Panel 1

Last time:

IP v6 header format

IP v6 addressing

8 groups of 4 hex # (with shortcuts)

IP v4 versus IP v6

- bigger address space
- no checksums for IP header
- QoS
- no fragmentation

=> Transport layer

- reliable source to dest. delivery!

1

Panel 2

(5) Group 1: Firewall

Jeff Johnson + Steve Malinelli

(4) Group 2: DNS

Frank Gounello + Thomas Ochenhaus

(3) Group 3: DHCP

Anthony Ambrose + Stefano Polo ✓

(1) Group 4: ICMP

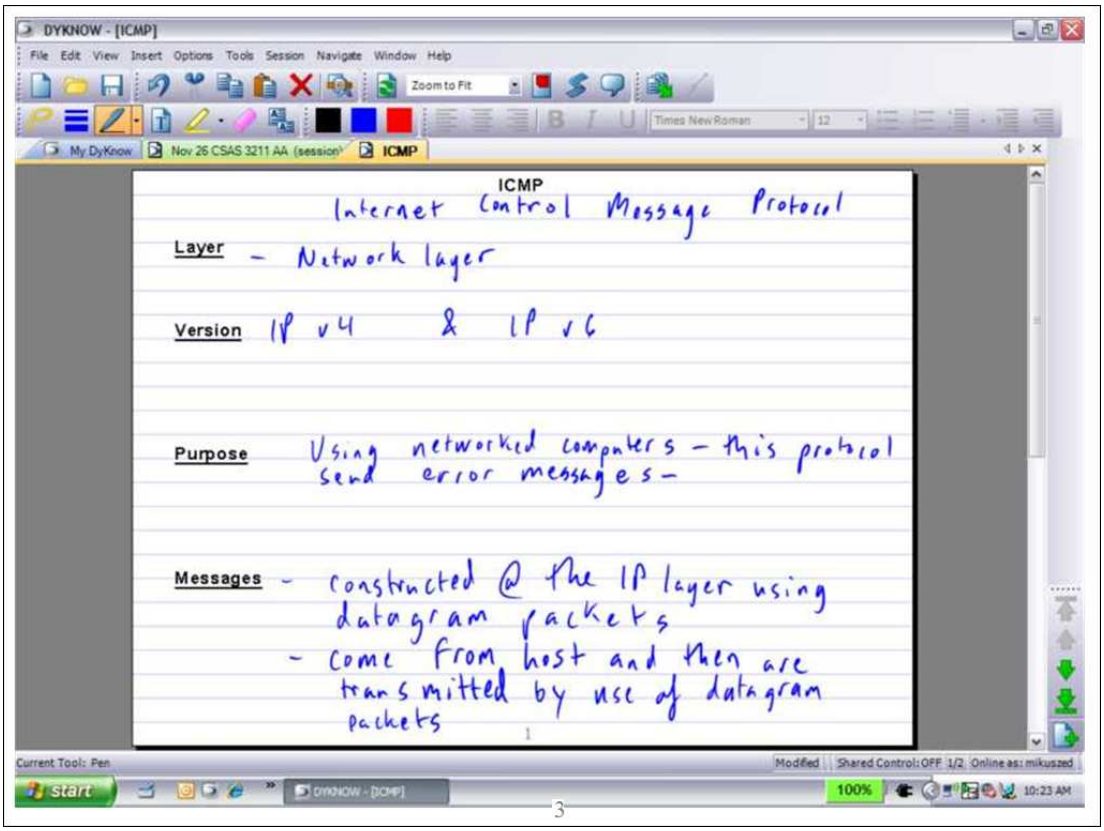
Yuri Abashkin + Ed Mikuszewski ✓

(2) Group 5: ARP + RARP

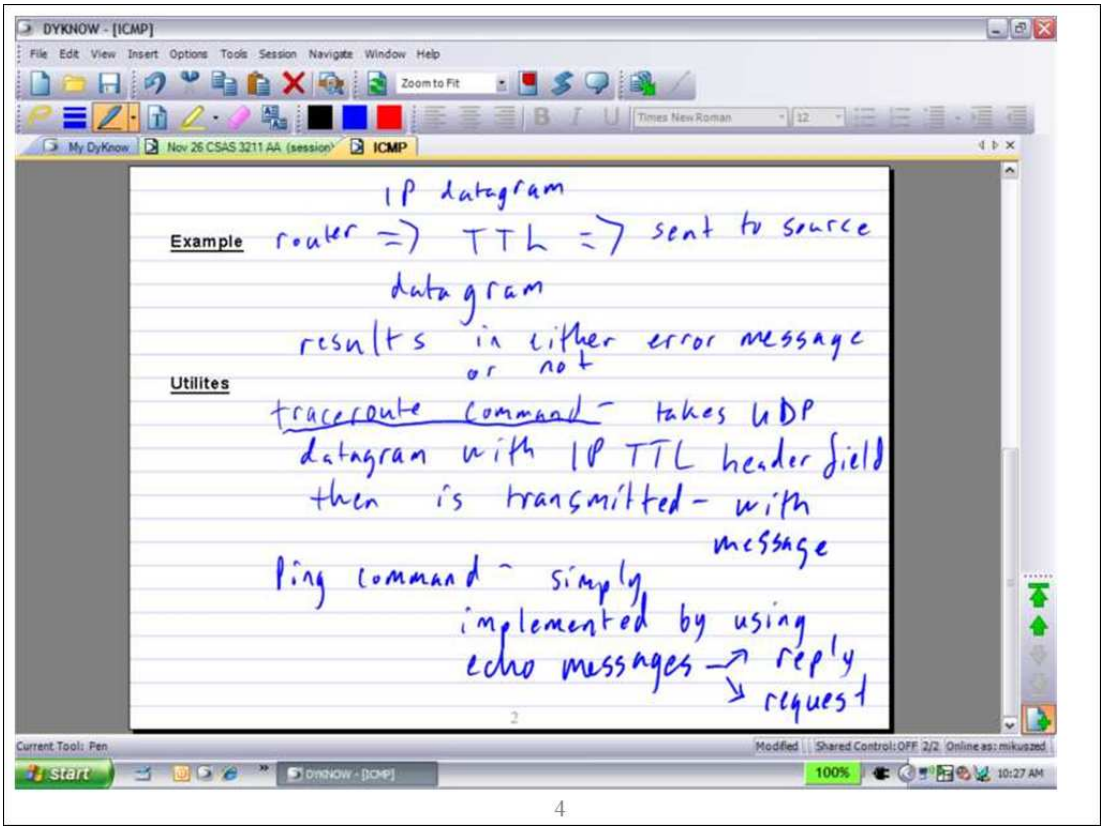
Chris Dubra + Michael Malinkov ✓

2

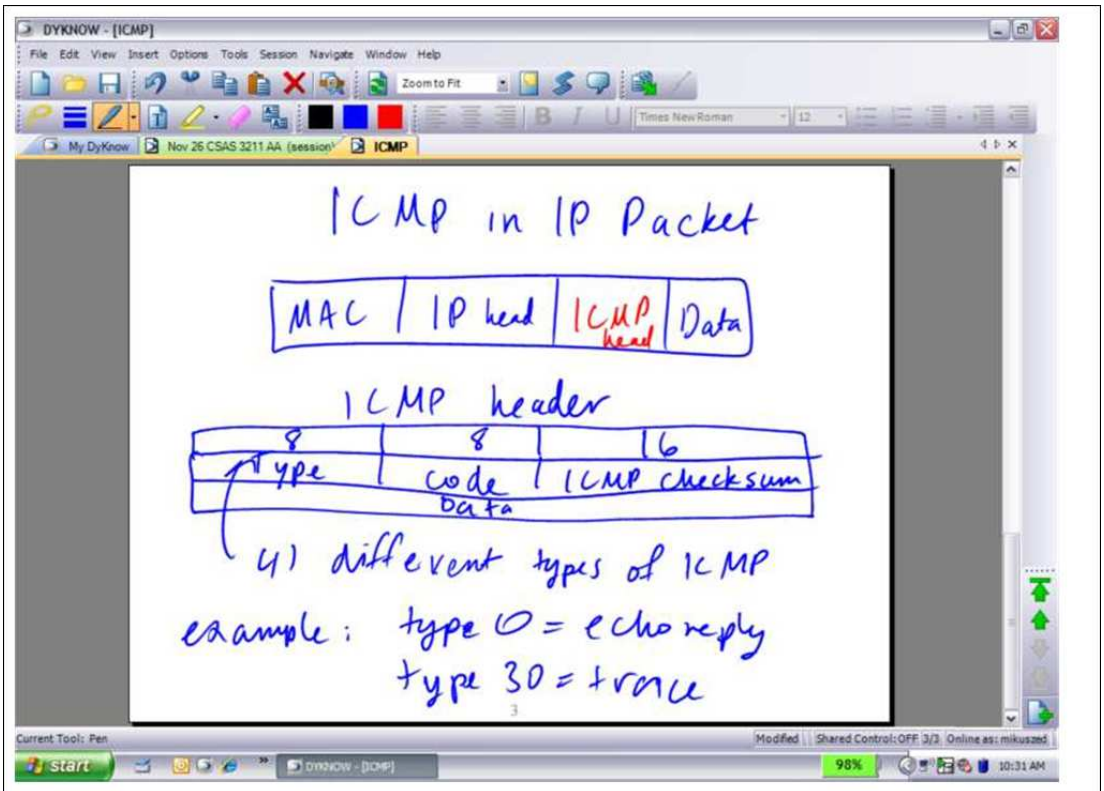
Panel 3



Panel 4



Panel 5



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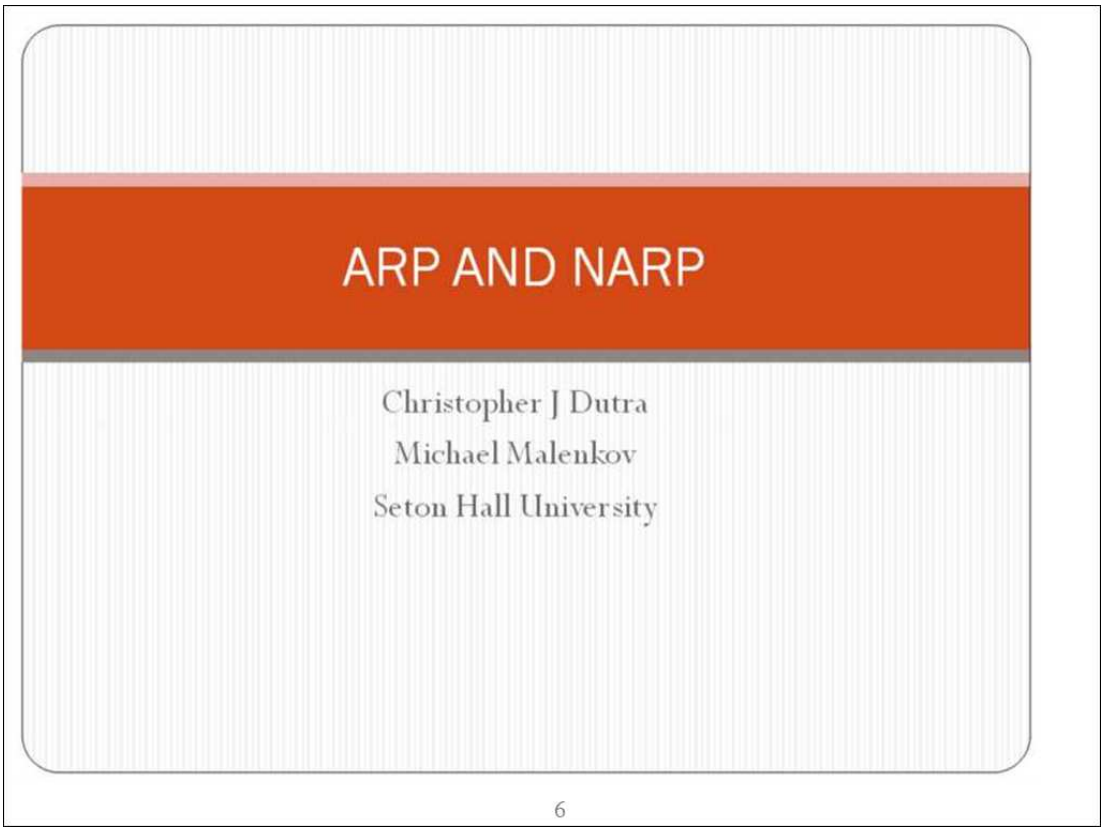
Panel 6



