Power On with HP for Technical Professionals – Multi-OS

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HP Training

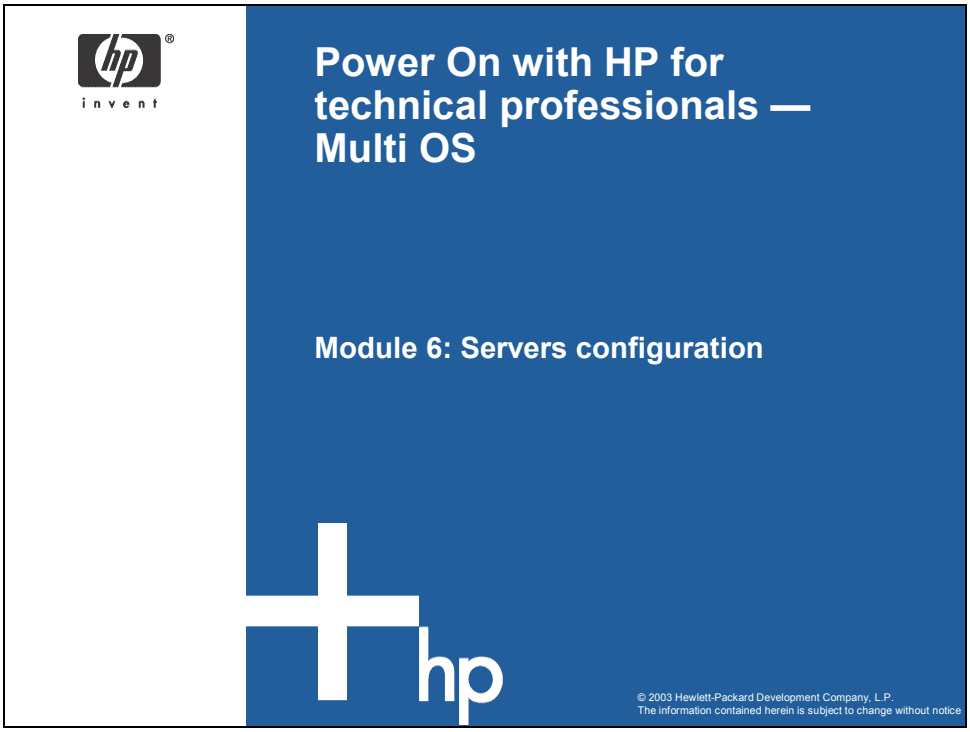
Student guide

invent

Printed in USA

POWER ON WITH HP FOR TECHNICAL PROFESSIONALS – MULTI-OS
Student Guide 2
March 2004
HP Restricted

CONFIGURATION



Servers configuration

Objectives

At the end of this module you should be able to:

Apply the HP server configuration process to a customer's situation

Objectives

Agenda

- Configuration methodology
- Walk-through exercise and HP Configuration and Pricing Tools
- Configuration case study
- Configuration tools

HP servers configuration resources

- HP Servers Ordering Guide
- HP Servers Configuration Guide
- UNIX systems performance quick reference card
- HP configuration and pricing tools

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HP servers configuration resources

- Access ESP on HP Partnership Web, Connect On-line, hpstar, or APPOL for up-to-date pricing!
- The Performance Quick Reference Tool (PQRT) is updated regularly on ESP.

Configuration Guide contents

- **Chapter 1 — How to Configure Hardware**. Provides the configuration process and some tools to assist in completing the process.
- **Chapter 2 — Systems**. Provides detailed information about the systems, including configuration rules and tips, specifications, and the system architecture.
- **Chapter 3 — I/O Adapters**. Input and Output Adapters. This includes adapters for Mass Storage, Networking and Multi-function, and Multiplexer adapters.
- **Chapter 4 — Storage, Accessories, and Other Peripherals**. This is a big chapter that covers the HP storage products from CDs to high-end disk arrays and tape libraries. Also included are other peripherals such as terminals, printers, cables and terminators.
- **Chapter 5 — How to Configure Software.** Includes Server Software products translation table and the application availability matrix for server products.
- **Chapter 6 — HP-UX, Desktop Utilities, High Availability, and Systems Management**. A wealth of information on HP-UX, High Availability, Systems Management, and workload management solutions.

- **Chapter 7 — Internet and Security Solutions**. If your customer is looking for an Internet solution, look here for information and specific solution examples.
- **Chapter 8 — Development Tools and Distributed Computing**. Includes database software, application development tools, distributed computing, and Linux tools.
- **Chapter 9 — Network and Enterprise Management** (HP OpenView products).
- **Chapter 10 — How to Configure Support**
- **Chapter 11 — Hardware Support.**
- **Chapter 12 — Index.** Standards compliance, peripherals, product number index, and product name index.

All the Configuration and Pricing Tools are delivered and updated via the Internet. To gain access to these tools, you must have a logon to your regional HP website.

These tools are not a cure-all. You must know how to configure to make the best use of these tools.

Evaluate customer needs

Step 1: Determine the user load

Step 2: Determine number of users

Step 3: Decide which operating system and which applications, including databases, to use

Step 4: Assess high-availability needs and understand the effects of downtime on the customer

Step 5: Assess networking requirements

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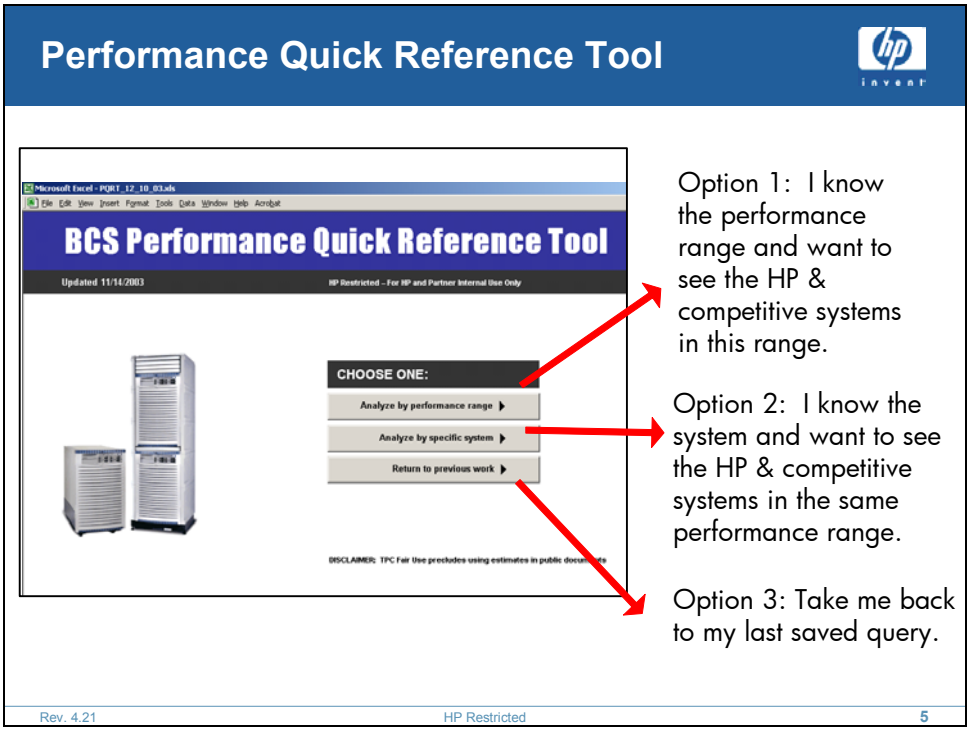
Evaluate customer needs

HP 9000, Integrity (Itanium-based), and carrier-grade servers Configuration Guide, pages 1-2 (bookmark: Configuration Process).

Let us begin with Step 1. Because it is not normally the case for users to log on to the server to work, how do you determine performance needed and find performance information on HP servers?



Performance Quick Reference Tool

PQRT vs. the old PQRC

What stays the same:

- Same data that the PQRC maintained in a more capable and user friendly format.
- Excel (Excel 2000 and later) spreadsheet-based, no new software.

What is new:

- New features for charting results, creating tables, and exporting results to Power Point slides.
- Powerful search and query logic speeds getting the right data.
- Replaces the PQRC
- Available on ESP keyword “PQRT”

NOTE: Macro Security Level must be at least set to “Medium” to run PQRT

TPM (transactions per minute) estimate

- **Important Note: Do not use TPM estimates in outbound material for general-purpose distribution.** This includes slides, brochures, product briefs, customer handouts, white papers, and press releases. You may discuss published, audited results from the TPC, but do not talk about TPM estimates when addressing general audiences.

- TPM estimates can be used when responding to Request for Proposals as long as the sheet is marked "HP CONFIDENTIAL."

Benchmark information

- The TPC Benchmark-H (TPC-H) is a decision support benchmark. It consists of a suite of business oriented *ad hoc* queries and concurrent data modifications. The queries and the data populating the database have been chosen to have broad industry-wide relevance while maintaining a sufficient degree of ease of implementation. This benchmark illustrates decision support systems that:
  - Examine large volumes of data
  - Execute queries with a high degree of complexity
  - Give answers to critical business questions
- TPC-R measures transaction processing performance and exercises most aspects of system, processors, memory, and disk I/O.
  - The TPC Benchmark-R (TPC-R) is a decision support benchmark. It consists of a suite of business-oriented queries and concurrent data modifications. The queries and the data populating the database have been chosen to have broad industry-wide relevance while maintaining a sufficient degree of ease of implementation. This benchmark illustrates decision support systems that:
    - Examine large volumes of data
    - Execute queries with a high degree of complexity
    - Give answers to critical, frequently asked business questions
- SPECWeb99 measures a system's ability to act as a web server for static and dynamic pages.
  - SPECweb99 is the maximum number of simultaneous connections, requesting the predefined benchmark workload that a web server is able to support while still meeting specific throughput and error rate requirements. The connections are made and sustained at a specified maximum bit rate with a maximum segment size intended to more realistically model conditions that will be seen on the internet during the lifetime of this benchmark. **Results from this benchmark cannot be compared with SPECweb96 results.**

- TPC-C is an online transaction processing (OLTP) benchmark.
  - As an OLTP system benchmark, TPC-C simulates a complete environment where a population of terminal operators executes transactions against a database. The benchmark is centered around the principal activities (transactions) of an order-entry environment. These transactions include entering and delivering orders, recording payments, checking the status of orders, and monitoring the level of stock at the warehouses. While the benchmark portrays the activity of a wholesale supplier, TPC-C is not limited to the activity of any particular business segment, but, rather, represents any industry that must manage, sell, or distribute a product or service.

Software information

- Availability matrix
- HP-UX details – see Chapter 6
- Non-HP software:
  - Customer's IT
  - Talk with a software vendor's representative
  - The vendor's web site

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Software information

Application Availability Matrix

Note: All 10.x products are no longer available.

		HP-UX Operation System Availability			
Product #	Description	11.0	11.11	11.22	11.23
100BaseT-0:#	100Base-T LAN driver	n/a	Dec-00*	n/a	n/a
32032C+	HP X.400/9000 Lic	Nov-97	n/a	n/a	n/a
32070B	OSI Transport Services LTU	Nov-97	Dec-00	n/a	Sep-03
A3402A+	EISA 100VG AnyLAN Hardware Adapter	Jun-99*	n/a	n/a	n/a
A3495A+	100Base-T LAN Adapter	Jun-99*	Dec-00	n/a	n/a
A3659A+	EISA FDDI LAN Adapter	Dec-99*	Dec-00	n/a	n/a
A3722A+	HSC FDDI LAN Adapter	Jun-99*	Dec-00	n/a	n/a
A3723A+	HSC FDDI 1 or 2 Station LAN Adapter	Jun-99*	Dec-00	n/a	n/a
A3739A+	Dual FDDI LAN Adapter	Jun-99*	Dec-00	n/a	n/a
A3739B	Universal PCI FDDI Adapter	Mar-00*	Dec-00	n/a	Sep-03
A4919A+	PCI Hyperfabric 1X Adapter Card	Jun-99*	Dec-00	n/a	n/a
A4920A+	HSC Hyperfabric Card for K Class	Jun-99*	Dec-00	n/a	n/a
A4921A+	HSC Hyperfabric Card for D and R Class	Jun-99*	Dec-00	n/a	n/a
A4924A+	1000BaseSX HSC Gig Ethernet LAN Adpt	Jun-99*	Dec-00	n/a	n/a
A4925A+	1000BaseSX HSC EISA Gigabit Adapter	Jun-99*	Dec-00	n/a	n/a
A4926A+	1000BaseSX PCI LAN Adapter	Jun-99*	Dec-00	Sep-02	Sep-03
A4929A+	1000BaseT PCI Gig Ethernet LAN Adpt	Jun-00*	Dec-00	Sep-02	Sep-03
A4930A+	PCI TokenRing LAN Adapter	Jun-01*	n/a	n/a	n/a
A5158A+	One Port PCI 2x Fitre Channel Adapter	Mar-00*	Dec-00	n/a	Sep-03

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Application Availability Matrix

PowerTrust UPS

Table 4.3.2 Server Watt Ratings for UPS loading

Server	Watt Rating for UPS loading (Maximum/Typical)	UPSs Typically Used	Approximate Battery Runtime (Minutes)
rp2400	400 W/350 W	• A1353/4A PowerTrust II – LR 1.4 kW/2.0 kVA (one battery) • A1356A PowerTrust II – LR 2.1 kW/3.0 kVA (one battery) • J4367A HP Rack System /E R3000 XR UPS 2.7 kW/3.0 kVA	• 65-90 minutes • 70-95 minutes • 40-65 minutes
rp2430	350 W/290 W	• A1353/4A PowerTrust II – LR 1.4 kW/2.0 kVA (one battery) • A1356A PowerTrust II – LR 2.1 kW/3.0 kVA (one battery) • J4367A HP Rack System /E R3000 XR UPS 2.7 kW/3.0 kVA	• 120 minutes • 130 minutes • 50 minutes
rp2450	600 W/450 W	• A1353/4A PowerTrust II – LR 1.4 kW/2.0 kVA (one battery) • A1356A PowerTrust II – LR 2.1 kW/3.0 kVA (one battery) • J4367A HP Rack System /E R3000 XR UPS 2.7 kW/3.0 kVA	• 43-63 minutes • 45-65 minutes • 33-55 minutes
rp2470	400 W/350 W	• A1353/4A PowerTrust II – LR 1.4 kW/2.0 kVA (one battery) • A1356A PowerTrust II – LR 2.1 kW/3.0 kVA (one battery) • J4367A HP Rack System /E R3000 XR UPS 2.7 kW/3.0 kVA	• 65-90 minutes • 70-95 minutes • 40-65 minutes
rx2600	715 W/ —	• A1353/4A PowerTrust II – LR 1.4 kW/2.0 kVA (one battery) • A1356A PowerTrust II – LR 2.1 kW/3.0 kVA (one battery) • J4367A HP Rack System /E R3000 XR UPS 2.7 kW/3.0 kVA	• 39 minutes • 41 minutes • 27 minutes

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PowerTrust UPS

The print on the slide is small. Use your reference material to follow along with the instructor.

HP 9000, Integrity (Itanium-based), and carrier-grade servers Configuration Guide, page 4-25 (bookmark: Uninterruptible Power Supplies/Table 4.3.2), page 4-30 (bookmark: Uninterruptible Power Supplies/Table 4.3.4), and page 4-31 (bookmark: Uninterruptible Power Supplies/Table 4.3.5).

High availability

Table 6.5.2.1 Supported Servers

Server	Comments
A400, rp2400, rp2405 (1-way), and rp2430	• These systems all have only 2 I/O slots, thus they have restrictions due to the more limited possibilities for creating redundant network and disk connectivity required for HA. • Supported on HP-UX 11.0 with MC/Serviceguard A.11.09 or later. • Supported on HP-UX 11.0 with Serviceguard OPS Edition A.11.09 or later. • Due to the limited number of I/O slots available (2), the only supported solution is to use the A5838A combo card, with two LVD Ultra2 SCSI ports and two 100Base-T LAN ports. Since both SCSI ports are on the same card, this card is a single point of failure, meaning that this is not an optimal HA solution. The remaining I/O slot is a short slot and can be used for any SCSI, Fibre Channel or Network card that is supported for use in that slot by this system (for network cards, check the web page at: http://hasolweb.cup.hp.com/cgi-bin/CertTest.asp, to see what network cards are supported for HA in the A400.). As of December 15, 2000, the A400 will be reinstated as a supported system with MC/Serviceguard or Serviceguard OPS Edition on HP-UX 11.0 and 11.11. This requires a patch for the A5838A LAN card driver, PHNE_22244 for HP-UX 11.0, and PHSS_22727 for HP-UX 11.11. This is required to prevent intermittent failures of the A5838A in High Availability environments. • The 10/100Base-T LAN port on the built in Multi I/O card, labeled "console" is a special purpose console LAN port and cannot be used as a MC/Serviceguard heartbeat or data lan. • The SCSI port on the built in Multi I/O card is not supported for use for Cluster packages, as it is not possible to change the SCSI ID, nor is it possible to remove the SCSI Terminators. NOTE: PCI SCSI and HP-PB SCSI interfaces are not supported when connected to the same shared SCSI bus.

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High availability

HP 9000, Integrity (Itanium-based), and carrier-grade servers Configuration Guide, page 6-39 (bookmark: Solution Design Team) and page 6-46 (bookmark: Serviceguard/Table 6.5.2.1).

Network adapters

Table 3.3.1 LAN Adapter Server Support

Product Number	Product Name	rp2400/rp5400 series	Integrity rx1600	Integrity rx2600	Integrity rx4640	HP 9000 rp34x0	HP 9000 rp4440	Integrity rx5670	HP 9000 rp74x0	Integrity rx7620	HP 9000 rp84x0	Integrity rx8620	HP 9000 Superdome	Integrity Superdome
Gigabit Ethernet														
A7011A	PCI-X 2-port 1000Base-SX Gigabit Adapter	H	H	H	H	H	H	H	H	H	H	H	H	H
A7012A	PCI-X 2-port 1000Base-T Gigabit Adapter	H	H	H	H	H	H	H	H	H	H	H	H	H
A9899A	Windows/Linux 2-port 1000Base-SX Gigabit Adapter		W/L[1]	W/L[1]	W/L[1]			W/L[1]		W/L[1]		W/L[1]		W/L[1]
A9900A	Windows/Linux 2-port 1000Base-T Gigabit Adapter		W/L[1]	W/L[1]	W/L[1]			W/L[1]		W/L[1]		W/L[1]		W/L[1]
A6825A	PCI 1000Base-T Gigabit Ethernet Adapter	H	H	H	H	H	H	H	H	H	H	H	H	H
A6847A	PCI 1000Base-SX Gigabit Ethernet Adapter	H	H	H	H	H	H	H	H	H	H	H	H	H
A7061A	Windows/Linux 1000Base-T Gigabit Ethernet Adapter		W/L[1]	W/L[1]	W/L[1]			W/L[1]		W/L[1]		W/L[1]		W/L[1]
A7073A	Windows/Linux 1000Base-SX Gigabit Ethernet Adapter		W/L[1]	W/L[1]	W/L[1]			W/L[1]		W/L[1]		W/L[1]		W/L[1]
Fast Ethernet														
A5230A	PCI 10/100Base-T LAN Adapter (for HP-UX only)	H	H	H	H	H	H	H	H	H	H	H	H	H
A5506B	PCI 4-port 100Base-TX LAN Adapter (for HP-UX only)	H	H	H	H	H	H	H	H	H	H	H	H	H

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Network adapters

Note

The rx2600 is an Itanium processor based server that will operate with HP-UX, Linux or Windows. You first must check to see if the I/O card is ‘supported’ by the OS. You can check with the third party supplier to see if they have qualified their product on the OS of choice. However, if HP has not qualified it, support will request that the card be removed before any assistance will be will be provided to resolve any system issues.

