

High Performance Network im kommerziellen Rechenzentrum

Sebastian Schmitzdorff - 14.11.2018





Beratung, Service & Support

Storage, HPC, Linux & more



High Performance Netzwerke

100GBe & InfiniBand



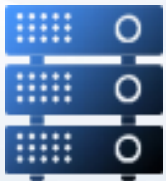
Enterprise Flash Storage

NVMe & Software defined



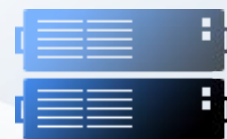
Scaleout Storage

Skalierbare Storage
Lösungen



HPC IT

CPU & GPU
Lösungen



Enterprise Server Lösungen

Supermicro & DELL

Welche HPC Interconnects gibt es?

InfiniBand
Ethernet
Omni-Path



Intel® Omni-Path Architecture



INFINIBANDSM
TRADE ASSOCIATION

- **Niedrige Latenz**
- **Hohe Bandbreite**
- **Einfache Skalierbarkeit**



Port to Port Latenz: 90 - 300ns (nanoseconds)

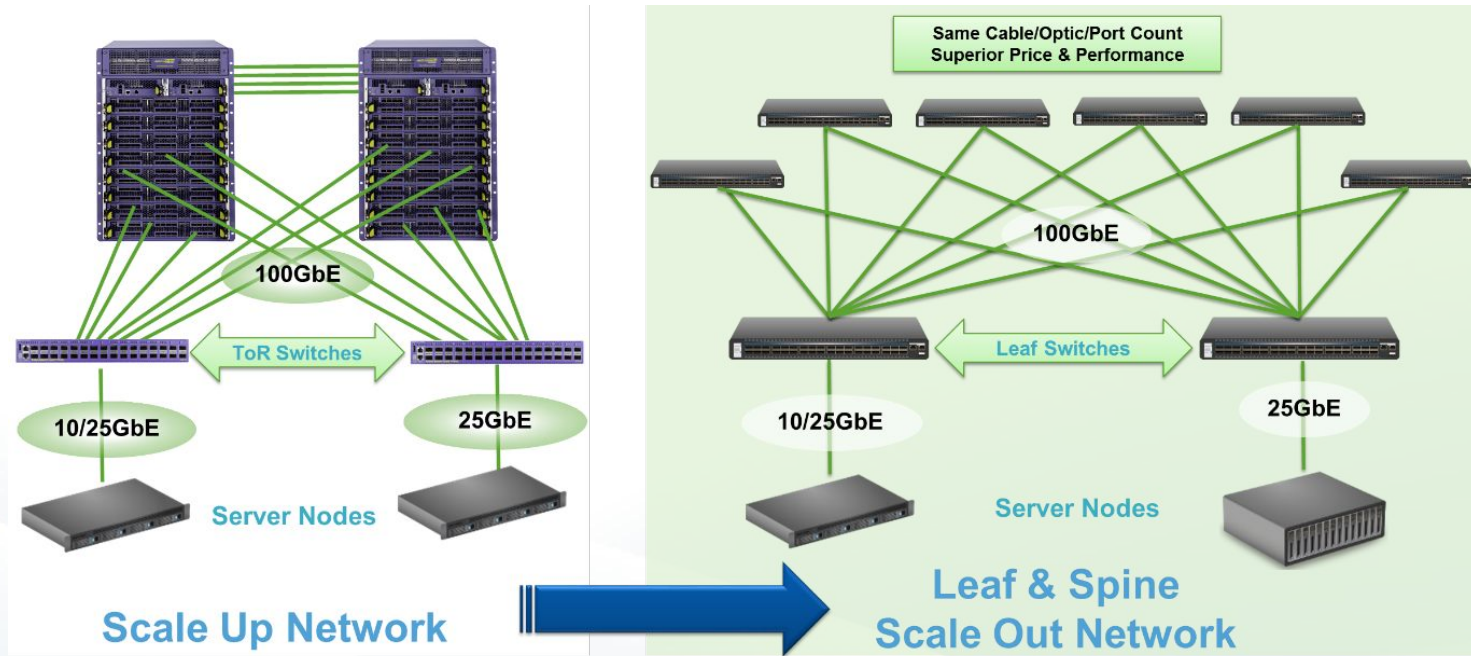
Server to Server Latenz: 0,6 - 4us (microseconds).

Technologie	Switch Latenz	Server to Server
InfiniBand (HDR)	0,09us	0,60us
Omni-Path	0,11us	
Ethernet	0,30us	4,00us



Technologie	Switch Bandbreite	Host Adapter Speed
InfiniBand	200Gbit/s	200Gbit/s
Omni-Path	100Gbit/s	100Gbit/s
Ethernet	400Gbit/s*	100Gbit/s





