NIX.CZ Internet eXchange Point

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5 years CTO @ NIX.CZ
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We need to bring the content to the users

How we gonna do it?

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We use

And other social networks

- Internet use an abstraction in terms of autonomous systems – or AS
- Each AS has a unique number

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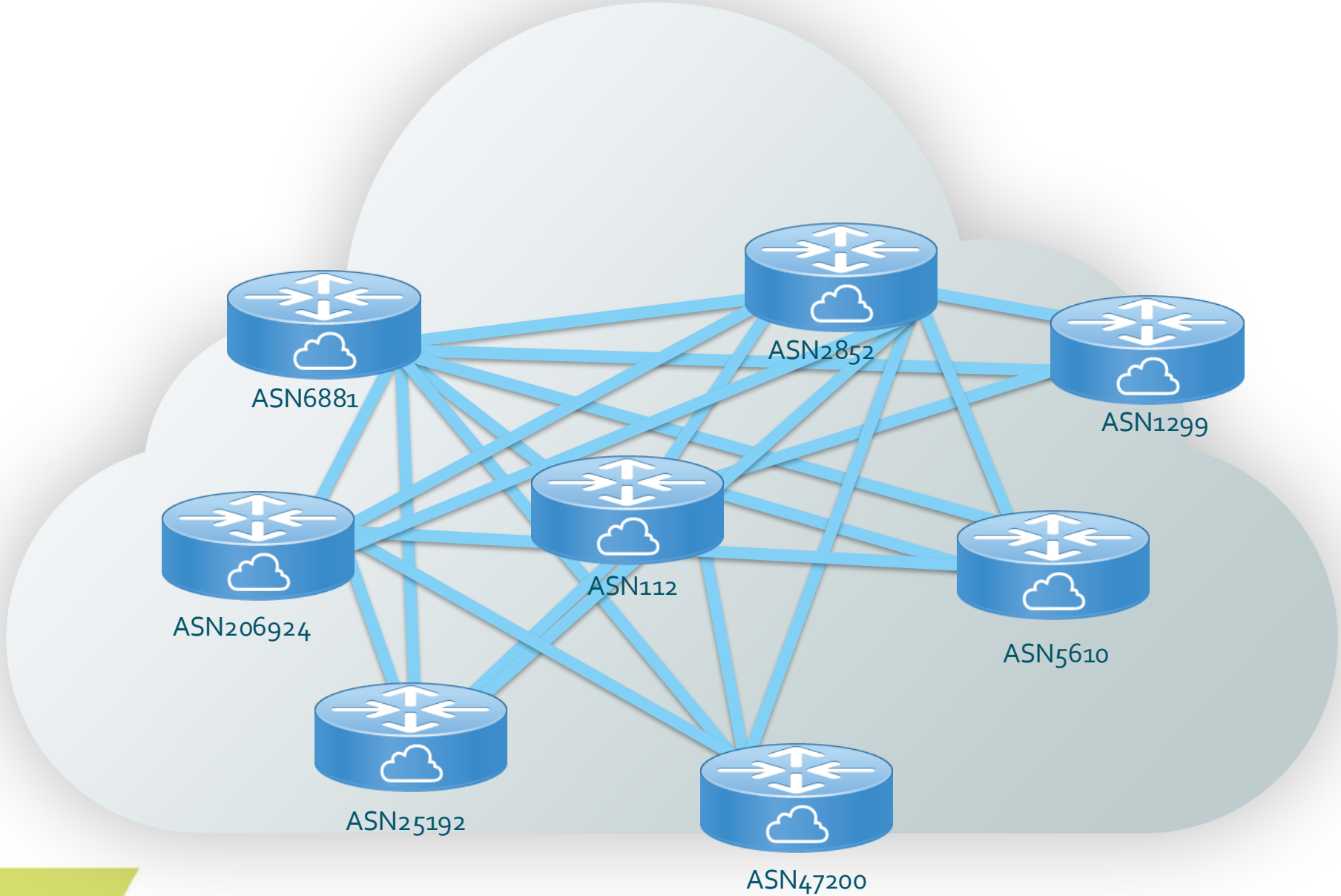
INTERNET


