



Business Value: Windows vs. Linux

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A Changed Landscape



Customer Demands

- Higher ROI
- Faster implementation
- More specialization

Partner/IT Needs

- Reliability
- Security
- TCO/ROI
- Price



Technology Shifts

- Web services
- Business processes
- Smart clients



Business Pressures

- Tightened IT budgets
- Channel fragmentation

Impact on IT

- Pressure to reduce the cost of managing existing infrastructure
- Pressure to derive new value from existing assets
- Pressure to maximize ROI on existing IT investments
- Pressure to show return on new deployments
- Pressure to drive information worker productivity

Enter Linux

Customer perceptions about the Linux OS

- Low software acquisition cost
- Low total cost of ownership
- Better price/performance
- Better security
- Reliability
- Interoperability

Customers want to save money with Linux...

FACT: Enterprises that require vendor support for Linux will pay for it

"Red Hat Starts Phasing Out For-Free Linux"

...Red Hat said it will end support for Linux versions 7.1 through 8.0 at the end of this year, and put a stop to support for its most recent Linux, version 9.0, April 30, 2004."

TechWeb (CMP ChannelWEB)

"While less complex versions of Linux are often free, enterprise-class variants are more costly."

Forbes

"If Red Hat is to survive as an independent Linux distributor, it has to generate sufficient revenues to be profitable. Without additional licensing revenues, it has no place to turn."

TechRepublic

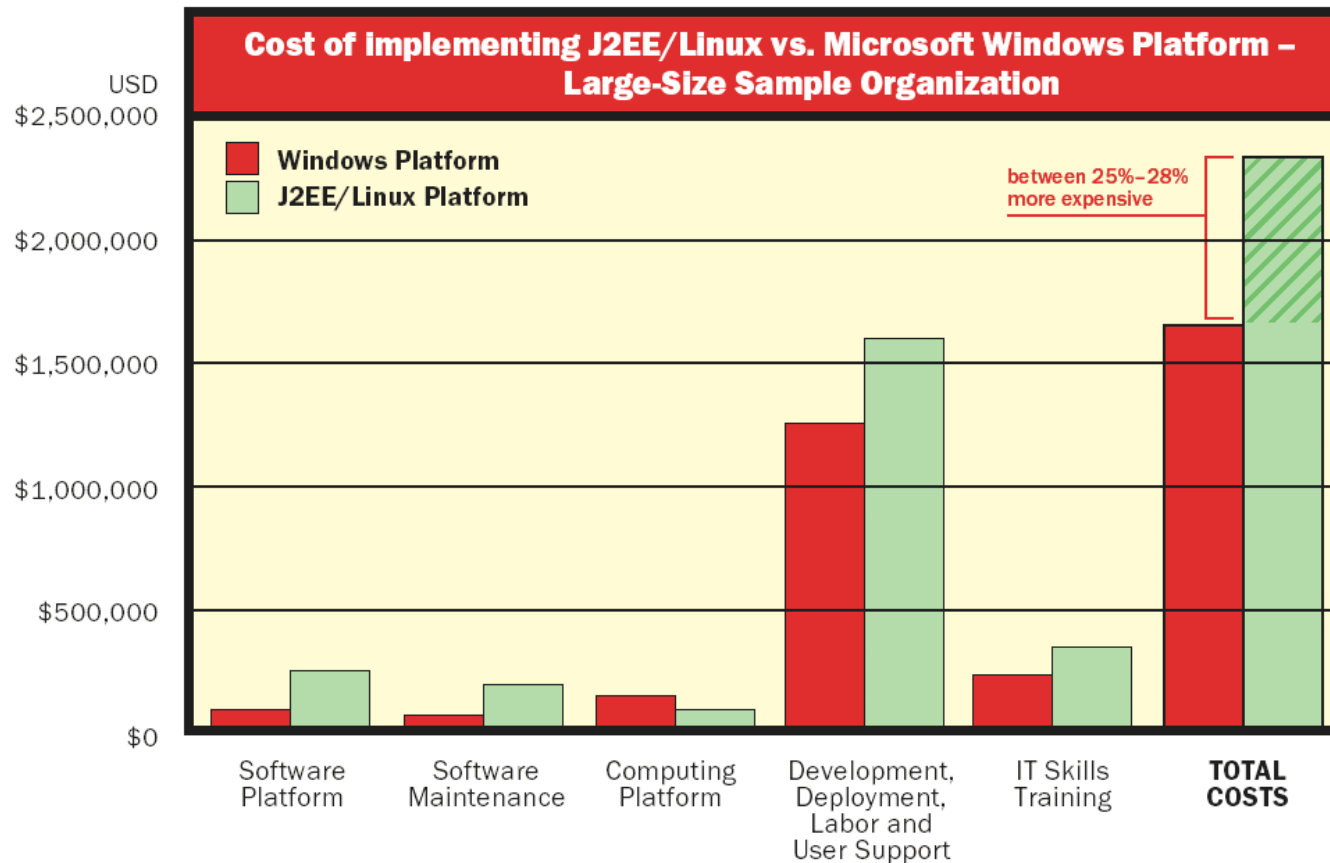
"When I speak about the high cost of deploying Linux, I'm talking about changes in licensing and support costs that major Linux system and application vendors are springing on customers. For many of these customers,... the cost of deploying "free" Linux can be very high indeed."

eWeek

*The Limitations of Linux, Forbes.com, June 16, 2003, Linux's Commercial Destiny in Doubt, TechRepublic, Sept. 25, 2003
Linux Is Not So 'Free, eWeek Magazine, Sept 1, 2003*

The Facts: Cost-of-Stack Study Results

Source: Giga Research, a wholly owned subsidiary of Forrester Research Inc., August 2003



For portal application development, enterprise customers who choose the .Net/Windows platform over a J2EE/Linux stack incur approximately 25 to 28 percent less cost over a four-year life cycle.

