

Unified
Computing
System
Launch

Welcome to Yas Island



Unified
Computing
System
Launch



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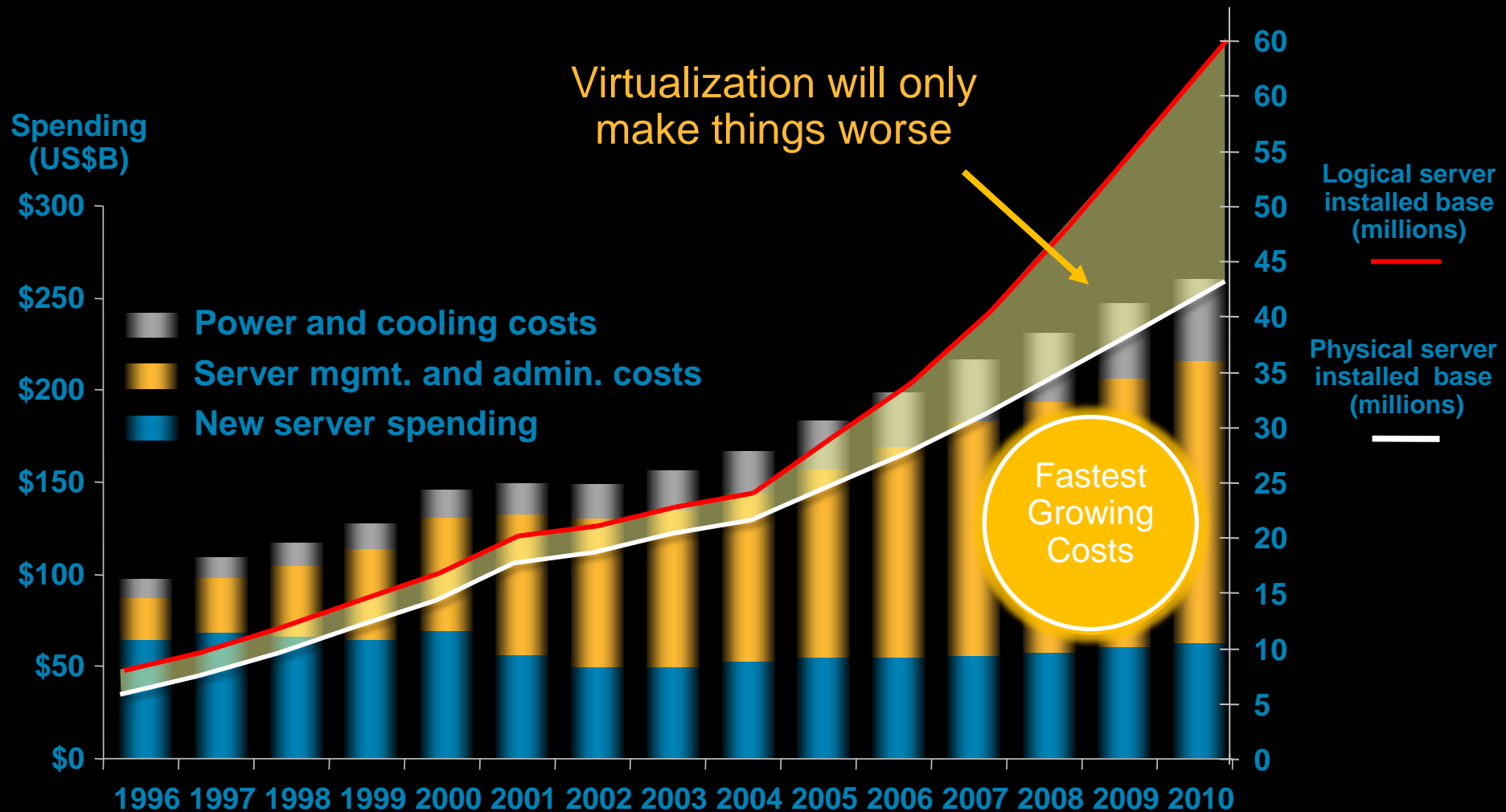
Unified Computing System



Coming up...

Data Center Infrastructure

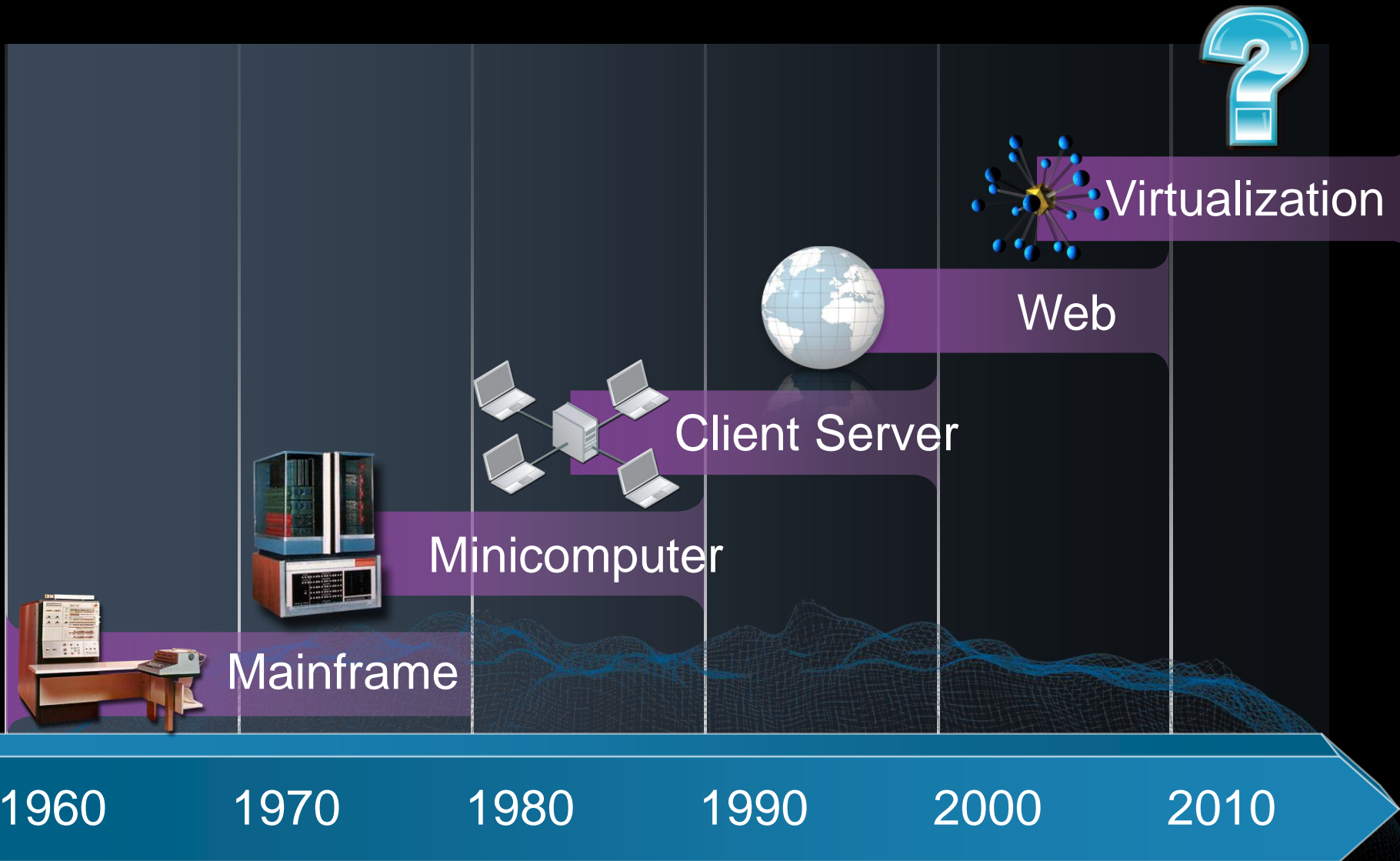
Operations & Maintenance Now ~80% of IT Budgets and Growing



