DNS Server Setup Report using BIND on Linux

Name: Tareq Suliman

Date: [Insert Date]

Project 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.

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.

@      IN     A      192.168.1.10

ns1    IN     A      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.