1. RHEL 6 and RHEL7 difference

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| RHEL 6 | RHEL 7 |
| * Default File system is Ext4 * Kernel Version starts from 2.6.xx * Release Name is Santigo * First Process starts is Initd * resize2fs * service name start * To by pass root password prompt append 1 to kernel command line * /etc/inittab * /boot/grub/grub.conf * tune2fs -l /dev/sda1|grep -i ‘inode size’ | * Default File system is XFS * Kernel Version starts from 3.10.xx * Release Name is Maipo * First Process starts is Systemd * Xfs\_growfs * systemctl start name.service * To by pass root password prompt rd.break to kernel command line * systemctl set-default * /etc/default/grub * xfs\_info /dev/sda1|grep isize |

1. What is LVM. how to increase existing Logical volume.

The Linux Logical Volume Manager (LVM) is a mechanism to virtualize the disks. It can create "virtual" disk partitions out of one or more physical hard drives, allowing you to grow, shrink, or move those partitions from drive to drive as your needs change. It also allows you to create larger partitions than you could achieve with a single drive. Traditional uses of LVM have included databases and company file servers, but even home users may want large partitions for music or video collections, or for storing online backups. LVM can also be convenient ways to gain redundancy without sacrificing flexibility. A typical example for the need of LVM can be, assuming that we are having a disk of size 2GB and we start adding the data in the form of a single file, eventually it grows to the size of 2GB. In this case the possibility is, you go for another disk which is larger than 2GB, let’s say 4GB. But what if the file again grows more than 4GB? How far you will be migrating file from one disk to another so on and so forth? It requires a down time as well which is not possible in real time, so to avoid these circumstances we implement LVM and store data in LV’s whose size can be easily increased whenever required without a downtime.

If the enough space is present in a Volume group then we can just use lvextend command to increase the LVM size and update the file system using resize2fs or xfs\_growfs command.

If the enough space is not preset in volume group then we need to add the new disk from the Vcentre and add the new PV to VG using vgextend command and then extend the required file system using lvextend command

1. How to restore Logical volume if deleted by mistake.

Whenever logical volume group get modified, the linux server will take the backup of existing configuration and save it in **/etc/lvm/archive** directory. By using **vgcfgrestore** command we can recover deleted LVM partitions.

vgcfgrestore --list {VGname} will list the logical volume groups recently deleted

vgcfgrestore -f /etc/lvm/archive/{volumegroupfilename}will to recover the deleted logical volume

lvchange -ay {lvmpathname} will activate the volumes before mounting to system

mount -t ext4 /dev/VolGroup/lvtest /data will mount the logical volume

1. What are the booting issues will you face after the kernel patching.

Kernel panic – system will stuck while booting process – there may be an issue with initramfs

Netwrok connection failed or timeout

Netwrok connection failed or timeout":

-go to single used mode

- add - init=/bin/ba

sh

- press b to resume booting

- then you will go to shell prompt where you can perform commands

- do "mount -o remount rw /" to get read write permissions on root file system

- for this kindof issues, error usally present in /etc/passwd file

- you should have already take the passwd file backup

- move the contents of backup passwd file to /etc/passwd

- now exec /sbin/init to resume booting

Control D prompt issue:

- if you see this then there is something issue in file systems

- give root password to enter into command line again

- unmount the root file system

- now do e2fsck {root file system}

- now do exec /sbin/init to resume booting

1. How to create normal user. ftp user and nologin user.

Normal user : #useradd ktuser2 –u 505 -g 505 –d /home/kernel –c salesman

Nologin User: usermod linuxconfig -s /sbin/nologin

FTP User: change below parameter in “/etc/vsftpd/vsftpd.conf” to YES. Un-hash it if its hashed.

chroot\_local\_user=YES

service vsftpd restart

chown ftpuser:ftpuser /var/ftp\_home

usermod -d /var/ftp\_home/ ftpuser

usermod -s /sbin/nologin ftpuser

1. How to remove the package using yum.

yum remove xxxx

1. How to identify the user locked or not.

cat /etc/shadow | grep -i sername

passwd -S username

pam\_tally2 --user xxxx

chage -l username

8. How to unlock the user if locked.

passwd -u username

pam\_tally2 --reset -u xxxx

passwd -l username (To lock)

9.How to check the linux process which is taking more CPU utilization.

top -c

10.What is zombie process how to kill the process.

A zombie process is a process whose execution is completed but it still has an entry in the process table. Zombie processes usually occur for child processes, as the parent process still needs to read its child's exit status

Within the ps output there is a STAT column which will show the processes current status, a zombie process will have Z as the status

kill-9 PID

11. How to resolve the emergency mode.

Log into emergency shell as root user and then run the command "lsblk -l" and verify what device is 8:3 (MAJ:MIN number)? Check if this block device is active. Also, look at the /etc/fstab file to confirm if the device mapping is correct. Inspect the journal logs by running the command "journalctl -xb". Run the below command to see what PV/VG/LV's are available and their status:

# lvm pvscan

# lvm vgscan

# lvm lvscan

# lvm lvs

If there any in-active LVs then you could try to activate them using 'lvchange -ay vgname/lvname' command. If you see that all LVs are active, you may trigger the command "systemctl default" or "exit" to boot into the default target. Check if this helps. If not working then please reply with the above command outputs and os release, kernel version etc,.

12. What is hard link and soft link

**A symbolic or soft link is an actual link to the original file**, whereas a hard link is a mirror copy of the original file. ... Even if you delete the original file, the hard link will still has the data of the original file. Because hard link acts as a mirror copy of the original file.

13. what is Sticky bit

If sticky bit is applied on a file or directory, then only root and owner of that file or directory can delete it. Even if others are having full permissions they cannot delete the file or directory.

14. What is Network Bonding?

Network bonding is **a process of combing or joining two or more network interfaces together into a single interface**. Network bonding offers performance improvements and redundancy by increasing the network throughput and bandwidth. If one interface is down or unplugged the other one will work.

15. What ports should be in open for NFS

111 for portmapper and 2049 for nfs

16. What if a mount point in not mounting from /etc/fstab

Strace command

17.