ASN6881
ASN2852
ASN1299
ASN206924
ASN112
ASN5610
ASN25192
ASN47200

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More than 100 000 ASNs world wide

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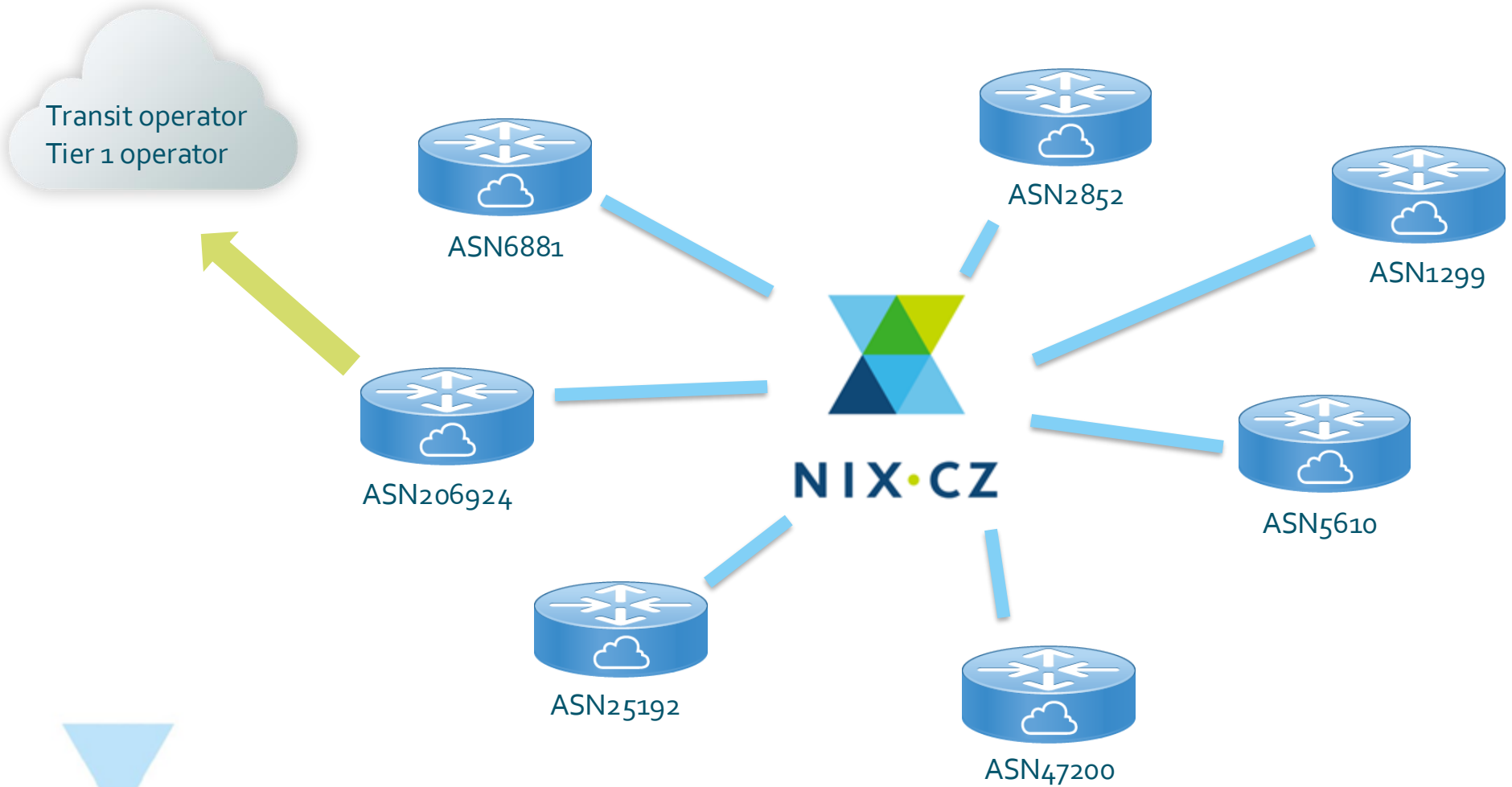
Transit operator
Tier 1 operator
ASN6881
ASN2852
ASN1299
ASN206924
NIX·CZ
ASN5610
ASN25192
ASN47200

