

# BIND DNS MASTER SLAVE

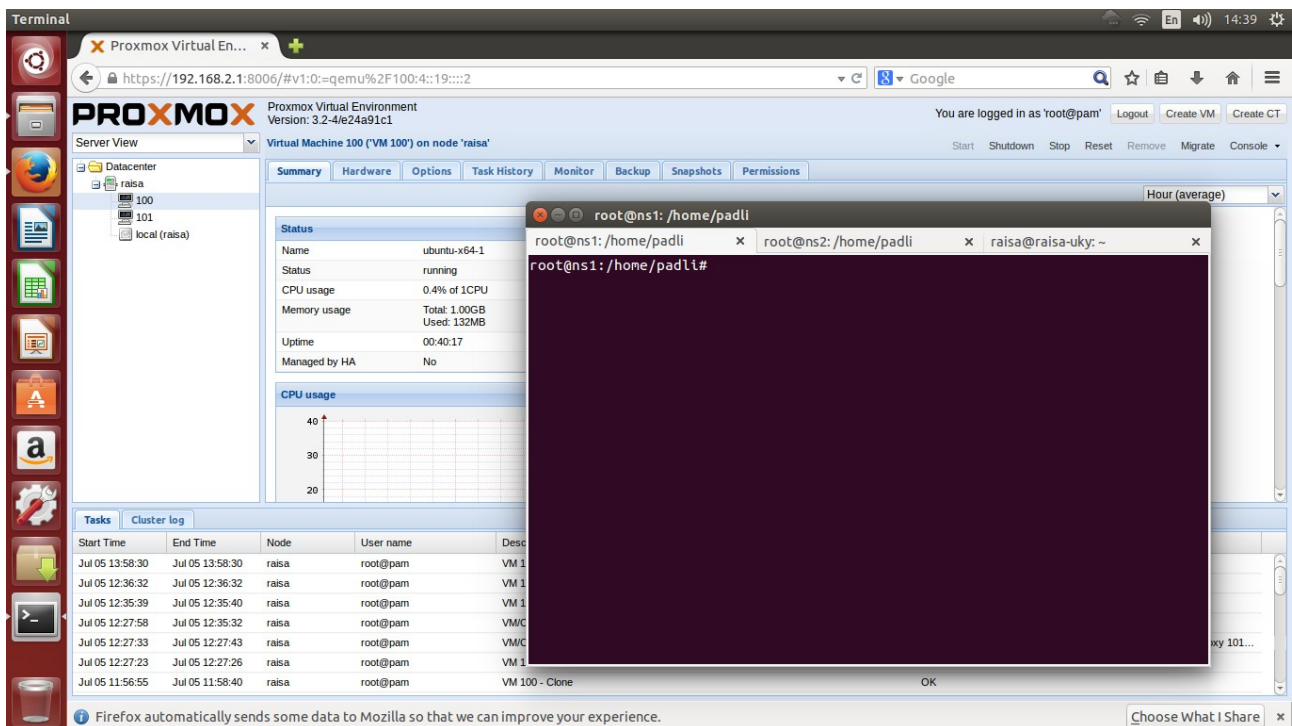
Note :

Gateway & web server : 192.168.2.5

PROXMOX VM : Ubuntu server x64 (192.168.2.10)

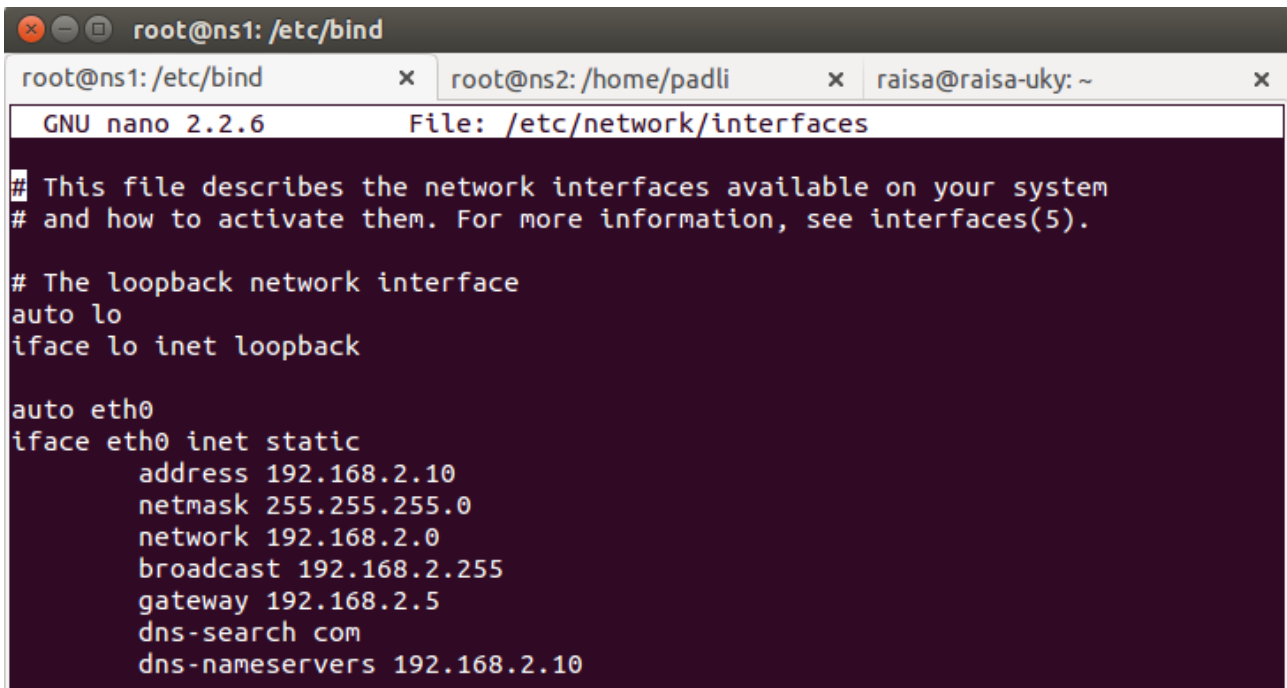
Ubuntu server x64 (192.168.2.11)

