

IBM Systems and Technology Group

IT Simplification: The Case for Virtualization Solutions.

Nigel Dessau
Vice President, Virtualization Solutions

Barbara Korte
Global Virtualization Solutions Executive



IBM Virtualization Solutions

ON DEMAND BUSINESS™

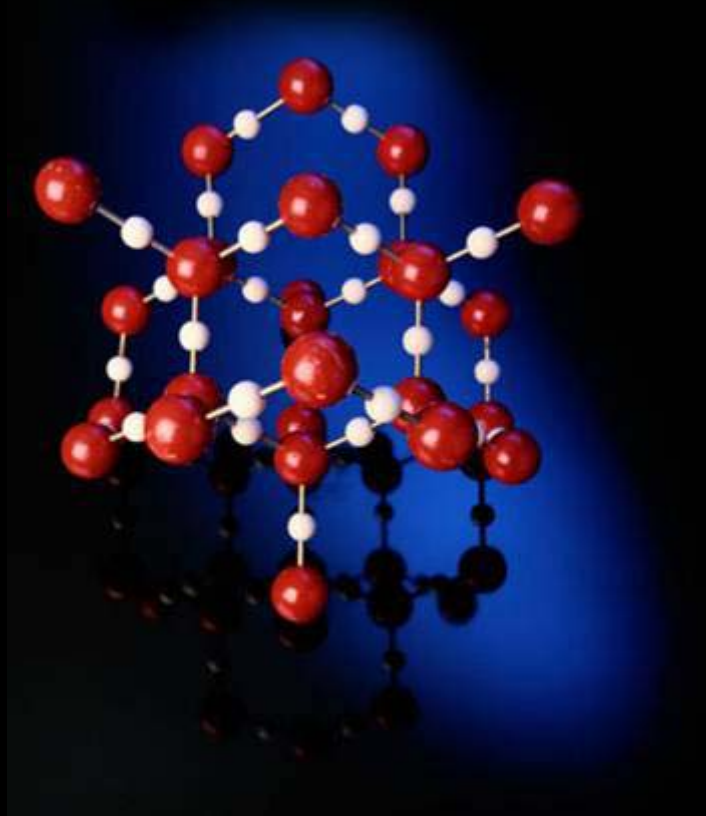
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Agenda

- The need for simplification and role for virtualization
- Stages of virtualization
- How to get started
- Next Steps for virtualization

On Demand Business

An on demand business is an enterprise whose **business processes — integrated end-to-end** across the company and with key partners, suppliers and customers — can **respond with speed** to any customer demand, market opportunity or external threat.



Insights about On Demand Businesses

- 1** The need for flexibility and innovation forces increased **componentization** of the overall business and its processes
- 2** Applications evolve on a parallel path— becoming increasingly **modular**
- 3** **Simplification** of the underlying IT infrastructure is required to support the changes in the business

Why IT optimization is important?

Fuel growth by managing costs:

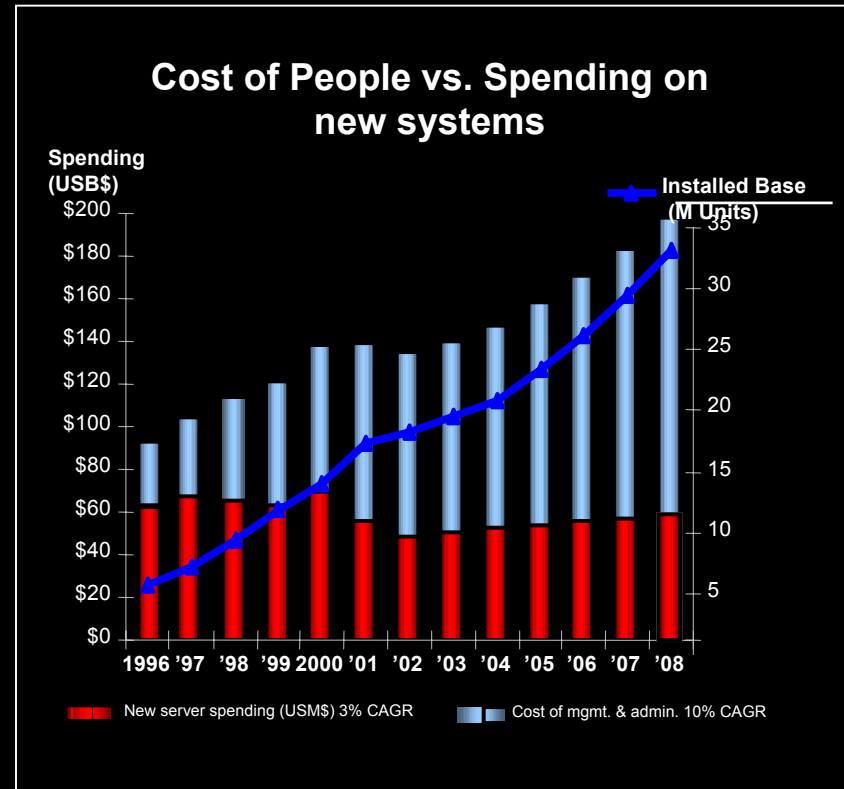
- 80% of CEO's view growth as a key focus area
- Operational costs far exceed the budgets for new hardware at approximately 2 ½ times the compound annual growth rate*

Complexity is growing:

- Existing computing capacity is highly underutilized
- Gartner predicts that enterprises that don't leverage virtualization technologies will spend as much as 25 percent more for their x86 servers

Business Flexibility:

- Agility has been made a high priority across the organization ... only 13% of the CEOs rate their organization's ability to respond to changing business conditions as very responsive **



Optimize IT assets now to fuel growth, improve ROI, increase staff productivity and improve quality of service.

*IDC, 2004 **CEO Study of 456 WW CEOs IBM Corporation, 2-04; Graphic: IDC Directions 4-7-04 Customer Adoption of On-Demand Enterprises.

Optimizing IT Through Infrastructure Management

Infrastructure Management

Sense and respond to changes, manage and optimize for the needs of the business through **Automation** and **Virtualization** of your IT environment



Virtualization

- Delivering **IT Simplification** through enterprise-wide fabrics, Grids and the virtualization of internal and external resources

Automation

- Increase flexibility and help reduce costs by automating your IT best practices and extend across process disciplines and resources

Virtualization can be a critical first step to Infrastructure Management

“Our infrastructure grew organically over the years without a master plan – things got bolted on – and now we are stuck where we are”

CIO from a Fortune 1000 company for IBM Marketing Research*

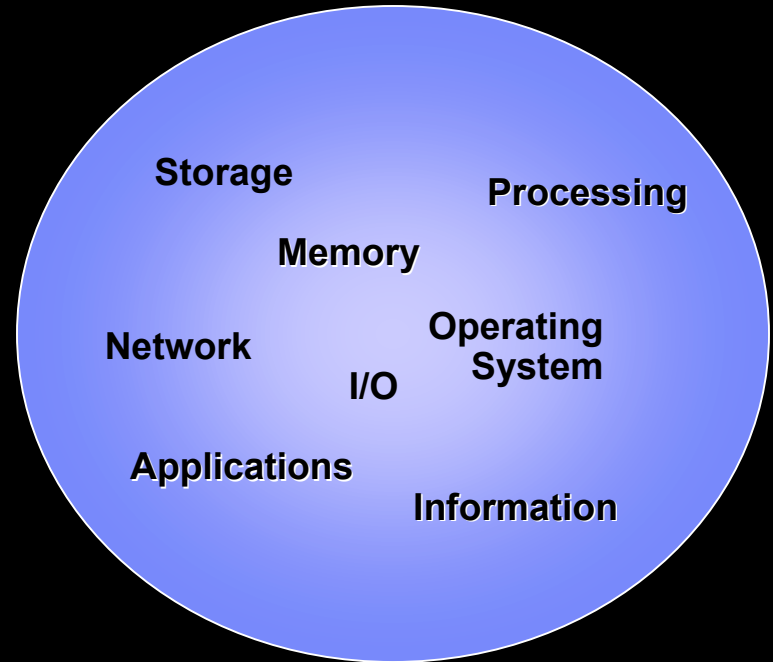
- Help lower the cost of their existing infrastructure
- Reduce the complexity of adding to that infrastructure
- Build heterogeneous infrastructure across multiple Data Centers that are more responsive to their business needs

* IBM Corporate Marketing Messaging Focus Groups in May 2004. No customers identified by name

