

## POWERDNS MASTER & SLAVE WITH POWERADMIN BACKEND MYSQL

Note :

OS : Ubuntu 14.04

NS1 : 192.168.100.51/24 (ns1.raisa.net). Master

NS2 : 192.168.100.52/24 (ns2.raisa.net). Slave

Host1 : 192.168.100.7/24 ([www.padli.org](http://www.padli.org), [www.mail.padli.org](http://www.mail.padli.org)).

Host2 : 192.168.100.20/24 ([www.host1.co.id](http://www.host1.co.id), [www.host2.co.id](http://www.host2.co.id)).

### NS1 MASTER

1. set ip ns1.

```
padli@ns1:~$ ifconfig
eth0      Link encap:Ethernet HWaddr a6:53:64:60:dc:06
          inet addr:192.168.100.51 Bcast:192.168.100.255 Mask:255.255.255.0
          inet6 addr: fe80::a453:64ff:fe60:dc06/64 Scope:Link
            UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1
            RX packets:152 errors:0 dropped:0 overruns:0 frame:0
            TX packets:86 errors:0 dropped:0 overruns:0 carrier:0
            collisions:0 txqueuelen:1000
            RX bytes:15324 (15.3 KB) TX bytes:10515 (10.5 KB)

lo       Link encap:Local Loopback
          inet addr:127.0.0.1 Mask:255.0.0.0
          inet6 addr: ::1/128 Scope:Host
            UP LOOPBACK RUNNING MTU:65536 Metric:1
            RX packets:0 errors:0 dropped:0 overruns:0 frame:0
            TX packets:0 errors:0 dropped:0 overruns:0 carrier:0
            collisions:0 txqueuelen:0
            RX bytes:0 (0.0 B) TX bytes:0 (0.0 B)

padli@ns1:~$
```

2. set hostname ns1.

```
padli@ns1:~$ more /etc/hostname
ns1.raisa.net
padli@ns1:~$
```

3. update & upgrade sistem ns1.

```
padli@ns1:~$ sudo apt-get update && sudo apt-get upgrade -y
```

4. install lib bahasa indonesia.

```
padli@ns1:~$ sudo apt-get install languange-pack-id
```

5. install mysql.

```
padli@ns1:~$ sudo apt-get install mysql-server mysql-client
```

6. set passwd user root.

```
padli@ns1:~$ sudo dpkg-reconfigure mysql-server-5.5
Package configuration

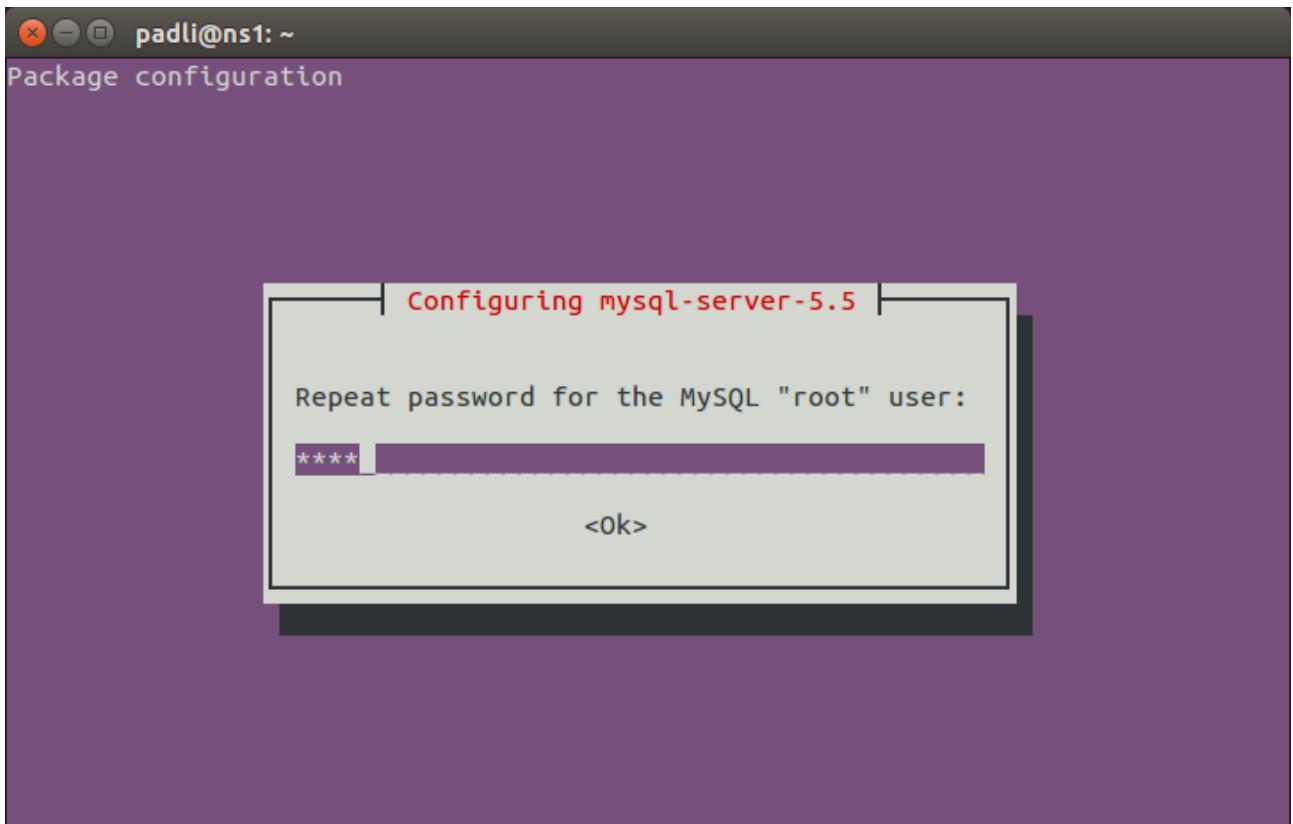
Configuring mysql-server-5.5
While not mandatory, it is highly recommended that you set a password
for the MySQL administrative "root" user.

If this field is left blank, the password will not be changed.

New password for the MySQL "root" user:
*****
```

<Ok>

7. konfirmasi passwd root.



8. edit file "nano /etc/mysql/my.cnf" set off bind-address.

A screenshot of a terminal window titled "padli@ns1: ~". The window shows the "GNU nano 2.2.6" editor with the file "/etc/mysql/my.cnf" open. The file contains MySQL configuration settings, including the line "#bind-address = 127.0.0.1" which is highlighted with a cursor. The bottom of the screen shows the nano editor's command-line interface with various keyboard shortcuts.

9. restart.

```
padli@ns1:~$ sudo reboot
```

10. install nmap.

```
padli@ns1:~$ sudo apt-get install nmap
```

11. cek port yg aktif.

```
padli@ns1:~$ sudo nmap localhost

Starting Nmap 6.40 ( http://nmap.org ) at 2015-08-19 15:13 WIB
Nmap scan report for localhost (127.0.0.1)
Host is up (0.000017s latency).
Other addresses for localhost (not scanned): 127.0.0.1
Not shown: 998 closed ports
PORT      STATE SERVICE
22/tcp    open  ssh
3306/tcp  open  mysql

Nmap done: 1 IP address (1 host up) scanned in 89.43 seconds
padli@ns1:~$
```

12. cek mysql.

```
padli@ns1:~$ mysql -u root -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 36
Server version: 5.5.44-0ubuntu0.14.04.1 (Ubuntu)

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owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

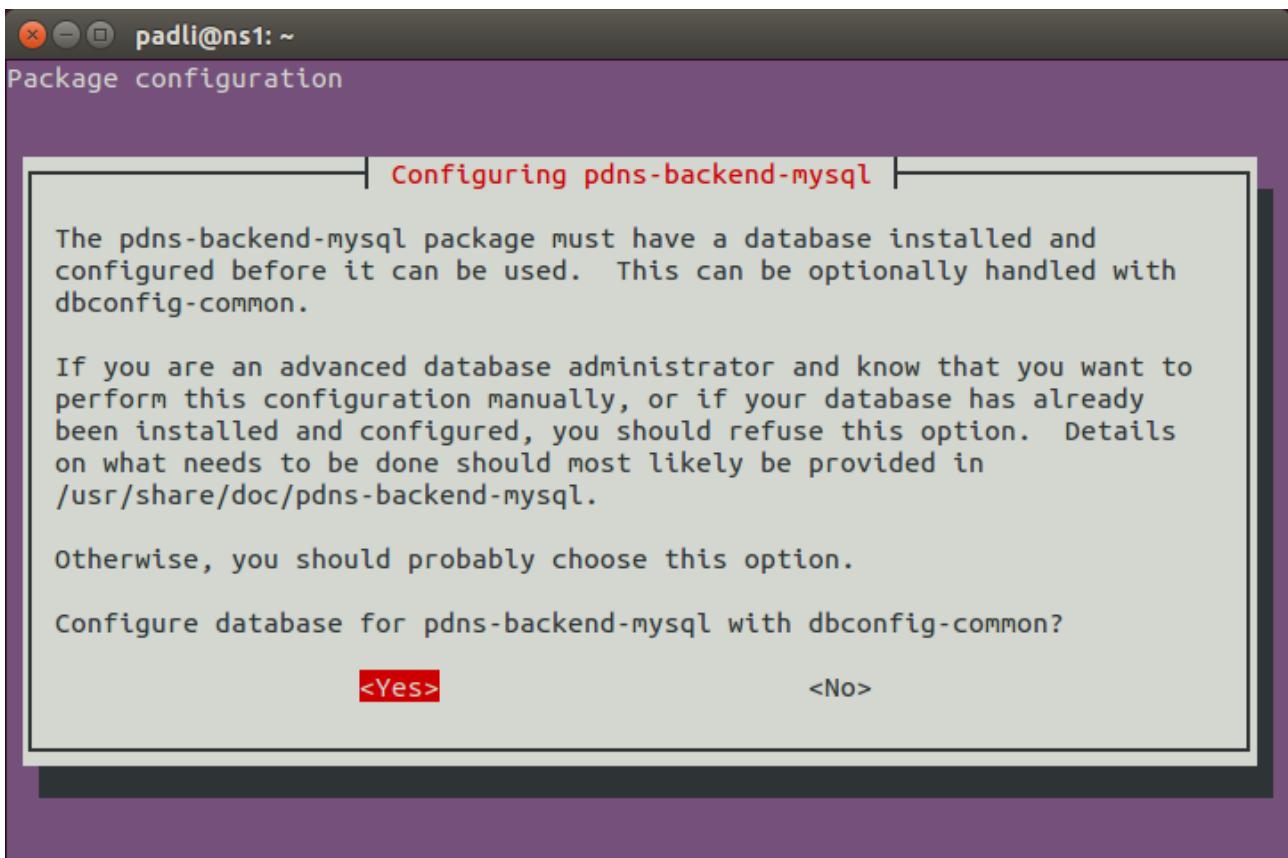
mysql> show databases;
+---------------------+
| Database           |
+-----+
| information_schema |
| mysql              |
| performance_schema |
+-----+
3 rows in set (0.03 sec)

mysql> 
```

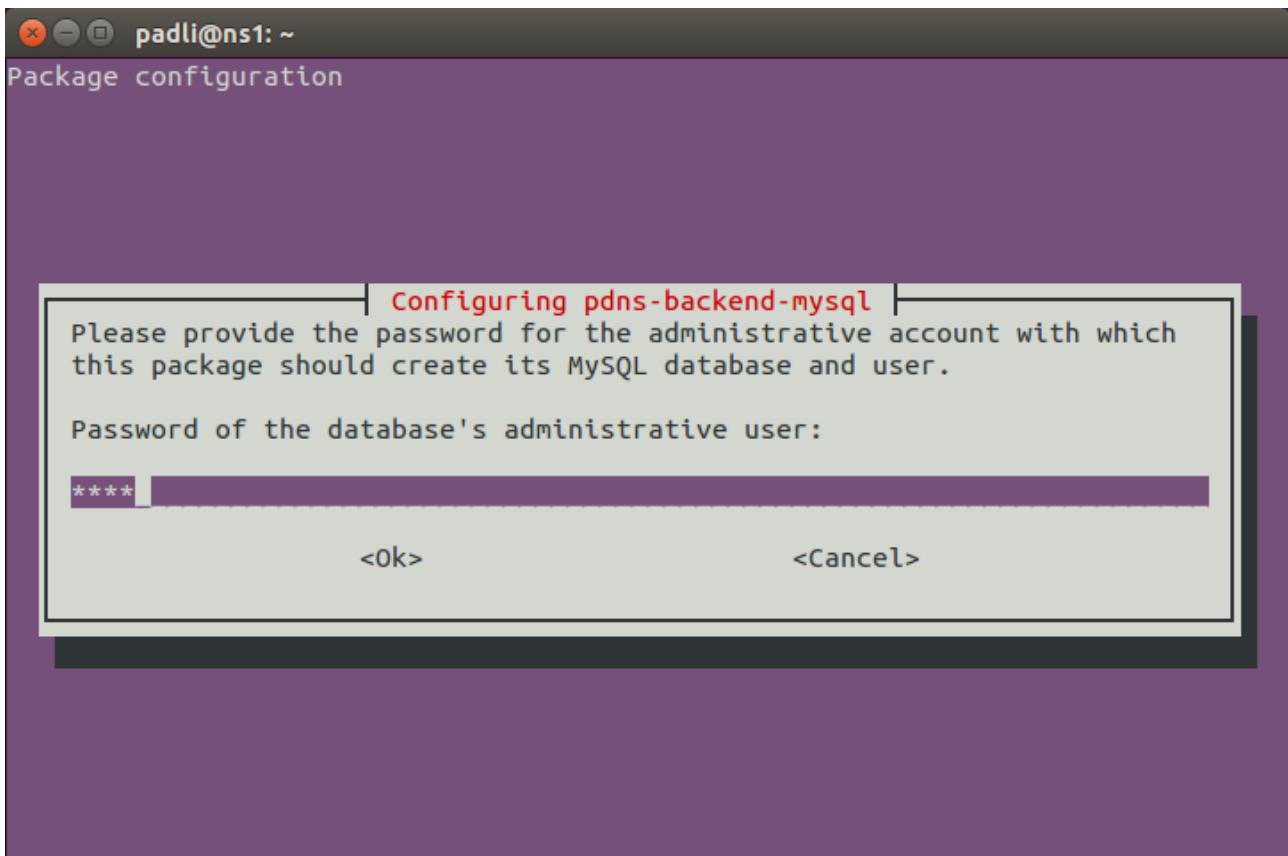
13. install powerdns.

```
padli@ns1:~$ sudo apt-get install pdns-server pdns-backend-mysql
```

