



# TRYHACKME - Network Fundamentals Walkthrough

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The TryHackMe "Network Fundamentals" module introduces foundational concepts of networking, including LAN/WAN topologies, IP addressing, subnetting, and key protocols.

This report summarizes the tasks completed and insights gained during the exercises.

## What is Networking?

Done! Room progress has been reset

Learn > What is Networking?

What is Networking?

Begin learning the fundamentals of computer networking in this bite-sized and interactive module.

Info 30 min

Help Save Room 10718 Options

Room progress (0%)

## Task 1: What is Networking?

### Explanation:

- Networking refers to the connection of multiple devices to communicate and share resources. Devices can be connected over different types of networks, including Local Area Networks (LANs) and Wide Area Networks (WANs).
- The main purpose of networking is to enable devices to exchange data and resources efficiently.

Take the diagram below as an example; Alice, Bob and Jim have formed their network. We'll come onto this a bit later on.

Room progress (9%)

Woop woop! Your answer is correct ×

Networks come in all shapes and sizes, which is something that we will also come on to discuss throughout this module.

Answer the questions below

What is the key term for devices that are connected together?

Network ▼ Correct Answer

↻

## Task 2: What is the Internet?

### Explanation:

- The Internet is a global network made up of many interconnected smaller networks. It originated from ARPANET, and Tim Berners-Lee's creation of the World Wide Web in 1989 revolutionized its use.
- It connects private networks through public networks, enabling worldwide communication and data sharing.

The screenshot shows a network diagram with two computer icons connected by lines, set against an orange background. At the top right, a progress bar indicates "Room progress (18%)". Below the diagram, a message says: "As previously stated, the Internet is made up of many small networks all joined together. These small networks are called private networks, where networks connecting these small networks are called public networks -- or the Internet! So, to recap, a network can be one of two types:" followed by a list: • A private network • A public network. A note below states: "Devices will use a set of labels to identify themselves on a network, which we will come onto in the task below." A section titled "Answer the questions below" contains the question "Who invented the World Wide Web?". A text input field shows the answer "Tim Berners-Lee". To the right are buttons for "Correct Answer" (green) and "Hint" (orange). Below this, two tabs are visible: "Task 3 Identifying Devices on a Network" and "Task 4 Ping (ICMP)".

## Task 3: Identifying Devices on a Network

### Explanation:

- Devices on a network are identified using IP addresses and MAC addresses. IP addresses allow devices to communicate over the network, while MAC addresses provide a unique identifier for each network device within a local network.
- These identifiers are essential for directing data to the correct devices.

The screenshot shows three questions about IP addresses:

- What does the term "IP" stand for? Answer: Internet Protocol. Correct Answer button shown.
- What is each section of an IP address called? Answer: Octet. Correct Answer button shown.
- How many sections (in digits) does an IP address have? (This question is partially cut off).

To the right, a message box displays the flag: THM{YOU GOT ON TRYHACKME. A progress bar at the top right shows "Room progress (63%)".

## Task 4: Ping (ICMP)

### Explanation:

- The "ping" command uses ICMP (Internet Control Message Protocol) to test connectivity between devices on a network. It sends a request to a device and waits for a reply, helping diagnose network issues.
- ICMP is used to verify if a device is reachable over the network.

Room progress ( 63% )

What does the term "IP" stand for?  
Internet Protocol ✓ Correct Answer

What is each section of an IP address called?  
Octet ✓ Correct Answer

How many sections (in digits) does an IP address have?  
4 ✓ Correct Answer Hint

What does the term "MAC" stand for?  
Media Access Control ✓ Correct Answer

Deploy the interactive lab using the "View Site" button and spoof your MAC address to access the site. What is the flag?  
THM{YOU\_GOT\_ON\_TRYHACKME} ✓ Correct Answer

Task 4 ○ Ping (ICMP)

Task 5 ○ Continue Your Learning: Intro to LAN

## Task 5: Continue Your Learning: Intro to LAN Explanation:

- A **Local Area Network (LAN)** connects devices within a small geographical area like a building or a campus. LANs typically provide high-speed data transfer and are the foundation of most corporate and home networks.

Room progress ( 90% )

Here we are pinging a device that has the private address of 192.168.1.254. Ping informs us that we have sent six ICMP packets, all of which were received with an average time of 4.16 milliseconds.

Now you are going to do the same thing to ping the address of "8.8.8.8" on the deployable website in this task. Pinging the correct address will reveal a flag to answer the following question below.

