NextCloud Installation and Configuration

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2 ISA2

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PROJECT ON

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Date of Submission: 11-07-2024

CERTIFICATE

This is to certify that this report titled "NextCloud Installation and Configuration" embodies the original work done by Aditya Rahman, Armila Zahrania Safira and Dea Fauziah Lestari. Project in partial fulfillment of their course requirement at NIIT.

Coordinator:

Listyo Edi Prabowo, S.T, M.T.

ACKNOWLEDGEMENT

With great gratitude, we express our praise and gratitude to God Almighty for all His abundant mercy. We are honored and grateful that this paper project has been successfully completed well and on time.

Not to forget, we would like to express our sincere appreciation and gratitude to all parties who have made valuable contributions in the smooth and successful running of this project. Especially, we would like to express our special gratitude to Mr. Listyo Edi Prabowo, who has contributed both thoughts and materials. This project describing report about NextCloud Installation and Configuration. The report contains Installation and Configuration NextCloud by using Web Server Apache in linux..

The author realizes that this project still has flaws and is not perfect. Therefore, the author expects constructive suggestions and criticisms from readers to assist in the refinement of the paper The author also hopes that this paper can provide meaningful benefits and contributions in the relevant field. Thank you again to all those who have participated in the success of this project.

Depok, 25 April 2024

SYSTEM ANALYSIS

System Summary:

In this current digital era, cloud storage is very necessary for all gadget users to meet individual and group needs. Therefore, the purpose of our project is to tell you how to configuring DNS and Apache so that a group or individual can create a NextCloud server.

NextCloud is an open-source repository storage and self-hosted client-server software that offers the features that needed for groups and individuals. In NextCloud, users can upload or download files from various devices, creating the folders, share files/folders, and others.

It is very similar to Dropbox and Google Drive, but your files will be private and stored on your server. NextCloud also provides media player, calendar and contact management. It can be extensible using apps and provide desktop and mobile clients for all major operating systems.

INSTALLING SOFTWARE

First of all, make sure that the ubuntu device has been downloaded and created an

ubuntu server.

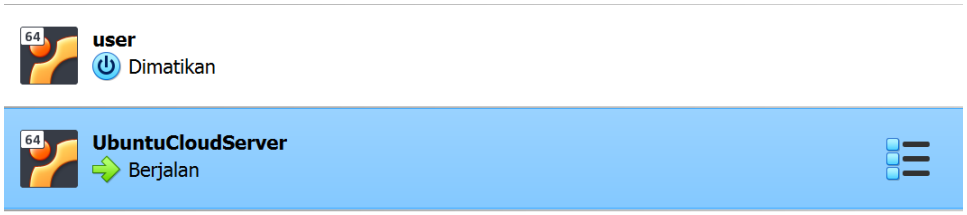

figure 1. 1 create ubuntu server

Then, open the ubuntu terminal and install bind9 with the command

```
$ apt-get install bind9
```

```
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  bind9-dnsutils bind9-host bind9-libs bind9-utils libjson-c5 liblmdb0
Suggested packages:
  bind9-doc resolvconf
The following NEW packages will be installed:
  bind9 bind9-dnsutils bind9-host bind9-libs bind9-utils libjson-c5 liblmdb0
0 upgraded, 7 newly installed, 0 to remove and 0 not upgraded.
Need to get 1,797 kB of archives.
After this operation, 7,270 kB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://archive.ubuntu.com/ubuntu focal-updates/main amd64 libjson-c5 a
Get:2 http://archive.ubuntu.com/ubuntu focal/main amd64 liblmdb0 amd64 0.9.2
Get:3 http://archive.ubuntu.com/ubuntu focal-updates/main amd64 bind9-libs a
Get:4 http://archive.ubuntu.com/ubuntu focal-updates/main amd64 bind9-utils
Get:5 http://archive.ubuntu.com/ubuntu focal-updates/main amd64 bind9-dnsuti
Get:6 http://archive.ubuntu.com/ubuntu focal-updates/main amd64 bind9-host a
Get:7 http://archive.ubuntu.com/ubuntu focal-updates/main amd64 bind9 amd64
```

figure 1. 2 outpot terminal from install bind9

DNS CONFIGURATION

Once installed, go ahead and change the named.conf.options file with the command

```
$ gedit sudo /etc/bind/named.conf.options
```

figure 1. 3 named.cond.options

then, change file named.conf.local to create a domain zone with the command

```
$ gedit sudo /etc/bind/named.conf.local
```

