DHCP sequence diagram with message details

This message flow shows how a computer boots up and obtains an IP address. The DHCP Discover and the DHCP Request handshakes are covered here. (Click on any message in the sequence diagram to see full field level details).


A PC boots up and broadcasts an IP address request. The PC receives an IP address offer.

A client machine comes up without an IP address. It sends out a DHCP Discover message on its subnet to identify the DHCP Servers. The message is sent as an Ethernet broadcast.

A DHCP server on the network receives the Ethernet broadcast and offers an IP address.

The PC accepts the IP address offered by the DHCP server.

DHCP Client sends out a DHCP Request as a subnet broadcast. The selected IP address is stored in the client IP address field.

DHCP Server 1 responds by a unicast. This requires that the ARP Cache is updated with the hardware address for the device.

Find more networking sequence diagrams at: Networking http://www.eventhelix.com/realtimemantra/networking/