

Modifying DNS Configuration for Servers



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Module Goals



Configure DNS Zones

Add DNS records

Configure subdomains



Domain namespace -
a distributed database

Domain namespace is
divided into Zones

Root Domain

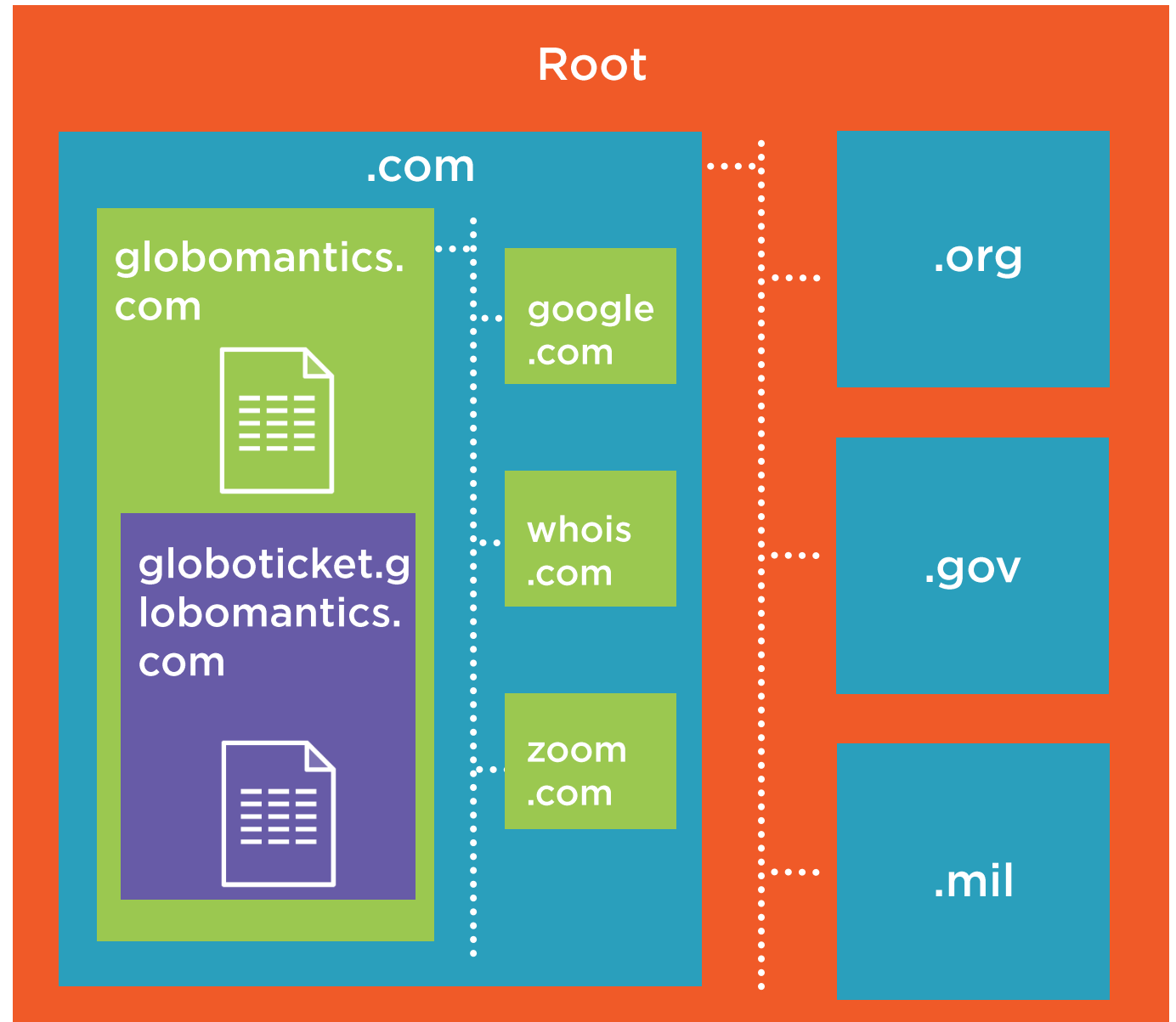
Top Level Domains (TLD)

