

SIMPLIFYING VIRTUALIZATION



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THE IMPACT OF VIRTUALIZATION

Through 2012, virtualization will be the highest-impact trend in infrastructure and operation.

- Thomas Bittman, Gartner Data Center Conference: “Server Virtualization: Trends, Best Practices, and the Future”, November 2007



CONSOLIDATION WITH VIRTUALIZATION DELIVERS TANGIBLE BENEFITS

IN THE DATA CENTER



- 50 cents spent on power & cooling for every \$1 on servers¹
- Real estate costs \$1,000 per square foot; \$40,000 per rack¹
- Average server utilization <10%¹

WITH VIRTUALIZATION

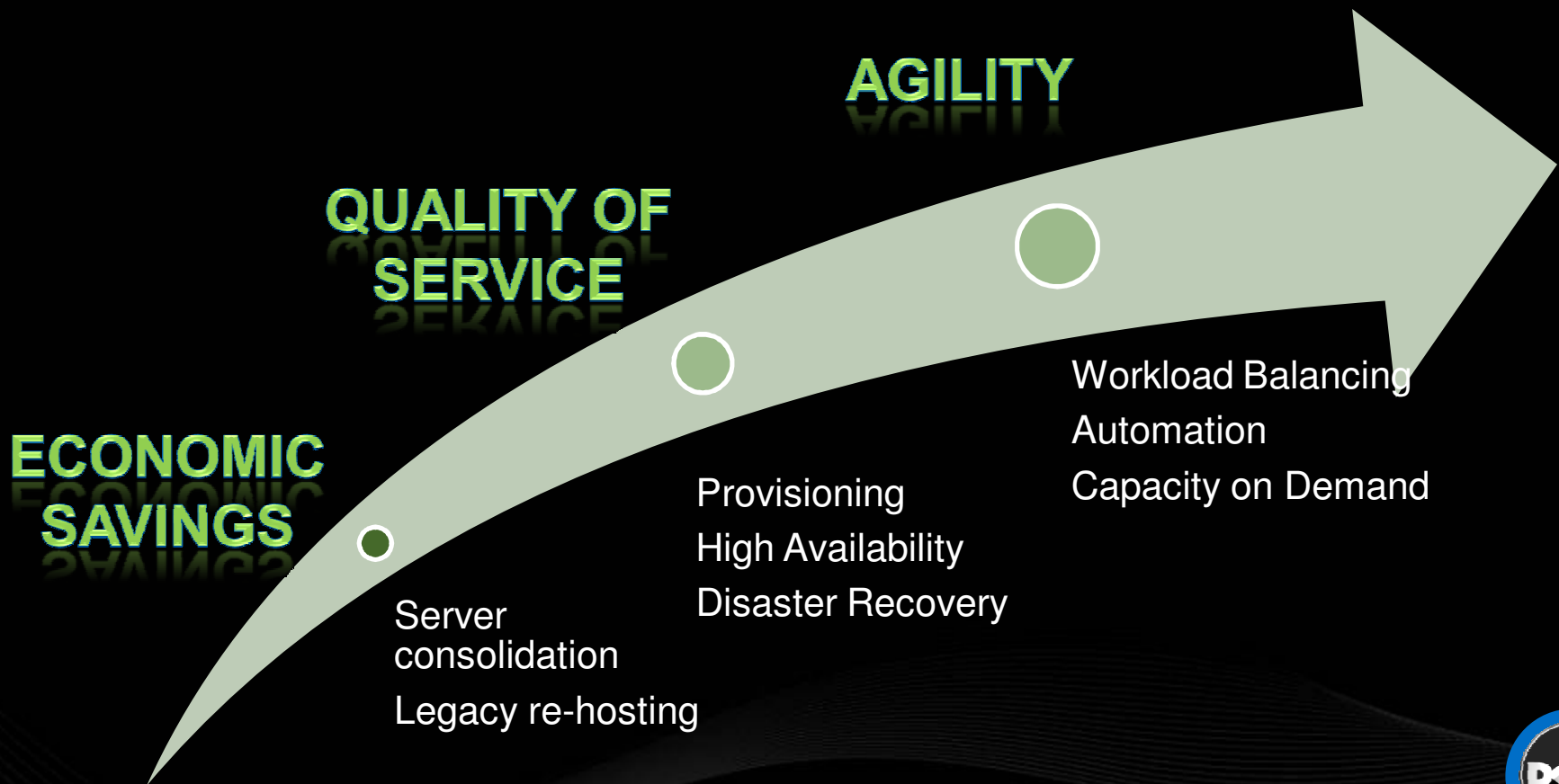
- Average number of virtual workloads consolidated on a single physical server is estimated at 10 in 2007 and 2008²
- Reduced overall hardware 22%¹
- Up to 23% annual cost savings¹

