DNS working

DNS is the Domain name system. DNS translates the domain name into IP address

4 DNS servers involved in loading a webpage

DNS Resolver

Root name server

TLD name server

Authoritative name server

Working of a DNS

1. The browser sends a request to the local DNS resolver, which is often provided by the internet service provider (ISP). The local DNS resolver checks its cache for the most recent copy of the DNS record for the domain. If it has it, it sends the IP address back to the browser. If the local DNS resolver does not have the most recent copy of the DNS record, it sends a request to a root nameserver.
2. The root nameserver replies with the address of a top-level domain (TLD) nameserver, such as .com
3. The local DNS resolver sends a request to the TLD nameserver.
4. The TLD nameserver responds with the address of the authoritative nameserver for the domain.
5. The local DNS resolver sends a request to the authoritative nameserver.
6. The authoritative nameserver responds with the IP address for the domain.
7. The local DNS resolver sends the IP address back to the browser.
8. The browser sends a request to the server at the IP address to retrieve the webpage.