



1st EURONOG event Krakow Poland
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QUICK FACTS

Edpnet: INDEPENDENT TELECOM PROVIDER

- Founded in 1996
- Headquarters in Sint-Niklaas, Belgium
- Branch offices: Amsterdam, The Netherlands and Saint-Petersburg, Russia and New York, USA

Edpnet: 'COMMON SENSE' PROVIDER


- The clever alternative for more monopolistic telecom providers
- High-quality products and services at an affordable price
- Transcontinental optical network - the ideal platform for connections between Europe, Russia and the USA



MARKETS

- Wholesale (Europe, Russia, USA)
- Professional (Europe, Russia, USA)
- Retail (Belgium, The Netherlands, Russia, France, UK)

PRODUCTS / SOLUTIONS



IP Transit / P2P /
DWDM, Voice
Wholesale

- Europe / Russia / USA

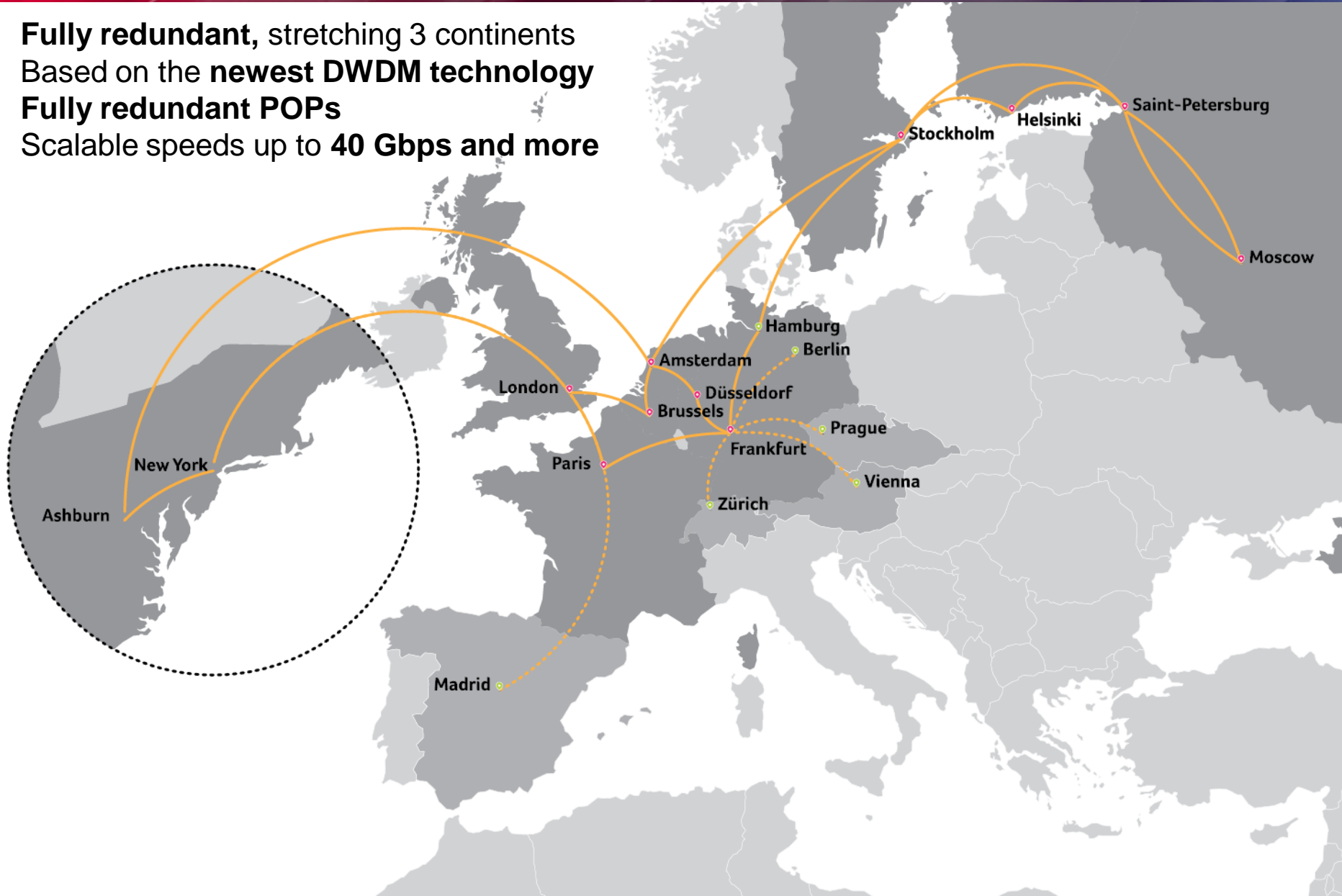
Broadband
Internet Access
Retail – B2B

- Belgium / Netherlands /
Russia

Internet linked
products
Retail – B2B

- Europe / Russia / USA

- **Fully redundant**, stretching 3 continents
- Based on the **newest DWDM technology**
- **Fully redundant POPs**
- Scalable speeds up to **40 Gbps and more**



