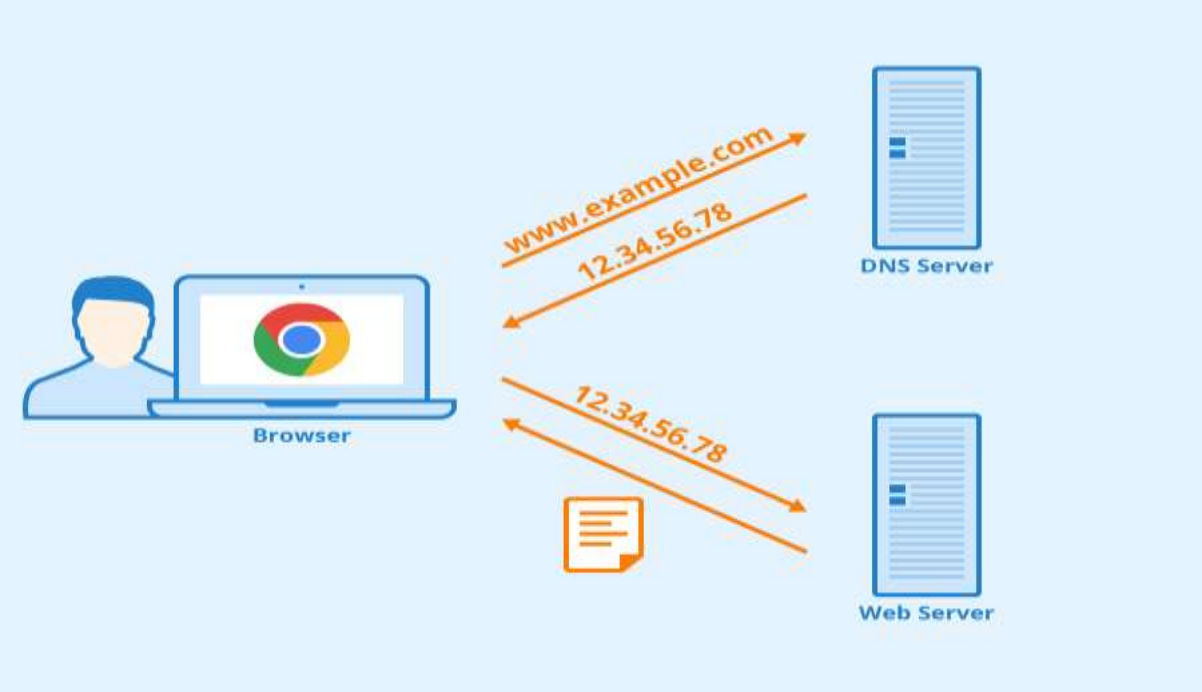
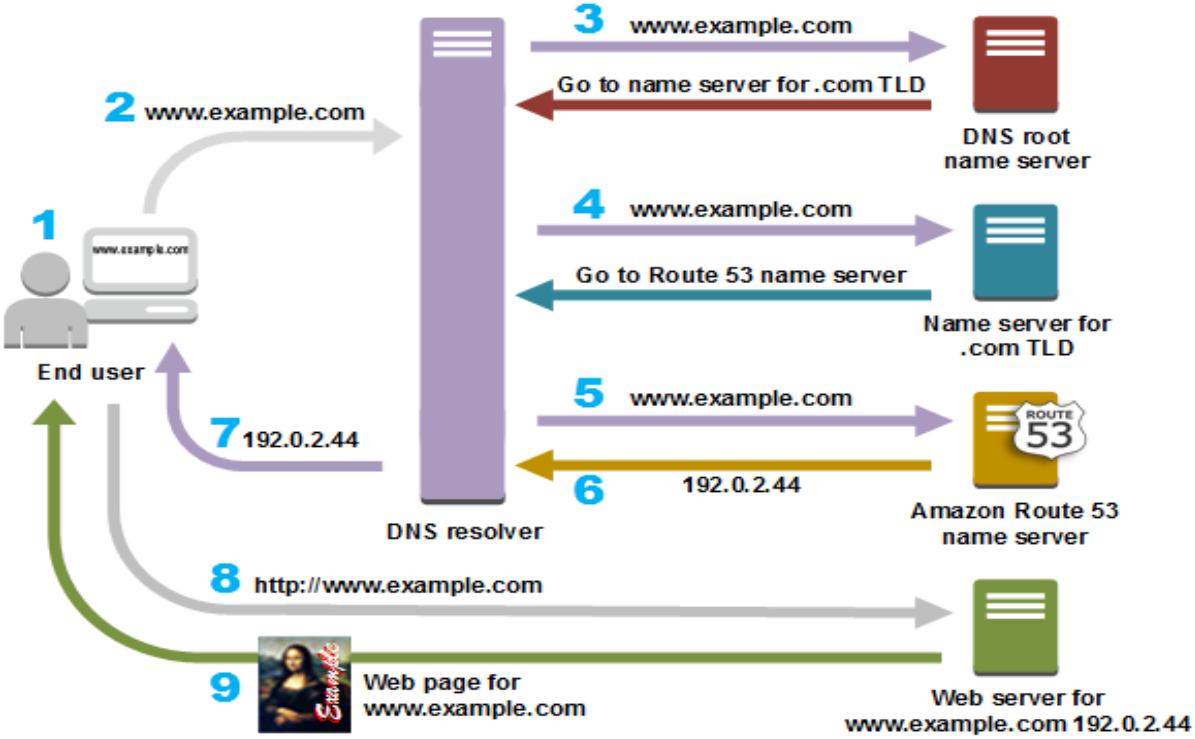
