



# Cloud Management:

## The Good the Bad and the Ugly


Session Date: **Wednesday, April 14, 2010**

Session Time: **9:55 AM - 10:40 AM**

Track: **Cloud Track**

David Crespi, CTO, Emulex

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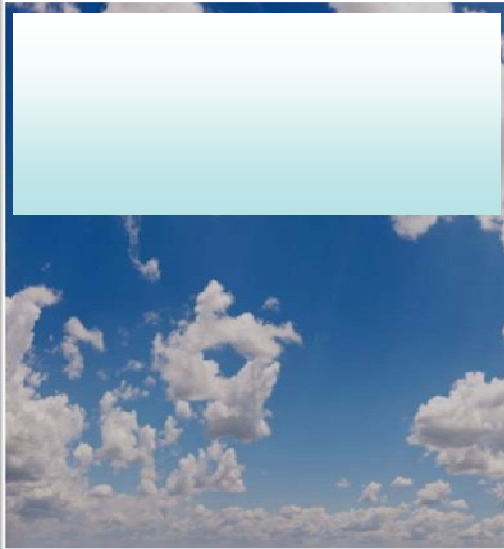
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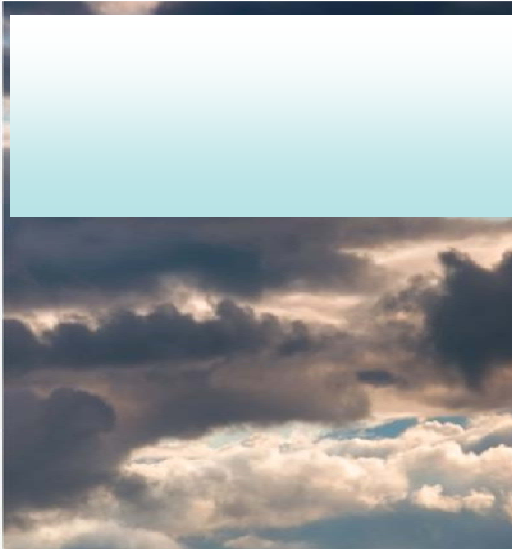
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# All Kinds of Clouds

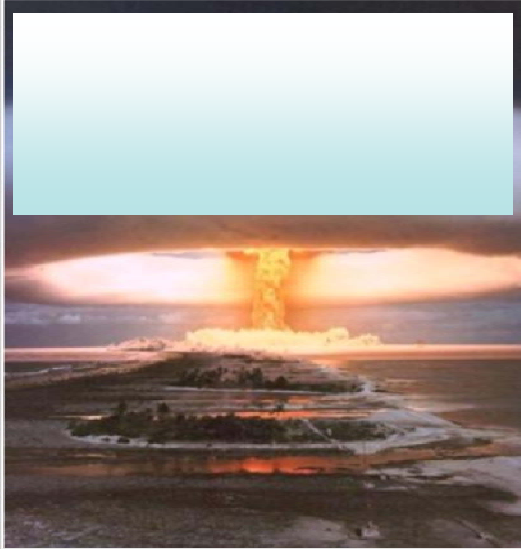
**GOOD**



**BAD**



**UGLY**



# Definition



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**NIST** “Cloud computing is a pay-per-use model for enabling available, convenient, on-demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications, services) that can be rapidly provisioned and released with minimal management effort or service provider interaction.”

**ESG, Steve Duplessie**

“The cloud is a bunch of crap.”