HP 9000, Integrity (Itanium-based), and carrier-grade servers Configuration Guide page 3-19 (bookmark: Network Adapters/Table 3.3.1).

Choose a system

At this point, it may be obvious which system to use. If not:

Step 6: Determine system sizing using RAM requirements, disk requirements, and I/O slot requirements.

Step 7: Evaluate system workload capabilities.

Table 1.1 Configuration Process Flow Chart

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Choose a system

HP 9000, Integrity (Itanium-based), and carrier-grade servers Configuration Guide page 1-2 (bookmark: Configuration Process).

System sizing

Memory

- 2GB for the OS and Foundation Operating Environment utilities in HP-UX 11i
- RAM requirements for applications are provided by the application vendor

Disk

- Operating Environment, User Space and Swap Space for virtual memory
- Operating environment mirrored on separate disks and controllers
- Application data usually stored externally and protected with RAID or mirroring. External storage is also essential for failover in HA environment.

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System sizing

Specification table rx7620

Table 2.16.1 HP Integrity rx7620-8 Server Specifications

Server Model Number	**rx7620-8**
Server Product Number (base)	**A7027A**
Number of Processors	2-8
Supported Processors	
1.3-GHz Intel® Itanium® 2 processor	
Cache	3 MB
Floating Point Coprocessor	Yes
1.5-GHz Intel® Itanium® 2 processor	
Cache	6 MB
Floating Point Coprocessor	Yes
Memory	
Memory slots	32 (16 per cell board)
Minimum memory (Quad: 4 DIMMs)	2 GB
Maximum memory capacity	64 GB (32 GB per cell board)
Internal Disks	
Maximum disk mechanisms	4
Maximum disk capacity	584 GB
Internal Removable Media	1 slot
DVD-ROM	
DDS-4 DAT	40 GB
Core I/O	
Ultra3 SCSI—LVD	Yes
10/100/1000Base-T (RJ-45 connector)	Yes
RS-232 serial ports (consoles and UPS)	3

Electrical Characteristics	
AC Input power	200-240V 50/60 Hz
Hotswap Power supplies	2 total, included with base
Redundant AC power inputs	2 required, 4 cords for 2N
Typical Power dissipation (VA) for maximum CPU, memory, disk, I/O configurations	2030 VA 10.15A @200VAC
Maximum Power dissipation (VA) [1]	3220 VA
Power factor at full load	0.98 (approximately)
kW rating for UPS loading [1]	3.0
Site Preparation	
Site planning and installation included	Yes
Depth (mm/inches)	782 mm/30 in
Width (mm/inches)	482 mm/19 in
Height (mm/inches/EIA) Racked	445 mm/17.5 in/10 units
Weight (kg/lbs.)	99.8 kg./224 lbs.
Environmental Characteristics	
Regulatory Model	RSVLA-0102
Acoustics (sound power) at 25°C	7.4 Bels LwA
Acoustics (sound power) at 30°C	7.4 Bels LwA
Acoustics (operator/bystander) at 24°C	58.4 dB LpA
Operating Temperature (up to 5000 ft) [2]	5° to 35°C (41° to 95°F)
Non-operating Temperature	–40° to 70°C (–40° to 158°F)
Maximum rate of temperature change	20°C/hour

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Specification table rx7620

The print on the slide is small. Use your reference material to follow along with the instructor.

HP 9000, Integrity (Itanium-based), and carrier-grade servers Configuration Guide, page 2-232 (bookmark: rx7620).

I/O adapters

Table 3.3.1 LAN Adapter Server Support

Product Number	Product Name	rp2400/rp5400 series	Integrity rx1600	Integrity rx2600	Integrity rx4640	HP 9000 rp34x0	HP 9000 rp4440	Integrity rx5670	HP 9000 rp74x0	Integrity rx7620	HP 9000 rp84x0	Integrity rx8620	HP 9000 Superdome	Integrity Superdome
Gigabit Ethernet														
A7011A	PCI-X 2-port 1000Base-SX Gigabit Adapter	H	H	H	H	H	H	H	H	H	H	H	H	H
A7012A	PCI-X 2-port 1000Base-T Gigabit Adapter	H	H	H	H	H	H	H	H	H	H	H	H	H
A9899A	Windows/Linux 2-port 1000Base-SX Gigabit Adapter		W/L[1]	W/L[1]	W/L[1]			W/L[1]		W/L[1]		W/L[1]		W/L[1]
A9900A	Windows/Linux 2-port 1000Base-T Gigabit Adapter		W/L[1]	W/L[1]	W/L[1]			W/L[1]		W/L[1]		W/L[1]		W/L[1]
A6825A	PCI 1000Base-T Gigabit Ethernet Adapter	H	H	H	H	H	H	H	H	H	H	H	H	H
A6847A	PCI 1000Base-SX Gigabit Ethernet Adapter	H	H	H	H	H	H	H	H	H	H	H	H	H
A7061A	Windows/Linux 1000Base-T Gigabit Ethernet Adapter		W/L[1]	W/L[1]	W/L[1]			W/L[1]		W/L[1]		W/L[1]		W/L[1]
A7073A	Windows/Linux 1000Base-SX Gigabit Ethernet Adapter		W/L[1]	W/L[1]	W/L[1]			W/L[1]		W/L[1]		W/L[1]		W/L[1]
Fast Ethernet														
A5230A	PCI 10/100Base-T LAN Adapter (for HP-UX only)	H	H	H	H	H	H	H	H	H	H	H	H	H
A5506B	PCI 4-port 100Base-TX LAN Adapter (for HP-UX only)	H	H	H	H	H	H	H	H	H	H	H	H	H

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I/O adapters

The print on the slide is small. Use your reference material to follow along with the instructor.

- Input/output interfaces are the crucial links that connect the computer system to its external peripheral devices, and connect.
- Two or more computer systems together.
- Interface adapters are specified by their technology (for example, SCSI, Token Ring, and so forth) and by their bus type (PCI, HSC, and so forth).

HP 9000, Integrity (Itanium-based), and carrier-grade servers Configuration Guide, pages 3-2 (bookmark: Bus Types), 3-3 (bookmark: Storage Adapters), 3-19 (bookmark: Network Adapters), and 3-29 (bookmarks: Multi-function Adapters).

Configure and verify a system

Step 8: Configure system

Step 9: Check Configuration

Step 10: Determine hardware and software support needs

Step 11: Place order

Table 1.1 Configuration Process Flow Chart

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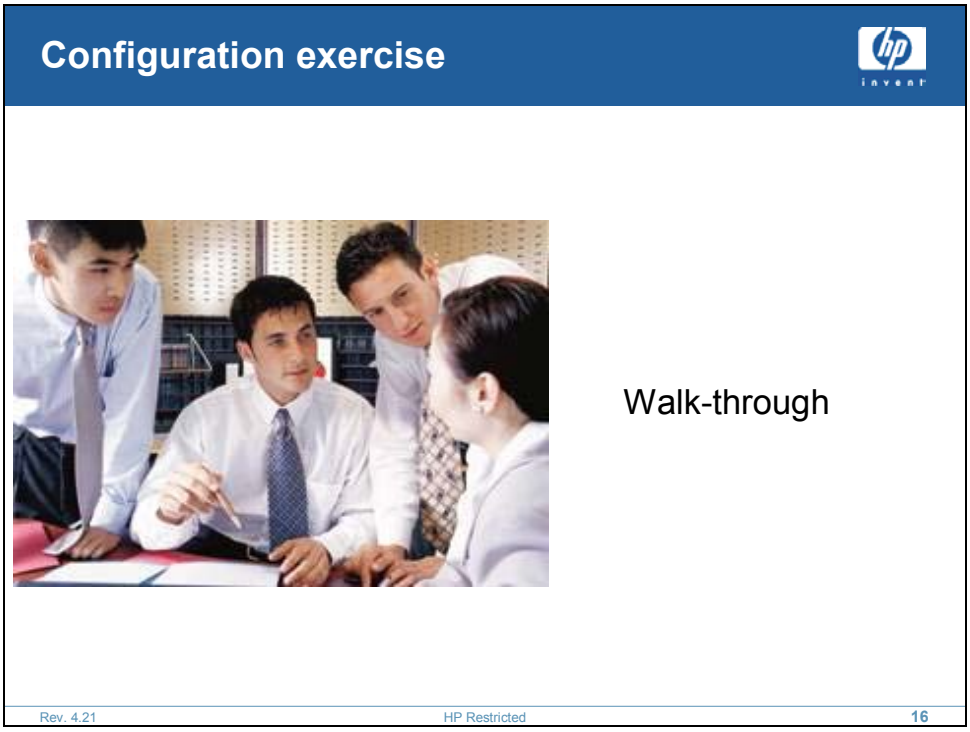
Configure and verify a system

A correct order the first time results in your customer receiving the correct products in the shortest time possible. So be sure to verify your order and include all necessary paperwork the first time.

HP 9000, Integrity (Itanium-based), and carrier-grade servers Configuration Guide, page 1-2 (bookmark: Configuration Process).



Configuration exercise

Customer case

To the people that travel on [use a city appropriate to your region] trains every day, the almost inconceivable complexity of operating the busy train schedule for carrying over 1 million passengers every day is largely transparent.

To ensure the smooth operations of five train lines and 44 stations, the task in providing quality business information systems and other IT services in supporting the front line operating staff is a non-trivial matter.

In addition to corporate, finance, property management and administrative users, the Corporation's IT department currently serves the following main groups of users in the Operations Division:

- The Operations Department for train service and station operations
- The Rolling Stock Maintenance Department for maintenance of passenger trains
- The Infrastructure Maintenance Department for maintenance of structure, tracks, and other fixed installations along the railway lines
- Safety and Quality and Operations Engineering Services Department for safety and quality systems and engineering design services for the railway lines

Challenge

Tasked with maintaining a highly complex IT system's architecture while keeping a high standard of IT provisions is no small feat. In addition, the corporation's IT staff have had to work within budgets and escalating demands for greater efficiency and service, while juggling multiple projects covering things from storage deployment to the maintenance of IT infrastructure.

In such an environment, constant initiatives to streamline and innovate while maintaining high quality and non-interrupted business information systems and IT services to front line staff has led to a continuous, aggressive search for IT solutions that will simplify operations, facilitate seamless knowledge sharing, and lower costs, all at the same time.

This company has already developed a reputation as a pioneering user of leading edge IT solutions in other cities, but the next step for Thomas Ruiz, head of information technology, is to transform the existing infrastructure to meet upward-spiraling needs for 24x7x365 availability of computing platforms without compromising performance or cost.

> "As the Corporation grows, we need to ensure that our IT resources can grow with us," said Thomas Ruiz.

The specifications

You and the sales representative have worked closely with Thomas to develop the specifications for their solution. Thomas has decided to consolidate transportation management systems onto a single server with failover capabilities for high availability. The applications will fail over to a development and testing system where all applications can be terminated in such an emergency. The specifications for the new server is:

- Performance: TPM (Sybase) of 140,000.
- The ability to run two separate applications on the same server.
- Software: HP Serviceguard
  - First application (i2) is a supply chain application that requires 45GB RAM and 10GB disk for the application code.
    - 100 users at any one time.
  - Second application is a database management system (Oracle 9i) that requires 50GB RAM and 10GB disk for the application code.
  - The i2 application data will be stored on the Oracle database in a pre-existing Storage Area Network. You must provide access to the SAN but do not need to design it.

- High availability:
  - Highly reliable architecture required with dual power supplies, 30 minutes of uptime in case of a power outage, and
  - 3-year HP Critical Systems Support.
  - Serviceguard will allow the applications to fail over to the development server.
- Network connectivity:
  - Connection to a User LAN at 100Base-T speeds.
  - Hyperfabric cluster.
  - SAN.
- US$750,000.

Initial system selection

- Performance requirement is 140,000 TPM
- Use the PQRT to narrow choices based on performance

				OLTP			
				TPC-C (v.5)			
Server	Class	Cell	CPU	Perf. tpmC	DB Ver	Price/ Perf. $/tpmC	Est. TPM (Oracle 10G)*
HP server rp8400 (650MHz)	M	3	12				129,720
HP server rp8400 (650MHz)	M	4	16				169,200
HP server rp8400 (750MHz)	M	1	4				54,720
HP server rp8400 (750MHz)	M	2	8				96,000
HP server rp8400 (750MHz)	M	3	12				132,480
HP server rp8400 (750MHz)	M	4	16	######	S12.5	$14.37	172,800
HP server rp8400 (875MHz)	M		4				57,000
HP server rp8400 (875MHz)	M		8				100,000
HP server rp8400 (875MHz)	M		12				138,000
HP server rp8400 (875MHz)	M		16				180,000

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Initial system selection

The print on the slide is small. Use your reference material to follow along with the instructor.

Performance Quick Reference Tool.

Evaluate customer needs

Step 1: Determine the user load.

Step 2: Determine the number of users.

Step 3: Decide which operating system and which applications, including databases, to use

Step 4: Assess high-availability needs and understand the effects of downtime on the customer

Step 5: Assess networking requirements

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Evaluate customer needs

HP 9000, Integrity (Itanium-based), and carrier-grade servers Ordering Guide, Chapter 2.

Choose a system

At this point, it may be obvious which system to use. If not:

Step 6: Determine system sizing using RAM requirements, disk requirements, and I/O slot requirements.

Step 7: Evaluate system workload capabilities.

Table 1.1 Configuration Process Flow Chart

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Choose a system

Memory sizing

- RAM requirements?
- Operating environment?
- Application(s)?
- Utilities?

Memory sizing

Memory specifications

rx8620

Table 2.17.1 HP Integrity rx8620-16 Server Specifications

Server Model Number	**rx8620-16**
Server Product Number (base)	**A7026A**
Number of Processors	2-16
Supported Processors	
1.3-GHz Intel® Itanium® 2 processor	
Cache	3 MB
Floating Point Coprocessor	Yes
1.5-GHz Intel® Itanium® 2 processor	
Cache	6 MB
Floating Point Coprocessor	Yes
Memory	
Memory slots	64 (16 per cell board)
Minimum memory (Quad: 4 DIMMs)	2 GB
Maximum memory capacity	128 GB (32 GB per cell board)
Internal Disks	
Maximum disk mechanisms	4
Maximum disk capacity	584 GB
Internal Removable Media	2 slots
DVD-ROM	
DDS-4 DAT	40 GB
Core I/O	

Electrical Characteristics	
AC Input power	200-240V 50/60 Hz
Hotswap Power supplies	6 total, 2 included with base
Redundant AC power inputs	2 required, 4 cords for 2N
Typical Power dissipation (VA) for maximum CPU, memory, disk, I/O configurations	3800 VA 19.5A @200VAC
Maximum Power dissipation (VA) [1]	5400 VA, 27A @200VAC
Power factor at full load	0.98 (approximately)
kW rating for UPS loading [1]	6.0
Site Preparation	
Site planning and installation included	Yes
Depth (mm/inches)	762 mm/30 in
Width (mm/inches)	482 mm/19 in
Height (mm/inches/EIA) Racked	755 mm/29.75 in/17 units
Height (mm/inches) Pedestal	833 mm/32.8 in
Weight (kg/lbs.)	188 kg/378 lbs.
Environmental Characteristics	
Acoustics (sound power) at 25°C	7.2 Bels LwA
Acoustics (sound power) at 30°C	7.5 Bels LwA
Acoustics (operator/bystander) at 24°C	61.0 dB LpA

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Memory specifications

HP 9000, Integrity (Itanium-based), and carrier-grade servers Configuration Guide, page 2-232 (bookmark: rx7620), page 2-106 (bookmark: rp8400), page 2-254 (bookmark: rx8620), and page 2-259 (bookmark: rx8620\CPU and rx8620/Memory).

Disk sizing

Disk Space Requirements:

- MCOE?
- Applications
  - I2?
  - Oracle 9i?
- User space?
- Utilities?

Disk sizing

HP rx8620 ordering – Base system

	Description		HP-UX	Windows	Linux	Product #	Opt #	Price
1.0	hp server rx8620 Enterprise Server (Max 1)	[ ]	Y	N/A	N/A	A7026A		
1.1	rx8620 SMP Base System							
	Does not include cell boards, memory, core I/O, storage, or CPUs. Includes two							
	power supplies for 2N+1 functionality							
	Flexible Advantage STarter (FAST) Base Systems							
	Must order one option with each product number ordered							
1.2	HP Integrity rx8620 2-way Server	[ ]	Y	N/A	N/A	AB236A		
	Includes Base System, 1 cell board, 1 core I/O, & three power supplies. Does not							
	include memory, internal storage, or OS. Must order one of the following options:							
	2 x 1.3GHz Intel Itanium2 Madison processors with 3M L3 cache	[ ]	Y	N/A	N/A		001	
	2 x 1.5GHz Intel Itanium2 Madison processors with 6M L3 cache	[ ]	Y	N/A	N/A		002	
1.3	HP Integrity rx8620 4-way Server	[ ]	Y	N/A	N/A	AB237A		
	Includes Base System, 1 cell board, 1 core I/O, & three power supplies. Does not							
	include memory, internal storage, or OS. Must order one of the following options:							
	4 x 1.3GHz Intel Itanium2 Madison processors with 3M L3 cache	[ ]	Y	N/A	N/A		001	
	4 x 1.5GHz Intel Itanium2 Madison processors with 6M L3 cache	[ ]	Y	N/A	N/A		002	
1.4	HP Integrity rx8620 8-way Server	[ ]	Y	N/A	N/A	AB238A		
	Includes Base System, 2 cell boards, 2 core I/O, & four power supplies. Does not							
	include memory, internal storage, or OS. Must order one of the following options:							
	8 x 1.3GHz Intel Itanium2 Madison processors with 3M L3 cache	[ ]	Y	N/A	N/A		001	
	8 x 1.5GHz Intel Itanium2 Madison processors with 6M L3 cache	[ ]	Y	N/A	N/A		002	
1.5	HP Integrity rx8620 12-way Server	[ ]	Y	N/A	N/A	AB239A		
	Includes Base System, 3 cell boards, 2 core I/O, & five power supplies. Does not							
	include memory, internal storage, or OS. Must order one of the following options:							
	12 x 1.3GHz Intel Itanium2 Madison processors with 3M L3 cache	[ ]	Y	N/A	N/A		001	
	12 x 1.5GHz Intel Itanium2 Madison processors with 6M L3 cache	[ ]	Y	N/A	N/A		002	

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HP rx8620 ordering — Base system

The print on the slide is small. Use your reference material to follow along with the instructor.

