2.DNS

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Experiment: 4

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Aim: To create and configure DNS Server

Description:

A DNS Server is a computer server that contains a database of public IP addresses and their associated hostnames, and in most cases, serves to resolve, or translate, those common names to IP addresses as requested.

Port No: 53

Package name: bind9

Configuration file: /etc/bind/named.conf. (Primary configuration file),/etc/bind/db.root

(root nameservers)

Procedure:

CASHING NAMESERVER

When configured as a caching nameserver BIND9 will find the answer to name queries and remember the answer when the domain is queried again.

1. Install bind9 by typing

\$sudo apt install bind9 \$sudo apt install dnsutils

2. The default configuration is set up to act as a caching server. All that is required is simply adding the IP Addresses of your ISP's DNS servers. Simply uncomment and edit the following in /etc/bind/named.conf.options:

3. Restart it by typing

\$sudo systemctl restart bind9.service

PRIMARY MASTER

As a primary master server BIND9 reads the data for a zone from a file on it's host and is authoritative for that zone.

Forward zone file

To add a DNS zone to BIND9, turning BIND9 into a Primary Master server, the first step is to edit /etc/bind/named.conf.local:

\$sudo cp /etc/bind/db.local /etc/bind/db.example.com \$sudo systemctl restart bind9.service

Reverse Zone File

Now that the zone is set up and resolving names to IP Addresses, a Reverse zone needs to be added to allows DNS to resolve an address to a name.

- 1. **Edit** /etc/bind/named.conf.local
- 2. Now create the /etc/bind/db.192 file:

\$sudo cp /etc/bind/db.127 /etc/bind/db.192

- **3.** edit /etc/bind/db.192 **changing the basically the same options as** /etc/bind/db.example.com:
- 4. After creating the reverse zone file restart BIND9:

\$sudo systemctl restart bind9.service

5.Check the status

\$Sudo service bind9 status

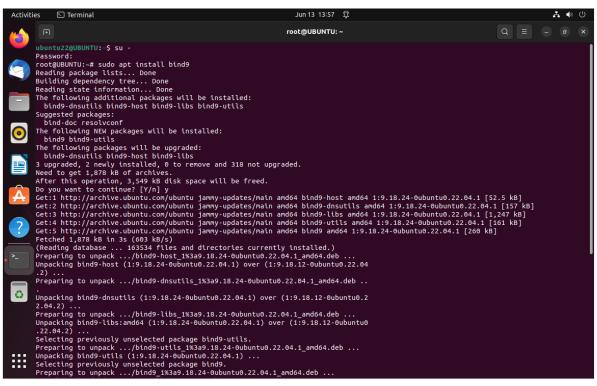
6.Check if nslookup can resolve

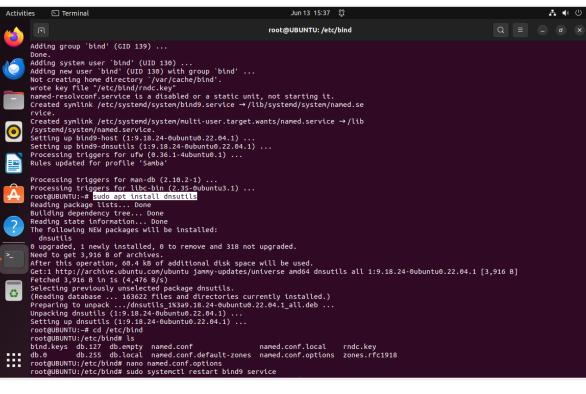
\$nslookup ftp.example.com
\$nslookup ubuntu.example.com

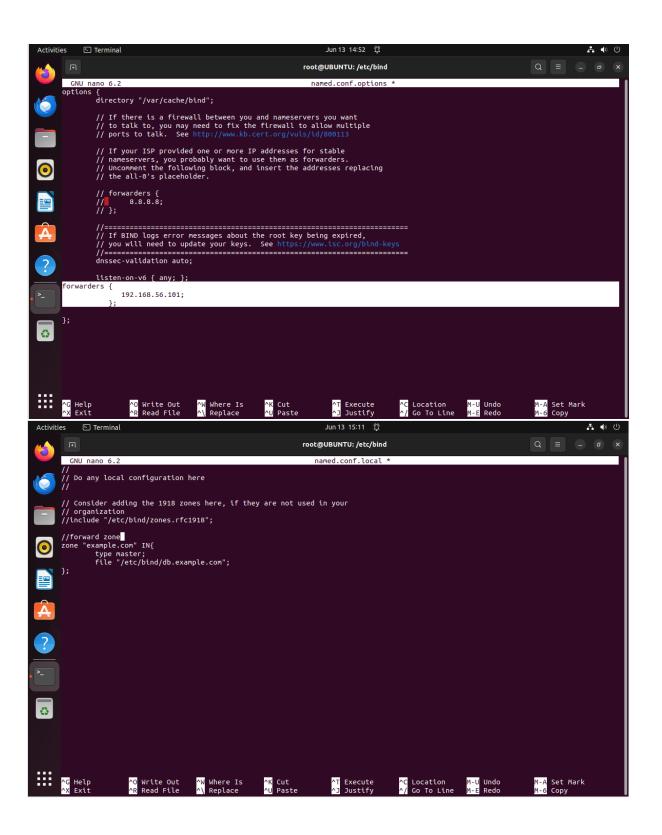
7. Gather information about your DNS server