<http://www.emulex.com/MarketMantras/?p=254>

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# Benefits to Cloud



Analyst Claims



[Function]-as-a-Service



Virtualization



Choices: Provisioning of Resources

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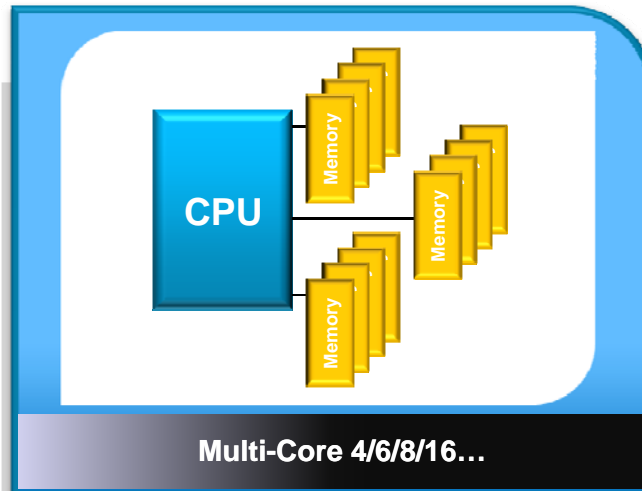
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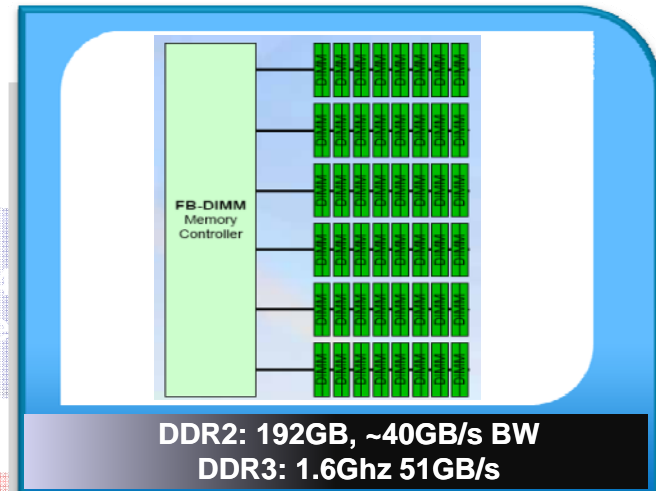
# Op-Ex and Cap-Ex \$\$



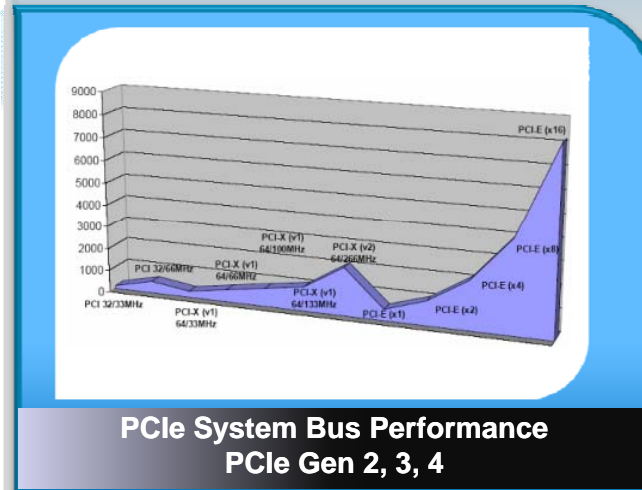
# Emerging Technologies



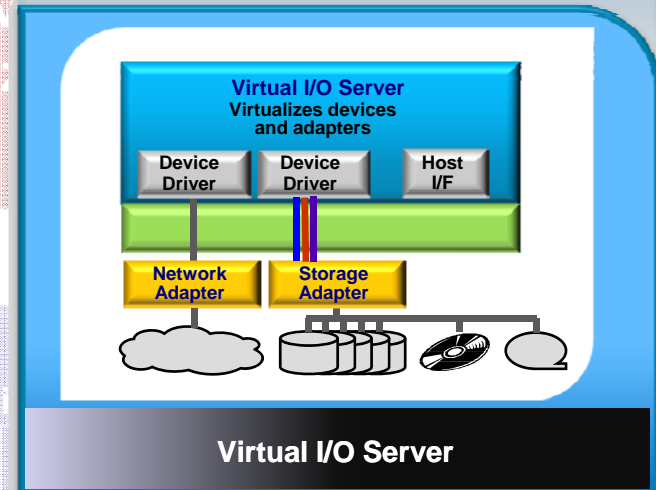
Multi-Core 4/6/8/16...