Scale Up Network

Leaf & Spine Scale Out Network

ARISTA





InfiniBand Brochure



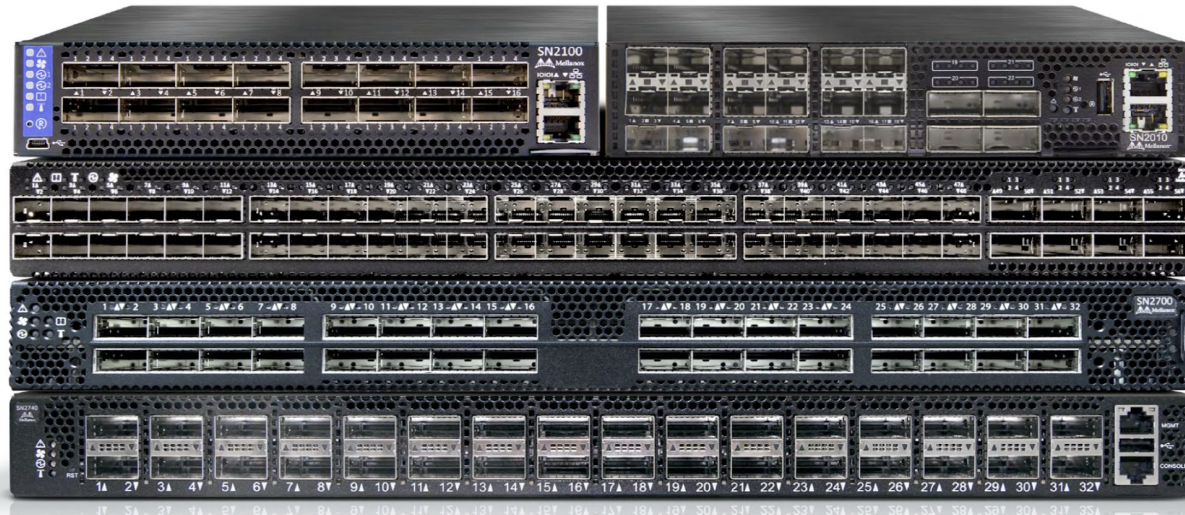
Highest Levels of Scalability
Simplified Network Manageability
Maximum System Productivity

40/56/100/200Gb/s InfiniBand
Switch System Family





SWITCH SYSTEM



Mellanox 12Port FDR IB Switch

3.500 €

Mellanox 16 Port 100GBE Switch

8.500 €

Mellanox Single Port FDR

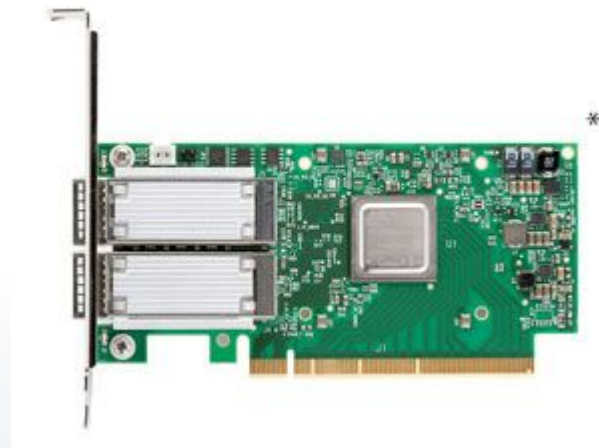
400 €

Mellanox Single Port 100GBE

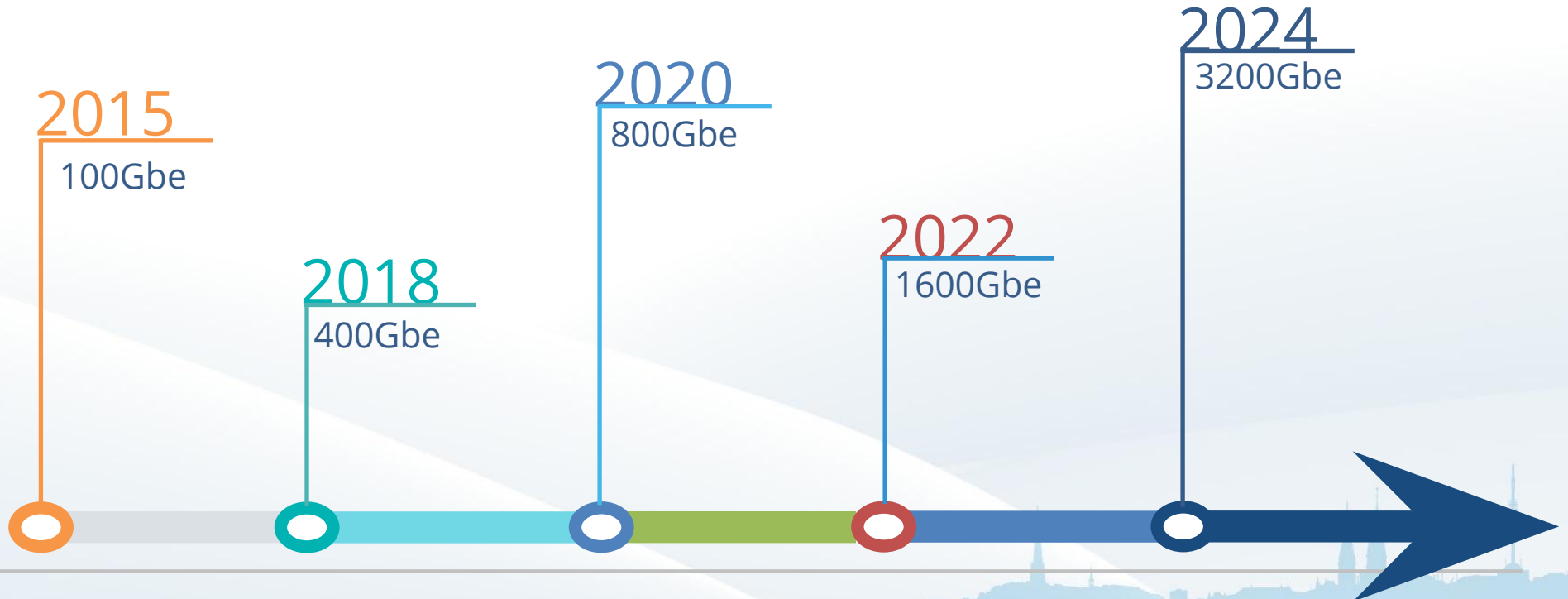
650 €

Mellanox Single Port 25GBE

300 €



Network: Future Ethernet Bandwidth



Vielen Dank!

Demo Equipment zum Testen bekommen Sie bei uns.