--Source: GIGA Research, a subsidiary of Forrester Research

Microsoft/Windows was found to be less expensive than IBM/Linux across the board, costing up to 8X more in the common configurations compared by ObjectWatch. --Source: Objectwatch

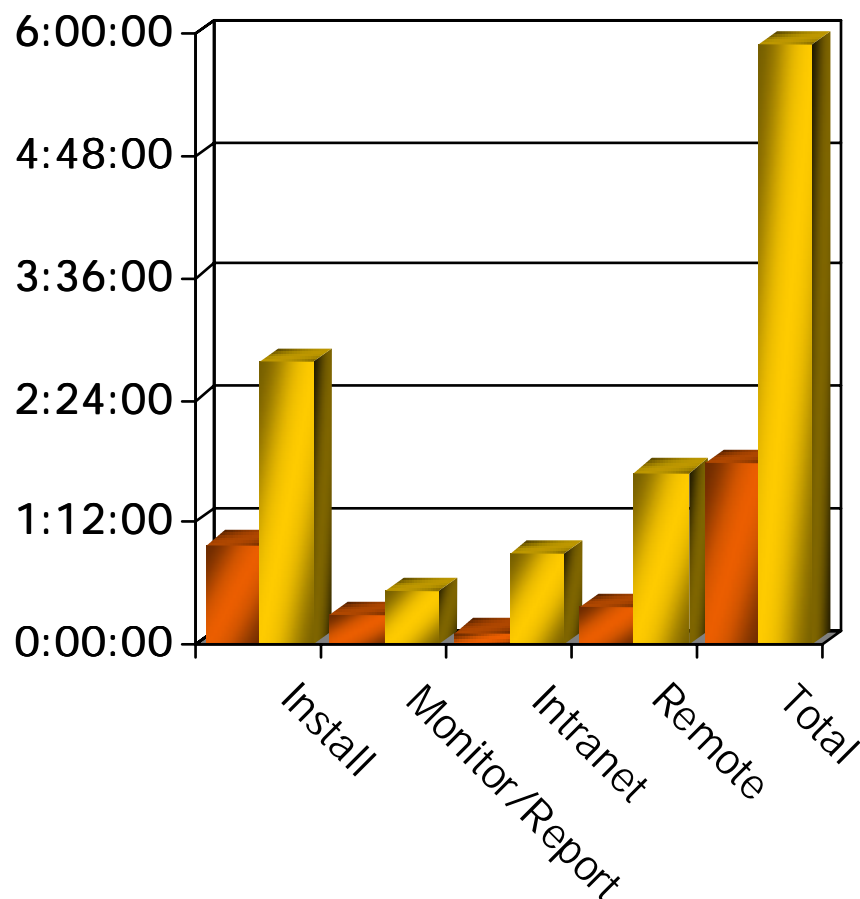
Customers want to drive down TCO with Linux...

FACT: Microsoft has demonstrated TCO advantages over Linux in study after study

- **IDC** - Win2000 offers cost advantages of 11-22% over a 5-year period compared to Linux in 4 of 5 common IT workloads
- **Giga** - .NET/Windows platform offers 25-28% cost advantages over J2EE/Linux stack during a 4-year lifecycle
- **Veritest** - Deployment of Red Hat Linux Enterprise Server 2.1 took 2h53m longer, and required 4.4 X the number of steps, compared to Windows Small Business Server 2003

The Facts: Veritest Benchmark Results

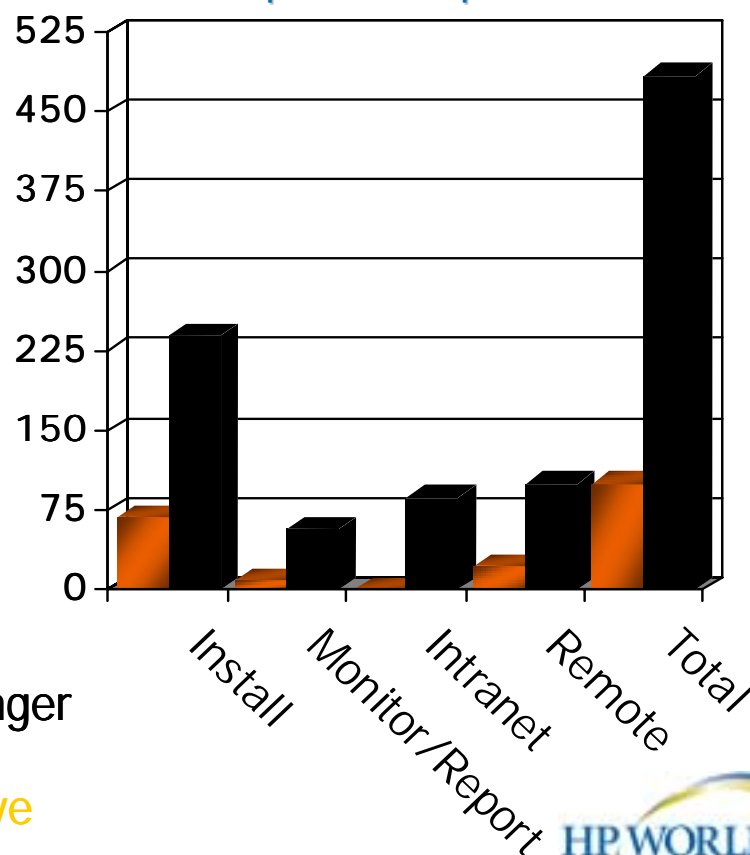
Time to Complete Task



Win SBS 2003
RH Ent Linux



Steps to Complete Task



To deploy all 4 workloads, it takes 231% longer with RH Enterprise Linux + add-ons because there are 384 more steps required to achieve like functionality to Win SBS

