

Linux Foundation

Certified System Administrator (LFCS)

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Essential Commands (25%)

- [] Log into local & remote graphical and text mode consoles
- [] Search for files
- [] Evaluate and compare the basic file system features and options
- [] Compare and manipulate file content
- [] Use input-output redirection (e.g. >, >>, |, 2>)
- [] Analyze text using basic regular expressions
- [] Archive, backup, compress, unpack, and uncompress files
- [] Create, delete, copy, and move files and directories
- [] Create and manage hard and soft links
- [] List, set, and change standard file permissions
- [] Read, and use system documentation
- [] Manage access to the root account

Operation of Running Systems (20%)

- [] Boot, reboot, and shut down a system safely
- [] Boot or change system into different operating modes
- [] Install, configure and troubleshoot bootloaders
- [] Diagnose and manage processes
- [] Locate and analyze system log files
- [] Schedule tasks to run at a set date and time
- [] Verify completion of scheduled jobs
- [] Update software to provide required functionality and security
- [] Verify the integrity and availability of resources
- [] Verify the integrity and availability of key processes
- [] Change kernel runtime parameters, persistent and non-persistent
- [] Use scripting to automate system maintenance tasks
- [] Manage the startup process and services (In Services Configuration)
- [] List and identify SELinux/AppArmor file and process contexts

- [] Manage Software
- [] Identify the component of a Linux distribution that a file belongs to

User and Group Management (10%)

- [] Create, delete, and modify local user accounts
- [] Create, delete, and modify local groups and group memberships
- [] Manage system-wide environment profiles
- [] Manage template user environment
- [] Configure user resource limits
- [] Manage user privileges
- [] Configure PAM

Networking (12%)

- [] Configure networking and hostname resolution statically or dynamically
- [] Configure network services to start automatically at boot
- [] Implement packet filtering
- [] Start, stop, and check the status of network services
- [] Statically route IP traffic
- [] Synchronize time using other network peers

Service Configuration (20%)

- [] Configure a caching DNS server
- [] Maintain a DNS zone
- [] Configure email aliases
- [] Configure SSH servers and clients
- [] Restrict access to the HTTP proxy server
- [] Configure an IMAP and IMAPS service
- [] Query and modify the behavior of system services at various operating modes
- [] Configure an HTTP server
- [] Configure HTTP server log files
- [] Configure a database server
- [] Restrict access to a web page
- [] Manage and configure containers
- [] Manage and configure Virtual Machines

Storage Management (13%)

- [] List, create, delete, and modify physical storage partitions
- [] Manage and configure LVM storage
- [] Create and configure encrypted storage
- [] Configure systems to mount file systems at or during boot
- [] Configure and manage swap space
- [] Create and manage RAID devices
- [] Configure systems to mount file systems on demand
- [] Create, manage and diagnose advanced file system permissions
- [] Setup user and group disk quotas for filesystems
- [] Create and configure file systems