

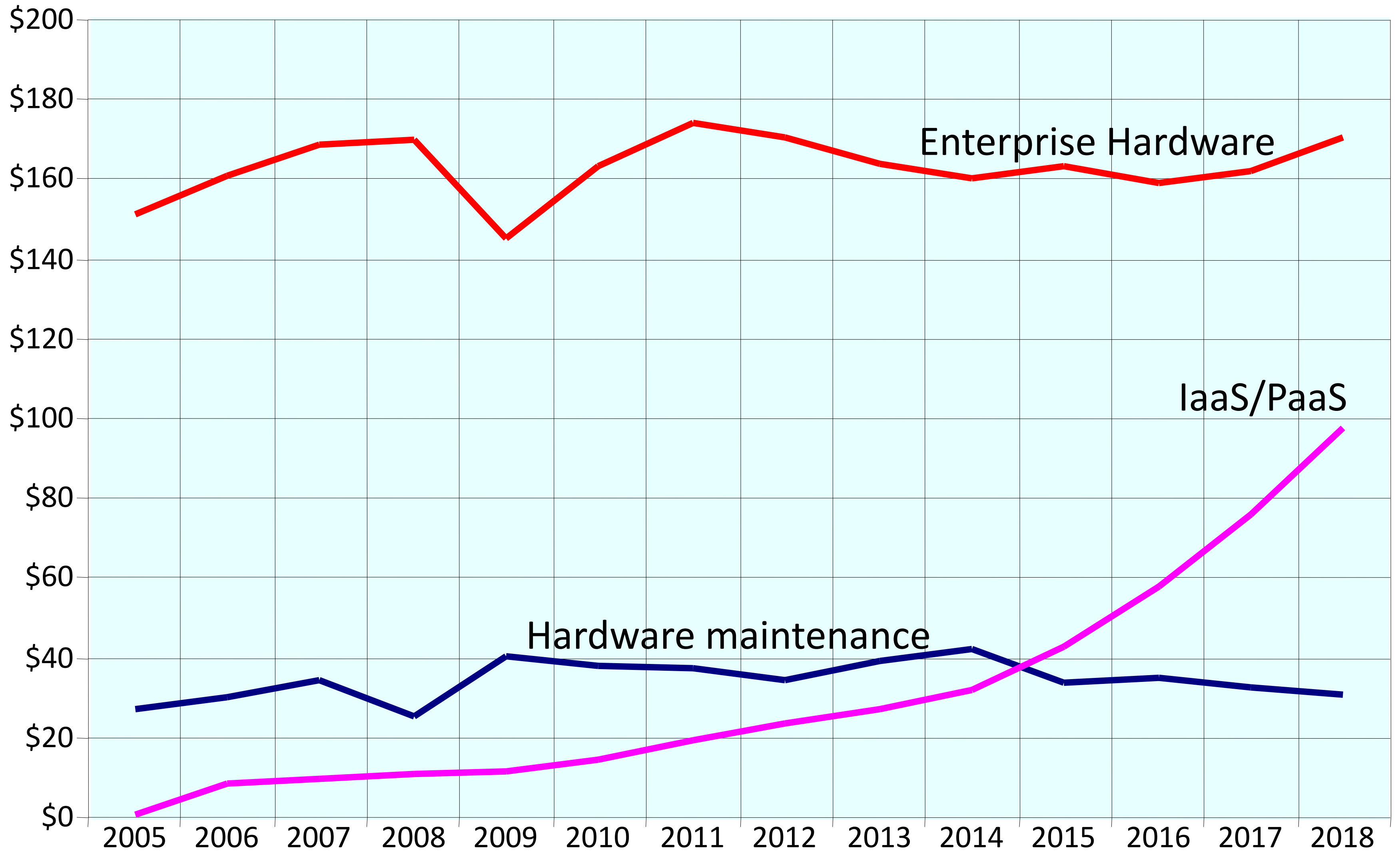
Growth Opportunities in the OEM Landscape

