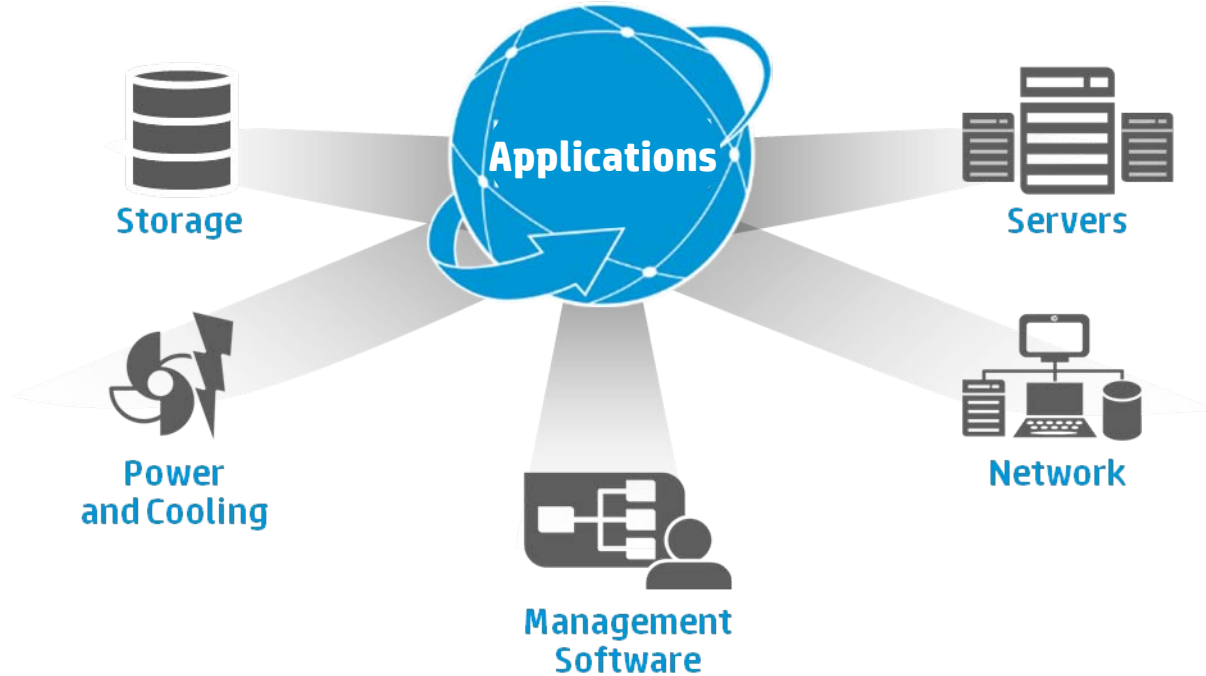




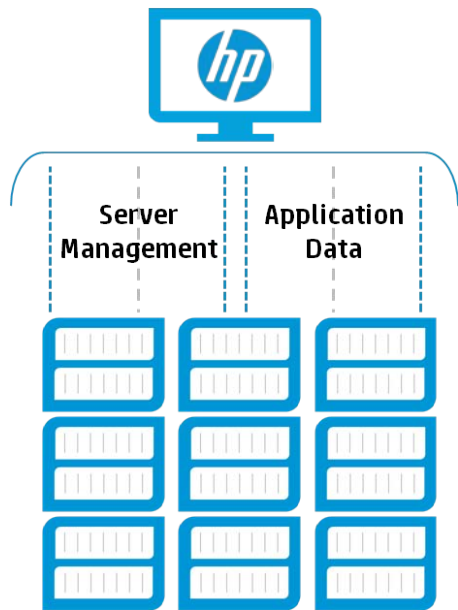
# HP BladeSystem Advantage over Cisco's UCS