Source: IDC 2009

The Evolution Of Computing Architecture

From Mainframe to Today



Virtualization Today

Data Center Platform “Islands”



Compute
Platform



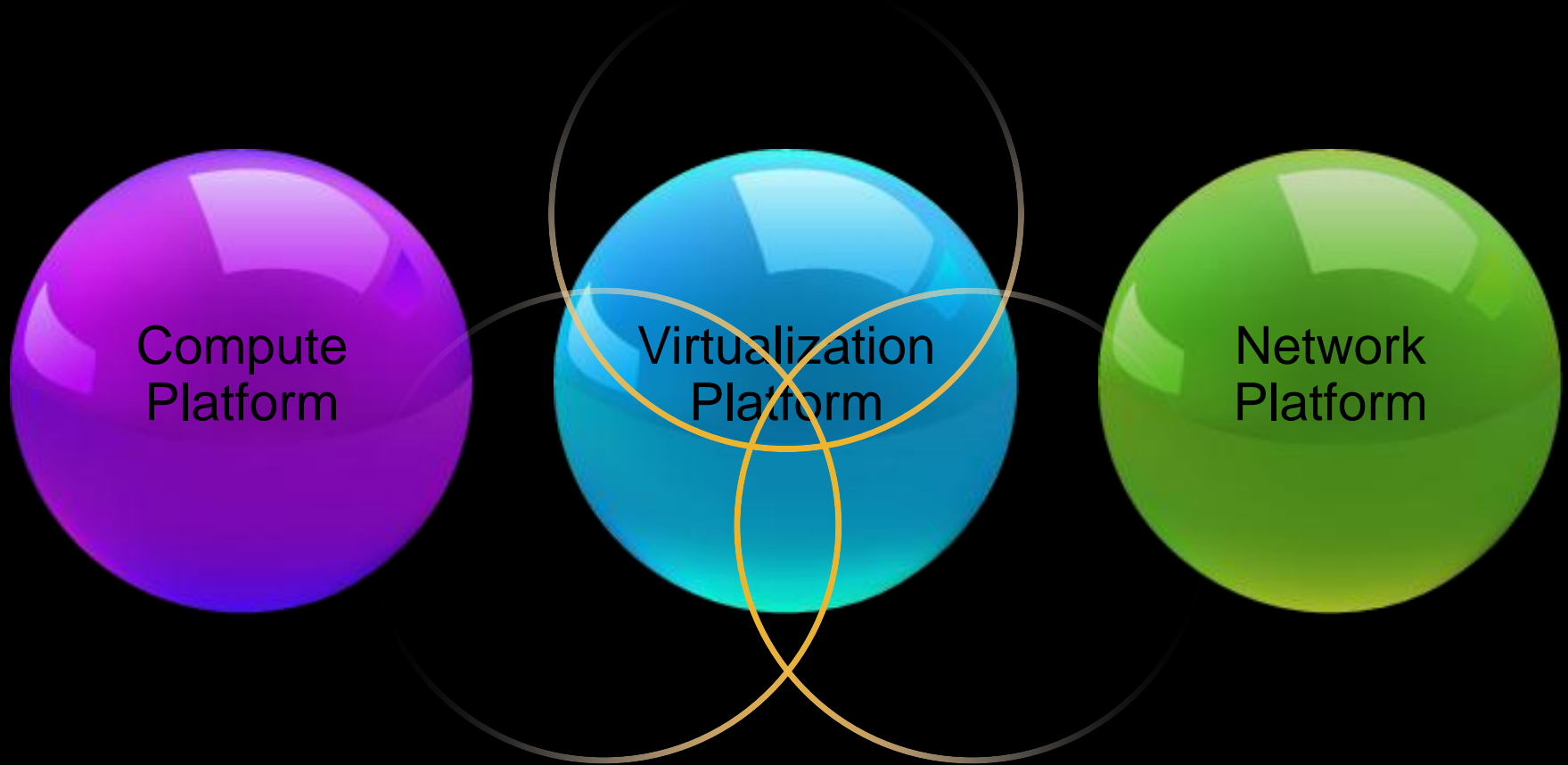
Virtualization
Platform



Network
Platform

Unified Computing

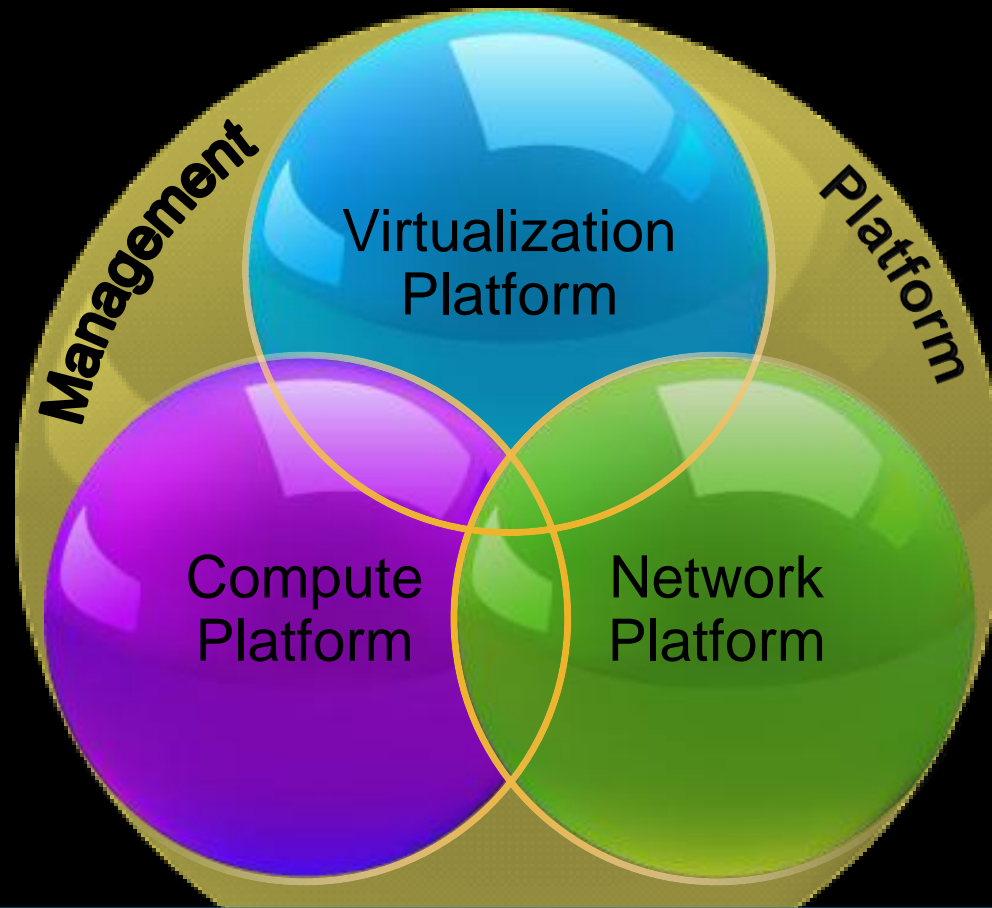
Federating the Data Center Islands into a Single System



Integrated architecture simplifies set-up, improves business metrics, and enables dynamic hardware provisioning

Unified Computing

Federating the Data Center Islands into a Single System



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Unified Computing System

Next Generation Data Center Infrastructure

Dramatically reduce datacenter total cost of ownership while simultaneously increasing IT agility and responsiveness.