Martin Hingley, ITCandor

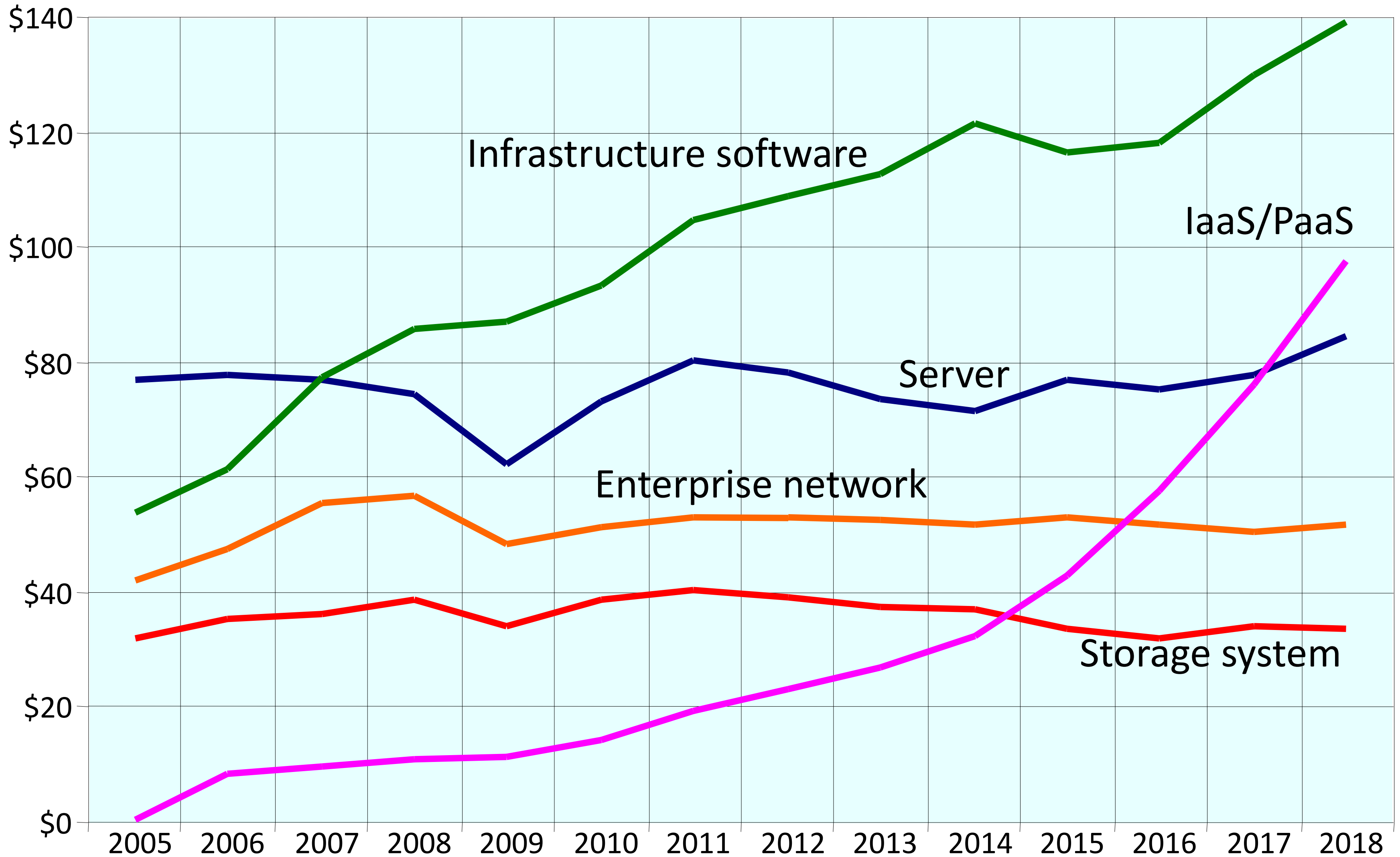
Agenda

- The data center market
- The leading suppliers
- SIA TPM friendliness survey results
- Growth Opportunities

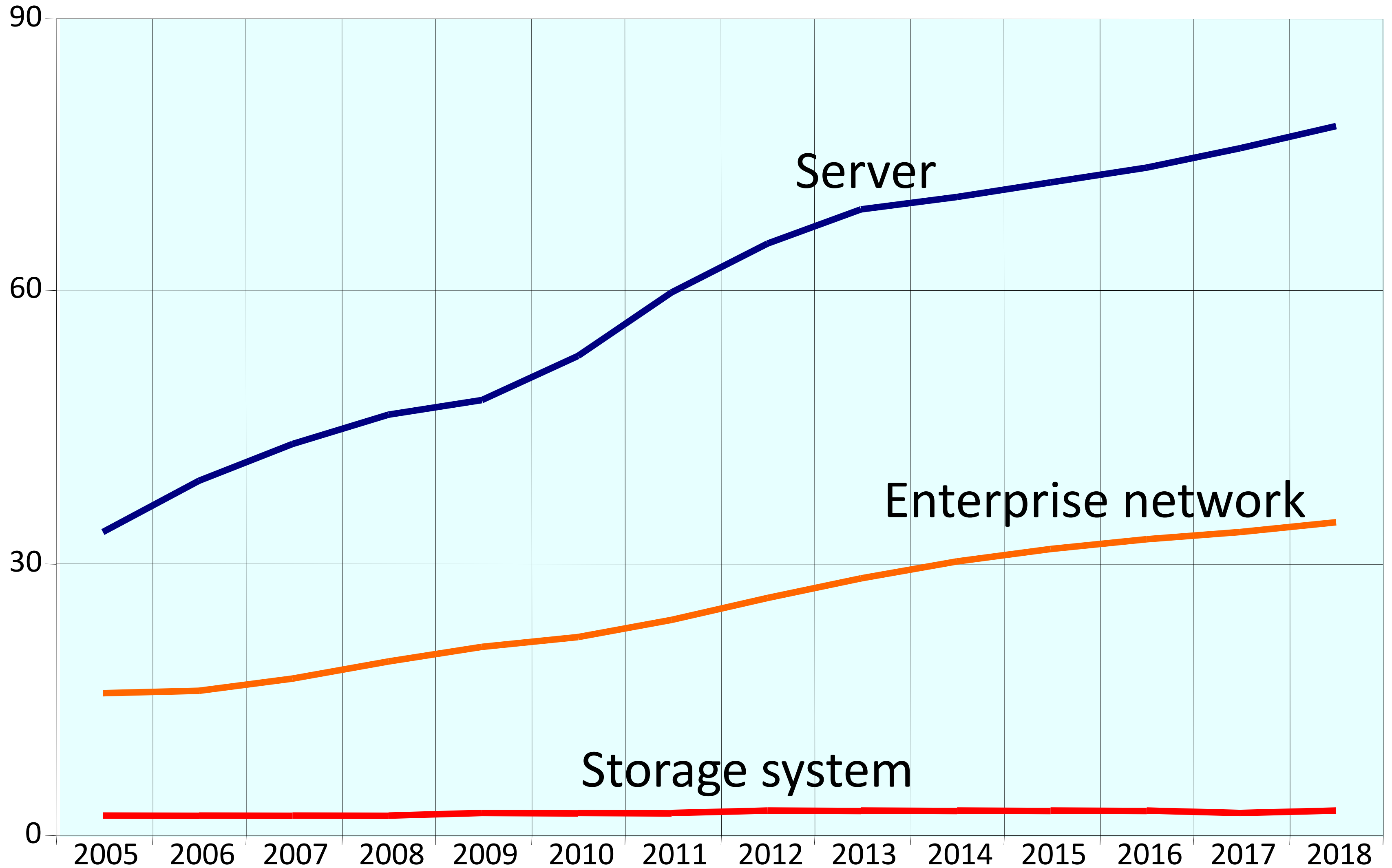
Data center spending (\$ billion) by area – 2005-2018



