

Course: Cloud and Network Security-C1-2026

Cyber Shujaa Program

Week 3: Examining Network Layers 4-7
Assignment 1: TryHackMe: DNS In Detail

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Introduction

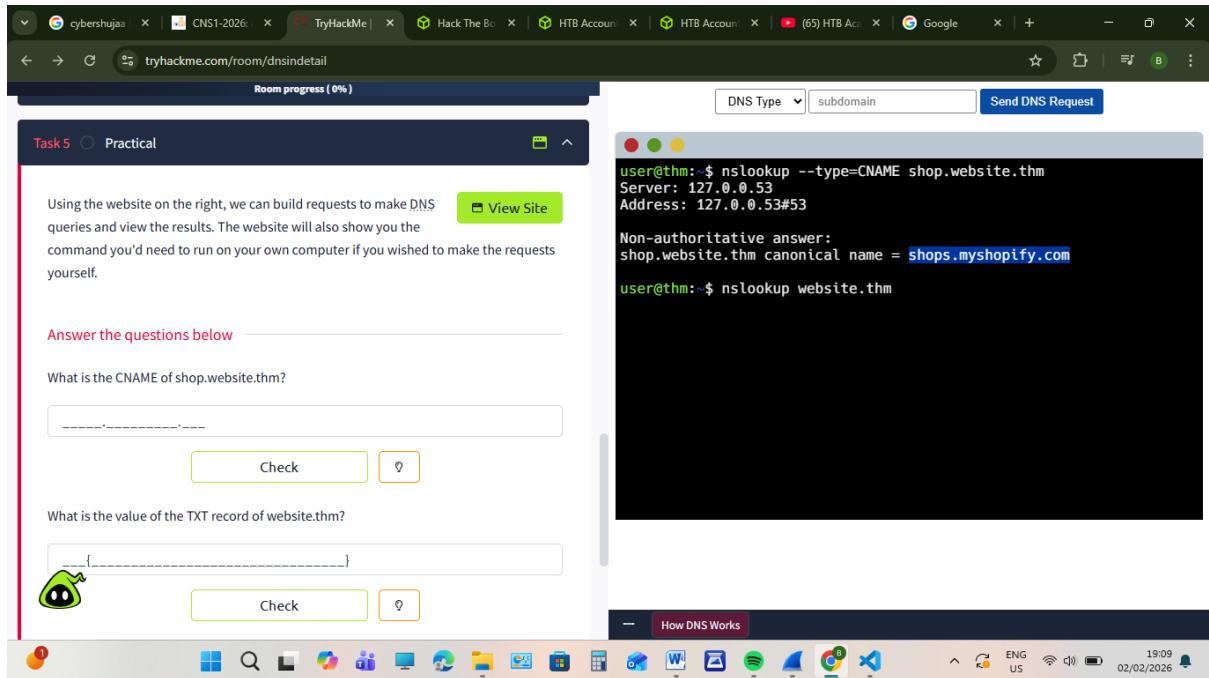
The purpose of this assignment was to develop an understanding of the operation of the Domain Name System (DNS) and how domain name resolution occurs in a networked environment.

Objectives

The objectives of the assignment were:

1. To understand the basic concept and purpose of the Domain Name System(DNS)
2. To explain how domain names are resolved into IP addresses
3. To identify the key components involved in the DNS resolution process
4. To understand the role of DNS in network communication and security

