

Ethernet Alliance Technology Exploration Forum 2014 “The Rate Debate”



Speeds in Data Centers

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October 16, 2014

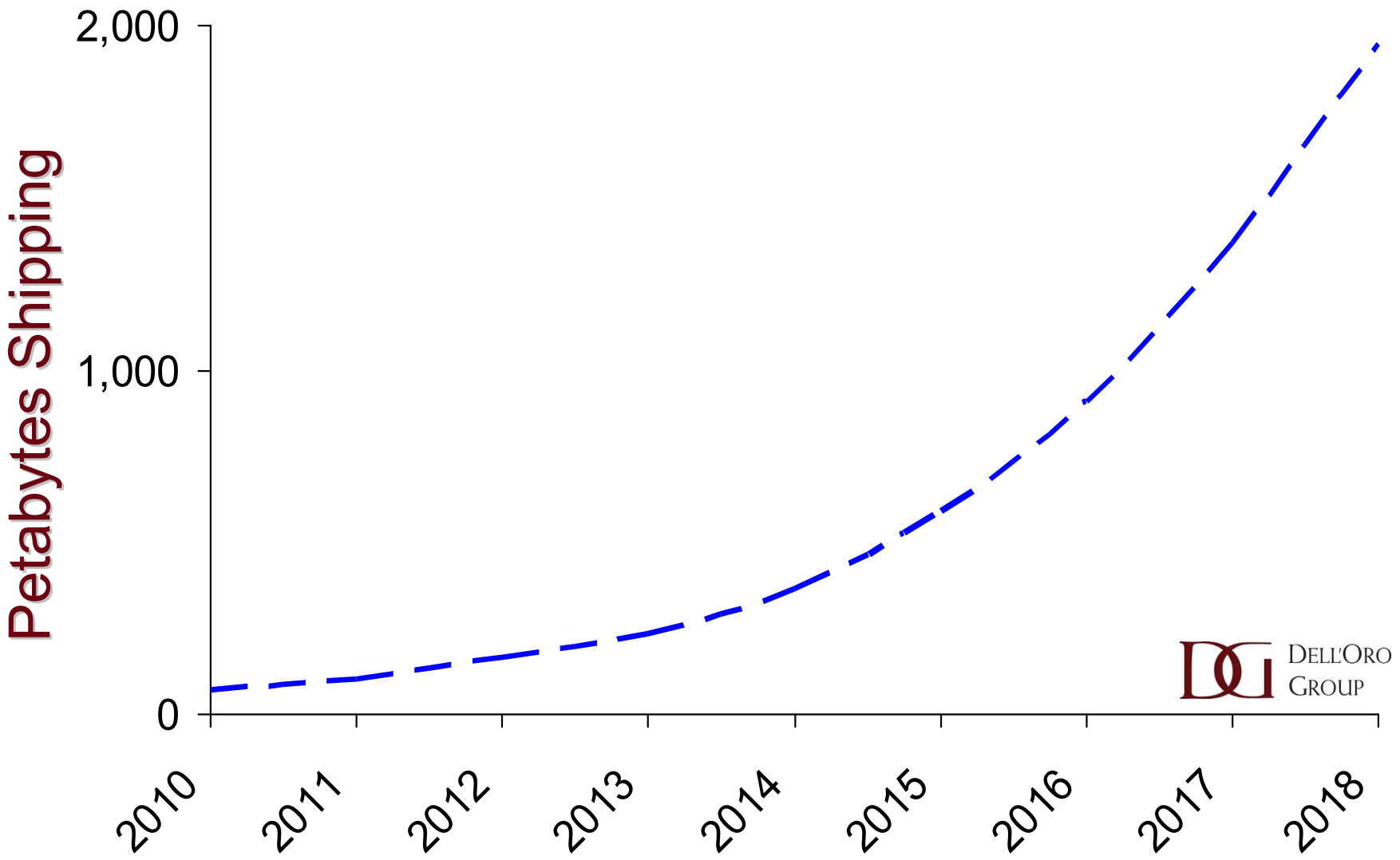


Introduction

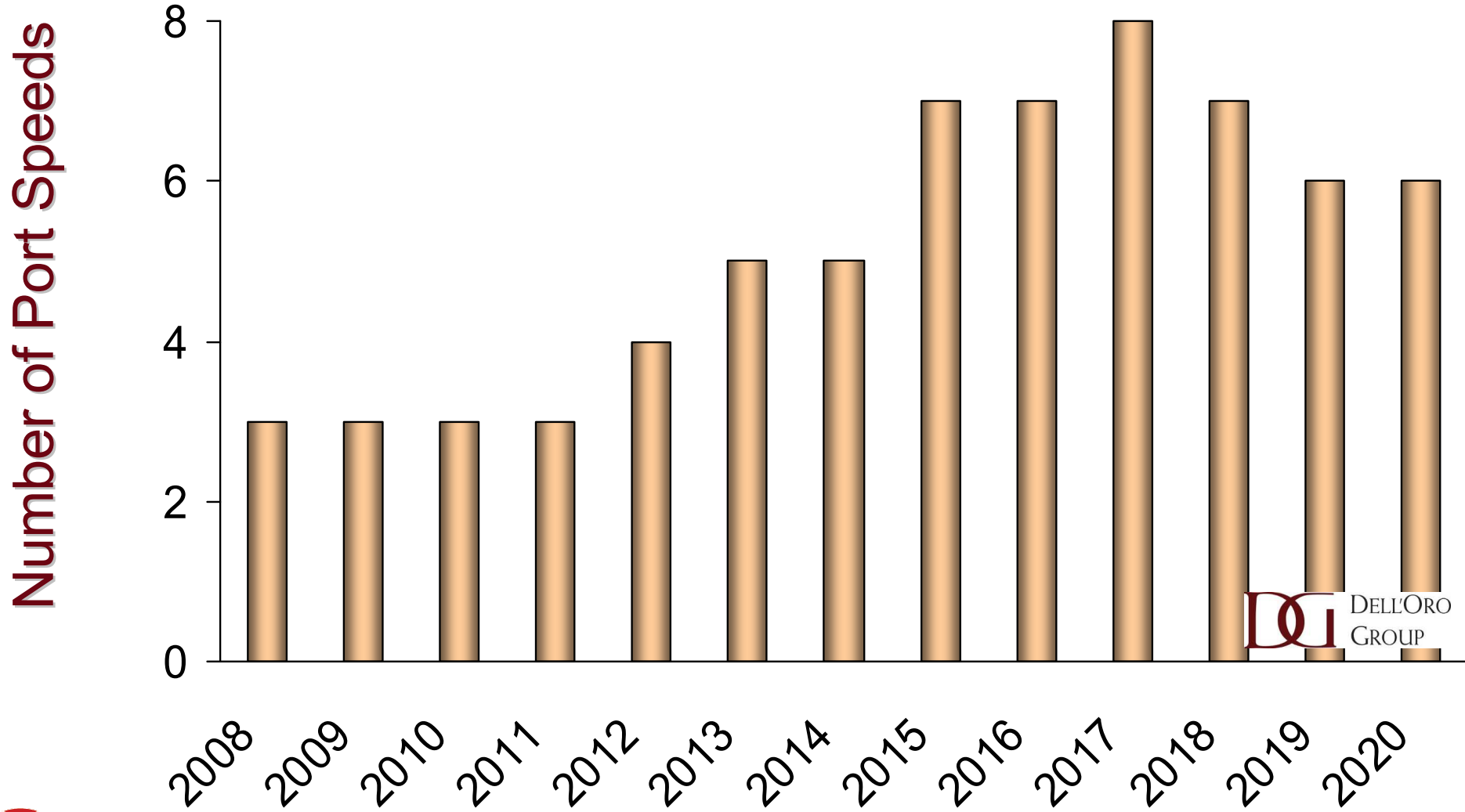
- Increasing amount of speeds and form factors needed to support the data center
 - Cloud vs. Enterprise vs. SMB
 - Rack vs. Blade vs. High-density servers