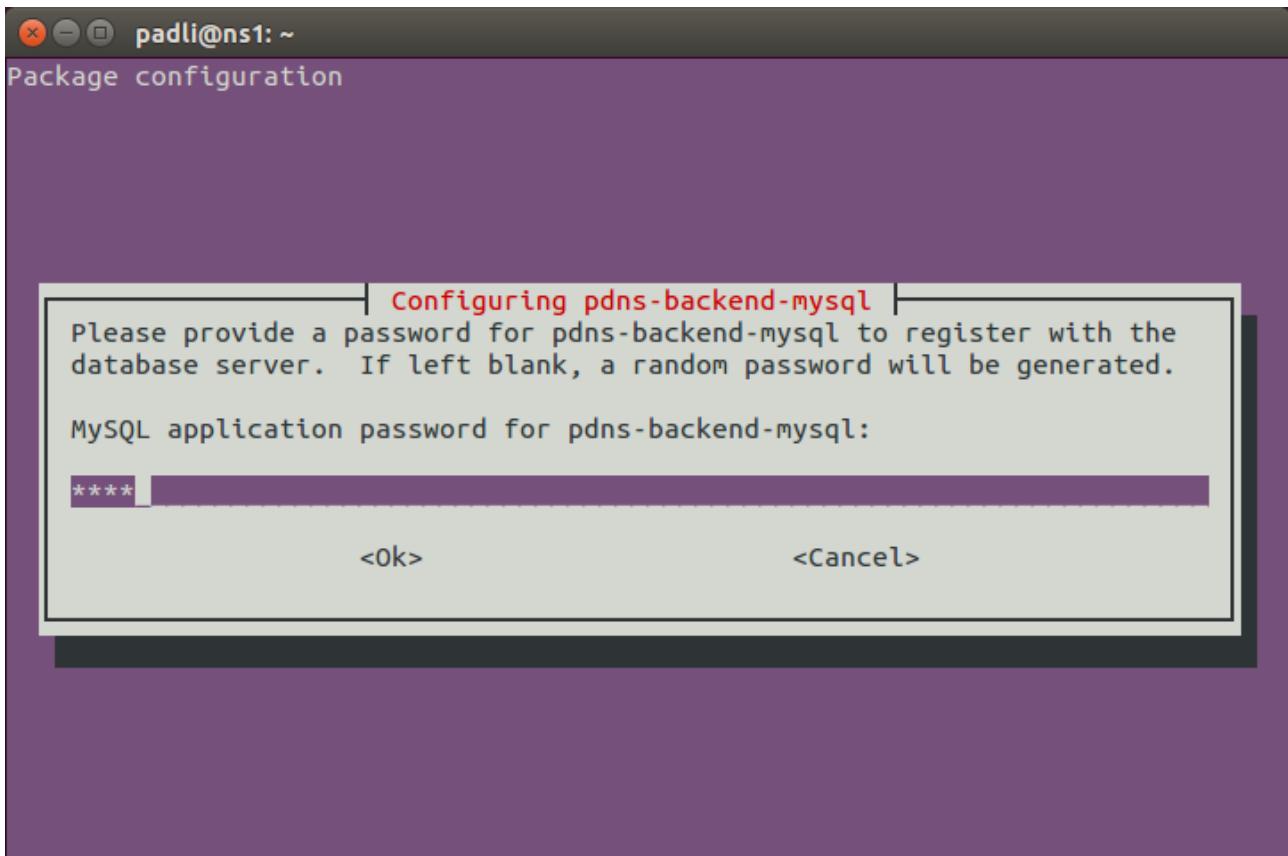
14. set yes.



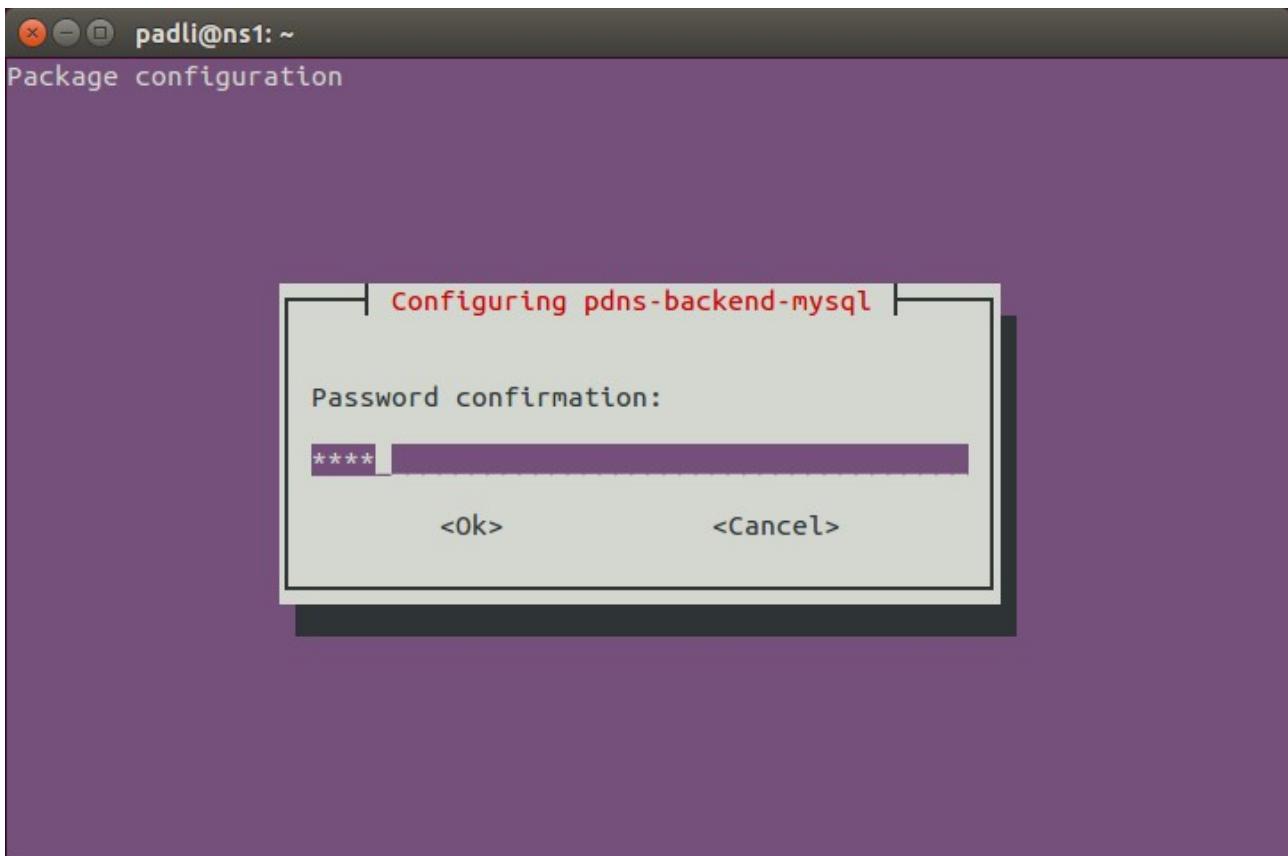
15. input root passwd mysql.



16. set passwd untuk powerdns backend mysql.



17. konfirmasi passwd.



18. buat database powerdns dan user poweruser untuk manajemen db.

```
padli@ns1:~$ mysql -u root -p
Enter password:
Welcome to the MySQL monitor. Commands end with ; or \g.
Your MySQL connection id is 46
Server version: 5.5.44-0ubuntu0.14.04.1 (Ubuntu)

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owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> CREATE DATABASE powerdns;
Query OK, 1 row affected (0.00 sec)

mysql> GRANT ALL ON powerdns.* TO 'poweruser'@'%' IDENTIFIED BY 'root';
Query OK, 0 rows affected (0.00 sec)

mysql> FLUSH PRIVILEGES;
Query OK, 0 rows affected (0.00 sec)

mysql> quit;
```

19. login user poweruser, buat tabel domains.

```
padli@ns1:~$ mysql -u poweruser -p
Enter password:
Welcome to the MySQL monitor. Commands end with ; or \g.
Your MySQL connection id is 47
Server version: 5.5.44-0ubuntu0.14.04.1 (Ubuntu)

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owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> USE powerdns;
Database changed
mysql> CREATE TABLE domains (
    -> id INT auto_increment,
    -> name VARCHAR(255) NOT NULL,
    -> master VARCHAR(128) DEFAULT NULL,
    -> last_check INT DEFAULT NULL,
    -> type VARCHAR(6) NOT NULL,
    -> notified_serial INT DEFAULT NULL,
    -> account VARCHAR(40) DEFAULT NULL,
    -> primary key (id)
    -> );
Query OK, 0 rows affected (0.04 sec)

mysql> CREATE UNIQUE INDEX name_index ON domains(name);
Query OK, 0 rows affected (0.08 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> █
```

20. buat tabel records.

```
padli@ns1: ~
mysql> CREATE TABLE records (
    -> id INT auto_increment,
    -> domain_id INT DEFAULT NULL,
    -> name VARCHAR(255) DEFAULT NULL,
    -> type VARCHAR(6) DEFAULT NULL,
    -> content VARCHAR(255) DEFAULT NULL,
    -> ttl INT DEFAULT NULL,
    -> prio INT DEFAULT NULL,
    -> change_date INT DEFAULT NULL,
    -> primary key(id)
    -> );
Query OK, 0 rows affected (0.04 sec)

mysql> CREATE INDEX rec_name_index ON records(name);
Query OK, 0 rows affected (0.04 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> CREATE INDEX nametype_index ON records(name,type);
Query OK, 0 rows affected (0.01 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> CREATE INDEX domain_id ON records(domain_id);
Query OK, 0 rows affected (0.05 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> ■
```

21. buat tabel supermasters.

```
padli@ns1: ~
mysql> CREATE TABLE supermasters (
    -> ip VARCHAR(25) NOT NULL,
    -> nameserver VARCHAR(255) NOT NULL,
    -> account VARCHAR(40) DEFAULT NULL
    -> );
Query OK, 0 rows affected (0.00 sec)

mysql> show tables;
+-----+
| Tables_in_powerdns |
+-----+
| domains           |
| records           |
| supermasters      |
+-----+
3 rows in set (0.00 sec)

mysql> quit;■
```

22. hapus file default.

```
padli@ns1:~$ sudo rm /etc/powerdns/pdns.d/*.*
```

23. buat file baru "nano /etc/powerdns/pdns.d/pdns.local.gmysql.conf" set koneksi ke db mysql.

```
padli@ns1:~$ nano /etc/powerdns/pdns.d/pdns.local.gmysql.conf
GNU nano 2.2.6      File: /etc/powerdns/pdns.d/pdns.local.gmysql.conf      Modified

# MySQL Configuration
#
# Launch gmysql backend
launch=gmysql

# gmysql parameters
gmysql-host=localhost
gmysql-dbname=powerdns
gmysql-user=poweruser
gmysql-password=root

^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
```

24. restart servis powerdns.

```
padli@ns1:~$ sudo /etc/init.d/pdns restart
 * Restarting PowerDNS Authoritative Name Server pdns                                [ OK ]
padli@ns1:~$ sudo netstat -tap | grep pdns
tcp        0      0 *:domain              *:*                  LISTEN      3113
/pdns_server-in
padli@ns1:~$
```

25. install lib2 yg dibutuhkan untuk instalasi powerdns.

```
padli@ns1:~$ sudo apt-get install apache2 gettext libapache2-mod-php5 php5 php5-common php5-curl  
php5-dev php5-gd php-pear php5-imap php5-ming php5-mysql php5-xmlrpc php5-mhash php5-mcrypt wget
```

26. install modul pear db (1).

```
padli@ns1:~$ sudo pear install DB
```

27. install modul pear db (2).

```
padli@ns1:~$ sudo pear install pear/MDB2#mysql
```

28. enable modul php5-mcrypt.

```
padli@ns1:~$ sudo php5enmod mcrypt  
padli@ns1:~$ sudo /etc/init.d/apache2 restart  
* Restarting web server apache2 [ OK ]  
padli@ns1:~$ 
```

29. change dir "cd /var/www/html".

```
padli@ns1:~$ cd /var/www/html/  
padli@ns1:/var/www/html$ rm index.html  
rm: remove write-protected regular file 'index.html'? y  
rm: cannot remove 'index.html': Permission denied  
padli@ns1:/var/www/html$ sudo rm index.html
```

30. download poweradmin.

```
padli@ns1:/var/www/html$ sudo wget http://sourceforge.net/projects/poweradmin/files/poweradmin-2.1.7.tgz
```

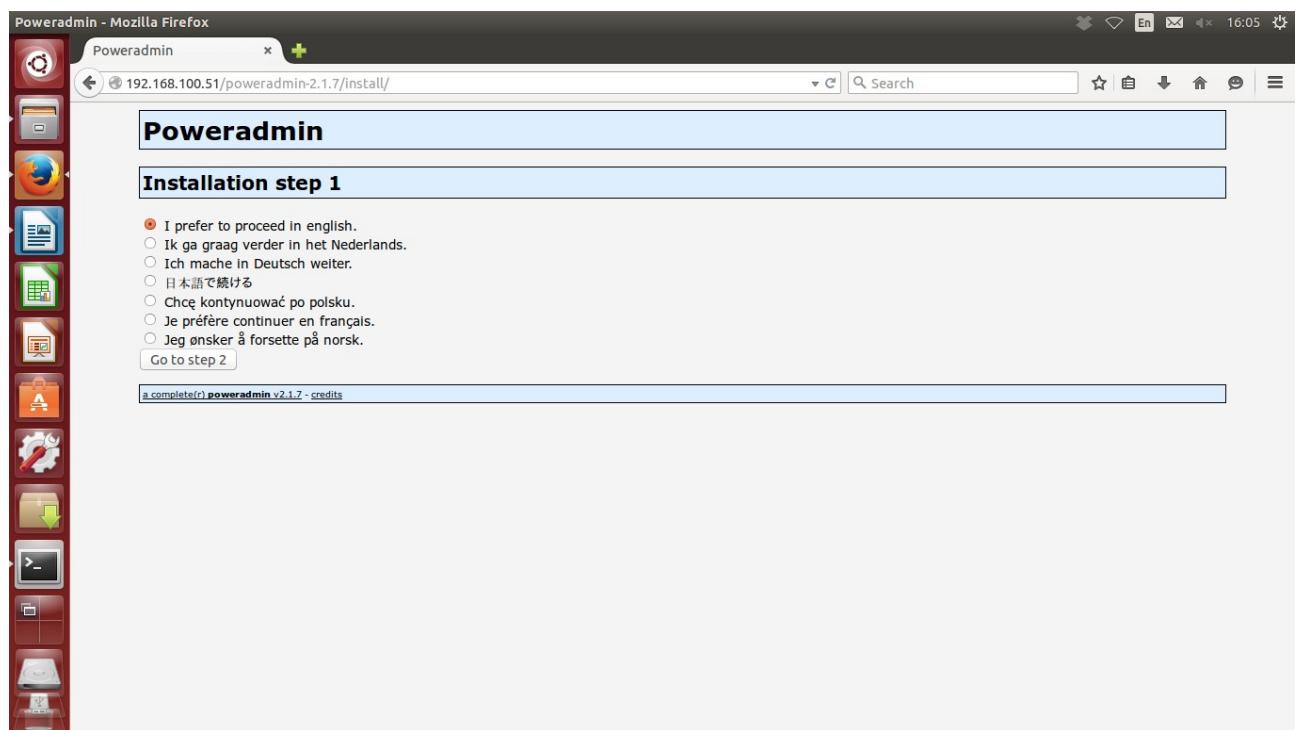
31. extract poweradmin.

```
padli@ns1:/var/www/html$ ls  
poweradmin-2.1.7.tgz  
padli@ns1:/var/www/html$ sudo tar xvfz poweradmin-2.1.7.tgz
```