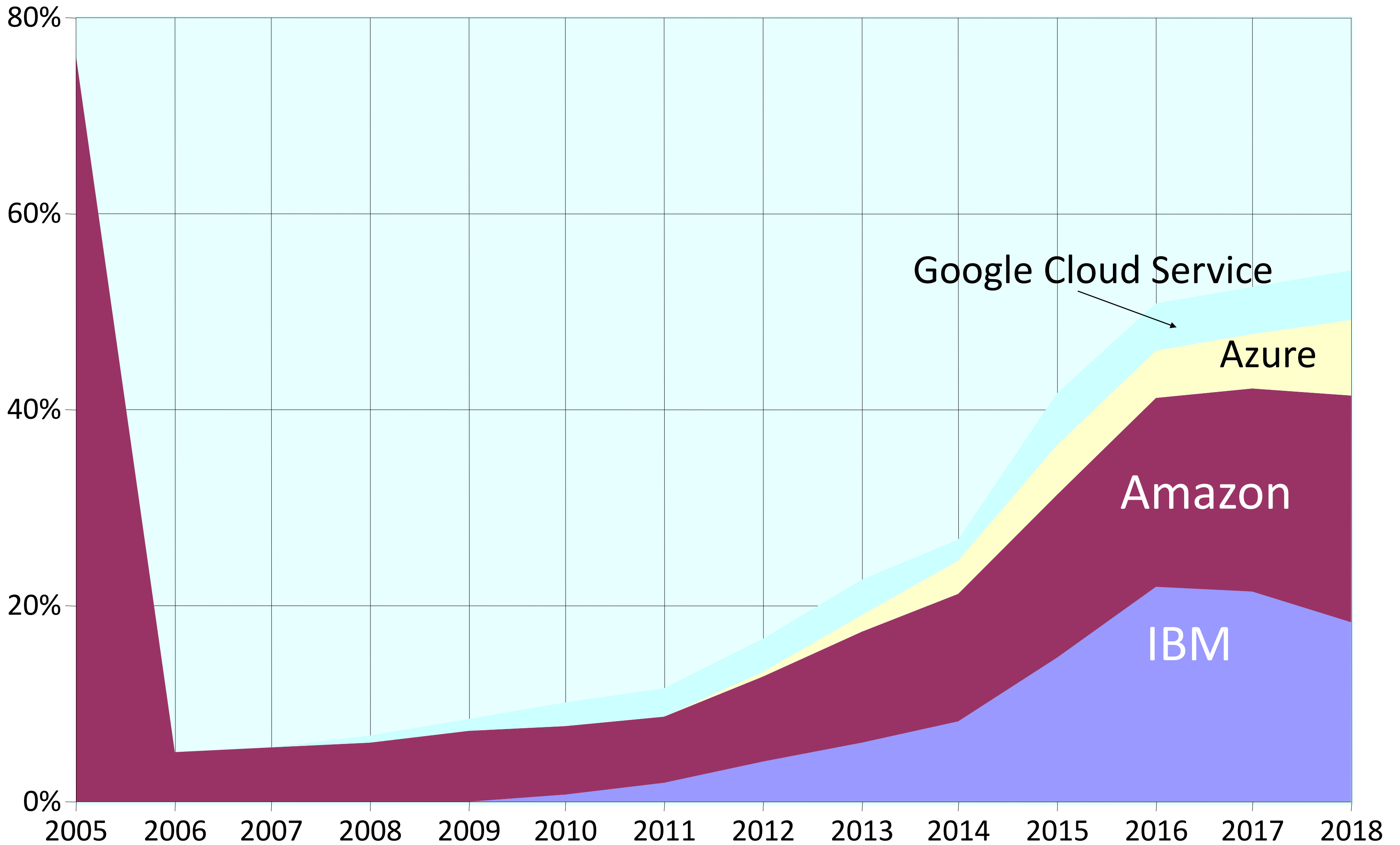
Data center spending (\$ billion) by offering – 2005-2018



