

Chapter 3:

```
[root@localhost ~]# ip link
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN mode DEFAULT group default qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
2: ens33: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP mode DEFAULT group default qlen 1000
    link/ether 00:0c:29:6b:b8:77 brd ff:ff:ff:ff:ff:ff
    altname enp2s1
3: ens36: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP mode DEFAULT group default qlen 1000
    link/ether 00:0c:29:6b:b8:81 brd ff:ff:ff:ff:ff:ff
    altname enp2s4
[root@localhost ~]# nmcli connection add type team con-name team0 ifname team0 config '{"runner": {"name": "activebackup"}}'
Connection 'team0' (35d83063-3634-4133-847b-a8783ac6717d) successfully added.
[root@localhost ~]# nmcli connection add type team-slave con-name team0-port1 ifname ens33 master team0
Connection 'team0-port1' (4f00044d-6538-4a69-a553-e841866739a1) successfully added.
[root@localhost ~]# nmcli connection add type team-slave con-name team0-port2 ifname ens36 master team0
Connection 'team0-port2' (ed31891b-70e3-4f29-b5cb-7ac2c8b90c69) successfully added.
[root@localhost ~]# teamdctl team0 state
setup:
  runner: activebackup
ports:
  ens36
    link watches:
      link summary: up
      instance[link_watch_0]:
        name: ethtool
```

```
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[root@localhost ~]# teamdctl team0 state
setup:
  runner: activebackup
ports:
  ens36
    link watches:
      link summary: up
      instance[link_watch_0]:
        name: ethtool
        link: up
        down count: 0
runner:
  active port: ens36
[root@localhost ~]# nmcli connection up team0-port1
Connection successfully activated (D-Bus active path: /org/freedesktop/NetworkManager/ActiveConnection/9)
[root@localhost ~]# teamdctl team0 state
setup:
  runner: activebackup
ports:
  ens33
    link watches:
      link summary: up
      instance[link_watch_0]:
        name: ethtool
        link: up
        down count: 0
  ens36
    link watches:
      link summary: up
      instance[link_watch_0]:
        name: ethtool
        link: up
        down count: 0
runner:
  active port: ens36
```

```
root@localhost:/etc/NetworkManager/system-connections
Connection 'team0-port1' (4f00044d-6538-4a69-a553-e841866739a1) successfully added.
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down count: 0
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active port: ens36
[root@localhost ~]# nmcli connection
Connection successfully activated (D-
[root@localhost ~]# teamdctl team0 st
setup:
runner: activebackup
ports:
ens33
link watches:
link summary: up
instance[link_watch_0]:
name: ethtool
link: up
down count: 0
ens36
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link summary: up
instance[link_watch_0]:
name: ethtool
link: up
down count: 0
runner:
active port: ens36

moe404@moe404-inspiron-5593:~
→ ~ ping 192.168.136.142
PING 192.168.136.142 (192.168.136.142) 56(84) bytes of data.
64 bytes from 192.168.136.142: icmp_seq=1 ttl=64 time=0.419 ms
64 bytes from 192.168.136.142: icmp_seq=2 ttl=64 time=0.351 ms
64 bytes from 192.168.136.142: icmp_seq=3 ttl=64 time=0.347 ms
64 bytes from 192.168.136.142: icmp_seq=4 ttl=64 time=0.411 ms
64 bytes from 192.168.136.142: icmp_seq=5 ttl=64 time=0.297 ms
64 bytes from 192.168.136.142: icmp_seq=6 ttl=64 time=0.381 ms
64 bytes from 192.168.136.142: icmp_seq=7 ttl=64 time=0.549 ms
64 bytes from 192.168.136.142: icmp_seq=8 ttl=64 time=0.412 ms
64 bytes from 192.168.136.142: icmp_seq=9 ttl=64 time=0.375 ms
64 bytes from 192.168.136.142: icmp_seq=10 ttl=64 time=0.389 ms
^C
--- 192.168.136.142 ping statistics ---
10 packets transmitted, 10 received, 0% packet loss, time 9220ms
rtt min/avg/max/mdev = 0.297/0.393/0.549/0.062 ms
→ ~
```

