

❖ How set up DNS server in windows and Linux?

1. Setting Up DNS Server in Linux

Linux commonly uses **BIND (Berkeley Internet Name Domain)** for DNS services.

Step 1: Install BIND

1. Update Packages:

```
sudo apt update # For Debian/Ubuntu
```

```
sudo yum update # For RHEL/CentOS
```

2. Install BIND:

```
sudo apt install bind9 # Debian/Ubuntu
```

```
sudo yum install bind # RHEL/CentOS
```

Step 2: Configure BIND

1. Edit the Main Configuration File:

- Open the file:

```
sudo nano /etc/bind/named.conf.options # Debian/Ubuntu
```

```
sudo nano /etc/named.conf # RHEL/CentOS
```

- Set the DNS server to listen on your IP address:

```
options {  
    directory "/var/cache/bind";  
  
    forwarders {  
        8.8.8.8; 8.8.4.4; # Use Google Public DNS as a fallback  
    };  
  
    allow-query { any; }; # Allow all clients to query  
  
    recursion yes;  
};
```

2. Create Zone Files:

- Edit /etc/bind/named.conf.local (Debian/Ubuntu) or /etc/named.conf (RHEL/CentOS) to define zones:

```
zone "example.com" {  
    type master;  
  
    file "/etc/bind/db.example.com"; # Path to the zone file
```

};

- Create the zone file:

```
sudo nano /etc/bind/db.example.com
```

Example content:

```
$TTL 604800
```

```
@ IN SOA example.com. admin.example.com. (
```

```
2 ; Serial
```

```
604800 ; Refresh
```

```
86400 ; Retry
```

```
2419200; Expire
```

```
604800 ); Minimum TTL
```

```
@ IN NS ns1.example.com.
```

```
ns1 IN A 192.168.1.1
```

```
www IN A 192.168.1.2
```

Step 3: Start and Enable BIND

1. Restart the Service:

```
sudo systemctl restart bind9 # Debian/Ubuntu
```

```
sudo systemctl restart named # RHEL/CentOS
```

2. Enable on Boot:

```
sudo systemctl enable bind9 # Debian/Ubuntu
```

```
sudo systemctl enable named # RHEL/CentOS
```

Step 4: Test Configuration

1. Check Syntax:

```
named-checkconf
```

2. Check Zone Files:

```
named-checkzone example.com /etc/bind/db.example.com
```

3. Query DNS:

dig @192.168.1.1 example.com