



# SYMANTEC ENGAGE HONG KONG 2010

## **NetApp Storage Efficiency Helps You Store More Information and Makes Your Business Go Further, Faster**

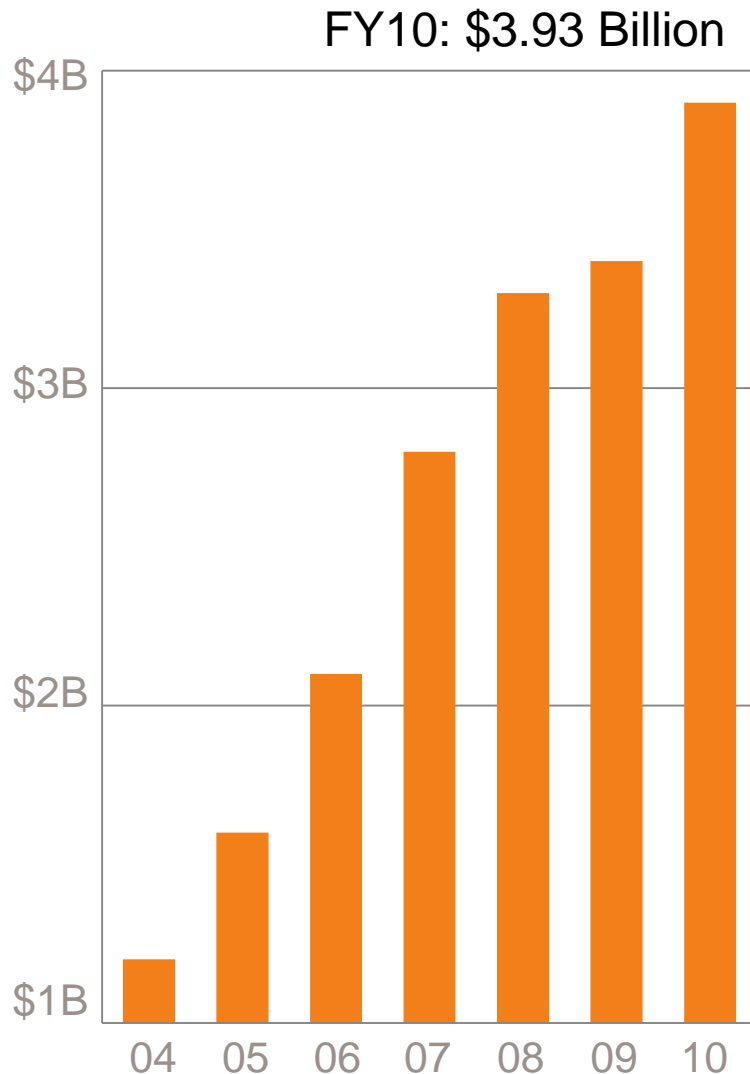
Nigel Lee

Senior Consulting Manager, Asia Pacific of NetApp





# Global Leadership



- Broad solutions portfolio
- Comprehensive professional services
- Global support
- Industry-leading partners
- 135+ offices around the world
- ~8000 employees
- Fortune 1000, S&P 500, NASDAQ 100



# A Culture Dedicated to Your Success

“Our talented employees are united in one goal: helping our customers succeed.”