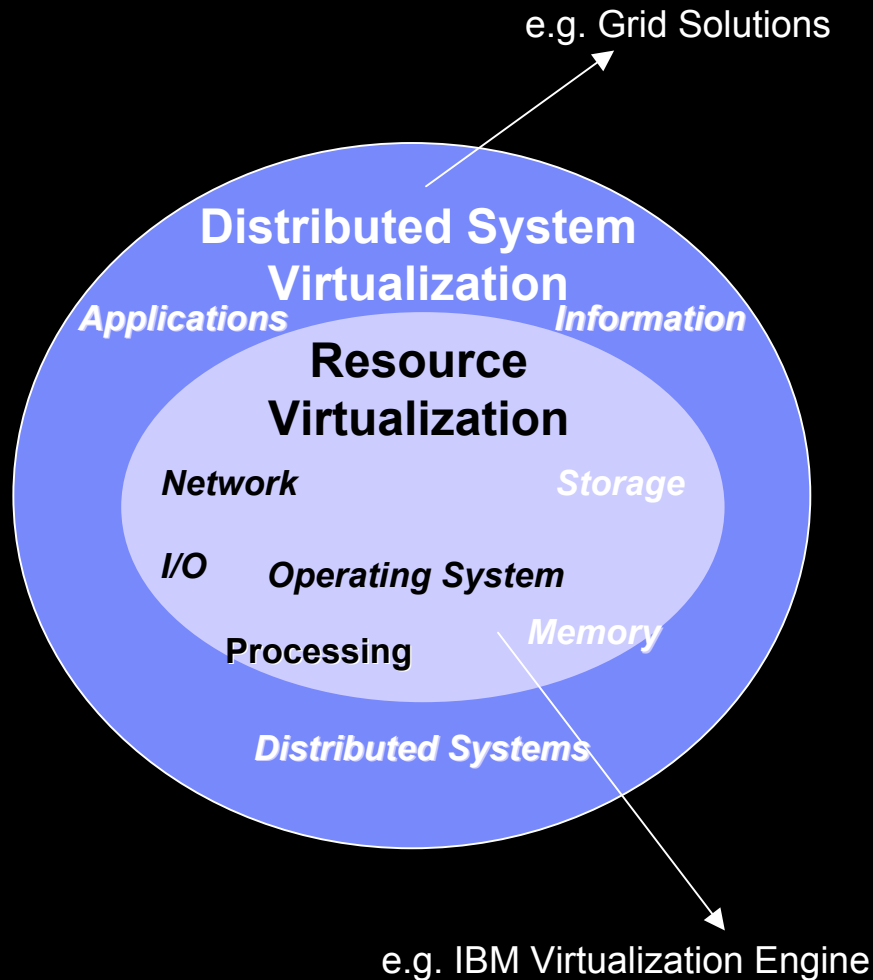
Virtualization

“Virtualization is the process of presenting computing resources in ways that users and applications can easily get value out of them, rather than presenting them in a way dictated by their implementation, geographic location, or physical packaging. In other words, it **provides a logical rather than physical view of data, computing power, storage capacity, and other resources.**”

Jonathan Eunice, Illuminata Inc.



Why Virtualization?



Customer Requirements

- Help lower the cost of their existing infrastructure by reducing operation and systems management cost while maintaining needed capacity.
- Reduce the complexity of adding to that infrastructure
- Gather information and collaboration across the organization to increase both the utilization of information and its effective use
- Deliver on SLA response times during spikes in production and test scenarios.
- Build heterogeneous infrastructure across the whole organization that are more responsive to the organization's needs

Our design principles

- **Building on our mainframe innovation**
- **Viewed from a holistic, system level perspective**
- **Learning from the world of open standards**
- **Extending leadership in Industry Standard environments**
- **Delivering the fastest time to value**

Value of Virtualization

Resource Sharing can help Increase Flexibility, Improve Service Levels And Reduce Costs

Business Unit Executive

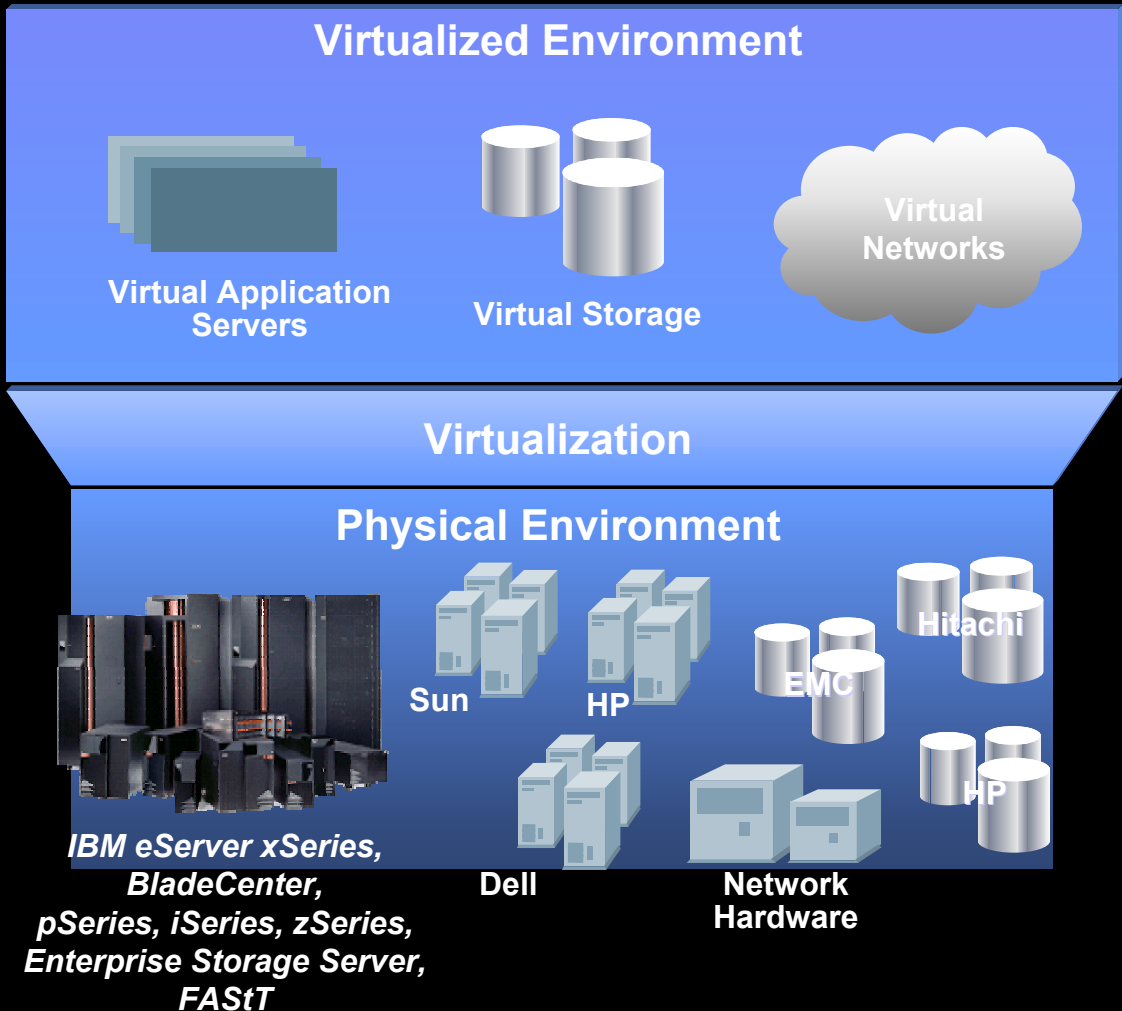
Virtualization can help improve cost and speed

Systems Administrator

More easily provision, manage and configure systems

Data Center Operations

Make changes transparent to users



IBM Virtualization Solutions

Agenda

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- Getting Started
- Next Steps for virtualization

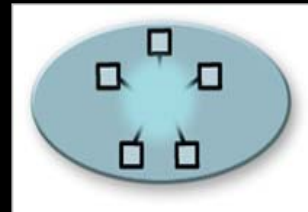
Virtualization Solutions - Stages

Orchestrate Infrastructure: Sense and respond to changes based on business policies



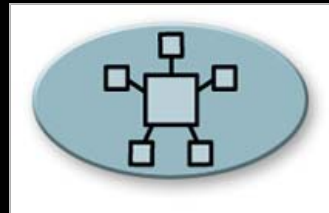
Virtualize Outside The Enterprise: Suppliers, partners, customers and external resources
(e.g. Public Grids)

Secure Cross Enterprises: Enable internal and external integration and resources.

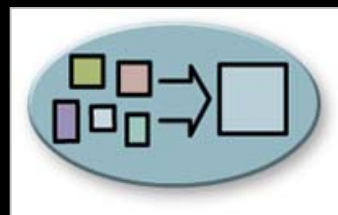


Virtualize The Enterprise: Enterprise wide Grids and Global Fabrics
(e.g. IBM eServer zSeries, Grid Enterprise Optimization)

Automate Workflows: Tasks like change/ configuration, ITIL processes



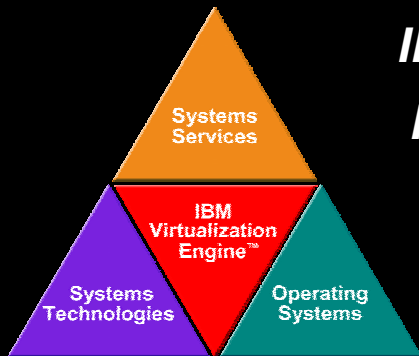
Virtualize Unlike Resources: Heterogeneous systems, application based Grids and networks
(e.g. IBM Virtualization Engine Enterprise Edition; Grid Focus: Business Analytics, Engineering and Design, R&D, Government Development)



Virtualize Like Resources: Homogenous systems, storage and networks (e.g. IBM Virtualization Engine Systems Edition)

Updated IT Governance and Management Processes

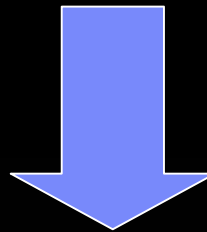
IBM Virtualization Engine™ Offerings



IBM Virtualization Engine Suite for Servers

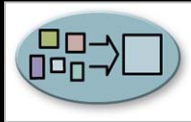
IBM Virtualization Engine Suite for Storage