Enterprise hardware installed base (million) by offering – 2005-2018

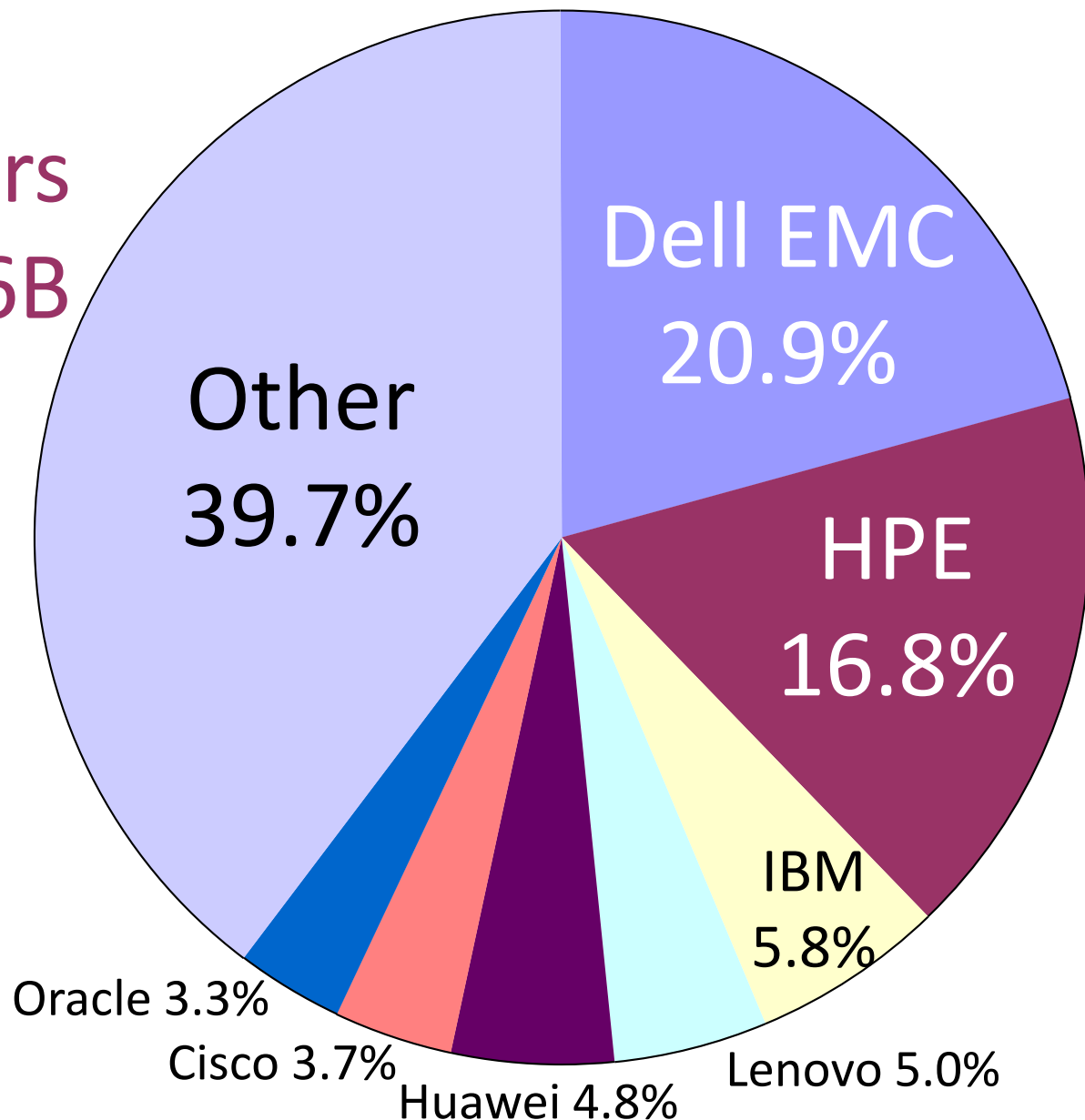


Evolving cloud service (IaaS/PaaS) market shares – 2005-2018

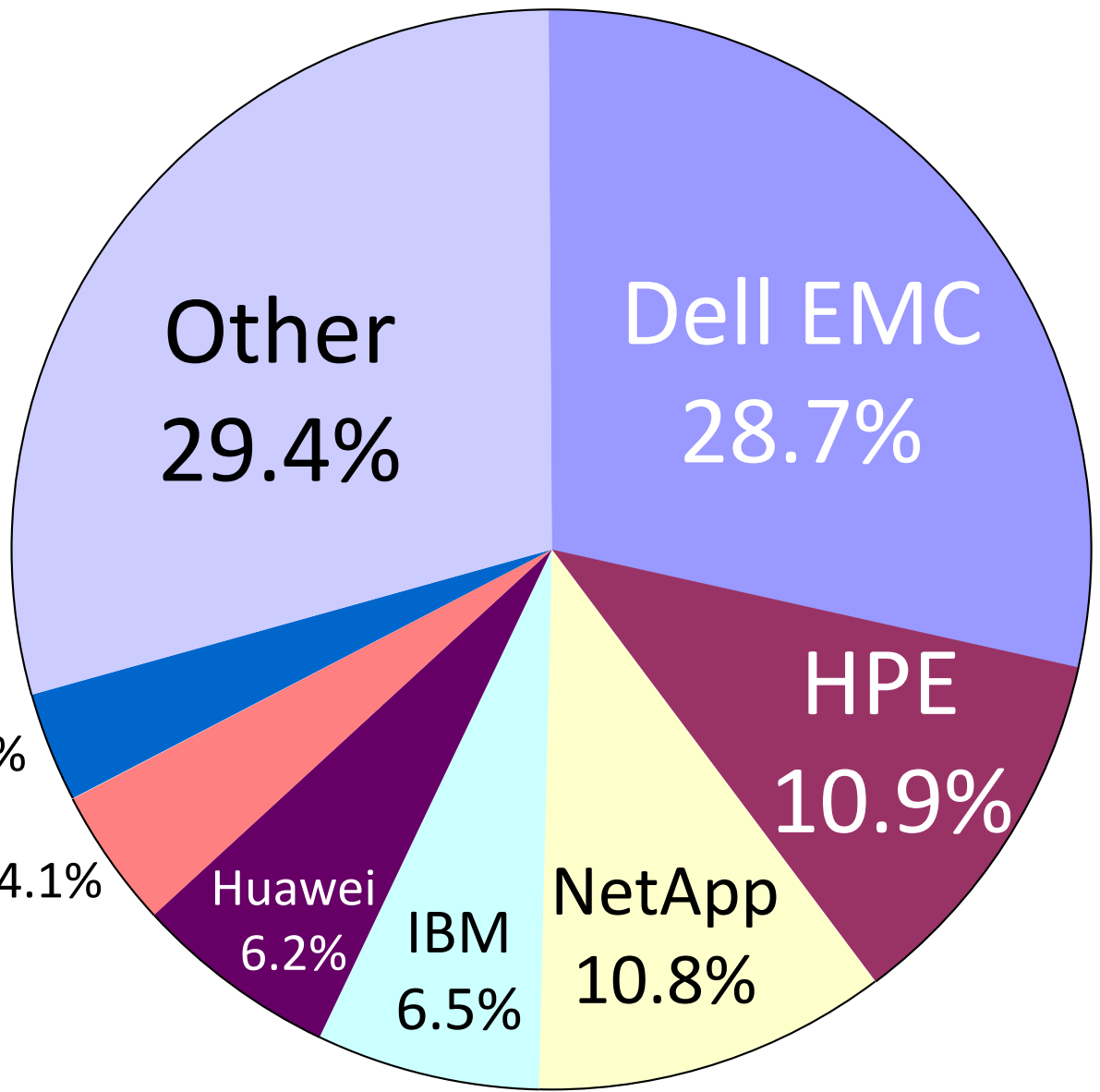


