

# DNS

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# Why is this SO important?

- Internal network (LAN)
- External network (WAN)



# What is DNS?

- ✱ The Domain Name System (DNS) is a hierarchical distributed naming system for computers, services, or any resource connected to the Internet or a private network. It associates various information with domain names assigned to each of the participating entities. Most prominently, it translates easily memorised domain names to the numerical IP addresses needed for the purpose of locating computer services and devices worldwide. By providing a worldwide, distributed keyword-based redirection service, the Domain Name System is an essential component of the functionality of the Internet.



# How does DNS work?

- \* Queries

  - \* Forward

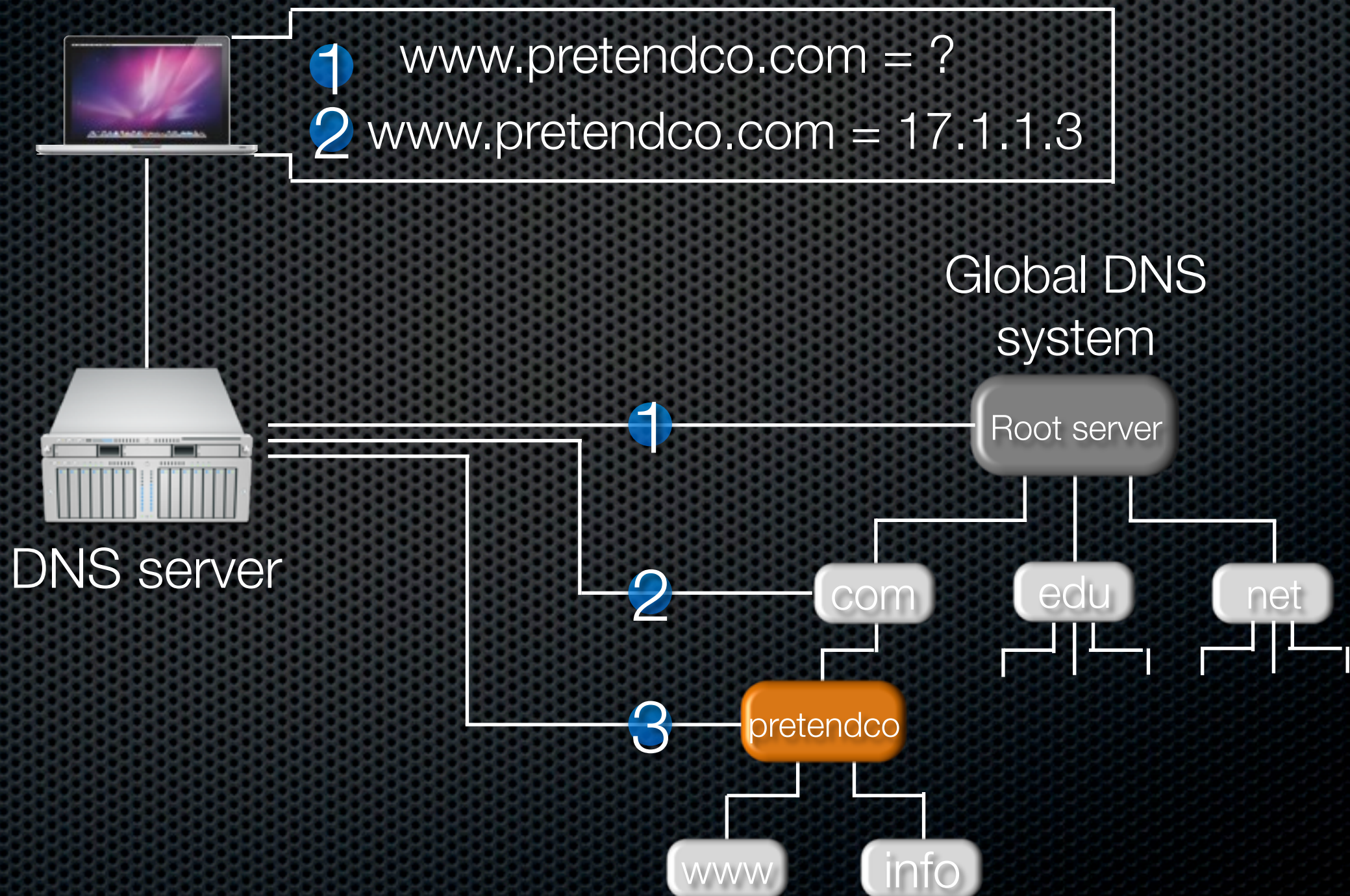
  - \* Reverse

- \* FQDN

  - \* Fully Qualified Domain Name



# The DNS hierarchy–Recursion





# Record Types

- \* NS

- \* A /AAAA

- \* CNAME

- \* MX

- \* TXT

- \* SRV

- \* PTR



# WAN DNS

- ✱ Authoritative Host (NS server)
- ✱ Zone file
- ✱ Records



# LAN DNS

- ✱ Open/Active Directory NEEDs this to work right
- ✱ Defining a Primary Zone
- ✱ Authoritative DNS server



# Split Horizon DNS

- \* New Best practice use .COM
- \* LAN mail.pretendco.com = 10.100.107.10
- \* WAN mail.pretendco.com = 17.100.107.10



