IPv6-Only for Wired Thin-Clients
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??? "Wired Thin-Client" ???

- Ethernet connected 'naked' device
  - No attached file system
  - Needs to download boot loader, OS, file system
- Ethernet connected 'full device'
  - Local file system
  - When they go to sleep (night), they need to be awaken to ensure OS updates
- Common in some environments:
  - Data Center
  - Virtual Desktop Interface
  - ...

Wake-On LAN (WoL)

- No standard but well known
- A magic packet
  - Any ether type
  - Must contain the client MAC address repeated 16 times
  - Upon receipt (even when sleeping), the NIC will power on the full computer
- IPv6...
  - Mapping IPv6 address <-> MAC disappear from cache quickly
  - How to send the magic packet from remote?
  - ??? A global IPv6 address statically mapped to ff-ff-ff-ff-ff-ff ??

Pre Boot Execution Environment (PXE)

- Specified by Intel, 1999 (!).
    - No IPv6 support in this spec
    - Relies on DHCP & TFTP
    - RFC 5970 adds support in DHCPv6 for PXE
    - RFC 5970 not widely supported
- Superseded by "Unified Extensible Firmware Interface Specification", 2015
    - IPv6 supported but not yet widely available

Summary

- The road to IPv6-only is still not cleared...
- WoL: probably need some IETF standardization?
- PXE: wait until UEFI is available?