What We Were Looking For

- **Better data to drive network planning**
 - **Particularly for analyzing and optimizing transit and peering relationships**
- **IPv6 ready solution**
- **Stand-alone package, in order to avoid having to perform integration with existing applications**

Detailed Traffic Analysis

- Possibility to check the outgoing traffic to customers: is it useful to setup a direct connection/link?
- Complete overview of the amount of traffic to a main AS with attached sub AS's.
- Great insights into edpnet's connections – useful feedback to decide whether we should buy peering or transit.
- Edpnet offers a lot of MPLS services between Russia and Europe (the Russian-European connection is crucial to our organization). Combination of routing and traffic analysis gives us also detailed insights into this traffic.

Traffic Reports

Destination AS

← → ⏪ ⏩ Drill Down

Destination AS	5 Minute Avg Selected Interval
ukrtelnet (6849)	113.58 Mbps
goldenlines-asn (9116)	64.57 Mbps
dneo-osp3 (7922)	54.49 Mbps
ntl (5089)	50.34 Mbps
nucleus (39318)	44.49 Mbps
netvision (1680)	43.83 Mbps
corbina-as (8402)	43.40 Mbps
telenet-as (6848)	39.72 Mbps
ti-as (12714)	25.60 Mbps
dtaq (3320)	25.32 Mbps
belqacom-skynet-as (5432)	25.27 Mbps
telefonica-data-espana (3352)	21.24 Mbps
ttnet (9121)	20.76 Mbps
hanaro-as (9318)	19.97 Mbps
ocn (4713)	18.99 Mbps
ovh (16276)	18.63 Mbps
net (28573)	18.56 Mbps
telepac (3243)	17.95 Mbps
svitonline (12530)	17.08 Mbps
insys-as (28890)	17.08 Mbps
iana_reserved (43039)	17.00 Mbps
ccinet-2 (22773)	16.77 Mbps
starman (13272)	15.02 Mbps
intertelecom (31343)	14.35 Mbps
google (15169)	14.22 Mbps
mpx-as (4804)	13.65 Mbps
hetzner-as (24940)	13.02 Mbps
qlobal (18881)	13.01 Mbps
incrowd (41471)	12.45 Mbps
ipq-as-ap (9299)	12.01 Mbps
hinet (3462)	11.71 Mbps
asn-infostrada (1267)	11.67 Mbps
asbrutele (12392)	11.55 Mbps
uninet (8151)	10.70 Mbps
arcor (3209)	10.24 Mbps
as3215 (3215)	10.16 Mbps
4201 entries	

