



Architectural Play for Data Center / Virtualization

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Green 3.0 – Data Center Team

Product Approach vs. Architectural Approach



DC Interconnect Systems



DC Edge Routing WAN Optimization Optical Family

Nexus and Catalyst Switching Systems



Catalyst Family



Nexus Family

Unified Computing Systems



UCS Family

DC Services Systems



ASA and ACE Families

DC Storage Systems



MDS 9000 Family

Product vs. Architecture

Cisco Data Center Network Architecture

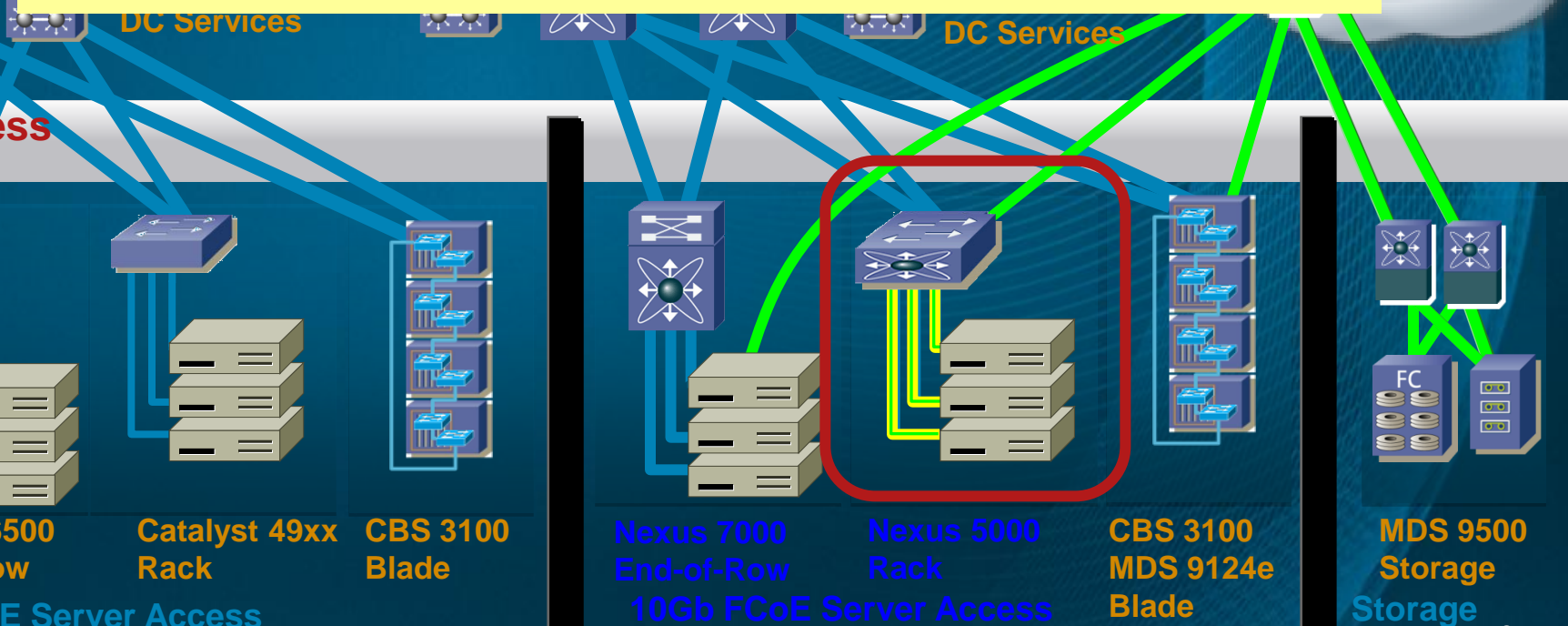
DC Core



DC Aggre



DC Access



Product vs. Architecture

Evolution of Architecture to Unified Fabric

DC Core

DC Aggr

DC Access

Unified Fabric Architecture Roadmap

Gigabit Ethernet
10 Gigabit Ethernet
10 Gigabit DCE
4Gb Fibre Channel
10 Gigabit FCoE/DCE