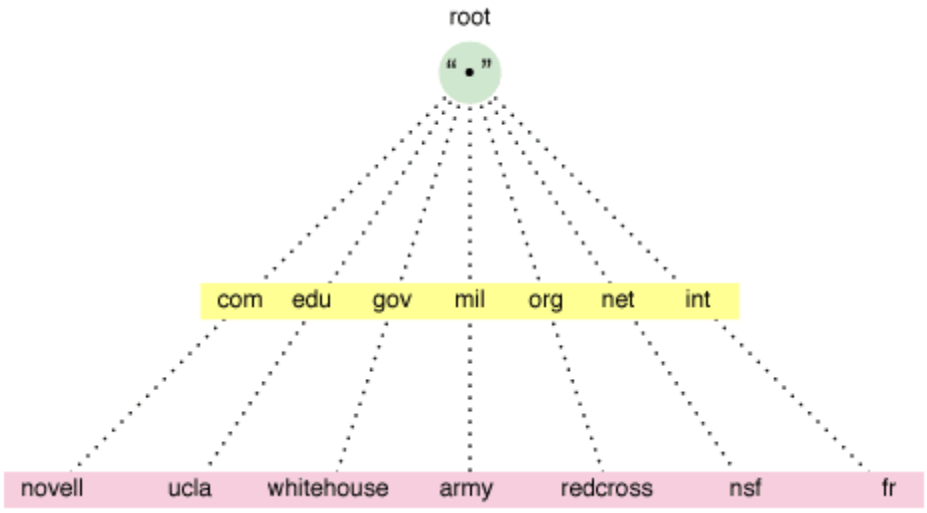
DNS





