

IPv6 operational experiences from an IXP operator

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What do you need?

- IXP IPv6 allocation
 - Obtained from RIPE under RIPE-256
 - And some sort of registry for IPs assigned
- Switches that can handle IPv6 frames
 - They all more or less do by now
- Supporting tools

Netnod IPv6

- Same (V)LANs as IPv4 traffic
 - No need to separate them
- ISP routers are dual-stack
 - as are ours
- One /64 per VLAN
- Netnod has a /48 to use accross the 14 VLANs in different cities

Netnod IPv6

- Routers do IPv6
 - /64 for links
 - OSPFv3 as IGP
- All services that we can monitor are running IPv6

Experiences so far

- For the IX, i.e switches, it's a no brainier
 - Just do it!
- Router vendors are something else...
- As is support systems...

Statistics

- To capture data on native traffic...
 - sFlow on the switches
- Use RRD Tool or MRTG for your own interfaces
 - Make sure your equipment supports RFC4093 IPv6 MIBs

Support systems

- Make sure your OS for support systems does IPv6
- Get an allocation from one of your customers (ISPs)
 - You can do transit across the fabric..
- Web-servers and mail systems support IPv6

Support systems - secondary effects

- Make sure your Monitoring systems monitors OVER IPv6....
- Make sure your modules are IPv6 compliant
 - I.e Nagios
 - Perl upgrades...
- Etc...

Uptake?

- We don't run sFlow so hard to tell
- But

2001:7F8:D:FB::24	4	2603	3542933	722018	637388	0	0	22w0d	925
2001:7F8:D:FB::34	4	1880	299450	170924	0	0	0	13w4d	Idle (Admin)
2001:7F8:D:FB::152	4	16086	721892	722114	637388	0	0	35w5d	4
2001:7F8:D:FE::41	4	3246	358555	361075	637388	0	0	35w5d	0
2001:7F8:D:FE::43	4	3257	963374	722135	637388	0	0	5w6d	903

Questions?