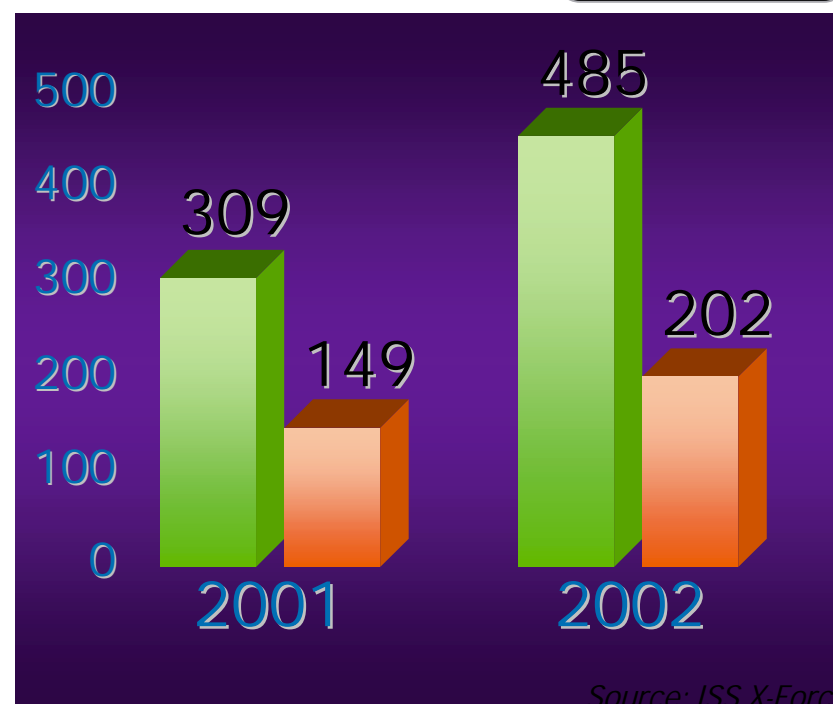
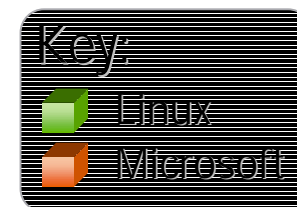
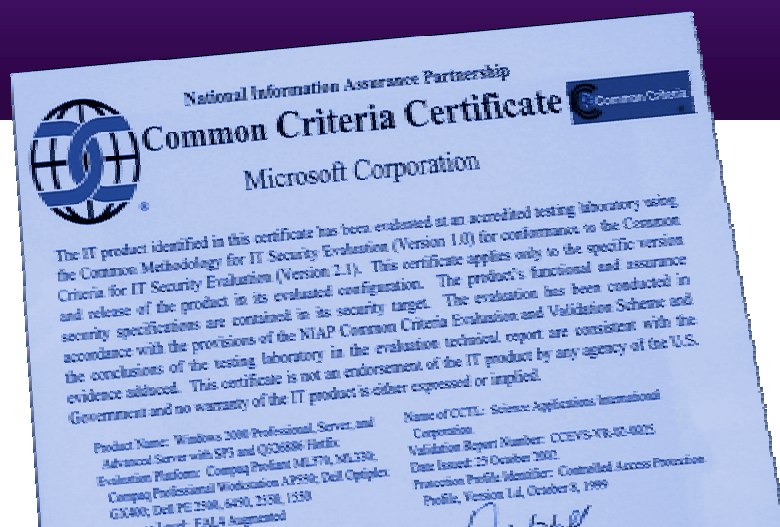
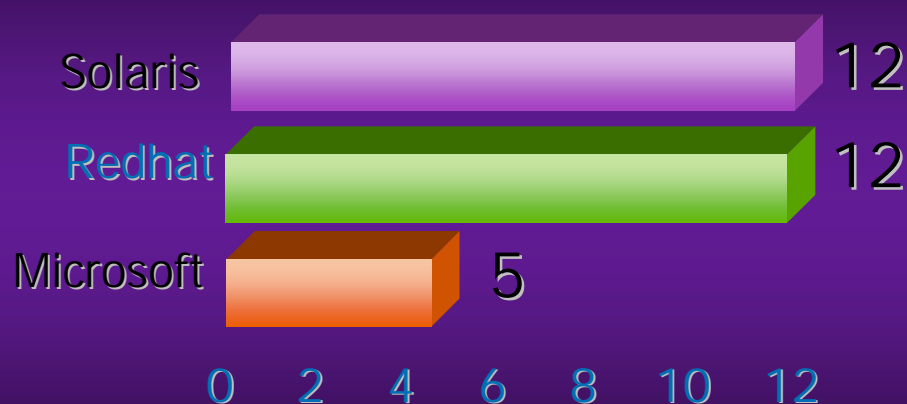
Source: "Microsoft Windows Small Business Server 2003 vs. Red Hat Enterprise Linux ES 2.1 Deployment," October 2003, VeriTest, a division of Lionbridge Technologies, Inc.



Customers Want Linux for Security...

FACT: Linux vulnerabilities are growing 21% faster than Microsoft

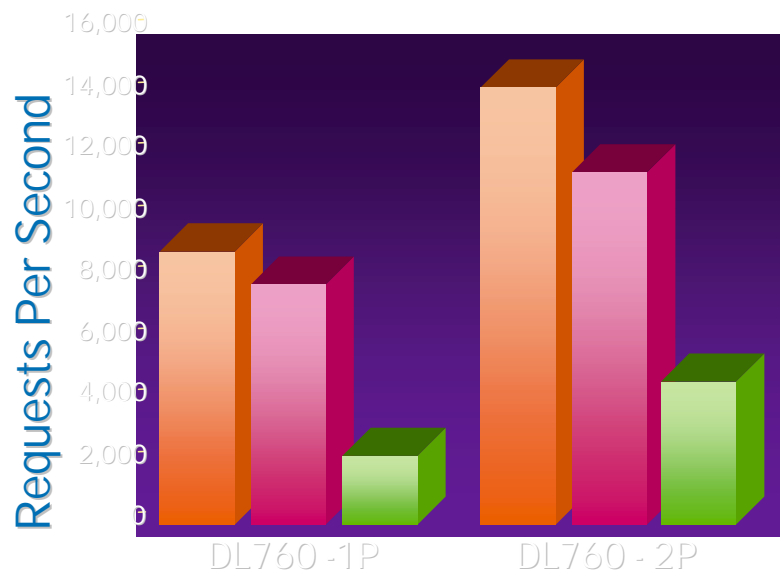
CERT Advisories by OS - 2002



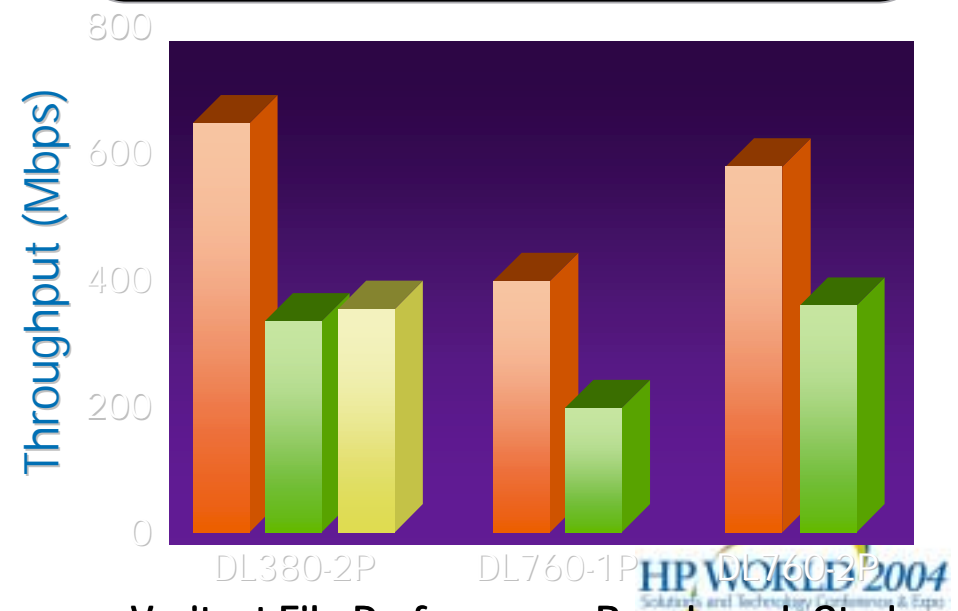
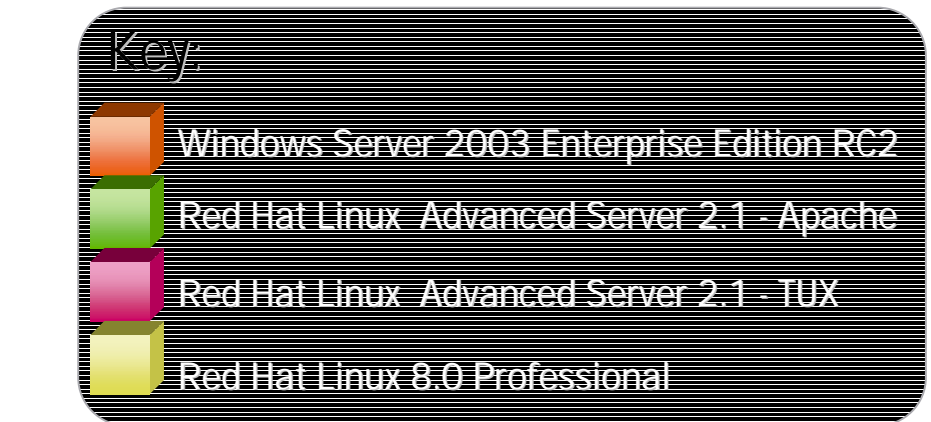
Customers want Linux for price/performance advantages...