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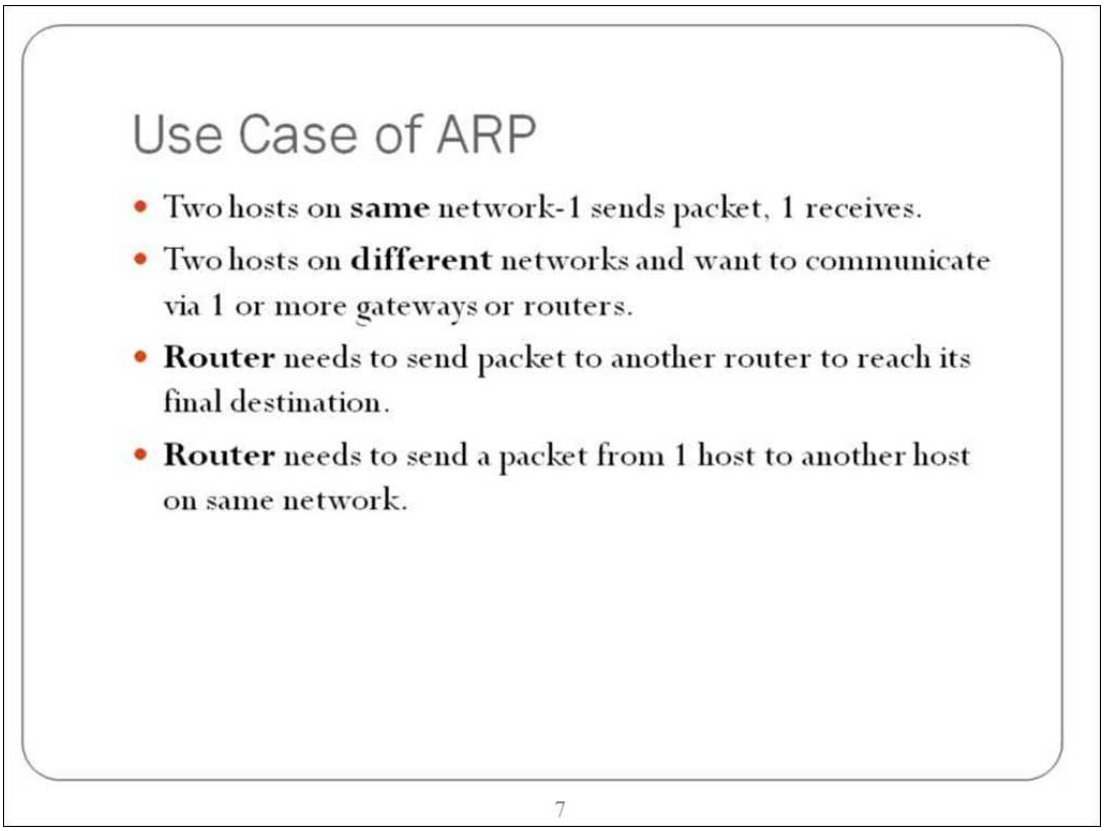
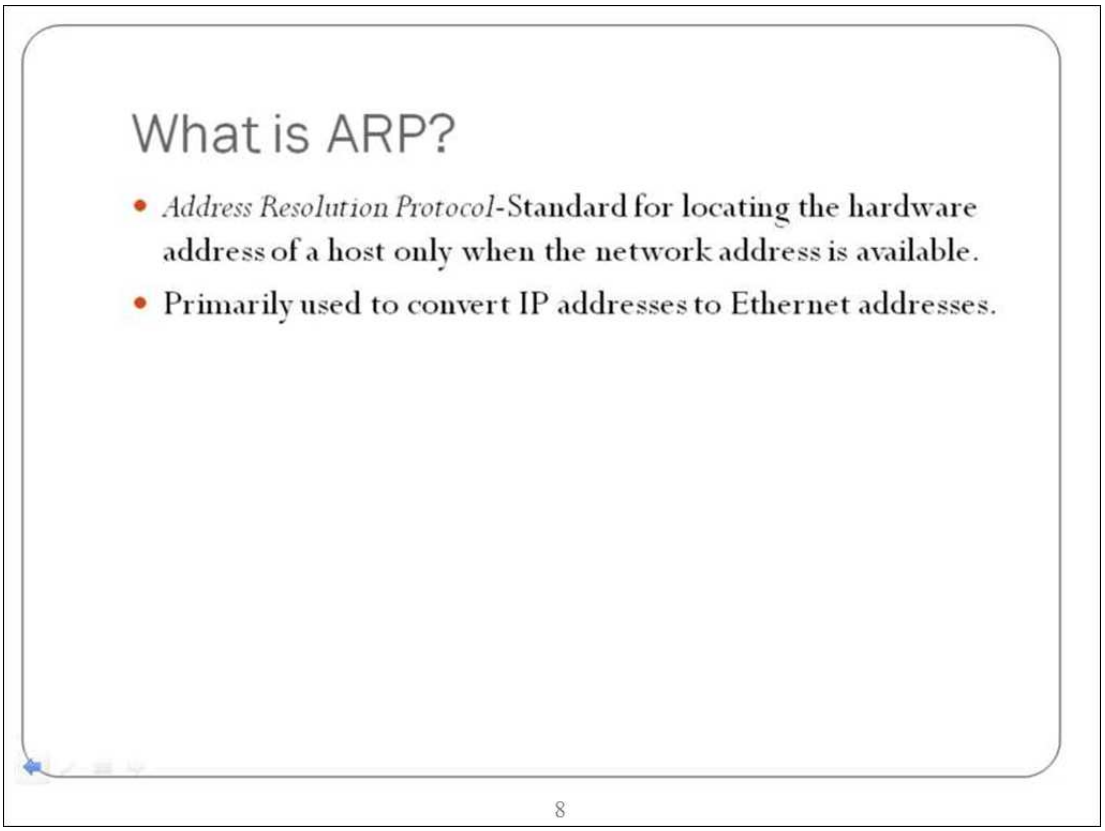
Panel 7

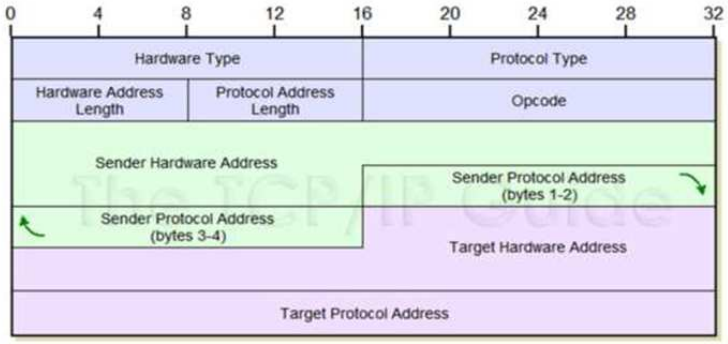


Panel 8



Panel 9

ARP Message Format



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Panel 10

RARP

- Reverse Address Resolution Protocol- gives an IP address when only the hardware address can be found.
- For example, diskless workstations don't have any means of storing an IP address. When workstations are booted up, they only know the hardware address.
- RARP handles that by retrieving the IP.