HP 9000, Integrity (Itanium-based), and carrier-grade servers Ordering Guide, page 2-115 (bookmark: rx8620).

HP rx8620 ordering – Processor modules and cell boards

2.0	Processor Modules (Required)							
	Min 1 pack per Cell Board, Max 2 packs per cell board							
	Intel® Itanium® 2 processor 1.3GHz with 3M L3 cache (Pack of 2 cpus)	[ ]	Y	N/A	N/A	A9765A	0D1	
	Intel® Itanium® 2 processor 1.5GHz with 6M L3 cache (Pack of 2 cpus)	[ ]	Y	N/A	N/A	A6438A	0D1	

3.0	Processor/Memory Cell Board (Required)	[ ]	Y	N/A	N/A	A6913A	0D1	
	Min 1, Min partition 2, Max 4							
	1 power supply is required for every cell board ordered. A cell board supports up							
	to 4 CPUs (two CPU dual packs), and up to 4 memory quad modules (max 32 GB)							
4.0	Core I/O (Required)	[ ]	Y	N/A	N/A	AB306A	0D1	
	If no Server Expansion Unit is ordered with rx8620: Min 1, Min partition 2, Max 2.							
	If Server Expansion Unit is ordered with rx8620: Min 2, Max2							
	Provides web console connection & Ultra2SCSI, 3 RS-232, and 1 GB/s LAN ports							

	Description		UX	Windows	Linux	Product #	Opt #	Price
1.0	**Processor iCOD - Right to Access (Optional)**							
	iCOD 1.5 GHz CPU - pack of 2 CPUs - Installation (Right to access)	[ ]	Y	N/A	N/A	A7101A	0D1	
	iCOD 1.3 GHz CPU - pack of 2 CPUs - Installation (Right to access)	[ ]	Y	N/A	N/A	A9766A	0D1	
	On-site ICOD S/W installation	[ ]	Y	N	N	H9908A		
	Note: Required if option 0D1 is not ordered							

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HP rx8620 ordering — Processor modules and cell boards

The print on the slide is small. Use your reference material to follow along with the instructor.

HP 9000, Integrity (Itanium-based), and carrier-grade servers Ordering Guide, page 2-115 (bookmark: rx8620) and page 2-122 (bookmark: rx8620/iCOD).

HP 9000, Integrity (Itanium-based), and carrier-grade servers Configuration Guide, page 2-272 (bookmark: rx8620/iCOD).

HP rx8620 ordering memory

5.0	Memory Quad Modules (Required)							
	Min 1 per cell board, Max 4 per cell board, Max 16 per system							
	2GB high-density SyncDRAM memory module (uses 4 SIMM slots)	[ ]	Y	N/A	N/A	AB307A	0D1	
	4GB high-density SyncDRAM memory module (uses 4 SIMM slots)	[ ]	Y	N/A	N/A	AB308A	0D1	
	8GB high-density SyncDRAM memory module (uses 4 SIMM slots)	[ ]	Y	N/A	N/A	AB309A	0D1	

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HP rx8620 ordering memory

The print on the slide is small. Use your reference material to follow along with the instructor.

HP 9000, Integrity (Itanium-based), and carrier-grade servers Ordering Guide, page 2-116 (bookmark: rx8620).

HP rx8620 ordering drives

	Description		HP-UX	Windows	Linux	Product #	Opt #	Price
	Visio Drawing attachment are provided. Order one of the Factory Installation and Integration Startup Services to trigger this process. Otherwise, data cable may ship unconnected and the switch settings on the products may not be configured. Refer to the Systems chapter of the Ordering Guide for factory integrated cabinet Menu.							
7.0	Internal Disk Drives (Optional)							
	For rx8620 Server - Optional; Max 4, 2nd core I/O card and cell board required to enable more than 2 disks							
	For rx8620 SEU - Optional, Max4 with 4 cell boards in base system; Max 3 with 3 cell boards in base system							
	36 GB HotPlug Ultra 160 SCSI Low Profile Disk (15k)	[ ]	Y	N/A	N/A	A9880A	0D1	
	73 GB Hot Plug Ultra 160 SCSI Low Profile Disk (15k)	[ ]	Y	N/A	N/A	A9881A	0D1	
	146 GB HotPlug Ultra 160 SCSI Low Profile Disk (10K)	[ ]	Y	N/A	N/A	A9882A	0D1	
8.0	Removable Internal Media Drives (Optional)							
	For rx8620 Server - Max 2, 2nd core I/O card and cell board required to enable more than 1 drive							
	For rx8620 SEU - Max 2							
	DVD Drive	[ ]	Y	N/A	N/A	A9879A	0D1	
	DAT 40GB DDS4 Drive	[ ]	Y	N/A	N/A	A9878A	0D1	

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HP rx8620 ordering drives

HP 9000, Integrity (Itanium-based), and carrier-grade servers Ordering Guide, page 2-117, (bookmark: rx8620).

HP rx8620 ordering I/O adapters

9.0	PCI HotPlug I/O cards (Optional)							
	For rx8620 Server - Max 16, any combination, 2nd Cell board is required to enable							
	more than 8 I/O cards.							
	For Server Expansion Unit – Max 16, any combination							
9.1	Mass Storage Adapters							
	PCI-X Dual Channel 2 GB Fibre Channel HBA	[ ]	Y	NA	NA	A6826A	0D1	
	PCI Ultra160 SCSI Adapter for HP-UX	[ ]	Y	N/A	N/A	A6828A	0D1	
	PCI Dual Channel Ultra160 SCSI Adapter for HP-UX	[ ]	Y	N/A	N/A	A6829A	0D1	
	PCI 2Gb Fibre Channel Adapter for HP-UX	[ ]	Y	N/A	N/A	A6795A	0D1	
9.2	Local Area Network (LAN) Adapters							
	PCI 1000Base-T Gigabit Ethernet Adapter for HP-UX	[ ]	Y	N/A	N/A	A6825A	0D1	
	PCI 1000Base-SX Gigabit Ethernet Adapter for HP-UX	[ ]	Y	N/A	N/A	A6847A	0D1	
	4 Port 100baseTX Ethernet LAN Adapter	[ ]	Y	N/A	N/A	A5506B	0D1	
	Single port 100baseTX Ethernet LAN Adapter	[ ]	Y	N/A	N/A	A5230A	0D1	
	FDDI Dual Attach Station LAN Adapter	[ ]	Y	N/A	N/A	A3739B	0D1	
	FDDI Dual Attach Station LAN Adapter - SC to MIC Cable Adapters	[ ]	Y	N/A	N/A			
	ATM 155 Mbps MMF Adapter	[ ]	Y	N/A	N/A	A5513A	0D1	
	802.5 Token Ring 4, 16, 100 Mb/s Operation LAN Adapter	[ ]	Y	N/A	N/A	A5783A	0D1	
9.3	I/O Combination Adapters (Mass Storage/LAN)							
	PCI 2 Port 100Base-T 2 Port Ultra2 SCSI (No boot, no Serviceguard support)	[ ]	Y	N/A	N/A	A5838A	0D1	
9.4	Wide Area Network (WAN) Adapters							
	PCI-X 2 Gb Fibre Channel/1000 Base-SX HBA	[ ]	Y	NA	NA	A9782A	0D1	
	2 port Programmable Serial Interface Card (supports X.25/Frame Relay/SDLC)	[ ]	Y	N/A	N/A	J3525A*	0D1	
	(Choose min/max one cable option and one software product below)							
	RS-232-C Cable, 3 M	[ ]	Y	N/A	N/A		1AT	
	V.35 Cable, 3 M	[ ]	Y	N/A	N/A		1AU	
	X.21/V11 Cable, 3 M	[ ]	Y	N/A	N/A		AFR	
	RS-499 Cable, 3 M	[ ]	Y	N/A	N/A		AFQ	
	RS-530 Cable, 3M	[ ]	Y	N/A	N/A		001	
	X.25 software	[ ]	Y	N/A	N/A	J2793B	0D1	
	Frame Relay Software	[ ]	Y	N/A	N/A	J3529A	0D1	
9.5	Serial Multiplexer Products							
	64 Port Multiplexer Card (must order port modules below)	[ ]	Y	N/A	N/A	A6749A*	0D1	
	Port Module Accessory Kit (Required if you have ordered the A6749A)	[ ]	Y	N/A	N/A		001	
	8 Port Multiplexer Card	[ ]	Y	N/A	N/A	A6748A*	0D1	
	Replace 4 ft. cable with 12 ft. cable	[ ]	Y	N/A	N/A		001	

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HP rx8620 ordering I/O adapters

The print on the slide is small. Use your reference material to follow along with the instructor.

HP 9000, Integrity (Itanium-based), and carrier-grade servers Ordering Guide, page 2-117 (bookmark: rx8620).

HP 9000, Integrity (Itanium-based), and carrier-grade servers Configuration Guide, pages 2-261 and 2-262 (bookmark: rx8620).

HP rx8620 ordering factory integration

11.0	Pedestal, Factory and Field Rack Kits for rx8620 Server (Required)							
	Max 1 per server. 4 Power cords included with each server (2 cords minimum, plus							
	2 cords for redundancy)							
11.1	Field Rack Kit	[ ]	Y	N/A	N/A	J1528A		
	Needed for field integration into 19" wide HP Rack System/E or most 3rd party							
	racks at customer location. Must order one Power Cord Option below:							
	4.5m, North America power cord, plug style: L6-20	[ ]	Y	N/A	N/A		AW4	
	4.5m, International power cord, plug style: unterminated	[ ]	Y	N/A	N/A		AW5	
	4.5m, European power cord, plug style: IEC309/16A	[ ]	Y	N/A	N/A		AWU	
	4.5m, European power cord, plug style: CEE 7/7	[ ]	Y	N/A	N/A		AWT	
	4.5m, China power cord, plug style: GB1002	[ ]	Y	N/A	N/A		AKM	
	4.5m, Server to UPS power cord, plug style: L6-30P	[ ]	Y	N/A	N/A		A5F	
	4.5m, Server to UPS power cord, plug style: unterminated	[ ]	Y	N/A	N/A		A5G	
	4.5m, Server to UPS power cord, plug style: C-20	[ ]	Y	N/A	N/A		A5H	
	2.0m, Jumper/Universal UPS-PDU power cord, plug style: C-20	[ ]	Y	N/A	N/A		A5N	
	Pwr Crd C19/ISI-32 2.5m BLACK CA ASSY	[ ]	Y	N/A	N/A		AKJ	
11.2	Factory Rack Kit and Installation into Rack System/E cabinet					J1528AZ		
	Must order one Power Cord Option below:							
	4.5m, North America power cord, plug style: L6-20	[ ]	Y	N/A	N/A		AW4	
	4.5m, International power cord, plug style: unterminated	[ ]	Y	N/A	N/A		AW5	
	4.5m, European power cord, plug style: IEC309/16A	[ ]	Y	N/A	N/A		AWU	
	4.5m, European power cord, plug style: CEE 7/7	[ ]	Y	N/A	N/A		AWT	
	4.5m, China power cord, plug style: GB1002	[ ]	Y	N/A	N/A		AKM	
	4.5m, Server to UPS power cord, plug style: L6-30P	[ ]	Y	N/A	N/A		A5F	
	4.5m, Server to UPS power cord, plug style: unterminated	[ ]	Y	N/A	N/A		A5G	
	4.5m, Server to UPS power cord, plug style: C-20	[ ]	Y	N/A	N/A		A5H	
	2.0m, Jumper/Universal UPS-PDU power cord, plug style: C-20	[ ]	Y	N/A	N/A		A5N	
	Pwr Crd C19/ISI-32 2.5m BLACK CA ASSY	[ ]	Y	N/A	N/A		AKJ	

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HP rx8620 ordering factory integration

The print on the slide is small. Use your reference material to follow along with the instructor.

HP 9000, Integrity (Itanium-based), and carrier-grade servers Ordering Guide, page 2-118 (bookmark: rx8620).

HP rx8620 ordering power supply and UPS

	Description		HP-UX	Windows	Linux	Product #	Opt #	Price
12.0	System Hotswap Power Supply (Required)							
	Order 1 additional supply for each ordered cell board. Redundant power supply							
	(N+1) is included with base system (A6093A)							
	Power Supply	[ ]	Y	N/A	N/A	A6099A	0D1	
	Uninterruptible Power Supply (UPS) (Optional)							
	Minimum power protection for single server - PowerTrust II-MR 6.5kW/9.0 kVA							
	UPS 230V (A6584A). Also available - PowerTrust II-MR (A6585A)							
	Refer to the Storage, Accessories, and Other Peripherals chapter of the Ordering							
	Guide for details							

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HP rx8620 ordering power supply and UPS

HP 9000, Integrity (Itanium-based), and carrier-grade servers Ordering Guide, page 2-119 (bookmark: rx8620).

HP 9000, Integrity (Itanium-based), and carrier-grade servers Configuration Guide, page 2-254 (bookmark: rx8620), page 4-31 (bookmark: Table 4.3.5), page 4-33 (bookmark: Table 4.3.8).

Configure and verify a system

Step 8: Configure system

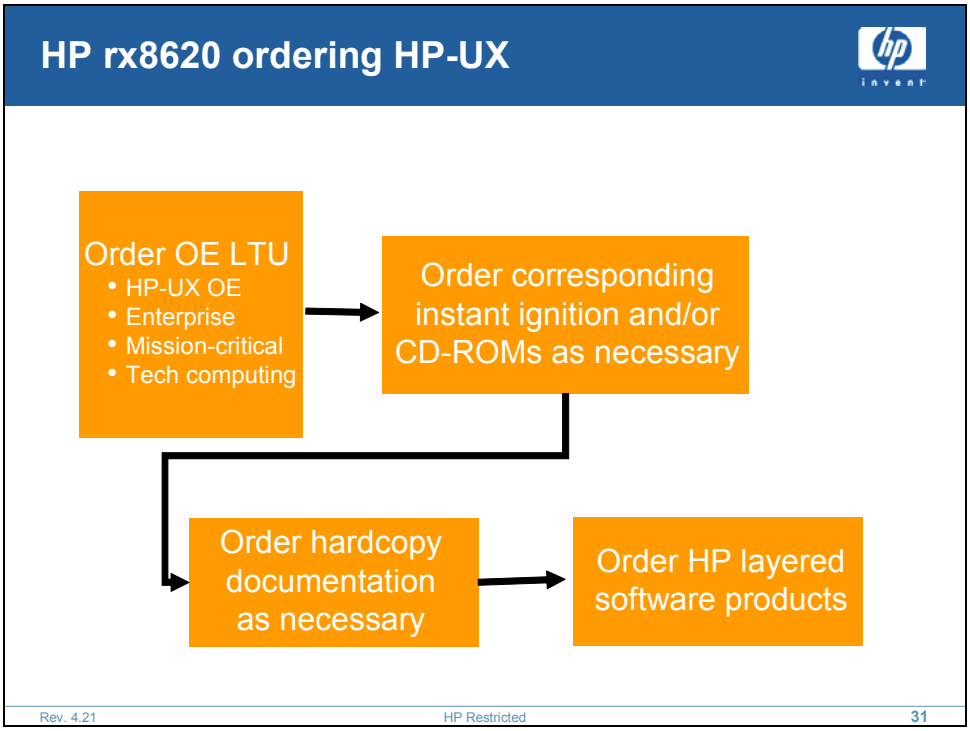
Step 9: Check configuration

Step 10: Determine hardware and software support needs

Step 11: Place order

Table 1.1 Configuration Process Flow Chart

Configure and verify a system



HP rx8620 ordering HP-UX

HP 9000, Integrity (Itanium-based), and carrier-grade servers Ordering Guide, page 2-115 (bookmark: rx8620), page 6-2 (bookmark: MC OE), page 5-10 (bookmark: OE Contents).

HP 9000, Integrity (Itanium-based), and carrier-grade servers Configuration Guide, page 6-11 (bookmark: HP-UX Ordering/Process).

HP rx8620 ordering support

15.0	Supplemental Systems Support							
	Select the desired supplemental System Support Product/Option for each ordered product noted with an asterisk(*).							
15.1	Supplemental System Support (Optional)							
	Select a HAxxxA1 product for 1 year of upfront support. Select a HxxxA3 product for 3 years of upfront support. For each order ensure that a consistent duration (1 yr. or 3 yr.) of support is purchased. When purchasing support options, ensure the hardware response time matches or exceeds the response time in the warranty.							
	IMPORTANT: Not all option features are offered with every option or supported product. Some of the HW option features (response time) are included with the standard warranty for the product.							
	Next Day Onsite HW Support	[ ]	Y	N/A	N/A	HA101A1/ HA101A3		
15.2	Additional System Support Options							
	HP Proactive 24 Service	[ ]	Y	N/A	N/A	HA111A1/ HA111A3		
	Select #900 (Proactive Environmental Services) and #100 (Proactive Server Services) for first server							
	b. Field Installation and Network Configuration (Optional)	[ ]	Y	N/A	N/A	HA113A1		
	Installation/network configuration (for customer-installable products)							
15.3	HP Critical Service					HA112A1/ HA112A3		
	Select #900 (Critical Environmental Services) and #100 (Critical Server Services) for first server.							

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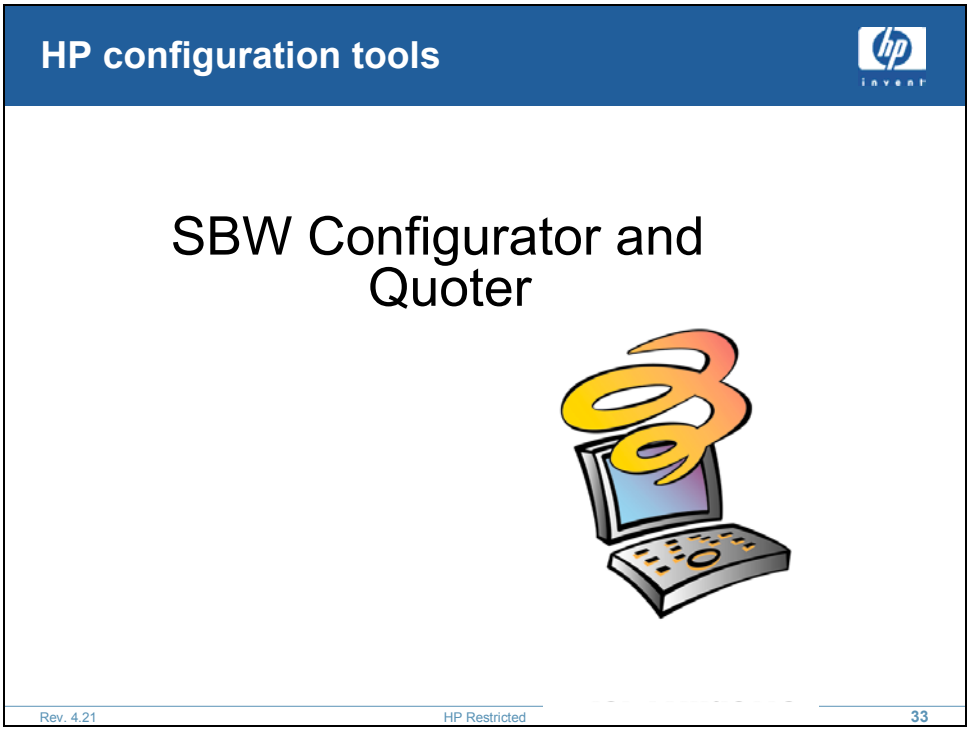
HP rx86200 ordering support



HP configuration tools

SBW for Windows Configurator and Quoter

SBW for Windows can be used on your PC or notebook as standalone applications and they are easy to use.

