

201.3 - Kernel runtime management and troubleshooting

Weight: 4

Description: Candidates should be able to manage and/or query a 2.6.x, 3.x or 4.x kernel and its loadable modules. Candidates should be able to identify and correct comm-on boot and run time issues. Candidates should understand device detection and management using udev. This objective includes troubleshooting udev rules.

Key Knowledge Areas:

- Use command-line utilities to get information about the currently running kernel and kernel modules
- Manually load and unload kernel modules
- Determine when modules can be unloaded
- Determine what parameters a module accepts
- Configure the system to load modules by names other than their file name.
- /proc filesystem
- Content of /, /boot/, and /lib/modules/
- Tools and utilities to analyze information about the available hardware
- udev rules

Terms and Utilities:

- /lib/modules/kernel-version/modules.dep
- module configuration files in /etc/
- /proc/sys/kernel/
- /sbin/depmod
- /sbin/rmmod
- /sbin/modinfo
- /bin/dmesg
- /sbin/lspci
- /usr/bin/lshw
- /sbin/lsmode
- /sbin/modprobe

- /sbin/insmod
- /bin/uname
- /usr/bin/lshusb
- /etc/sysctl.conf, /etc/sysctl.d/
- /sbin/sysctl
- udevmonitor
- udevadm monitor
- /etc/udev/