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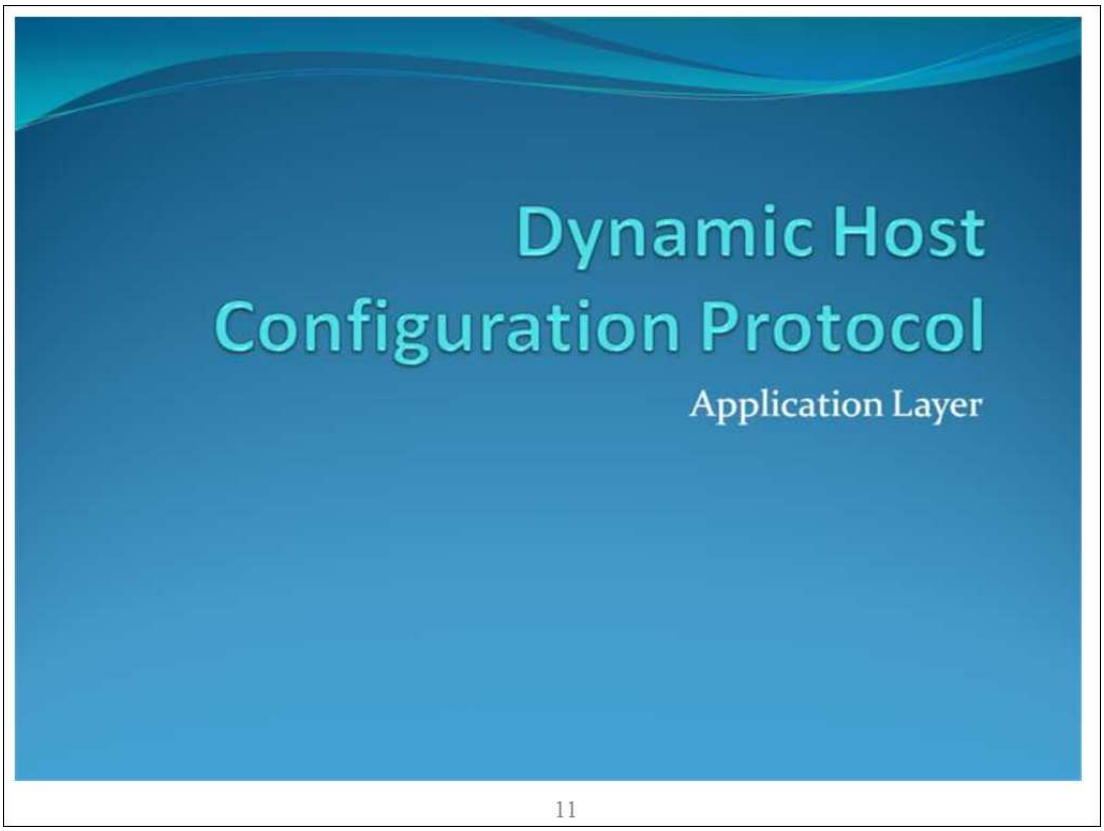
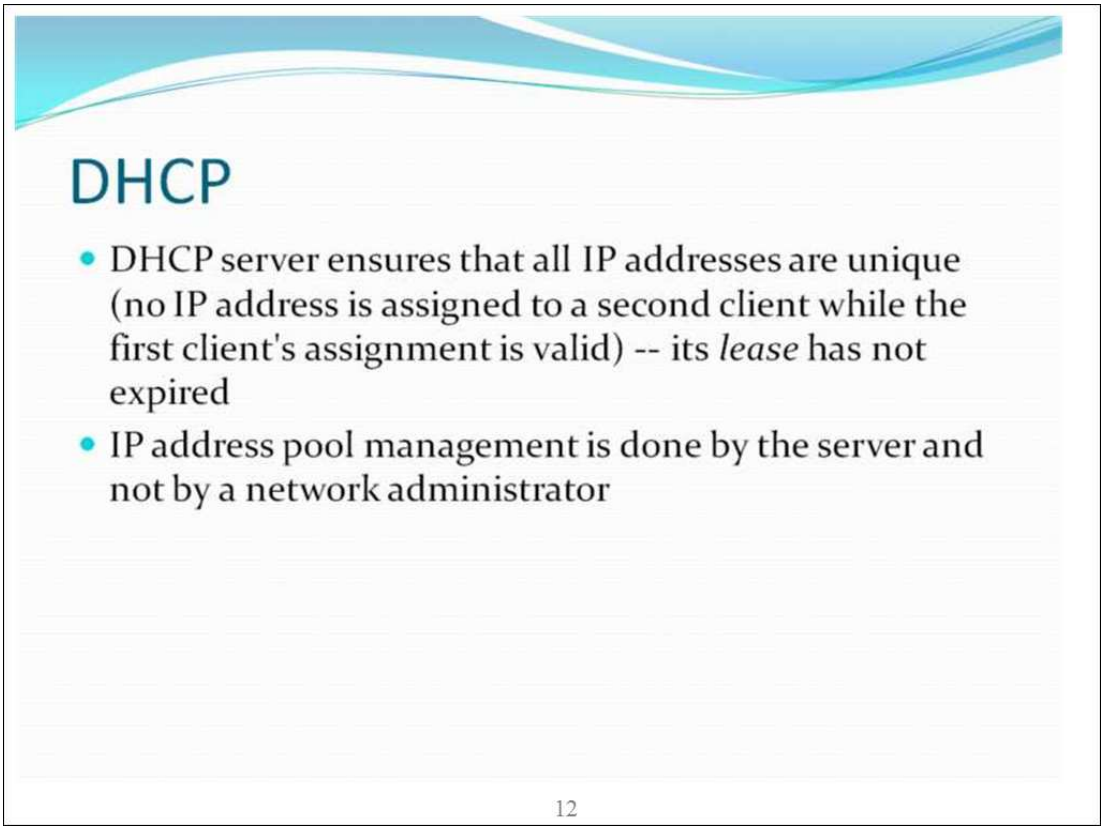
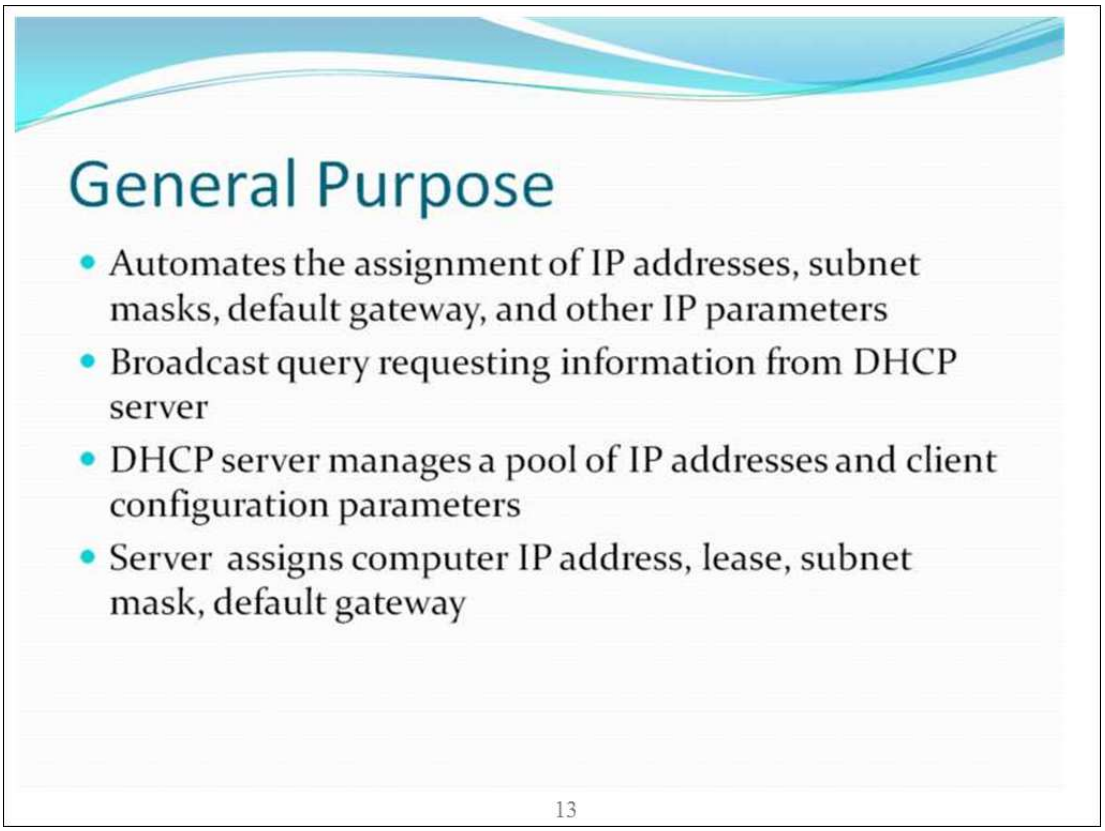
Panel 11