Lower Level Domains

Records

Subdomains

Records



Lower Level Domains

Records

Subdomains

Records



Lower Level Domain Zone

Forward Lookup Zone

Reverse Lookup Zone



Jayden



globomantics.com



globoticket.globomantics.com



DNS Server Types

Authoritative



Primary Server - Has read/write copy of the zone records

Secondary Server - Has read only copy of the zone records

Non-Authoritative



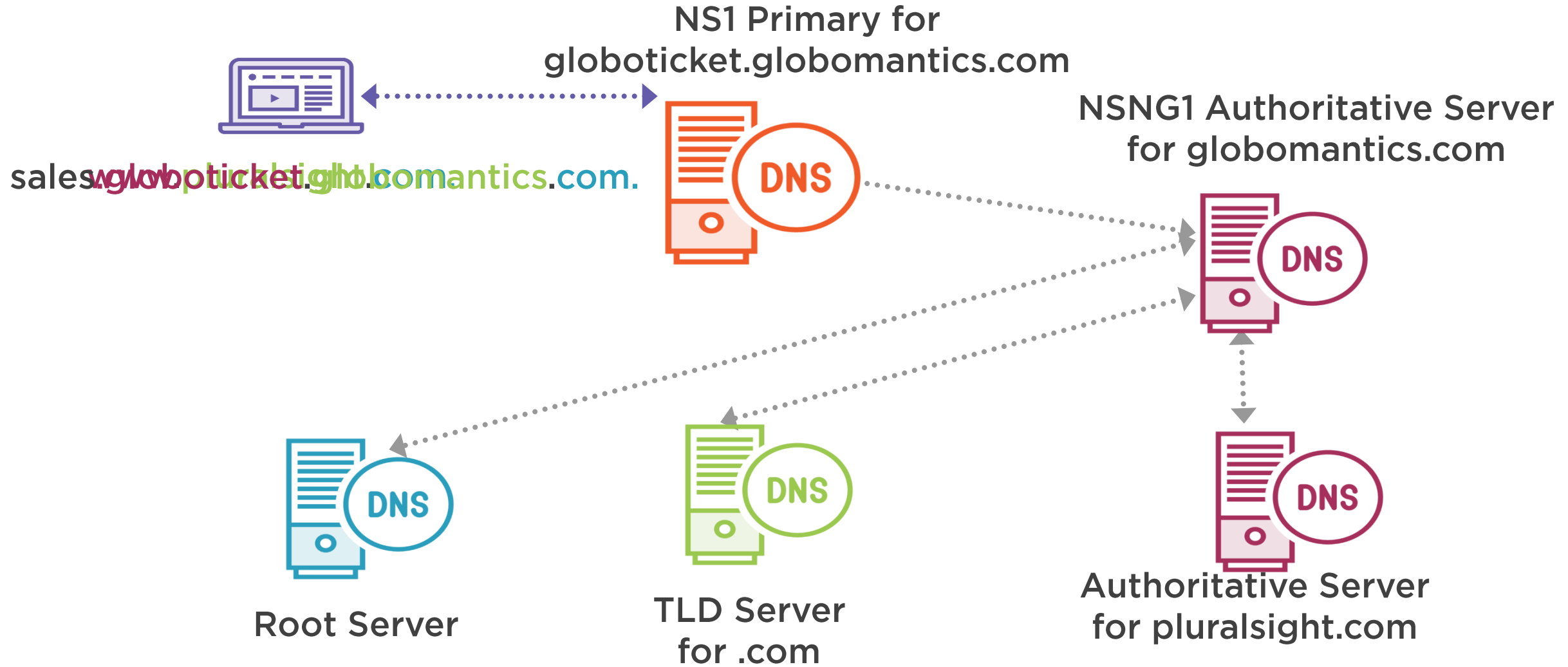
Recursive Server - Performs iterative lookups on client's behalf