Automated Provisioning

- Embedded single point of management and provisioning
 - Visibility and control across technology silos
 - Comprehensive API for simplified integration



Virtualized Services

- Fine-grained control, portability, and visibility of network, compute, and storage attributes
 - Increased Processor Efficiency with Hypervisor Bypass



Industry Standard Servers

- Intel Xeon Processor 5500 series
 - More than double the memory capacity of competing systems
 - Blade and Rack Form Factor

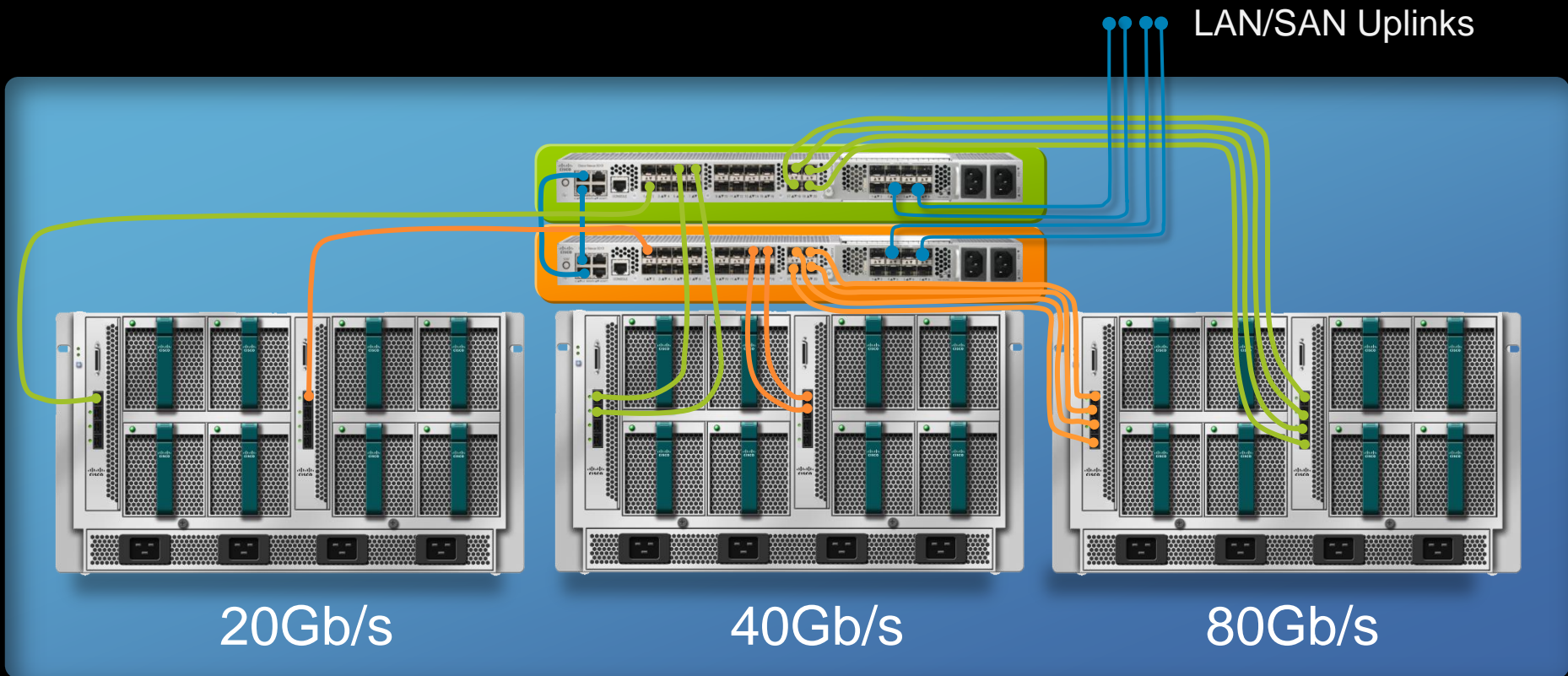


Unified Fabric

- Wire once, low latency FC and Ethernet
 - Virtualization aware
- Dramatic reduction in adapters, switches, pass thru modules