IBM Virtualization Engine Systems Technologies



IBM Virtualization Solutions





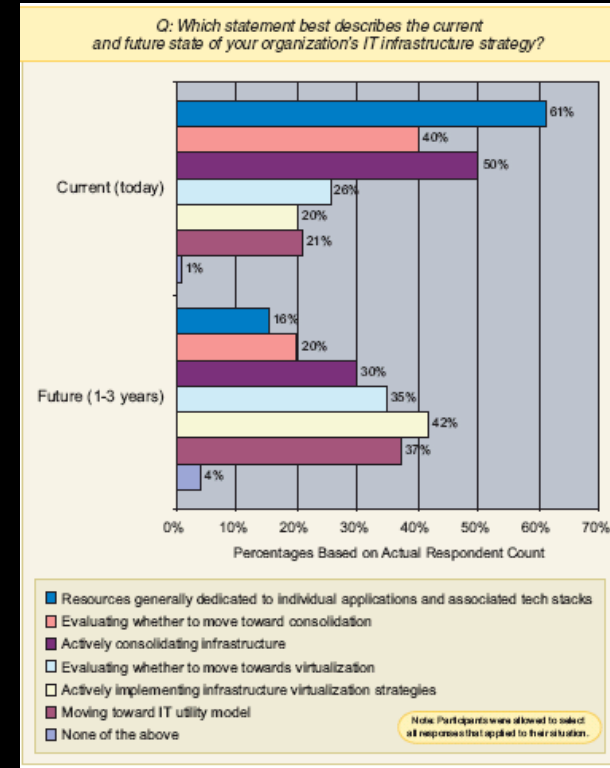
I) Virtualize Like Resources

Action: reduce the number and complexity of existing pools of similar resources

Typical Solutions: Storage and Server simplification

Potential Benefits:

- Increase availability
- Reduce costs and increase utilization of assets
- Make infrastructure changes that are not disruptive
- Administrators are more productive
- Strengthen resiliency of the environment



Source: Summit Strategies, "Survey Shows Enterprise Customers Planning Three Year Journey Towards Dynamic Computing," November 2004

IBM Virtualization Engine™ Offerings

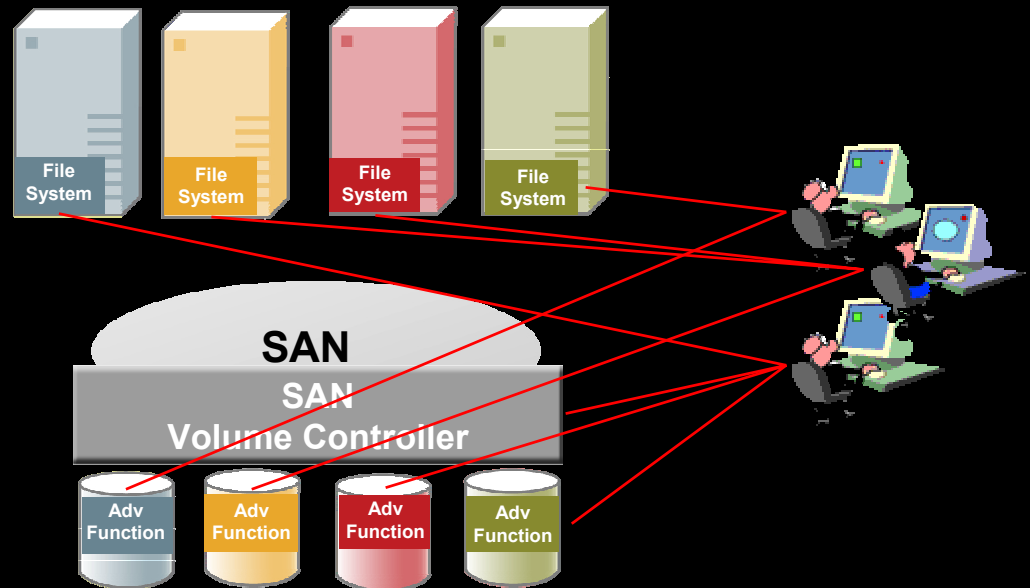
IBM Virtualization Engine Suite for Storage

Liberate yourself from traditional storage and disk management

Volume, Storage Management Issues

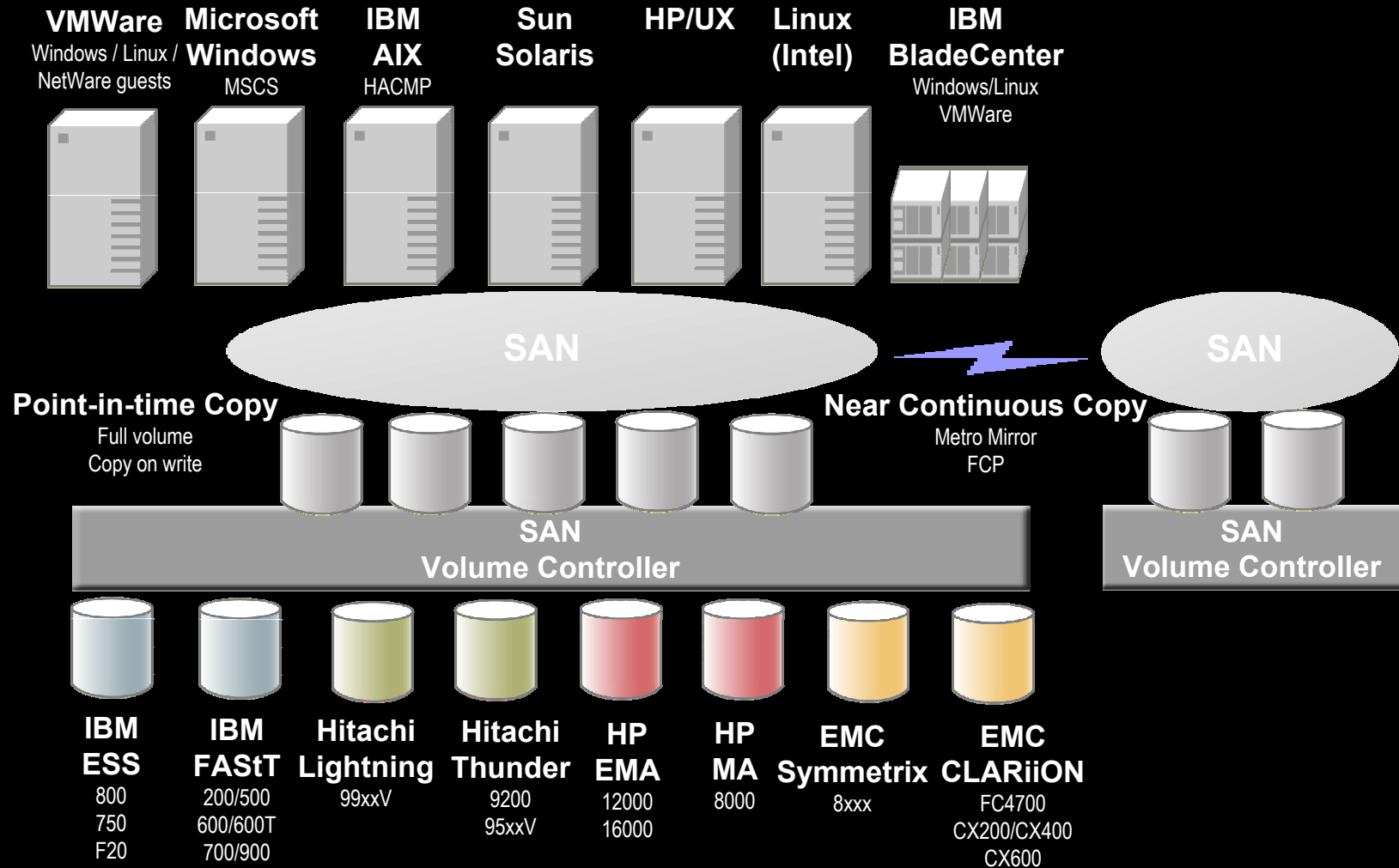
- Server to storage logical connections are static
- Server Downtime required to manage LUNs, migrate volumes
- Copy services are unique to each device
- Difficult to pool volumes

Addresses
volume
management
issues



TotalStorage SAN Volume Controller Supported Environments

Intended as an overview only.
For the most complete information,
visit ibm.com/storage/software



