



nkaliyamurthy 2/07/2024 ↻

Recap from Previous Lecture Session NOSS

What did we discuss so far in our earlier lecture (s) ? List the topics and add a short note on it....

↻ ANONYMOUS 2/8/24 8:59AM

IP Address

Internet Protocol Address

Two types of IP addresses, IPv4
and IPv6 (IPv4 is the more popular)

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IP address can be considered as a virtual address that helps
identify a computer, router, server and website

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What a host is

What a node

Ip address

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Data is transferred over the
internet by dividing it into packets.

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Router and Switches

If a router or a switch **needs** an IP address

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Hosts

Devices connected in a home

Ip addresses

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Data at the application layer

When you send or receive data on the
internet l, it usually starts at the application
layer. This layer imcludes software applications

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Difference between routers and switches

Switches are layer 2 devices which means they use MAC addresses as an identifier, whereas routers are layer 3 devices which mean they use an IP address as an identifier on a network.

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IP address, Network router and switch

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IP

Packets can be delivered using TCP or UDP

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The internet backbone

The internet backbone is the main pathway for data to travel across great distances within the internet.

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How computers connect over networks

The different types of networks

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Two devices need a IP address to communicate between them

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Internal/external IP address

an internal IP address is not publicly routed. An external IP address is a publicly routed IP address.

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**The difference between a host and a node.
Hosts have IP addresses. Nodes don't need IP addresses however they can assigned.**

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The router examines the destination ip address in the packet header using its routing table

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Computer networks
Local area network (LAN)
Wide area network (WAN)
Home area network (HAN)
Metropolitan area network (MAN)

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IP address => ipv4/ipv6
Host/Node
Data is transferred by dividing into packets

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Different classes of type 4 ip addresses
Type a, b, and c address ranges

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NAT
NAT is used to translate the private internal IP address to a global public address

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ip addresses have ipv4 and ipv6

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IP Addresses
Packets require both a MAC and IP address even if they are only used by layer 2 devices

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IPv4 and IPv6
The differences between the two and the benefits of IPv6

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Tcp, Udp

TCP is a connection-based protocol and UDP is connectionless

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Udp vs tcp

Tcp tracks the packets and resend any dropped packets

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TCP establishes a connection before sending. UDP is quicker but does not establish a connection first

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TCP slower

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Recap from Last Week

IP addresses are used to establish communications between computers and networks, both privately (within internal networks only and cannot connect to the internet) and publicly (being able to connect to the internet).

There are two types of IP Addresses.

1. IPv4, structured as part of subnetting and helps identify tiny the sunset mask, it is formatted in binary to create an IPv4 address via 32-bits (4 bytes of 8-bits each).

I ran out of time. :(

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