What is important

- Keeping the connections (traffic) local
- Reliable infrastructure
- Redudancy

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Keeping the connections (traffic) local

- Czech Republic (where users are)
- Slovakia (where users are)
- Austria (where users and content is)
- Germany (where content is)

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Reliable infrastructure

- Power redundancy
  At least 2 mains
- Network redundancy
  Policy of a „50%“
- State critical infrastructure
  ISO 27001

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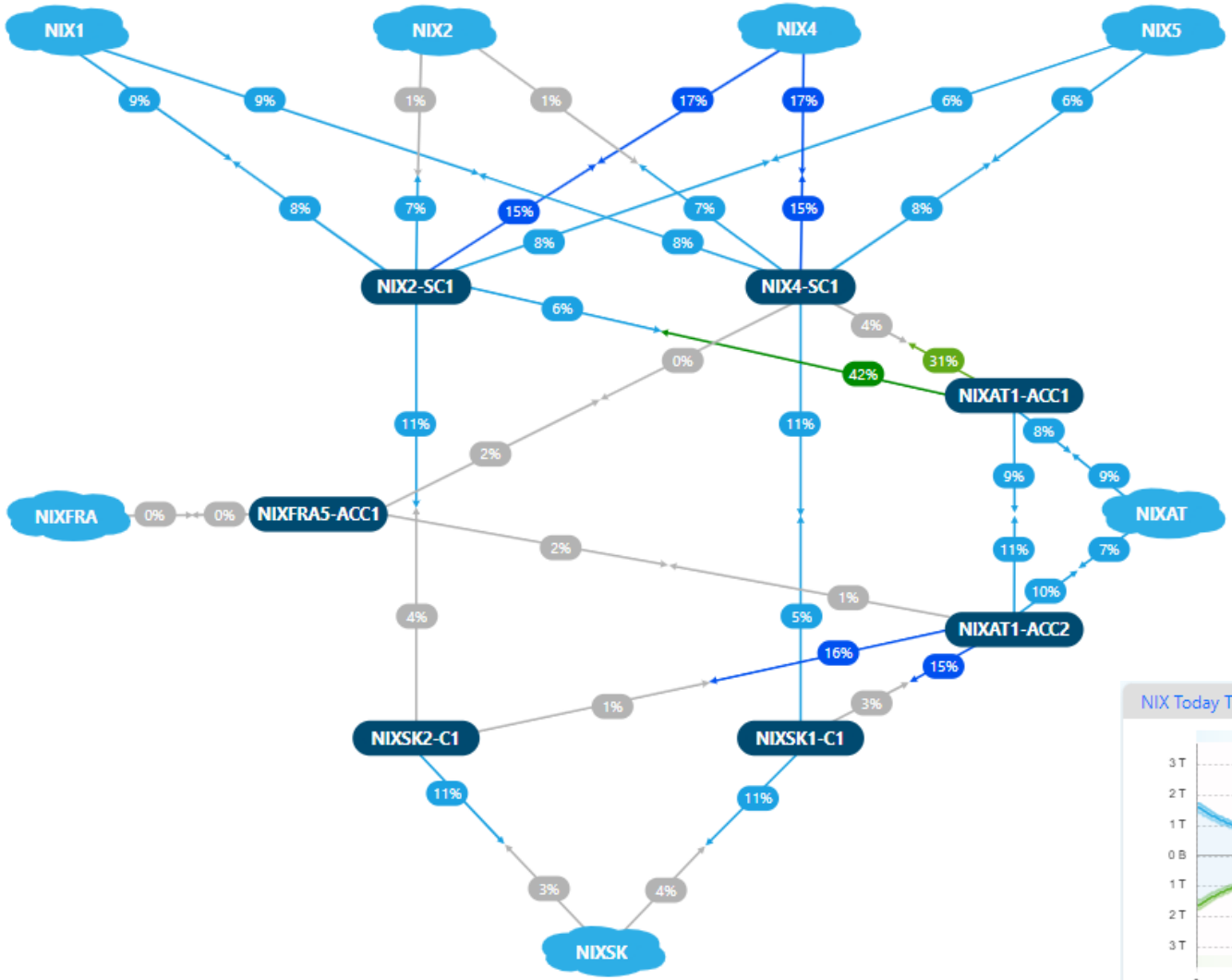
NIX1
NIX2
NIX4
NIX5
NIX2-SC1
NIX4-SC1
NIXAT1-ACC1
NIXAT1-ACC2
NIXFRA
NIXFRA5-ACC1
NIXAT
NIXSK2-C1
NIXSK1-C1
NIXSK

