Day 02

Kick-off

T5 - Networks and Systems Admin. Seminar

T-NSA-500

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1.1

What is a network ?

In information technology, a network is defined as the linking of two or more computer systems by means of a cable or wireless connection.
The main advantages of networks are :

- Sharing of data
- Sharing of resources
- Centralized management of programs and data
- Centralized storage and backup of data
- Shared computing power and storage capacity
- Simple administration of permissions and responsibilities

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12.5 %

Types of network

Depending on the size and scope of the computer network, it is possible to differentiate and categorise networks

- **LAN** : Local Area Network
- **MAN** : Metropolitan Area Network
- **WAN** : Wide Area Network

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25 %

IP

IP : Internet Protocol

An IP address is an identification number assigned to a device connected to a network.

Having an IP address allows that device to communicate with other devices that have an IP address themselves

IPv4 : 192.168.0.1
IPv6 : 2001:db8:0:85a3::ac1f:8001

Gateway

A gateway is a hardware and software system for linking two networks, to interface between different network protocols

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DHCP

DHCP : Dynamic Host Configuration Protocol

It is a protocol that allows a computer that connects to a network to obtain its network configuration dynamically, i.e. without any particular intervention

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DNS

DNS : Domain Name System

The DNS is like the telephone directory of the Internet. Internet users access online information via domain names (e.g. intra.epitech.eu), while browsers interact via IP addresses.

The DNS translates domain names into IP addresses so that browsers can load web resources.

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Tips & Tricks

- Use **netstat** to get information such as routing tables, …
- Use **tcpdump** or **wireshark** to analyse packets

Questions ?

Do you have any questions ?

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100 %