

# Création d'un cluster K8S sur proxmox

## Création de 3 VMS en désactivant le SWAP

1. \$ free -h.
2. \$ sudo swapoff -a.
3. \$ sudo nano /etc/fstab.
4. # /dev/sda3 none swap sw 0 0.
5. \$ sudo swapoff -a.

## Installation des outils

1. Update the `apt` package index and install packages needed to use the Kubernetes `apt` repository:

```
sudo apt-get update  
sudo apt-get install -y apt-transport-https ca-certificates curl gpg
```

2. Download the public signing key for the Kubernetes package repositories. The same signing key is used for all repositories so you can disregard the version in the URL:

```
curl -fsSL https://pkgs.k8s.io/core:/stable:/v1.29/deb/Release.key | sudo gpg --dearmor -o  
/etc/apt/keyrings/kubernetes-apt-keyring.gpg
```

**Note:** In releases older than Debian 12 and Ubuntu 22.04, folder `/etc/apt/keyrings` does not exist by default, and it should be created before the curl command.

3. Add the appropriate Kubernetes `apt` repository. If you want to use Kubernetes version different than v1.29, replace v1.29 with the desired minor version in the command below:

```
echo 'deb [signed-by=/etc/apt/keyrings/kubernetes-apt-keyring.gpg]  
https://pkgs.k8s.io/core:/stable:/v1.29/deb/ /' | sudo tee /etc/apt/sources.list.d/kubernetes.list
```

**Note:** To upgrade kubectl to another minor release, you'll need to bump the version in `/etc/apt/sources.list.d/kubernetes.list` before running `apt-get update` and `apt-get upgrade`. This procedure is described in more detail in [Changing The Kubernetes Package Repository](#).

4. Update `apt` package index, then install kubectl:

```
sudo apt-get update  
sudo apt-get install -y docker.io kubelet kubeadm kubectl kubernetes-cni
```

```
containerd config default | sudo tee /etc/containerd/config.toml >/dev/null 2>&1
```

Edit the file `/etc/containerd/config.toml` and look for the section `'[plugins."io.containerd.grpc.v1.cri".containerd.runtimes.runc.options]'` and change `'SystemdCgroup = false'` to `'SystemdCgroup = true'`

```
$ sudo vi /etc/containerd/config.toml
```

Enable-SystemCgroup-Containerd-Debian12

Save and exit the file.

reboot

## Initialisation du kube

Sur le noeud 1

```
kubeadm init
```

To start interacting with cluster, run following commands on master node,

```
$ mkdir -p $HOME/.kube  
$ sudo cp -i /etc/kubernetes/admin.conf $HOME/.kube/config  
$ sudo chown $(id -u):$(id -g) $HOME/.kube/config
```

Run following kubectl command to get nodes and cluster information,

```
$ kubectl get nodes  
$ kubectl cluster-info
```

Output of above commands

## Ajout de nodes dans le kube