DDR2: 192GB, ~40GB/s BW  
 DDR3: 1.6Ghz 51GB/s



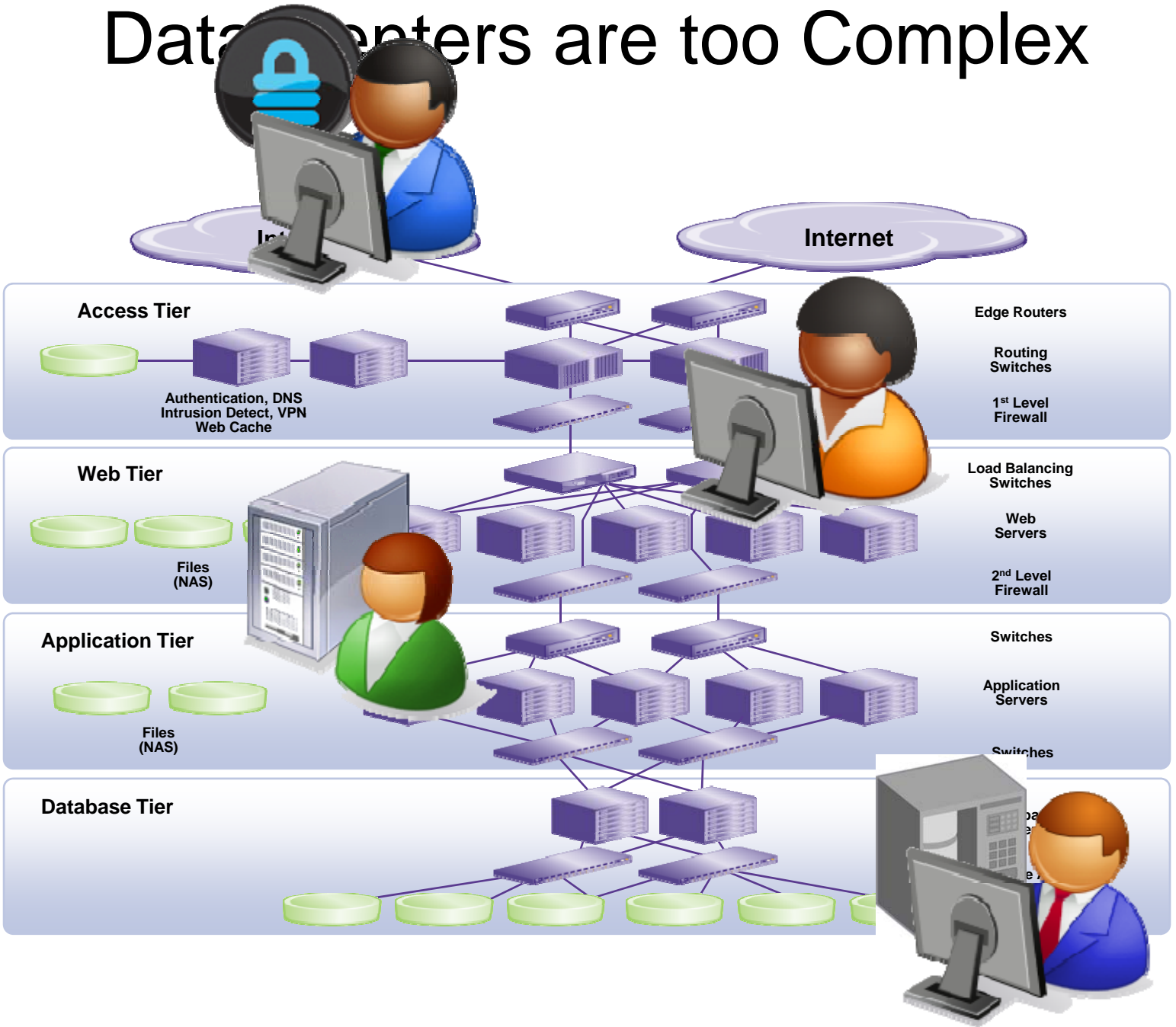
PCIe System Bus Performance  
 PCIe Gen 2, 3, 4



Virtual I/O Server


  

  
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# Data centers are too Complex