# Priority #1: Enabling Applications

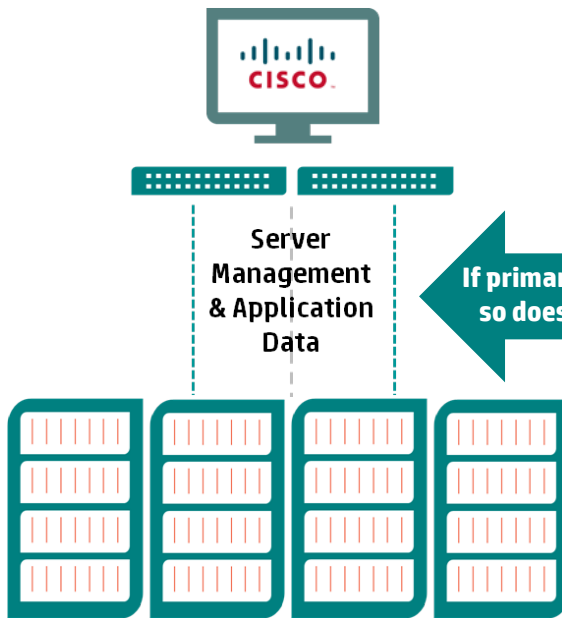


# Architectural Stability

## IT Best Practice: Out of Band Management



## The UCS way: In Band Management



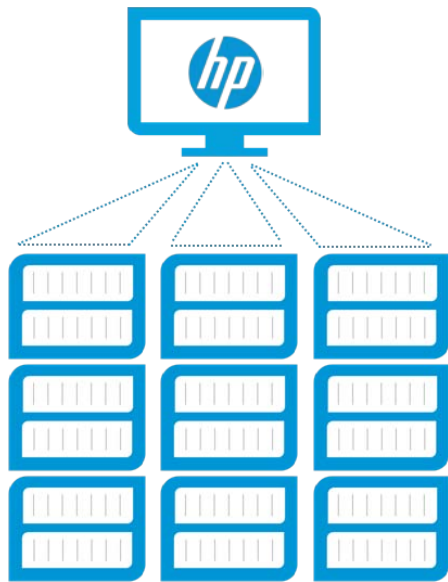
#1 Stability Matters



# Risk Compartmentalization

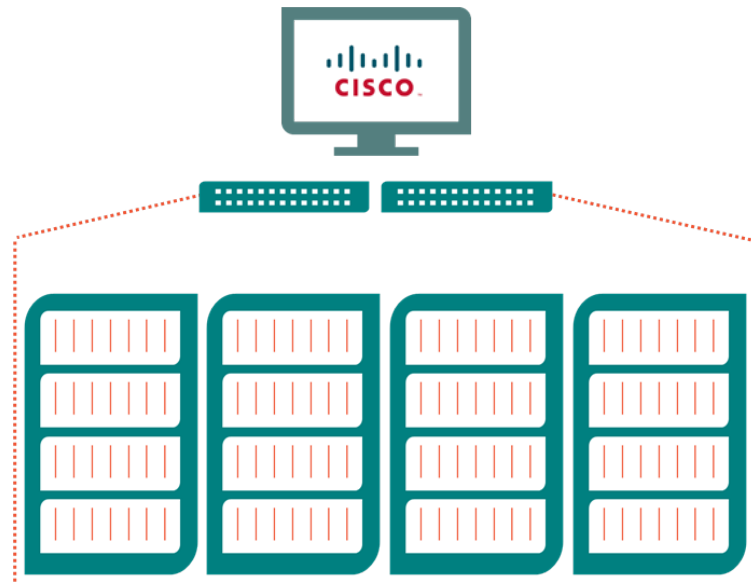
#1 Stability Matters

## IT Best Practice: Compartmentalization of Risk



**Fault Domain: 16 servers**

## The UCS Way: High Risk Profile



**Fault Domain: up to 160 servers**

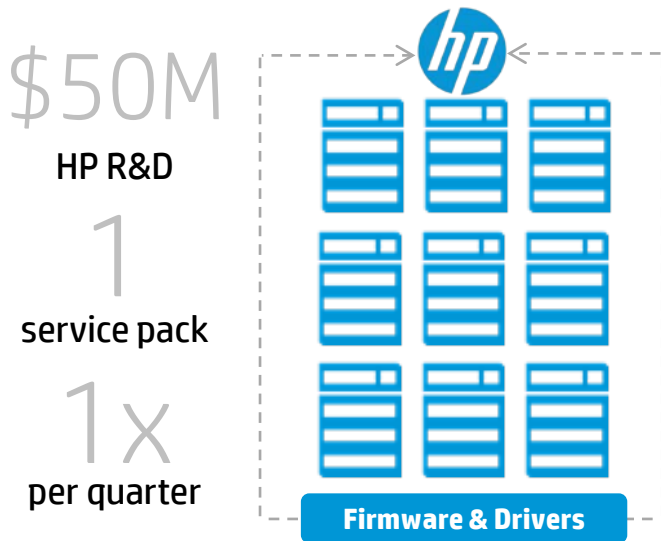
# HP Smart Update Manager

#1 Stability Matters



## HP Smart Update Manager

Sequence — Stage — Schedule



Separate service packs.

No sequencing.

High risk for **failures**.

Firmware

Drivers

Since December 2011...

HP has issued **9** Critical updates

In the same timeframe...

Cisco has issued **38** Critical updates