Client : 192.168.2.21



## MASTER NS1

1. Set ip "nano /etc/network/interfaces".

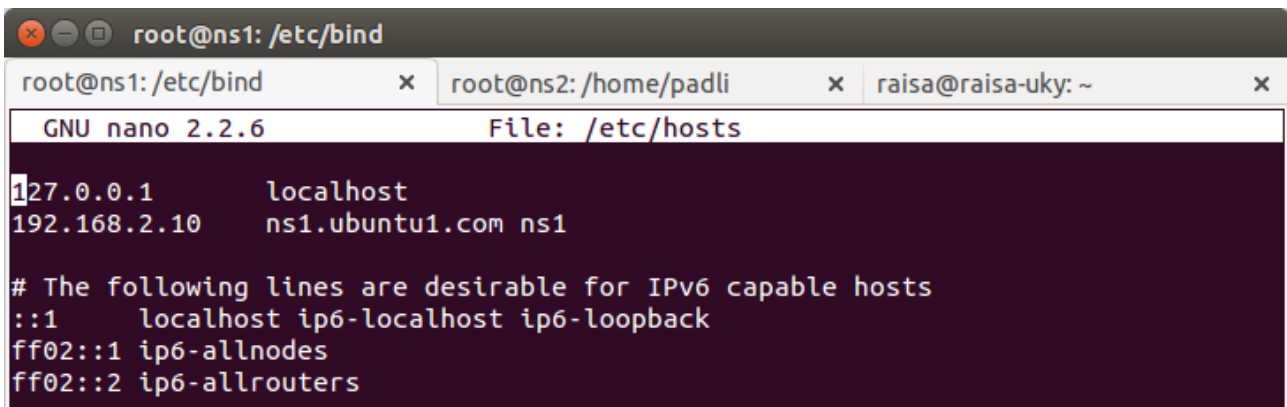


```
root@ns1: /etc/bind
root@ns1: /etc/bind x root@ns2: /home/padli x raisa@raisa-uky: ~ x
GNU nano 2.2.6 File: /etc/network/interfaces
# This file describes the network interfaces available on your system
# and how to activate them. For more information, see interfaces(5).

# The loopback network interface
auto lo
iface lo inet loopback

auto eth0
iface eth0 inet static
    address 192.168.2.10
    netmask 255.255.255.0
    network 192.168.2.0
    broadcast 192.168.2.255
    gateway 192.168.2.5
    dns-search com
    dns-nameservers 192.168.2.10
```

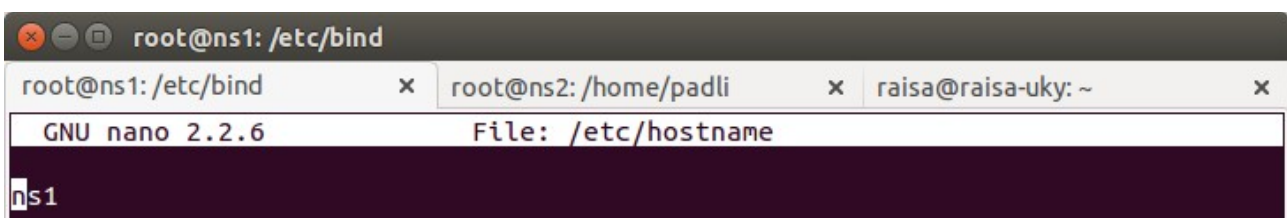
2. Set "nano /etc/hosts".



```
root@ns1: /etc/bind
root@ns1: /etc/bind x root@ns2: /home/padli x raisa@raisa-uky: ~ x
GNU nano 2.2.6 File: /etc/hosts
127.0.0.1 localhost
192.168.2.10 ns1.ubuntu1.com ns1

# The following lines are desirable for IPv6 capable hosts
::1 localhost ip6-localhost ip6-loopback
ff02::1 ip6-allnodes
ff02::2 ip6-allrouters
```

3. Set "nano /etc/hostname".



```
root@ns1: /etc/bind
root@ns1: /etc/bind x root@ns2: /home/padli x raisa@raisa-uky: ~ x
GNU nano 2.2.6 File: /etc/hostname
ns1
```

#### 4. Restart.

```
root@ns1: /etc/bind
root@ns1: /etc/bind x root@ns2: /home/padli x raisa@raisa-uky: ~ x
root@ns1: /etc/bind# reboot
```

#### 5. Cek hostname.

```
root@ns1: /etc/bind
root@ns1: /etc/bind x root@ns2: /home/padli x raisa@raisa-uky: ~ x
root@ns1: /etc/bind# hostname
ns1
root@ns1: /etc/bind# hostname -f
ns1.ubuntu1.com
root@ns1: /etc/bind#
```

#### 6. Update.

```
root@ns1: /etc/bind
root@ns1: /etc/bind x root@ns2: /home/padli x raisa@raisa-uky: ~ x
root@ns1: /etc/bind# apt-get update
```

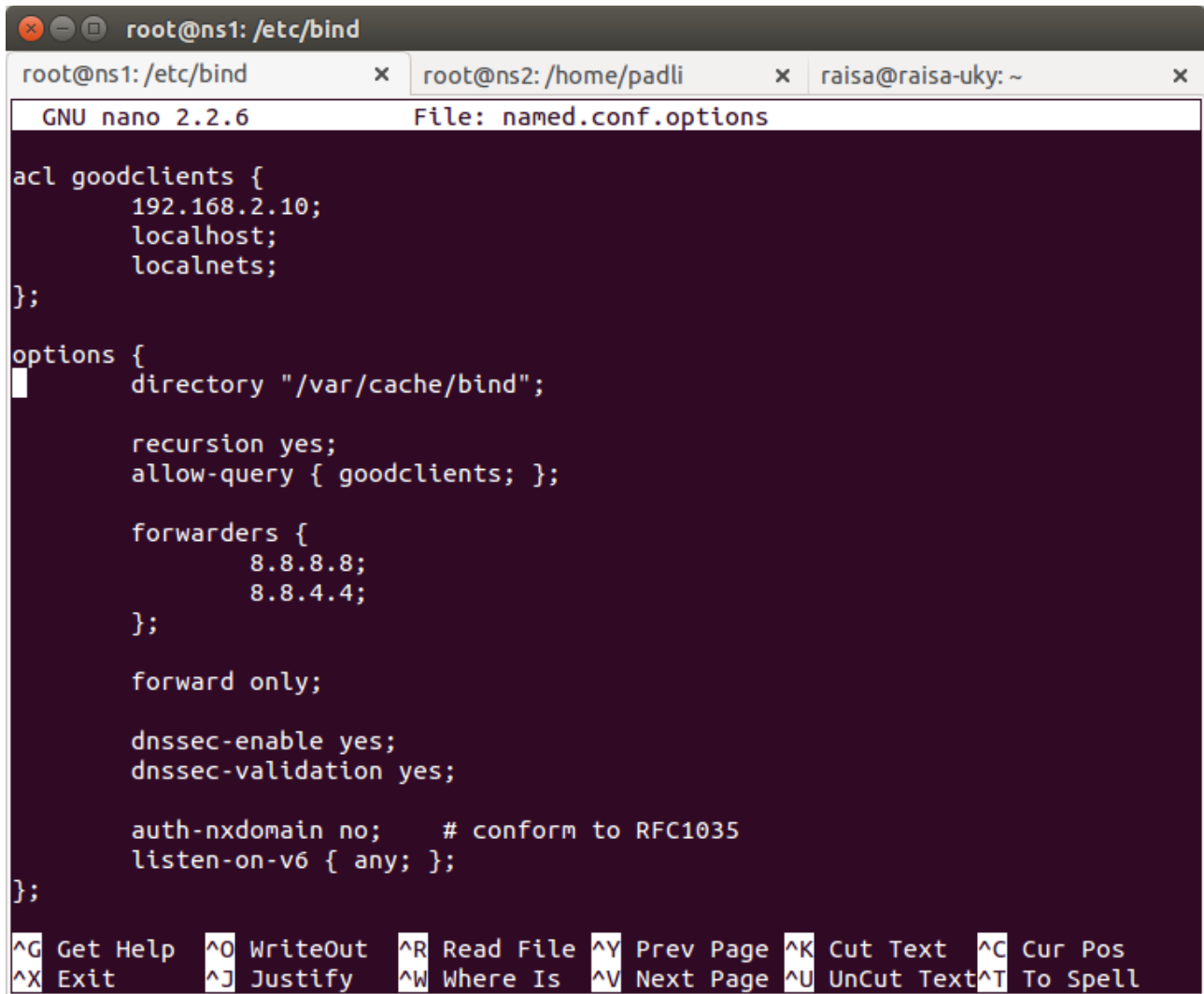
#### 7. Install lp.

```
root@ns1: /etc/bind
root@ns1: /etc/bind x root@ns2: /home/padli x raisa@raisa-uky: ~ x
root@ns1: /etc/bind# apt-get install language-pack-id
```