Answer the questions below

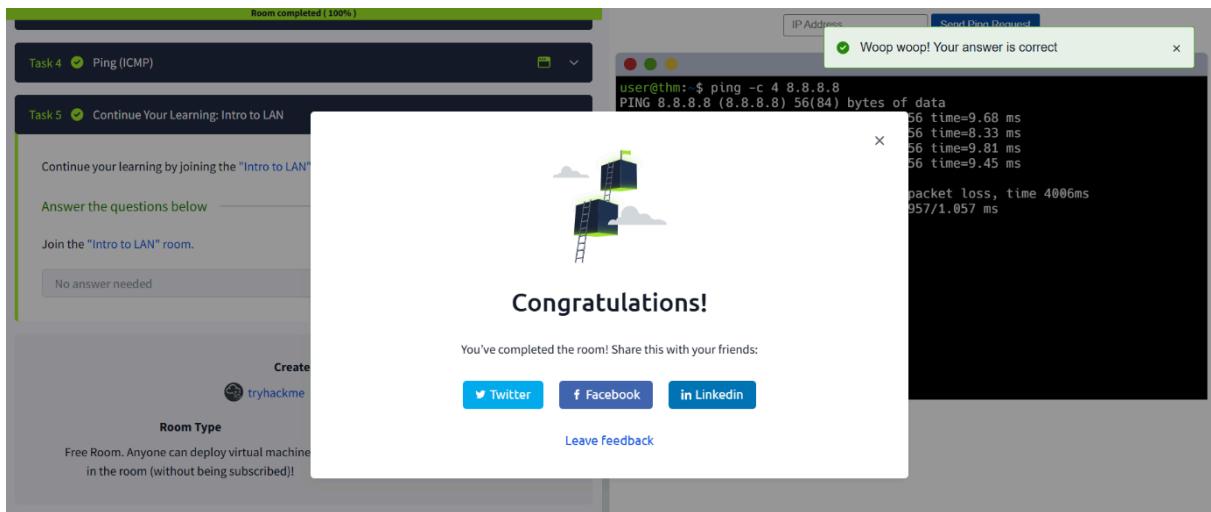
What protocol does ping use?  
ICMP ✓ Correct Answer

What is the syntax to ping 10.10.10.10?  
ping 10.10.10.10 ✓ Correct Answer

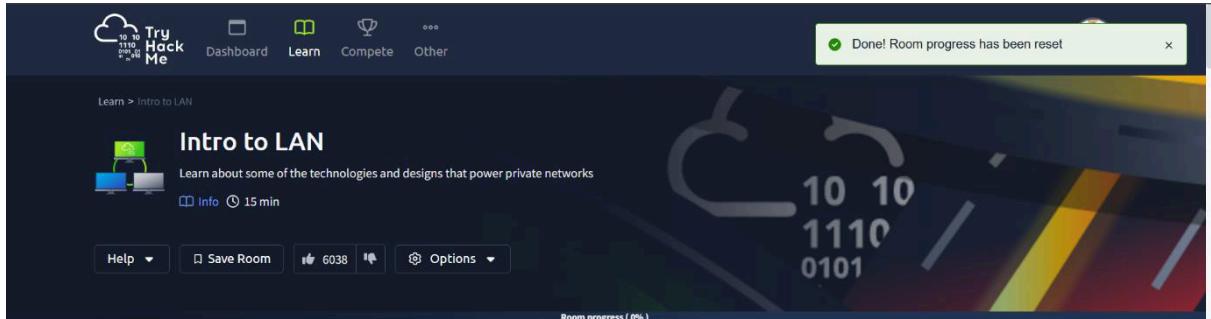
What flag do you get when you ping 8.8.8.8?  
THM{I\_PINGED\_THE\_SERVER} ✓ Correct Answer

Task 5 ○ Continue Your Learning: Intro to LAN

## Completion



## Intro to LAN



### Task 1: Introducing LAN Topologies

#### Explanation:

- LAN (Local Area Network) topologies refer to the physical or logical layout of the

network. Common LAN topologies include **bus**, **star**, **ring**, and **mesh**. Each topology

has its advantages and disadvantages based on factors such as scalability, fault

tolerance, and ease of installation.

- Star topology, for example, is widely used in modern networks due to its simplicity

and reliability. In this topology, each device is connected to a central device (such as a switch).

The screenshot shows a user interface for a cybersecurity challenge. On the left, there's a list of questions with dropdown answer fields and 'Correct Answer' and 'Hint' buttons. The first question asks about the verb routers perform, with 'Routing' selected. The second asks what device connects devices to a network, with 'Switch' selected. The third asks about cost-efficiency, with 'Bus Topology' selected. The fourth asks about expense, with 'Star Topology' selected. The fifth asks for a flag from an attached lab, with 'THM[TOPOLOGY\_FLAWS]' selected. On the right, a large blue box indicates the task is 'Completed' with the message 'You found all the topology flaws' and the flag 'THM[TOPOLOGY\_FLAWS]'. At the bottom left, it says 'Task 2 A Primer on Subnetting'.

## Task 2: A Primer on Subnetting

### Explanation:

- Subnetting is the process of dividing a larger network into smaller, more manageable subnetworks (subnets). It helps improve performance, security, and management.
- A subnet mask is used to determine the network and host portions of an IP address, allowing devices within the same subnet to communicate directly with each other.

ANSWER the questions below

What is the technical term for dividing a network up into smaller pieces?

✓ Correct Answer

How many **bits** are in a subnet mask?

✓ Correct Answer

💡 Hint

What is the range of a section (octet) of a subnet mask?

✓ Correct Answer

💡 Hint

What address is used to identify the start of a network?

✓ Correct Answer

💡 Hint

What address is used to identify devices within a network?

✓ Correct Answer

💡 Hint

What is the name used to identify the device responsible for sending data to another network?

✓ Correct Answer

### Task 3: ARP

#### Explanation:

- ARP (Address Resolution Protocol) is used to map IP addresses to MAC (Media Access Control) addresses in a local network. When a device needs to communicate with another device on the same network, ARP helps translate the device's IP address to its physical MAC address.
- This process is essential for proper data transmission over a network.

Room progress ( 80% )

Answer the questions below

What does ARP stand for?

Address Resolution Protocol ✓ Correct Answer

What category of ARP Packet asks a device whether or not it has a specific IP address?

Request ✓ Correct Answer

What address is used as a physical identifier for a device on a network?

MAC Address ✓ Correct Answer ? Hint

What address is used as a logical identifier for a device on a network?