2018 market shares – server, storage system, enterprise network

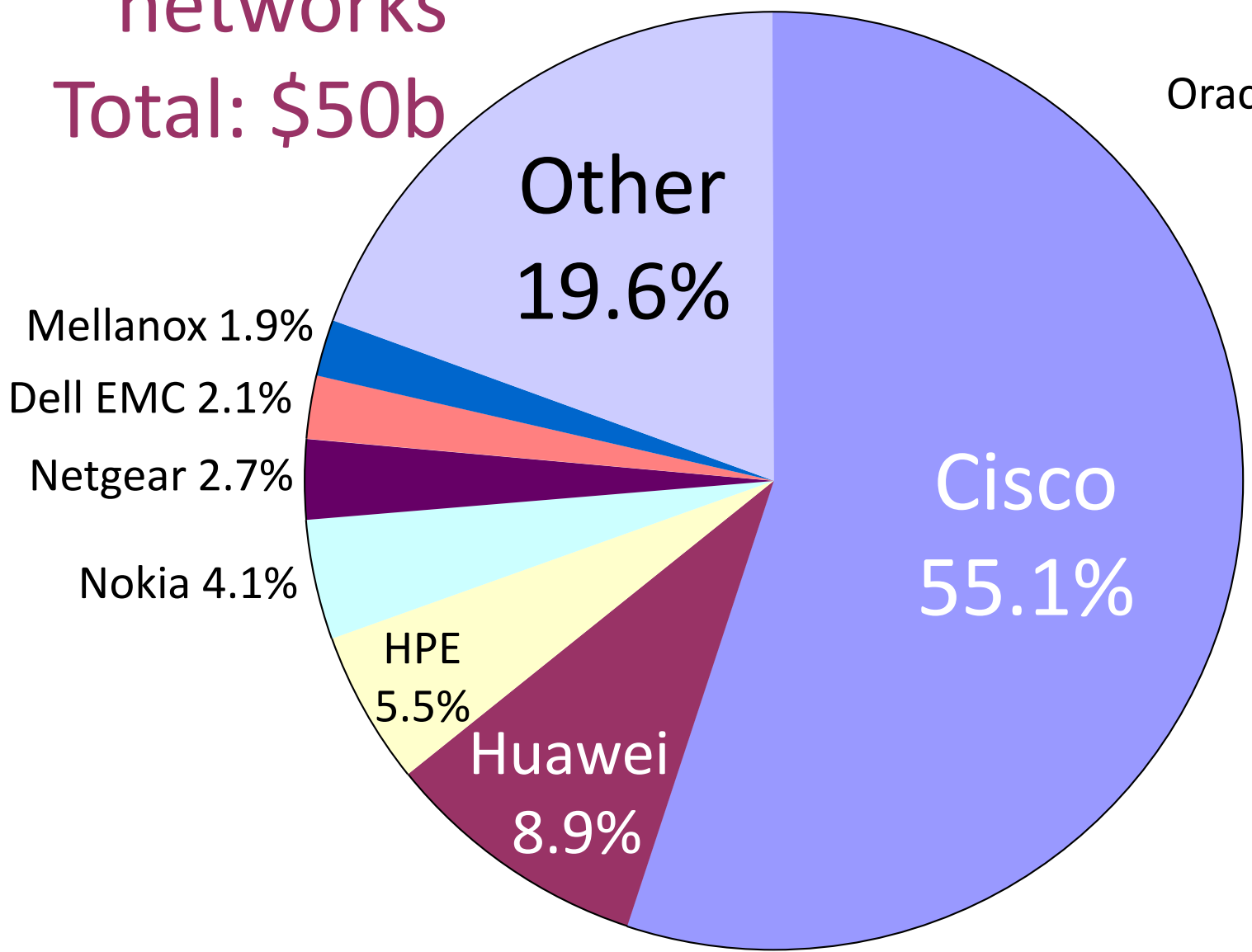
Servers
Total: \$86B



Storage systems
Total: \$34b



Enterprise networks
Total: \$50b



Cisco activities 2018..

