What are the tasks perfromed buy Linux

Process Schduling
Memory managemnet
Creation and termination of processes
Provides filesystem
Access to device such as mouse,monitors,keyboards etc
Provision of a system call API
Networking

What is Runlevel

Runlevel is a mode of operation in OS. It represents diff system state of Linux.

When linux system boots the kernel get initialized and enters into one and only one RUN level.
When service starts it will try to start all the services that are assoiated wit that runlevel.

In short run level defines what tasks to be accomplished in the current level.

Runlevel0 - System Shut down all running processes ,unmount file system and powers off
Runlevel1 - Single user mode state where only single user can login into the system
            It is also call rescue mode or trouble-shooting mode
Runlevel2 - Multiuser no network support
Runlevel3 - Non-Graphical text mode operations for server systems
Runlevel4 - Custom mode used by sysadmin
Runlevel5 - Grapg=hiocal login with same usability of Run level 3
Runlevel6 - Reboot

What is /sbin/init

It is the first process started by Linux system after machine boot and the kernel loads into the memory.

It decides how a user process or a system service should load in what order and wheather it should start automatically.

It is parent of all the process.

Chkconfig

How to change time zone?

date

sudo rm /etc/localtime

```
sudo ln -s /usr/share/zoneinfo/us/Pacific /etc/localtime
```

AWS Interview Questions

1. Attaching AWS EBS volume to the instance

Increasing volume to a instance
1. Connect to instance using SSH
2. Use the lsblk command to view our available disk devices and their mount points
3. We need to create file system on the volume as the newly provisioned EBS volume is a raw block device.
Volumes used for snapshots already have the data

```
 sudo file -s /dev/xvda1 # it will list down the file system type
```

4. Following command is used to create file system on the volume.

```
sudo mkfs -t ext4 /dev/xvdf
```

5. use the following command to create a mount point directory

```
sudo mkdir /vol
```

6. Use the following command to mount the location we just have created.

```
sudo mount /dev/xvdf /vol
```

7. We can check the new voulme is mounted or not

```
lsblk
```

8. To mount this newly added EBs volume on every system reboot,We need to add the entry for device
the /etc/fstab file.

I] Create a backup of our /etc/fstab file

```
   sudo cp /etc/fstab /etc/fstab.orig
```

II] Open the /etc/fstab file and add a new line

```
    device_name  mount_point  file_system_type  fs_mntops
fs_freq  fs_passno
         dev/xvdf       /vol       ext4             defaults,nofail
0       2
```

III] Run the sudo mount -a command to mount all file systems in /etc/fstab.

IV] Let's check out disk space using df -h

9. Following is shell script to mount the new voume

```
   #!/bin/bash
mkfs.ext4 /dev/xvdf
mkdir /vol
echo "/dev/xvdf /vol auto noatime 0 0" | sudo tee -a /etc/fstab
```

AWS Cloud front

It is a Global CDN service that speeds up delivery of static and dynamic content to your end users.

It uses edge location to serve the content

Edge location - It cached the file nearer to user'S physical location.

Cloudfront:
Edge loction can be used for both downloading and uploading objects.
Set Objects TTL
Geo Restriction (whitelist or blacklist countries)
can invalidate cached objects (additinal cost)

VPC and VPC Peering

CIDR:
Subnet:
Routetable:
Internet Gateway: Max 1 per VPC
Network Access Control List: (ACL) : Acts as firewall at subnet level
Security Group:

5 Pillars

1. Security

Design Prinipals
 Apply Security at al layers
 Enable Traceability
 Automate response to security events
 Focusing on Securing your system (Shared responsiblity model)
 securit data , subnets and os
 Automate security best prac

Defination:
  Security in the cloud consist of 4 areas
  Data Protection
  Privilege Management
  Infrastructure Protection
  Detective Controls

VPC Flow log is way of tracking n/w traffic within VPC.
It can be collected at 3 levels
 VPC
 Subnet
 Network Interface level

NAT vs Bastions

SOA
It stores name of the server who stores data about the zone
The administrator of the zone
The current version of data file
The number of seconds a secondray name server should wait before checking for updates.
The number of seconds a secondry name server should wait before

retrying a failed zone transfer
The maximum number of seconds a secondry name server can use data before it must be refreshed or expired
The default number of seconds for the time to live file on resource records

NS Records:
NS stands for name server records and used by top level domain servers to direct the traffic to the
conten DNS server which conatins authorative DNS records.

A Records:
To translate the name of the domain to IP address.

TTL
The length of the DNS record is cached on either resolving server or users own local pc is equal to the
value of TTL in seconds.
The lower the value faster changes to DNS records takes to propogate throught the internet.
 Used in DNS Migration
  drop the TTL of DNS record to 300 sec from 2 day

CNames (canonical names)
  it is used to resolve one domain name to another

Alias Records:
Those are like CName records but CNAME can't be used used for naked domain names
e.g. you can not have CNAME for http://acloud.guru it is either A record or Alias records

Alias resource records saves your time because Route 53 automatically recognizes chnages in record sets
do not need to update the zone file.