Wire Once Architecture



- Wire **once** for bandwidth, not connectivity
- All links can be active all the time
- Policy-driven bandwidth allocation

Cabling Simplification

UCS Uses Significantly Fewer Cables

Traditional Blade Server



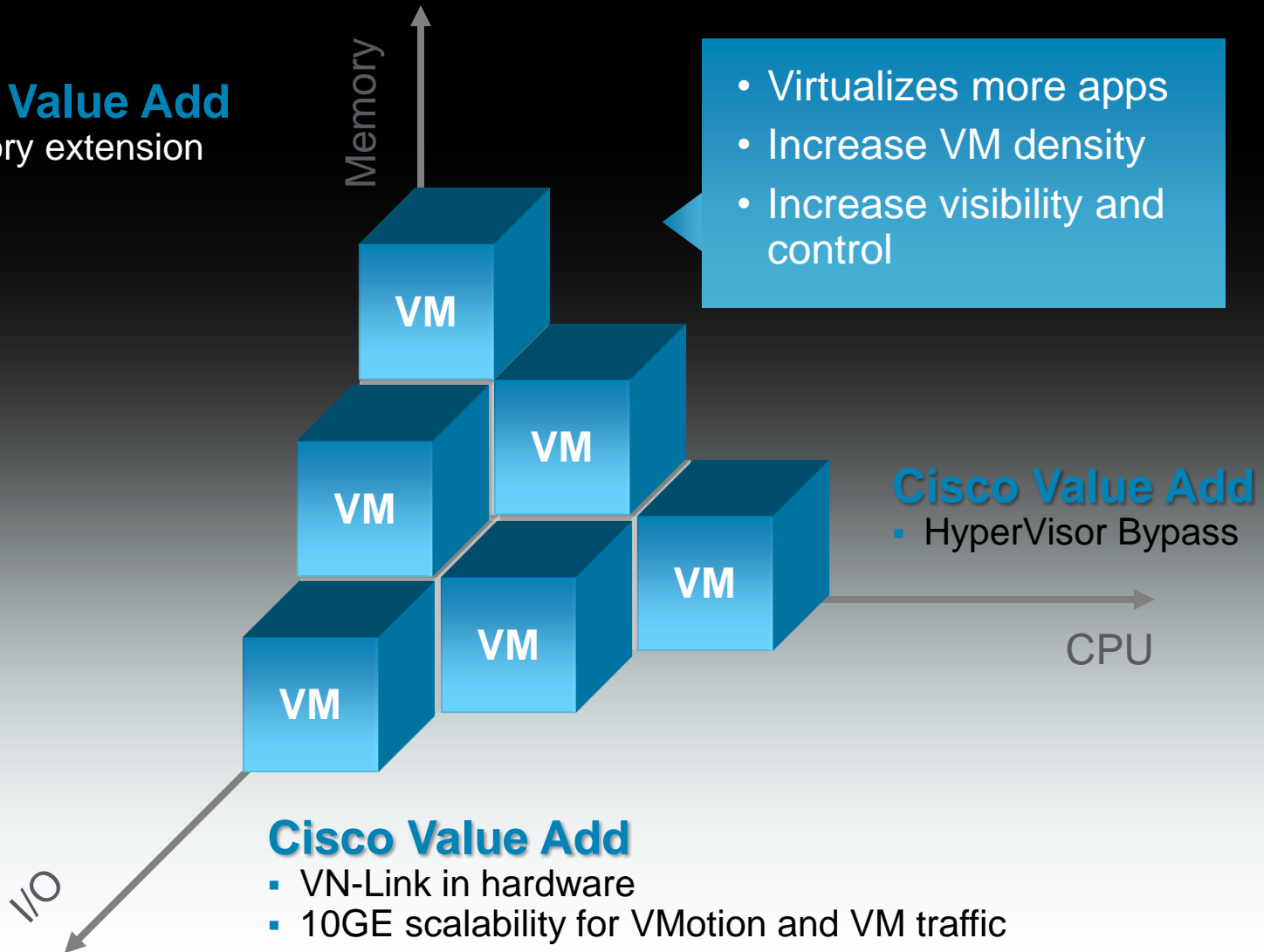
Cisco Unified Computing



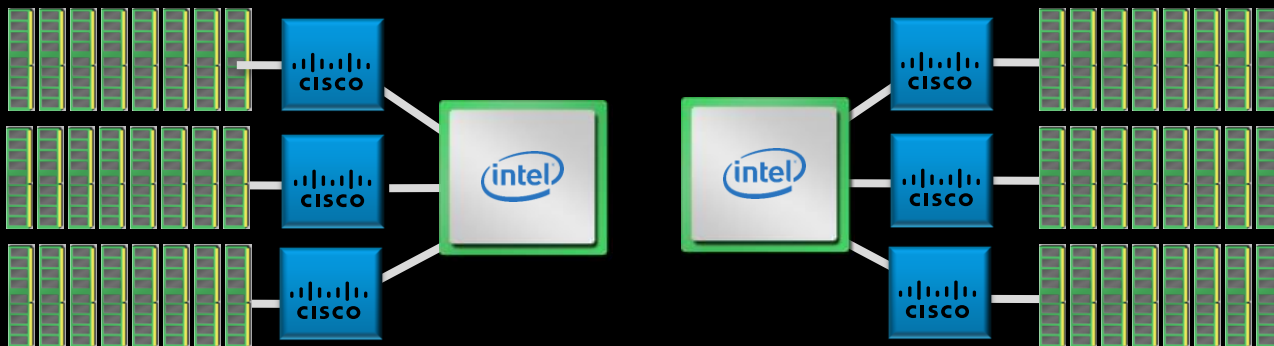
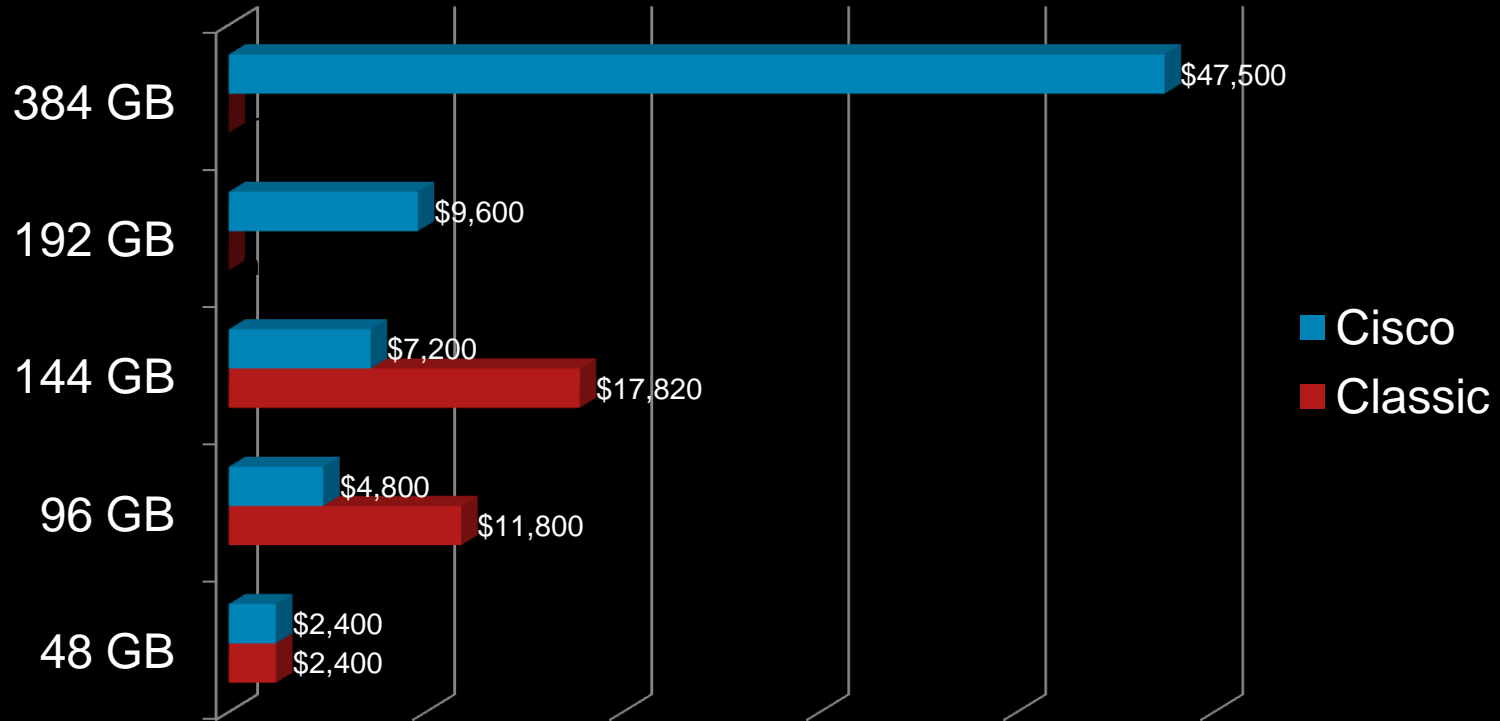
Virtualization Scalability, Reduced TCO

