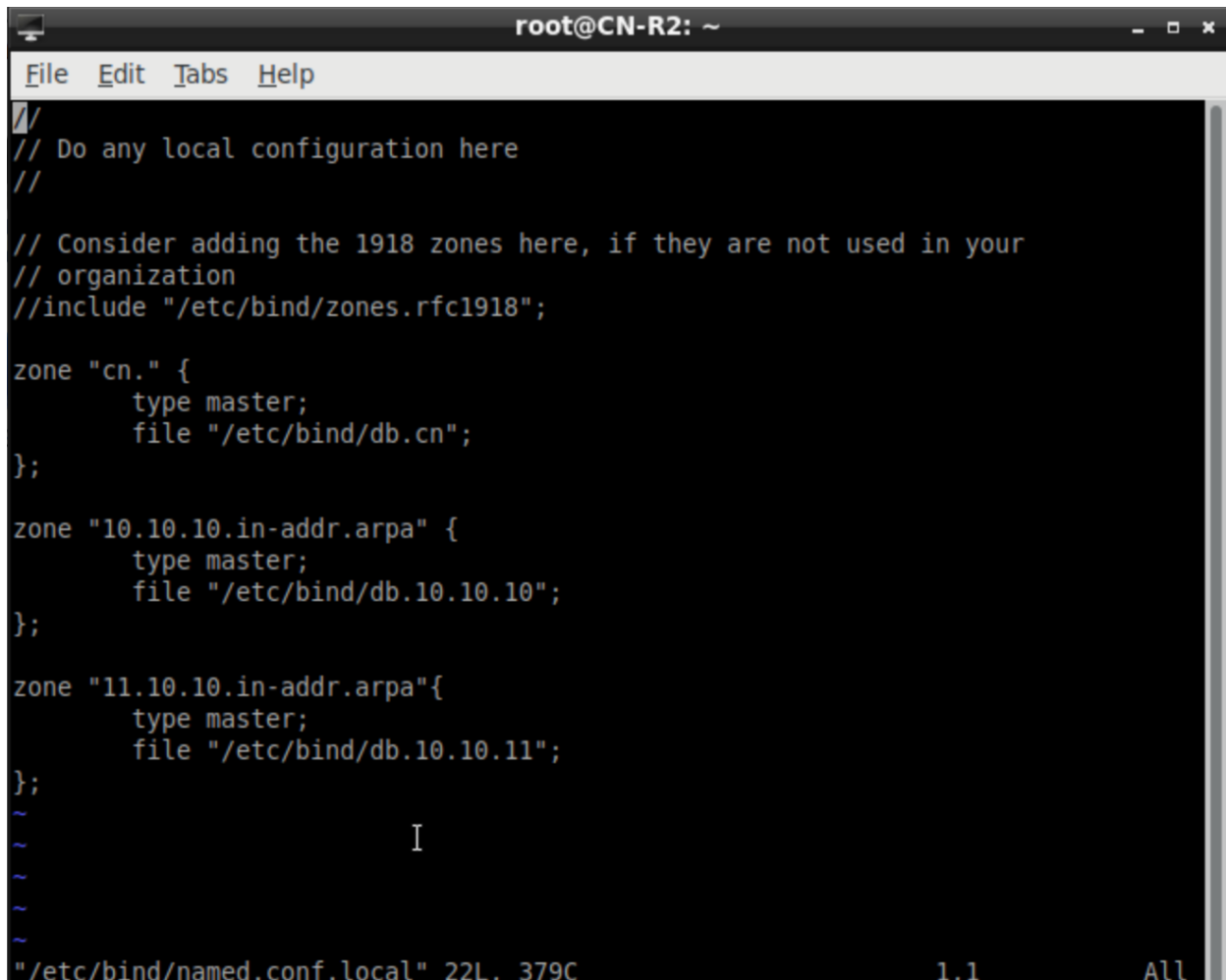


CN ASSIGNMENT DNS

HARI KISHAN REDDY (ha2755)

/etc/bind/named.conf.local file on R2:



```
root@CN-R2: ~  
File Edit Tabs Help  
//  
// Do any local configuration here  
//  
  
// Consider adding the 1918 zones here, if they are not used in your  
// organization  
//include "/etc/bind/zones.rfc1918";  
  
zone "cn." {  
    type master;  
    file "/etc/bind/db.cn";  
};  
  
zone "10.10.10.in-addr.arpa" {  
    type master;  
    file "/etc/bind/db.10.10.10";  
};  
  
zone "11.10.10.in-addr.arpa"{  
    type master;  
    file "/etc/bind/db.10.10.11";  
};  
~  
~  
~  
~  
~  
"/etc/bind/named.conf.local" 22L, 379C 1,1 All
```