**20** caused outages



# The case for intelligent compute

#2 Compute Matters

According to Cisco: *“The compute node is just an execution engine with CPU, memory, disk, flash, or hard drive.”*<sup>1</sup>

## 1995: HP Introduces Pre-failure Alerting



## 2012: HP Introduces ProLiant Gen8



**3D Sea of Sensors**



**Active Health System Log**



**Complete Hypervisor Integration**

[http://www.cisco.com/web/strategy/docs/qov/CiscoCloudComputing\\_WP.pdf](http://www.cisco.com/web/strategy/docs/qov/CiscoCloudComputing_WP.pdf), page 10

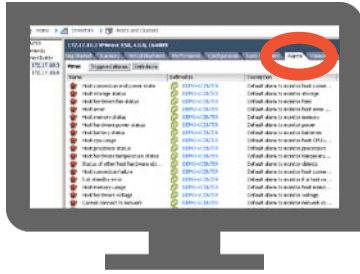


# The case for intelligent compute

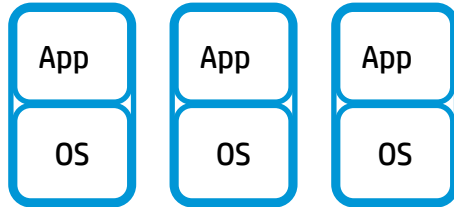
#2 Compute Matters



## Proactive Pre-failure Alerting



- Predictive Maintenance Protection
- Pre-Hardware Fault Notification
- Alert Hypervisor of pending issue
- Automatically begin moving workloads
- Automation of vMotion (Like DRS!)



The UCS way:

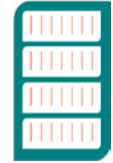
## Reactive post-failure response



1. Outage



2. Notification

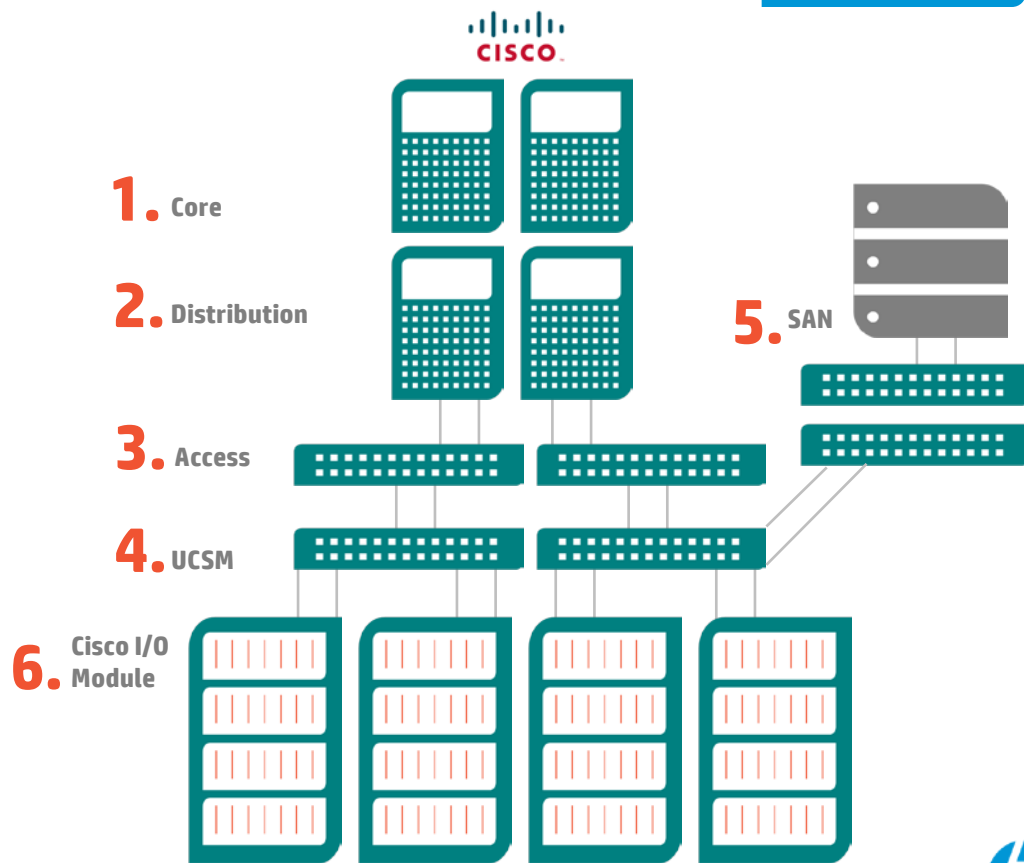
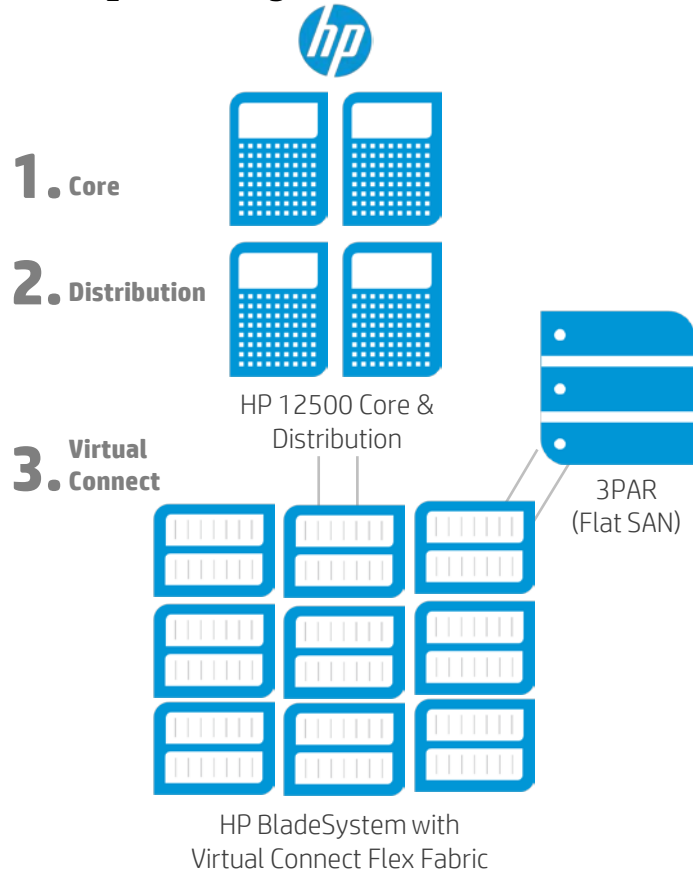