Internet access is only needed to access the software prior to installations and for updates. You do not have to be connected to the Internet to do configurations or quotes.

Overview

With the SBW Configurator, the only configurator you need to learn, you can:

- Put together all the components needed for configuring one or more HP servers, storage devices (with a server or on its own), workstations, and PCs.
- You can configure new systems, upgrades, and add-ons, make changes to configurations and quotes, leverage configurations and quotes you have already done, and quickly change a configuration or quote to meet your customer's changing needs.
- You can see a drawing of the system, verify the configuration according to the configuration rules built into SBW, and, with a simple click using SBW Quoter, you can generate a customized quote for your customer.

Features

- **Portable** — Install SBW on your notebook and take it with you anywhere. You can quickly configure systems right at the customer site or while traveling.
- **Fast configuration** — Use the system diagram, configuration worksheet or parts list to quickly configure, upgrade or add-on to systems. The easy-to-use interfaces, detailed help, built in configuration rules, and ability to leverage existing configurations allows you to quickly create and modify configurations for one or multiple systems.
- **Shows the system diagram and its modifications** — With one click you can view they system diagram and any changes you have made.

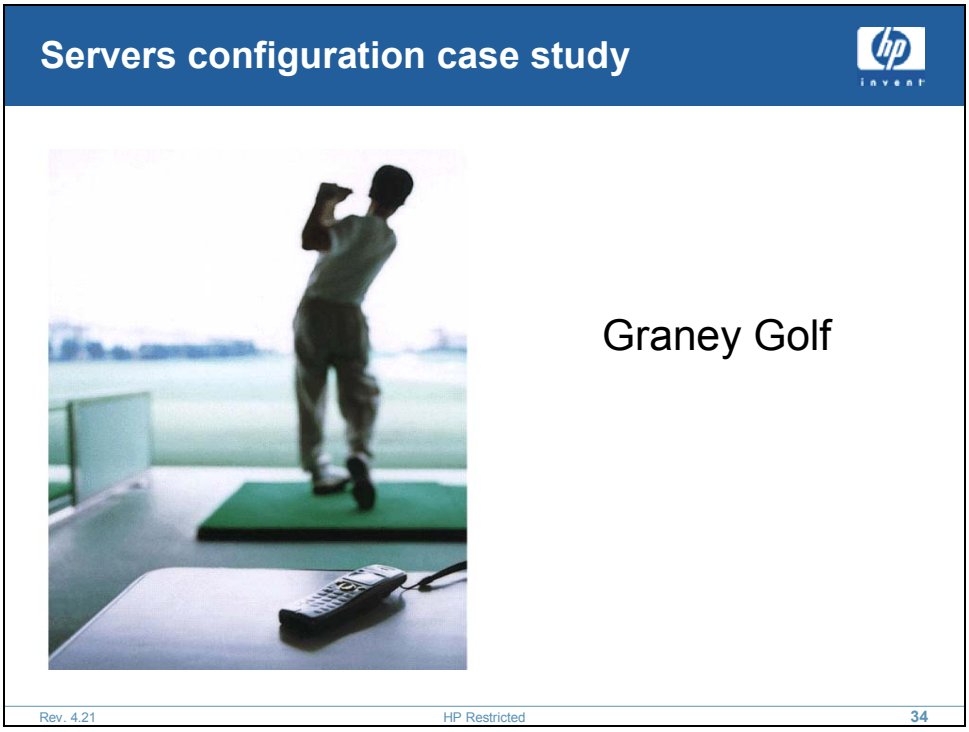
Benefits

- HP Configuration Tools reduce the need for the printed HP Configuration and Ordering Guides.
- These tools significantly reduce the time required to select all of the components necessary to build an HP system.
- The configuration engine checks the selections and alerts you to potential conflicts like an operating system that does not support a desired peripheral.
    - Before you start configuring with SBW Configurator, you do need to know certain information about your customer's requirements including:
        - Memory required
        - Storage required
        - Type of network connection
        - Support levels required
        - Operating system including version
        - Additional software needs
        - High availability requirements
        - Which system model is required to meet the customer’s requirements.

With this information and a little practice using SBW, you should be able to very quickly configure a system or systems for your customer.

The SBW Quoter

- The Quoter process in SBW allows you to add discounts, change pricing and margins, add comments, as well as other products to your document.
- You can customize how it will look and what it will contain; then you can save and print that information. This allows you to put a quote into your customer's hand quickly and accurately.
- One of the significant features of this utility is that it has the capability to display your net price for HP products. This allows you to see the impact of your chosen margins or discounts and make adjustments if necessary.



Servers configuration case study

Graney Golf

Graney Golf has led the golf industry's technical revolution since it was founded in 1979. In 1998, the company merged operations with Brock Sportswear, a manufacturer of performance golf footwear, apparel, and accessories. The combined company posted $650 million in total revenues for 2002. Graney Golf is a wholly owned subsidiary of Brock AG, a $4 billion regional company.

With its cutting-edge golf equipment popular with PGA golf professionals and avid golfers alike, Graney Golf is truly at the top of its game. Sales are outstanding and demand is strong for its metalwoods, irons, golf apparel, and footwear.

But while demand is strong, it is also unpredictable. In the past, using Excel spreadsheets, the company's planners tried in vain to determine how many of which clubs it needed to supply its retail customers.

"We never really knew how much of what we were going to sell in a given period of time," said Carol Cohen, eMarketing Manager for Graney Golf. "Because we did not have an accurate picture of demand, we would build up our inventory to guard against placing customer orders on backorder." Last year Graney turned its inventory 1.8 times.

The problem with unpredictable demand was exemplified by the company's popular "Go-straight" line of metalwoods and irons. When Graney Golf reduced the price of its popular "Go-straight" clubs, demand spiked well beyond Graney Golf's expectations—as well as its ability to deliver. So the company was in the frustrating situation of shipping "Go-straight" clubs to a limited number of customers, upsetting other customers, and missing sales opportunities.

Even though sales are good and Brock AG wants to avoid future situations like this in the future, they also need to control costs and see ROI within one year. But there was a way out of the rough. A change in management brought with it executives experienced in increasing demand forecast accuracy and optimizing the entire dynamic value chain. The company's leadership realized it could use the value chain as a competitive weapon to further distance itself from its competition and add even more value to its customer relationships.

Graney Golf wanted to first focus on more accurately gauging customer demand, then managing to that forecast in a more efficient manner. For example, because many golf club components come from the Far East, shipping can be a major cost. Transporting those parts over the ocean is much more cost-effective than flying them to the factories. But without an accurate demand picture, Graney Golf was often forced to expedite part shipments causing operating expenses to climb.

In addition to transport problems, Graney was experiencing problems designing new products and getting those new products to market in a timely manner. Graney Golf had always used AlphaServers and workstations to design their clubs. However, Brock AG typically used Sun servers and workstations so had no experience with AlphaServers. Since the merger, the Alpha systems have not been updated and the company has been in a quandary about what type of systems would work best to decrease development time and increase productivity.

They also need to reduce planned and unplanned downtime on their business servers as their inventory management becomes more mission-critical. The company's engineers love their current design applications and have told you they are available on all major platforms.

The company's management also expects to be able to increase inventory turns to at least 3.0 and improve customer service through higher fill rates and improved on-time deliveries. Higher fill rates are expected to increase sales by 15% as retailers, would be able to keep more Graney Golf products in stock. Marginal net profit on increased sales is expected to be 35%.

The applications

After thoroughly surveying the market, Graney Golf chose SAP and its suites of Supply Chain Management (SCM), Supplier Relationship Management (SRM) and Customer Relationship Management (CRM). Now management is looking for a hardware vendor to partner with them. According to Charlie Monasch, the CIO:

> "We want a partner that can handle all aspects of our requirements. We do not want to have to find multiple vendors and integrate not only our own legacy systems but also to other supply chain, supplier collaboration, and customer relationship management applications. One of the most important value-adds of SAP is that it handles all the integration. SAP systems already talk to each other, so we do not have to integrate supply chain applications with the CRM and SRM suites. With SAP integration already proven we are on the cutting edge and not the bleeding edge."

Specifications

Add CRM, SRM, and SCM server requirements including backup, business continuity and storage. Requirements need to indicate mid-range servers such as rp7410s or rp8400s. Assume that you will use EVA or XP storage, with Serviceguard and ProLiant workstations.

What are the customer benefits? How much will they add to profits in the first year after the new system implemented?

- Performance: TPM (Sybase) of 92,000
- SAP CRM application for 350 users
- SAP SRM application for 200 users
- SAP SCM application for 500 users

Each application requires 400GB of disk space, 10GB for the application and 390Gb for the data, 18GB memory to run all the SAP applications.

- Oracle databases
- EVA storage
- Offline tape backup
- 24x7 operation
- Disaster tolerant solution with second cluster to be used 40 miles away
- High availability

Your task

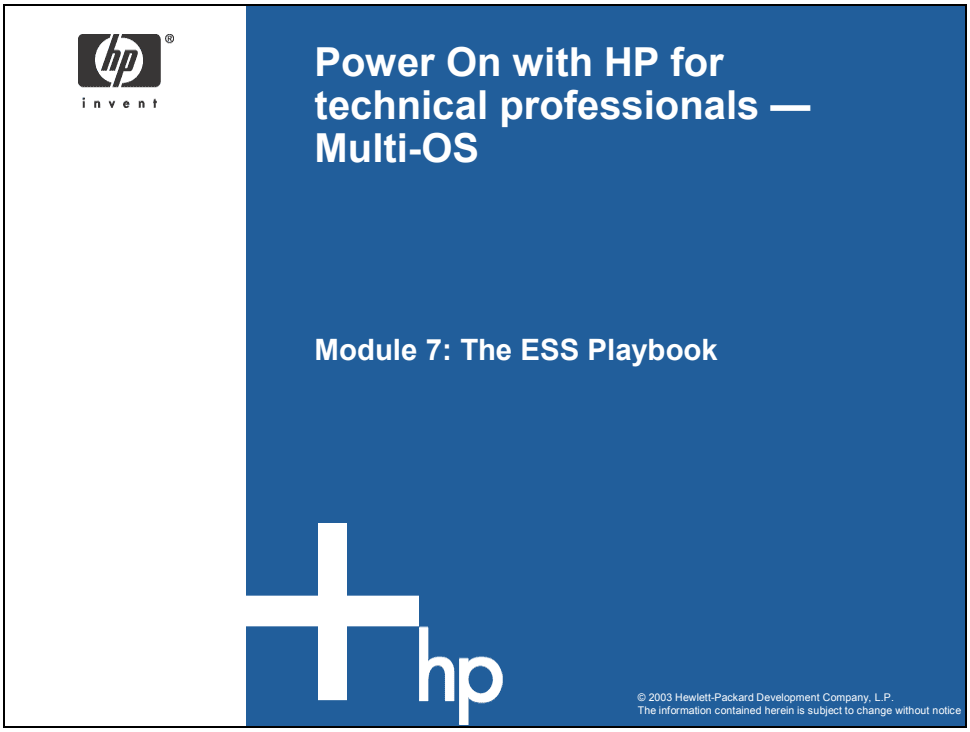
- Configure a solution that will meet Graney Golf's needs.
- Provide solutions for the design group.
- Identify recovery services, software solutions, support services, etc.
- You may not have enough information to completely configure the solution. Document the questions you would need to ask to obtain the necessary information. Then use the answers you think you might get to those questions to complete your solution.
- Prepare a presentation of your configuration using the transparencies provided.
- Include product numbers and rough pricing as a part of your solution. What are the customer benefits? How much will they add to profits in the first year after the new system implemented?
- Please prepare to justify your configuration.

Summary

- Configuration methodology
- Configuration tools

Summary

ESS PLAYBOOK



The ESS Playbook

Objectives

At the end of this module, you will be able to:

- Define playbooks and plays
- Discuss benefits of selling with plays
- Explain how HP Integrity server plays can save customers money now and into the future
- Use the ESS Playbook Tool

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Objectives

Agenda

- Definitions of plays and playbooks
- How plays facilitate selling
- Play example: Computer-aided engineering
- Play example: J2EE
- An overview of the ESS Playbook Tool

Playbook overview

- What are plays?
- Why should you care?

Focus your efforts so that they are the most productive

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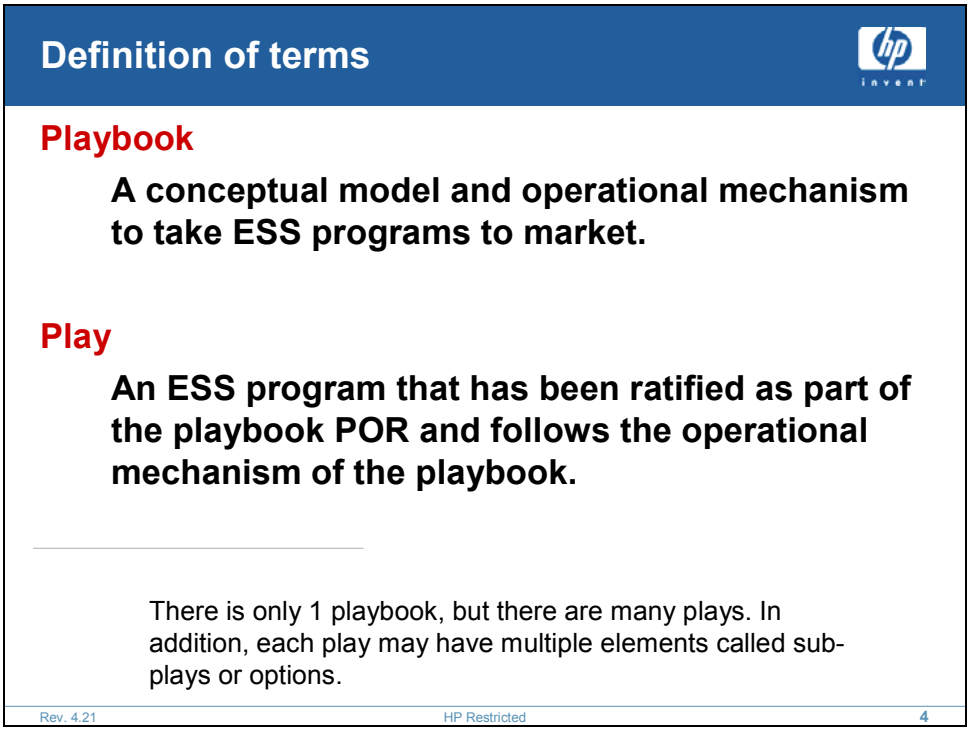
Playbook overview

You have many products, services, and solutions to sell, so how do you focus your efforts the most productively?

Additional information

Access the Playbook SPT for additional information.



Definition of terms

Playbook

The Playbook is a **collection** of qualified plays. It is NOT a document that you can find in a binder or any kind of document.

Play

A Play is a prioritized and aligned customer-centric approach to executing a program or program element, based upon the customer-stated direction, strategic choices, mental state, and competitive forces.

POR

Another term you may use is POR. POR is the Plan of Record that is a complete list of all the possible plays. The regions provide input and determine release dates.

Playbook objectives and goals

Help focus sales in areas where we have the best opportunity to WIN!

Objective	Goal
Align resellers with HP marketing strategy and initiatives	Optimize Reseller and HP investments
Focus sales efforts on opportunities with winning potential	Promote more effective selling
Consolidate information and resources	Enhance selling efficiency

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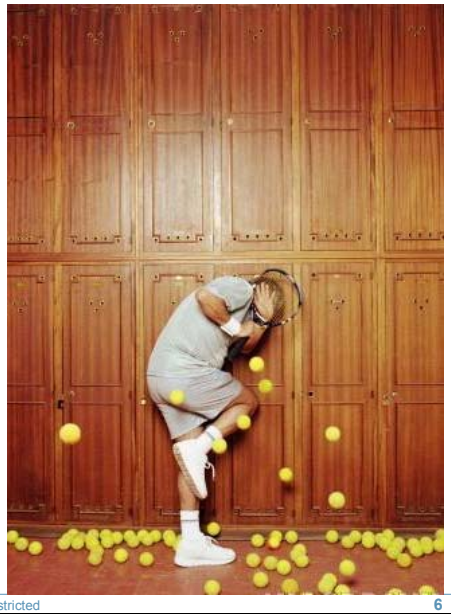
Playbook objectives and goals

The Playbook is a tool used by ESS to promote more effective sales. One of the things we have heard from resellers is, “Do not just tell us about the products. Instead, tell us how those products relate to customer needs and provide business value to the customer.”

The Playbook process does just that. It looks at the ESS portfolio and evaluates it based on customer needs and business value to the customer and to HP.

