



IPv6 State of Play

An Australian ISP View



Router Software

- Cisco finally ships “production” code
- IOS 12.2(2)T
- Are you game??!!



Corporate Clients

- 12.2(2)T seems stable enough in a corporate LAN environment
- Take existing 12.0 configuration and just add IPv6 commands
- Don't touch anything else that might look "interesting" as there may be bugs :-)



ISP Infrastructure

- A (2) release is too soon, especially since it is in the T train
- Seems incomplete
 - “show ipv6 bgp” commands missing on 2600 platform even though BGP4+ could be configured and worked OK
 - *Note: Turns out cisco have played with the syntax and it is now “show bgp ipv6”!*



How to connect clients?

- Dedicated client concentrator router for clients that want IPv6 and IPv4?
 - Seamless (and native) to client, although they may need to reconfigure their connection to new client concentrator router
 - Expensive to deploy, need to support multiple connection technologies on the one router
 - Could be risky if router not stable under load and crash takes out client's IPv4 connectivity too



How to connect clients?

- Dedicated 6to4 tunnel router
- Less risk to ISP, less critical or nagging support calls when things go bad
- Client's risk is constrained to IPv6 connectivity
- Needs more client configuration and knowledge
 - Early adopter clients need expertise anyway



ISP Infrastructure

- Don't deploy on backbone
- Overlay network of 6to4 tunnels
- Need IPv6 visible DNS
- Other services might be nice
 - News, Web



Is it doable now?

- Probably
- May have billing implications
- Needs some dedicated hardware
- Needs some duplication of services so crash in IPv6 doesn't impact IPv4
 - IPv4 & IPv6 service systems
 - IPv4 only service systems



Will it happen now?

- Probably not!
- Still lack of customer demand
 - Customer not asking ISPs for it
 - No IPv6 only killer apps
 - IPv4 NAT with RFC 1918 addressing seen as security feature so “lack” of public address space not issue



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