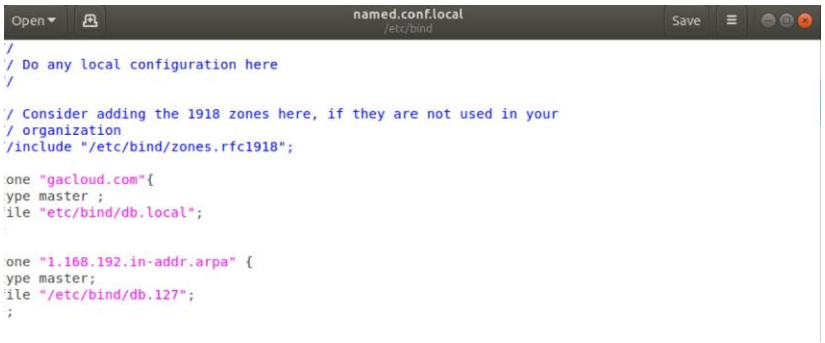

figure 1. 4 named.conf.local

It then creates a file for the domain zone from ip address to domain name. The changed file will duplicate the db.local dile and match the domain name. With the command

DNS CONFIGURATION

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figure 1. 5 named.cond.options

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```

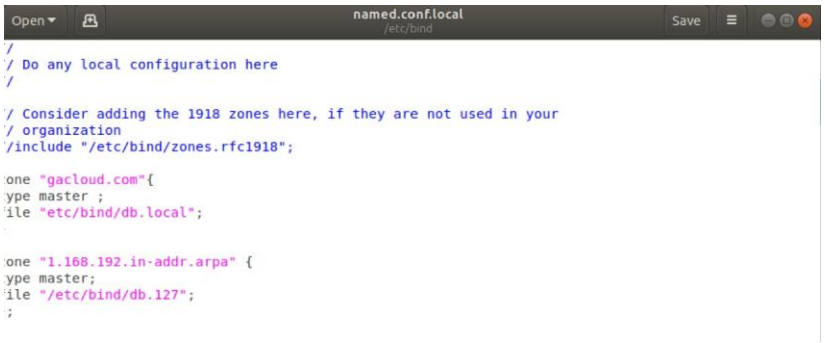

figure 1. 6 named.conf.local

DNS CONFIGURATION

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```
$ sudo gedit /etc/bind/db.local
```

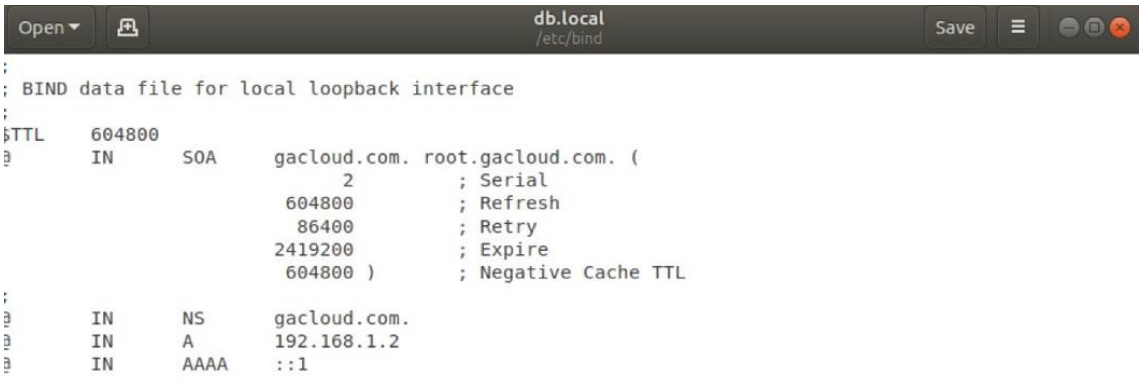

figure 1. 7 db.local

Then, create a zone ip address file from the domain to the ip address. With the command