Outgoing traffic

Traffic Reports

Downstream Neighbor AS

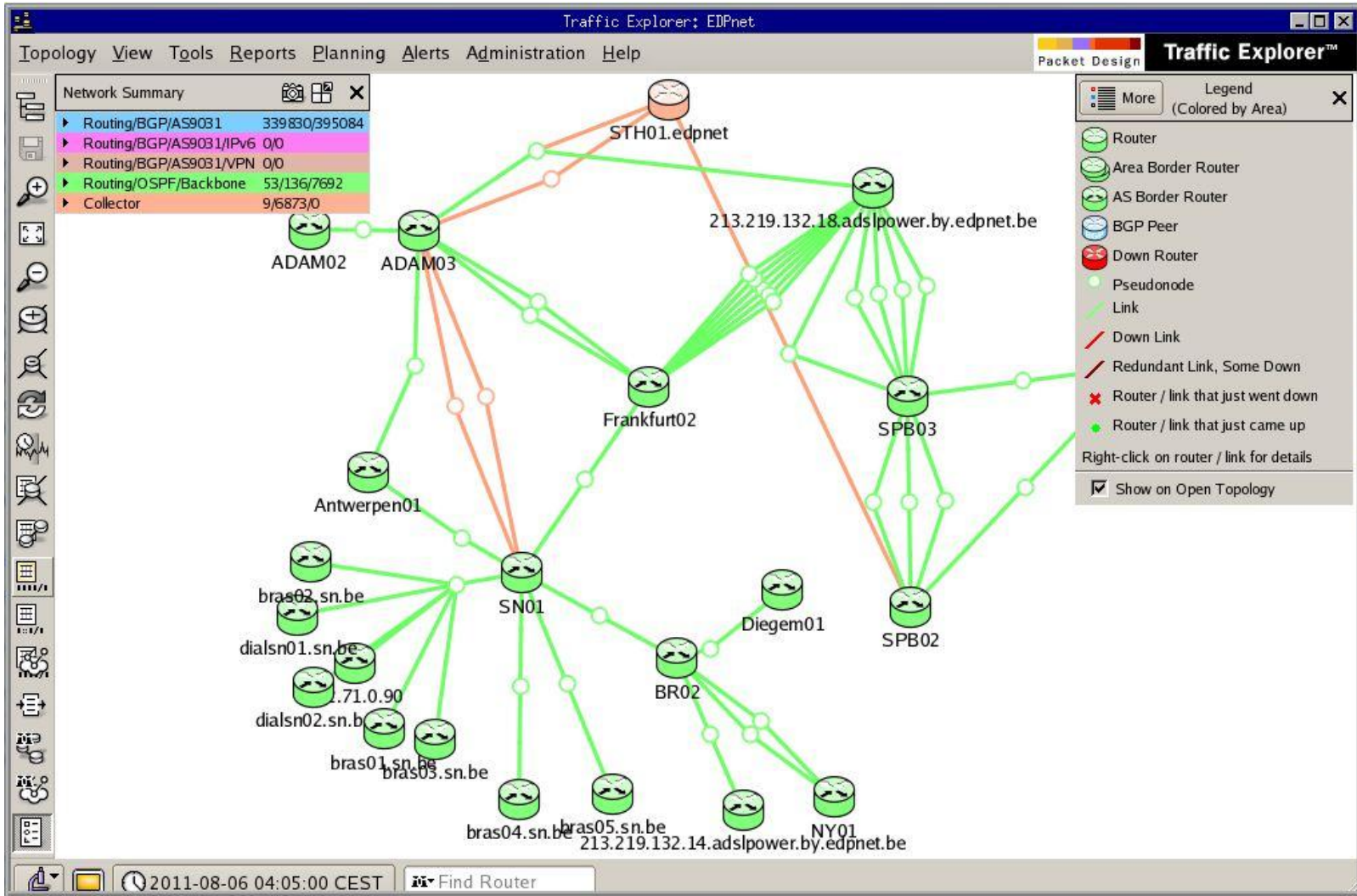
← → ⏪ ⏩ Drill Down

Neighbor AS	5 Minute Avg Selected Interval
leveB (3356)	450.76 Mbps
qbbx (3549)	233.89 Mbps
ntt-communications-2914 (2914)	139.76 Mbps
goldenlines-asn (9116)	66.74 Mbps
sovam-as (3216)	54.46 Mbps
ntl (5089)	50.34 Mbps
nucleus (39318)	44.73 Mbps
netvision (1680)	43.90 Mbps
telenet-as (6848)	39.96 Mbps
newline (21219)	39.19 Mbps
ttnet (9121)	29.96 Mbps
ett-as (35320)	28.99 Mbps
ti-as (12714)	28.71 Mbps
belqacom-skyonet-as (5432)	23.80 Mbps
interoute (8928)	23.53 Mbps
hanaro-as (9318)	19.97 Mbps
peer1 (13768)	19.40 Mbps
cprm (8657)	19.08 Mbps
ovh (16276)	18.63 Mbps
rostelecom-as (12389)	18.55 Mbps
svitonline (12530)	17.11 Mbps
hetzner-as (24940)	13.02 Mbps
incrowd (41471)	12.45 Mbps
asn-infostrada (1267)	12.42 Mbps
asbrutele (12392)	11.55 Mbps
arcor (3209)	11.23 Mbps
kabeldeutschland-as (31334)	9.42 Mbps
asn-numericable (21502)	9.31 Mbps
t-h (5391)	8.08 Mbps
ocom (16265)	7.50 Mbps
asn-bics (6774)	7.16 Mbps
google (15169)	6.53 Mbps
opaltelecom-as (13285)	6.52 Mbps
swisscom (3303)	6.47 Mbps
plusnet (6871)	6.20 Mbps
mf-mqsm-as (31133)	6.14 Mbps
313 entries	

Overview total amount of traffic

Network Optimization

- We can easily **detect network and track network anomalies** (DoS).
 - Connection delays
 - Links that are down
 - External attacks
- Integrated routing and traffic analyses automatically **updates the data about our network performance**.
 - We can check all parameters in real time.