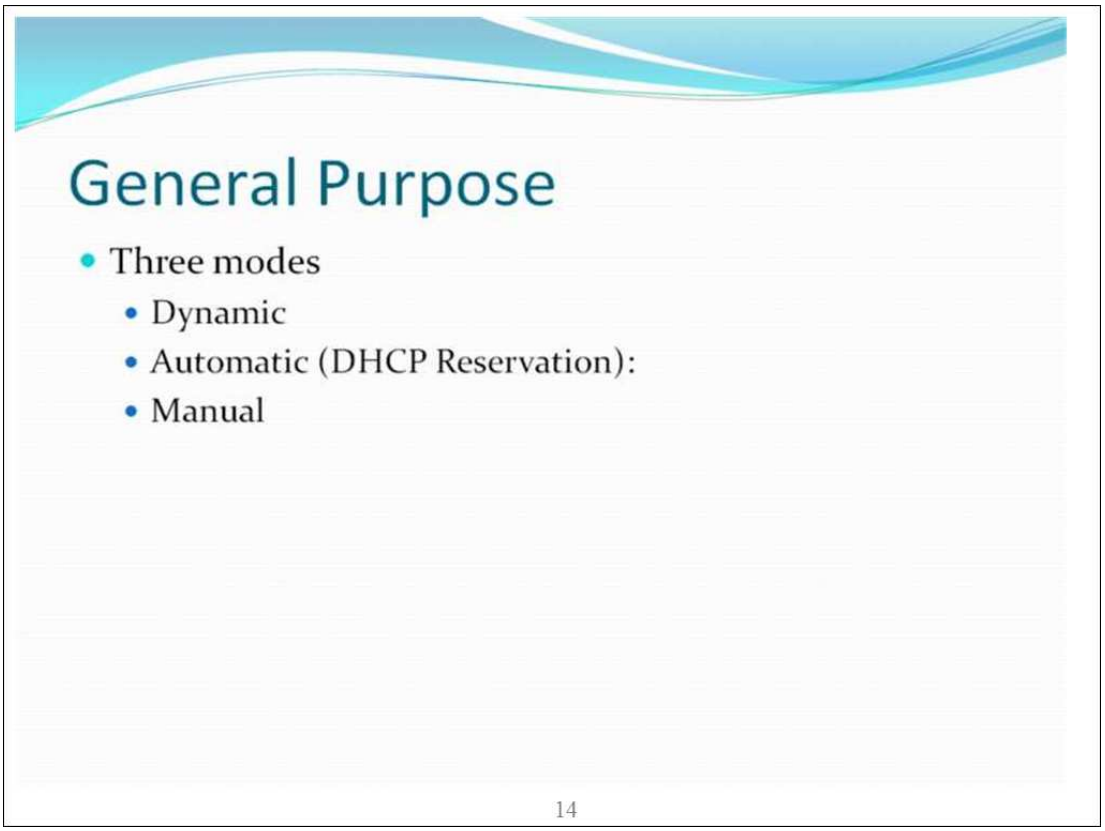
Panel 12



Panel 13



Panel 14



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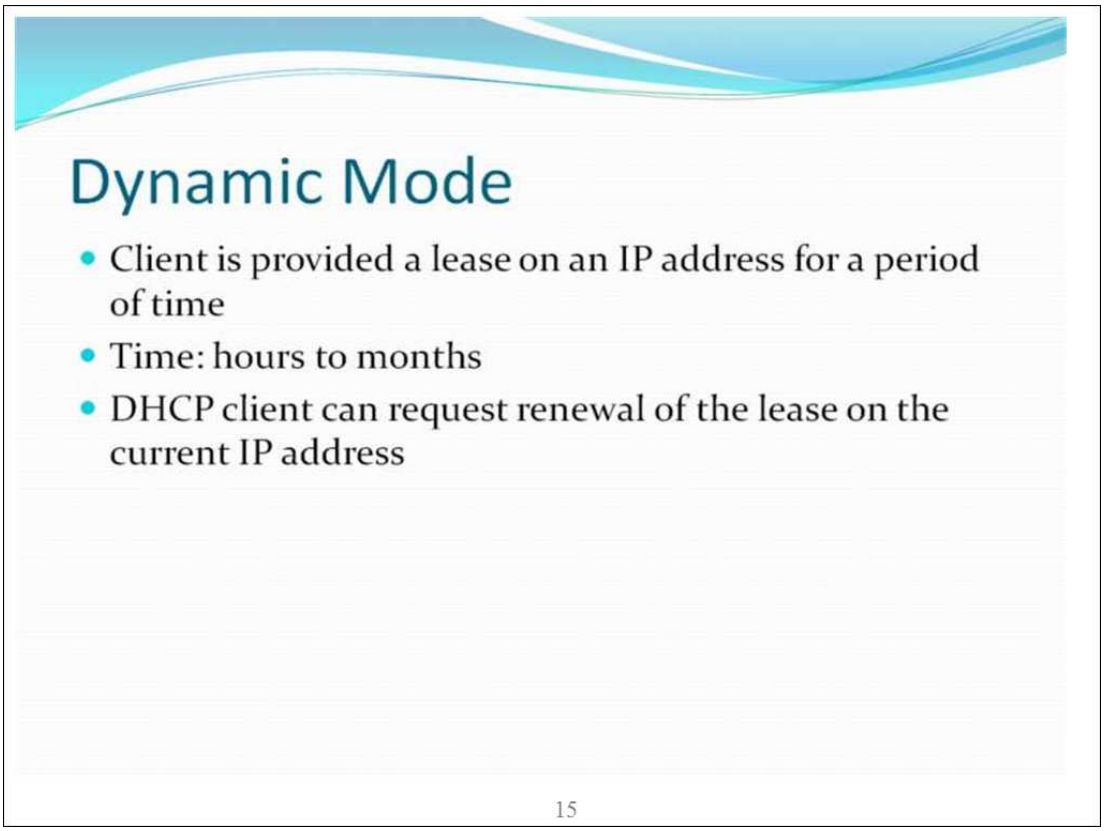
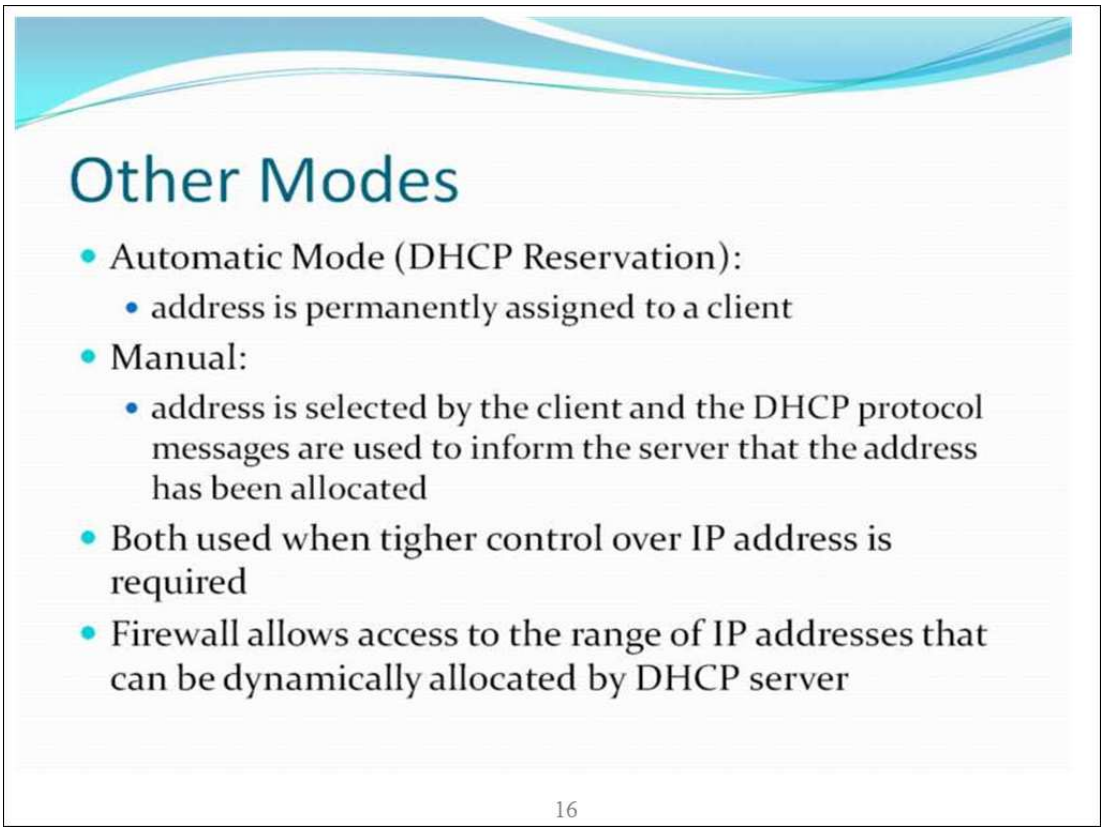
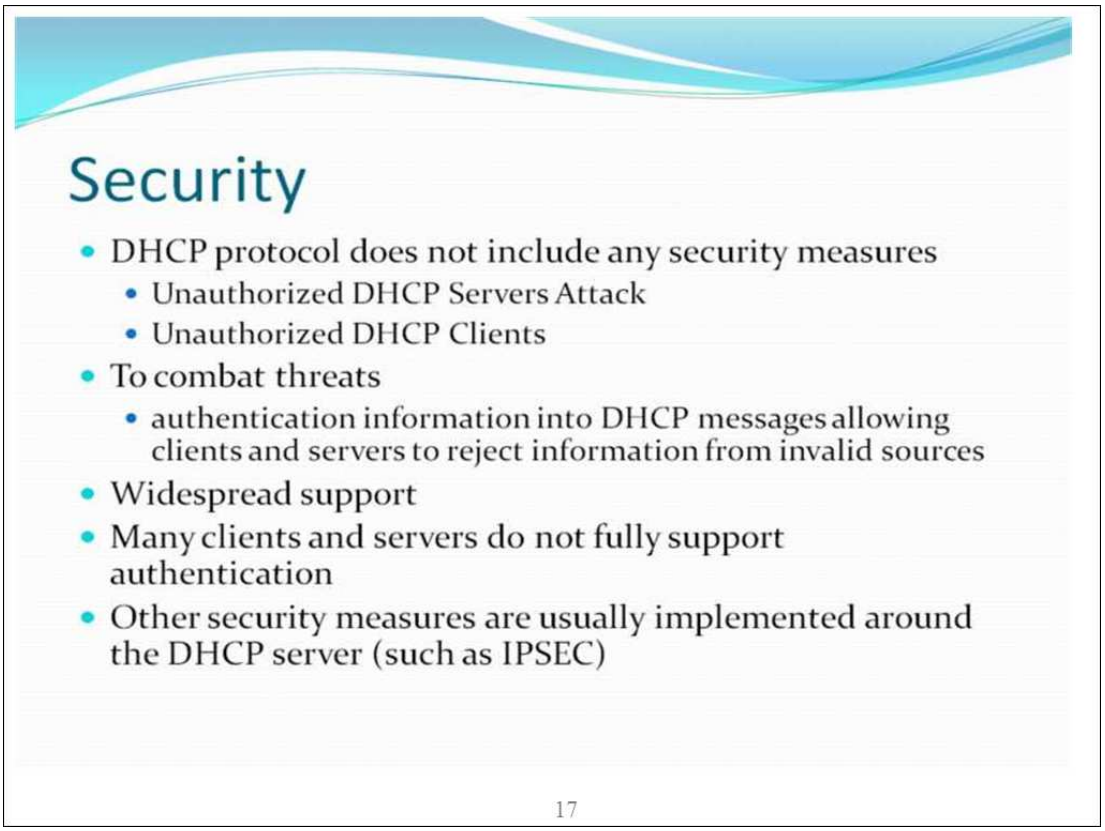