Forward zone for DNS server:
/etc/bind/db.cn. file

```
root@CN-R2: ~  
File Edit Tabs Help  
;  
; BIND data file for local loopback interface  
;  
$TTL      604800  
@         IN      SOA      localhost. root.localhost. (  
                2          ; Serial  
                604800     ; Refresh  
                86400      ; Retry  
                2419200    ; Expire  
                604800 )   ; Negative Cache TTL  
;  
@         IN      NS       localhost.  
@         IN      A        127.0.0.1  
@         IN      AAAA     ::1  
  
R1        IN      A        10.10.10.1  
R2        IN      A        10.10.10.2  
Kali      IN      A        10.10.10.3  
  
R3        IN      A        10.10.11.2  
R4        IN      A        10.10.11.6  
Ubuntu    IN      A        10.10.11.18  
~  
~  
~  
~  
~  
"/etc/bind/db.cn" 22L, 411C 17,22-35 All
```

Reverse zone files for primary DNS server.
/etc/bind/db.10.10.10 (for 10.10.10 subnet machines)

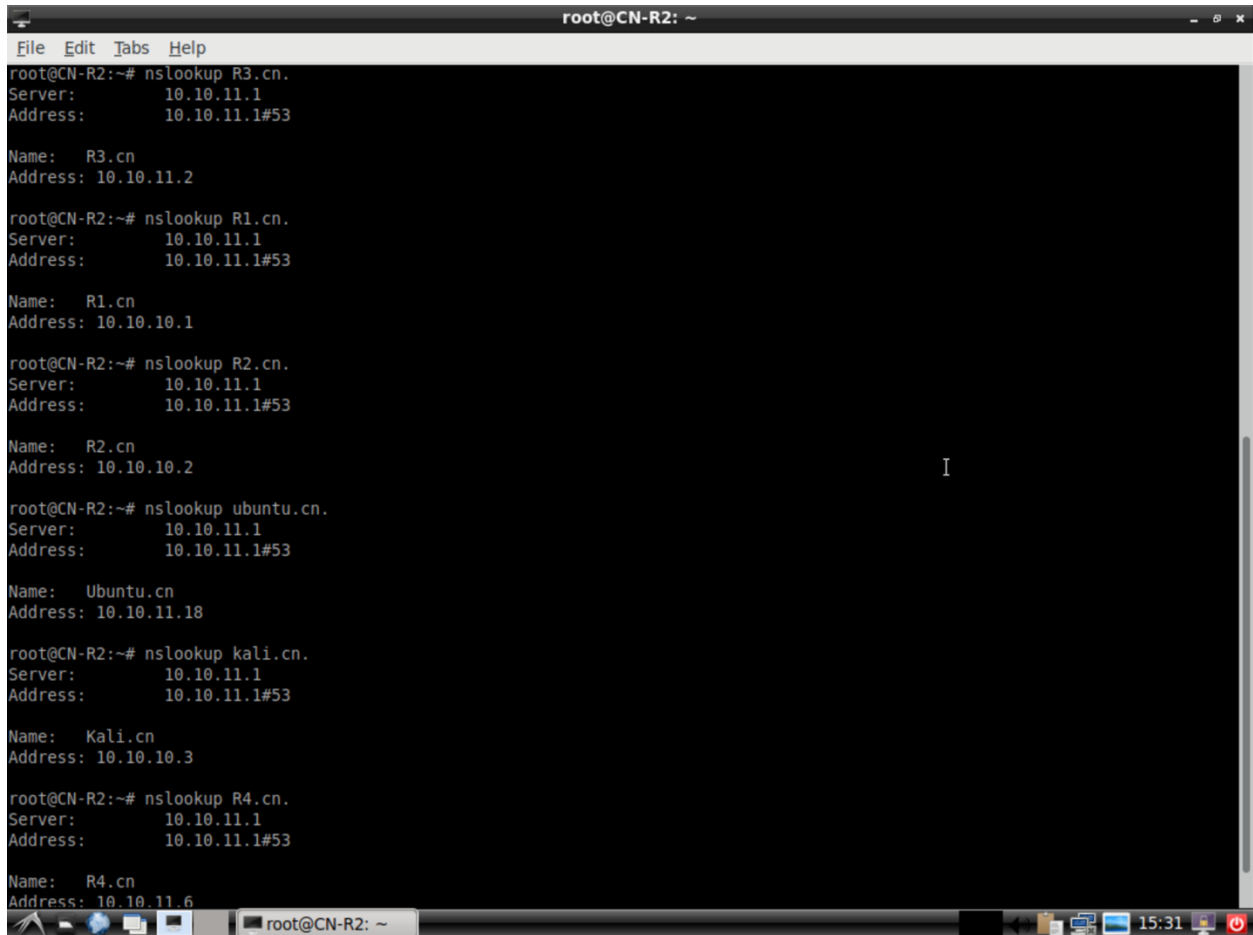
[illegible]

```
/etc/bind/db.10.10.11 (for 10.10.11 subnet machines)
```

