

Netnod Internet Exchange

RIPE 57

Dubai, UAE - October 2008

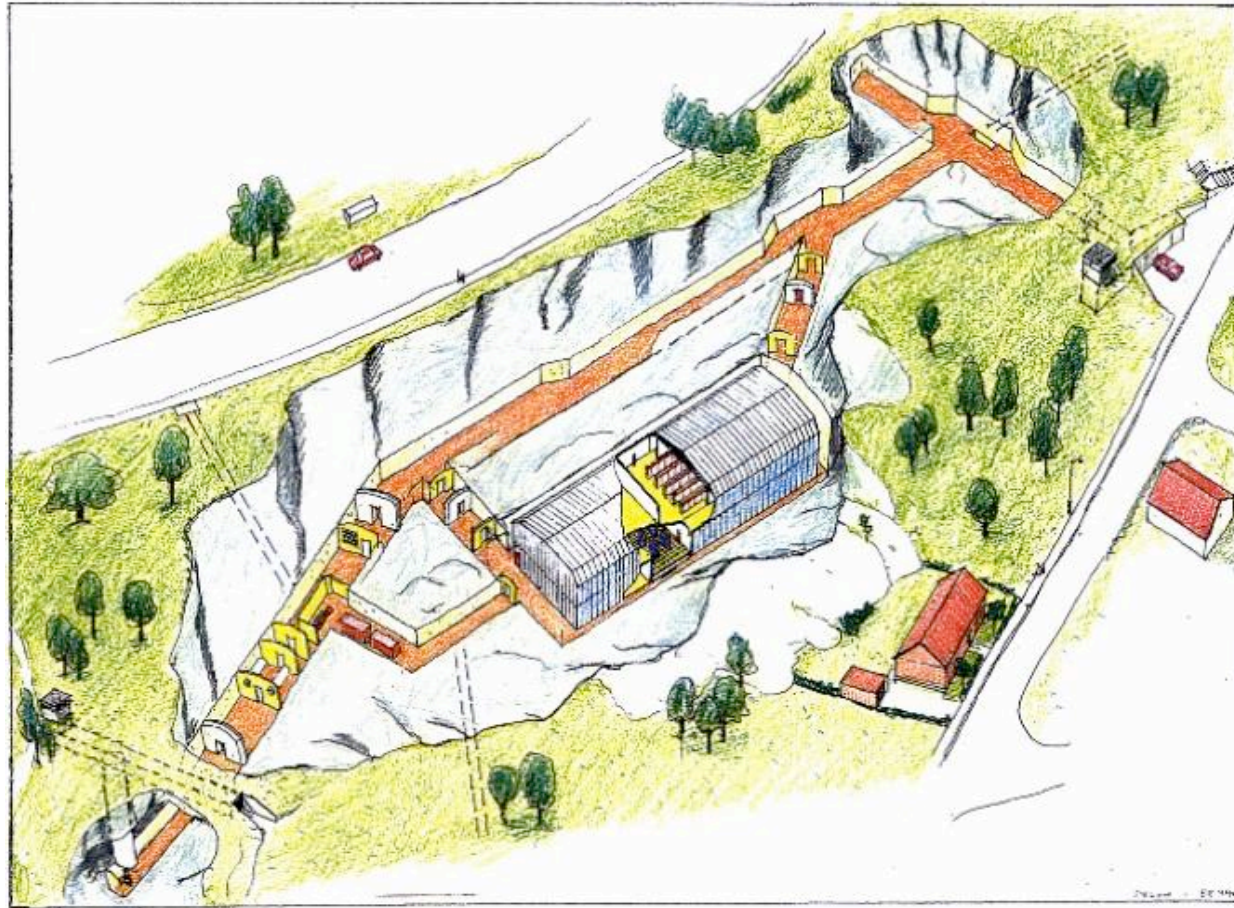
Nurani Nimpuno

Who are we?

- Non-profit, neutral exchange (1996)
 - Started out at KTH-NOC (1992)
- National infrastructure
 - Need for high availability
 - i.root-servers.net, TLDs, Official Swedish time, TPTEST, RIPE IRR
- Operate 6 IXPs in 5 cities
 - 2 switches in Stockholm
 - 50+ peers



Underground bunkers



Rock Solid Internet Exchange



Rock Solid Internet Exchange



<http://www.netnod.se>



What's new?