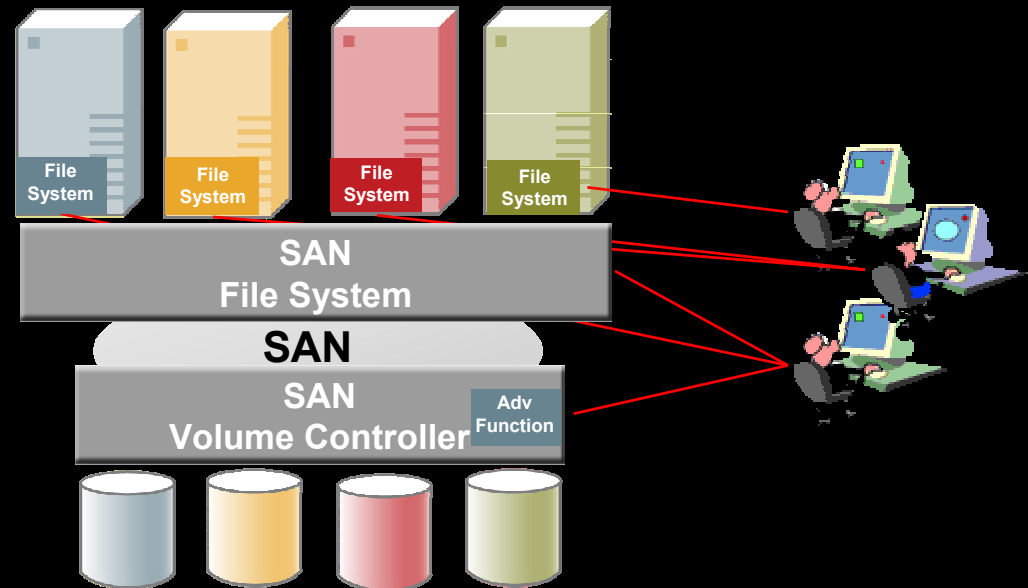
IBM Virtualization Engine™ Offerings

IBM Virtualization Engine Suite for Storage

Liberate yourself from traditional storage and disk management

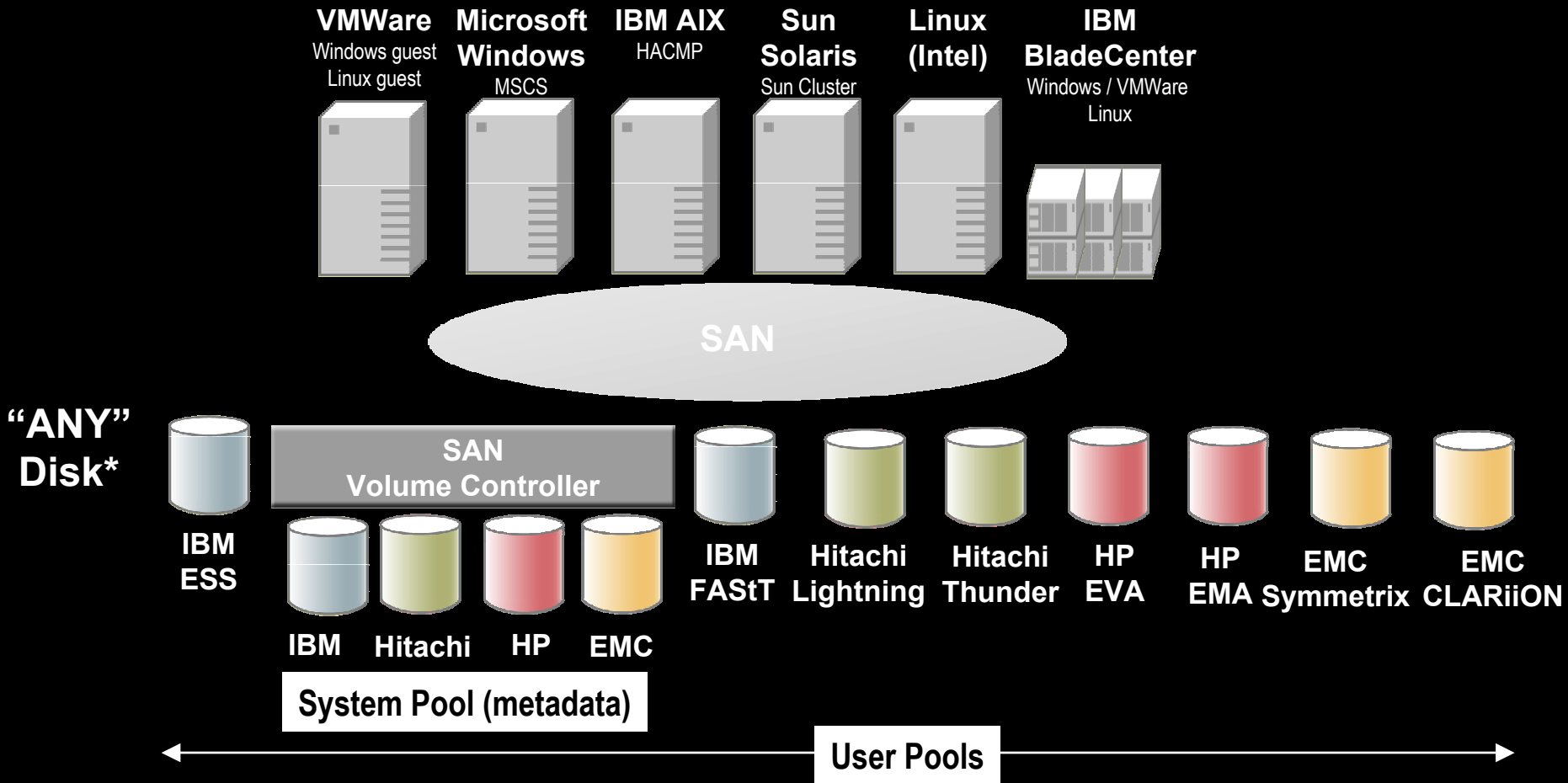
- File, Data Management Issues
- File tasks must be done on each server
 - Difficult to migrate applications to other servers
 - Application Downtime required for FS changes
 - No single view/access to files or data
 - Cannot pool files based on Quality of Service

Addresses file and data management issues

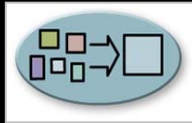


TotalStorage SAN File System Supported Environments

Intended as an overview only.
For the most complete information, visit ibm.com/storage/software



* One IBM SAN Volume Controller, FASTt or ESS required for metadata information



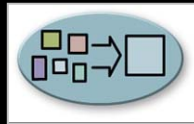
Liberating your storage

almost half of customers surveyed plan to deploy or actively evaluate [...] storage virtualization [...] over the next 12 months (Summit Strategies, November 2004)

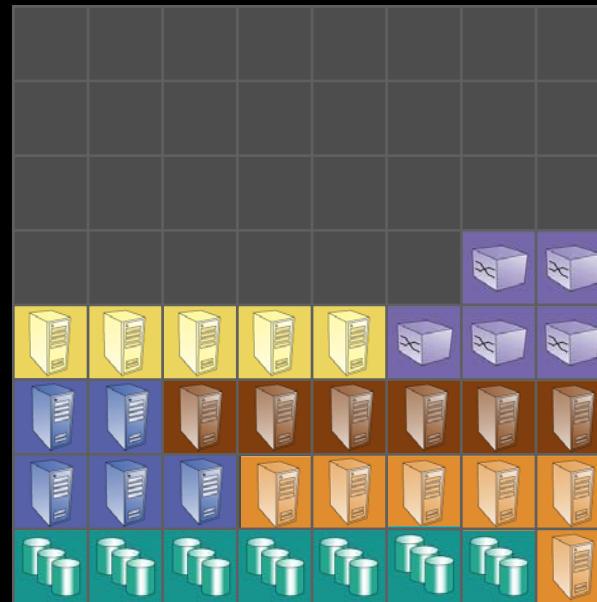
- **IBM TotalStorage SAN Volume Controller**
- **Also with SAN Volume Controller for CISCO MDS 9000**
 - Improve the flexibility of the disk storage infrastructure







- **IBM TotalStorage SAN File System**
 - Improve the flexibility of the file management infrastructure

- **IBM TotalStorage Productivity Center**
 - Automate the capacity management of file and database resources and the management of heterogeneous storage networks, and disk systems



Simplification is a journey



-  **Storage**
-  **Linux Server**
-  **Unix Server**
-  **Management Server**
-  **Windows Server**
-  **Networking**

Today

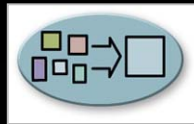
- 1 workload per server
- Disparate mgmt tools
- Manual provisioning



Systems Simplification

- Fewer servers and licenses
- Disparate mgmt tools
- Labor-intensive provisioning

Server Simplification



IBM Virtualization Solutions



■ IBM Virtualization Engine – for Systems

➤ Ability to consolidate multiple similar types of servers, even running different OS's, on larger, partitioned types

■ zSeries

- Dynamic Ipar, Virtual I/O, Intelligent Resource Director (IRD), zSeries Application Assist Processor (zAAP), Parallel Sysplex Clustering, Hipersockets, VLANs

■ xSeries & BladeCenter

- Integrated shared infrastructure for Blades, IBM Director, VMWare, clustering

■ pSeries

- Clustering, NIM, Micro-partitioning, Dynamic Ipar, Virtual Ethernet, Virtual I/O

■ iSeries

- Clustering, Dynamic Ipar, Virtual Ethernet, Virtual I/O, IBM Director Multiplatform

Infrastructure management: Capacity on Demand

Capacity on Demand

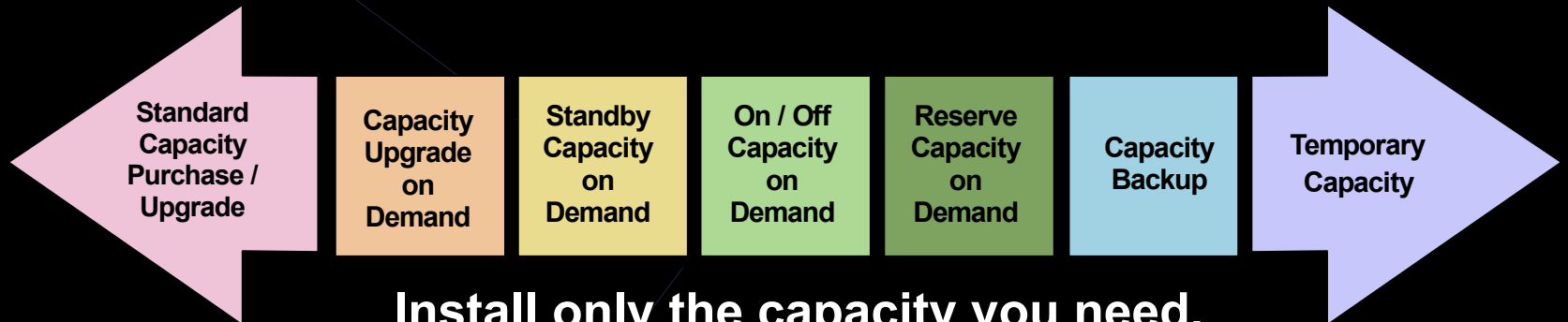
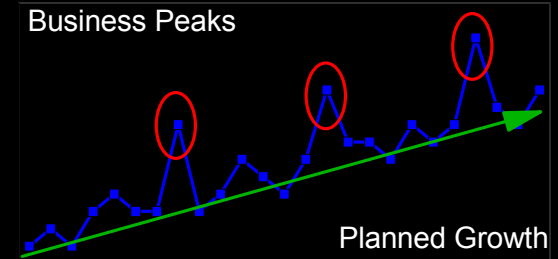
Optimize Systems and Storage investments :

Permanent Capacity on Demand:

- Non-disruptive, immediate upgrades when needed

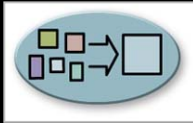
On/Off and Reserve Capacity on Demand:

- Instant, temporary capacity for periodic peak loads

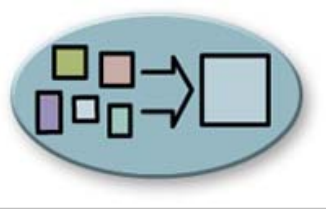


**Install only the capacity you need,
precisely when your business needs it**

Source: e-business on demand attributes and capabilities study, IBM 2003



Simplification Examples



Virtualize Like Resources



Storage Administrator
Productivity improved
30%



Increased workload
throughput by
reducing provisioning
time to 5 mins



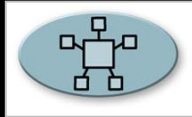
Application Availability
improved from 97% to
99.999%



Cut response times by
50% through
consolidation and
utilization



Lowered costs by
recovering 50% of
underutilized storage



II) Virtualize Unlike Resources

Action: managing dissimilar resources

Typical Solutions: Use of IBM Virtualization Engine

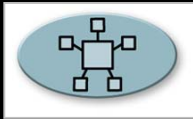
Potential Benefits:

- Reduce complexity
- Increase flexibility
- Cut costs
- Improve utilization rates
- Speed time to business value

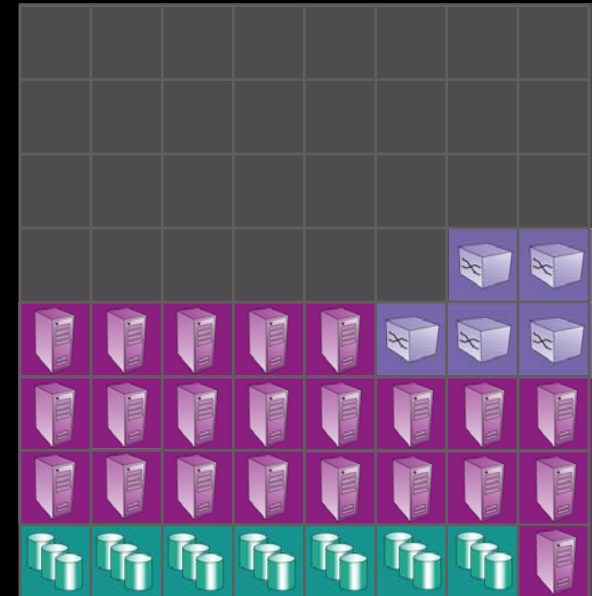
...we view virtualization as consisting of the following:
The automated consolidation and pooling of IT resources in a way that allows them to be managed as a **single, virtual pool (or several pools) of server, storage, and networking capacity** that can be dynamically allocated according to changing demand and business needs.

– John Madden

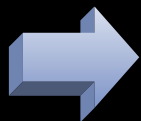
Summit Strategies, "Is Data-Center Virtualization a Virtual Certainty?" April 2003



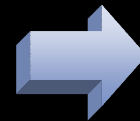
Server Simplification is a journey (continued)



Systems Simplification

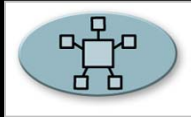


- Fewer servers and licenses
- Disparate mgmt tools
- Labor-intensive provisioning



Heterogeneous

- Systems managed as one
- Flexible and Shared
- Multiple OS's per server
- Enterprise workload mgmt
- Rapid provisioning



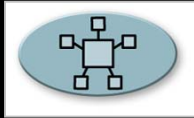
IBM Virtualization Engine™ Offerings

IBM Virtualization Engine V1 – for Enterprise

- Currently sold as IBM Virtualization Engine Suite for Servers
- Providing a common interface and management environment
- Including Tivoli Provisioning Manager

- Automated Resource Management based on business goals
 - **Enterprise Workload Manager**
- Converging IBM Out-of-the-box basic management of systems
 - **Director Multiplatform**
- Dynamically deploying and optimizing IT resources real-time
 - **Tivoli Provisioning Manager** with eServer workflows
- Building a solid open standards based approach to connectivity
 - **IBM Grid Toolbox**
- A “Dashboard” for your systems
 - **VE Console**

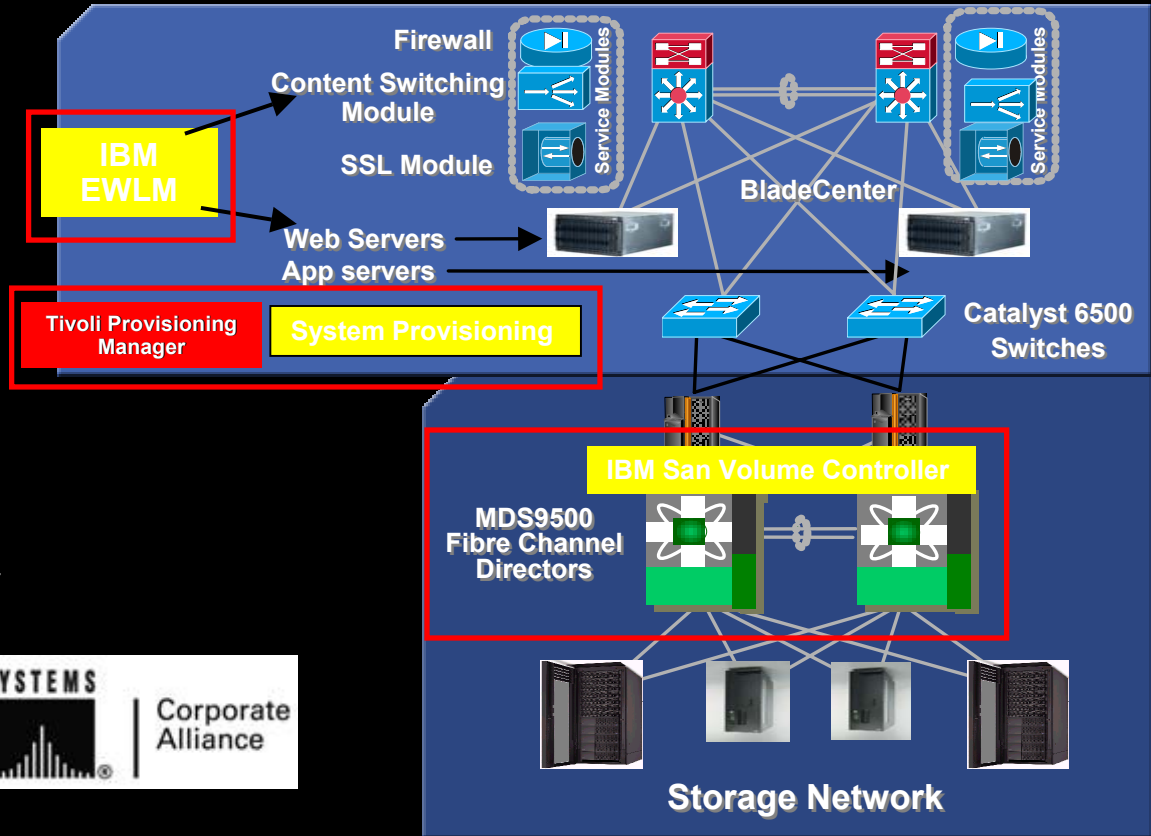
Tivoli software



Network Virtualization Example

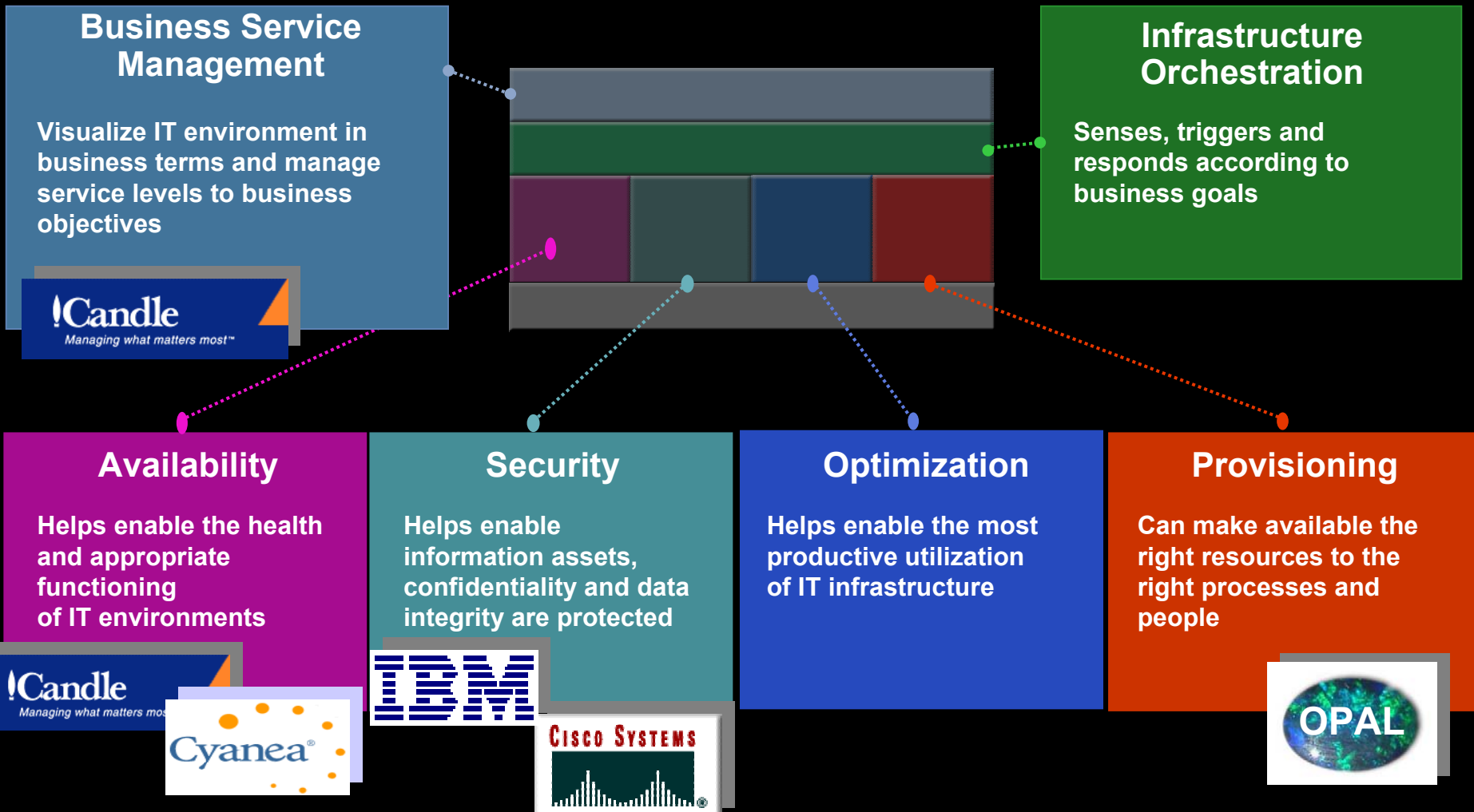
IBM and Cisco's Business Ready Data Center