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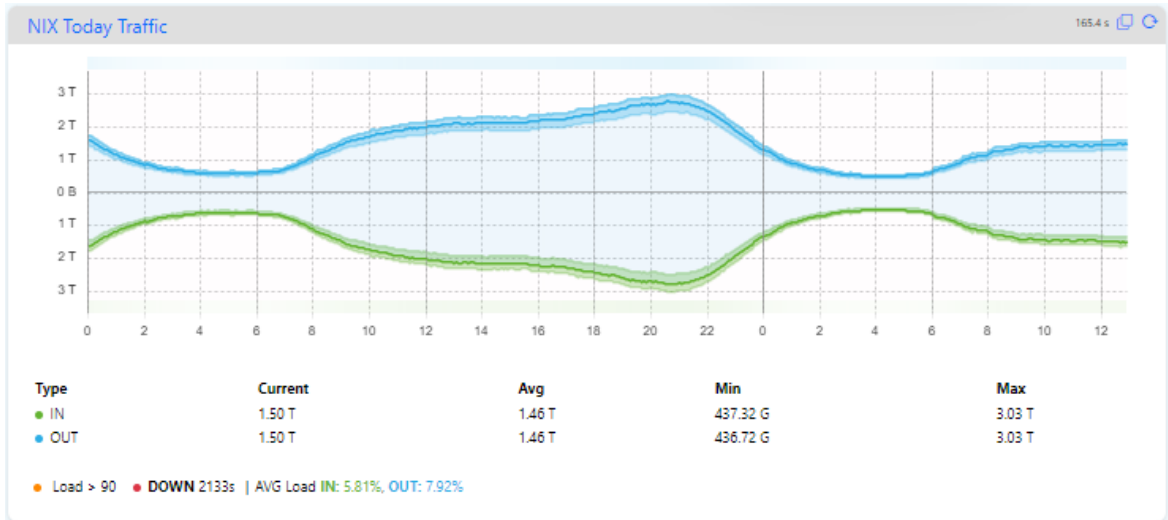
NIX Today Traffic
3 T
2 T
1 T
0 B
1 T
2 T
3 T
0 2 4 6 8 10 12 14 16 18 20 22 0 2 4 6 8 10 12
Type Current Avg Min Max
IN 1.50 T 1.46 T 437.32 G 3.03 T
OUT 1.50 T 1.46 T 436.72 G 3.03 T
Load > 90
DOWN 2133s | AVG Load IN: 5.81%, OUT: 7.92%

What „Neutral“ means

- Non-Profit assotiation
- Member based
- Equal conditions for everybody
- Transparent (completely)

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NIX.CZ's milestones

1996 - Foudation
1997 – First connection
1998 – CZ.NIC foudation
2002 – 1 Gbit/s
2003 – IPv6
2005 – 10 Gbit/s
2009 – 100 Gbit/s
2014 – Fenix kickoff
2019 – 1 Tbit/s
2022 – 2 Tbit/s
2024 – 3Tbit/s
2024 – Migration to EVPN finished