IP Address ✓ Correct Answer ? Hint

**Task 4** ○ DHCP

✓ Woop woop! Your answer is correct ×  
**You found all the topology flaws**  
**THM{TOPOLOGY\_FAULTS}**

## Task 4: DHCP

### Explanation:

- DHCP (Dynamic Host Configuration Protocol) is responsible for dynamically assigning IP addresses to devices on a network. This eliminates the need for manual IP address configuration and helps ensure that devices can easily join a network.
- A DHCP server manages the assignment of IP addresses, leases, and related network configuration information.

Room progress ( 95% )



Answer the questions below

What type of DHCP packet is used by a device to **retrieve an IP address**?

DHCP Discover ✓ Correct Answer ? Hint

What type of DHCP packet does a device **send once it has been offered an IP address** by the DHCP server?

DHCP Request ✓ Correct Answer ? Hint

Finally, **what is the last** DHCP packet that is sent to a device from a DHCP server?

DHCP ACK ✓ Correct Answer ? Hint

✓ Woop woop! Your answer is correct ×  
✓ Woop woop! Your answer is correct ×  
✓ Woop woop! Your answer is correct ×  
**Completed**  
**You found all the topology flaws**  
**THM{TOPOLOGY\_FAULTS}**

## Task 5: Continue Your Learning: OSI Model

## Explanation:

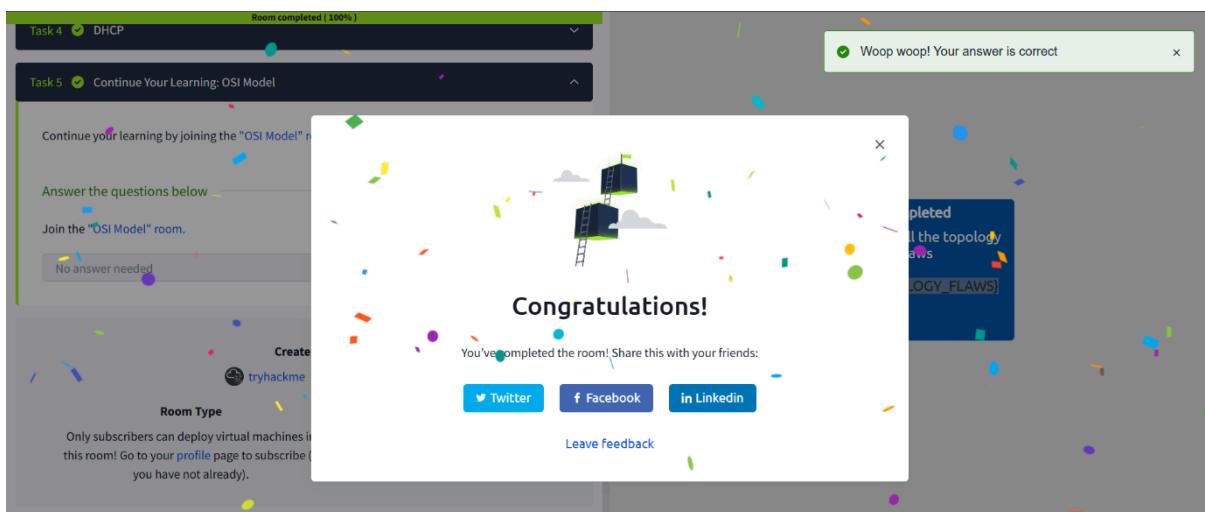
- The **OSI Model** (Open Systems Interconnection) is a conceptual framework used to

understand network communication. It is divided into seven layers: Physical, Data

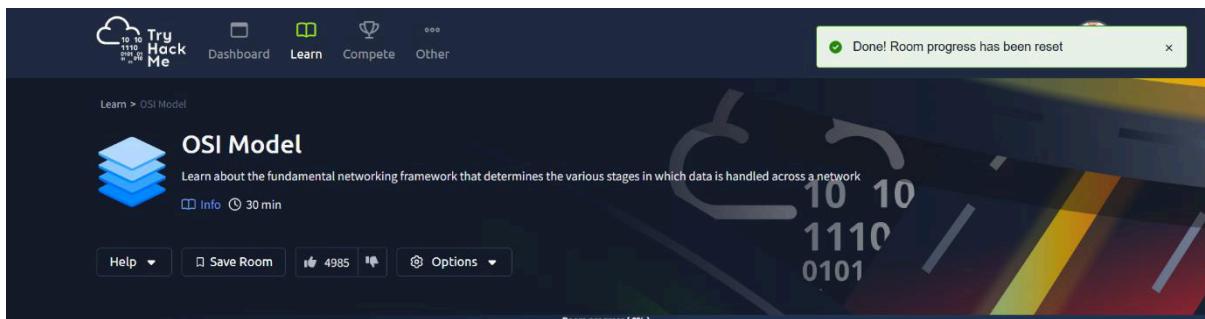
Link, Network, Transport, Session, Presentation, and Application.

- Each layer performs specific tasks that contribute to the overall function of network

communication. The OSI model is essential for understanding how devices communicate in a network.



# OSI Model



## Task 1: What is the OSI Model?

### Explanation:

- The **OSI Model** (Open Systems Interconnection) is a conceptual framework used to

understand how different networking protocols work together to enable communication over a network.

- It consists of **7 layers**, each responsible for specific tasks during data transmission,

from physical transmission to application-level communication. The OSI model is

important for understanding the complexities of networking.