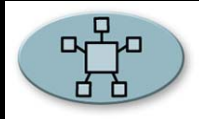
- EWLM communication with Cisco Content Switching Module
- Coordinated provisioning of Systems and Network resources via inclusion of networking workflows
- Cisco MDS9000 support for IBM SAN Volume Controller



Enabling End-to-End Infrastructure Virtualization

Automation Blueprint - Continuing To Deliver Value





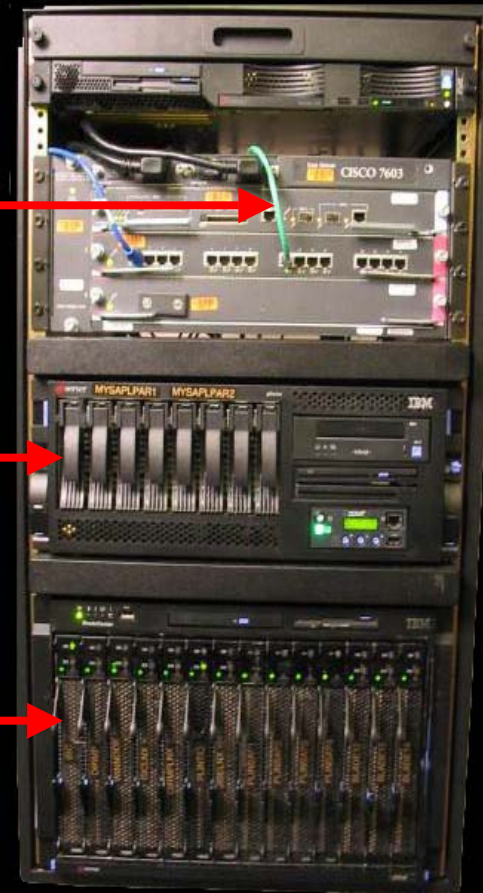
Action: Manage dissimilar resources

Real solutions from IBM ...

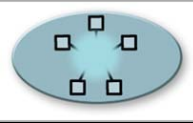
Cisco Switches

Rack-mounted
IBM eServer p5 systems

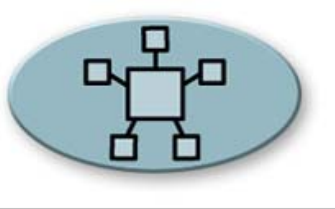
BladeCenter with AIX,
Linux, Microsoft Windows



DEMO



Simplification Examples



Virtualize Unlike Resources



Savings from floor space, network bandwidth and cost of management

e-commerce

Server maintenance and recovery from 20 to 4 minutes



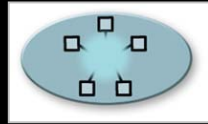
Server re-provisioning enables enough flexibility for x70 normal web traffic

PHILIPS

- 3 times the computing power

- 100% increase in the number of jobs Philips Research can run because of higher hardware performance

- 50% lower total cost of ownership



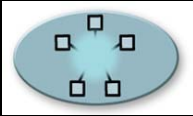
III) Virtualize The Enterprise

Action: application or platform
enterprise-wide virtualization fabric

Typical Solutions: Typically zSeries
or Grid based environments

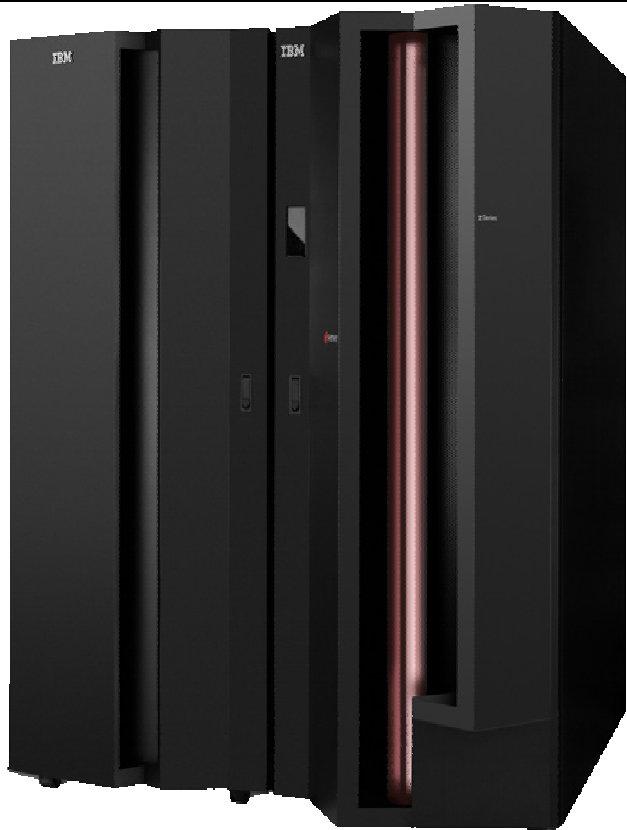
Potential Benefits:

- Enterprise-level business resiliency with business process and component recovery governed by business objectives
- Business-process SLA management with integration to provide industry-leading problem determination, provisioning, etc...
- Integrated business process management which exploits your business logic and data into a business rules based Service Oriented Architectures.



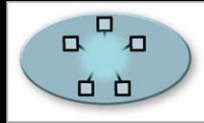
Action: application or platform enterprise-wide virtualization fabric

IBM eServer zSeries



Grid Solutions





Simplification Examples



Virtualize The Enterprise

Hewitt

- Cut the cost of complex pension calculations by 90%
- Eliminating the need to reserve 25% of mainframe for very small percentage of calculations
- Grid showed throughput of -0.2 seconds slower to 10% to 15% (shorter to longer transactions)

swisscom
IT services

- Create and deploy virtual servers in minutes
- Eliminating the time associated with physical server implementation
- Code sharing between virtual servers minimizes IT spending



IV) Virtualize Outside The Enterprise

Action: exploitation of both owned and virtual resources

Typical Solutions: IBM Supercomputing Capacity on Demand centers, UMI solutions from IGS

Potential Benefits:

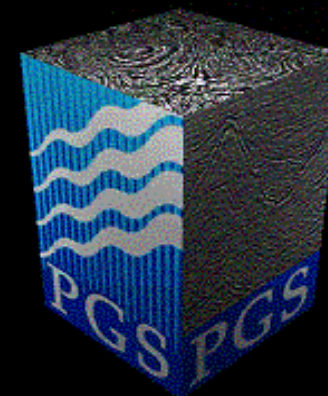
- Ability to add non-owned resources seamlessly
- Costs scale with requirement
- Integrated with a support of existing SLA and business priorities



Simplification status examples



Virtualize Outside The Enterprise



Agenda

- The need for simplification and role for virtualization
- Stages of virtualization
- Getting Started
- Next Steps for virtualization

Why Should You Care?

Because:

- Taking your customers through the Virtualization Solutions journey **creates many opportunities to sell servers, software and services.**
- IBM is the company that can tell the virtualization story **comprehensively** and makes the **technologies available today** - they are either embedded in the products or integrated in the VE suites.
- With **over 40 years of track record** in building virtualization capabilities and our continued commitment to enhance our solutions, several analysts, such as DH Brown, Summit Strategies and The451, considers us **ahead of the competitors.**

How to support your VE activities

If your customer...	Then you should...	Support/Offering
Is asking about virtualization or is positioned well for virtualization	Hold an executive briefing	Meeting in a Box Your geo sales team
Has had a briefing and wants to know more	Conduct a one-two day whiteboarding session to determine where to start with VE	Systems Architects
Has committed to, or is considering, a pilot or POC	Get your customer technical hands-on familiarity with VE Suite for Servers	Start Your Engines
Has a specific business problem they want to ensure a VE component can solve	Help them plan a Proof of Concept	Systems Architects Design Center
Wants to start a pilot	Get services involved to help implement	Installation & Configuration Services
Wants to develop a virtualization strategy	Get a combination of Systems Architects & Services involved to plan with the customer	VE 2 Day Assessment VE Architecture Assessment
Wants to include VE in their On Demand Operating Environment	Sell a services engagement to develop their architecture	VE Consulting Assessment 12 Steps to Strategic Virtualization

Engage the project office to help you!

Know What Everyone Else Will be Expected To Do in 2005

- **eSMs:**
Inspire the customers with the Virtualization solutions story – position it to meet your customer’s IT Optimization needs.
- **Each Server Series Team:**
Drive sales of the Systems Edition of the Virtualization solutions as it applies to your series.
- **Geo Sales Leaders:**
Provide sales support, including executive briefings on the Virtualization Solutions.
Assist in selling the Enterprise Edition of the Virtualization solutions.
- **Project Office:**
Assist in very complex deals; provide pricing; FOAK; identify required resources.

