Disruption in Enterprise Networking
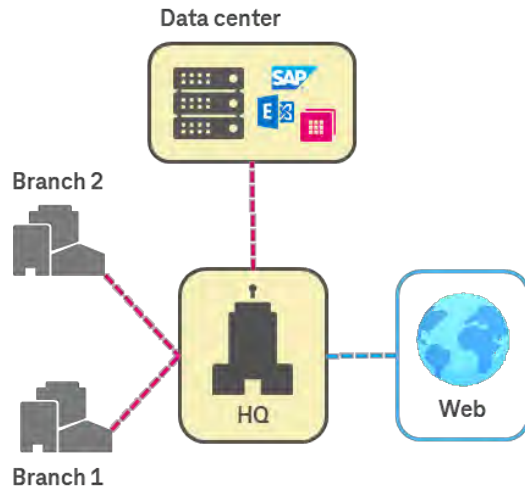
Sourcing Advisors & Analysts Days 2023 //
Breakout Session June 29th

Frank Opfer
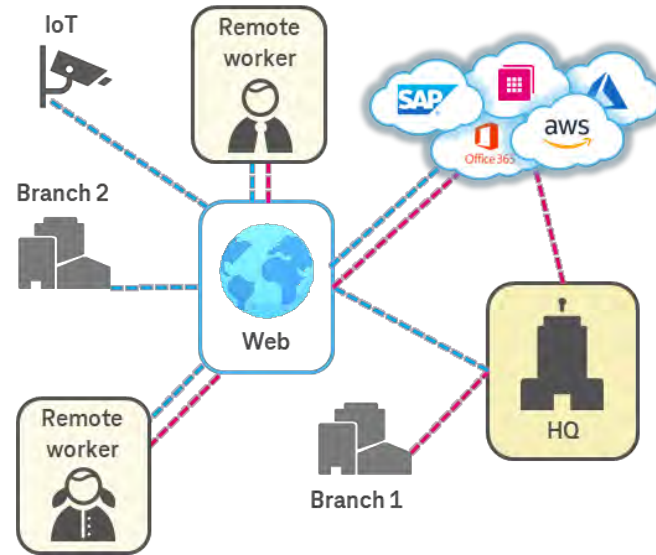
Fundamental changes of company networks

From centralized...

- Centralized topology (MPLS)
- Access to public network secured and managed centrally
- Less focus on cloud adoption
- Network functions run on separate hardware devices

...to decentralized infrastructure.

- Decentralized topology (SD-x)
- Access to public network secured and managed locally
- Cloud adoption and remote work
- Network functions are virtualized and run on a single device

Customer expectation

- Low complexity
- High agility
- Network virtualization
- Value for money
- Security / data protection

What does this mean for our customers' networks?

2000s…	…2018 – 20xx	2022 – 20xx
20+ years ago private MPLS networks became standard	Switching from legacy MPLS to cheaper and more flexible internet connections with SD-WAN	Which network technology will disrupt traditional enterprise networking?

2000s…

✅ Highly reliable & secure private networks with performance SLAs

❌ Long lead times for installation and changes

❌ Not designed for cloud adoption / remote work

…2018 – 20xx

❌ No performance SLAs; security becomes a concern

✅ Ubiquitous internet availability

✅ Easy to integrate cloud / remote work

2022 – 20xx

?

Premium Internet is our response

In a nutshell — managed internet with E2E SLAs

- **Deutsche Telekom end-to-end managed premium internet underlay solution with performance SLAs**
- **Complete solution** of internet access, backbone and CPE
- **Global coverage** based on Telekom's IP network, combined with Teridion's cloud-based/software-only WAN solution
  - **500 PoPs worldwide** with 25 cloud & infrastructure providers
  - Setup of new PoPs within hours
- **Attractive flat-rate pricing model**