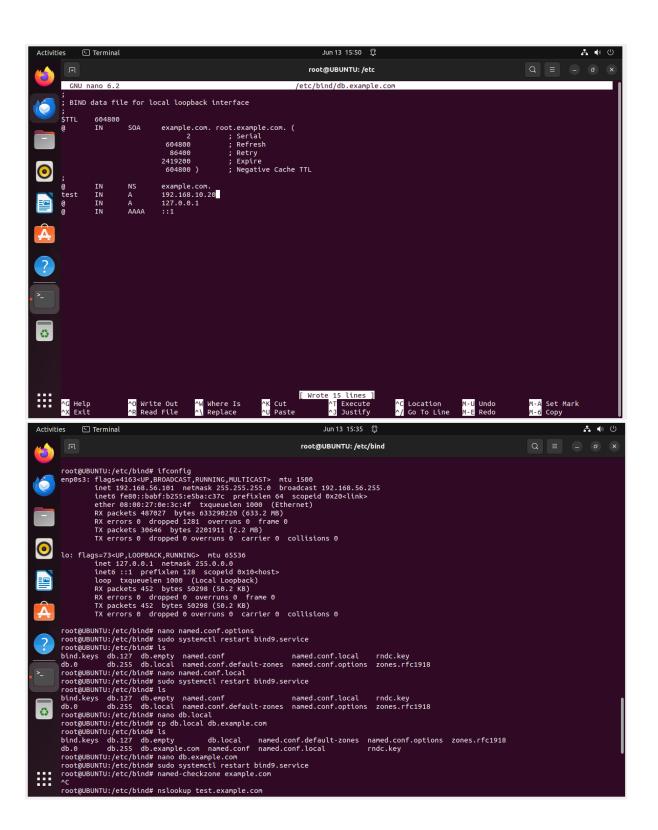
\$dig ubuntu.example.com \$dig www.example.com \$dig ftp.example.com

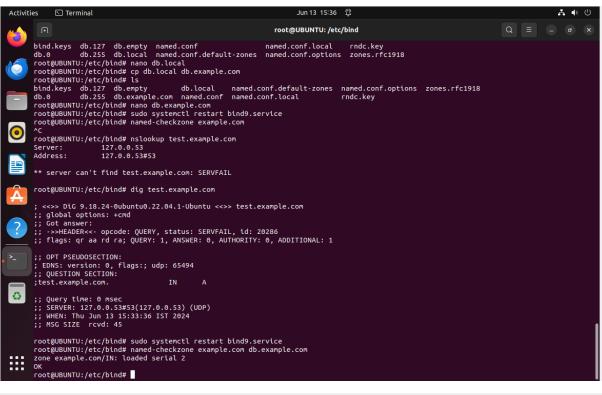
Result:

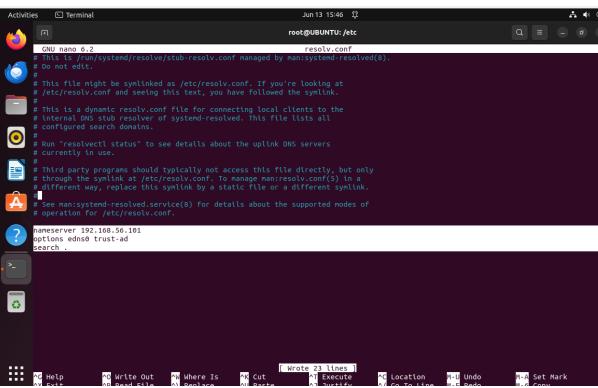


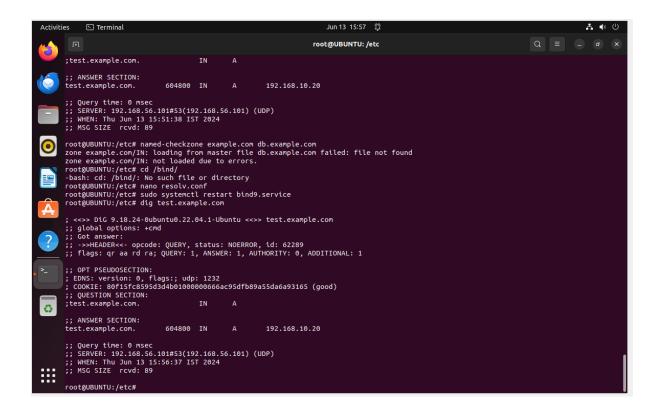












Conclusion: The DNS has installed and configured successfully.