FACT: The Microsoft platform has

- Lower total cost
- Better performance
- Tight integration



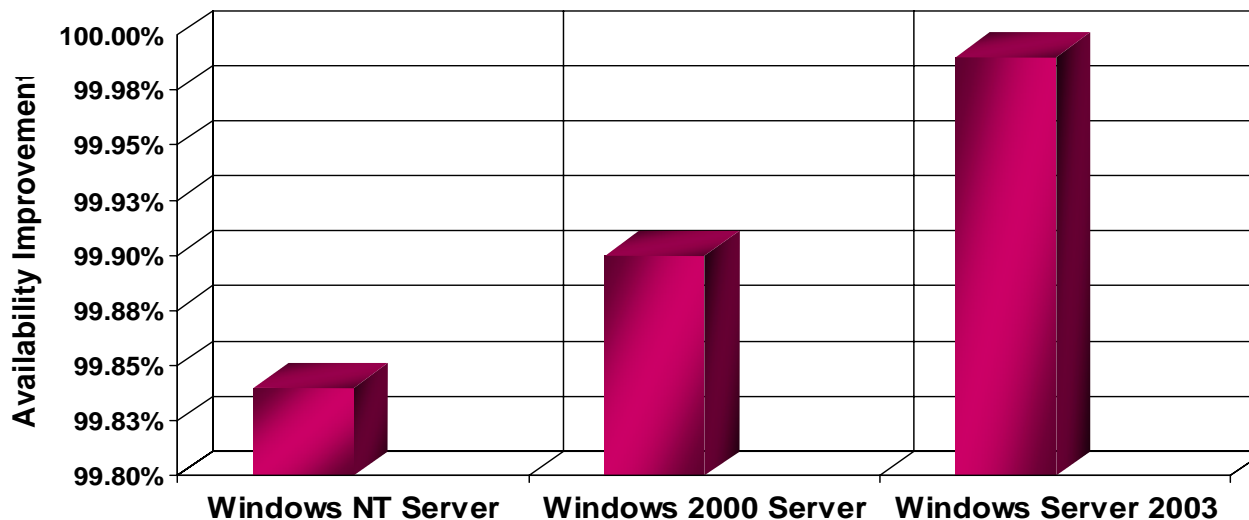
Veritest Web Performance Benchmark Study



Veritest File Performance Benchmark Study

Customers perceive Linux to be more reliable...

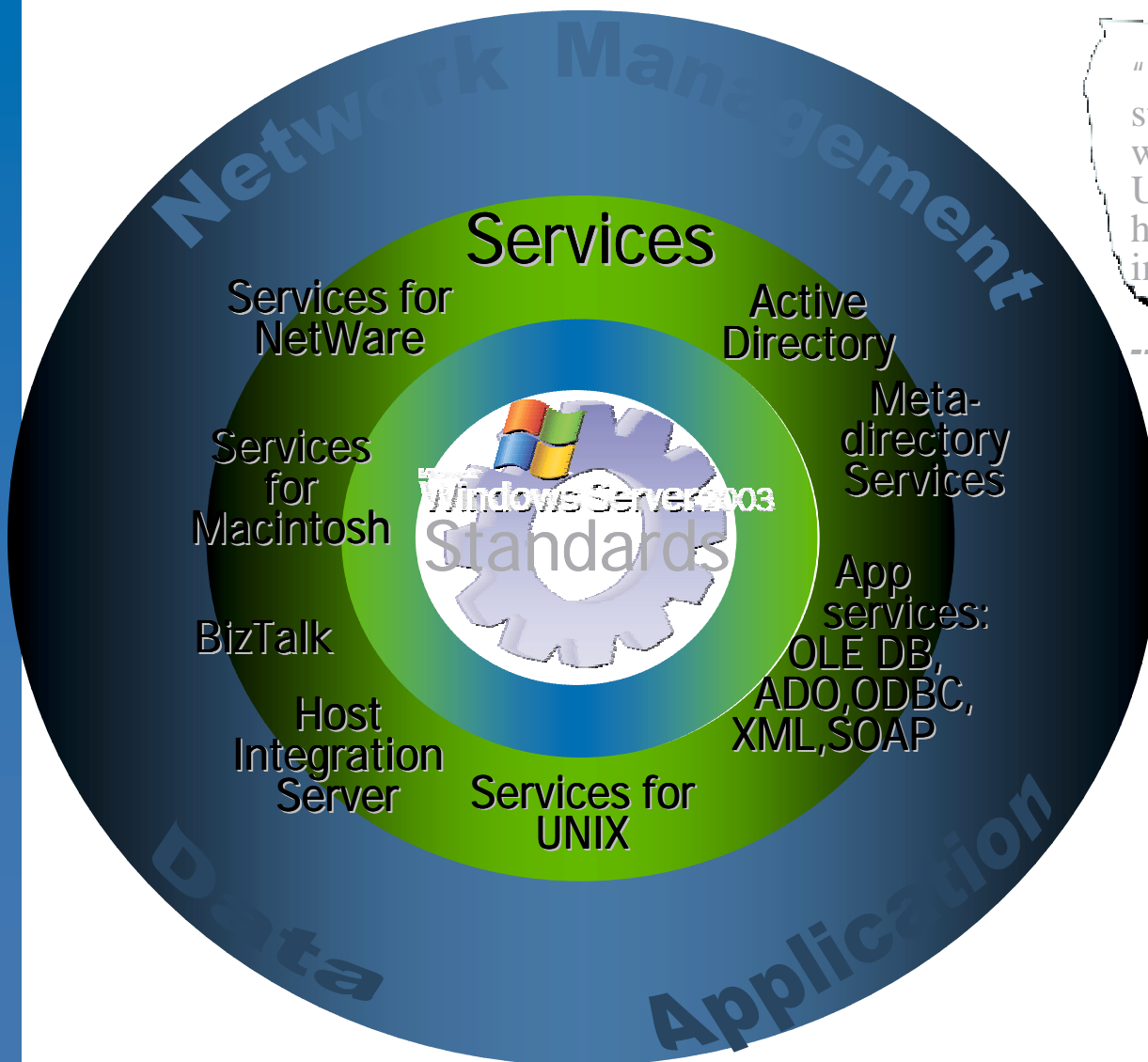
- **VeriTest.** Reliability benchmark results
 - Windows Server 2003 and Red Hat Linux both ran identical workloads for 61 days on each of 3 identically configured servers with no failures
- Windows Server 2003 delivers dramatic reliability improvements over NT4 & 2000
 - 8x downtime improvement over Windows NT 4
 - 4x downtime improvement over Windows 2000