#### 8. Install bind.

```
root@ns1: /etc/bind
root@ns1: /etc/bind x root@ns2: /home/padli x raisa@raisa-uky: ~ x
root@ns1: /etc/bind# apt-get install bind9 bind9utils
```

9. Set "nano /etc/bind/named.conf.options".



```
root@ns1: /etc/bind
root@ns1: /etc/bind x root@ns2: /home/padli x raisa@raisa-uky: ~ x
GNU nano 2.2.6 File: named.conf.options

acl goodclients {
    192.168.2.10;
    localhost;
    localnets;
};

options {
    directory "/var/cache/bind";

    recursion yes;
    allow-query { goodclients; };

    forwarders {
        8.8.8.8;
        8.8.4.4;
    };

    forward only;

    dnssec-enable yes;
    dnssec-validation yes;

    auth-nxdomain no;    # conform to RFC1035
    listen-on-v6 { any; };
};

^G Get Help ^O WriteOut ^R Read File ^Y Prev Page ^K Cut Text ^C Cur Pos
^X Exit ^J Justify ^W Where Is ^V Next Page ^U UnCut Text ^T To Spell
```

10. Set "nano /etc/bind/named.conf.local".



```
root@ns1: /etc/bind
root@ns1: /etc/bind x root@ns2: /home/padli x raisa@raisa-uky: ~ x
GNU nano 2.2.6 File: named.conf.local

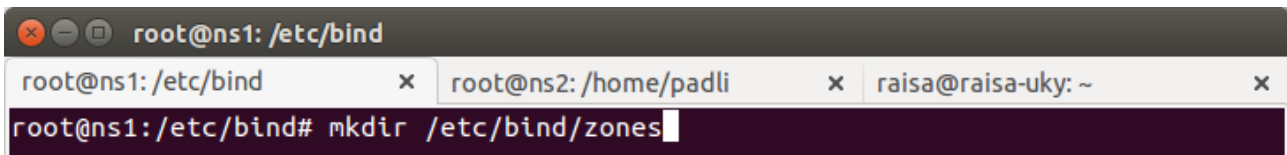
//
// Do any local configuration here
//

// Consider adding the 1918 zones here, if they are not used in your
// organization
//include "/etc/bind/zones.rfc1918";

zone "ubuntu1.com" {
    type master;
    file "/etc/bind/zones/db.ubuntu1";
    allow-transfer { 192.168.2.11; };
};

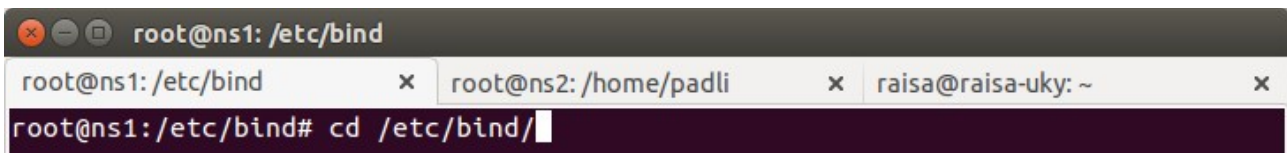
zone "2.168.192.in-addr.arpa" {
    type master;
    notify no;
    file "/etc/bind/zones/db.192";
};
```

11. Make dir.



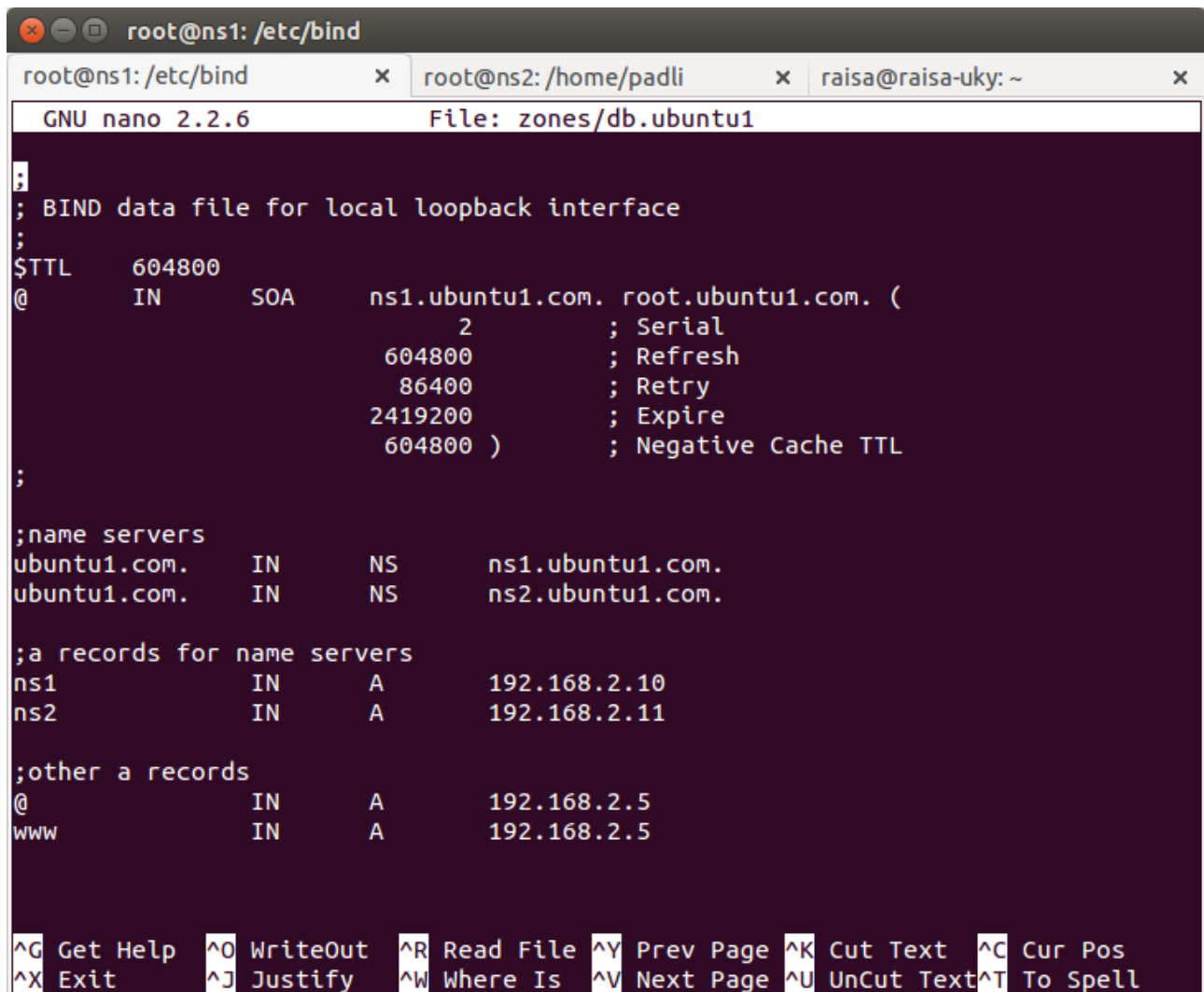
```
root@ns1: /etc/bind
root@ns1: /etc/bind x root@ns2: /home/padli x raisa@raisa-uky: ~ x
root@ns1: /etc/bind# mkdir /etc/bind/zones
```

