



GÉANT IPv6 STATUS

tf-ngn

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Agenda

- Report
- Routing policy
- Community tagging
- Monitoring
- Next points



Report

- Géant IPv6 configured in February
- Firsts NRNs connections in March
 - Connected now:
 - Native: RedIRIS, Renater, FCCN, SURFNET
HEANET, GARR, PSCN, Abilene
 - Tunnels: IUCC, Litnet
 - Abilene currently has one IPv6 peering enabled,
link FFM-Washington.
- Routers upgraded to 5.5R3
 - If using IPv6, you must have 5.5R3 or 5.6R2
- Cisco: using IOS 12.2(13)T and
12.0(23)S1



Routers bugs

- Juniper: in something different to 5.5R3 or 5.6R2
 - Kernel crash when routing IPv6 packet with optional extension headers.
- Cisco:
 - In 12.2(13)T bug related with IPv6 cef
 - In 12.0(23)S1 bug related with IPv6 peer-groups



Routing policy

- With NRENs:
 - Import
 - Accept prefixes from /35 to /32
 - Accept 2002::/16
 - Accept 6bone
 - Limited number of prefixes accepted until October 2003
 - NRNs have to do Special requests to get these prefixes accepted
 - Export
 - Originate 2001:0798/32
 - Announce NRENs, Abilene, Canarie, Esnet ...
 - Announce NRENs only connected to 6NET to NRENs that are not DUAL HOMED to 6NET and GEANT



Routing policy II

- With 6NET
 - Two gateways between Geant-6NET
 - Limited period of time
 - For NRENs connected only to 6NET
 - won't offer transit for Abilene routes or backup for Dual homed NRENs (6NET and GEANT)
 - Simplicity
 - Import
 - NRENs only connected to 6NET
 - Accept 2001:0798::/35
 - Export
 - Don't use gateways for backup
 - NRENs only connected to GÉANT
 - 2001:0798::/32



Routing Policy III

- With Abilene:
 - Export
 - Announce geant-nrn (2001:xxxx::/32 and /35) including 2001:0798::/32
 - Announce other R&E ? (open for discussion)
 - Import
 - Discard .*6680.* (6NET)
 - Accept prefixes 2001:xxxx::/32 to 2001:xxxx::/35
 - Accept 2002::/16
 - reject 6bone prefixes



Routing Policy IV

- Commercial Peerings:
 - GX and Telia
 - Export
 - Announce NRENs
 - 6NET shouldn't announce Geant-only NRENs to NTT
 - Import
 - Discard .*6680.*
 - Accept 2001:xxxx::/32 to /35
 - Geant and 6NET can offer transit to IST projects
 - Based on requests.
- Martians routes:
 - Based on
 - <http://www.space.net/~gert/RIPE/ipv6-filters.html>



Community Tagging

- Waiting for real cases
 - Evaluation of good and bad routes
- Now
 - Complex and difficult to implement a routing policy with community tagging and Local Pref, or AS prepending



Monitoring

- Cisco: no MIB available
- Juniper: only traffic volume per router (via snmp mib)
 - Possibility to use firewall filters
 - With firewall filters you can monitor traffic per access (interface), can't you ?
 - Or use separate DLCIs for IPv4 and IPv6
 - volunteers ?



Next points

- Now testing the IPv6 traffic between connected NRENs
- DNS
- Monitoring
- IPv6 service



Thanks!

- Ref:
 - <http://www.join.uni-muenster.de/geantv6/>
 - <http://www.dante.net/nep/ipv6/index.html>
 - geantv6@dante.org.uk