```
$ sudo gedit /etc/bind/db.127
```

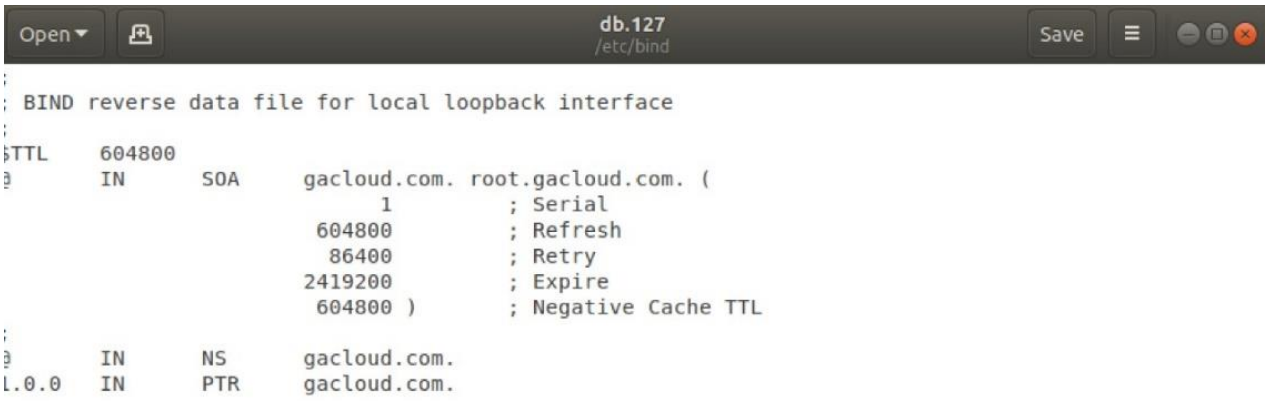

figure 1. 8 db.127

DNS CONFIGURATION

Then, change the resolv.conf file to set the ip address of the server domain and the domain name is 192.168.1.2 and gacloud.com with the command.

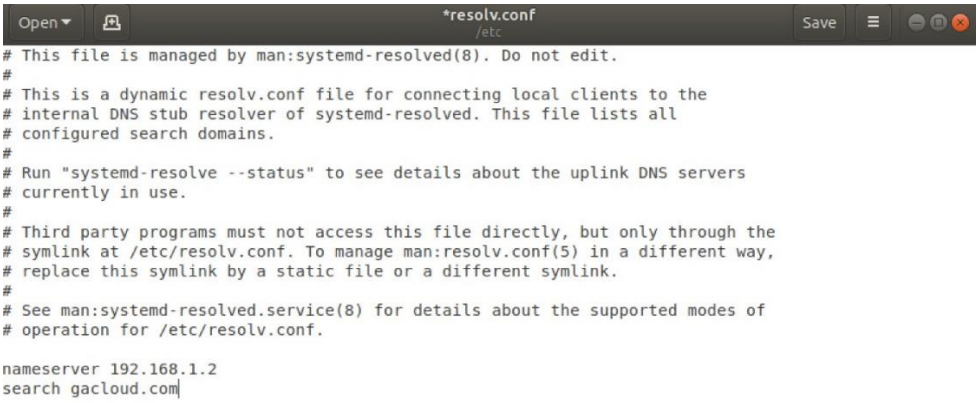

figure 1. 9 resolv.conf

NameServer 192.168.1.2
search gacloud.com

Then, enter the hosts ip address server and domain name into the file. With the command

```
$ sudo gedit /etc/hosts
```

figure 1. 10 hosts

INSTALLING SOFTWARE

Install apache, mariadb-server, php and its extensions with the command

```
$ sudo apt-get install apache2 mariadb-server apache2 php7.2
php7.2-gd php7.2-json php7.2-mysql php7.2-curl php7.2-mbstring
php7.2-intl php7.2-imagick php7.2-xml php7.2-zip libapache2-mod-
php7.2 unzip wget -y
```

Once all packages are installed, open the php.ini file and twick some settings with the command

```
$ sudo gedit /etc/php/7.2/apache2/php.ini
```

Then search for a few words and change them with:

file_uploads = On

```
; Whether to allow HTTP file uploads.
; http://php.net/file-uploads
file_uploads = On
```

figure 2. 1 php.ini

allow_url_fopen = On

```
; Whether to allow the treatment of URLs (like http:// or ftp://) as files.
; http://php.net/allow-url-fopen
allow_url_fopen = On
```

figure 2. 2 php.ini

memory_limit = 256M