Room progress (10%)

Woop woop! Your answer is correct

Answer the questions below

What does the "OSI" in "OSI Model" stand for?

Open Systems Interconnection ✓ Correct Answer

How many layers (in digits) does the OSI model have?

7 ✓ Correct Answer

What is the key term for when pieces of information get added to data?

encapsulation ✓ Correct Answer

## Task 2: Layer 1 - Physical

### Explanation:

- Layer 1, the **Physical Layer**, is responsible for the transmission and reception of raw

data bits over a physical medium, such as cables or wireless connections.

- This layer defines electrical, mechanical, and procedural aspects of data transmission,

including voltage levels, timings, and physical connectors.

The screenshot shows a digital quiz interface. At the top right, a green box says "Woop woop! Your answer is correct". Below it, there are three questions:

- What is the name of this Layer?  
Physical ✓ Correct Answer
- What is the name of the numbering system that is both 0's and 1's?  
Binary ✓ Correct Answer
- What is the name of the cables that are used to connect devices?  
Ethernet Cables ✓ Correct Answer

## Task 3: Layer 2 - Data Link

### Explanation:

- Layer 2, the **Data Link Layer**, ensures reliable data transfer across the physical network. It divides the data into frames and handles addressing (MAC addresses) and error detection.
- This layer also manages flow control to prevent congestion and retransmits corrupted data.

The screenshot shows a digital quiz interface. At the top right, a green box says "Woop woop! Your answer is correct". Below it, there is explanatory text about the Data Link Layer:

The data link layer focuses on the physical addressing of the transmission. It receives a packet from the network layer (including the IP address for the remote computer) and adds in the physical **MAC** (Media Access Control) address of the receiving endpoint. Inside every network-enabled computer is a **Network Interface Card (NIC)** which comes with a unique MAC address to identify it.

MAC addresses are set by the manufacturer and literally burnt into the card; they can't be changed – although they can be spoofed. When information is sent across a network, it's actually the physical address that is used to identify where exactly to send the information.

Additionally, it's also the job of the data link layer to present the data in a format suitable for transmission.

Answer the questions below

What is the name of this Layer?  
Data Link ✓ Correct Answer

What is the name of the piece of hardware that all networked devices come with?  
Network Interface Card ✓ Correct Answer 💡 Hint

## Task 4: Layer 3 - Network

### Explanation:

- Layer 3, the **Network Layer**, is responsible for routing data between devices on

different networks. It handles logical addressing, typically through **IP addresses**, and

determines the best path for data to travel.

- This layer includes protocols like **IP, ICMP, and ARP**.

Room progress (44%)

Answer the questions below

What is the name of this Layer?

Network ✓ Correct Answer

Will packets take the most optimal route across a network? (Y/N)

Y ✓ Correct Answer

What does the acronym "OSPF" stand for?

Open Shortest Path First ✓ Correct Answer

What does the acronym "RIP" stand for?

Routing Information Protocol ✓ Correct Answer

What type of addresses are dealt with at this layer?

IP Addresses ✓ Correct Answer 💡 Hint

## Task 5: Layer 4 - Transport

### Explanation:

- Layer 4, the **Transport Layer**, ensures reliable data transfer between devices. It is

responsible for flow control, error detection, and end-to-end communication.

- Protocols such as **TCP** and **UDP** operate at this layer. TCP is reliable, while UDP is

faster but less reliable.

Room progress ( 72% )

Transmission Control Protocol ✓ Correct Answer

What does UDP stand for?

User Datagram Protocol ✓ Correct Answer

What protocol guarantees the accuracy of data?

TCP ✓ Correct Answer

What protocol doesn't care if data is received or not by the other device?

UDP ✓ Correct Answer

What protocol would an application such as an email client use?

TCP ✓ Correct Answer

What protocol would an application that downloads files use?

TCP ✓ Correct Answer

What protocol would an application that streams video use?

UDP ✓ Correct Answer



## Task 6: Layer 5 - Session

### Explanation:

- Layer 5, the **Session Layer**, manages sessions or connections between devices. It establishes, maintains, and terminates communication sessions between two devices.
- This layer also controls the dialogue between systems and ensures data is properly synchronized.

Room progress ( 79% )

Woop woop! Your answer is correct

Once data has been correctly translated or formatted from the presentation layer (layer 6), the session layer (layer 5) will begin to create and maintain the connection to other computer for which the data is destined. When a connection is established, a session is created. Whilst this connection is active, so is the session.

The session layer is also responsible for closing the connection if it hasn't been used in a while or if it is lost. Additionally, a session can contain "checkpoints," where if the data is lost, only the newest pieces of data are required to be sent, saving bandwidth.

What is worthy of noting is that sessions are unique — meaning that data cannot travel over different sessions, but in fact, only across each session instead.

Answer the questions below

What is the name of this layer?

Session ✓ Correct Answer

What is the technical term for when a connection is successfully established?

Session ✓ Correct Answer Hint

Task 7 Layer 6 - Presentation

## Task 7: Layer 6 - Presentation

### Explanation:

- Layer 6, the **Presentation Layer**, is responsible for translating, encrypting, and

compressing data. It ensures that data is presented in a format that the receiving

system can understand.

- It handles data encoding, such as converting between different character sets (e.g., ASCII to EBCDIC).

Room progress ( 86% )

Layer 6 of the OSI model is the layer in which standardisation starts to take place. Because software developers can develop any software needs to be handled in the same way — no matter how the software works.