12. Change dir.



```
root@ns1: /etc/bind
root@ns1: /etc/bind x root@ns2: /home/padli x raisa@raisa-uky: ~ x
root@ns1: /etc/bind# cd /etc/bind/
```

13. Make file "nano /etc/bind/zones/db.ubuntu1.com".



```
root@ns1: /etc/bind
root@ns1: /etc/bind x root@ns2: /home/padli x raisa@raisa-uky: ~ x
GNU nano 2.2.6 File: zones/db.ubuntu1
;
; BIND data file for local loopback interface
;
$TTL      604800
@         IN      SOA      ns1.ubuntu1.com. root.ubuntu1.com. (
                        2      ; Serial
                        604800  ; Refresh
                        86400   ; Retry
                        2419200  ; Expire
                        604800 ) ; Negative Cache TTL
;

;name servers
ubuntu1.com.      IN      NS      ns1.ubuntu1.com.
ubuntu1.com.      IN      NS      ns2.ubuntu1.com.

;a records for name servers
ns1                IN      A       192.168.2.10
ns2                IN      A       192.168.2.11

;other a records
@                  IN      A       192.168.2.5
www                IN      A       192.168.2.5

^G Get Help  ^O WriteOut  ^R Read File ^Y Prev Page ^K Cut Text   ^C Cur Pos
^X Exit      ^J Justify   ^W Where Is  ^V Next Page ^U UnCut Text ^T To Spell
```

14. Make file "nano /etc/bind/zones/db.192".

```
root@ns1: /etc/bind
root@ns1: /etc/bind x root@ns2: /home/padli x raisa@raisa-uky: ~ x
GNU nano 2.2.6 File: zones/db.192
;
; BIND reverse data file for local loopback interface
;
$TTL      604800
@         IN      SOA      ubuntu1.com. root.ubuntu1.com. (
                        1          ; Serial
                        604800     ; Refresh
                        86400      ; Retry
                        2419200    ; Expire
                        604800 )   ; Negative Cache TTL
;

;name servers
      IN      NS      ns1.ubuntu1.com.
      IN      NS      ns2.ubuntu1.com.

;ptr records
10     IN      PTR      ns1.ubuntu1.com.
11     IN      PTR      ns2.ubuntu1.com.
5      IN      PTR      www.ubuntu1.com.
```

15. Restart service bind.

```
root@ns1: /etc/bind
root@ns1: /etc/bind x root@ns2: /home/padli x raisa@raisa-uky: ~ x
root@ns1:/etc/bind# /etc/init.d/bind9 restart
* Stopping domain name service... bind9
waiting for pid 878 to die
[ OK ]
* Starting domain name service... bind9
[ OK ]
root@ns1:/etc/bind#
```

16. Tes config.

```
root@ns1: /etc/bind
root@ns1: /etc/bind x root@ns2: /home/padli x raisa@raisa-uky: ~ x
root@ns1:/etc/bind# named-checkconf
root@ns1:/etc/bind# named-checkzone ubuntu1.com /etc/bind/zones/db.ubuntu1
zone ubuntu1.com/IN: loaded serial 2
OK
root@ns1:/etc/bind# named-checkzone 2.168.192.in-addr.arpa /etc/bind/zones/db.192
zone 2.168.192.in-addr.arpa/IN: loaded serial 1
OK
root@ns1:/etc/bind#
```

17. Cek log.

```
root@ns1: /etc/bind
root@ns1: /etc/bind x root@ns2: /home/padli x raisa@raisa-uky: ~ x
root@ns1: /etc/bind# tail -f /var/log/syslog
Jul  5 15:08:26 ns1 named[1190]: managed-keys-zone: loaded serial 3
Jul  5 15:08:26 ns1 named[1190]: zone 0.in-addr.arpa/IN: loaded serial 1
Jul  5 15:08:26 ns1 named[1190]: zone 127.in-addr.arpa/IN: loaded serial 1
Jul  5 15:08:26 ns1 named[1190]: zone 2.168.192.in-addr.arpa/IN: loaded serial 1
Jul  5 15:08:26 ns1 named[1190]: zone localhost/IN: loaded serial 2
Jul  5 15:08:26 ns1 named[1190]: zone 255.in-addr.arpa/IN: loaded serial 1
Jul  5 15:08:26 ns1 named[1190]: zone ubuntu1.com/IN: loaded serial 2
Jul  5 15:08:26 ns1 named[1190]: all zones loaded
Jul  5 15:08:26 ns1 named[1190]: running
Jul  5 15:08:26 ns1 named[1190]: zone ubuntu1.com/IN: sending notifies (serial 2)
```

## SLAVE NS2

18. Set ip "nano /etc/network/interfaces".

```
root@ns2: /
root@ns1: /etc/bind x root@ns2: / x raisa@raisa-uky: ~ x
GNU nano 2.2.6 File: /etc/network/interfaces
# This file describes the network interfaces available on your system
# and how to activate them. For more information, see interfaces(5).

# The loopback network interface
auto lo
iface lo inet loopback

auto eth0
iface eth0 inet static
    address 192.168.2.11
    netmask 255.255.255.0
    network 192.168.2.0
    broadcast 192.168.2.255
    gateway 192.168.2.5
    dns-search com
    dns-nameservers 192.168.2.10
```

19. Set "nano /etc/hostname" & "nano /etc/hosts".

```
root@ns2: /
root@ns1: /etc/bind x root@ns2: / x raisa@raisa-uky: ~ x
GNU nano 2.2.6 File: /etc/hostname
ns2
```



```
root@ns2: /
root@ns1: /etc/bind x root@ns2: / x raisa@raisa-uky: ~ x
GNU nano 2.2.6 File: /etc/hosts Modified
127.0.0.1 localhost
192.168.2.11 ns2.ubuntu1.com ns2

# The following lines are desirable for IPv6 capable hosts
::1 localhost ip6-localhost ip6-loopback
ff02::1 ip6-allnodes
ff02::2 ip6-allrouters
```

