This document contains all the different command used to setup the cluster, including the videos which help to understand the topic in detail. Most of the commands are self explanatory and links to various open source projects are also included to understand the initial setup. Not all commands are necessary but the document gives various features used during maintainability of the cluster and also looking into its performance matrices.

**Commands for setting the initial configuration**

sudo apt update

sudo apt upgrade -y

sudo nano /boot/cmdline.txt

Add to the end of the file: cgroup\_memory=1 cgroup\_enable=memory

sudo reboot

**Deploying the k3s in default mode**

curl -sfL [https://get.k3s.io](https://www.youtube.com/redirect?event=video_description&redir_token=QUFFLUhqbkdmQmhKblh2QXRySGx5eWtKTUNiSVhGWHZTUXxBQ3Jtc0trV2Z2MGxOa0xsbGNTWHByMjViMEpoU3dxSDVzN0ZqUkNwNEhJZC0xenhjejNNLXlucFBUYWU1WUQ0NnlSSnF3LThYUzFucWloOHBzUUtzOVZuSnBmQVlMOXVjY2xvQzV3M0FZdHl6MHQwSkhmNjhNSQ&q=https%3A%2F%2Fget.k3s.io%2F&v=rOXkutK8ANc) | sh -

**Deploying the k3s in with docker**

curl <https://releases.rancher.com/install-docker/20.10.sh> | sh

curl -sfL <https://get.k3s.io> | sh -s - --docker

sudo k3s kubectl get pods --all-namespaces

sudo docker ps

**Getting the token from master node**

sudo cat /var/lib/rancher/k3s/server/node-token

From <[*https://www.youtube.com/watch?v=rOXkutK8ANc*](https://www.youtube.com/watch?v=rOXkutK8ANc)>

**Installing k3s on worker node**

curl -sfL [https://get.k3s.io](https://www.youtube.com/redirect?event=video_description&redir_token=QUFFLUhqbFJkeGx2U29qWjdnSjlsbG9yYUMxVm9HWTJId3xBQ3Jtc0tteFRSY1MyZGtOTVg0VFY3eUo1X1Y3c29sTTZlRXBrT2ZhRHp3eTJvYkxRTUhuS3lVRGFUaXBUTDd6Wks1OXBTR0JGdm1PVTJhejZHdTdMR0pJb0wxaEl2THI3eExTWW5TLVN4dzFNVlY5MjQ4QTB5Zw&q=https%3A%2F%2Fget.k3s.io%2F&v=rOXkutK8ANc) | K3S\_URL=https://ip-address:6443 K3S\_TOKEN=node-token sh -s - --docker

**Useful commands for performance and maintenance of Cluster**

From <[*https://github.com/k3s-io/k3s/issues/1011*](https://github.com/k3s-io/k3s/issues/1011)>

systemctl status k3s.service

kubectl get nodes -o wide

sudo journalctl --vacuum-time=2d

journalctl --no-pager

journalctl --pager-end sudo journalctl --rotate

sudo journalctl --vacuum-time=1s

**Commands to be used for setting/maintaining the minio database**

**kubectl get pods -n minio-dev**

**kubectl describe pod/minio -n minio-dev**

**kubectl logs pod/minio -n minio-dev**

[MinIO High Performance Object Storage — MinIO Object Storage for Kubernetes](https://min.io/docs/minio/kubernetes/upstream/index.html)

kubectl port-forward pod/minio -n minio-dev 9000 9090

**Trouble shooting links used**

[kubernetes - Pod is in pending stage ( Error : FailedScheduling : nodes didn't match node selector ) - Stack Overflow](https://stackoverflow.com/questions/60166842/pod-is-in-pending-stage-error-failedscheduling-nodes-didnt-match-node-sel) label creation issue

[How Do I Set a Static IP Address on Raspberry Pi? (makeuseof.com)](https://www.makeuseof.com/raspberry-pi-set-static-ip/)

echo "mega\_secret\_key" | base64

echo "bWVnYV9zZWNyZXRfa2V5Cg==" | base64 -d

[How to Base64 Encode Kubernetes Secrets - CloudyTuts](https://www.cloudytuts.com/tutorials/kubernetes/how-to-base64-encode-kubernetes-secrets/) does not work with k3s (on my machine)

[Secrets | Kubernetes](https://kubernetes.io/docs/concepts/configuration/secret/)

[Routing Configuration for Traefik CRD - Traefik](https://doc.traefik.io/traefik/routing/providers/kubernetes-crd/)

[k3s-traefik-v2-kubernetes-crd/004-service.yaml at master · sleighzy/k3s-traefik-v2-kubernetes-crd · GitHub](https://github.com/sleighzy/k3s-traefik-v2-kubernetes-crd/blob/master/004-service.yaml)

[Kubernetes at Home With K3s :: Bruno Antunes — Thoughts, rants, ideas (nootch.net)](https://blog.nootch.net/post/kubernetes-at-home-with-k3s/)

[raspberry-pi-k3s-homelab/k3s.md at main · sleighzy/raspberry-pi-k3s-homelab · GitHub](https://github.com/sleighzy/raspberry-pi-k3s-homelab/blob/main/k3s.md#installing-k3s-agent-node-with-k3sup)

[GitHub - sleighzy/k3s-minio-deployment: Instructions and manifest files for deploying MinIO Object Storage on K3s.](https://github.com/sleighzy/k3s-minio-deployment)