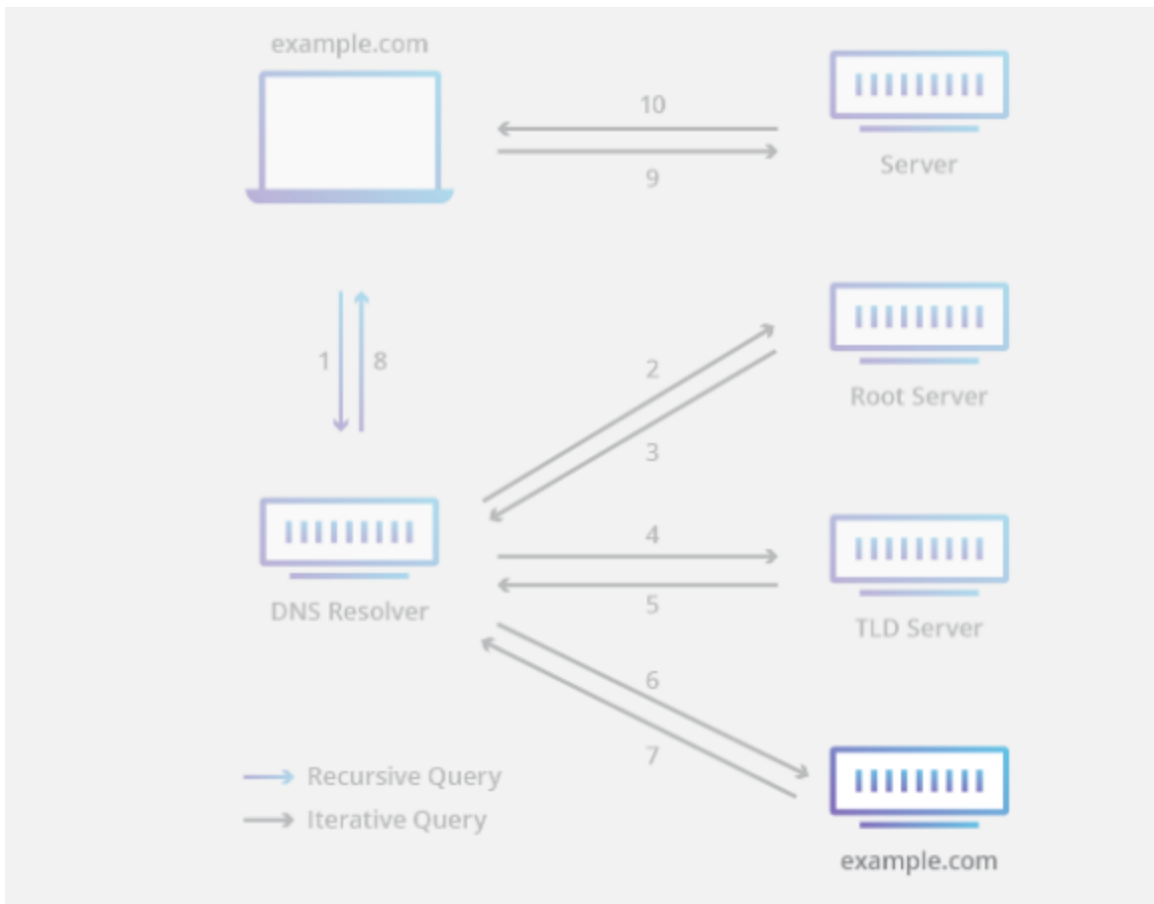


HOW DNS WORKS?

=>What is DNS?

The DNS System allows to convert your URL to IP address.

How DNS System Works?