Selling without plays

- Selecting which opportunity to pursue first is done without clear focus
- Mapping customer needs to specific solutions is very difficult and time-consuming
- Staying abreast of all product maps takes too much time
- Identifying which HP marketing program applies is very tedious



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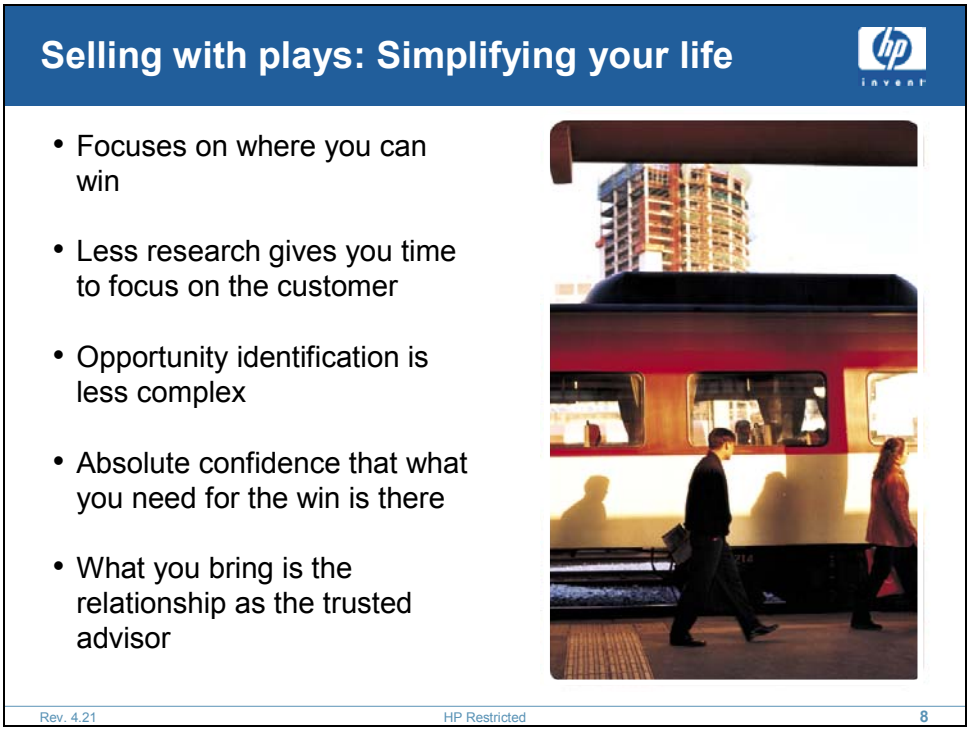
Selling without plays



Selling with plays: Simplifying your life

Example of using a play

1. Instead of going to a customer and trying to sell HP Integrity servers, you will research the customer's business objectives to see if they match up with any of the qualified plays. If they do not match up, then you save time by not calling on the customer.
2. If the customer does match up to one or more plays, then you pull the collateral for only those plays.
3. You then review the applicable collateral and prepare to call on the customer with the detailed information needed to let the customer know that HP clearly understands their challenges and has just the strategy, services, and products they need.

In other words, YOU are seen as a business partner or trusted advisor instead of just another vendor.

ESS play list

Currently available

- IBM Mainframe Alternative
- Enterprise Business Intelligence (BI) Infrastructure
- Virtualization
- Real Time Enterprise (RTE)
- ✘ Computer-aided Engineering
- NT4 to Windows 2003 Migration
- SAP R/3 to mySAP ERP
- Integrity Integration
- ✘ Integrity J2EE

Coming soon

- HP Best Practices
- Real Time ePayments
- Transactional Database
- SAP
- IT Consolidation
- Front-End Infrastructure
- HP Servers to Integrity Servers
- Legacy Storage Migration
- Rack to Blade Migration
- EMC Attack

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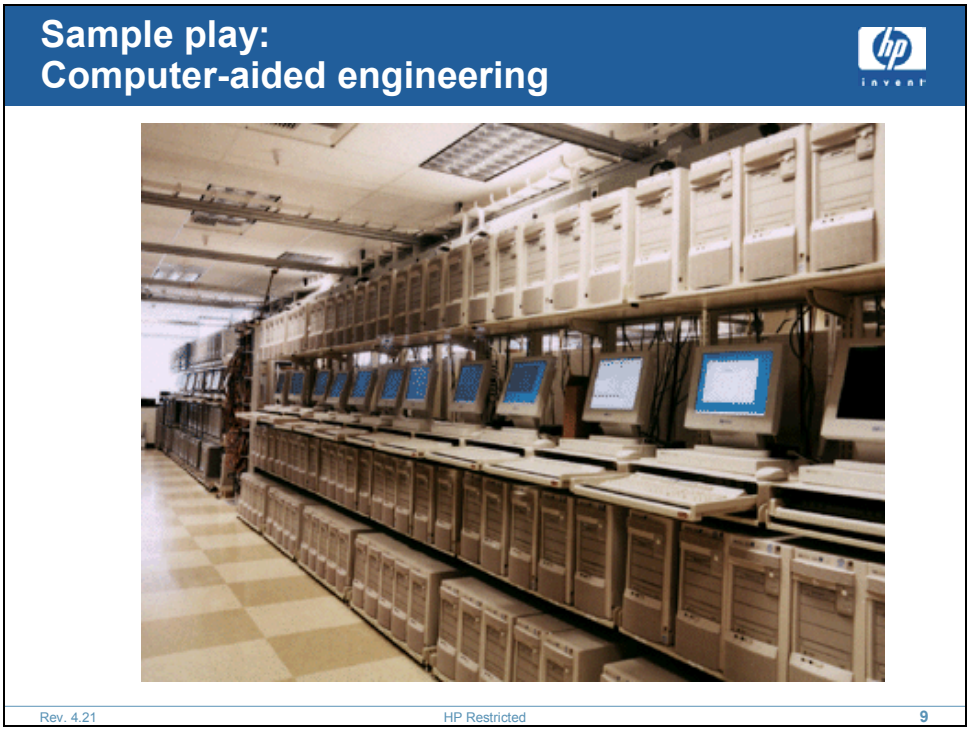
ESS play list



Sample play: Computer-aided engineering

Computer-aided engineering is known as CAE.

What is CAE?

- Employs modeling and simulation in the design of products
- Found in every aspect of manufacturing
  - Automotive
  - Heavy equipment
  - Aerospace
  - Tire and rubber
  - Chemical processing
- Includes the following
  - Structural analysis
  - Explicit (Crash) analysis
  - Fluid analysis

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What is CAE?

CAE applications are found in almost every aspect of manufacturing, including automotive, heavy equipment, aerospace, tire & rubber, chemicals (processing), and manufacturing.

CAE applications are generally broken down into the following segments:

- Structural Analysis — When CAD engineers design structural parts, a key question is how each part or assembly will perform under load. Will it bend? Could it be designed lighter? Instead of building a prototype and physically testing it until failure, engineering analysts can simulate stresses with structural analysis applications. Also called “Finite Element Analysis” (FEA), this technique is classified as “implicit” and can model linear behavior of a part up to the point of failure. Typical industries include aerospace, automotive, civil engineering, defense, industrial manufacturers, and national and university labs. Jobs are typically run over one to four, and at most eight, CPUs.
- Explicit (Crash) Analysis — A second major segment of FEA is Explicit Analysis and simulates the results of a dynamic impact—such as dropping a cell phone or crashing a vehicle. These events are non-linear and are modeled to predict cascading damage to structural and component integrity. Major users of crash testing include automotive manufacturers, who use it to save money by reducing the need for real-world crash tests. Crash analysis jobs typically run over 8 to 16 CPUs.

- Fluid Analysis — Computational Fluid Dynamics (CFD) is used for simulating the flow of air, fluids, heat, and viscous material. CFD applications have many uses in a wide variety of industries, including aeronautic sciences, drag simulation in car shape design, jet and thermal flow in engine design, and lava flow simulation. Jobs scale very well when run over 32 to 64 CPUs.

Opportunity: Why do you care?

- CAE is one of the hottest segments in HPTC
- HP's Itanium processor and ecosystem provides extremely close fit for high demand solutions
- Find new opportunities in existing manufacturing accounts
- Make your HP hardware quota
- Make your HP services quota
- Significant incremental opportunity linked to ERP system
- Rich upgrade opportunities
- Opportunity to team with leading ISVs
- Become a trusted supplier throughout your account

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Opportunity: Why do you care?

CAE is one of the hottest market segments in High Performance Technical Computing. The Itanium processor and the ecosystem developed by HP and its partners provide an extremely close fit to solutions customers are looking for in CAE market segments.

For multiple reasons, HP server sales representatives who call on manufacturing companies may not have typically called on engineering departments. This play summary suggests that now is the time to consider a fresh involvement in High Performance Technical Computing for reasons that should hit your pocketbook:

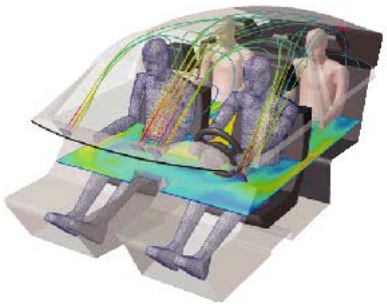
- CAE is one of the hottest segments in HPTC
- HP's products provide a very close fit for high-demand applications.
- You can find new opportunities in your existing account base.
- You can generate Itanium 2 server and cluster business that can be applied to your hardware quota.
- You can secure incremental opportunities and upgrade business. Winning an Itanium 2 server deal in engineering, where the value proposition is more mature, can pave the way for Itanium 2 to be positively considered in the next upgrade of your HP-UX systems in use in the commercial IT infrastructure.

Become a trusted advisor throughout your account. Customers in this segment demand a trusted supplier that can meet their requirements, plus provide reliable and comprehensive service and support. HP provides excellent performance and price/performance, application availability, and a complete and trusted suite of consulting, services, and support options.

Why sell HP CAE play?

HP is uniquely suited with:

- Performance and price/performance leadership
- Technical partnerships with key ISVs who have extensive portfolio of well-tuned Itanium-based applications
- Renowned system reliability
- Choice of operating system on workstations, servers, clusters
- Investment protection with in-box upgrades



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Why sell HP CAE play?

As an HP partner, why would you invest your valuable time in pursuing these projects in your accounts?

HP's strengths in this market segment lie in four important areas:

1. Reliable history of consistent improvements in performance and price/performance for HP customers — The Itanium 2 and Xeon product lines continue this trend
2. Complete portfolio of CAE applications well-tuned for HP platforms.
3. HP technical and business relationships with ISVs that assure customers of successful implementation of HP CAE solutions
4. Choice of HP-UX, Linux, and Windows environments on workstations, servers, and clusters to give customers cost-effective choices for their IT environments

Major trends and business challenges

Trends

- Achieving maximum compute power for least investment
- Analyzing problems of increasing size and complexity
- Using clusters and moving toward “commodity” processors
- Moving away from proprietary platforms

Challenges

- Reducing time to market
- Designing higher quality products in less time
- Lowering manufacturing costs

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Major trends and business challenges

Major market trends

The trends in CAE toward increasingly powerful, less expensive hardware and more sophisticated, easier-to-use software combine to make engineering analysis feasible today. This has enabled analytical engineering and process manufacturing organizations to vastly improve productivity, bringing products to market faster and cheaper.

For example, complex optimization studies, using computational fluid and solid mechanics techniques, enables product design integrity to be improved before costly investments are made in downstream operations.

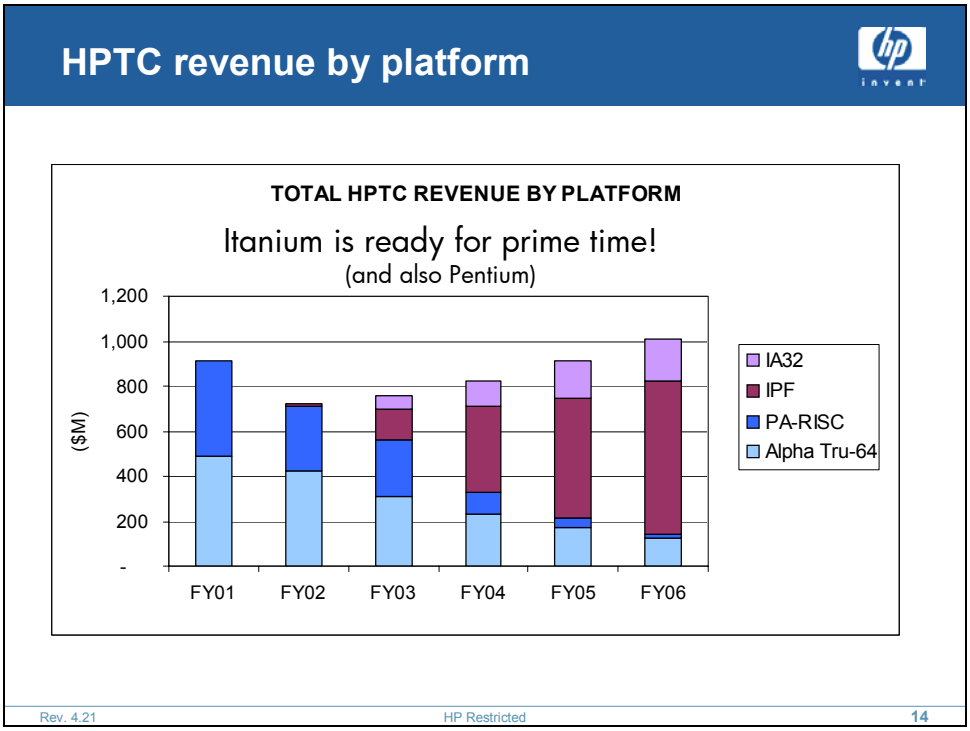
Rapidly changing hardware and software architectures makes it difficult to determine what hardware provides the best application performance. HP has teamed with leading independent software vendors to offer the best technical computing solutions for CAE needs.

Business Challenges

Because of increasing competitive pressures, CAE customers must improve their time to market by reducing their product design cycle times. A large portion of the time to bringing a product to market is the design cycle — the elapsed time from product idea to full production. If the design cycle is too long, the manufacturer misses the product introduction window, and the product will not be competitive.

Computer modeling enables higher quality products to be designed in shorter time. Manufacturers that do not keep up this increased quality will not be competitive. Competition is forcing companies to increase the quality of individual components as well as assemblies. Without expensive and time-consuming prototypes, computer modeling is the only mechanism for improving quality.

As product complexity increases, it becomes more difficult to create a lower-cost product, yet to remain competitive, product and manufacturing costs must be kept low. Products that are too expensive to manufacture, or are too expensive because of material costs, are less competitive in today's manufacturing environment. Additional modeling and simulation can lower these costs, but require additional compute power, additional applications, and increased IT costs.



HPTC revenue by platform

Rapid decline of PA-RISC and Alpha

PA-RISC platforms are making a quick evolution to Integrity because customers are able to move to Integrity without porting to a new operating system. And existing HP9000 platforms can be easily upgraded to IPF.

Over time, IA-64-based products will capture an increasing percentage of Alpha-based systems, consistent with HP's roadmap for the Alpha platform.

IA-32 will grow

In this graph, the IA-32 revenue only includes clustered Linux solutions that first became available in fiscal year 2002. However, moving forward in time, IA32 growth slows as IA-64 price performance improves.

Compelling events

Companies experiencing:

- Increasing competitive pressures
- Rising manufacturing costs
- Deteriorating product quality
- Losing business due to being late to market

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Compelling events

Companies exhibiting any of these conditions are excellent prospects for the CAE play, provided they have made the commitment to make the appropriate technology investments

What do you sell?

- Servers
  - HP Integrity servers
  - HP Proliant servers
  - Clusters
  - Workstations
- Operating environments
  - HP-UX
  - Linux
  - Middleware and tools
- Storage
- HP services
- ISV software solutions

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What do you sell?

The CAE play provides the opportunity to sell a full array of HP hardware from servers to clusters to workstations. The predominant operating systems will be HP-UX and Linux. Storage will also be an opportunity along with the standard HP services.

As is the case in all HPTC segments, ISV applications often lead the sale and the CAE play provides a great opportunity to work in cooperating with these market specialists.

HP services for CAE

- System installation and tuning
- Application loading and version control
- Setup of job-management queuing
- Output file storage
- Archiving

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HP services for CAE

In addition to the standard menu of services, HP offers comprehensive service and support options designed for CAE customers, including managed services, consulting and integration, and guaranteed response time services. These services offer the following:

- Single point of accountability lifecycle support
- Proven proactive and reactive services available around the clock and around the world

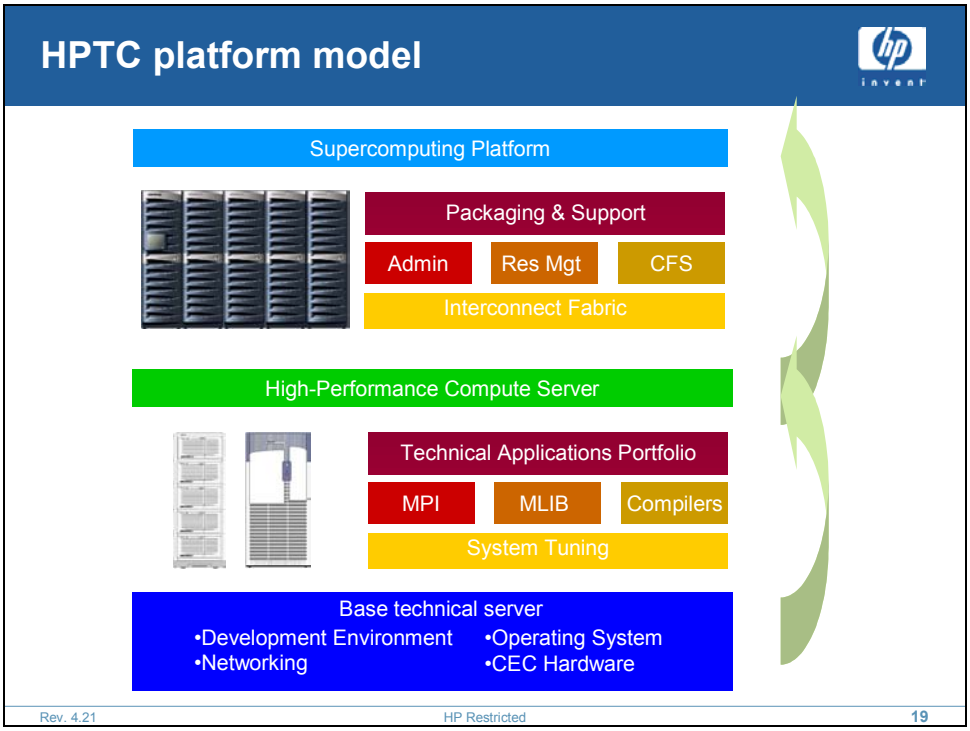
Flexible service plans to suit their needs and their budget. Services that HP is able to offer CAE customers include: system installation and tuning, application loading and version control, set-up of job management queuing, output file storage and archiving.

ISVs involved in the CAE play

A complete CAE solution demands more than high-performance hardware—it also demands a wide variety of certified software. HP Integrity servers and clusters support all of these ISV solver applications on the HP-UX operating system. Many of these applications are also available for Linux system applications support.

HP holds a unique position for CAE customers. Because of a long history of serving the technical computing community and demonstrating core expertise in HPTC applications development, HP has gained a reputation as a trusted advisor to third-party software partners.

HP supports all major CAE applications on Itanium under both HP-UX and Linux operating environments. For the HP-UX operating environment, HP has worked directly with the ISV to provide a highly optimized version of an application, specifically designed to take advantage of the features of the Itanium processor architecture.