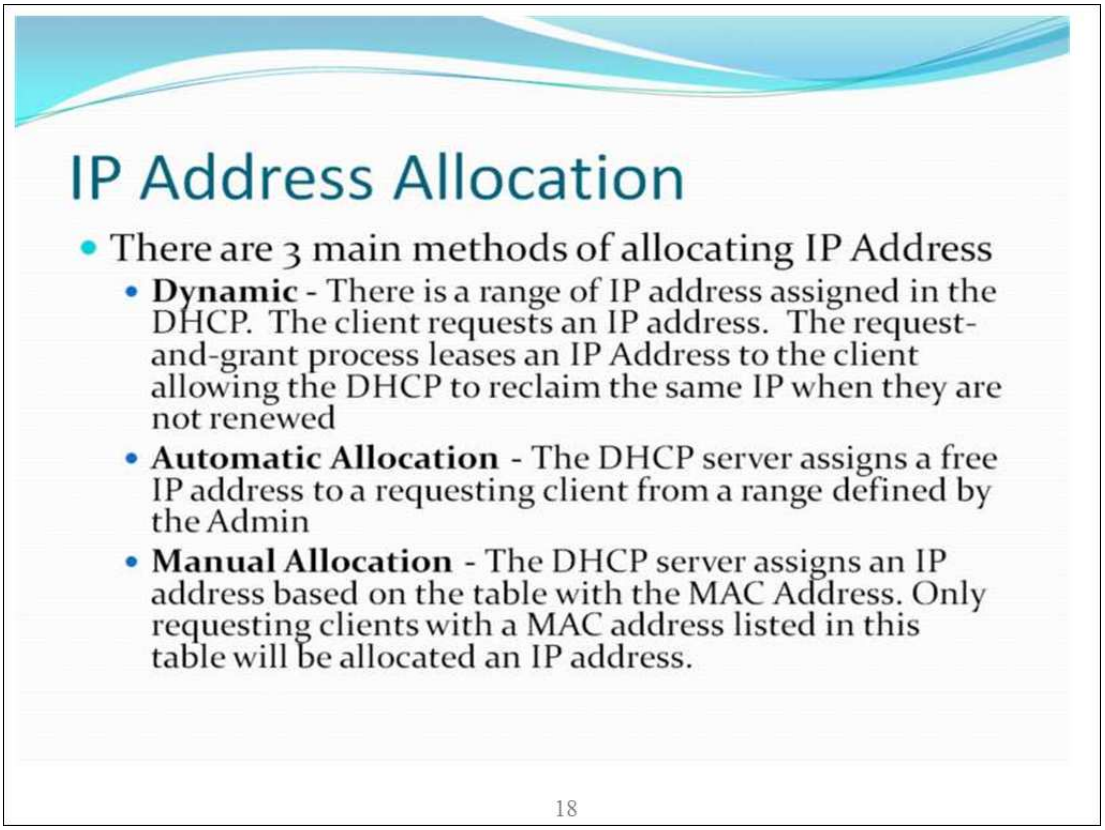
Panel 16



Panel 17



Panel 18



Panel 19

DHCP and firewalls

HW think about it!

- Firewalls need to permit DHCP traffic explicitly. Packets must have a source address of oxoooooooo or the destination address of oxffffffff.
- To allow DHCP, network administrators need to allow several types of packets through the server-side firewall. All DHCP packets travel as UDP datagrams; all client-sent packets have source port 68 and destination port 67; all server-sent packets have source port 67 and destination port 68.