Chapter 5:

```
moe404@localhost:~
[moe404@localhost ~]$ unbound
bash: unbound: command not found...
Install package 'unbound' to provide command 'unbound'? [N/y] y

* Waiting in queue...
* Loading list of packages....
The following packages have to be installed:
unbound-1.16.2-17.el9.x86_64 Validating, recursive, and caching DNS(SEC) resolver
unbound-libs-1.16.2-17.el9.x86_64 Libraries used by the unbound server and client applications
Proceed with changes? [N/y] y

* Waiting in queue...
* Waiting for authentication...
* Waiting in queue...
* Loading list of packages....
* Downloading packages...
* Requesting data...
* Testing changes...
* Installing packages...
May 26 17:37:36 unbound[5058:0] warning: setsockopt(.. IP_TRANSPARENT ..) failed: Operation not permitted
May 26 17:37:36 unbound[5058:0] error: can't bind socket: Permission denied for ::1 port 53
May 26 17:37:36 unbound[5058:0] fatal error: could not open ports

[moe404@localhost ~]$ unbound
May 26 17:37:44 unbound[25617:0] warning: setsockopt(.. IP_TRANSPARENT ..) failed: Operation not permitted
May 26 17:37:44 unbound[25617:0] error: can't bind socket: Permission denied for ::1 port 53
May 26 17:37:44 unbound[25617:0] fatal error: could not open ports
[moe404@localhost ~]$ vim /etc/unbound/unbound.conf
[moe404@localhost ~]$ sudo vim /etc/unbound/unbound.conf
[moe404@localhost ~]$ sudo vim /etc/unbound/unbound.conf
[moe404@localhost ~]$
```

```
# interface: 0.0.0.0@80
# interface: ::0@80
interface: 0.0.0.0
# enable this feature to copy the source address of queries to reply.
# Socket options are not supported on all platforms. experimental.
# interface-automatic: yes
#
# NOTE: Enable this option when specifying interface 0.0.0.0 or ::0
```

```
[moe404@localhost ~]$ sudo grep ^[[[:space:]]]*access-control /etc/unbound/unbound.conf
[moe404@localhost ~]$ sudo vim /etc/unbound/unbound.conf
```

```
# The server clause sets the main parameters.
server:
    # whitespace is not necessary, but looks cleaner.
    access-control: 172.25.3.0/24 allow
    # verbosity number, 0 is least verbose. 1 is default.
    verbosity: 1
```

```
[moe404@localhost ~]$ sudo vim /etc/unbound/unbound.conf
[moe404@localhost ~]$ sudo grep ^[[[:space:]]]*access-control /etc/unbound/unbound.conf
    access-control: 172.25.3.0/24 allow
[moe404@localhost ~]$ sudo unbound-checkconf
unbound-checkconf: no errors in /etc/unbound/unbound.conf
[moe404@localhost ~]$ sudo systemctl restart unbound
[moe404@localhost ~]$
```

```
[root@localhost ~]# dig @localhost A example.com

; <<>> DiG 9.16.23-RH <<>> @localhost A example.com
; (2 servers found)
;; global options: +cmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 57926
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 6, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:;; udp: 1232
;; QUESTION SECTION:
;example.com.                IN      A

;; ANSWER SECTION:
example.com.                 300     IN      A       23.192.228.84
example.com.                 300     IN      A       23.215.0.136
example.com.                 300     IN      A       23.215.0.138
example.com.                 300     IN      A       96.7.128.175
example.com.                 300     IN      A       96.7.128.198
example.com.                 300     IN      A       23.192.228.80

;; Query time: 449 msec
;; SERVER: 127.0.0.1#53(127.0.0.1)
;; WHEN: Mon May 26 18:16:53 EEST 2025
;; MSG SIZE rcvd: 136

[root@localhost ~]#
```

Chapter 6:

```
[moe404@localhost ~]$ postconf
bash: postconf: command not found...
Install package 'postfix' to provide command 'postconf'? [N/y] y

* Waiting in queue...
* Loading list of packages....
The following packages have to be installed:
postfix-2:3.5.25-1.el9.x86_64 Postfix Mail Transport Agent
Proceed with changes? [N/y] y

* Waiting in queue...
* Waiting for authentication...
* Waiting in queue...
* Loading list of packages....
* Downloading packages...
* Requesting data...
* Testing changes...
* Installing packages...
```

```
[moe404@localhost ~]$ postconf -e "relayhost=[smtpX.example.com]"
postconf: fatal: open /etc/postfix/main.cf.tmp: Permission denied
[moe404@localhost ~]$ sudo postconf -e "relayhost=[smtpX.example.com]"
[moe404@localhost ~]$ postconf -e "inet_interfaces=loopback-only"
postconf: fatal: open /etc/postfix/main.cf.tmp: Permission denied
[moe404@localhost ~]$ sudo postconf -e "inet_interfaces=loopback-only"
[moe404@localhost ~]$ sudo -i
[root@localhost ~]# postconf -e "relayhost=[smtpX.example.com]"
[root@localhost ~]# postconf -e "inet_interfaces=loopback-only"
[root@localhost ~]# postconf -e "mynetworks=127.0.0.0/8 [::1]/128"
[root@localhost ~]# postconf -e "myorigin=desktopX.example.com"
[root@localhost ~]# postconf -e "mydestination="
[root@localhost ~]# postconf -e "local_transport=error: local delivery disabled"
[root@localhost ~]# systemctl restart postfix
[root@localhost ~]#
```

```
[moe404@localhost ~]$ mutt -f imaps://imapX.example.com
bash: mutt: command not found...
Install package 'mutt' to provide command 'mutt'? [N/y] y

* Waiting in queue...
* Loading list of packages....
The following packages have to be installed:
mutt-5:2.2.6-2.el9.x86_64      A text mode mail user agent
perl-File-Copy-2.34-481.el9.noarch  Copy files or file handles
tokyocabinet-1.4.48-19.el9.x86_64  A modern implementation of a DBM
urlview-0.9-31.20131022git08767a.el9.x86_64  URL extractor/launcher
Proceed with changes? [N/y] y

* Waiting in queue...
* Waiting for authentication...
* Waiting in queue...
* Loading list of packages....
* Downloading packages...
* Requesting data...
* Testing changes...
* Installing packages...
No recipients specified.

[moe404@localhost ~]$
```