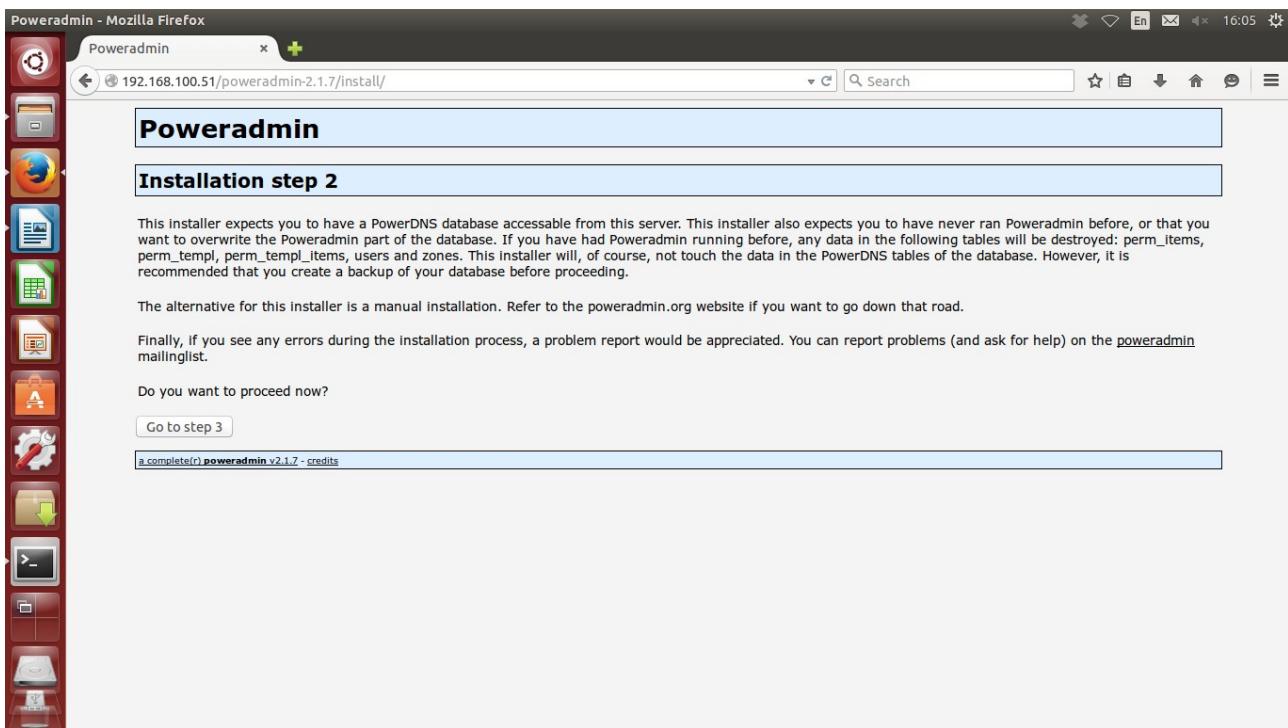
32. ubah kepemilikan dir poweradmin, restart servis apache2.

```
padli@ns1:/var/www/html$ ls
poweradmin-2.1.7 poweradmin-2.1.7.tgz
padli@ns1:/var/www/html$ sudo chown -R www-data:www-data /var/www/html/poweradmin-2.1.7
padli@ns1:/var/www/html$ ls -al
total 304
drwxr-xr-x 3 root      root      4096 Agu 19 15:59 .
drwxr-xr-x 3 root      root      4096 Agu 19 15:51 ..
drwxrwxr-x 10 www-data www-data  4096 Jul  5  2014 poweradmin-2.1.7
-rw-r--r--  1 root      root    296469 Jul 10  2014 poweradmin-2.1.7.tgz
padli@ns1:/var/www/html$ sudo /etc/init.d/apache2 restart
 * Restarting web server apache2                                         [ OK ]
padli@ns1:/var/www/html$
```

33. login poweradmin [http://ipserver/poweradmin\\$\\$\\$/install](http://ipserver/poweradmin$$$/install), next.

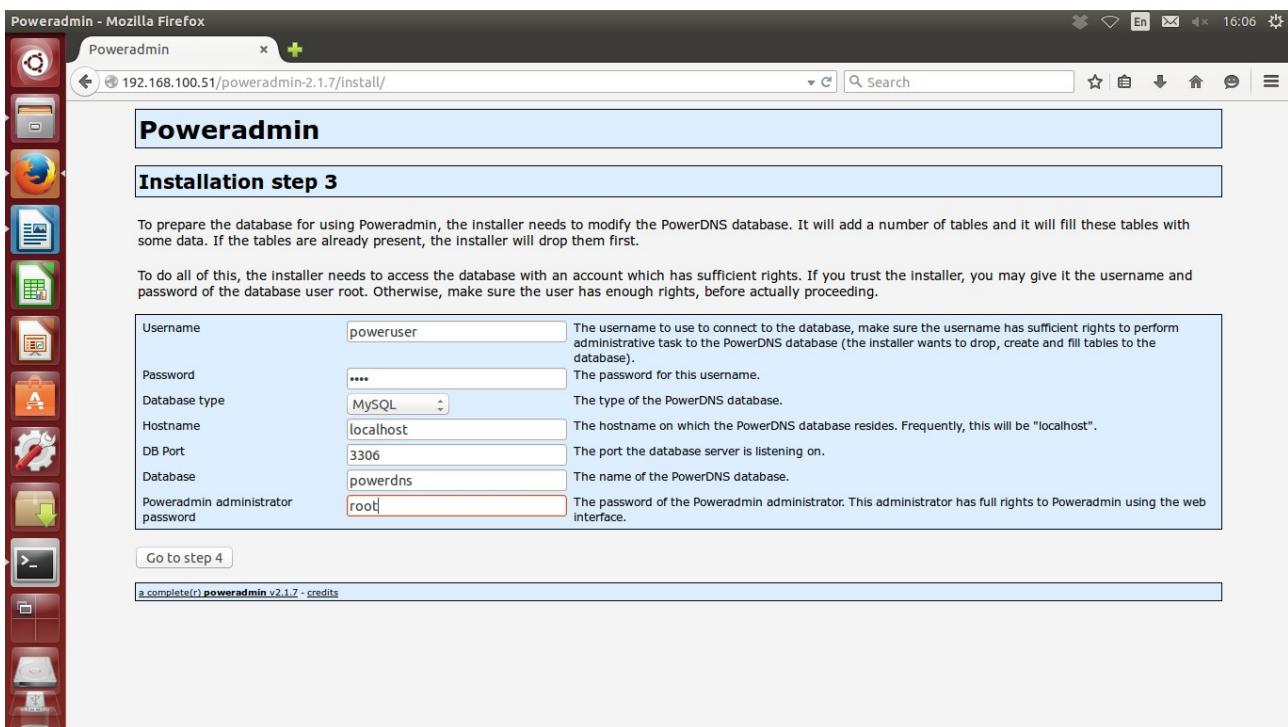


34. next.



A screenshot of a Mozilla Firefox browser window showing the Poweradmin installation process. The URL is 192.168.100.51/poweradmin-2.1.7/install/. The page title is "Poweradmin" and the section is "Installation step 2". A sidebar on the left contains various icons for file management, databases, and system tools. The main content area includes a note about the PowerDNS database, instructions for proceeding, and a "Go to step 3" button. At the bottom, there is a link to "a\_complete(r).poweradmin v2.1.7 - credits".

35. isikan config db mysql, sesuaikan dengan config db mysql, next.



A screenshot of a Mozilla Firefox browser window showing the Poweradmin installation process. The URL is 192.168.100.51/poweradmin-2.1.7/install/. The page title is "Poweradmin" and the section is "Installation step 3". A sidebar on the left contains various icons for file management, databases, and system tools. The main content area includes instructions for preparing the database, a note about the installer's rights, and a form for entering database connection details. The form fields are as follows:

Username	poweruser	The username to use to connect to the database, make sure the username has sufficient rights to perform administrative task to the PowerDNS database (the installer wants to drop, create and fill tables to the database).
Password	....	The password for this username.
Database type	MySQL	The type of the PowerDNS database.
Hostname	localhost	The hostname on which the PowerDNS database resides. Frequently, this will be "localhost".
DB Port	3306	The port the database server is listening on.
Database	powerdns	The name of the PowerDNS database.
Poweradmin administrator password	root	The password of the Poweradmin administrator. This administrator has full rights to Poweradmin using the web interface.

At the bottom, there is a "Go to step 4" button and a link to "a\_complete(r).poweradmin v2.1.7 - credits".

### 36. config user baru untuk poweradmin.

Poweradmin - Mozilla Firefox

Poweradmin

192.168.100.51/poweradmin-2.1.7/install/

### Poweradmin

#### Installation step 4

Updating database... done!

Now we will gather all details for the configuration itself.

Username	poweruser	The username for Poweradmin. This new user will have limited rights only.
Password	root	The password for this username.
Hostmaster	ns1.raisa.net	When creating SOA records and no hostmaster is provided, this value here will be used. Should be in the form "hostmaster.example.net".
Primary nameserver	ns1.raisa.net	When creating new zones using the template, this value will be used as primary nameserver. Should be like "ns1.example.net".
Secondary nameserver	ns2.raisa.net	When creating new zones using the template, this value will be used as secondary nameserver. Should be like "ns2.example.net".

Go to step 5

a complete(r) poweradmin v2.1.7 - credits

### 37. ubah 'localhost' ke '%' agar db dapat di akses dari mana saja, next.

Terminal

Poweradmin

192.168.100.51/poweradmin-2.1.7/install/

### Poweradmin

#### Installation step 5

You now want to give limited rights to Poweradmin so it can insert and update records in the PowerDNS database.

```
GRANT SELECT, INSERT, UPDATE, DELETE  
ON powerdns.*  
TO 'poweruser'@'localhost'  
IDENTIFIED BY 'root';
```

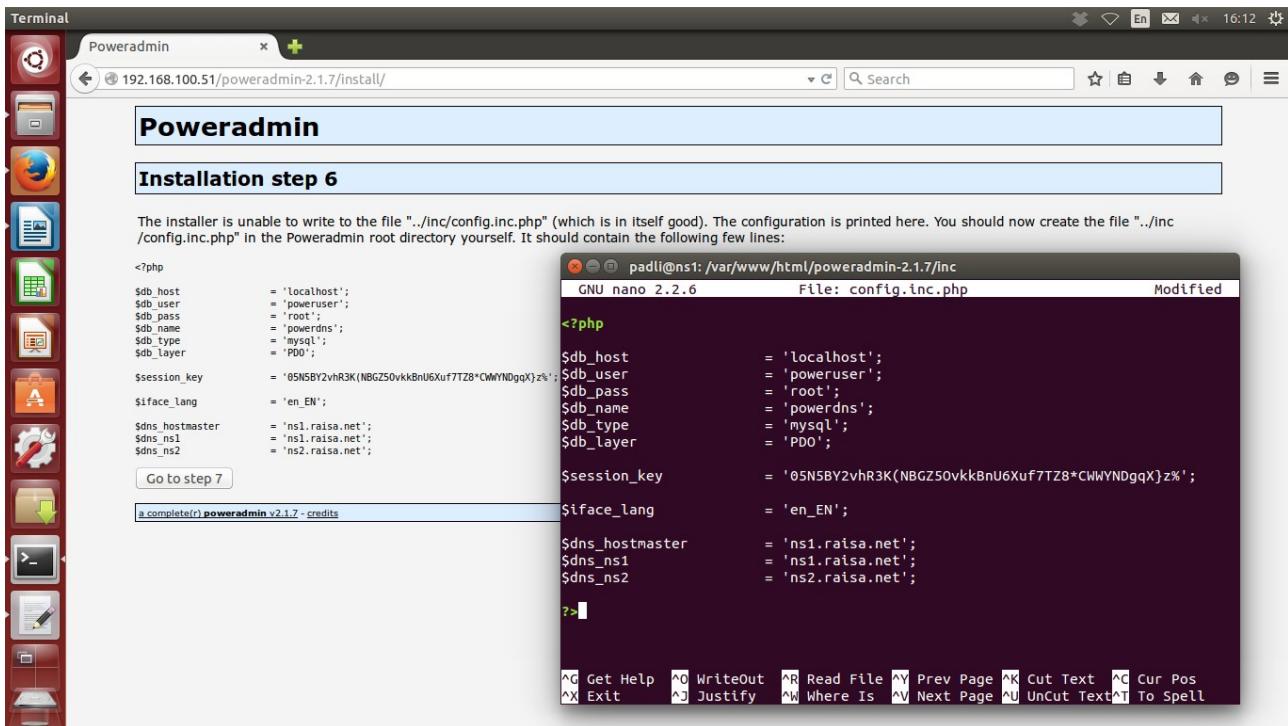
After you have added the new user, proceed with this:

Go to step 6

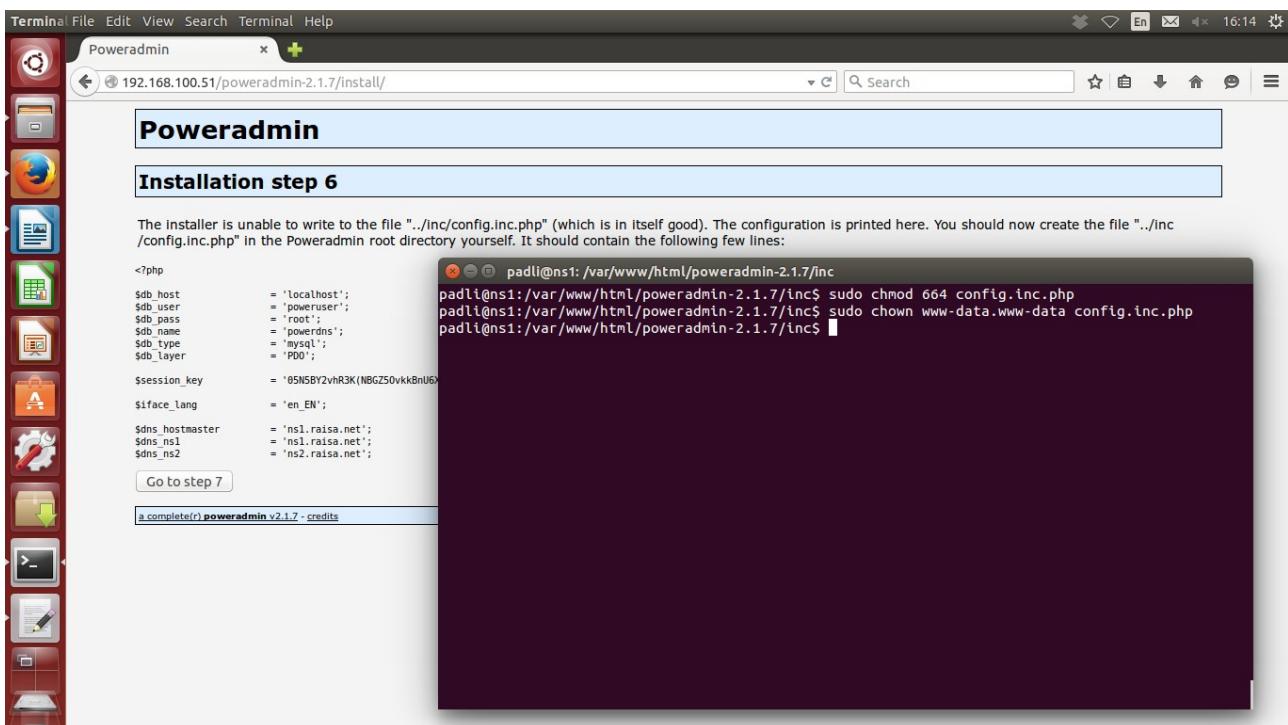
a complete(r) poweradmin v2.1.7 - credits

```
padli@ns1:~$ mysql -u root -p  
Enter password:  
Welcome to the MySQL monitor. Commands end with ; or \g.  
Your MySQL connection id is 49  
Server version: 5.5.44-0ubuntu0.14.04.1 (Ubuntu)  
  
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owners.  
  
Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.  
  
mysql> GRANT SELECT, INSERT, UPDATE, DELETE  
-> ON powerdns.*  
-> TO 'poweruser'@'%'  
-> IDENTIFIED BY 'root';  
Query OK, 0 rows affected (0.00 sec)  
  
mysql> 
```

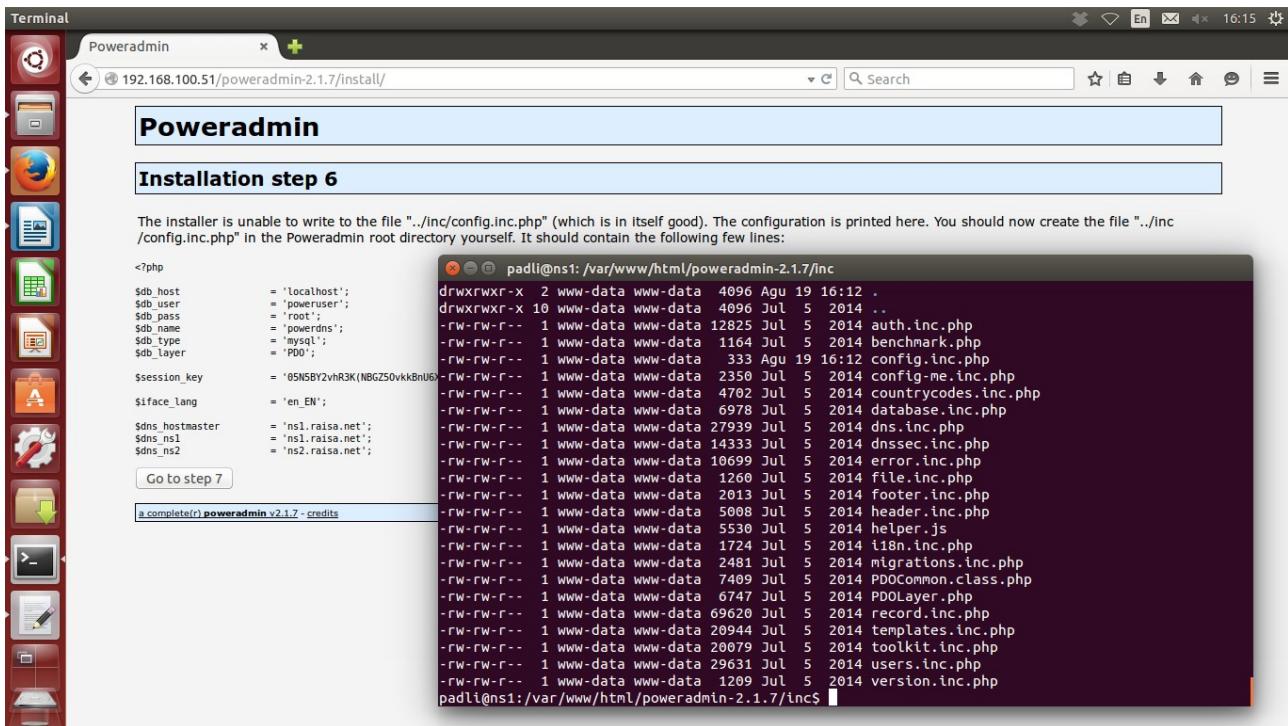
### 38. copy script ke file /var/www/html/poweradmin\$\$\$/inc/config.inc.php.



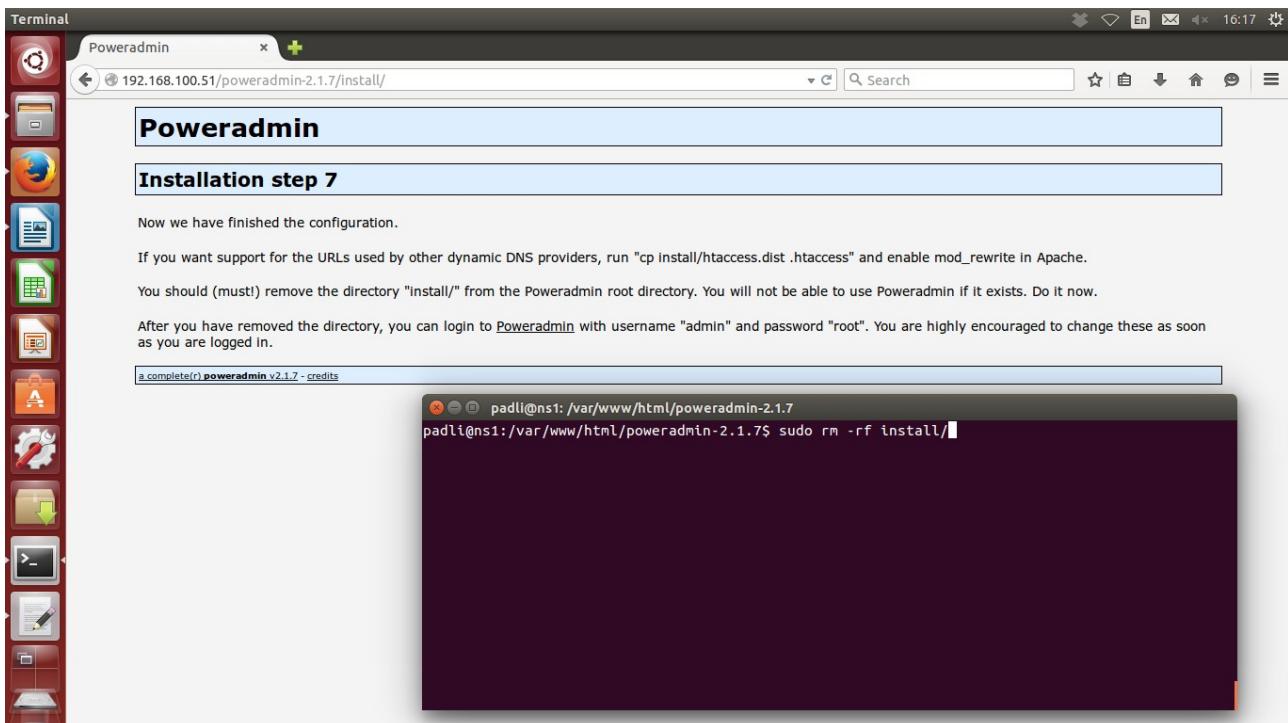
### 39. ubah hak akses & kepemilikan file.



## 40. cek file, next.



## 41. hapus dir installasi, login poweradmin.



42. login admin & passwd root sesuai config.

Poweradmin - Mozilla Firefox

Poweradmin

192.168.100.51/poweradmin-2.1.7/index.php

Search

**Poweradmin**

**Log in**

Username: admin

Password: \*\*\*\*

Language: English

Go

a.complete(r).poweradmin - credits

43. halaman index poweradmin.

Poweradmin - Mozilla Firefox

Poweradmin

192.168.100.51/poweradmin-2.1.7/index.php?time=1439975868

Search

**Poweradmin**

[Index](#) [Search zones and records](#) [List zones](#) [List zone templates](#) [List supermasters](#) [Add master zone](#) [Add slave zone](#) [Add supermaster](#) [Bulk registration](#) [Change password](#) [User administration](#) [Logout](#)

Welcome Administrator

- Index
- Search zones and records
- List zones
- List zone templates
- List supermasters
- Add master zone
- Add slave zone
- Add supermaster
- Change password
- User administration
- Logout

a.complete(r).poweradmin v 2.1.7 - credits

44. backup default file pdns.conf.

```
padli@ns1: /etc/powerdns
padli@ns1:~$ cd /etc/powerdns/
padli@ns1:/etc/powerdns$ ls
bindbackend.conf pdns.conf pdns.d
padli@ns1:/etc/powerdns$ sudo mv pdns.conf pdns.conf.bk
[sudo] password for padli:
padli@ns1:/etc/powerdns$
```

45. buat file baru "nano /etc/powerdns/pdns.conf" & set seperti gambar.

```
padli@ns1: /etc/powerdns
GNU nano 2.2.6          File: pdns.conf          Modified

allow-recursion=0.0.0.0/0
allow-axfr-ips=192.168.100.52/24
config-dir=/etc/powerdns
daemon=yes
disable-axfr=no
guardian=yes
local-address=0.0.0.0
local-port=53
log-dns-details=on
log-failed-updates=on
loglevel=3
module-dir=/usr/lib/powerdns
master=yes
slave=no
setgid=pdns
setuid=pdns
socket-dir=/var/run
version-string=powerdns
include-dir=/etc/powerdns/pdns.d
recursor=8.8.8.8

^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
```

46. restart & cek servis powerdns.

```
padli@ns1: /etc/powerdns
padli@ns1:/etc/powerdns$ sudo /etc/init.d/pdns restart
 * Restarting PowerDNS Authoritative Name Server pdns
[ OK ]
padli@ns1:/etc/powerdns$ sudo netstat -tap | grep pdns
tcp        0      0 *:domain              *:*                  LISTEN
1436/pdns_server-in
padli@ns1:/etc/powerdns$
```

47. ubah default nameserver.

The screenshot shows a terminal window titled "padli@ns1: /etc/powerdns". The file being edited is "/etc/network/interfaces". The content of the file is as follows:

```
GNU nano 2.2.6          File: /etc/network/interfaces          Modified

# 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 192.168.100.51
    netmask 255.255.255.0
    network 192.168.100.0
    broadcast 192.168.100.255
    gateway 192.168.100.1
    dns-nameserver 192.168.100.51 192.168.100.52
```

At the bottom of the terminal window, there is a menu of keyboard shortcuts:

- ^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

48. restart.

The screenshot shows a terminal window titled "padli@ns1: /etc/powerdns". The user runs the command "sudo reboot".

```
padli@ns1:/etc/powerdns$ sudo reboot
```

49. setelah restart, cek nameserver.

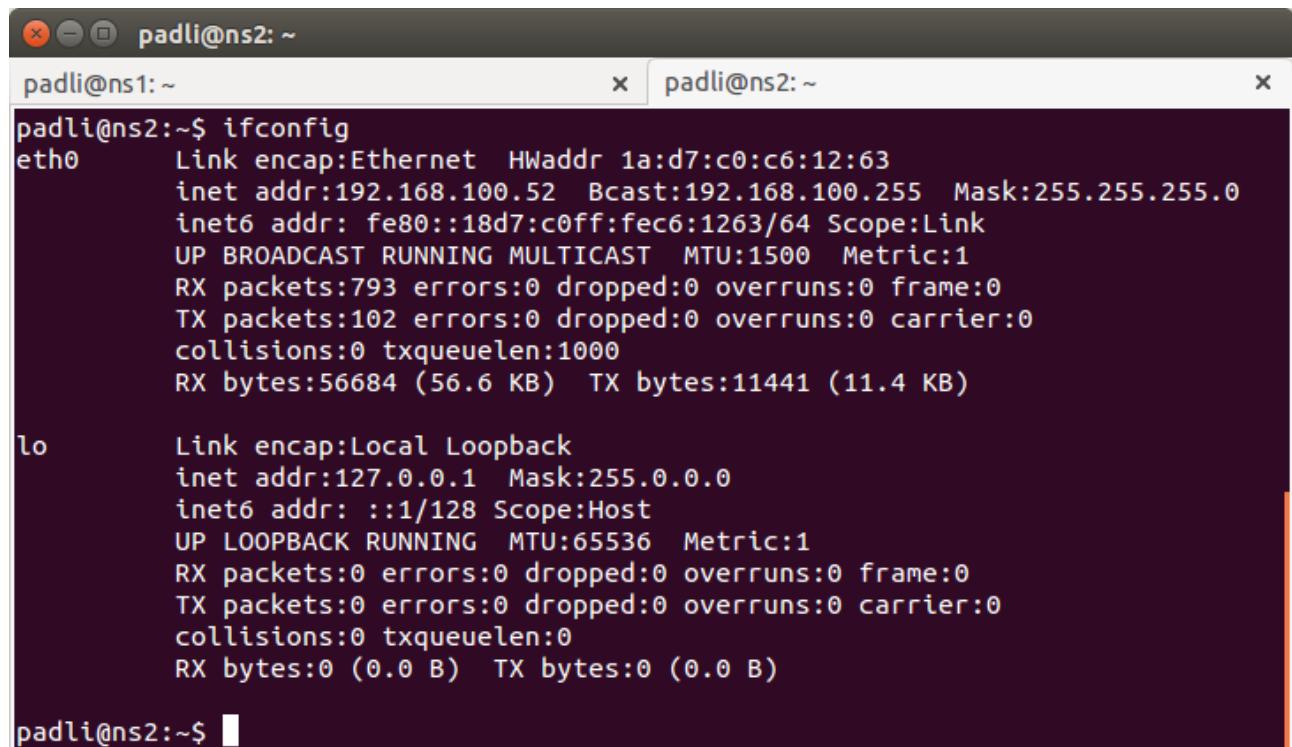
The screenshot shows a terminal window titled "padli@ns1: ~". The user runs the command "more /etc/resolv.conf" to view the contents of the resolv.conf file.

```
padli@ns1:~$ more /etc/resolv.conf
# Dynamic resolv.conf(5) file for glibc resolver(3) generated by resolvconf(8)
#      DO NOT EDIT THIS FILE BY HAND -- YOUR CHANGES WILL BE OVERWRITTEN
nameserver 192.168.100.51
nameserver 192.168.100.52
padli@ns1:~$
```

## NS2 SLAVE

50. lakukan hal yg sama pada mesin ns2 (langkah 1 s.d 43).