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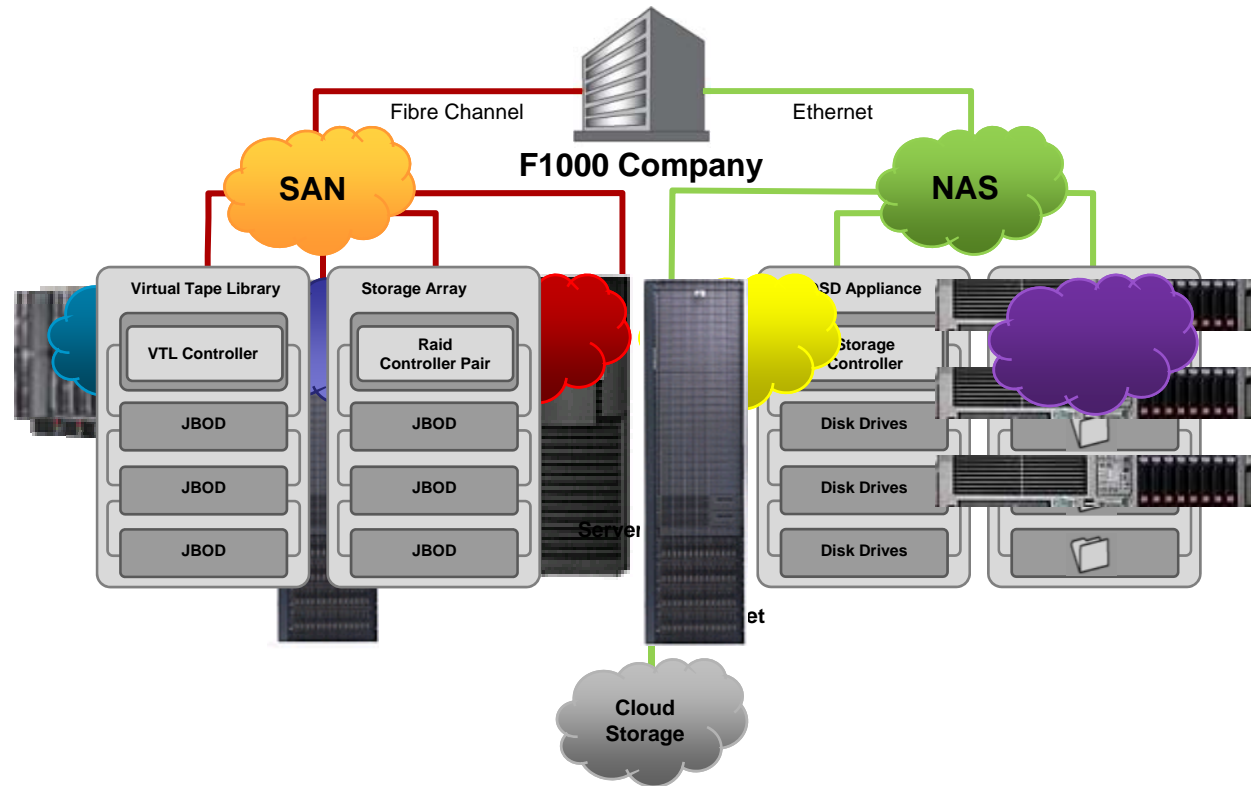
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Data Centers are Too Complex






# Cloud Access



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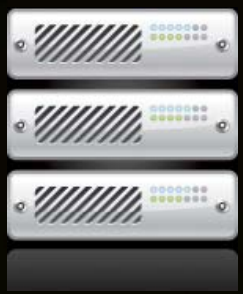
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Cloud  
Providers  
The Great  
Unknown



Your  
Data  
Here



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# It Should Be About Your Data!