Traffic Explorer: EDPnet

Topology View Tools Reports Planning Alerts Administration Help

Packet Design Traffic Explorer™

Network Summary

- Routing/BGP/AS9031 Current
 - Active Prefixes 339830
 - Active Routes 395084
 - Baseline Up 374854
 - Baseline Down 1132
 - Next Hops 610
 - Neighbor ASs 502
- Routing/BGP/AS9031/IPv6 0/0
- Routing/BGP/AS9031/VPN 0/0
- Routing/OSPF/Backbone 53/136/7692
- Collector 9/6873/0

Legend (Colored by Area)

- Router
- Area Border Router
- AS Border Router
- BGP Peer
- Down Router
- Pseudonode
- Link
- Down Link
- Redundant Link, Some Down
- Router / link that just went down
- Router / link that just came up

Right-click on router / link for details

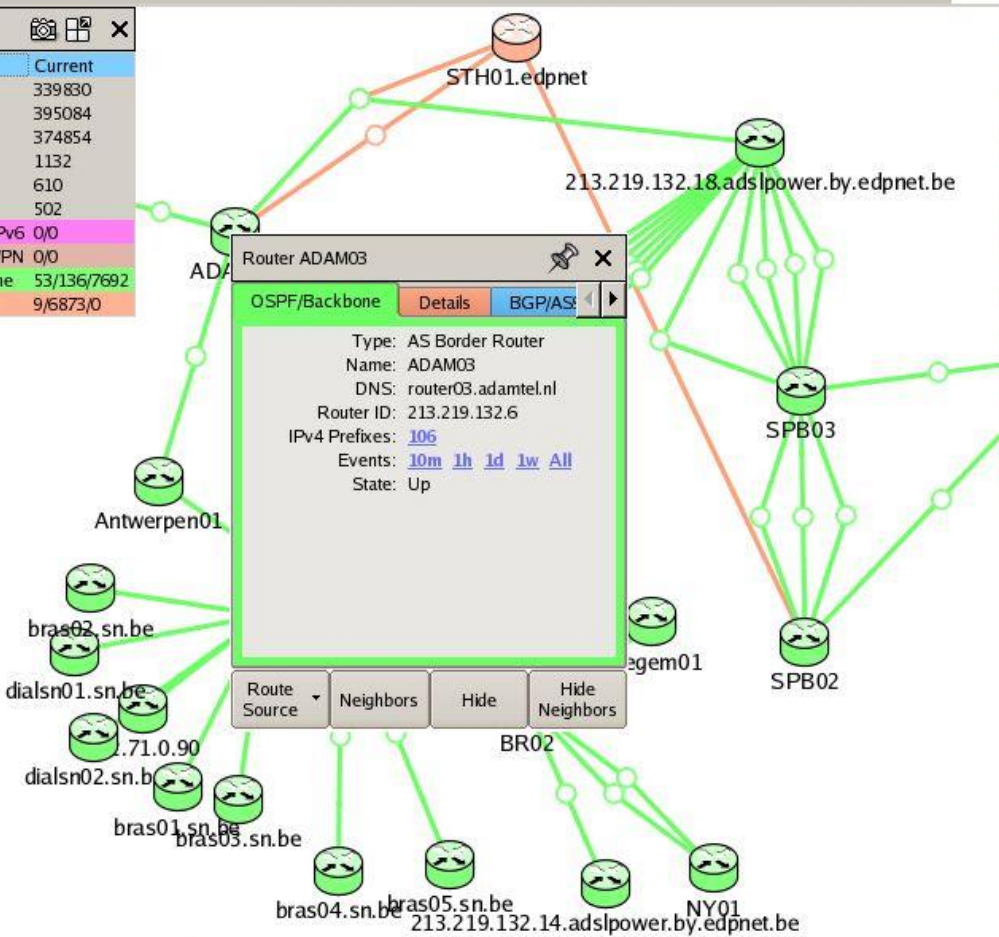
Show on Open Topology

Router ADAM03

OSPF/Backbone Details BGP/AS

Type: AS Border Router
 Name: ADAM03
 DNS: router03.adamtel.nl
 Router ID: 213.219.132.6
 IPv4 Prefixes: 106
 Events: 10m 1h 1d 1w All
 State: Up

Route Source Neighbors Hide Hide Neighbors



Antwerpen01

bras02.sn.be

dialsn01.sn.be

dialsn02.sn.be

bras01.sn.be

bras03.sn.be

bras04.sn.be

bras05.sn.be

NY01

213.219.132.14.adslpower.by.edpnet.be

BR02

egem01

SPB02

SPB03

213.219.132.18.adslpower.by.edpnet.be

STH01.edpnet

ADAM03

Traffic Explorer: EDPnet 10:05:00 CEST Find Router

Solved Issues: Hardware

- Different types of routers: how to get the right netflow data?
Flexible route analytics capability solved this problem
- We had a server crash and no backup was made: a complete recovery of the data was possible by leveraging our route analytics capability

End-User Benefits

- **High-quality connections**
 - Traffic offload via the shortest path routes
 - Edpnet guarantees:
 - the fastest connection possible
 - lowest latencies
 - lowest packet loss
- By gaining better insight into our routing and traffic, we can deliver more effectively on our promises

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