Linux Kernel

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- ❖ A kernel is a central component of an o.s.
- ❖ The o.s. consist of kernel space and user space.
- ❖ The Linux is a large modular system. It is present between application and hardware layer in the structure of Linux o.s.
- ❖ When the computer starts the BIOS starts the boot loader which controls the kernel.
- ❖ It initialize core systems , checks identifies and enables hardware and starts boot scripts.
- ❖ It provides an uniform interface to services such as task switching ,signaling ,device I/O and memory management.
- ❖ When we say a program "run on Linux" we mean that it communicates through these kernel interfaces.

❖ The linus kernel is now almost completely modular.Hence most components and services can be added as required through sysct(system control) interfaces or through setting bootparams(boot parameters) in /etc/modules.conf.

❖ Linux kernel can be categorized into following ares:
i) architecture ii) drivers   iii) file systems iv) init
v) intercrosses communication vi) kernel vii) memory management
viii) networking.

Types of Kernel

❖ There are two general types of kernels that linux can be configured to operate. These are

a) Modular Kernel :-
It is a very basic kernel that includes code which is necessary to allow the system to provide major functionality such as Memory management and module support.
Advntage of this module is it reduces memory overhead.

b) Monolithic Kernel:-
It include all necessary drivers for piece of hardware that will be installed in the computer.
Advantage of this module is it reduces compile time.

Kernel versions:

❖ The uname command with –r option displays the current kernel version.

 [root@ Linux8 root] # Uname – r

                              2.4.7 -10 enterprise

The kernel version is divided into 4 sections.
1) Major version
2) Minor version
3) Sublevel version
4) Extraversion level

          eg. Red Hat 7.2 kernel

 Here , 2 – is the major version.

       4 - is the patch level or minor version

       7 – is the sublevel

      10 – is the extraversion level

Thanks For Watching!

ANY QUESTIONS?

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