**CN Tutorial-6**

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**DNS Server:**

The Domain Name System (DNS) is a fundamental technology that plays a crucial role in how the internet functions. It is often described as the "phonebook" of the internet, translating human-readable domain names into IP addresses that computers use to identify each other on the network. DNS servers are the infrastructure responsible for managing this translation process. Configuring DNS servers correctly is essential for the proper functioning of the internet and various network services.

**Uses:**

* **Domain Resolution:** DNS servers translate human-readable domain names (e.g., www.example.com) into IP addresses (e.g., 192.0.2.1), making it possible for users to access websites and other online resources.
* **Email Routing:** DNS MX (Mail Exchange) records specify the mail servers responsible for receiving email for a domain. DNS servers ensure proper email routing.
* **Load Balancing:** DNS can distribute traffic across multiple servers, implementing load balancing for high-availability and improved performance.
* **Redundancy:** By configuring secondary DNS servers and using DNS failover mechanisms, you can ensure DNS service availability, even in the event of server failures.
* **DNS-Based Security:** DNS is a key component in threat detection and prevention, as malicious domain names and IP addresses can be blacklisted or sinkholed using DNS.
* **Content Delivery:** DNS-based Content Delivery Networks (CDNs) use DNS resolution to direct users to the nearest content server, reducing latency and improving content delivery speed.

**Implementation:**

**LAN’s:**

LAN1 – LAN L209

LAN2 – LAN L509

**Configuration of PC’s:**

**LAN L209:**

Ip-address: 192.168.2.1, 192.168.2.2, 192.168.2.3

default gateway: 192.168.2.264

DNS server: 192.168.5.200

Names: cn001.iiitdm.ac.in, cn002.iiitdm.ac.in, cn003.iiitdm.ac.in

**LAN L509:**

Ip-address: 192.168.5.1, 192.168.5.2, 192.168.5.3

default gateway: 192.168.5.264

DNS server: 192.168.5.200

Names: os001.iiitdm.ac.in, os002.iiitdm.ac.in, os003.iiitdm.ac.in

**Server Configuration:**

Ip-address: 192.168.5.200

Default gateway: 192.168.4.264

DNS server: 192.168.5.200

**Images:**