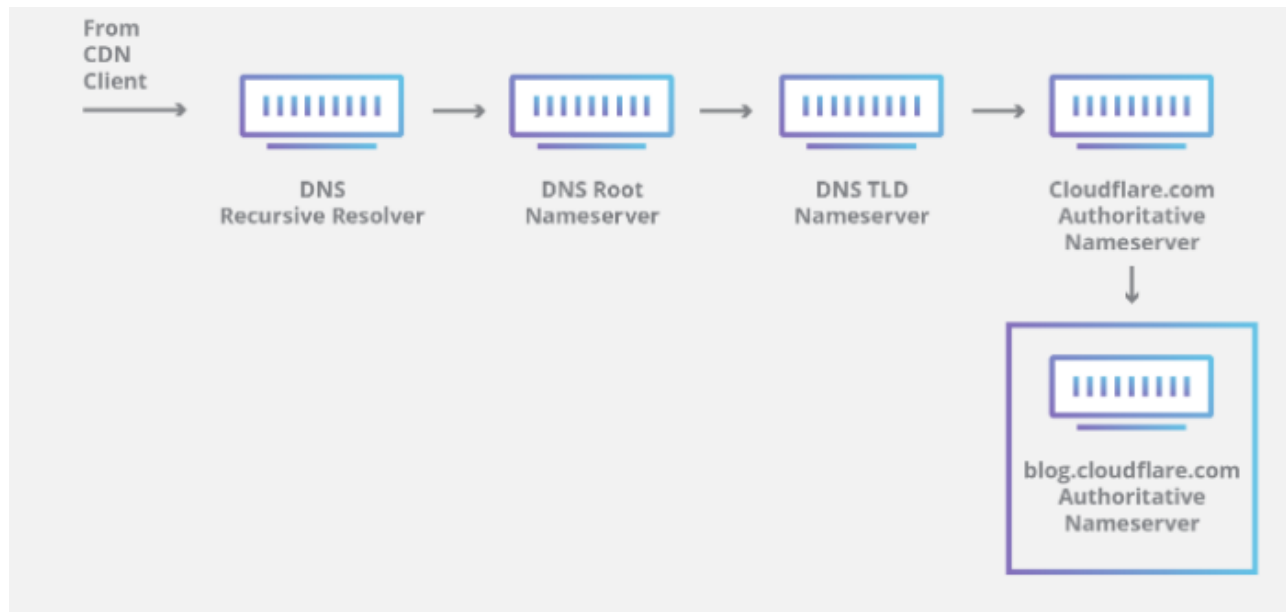


*It can be organization physical device or your router...Let say.

DNS Resolver or DNS Recursive resolver will check record in its persistent cache...if IP not present ? then it will make a sequence of requests until it reaches Authoritative name server...Authoritative nameserver can be cloudflare or Route 53.

If IP found in its DNS Resolver persistence cache will return to client and traverse to server through ISP's network packets.Luckily DNS Resolver will support

How Sequence of Request Works?



1.**DNS Recursive resolver** acts as a middleman between client and DNS like above sentences said.

2.DNS Recursive resolver will query to DNS **Root Nameserver** which accepts domain name and based on the domain name root server will respond to TLD (top level domain) based on the Extension(.com, .net, .org) of that domain (example.com)..DNS Root Nameserver are overseen by a Non profit called the Internet corporation for Assigned Names and Number(ICANN) and also The 13 DNS root nameserver are known to every recursive resolver like .com, .in etc.

*Let say DNS Recursive resolver is a librarian,A librarian will look up racks and racks can be innovation, smart etc.

*For Us Racks is .com, .org in root server.

*Let say we requested .com, Root server will look up inside .com either foo.com is present or if present root will respond to TLD based on extension.

*The job of root server to look up only domains like .com, .org etc.

3.**DNS TLD Nameserver** will hold all the information about domain name that ends with .com.

*Let say a librarian is looking up in .com rack which is available all domain with .com extension.

*TLD will respond to authoritative name server along with domain.

Authoritative Nameserver

*Authoritative Name server can be any domain registrar such as Route 53, cloudflare etc

*Authoritative name server will query into Name server where records are added and look up the records and will respond back to RNS with IP.

REFERENCE LINK

<https://www.cloudflare.com/learning/dns/what-is-dns/>