Cisco Value Add

- Memory extension



Savings With Memory Extension



NOTE:
DDR3 memory
pricing as of
6/10/09

Embedded Unified Management

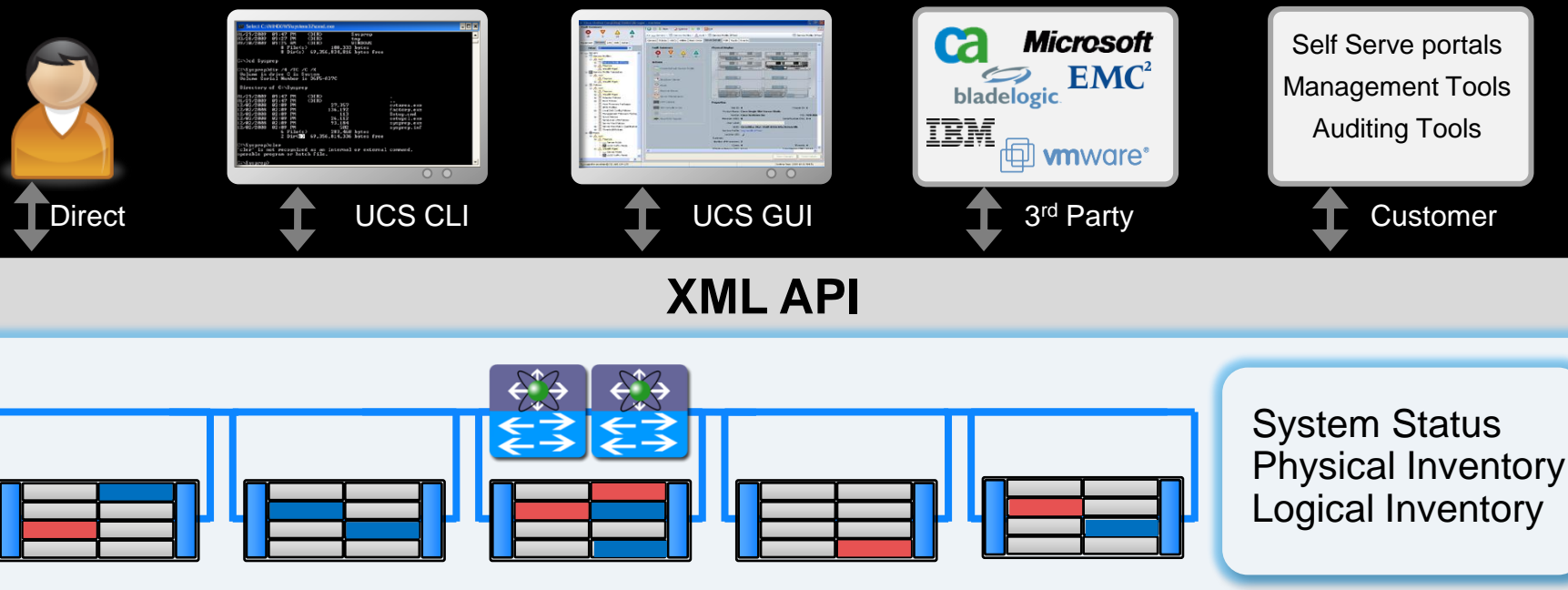


- Unified Management Domain
 - Automatic discovery
 - Dynamic Provisioning
- Building Block for Dynamic Data Center
 - Simplify management of infrastructure for ESX clusters and datacenters
- One-click configuration of LAN, SAN and firmware parameters

