DNS Server Setup Report using BIND on Linux

Name: Tareq Suliman

Title: Setting Up a DNS Server Using BIND

Objective:

To successfully deploy a DNS server on a Linux system that resolves domain names (e.g., example.local) to IP addresses.

1. System Update

Commands:

sudo apt update

sudo apt upgrade

Explanation:

This step ensures that the system's package list and installed software are up-to-date before installation.

2. Install BIND

Command:

sudo apt install bind9

Explanation:

BIND9 is the most commonly used DNS server software for Linux systems.

3. Configure BIND

Command:

sudo vim /etc/bind/named.conf.local

Added Configuration:

```
zone "example.local" {
    type master;
    file "/etc/bind/db.example.local";
}; Explanation:  This configuration tells BIND to manage the 'example.local' zone and points it to the zone file.
```

the zone file.

4. Create the Zone File

Command:

sudo vim /etc/bind/db.example.local

Zone File Content:

```
$TTL   604800
@       IN      SOA     ns1.example.local. admin.example.local. (
                2023111001 ; Serial
                604800      ; Refresh
                86400       ; Retry
                2419200    ; Expire
                604800 ) ; Negative Cache TTL
 @   @ IN      NS      ns1.example.local.
ns1     IN      A A   192.168.1.10
        IN              192.168.1.10
```

Explanation:

Defines the zone's authoritative name server, A records for the domain and its name server, and sets TTL values.

5. Restart BIND

Command:

sudo service bind9 restart

Explanation:

Restarts the BIND service to apply all changes.

6. Update resolv.conf

Command:

sudo vim /etc/resolv.conf

Added Line:

nameserver 192.168.1.10

Explanation:

This directs the system to use the new DNS server (your server) for name resolution.

7. Test the DNS Server

Command:

nslookup example.local

Expected Output:

Server: 192.168.1.10

Address: 192.168.1.10#53

 Name: example.local

 Address: 192.168.1.10

Explanation:

Verifies that the DNS server resolves example.local correctly.

Conclusion:

The DNS server using BIND was successfully configured. The domain 'example.local' was correctly

resolved to the assigned IP, confirming that the server is functioning properly.