Tom Georgens, CEO



#7 in 2010



2010  
2009  
2008  
2007  
2006  
2005  
2004  
2003



# Leaders Rely on NetApp

NetApp®

## Energy



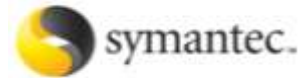
## Financial



The world's local bank



## Tech



## Government



## Other



## Manufacturing



## Media/Internet



## Telco





# NetApp Ranks #1 Enterprise Array in 2010

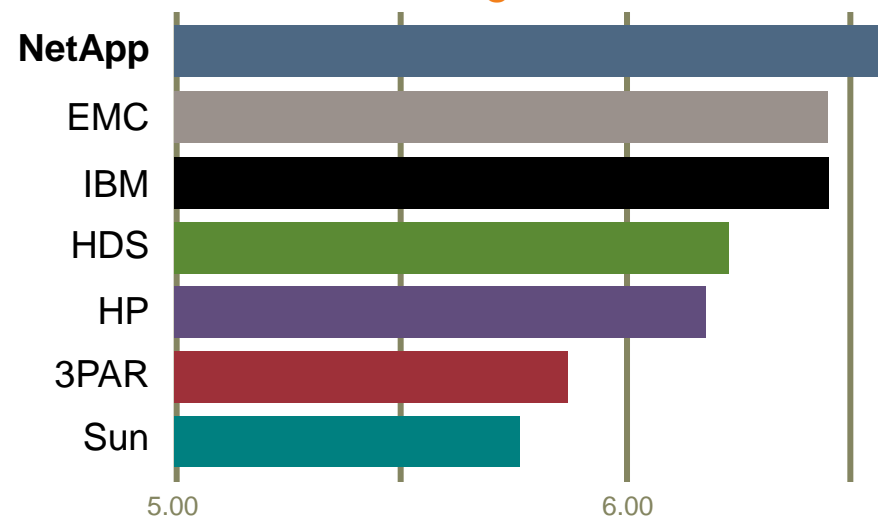
## Storage Magazine



Source: Storage Magazine - March 2010

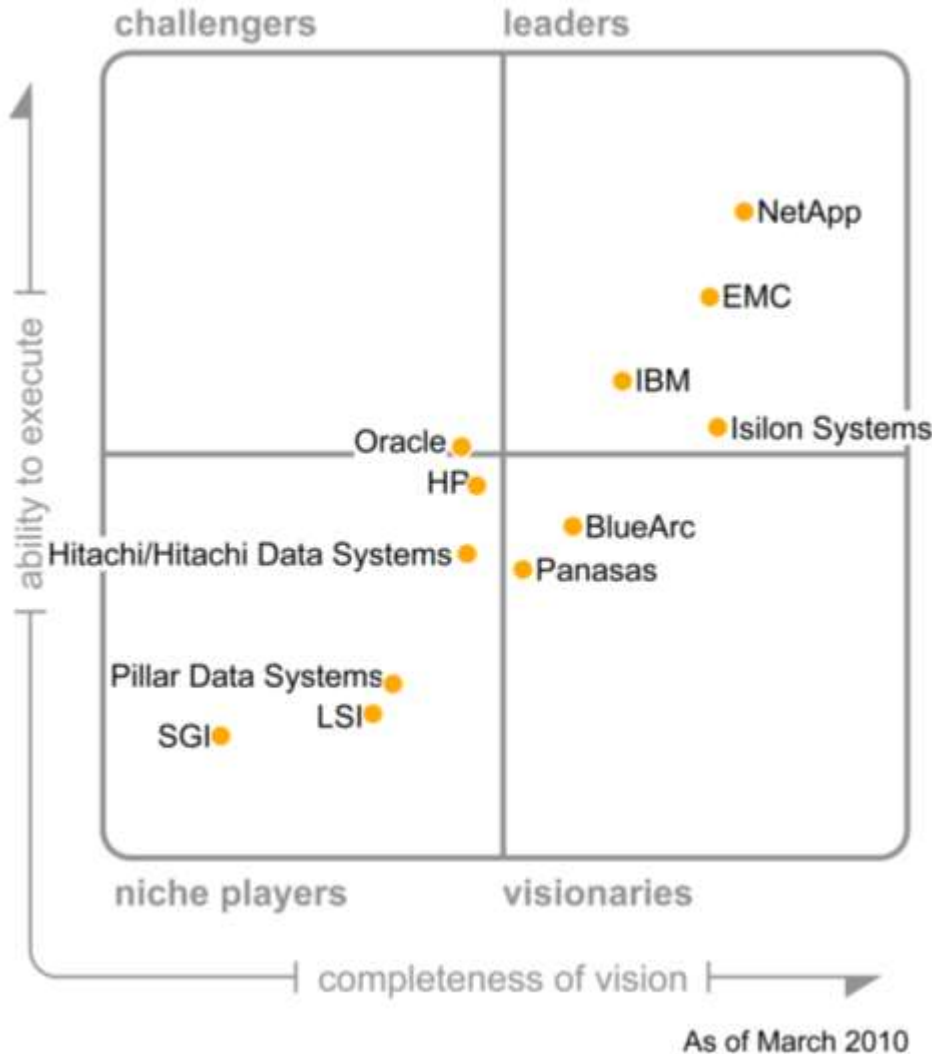
- #1 in “initial product quality”
- #1 in “product features”
- Highest percentage “would buy this product again”
- Top of the rankings for 2<sup>nd</sup> year

### Overall Rankings





# Gartner Magic Quadrant Midrange and High-End NAS Solutions



Source: Gartner, Inc. March 2010  
Pushan Rinnen, Robert E. Passmore,  
Roger W. Cox

## Magic Quadrant for Midrange and High-End NAS Solutions

This Magic Quadrant was published as part of a larger research note and should be evaluated in the context of the entire report. The report is available upon request from NetApp.

The Magic Quadrant is copyrighted March 15, 2010 by Gartner, Inc. and is reused with permission. The Magic Quadrant is a graphical representation of a marketplace at and for a specific time period. It depicts Gartner's analysis of how certain vendors measure against criteria for that marketplace, as defined by Gartner. Gartner does not endorse any vendor, product or service depicted in the Magic Quadrant, and does not advise technology users to select only those vendors placed in the "Leaders" quadrant. The Magic Quadrant is intended solely as a research tool, and is not meant to be a specific guide to action. Gartner disclaims all warranties, express or implied, with respect to this research, including any warranties of merchantability or fitness for a particular purpose.



# Addressing Your Challenges

Explosive Growth    Backup and Recovery    Virtualization  
SAN vs. NAS    iSCSI vs. FCOE    Performance  
Deduplication    Aggressive SLAs    Productivity  
Rapid Provisioning    Headcount    Scalability    Complexity  
Disaster Protection    Disk-to-Disk    App Performance  
Availability    Cost    Utilization    Efficiency

- Deliver new capabilities to applications and the business
- Increase infrastructure flexibility & efficiency
- Deploy new technologies with confidence





