LFCS Command Cheat Sheet

Essential Commands	
ssh -V	
hostnamectl	change the static hostname of your Linux system
ssh -v alex@localhost	That will show a lot more status messages and help you debug why this connection is failing.
ls -la /home/bob/data/	Find hidden files in a given directory
touch /home/bob/myfile	Create a file name myfile in the /home/bob/ directory
apropos "NFS mounts"	Search the manual page names and descriptions for keywords.
usermod -a -G developers jane	Add the user jane to the group called developers
groupadd -g 9875 cricket	Create a group named cricket and set its GID to 9875
groupmod -n soccer cricket	Rename cricket group to soccer while preserving the same GID
useradd -G soccer sam --uid 5322	Create a user sam with UID 5322, also make it a member of soccer group.
usermod -g rugby sam	Update primary group of user sam and set it to rugby
usermod -L sam	Lock the user account called sam
groupdel appdevs	Delete the group called appdevs
chage -W 2 jane	Make sure the user jane gets a warning at least 2 days before the password expires
gpasswd -a trinity wheel	Allow the user called trinity to execute any sudo command
findmnt /dev/vda1	Show mount options used with /dev/vda1
umount /mnt	Manually unmount filesystems
mount -o ro,noexec,nosuid /dev/vdb1 /mnt	Mount /dev/vdb1 into the /mnt/ directory, use mount options: ro,noexec,nosuid
openssl req -newkey rsa:4096 -keyout priv.key -out cert.csr	Generate a key and certificate signing request
openssl x509 -in my.crt -text	Identify the CN of certificate
git add *.cpp	Stage all the files with the .cpp extension to prepare them for a future commit
git commit -m "Message"	Commit the files with the commit message
git branch testing	Create a branch with the name testing
git checkout master	Check out to master branch
git branch --delete testing	Delete the testing branch

git log --raw	Check for the file modified in the latest commit
git merge "branch name"	Merge the branch to the master branch
git pull origin master	Pull in the latest commits from the remote repository
git push origin master	Push changes to master branch of remote repository
git clone "repository"	Clone the repo

Operations Deployment	
shutdown +120	Schedule this system to power off two hours later from now
grub-install /dev/vda	Install grub to /dev/vda
systemctl get-default	Find out what is the system's current default boot target
shutdown -c	Cancel the scheduled shutdown you configured in the beginning
./script.sh	How do we run script.sh that is located in our current directory?
chmod u+x ./script.sh	Make script executable
systemctl daemon-reload	Reload systemd manager configuration
ps lax	See all processes running on the system, along with their nice values
sleep 10	Sleep for 10 seconds
renice 9 <PID>	Assign a nice value of 9 to process
lsof -p 1	List all files that are opened by process with PID 1
pgrep -a rpcbind	Identify the PID of the process named rpcbind
kill -SIGHUP <pid>	Send the SIGHUP signal to PID
grep -r --text 'reboot' /var/log/	Under `/var/log` directory, search for all files containing the `reboot` string
ps u 1	Identify the CPU and Memory usage by only the process having PID 1
[command] &	Running command in the background
crontab -l	See the crontab for theroot user
anacron -n -f	Force anacron to rerun all jobs, regardless of when they were last executed
atq	List currently scheduled jobs under current user
atrm <jobid>	Remove the job with JOBID
apt search "apache http server"	Search for package
apt install apache2	Install the Apache web server

dpkg --search /bin/ls	Find out the name of the package that "/bin/ls" belongs to.
dpkg --listfiles coreutils | grep ^/bin	list the files that belong to coreutils package
apt-get remove --auto-remove -y ziptool	Uninstall the package ziptool and its dependency package(s) from the system.
df /	Identify what % space of / partition is in use on our system
du -sh /bin/	Show storage space of the /bin/ directory
free --mega	Show the memory on this system (in megabytes)
uptime	Show how long this system is up
lscpu	Show CPU architecture information from sysfs
xfs_repair /dev/vdb	Check /dev/vdb XFS filesystem for errors
sysctl -w kernel.modules_disabled =1	Turn on kernel.modules_disabled kernel runtime parameter
ls -Z /bin/sudo	Check out the SELinux label for the file stored at /bin/sudo
chcon -t httpd_sys_content_t /var/index.html	Change the SELinux context of /var/index.html file to httpd_sys_content_t
setenforce 0	Temporarily change the SELinux status to Permissive on this system
semanage user -l	Identify the SELinux Roles for staff_u SELinux user
restorecon -R /var/log/	Restore the correct (default) labels for every file and subdirectory in the /var/log directory