This layer acts as a translator for data to and from the application layer (layer 7). The receiving computer will also understand data sent to a computer in one format destined for in another format. For example, when you send an email, the other user may have another email client to you, but the contents of the email will still need to display the same.

Security features such as data encryption (like HTTPS when visiting a secure site) occur at this layer.

Answer the questions below

What is the name of this Layer?

Presentation ✓ Correct Answer

What is the main purpose that this Layer acts as?

Translator ✓ Correct Answer 💡 Hint

Task 8 Layer 7 - Application

Task 9 Practical - OSI Game

## Task 8: Layer 7 - Application

### Explanation:

- Layer 7, the **Application Layer**, is the top layer of the OSI model. It interacts directly

with end-users and provides application services such as **HTTP, FTP, SMTP**, and more.

- This layer is where network services and applications run, such as web browsers or email clients.

The screenshot shows a digital workspace interface. At the top, a sidebar lists "Room progress (93%)" with a list of files: Family Photos, Music, Notes, Scans, Uncle Kev's USB, Website, File: passwords.txt, and public. A message box indicates "Woop woop! Your answer is correct". Below this, a question asks "What is the name of this Layer?", with the answer "Application" highlighted in a grey box, accompanied by a green "Correct Answer" button. Another question asks "What is the technical term that is given to the name of the software that users interact with?", with the answer "Graphical User Interface" highlighted in a grey box, also with a green "Correct Answer" button. At the bottom, there are two task cards: "Task 9 Practical - OSI Game" and "Task 10 Continue Your Learning: Packets & Frames".

## Task 9: Practical - OSI Game

### Explanation:

- In this practical task, you are likely to simulate how the OSI model operates and how

data flows through the layers.

- This exercise helps reinforce your understanding of the theoretical concepts by

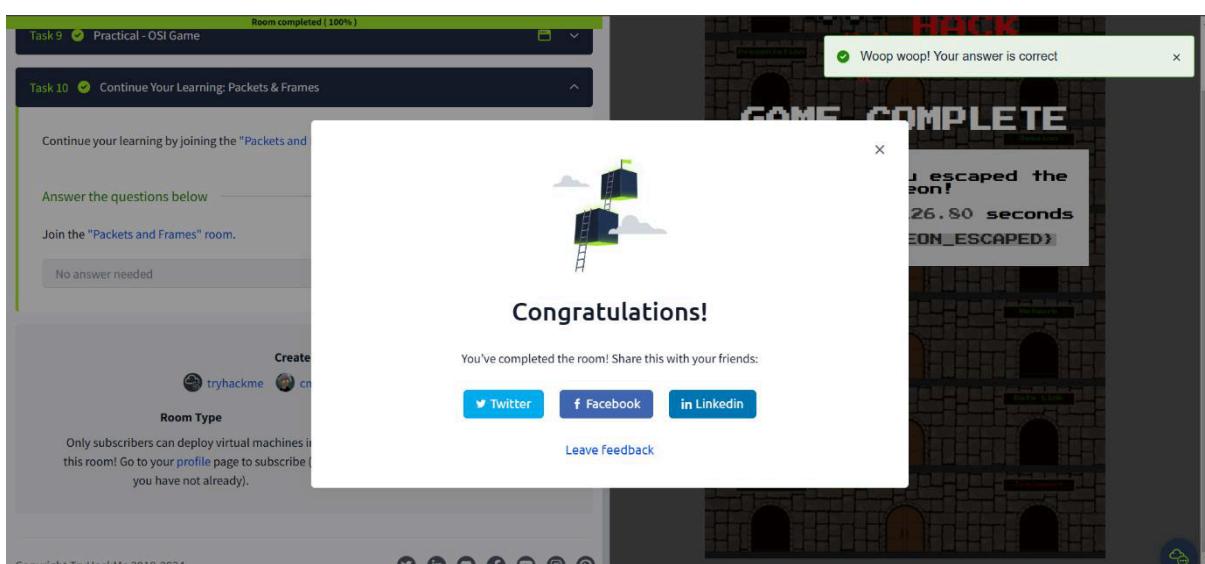
providing a hands-on approach to how data moves across networks.

The screenshot shows the "Practical - OSI Game" task card. It displays instructions for escaping an OSI dungeon, mentioning a staff high score of 19 seconds. A "View Site" button is present. Below, a question asks "Escape the dungeon to retrieve the flag. What is the flag?", with the answer "THM{OSI\_DUNGEON\_ESCAPED}" entered in a text field and a "Submit" button next to it. To the right, a "GAME COMPLETE" screen from the game is shown, displaying the message "Well done, you escaped the dungeon! Completed In 126.80 seconds THM{OSI\_DUNGEON\_ESCAPED}" over a background of a stone dungeon wall with various doors labeled "Data Layer", "User Layer", "Session Layer", and "Transport Layer".