```
; Maximum amount of memory a script may consume (128MB)
; http://php.net/memory-limit
memory_limit = 256M
```

figure 2. 3 php.ini

INSTALLING SOFTWARE

upload_max_filesize = 20M

```
; Maximum allowed size for uploaded files.
; http://php.net/upload-max-filesize
upload_max_filesize = 100M

; Maximum number of files that can be uploaded via a single request
max_file_uploads = 20
```

figure 2. 4 php.ini

display_errors = Off

```
; display_errors
;   Default Value: On
;   Development Value: On
;   Production Value: Off
```

figure 2. 5 php.ini

Save and exit the tab. Then, start apache2 and MariaDB, and enable the system to start the system with the command:

```
$ sudo systemctl start apache2
$ sudo systemctl start mariadb
$ sudo systemctl enable apache2
$ sudo systemctl enable mariadb
```

CREATE DATABASE

Then, create a database and user for NextCloud, Log in to MariaDB with the command

```
$ mysql -u root -p

MariaDB > CREATE DATABASE nextclouddb;
MariaDB > CREATE USER 'nextclouduser'@'localhost' IDENTIFIED BY 'password';
MariaDB > GRANT ALL ON nextclouddb.* TO 'nextclouduser'@'localhost' IDENTIFIED BY
'password' WITH GRANT OPTION;
MariaDB > FLUSH PRIVILEGES;;
MariaDB >EXIT;
```

CONFIGURATION NEXTCLOUD

- **INSTALLING NEXTCLOUD**

First, download nextcloud with a version that is adjusted to the PHP version. In this project, the version used is PHP 7.2 and then nextcloud is installed version 16.0.3 with the command

```
$ wget https://download.nextcloud.com/server/releases/nextcloud-16.0.3.zip
```

If the download is complete, unzip the downloaded file with the command:

```
$ sudo unzip nextcloud-16.0.3.zip -d /var/www/html/
```

Next, grant permission for nextcloud directory with the command

```
$ sudo chown -R www-data: /var/www/html/nextcloud
```

Configure apache for NextCloud

Create an apache virtual hosts file for NextCloud with the command

```
$ sudo gedit /etc/apache2/sites-available/nextcloud.conf
```

figure 3. 1 nextcloud.conf

CONFIGURATION NEXTCLOUD

Save and close the file. Then, enable virtual host file and other required modules with the following command

```
$ sudo a2ensite nextcloud.conf
$ sudo a2enmod rewrite
$ sudo a2enmod headers
$ sudo a2enmod env
$ sudo a2enmod dir
$ sudo a2enmod mime
```

Last step, restart apache service to apply configuration changes dengan command