# LAN DNS

- \* Slave Servers: When? Why?
- \* Forwarding Server (caching servers)
- \* Naming
  - \* Own your TLD
  - \* .private and .local – deprecated



# What if I don't have a public static IP?

- \*Dynamic DNS

- \*Various Providers free and paid

- \*Various Services

- \*<http://dnslookup.me/dynamic-dns/>



# When things go wrong

- \* dig
- \* host
- \* nslookup
- \* /Applications/Utilities/Network Utility



# OS X Server Specific

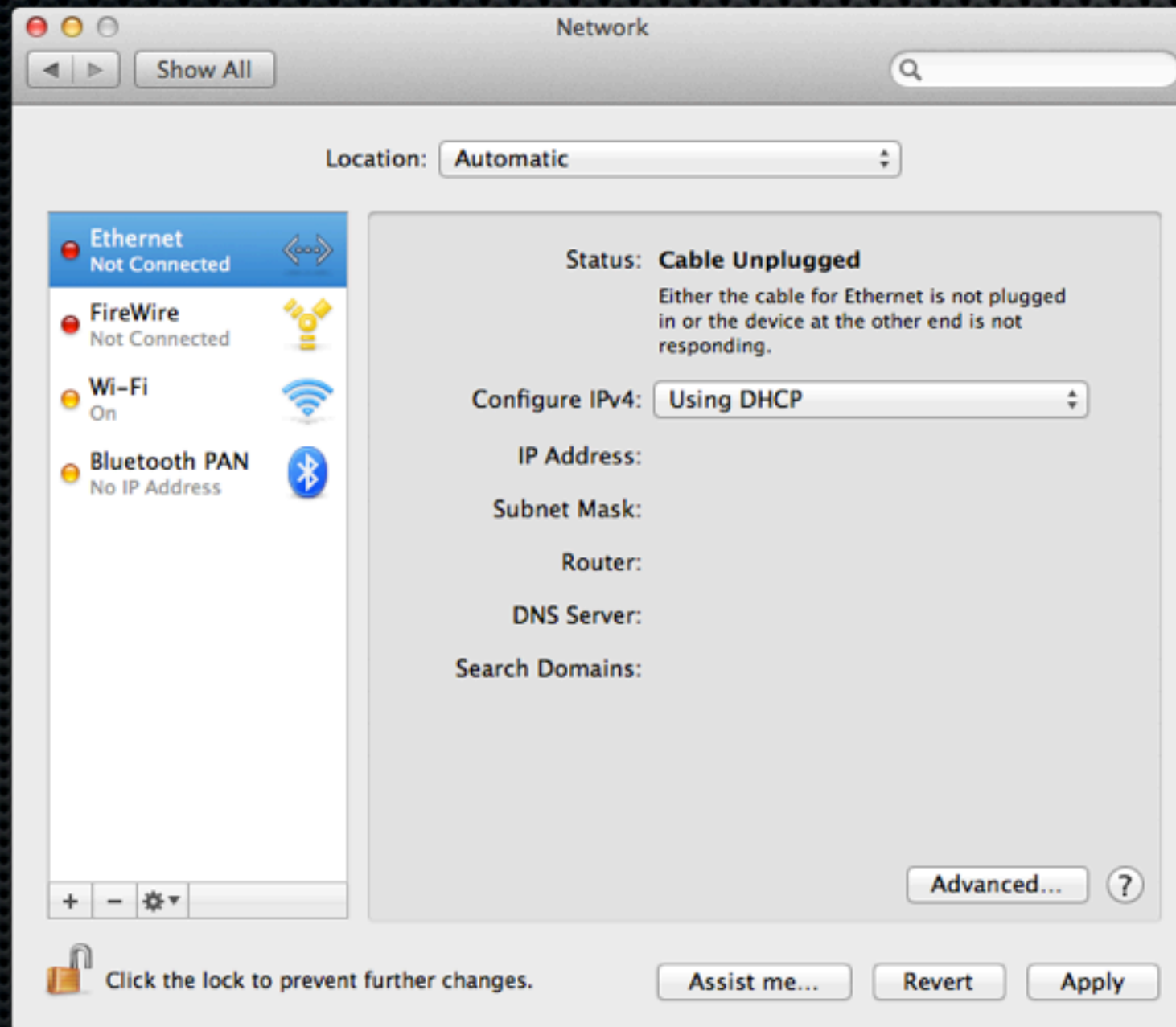
\*`sudo /Applications/Server.app/Contents/ServerRoot/usr/sbin/changeip -checkhostname`

```
Primary address      = 10.0.1.30
Current HostName     = laptop.favarger.net
DNS HostName         = laptop.favarger.net

The names match. There is nothing to change.
dirserv:success = "success"
```



# What's wrong with this?





# Server Setup

Server

## Accessing your Server

Choose how users will access your server.

☒ Local Network


Access your server on the local network using a host name ending in ".local".  
Your server will not be accessible outside of your local network.

☐ Local Network and using VPN

Access your server on the local network using a host name ending in ".private".  
Users can also access your server using a Virtual Private Network (VPN).

☐ Domain Name

Access your server on both the local network and on the Internet using a registered domain name.



Go Back

Continue



# To change this





# DNS GUI