# Solutions and Partnerships to Accelerate IT

## Scalable Family of Networked Storage Systems



## Infrastructure Solutions for Virtualized Environments



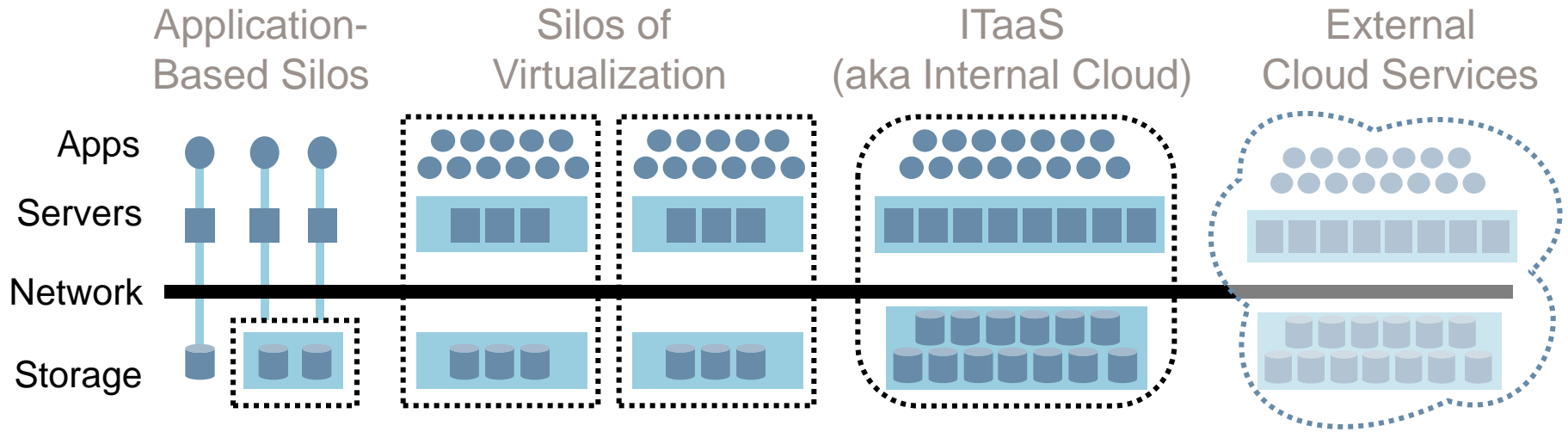
## Integrated Data Management Solutions

Database ♦ Messaging & Collaboration ♦ Engineering Applications

## Data Protection & Retention Solutions

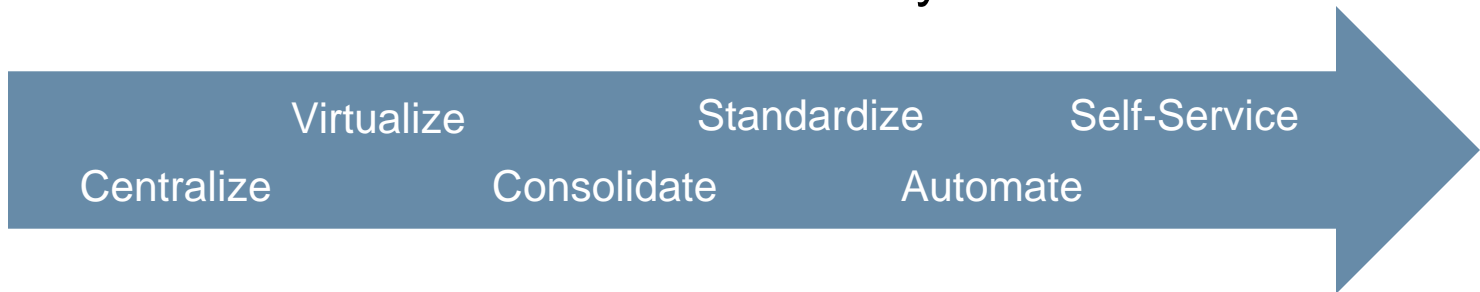
Backup ♦ Security ♦ DR ♦ Compliance ♦ Archive

# Data Center Evolution Toward IT as a Service



From Silos...

...to Virtualized Dynamic Data Centers



Work with your partner to map out your path when you are ready!

# A Foundation for Flexibility



## Unified architecture

- Broadest unified storage platform
- High-performance SAN and NAS
- Single, scalable architecture
- Support for multivendor storage

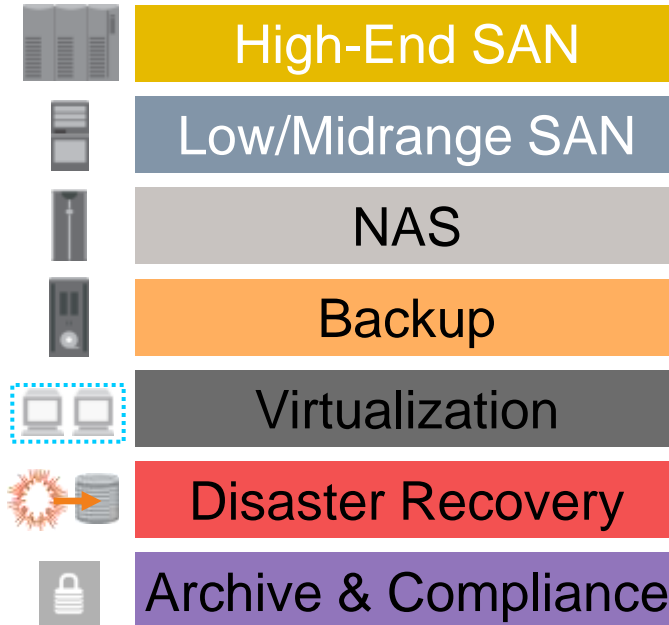
## Now you can

- Choose the optimal storage for your apps
- “Future proof” your environment
- Put new innovation to work quickly and broadly