[illegible]

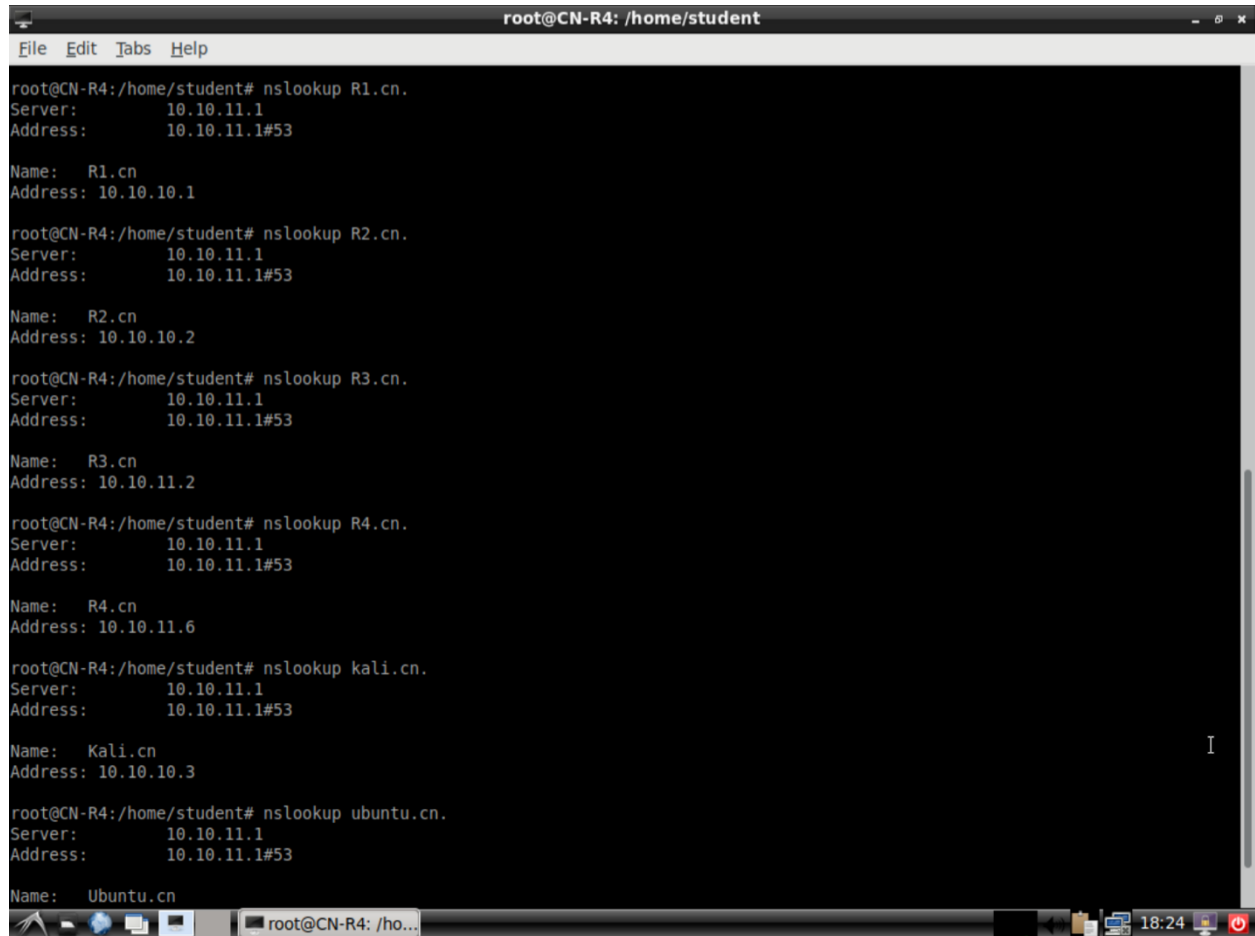
Host lookup by name using nslookup or dig.

