Duration: 6 Days

Audience: The Linux Foundation Certified System Administrator (LFCS) certification is ideal for candidates early in their Linux system administration or open source career. The exam consists of performance-based items that simulate on-the-job tasks and scenarios faced by sysadmins in the real world.

Format: This hands-on class is approximately 80/20 lab to lecture ratio, combining engaging lecture, demos, group activities and discussions with comprehensive machine-based practical labs.

Course Outline

Essential Commands

- 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
- 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
- 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
- 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
- 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
- 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