

LAPORAN TUGAS
PEMBELAJARAN TRYHACKME
“DNS In Detail”



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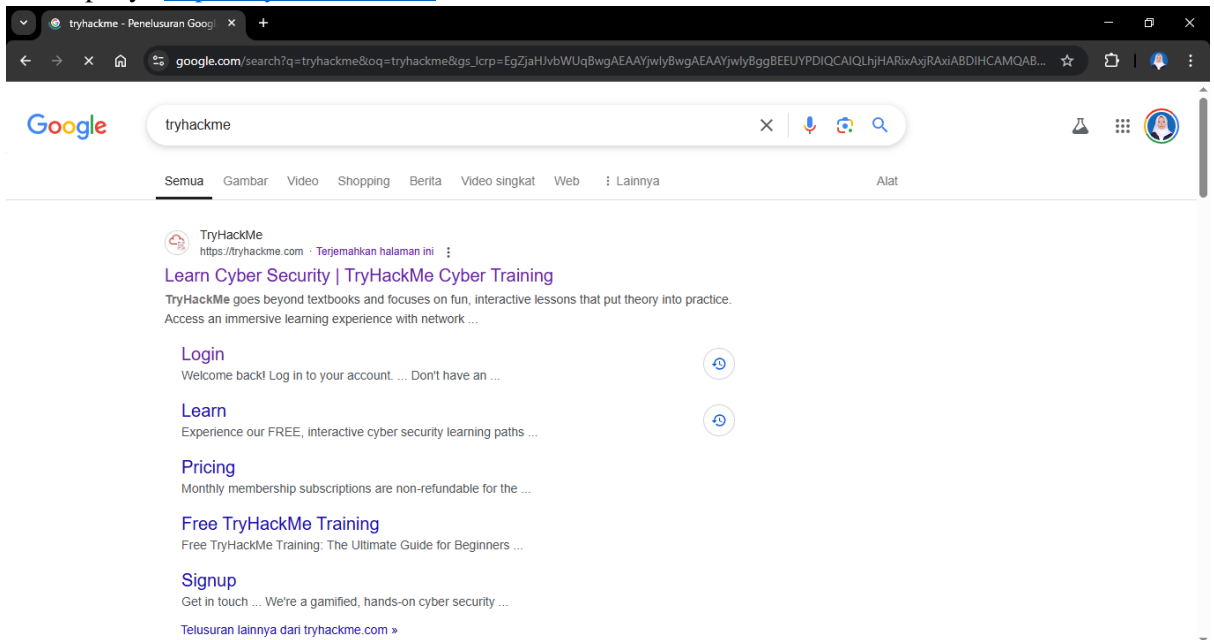
POLITEKNIK NEGERI MALANG PSDKU LUMAJANG

Jl. Lintas Timur, Area Sawah/Kebun, Jogoturunan, Kec. Lumajang, Kab. Lumajang

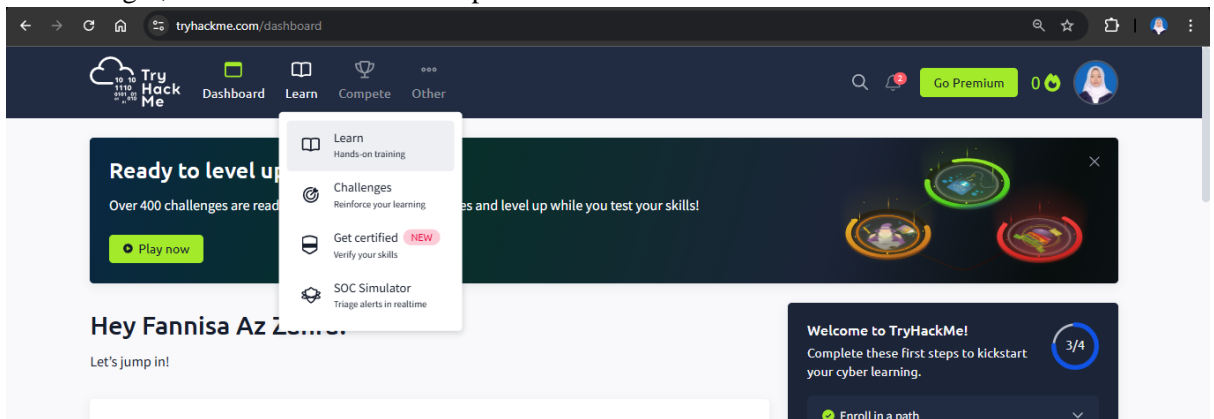
Jawa Timur 67314

2025

1. Buka laman chrome, lalu ketikkan tryhackme kemudian Login dengan akun yang sudah kalian punya <https://tryhackme.com/>