From R2:



```
root@CN-R2: ~  
File Edit Tabs Help  
root@CN-R2:~# nslookup R3.cn.  
Server:      10.10.11.1  
Address:     10.10.11.1#53  
  
Name:   R3.cn  
Address: 10.10.11.2  
  
root@CN-R2:~# nslookup R1.cn.  
Server:      10.10.11.1  
Address:     10.10.11.1#53  
  
Name:   R1.cn  
Address: 10.10.10.1  
  
root@CN-R2:~# nslookup R2.cn.  
Server:      10.10.11.1  
Address:     10.10.11.1#53  
  
Name:   R2.cn  
Address: 10.10.10.2  
  
root@CN-R2:~# nslookup ubuntu.cn.  
Server:      10.10.11.1  
Address:     10.10.11.1#53  
  
Name:   Ubuntu.cn  
Address: 10.10.11.18  
  
root@CN-R2:~# nslookup kali.cn.  
Server:      10.10.11.1  
Address:     10.10.11.1#53  
  
Name:   Kali.cn  
Address: 10.10.10.3  
  
root@CN-R2:~# nslookup R4.cn.  
Server:      10.10.11.1  
Address:     10.10.11.1#53  
  
Name:   R4.cn  
Address: 10.10.11.6
```

From R4(anyone machine from area 1):



```
root@CN-R4: /home/student
File Edit Tabs Help

root@CN-R4:/home/student# nslookup R1.cn.
Server:      10.10.11.1
Address:     10.10.11.1#53

Name:   R1.cn
Address: 10.10.10.1

root@CN-R4:/home/student# nslookup R2.cn.
Server:      10.10.11.1
Address:     10.10.11.1#53

Name:   R2.cn
Address: 10.10.10.2

root@CN-R4:/home/student# nslookup R3.cn.
Server:      10.10.11.1
Address:     10.10.11.1#53

Name:   R3.cn
Address: 10.10.11.2

root@CN-R4:/home/student# nslookup R4.cn.
Server:      10.10.11.1
Address:     10.10.11.1#53

Name:   R4.cn
Address: 10.10.11.6

root@CN-R4:/home/student# nslookup kali.cn.
Server:      10.10.11.1
Address:     10.10.11.1#53

Name:   Kali.cn
Address: 10.10.10.3

root@CN-R4:/home/student# nslookup ubuntu.cn.
Server:      10.10.11.1
Address:     10.10.11.1#53

Name:   Ubuntu.cn
```