Source: Microsoft internal test results with actual customers 11

Customers want interoperability...

FACT: Microsoft delivers built-in interoperability



"...And in a very small but telling step at LinuxWorld, Microsoft won an award for its Services for Unix 3.0, showing it accepts heterogeneous architectures that include Linux."

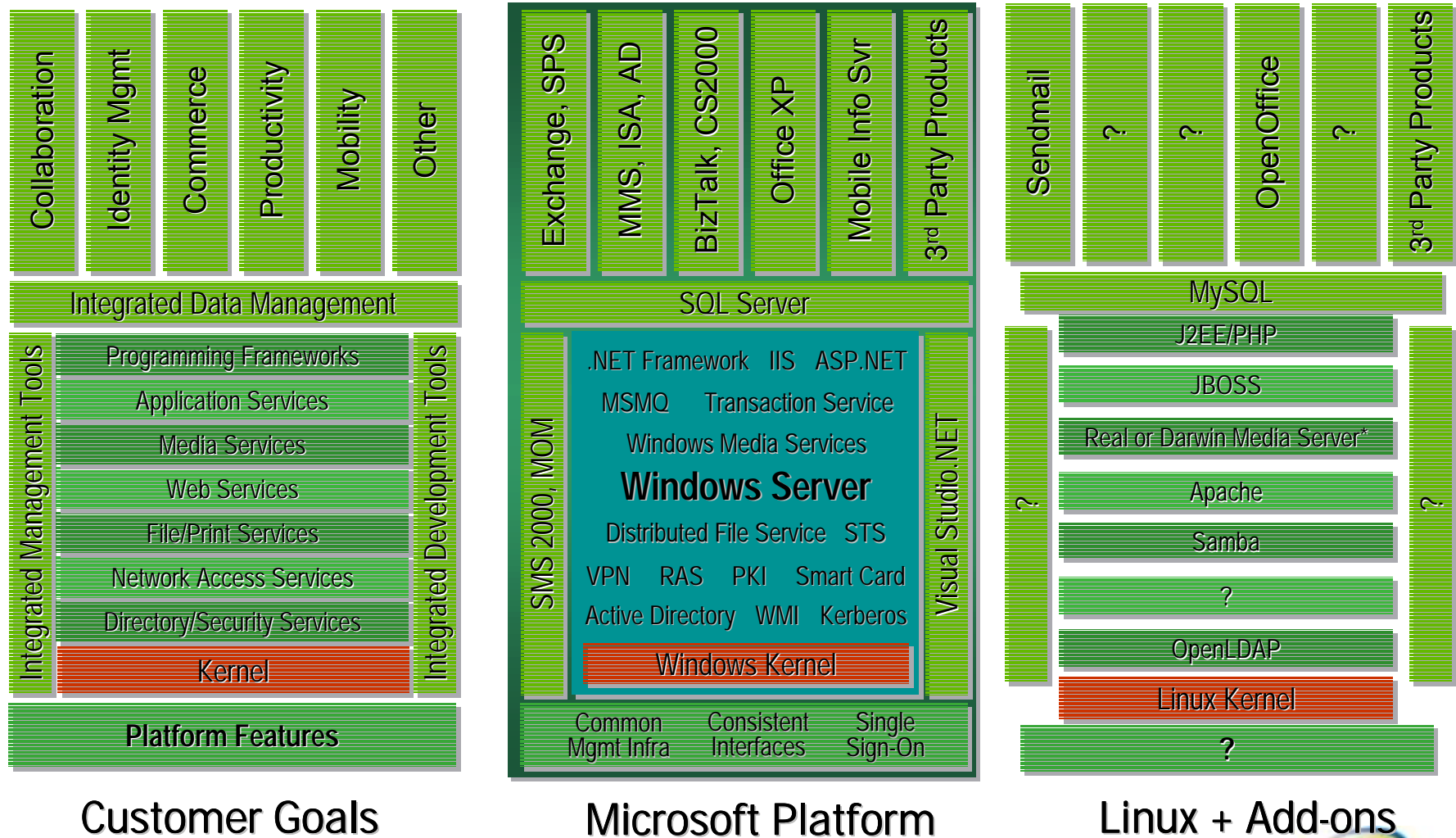
-- eWeek



SFU 3.5 Launches
calendar Q104!