# The Benefits of Unified Storage

## Industry Approach



Different hardware  
Different software  
Different people  
Different processes

## NetApp®

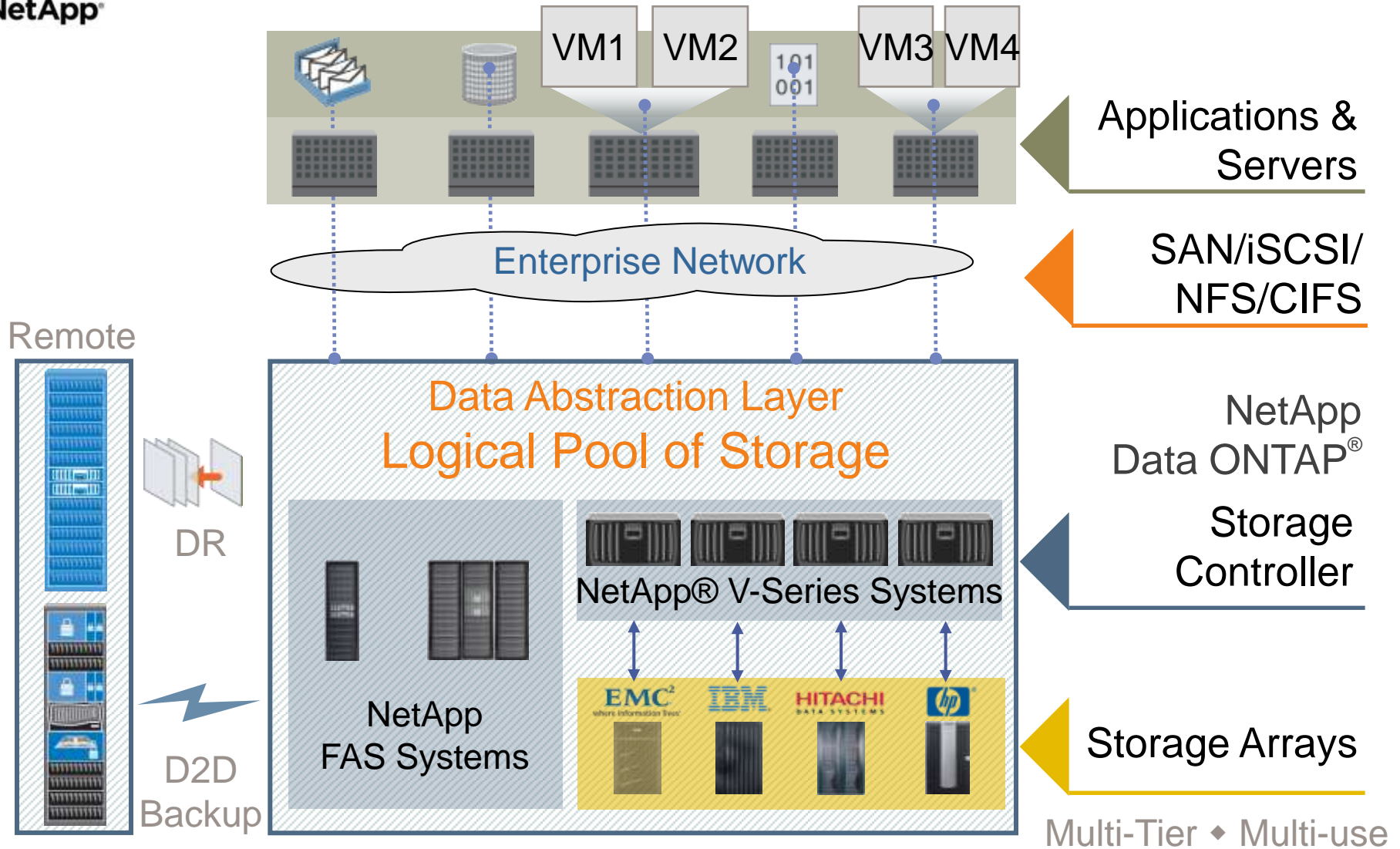


FAS family  
Data ONTAP®

Flexibility  
Efficiency  
Agility  
Value

Same hardware  
Same software  
Same people  
Same processes

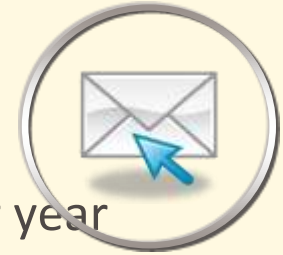
# Unified Storage at Work



# Today's Information Challenges

## Unstructured content is growing exponentially

- E-mail #1 driver of storage growth
- Structured and unstructured data still doubling year over year



## Application scaling and performance are critical

- Users send/receive ~20 MB per day
- Backup windows are shrinking



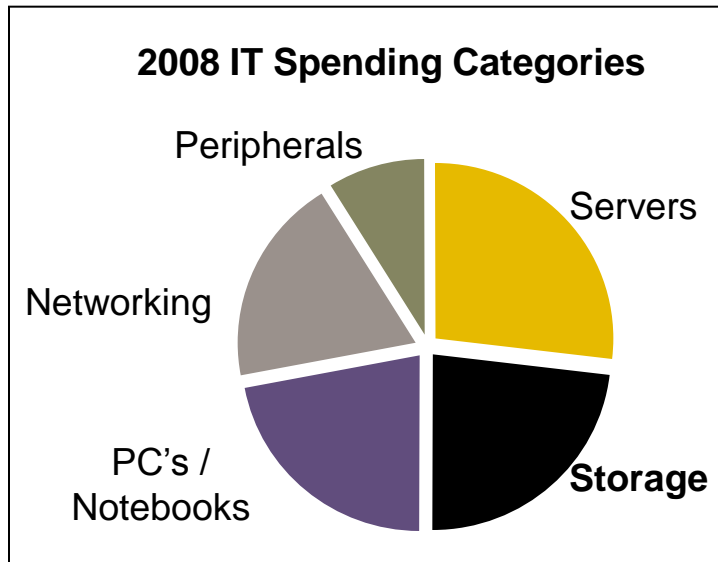
## Managing and finding information is difficult

- 90% of all corporate information created today is digital
- End users spend 60 minutes weekly managing e-mail
- Average organization faces 40 discoveries/year

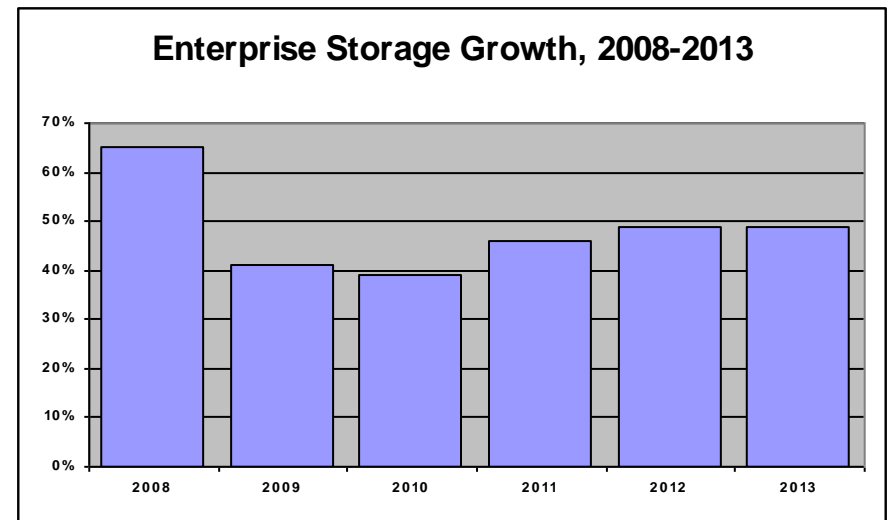


# Storage is Second Biggest IT Cost

- Data storage is the 2nd biggest cost category for enterprise data centers
- Storage is growing at 50% per year, but budgets are not...