HPTC platform model

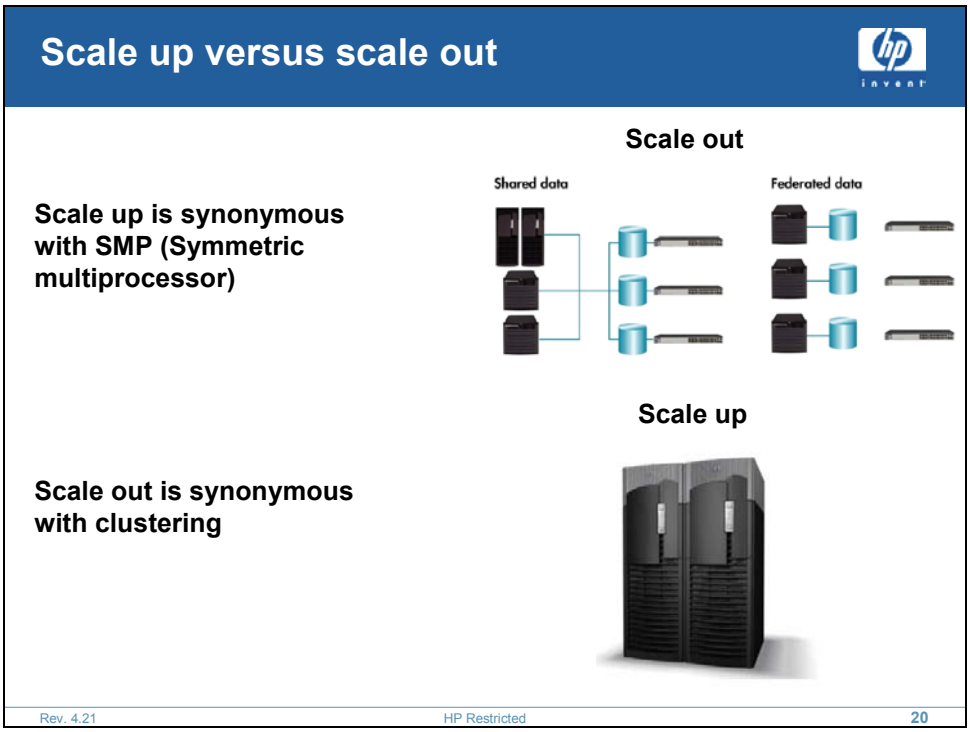
This is an architectural view of what the offerings look like as we take them out to market. Remember, the strategy is to use and leverage commodity off-the-shelf technology. So the base platforms are the same platforms that you are already selling.

HP has a technical computing operating environment, which has some of the parameter and Kernel settings to optimize it for an HPTC environment. , HP also has a number of very important tools for customers, such as MPI or Math Libraries, that are common across all kinds of different competitors or open-source tools. You can get these anywhere. What HP does is optimize them for scalability and performance and provide needed support. HP has the best implementation in the industry.

Part of the reason BP Americas chose HP for the same Itanium processors that they could have bought from an Intel or IBM-made system was the performance differentiation HP drives out of the proprietary chipset and some of the software.

Beyond what it takes to build a high-performance compute server, HP has added higher-level components, such as interconnects, clustered file systems, and management tools, which turn our systems into a super-computing environment.

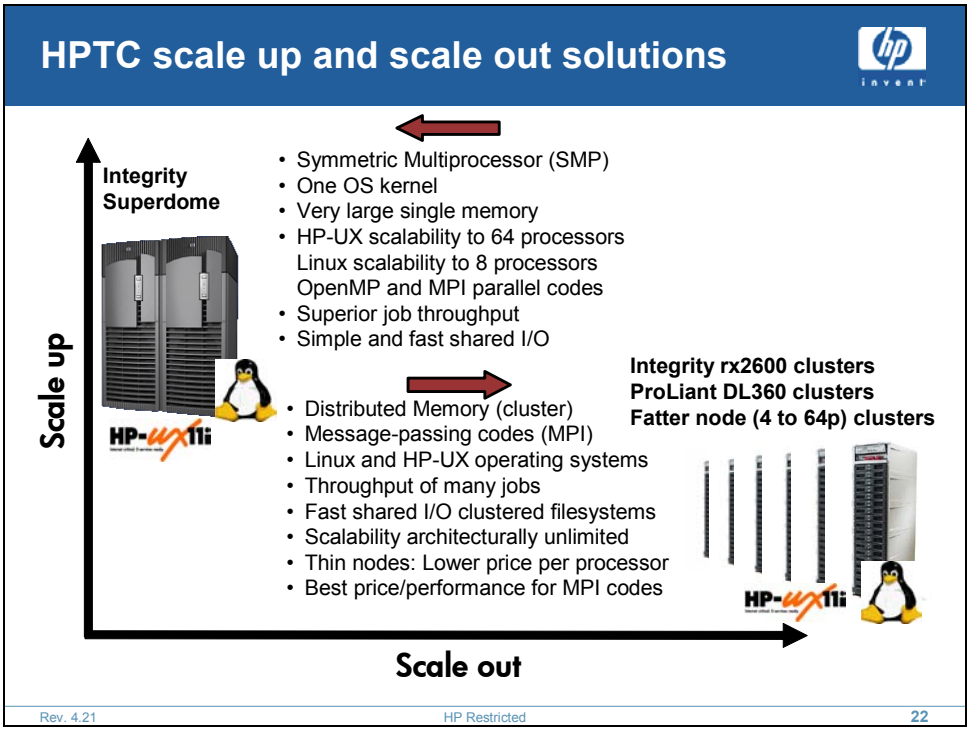
The HPTC market is comprised of 60% standard server products and 40% high performance clusters. HP has designed elements of the system infrastructure, such as the Zx1 and sx1000 chipsets, to provide systems with higher levels of performance. Invented entirely by HP and used exclusively in HP platforms, these chipsets represent a value-add in a standards-based world of computing.



Scale up versus scale out

Scaling up refers to adding processors on a common memory and running a single kernel across all the processors, such asa 64-processor Superdome running a single partition of HP-UX.

Scaling out refers to connecting multiple server nodes with Ethernet or some higher-speed interconnect, such as Quadrics, Myrinet, or Infiniband. Each server node runs an independent copy of UNIX or Linux. The collection of nodes can scale to higher performance than with SMPs and often offers better price/performance than SMPs. However, scale-out systems can be harder to configure, install, manage, and program compared with SMPs. As scale-out technologies are improving, more customers are choosing the better – price/performance path of scale-out technologies.



HPTC scale up and scale out solutions

HP offers several combinations of scale-up and scale-out solutions with a mix of HP-UX and Linux operating systems based on ProLiant and Itanium server nodes:

- HP-UX scale-up:
  - Limited to 64p Superdome
  - Itanium rx2600 to Superdome servers: 2p, 4p, 8p, 16p, 32p, and 64p
- HP-UX scale-out:
  - Limited to 64p Itanium
  - HPTC/ClusterPack based on any Integrity server node, thin or fat
  - Choose from Ethernet and HyperFabric2 interconnects, with faster InfiniBand interconnects available in early 2004
- Linux scale-up:
  - Limited to 8p partitions on cell-based Integrity servers
  - Higher SMP scalability in years to come
- Linux scale-out:
  - Limited to 512p for large systems, extra large by request
  - Multiple Linux scale-out solutions based on ProLiant and Integrity servers

Selecting the right operating system

Customer-driven decision: both HP-UX and Linux are good choices

Scale up and scale out solutions differ by operating system

(SMP or medium clusters)
Integrity only

- Better SMP support (64p, ½ TB memory)
- May have lower TCO (not a common perception)
- Larger ISV base – ISV driven
- Dominates HPTC market share now and for years to dome
- Proven technologies for industrial computing

(Mostly for clusters, medium or large)
Integrity or ProLiant

- Faster growth rate, newer technologies
- Popular with leading-edge customers
- Growing, but smaller, ISV list
- ProLiant Linux price-performance can be excellent when ProLiant clusters meet customer requirements
- Higher cluster scalability with good shared-file system support

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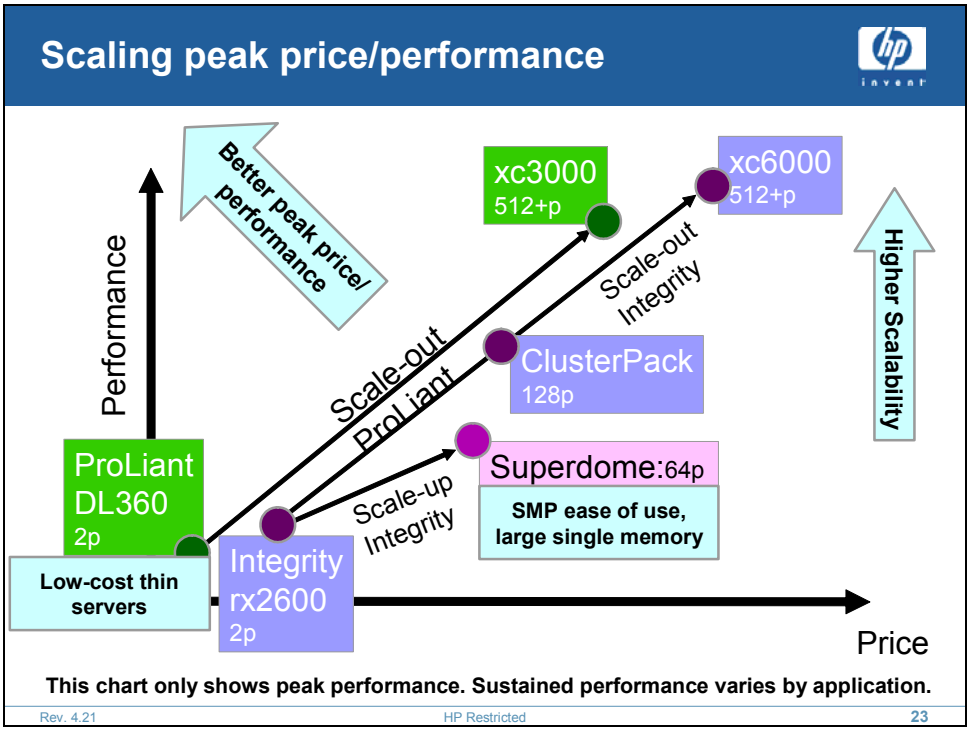
Selecting the right operating system

Currently, some applications are available on Itanium workstations running Windows XP-64. Over the next few years, this environment will be completed and will be ready to handle HPTC workloads. Until then, HP-UX and Linux are the operating systems of choice for this segment. Unlike previous hardware choices, Itanium 2 offers customers the unique flexibility to change operating systems as applications become available or as technical needs change, but without having to swap hardware.

For customers with in-house-developed CAE applications, HP provides HP-UX and Linux tools for Itanium 2 that enable the smoothest creation of native Itanium 2 applications in the industry.



Scaling peak price/performance

HPTC-oriented benchmarks

HP Integrity servers, based on the Itanium 2 processor, have again achieved record results on several important high-performance technical computing benchmarks, including SPEC HPC2002, SPEC OMP, and the new Purdue Top Application Performance benchmark ratings.

These new results, along with previously reported record results, place HP Integrity systems at the top of many of the prestigious HPTC-oriented benchmarks lists, including Linpack, SPECfp, Purdue's TAP list, SPEC OMP OpenMP, and the SPEC HPC benchmarks.

SPEC OMP

The HP Integrity Superdome server running IA-64, 1.5GHz Itanium 2 processors on the HP-UX operating system is the first system of any size to break the 300,000 barrier for SPEC OMP large performance with an official score of 303,161 on the SPECompLpeak2001 benchmark.

This same system also set the official leading score for any size server of 289,967 for the SPECompLbase2001 benchmark. These SPEComp large results are more than 53%higher than SGI's fastest results on an Origin 3900 system, faster than a Fujitsu HPC2500 system that used twice as many processors, and faster than results reported by all other vendors.

SPEC HPC2002

With these new record-breaking SPEC HPC2002 results on SPECchemM2002 of 56.66 and SPECenvM2002 of 309.95, HP now holds the number one position on the primary TAP list maintained by Purdue University. HP also leads the TAP OMP list based on SPEC OMPM2001. TAP lists are new high-performance computer rank lists that use realistic application benchmarks to measure performance. The primary TAP list, also referred to as the TAP HPC list, ranks high-performance computers based on the SPEC HPC2002 benchmarks, which are the largest, most realistic computational application benchmarks that are available to the public today.

Linpack N*N

In addition, HP Integrity leads the industry on 64-processor, shared-memory Linpack N*N performance, sustaining 341.685Gflop/s. HP Integrity systems also have maintained the leading position on the Linpack report, with no challengers since the 1.5GHz, Itanium 2-based HP Integrity systems were released in June 2003. These servers secured 1,635Mflop/s for the 100x100 result and 5,303Gflop/s.

SPECfp 2000

Since its introduction in June 2003, the HP Integrity rx2600 server has held the record for the fastest server SPECfp 2000 result in the industry: 2,106. This result is yet to be challenged by any other vendor. The HP Integrity systems also maintained their leadership on the SPEC ENV2002 benchmark, with no challengers in this last round of updates.

FUD from Sun Microsystems

FUD # 1: Sun will claim leadership in system technology because SunFire 15K leads in terms of aggregate system bandwidth at 172GB/s and CPUs at 72+

FUD #2: Sun will claim leadership emerging in the HPC market because the number of systems went up from 37 to 88

FUD #3: Sun will claim leadership in GRID-technology because Sun has the GRIDengine with more than 2,500 installations

FUD #4: Sun will claim leadership in operating-system technology because Solaris is popular and (again) will be ported to IA-32

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FUD from Sun Microsystems

FUD #1

Sun will claim leadership in system technology because SunFire 15K leads in terms of aggregate system bandwidth at 172 GB/s and CPUs at 72+

HP' position

The SunFire15K's reference manuals just talk about 43GB/s, and the per-CPU application performance is, in general, dramatically lower against the Intel Itanium, Alpha Tru64, and PA-RISC architectures. For comparison, a 64-way HP Superdome system provides 64GB/s of system bandwidth.

FUD #2

Sun will claim leadership emerging in the HPC market because the number of systems went up from 37 to 88

HP' position

Most Sun systems are in the lowest quarter of the TOP500 list. Sun has only 6.3% of the installed performance versus HP with 22.1% (based on Rmax). Further, why are there so many unnamed sites in the list?

FUD #3

Sun will claim leadership in GRID-technology because Sun has the GRIDengine with more than 2,500 installations

HP' position

The de facto standard is Globus and the fact that 2,500 "GRIDengine CDs" have been shipped doesn't say anything about installations. Globus runs on HP-UX and Alpha Tru64.

FUD #4

Sun will claim leadership in operating-system technology because Solaris is popular and (again) will be ported to IA-32

HP' position

The Solaris version on IA-32 is "little endian," and there is now also a Linux strategy for IA-32—but (still) no "Solaris on Itanium" plan. Solaris has also lost its feature leadership against HP-UX. Traditionally, the heart of Sun's product line has been workstations, blades, and other low-end systems; Linux is consuming this market space and pushing out Solaris-based systems.

For years, Grid computing has been the province of academic and government researchers, who have been hooking together individual computers around the world to perform compute-intensive tasks.

These virtual supercomputers, which can quickly process vast amounts of information, have helped produce breakthroughs in meteorology, physics, medicine, and other fields. Scientists have even harnessed the power of the Grid in the SETI@home search for extraterrestrial life.

Now researchers at HP are working to bring the benefits of Grid computing to the corporate world. Grid computing will let enterprises use their IT resources more efficiently. It will allow collaboration within a company on any kind of compute task of any size or duration. It will make it possible to set up ad hoc, secure IT projects between geographically disparate units, and even across organizational boundaries.

Sales: Qualifying Questions

- Is the customer under increasing pressure from competitors?
- Are their costs of designing and producing products increasing?
- Are their products becoming less competitive as a result of decreasing quality and/or increasing price?
- Is the competition beating the customer to market? Is the customer losing business as a result?

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Sales: Qualifying

Qualifying questions are not so much questions you need to ask the customer as questions you need the answers to so you can determine if the customer is a good opportunity for the HP CAE play.

The customer is a good candidate if:

- They are under increasing pressure from competitors
- Their product design and manufacturing costs are rising.
- They are becoming less competitive because of product quality issues and increasing prices.
- They are losing business to their competition that is beating them to market with new products.

Sales: Selling tips

The Itanium architecture provides high floating-point performance and a 64-bit address space, a perfect fit for the types of computation required for CAE applications. Your customer will be dealing with these kinds of problems:

- **Problem size.** Have them evaluate both IA-32 and IA-64 architectures.
- **Double precision math.** Have them assess their three-year plan of problem accuracy and evaluate adopting more 64-bit math in their models in the near future.

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Sales: Selling tips

Problem size

When talking with a user who is examining both IA-32 and IA-64 architectures, focus on the trend of problem sizes at that site for the last few years. For many structural analysis users, a problem size limit will be reached soon, if not already, and larger problems will not be solvable on IA-32 hardware. Given a typical three-year life of new hardware, a 64-bit solution such as Itanium 2 is required for customers approaching the 32-bit address space limit, so encourage the user to design a very large benchmark that represents future requirements, not last year's problem. This will substantiate a key value proposition of Itanium.

Double-precision math

As problem sizes grow and job run-times increase, rounding errors in the algorithms can accumulate sufficiently to deteriorate the quality of the generated answers, undermining the purpose of the model in the first place. To mitigate these effects, many applications now use 64-bit arithmetic. While all 32- and 64-bit architectures can execute this type of math, native 64-bit processors, such as Itanium 2, see much less of a performance impact. Again, ask the customer to assess their three-year plan of problem accuracy and see if they will be adopting more 64-bit math in their models in the near future.

Sample play: Integrity J2EE

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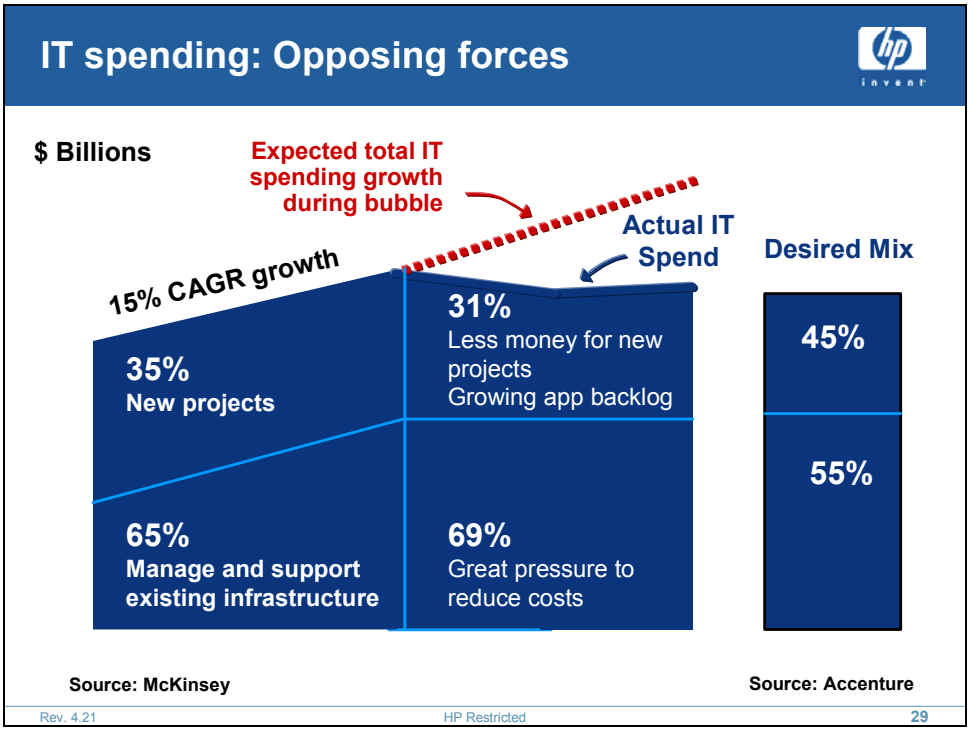
Sample play: Integrity J2EE



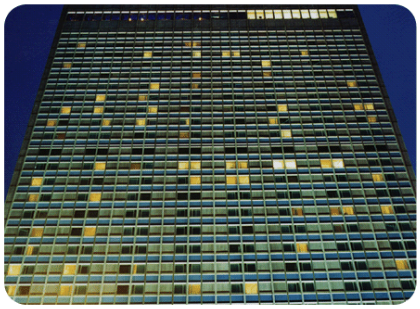
IT spending: Opposing forces

Your customers' IT budgets fall into two areas—what they spend to manage and support existing infrastructure and what is left over to spend on new projects that move their business forward. As you can see in this chart, IT budgets have flattened while the cost of maintaining existing systems has grown, leaving less to fund new projects. At the same time, IT professionals would like to spend about 55% on existing infrastructure and 45% on new projects.