Traffic growth

- 3000 times in 22 years
- 3 times in 5 years

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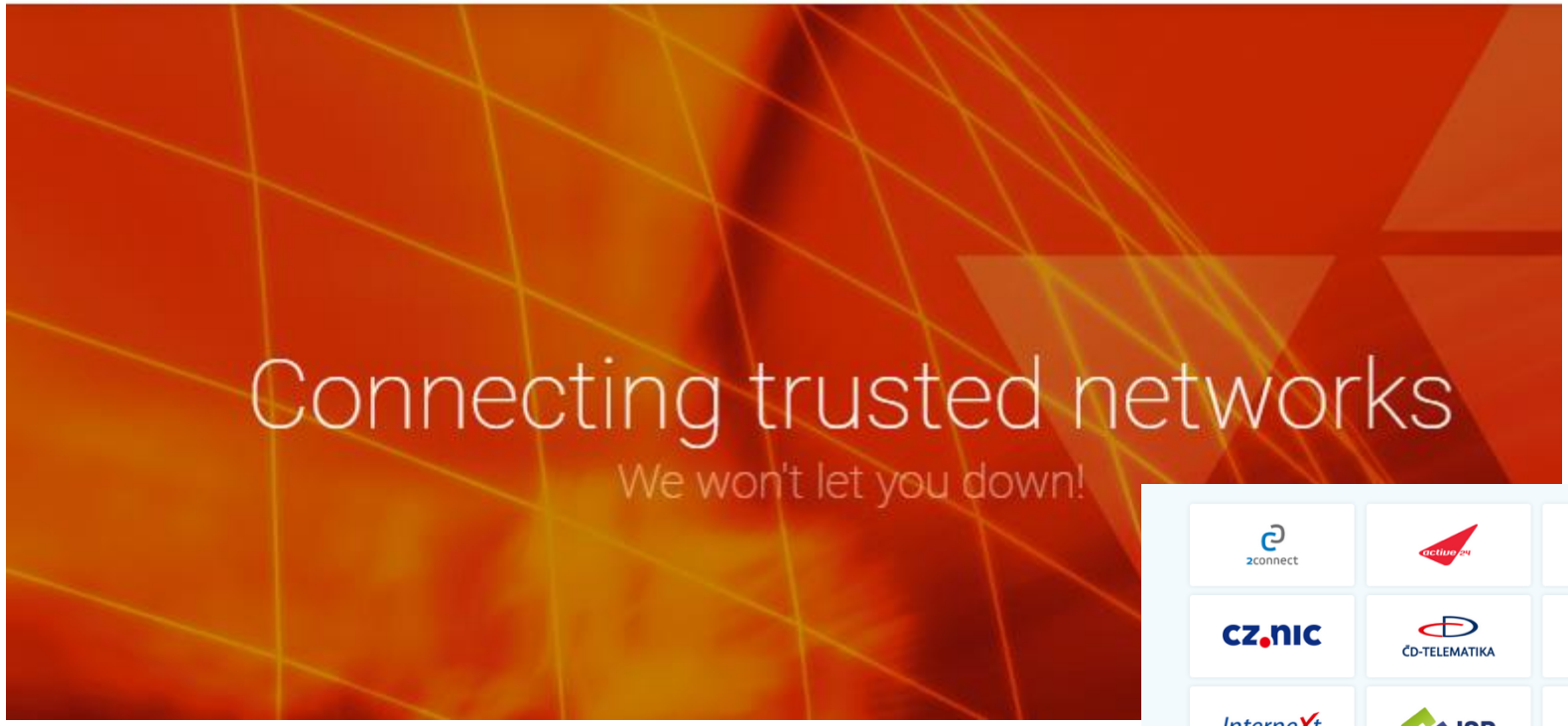
FENIX