20. Restart.

```
root@ns2: /
root@ns1: /etc/bind x root@ns2: / x raisa@raisa-uky: ~ x
root@ns2: /# reboot
```

21. Update.

```
root@ns2: /
root@ns1: /etc/bind x root@ns2: / x raisa@raisa-uky: ~ x
root@ns2: /# apt-get update
```

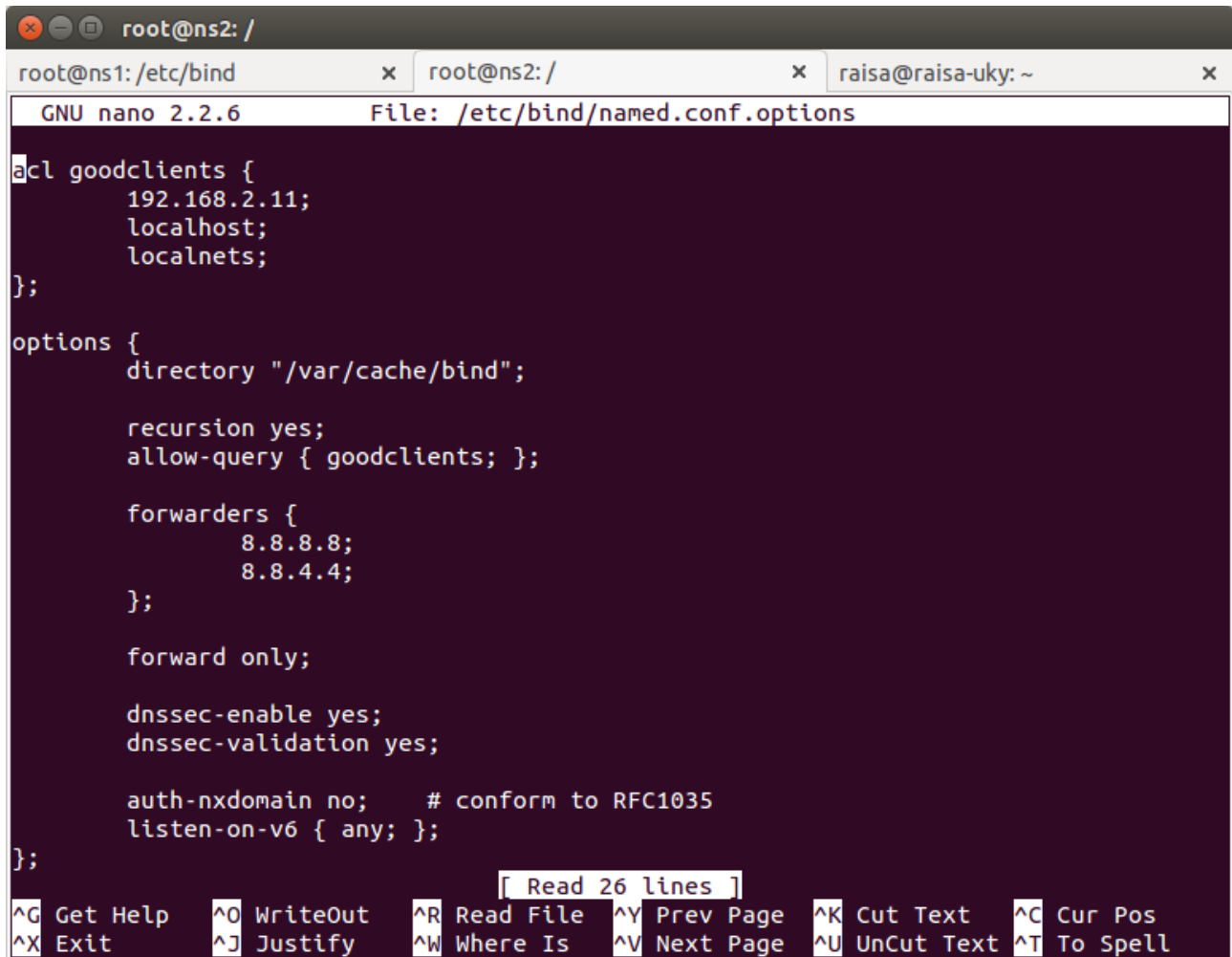
22. Install lp.

```
root@ns2: /
root@ns1: /etc/bind x root@ns2: / x raisa@raisa-uky: ~ x
root@ns2: /# apt-get install language-pack-id
```

23. Install bind.

```
root@ns2: /
root@ns1: /etc/bind x root@ns2: / x raisa@raisa-uky: ~ x
root@ns2: /# apt-get install bind9 bind9utils
```

24. Set "nano /etc/bind/named.conf.options".



```
root@ns2: /
root@ns1:/etc/bind x root@ns2:/ x raisa@raisa-uky: ~ x
GNU nano 2.2.6 File: /etc/bind/named.conf.options

acl goodclients {
    192.168.2.11;
    localhost;
    localnets;
};

options {
    directory "/var/cache/bind";

    recursion yes;
    allow-query { goodclients; };

    forwarders {
        8.8.8.8;
        8.8.4.4;
    };

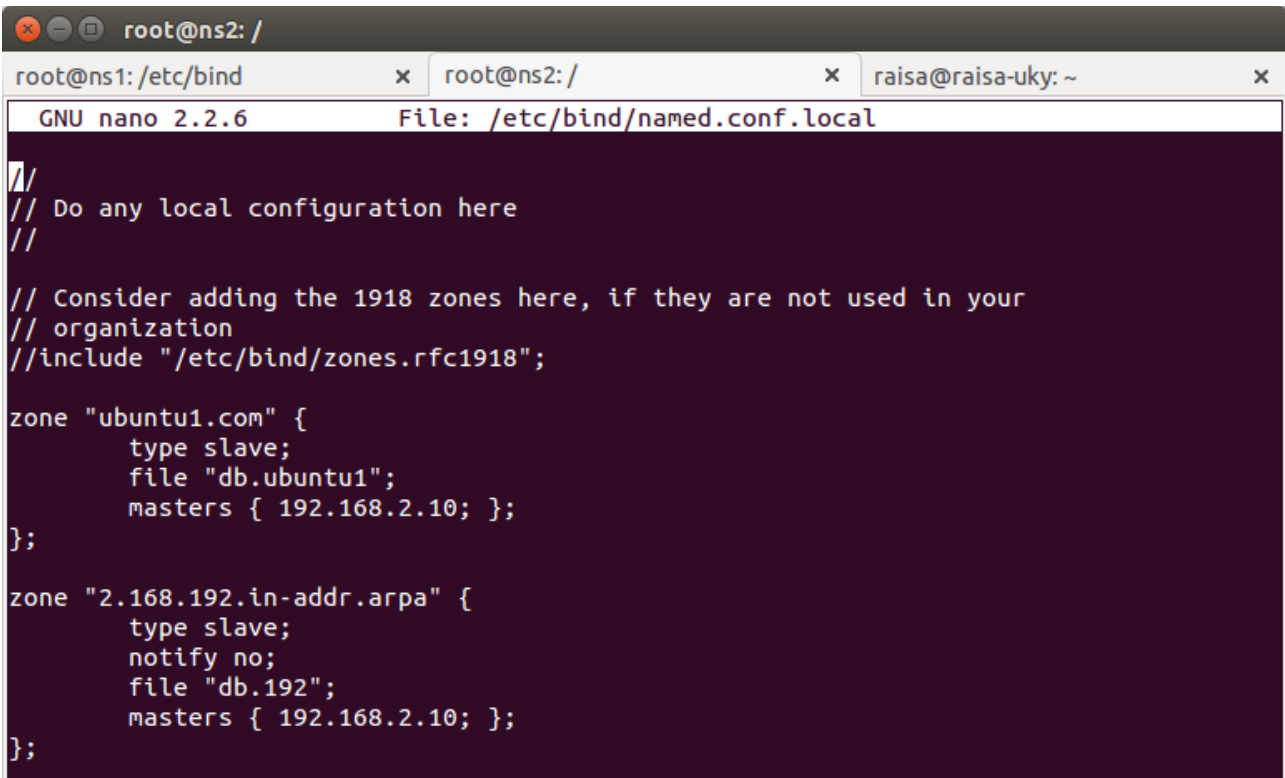
    forward only;

    dnssec-enable yes;
    dnssec-validation yes;

    auth-nxdomain no;    # conform to RFC1035
    listen-on-v6 { any; };
};

[ Read 26 lines ]
^G Get Help      ^O WriteOut      ^R Read File     ^Y Prev Page     ^K Cut Text       ^C Cur Pos
^X Exit          ^J Justify       ^W Where Is      ^V Next Page     ^U UnCut Text    ^T To Spell
```