- Acquisitions – Accompany, Duo Security, Luxtera
- Partnerships – NetApp for Flexpod, Google Cloud Services, Veeam, Verizon (SDN)
- Launches – AI/ML server, hybrid solution for Kubernetes on AWS, lots of 5G work

HPE activities 2018...

- Acquisitions – BlueData
- Partnerships – PLDA (semiconductors)
- Launches – PointNext data center care services, cloud based server ops, ‘composable’, real-time telco edge platform, memory-driven computing services, blockchain

Huawei activities 2018...

- Acquisitions – none known
- Partnerships – Arrow, Intel, Siemens, Bright Computing (ARM), 22+ 5G partners, Nutanix
- Launches – SAP HANA appliance, Azure stack hybrid cloud solution, FusionCloud 6.3, blockchain, autonomous driving, adopts OCP Open Rack in cloud data centers

Dell EMC activities 2018...

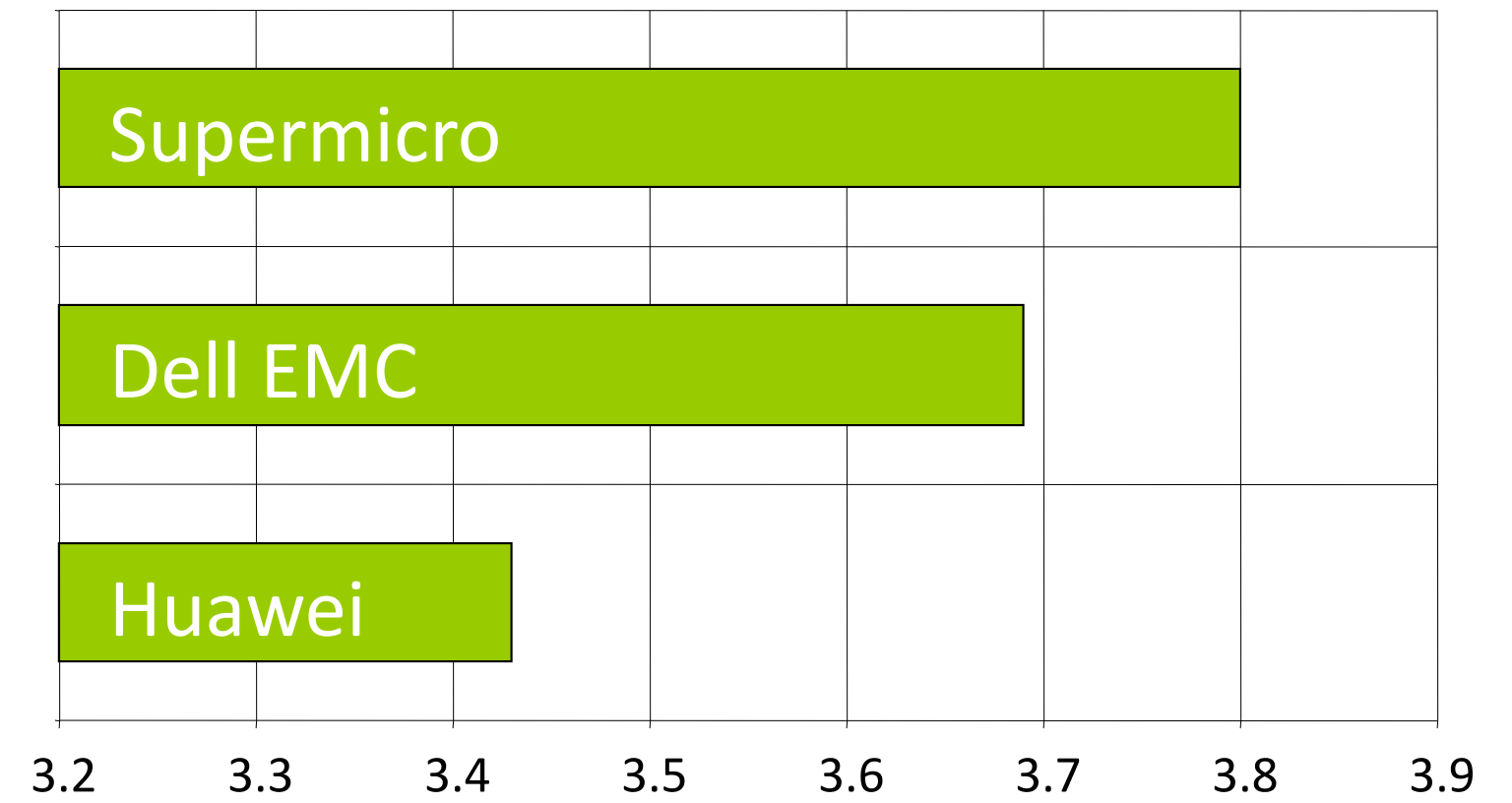
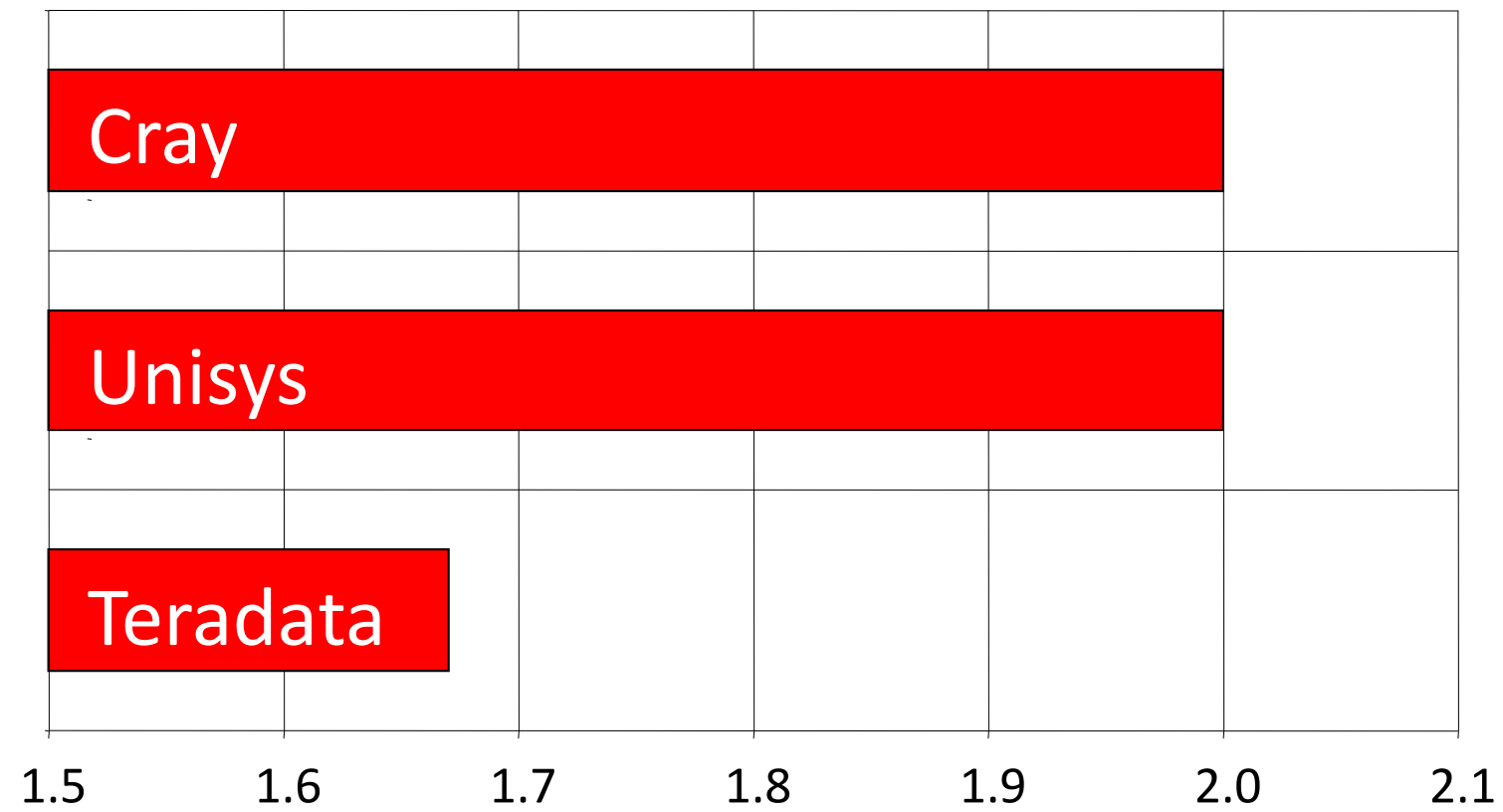
- Acquisitions – none known
- Partnerships – Microsoft (IoT), Nokia (semi-autonomous barges), Secureworks
- Launches – VDI solution, Unity and SC arrays, PowerEdge MX, cyber recovery software, PowerVault arrays for SMEs