Delivering Integrated Innovation



Resources

- **Getting the facts**
 - <http://www.microsoft.com/getfacts>
- **Independent Analyses**
 - <http://www.microsoft.com/mscorp/facts/analyses.asp>
- **Industry Case Studies**
 - <http://www.microsoft.com/mscorp/facts/studies.asp>
- **Customized Partner Compete Portal:**
<http://www.microsoft.com/partner/compete>
- **Online Competitive Selling Modules:**
<http://www.microsoft.com/partner/training/learningcenter.aspx>

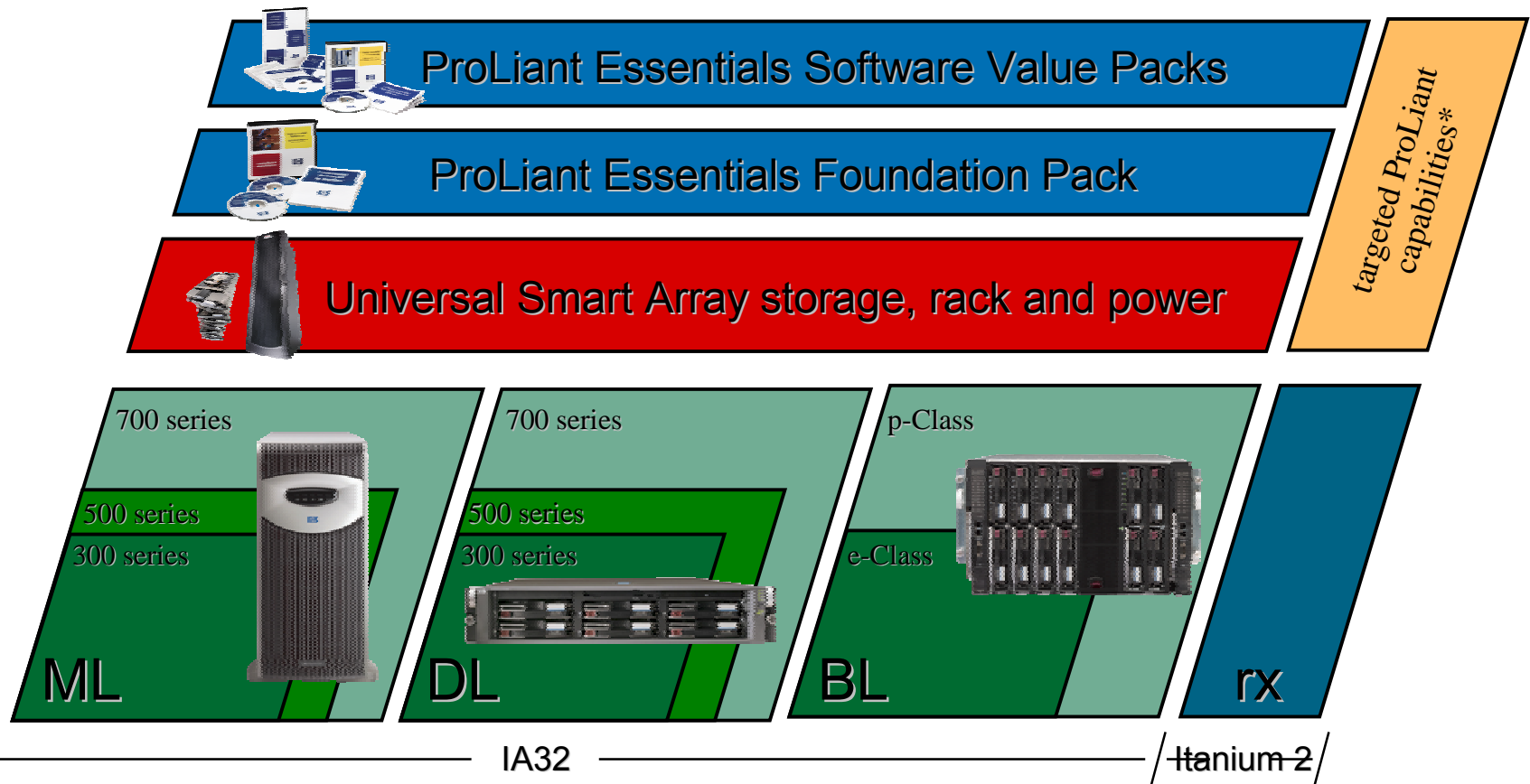
Challenges

- Business environment
 - Complex, unpredictable, changing fast
- Infrastructure environment
 - Challenged to meet the business need for greater agility
- Business agility
 - Requires a technology infrastructure that adapts to change, optimizes resources and responds immediately business needs



HP ProLiant server family

Industry standard tools for an adaptive enterprise



Novell

Microsoft



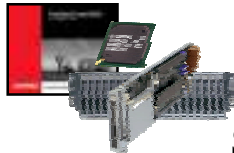
Delivering our vision to ProLiant customers

Articulated ISS vision



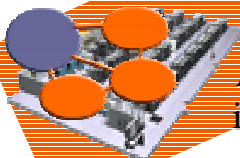
First hot plug memory
(DL580 G2)

First embedded
iLO (DL360)



ProLiant Essentials
SW & value packs

Blade launch
& vision



Aligned to adaptive
infrastructure vision

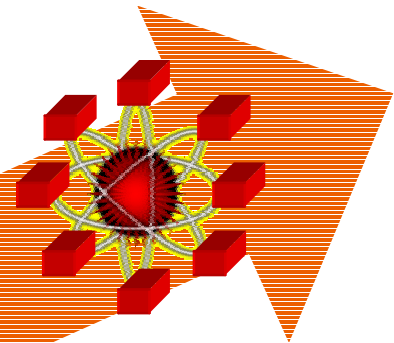
2001 - 2002

Drive volume Executing to the blueprint

- Ramp Blades to volume
- 2nd wave of Blades for enterprise apps (perf, avail, density)
- Adaptive infrastructure technology across ProLiant servers
- Integration with OpenView & Utility Data Center
- Extend the 8-way performance & capabilities

2003 - 2004

Integration pervasive across the enterprise



- Unified fabrics
- Virtualized resources
- Self healing systems
- Service-centric management
- Utility-based computing

HP WORLD 2004
2005+ HP World Technology Conference & Expo

HP ProLiant technologies for continuous, secure operation



Integrated
management

ProLiant
cluster
solutions

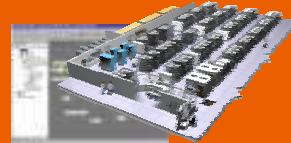
Systems &
architectures

Embedded
fault resilient
& redundant
technologies

- Insight Manager 7: proactive notification and resolution of problems before downtime occurs
- Integration with HP OpenView for system to service level uptime and control
- Departmental, infrastructure, enterprise and disaster tolerant
- 300+ configurations with widest range of server, storage, OS and interconnects
- DISA: Dynamic Internet Solutions Architecture
- ProLiant 500 & 700 series: scale up & consolidate
- ProLiant DL/BL density optimized & blade server infrastructures
- Advanced Memory Protection
- Smart Array 5i+ battery back cache
- Integrated Lights-Out management
- Hot-add, hot-plug memory, drives, PCI, power, fans