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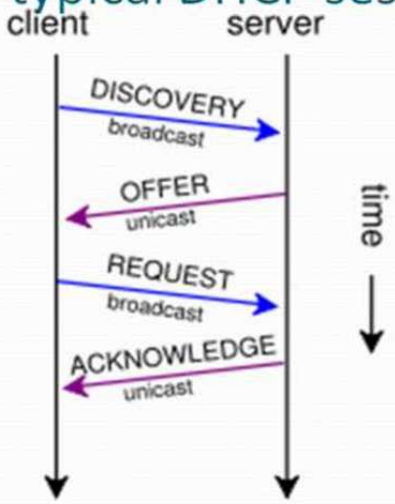
Panel 20

Schema of a typical DHCP session



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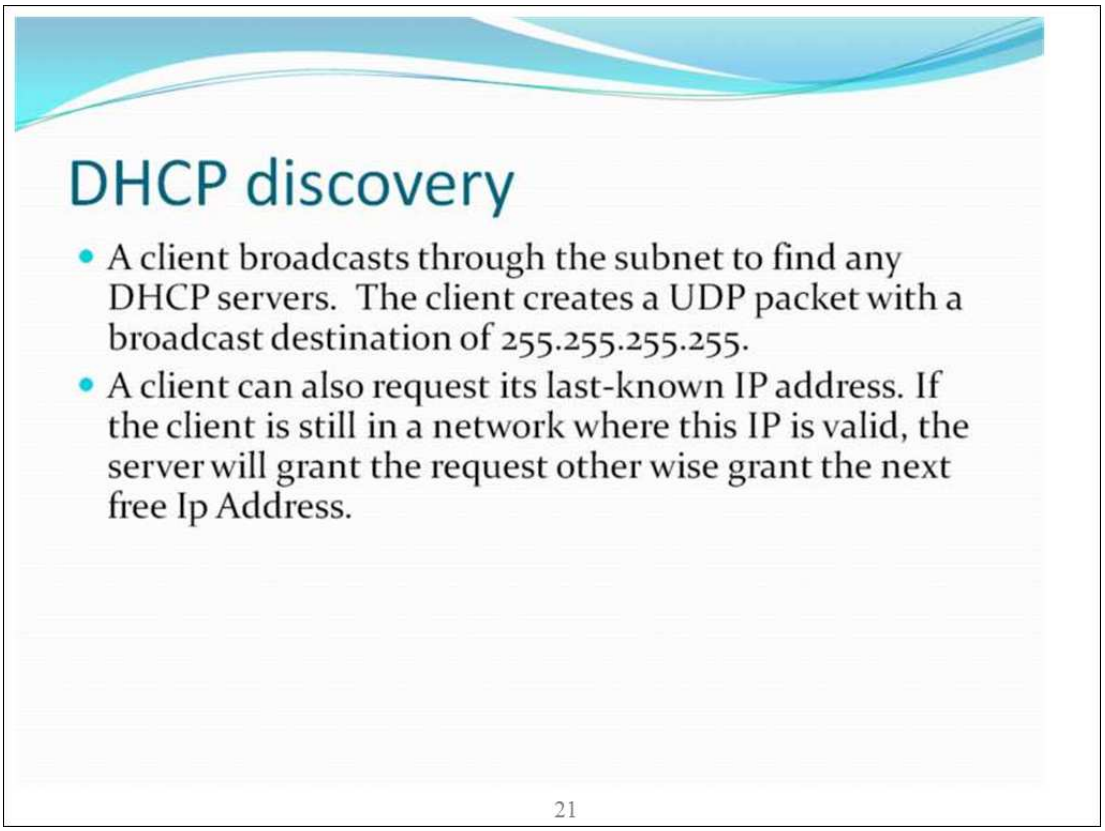
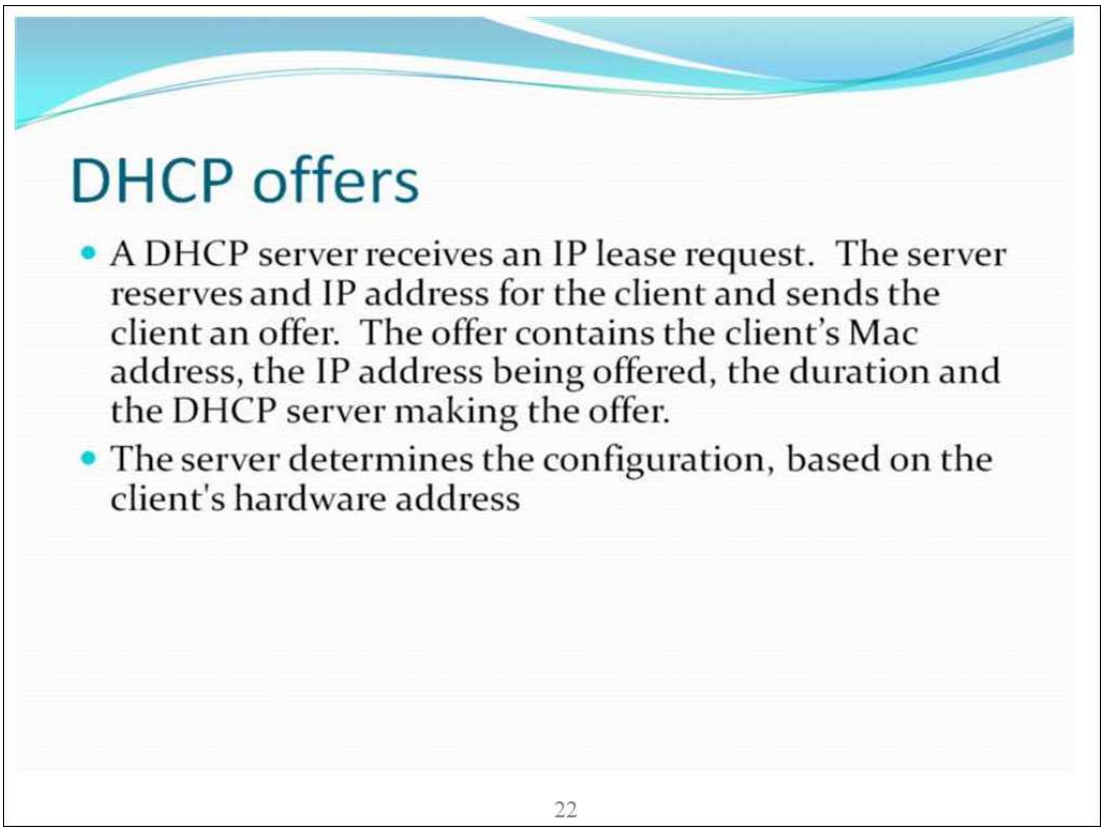
Panel 21