Source: IDC Perspectives Study



Source: IDC Worldwide Enterprise Storage Systems 2008-2013 Forecast



# Store More, Buy Less Efficiency Is in the Software

## Benefits compound when using multiple features



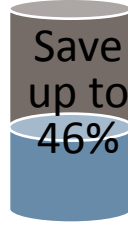
**Snapshot<sup>™</sup> Copies**  
Point-in-time copies that write only changed blocks. No performance penalty.



**Deduplication**  
Removes data redundancies in primary and secondary storage.



**Virtual Copies (FlexClone<sup>®</sup>)**  
Near-zero space, instant “virtual” copies. Only subsequent changes in cloned data set get stored.



**RAID 6 Protection (RAID-DP<sup>®</sup>)**  
Protects against double disk failure with no performance penalty.



**Thin Provisioning (FlexVol<sup>®</sup>)**  
Create flexible volumes that appear to be a certain size but are really a much smaller pool.



# Hardware Efficiencies: High-Density Disk Drives & Shelves

- **SATA** high-density/capacity drives deliver the lowest \$/GB and best power efficiency
- **RAID6 (DP)** elevates SATA to enterprise levels of reliability
- **Flash Cache (Performance Acceleration Module)** elevates SATA to enterprise FC levels of performance



+



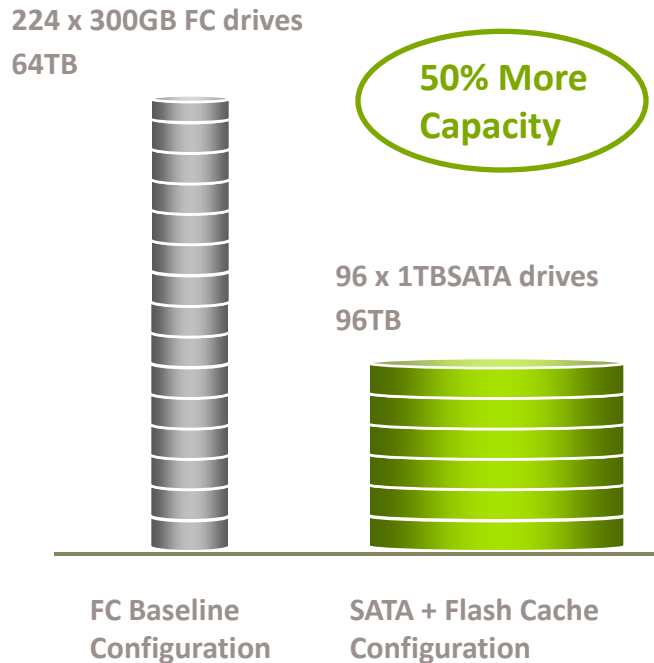
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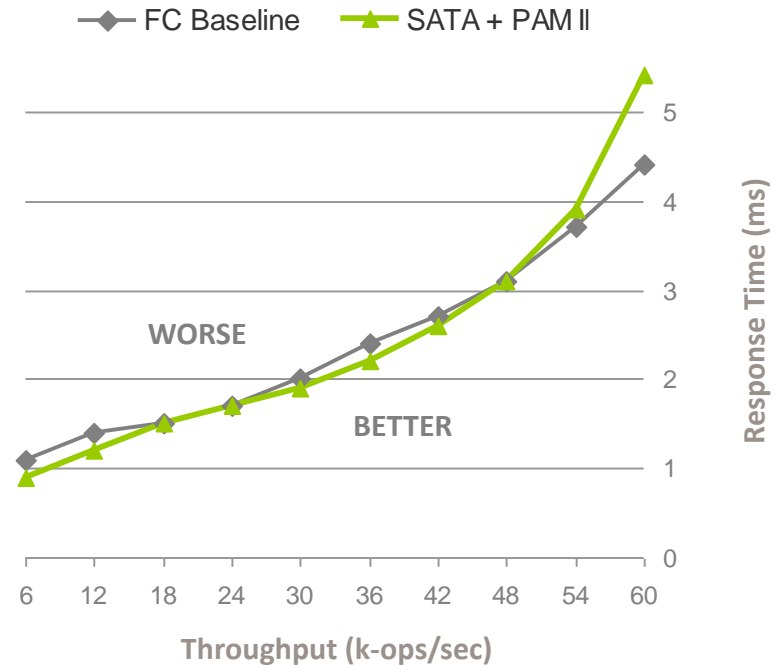
Lower cost, less power & more density with the highest levels of reliability and performance

