

Dynamic Host Configuration Protocol (DHCP)

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Overview

- Bootstrapping diskless workstations
- RARP
- BOOTP
- ICMP Information Request
- DHCP

Bootstrapping and configuration

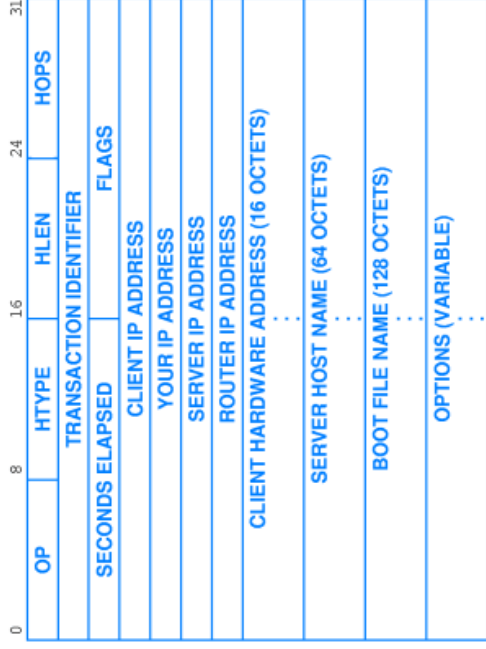
- Host loads boot image and/or config from net
- Station needs to know its own IP address
- Station only knows its hardware address/info
- Station needs, minimally:
 - IP address
 - A default router
 - Subnet mask
 - And a DNS server or two would be nice

Old methods

- RARP
 - What is IP for h/w address xx-xx-xx-xx-xx-xx
- ICMP info/mask/router queries
 - What is my IP, subnet, default router, etc.
- BOOTP
 - What is my IP config (and maybe loader file)

Enter DHCP

- BOOTP + leased IPs and other parameters



Typical discovery process

Client

- DHCPDISCOVER
- DHCPREQUEST
- DHCPRELEASE

Server

- DHCPOFFER
- DHCPACK

Notes

- Leases
- DHCP parameters
- UDP protocol ports 67 and 68
- DHCP versus BOOTP versus RARP
- Security/authentication issues