

# Netnod news

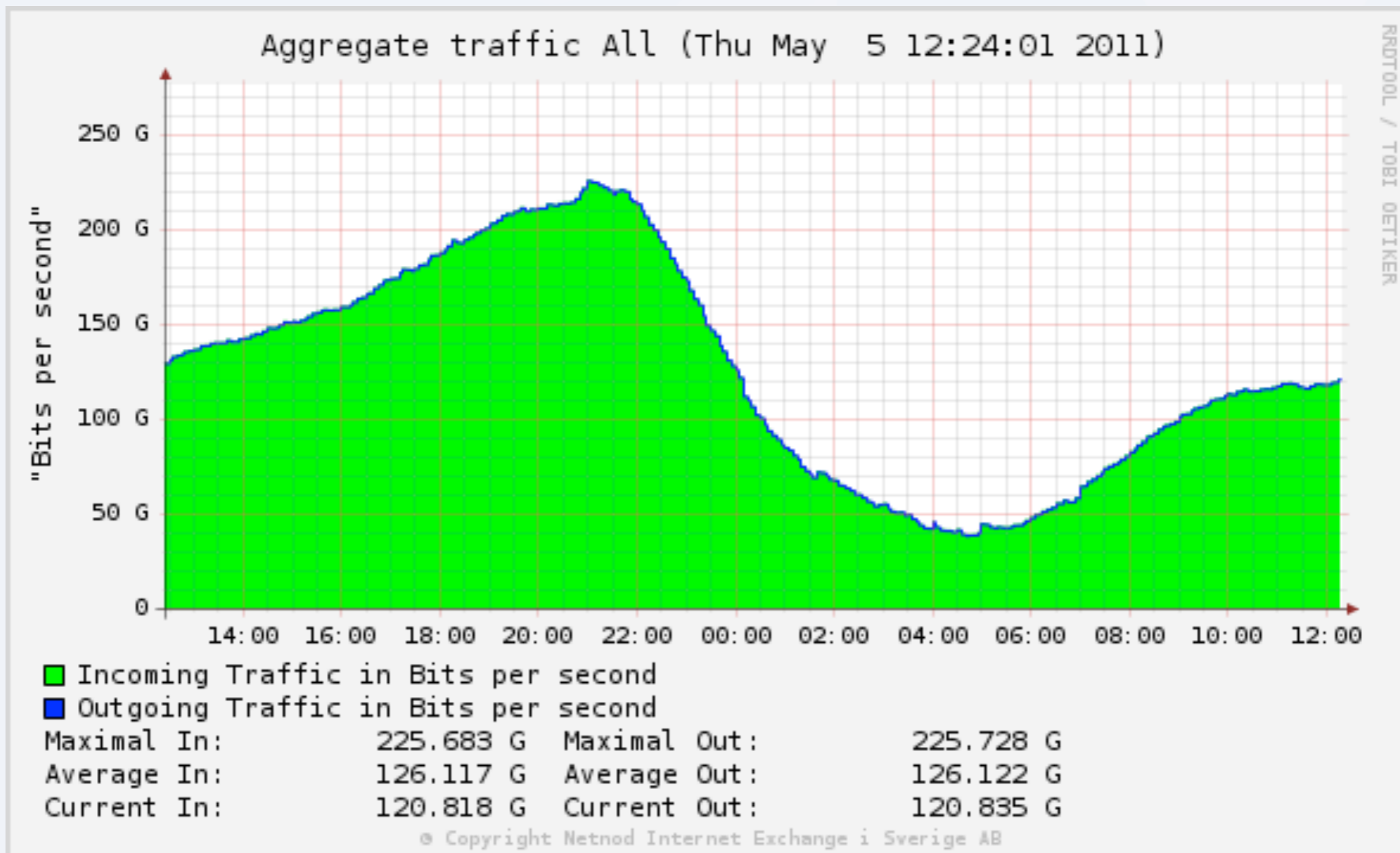
RIPE 62  
Amsterdam, May 2011

# Netnod

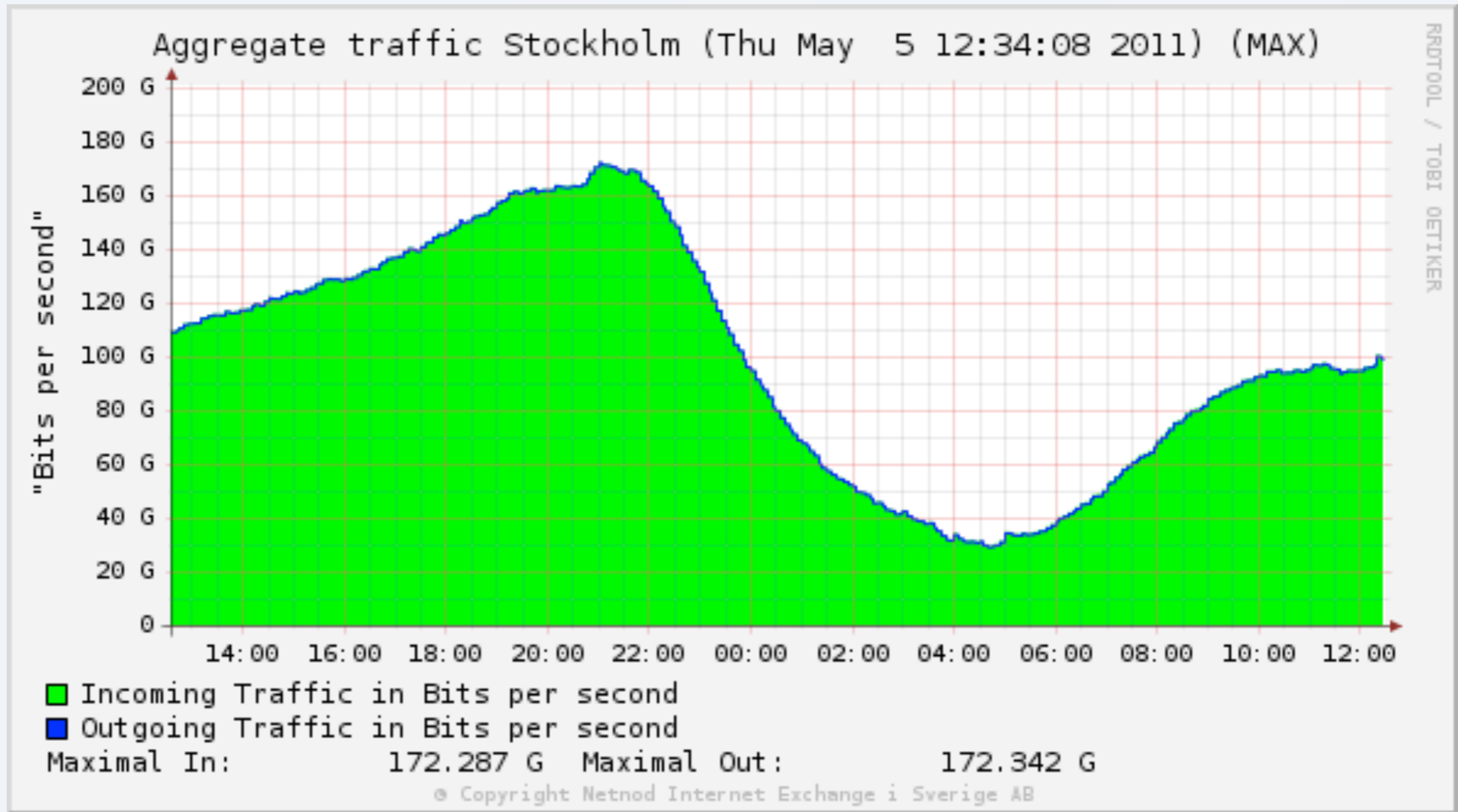
- Non-profit org
- IXPs in five cities in Sweden
  - ▶ DNS anycast & unicast slave services
  - ▶ i.root-servers.net
- IXP in underground bunkers
- 73 peers
- Stockholm
  - ▶ Two independent IXP switches
  - ▶ Fibers to switch location included in fee
  - ▶ WDM Systems in Telecity & 2 and InterXion

<http://www.netnod.se/ix/members>

# Total aggregated traffic



# Stockholm aggregated traffic



# Route servers at Netnod

- Two route servers established in Stockholm.
  - ▶ Two physical machines, one at each IXP
- Software: BIRD v1.2.5
- Both IPv4 and IPv6.
- Available on all VLANs.
  - ▶ Track which VLAN customer is connected to, and forwards only appropriate peering info.
- Separate autonomous system: 52005
  - ▶ Invisible in the BGP Path
  - ▶ MD5 passwords are supported.

# Tech: Peering Info

- Autonomous system number: 52005

STH-A	
VLAN 215 (MTU 1500)	
IPv4	194.68.123.254
IPv6	2001:7f8:d:ff::254
VLAN 216 (MTU 4470)	
IPv4	195.245.240.254
IPv6	2001:7f8:d:fc::254

STH-B	
VLAN 15 (MTU 1500)	
IPv4	194.68.128.254
IPv6	2001:7f8:d:fe::254
VLAN 16 (MTU 4470)	
IPv4	195.69.119.254
IPv6	2001:7f8:d:fb::254

# Tech: Communities

- You must tag **ALL** routes!