Programmatic Infrastructure

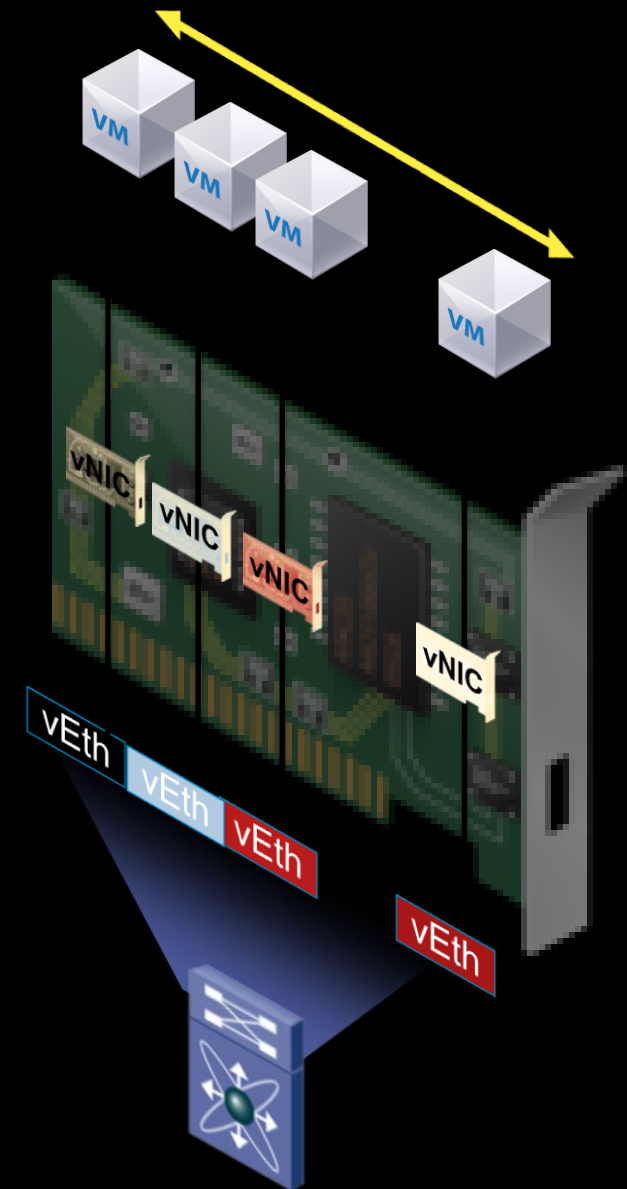
Develop *With* The Infrastructure, Not Just *On* The Infrastructure

- Comprehensive XML API, standards-based interfaces
- Bi-Directional access to physical & logical internals



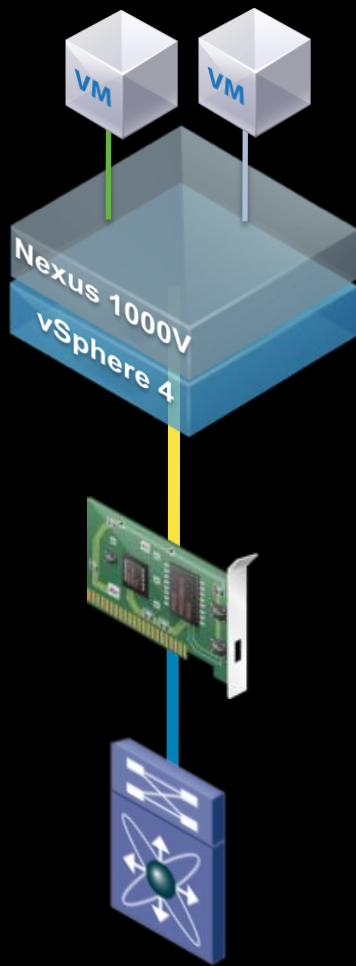
Cisco Virtual Interface Controller

- Converged Network Adapter designed for both single-OS and VM-based deployments
 - Virtualize in hardware
 - PCIe compliant
- 2 x 10GbE performance
- Supports VN-Link in hardware
- 2 Levels of Performance
 - Bypass vSwitch to deliver VN-Link in hardware
 - VM Direct Path: bypass vSwitch and Hypervisor for maximum performance