```
$ sudo systemctl restart apache2
```

NEXTCLOUD

Now, open a web browser with URL type 192.168.1.2/nextcloud.com

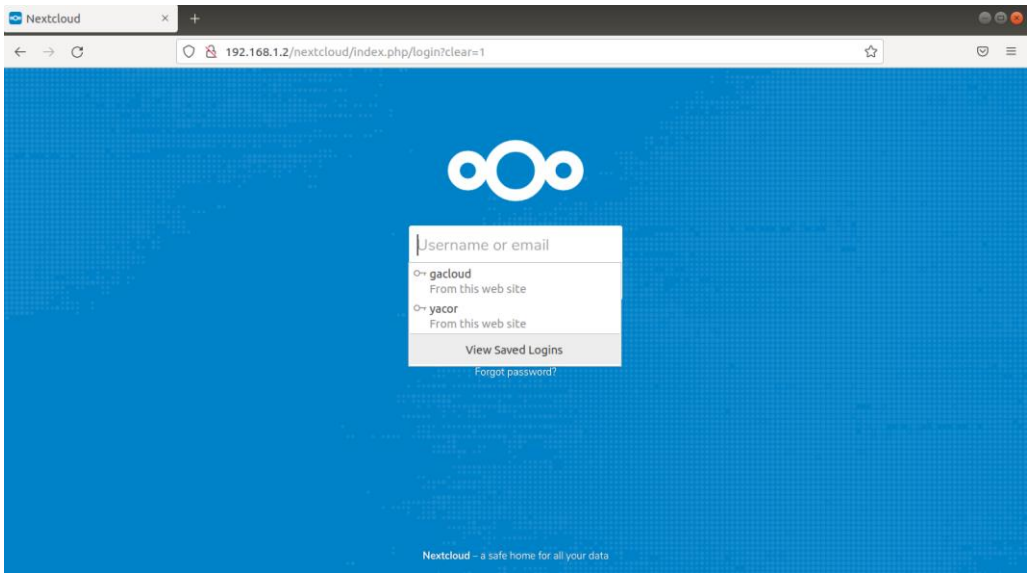

figure 3. 2 nextcloud.interface

Create an account for admins, then log in and display the home tab as follows

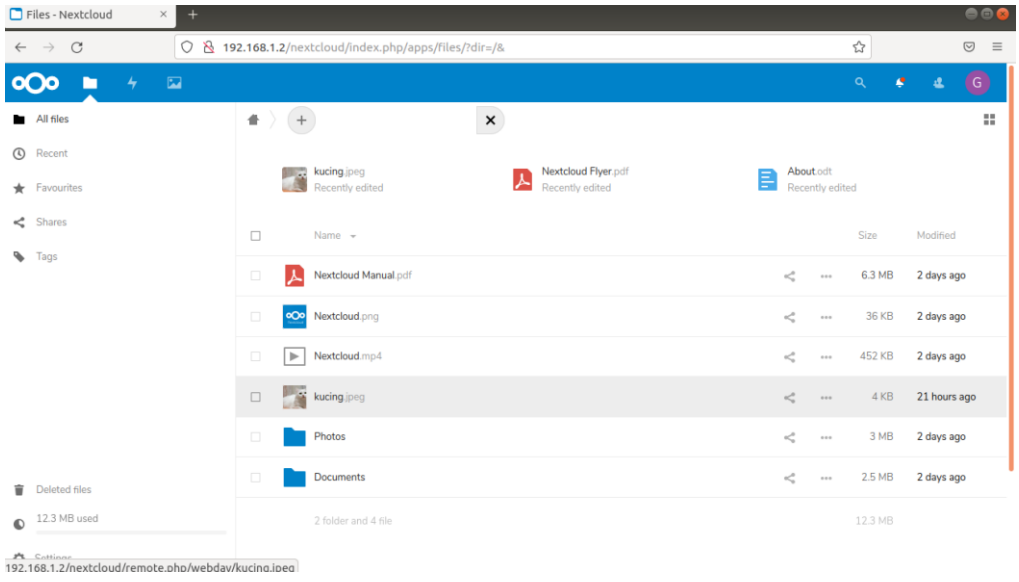

figure 3. 3 admin.interface

NEXTCLOUD

In the admin server, admins can create accounts for users and create groups of multiple users.

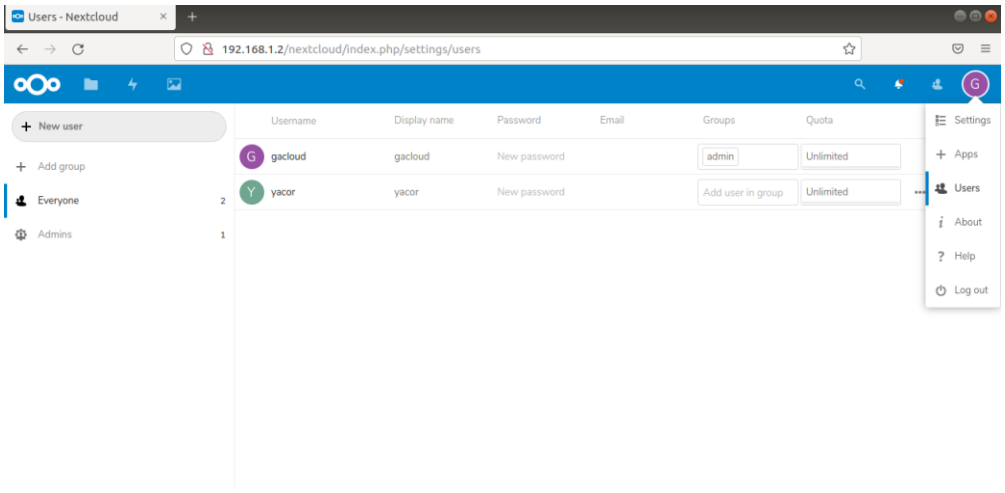

figure 3. 4 interface.admin

The interface for users is as follows: