

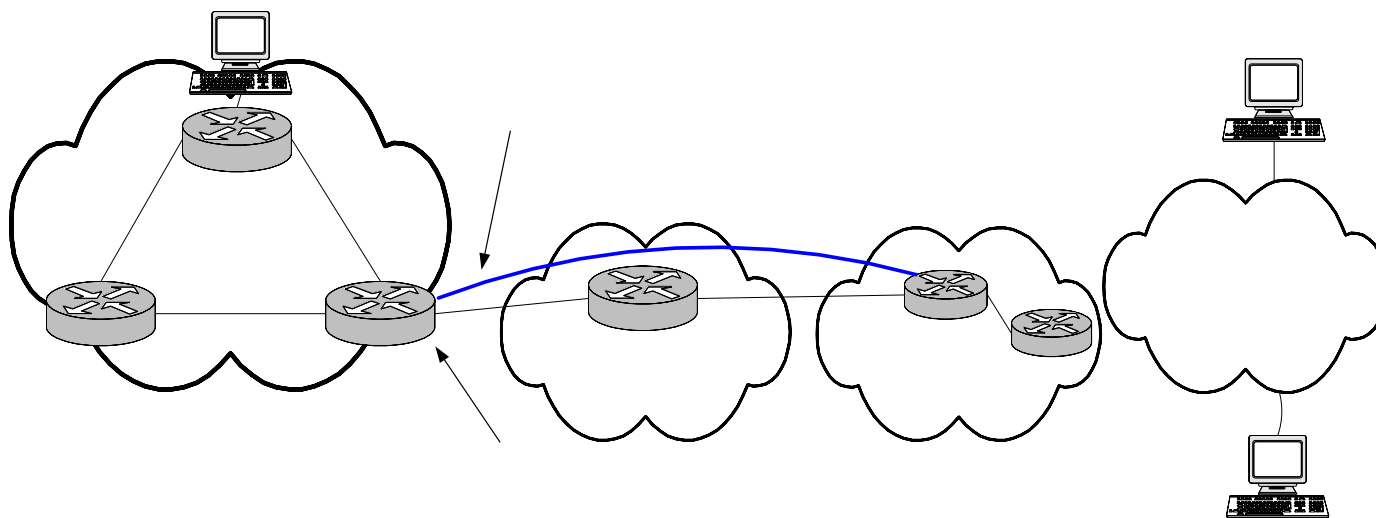
Multicast IPv6 on GÉANT

Multicast IPv6

- Objective: Pilot service for the end of year 2004
- Tests on going with JUNOS in GEANT testbed
 - using Junipers M20
- Multicast v6 TF created with NRENs
 - Renater, UNINETT, FCCN, SWITCH

Multicast IPv6 - Tests

- Testbed running topology simulating GÉANT
 - Connected to m6bone via tunnel
 - Beacon client in testbed sourcing and receiving



Multicast IPv6 - Today

- With JUNOS 6.1:
 - PIM forwarding
 - RP provided by other party
 - Receiving monitoring: beacon - no sourcing
 - NRENs sending /32 - /35 mcast + unicast routes
 - all go into same routing table
 - problems with RPF check, difficult debugging
 - no other services affected - unicast v6

Multicast IPv6 - Tomorrow

- Added features in JUNOS 6.4
 - In GÉANT within a few weeks
 - PIM RPF using inet6.2 (mcast routing table)
 - RP available: internal monitoring possible [Beacon]
 - but won't offer RP to users (transit AS only)
 - Juniper DR compatible with other vendors RP

Multicast IPv6 – Future (1/2)

- No embedded RP support on GÉANT for now
 - Solution for inter-domain multicast
 - Requested as JUNOS enhancement
 - Confident will have early next year
 - Testing needed
 - Someone will need to offer an RP for community in meantime
 - All the GEANT routers will need to be configured pointing to an external RP to forward the PIMs coming from the NRENs

Multicast IPv6 – Future (2/2)

- **Interim support for non- mcastIPv6 enabled NRENs?**
- **Need to build some tunnels**
- **BUT not to end users (too many)**
- **SO proposal is 1 tunnel per NREN to part of NREN that is mcastIPv6-enabled (often a testbed)**
- **Supported on best efforts basis**