Networking

Basic Commands

ip a	Display network inerfaces and detail
ip addr	
ifconfig	
hostnamectl set-hostname <hostname>	set hostname

NetworkManager

systemctl status NetworkManager	NetworkManager status
ps -ef | grep NetworkManager	verify the process is running

Network Configuration Methods

nmcli	network manager cli (non gui) can b
nmtui	text user interface
nm-connection-editor	full gui (via desktop/console)
GNOME Settings	

Creating a New Connection Profile

nmcli con add type ethernet ifname enp0s3 con-name myprofile1

Use nmcli to set a static ip address

nmcli connection	connected interface UUIDs
nmcli device	connected interface status
nmcli connection modify eth0 ipv4.addresses 192.168.50.X/24	set static ip address & subnet mask
nmcli connection modify eth0 ipp4.gateway 192.168.50.1	set gateway
nmcli connection modify eth0 ipv4.method manual	configure eth0 to use static IP
nmcli connection modify eth0 ipv4.dns 8.8.8.8	set dns to google.com
nmcli connection down eth0 && nmcli connection up eth0	restart nmcli connection
ip address show eth0	

Use nmcli to configure a secondary static ip address

nmcli device status	
nmcli connection show --active	

ifconfig	
nmcli connection modify eth0 +ipv4.addresses 192.168.50.X/24	set secondary static ip address & su
nmcli connection reload	
systemctl reboot	
ip address show	

nmtui (as root), nm-connection-editor or GNOME settings can also be used to activate a connection or change hostname

Network Files and Basic Commands

/etc/sysconfig/network-scripts	
/etc/hosts	
/etc/hostname	
/etc/resolv.conf	DNS
/etc/nsswitch.conf	Set to use Files or DNS first (per com
ping	verify network connectivity to a host
ifconfig	Display network interfaces and IP ad
ip addr	
ip a	
ifup	brings up a specific network interfac
ifdown	takes down a specific network interf
traceroute	track and display path (router/hops) destination host
tcpdump -i eth0	capture and monitor live network tra
nslookup	queries DNS servers to find ip adddr
dig	
ethtool eth0	display and modify physical hardwar speed & duplex

Revision #2
Created 2026-07-05 06:22:27 UTC by Admin
Updated 2026-07-09 06:35:21 UTC by Admin