- European Peering Forum!
 - Netnod now co-organiser
 - EPF 4: Sep 2009 - location to be announced! :)
- IPv6 efforts
 - IPv6 enabled on all services
 - Info sharing: IPv6 workshop, tutorials etc
- WDM solution - to lower customer costs
 - Q1 2009 WDM at Telecity & Interxion
 - Reducing the prices in Stockholm
- Netnod fees
 - Looking at further reduction of fees in 2009

Connecting to Netnod

- Stockholm
 - Charges include cost of 2 separately routed fiber pairs
 - One to each bunker
 - (Therefore prices significantly higher in Stockholm)
- Other cities
 - ISP have to find a fiber provider themselves
 - Coordination needed to patch through to us

Pricing structure

- *Looking at further reductions 2009*

- **Stockholm***

- Outer city

- 2x10GE: 350k SEK (~35k €)
 - 2x1GE: 280k SEK (~28k €)

- Inner city:

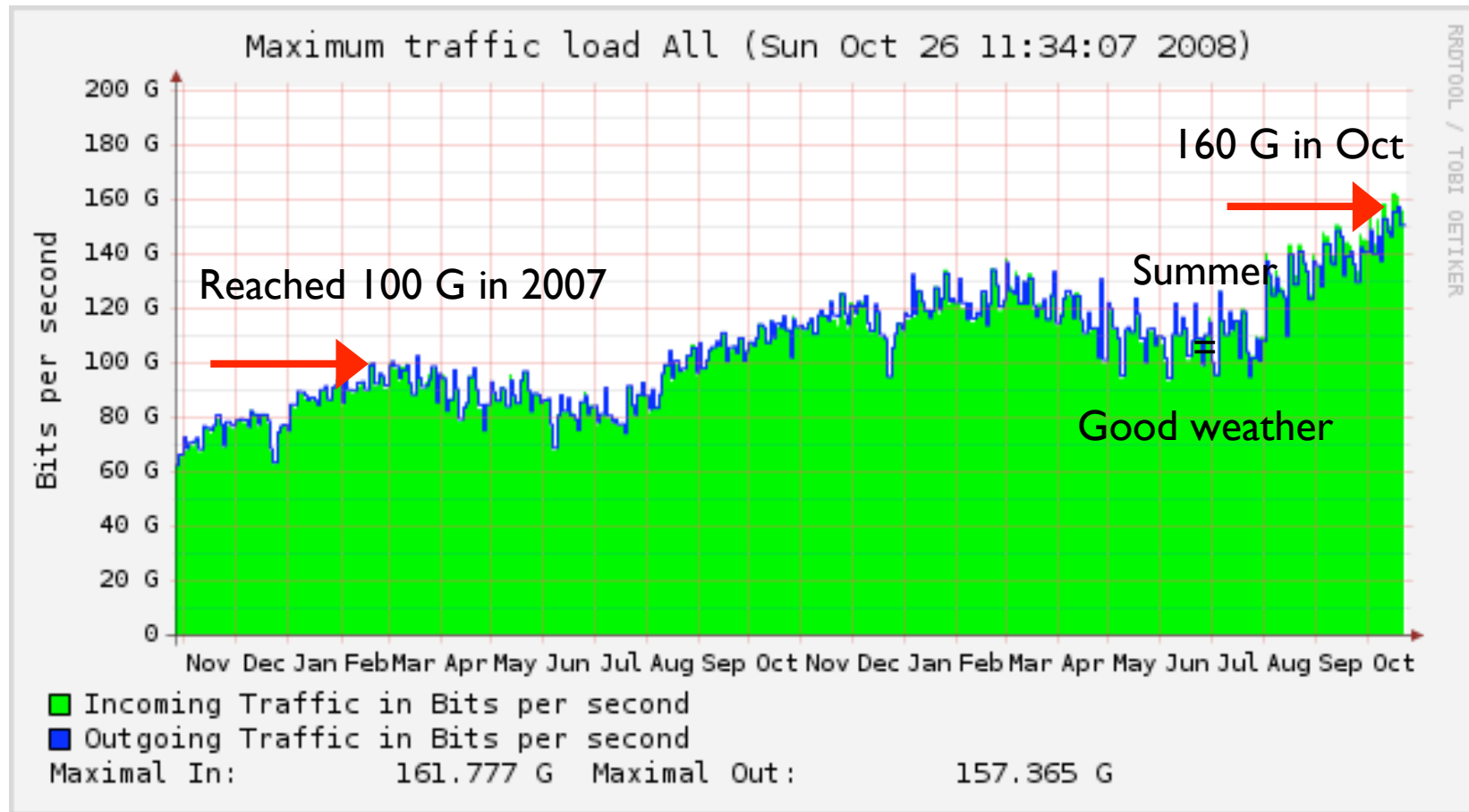
- 2x10GE: 265k SEK (~27k €)
 - 2x1GE: 195k SEK (~20k €)