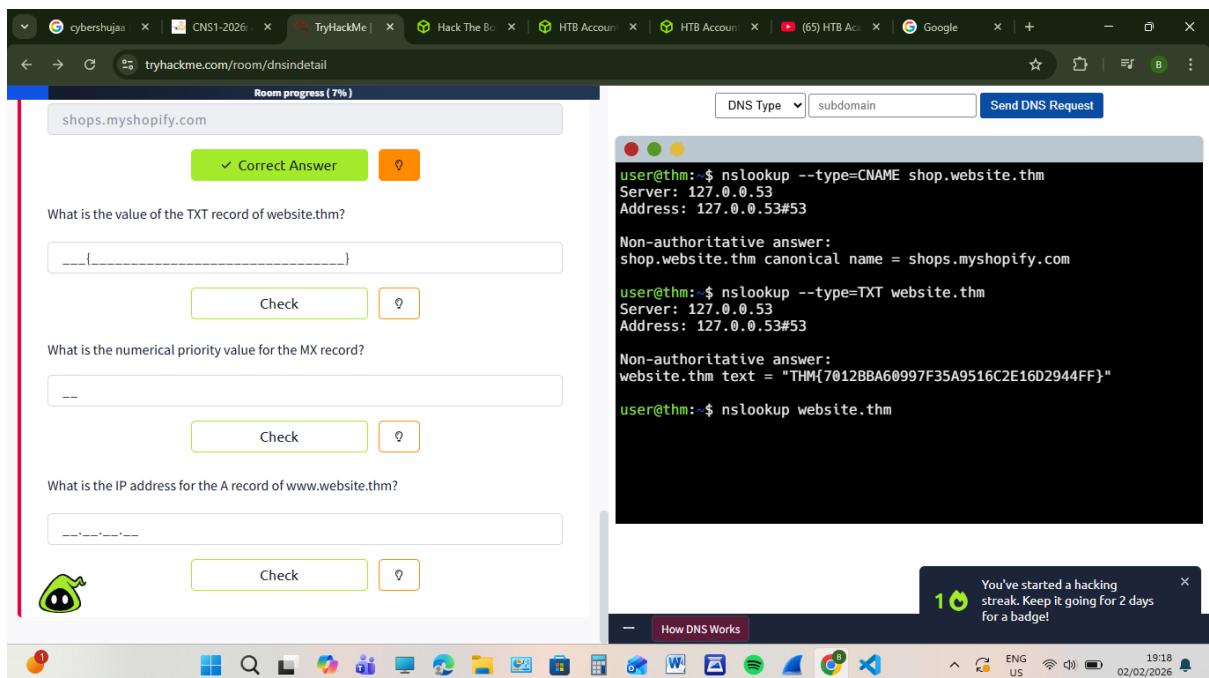
1. The CNAME of shop.website.thm



The screenshot shows a browser window for the TryHackMe challenge "dnsindetail". On the left, there's a task card for "Task 5 Practical" with instructions about using the provided website to make DNS queries. Below it are two input fields for answers: one for the CNAME of shop.website.thm and another for the value of the TXT record of website.thm. On the right, a terminal window shows the output of the command `nslookup --type=CNAME shop.website.thm`, which returns the canonical name as `shops.myshopify.com`. Below that, the command `nslookup website.thm` is run.

The CNAME of the shop.website.thm is shop.myshopify.com

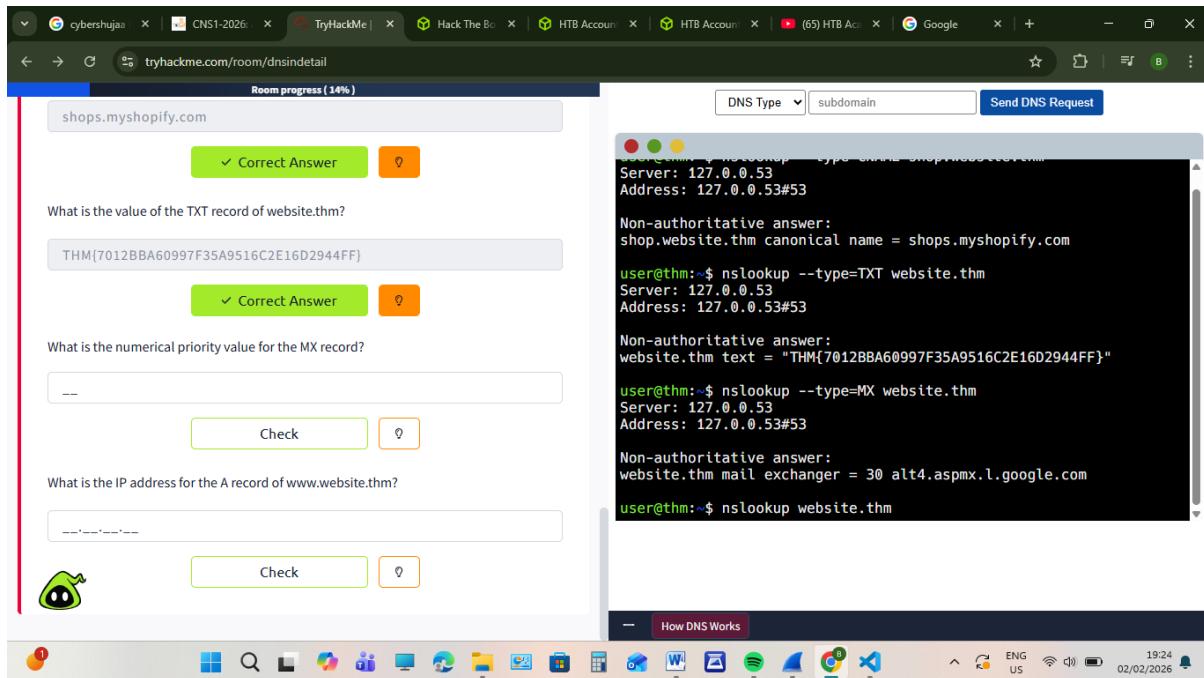
2. What is the value of the TXT record of website.thm?