51. cek ip ns2.



The screenshot shows two terminal windows side-by-side. The left window is titled 'padli@ns1: ~' and the right window is titled 'padli@ns2: ~'. Both windows have a dark background and light-colored text. The 'ifconfig' command is run in both windows, displaying network interface statistics. The 'eth0' interface on ns2 has an IP of 192.168.100.52 and a broadcast address of 192.168.100.255. The 'lo' interface on ns2 has an IP of 127.0.0.1. The 'ifconfig' command ends with a prompt 'padli@ns2:~\$'.

```
padli@ns2:~$ ifconfig
eth0      Link encap:Ethernet HWaddr 1a:d7:c0:c6:12:63
          inet addr:192.168.100.52 Bcast:192.168.100.255 Mask:255.255.255.0
          inet6 addr: fe80::18d7:c0ff:fecc:1263/64 Scope:Link
                  UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1
                  RX packets:793 errors:0 dropped:0 overruns:0 frame:0
                  TX packets:102 errors:0 dropped:0 overruns:0 carrier:0
                  collisions:0 txqueuelen:1000
                  RX bytes:56684 (56.6 KB) TX bytes:11441 (11.4 KB)

lo       Link encap:Local Loopback
          inet addr:127.0.0.1 Mask:255.0.0.0
          inet6 addr: ::1/128 Scope:Host
                  UP LOOPBACK RUNNING MTU:65536 Metric:1
                  RX packets:0 errors:0 dropped:0 overruns:0 frame:0
                  TX packets:0 errors:0 dropped:0 overruns:0 carrier:0
                  collisions:0 txqueuelen:0
                  RX bytes:0 (0.0 B) TX bytes:0 (0.0 B)

padli@ns2:~$
```

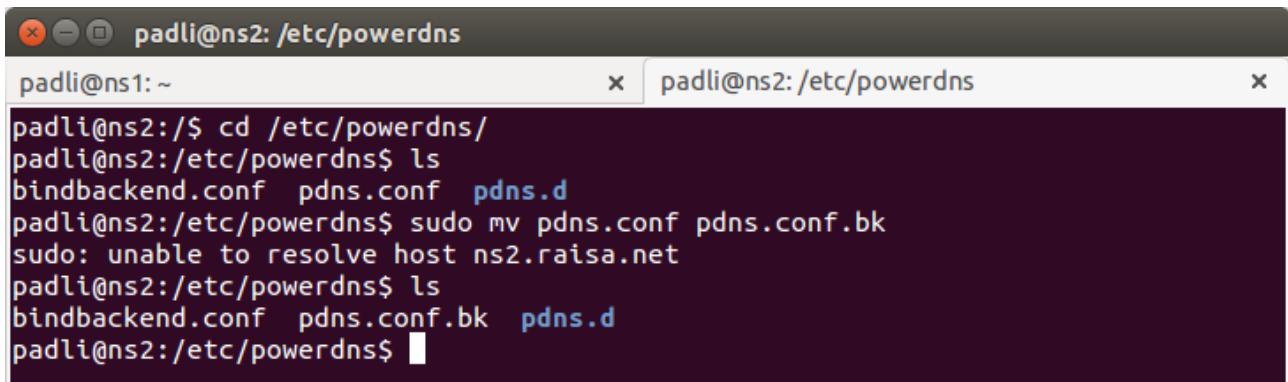
52. cek hostname & nameserver ns2.



The screenshot shows two terminal windows side-by-side. The left window is titled 'padli@ns1: ~' and the right window is titled 'padli@ns2: ~'. Both windows have a dark background and light-colored text. The 'more' command is run on the '/etc/hostname' and '/etc/resolv.conf' files. The '/etc/hostname' file contains the entry 'ns2.raisa.net'. The '/etc/resolv.conf' file contains entries for nameservers: 'nameserver 192.168.100.51' and 'nameserver 192.168.100.52'. The 'more' command ends with a prompt 'padli@ns2:~\$'.

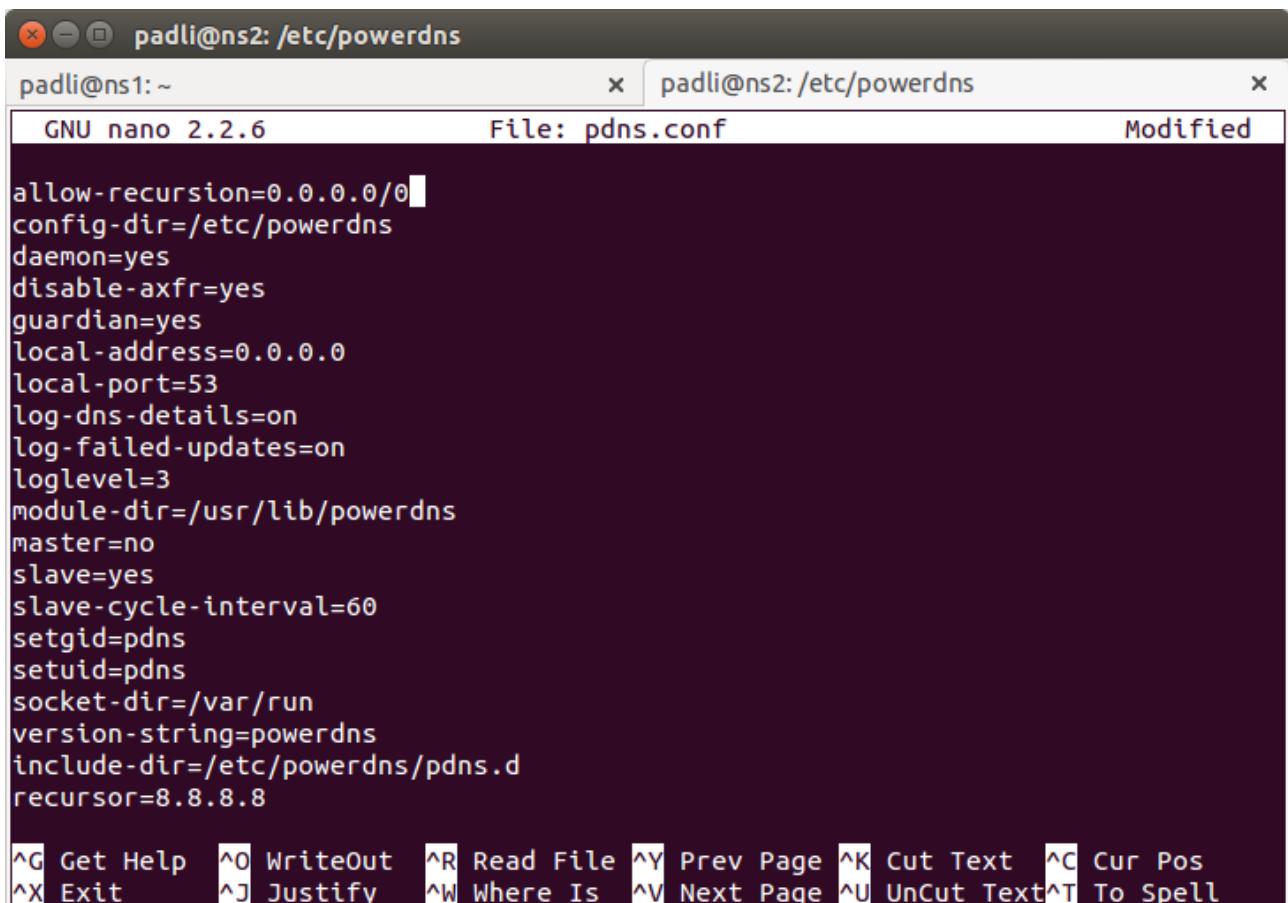
```
padli@ns2:~$ more /etc/hostname
ns2.raisa.net
padli@ns2:~$ more /etc/resolv.conf
# Dynamic resolv.conf(5) file for glibc resolver(3) generated by resolvconf(8)
#       DO NOT EDIT THIS FILE BY HAND -- YOUR CHANGES WILL BE OVERWRITTEN
nameserver 192.168.100.51
nameserver 192.168.100.52
padli@ns2:~$
```

53. backup file default pdns.conf.



```
padli@ns1: ~ x padli@ns2: /etc/powerdns
padli@ns2:/$ cd /etc/powerdns/
padli@ns2:/etc/powerdns$ ls
bindbackend.conf pdns.conf pdns.d
padli@ns2:/etc/powerdns$ sudo mv pdns.conf pdns.conf.bk
sudo: unable to resolve host ns2.raisa.net
padli@ns2:/etc/powerdns$ ls
bindbackend.conf pdns.conf.bk pdns.d
padli@ns2:/etc/powerdns$
```

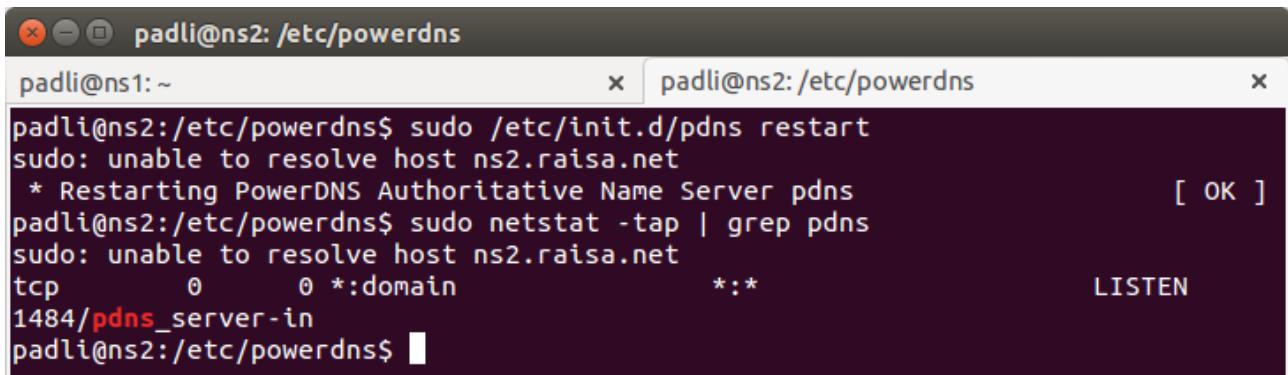
54. buat baru file "nano /etc/powerdns/pdns.conf" set sebagai slave.



```
padli@ns1: ~ x padli@ns2: /etc/powerdns
GNU nano 2.2.6 File: pdns.conf Modified
allow-recursion=0.0.0.0/0
config-dir=/etc/powerdns
daemon=yes
disable-axfr=yes
guardian=yes
local-address=0.0.0.0
local-port=53
log-dns-details=on
log-failed-updates=on
loglevel=3
module-dir=/usr/lib/powerdns
master=no
slave=yes
slave-cycle-interval=60
setgid=pdns
setuid=pdns
socket-dir=/var/run
version-string=powerdns
include-dir=/etc/powerdns/pdns.d
recursor=8.8.8.8
```

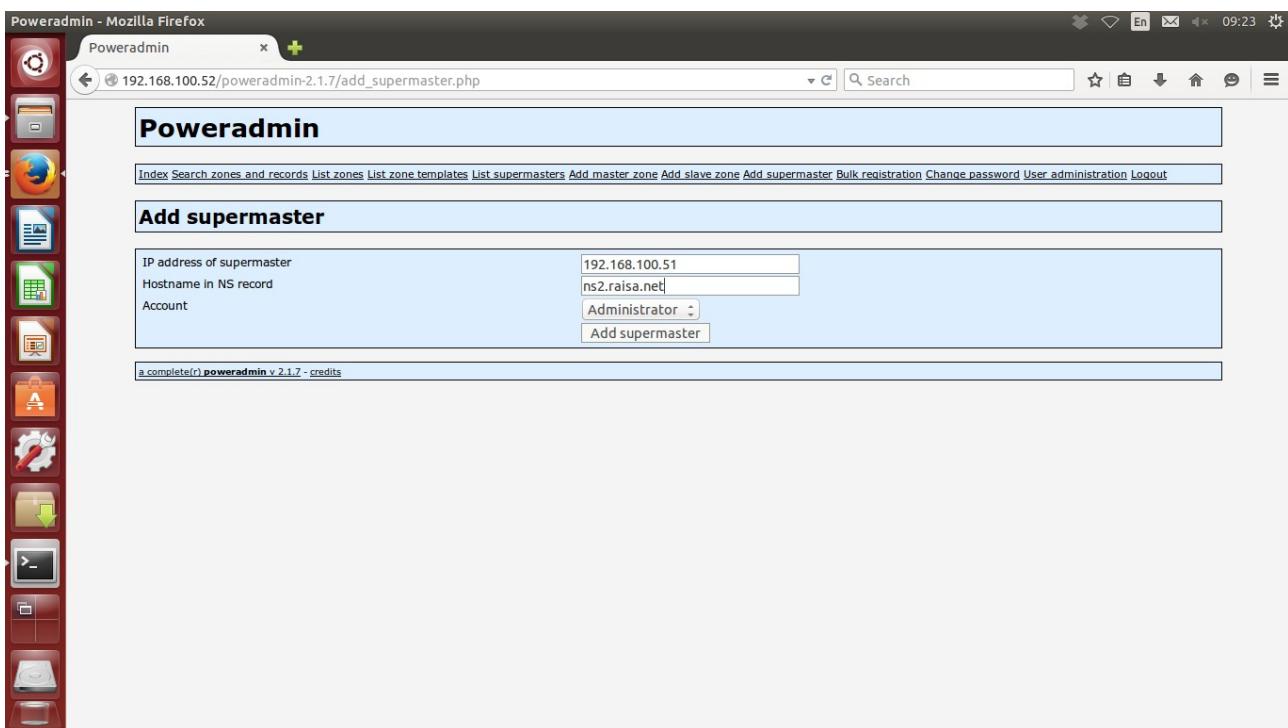
^G Get Help ^O WriteOut ^R Read File ^Y Prev Page ^K Cut Text ^C Cur Pos  
^X Exit ^J Justify ^W Where Is ^V Next Page ^U UnCut Text ^T To Spell

55. restart & cek servis powerdns.



```
padli@ns1: ~ x padli@ns2: /etc/powerdns
padli@ns2:/etc/powerdns$ sudo /etc/init.d/pdns restart
sudo: unable to resolve host ns2.raisa.net
* Restarting PowerDNS Authoritative Name Server pdns [ OK ]
padli@ns2:/etc/powerdns$ sudo netstat -tap | grep pdns
sudo: unable to resolve host ns2.raisa.net
tcp        0      0 *:domain              *:*                  LISTEN
1484/pdns_server-in
padli@ns2:/etc/powerdns$
```

56. tambahkan supermaster (ip master, nameserver slave, admin).