¹IDC, "Virtualization and Multicore Innovations Disrupt the Worldwide Server Market," Doc # 206035, March 2007

²Gartner, Dataquest Insight: Virtualization Impacts x86 Server Shipments, August 2007

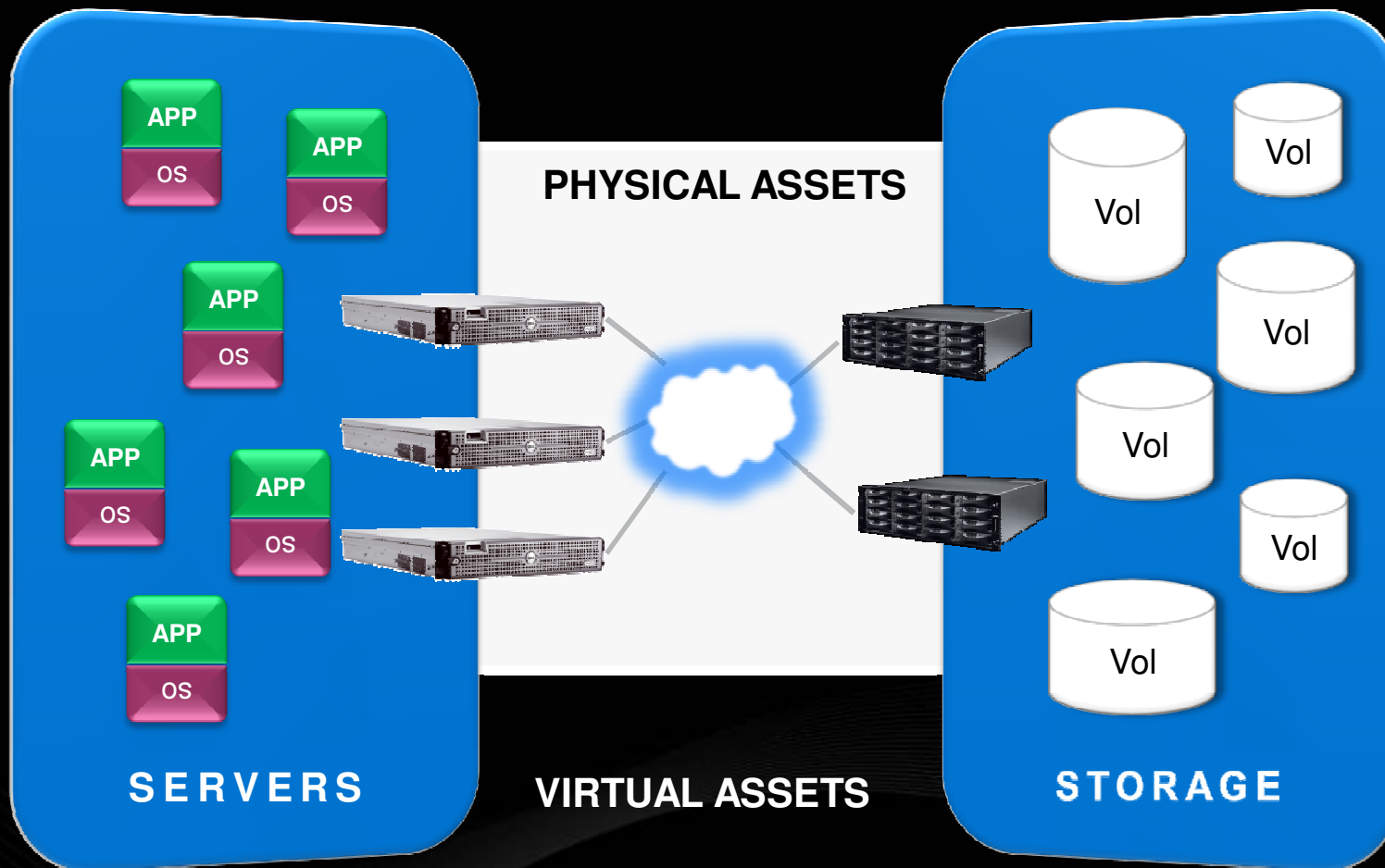


VIRTUALIZATION SIMPLIFIES IT BEYOND CONSOLIDATION



THE FUTURE IS VIRTUAL

DELL EQUALLOGIC VIRTUALIZED iSCSI SANs



SERVER VIRTUALIZATION

KEY FEATURES ARE ENABLED BY NETWORK STORAGE (SAN)