3. Restart application in new server blade



# Simplicity Matters

#3 Simplicity Matters



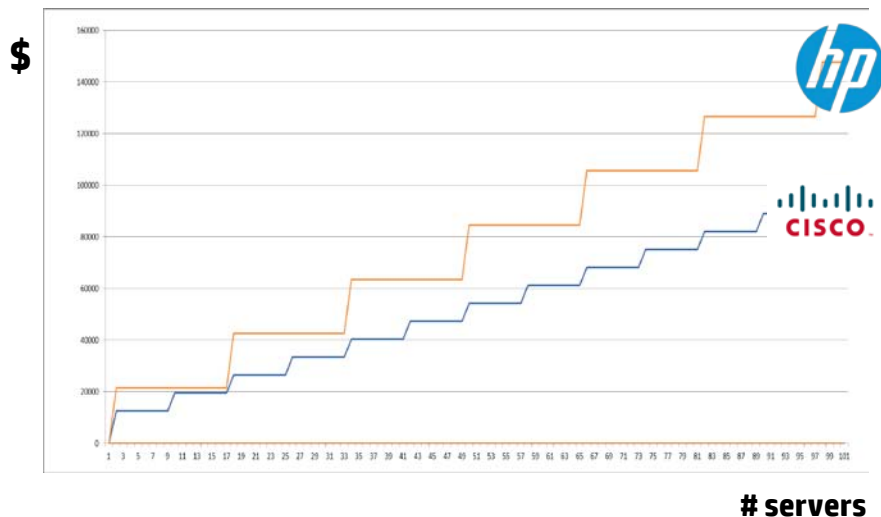


# “The cost of the 17<sup>th</sup> server”

#4 TCO Matters

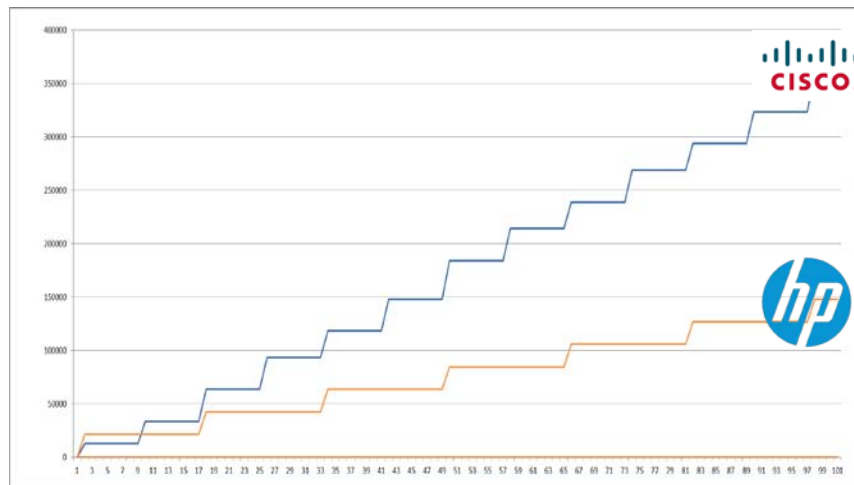
## Cisco Representation of UCS TCO

minimal port licensing/lightly configured (“smart play bundle”)



## Accurate Representation of UCS TCO

(UCS configured/licensed to scale)