25. Set "nano /etc/bind/named.conf.local".



```
root@ns1: /etc/bind x root@ns2: / x raisa@raisa-uky: ~ x
GNU nano 2.2.6 File: /etc/bind/named.conf.local

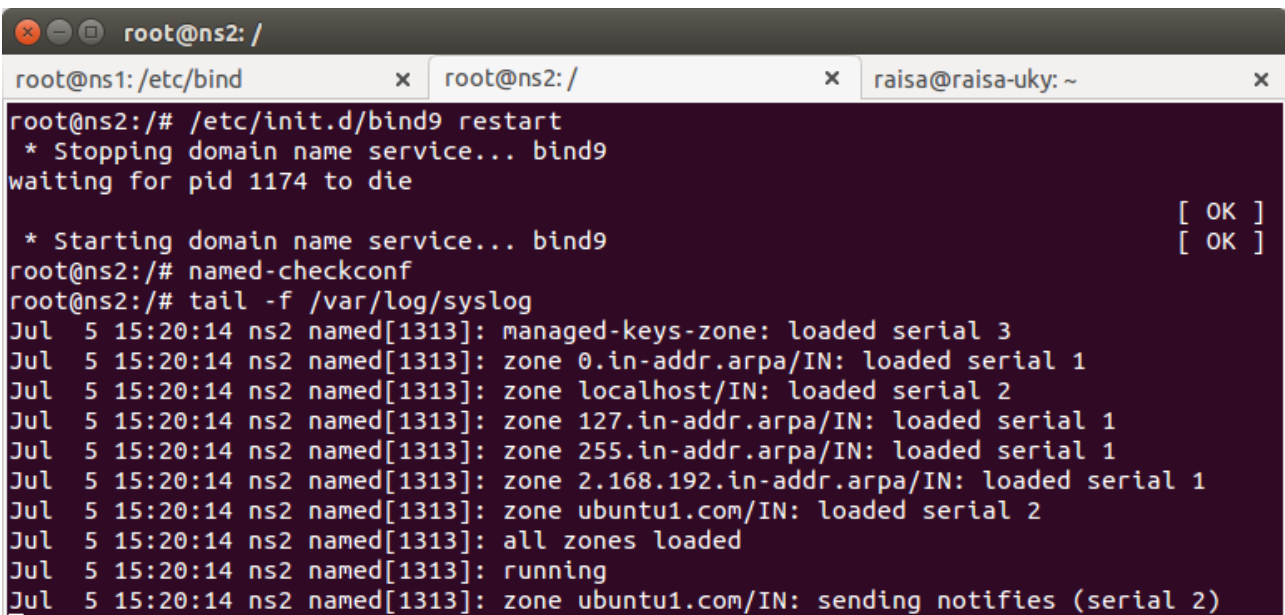
//
// Do any local configuration here
//

// Consider adding the 1918 zones here, if they are not used in your
// organization
//include "/etc/bind/zones.rfc1918";

zone "ubuntu1.com" {
    type slave;
    file "db.ubuntu1";
    masters { 192.168.2.10; };
};

zone "2.168.192.in-addr.arpa" {
    type slave;
    notify no;
    file "db.192";
    masters { 192.168.2.10; };
};
```

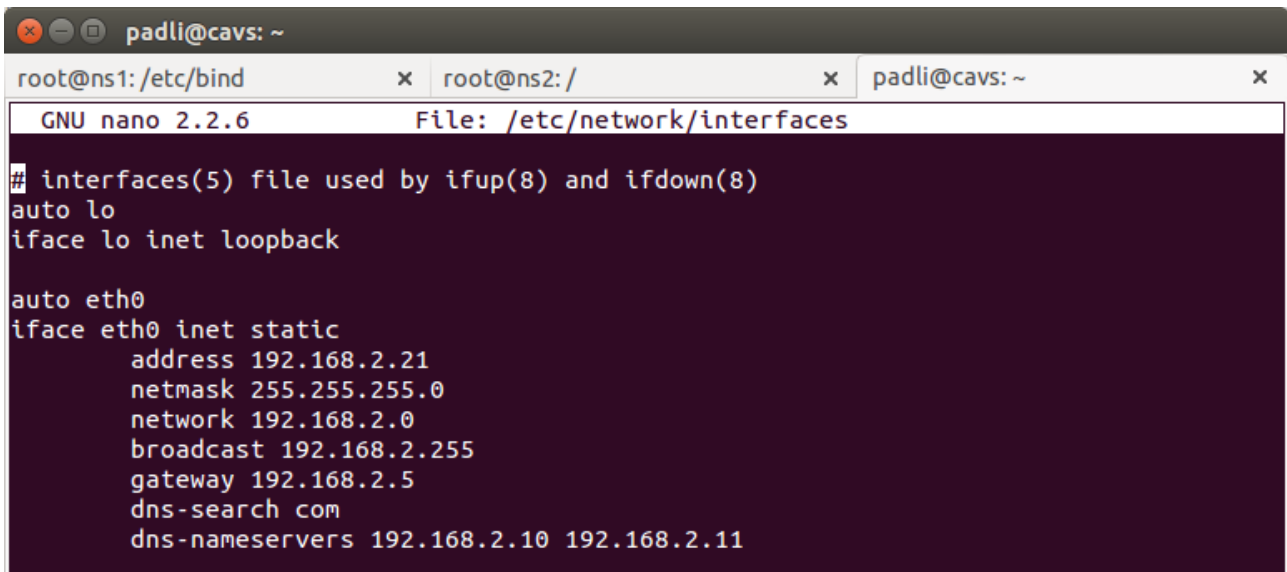
26. Restart bind & cek log.



```
root@ns2: /etc/bind x root@ns2: / x raisa@raisa-uky: ~ x
root@ns2: /# /etc/init.d/bind9 restart
* Stopping domain name service... bind9
waiting for pid 1174 to die
[ OK ]
* Starting domain name service... bind9
[ OK ]
root@ns2: /# named-checkconf
root@ns2: /# tail -f /var/log/syslog
Jul  5 15:20:14 ns2 named[1313]: managed-keys-zone: loaded serial 3
Jul  5 15:20:14 ns2 named[1313]: zone 0.in-addr.arpa/IN: loaded serial 1
Jul  5 15:20:14 ns2 named[1313]: zone localhost/IN: loaded serial 2
Jul  5 15:20:14 ns2 named[1313]: zone 127.in-addr.arpa/IN: loaded serial 1
Jul  5 15:20:14 ns2 named[1313]: zone 255.in-addr.arpa/IN: loaded serial 1
Jul  5 15:20:14 ns2 named[1313]: zone 2.168.192.in-addr.arpa/IN: loaded serial 1
Jul  5 15:20:14 ns2 named[1313]: zone ubuntu1.com/IN: loaded serial 2
Jul  5 15:20:14 ns2 named[1313]: all zones loaded
Jul  5 15:20:14 ns2 named[1313]: running
Jul  5 15:20:14 ns2 named[1313]: zone ubuntu1.com/IN: sending notifies (serial 2)
```