Global Premium Internet Backbone
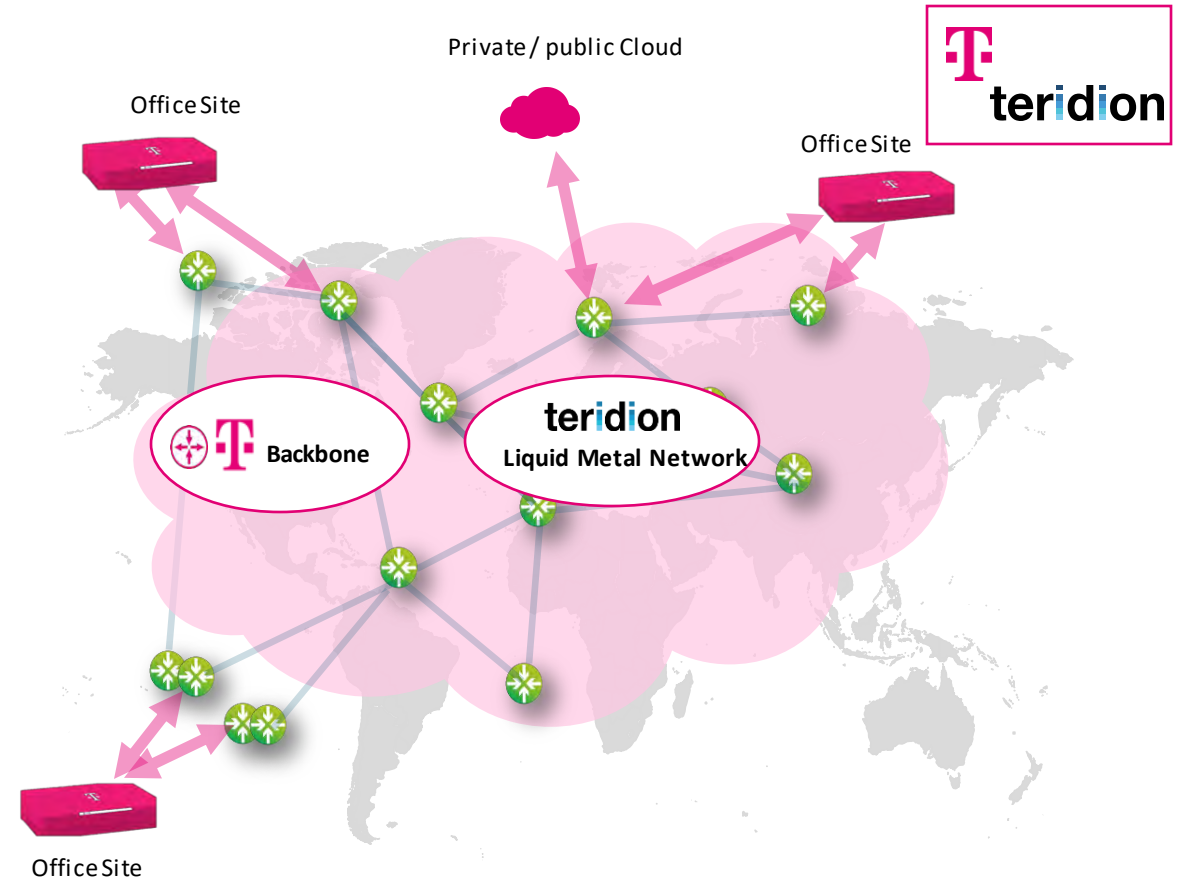
Premium Internet with MPLS-like performance SLAs

Premium Internet vs. MPLS

PoP-to-PoP Performance SLAs	Premium Internet Underlay	Average MPLS
Packet loss	Max. 0.1%[1]	From 0.1% to 1%[3]
Round-trip delay (Europe-Europe)	From 45 to 74 milliseconds	From 45 to 84 milliseconds[3]
Round-trip delay (Germany-Asia)	Max. 219 milliseconds[2]	From 255 to 340 milliseconds[3]
Access SLAs (MTTR, Availability, RfS)	Available	Available

Additional advantages

- **Cloud adoption and remote users –** MPLS architectures are often not designed to cope with increasing cloud adoption and local internet breakouts at the branch level. Premium Internet offers direct cloud connectivity at the branch level and supports the increasing number of remote users

- **Lower cost –** Premium Internet provides MPLS-like performance SLAs, but at lower cost.

[1]Site-to-site SLA   [2]EU-Singapore   [3]Depending CoS

Premium Internet with universal CPE

🟢 ⚪	Premium Internet
🟢 ⚪	SD-WAN Overlay
🟢 ⚪	Security / Zero Trust
⚪ 🔴	Future use

8 or 16 core chip

	From traditional CPE HW…	to	…future-proof universal CPE HW
Operating system	• Proprietary operating system	▶	• Open-source operating system
Network functions	• Specialized HW devices • High complexity	▶	• Software-based virtual network functions • Flexibility and less complex operations
Customer space	• Minimum two CPE devices	▶	• One uCPE device
Sustainability	• Separate power and cooling per HW device • Generally long provisioning times	▶	• Less power and cooling from single-box-solution • Shortened provisioning times
Pricing	• Static "pay-per-box" plan • No spare capacity	▶	• Flexible "pay-as-you-grow" plan. • Extension on demand