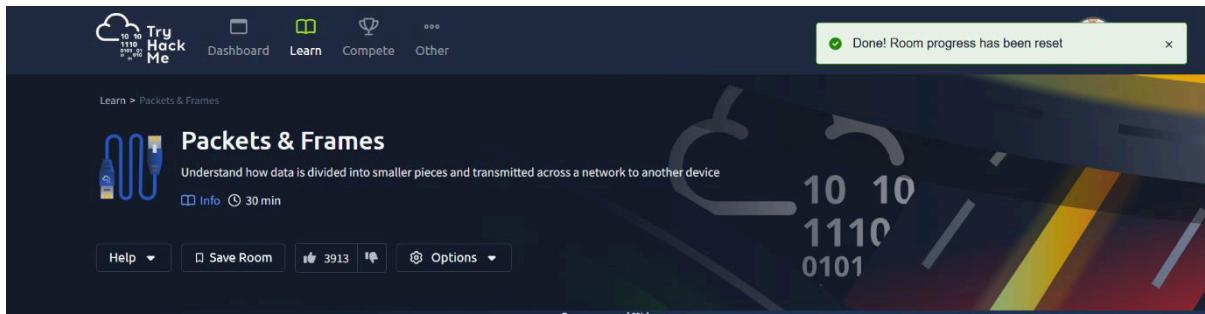
## Task 10: Continue Your Learning: Packets & Frames

## Explanation:

- This task serves as a transition to the next module, which focuses on how data is organized into **packets** and **frames** for transmission over networks.
- Understanding packets and frames is critical for further learning about how data travels across networks and how different protocols function.



## Packets & Frames



### Task 1: What are Packets and Frames

## Explanation:

- **Packets** are small units of data transmitted across a network. Each packet contains a portion of the original data, along with necessary information such as source and destination IP addresses.
- **Frames** are packets at the Data Link Layer. They add additional information such as MAC addresses and error-checking data to ensure data integrity during transmission.

The screenshot shows a digital quiz interface with the following details:

- Room progress (16%)**: Top right corner.
- Address**: Input field.
- Answer the questions below**: Instruction.
- What is the name for a piece of data when it **does have** IP addressing information?**: Question.
  - Packet**: Answer input field.
  - Correct Answer**: Green button with checkmark.
  - Hint**: Orange button with question mark.
- What is the name for a piece of data when it **does not have** IP addressing information?**: Question.
  - Frame**: Answer input field.
  - Correct Answer**: Green button with checkmark.
  - Hint**: Orange button with question mark.
- Task 2**: Radio button next to **TCP/IP (The Three-Way Handshake)**.
- Task 3**: Radio button next to **Practical - Handshake**.
- Task 4**: Radio button next to **UDP/IP**.

## Task 2: TCP/IP (The Three-Way Handshake)

### Explanation:

- The **Three-Way Handshake** is the process used by the **TCP** (Transmission Control

Protocol) to establish a reliable connection between two devices. The three steps are:

1. **SYN**: The client sends a synchronization request.
2. **SYN-ACK**: The server acknowledges the request.
3. **ACK**: The client acknowledges the server's response, completing the connection.

This process ensures both devices are ready for communication.

In the illustration, we can see that Alice has sent Bob a "FIN" packet. Because Bob received this, he will let Alice know that he received it and that he also wants to close the connection (using FIN). Alice has heard Bob loud and clear and will let Bob know that she acknowledges this.

Answer the questions below

What is the header in a TCP packet that ensures the integrity of data?

✓ Correct Answer

Provide the order of a normal Three-way handshake (with each step separated by a comma)

✓ Correct Answer ✗ Hint

## Task 3: Practical - Handshake

### Explanation:

- In this practical task, you will likely simulate the **Three-Way Handshake** process to reinforce understanding of how TCP connections are established in real-world scenarios.

Task 1 ✓ What are Packets and Frames

Task 2 ✓ TCP/IP (The Three-Way Handshake)

Task 3 ✓ Practical - Handshake

Help Alice and Bob communicate by re-assembling the TCP handshake in the correct order in the static lab attached to this task! View Site

Enter the value of the flag given at the end of the conversation into the question below.

Answer the questions below

What is the value of the flag given at the end of the conversation?

✓ Correct Answer

Task 4 ✗ UDP/IP

Task 5 ✗ Ports 101 (Practical)

Task 6 ✗ Continue Your Learning: Extending Your Network

Woop woop! Your answer is correct

THM[TCP\_CHATTER]

Human TCP Connection

## Task 4: UDP/IP

### Explanation:

- **UDP (User Datagram Protocol)** is a connectionless protocol, meaning it does not establish a connection before transmitting data. Unlike TCP, UDP does not guarantee reliable delivery or order of packets.

- This makes UDP faster but less reliable, often used for applications where speed is more important than reliability (e.g., video streaming or online gaming).

Room progress (75%)

Answer the questions below

What does the term "UDP" stand for?

User Datagram Protocol ✓ Correct Answer

What type of connection is "UDP"?

stateless ✓ Correct Answer

What protocol would you use to transfer a file?

TCP ✓ Correct Answer

What protocol would you use to have a video call?

UDP ✓ Correct Answer

Task 5 Ports 101 (Practical)

THM(TCP\_CHATTER)

Woop woop! Your answer is correct

## Task 5: Ports 101 (Practical)

### Explanation:

- **Ports** are used by protocols (such as TCP/UDP) to distinguish between different services running on a device. This task introduces common port numbers and how they are used to identify specific services, like **HTTP** (port 80) or **SSH** (port 22).

In this practical task, you will learn how to identify and use ports in real-world networking scenarios.

Room progress (63%)

Remote Desktop Protocol (RDP) 3389

This protocol is a secure means of logging in to a system using a visual desktop interface (as opposed to the text-based limitations of the SSH protocol).

We have only briefly covered the more common protocols in cybersecurity. You can [find a table of the 1024 common ports listed](#) for more information.

What is worth noting here is that these protocols only follow the standards. I.e. you can administer applications that interact with these protocols on a different port other than what is the standard (running a web server on 8080 instead of the 80 standard port). Note, however, applications will presume that the standard is being followed, so you will have to provide a colon (:) along with the port number.