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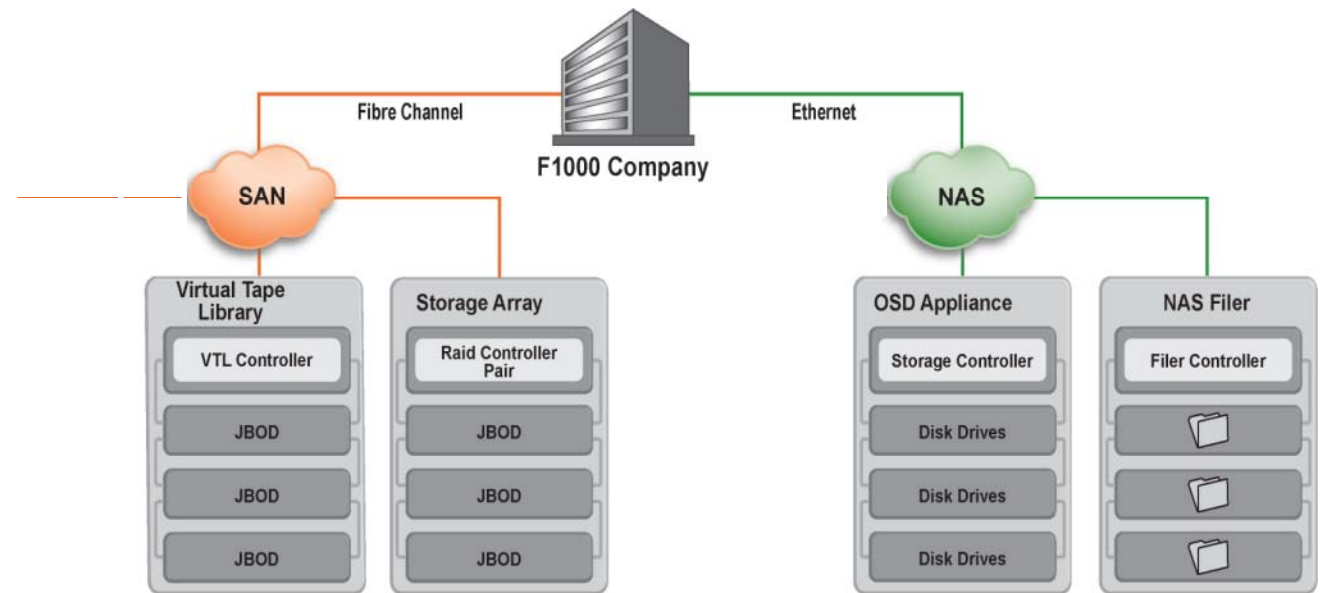


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# It Should Be About Your Data!



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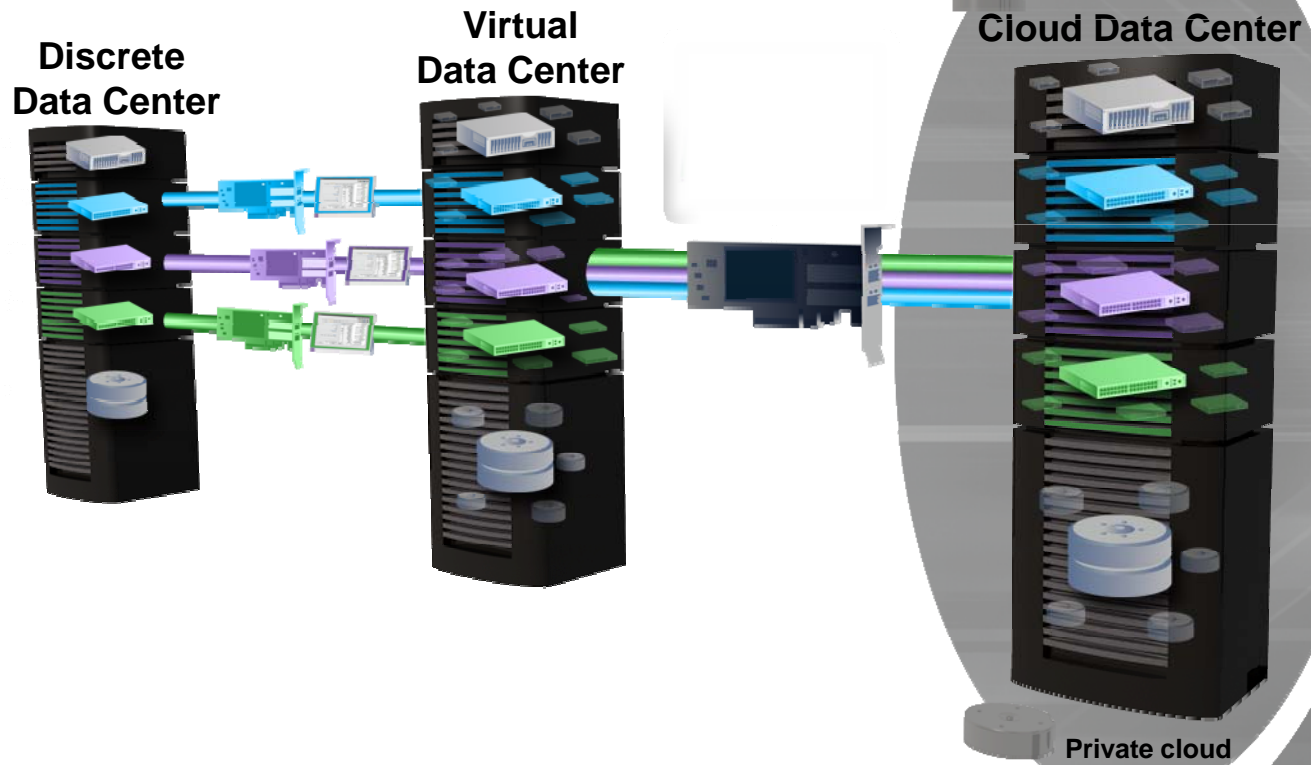