# SATA and Flash Cache

## Benchmarked FAS3160A Configs



## SPECsfs2008 Performance

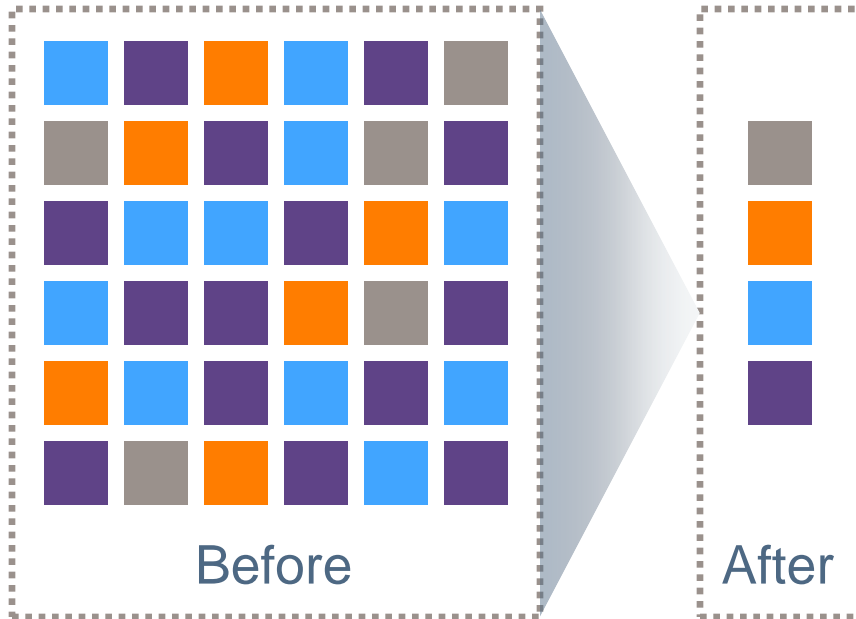


39% lower price, 50% more capacity,  
66% power savings & 59% space savings

For more information, visit <http://spec.org/sfs2008/results/sfs2008nfs.html>. SPEC® and SPECsfs2008® are trademarks of the Standard Performance Evaluation Corp.



# Deduplication



## Pervasive Deduplication

- 20:1 reduction in secondary
- 30-50% reduction in primary
- Capability, not a platform
- 70-95% reduction in Virtualised environments




# Calculate the Efficiency Savings


NetApp®  
22 Disks

Traditional Arrays  
61 Disks

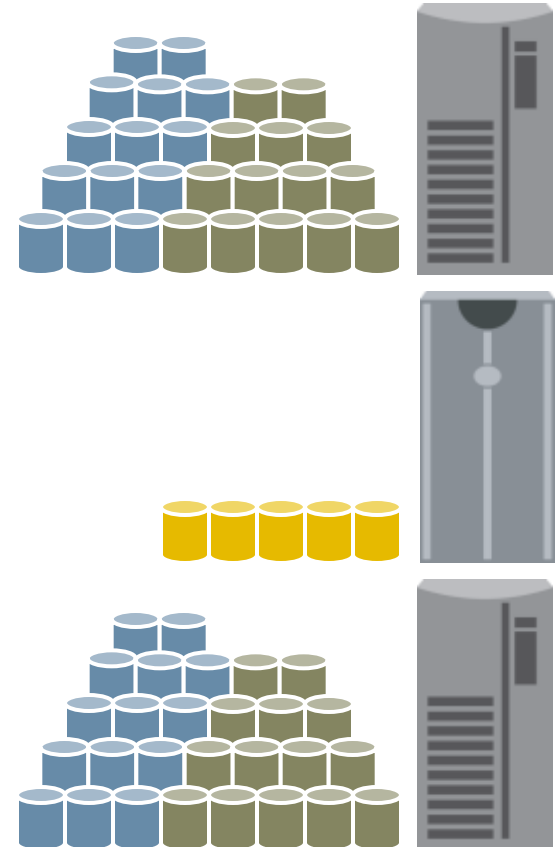
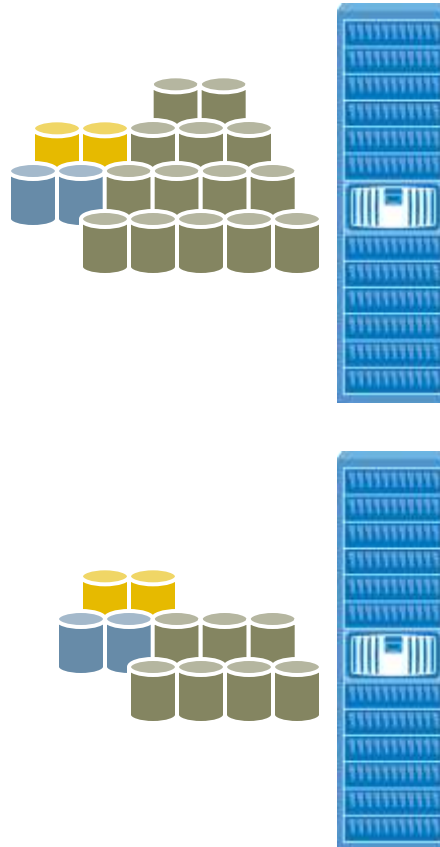
 Primary Storage

 Double Disk  
Data Protection

Deduplicate  
Primary Data

 Add VMware® Disk-  
Based Backup

Add VMware SRM



Storage Virtualization should drive cost reductions



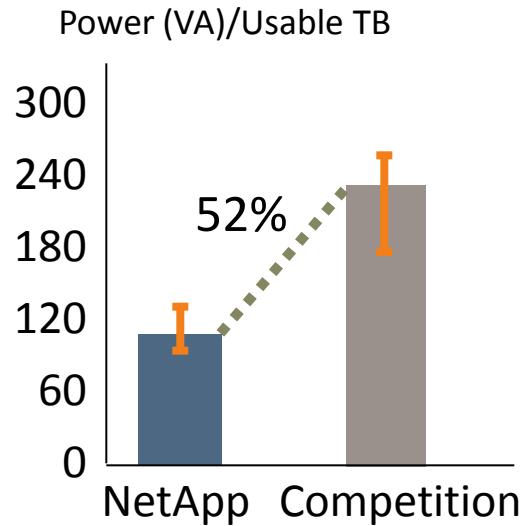
# Operational Efficiency: Slash Power, Cooling, and Space Costs