Panel 22



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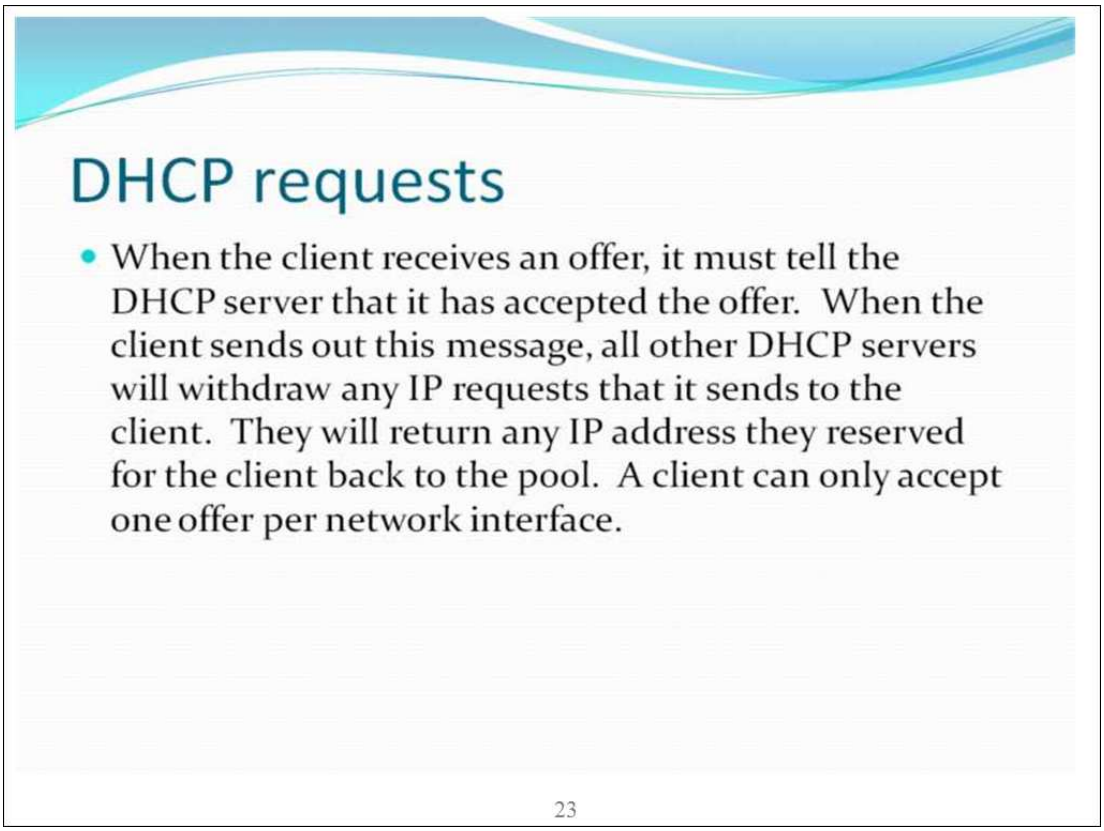

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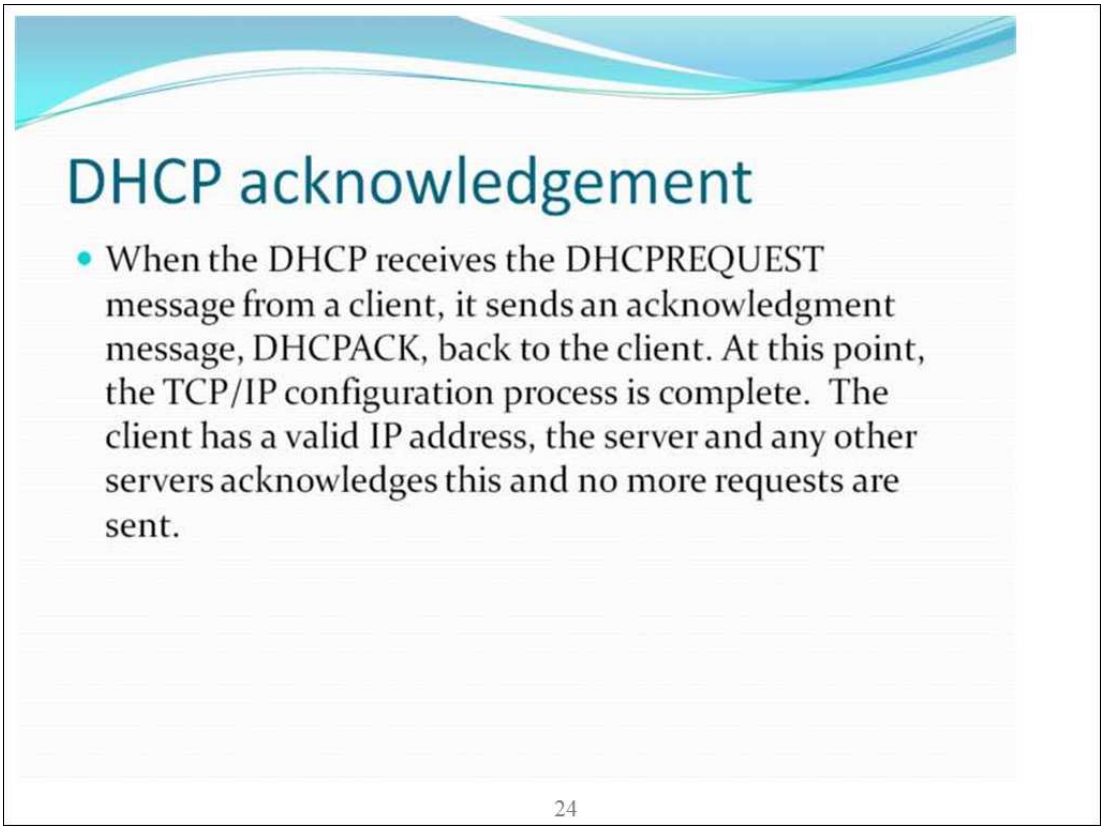

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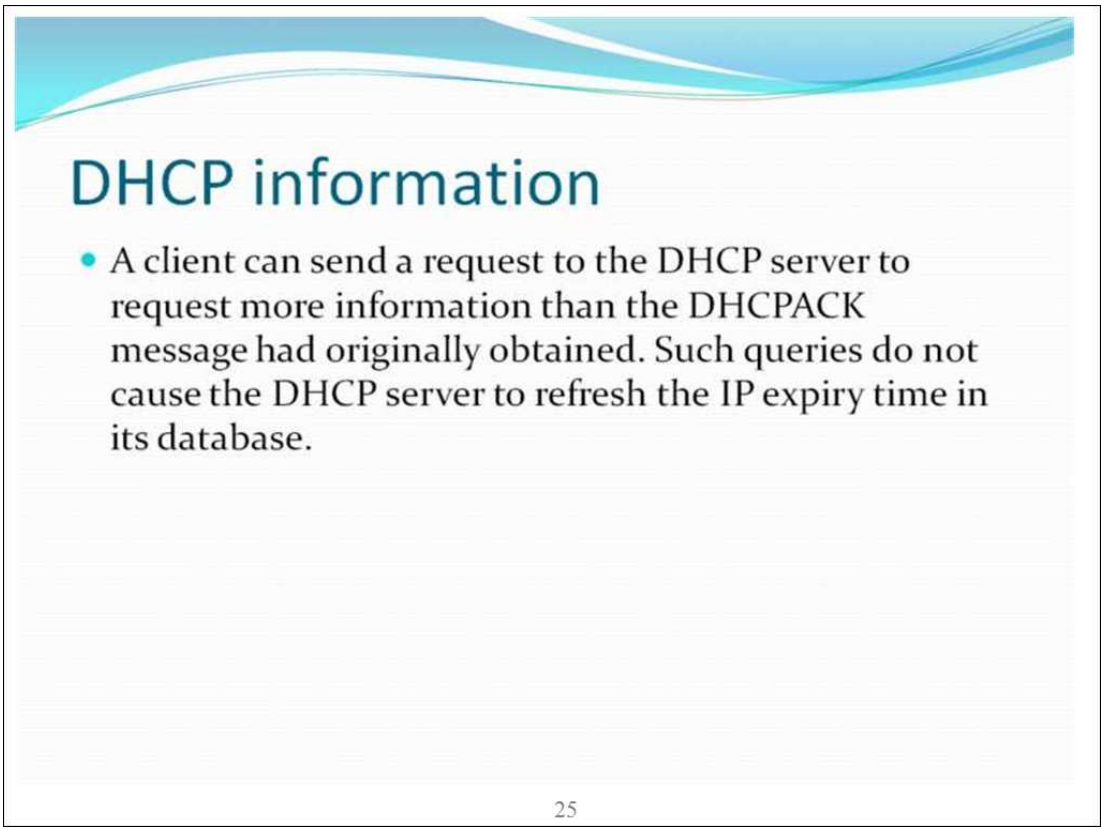

Panel 26