 - North/South vs. East/West traffic
 - Vendor offerings vs. White Box
- Enterprise market for networking and servers will stop growing after 2015
- It's no longer simply about speeds and feeds



Ethernet Switch - Data Center Bandwidth



Number of Different Port Speeds Shipping in the Data Center



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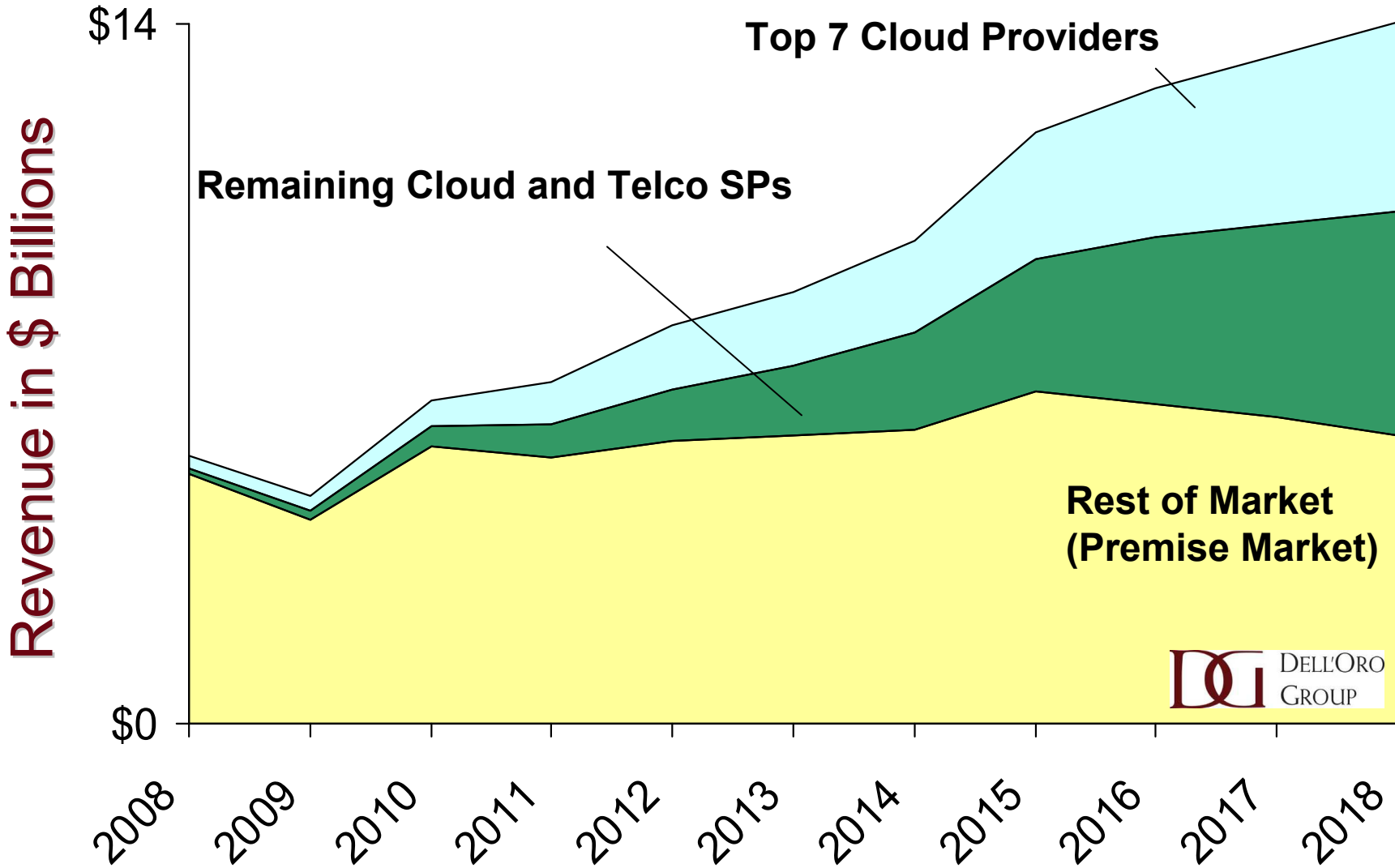