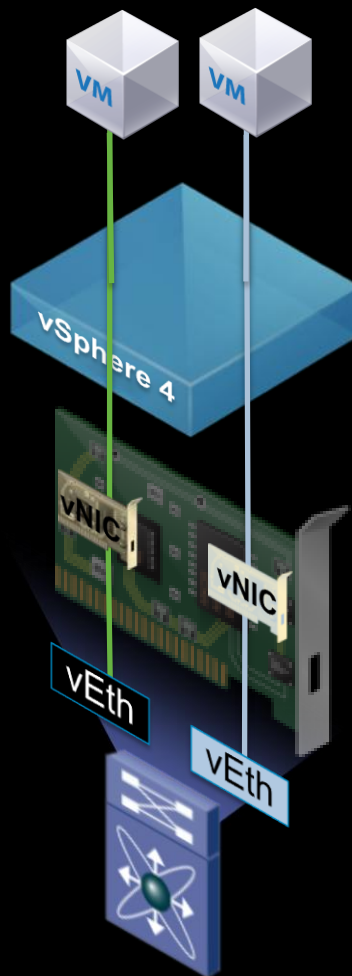


Options for VMware Environments

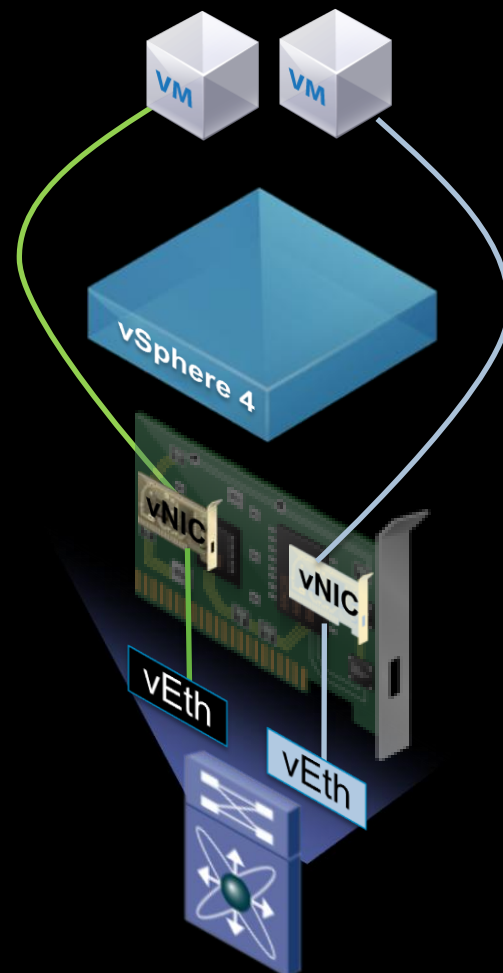
VN-link in Software



VN-Link in Hardware



VN-Link in Hardware with VM DirectPath



InfoWorld

How Cisco UCS reinvents the datacenter

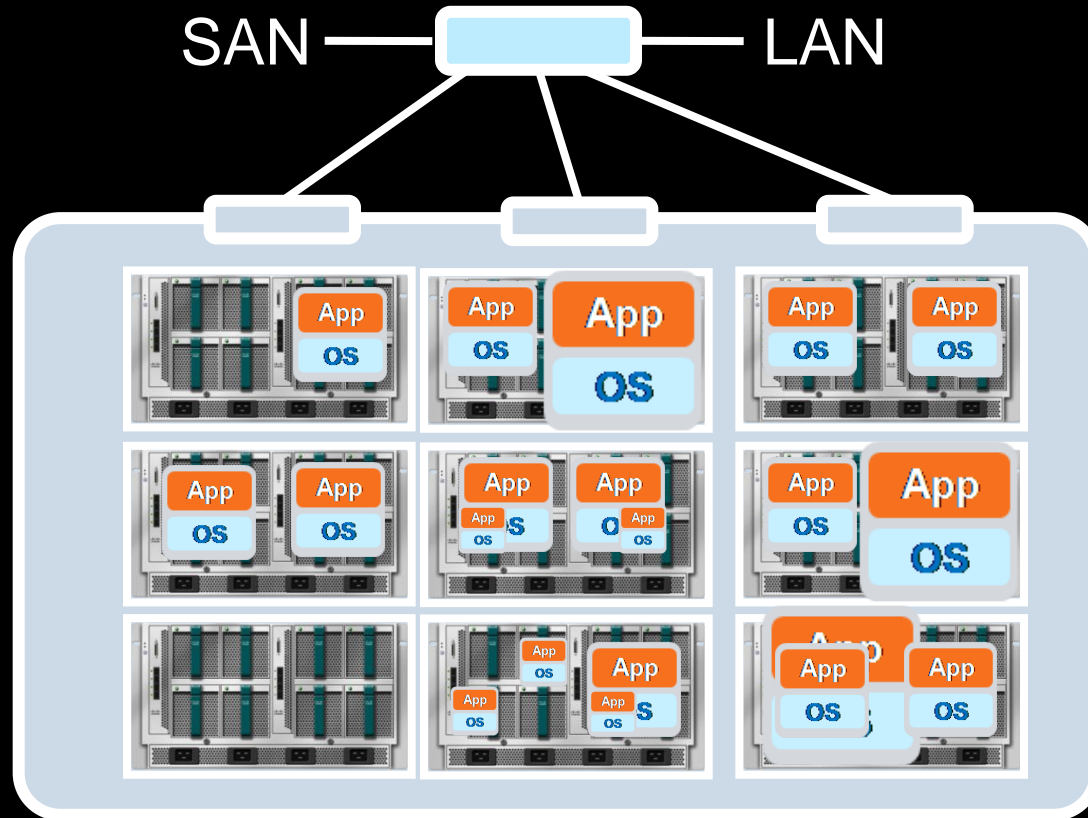
November 10, 2009

“If you could design a blade server system entirely from scratch, it might look a whole lot like Cisco's Unified Computing System.”

<http://www.infoworld.com/d/hardware/how-cisco-ucs-reinvents-datacenter-409?source=footer>