## Half the Space



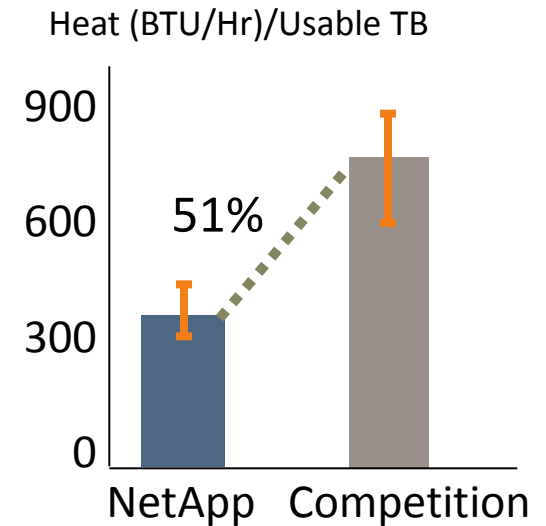
Total rack units (typical configuration) required for 10TB usable

## Half the Power



I Possible range based on environment-specific factors/typical environments.

## Half the Cooling Load



Source: Oliver Wyman Study: "Making Green IT a Reality." November 2007.  
Competitors: EMC Clariion and HP EVA.

# It All Adds Up to Savings



## Application Environments

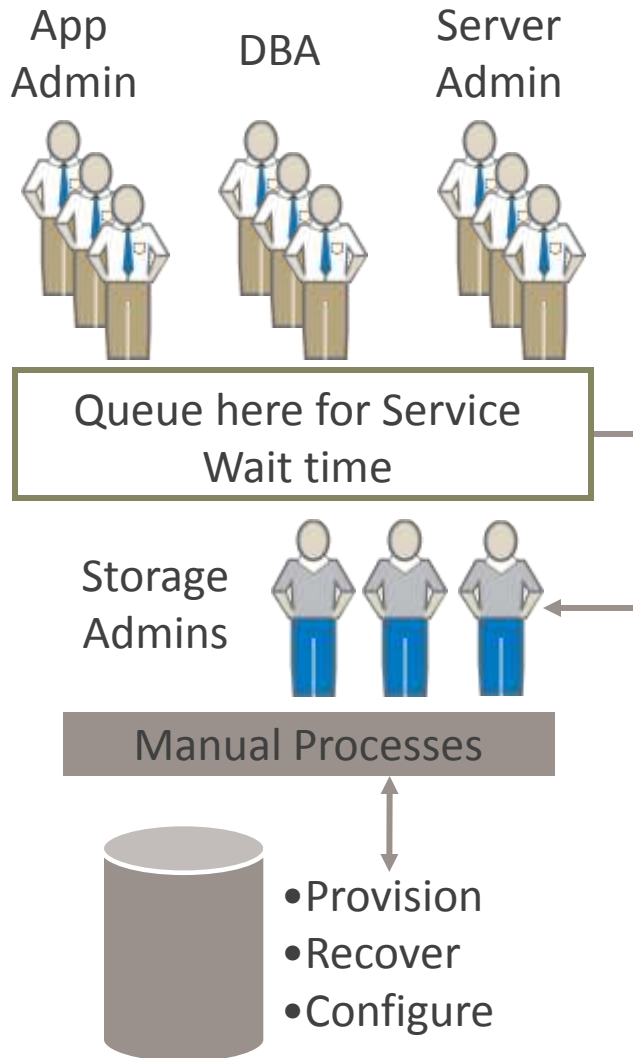
- 39% lower TCO for Oracle®
- 55% lower TCO for SAP®
- 30% lower TCO for Exchange
- 44% lower TCO for file services
- 35% lower TCO for archive
- 38% lower TCO for VMware®