Cloud vs. Enterprise vs. SMB

- Big Data is now the number one application in the enterprise
- Enterprise and SMB solutions are becoming more converged systems instead of stand-alone equipment
- Cloud and Enterprises are upgrading to higher speeds for server access at different rates



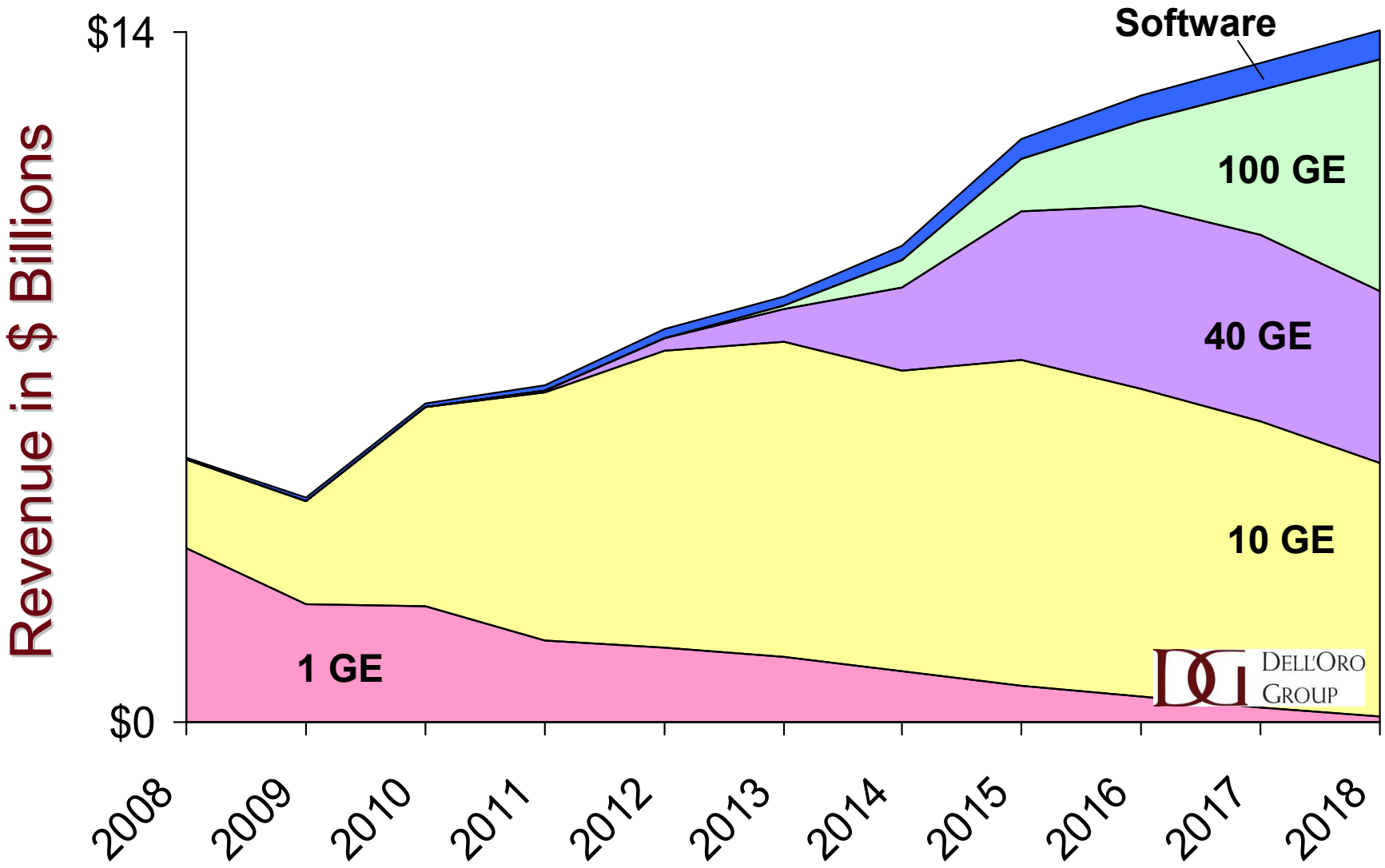
Ethernet Switch - Data Center Revenue



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Ethernet Switch - Data Center Revenue



