

Chapter 10

Virtual Network Services and Solutions

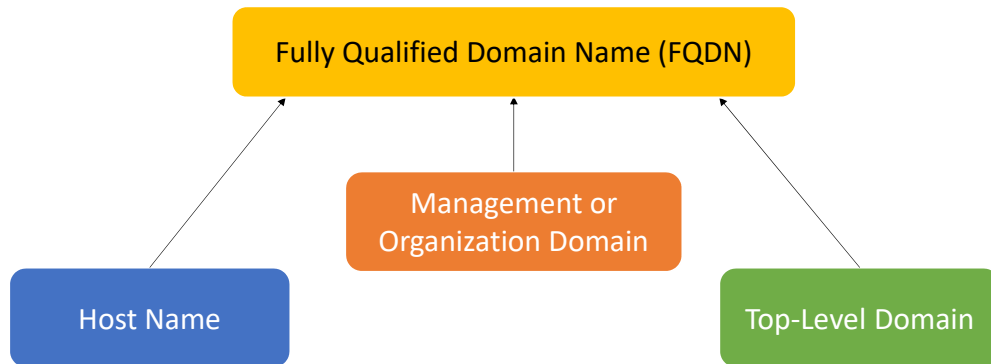


DNS Overview

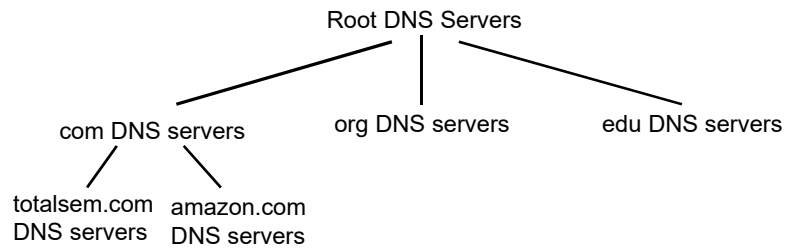
- DNS (Domain Name System)
- RFCs 1034 and 1035
- Domains are specified boundaries of activity
- DNS provides name to IP address mapping

DNS Name Structure

- aws.amazon.com



DNS Resolution

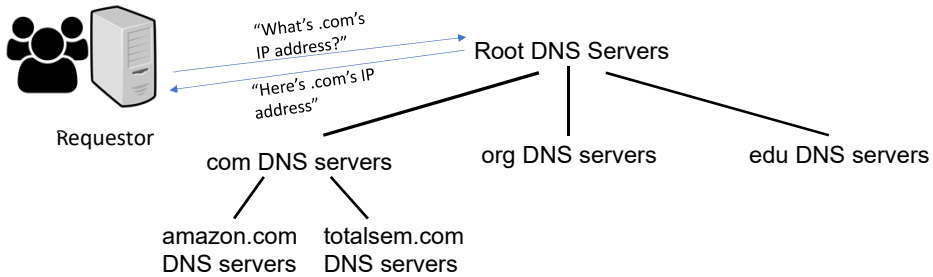


client wants IP for aws.amazon.com

1. Client queries a root server to find com DNS server
2. Client queries com DNS server to get amazon.com DNS server
3. Client queries amazon.com DNS server to get IP address for aws.amazon.com

<https://www.inetdaemon.com/tutorials/internet/dns/operation/resolution/forward/forward.shtml>

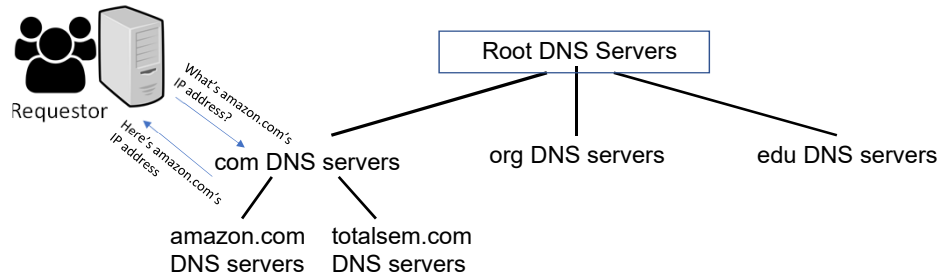
DNS Resolution



What is IP address for aws.amazon.com?

1. Requestor queries a root server to find com DNS server
2. Requestor queries com DNS server to get amazon.com DNS server
3. Requestor queries amazon.com DNS server to get IP address for aws.amazon.com

DNS Resolution



What is IP address for aws.amazon.com?

1. Requestor queries a root server to find com DNS server
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DNS Hosting vs. Resolution

- Hosting
 - Provides name resolution
 - Caching
 - Recursion
 - Stores DNS database
 - Aliasing
 - Provides DNS zone transfers
 - Offloads name resolution processing
- Resolution
 - Requests IP address of a host name
 - Forward lookup
 - Requests host name of an IP address
 - Reverse lookup
 - Requestor is configured with a DNS server address
 - Example: 8.8.8.8

DNS Records

- A and AAAA
 - Hostname > IPv4 or IPv6
- NS
 - Domain > hostname
- MX
 - Mail record
- CNAME
 - Alias for the real name (canonical)

Episode 10.02

Configuring DNS Lab

DEMO

- DNS Configuration Defaults

Episode 10.03

Configuring Route 53 Lab

Route 53

- DNS service
 - Domain registration
 - DNS resolution
 - DNS management
 - Health checking

DEMO

- Managing Route53

Episode 10.04

Configuring ACLs and NACLs Lab

ACLs

- S3 buckets
- VPC ACLs
- Subnet ACLs

DEMO

- Viewing Default ACLs

Episode 10.05

Flow Logs

DEMO

- Creating Flow Logs on Network Interfaces
- Creating Flow Logs on VPCs
- Creating Flow Logs on Subnets