The Scope of Your Sales Support

Programs / Contacts	Scope of Activities	Contact for More Info
Geo Sales Leaders	Executive briefing; sales support	AG: Judy Kelly/Southfield EMEA: Philippe Bricard/France AP: Yoshihiko Itoh/Japan
Project Office	FOAK; Pricing; Assistance in very complex deals; Identify required resources	VSPO@us.ibm.com
SYE (Start Your Engine)	Provides technical customers with hands-on-experience with the various VE components in preparation for a pilot	Tess Baruffaldi/Thornwood
Briefing Centers	Provides technical support for PoC, complex solutions design, demos, technical briefings etc.	Michael Kuhn/Somers

Resources to help you sell

Start Your Engines Workshop:
Preparing your customer for a pilot or proof of concept

http://w3-1.ibm.com/sales/systems/portal/_s.155/254?navID=f220s240&geoID=All&prodID=IBMeServerAndTotalStorageProducts&docID=etedvesye

Next Steps:
Helping account teams and customers develop a Virtualization roadmap

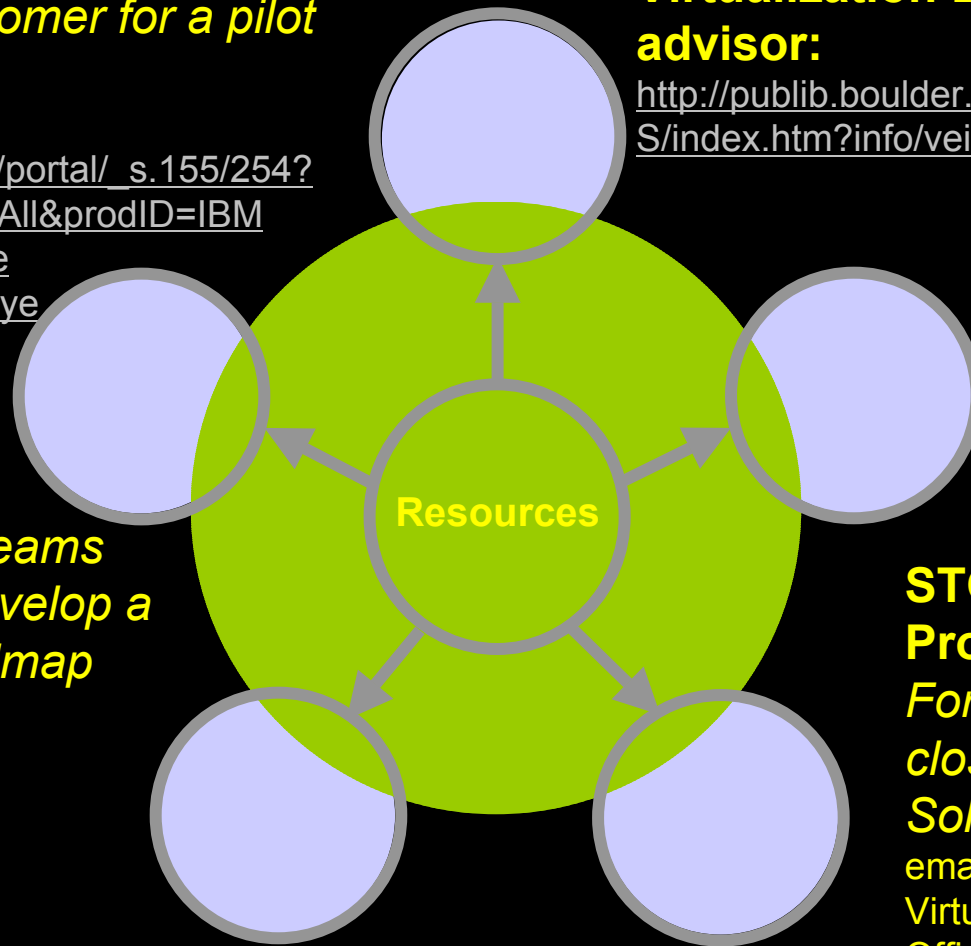
[Barbara Korte \(bkorte@us.ibm.com\)](mailto:bkorte@us.ibm.com)

References:

<http://w3.ncs.ibm.com/crmd.nsf/on+demand?openform>

Virtualization Engine planning advisor:

http://publib.boulder.ibm.com/eserver/v1r1/en_US/index.htm?info/veinfo/planner.htm



STG Worldwide Project Office:
For any assistance to close a Virtualization Solution Sale:

email VSPO@us.ibm.com or Virtualization Solutions Project Office/Poughkeepsie/IBM

Technical Support Makes It Easy to Buy, Install & Maintain Solutions



Traditional Geo Technical Sales Support

Dedicated Technical Sales Team

Technical Architects and Specialists

Regional IT Specialists/Architects

Client, eServer, Storage, Software, & Solutions Expertise and Technical Skill for Face-to-Face Sales Oppys

Techline / Competeline

Remote solution design; sizings; configs; quick proposals; pricing; competitive support

Advanced Technical Support (ATS)

Complex solution design; critical situation support; benchmarks; proofs of concept; skills transfer

WW Centers

Single Point of Access on Systems Sales Portal

Presales / Marketing Centers

- Briefing Centers
- Competency Centers

Proof of Concept Centers

- Design Centers
- Integration Centers
- Benchmark Centers

IBM Development and ISV Enablement Centers

- Technology Centers
- Porting Centers
- International Competency Centers

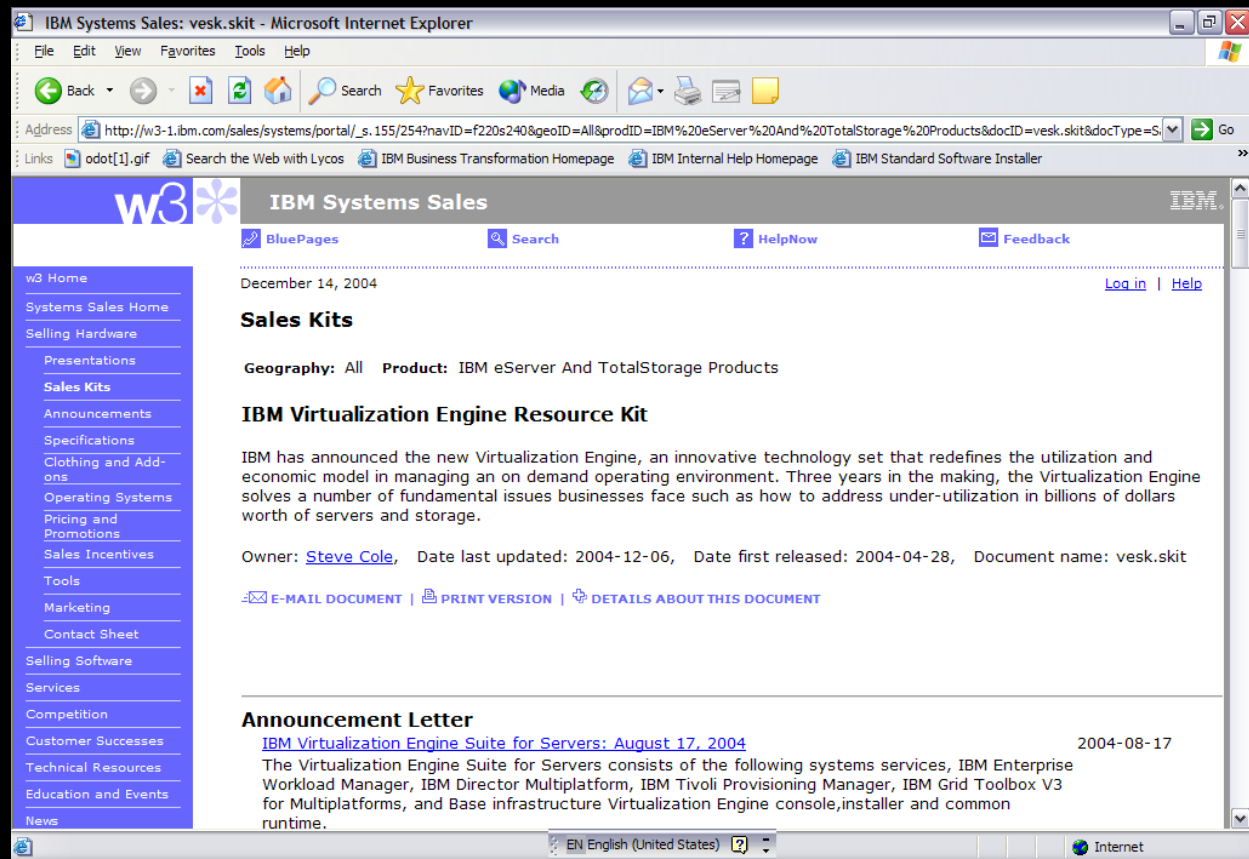
Who Else Can Help You: Design Centers

- **Cross IBM team (eServer, Software, Storage, Services) providing technical support to selected WW customers to speed deployment of integrated end-to-end On Demand infrastructures**
 - **Thought Leadership**
 - Virtualization Solutions
 - Grid/"On-Demand" computing
 - Autonomic computing
 - Information integration
 - Web Services
 - Linux
 - BladeCenter
 - **Inviting customers who:**
 - Have advanced e-business plans and strategies
 - Need help with technology selection/integration
 - Have a leading edge project w/ unique challenges
 - Are potential references for IBM
 - **Objective: Generate proof points of IBM's On Demand Strategy; Close significant IBM sales opportunities; Generate customer references; Leverage experiences**
 - **WW Design Centers working cooperatively:**
 - Poughkeepsie, NY (since 7/99)
 - Montpellier, France (since 6/00)
 - Makuhari, Japan (since 10/00)

Getting Smarter about Virtualization

- **The Virtualization Engine Resource Kit** is the one-stop shopping location for all relevant information on Virtualization Solutions, including: Presentations, Red Books, Events, FAQ's, Analyst Reports, Press Release, Education resources , Brochures, etc.