## Operational Efficiency

- 50% less rack space
- 52% less power
- 51% lower heat

Source: Mercer and Oliver Wyman TCO studies, 2006-2008

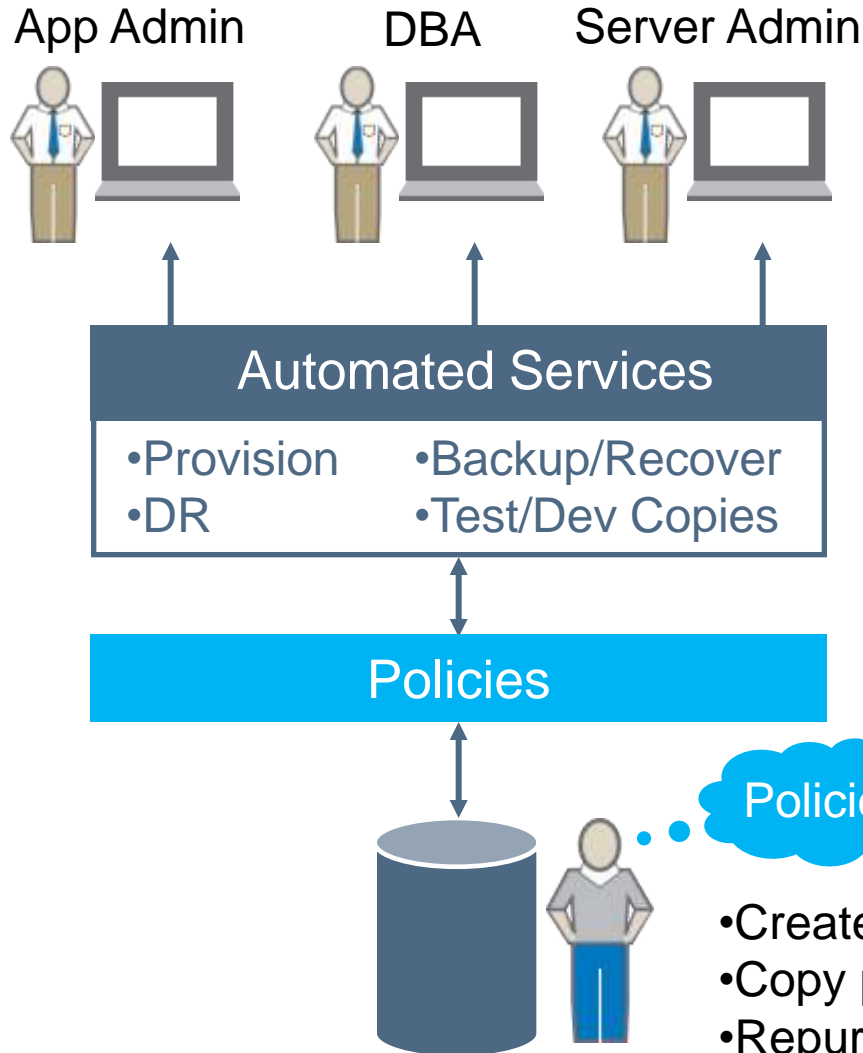
# The Data Management Challenge



Traditional approach impedes agility

- Bottleneck for everyday tasks
- Manual processes
- Everyone's frustrated

# Reduce Data Management



- Faster, better response to business needs
- More productive people

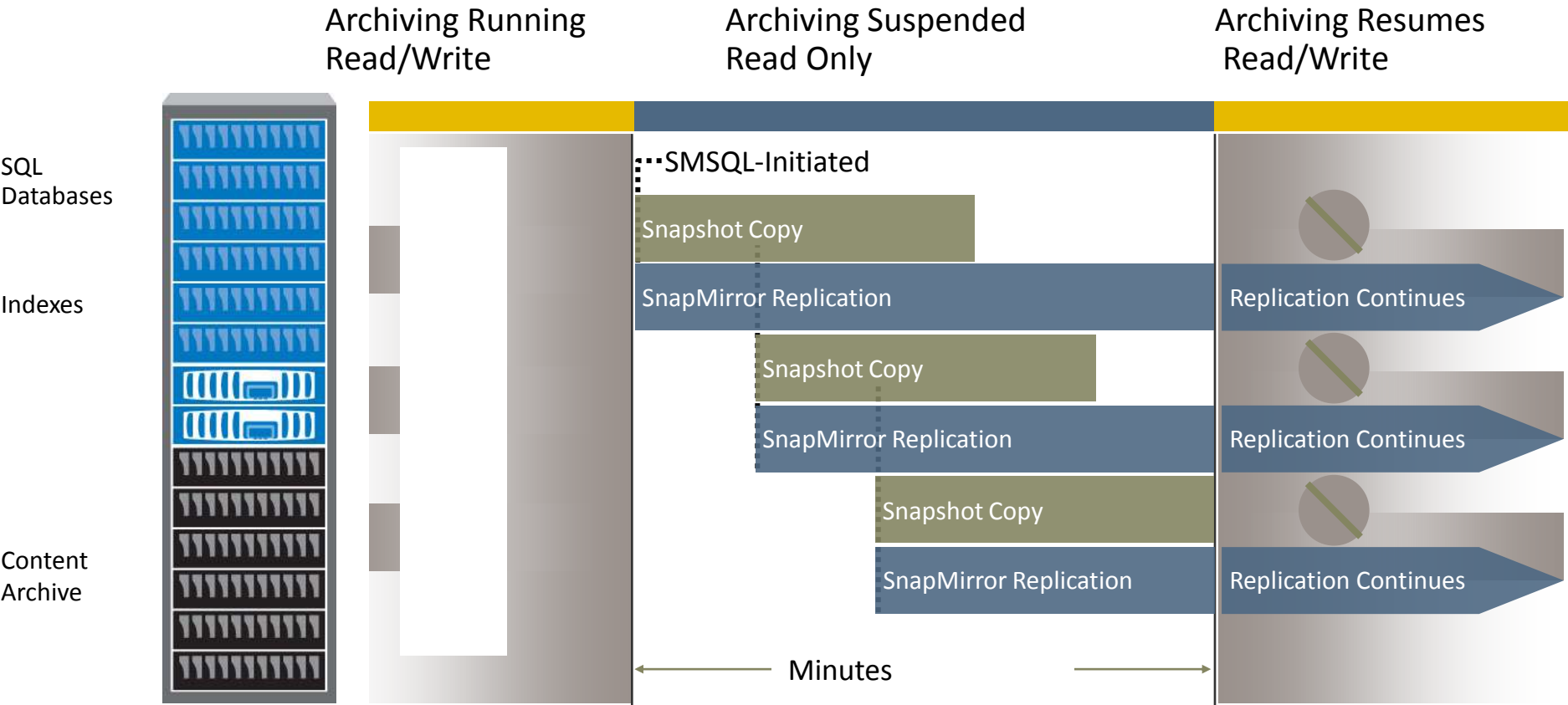
Enabling technologies

- Provisioning Manager
- Protection Manager



# Establish Advanced Data Protection:

## Cascading Snapshot™



NetApp Storage

- Benefits:**
- Automated and Synchronized
  - Improved Recoverability
  - Greater Application Availability

- **Challenge**

- Diverse and fragmented Exchange environment
- Minimize expense and inefficiencies of dealing with legal inquiries
- Minimize impact on end users

- **Solution**

- Consolidate over 100 exchange servers in to centralized data centers
- Implement automated, policy-driven e-mail with disaster recovery infrastructure

- ▶ **Benefits**

- **~US\$7 million savings** from improved e-mail administration from enterprise-wide deployment
- **Discovery time cut from 50-100 hours per request to 1-2 hours**
- **Reduced risk of losing valuable and pertinent e-mails for legal inquiries**
- **Average Recovery time reduced from 12hrs to 1.5rs**



# For more information see us at the Kiosk!

## Application Integration:



Business Apps  
& Database

Messaging  
& Collaboration

Technical Apps  
& File Services

## Infrastructure:



Consolidation & Virtualization

Data Protection and Retention

Flexibility and  
efficiency

◆ New  
capabilities ◆

Deploy with  
confidence

Go further, faster™



# Thank you!

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