IBM activities 2018...

- Acquisitions – RedHat, Oniqua
- Offloads - HCL
- Partnerships – NVIDIA, Lenovo, VMWare, Seagate, ServiceNow, Samsung
- Launches – 9,100 patents, new storage arrays and Spectrum software, lots of blockchain and Ai

OEM friendliness survey 2019

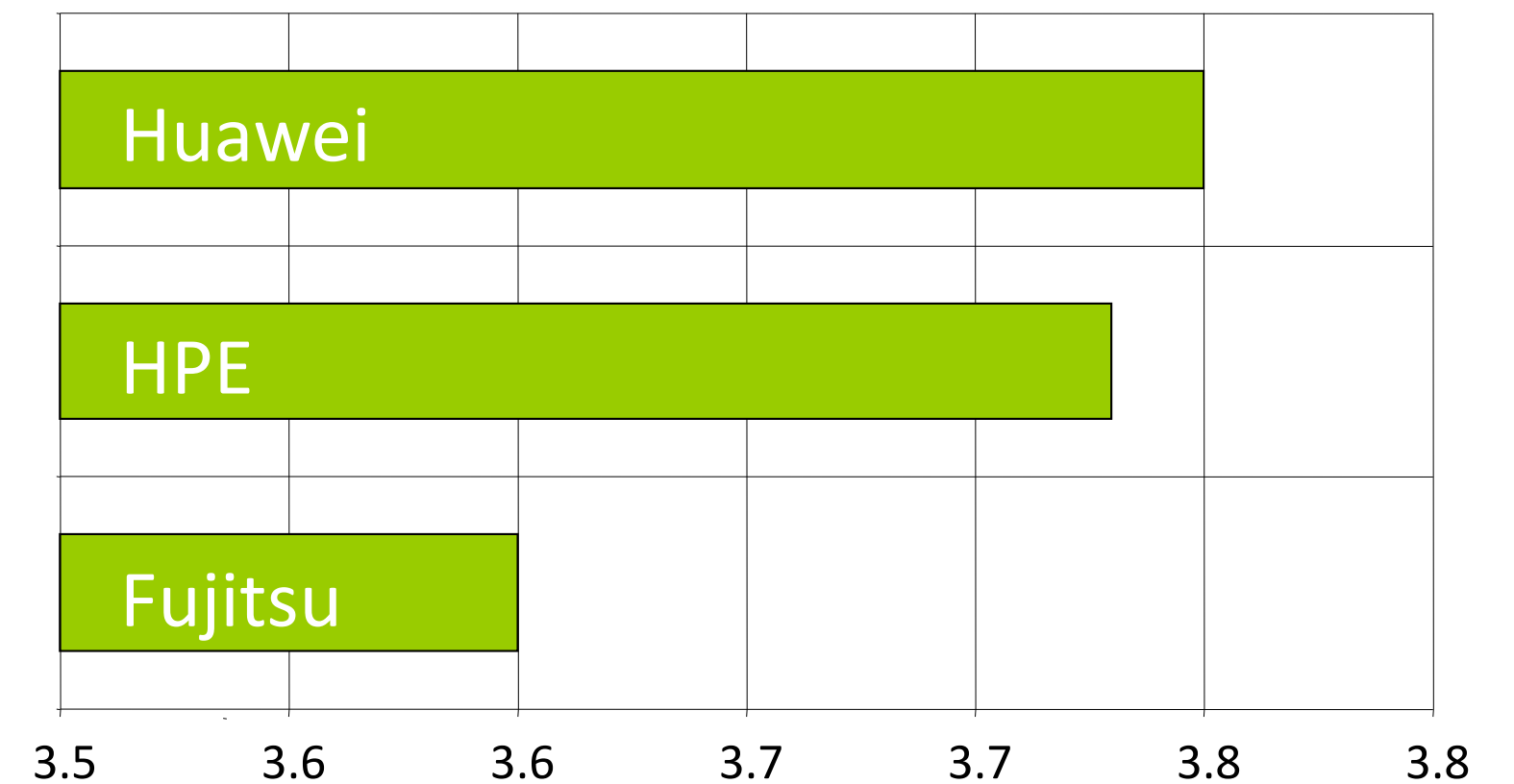
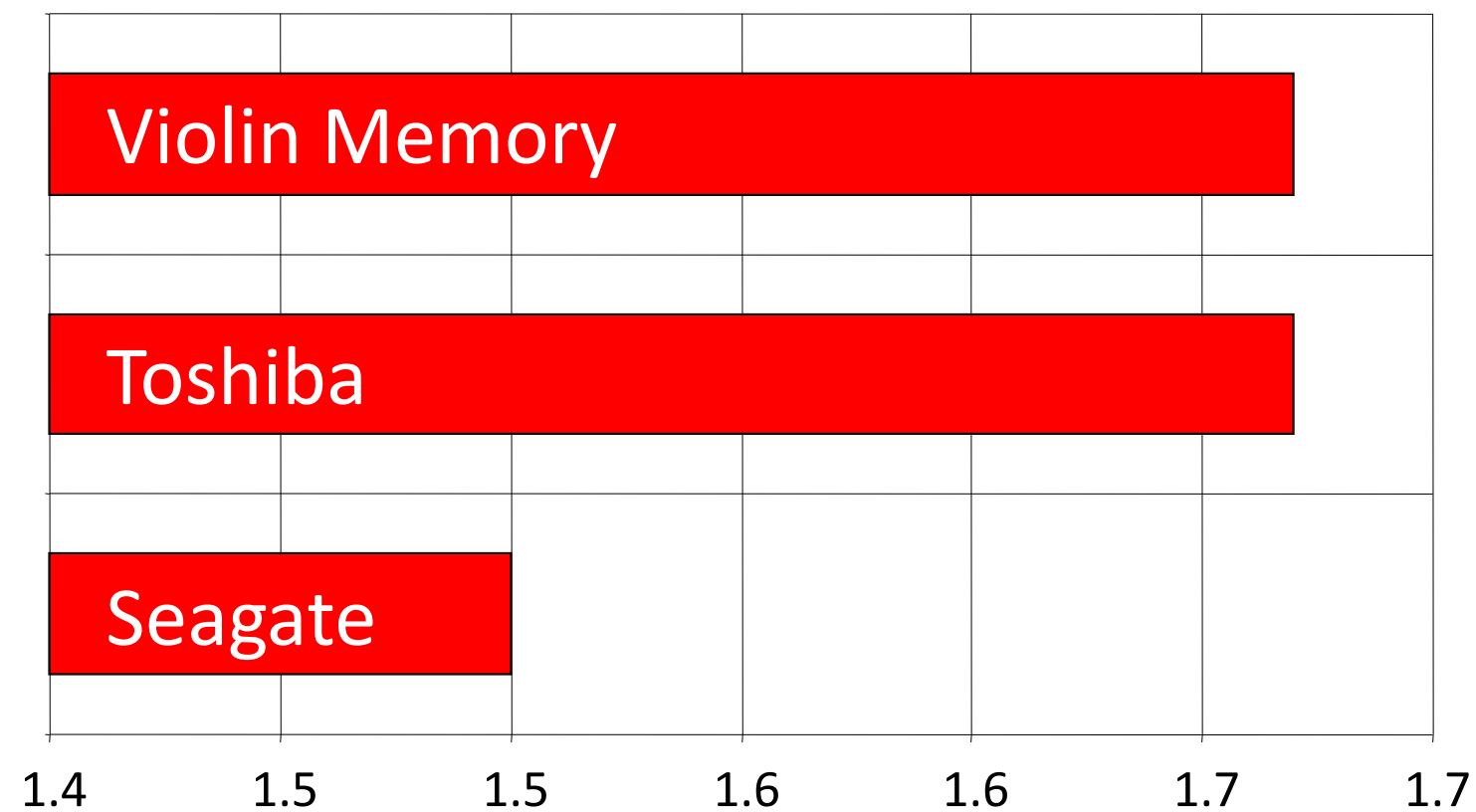
Server