Catalyst 6500
10GbE VSS Agg
DC Services

Nexus 7000
10GbE Agg
Catalyst 6500
DC Services

Nexus 7000
Storage Core

Unified Fabric

Catalyst 6500
End-of-Row

Catalyst 49xx
Rack

CBS 3100
Blade

Nexus 7000
End-of-Row

Nexus 5000
Rack

Nexus 3000
Blade

Nexus 7000
Storage

1GbE Server Access

10Gb DCE Server Access

Storage

Product vs. Architecture

Virtualization Features vs. Architecture

Physical Infrastructure

Virtual Infrastructure

Shared Infrastructure 'Stack'

VMotion App1

Application 2

Virtual Machines

Virtualization Architecture

Policy, Security, QoS

Server

Network

Virtual Networks

Virtual Load Balancers

Virtual SANs

VSAN1

VSAN2

VSAN3

Virtual LUNS

Storage

Virtual Storage

Next Generation Data Center Architecture

Data Center Transformation / Transition

- **I/O Consolidation**

Unified IO, Unified Fabric

- **Virtualized Data Center**

DC Infrastructure Transformation

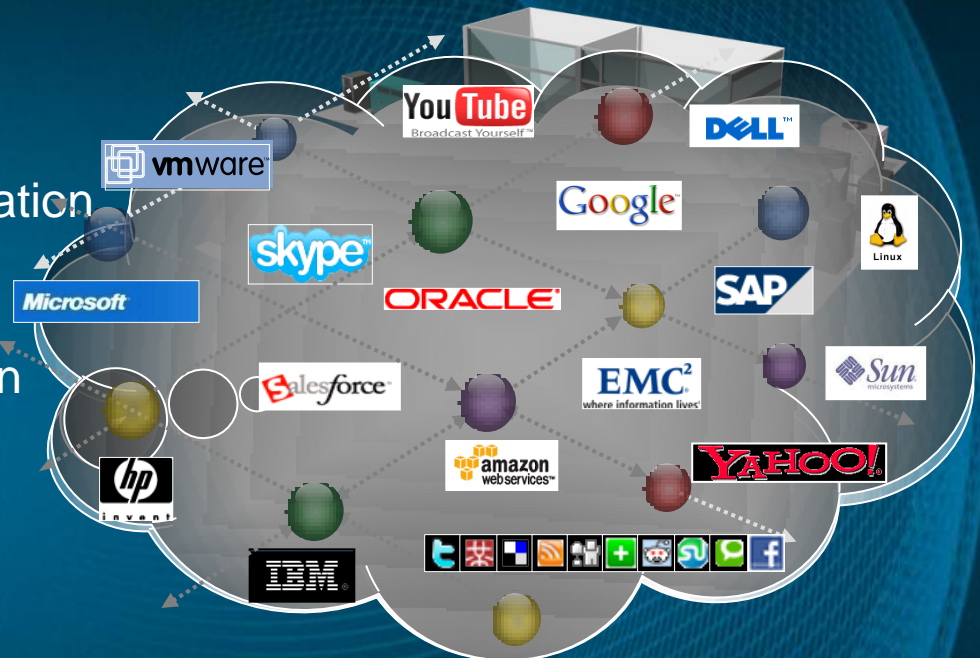
- **Automated Provisioning**

DC Operation Transformation

- **Green Data Center**

Power, Cooling, Space

- **Cloud Services**

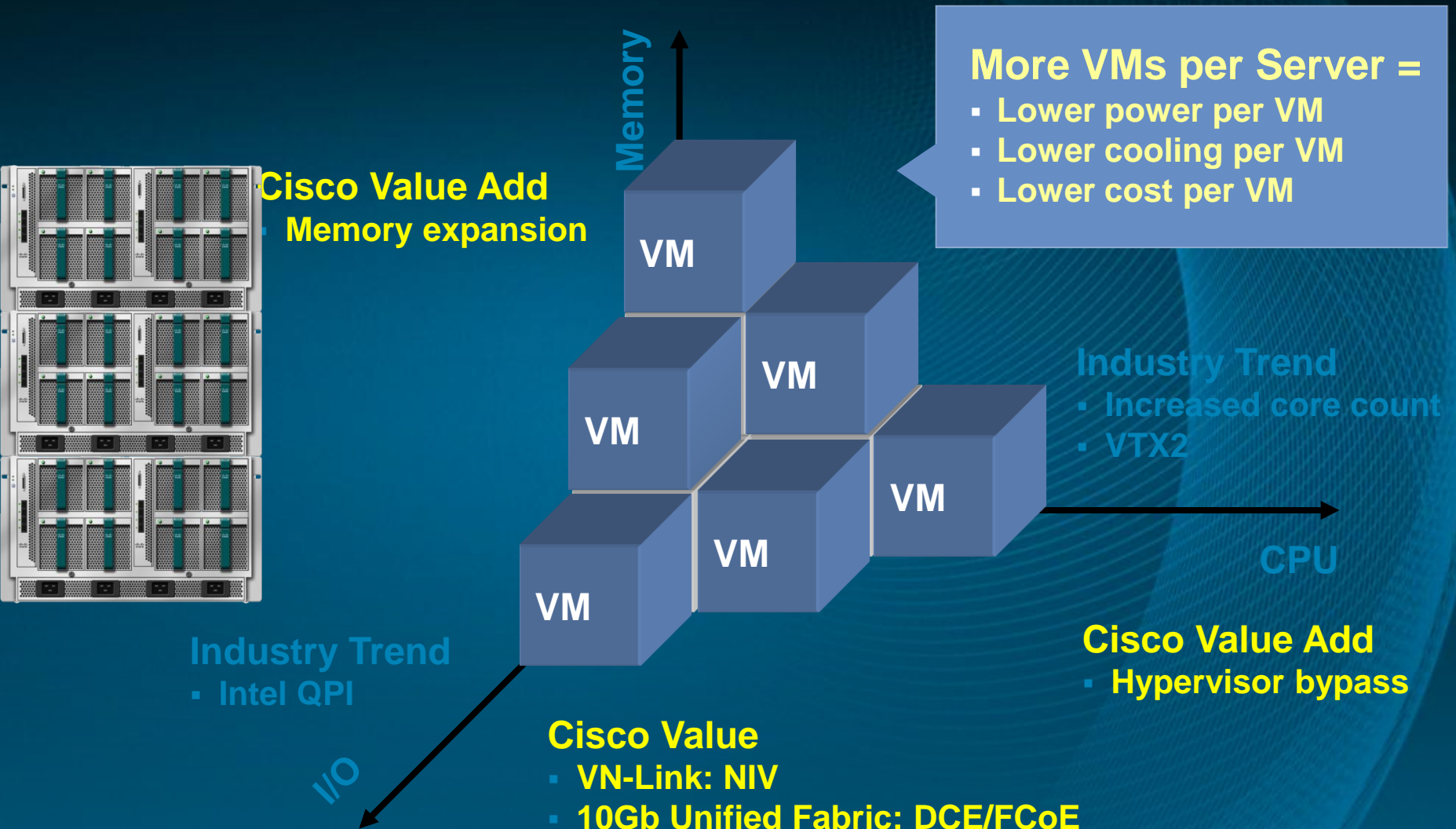


August 23, 2007

Next-Generation Data Centers - A First Look At The Future Of Data Center
(IDG NGDC Conference in SF (2007.8))

Cisco UCS... Architectural Approach

Virtualization Optimized Platform



FY10 Cisco Data Center Strategy/Excution

Through the **Unified Computing Architecture**, build the **Virtualized Data Center** to enable the **Cloud Services**

1. Catalyst 6K/4K Switch -> **Nexus 7K/5K Switch Migration**
2. Virtualization Platform -> **Cisco UCS/Rack Server**
3. Storage MDS 9K – **Nexus 7K/5K FCoE**
4. **ANS (L4-7, WAN Opt.)**



CISCO