This pressure to control or reduce spending for current infrastructure support so that IT can spend more on new projects is giving rise to significant sales opportunities, including the one that we will be discussing next, the J2EE play.

What is J2EE?

J2EE is Java 2 Platform, Enterprise Edition, designed to simplify application development



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What is J2EE?

BEA: Who are they?

World's leading application infrastructure software company

- 15,000 customers
- 77 offices in 24 countries

Why BEA:

- Evolve existing software applications from legacy architectures to Web infrastructures
- Lower the total cost of IT
- Leverage current and future assets
- Improve IT productivity and responsiveness

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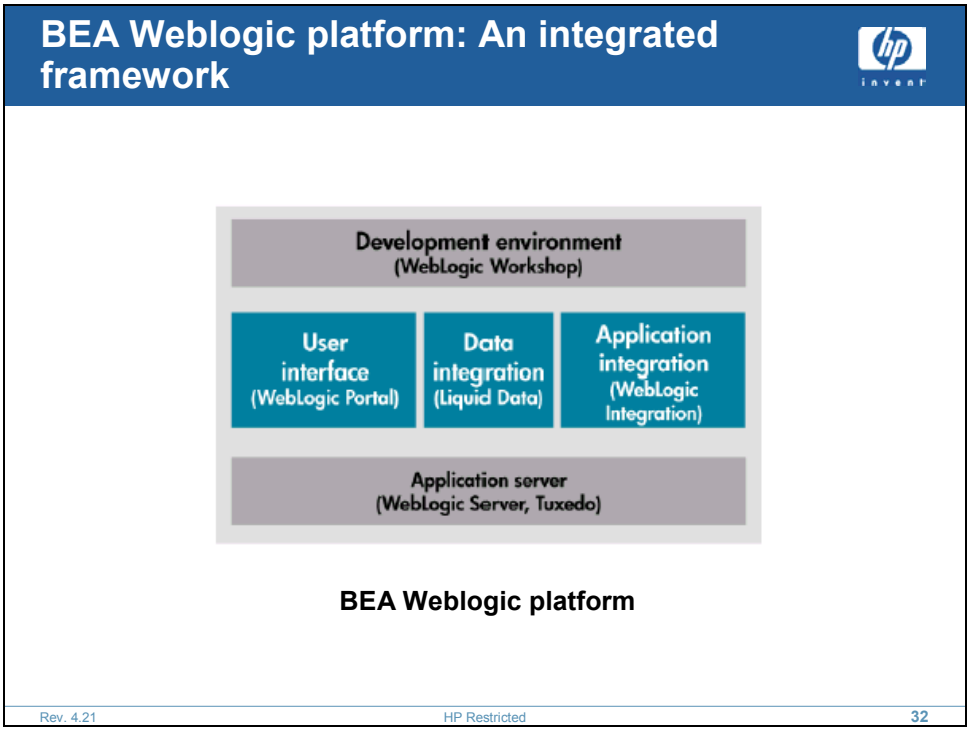
BEA: Who are they?

BEA is one of the world's leading application infrastructure software companies with more than 15,000 customers around the world, including the majority of the Fortune Global 500. BEA is a key supplier to enterprise organizations to help them evolve their existing enterprise software applications from inflexible, redundant, legacy client/server architectures to highly responsive, mature Web infrastructures, helping lower total cost of IT by simplifying the complex environments many companies have developed over time.

In addition to BEA Weblogic Server 8.1, BEA provides:

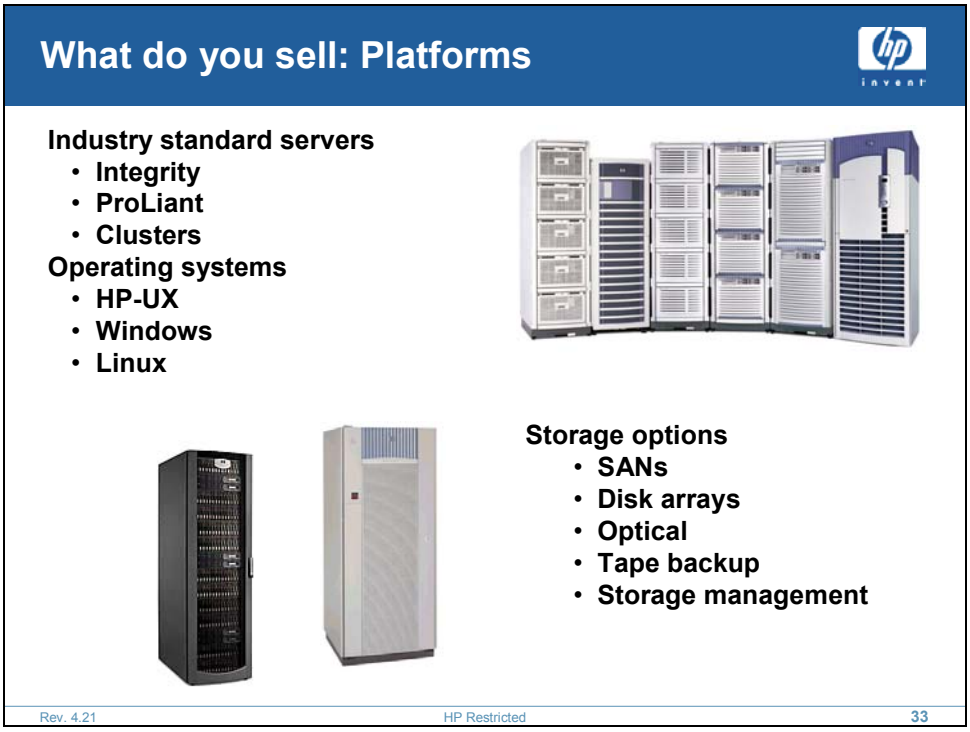
- BEA Tuxedo — An industry-leading enterprise transaction-processing monitor that provides a premier development platform for building and deploying business-critical applications. It has the same APIs as HP NonStop
- BEA WebLogic Platform — The first enterprise application infrastructure to converge the processes of development and integration for faster time-to-value in building and deploying applications and Web services
- BEA Weblogic Server — An industrial-strength application infrastructure for developing, integrating, securing, and managing distributed Java applications that deliver value in less time with reduced costs while simplifying and unifying the enterprise infrastructureBEA WebLogic Portal — A portal that simplifies access to relevant content, increases productivity, ensures user satisfaction, and minimizes development and administration time, reducing time to market and overall costs
- BEA Liquid Data for WebLogic — An applications that simplifies access and aggregation of distributed information, providing real-time visibility for front-office applications such as portals, customer service, and support

- BEA WebLogic Workshop — An integrated development framework that empowers all application developers, not just J2EE experts, to rapidly create, test, and deploy enterprise-class Web Service applications on the BEA WebLogic Platform™
- BEA WebLogic Integration — A standards-based, single solution delivering application server, application integration, business process management, and B2B integration functionality for the enterprise, designed to speed time to value, reduce the costs of IT initiatives, and future-proof businesses
- BEA WebLogic Jrockit — The first Java Virtual Machine (JVM) to be uniquely optimized for the Intel platform, enabling Java applications to run with increased reliability and performance on lower cost, standards-based platforms such as HP Integrity
- BEA WebLogic Enterprise Security — An application security infrastructure solution that uses a service-oriented approach to enable applications to leverage shared enterprise security services. It combines centralized policy control and visibility with distributed policy decision-making and enforcement.



BEA Weblogic platform: An integrated framework

WebLogic Server is part of an integrated framework, called BEA WebLogic Platform, which incorporates a number of different applications, the foundation of which is WebLogic Server.



What do you sell: Platforms

Servers and clusters

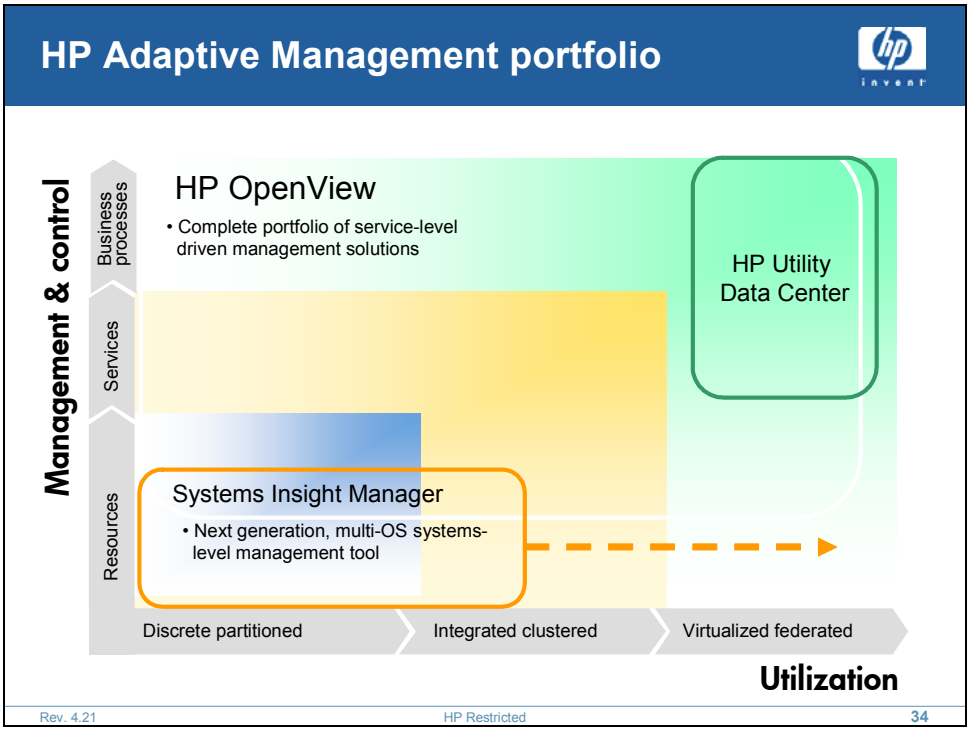
Although any of HP's broad range of servers can be included in a J2EE play, the focus is on the Integrity servers and clusters. The open-standards focus of the BEA Weblogic Server most closely matches the open standards architecture and adaptive enterprise messaging of these HP servers.

Storage

Any of HP's storage products can be included in the J2EE play, depending on what the customer needs. However, the virtualization built into the HP Storageworks EVA and HP's Storage Area Management suite best support what you, the BEA sales rep, and your customer are most likely to be working toward—an adaptive infrastructure.

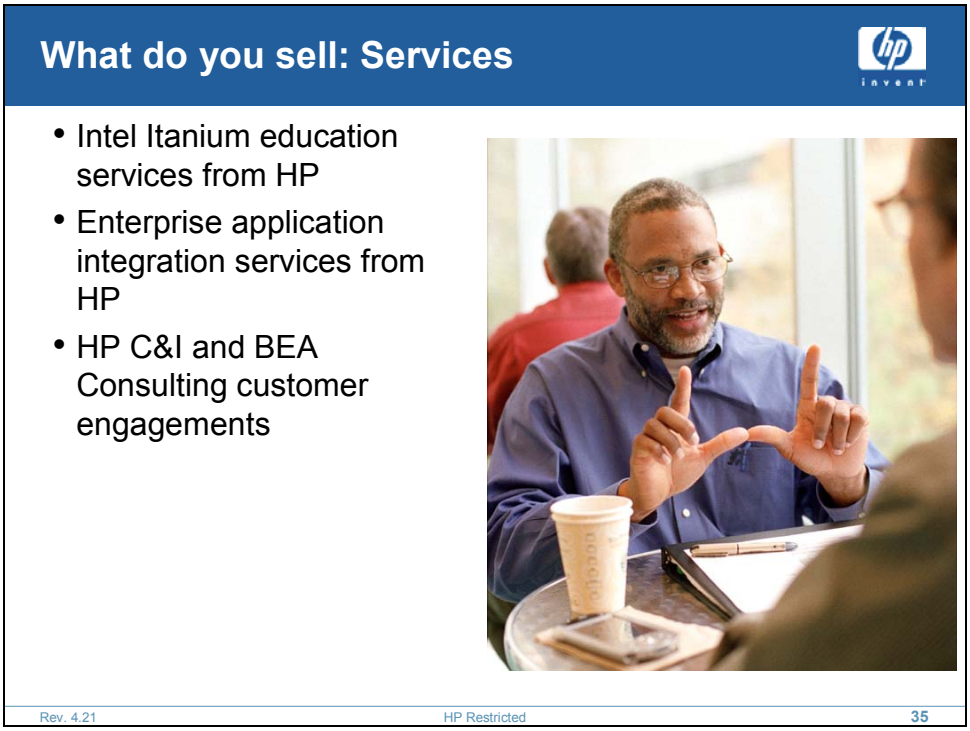
HP Services

HP's standard menu of hardware, software, and start-up services, along with an extended warranty are opportunities for this play.



HP Adaptive Management portfolio

Pursuing the J2EE play also provides an excellent opportunity to uncover management software and services opportunities. The HP OpenView portfolio plays a key role in the services level of the enterprise, where J2EE falls, as well as in the other two management levels of the enterprise—resources and business processes levels.



What do you sell: Services

In addition to our standard menu of hardware, software, and start-up services, along with an extended warranty, HP provides several services specifically designed for customers who are consolidating the application tier of their IT environments.

Intel Itanium education services from HP

Through a dedicated team of HP J2EE-certified consultants, HP offers professional services to help you implement BEA solutions and integrate them with an existing environment. These services include:

- General integration assessment and prototyping — HP assesses business and technical needs and then designs or prototypes a BEA-based solution
- Migration to BEA — Guides customers through all the steps of migration, from analysis through implementation, to help them reduce business risk and build an adaptable infrastructure
- BEA upgrade service —Helps customers upgrade from WebLogic Server 5.1 and 7.0 to 8.1 and to migrate to an HP Integrity platform
- BEA WebLogic and Java performance tuning service —Helps improve performance and expanded capabilities

Together, HP and BEA offer a seamless approach to integrating new Web-based applications with legacy systems across heterogeneous environments.

Enterprise application integration services from HP

Many companies looking to increase the efficiency and effectiveness of business units turn to enterprise application integration (EAI). The right enterprise integration services and solutions can improve business processes, information flow, and data quality by incorporating Web services technologies into legacy enterprise application solutions. HP Services professionals work with the customer's team to help plan, design, implement, manage, and support enterprise application development solutions incorporating Web services technologies.

Built on tried-and-true lifecycle methodology, HP's phased approach includes these steps:

1. Assessment
2. Proof of concept
3. Pilot
4. Architecture and design
5. Development and implementation
6. Management and support

As needed, HP also provides the foundation elements for extending .NET and J2EE-based solutions, including enterprise message bus, enterprise repository implementations, and migration services.

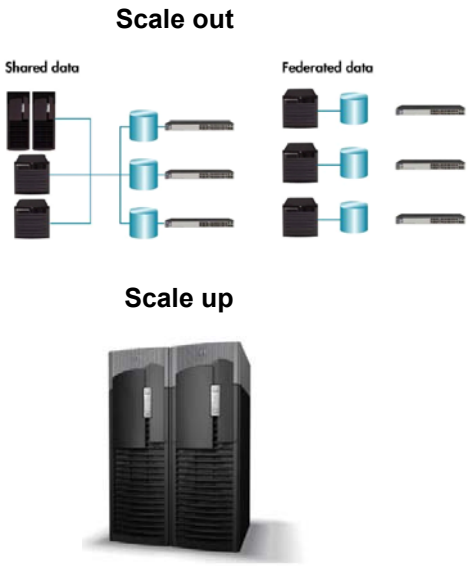
HP C&I and BEA Consulting customer engagements

BEA is committed to successful technology adoption by customers in conjunction with HP C&I. Together, HP and BEA provide:

- Engagement process
- Complementary sets of skills and offerings
- Joint development of repeatable horizontal and vertical end-to-end solutions

What is new?

- The dramatic increase in high-volume, transaction-based web applications has created the need for robust application servers
- With the availability of BEA Weblogic Server 8.1, customers now have the option to scale up as well as out when seeking additional capacity
- Customers are now seeking standards-based infrastructure solutions to enhance their flexibility



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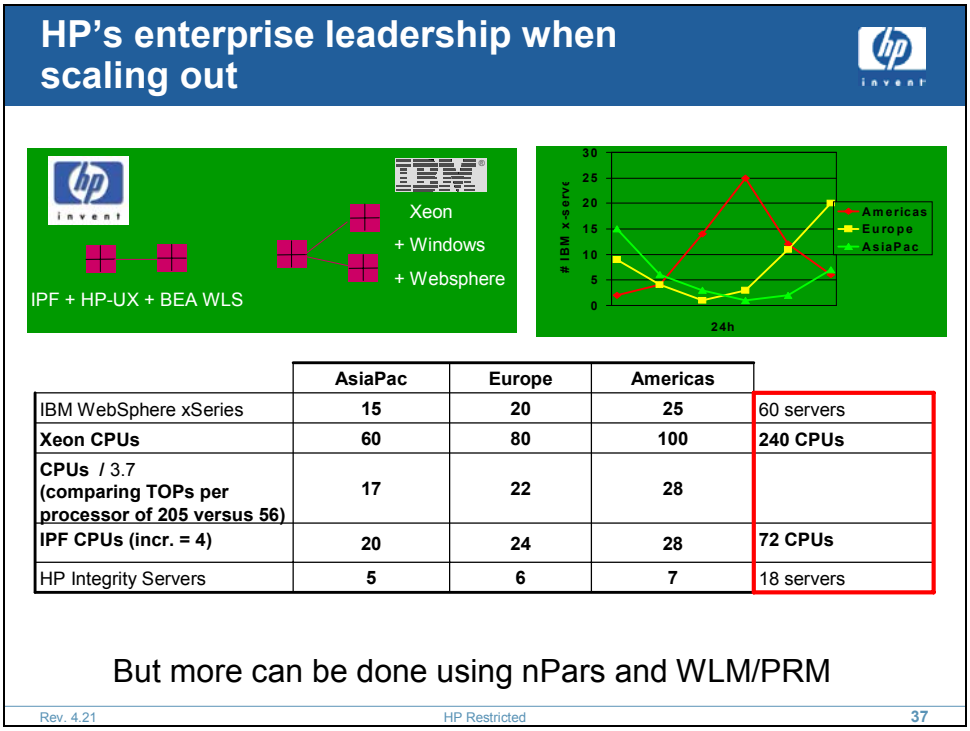
What is new?

