

SWAP PARTITION ON RAM(MEMORY)

Define :

When physical RAM is already in use, Amazon EC2 instances use swap space as a short-term replacement for physical RAM.

Contents of RAM that aren't in active use or that aren't needed as urgently as other data or instructions can be temporarily paged to a swap file. This frees up RAM for more immediate use.

You can also create swap space on a partition

STEP 1 : Create EC2 Instance

- Choose AMI Linux 2023/Linux 2 kernel/ubuntu
- Attach a Security Group
- Attach a Key Pair
- And Create the EC2 Instance

Instances (2) Info								
<input type="text" value="Find Instance by attribute or tag (case-sensitive)"/>								
<input type="checkbox"/>	Name ✎	Instance ID	Instance state ▼	Instance type ▼	Status check	Alarm status	Availability Zone ▼	
<input type="checkbox"/>	swap prt	i-0eee3e21672a16fdd	Running 🔍 🔍	t2.micro	2/2 checks passed	View alarms +	us-east-1c	
<input type="checkbox"/>	LVM RAJ	i-0fc04371b7ebdbfae	Stopped 🔍 🔍	t2.micro	-	View alarms +	us-east-1c	

STEP 2 : Check Swap Partition

Command used :

❖ Check if there is any partition done

```
#sudo swapon -s
```

❖ Check if there is a Free memory or not

```
#sudo free -m
```

STEP 3 : Setup a Swap Partition

Command Used:

- ❖ This command create a Swap file for the Partition
- ❖ The block size you specify should be less than the available memory on the instance or you receive a "memory exhausted" error.

```
#sudo fallocate -l 4G /swapfile
```

OR

```
#sudo dd if=/dev/zero of=/swapfile bs=128M count=32
```

- ❖ This above command will create a swap file of 4G size
- ❖ Now we will update the read and write permissions for the swap file:

```
#sudo chmod 600 /swapfile
```

- ❖ This command will setup the swap partition area for the sever

```
#mkswap /swapfile
```

- ❖ This command will enable/process the Swap

```
#sudo swapon /swapfile
```

STEP 4 : Display the partition

- ❖ Hence we have successfully parted the Memory

Command used :

```
#sudo swapon -s
```

```
#sudo free -m
```

```
[root@ip-172-31-36-112 ec2-user]# sudo swapon -s
Filename                                Type              Size              Used              Priority
/swapfile                              file              4194300           0                 -2
[root@ip-172-31-36-112 ec2-user]# sudo free -m
              total        used        free      shared  buff/cache   available
Mem:           949          132          572           2         244         677
Swap:          4095           0         4095
```

STEP 5 : Permanently store

❖ To permanently store the swap we will store the swap in /etc/fstab

Commad used :

#blkid //this commad will display the UUID for the sever for the partition

#nano /etc/fstab

❖ Add this in the fstab file and save

“

/swapfile swap swap defaults 0 0

”

```
GNU nano 5.8
#
UUID=765bfc7d-5880-4887-aba3-91f9c0e8091a / xfs defaults,noatime 1 1
UUID=0619-3DF0 /boot/efi vfat defaults,noatime,uid=0,gid=0,umask=0077,shortname=winnt,x-systemd.automoun
/swapfile swap swap defaults 0 0
```

REFERENCE LINK :

DOCS:

<https://repost.aws/knowledge-center/ec2-memory-swap-file>

<https://tecadmin.net/add-swap-partition-on-ec2-linux-instance/>

VIDIO:

https://youtu.be/oHW0quS4pV4?si=73Ui6_25n4CdK7Vr

https://youtu.be/uAr_EllTIxs?si=tRJ2zzb8HKXSXKhE

COMMAD USED :

```
#sudo su
```

```
#sudo swapon -s
```

```
#sudo free -m
```

```
#lsblk
```

```
#sudo fallocate -l 4G /swapfile
```

```
#sudo chmod 600 /swapfile
```

```
#sudo mkswap /swapfile
```

```
#sudo swapon /swapfile
```

```
#sudo swapon -s
```

```
#sudo free -m
```

```
#blkid
```

```
#nano /etc/fstab
```