### What I Learned & What I Did in Week 4

In this course, I learned how the Domain Name System (DNS) works, including:

I used the **NetOps virtual lab** to install and configure **Unbound**

I edited the unbound.conf file to listen on IP 192.168.0.113

I tested DNS queries using the dig command

I verified that Unbound caching works by checking query time differences

### 📊What I Observed

I used the dig command to test DNS resolution with Unbound.

The **first query** to google.com took longer because the server had to fetch the result from the internet.

·The **second query** was much faster because Unbound served it from its **local cache**.

This confirmed that **DNS caching** was working correctly and helps reduce response times.

### How This Applies in Real Life

In a growing company, a **local caching DNS** server can

Improve network speed

Reduce external traffic

Increase reliability

I now understand how to set this up and explain it to others

### Summary

This course helped me understand how DNS works at a technical level and how to use Unbound to improve DNS performance in real-life networks. I can now confidently configure and troubleshoot a basic DNS caching server.