## CLIENT TES

27. Set ip "nano /etc/network/interfaces".



The screenshot shows a terminal window with three tabs: 'root@ns1: /etc/bind', 'root@ns2: /', and 'padli@cavs: ~'. The active tab is 'padli@cavs: ~', which displays the GNU nano 2.2.6 editor editing the file /etc/network/interfaces. The content of the file is as follows:

```
# interfaces(5) file used by ifup(8) and ifdown(8)
auto lo
iface lo inet loopback

auto eth0
iface eth0 inet static
    address 192.168.2.21
    netmask 255.255.255.0
    network 192.168.2.0
    broadcast 192.168.2.255
    gateway 192.168.2.5
    dns-search com
    dns-nameservers 192.168.2.10 192.168.2.11
```

## 28. Tes ping.

```
padli@cavs: ~  
root@ns1:/etc/bind x root@ns2:/ x padli@cavs: ~ x  
padli@cavs:~$ ping ns1.ubuntu1.com  
PING ns1.ubuntu1.com (192.168.2.10) 56(84) bytes of data.  
64 bytes from ns1.ubuntu1.com (192.168.2.10): icmp_seq=1 ttl=64 time=0.299 ms  
64 bytes from ns1.ubuntu1.com (192.168.2.10): icmp_seq=2 ttl=64 time=0.401 ms  
^C  
--- ns1.ubuntu1.com ping statistics ---  
2 packets transmitted, 2 received, 0% packet loss, time 1001ms  
rtt min/avg/max/mdev = 0.299/0.350/0.401/0.051 ms  
padli@cavs:~$ ping ns2.ubuntu1.com  
PING ns2.ubuntu1.com (192.168.2.11) 56(84) bytes of data.  
64 bytes from ns2.ubuntu1.com (192.168.2.11): icmp_seq=1 ttl=64 time=0.319 ms  
64 bytes from ns2.ubuntu1.com (192.168.2.11): icmp_seq=2 ttl=64 time=0.394 ms  
^C  
--- ns2.ubuntu1.com ping statistics ---  
2 packets transmitted, 2 received, 0% packet loss, time 1001ms  
rtt min/avg/max/mdev = 0.319/0.356/0.394/0.041 ms  
padli@cavs:~$ ping ubuntu1.com  
PING ubuntu1.com (192.168.2.5) 56(84) bytes of data.  
64 bytes from cavs.com (192.168.2.5): icmp_seq=1 ttl=64 time=0.275 ms  
64 bytes from cavs.com (192.168.2.5): icmp_seq=2 ttl=64 time=0.329 ms  
^C  
--- ubuntu1.com ping statistics ---  
2 packets transmitted, 2 received, 0% packet loss, time 999ms  
rtt min/avg/max/mdev = 0.275/0.302/0.329/0.027 ms  
padli@cavs:~$ ping www.ubuntu1.com  
PING www.ubuntu1.com (192.168.2.5) 56(84) bytes of data.  
64 bytes from cavs.com (192.168.2.5): icmp_seq=1 ttl=64 time=0.247 ms  
64 bytes from cavs.com (192.168.2.5): icmp_seq=2 ttl=64 time=0.291 ms  
^C  
--- www.ubuntu1.com ping statistics ---  
2 packets transmitted, 2 received, 0% packet loss, time 999ms  
rtt min/avg/max/mdev = 0.247/0.269/0.291/0.022 ms  
padli@cavs:~$
```

## 29. Test nslookup.

```
padli@cavs: ~  
root@ns1: /etc/bind x root@ns2: / x padli@cavs: ~ x  
padli@cavs:~$ nslookup ns1.ubuntu1.com  
Server:      192.168.2.10  
Address:     192.168.2.10#53  
  
Name:   ns1.ubuntu1.com  
Address: 192.168.2.10  
  
padli@cavs:~$ nslookup ns2.ubuntu1.com  
Server:      192.168.2.10  
Address:     192.168.2.10#53  
  
Name:   ns2.ubuntu1.com  
Address: 192.168.2.11  
  
padli@cavs:~$ nslookup ubuntu1.com  
Server:      192.168.2.10  
Address:     192.168.2.10#53  
  
Name:   ubuntu1.com  
Address: 192.168.2.5
```

```
padli@cavs: ~  
root@ns1: /etc/bind x root@ns2: / x padli@cavs: ~ x  
padli@cavs:~$ nslookup 192.168.2.10  
Server:      192.168.2.10  
Address:     192.168.2.10#53  
  
10.2.168.192.in-addr.arpa      name = ns1.ubuntu1.com.  
  
padli@cavs:~$ nslookup 192.168.2.11  
Server:      192.168.2.10  
Address:     192.168.2.10#53  
  
11.2.168.192.in-addr.arpa      name = ns2.ubuntu1.com.  
  
padli@cavs:~$ nslookup 192.168.2.5  
Server:      192.168.2.10  
Address:     192.168.2.10#53  
  
5.2.168.192.in-addr.arpa      name = www.ubuntu1.com.
```