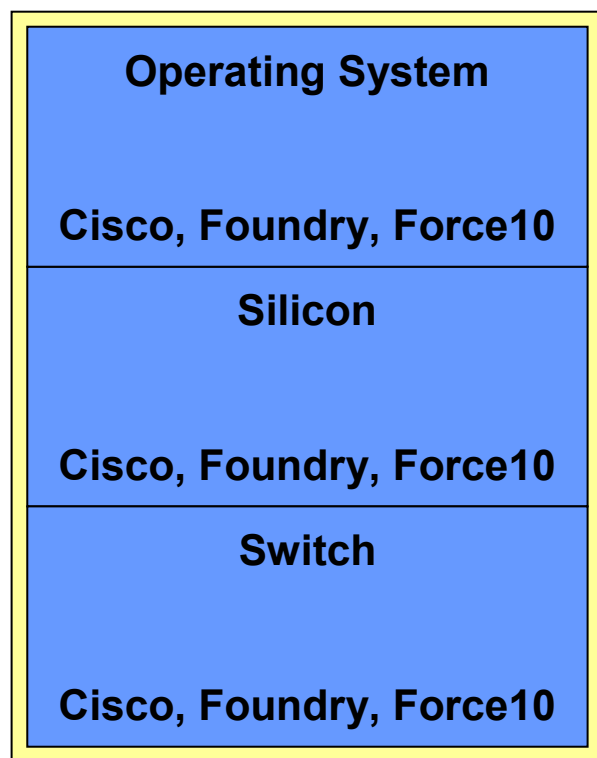
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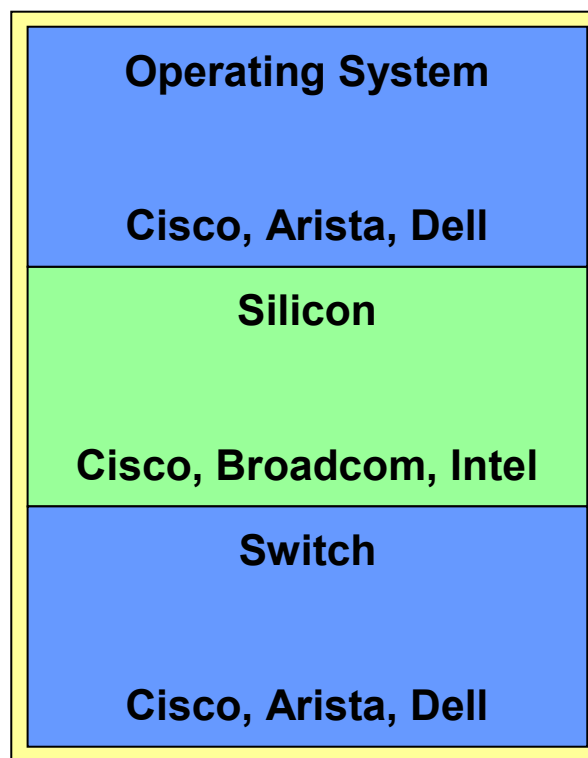
Ethernet Switch Architecture Transformation