2. Setelah login, masuk ke dashboard dan pilih learn.



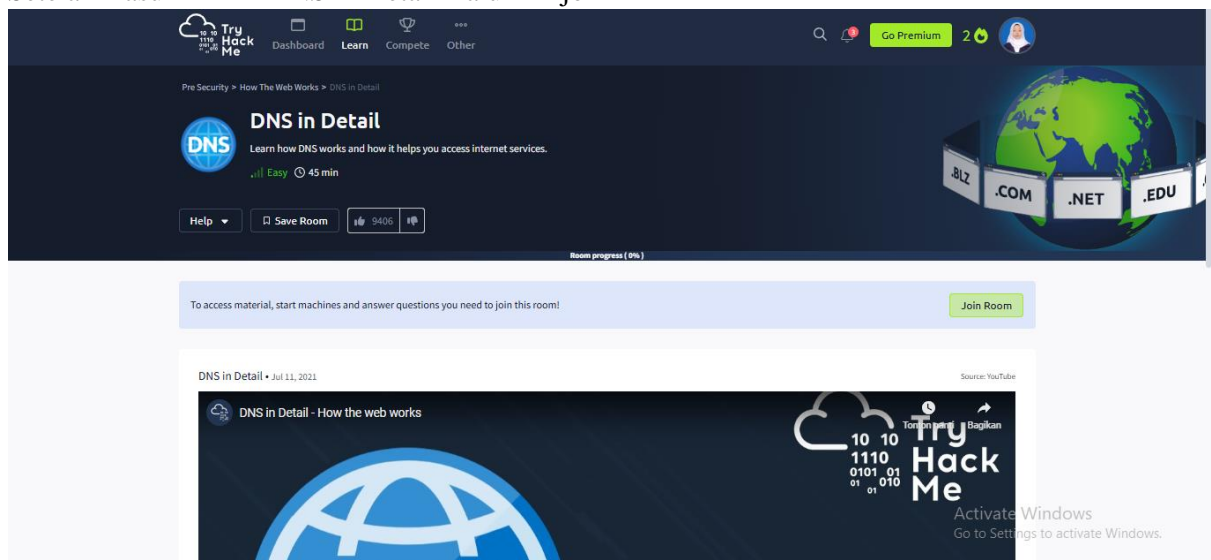
3. Setelah itu scroll kebawah dan pilih Free Roadmap



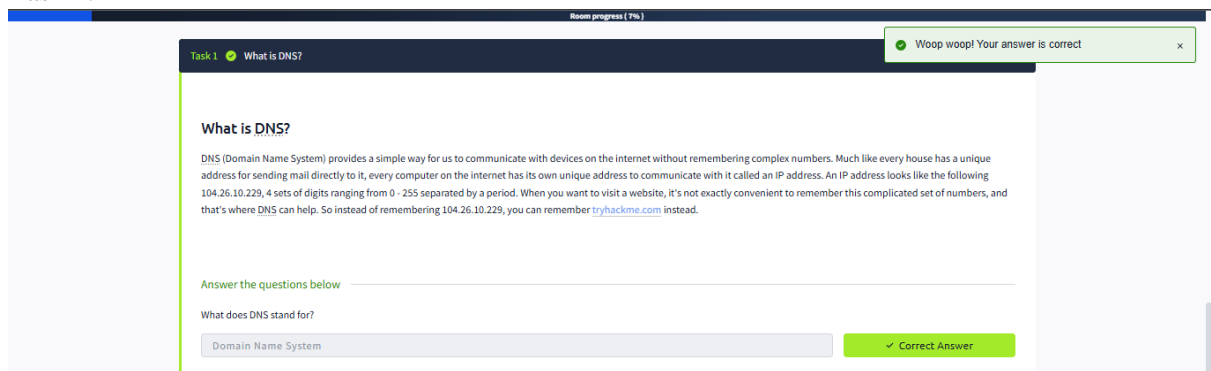
4. Lalu scroll kebawah dan pilih “room DNS In Detail”



5. Setelah masuk room “DNS In Detail” lalu klik join



6. Task 1.



7. Task 2.

Room progress (30%)

Due to strict licensing, there is an limit to how gTLDs ranging from .online, .radio, .webcam, .live and so many more, for a full list of over 2000 TLDs click [here](#).

Second-Level Domain

Taking [tryhackme.com](#) as an example, the .com part is the TLD, and tryhackme is the Second Level Domain. When registering a domain name, the second-level domain is limited to 63 characters + the TLD and can only use a-z 0-9 and hyphens (cannot start or end with hyphens or have consecutive hyphens).