From R1 (anyone machine from area 0):

```
root@CN-R1: /home/student
File Edit Tabs Help
root@CN-R1:/home/student# nslookup R2.cn
Server:      10.10.11.1
Address:     10.10.11.1#53

Name:   R2.cn
Address: 10.10.10.2

root@CN-R1:/home/student# nslookup kali.cn
Server:      10.10.11.1
Address:     10.10.11.1#53

Name:   Kali.cn
Address: 10.10.10.3

root@CN-R1:/home/student# nslookup R3.cn
Server:      10.10.11.1
Address:     10.10.11.1#53

Name:   R3.cn
Address: 10.10.11.2

root@CN-R1:/home/student# nslookup R4.cn
Server:      10.10.11.1
Address:     10.10.11.1#53

Name:   R4.cn
Address: 10.10.11.6

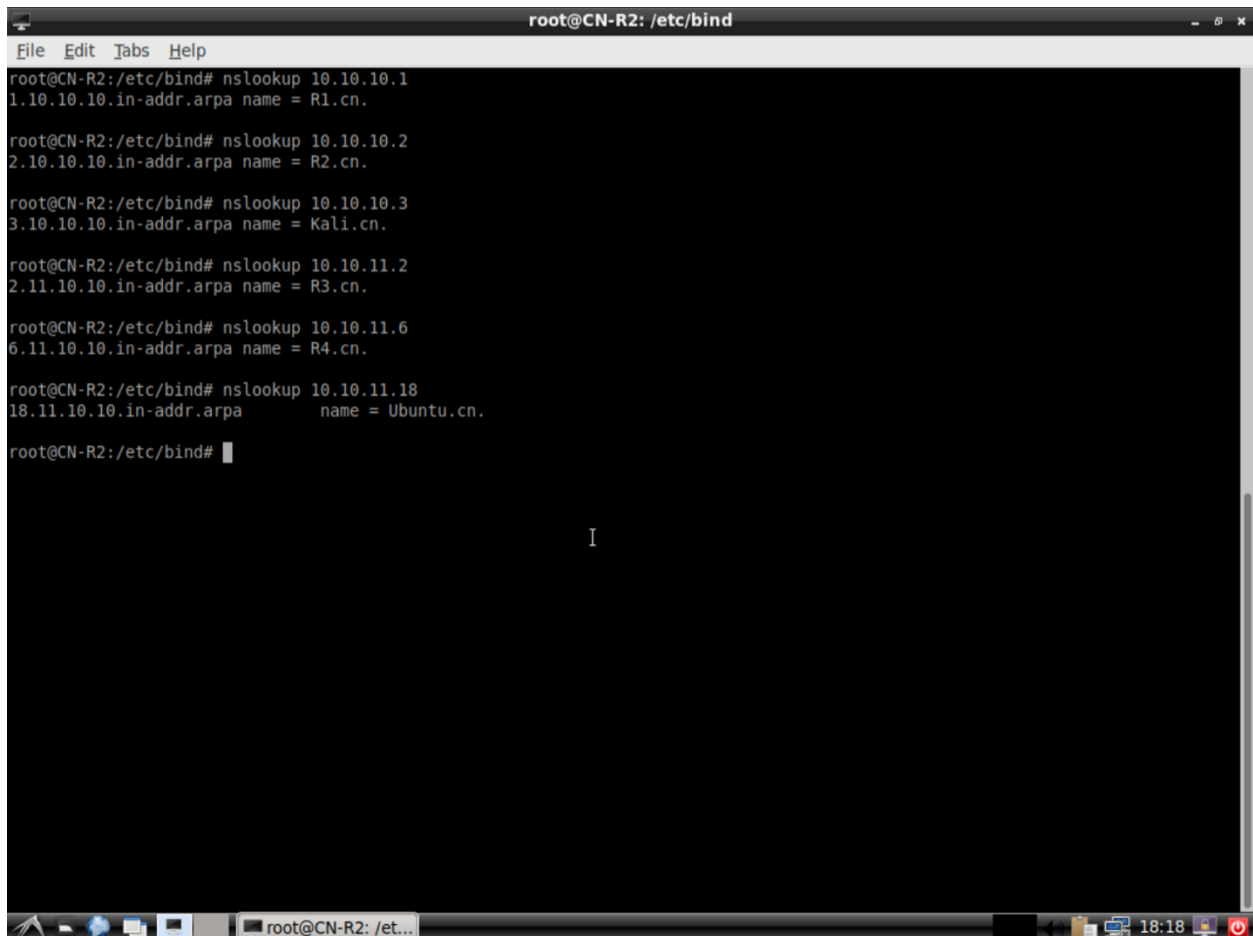
root@CN-R1:/home/student# nslookup ubuntu.cn
Server:      10.10.11.1
Address:     10.10.11.1#53

Name:   Ubuntu.cn
Address: 10.10.11.18

root@CN-R1:/home/student#
```

Host lookup by address using nslookup or dig

From R2:



A terminal window titled "root@CN-R2: /etc/bind" with a menu bar (File, Edit, Tabs, Help). The terminal shows a series of nslookup commands and their outputs. The commands are: nslookup 10.10.10.1, nslookup 10.10.10.2, nslookup 10.10.10.3, nslookup 10.10.11.2, nslookup 10.10.11.6, and nslookup 10.10.11.18. The outputs show reverse DNS lookups for each IP address, returning names like R1.cn, R2.cn, Kali.cn, R3.cn, R4.cn, and Ubuntu.cn. The terminal ends with a prompt root@CN-R2: /etc/bind# and a cursor. The window has a standard Linux desktop environment with a taskbar at the bottom showing icons for a file manager, terminal, and other applications, along with a system clock showing 18:18.

```
root@CN-R2:/etc/bind# nslookup 10.10.10.1
1.10.10.10.in-addr.arpa name = R1.cn.

root@CN-R2:/etc/bind# nslookup 10.10.10.2
2.10.10.10.in-addr.arpa name = R2.cn.

root@CN-R2:/etc/bind# nslookup 10.10.10.3
3.10.10.10.in-addr.arpa name = Kali.cn.

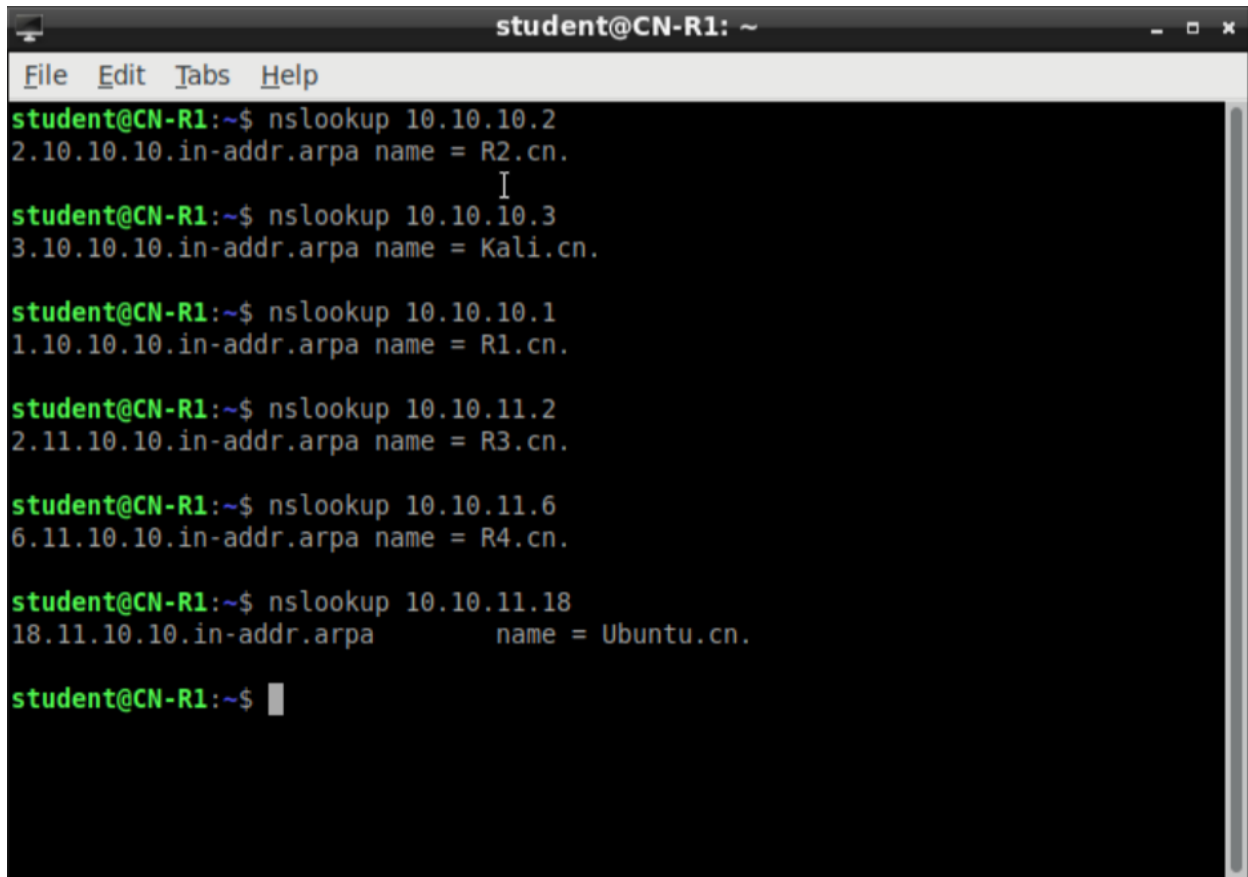
root@CN-R2:/etc/bind# nslookup 10.10.11.2
2.11.10.10.in-addr.arpa name = R3.cn.

root@CN-R2:/etc/bind# nslookup 10.10.11.6
6.11.10.10.in-addr.arpa name = R4.cn.

root@CN-R2:/etc/bind# nslookup 10.10.11.18
18.11.10.10.in-addr.arpa      name = Ubuntu.cn.

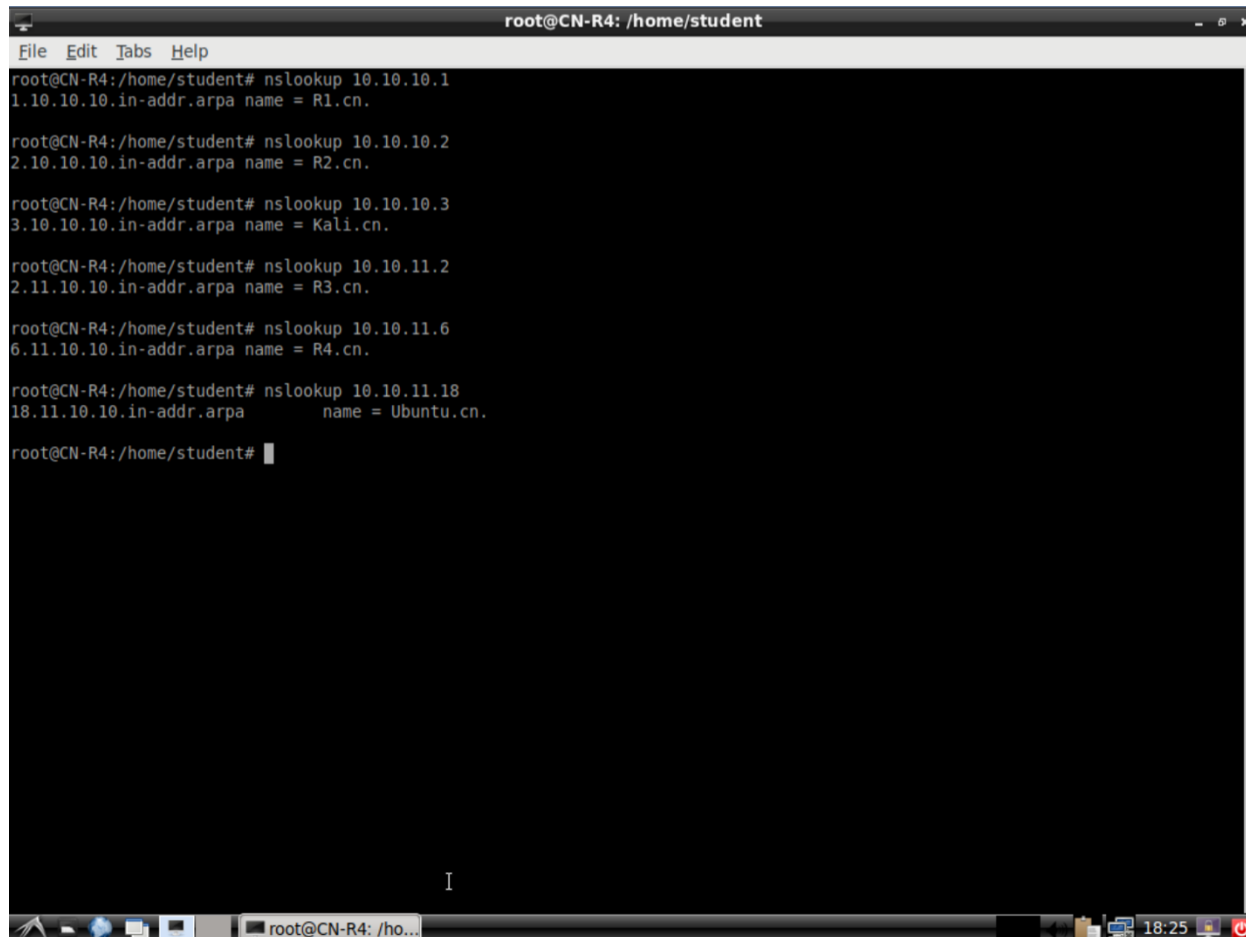
root@CN-R2:/etc/bind#
```

