both Cassandra and Zookeeper processes on the same node. If you are installing both new Zookeeper and Cassandra you can use profile ds (Datastore).

Add Zookeeper nodes 3/5

3. Reconfigure existing Zookeeper nodes

Update Zookeeper local configuration on each of the existing nodes (nodes present on the planet before the addition):

```
/opt/apigee/apigee-setup/bin/setup.sh -p zk -f updatedConfigFile
```

Add Zookeeper nodes 4/5

4. Reconfigure the Management Server

4.1 On a Management-Server node, execute setup.sh to update the Management Server for the newly added Zookeeper nodes:

```
/opt/apigee/apigee-setup/bin/setup.sh -p ms -f  
updatedConfigFile
```

4.2 After completing step 4.1, restart all Zookeeper nodes:

```
/opt/apigee/apigee-service/bin/apigee-service apigee-zookeeper  
restart
```

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5. Reconfigure Edge components

For each of the components listed, reconfigure the component and restart it:

Components list:

- Edge-message-processor (profile mp)
- Edge-qpids-server (profile qs)
- Edge-postgres-server (profile ps)

Reconfigure components:

```
/opt/apigee/apigee-setup/bin/setup.sh -p <component> -f updatedConfigFile
```

Restart components:

```
/opt/apigee/apigee-service/bin/apigee-service <component> restart
```




Removing Zookeeper Nodes

Removing Zookeeper nodes 1/3

1. Update response file

1.1. Update response file by removing the appropriate Zookeeper nodes.

Current response file:

```
IP1=10.10.0.1
IP2=10.10.0.2
IP3=10.10.0.3
IP14=10.10.0.14
IP15=10.10.0.15
IP16=10.10.0.16

HOSTIP=$(hostname -i)
ADMIN_EMAIL=opdk@apigee.com
...
ZK_HOSTS="$IP1 $IP2 $IP3 IP14 IP15 IP16:observer"
ZK_CLIENT_HOSTS="$IP1 $IP2 $IP3 IP14 IP15 IP16"
...
BIND_ON_ALL_INTERFACES="y"
```

Updated response file:

```
IP1=10.10.0.1
IP2=10.10.0.2
IP3=10.10.0.3

HOSTIP=$(hostname -i)
ADMIN_EMAIL=opdk@apigee.com
...
ZK_HOSTS="$IP1 $IP2 $IP3"
ZK_CLIENT_HOSTS="$IP1 $IP2 $IP3"
...
BIND_ON_ALL_INTERFACES="y"
```

Removing Zookeeper nodes 2/3

2. Remove Zookeeper references from Pods and local configuration

2.1. Update configuration of remaining Zookeeper nodes:

```
/opt/apigee/apigee-setup/bin/setup.sh -p zk -f updatedConfigFile
```

2.2. After completing step 2.1, restart all Zookeeper nodes:

```
/opt/apigee/apigee-service/bin/apigee-service apigee-zookeeper restart
```

2.3. Stop all removed Zookeeper nodes:

```
/opt/apigee/apigee-service/bin/apigee-service apigee-zookeeper stop
```

2.4 Uninstall Zookeeper:

If required, uninstall component as described at Uninstalling Edge:

<http://docs.apigee.com/private-cloud/latest/uninstalling-edge>

Removing Zookeeper nodes 1/3

3. Reconfigure Edge components

For each of the components listed, reconfigure the component and restart it:

Components list:

- edge-management-server
- edge-router
- edge-message-processor
- edge-qpuid-server
- edge-postgres-server

Reconfigure components:

```
/opt/apigee/apigee-setup/bin/setup.sh -p <component> -f updatedConfigFile
```

Restart components:

```
/opt/apigee/apigee-service/bin/apigee-service <component> restart
```



Thank You