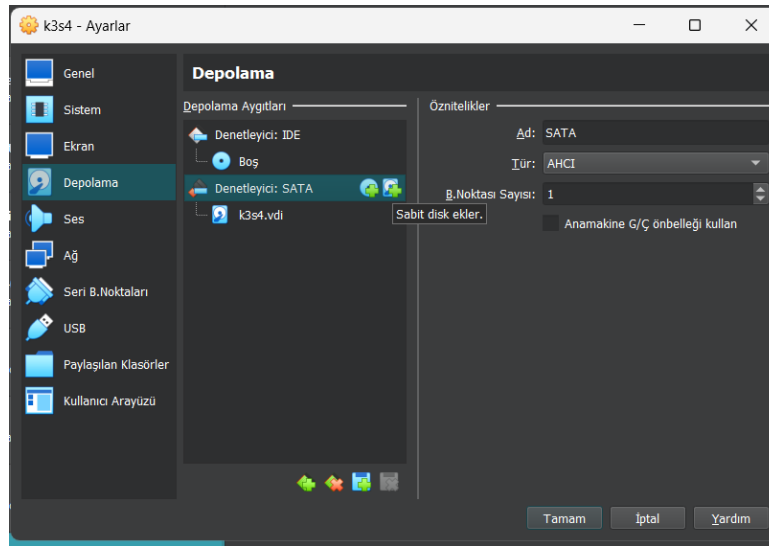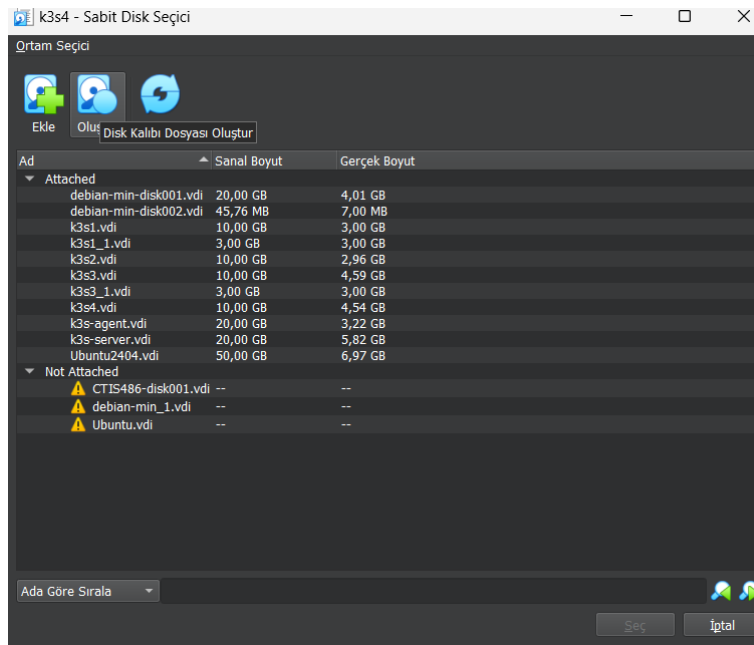# SWAP

Ahmet Oğuz Ergin

Why I swap?

In real life scenarios, cloud providers, provide limited CPU and RAM on vm. But they provide enough space (volume) and we can use that volume to swap memory.

Swap With New Block Device

Installing New Block Device on VM

1 Block Device Installation

2 Block Device Installation

3 Block Device Installation

Partition Disk

Run **lsbk** command to display current block devices. /dev/sdb will be added.

```
lsblk
fdisk /dev/sdb
n
p
1
w
lsblk
```

Format Partiton and Save as Persistent

```
swapon --show
mkswap /dev/sdb1
swapon /dev/sdb1
echo '/dev/sdb1 none swap sw 0 0' | tee -a /etc/fstab
reboot
swapon --show
free -h
```

Swap Without New Block Device

First Check initial sizes. 15G

```
root@st-vm:~# df -h
Filesystem      Size  Used Avail Use% Mounted on
udev            474M     0  474M   0% /dev
tmpfs            97M  456K   97M   1% /run
/dev/sda1        15G  2.2G   12G  16% /
tmpfs           485M     0  485M   0% /dev/shm
tmpfs           5.0M     0  5.0M   0% /run/lock
/dev/sda15      124M   12M  113M  10% /boot/efi
tmpfs            97M     0   97M   0% /run/user/1002
```

```
root@st-vm:~# free -h
              total        used        free      shared  buff/cache   available
Mem:          969Mi       716Mi       160Mi       488Ki       263Mi       253Mi
Swap:            0B          0B          0B
```

Run commands to create swap.

```
fallocate -l 3G /swapfile
chmod 600 /swapfile
mkswap /swapfile
swapon /swapfile
```

Check size again.

```
root@st-vm:~# df -h
Filesystem      Size  Used Avail Use% Mounted on
udev            474M     0  474M   0% /dev
tmpfs            97M  456K   97M   1% /run
/dev/sda1        15G  5.2G  8.7G  38% /
tmpfs           485M     0  485M   0% /dev/shm
tmpfs           5.0M     0  5.0M   0% /run/lock
/dev/sda15      124M   12M  113M  10% /boot/efi
tmpfs            97M     0   97M   0% /run/user/1002
```

```
root@st-vm:~# free -h
              total        used        free      shared  buff/cache   available
Mem:          969Mi       420Mi       225Mi       420Ki       500Mi       549Mi
Swap:         3.0Gi       768Ki       3.0Gi
```

Make it persistent.

```
echo '/swapfile none swap sw 0 0' | sudo tee -a /etc/fstab
```