- Supermicro top
- Teradata bottom
- Market leader Dell EMC came second

OEM friendliness survey 2019

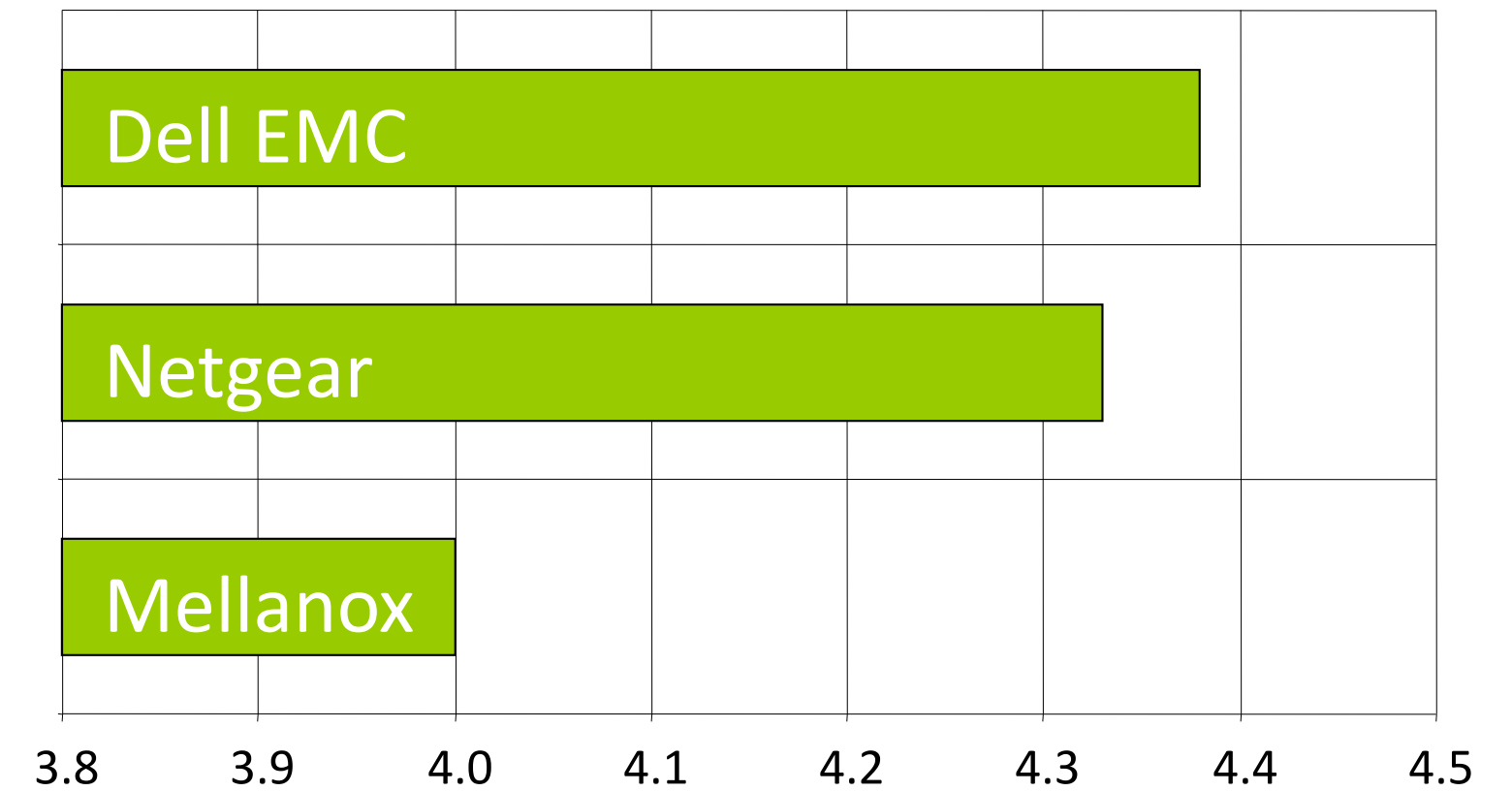
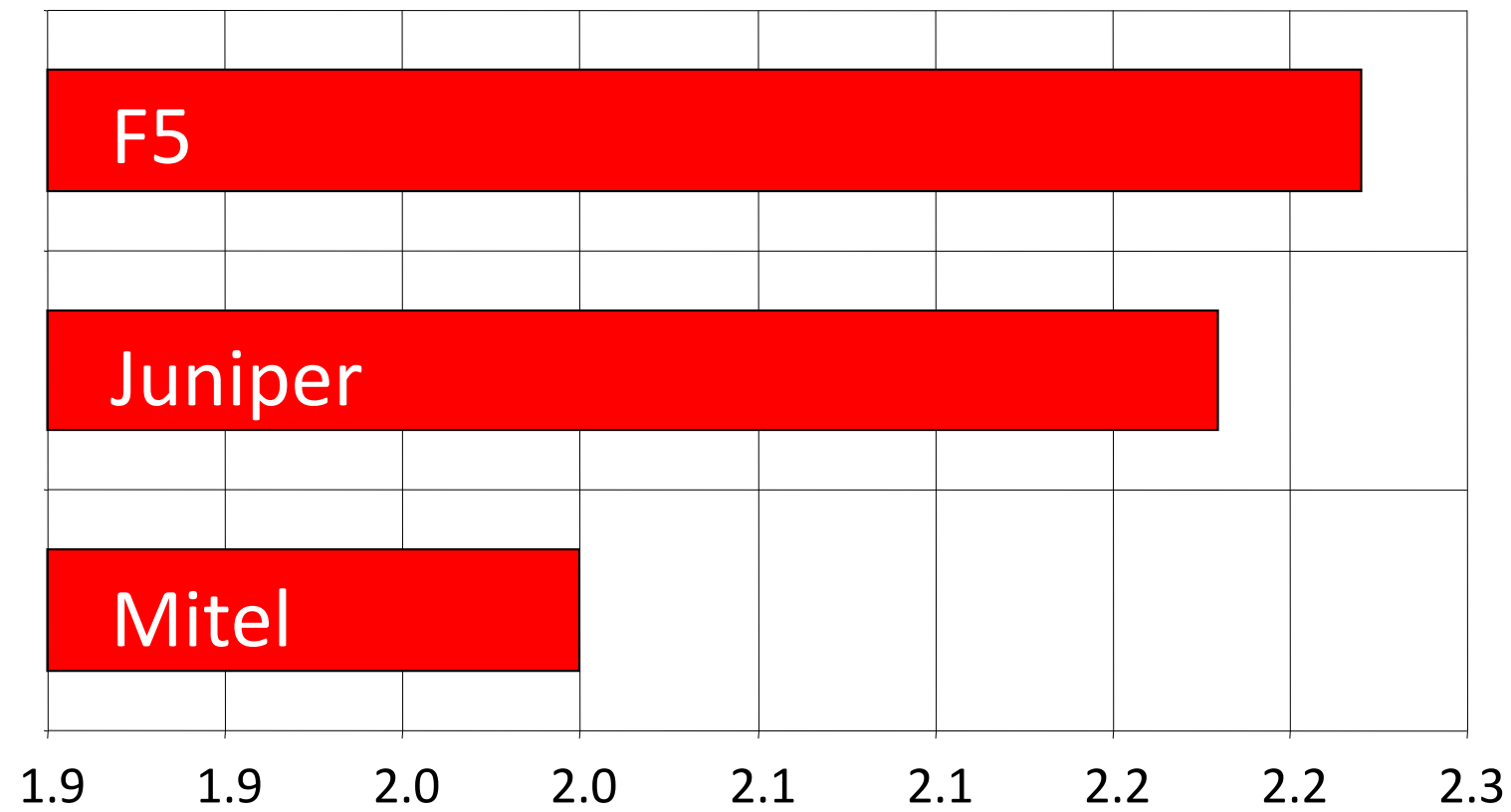
Storage system



- Huawei top
- Seagate bottom
- Market Dell EMC came fifth (only)

OEM friendliness survey 2019

Enterprise network



- Dell EMC top
- Mitel bottom (bought by Searchlight Capital Partners)
- Market leader Cisco came eighth (only!)

OEM friendliness survey 2019

General comments

- Most helpful: sharing machine/maintenance details if we can show then proof.
- Least helpful: controlling of firmware/patches - making things difficult for clients.
- IBM, HP and Dell are the top in my list due to their compatibility with other OEMs and easy access to parts availability.

OEM friendliness survey 2019

Dell EMC – merger differences

- Dell always helps - understands what we do.
- Dell [is most helpful] since they don't have a proprietary OS.
- Dell EMC are the least helpful, they spread fear uncertainty and doubt with their customers regarding moving to a TPM.
- Dell has been the most helpful as they use TPM's themselves and leave code for most products open. EMC on the other hand is still the same old typical OEM.

OEM friendliness survey 2019

Other OEMs

- **Cisco** - 'becoming fiercely protective of the network business', 'we usually do not deal with them at all', '...Cisco are bullies and litigious'
- **HPE** – 'good support and the telephone hotline'
- **Huawei** – 'gradually coming up the list, but still falls behind due to lack of option availability'
- **Oracle** – 'has been an active thorn in everyone's side', 'actively tries to induce fear of TPM in customers', 'is the worst...'

Growth Opportunities

- The enterprise hardware market stays its course despite fast IaaS/PaaS adoption
- ‘Multi-cloud’ strategies accept the co-existence of on premise, private and public resources
- Infrastructure software and cloud need focus
- Dell EMC, HPE, Cisco, Huawei and IBM are the main players – they’re least helpful in their main business areas
- New Nationalism is creating business uncertainty and slowing replacements – good for TPM