The screenshot shows the Poweradmin web interface in Mozilla Firefox. The URL is 192.168.100.52/poweradmin-2.1.7/add\_supermaster.php. The left sidebar has icons for zones, records, zones template, supermasters, master zone, slave zone, supermaster, bulk registration, change password, user administration, and logout. The main content area is titled "Add supermaster". It contains fields for "IP address of supermaster" (192.168.100.51), "Hostname in NS record" (ns2.raisa.net), and "Account" (Administrator). A "Add supermaster" button is at the bottom. At the very bottom of the page, there is a footer bar with the text "a complete(r) poweradmin v 2.1.7 - credits".

## 57. cek list supermaster.

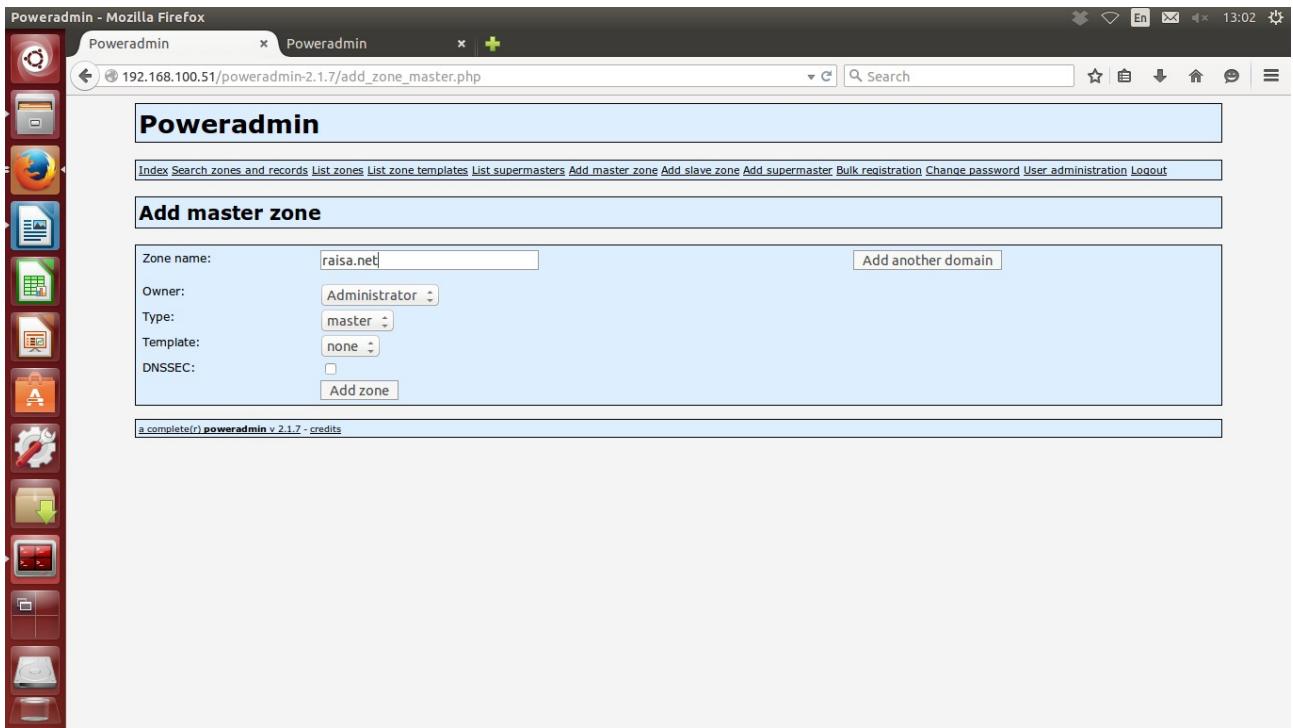
The screenshot shows a Mozilla Firefox browser window with the title 'Poweradmin - Mozilla Firefox'. The address bar displays the URL '192.168.100.52/poweradmin-2.1.7/list\_supermasters.php'. The main content area is titled 'Poweradmin' and shows a table titled 'List supermasters'. The table has three columns: 'IP address of supermaster' (containing '192.168.100.51'), 'Hostname in NS record' (containing 'ns2.raisa.net'), and 'Account' (containing 'admin'). A small trash can icon is visible next to the IP address column. Below the table, a footer note reads 'a complete(r) poweradmin v 2.1.7 - credits'. On the left side of the browser window, there is a vertical toolbar with various icons, and at the top right, there are standard browser controls like back, forward, search, and refresh.

IP address of supermaster	Hostname in NS record	Account
192.168.100.51	ns2.raisa.net	admin

a complete(r) poweradmin v 2.1.7 - credits

## TES KONFIGURASI (NS1, NS2 & HOST)

58. tambahkan master zone raisa.net (NS1).



Poweradmin - Mozilla Firefox

Poweradmin

192.168.100.51/poweradmin-2.1.7/add\_zone\_master.php

Poweradmin

Add master zone

Zone name: raisa.net

Owner: Administrator

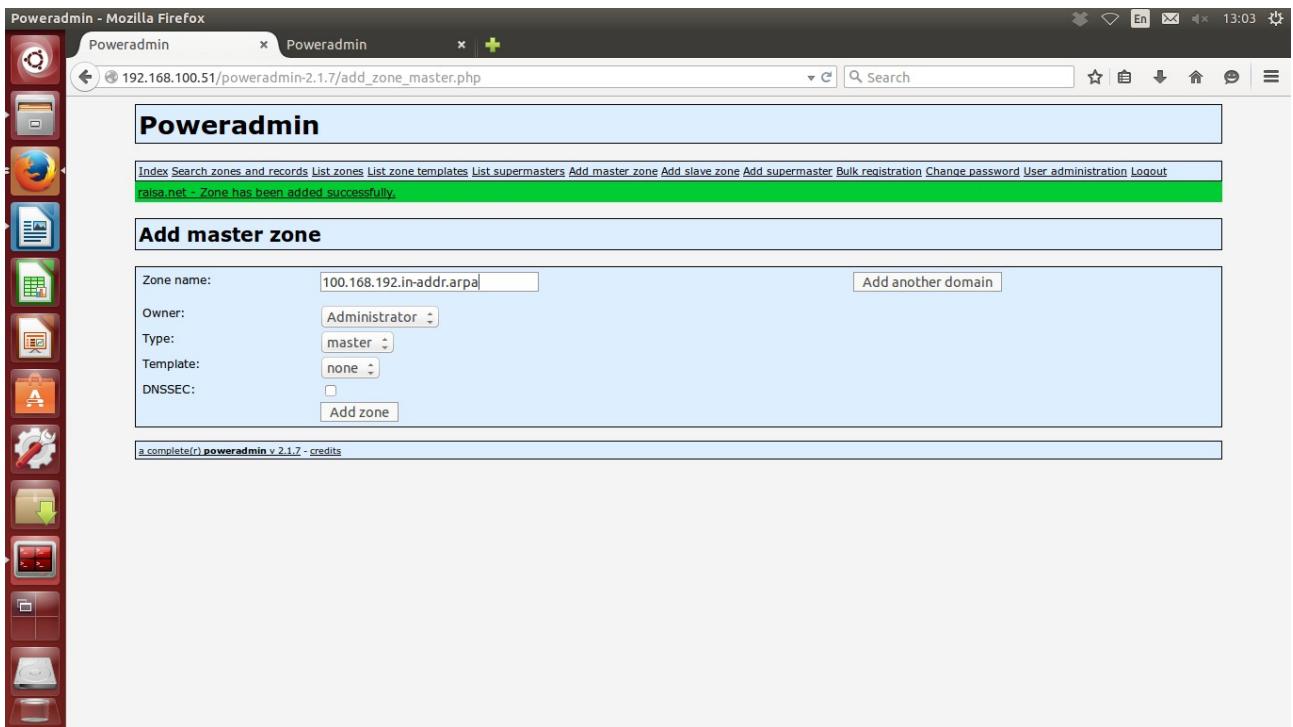
Type: master

Template: none

DNSSEC:

Add zone

59. tambahkan master zone reverse (NS1).



Poweradmin - Mozilla Firefox

Poweradmin

192.168.100.51/poweradmin-2.1.7/add\_zone\_master.php

Poweradmin

Add master zone

Zone name: 100.168.192.in-addr.arpa

Owner: Administrator

Type: master

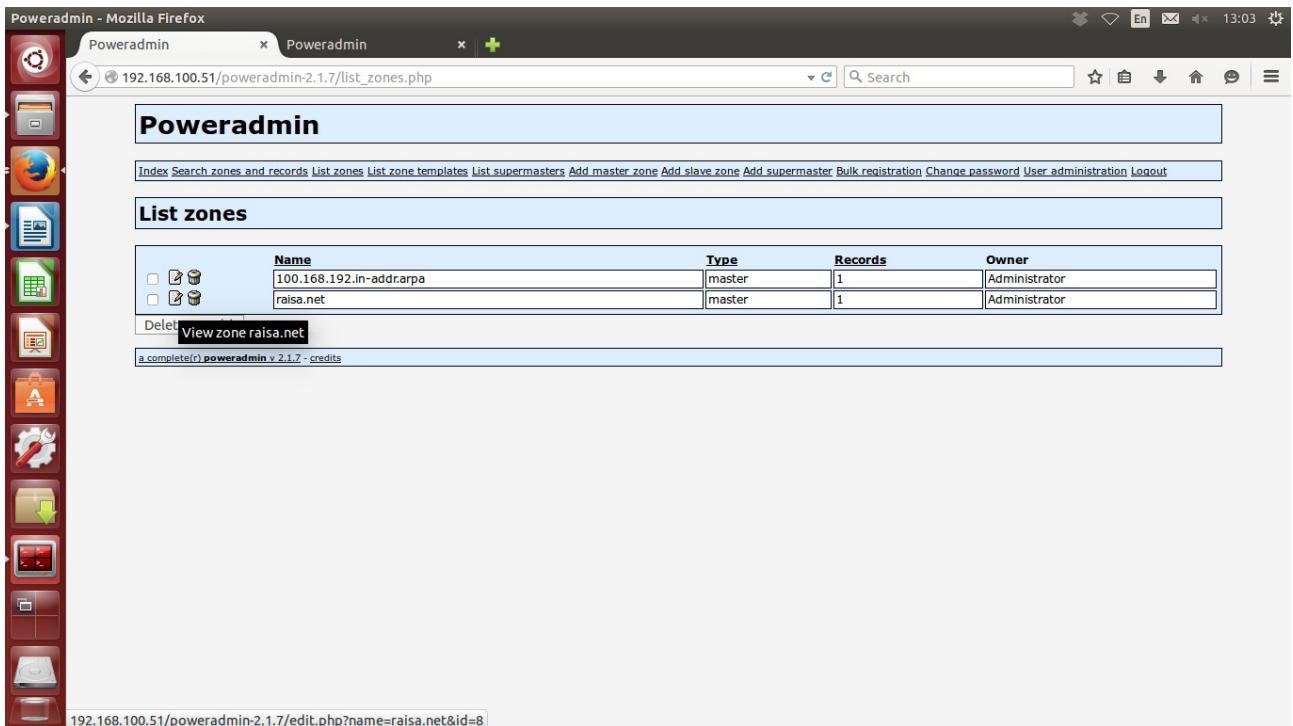
Template: none

DNSSEC:

Add zone

raisa.net - Zone has been added successfully.

## 60. cek list master zone & edit master zone raisa.net (NS1).

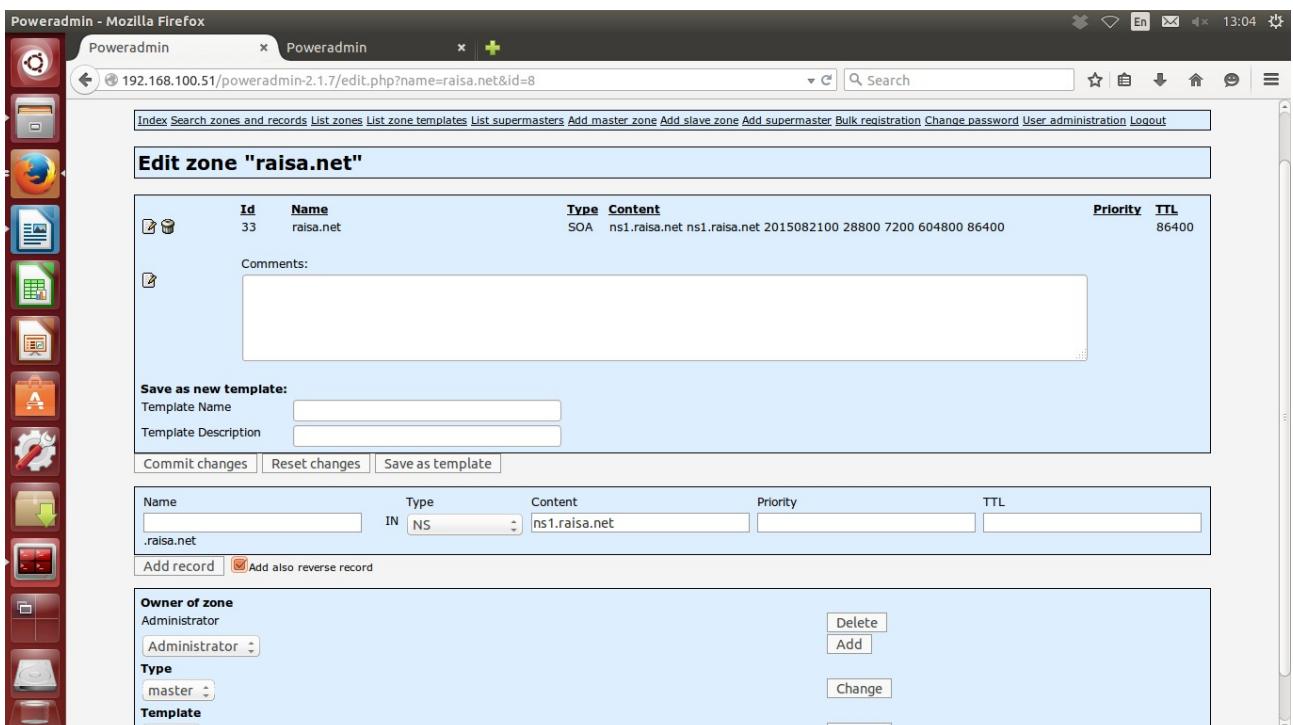


The screenshot shows the Poweradmin interface in Mozilla Firefox. The URL is 192.168.100.51/poweradmin-2.1.7/list\_zones.php. The main content area is titled "List zones" and shows a table with two entries:

Name	Type	Records	Owner
100.168.192.in-addr.arpa	master	1	Administrator
raisa.net	master	1	Administrator

Below the table are buttons for "Delete" and "View zone raisa.net". The status bar at the bottom shows the URL 192.168.100.51/poweradmin-2.1.7/edit.php?name=raisa.net&id=8.