This screenshot continues the challenge from the previous one. It shows the same interface with the CNAME answer now marked as correct. A new question asks for the value of the TXT record of website.thm. The terminal window on the right shows the output of `nslookup --type=txt website.thm`, which returns the text value as "THM{7012BBA60997F35A9516C2E16D2944FF}".

THM{7012BBA60997F35A9516C2E16D2944FF}

3. What is the numerical priority value for the MX record?



Room progress (14%)

shops.myshopify.com

What is the value of the TXT record of website.thm?

THM{7012BBA60997F35A9516C2E16D2944FF}

What is the numerical priority value for the MX record?

--

Check

What is the IP address for the A record of www.website.thm?

--

Check

DNS Type subdomain Send DNS Request

```

user@thm:~$ nslookup --type=MX website.thm
Server: 127.0.0.53
Address: 127.0.0.53#53

Non-authoritative answer:
website.thm mail exchanger = 30 alt4.aspmx.l.google.com

user@thm:~$ nslookup website.thm
Server: 127.0.0.53
Address: 127.0.0.53#53

Non-authoritative answer:
Name: website.thm
Address: 10.10.10.10

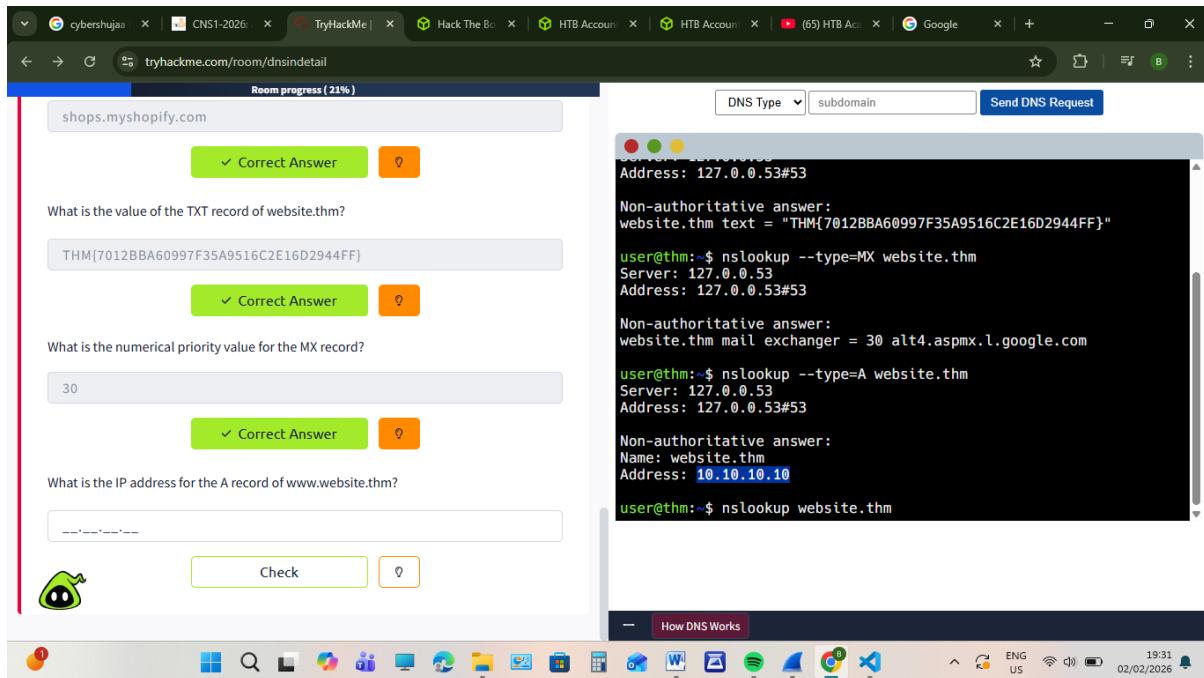
user@thm:~$ nslookup website.thm
Server: 127.0.0.53
Address: 127.0.0.53#53

Non-authoritative answer:
Name: website.thm
Address: 10.10.10.10
  
```

How DNS Works

30

4. What is the IP address for the A record of www.website.thm?



Room progress (21%)

shops.myshopify.com

What is the value of the TXT record of website.thm?

THM{7012BBA60997F35A9516C2E16D2944FF}

What is the numerical priority value for the MX record?