HP ProLiant technologies for automated, intelligent management

HP service
level
software
value



OpenView &
Utility Data Center

ProLiant
Essential
software
value

ProLiant Essentials Foundation Pack

Delivered with every
ProLiant server



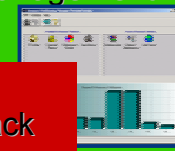
The essentials every
customer needs

ProLiant Essentials Value Packs

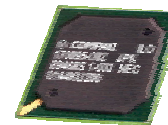
Rapid Deployment
Pack



Workload
Management Pack



Performance
Management Pack



Integrated Lights-Out
Advanced Pack



Recovery Server
Option Pack

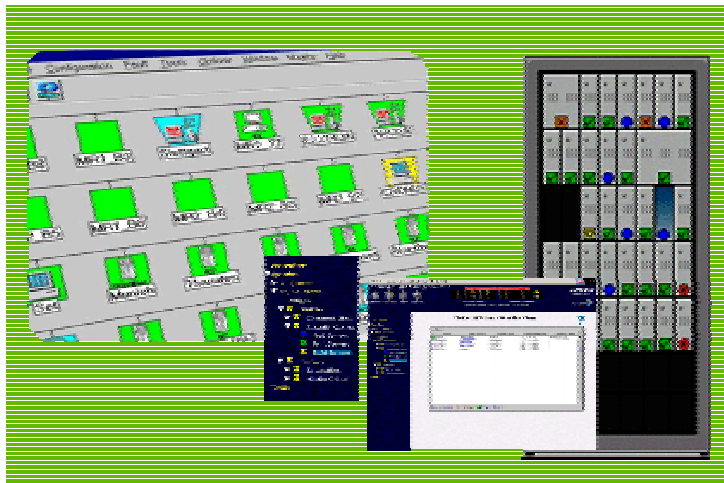
Options to meet specific customer needs

ProLiant
server &
storage
value

IA32/64 server/storage

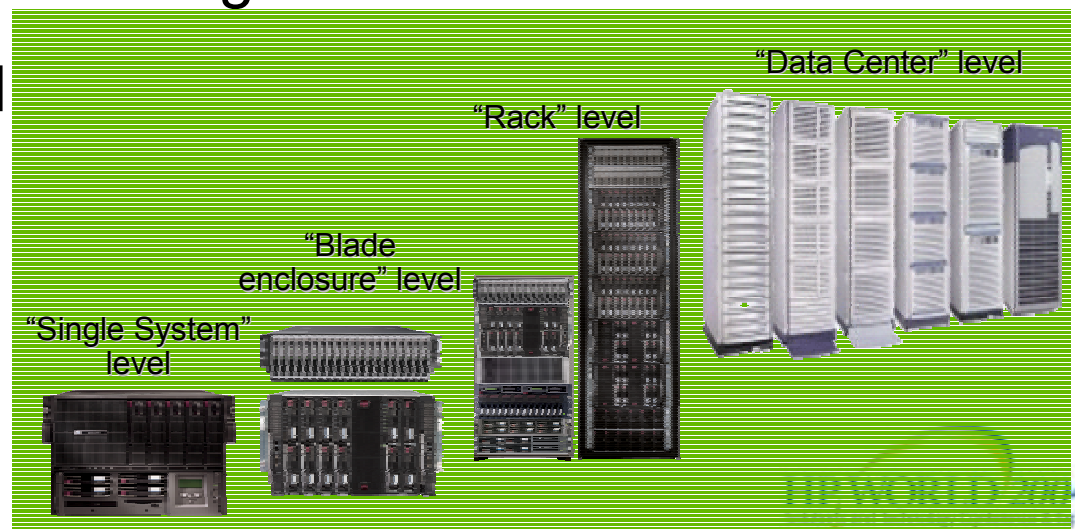
You choose which OS to run management platform