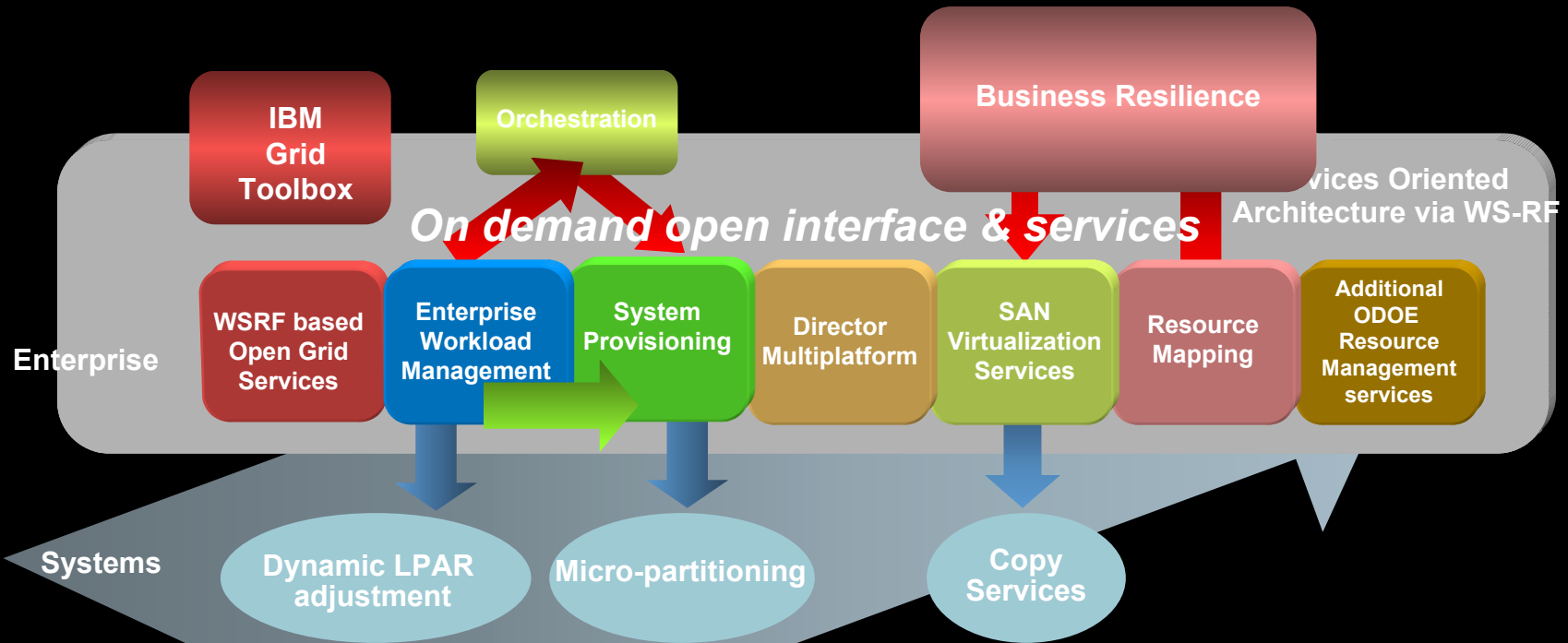
■ (Note to Business Partners, <http://www.ibm.com/partnerworld/sales/systems/> Due to Security features on www.ibm.com/partnerworld/sales/systems/ we cannot provide direct hyperlinks . To access Virtualization Resource Kit, log into IBM System Sales home page. After you log in, then enter "VESK" in the search box on System Sales home page. Virtualization engine resource kit (VESK))



Agenda

- ❑ The need for simplification and role for virtualization
- ❑ Stages of virtualization
- ❑ Getting Started
- Next Steps for virtualization

Virtualization Innovation – What’s Next



- Expand the linkage between Services and Technologies
- Create solutions founded upon IBM Virtualization Engine Services and Technologies
 - IBM Dynamic Infrastructure for mySAP Business Suite
- Broadening usage of the Open Standards and Web Services - Resource Framework (WS-RF)
- Expand the Ecosystem by making open standards and interfaces available
 - EWLM APIs published – Currently exploited by Cisco & Nortel



IBM Virtualization Solutions

ON DEMAND BUSINESS™

ibm.com

dessaun@us.ibm.com

Additional Information

Tell Your Customer About Virtualization

Leverage these resources to help you tell the Virtualization Story to your clients:

Online education

Web lecture library	eServer Online University
Seminars	
Corporate universities	eServer Online
eServer Online University	
Workspace	
Library search	
My Profile	
Bookmarks	
Forum	
Personal Preferences	
My bookmarks	
Prepare your system	
Help	

Simplify!
Optimize your infrastructure with IBM Virtualization Solutions

[Launch the Flash demo \(1.2Mb\)](#)

IBM Virtualization Engine Systems Services

The road to a business breakthrough

In a complex, information-intensive environment, it's essential to have the right tools and services to help you manage your IT infrastructure. IBM Virtualization Engine Systems Services provides the tools and services you need to optimize your IT infrastructure and reduce your total cost of ownership.

Virtualization and the On Demand Business

Redpaper

ibm.com/redbooks

Technical papers

Click image above to view latest on-line Virtualization demo.

Brochures

IBM Dynamic Infrastructure Enterprise Edition for mySAP™ Business Suite -- Jan 11, 2005 Announce

- **IBM Dynamic Infrastructure Enterprise Edition for mySAP™ Business Suite**
 - Offering available on xSeries, pSeries and zSeries
 - Available on Passport Advantage as a chargeable component of the Virtualization Engine Suite for Servers
 - Three major technical components (TPM workflows, Dynamic Optimizer, UBS)
 - A customer solution on top of Virtualization Engine
 - Tivoli Provisioning Manager is a Pre-requisite (purchase stand alone or as part of the VE Suite for Servers)
 - IBM Dynamic Infrastructure for mySAP™ Business Suite Services Available
- **IBM Dynamic Infrastructure features a set of core functions**
 - Resource Virtualization (server, storage and SAP application)
 - High Availability of all components (server, storage, application)
 - Dynamic Resource Allocation
 - Integrated Management (Control)
- **Some platforms extend the basic functions with out-of-the box capabilities**
 - On pSeries, zSeries and iSeries**
 - Dynamic LPAR re-sizing (grow/shrink)
 - Dynamic provisioning of CPU/Memory/Adapters

Virtualization Engine Additional Information

- For Ordering, Planning, and Deploying IBM Virtualization Engine Suite for Servers use the Planning Advisor
- Get your customer involved with Start Your Engine Workshop
- Virtualization Basic Sales Education
- VE Technical Sales Education (suggested on line courses)
- VE Suite for Servers mastery exam
- **IBM Dynamic Infrastructure Enterprise Edition for mySAP™ Business Suite (link pending- will have by Jan 5th)**
- **VE Consulting Offerings (link pending)**

■ **Start Your Engines – IBM Virtualization Engine –for Systems hands-on technical workshop**

–Objective

- Provide an introduction to the IBM Virtualization Engine Suite for Servers and familiarize participants with the strategy behind the IBM Virtualization portfolio. Workshop delivers hands-on lab exercises so that key aspects of the VE suite for servers may be experienced and better understood.

–Focus on using suite for server components

- VE Console + hands-on lab, Director Multiplatform + hands-on lab, EWLM + hands-on lab, Tivoli Provisioning Manager + hands-on lab

–Discussion of other virtualization technologies

- Grid, Storage Virtualization

–Nominate your customer for sessions in the US & EMEA, customer pays T&L, no charge for workshop

■ **Early Customer Support Program: IBM Virtualization Engine Suite Release 2**

–Nominations in 2Q2005, program starts 3Q2005

–Benefits to customers: Influence product development, access to service & support during beta, strengthen IBM/Customer relationship

–Benefits to IBM: Improve product quality, improved customer input to development, increased customer satisfaction, customer references and testimonials

Ordering IBM Virtualization Engine Suite for Servers

- **PID number for VE Suite for Servers**

5724i72 – VE Suite for Servers, includes all systems services: EWLM, TPM, IBM Director Multiplatform, IBM Grid Toolbox and VE Console

5724i71 – A la Carte, includes capability to order the following components separately: EWLM, IBM Director Multiplatform, IBM Grid Toolbox
TPM may be ordered separately from Tivoli

- **Passport advantage info for VE Suite for Servers**

VE Suite for Servers – PID number 5724i72

PPA part number:

D53XCLL -- VE Systems Services for managing AIX & OS/400, license & 12 month maintenance

D53XFLL -- VE Systems Services for managing Solaris & Windows, license and 12 month maintenance

D53XELL -- Upgrade from Tivoli Provisioning Manager for managing AIX & OS/400, license & 12 month maintenance

D53XHLL -- Upgrade from Tivoli Provisioning Manager for managing Solaris & Windows, license & 12 month maintenance

A la carte – PID number 5724i71

PPA part number:

D53XALL – VE Director Multiplatform, license & 12 mo maintenance

D53ZRLL -- VE Grid Toolbox for Multiplatforms, license & 12 mo maintenance

D53X4LL -- VE EWLM Multiplatform for managing AIX & OS/400, license & 12 mo maintenance

D53X6LL -- VE EWLM Multiplatform for managing Solaris & Windows

- **STG Worldwide Sales Project Office for VE**

Assist in all pricing requests. To engage the STG Sales Project Office for IBM Virtualization Engine Suite for Servers, please send a Lotus Note to VSPO@us.ibm.com or **Virtualization Solutions Project Office/Poughkeepsie/IBM@IBMus**.

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