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# The Challenge...



**Converged I/O**

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# SLA's & Ownership

An SLA Is an Agreement Between a Provider and a Consumer

## SLA ADDRESSES FIVE KEY ASPECTS



- How the agreement changes over time



- What the provider is promising
- How will those promises be delivered



- Who measures delivery, and how
- What are the penalties if services are not delivered as promised

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# Creating Intelligence

## WRITTEN CONTRACT



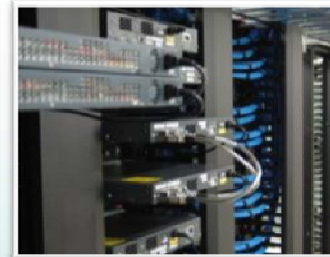
## ADMINISTRATORS



APPLICATION



STORAGE



NETWORK



SECURITY

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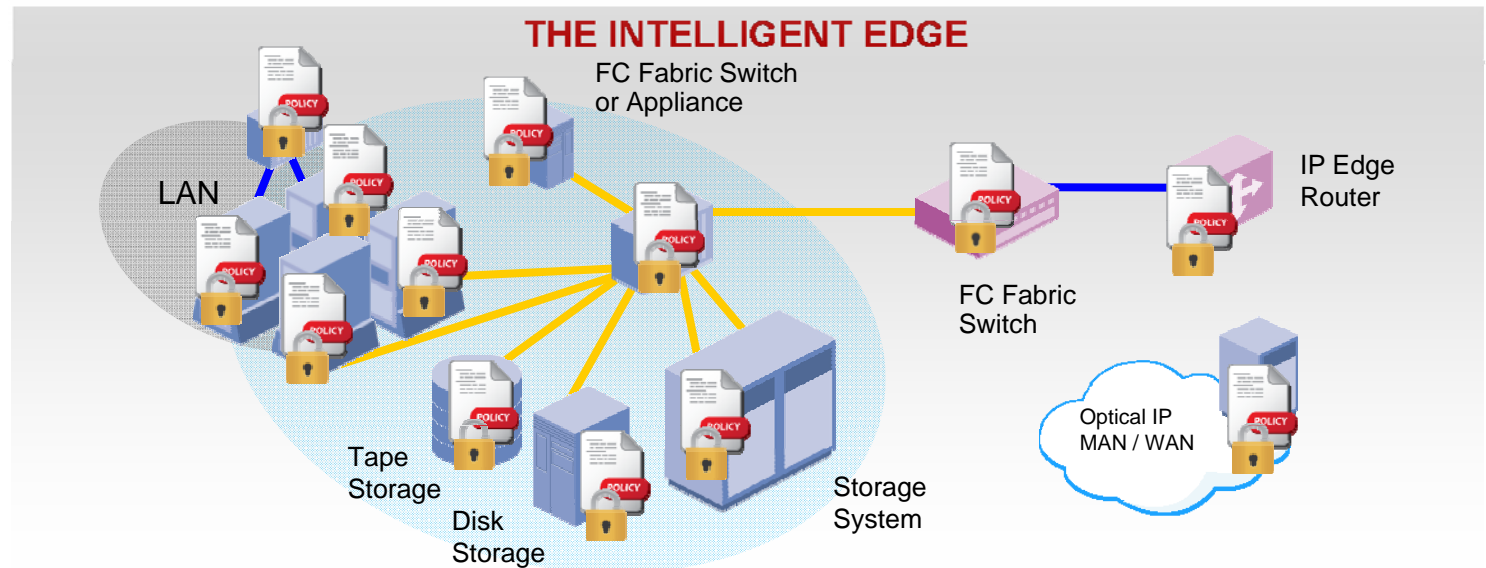
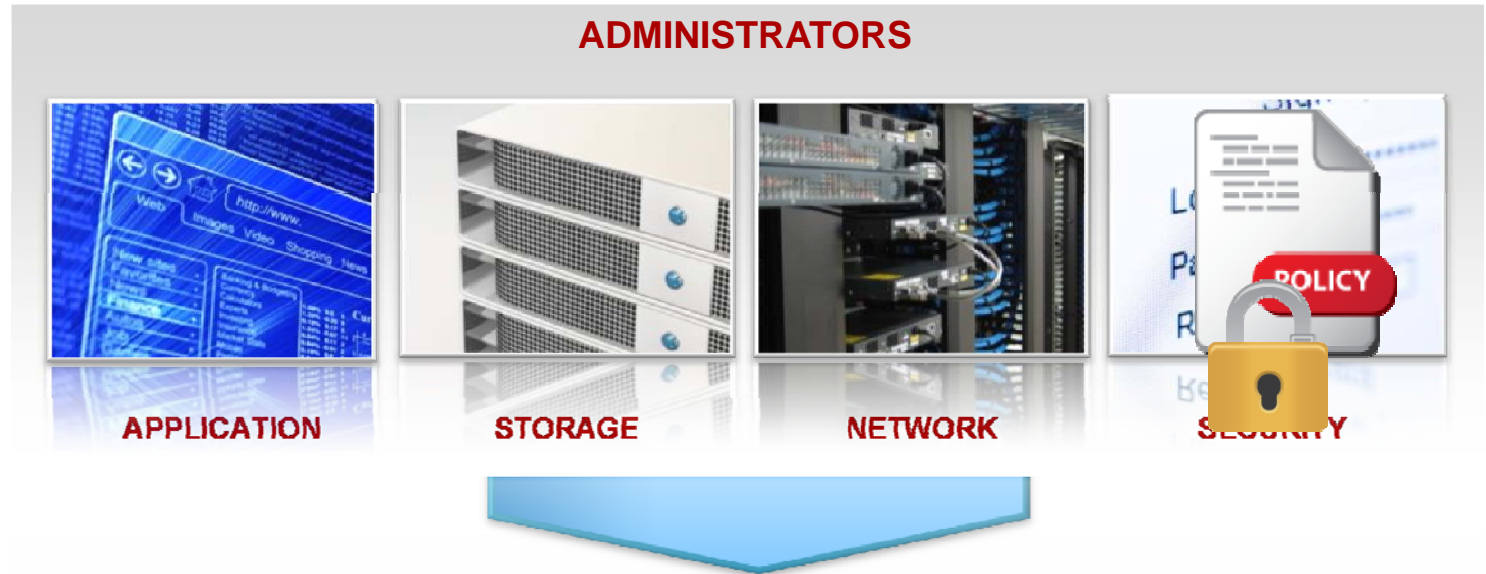