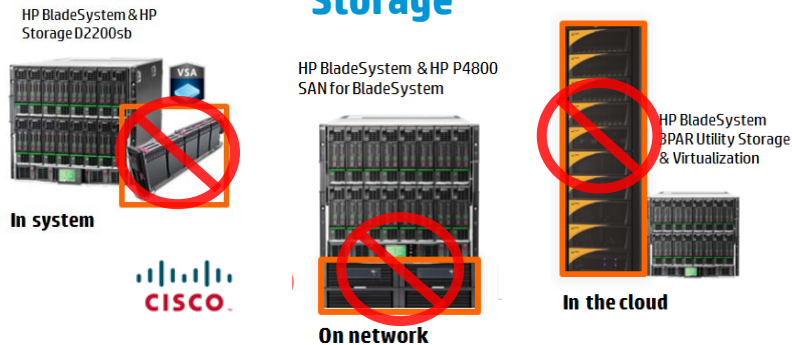
# Portfolio Matters

#5 Portfolio Matters

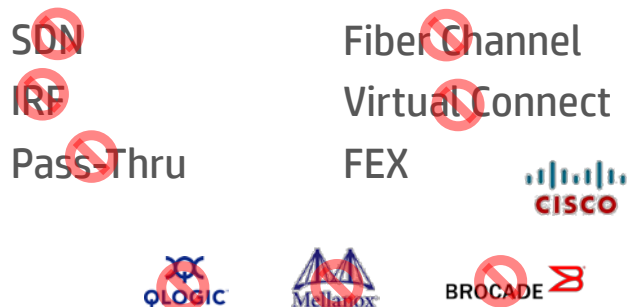
## Servers



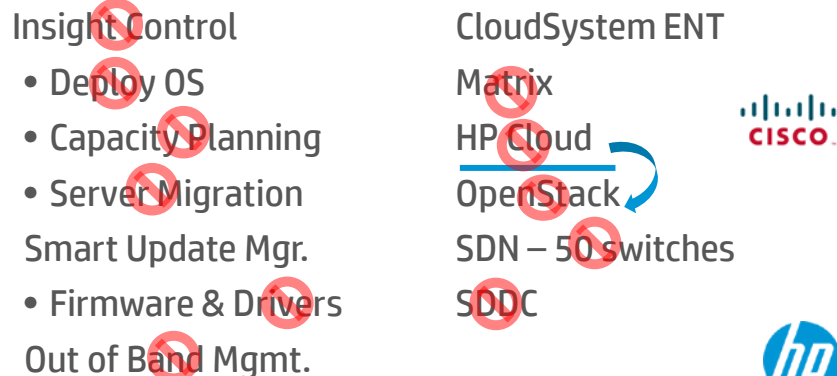
## Storage



## Blade Networking



## Software

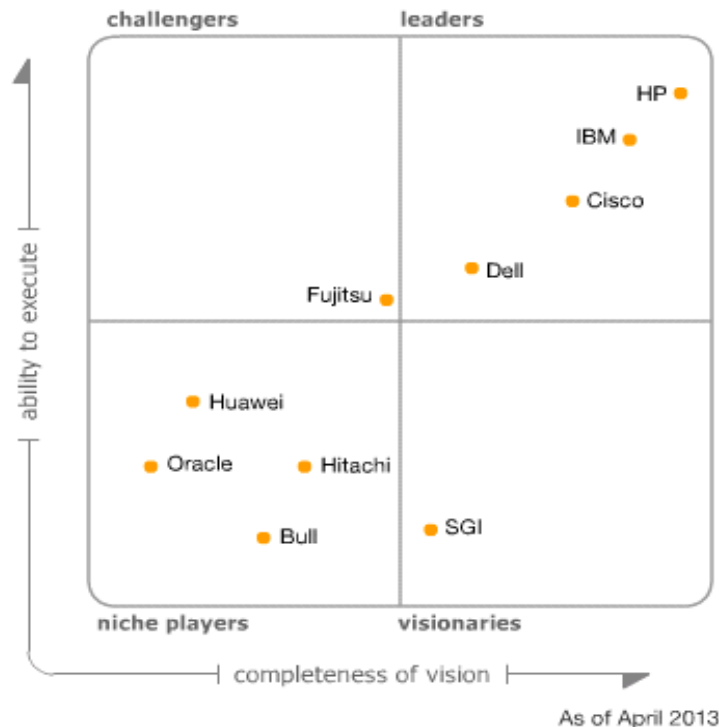


# Analyst Point of View

## Gartner<sup>®</sup> Magic Quadrant for Blade Servers April 2013

Source: Gartner Magic Quadrant for Blade Servers  
April 2013  
ID Number: G00250031