Top-of-Rack Switch

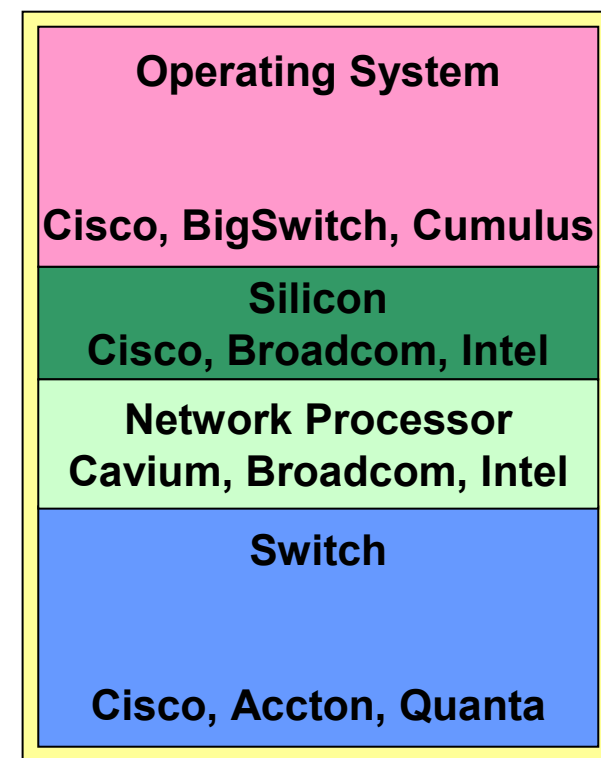
2008



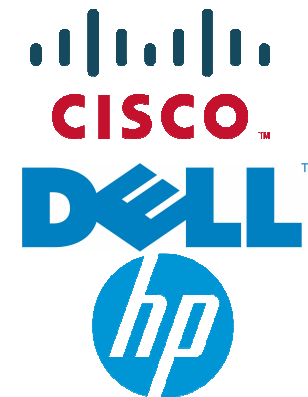
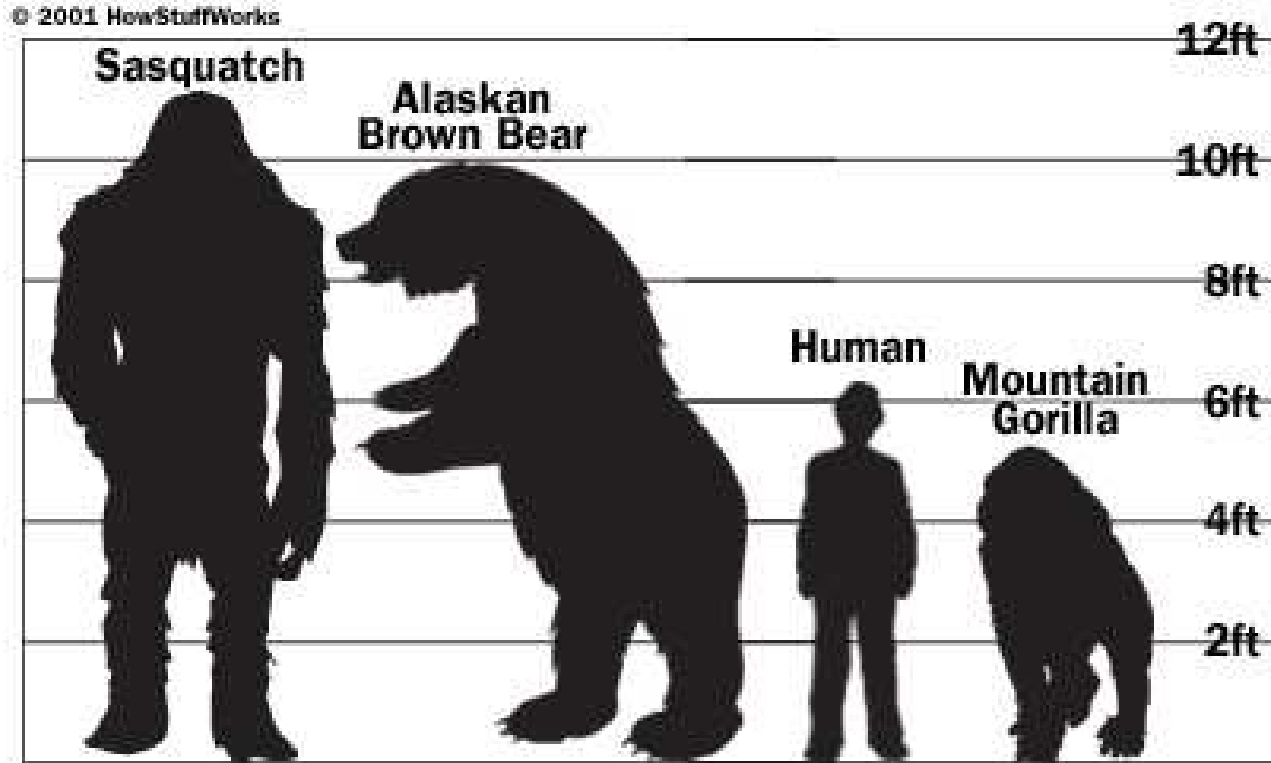
2011