Subdomain

A subdomain sits on the left-hand side of the Second-Level Domain using a period to separate it; for example, in the name [admin.tryhackme.com](#) the admin part is the subdomain. A subdomain name has the same creation restrictions as a Second-Level Domain, being limited to 63 characters and can only use a-z 0-9 and hyphens (cannot start or end with hyphens or have consecutive hyphens). You can use multiple subdomains split with periods to create longer names, such as [jupiter.servers.tryhackme.com](#). But the length must be kept to 253 characters or less. There is no limit to the number of subdomains you can create for your domain name.

Answer the questions below

What is the maximum length of a subdomain?

63 ✓ Correct Answer [Hint](#)

Which of the following characters cannot be used in a subdomain (3 b _ -)?

- ✓ Correct Answer

What is the maximum length of a domain name?

253 ✓ Correct Answer

What type of TLD is .co.uk?

ccTLD ✓ Correct Answer

Activate Windows
Go to Settings to activate Windows.

8. Task 3.

Room progress (50%)

These records resolve to IPv4 addresses, for example 104.26.10.229

AAAA Record

These records resolve to IPv6 addresses, for example 2606:4700:20::681a:be5

CNAME Record

These records resolve to another domain name, for example, TryHackMe's online shop has the subdomain name [store.tryhackme.com](#) which returns a CNAME record [shops.shopify.com](#). Another DNS request would then be made to [shops.shopify.com](#) to work out the IP address.

MX Record

These records resolve to the address of the servers that handle the email for the domain you are querying, for example an MX record response for [tryhackme.com](#) would look something like [alt1.aspmx.l.google.com](#). These records also come with a priority flag. This tells the client in which order to try the servers, this is perfect for if the main server goes down and email needs to be sent to a backup server.

TXT Record

TXT records are free text fields where any text-based data can be stored. TXT records have multiple uses, but some common ones can be to list servers that have the authority to send an email on behalf of the domain (this can help in the battle against spam and spoofed email). They can also be used to verify ownership of the domain name when signing up for third party services.

Answer the questions below

What type of record would be used to advise where to send email?

MX ✓ Correct Answer

What type of record handles IPv6 addresses?

AAAA ✓ Correct Answer

Activate Windows
Go to Settings to activate Windows.

9. Task 4.

Room progress (71%)

Answer, starting with the internet's backbone servers.

3. The root servers act as the DNS backbone of the internet; their job is to redirect you to the correct Top Level Domain Server, depending on your request. If, for example, you request [www.tryhackme.com](#), the root server will recognise the Top Level Domain of .com and refer you to the correct TLD server that deals with .com addresses.

4. The TLD server holds records for where to find the authoritative server to answer the DNS request. The authoritative server is often also known as the nameserver for the domain. For example, the name server for [tryhackme.com](#) is [kip.ns.cloudflare.com](#) and [uma.ns.cloudflare.com](#). You'll often find multiple nameservers for a domain name to act as a backup in case one goes down.

5. An authoritative DNS server is the server that is responsible for storing the DNS records for a particular domain name and where any updates to your domain name DNS records would be made. Depending on the record type, the DNS record is then sent back to the Recursive DNS Server, where a local copy will be cached for future requests and then relayed back to the original client that made the request. DNS records all come with a TTL (Time To Live) value. This value is a number represented in seconds that the response should be saved locally until you have to look it up again. Caching saves on having to make a DNS request every time you communicate with a server.

Answer the questions below

What field specifies how long a DNS record should be cached for?

TTL ✓ Correct Answer

What type of DNS Server is usually provided by your ISP?

recursive ✓ Correct Answer

What type of server holds all the records for a domain?

authoritative ✓ Correct Answer

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10. Task 5.

Room completed (100%)

Task 5 Practical

Using the website on the right, we can build requests to make DNS queries and view the results. The website will also show you the command you'd need to run on your own computer if you wished to make the requests yourself. [View Site](#)

Answer the questions below

What is the CNAME of shop.website.thm?

shops.myshopify.com

✓ Correct Answer

🔍 Hint

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

THM[7012BBA60997F35A9516C2E16D2944FF]

✓ Correct Answer

🔍 Hint

What is the numerical priority value for the MX record?

30

✓ Correct Answer

🔍 Hint

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

10.10.10.10

✓ Correct Answer

🔍 Hint

11. Maka selesai sudah room “DNS In Detail”

Woop woop! Your answer is correct

Congratulations on completing DNS in Detail!!! 🎉

Points earned
🏆 112

Completed tasks
📋 5

Room type
🗺️ Walkthrough

Difficulty
🌟 Easy

Streak
🔥 2

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