## 61. tambahkan record NS (nameserver), cek list add also reverse record (NS1).



The screenshot shows the Poweradmin interface in Mozilla Firefox. The URL is 192.168.100.51/poweradmin-2.1.7/edit.php?name=raisa.net&id=8. The main content area is titled "Edit zone "raisa.net"" and shows the following details:

**SOA Record:**

ID	Name	Type	Content	Priority	TTL
33	raisa.net	SOA	ns1.raisa.net ns1.raisa.net 2015082100 28800 7200 604800 86400		86400

**Comments:** (Empty text area)

**Save as new template:**

Template Name:   
Template Description:

**Record Table:**

Name	Type	Content	Priority	TTL
.raisa.net	IN NS	ns1.raisa.net		

**Action Buttons:**

Add record  Add also reverse record

**Owner of zone:** Administrator

**Type:** master

**Template:** (dropdown menu)

**Buttons:** Delete, Add, Change, Change

62. tambahkan record lagi sehingga seperti list di gambar (NS1).

<b>Id</b>	<b>Name</b>	<b>Type</b>	<b>Content</b>	<b>Priority</b>	<b>TTL</b>
33	raisa.net	SOA	ns1.raisa.net ns1.raisa.net 2015082104 28800 7200 604800 86400		86400
35	raisa.net	NS	ns1.raisa.net	0	86400
36	raisa.net	NS	ns2.raisa.net	0	86400
38	ns1.raisa.net	A	192.168.100.51	0	86400
40	ns2.raisa.net	A	192.168.100.52	0	86400

Comments:

Save as new template:

Template Name:

Template Description:

Commit changes | Reset changes | Save as template

Add record  Add also reverse record

63. cek list master record reverse (NS1).

<b>Id</b>	<b>Name</b>	<b>Type</b>	<b>Content</b>	<b>Priority</b>	<b>TTL</b>
34	100.168.192.in-addrarpa	SOA	ns1.raisa.net ns1.raisa.net 2015082102 28800 7200 604800 86400		86400
37	51.100.168.192.in-addr.arpa	PTR	ns1.raisa.net	0	86400
39	52.100.168.192.in-addr.arpa	PTR	ns2.raisa.net	0	86400

Comments:

Save as new template:

Template Name:

Template Description:

Commit changes | Reset changes | Save as template

Name:  Type:  Content:  Priority:  TTL:   
.100.168.192.in-addr.arpa IN PTR

Add record

Owner of zone  
Administrator

64. cek list zone pada slave, setup di master otomatis akan terecord ke slave (NS2).

The screenshot shows the 'List zones' section of the Poweradmin web interface. A single zone, 'raisa.net', is listed in the table. The table columns are Name, Type, Records, and Owner. The zone 'raisa.net' has a type of 'slave' and 5 records. There is a 'Delete zone(s)' button at the bottom of the table.

	Name	Type	Records	Owner
<input type="checkbox"/>	raisa.net	slave	5	

a complete(r) poweradmin v 2.1.7 - credits

65. cek record pada slave, setup di master otomatis akan terecord ke slave (NS2).

The screenshot shows the 'Edit zone "raisa.net"' page. It lists several DNS records for the zone 'raisa.net'. The records include:

ID	Name	Type	Content	Priority	TTL
12	raisa.net	SOA	ns1.raisa.net. ns1.raisa.net. 2015082104 28800 7200 604800 86400		86400
13	raisa.net	NS	ns1.raisa.net	0	86400
14	raisa.net	NS	ns2.raisa.net	0	86400
15	ns1.raisa.net	A	192.168.100.51	0	86400
16	ns2.raisa.net	A	192.168.100.52	0	86400

Comments:  
Save as new template:  
Template Name: \_\_\_\_\_  
Template Description: \_\_\_\_\_  
Commit changes | Reset changes | Save as template |

Owner of zone: Administrator | Add | Type: \_\_\_\_\_

## 66. tambahkan master zone padli.org (NS1).

The screenshot shows the 'List zones' section of the Poweradmin web interface. On the left is a vertical toolbar with various icons. The main area displays a table of zones:

Name	Type	Records	Owner
100.168.192.in-addr.arpa	master	5	Administrator
padli.org	master	6	Administrator
raisa.net	master	5	Administrator

At the bottom of the table is a link 'Delete zone(s)'. Below the table is a footer bar with the text 'a complete(r) poweradmin v.2.1.7 - credits'.

## 67. tambahkan record pada master zone padli.org (NS1).

The screenshot shows the 'Edit zone "padli.org"' page. The main area displays a table of records for the 'padli.org' zone:

ID	Name	Type	Content	Priority	TTL
41	padli.org	SOA	ns1.raisa.net ns1.raisa.net 2015082105 28800 7200 604800 86400		86400
42	padli.org	NS	ns1.raisa.net	0	86400
43	padli.org	NS	ns2.raisa.net	0	86400
46	mail.padli.org	A	192.168.100.7	0	86400
44	padli.org	MX	mail.padli.org	10	86400
48	www.padli.org	A	192.168.100.7	0	86400

Below the table is a 'Comments:' text area with a placeholder icon. At the bottom of the page are sections for saving templates and committing changes:

**Save as new template:**  
Template Name:   
Template Description:

Commit changes | Reset changes | Save as template

At the very bottom is a small table for adding a new record:

Name	Type	Content	Priority	TTL
.padli.org	IN A			

## 68. cek list master zone reverse (NS1).

The screenshot shows the Poweradmin interface in Mozilla Firefox. The URL is 192.168.100.51/poweradmin-2.1.7/edit.php?name=100.168.192.in-addr.arpa&id=9. The page title is 'Edit zone "100.168.192.in-addr.arpa"'. On the left is a vertical toolbar with various icons. The main content area displays a table of records for the zone:

ID	Name	Type	Content	Priority	TTL
34	100.168.192.in-addr.arpa	SOA	ns1.raisa.net ns1.raisa.net 2015082104 28800 7200 604800 86400		86400
45	7.100.168.192.in-addr.arpa	PTR	mail.padli.org	0	86400
47	7.100.168.192.in-addr.arpa	PTR	www.padli.org	0	86400
37	51.100.168.192.in-addr.arpa	PTR	ns1.raisa.net	0	86400
39	52.100.168.192.in-addr.arpa	PTR	ns2.raisa.net	0	86400

Below the table is a 'Comments:' text area with a placeholder icon. Underneath is a section for saving a template:

Save as new template:  
Template Name:   
Template Description:

Buttons at the bottom include 'Commit changes', 'Reset changes', and 'Save as template'. A smaller form for adding a new record is shown at the bottom:

Name	Type	Content	Priority	TTL
.100.168.192.in-addr.arpa	IN PTR			

Buttons 'Add record' and 'Add zone' are also present.

## 69. tambahkan master zone host1.co.id & host2.co.id (NS1).

The screenshot shows the Poweradmin interface in Mozilla Firefox. The URL is 192.168.100.51/poweradmin-2.1.7/list\_zones.php. The page title is 'List zones'. The main content area displays a table of existing zones:

Name	Type	Records	Owner
100.168.192.in-addrarpa	master	5	Administrator
host1.co.id	master	1	Administrator
host2.co.id	master	1	Administrator
padli.org	master	6	Administrator
raisa.net	master	5	Administrator

Below the table is a 'Delete zone(s)' button and a footer note: 'a complete(r) poweradmin v 2.1.7 - credits'.

70. pada master zone host1.co.id tambahkan record seperti ini (NS1).

The screenshot shows the Poweradmin web interface for managing DNS zones. The current page is 'Edit zone "host1.co.id"'. The main table displays the following records:

<b>Id</b>	<b>Name</b>	<b>Type</b>	<b>Content</b>	<b>Priority</b>	<b>TTL</b>
49	host1.co.id	SOA	ns1.raisa.net ns1.raisa.net 2015082103 28800 7200 604800 86400		86400
51	host1.co.id	NS	ns1.raisa.net	0	86400
52	host1.co.id	NS	ns2.raisa.net	0	86400
54	www.host1.co.id	A	192.168.100.20	0	86400

Below the table, there is a 'Comments:' text area with a small icon. Underneath the table, there are fields for saving a template:

**Save as new template:**  
Template Name:   
Template Description:

Buttons at the bottom include 'Commit changes', 'Reset changes', and 'Save as template'.

At the bottom of the page, there is a smaller table for adding a new record:

Name	Type	Content	Priority	TTL
.host1.co.id	IN A	<input type="text"/>	<input type="text"/>	<input type="text"/>

Buttons for 'Add record' and 'Add also reverse record' are present.

71. pada master zone host2.co.id tambahkan record seperti ini (NS1).

The screenshot shows the Poweradmin web interface for managing DNS zones. The current page is 'Edit zone "host2.co.id"'. The main table displays the following records:

<b>Id</b>	<b>Name</b>	<b>Type</b>	<b>Content</b>	<b>Priority</b>	<b>TTL</b>
50	host2.co.id	SOA	ns1.raisa.net ns1.raisa.net 2015082103 28800 7200 604800 86400		86400
55	host2.co.id	NS	ns1.raisa.net	0	86400
56	host2.co.id	NS	ns2.raisa.net	0	86400
58	www.host2.co.id	A	192.168.100.20	0	86400

Below the table, there is a 'Comments:' text area with a small icon. Underneath the table, there are fields for saving a template:

**Save as new template:**  
Template Name:   
Template Description:

Buttons at the bottom include 'Commit changes', 'Reset changes', and 'Save as template'.

At the bottom of the page, there is a smaller table for adding a new record:

Name	Type	Content	Priority	TTL
.host2.co.id	IN A	<input type="text"/>	<input type="text"/>	<input type="text"/>

Buttons for 'Add record' and 'Add also reverse record' are present.

72. cek list master zone reverse hasilnya seperti ini (NS1).

The screenshot shows the Poweradmin interface for editing a DNS zone. The URL is 192.168.100.51/poweradmin-2.1.7/edit.php?name=100.168.192.in-addr.arpa&id=9. The page title is "Edit zone \"100.168.192.in-addr.arpa\"".

ID	Name	Type	Content	Priority	TTL
34	100.168.192.in-addr.arpa	SOA	ns1.raisa.net ns1.raisa.net 2015082106 28800 7200 604800 86400		86400
45	7.100.168.192.in-addr.arpa	PTR	mail.padli.org	0	86400
47	7.100.168.192.in-addr.arpa	PTR	www.padli.org	0	86400
57	20.100.168.192.in-addr.arpa	PTR	www.host2.co.id	0	86400
53	20.100.168.192.in-addr.arpa	PTR	www.host1.co.id	0	86400
37	51.100.168.192.in-addr.arpa	PTR	ns1.raisa.net	0	86400
39	52.100.168.192.in-addr.arpa	PTR	ns2.raisa.net	0	86400

Comments:

Save as new template:

Template Name:

Template Description:

Buttons: Commit changes | Reset changes | Save as template

73. cek slave ns2.raisa.net otomatis setup pada master akan terecord di slave (NS2).

The screenshot shows the Poweradmin interface for listing zones. The URL is 192.168.100.52/poweradmin-2.1.7/list\_zones.php. The page title is "List zones".

Name	Type	Records	Owner
host1.co.id	slave	4	
host2.co.id	slave	4	
padli.org	slave	6	
raisa.net	slave	5	

Buttons: Delete zone(s)

a\_complete(r) poweradmin v 2.1.7 - credits

## 74. tes ns1,ns2,host (pastikan ip dan nameserver benar).

padli@cav: ~

```
padli@ns1:~ 81x20
# Dynamic resolv.conf(5) file for glibc resolver(3) generated by resolvconf(8)
# DO NOT EDIT THIS FILE BY HAND -- YOUR CHANGES WILL BE OVERWRITTEN
nameserver 192.168.100.51
nameserver 192.168.100.52
padli@ns1:~$ ifconfig eth0
eth0      Link encap:Ethernet HWaddr a6:53:64:60:dc:06
          inet addr:192.168.100.51  Bcast:192.168.100.255  Mask:255.255.255.0
          inet6 addr: fe80::a453:64ff:fe06:dc06/64 Scope:Link
          UP BROADCAST RUNNING MULTICAST  MTU:1500 Metric:1
          RX packets:1349 errors:0 dropped:0 overruns:0 frame:0
          TX packets:900 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:192426 (19.2 KB)  TX bytes:336730 (336.7 KB)

padli@ns1:~$ 
```

padli@ns2: ~ 81x20

```
padli@ns2:~ 81x20
# Dynamic resolv.conf(5) file for glibc resolver(3) generated by resolvconf(8)
# DO NOT EDIT THIS FILE BY HAND -- YOUR CHANGES WILL BE OVERWRITTEN
nameserver 192.168.100.51
nameserver 192.168.100.52
padli@ns2:~$ ifconfig eth0
eth0      Link encap:Ethernet HWaddr 1a:d7:c0:c6:12:63
          inet addr:192.168.100.52  Bcast:192.168.100.255  Mask:255.255.255.0
          inet6 addr: fe80::18d7:coff:fecc:1263/64 Scope:Link
          UP BROADCAST RUNNING MULTICAST  MTU:1500 Metric:1
          RX packets:1432 errors:0 dropped:0 overruns:0 frame:0
          TX packets:851 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:204913 (204.9 KB)  TX bytes:294412 (294.4 KB)

padli@ns2:~$ 
```

padli@raisa: ~ 80x20

```
padli@raisa:~ 80x20
# Dynamic resolv.conf(5) file for glibc resolver(3) generated by resolvconf(8)
# DO NOT EDIT THIS FILE BY HAND -- YOUR CHANGES WILL BE OVERWRITTEN
nameserver 192.168.100.51
nameserver 192.168.100.52
padli@raisa:~$ ifconfig eth0
eth0      Link encap:Ethernet HWaddr 5e:60:78:f1:98:7d
          inet addr:192.168.100.20  Bcast:192.168.100.255  Mask:255.255.255.0
          inet6 addr: fe80::5c60:78ff:fe97:64/64 Scope:Link
          UP BROADCAST RUNNING MULTICAST  MTU:1500 Metric:1
          RX packets:2658 errors:0 dropped:0 overruns:0 frame:0
          TX packets:1780 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:222487 (222.4 KB)  TX bytes:184473 (184.4 KB)

padli@raisa:~$ 
```

padli@cav: ~ 80x20

```
padli@cav:~ 80x20
# Dynamic resolv.conf(5) file for glibc resolver(3) generated by resolvconf(8)
# DO NOT EDIT THIS FILE BY HAND -- YOUR CHANGES WILL BE OVERWRITTEN
nameserver 192.168.100.51
nameserver 192.168.100.52
padli@cav:~$ ifconfig eth0
eth0      Link encap:Ethernet HWaddr 14:da:e9:ad:9f:bc
          inet addr:192.168.100.7  Bcast:192.168.100.255  Mask:255.255.255.0
          inet6 addr: fe80::16da:e9ff:fead:9fb/64 Scope:Link
          UP BROADCAST RUNNING MULTICAST  MTU:1500 Metric:1
          RX packets:78651 errors:0 dropped:0 overruns:0 frame:0
          TX packets:94356 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:82194958 (82.1 MB)  TX bytes:32489094 (32.4 MB)

padli@cav:~$ 
```