2014



There is something bigger than an 800lb gorilla driving data center networking

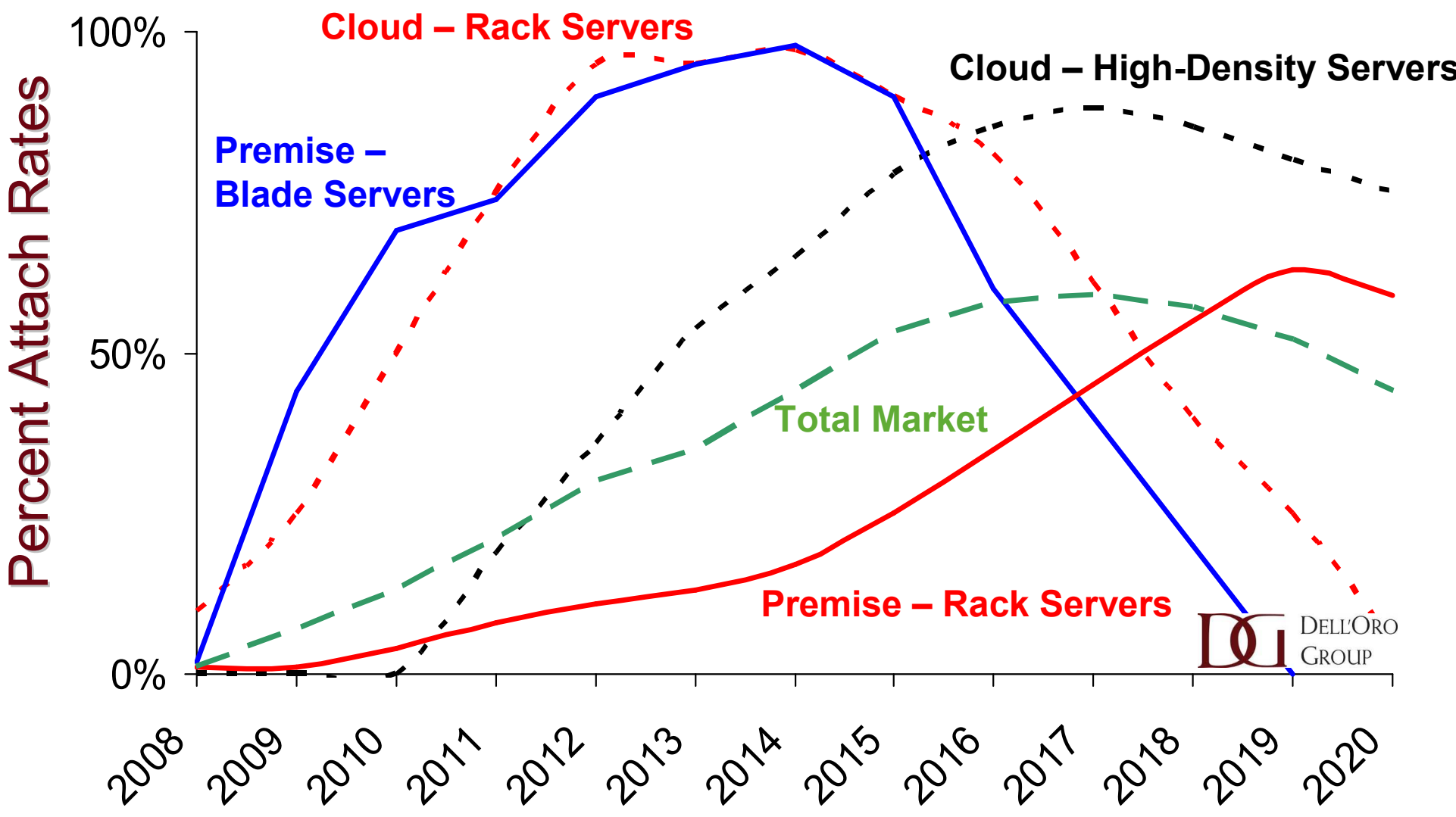


Rack vs. Blade vs. High-density servers

- Blade server growth is slowing
- Early stage of High-density servers
- Workload optimized servers are becoming commonplace
- Each class of server is migrating to higher speeds for server access at a different rate



