RedHat Certified System Administrator (RHEL 9)

SUMMARY

Disk Partitioning

[Root access is mandatory]

1. Check your disks:

   lsblk (-f)

2. Using "fdisk" to partition the disk:

   fdisk /dev/sdX
   n: New partition
   p: Print partition table
   t: Change type
   w: write changes and exit

3. Format the partition(in this step you can also give the partition a LABEL, more in the man pages):

   mkfs.xfs /dev/sdb1
   mkfs.ext4 /dev/sdb1
   mkfs.vfat /dev/sdb1
   {mkswap/dev/sdb1; swapon /dev/sdb1}

4. Mount the newly created partition

- Method1: Manually

   mount [partition] [existing_path]

- Method2: Persistent

   vim /etc/fstab

UUID=XXXX /mount_point filesystem_type defaults 0 0
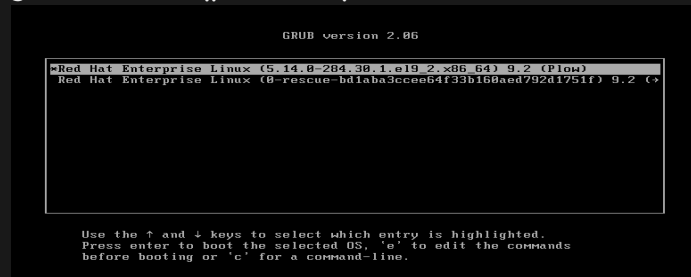LABEL=XXXX /mount_point filesystem_type defaults 0 0
EXAMPLE: UUID=XXXX none swap defaults 0 0
PS: You can get the UUID of the partition using "blkid"
WARNING: Do not use the path of the partitions in the "fstab" file because they are given at the boot, meaning they don't uniquely define each partition.

- Happens when the system crashes:
  - Some wrong entry in /etc/fstab
  - A mistake in /etc/sudoers
  - Needed to reset root password

1. Reboot/Reset the VM and when you get to the grub menu (press 'e'):
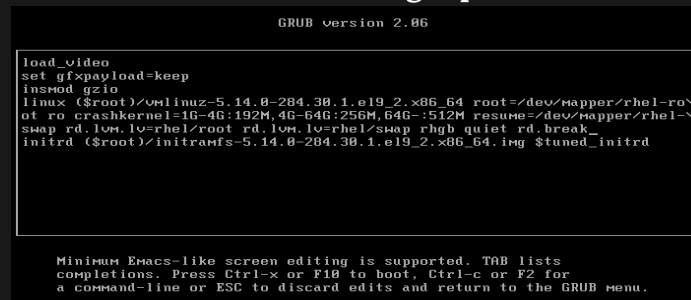
```
                          GRUB version 2.06

  ►Red Hat Enterprise Linux (5.14.0-284.30.1.el9_2.x86_64) 9.2 (Plow)
   Red Hat Enterprise Linux (0-rescue-bd1aba3ccee64f33b160aed792d1751f) 9.2 (►




       Use the ↑ and ↓ keys to select which entry is highlighted.
       Press enter to boot the selected OS, 'e' to edit the commands
       before booting or 'c' for a command-line.
```

2. You will then have access to a file editor, you need to add exactly: " rd.break" (no spaces after that) after the 4th line that ends with "rhgb quiet".

```
                          GRUB version 2.06

  load_video
  set gfxpayload=keep
  insmod gzio
  linux ($root)/vmlinuz-5.14.0-284.30.1.el9_2.x86_64 root=/dev/mapper/rhel-ro\
  ot ro crashkernel=1G-4G:192M,4G-64G:256M,64G-:512M resume=/dev/mapper/rhel-\
  swap rd.lvm.lv=rhel/root rd.lvm.lv=rhel/swap rhgb quiet rd.break_
  initrd ($root)/initramfs-5.14.0-284.30.1.el9_2.x86_64.img $tuned_initrd




       Minimum Emacs-like screen editing is supported. TAB lists
       completions. Press Ctrl-x or F10 to boot, Ctrl-c or F2 for
       a command-line or ESC to discard edits and return to the GRUB menu.
```

3. Press CTRL+x and it will open a shell, then you have to remount the sysroot directory (which contains the filesystem that you get when booting normally) with the options remount and rw since it's now a Read Only mount:

    mount -o remount,rw /sysroot

4. Change the root of your filesystem to sysroot:

    chroot /sysroot

5. Resolve whatever issue that caused your system to crash or reset your root password

    echo "root_password" | passwd --stdin root

6. To be able to boot next time, you HAVE to create a file "/.autorelabel" to trigger the SELinux system to relabel all objects on the next boot. (More on that in the SELinux Chapter), after that <u>exit twice</u>, continue the boot.

    touch /.autorelabel