Project Fenix

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Projekt Fenix

- Group of operators fullfilling strict (routing) security policies
- Separated „peering“ LAN
- An option to separate from the Internet in case of a crisis

- Cisco Nexus 9300

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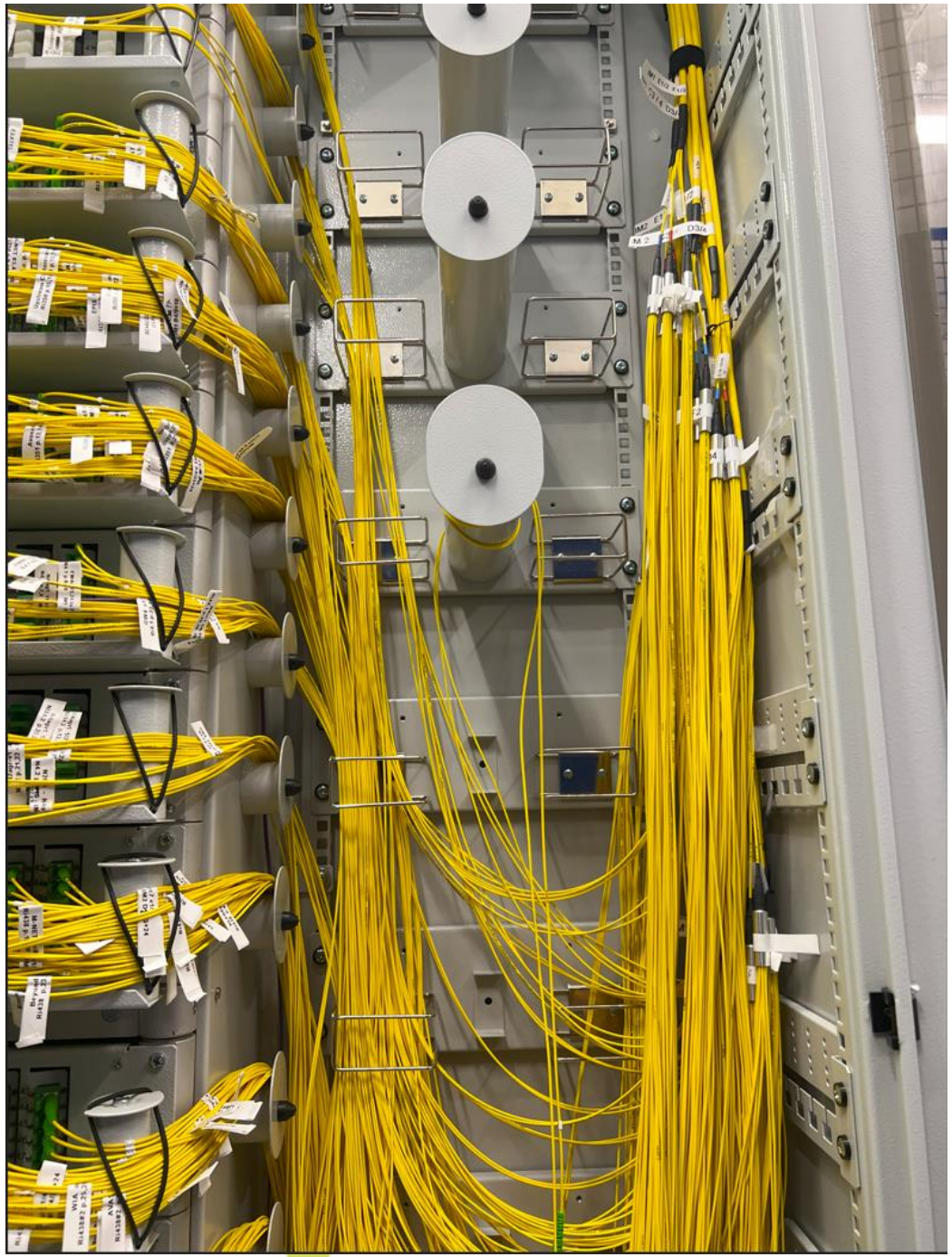