HP ProLiant technologies for dynamic resource optimization

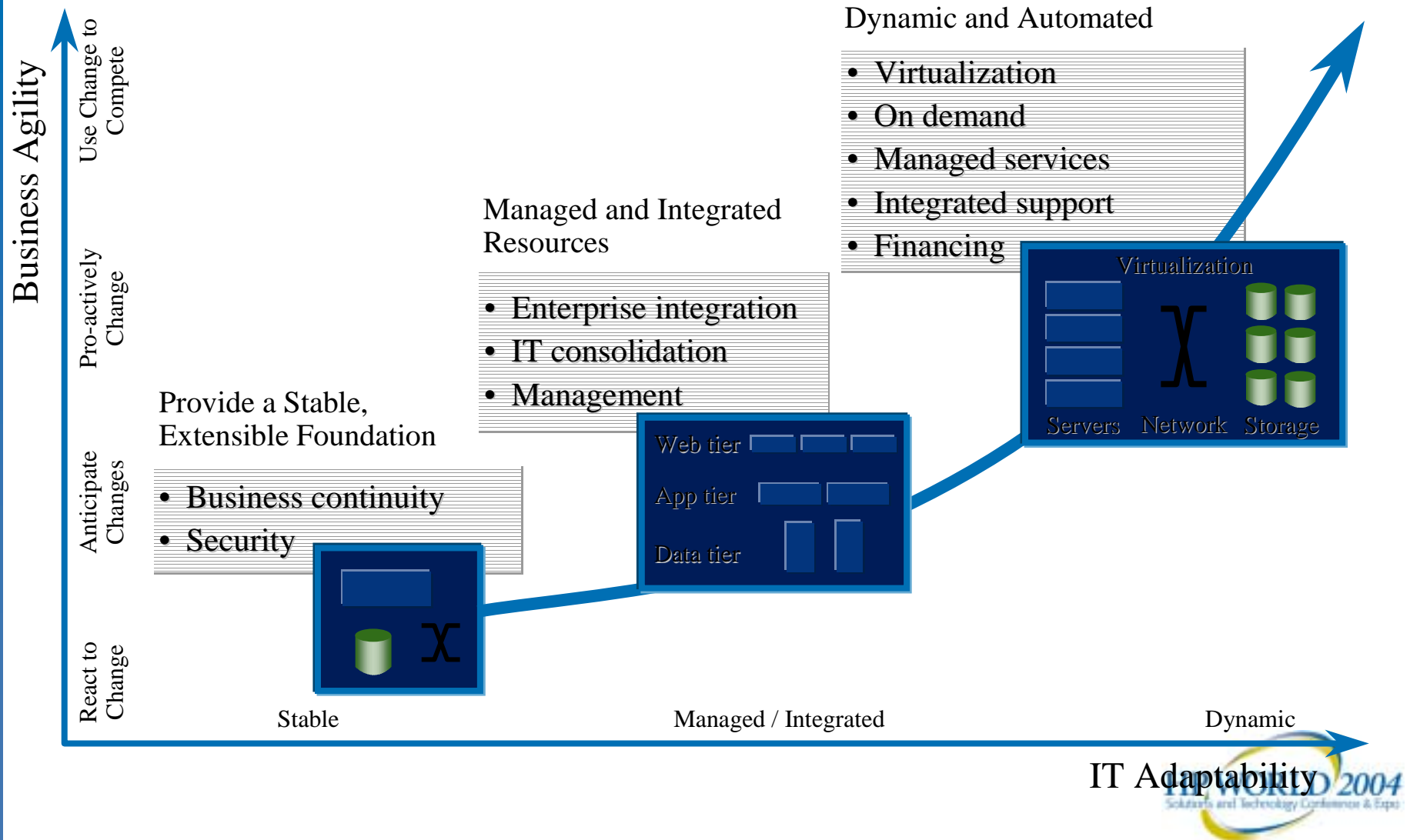


- Single system partitioning & workload optimization
- Modular, virtualized blade & rack architectures
- Virtualized data center integration

- Integrated workload management
 - Analyze demand and dynamically adjust supply
- Automated re-deployment & re-provisioning tools
 - Virtual provisioning of resources, application environments and asset pools
- Intelligent rack infrastructures



Scalable to your unique environment



Integrated with services and solutions

How do I ...?

...Identify my critical business agility needs?

...Design a blueprint for achieving an adaptive enterprise?

... Integrate my diverse applications to gain a cross functional view of my business?

... Simplify and reduce the complexity and cost of my IT resources?

... Gain control and insight into my applications, resources from a service viewpoint?

... Ensure that my network, server and storage environment can be shared and pooled for maximum utilization?

... Build a solid and secure foundation?

Agility Assessment Services

Architecture and
Assessment
Services

Enterprise Integration

IT Consolidation

Management

Adaptive
Infrastructure &
Management
Solutions

Virtualization

Business Continuity

Security

On-Demand

Sourcing
Solutions

Managed Services & Integrated Support

Financing Services



HP Adaptive Enterprise Solutions

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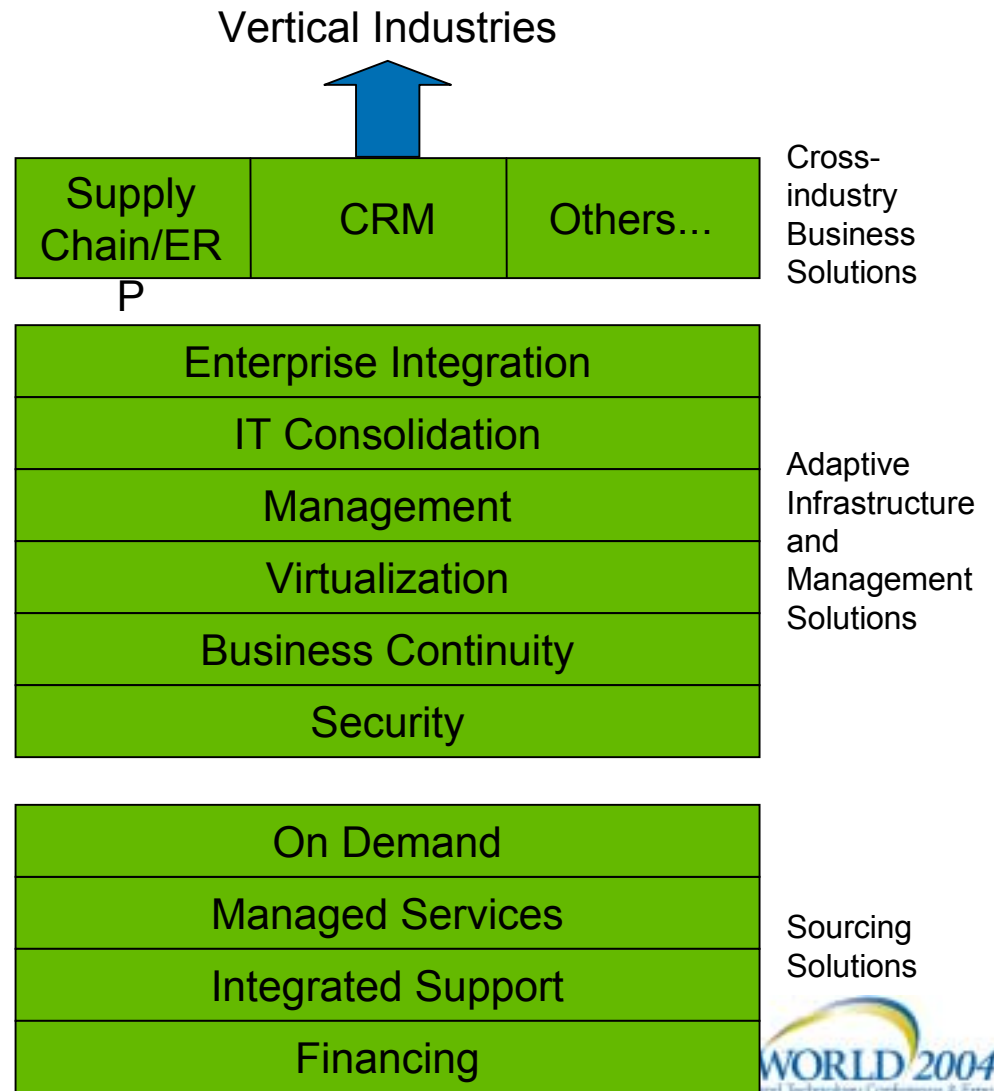
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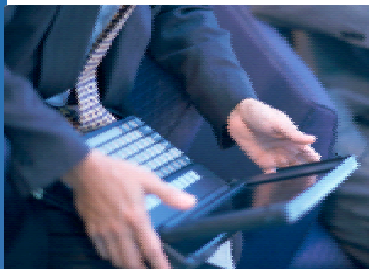
... Ensure that my network, server and storage environment can be shared and pooled for maximum utilization?

... Build a solid and secure foundation?

... Source and deploy technology so



Adaptive Enterprises in action



- Continuous, secure operation
 - Just received notification that a power supply failed in a remote server
 - Also got the notification from HP that a replacement will be installed this afternoon
- Automated, intelligent management
 - Executed an automated script that finished the driver update, checked the firmware levels, rebooted the server, brought it all back on line
 - All from 300 miles away with my portable!
- Dynamic resource optimization
 - The exchange workload has been running at an all time high due to the merger announcement
 - Not a problem, additional processors assigned automatically when the threshold was exceeded

HP WORLD 2004

Solutions and Technology Conference & Expo

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