Movement of Workloads

- Migration of running virtual desktop without interruption

Balancing Workloads

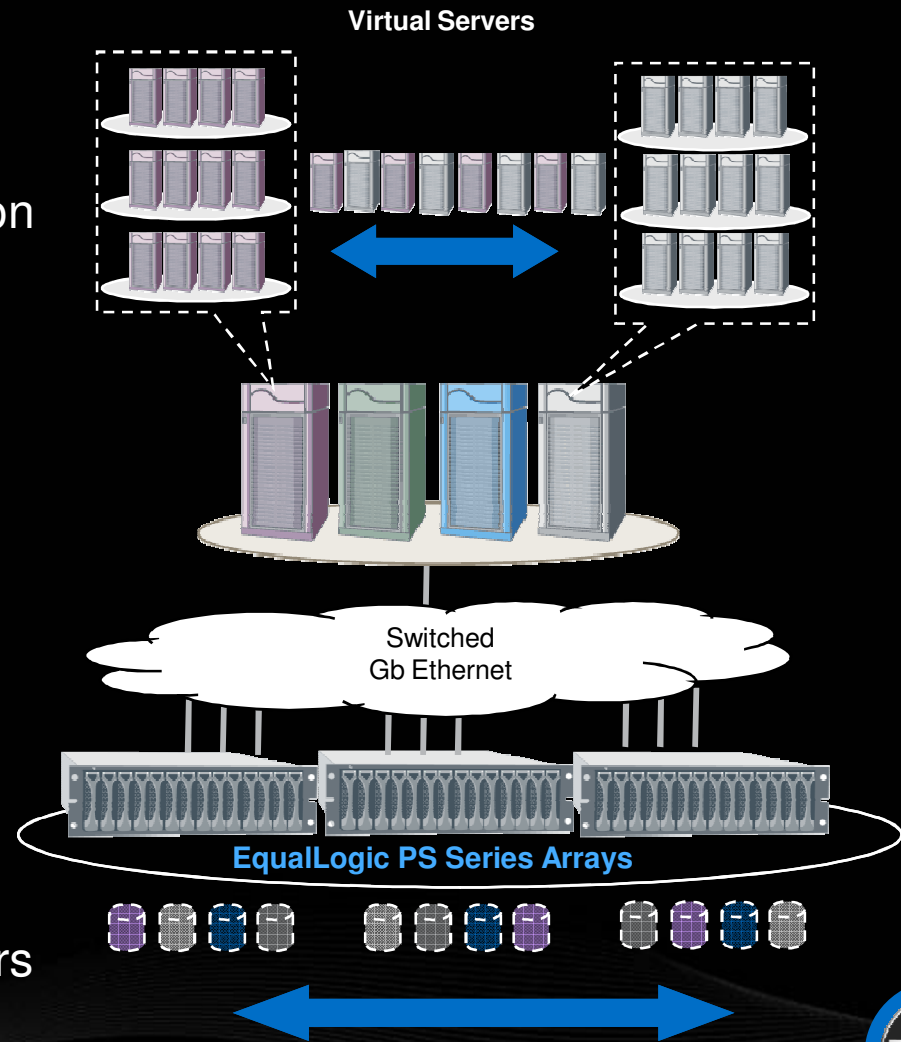
- Optimized resource usage given current workloads

High Availability

- Re-hosting and restart of virtual desktop in case of server failure

Server-less backup

- Independent of production servers



Case Study – Kane County

Fourth Largest County in Illinois, among fastest-growing in country

492,000 Residents, expects 50-75% increase by 2030

Server Sprawl

- 45 Departments, all with own file/print and discrete application servers on aging equipment

Mission Critical Systems

- 911
- Laptops in squad cars
- Resident data

Cost Control

- Power, HVAC and staffing costs rising due to increasing complexity



Case Study – Kane County

Phase I

- 2003 upgrade/refresh replaced Symmetrix with NetApp FC storage
- Added VMware ESX Server
 - Reduce server count - HVAC and power consumption
 - Enabled VDI

Phase II

- 2005 migration from NetApp to Equallogic
- Better performance, significantly better ROI
- No software licensing costs
 - Capital redirect of \$90k in NetApp licensing to new project
- Simplified IT operations



Case Study - The Results

Reduced physical server count from 84 to 6

- 26 virtual servers
- Simplified management
- Increased availability
- Enabled DR

>90% reduction in power and cooling requirements for the county

Moved hundreds of desktops to VDI

- Reduce costs, simplify operations, “greener”, increased security

Deploys a new virtual server in <10 minutes, a new desktop “in seconds”

Shaved \$1M off the IT budget

“VMWare and EqualLogic make it possible for any organization - not just large corporations with deep pockets – to implement a high-availability, disaster-proof infrastructure”.
– David Siles, CIO, Kane County



DELL SIMPLIFIES IT

THANK YOU

www.dell.com/Virtualization

www.dell.com/PSseries