IPv6 Home Network, what’s Next After W6L?

Hans, M.H. Liu
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Global IPv6 traffic over 1%

Dramatically increased IPv6 traffic.

Major factors:

• Content availability
• Client network connectivity
• Client and **CPE** device support
IPv6 Connectivity (6rd, Native Dual Stack, DS-Lite)
IPv6 Firewall and Simple Security (RFC 6092)
IPv6 Static Route
ULA
IPv6 Connectivity

- Tunneling
  - IPv6 in IPv4 Tunneling
  - 6to4 Tunneling
  - 6rd Tunneling and DHCP Option for 6rd
  - Teredo passthrough

- Native Dual Stack
  - Static IPv6 and route
  - DHCPv6/DHCPv6-PD
  - Autoconfiguration
  - IPv6 over PPP

- DS-Lite (Dual-Stack Lite)
  - B4 and DHCPv6 Option for DS-Lite
IPv6 at Home

- Good use of the prefixes
- Device management
- IPv6 digital home
Good use of the prefixes

- Separate guest network and host network
  - A standalone /64 prefix for Wi-Fi Guest SSID

- Prefix delegation in LAN
  - Automatically delegate unused prefixes in LAN
  - Delegate prefixes manually in LAN
Device Management

› Web Management Interface
  • LLMNR
  • mDNS

› TR-069 and SNMPv6
  • BBF.069 Certified
  • SNMPv6 Certified

› UPnP
  • UPnP Device Architecture Annex A (IPv6 Support)
Web Management

- Dual Stack httpd
- LLMNR and mDNS support
BBF.069 Certification Program

- TR-069 is a remote management standard, used to provision and manage CPE in the connected home.

- D-Link has been working closely with UNH-IOL on BBF.069 certification program.

- D-Link TR-069 implementation fully supports IPv6.
IPv6 Digital Home

✈ UPnP AV
  • DLNA Digital Media Server (DMS)*

✈ Gradually enable IPv6 for all products
  • IPCam
  • NAS
  • Smart Plug
  • Wi-Fi Range Extender

✈ Software Utilities and Applications
UPnP AV upon IPv6

› Enjoy media streaming through IPv6 network!
IPv6 Digital Home

- **IPCam**
  - Business IPCam supports IPv6 today
  - New consumer IPCam will support IPv6

- **NAS**
  - NAS will support IPv6 gradually
  - DNS-345, IPv6 Ready Logo Certified

- **Smart Plug**
  - IPv6 Management Interface

- **Wi-Fi Range Extender**
  - IPv6 Management Interface
DNS- Series NAS

- IPv6 Ready Logo Certified

- IPv6 enabled Applications
  - Web user interface
  - FTP/HTTP Downloads
  - Remote Backups
  - Local Backups
  - MyFiles
  - MyPhotos
  - MyMusic
  - FTP Server

https://www.ipv6ready.org/db/index.php/public/logo/02-C-000809/
 IPv6 Support Required for All IP-Capable Nodes

Abstract

Given the global lack of available IPv4 space, and limitations in IPv4 extension and transition technologies, this document advises that IPv6 support is no longer considered optional. It also cautions that there are places in existing IETF documents where the term "IP" is used in a way that could be misunderstood by implementers as the term "IP" becomes a generic that can mean IPv4 + IPv6, IPv6-only, or IPv4-only, depending on context and application.

Status of This Memo
Contacts

Hans, M.H. Liu
Wireless & Router Product Division
D-Link Corporation
Tel. +886-2-6600-0123 ext. 5836
Hans_Liu@dlink.com.tw

Claire, H.J. Cheng
Wireless & Router Product Division
D-Link Corporation
Tel. +886-2-6600-0123 ext. 5829
Claire_Cheng@dlink.com.tw
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