

## Lab Report - Lab 8

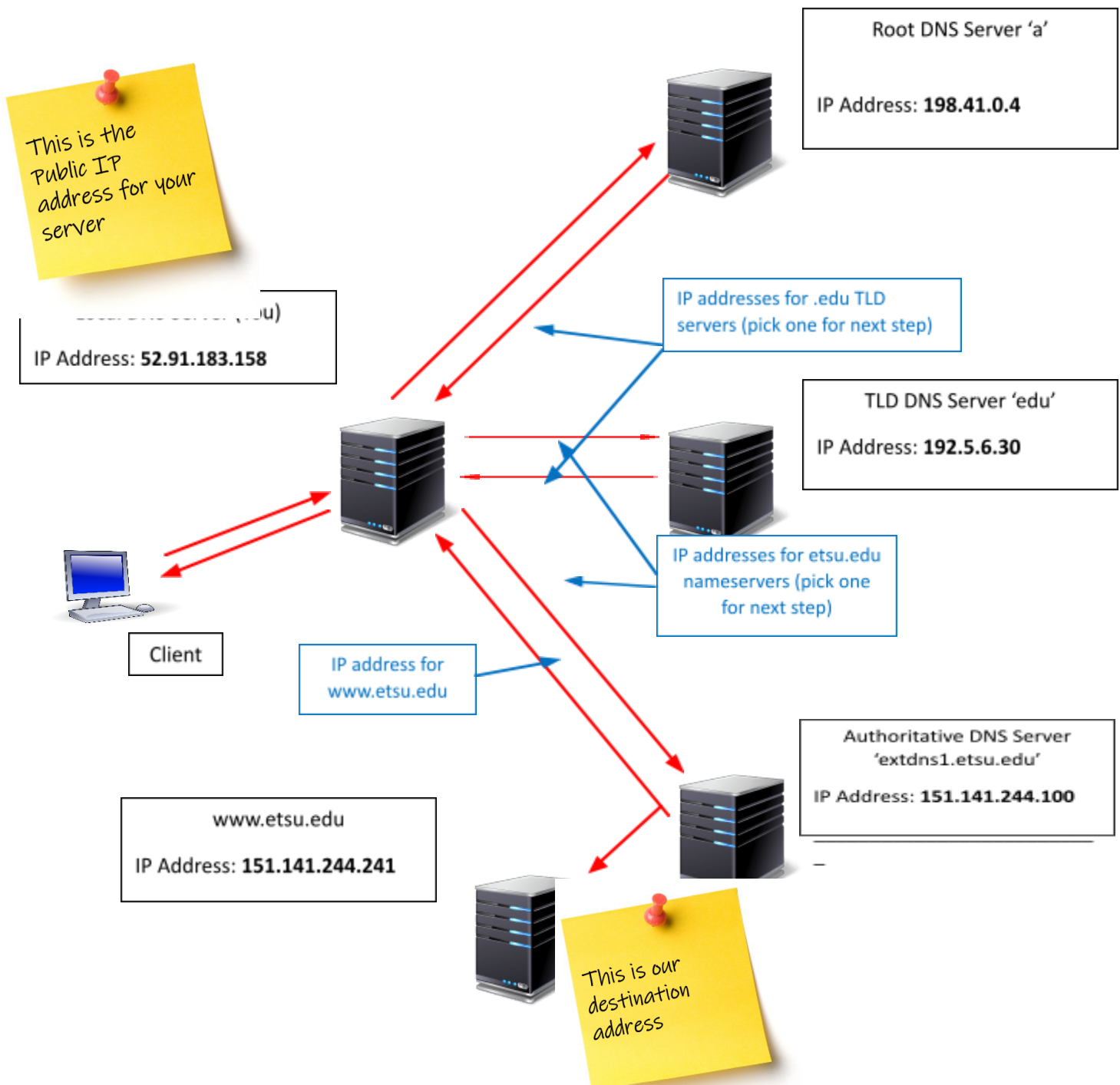
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Date: 3/11/2024

### Research Questions

1. How would containerization technology fit in with auto-scaling? In today's example, the 'container' was pretty simple, a very basic PHP web page, but can you see how this would impact development and deployment? What about automation?  
Containers are lightweight, isolated, packages that can scale by only pulling the resources they need from the host. With this in mind, we can automate deploying architectures and application on the fly by using scripts with docker commands.
2. What is Docker Container?  
Docker container is an open source containerization program for user to be able to create, run, and stop (and several other commands) containers when they need.
3. Is Container technology new?  
No, it started in the 70's and was used to better isolate code in Unix.
4. Does running containers provide any additional security?  
They can provide extra security if you configure them to (harden them).
5. What is the difference between Docker Image and container?  
A container is a runnable software or application, but a docker image is the template to create a container.
6. What is Docker hub?  
Docker Hub is one of the largest registries for community container images.
7. Do I lose my data when the Docker container exits?  
No, when the container exits it will preserve your data unless you delete the instance.
8. Can we run multiple apps on one server with Docker?  
Yes, you can run multiple applications with Docker.
9. What are the states that a Docker container can be in?  
The states are the following: Created, running, restarting, exited, paused, and dead.

10.



1. What is the IP address of the [www.etsu.edu](http://www.etsu.edu) server?

151.141.244.241

2. Was this search recursive or iterative?

Recursive

3. What type of Resource Record is [www.etsu.edu](http://www.etsu.edu)?

ETSU uses a CNAME record.

4. How long did the root server query take?

26 msec

5. What was the header ID for the root server query?

The header ID 43905

6. Which port and TCP protocol does the DNS system use?

DNS uses SSH so its port is 80.

7. If a server has no clue about where to find the address for a hostname then it contacts what?

It will contact the root server.

8. What is DNS caching? Why is it beneficial?

This is the process of storing the IP address of a DNS and speeds up the process of searching for the corresponding DNS.

9. The right to use a domain name is delegated by domain name registers which are accredited by whom?

It is delegated by ICANN.

10. Describe the structure of the Domain Name System

The structure is: www. "subdomain" . "Top level Domain" (.com, org, gov, etc)