30

Check

What is the IP address for the A record of www.website.thm?

--

Check

DNS Type subdomain Send DNS Request

```

user@thm:~$ nslookup --type=MX website.thm
Server: 127.0.0.53
Address: 127.0.0.53#53

Non-authoritative answer:
website.thm mail exchanger = 30 alt4.aspmx.l.google.com

user@thm:~$ nslookup --type=A website.thm
Server: 127.0.0.53
Address: 127.0.0.53#53

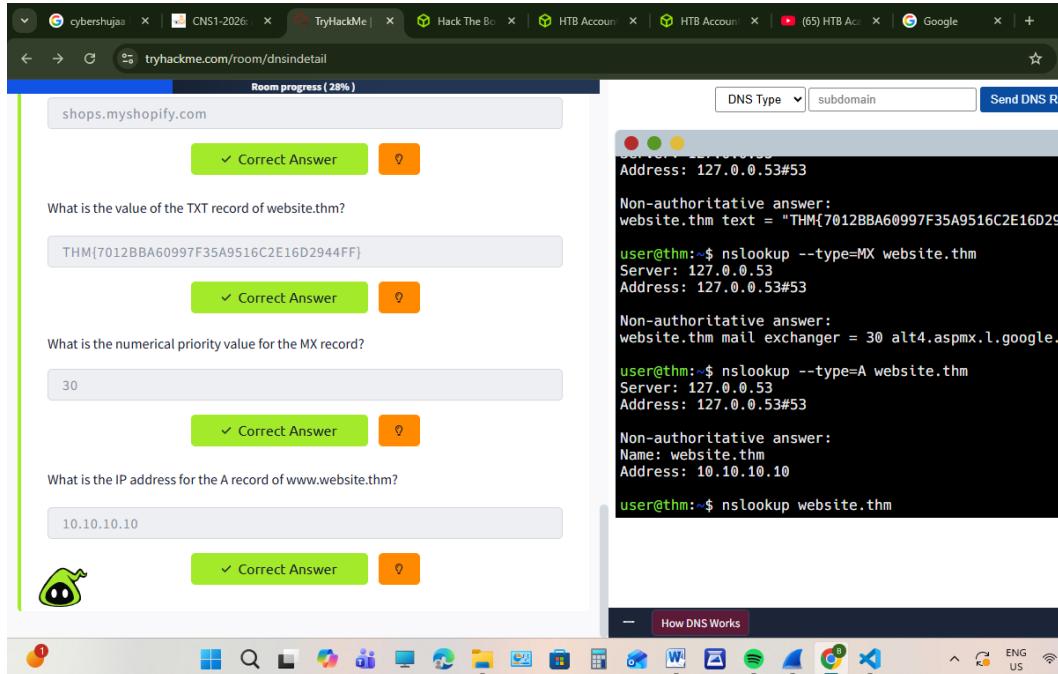
Non-authoritative answer:
Name: website.thm
Address: 10.10.10.10

user@thm:~$ nslookup website.thm
Server: 127.0.0.53
Address: 127.0.0.53#53

Non-authoritative answer:
Name: website.thm
Address: 10.10.10.10
  
```

How DNS Works

10.10.10.10



The screenshot shows a browser window with several tabs open, including "tryhackme.com/room/dnsindetail". The main content area displays a challenge titled "shops.myshopify.com". It asks for the value of the TXT record of website.thm, which is answered as "THM[7012BBA60997F35A9516C2E16D2944FF]". It also asks for the numerical priority value for the MX record, answered as "30", and the IP address for the A record of www.website.thm, answered as "10.10.10.10". To the right, there is a terminal window showing the results of running nslookup commands on the host "website.thm". The terminal output includes:

```
Address: 127.0.0.53#53
Non-authoritative answer:
website.thm text = "THM[7012BBA60997F35A9516C2E16D2944FF]

user@thm:~$ nslookup --type=MX website.thm
Server: 127.0.0.53
Address: 127.0.0.53#53

Non-authoritative answer:
website.thm mail exchanger = 30 alt4.aspmx.l.google.

user@thm:~$ nslookup --type=A website.thm
Server: 127.0.0.53
Address: 127.0.0.53#53

Non-authoritative answer:
Name: website.thm
Address: 10.10.10.10

user@thm:~$ nslookup website.thm
```

I have completed the module as shown above

The link to view the assignment

➤ <https://tryhackme.com/room/dnsindetail>

Conclusion

In conclusion the assignment enhanced the understanding of how the Domain Name System (DNS) works and its role in network communication. It demonstrated how domain names are resolved into IP addresses and highlighted the importance of DNS in ensuring efficient and secure network operations.