GETTING STARTED

WITH

SYSTEM POWER MANAGEMENT

➢ SHUTDOWN, SUSPENDING & HIBERNATING:

- As a system administrator, you can use different power management options to manage power consumption, perform a proper shutdown to ensure that all data is saved, or restart the system to apply changes and updates.

SCHEDULING A SYSTEM SHUTDOWN:

- As a system administrator, you can schedule a delayed shutdown to give users time to save their work and log off the system.

  → **Specify the time at which you want to shut down the system and power off the machine:**
  #shutdown --poweroff hh:mm
  #shutdown --poweroff 23:59

  → **Shut down and halt the system after a delay, without powering off the machine:**
  #shutdown --halt +m   (+m is the delay time in minutes)
  #shutdown --halt +15   (now keyword as an alias for +0)
  #shutdown --halt now

  → **Cancel a pending shutdown:**
  #shutdown -c

  → **Restart the system:**
  #systemctl reboot

OPTIMIZING POWER CONSUMPTION BY SUSPENDING AND HIBERNATING THE SYSTEM:

- As a system administrator, you can manage power consumption, save energy on your systems, and preserve the current state of your system.

SUSPEND:

- Suspending saves the system state in RAM and with the exception of the RAM module, powers off most of the devices in the machine.

- When you turn the machine back on, the system then restores its state from RAM without having to boot again. Because the system state is saved in RAM and not on the hard disk, restoring the system from suspend mode is significantly faster than from hibernation.

  → **Suspend the system**   : #systemctl suspend

HIBERNATE:

- Hibernating saves the system state on the hard disk drive and powers off the machine.
- When you turn the machine back on, the system then restores its state from the saved data without having to boot again. Because the system state is saved on the hard disk and not in RAM, the machine does not have to maintain electrical power to the RAM module.

  → **Hibernate the system**   : #systemctl hibernate

HYBRID SLEEP:

- This combines elements of both hibernation and suspending. The system first saves the current state on the hard disk drive, and enters a low-power state similar to suspending, which allows the system to resume more quickly
- The benefit of hybrid sleep is that if the system loses power during the sleep state, it can still recover the previous state from the saved image on the hard disk, similar to hibernation.

  → **Hibernate and suspend the system**   : #systemctl hybrid-sleep

SUSPEND-THEN-HIBERNATE:

- This mode first suspends the system, which results in saving the current system state to RAM and putting the system in a low-power mode.
- The system hibernates if it remains suspended for a specific period of time that you can define in the HibernateDelaySec parameter.
- Hibernation saves the system state to the hard disk drive and shuts down the system completely. The suspend-then-hibernate mode provides the benefit of conserving battery power while you are still able to quickly resume work.

  → **Suspend and then hibernate**   : #systemctl suspend-then-hibernate

POWER MANAGEMENT COMMANDS:

- The following list of the **systemctl** commands to control the power management of your system.

systemctl command	Description
systemctl halt	Halts the system.
systemctl poweroff	Powers off the system.
systemctl reboot	Restarts the system.
systemctl suspend	Suspends the system.
systemctl hibernate	Hibernates the system.
systemctl hybrid-sleep	Hibernates and suspends the system.

TRADITIONAL Vs NEW COMMANS:

OLD COMMAND	NEW COMMAND	DESCRIPTION
halt	systemctl halt	Halts the system.
poweroff	systemctl poweroff	Powers off the system.
reboot	systemctl reboot	Restarts the system.
pm-suspend	systemctl suspend	Suspends the system.
pm-hibernate	systemctl hibernate	Hibernates the system.
pm-suspend-hybrid	systemctl hybrid-sleep	Hibernates & suspends the system