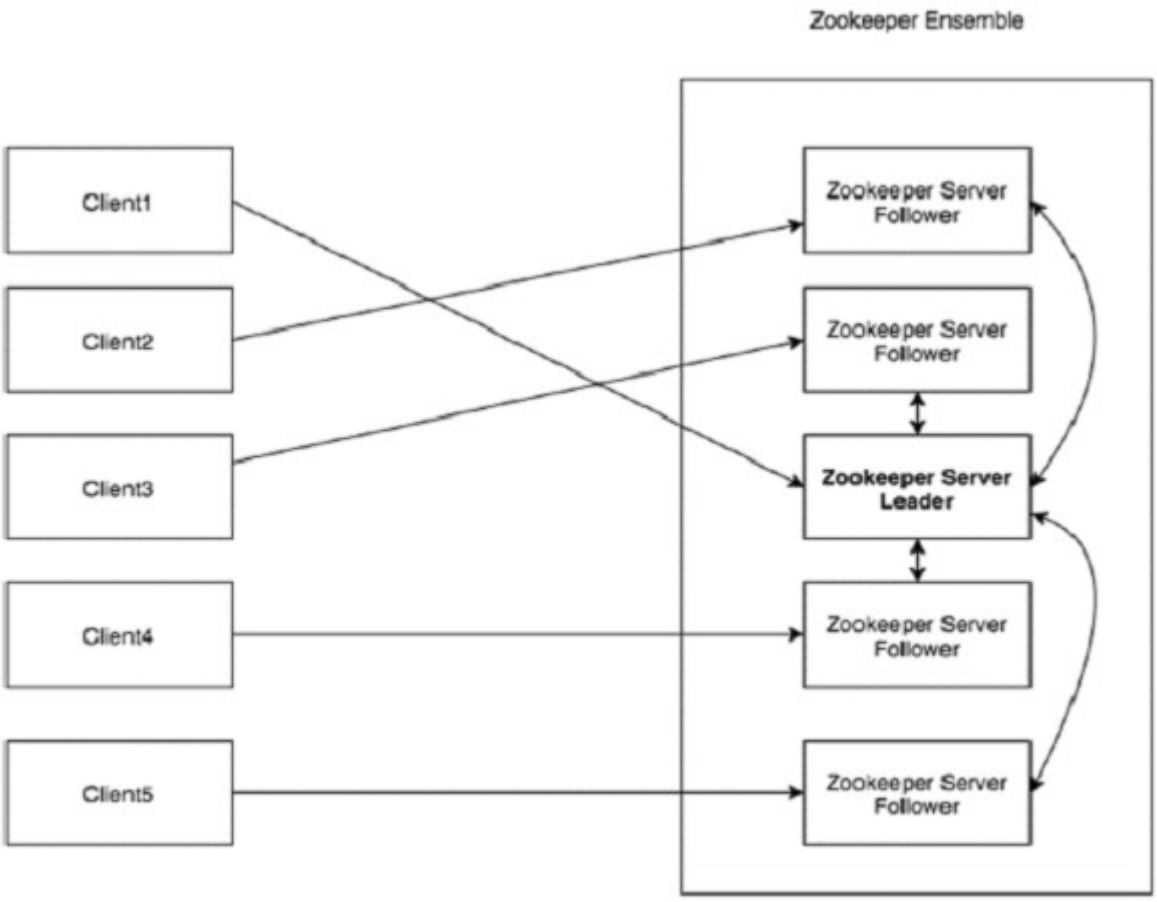
ZOOKEEPER

ZooKeeper is a centralized service for maintaining configuration information, naming, providing distributed synchronization, and providing group services.



Leader	Server node which performs automatic recovery if any of the connected node failed. Leaders are elected on service startup.
Follower	Server node which follows leader instruction.
Ensemble	Group of ZooKeeper servers. The minimum number of nodes that is required to form an ensemble is 3.

Step1:Install java packages

install these step in all nodes

- `sudo apt-get install software-properties-common`
- `sudo add-apt-repository ppa:openjdk-r/ppa`
- `sudo apt-get update`
- `sudo apt-get install openjdk-8-jdk`
- `java -version`

link :http://askubuntu.com/questions/464755/how-to-install-openjdk-8-on-14-04-lts

STEP2:INSTALL ZOOKEEPER ON MULTINODES

- cd /opt
- sudo wget http://mirror.nus.edu.sg/apache/zookeeper/zookeeper-3.4.6/zookeeper-3.4.6.tar.gz
- `sudo tar -zxvf zookeeper-3.4.6.tar.gz`
- `cd zookeeper-3.4.6/`
- `sudo nano conf/zoo.cfg   #create file`

```
tickTime=2000
dataDir=/var/lib/zookeeper/data
clientPort=2181
initLimit=5
syncLimit=2
server.1=172.17.0.2:2888:3888
server.2=172.17.0.3:2888:3888
```

- save it
- create a directory
- sudo mkdir -p /var/lib/zookeeper/data #it for data directory

in each system do this(create diffrent my id for each system)

- **cd** /var/lib/zookeeper/data

for 1st system

- echo “1” > /var/lib/zookeeper/data/myid #or create myid file content 1

for 2nd system

- echo “2” > /var/lib/zookeeper/data/myid #or create myid file content 2

if the third system it have myid will 3 etc.....

- cd /opt/zookeeper-3.4.6/

Finally start the zookeeper service,

- sudo bin/zkServer.sh start

Check your zookeeper whether is it running or not,

- sudo netstat -anplt | grep 2181

Servers listen on three ports: 2181 for client connections; 2888 for follower connections, if they are the leader; and 3888 for other server connections during the leader election phase .

We can check each status of nodes by

- `cd` /opt/`zookeeper-3.4.6/`

status of the zookeeper service,

- `sudo bin/zkServer.sh status`

- bin/zkCli.sh -server [ip or hostname or domain name]:2181

some commands

note:there is 1 leader and more followers

- **when its connected**
- **we can check the commands below**

```
zkshell: 8] ls /
zkshell: 0] help
[zkshell: 9] create /zk_test my_data
Created /zk_test
[zkshell: 11] ls /
[zkshell: 12] get /zk_test
```

we can also check clustering by using this commands between different nodes

DOCKER FILE

```
FROM ubuntu:14.04

MAINTAINER pratheesh


run apt-get update
run apt-get upgrade -y
run apt-get install -y  software-properties-common
run add-apt-repository ppa:openjdk-r/ppa -y
run  apt-get update -y
run apt-get install openjdk-8-jdk -y


workdir /opt
run apt-get install wget -y
run apt-get install nano -y
run wget http://mirror.nus.edu.sg/apache/zookeeper/zookeeper-3.4.6/zookeeper-3.4.6.tar.gz
run tar -xzf zookeeper-3.4.6.tar.gz
add zoo.cfg  /opt/zookeeper-3.4.6/conf/

workdir /var/lib/zookeeper/data/
run echo "2" > /var/lib/zookeeper/data/myid
expose 2181
entrypoint /opt/zookeeper-3.4.6/bin/zkServer.sh start && bash
```

zoo.cfg file

```
ubuntu@myregistrydomain:~/zookeeper$ cat zoo.cfg
tickTime=2000
dataDir=/var/lib/zookeeper/data
clientPort=2181
initLimit=5
syncLimit=2
server.1=172.17.0.2:2888:3888
server.2=172.17.0.3:2888:3888
```