**Practical Challenge:**

Open the site attached to this task and connect to the IP address "8.8.8.8" on port "1234", and you'll receive a flag.

Answer the questions below

What is the flag received from the challenge?

THM{YOU\_CONNECTED\_TO\_A\_PORT} ✓ Correct Answer

IP Address Port Connected

user@thm:~\$ nc 8.8.8.8 1234

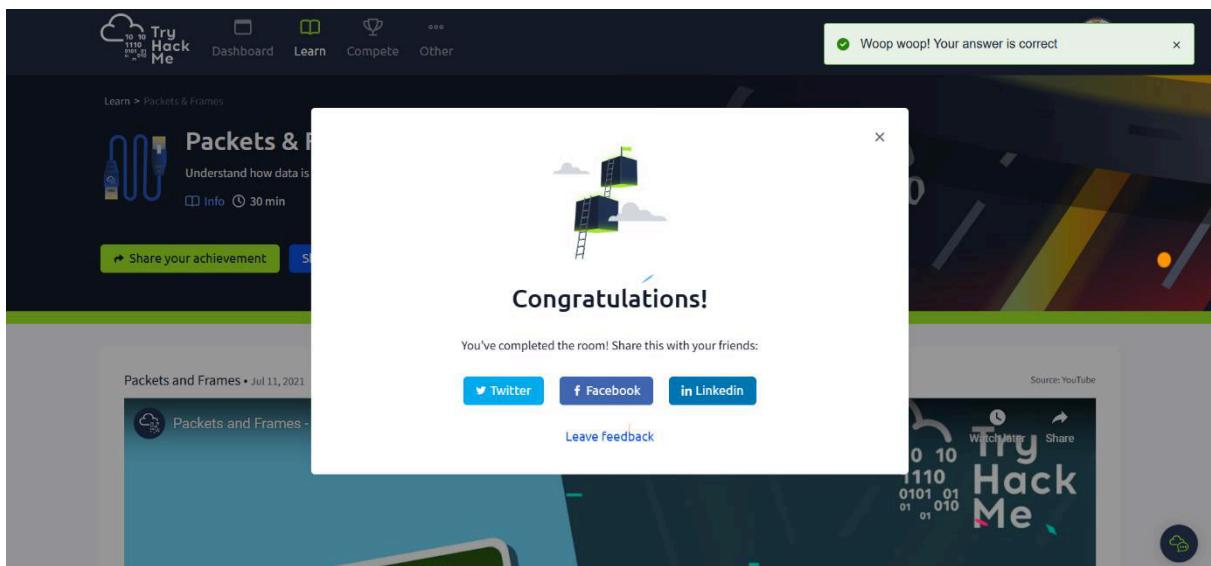
Connection Received: THM{YOU\_CONNECTED\_TO\_A\_PORT}

user@thm:~\$ nc

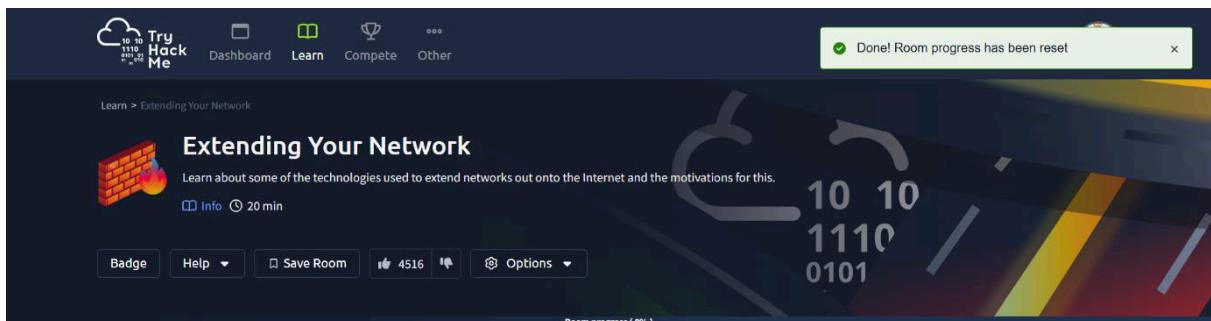
Woop woop! Your answer is correct

## Task 6: Continue Your Learning: Extending Your Network Explanation:

- This task transitions into learning about **network extension** techniques, focusing on how networks are extended and connected to larger networks like the **Internet**.



# Extending Your Network



## Task 1: Introduction to Port Forwarding

**Explanation:**

- **Port forwarding** is a technique used to allow external devices to access services on a private network. By forwarding ports, a router directs traffic from the outside world to a specific device within the local network. This is often used to allow remote access to internal servers or services (e.g., a web server).

Room progress (9%)

Port 80

The internet

Woop woop! Your answer is correct

With this design, Network #2 will now be able to access the webserver running on Network #1 using the public IP address of Network #1 (82.62.51.70).

It is easy to confuse port forwarding with the behaviours of a firewall (a technology we'll come on to discuss in a later task). However, at this stage, just understand that port forwarding opens specific ports (recall how packets work). In comparison, firewalls determine if traffic can travel across these ports (even if these ports are open by port forwarding).

Port forwarding is configured at the router of a network.

Answer the questions below

What is the name of the device that is used to configure port forwarding?

router

✓ Correct Answer

## Task 2: Firewalls 101

### Explanation:

- **Firewalls** act as barriers between trusted internal networks and potentially untrusted external networks, such as the internet. They inspect incoming and outgoing network traffic based on predefined security rules. Firewalls can help prevent unauthorized access, filter malicious traffic, and protect against attacks like denial-of-service (DoS) or unauthorized data access.