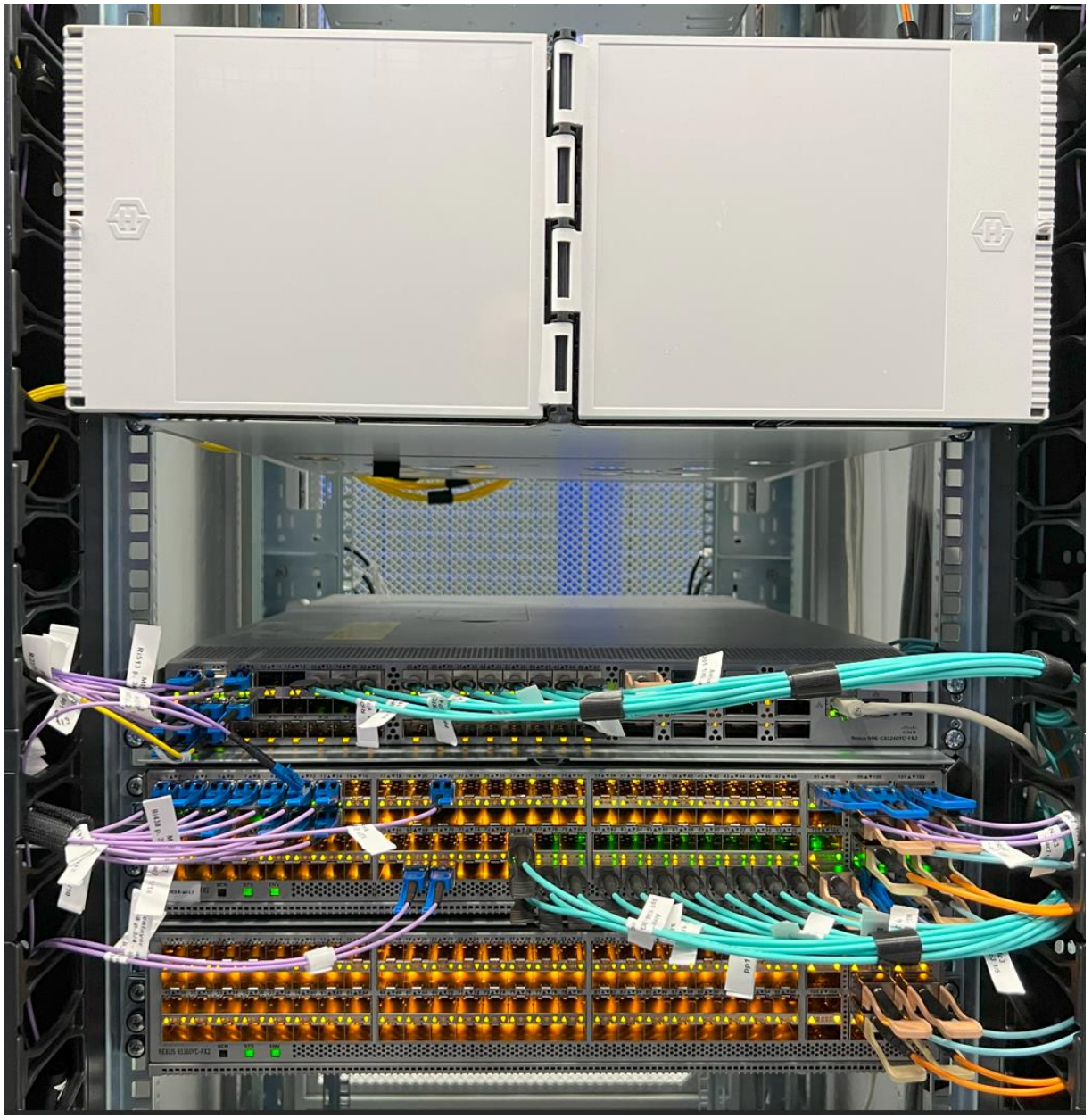

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