Community	Effect
0:peer-as	Block announcement of prefix to AS <i>peer-as</i>
52005:peer-as	Announce prefix to AS <i>peer-as</i>
0:52005	Block announcement of prefix to <i>all</i> participants
52005:52005	Announce prefix to <i>all</i> participants

- A route may have multiple communities set.
  - ▶ “Reasonable logic applies ...” ☺

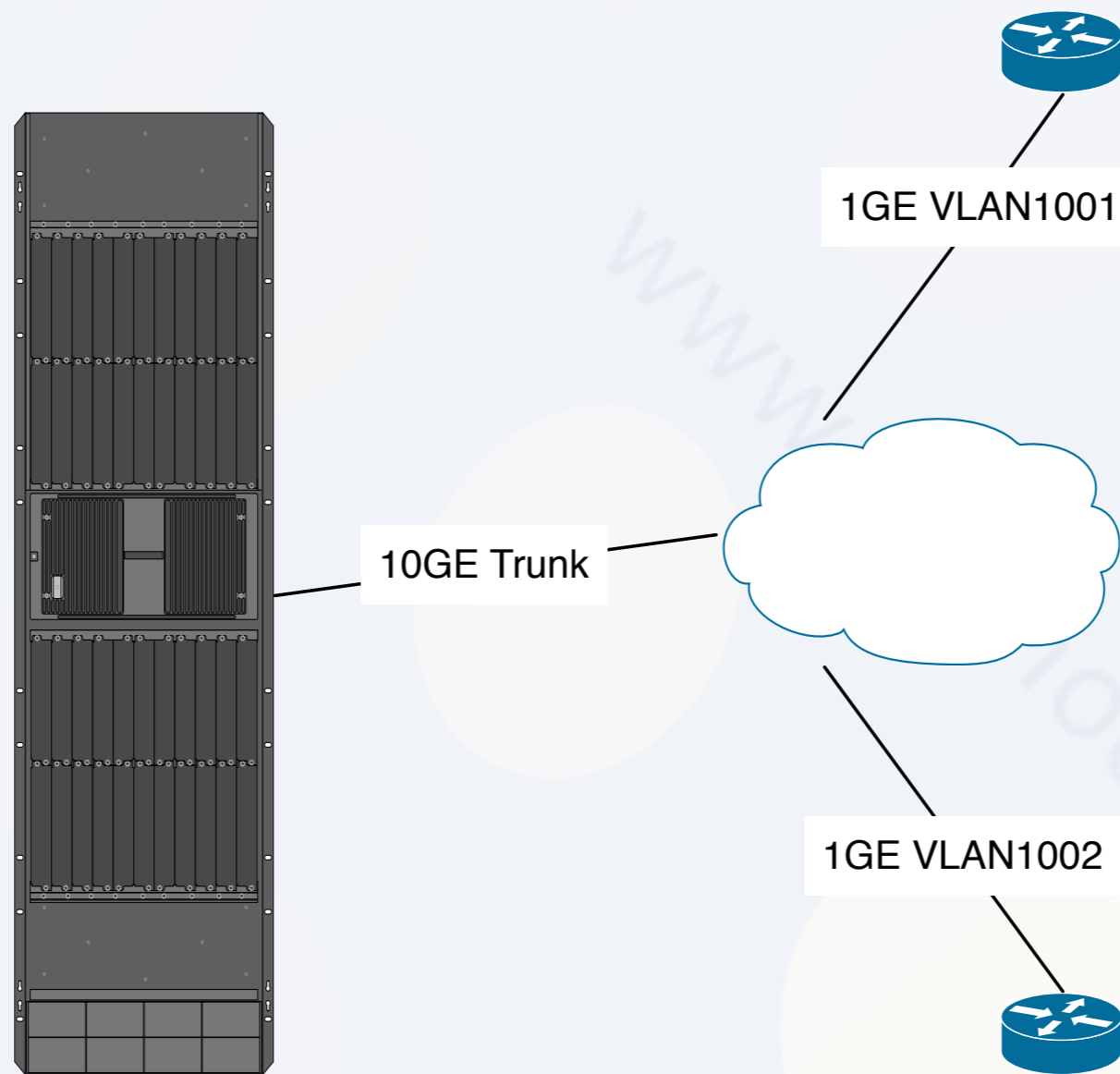
# Tech: Community filtering

- The specific 52005 communities are stripped before announcing the route to peers.
- All other communities, including NO\_EXPORT et al., are retained and forwarded to peers.
- NEXT\_HOP is retained, of course.



# Remote connection to Netnod

- Still lacking product name
- Pseudo-wire carrier connects with a 10GE port
  - Can be resold as 10x1GE VLANs to third parties wanting to join Netnod
- Implemented as mapping the VLANs into the main Netnod VLAN
- Currently in testing phase
  - Working on contracts
  - No exact launch date set yet



VLAN1001 rewritten to VLAN15  
VLAN1002 rewritten to VLAN15

# Thanks

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