# Kubernetes Lab

# Connect to Kubernetes Master Node using the Public IP

# Open an SSH client.

# Locate your private key file (singaporekeypair.pem)

# # chmod 400 singaporekeypair.pem

# Now you will be able to SSH using your Public DNS/Public IP

# ssh -i "singaporekeypair.pem" [ec2-user@ec2-xx-xx-xx-xx.ap-south-1.compute.amazonaws.com](mailto:ec2-user@ec2-xx-xx-xx-xx.ap-south-1.compute.amazonaws.com)

# NB:- If SSH connectivity does not work, see changing the chmod to 600 (chmod 600 singaporekeypair.pem)

# Cluster Maintenance

# Cluster Upgrade

# https://kubernetes.io/docs/tasks/administer-cluster/kubeadm/kubeadm-upgrade/

# ETCD Backup and Restore

# Copy the below content into a shell file and execute the same. You may download the latest version from <https://github.com/etcd-io/etcd/releases>

# $ vi etcd\_download.sh

ETCD\_VER=v3.4.13

# choose either URL

GOOGLE\_URL=https://storage.googleapis.com/etcd

GITHUB\_URL=https://github.com/etcd-io/etcd/releases/download

DOWNLOAD\_URL=${GOOGLE\_URL}

rm -f /tmp/etcd-${ETCD\_VER}-linux-amd64.tar.gz

rm -rf /tmp/etcd-download-test && mkdir -p /tmp/etcd-download-test

curl -L ${DOWNLOAD\_URL}/${ETCD\_VER}/etcd-${ETCD\_VER}-linux-amd64.tar.gz -o /tmp/etcd-${ETCD\_VER}-linux-amd64.tar.gz

tar xzvf /tmp/etcd-${ETCD\_VER}-linux-amd64.tar.gz -C /tmp/etcd-download-test --strip-components=1

rm -f /tmp/etcd-${ETCD\_VER}-linux-amd64.tar.gz

/tmp/etcd-download-test/etcd --version

/tmp/etcd-download-test/etcdctl version

# You may now add the path “/tmp/etcd-download-test/” in PATH

# $ export PATH=$PATH:.:/tmp/etcd-download-test

# $ export ETCDCTL\_API=3

# Working with ETCD

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# $ sudo ./etcdctl --cacert /etc/kubernetes/pki/etcd/server.crt --cert /etc/kubernetes/pki/etcd/ca.crt --key /etc/kubernetes/pki/etcd/ca.key put mykey "this is mykey"

# $sudo ./etcdctl --cacert /etc/kubernetes/pki/etcd/server.crt --cert /etc/kubernetes/pki/etcd/ca.crt --key /etc/kubernetes/pki/etcd/ca.key get mykey

# Snapshot

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# $ sudo ./etcdctl snapshot save etcdsnap.db --cacert /etc/kubernetes/pki/etcd/server.crt --cert /etc/kubernetes/pki/etcd/ca.crt --key /etc/kubernetes/pki/etcd/ca.key

# [--endpoints=https://127.0.0.1:2379 if etcd is remote]

# The above command shall create the snapshot with name “etcdsnap.db”

# $ sudo ./etcdctl --write-out=table snapshot status etcdsnap.db

# $ sudo ./etcdctl snapshot restore etcdsnap.db --cacert /etc/kubernetes/pki/etcd/server.crt --cert /etc/kubernetes/pki/etcd/ca.crt --key /etc/kubernetes/pki/etcd/ca.key