### 30. Tes dig.

```
padli@cavs: ~  
root@ns1:/etc/bind x root@ns2:/ x padli@cavs: ~ x  
padli@cavs:~$ dig ns1.ubuntu1.com  
  
; <<> DiG 9.9.5-3-Ubuntu <<> ns1.ubuntu1.com  
;; global options: +cmd  
;; Got answer:  
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 24832  
;; flags: qr aa rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 2, ADDITIONAL: 2  
  
;; OPT PSEUDOSECTION:  
; EDNS: version: 0, flags:; udp: 4096  
;; QUESTION SECTION:  
ns1.ubuntu1.com. IN A  
  
;; ANSWER SECTION:  
ns1.ubuntu1.com. 604800 IN A 192.168.2.10  
  
;; AUTHORITY SECTION:  
ubuntu1.com. 604800 IN NS ns1.ubuntu1.com.  
ubuntu1.com. 604800 IN NS ns2.ubuntu1.com.  
  
;; ADDITIONAL SECTION:  
ns2.ubuntu1.com. 604800 IN A 192.168.2.11  
  
;; Query time: 2 msec  
;; SERVER: 192.168.2.10#53(192.168.2.10)  
;; WHEN: Sun Jul 05 15:26:21 WIB 2015  
;; MSG SIZE rcvd: 108
```

```
padli@cavs: ~
root@ns1:/etc/bind x root@ns2:/ x padli@cavs: ~
padli@cavs:~$ dig ns2.ubuntu1.com

; <<>> DiG 9.9.5-3-Ubuntu <<>> ns2.ubuntu1.com
;; global options: +cmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 62959
;; flags: qr aa rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 2, ADDITIONAL: 2

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 4096
;; QUESTION SECTION:
ns2.ubuntu1.com.                IN      A

;; ANSWER SECTION:
ns2.ubuntu1.com.                604800  IN      A      192.168.2.11

;; AUTHORITY SECTION:
ubuntu1.com.                    604800  IN      NS      ns1.ubuntu1.com.
ubuntu1.com.                    604800  IN      NS      ns2.ubuntu1.com.

;; ADDITIONAL SECTION:
ns1.ubuntu1.com.                604800  IN      A      192.168.2.10

;; Query time: 2 msec
;; SERVER: 192.168.2.10#53(192.168.2.10)
;; WHEN: Sun Jul 05 15:26:53 WIB 2015
;; MSG SIZE rcvd: 108
```



```
padli@cavs: ~
root@ns1:/etc/bind x root@ns2:/ x padli@cavs: ~
padli@cavs:~$ dig ubuntu1.com

; <<>> DiG 9.9.5-3-Ubuntu <<>> ubuntu1.com
;; global options: +cmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 50011
;; flags: qr aa rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 2, ADDITIONAL: 3

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags;; udp: 4096
;; QUESTION SECTION:
;ubuntu1.com.                IN      A

;; ANSWER SECTION:
ubuntu1.com.                604800  IN      A      192.168.2.5

;; AUTHORITY SECTION:
ubuntu1.com.                604800  IN      NS      ns2.ubuntu1.com.
ubuntu1.com.                604800  IN      NS      ns1.ubuntu1.com.

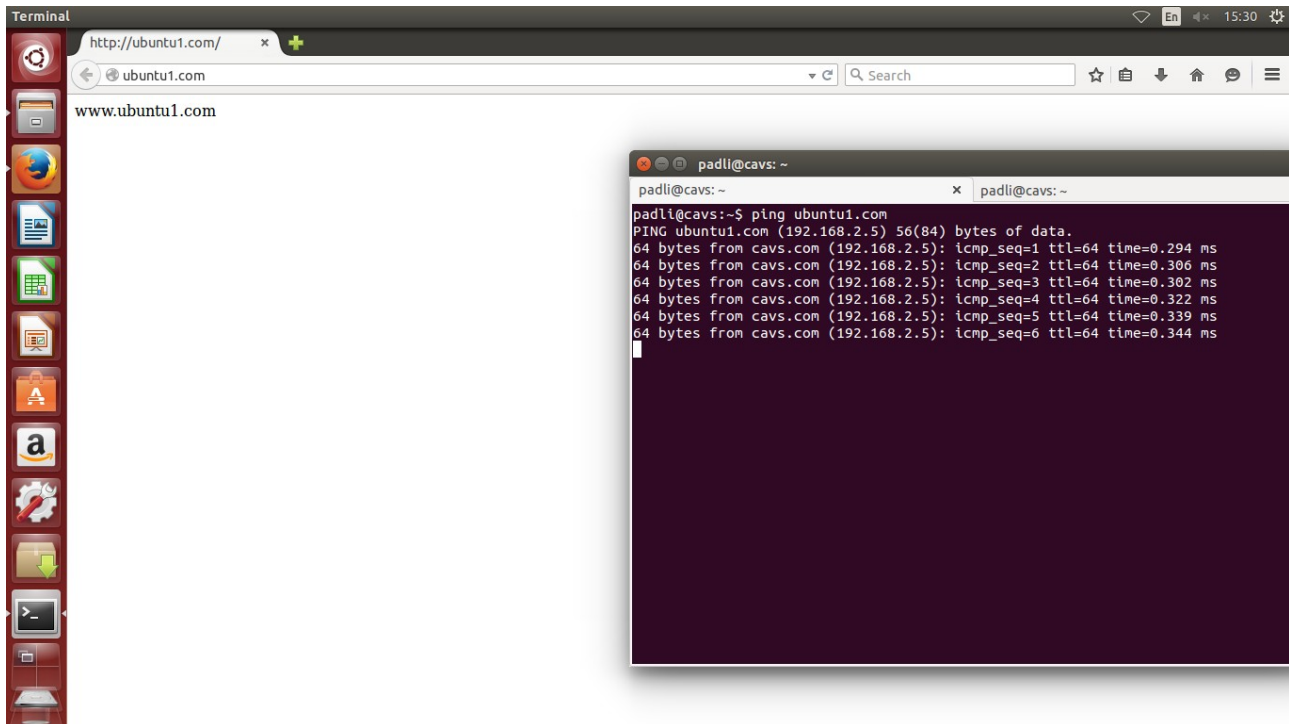
;; ADDITIONAL SECTION:
ns1.ubuntu1.com.           604800  IN      A      192.168.2.10
ns2.ubuntu1.com.           604800  IN      A      192.168.2.11

;; Query time: 2 msec
;; SERVER: 192.168.2.10#53(192.168.2.10)
;; WHEN: Sun Jul 05 15:27:11 WIB 2015
;; MSG SIZE rcvd: 124
```

### 31. Tes forwarding DNS google.

```
padli@cavs: ~
root@ns1:/etc/bind x root@ns2:/ x padli@cavs: ~
padli@cavs:~$ sudo apt-get update
Ign http://id.archive.ubuntu.com trusty InRelease 2
Ign http://security.ubuntu.com trusty-security InRelease
Ign http://extras.ubuntu.com trusty InRelease
Ign http://id.archive.ubuntu.com trusty-updates InRelease
Hit http://security.ubuntu.com trusty-security Release.gpg
Hit http://extras.ubuntu.com trusty Release.gpg
Ign http://id.archive.ubuntu.com trusty-backports InRelease
Hit http://security.ubuntu.com trusty-security Release
Hit http://extras.ubuntu.com trusty Release
Hit http://id.archive.ubuntu.com trusty Release.gpg
Hit http://extras.ubuntu.com trusty/main Sources
```

### 32. Tes browsing.



### 33. Turn off ns1.

```
root@ns1:/etc/bind# init 0  
root@ns1:/etc/bind# Connection to 192.168.2.10 closed by remote host.  
Connection to 192.168.2.10 closed.  
raisa@raisa-uky:~$
```

### 34. Ns2 slave it's work.

