



Section 1.0 Computer Networks Fundamentals

(What is a Computer Network)

Cracking OSCP: Your Roadmap to Ethical Hacking Success

[YouTube : HackProKP – Kailash Parshad](#)

[LinkedIn : Kailash Parshad](#)

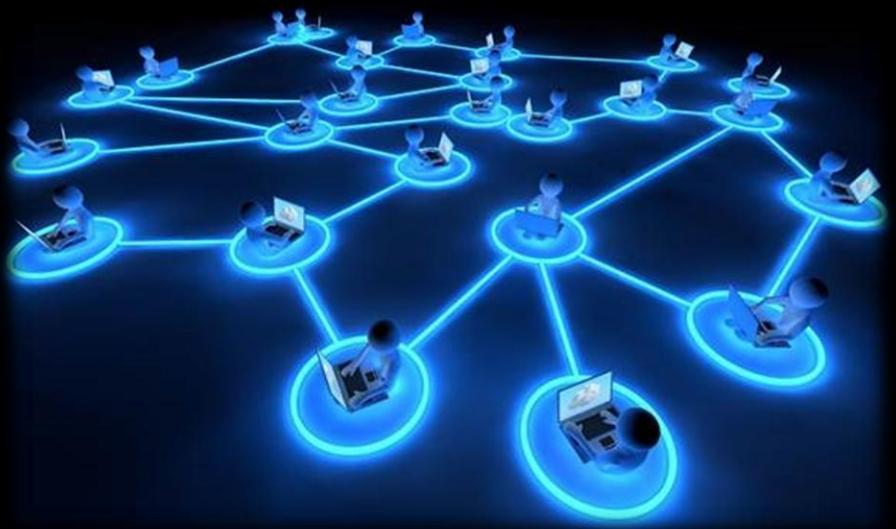
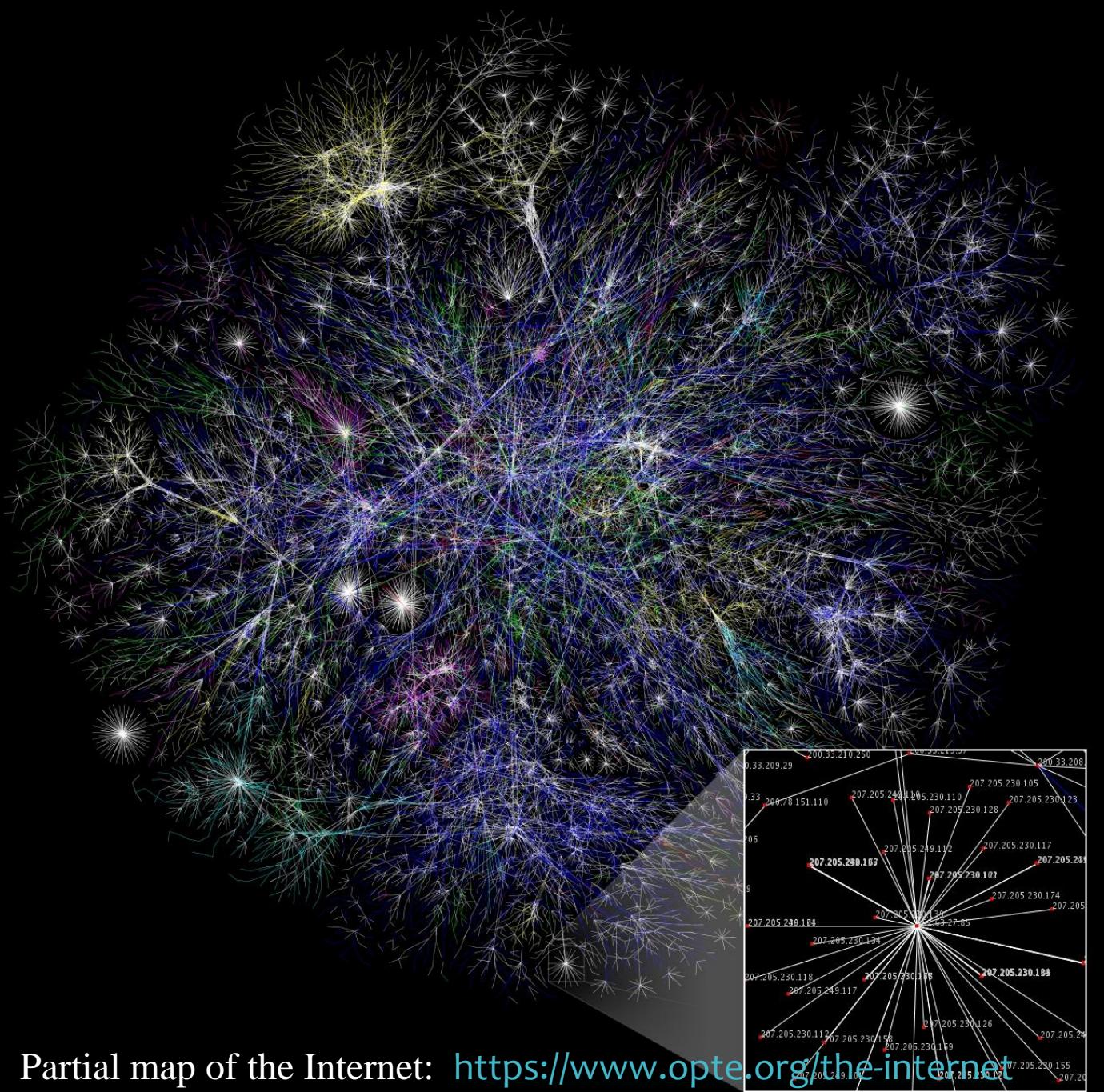
Topics:

