LFCS_Module3_Networking Cheat Sheet

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Persistent Network Config in CentOS

nmcli	Network Manager command line
nmtui	network Manger graphical
nmcli connection up ens33	Switch on ens33 interface
/etc/sysconfig/network-scripts	Config file

Common Network Tools

dig	Verify DNS relay
nmap	Scanning ports

iptables Syntax

```
iptables {-A|I} chain [-i/o iface] [-s/d ipaddr] [-p udp/tcp/icmp[--dport/sport nn...]] -j [LOG|ACCEPT|DROP|REJECT]
-A|I: Append or Insert
-i/o: INPUT or OUTPUT chain
-s/d: source IP or destin ation IP
-p udp/tc p/icmp: protocol to use
--dpor t/sport nn: destin ation port or source port
-j LOG|AC CEP T|D ROP |RE JECT: Write line to syslog or Accept or Drop silently (external traffic) or reject non-si lently (internal traffic)
```

Configuring Local time

hwclock	Display kernel hardware clock
hwclock --systohc	Synchronise system tim to hardware time
hwclock --hctosys	Synchronise hardware clock to system
timedatectl	Utilitiy to config time

NTPD and Chronyd

vim /etc/ntp.conf	Config file; Server *server name* iburst
systemctl restart ntpd	Restart NTP service
ntpq -p	Show current time info
systemctl status chrony	Show current status of chrony
vim /etc/chrony.conf	Chrony config file
chronyc sources	Current time server status
chrony tracking	Current chrony tracking status
iptables -A INPUT -p udp --dport 123 -j ACCEPT	Allow traffic to time server
iptables -A OUTPUT -p udp --dport 123 -j ACCEPT	//

IP Traffic Route

route -n	IP routing table
ip route list	List of ip route
ip route add 8.8.0.0/16 proto static metric 10 via inet 10.9.1-85.143 dev eth0	Add new IP route
ip route del 8.8.0.0/16 proto static metric 10 via inet 10.9.185.143 dev eth0	Delete IP route

Firewalld

firewall-cmd --list-all	Show current firewall config-uration
firewall-cmd --get-ser-vices	Show current services on Firewall
/usr/lib/firewalld/se-rvices	List of services config file
firewall-cmd --add--service samba --permanent	Add Samba service to Firewall persistently
firewall-cmd --add-port 4000-4005/tcp --permanent	Add port 4000-4005 on TCP persistently

SSH

vim /etc/ssh/sshd_c-onfig	Config file for SSH Daemon (SSH server)
vim /etc/ssh/ssh-_config	Config file for SSH Client
systemctl status sshd	Current status of process
systemctl enable sshd	Start SSH at boot
ssh -X *user@ip*	SSH with graphical application
ssh-keygen	Generating public and private key
scp /etc/hosts 192.168.4.240:/tmp (vice versa)	Copy /etc/hosts over SSH to /tmp
rsync -avz /tmp student@192.1-68.4.240:/tmp	Rsync from host to remote

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Config static network

```
vim /etc/network-scripts/ifcfg-eht0
BOOTPR OTO =none
IPADDR =19 2.1 68.0.222
PREFIX=24
GATEWA Y=1 92.1 68.0.1
DNS1=8.8.8.8
systemctl restart network
```

Hostname

vim /etc/hostname	Hostname config file
hostnamectl	Tool for setting hostname
vim /etc/hosts	Local resolving of hostname
vim /etc/resolv.conf	DNS config file
vim /etc/nsswitch.conf	Specify which config file to be processed

Firewall using iptables

systemctl stop firewalld	Stop Firewalld
iptables -L -v	List iptables policy verbosely
iptables -P INPUT(-OUTPUT) DROP	Set INPUT(OUTPUT) to DROP
iptables -A INPUT -i lo -j ACCEPT	Allow incoming traffic to loopback interface
iptables -A OUTPUT -o lo -j ACCEPT	Allow outgoing traffic to loopback interface
iptables -A INPUT -p tcp --dport 22 -j ACCEPT	Allow packet through port on TCP going to system

Firewall using iptables (cont)

iptables -A OUTPUT -m state --state ESTABLISHED, RELATED -j ACCEPT	Allow all old to get out of system; doesn't all new traffic
iptables -A OUTPUT -p tcp --dport 22 -j ACCEPT	//
iptables -A INPUT -m state --state ESTABLISHED, RELATED -j ACCEPT	//
iptables -A OUTPUT -p tcp --dport 80 -j ACCEPT	Allow TCP traffic going out through port 80
iptables -A OUTPUT -p udp --dport 53 -j ACCEPT	Allow traffic going out through DNS (port 53)
iptables-save > /etc/sysconfig/iptables	Save iptables to start automatically at boot

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