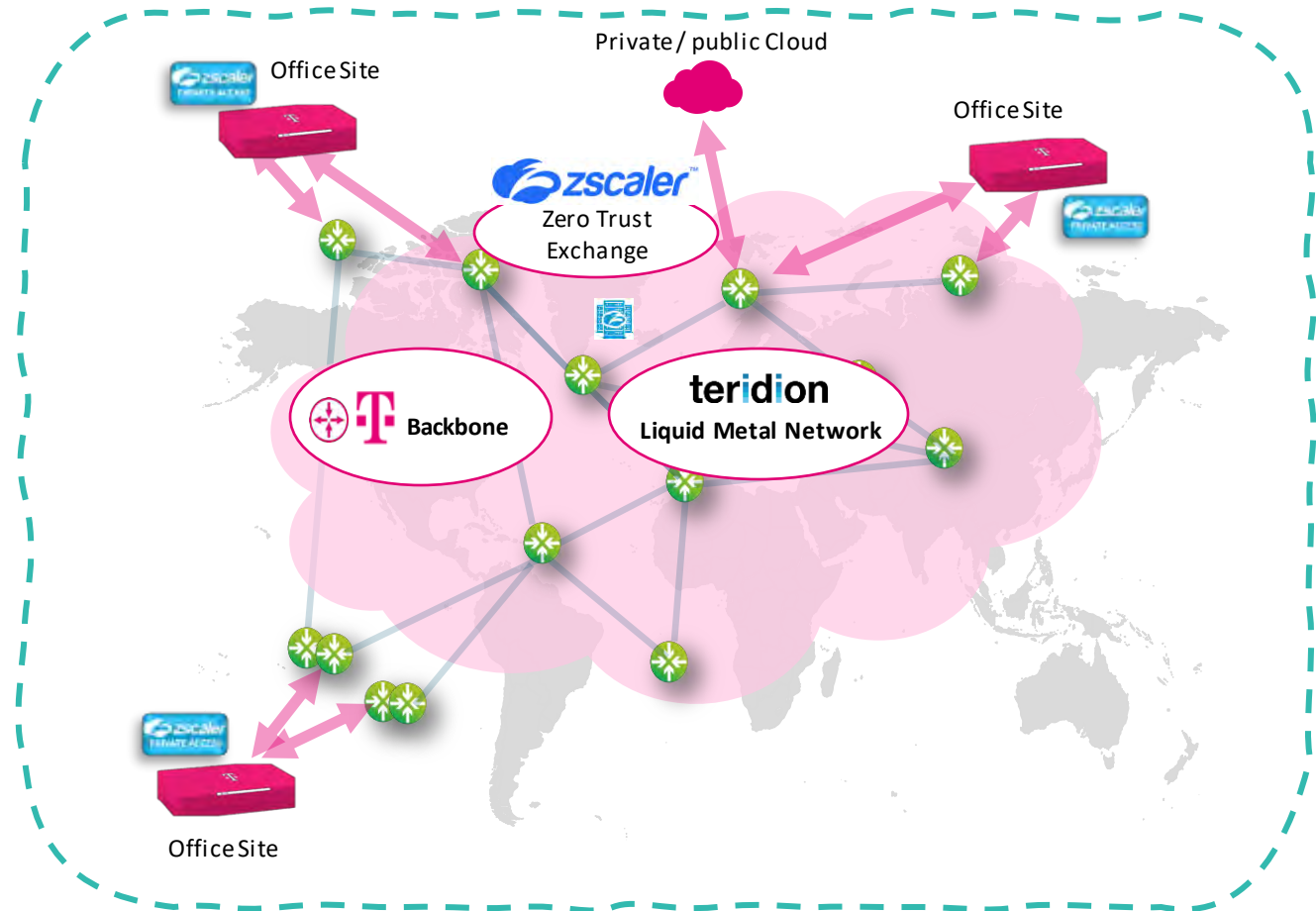# Premium Internet with universal CPE and zero-trust

Premium Internet with uCPE
and full support of Zscaler...

- Private service edge
- Application connector
- Branch Connector

The result:
A fully integrated and end-to-end managed zero-trust solution

Global Premium Internet Backbone

Private / public Cloud

Office Site

Office Site

Zero Trust Exchange

Backbone

teridion Liquid Metal Network

Office Site

Summary & DT approach

2000s…

20+ years ago
private MPLS networks
became standard

- ✅ Highly reliable & secure private networks with performance SLAs
- ❌ Long lead times for installation and changes
- ❌ Not designed for cloud adoption / remote work

…2018 – 20xx

Switching from legacy MPLS
to cheaper and more flexible
internet connections with SD-WAN

- ❌ No performance SLAs; security becomes a concern
- ✅ Ubiquitous internet availability
- ✅ Easy to integrate cloud / remote work

2022 – 20xx

Which network technology will
disrupt traditional enterprise
networking?

- ✅ Premium internet with perfor-mance SLAs and zero trust
- ✅ Service chaining on uCPE and PoP (e.g. SD-WAN or ZTNA)
- ✅ Globally available and cloud-agnostic

Contact

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Thank You!