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# Creating Intelligence



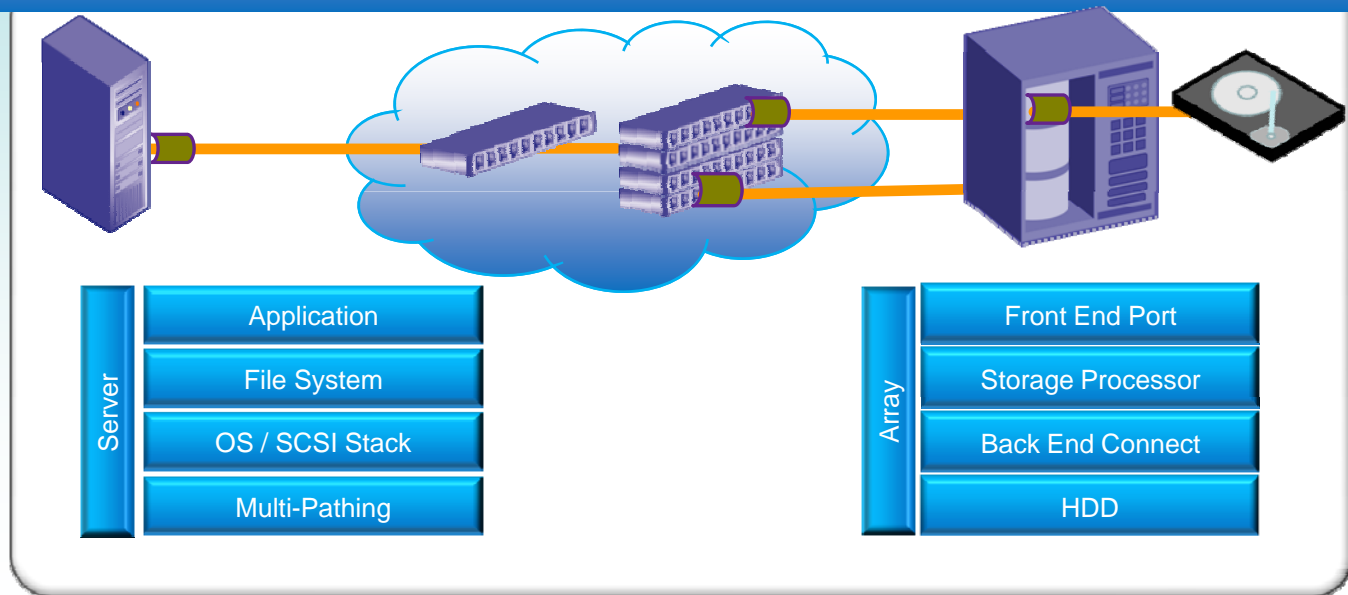


# Layers Where Bottleneck Can Occur




Virtual Servers

Virtual Adapters



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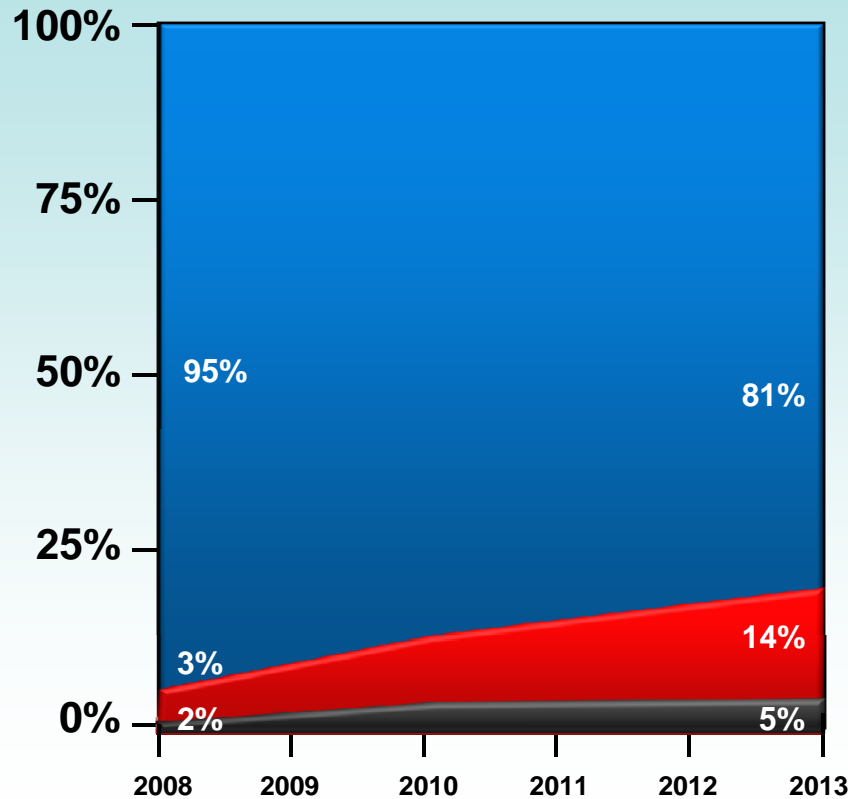
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# IDC—Server Spend

% SERVER SPEND



## Traditional IT

- Heterogeneous
- Legacy & Proprietary

## Private Cloud

- Bladed and Virtualized
- Consolidation Play
- Existing Workloads

## Public Cloud

- Homogeneous
- Dense/Low Cost
- New Workloads