**Linux Foundation Certified System Administrator**

I’m creating these notes as part of my LFCS exam preparations. I followed multiple tutorials and books for preparing this exam.

LFCS is one of the best exams with hands on lab. You should be very familiar Linux command line and use of multiple Linux features to pass this exam.

I’m using RHEL7.x Operating System for my day to day task at office, even though I’m not a System Administrator. But after spending 5+ years with RHEL 7.x and now with RHEL8.x, I thought it is nice to have a Certification in Linux. I know there are Certifications based on Redhat Linux, but I prefer to get a certification from Linux Foundation.

The notes will be based on LFCS study guide. You can get that from Linux Foundation website.

**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 nonpersistent

■**■** 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