

Task 1 Introduction

The aim of this room is to provide a beginner's introduction to the basic principles of networking. Networking is a *massive* topic, so this really will just be a brief overview; however, it will hopefully give you some foundational knowledge of the topic, which you can build upon for yourself.

The topics that we're going to cover in this room are:

- The OSI Model
- The TCP/IP Model
- How these models look in practice
- An introduction to basic networking tools

Answer the questions below

Let's get started!

No answer needed

✓ Correct Answer

Task 2 The OSI Model: Overview

Answer the questions below

Which layer would choose to send data over TCP or UDP?

4

✓ Correct Answer

Which layer checks received information to make sure that it hasn't been corrupted?

2

✓ Correct Answer

In which layer would data be formatted in preparation for transmission?

2

✓ Correct Answer

Which layer transmits and receives data?

1

✓ Correct Answer

Which layer encrypts, compresses, or otherwise transforms the initial data to give it a standardised format?

6

✓ Correct Answer

Which layer tracks communications between the host and receiving computers?

Which layer tracks communications between the host and receiving computers?

5

✓ Correct Answer

Which layer accepts communication requests from applications?

7

✓ Correct Answer

Which layer handles logical addressing?

3

✓ Correct Answer

When sending data over TCP, what would you call the "bite-sized" pieces of data?

Segments

✓ Correct Answer

[Research] Which layer would the FTP protocol communicate with?

7

✓ Correct Answer

💡 Hint

Which transport layer protocol would be best suited to transmit a live video?

UDP

✓ Correct Answer

Which model was introduced first, OSI or TCP/IP?

TCP/IP

✓ Correct Answer

Which layer of the TCP/IP model covers the functionality of the Transport layer of the OSI model (**Full Name**)?

Transport

✓ Correct Answer

Which layer of the TCP/IP model covers the functionality of the Session layer of the OSI model (**Full Name**)?

Application

✓ Correct Answer

The Network Interface layer of the TCP/IP model covers the functionality of two layers in the OSI model. These layers are Data Link, and?.. (**Full Name**)?

Physical

✓ Correct Answer

Which layer of the TCP/IP model handles the functionality of the OSI network layer?

Internet

✓ Correct Answer

What kind of protocol is TCP?

Connection-based

✓ Correct Answer

🔗 Hint

What kind of protocol is TCP?

Connection-based

✓ Correct Answer

💡 Hint

What is SYN short for?

Synchronise

✓ Correct Answer

💡 Hint

What is the second step of the three way handshake?

SYN/ACK

✓ Correct Answer

What is the short name for the "Acknowledgement" segment in the three-way handshake?

ACK

✓ Correct Answer

Answer the questions below

What command would you use to ping the `bbc.co.uk` website?

`ping bbc.co.uk`

✓ Correct Answer

Ping `muirlandoracle.co.uk`

What is the IPv4 address?

`217.160.0.152`

✓ Correct Answer

🔗 Hint

What switch lets you change the interval of sent ping requests?

`-i`

✓ Correct Answer

🔗 Hint

What switch would allow you to restrict requests to IPv4?

`-4`

✓ Correct Answer

What switch would give you a more verbose output?

`-v`

✓ Correct Answer

Answer the questions below

Use traceroute on tryhackme.com

Can you see the path your request has taken?

No answer needed

✓ Correct Answer

What switch would you use to specify an interface when using Traceroute?

-i

✓ Correct Answer

💡 Hint

What switch would you use if you wanted to use TCP SYN requests when tracing the route?

-T

✓ Correct Answer

[Lateral Thinking] Which layer of the *TCP/IP* model will traceroute run on by default (Windows)?

Internet

✓ Correct Answer

Perform a whois search on **facebook.com**

No answer needed

✓ Correct Answer

What is the registrant postal code for facebook.com?

94025

✓ Correct Answer

When was the facebook.com domain first registered (Format: DD/MM/YYYY)?

29/03/1997

✓ Correct Answer

Perform a whois search on **microsoft.com**

(Note: Please ensure you have read the task above before attempting the next questions.)

No answer needed

✓ Correct Answer

Which city is the registrant based in?

Redmond

✓ Correct Answer

[OSINT] What is the name of the golf course that is near the registrant address for microsoft.com?

What city is the registrant based in?

Redmond

✓ Correct Answer

[OSINT] What is the name of the golf course that is near the registrant address for microsoft.com?

Bellevue Golf Course

✓ Correct Answer

What is the registered Tech Email for microsoft.com?

msnhst@microsoft.com

✓ Correct Answer

Answer the questions below

Read the final thoughts

No answer needed

✓ Correct Answer