- Computer Network - Definition
- Benefits of Computer Networks
- Other Network Types



Computer Networks - Definition

- A computer network is a collection of interconnected devices (computers, servers, routers, switches, etc.) that can communicate and share resources.
- These networks enable data and information to be transmitted between devices, allowing them to work together efficiently.
- **1. COMPUTER NETWORK REFERS TO INTERCONNECTED COMPUTING DEVICES THAT CAN EXCHANGE DATA AND SHARE RESOURCES WITH EACH OTHER – Amazon**



Computer Networks – Benefits

- Efficient data sharing: Users can share files, documents, and resources across the network.
- Centralized data management: Data can be stored centrally, making backups and data security easier to manage.
- Internet access: Networks provide connectivity to the Internet, enabling access to a vast amount of information and services.
- Collaboration: Networks facilitate collaboration through email, video conferencing, and shared applications.
- AND MUCH MORE...

Other Network Types:

1. Internet of Things (IoT):

1. IoT involves a group of physical devices or objects equipped with sensors, processing capabilities, software, and other technologies.
2. These devices are designed to connect to the internet and share data with other devices and systems.
3. Examples include smart thermostats, wearable fitness trackers, and connected home appliances.

2. Wireless Networks:

1. Wireless networks operate without physical cables and rely on various radio technologies.
2. Common examples include Wi-Fi networks that use routers to provide wireless connectivity.
3. Wi-Fi networks often operate on both 2.4GHz and 5GHz frequencies to accommodate different devices and requirements.

3. Mobile Networks:

1. Mobile networks are cellular networks that consist of a network of mobile devices and their base stations.
2. These networks enable mobile devices, such as smartphones and tablets, to connect to the internet and make calls.
3. Mobile networks are crucial for providing wireless communication on the go.

Other Network Types:

4. Software-Defined Networking (SDN):

1. SDN is an innovative approach to networking that uses software controllers and application programming interfaces (APIs).
2. It allows administrators to communicate with the underlying hardware infrastructure and direct traffic on the network.
3. SDN is often used in cloud computing environments to manage and optimize network resources dynamically.

5. The Air-Gapped Network: ★

1. An air-gapped network is a highly secure network physically and logically isolated from public networks.
2. It is intentionally not connected to the internet or any external network to minimize security risks.
3. Air-gapped networks are commonly used in environments where data confidentiality and security are paramount, such as classified government systems or critical infrastructure.

Thank You! 😊 ❤

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