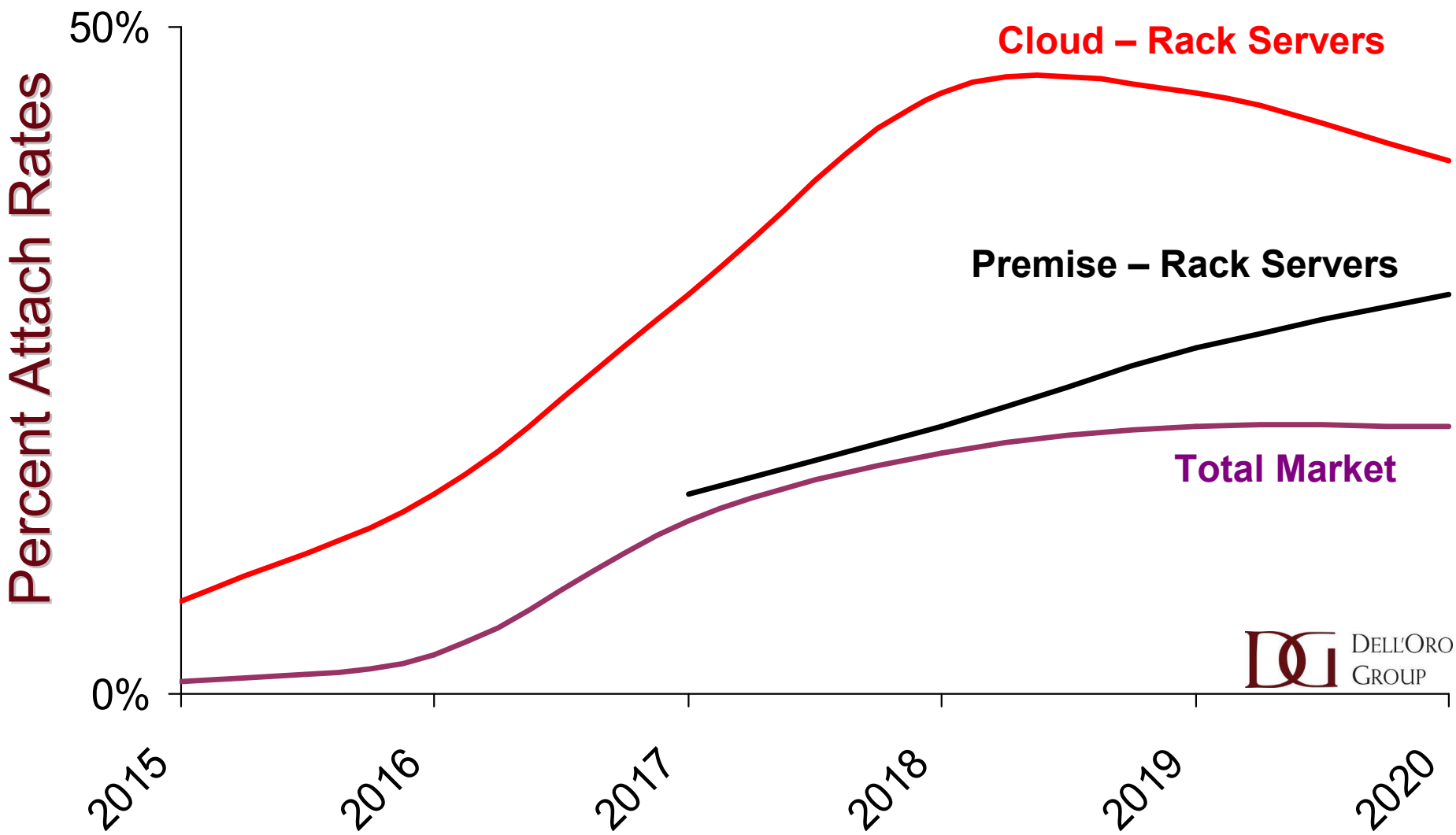
10 GE Server Adoption



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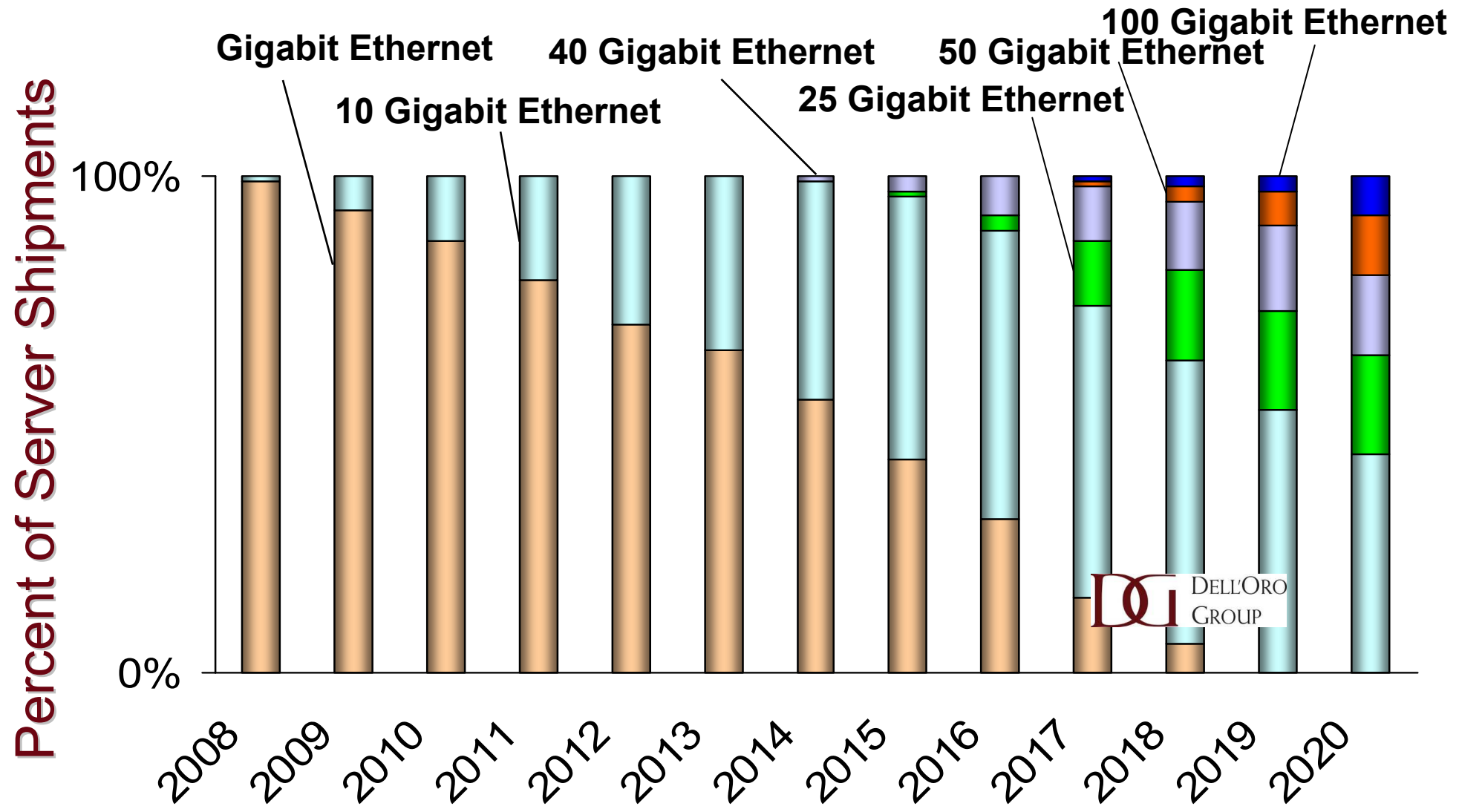
25 GE Server Adoption