From R1 (anyone machine from area 0):

A terminal window titled 'student@CN-R1: ~' with a menu bar containing 'File', 'Edit', 'Tabs', and 'Help'. The terminal shows a series of 'nslookup' commands and their outputs. The first command is 'nslookup 10.10.10.2', which returns '2.10.10.10.in-addr.arpa name = R2.cn.'. The second command is 'nslookup 10.10.10.3', which returns '3.10.10.10.in-addr.arpa name = Kali.cn.'. The third command is 'nslookup 10.10.10.1', which returns '1.10.10.10.in-addr.arpa name = R1.cn.'. The fourth command is 'nslookup 10.10.11.2', which returns '2.11.10.10.in-addr.arpa name = R3.cn.'. The fifth command is 'nslookup 10.10.11.6', which returns '6.11.10.10.in-addr.arpa name = R4.cn.'. The sixth command is 'nslookup 10.10.11.18', which returns '18.11.10.10.in-addr.arpa name = Ubuntu.cn.'. The prompt 'student@CN-R1:~\$' is followed by a cursor.

```
student@CN-R1:~$ nslookup 10.10.10.2
2.10.10.10.in-addr.arpa name = R2.cn.
student@CN-R1:~$ nslookup 10.10.10.3
3.10.10.10.in-addr.arpa name = Kali.cn.
student@CN-R1:~$ nslookup 10.10.10.1
1.10.10.10.in-addr.arpa name = R1.cn.
student@CN-R1:~$ nslookup 10.10.11.2
2.11.10.10.in-addr.arpa name = R3.cn.
student@CN-R1:~$ nslookup 10.10.11.6
6.11.10.10.in-addr.arpa name = R4.cn.
student@CN-R1:~$ nslookup 10.10.11.18
18.11.10.10.in-addr.arpa name = Ubuntu.cn.
student@CN-R1:~$
```


From R4 (anyone machine from area 1):