Room progress (36%)

Whilst these firewalls use much fewer resources than alternatives, they are much dumber. For example, these defined within them. If a rule is not exactly matched, it is effectively useless.

However, these firewalls are great when receiving large amounts of traffic from a set of hosts (such as a Distributed Denial-of-Service attack)

Woop woop! Your answer is correct

Answer the questions below

What layers of the OSI model do firewalls operate at?

Layer 3, Layer 4

✓ Correct Answer

What category of firewall inspects the **entire connection**?

stateful

✓ Correct Answer

What category of firewall inspects individual packets?

stateless

✓ Correct Answer

Task 3 Practical - Firewall

## Task 3: Practical - Firewall

### Explanation:

- In this practical task, you will likely learn how to configure or implement a firewall to secure a network. The task will provide hands-on experience in managing firewall rules and using firewalls effectively to control traffic in a network.

Room progress (45%)

Task 2 🔐 Firewalls 101

Task 3 🔐 Practical - Firewall

Deploy the static site attached to this task. You must **correctly configure the firewall to prevent the device from overloading** to receive the flag!

[View Site](#)

Answer the questions below

What is the flag?

THM[FIREWALLS\_RULE]

Correct Answer

Task 4 🔐 VPN Basics

Task 5 🔐 LAN Networking Devices

Task 6 🔐 Practical - Network Simulator

Created by

Firewall Rules

Woop woop! Your answer is correct

You saved the server!

THM[FIREWALLS\_RULE]

Source IP	Destination IP	Port	Action
198.51.100.34	203.0.110.1	21	DROP
198.51.100.34	203.0.110.1	80	DROP
198.51.100.34	203.0.110.1	8080	DROP

198.51.100.34

203.0.110.1

router

198.51.100.34

203.0.113.99

## Task 4: VPN Basics

### Explanation:

- Virtual Private Networks (VPNs)** provide a secure way to connect to remote networks over the internet. They encrypt data and route it through a secure tunnel, making it difficult for outsiders to intercept or access sensitive information. VPNs are often used to protect user privacy and securely access corporate networks remotely.

The screenshot shows a challenge interface with a table titled "THM[FIREWALLS\_RULE]" containing the following data:

	198.51.100.34	203.0.110.1	21	DROP
1	198.51.100.34	203.0.110.1	80	DROP
2	198.51.100.34	203.0.110.1	8080	DROP

Below the table is a network diagram with three hosts connected to a central router labeled "router".

## Task 5: LAN Networking Devices

### Explanation:

- This task likely covers the various devices used in **Local Area Networks (LANs)**.

Devices such as **routers**, **switches**, and **access points** facilitate communication between devices in a network. Each device plays a specific role in ensuring efficient data transmission and network connectivity.

The screenshot shows a practical network simulator interface with a table titled "THM[FIREWALLS\_RULE]" containing the following data:

	198.51.100.34	203.0.110.1	21	DROP
1	198.51.100.34	203.0.110.1	80	DROP
2	198.51.100.34	203.0.110.1	8080	DROP

A green box displays the message: "You saved the server!"

## Task 6: Practical - Network Simulator

### Explanation:

- The practical simulation will give you the opportunity to configure and manage different network devices and observe how networks function in a simulated environment. It will likely involve hands-on experience with **routing**, **firewalls**, **VPNs**, and other network devices to manage and secure network traffic.

Room progress (81%)

**Task 6** Practical - Network Simulator

An embedded page at static-labs.tryhackme.cloud says  
THM[YOU'VE\_GOT\_DATA]

Deploy the static site attached to this task. And experiment with the network simulator. The simulator will break down every step a packet needs to take to get from point a to b. Try sending a TCP packet from computer1 to computer3 to reveal a flag.

**Note:** Please use the Chrome or Firefox browser to complete this practical exercise.

**Answer the questions below**

What is the flag from the network simulator?

Answer format: \*\*\*[\*\*\*\*\*]

How many HANDSHAKE entries are there in the Network Log?

Answer format: \*

Created by tryhackme cmmatic

Room Type	Users in Room	Created
Only subscribers can deploy virtual machines in this room! Go to your <a href="#">profile</a> page to subscribe (if you're not already a subscriber)	189,271	1240 days ago

The diagram shows a network topology with three computers (computer1, computer2, computer3) connected to two switches (switch1, switch2) and a central router. Computer1 is at the bottom left, computer2 is at the bottom right, and computer3 is at the top right. They are connected to switch1, switch2, and the router respectively. The router is also connected to both switches.

**Legend**

- TCP Packet
- TCP Handshake
- UDP Packet

**Send Packet**

From: computer1  
To: computer3

**Network Log**

- Computer3 received ACK packet from computer1, Handshake Complete
- TCP: Sending TCP packet from computer1

## Completion:

Room completed (100%)

**Task 6** Practical - Network Simulator

Deploy the static site attached to this task. And experiment with the network simulator. The simulator will break down every step a packet needs to take to get from point a to b. Try sending a TCP packet from computer1 to computer3 to reveal a flag.

**Note:** Please use the Chrome or Firefox browser to complete this practical exercise.

**Answer the questions below**

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**Congratulations!**

Woop woop! Your answer is correct

You've completed the room! Share this with your friends:

**Leave feedback**

**Network Log**

- Computer3 received ACK packet from computer1, Handshake Complete
- TCP: Sending TCP packet from computer1