Users and Groups	
usermod -e 2030-03-01 jane	Set the jane user account to expire on March 1, 2030
usermod -e "" jane	Unexpire Jane's account and make sure it never expires again
useradd -s /bin/csh -m jack	Create a user account called jack with home directory and set its default login shell to be /bin/csh
userdel -r jack	Delete the user account called jack and ensure his home directory is removed
chage --lastday 0 jane	Mark the password for jane as expired to force her to immediately change it the next time she logs in.
nproc	Limit the number of processes a user can run
echo $MYVAR	Print the value of an environment variable
env	Print our current user environment
source ~/.bashrc	To refresh the current shell environment by re-reading
touch path/file	To create new, empty files

Networking	
ss -tunlp	Show processes on our system are listening for incoming network connections, on the TCP and UDP protocols
ip a	Displays information about interfaces, devices, routing, and tunnels
ip route show	Display the IPv4 routing table of a router
ip a add 192.168.9.3/24 dev eth1	Add a temporary extra IP to the eth1 interface
netplan apply	Applies the current netplan configuration to a running system
netstat -tulpn	Get the list of all incoming open ports on this system
timedatectl	Check for the Time zone
timedatectl set-timezone America/New_York	Set the time zone to America, New York
ufw enable	Turn on UFW
ufw allow 22	Allow SSH on port 22
ufw deny 443/tcp	Deny incoming traffic to this machine on port 443, through the TCP protocol
ufw delete deny 443/tcp	Delete a firewall rule denying incoming traffic to this machine on port 443, through the TCP protocol
ufw status numbered	List numbered firewall rules
ufw allow from 207.45.232.181	Allow all traffic that is coming from the following IP address 207.45.232.181
ufw allow from 10.11.12.0/24	Allow all traffic that is coming from any IP in this network range: 10.11.12.0 to 10.11.12.255 (i.e 10.11.12.0/24)
ufw delete 8	Delete a numberd firewall rule

Storage	
lsblk	Display block devices, such as disks or partitions
mkswap /dev/vdb3	Format a partition as swap space. Where /dev/vdb3 is the partition we want to format
swapon --show	Identify the swapfile
fdisk /dev/vdb	Update primary partitions on /dev/vdb
mkswap /dev/vdb2	Format the /dev/vdb2 partition as swap
swapon /dev/vdb2	Active swap for /dev/vdb2 partition
swapoff /dev/vdb2	Stop the /dev/vdb2 partition as swap
cfdisk	To create, delete, and modify partitions on a disk device
mkfs.xfs -L "DataDisk" /dev/vdb	To create an xfs filesystem with the label "DataDisk" on /dev/vdb
mkfs.ext4 -N 2048 /dev/vdc	To create an ext4 filesystem with a number of 2048 inodes on /dev/vdc
mount /dev/vdb /mnt	Mount /dev/vdb in the /mnt/ directory
umount /mnt	Unmount the filesystem mounted in the /mnt/ directory
xfs_admin -L "SwapFS" /dev/vdb	Change the label for /dev/vdb filesystem to SwapFS
findmnt /dev/vda1	Show mount options used with /dev/vda1
exportfs -r	To reexport the /etc/exports configuration
pvcreate /dev/vdb /dev/vdc	Add these two disks as PVs (Physical Volumes) to LVM: /dev/vdb, /dev/vdc
pvs	Display a list of Physical Volumes (PVs) used by LVM
pvremove /dev/vdc	Remove the /dev/vdc physical volume from LVM
vgcreate volume1 /dev/vdb	Create a Volume Group (VG) named volume1 which created on Physical Volume: /dev/vdb
vgextend volume1 /dev/vdc	Increases a volume group's capacity by adding one or more free physical volumes
vgreduce volume1 /dev/vdc	Remove /dev/vdc from the volume group volume1
vgs	Displays all of the volume groups
lvcreate	Create a Logical Volume (LV)
lvresize --size 752M volume1/smalldata	Resize the Logical Volume called smalldata to 752 MB (volume group called volume1)
mkfs.xfs /dev/volume1/smalldata	Create an XFS filesystem on the logical volume called smalldata (volume group called volume1)
lvremove volume1/smalldata	Remove the Logical Volume called smalldata
getfacl archive	List the ACL permissions associated with archive file

mdadm --create /dev/md0 --level=1 --raid-devices=2 /dev/vdb /dev/vdc	Create a level 1 RAID array, at /dev/md0, with two devices: /dev/vdb and /dev/vdc
setfacl --modify user:john:rw specialfile	Add an ACL permission to specialfile file so that the user called john can read and write to it
setfacl --remove user:john specialfile	Remove the ACL permissions for the user called john for specialfile file
setfacl --modify group:mail:rx specialfile	Add an ACL permission for the group called mail. The mail group should get permissions to read and execute specialfile file.
setfacl --recursive --modify user:john:rwx collection/	Update ACL permissions for collection folder and all its contents, allowing the user john to read, write, and execute everything inside
xfs_quota -x -c 'limit bsoft=100m bhard=500m john' /dev/vda1	Edit disk quotas for the user called john. Set a soft limit of 100 megabytes and hard limit of 500 megabytes on /dev/vda1 partition