ASSIGNMENT - 2

Virtual File System

Name – Ashutosh Soni Id – 2018ucp1505

Question: On a Linux machine, explore proc virtual file system. Use command (cd /proc). Write a report on what information can be accessed from this file system and how?

Answer:

Proc file System (procfs) is virtual system created on fly when system boots and is dissolved at time of system shut down. It contains the information about the processes that are currently running, it is regarded as control and information centre for the kernel. The proc file system also provides communication medium between kernel space and user space.

Several Linux commands access the information from /proc, and displays in a certain format.

1. /proc Directories with names as numbers

Do a ls -l /proc, and you'll see lot of directories with just numbers. These numbers represent the process ids, the files inside this numbered directory corresponds to the process with that particular PID.

Following are the important files located under each numbered directory (for each process):

- cmdline command line of the command.
- environ environment variables.
- fd Contains the file descriptors which is linked to the appropriate files.
- limits Contains the information about the specific limits to the process.
- mounts mount related information

Following are the important links under each numbered directory (for each process):

- cwd Link to current working directory of the process.
- exe Link to executable of the process.
- root Link to the root directory of the process.

2. /proc Files about the system information

Following are some files which are available under /proc, that contains system information such as cpuinfo, meminfo, loadavg.

- /proc/cpuinfo information about CPU,
- /proc/meminfo information about memory,
- /proc/loadvg load average,
- /proc/partitions partition related information,
- /proc/version Linux version

Some of the screenshot related with proc command are as under...

Under directory...

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ashutosh@ashutosh:~$ tree / -L 1
/
|-- bin
|-- boot
|-- dev
|-- etc
|-- home
|-- lib
|-- lib64
|-- media
|-- meta
|-- mnt
|-- opt
|-- proc
|-- root
|-- root
|-- run
|-- sbin
|-- snap
|-- srv
|-- sys
|-- tmp
|-- usr
|-- writable

22 directories, 0 files
ashutosh@ashutosh:~$
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Some other screenshots of proc commands containing list...

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ashutosh:~$ ls -l /proc
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