- **Malmö/Göteborg/Sundsvall**

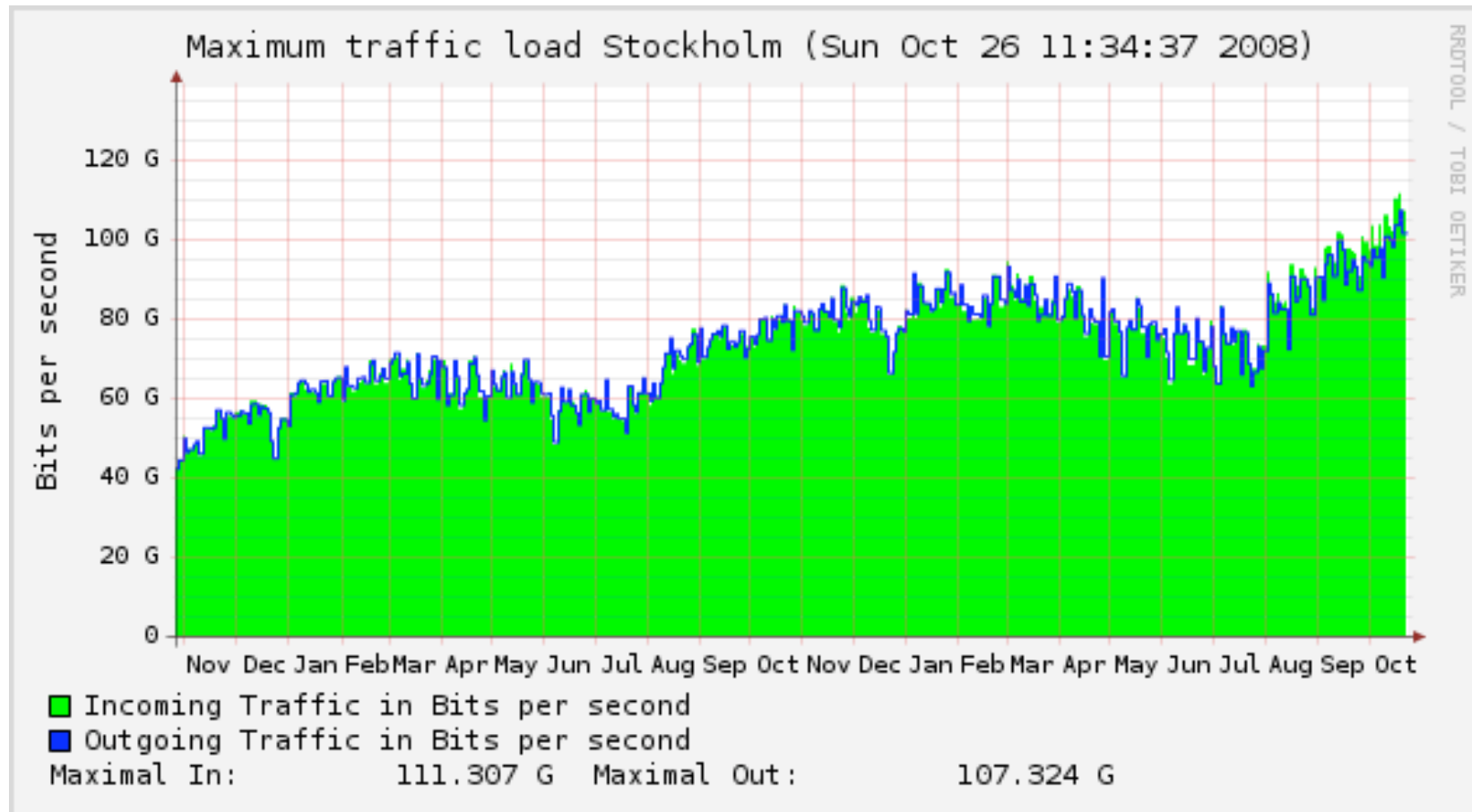
- 10GE: 110k SEK (~11k €)
 - 1GE: 75k SEK (~8k €)

**Stockholm fees include
2 connections &
2 separate fiber pairs*

Cumulative traffic



Traffic - Stockholm



Some observations

- Continued traffic growth
 - Total traffic above 100 G in 2007
 - 160G today
 - Continued 10 GE port demand
- Very high amount of traffic / peer
 - 2-2.5 Gbps / peer today
 - European average ~ 0.5 Gbps

Questions?

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