A terminal window titled 'root@CN-R4: /home/student' with a menu bar (File, Edit, Tabs, Help). The terminal shows a series of 'nslookup' commands and their outputs. The commands are: 'nslookup 10.10.10.1', 'nslookup 10.10.10.2', 'nslookup 10.10.10.3', 'nslookup 10.10.11.2', 'nslookup 10.10.11.6', and 'nslookup 10.10.11.18'. The outputs are: '1.10.10.10.in-addr.arpa name = R1.cn.', '2.10.10.10.in-addr.arpa name = R2.cn.', '3.10.10.10.in-addr.arpa name = Kali.cn.', '2.11.10.10.in-addr.arpa name = R3.cn.', '6.11.10.10.in-addr.arpa name = R4.cn.', and '18.11.10.10.in-addr.arpa name = Ubuntu.cn.'. The prompt 'root@CN-R4: /home/student#' is visible at the end of each line. The terminal window has a dark background and is part of a desktop environment with a taskbar at the bottom showing various icons and the time '18:25'.

Screenshot of R1 pinging R2 and Kali:

```
student@CN-R1: ~  
File Edit Tabs Help  
student@CN-R1:~$ ping R2  
PING R2.cn (10.10.10.2) 56(84) bytes of data.  
64 bytes from R2.cn (10.10.10.2): icmp_seq=1 ttl=64 time=0.362 ms  
64 bytes from R2.cn (10.10.10.2): icmp_seq=2 ttl=64 time=0.604 ms  
64 bytes from R2.cn (10.10.10.2): icmp_seq=3 ttl=64 time=0.388 ms  
64 bytes from R2.cn (10.10.10.2): icmp_seq=4 ttl=64 time=0.371 ms  
^C  
--- R2.cn ping statistics ---  
4 packets transmitted, 4 received, 0% packet loss, time 45ms  
rtt min/avg/max/mdev = 0.362/0.431/0.604/0.101 ms  
student@CN-R1:~$ ping kali  
PING Kali.cn (10.10.10.3) 56(84) bytes of data.  
64 bytes from Kali.cn (10.10.10.3): icmp_seq=1 ttl=64 time=0.335 ms  
64 bytes from Kali.cn (10.10.10.3): icmp_seq=2 ttl=64 time=0.610 ms  
64 bytes from Kali.cn (10.10.10.3): icmp_seq=3 ttl=64 time=0.575 ms  
64 bytes from Kali.cn (10.10.10.3): icmp_seq=4 ttl=64 time=0.165 ms  
^C  
--- Kali.cn ping statistics ---  
4 packets transmitted, 4 received, 0% packet loss, time 45ms  
rtt min/avg/max/mdev = 0.165/0.421/0.610/0.182 ms  
student@CN-R1:~$
```

Screenshots of R2 pinging R3, R4, and Ubuntu

```
root@CN-R2: ~  
File Edit Tabs Help  
root@CN-R2:~# ping R3  
PING R3.cn (10.10.11.2) 56(84) bytes of data.  
64 bytes from R3.cn (10.10.11.2): icmp_seq=1 ttl=64 time=1.79 ms  
64 bytes from R3.cn (10.10.11.2): icmp_seq=2 ttl=64 time=0.190 ms  
64 bytes from R3.cn (10.10.11.2): icmp_seq=3 ttl=64 time=0.112 ms  
^C  
--- R3.cn ping statistics ---  
3 packets transmitted, 3 received, 0% packet loss, time 5ms  
rtt min/avg/max/mdev = 0.112/0.696/1.788/0.772 ms  
root@CN-R2:~# ping R4  
PING R4.cn (10.10.11.6) 56(84) bytes of data.  
64 bytes from R4.cn (10.10.11.6): icmp_seq=1 ttl=64 time=0.584 ms  
64 bytes from R4.cn (10.10.11.6): icmp_seq=2 ttl=64 time=0.442 ms  
64 bytes from R4.cn (10.10.11.6): icmp_seq=3 ttl=64 time=0.476 ms  
^C  
--- R4.cn ping statistics ---  
3 packets transmitted, 3 received, 0% packet loss, time 23ms  
rtt min/avg/max/mdev = 0.442/0.500/0.584/0.065 ms  
root@CN-R2:~# ping ubuntu  
PING Ubuntu.cn (10.10.11.18) 56(84) bytes of data.  
64 bytes from Ubuntu.cn (10.10.11.18): icmp_seq=1 ttl=63 time=0.637 ms  
64 bytes from Ubuntu.cn (10.10.11.18): icmp_seq=2 ttl=63 time=0.573 ms  
64 bytes from Ubuntu.cn (10.10.11.18): icmp_seq=3 ttl=63 time=0.833 ms  
^C  
--- Ubuntu.cn ping statistics ---  
3 packets transmitted, 3 received, 0% packet loss, time 15ms  
rtt min/avg/max/mdev = 0.573/0.681/0.833/0.110 ms  
root@CN-R2:~#
```