Caching Server - Caches responses from iterative lookups

Forwarding Server - Passes all requests to another DNS Server



Double Duty - Primary + Forwarding Server



Demo



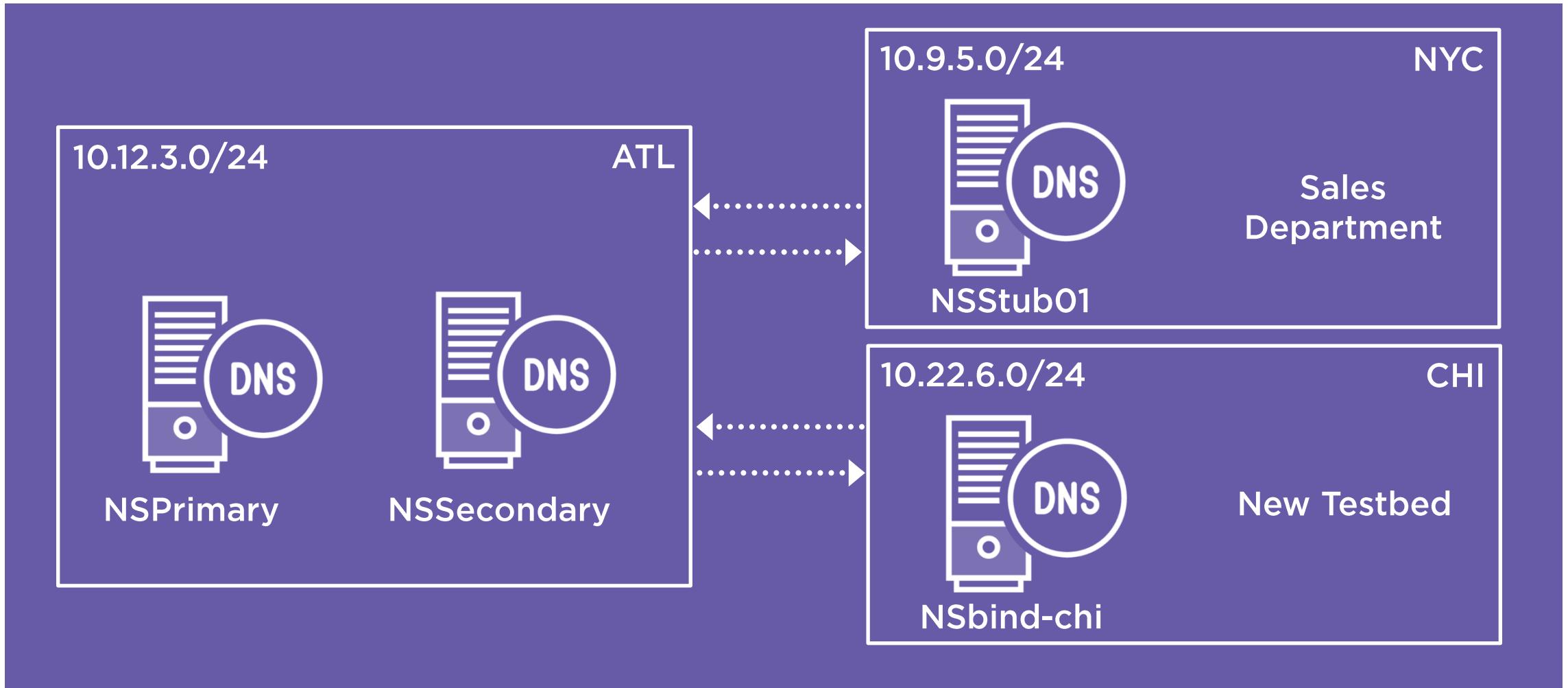
View records in Primary

Add Secondary to Primary

Capture Zone transfer



Server Locations - GT.GM.COM



DNS Records



DNS Host Record Types



A - IPv4 Host



AAAA - IPv6 Host



NS - Name Server



MX - Email Server



DNS Special Record Types



SOA - Start of Authority



CNAME - Canonical Name



SRV - Service



PTR - Pointer



TXT - Text



One Name - Multiple Addresses - Windows Style

Imagine we have web servers in four different locations

Option 1:
Netmasking

Order of the Records

www.gt.gm.com A 11.2.3.4

www.gt.gm.com A 22.3.4.5

www.gt.gm.com A 33.4.5.6

www.gt.gm.com A 44.5.6.7



22.3.4.100



11.2.3.4



22.3.4.5



33.4.5.6



44.5.6.7



One Name - Multiple Addresses - Windows Style

Imagine we have web servers in four different locations

Option 1:
Netmasking

Option 2: Round Robin

Order of the Records

www.gt.gm.com A 22.3.4.5

www.gt.gm.com A 33.4.5.6

www.gt.gm.com A 44.5.6.7

www.gt.gm.com A 11.2.3.4



11.2.3.4



22.3.4.5



33.4.5.6



44.5.6.7



One Name - Multiple Addresses - BIND Style

Imagine we have web servers in four different locations

Option 1: Fixed

Option 2: Round Robin

Option 3: Random

DNS Records

www.gt.gm.com A 11.2.3.4

www.gt.gm.com A 44.5.6.7

www.gt.gm.com A 33.4.5.6

www.gt.gm.com A 22.3.4.5



11.2.3.4



22.3.4.5



33.4.5.6



44.5.6.7



Demo



Add records to the Primary Server

Confirm the record movement in the Zone Transfer using Wireshark



Subdomains



Domains and Their Subdomains

globomantics.com



www.globomantics.com

globomantics.com



globotickets.globomantics.com

globoticket.com



events.globoticket.com

globoticket.com



bandname.globoticket.com



Demo



Configure subdomain on DNS Server



Summary



Configure Domains

Configure Records

Configure Subdomains



Up Next:
Troubleshooting DNS