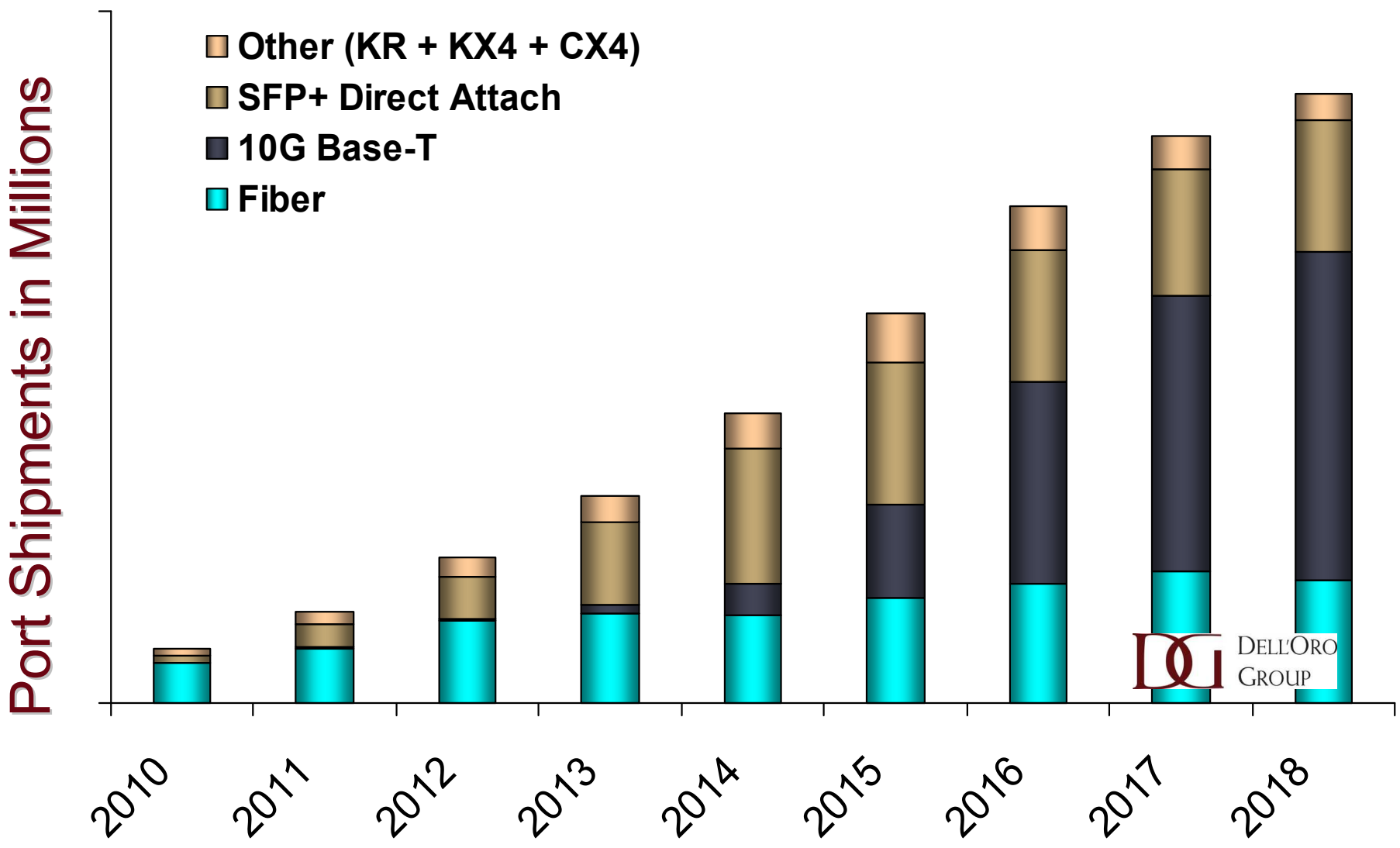
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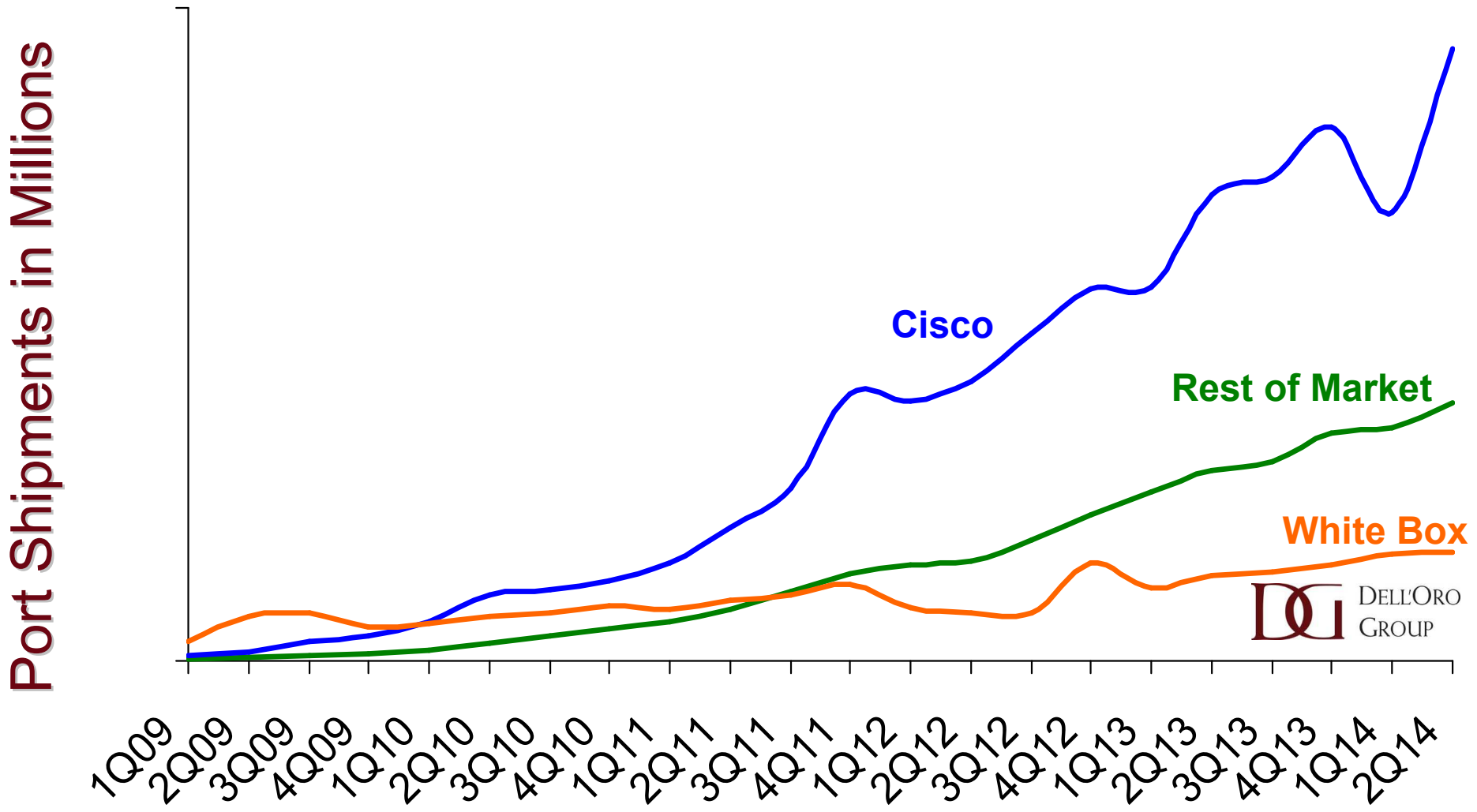
Speed Migration on Servers – Total Market



10 GE Port Shipments



Vendor Positioning (with White Box) Fixed 10 GE Purpose Built Port Shipments



Conclusion

- Enterprises will be 1-2 speed cycles behind the Cloud
 - Rate of disparity is increasing with time
- Market is shifting from one that is Enterprise based to One that is Cloud based
- Data Center vendors must innovate or die



Speeds in Data Centers

Thank You

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