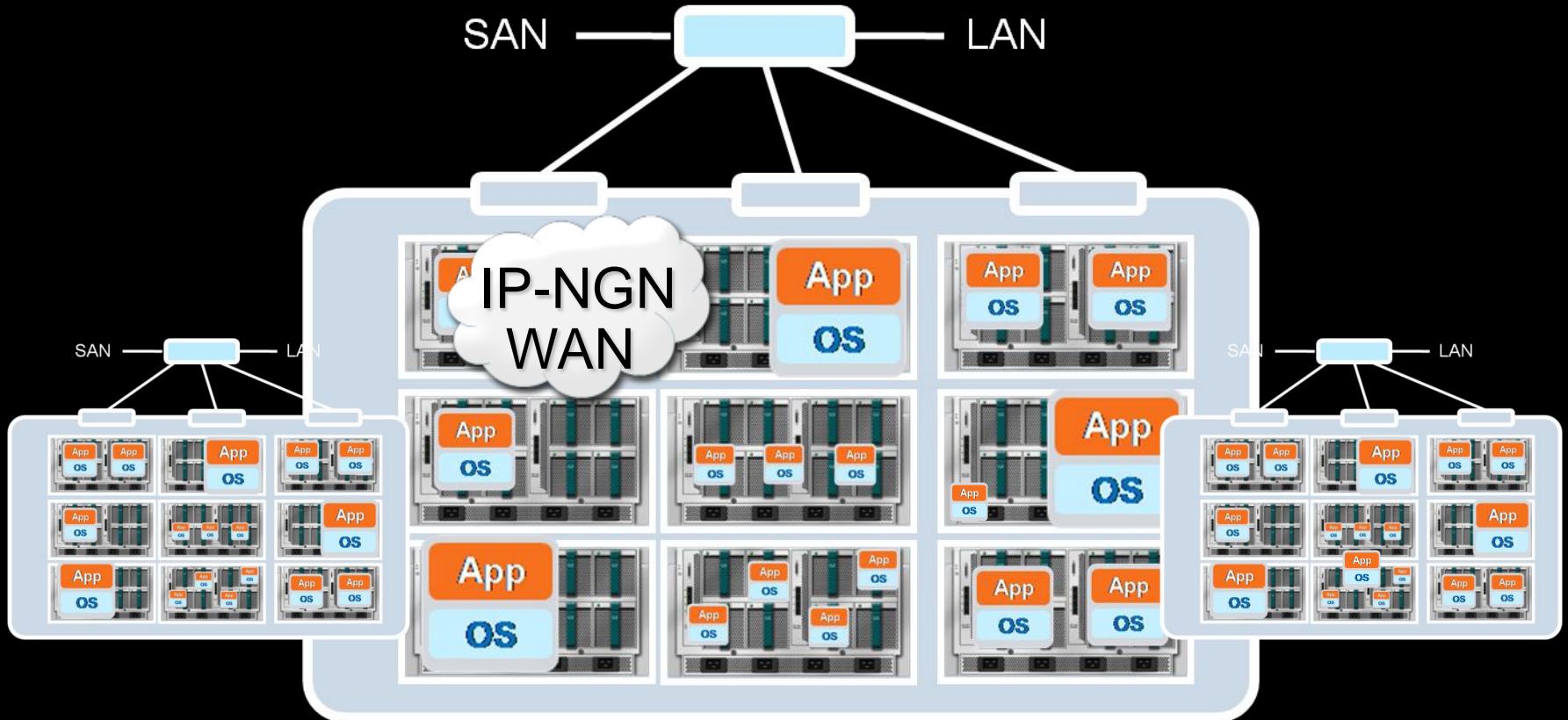
The New 'Atomic Datacenter Unit'



- Dynamic resource provisioning

Data Center Vision

Transparent scaling, dynamic rebalancing



Cisco IT Projections from DC Designs

1 MW, 10,000 sq ft CoLo Facility

Cost & Operational Efficiencies:

40% savings in cabling, fiber,
patch cords and labor

Overall DC Utilization:

Up to 4Xs as many virtual machines
30% more power available to servers
Power reduction benefits of UCS

Agility & Happier Application Developers:

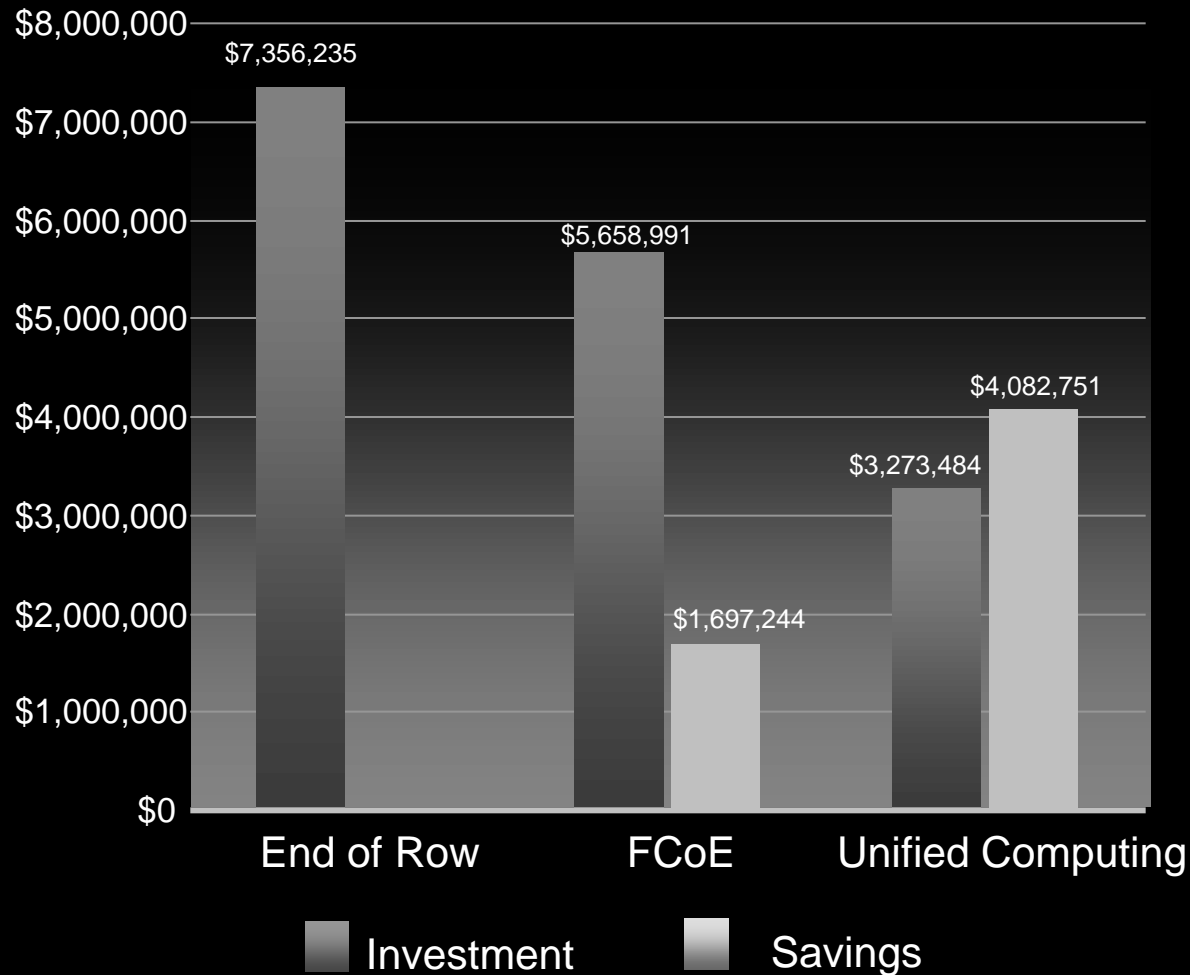
Major reduction in provisioning time
UCS Manager Server profiles

Server Failover Recovery via UCS
(using Service Profiles)



Total Cost of Ownership

1,000 Server Use Case:
Legacy Rackmount to Unified Computing





CISCO