DNS_Basics

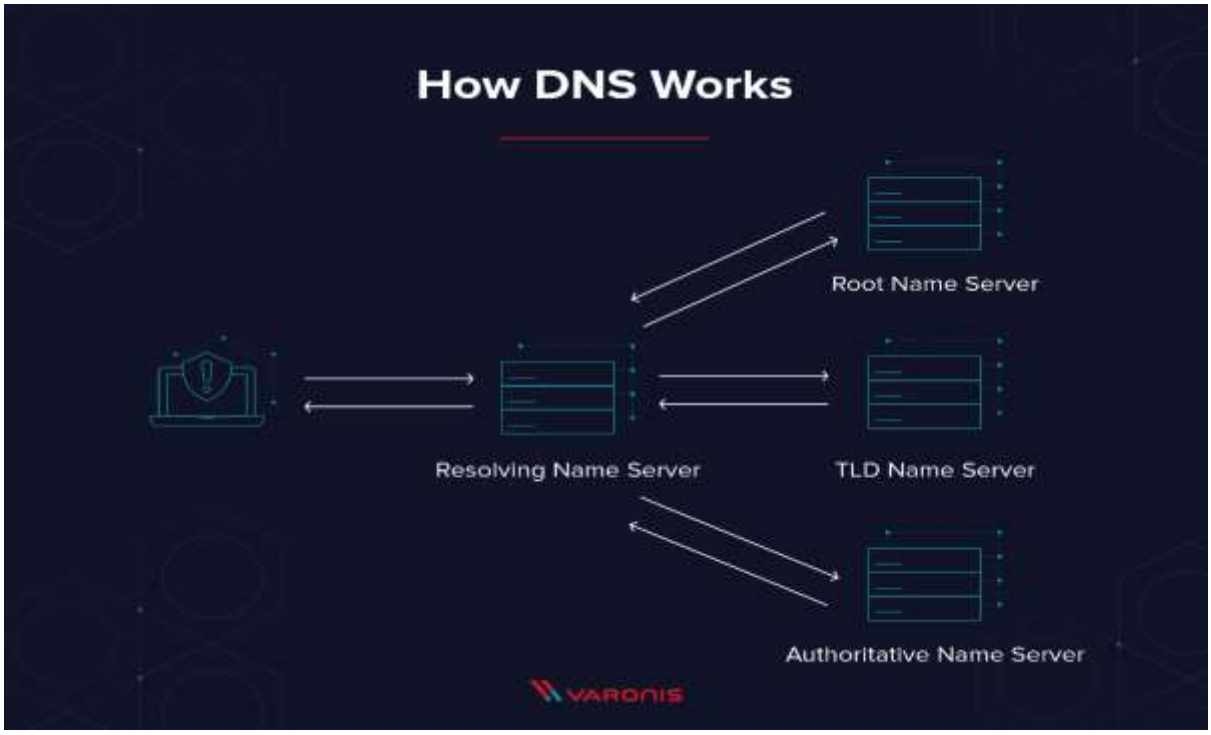
DNS_Hierarchy



7 Steps in a DNS Lookup

Let's look at exactly how a DNS request works.

1. **A DNS request starts when you try to access a computer on the internet**. For example, you type www.varonis.com in your browser address bar.
2. **The first stop for the DNS request is the local DNS cache.** As you access different computers, those IP addresses get stored in a local repository. If you visited www.varonis.com before, you have the IP address in your cache.
3. **If you don't have the IP address in your local DNS cache, DNS will check with a recursive DNS server.** Your IT team or Internet Service Provider (ISP) usually provides a recursive DNS server for this purpose.
4. **The recursive DNS server has its own cache, and if it has the IP address, it will return it to you.** If not, it will go ask another DNS server.
5. **The next stop is the TLD name servers, in this case, the TLD name server for the .com addresses.** These servers don't have the IP address we need, but it can send the DNS request in the right direction.
6. **What the TLD name servers do have is the location of the authoritative name server for the requested site.** The authoritative name server responds with the IP address for www.varonis.com and the recursive DNS server stores it in the local DNS cache and returns the address to your computer.
7. **Your local DNS service gets the IP address and connects to www.varonis.com to download all the glorious content.** DNS then records the IP address in local cache with a time-to-live (TTL) value. The TTL is the amount of time the local DNS record is valid, and after that time, DNS will go through the process again when you request Varonis.com the next time.



HOW DNS WORKS