

Microsoft Research
Faculty
Summit
2016



Optical Networks for the Cloud

Session chairs:
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Optics are the workhorse of cloud networks

- ✓ Ubiquitous in data center and long-haul networks
- ✓ Optics is poised to play an even bigger role in next-generation networks
- ✓ A lot can be achieved by leveraging industry-university collaboration

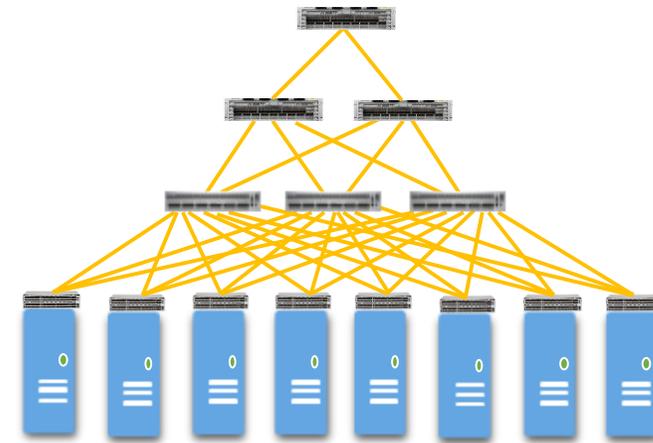


Microsoft is looking ahead in optics

We are building new optical monitoring and analysis systems



Bandwidth variable links in the WAN
[OFC'16]
Optical Software-Defined Network

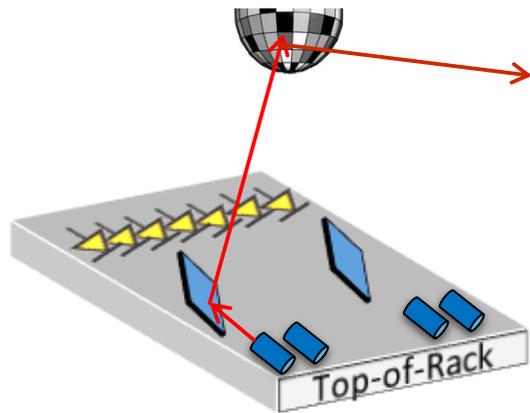


Cheap transceivers and smart routing
in the data center



Microsoft is looking ahead in optics

We are exploring new optical designs for data center networks



Free-space optical data center topology [SIGCOMM'16]



High-radix, nanosecond optical switching for data centers [OFC'16]





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