*This graphic was published by Gartner, Inc. as part of a larger research document and should be evaluated in the context of the entire document. The Gartner document is available upon request from HP. Gartner does not endorse any vendor, product or service depicted in its research publications, and does not advise technology users to select only those vendors with the highest ratings. Gartner research publications consist of the opinions of Gartner's research organization and should not be construed as statements of fact. Gartner disclaims all warranties, expressed or implied, with respect to this research, including any warranties of merchantability or fitness for a particular purpose.*



# In Summary:

## IT Best Practice

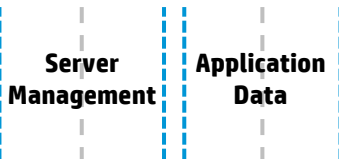


### ProLiant Gen8:

Intelligent. Self-healing. Self-sufficient.

enables

**Out-of-band management**  
for reliable & resilient  
“lights-out” management

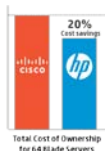


And allows for **compartmentalization of risk**

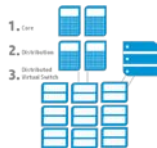


**Management control at the enclosure level**

HP innovates for what matters most:



**Lower cost**



**Simplicity**



**Application Uptime**

## The UCS Way



*“Compute is an endpoint”*

But endpoints can only handle

**In-band-management**  
creates a single point of failure



Which leads to a  
**large profile of risk**



**160 server failure domain**

**BIG problem when you can't correlate**

**Firmware Drivers**



Because at the end of the day:



Access Switches



SAN Switches

**=\$\$\$**



# We call it Converged Infrastructure.

## HP ProLiant Gen8



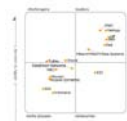
Gartner Magic Quadrant for Blade Servers (Mar. '12)\*

Intelligent. Self-healing. Self-sufficient.

**150+**  
Customer-inspired  
innovations

**#1** blade servers  
servers virtualized  
ww x86 market share

## HP 3PAR Tier-1 Storage



Gartner Magic Quadrant for Midrange & High-End Modular Disk Arrays (Nov. '11)\*



Autonomic. Efficient. Multi-tenant.

**2x**  
Virtual Machine  
density

**50%**  
Less capacity  
required

**Guaranteed.**

## HP FlexNetwork Architecture



Magic Quadrant for Enterprise LAN (Aug. '11)\*

**Simplify**  
networking  
HP Intelligent  
Management Center

**Automate**  
deployment  
Virtual Application  
Networks & SDN

**Scale**  
solutions  
HP Intelligent  
Resilient Framework

**Need an expert?**   
We've got plenty.  
**Plan your strategy** with HP  
Consulting: faster execution,  
faster results.  
**Keep your systems &  
business running** with HP  
Proactive Care – the guardian  
angel of IT.

## HP StoreOnce Deduplication

Backup speed **3x** faster backup  
Restore speed **5x** faster restore  
\$ per TB/hour **75%** less cost

**HP** StoreOnce B6200  
with Catalyst  
**EMC** DD990 with  
Boost

# You can call it game-changing.

## The world's most intelligent servers

Leader in performance

**#1**  
vmware

**#1**  
SAP

**#1**  
spec

What Dell  
does in **5 hours...**



HP can do  
in **10 minutes.**



Gain back  
**30 days**  
of admin productivity

**5 months**  
to return on investment

## The industry's first flat SAN with Virtual Connect

HP Virtual Connect FlexFabric:



**2 parts.**

**65%**  
Less cost

**40%**  
Less power

**95%**  
Fewer parts

**vs. Traditional Infrastructure:**



217 components  
73 parts  
144 cables



## It's time for a flexible network.

**Focus less on managing  
infrastructure...  
and more on connecting  
users to applications.**

Network Management Applications:

**25**  
Cisco  
Applications

**vs. 1**

HP Intelligent  
Management Center

## The world's fastest backup solution.

What EMC does in 5 days...



HP can do in **1.**



**Private Cloud**  
over **775**  
installations

**Managed Cloud**  
over **200**  
customers

**Public Cloud**  
**1000's**  
of users

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# Thank you.

