

Managing the Linux Boot Process



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Overview



Booting to the Linux Kernel

grub

- mbr
- ramdisk
- kernel
- /etc/default/grub
- grubby

Kernel panic



Ramdisk / Kernel

initramfs

**Drivers to access to root file
system at boot time**

kernel

The core operating system



Demo



Working on the Alma Linux 8.5

- We discover the the /boot directory



Grub Defaults

/etc/default/grub

```
GRUB_TIMEOUT=5
```

```
GRUB_DISTRIBUTOR="$(sed 's, release .*$, ,g'  
/etc/system-release)"
```

```
GRUB_DEFAULT=saved
```

```
GRUB_DISABLE_SUBMENU=true
```

```
GRUB_TERMINAL_OUTPUT="console"
```

```
GRUB_CMDLINE_LINUX="resume=UUID=7191323b-  
10c7-416e-a894-6f0fe7031cfa rhgb quiet"
```

```
GRUB_DISABLE_RECOVERY="true"
```

```
GRUB_ENABLE_BLSCFG=true
```

Demo



Working on the Alma Linux 8.5

Working with Grub Defaults

- Change timeout
- Update grub2.cfg



Default Kernel Options

resume

Hibernation partition,
not needed on server

rhgb

Red Hat Graphical
Boot, really no one
cares on a server

quiet

This is a server no one
is going to see. If a tree
falls in a forest etc



```
$ sudo -i
# cat /boot/grub2/grubenv
# cat /boot/loader/entries/<...>.conf
# grubby --update-kernel=ALL --remove-args="rhgb quiet"
# grubby --update-kernel=ALL --args="rhgb quiet"
# grubby --update-kernel=/boot/vmlinuz-$(uname -r) --remove-args="rhgb quiet"
```

Changing Entries Using grubby

Demo



Working with Alma Linux 8

- Kernel Options
- Using Grubby



When the Linux Kernel Panics!



Add Password for
Vagrant Account

```
$ sudo passwd vagrant
```

Cause Kernel Panic

Delete Initramfs --
take care

```
# rm /boot/initramfs-$(uname -r).img
```

Fix Kernel Panic

Create Initramfs

Boot to Rescue Image

```
# mkinitrd --force /boot/initramfs-$(uname -  
r).img $(uname -r)
```

Demo



Working with Alma Linux 8

- Recovering from a Kernel Panic



Summary



Booting Linux

- grub
- kernel
- initramfs

Configuring Grub

- /etc/default/grub
- grub2-mkconfig
- grubby

Kernel Panic

- corrupt or inaccessible initramfs
- rescue system
- mkinitrd or dracut



Managing Linux Network Configuration