## 75. tes nslookup.

padli@ns1: ~ 81x20

```
padli@ns1:~ 81x20
padli@ns1:~$ nslookup www.host1.co.id
Server:    192.168.100.51
Address:   192.168.100.51#53

Name:  www.host1.co.id
Address: 192.168.100.20

padli@ns1:~$ nslookup www.host2.co.id
Server:    192.168.100.51
Address:   192.168.100.51#53

Name:  www.host2.co.id
Address: 192.168.100.20

padli@ns1:~$ 
```

padli@ns2: ~ 81x20

```
padli@ns2:~ 81x20
padli@ns2:~$ nslookup www.padli.org
Server:    192.168.100.51
Address:   192.168.100.51#53

Name:  www.padli.org
Address: 192.168.100.7

padli@ns2:~$ nslookup mail.padli.org
Server:    192.168.100.51
Address:   192.168.100.51#53

Name:  mail.padli.org
Address: 192.168.100.7

padli@ns2:~$ 
```

padli@raisa: ~ 80x20

```
padli@raisa:~ 80x20
padli@raisa:~$ nslookup 192.168.100.7
Server:    192.168.100.51
Address:   192.168.100.51#53

51.100.168.192.in-addr.arpa    name = ns1.raisa.net.

padli@raisa:~$ nslookup 192.168.100.20
Server:    192.168.100.51
Address:   192.168.100.51#53

7.100.168.192.in-addr.arpa    name = www.padli.org.
7.100.168.192.in-addr.arpa    name = mail.padli.org.

padli@raisa:~$ nslookup 192.168.100.20
Server:    192.168.100.51
Address:   192.168.100.51#53

20.100.168.192.in-addr.arpa    name = www.host1.co.id.
20.100.168.192.in-addr.arpa    name = www.host2.co.id.

padli@raisa:~$ 
```

padli@cav: ~ 80x20

```
padli@cav:~ 80x20
padli@cav:~$ nslookup ns2.raisa.net
Server:    192.168.100.51
Address:   192.168.100.51#53

Name:  ns2.raisa.net
Address: 192.168.100.52

padli@cav:~$ nslookup 192.168.100.52
Server:    192.168.100.51
Address:   192.168.100.51#53

52.100.168.192.in-addr.arpa    name = ns2.raisa.net.

padli@cav:~$ 
```

## 76. tes dig.

The image shows two terminal windows side-by-side. Both windows have a title bar with the session name 'padli@raisa' and a timestamp '13:32'. The left window has a title 'padli@ns1: ~ 81x20' and the right window has a title 'padli@raisa: ~ 80x20'. Both windows display the output of the 'dig' command for different domains. The left window shows queries for 'www.host1.co.id', 'mail.padli.org', and 'mail.padli.org'. The right window shows queries for 'ns1.raisa.net' and 'facebook.com'. The output includes DNS header information, question sections, answer sections (with IP addresses like 192.168.100.20, 192.168.100.51, etc.), authority sections, and additional sections. The dig command version is 9.9.5-3ubuntu0.4-Ubuntu.

```
padli@ns1:~$ dig www.host1.co.id
...
; OPT PSEUDOSECTION:
; EDNS: version: 0, flags: +cmd
; QUESTION SECTION:
; www.host1.co.id. IN A
; ANSWER SECTION:
www.host1.co.id. 86400 IN A 192.168.100.20
; Query time: 4 msec
; SERVER: 192.168.100.51#53(192.168.100.51)
; WHEN: Fri Aug 21 13:30:08 WIB 2015
; MSG SIZE rcvd: 60

padli@ns2:~$ dig mail.padli.org
...
; OPT PSEUDOSECTION:
; EDNS: version: 0, flags: +cmd
; QUESTION SECTION:
; mail.padli.org. IN A
; ANSWER SECTION:
mail.padli.org. 86400 IN A 192.168.100.7
; Query time: 1 msec
; SERVER: 192.168.100.51#53(192.168.100.51)
; WHEN: Fri Aug 21 13:30:30 WIB 2015
; MSG SIZE rcvd: 59

padli@raisa:~$ dig ns1.raisa.net
...
; OPT PSEUDOSECTION:
; EDNS: version: 0, flags: +cmd
; QUESTION SECTION:
; ns1.raisa.net. IN A
; ANSWER SECTION:
ns1.raisa.net. 86400 IN A 192.168.100.51
; Query time: 4 msec
; SERVER: 192.168.100.51#53(192.168.100.51)
; WHEN: Fri Aug 21 13:32:09 WIB 2015
; MSG SIZE rcvd: 58

padli@cav:~$ dig facebook.com
...
; <>> Dig 9.9.5-3Ubuntu <>> facebook.com
; global options: +cmd
; Got answer:
; -->HEADER<- opcode: QUERY, status: NOERROR, id: 25131
; flags: qr rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 2, ADDITIONAL: 4
; OPT PSEUDOSECTION:
; EDNS: version: 0, flags: +cmd
; QUESTION SECTION:
; facebook.com. IN A
; ANSWER SECTION:
facebook.com. 1970 IN A 173.252.74.22
; AUTHORITY SECTION:
facebook.com. 172764 IN NS a.ns.facebook.com.
facebook.com. 172764 IN NS b.ns.facebook.com.
; ADDITIONAL SECTION:
a.ns.facebook.com. 3564 IN AAAA 2a03:2880:fffe:c:face:b00c:0:35
```

## 77. tes ping (hasil ping ke unila.ac.id di forward ke ns 8.8.8.8).

The image shows four terminal windows arranged in a 2x2 grid. All windows have a title bar with the session name 'padli@cav' and a timestamp '13:34'. The top-left window has a title 'padli@ns1: ~ 81x20' and the bottom-left window has a title 'padli@ns2: ~ 81x20'. The top-right window has a title 'padli@raisa: ~ 80x20' and the bottom-right window has a title 'padli@cav: ~ 80x20'. Each window displays the output of the 'ping' command for different hosts. The top-left window shows pings to 'www.host1.co.id' and 'www.host2.co.id'. The bottom-left window shows pings to 'www.padli.org' and 'mail.padli.org'. The top-right window shows pings to 'ns1.raisa.net' and 'ns2.raisa.net'. The bottom-right window shows pings to 'unila.ac.id' and 'teknokrat.ac.id'. The output includes ping statistics (rtt min/avg/max/mdev), packet counts, and percentage of packet loss. The ping command version is 9.9.5-3ubuntu0.4-Ubuntu.

```
padli@ns1:~$ ping www.host1.co.id
PING www.host1.co.id (192.168.100.20) 56(84) bytes of data.
64 bytes from www.host2.co.id (192.168.100.20): icmp_seq=1 ttl=64 time=0.241 ms
64 bytes from www.host2.co.id (192.168.100.20): icmp_seq=2 ttl=64 time=0.309 ms
^C
--- www.host1.co.id ping statistics ---
2 packets transmitted, 2 received, 0% packet loss, time 1000ms
rtt min/avg/max/mdev = 0.241/0.275/0.309/0.034 ms
padli@ns1:~$ ping www.host2.co.id
PING www.host2.co.id (192.168.100.20) 56(84) bytes of data.
64 bytes from www.host2.co.id (192.168.100.20): icmp_seq=1 ttl=64 time=0.236 ms
64 bytes from www.host2.co.id (192.168.100.20): icmp_seq=2 ttl=64 time=0.282 ms
^C
--- www.host2.co.id ping statistics ---
2 packets transmitted, 2 received, 0% packet loss, time 999ms
rtt min/avg/max/mdev = 0.236/0.259/0.282/0.023 ms
padli@ns1:~$ 

padli@ns2:~$ ping www.padli.org
PING www.padli.org (192.168.100.7) 56(84) bytes of data.
64 bytes from www.padli.org (192.168.100.7): icmp_seq=1 ttl=64 time=0.392 ms
64 bytes from www.padli.org (192.168.100.7): icmp_seq=2 ttl=64 time=0.492 ms
^C
--- www.padli.org ping statistics ---
2 packets transmitted, 2 received, 0% packet loss, time 1001ms
rtt min/avg/max/mdev = 0.392/0.442/0.492/0.050 ms
padli@ns2:~$ ping mail.padli.org
PING mail.padli.org (192.168.100.7) 56(84) bytes of data.
64 bytes from www.padli.org (192.168.100.7): icmp_seq=1 ttl=64 time=0.383 ms
64 bytes from www.padli.org (192.168.100.7): icmp_seq=2 ttl=64 time=0.478 ms
^C
--- mail.padli.org ping statistics ---
2 packets transmitted, 2 received, 0% packet loss, time 1000ms
rtt min/avg/max/mdev = 0.383/0.430/0.478/0.051 ms
padli@ns2:~$ 

padli@raisa:~$ ping ns1.raisa.net
PING ns1.raisa.net (192.168.100.51) 56(84) bytes of data.
64 bytes from ns1.raisa.net (192.168.100.51): icmp_seq=1 ttl=64 time=0.248 ms
64 bytes from ns1.raisa.net (192.168.100.51): icmp_seq=2 ttl=64 time=0.311 ms
^C
--- ns1.raisa.net ping statistics ---
2 packets transmitted, 2 received, 0% packet loss, time 1001ms
rtt min/avg/max/mdev = 0.248/0.279/0.311/0.035 ms
padli@raisa:~$ ping ns2.raisa.net
PING ns2.raisa.net (192.168.100.52) 56(84) bytes of data.
64 bytes from ns2.raisa.net (192.168.100.52): icmp_seq=1 ttl=64 time=0.519 ms
64 bytes from ns2.raisa.net (192.168.100.52): icmp_seq=2 ttl=64 time=0.287 ms
^C
--- ns2.raisa.net ping statistics ---
2 packets transmitted, 2 received, 0% packet loss, time 1001ms
rtt min/avg/max/mdev = 0.287/0.403/0.519/0.116 ms
padli@raisa:~$ 

padli@cav:~$ ping unila.ac.id
PING unila.ac.id (103.3.46.5) 56(84) bytes of data.
64 bytes from hosting.unila.ac.id (103.3.46.5): icmp_seq=1 ttl=56 time=300 ms
64 bytes from hosting.unila.ac.id (103.3.46.5): icmp_seq=2 ttl=56 time=59.4 ms
^C
--- unila.ac.id ping statistics ---
2 packets transmitted, 2 received, 0% packet loss, time 999ms
rtt min/avg/max/mdev = 59.487/179.789/300.091/120.302 ms
padli@cav:~$ ping teknokrat.ac.id
PING teknokrat.ac.id (118.97.147.155) 56(84) bytes of data.
64 bytes from 155.subnet118-97-147.static.astinet.telkom.net.id (118.97.147.155):
; icmp_seq=1 ttl=59 time=67.1 ms
64 bytes from 155.subnet118-97-147.static.astinet.telkom.net.id (118.97.147.155):
; icmp_seq=2 ttl=59 time=26.5 ms
^C
--- teknokrat.ac.id ping statistics ---
2 packets transmitted, 2 received, 0% packet loss, time 1000ms
rtt min/avg/max/mdev = 26.541/46.851/67.162/20.311 ms
padli@cav:~$ 
```

78. hasil tes slave ns2 ok, setelah mesin ns1 master off, tes ping tetap berjalan normal.

```
padli@cav: ~ padli@cav: ~ 81x20
padli@ns1:~$ sudo init 0
[sudo] password for padli:
padli@ns1:~$ Connection to 192.168.100.51 closed by remote host.
Connection to 192.168.100.51 closed.
padli@cav:~$ 

padli@cav: ~ padli@raisa: ~ 80x20
padli@raisa:~$ ping mail.padli.org
PING mail.padli.org (192.168.100.7) 56(84) bytes of data.
64 bytes from 192.168.100.7: icmp seq=1 ttl=64 time=0.395 ms
64 bytes from 192.168.100.7: icmp seq=2 ttl=64 time=0.385 ms
^C
--- mail.padli.org ping statistics ---
2 packets transmitted, 2 received, 0% packet loss, time 5366ms
rtt min/avg/max/mdev = 0.385/0.390/0.395/0.005 ms
padli@raisa:~$ ping www.padli.org
PING www.padli.org (192.168.100.7) 56(84) bytes of data.
64 bytes from 192.168.100.7: icmp seq=1 ttl=64 time=0.457 ms
64 bytes from 192.168.100.7: icmp seq=2 ttl=64 time=0.349 ms
^C
--- www.padli.org ping statistics ---
2 packets transmitted, 2 received, 0% packet loss, time 5023ms
rtt min/avg/max/mdev = 0.349/0.403/0.457/0.054 ms
padli@raisa:~$ 

padli@ns2:~$ ping www.host1.co.id
PING www.host1.co.id (192.168.100.20) 56(84) bytes of data.
64 bytes from 192.168.100.20: icmp seq=1 ttl=64 time=0.372 ms
64 bytes from 192.168.100.20: icmp seq=2 ttl=64 time=0.452 ms
64 bytes from 192.168.100.20: icmp seq=3 ttl=64 time=0.309 ms
^C
--- www.host1.co.id ping statistics ---
3 packets transmitted, 3 received, 0% packet loss, time 6250ms
rtt min/avg/max/mdev = 0.309/0.377/0.452/0.062 ms
padli@ns2:~$ ping www.host2.co.id
PING www.host2.co.id (192.168.100.20) 56(84) bytes of data.
64 bytes from 192.168.100.20: icmp seq=1 ttl=64 time=0.372 ms
64 bytes from 192.168.100.20: icmp seq=2 ttl=64 time=0.393 ms
^C
--- www.host2.co.id ping statistics ---
2 packets transmitted, 2 received, 0% packet loss, time 5023ms
rtt min/avg/max/mdev = 0.372/0.382/0.393/0.022 ms
padli@ns2:~$ 

padli@cav: ~ padli@cav: ~ 80x20
padli@cav:~$ ping unila.ac.id
PING unila.ac.id (103.3.46.5) 56(84) bytes of data.
64 bytes from hosting.unila.ac.id (103.3.46.5): icmp seq=1 ttl=56 time=173 ms
64 bytes from hosting.unila.ac.id (103.3.46.5): icmp seq=2 ttl=56 time=59.4 ms
64 bytes from hosting.unila.ac.id (103.3.46.5): icmp seq=3 ttl=56 time=74.6 ms
^C
--- unila.ac.id ping statistics ---
3 packets transmitted, 3 received, 0% packet loss, time 6669ms
rtt min/avg/max/mdev = 59.478/102.703/173.956/50.765 ms
padli@cav:~$ 
```

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