Since the dot.com boom of the late 1990's, the industry has seen a dramatic increase in high volume, transaction-based, web applications which have created the need for robust application server. With the availability of BEA Weblogic Server 8.1, customers now have the option to scale up as well as out when seeking additional capacity. This creates a unique opportunity for HP and BEA to help customers consolidate and save on software and administrative costs.



	AsiaPac	Europe	Americas	
IBM WebSphere xSeries	15	20	25	60 servers
Xeon CPUs	60	80	100	**240 CPUs**
CPUs / 3.7 **(comparing TOPs per processor of 205 versus 56)**	17	22	28	
IPF CPUs (incr. = 4)	20	24	28	**72 CPUs**
HP Integrity Servers	5	6	7	18 servers

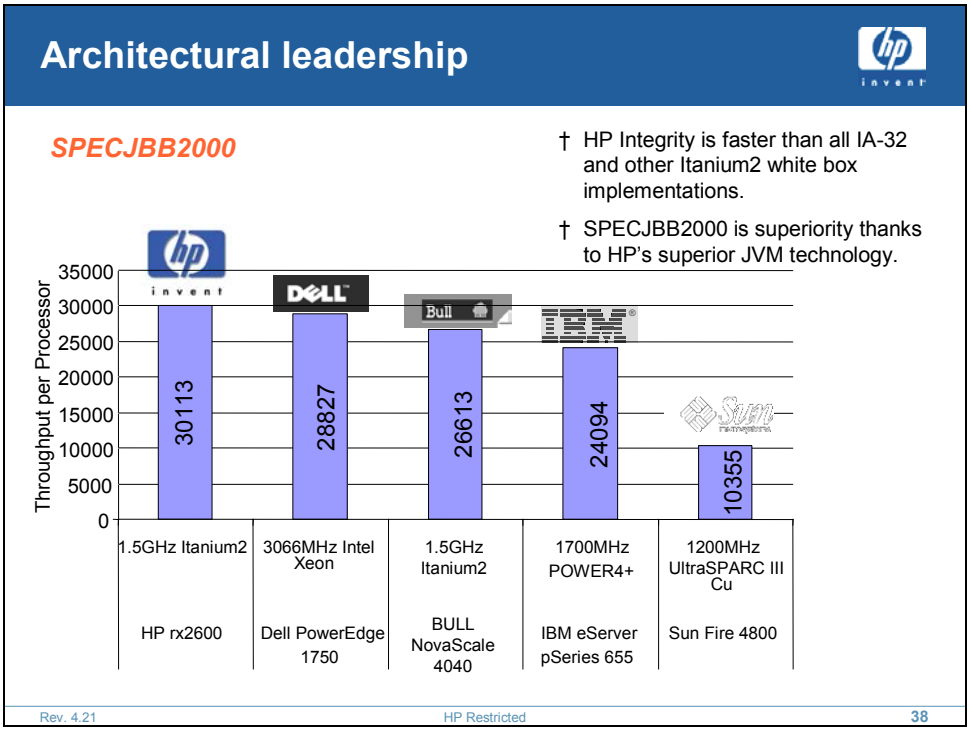
HP's enterprise leadership when scaling out

Let us review an example of a customer deploying a Java application serving three different geographies. Due to management, upgradeability, and content localization needs, the customer must deploy different servers for each region. After sizing the installation, the customer considers they will need 60 servers with 240 Xeon processors running IBM WebSphere.

If we try to deploy the same installation on an HP Integrity server rx5670 with 1.5GHz CPUs, we can decrease the number of CPUs dramatically. Because we are selling a 4-way server, we are going to round in multiples of four. The result is we will only need 30% of the licenses and servers.

This is already a great gain in manageability, along with cost and support of license savings, upgrades, and floor space. As an illustration, if the customer was purchasing standalone WebLogic Server 8.1 licenses at $17K per license, the reduction in support costs alone would be $1.1 million per year: 240 processors – minus 72= 168 licenses x $6550.

Do not forget the next stage, putting everything into nPartitions on a Superdome 64-way and using HP-UX tools such as WorkLoad Manager to manage the WLS instances. There, the cost of management becomes minuscule compared with managing 60 IBM x-series servers with Windows and WebSphere.



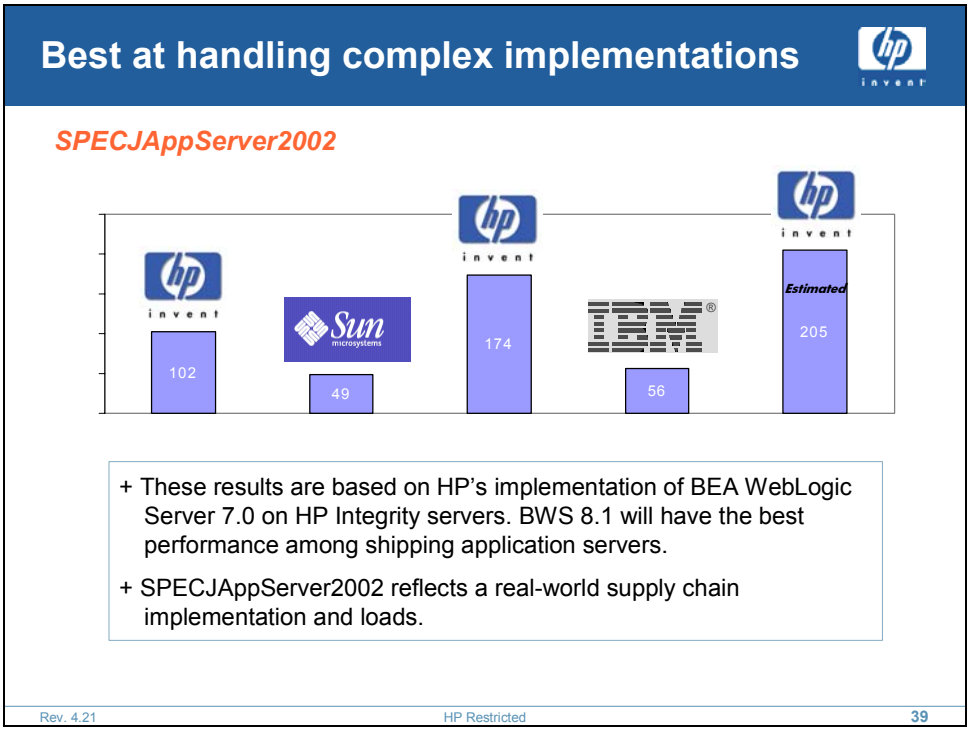
Architectural leadership

SPECJBB2000 compares vendors' ability to implement and run a tuned JVM on their system architecture.

HP produced better performance numbers than other vendors, running both IA-32 and Itanium 2-based systems. This shows HP's superior system implementation capability and Java software engineering skills as HP purchased Sun's Hotspot JVM and tuned it for use on HP Integrity servers.

Notice that all of these performance numbers are between 17K and 30K throughputs per processor. SpecJbb2000 numbers from the year 2001 on competitive Sun and IBM platforms were between 5K and 8K throughputs per processor. Theoretically, a customer operating an application server that is only 2 years old could get a performance boost of as much as 600% by moving to HP Integrity.

The real savings is in software license reduction, because most application server support is 20-23% of the cost of the license itself. Theoretically, the 600% performance improvement would mean needing 1/6 the number of application servers to achieve the same throughput. And this consolidation could be paid for purely by the reduction in software license support.

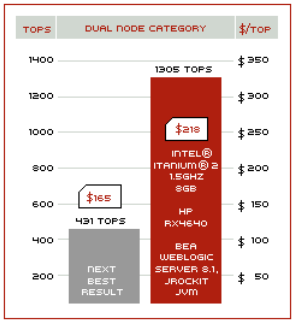


Best at handling complex implementations

The results seen on this slide are based on Weblogic Server running 7.0 which is at least 30% slower than 8.1. The performance boost with 8.1 is illustrated on the following slide.

The best SPECJAppServer2002 result put out by IBM is 27% of the worst number seen on Itanium 2. Sun's last published performance number is 24% of that observed on Itanium 2 running the same BEA WebLogic Server software.

Benchmarks



SPECjAppServer2002 benchmark results

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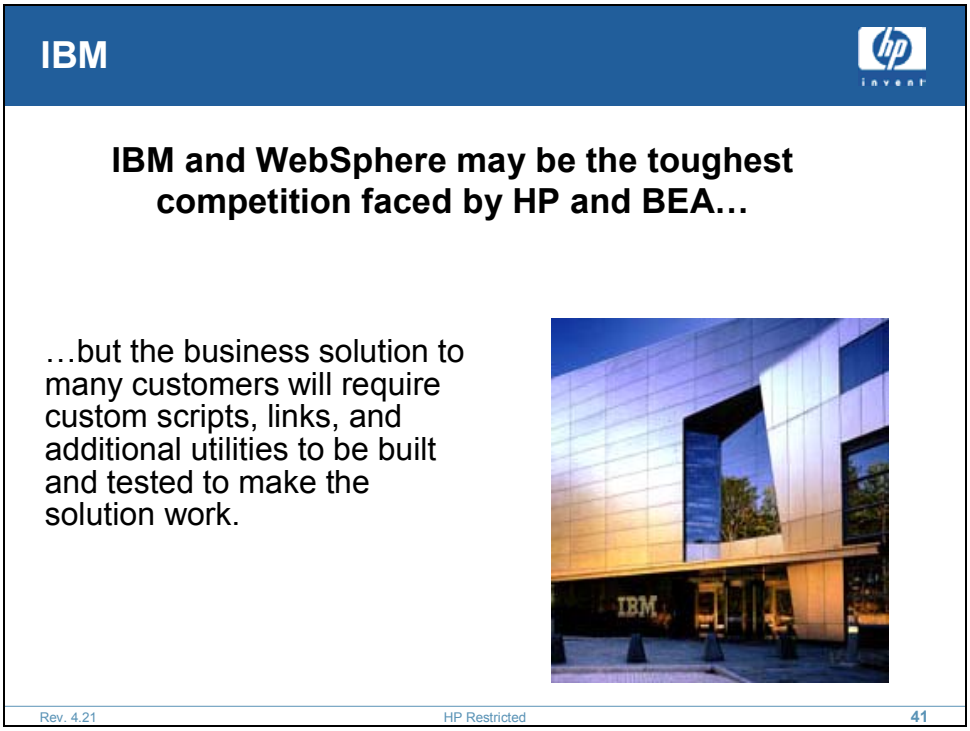
Benchmarks

BEA Systems and HP recently announced new record-setting SPECjAppServer2002 benchmark results on BEA Weblogic Server 8.1, achieving three times higher transactional throughput than the closest competitor at only a slightly higher price per transaction. The complete "solution stack" processed 1,305 Total business Operations per Second (TOPS) using the workload that models a Fortune 500 enterprise manufacturing, supply chain, and order/inventory application. This extremely high throughput, translated into more understandable terms, represents the entry and processing of manufacturing orders at the rate of approximately 10,753 order line items per second. Price/performance of $218/TOPS represents the total cost of each transaction, including all of the hardware, software, and three years of 24x7 support.

The application was deployed on two HP rx4640 servers, one running BEA WebLogic Server™ 8.1 and another running Microsoft SQL Server database. BEA WebLogic Type 4 JDBC Driver for MS SQL server was used to access the database. Each HP rx4640 had four Itanium 2 processors and 8GB of RAM.



IBM

IBM and WebSphere may be the toughest competition faced by HP and BEA. By one study, IBM had the largest share of worldwide application integration software revenue at 19.6%, beating the next competitor by more than double. The strategy of using HP Workload Manager and BEA WebLogic Server together to reduce resource usage can only be partially countered by IBM. Although they have WorkLoad Manager, full functionality similar to HP's is only available on the mainframe.

IBM's strategy

However, IBM has a clever strategy. Where IBM positions Linux on Xeon-based systems, many times they end up selling Linux consolidation on virtual machines running on a zSeries mainframe because of the manageability and high availability of the platform. According to many observers, IBM's WebSphere is a product that has been characterized as a "brand" of disparate products rather than an integrated platform. It includes at least 300 different software pieces tied together by services and developers who need to create links to meet a customer's needs. IBM may be effective at selling its products as a business solution, but it is a solution that requires custom scripts, links, and additional utilities to be built and tested to make the solution work. The problem is that once IBM gets into an account, the customer is locked into IBM's expensive integrated development environment (IDE). This greatly reduces customer choice, especially if the customer is not happy with the implementation and wants to shift to a best-of-breed vendor such as BEA.

Key competitive points

Key points for BEA/HP versus WebSphere/IBM:

- IBM has made a point of releasing SPECjAppServer2002 benchmark results using a Xeon 4-way server running Windows and WebSphere. However, most of their more useful tools for implementing consolidation are only available on the MQ Series, AIX, and mainframe-based servers.
- IBM is up to two years behind BEA in standards support, resulting in an inability to take advantage of the latest productivity advances.
- IBM's LPAR and DLPAR capability is functionally rich and can assist in application consolidation efforts with WebSphere. However, this can only be done on their expensive MQ Series, POWER4 servers, or mainframes.
- WebSphere has weak interoperability with .NET.
- IBM's Workload Manager does not have goal-based features outside the mainframe
- There are several points where IBM provides a less reliable platform:
  - The admin server is a single point of failure.
  - There is no support for mission-critical platforms.
  - If the database connection fails, WebSphere must be re-started.
- Integration with WebSphere consists of more than five products that cannot be easily ported onto WebSphere.
- WebSphere versions 3.X, 4.X, and 5.X have three different code bases requiring different skill sets.
- Over 50% of IBM revenue is from services. By IBM's admission, for every $1 spent on middleware, $12 is spent on integration services. With a HP/BEA implementation service, costs will run $6 or less for every $1 spent on middleware. In fact, complexity is inherent to WebSphere.

WebSphere clustering

It appears that WebSphere clustering is a tool available on all of their platforms, but on their Website they only seem to recommend implementation of high availability on WebSphere using the WebSphere MQ series eServer, zSeries, or iSeries—their AIX and mainframe products. This is a technique used by IBM to lead with a lower-priced, Intel-based solution and then sell up into a mainframe or even an outsourcing engagement.

HP Sales Strategy

IBM is able to use WebSphere running on the Linux or AIX architecture in conjunction with other software tools and IBM Global Services to effectively solve customers' business problems. When going against IBM, use the strategy of HP's industry-standard, Itanium 2 micro-architecture in conjunction with the best-of-breed WebLogic Server to counter the complexity, high cost, and proprietary nature of an IBM implementation. Use the stronger SPECjAppServer2002 and SPECjbb2000 performance numbers that show the Itanium architecture's better per-processor performance.

When BEA competes with IBM

- When BEA competes with IBM, they win 95% of the time.
- In 120 accounts, BEA displaced IBM despite Big Blue's "lock-in".
- At Otto, a recent HP/BEA win in Europe, IBM lost in spite of offering 800 days of free consulting.

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When BEA competes with IBM

Noted results when BEA competes head-to-head with IBM

- During one quarter towards the end of 2002, BEA competed with IBM in 212 accounts and won 200 of the deals (success rate of >95%)
- There were 120 accounts where BEA replaced IBM WebSphere during the same time period—despite the "lock-in" that IBM gets, many customers choose to move to BEA
- During a recent HP/BEA win in Europe at Otto, IBM offered 800 free days of consulting as part of the implementation, with HP offering 200 days. HP/BEA still won the deal on TCO

Sun

- The performance of older Sun/Solaris Weblogic servers is considerably less that current HP offering
- No capability for creating .Net or other standards interactions
- Sun has large gaps in J2EE standards compliance
- No pure Java JTS
- No EJB 2.0 or message driven beans
- No Web Services infrastructure or tools
- Weak clustering and scalability
- Conflicted strategy with BEA and own Sun ONE
- Poor benchmark results

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Sun

Any customer running an older Sun/Solaris WebLogic Server, an iPlanet (Sun ONE) environment, or an older IA-32–based application server should be considering consolidation as part of their strategy. The reason is that Java performance has improved dramatically in the past three years—up to 5 times when compared with some platforms—and customers can achieve significant cost savings.

Other comments regarding Sun ONE:

- Sun's implementation is very Solaris-centric, so no capabilities are available for creating .NET or other standards interactions.
- There are large gaps in J2EE standards compliance.
- There is no pure Java JTS (Java Transaction Service) integrated transaction support.

There are no EJB 2.0 or message-driven beans.

- There is no Web Services infrastructure or tool.
- There is weak clustering and scalability features.
- Sun has a strategy that is encompassing a partnership with BEA, as well as using Sun ONE.
    - While Sun sells and positions their own middleware product Sun ONE, they actively promote their own BEA alliance. Information on the alliance can be found at www.sun.com/solutions/third-party/global/bea/index.html.

- In direct contrast, there is also a set of Sun migration tools located at www.sun.com/migration/sunonetools.html for customers wishing to move off older versions of BEA WebLogic Server and onto Sun ONE. The migration tool allows customer who are currently running BEA WebLogic Server 5.1, 6.0, or 6.1 to migrate to Sun ONE.

Sun: Key weaknesses

- Sun has not published any benchmarks on Sun ONE, indicating weakness
- Beginning with J2SE 1.4.1, the Java HotSpot server JVM does not support operation on chips with SPARC v8 architecture
- There are no notable customer successes with Sun ONE

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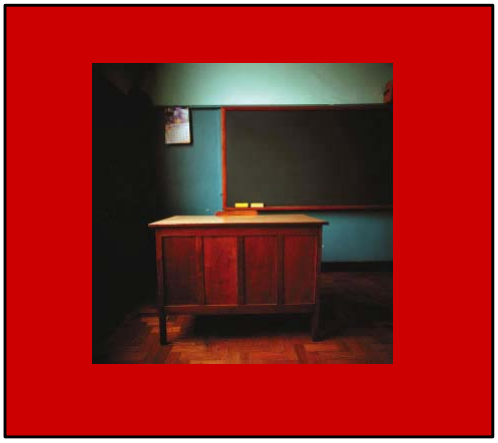
Sun: Key weaknesses

Sun has several additional weaknesses that are worth noting:

- Sun has not published any benchmarks on Sun ONE, which indicates weakness relative to the real competition such as BEA WebLogic Server and IBM WebSphere. In addition, Sun recently published a SPECjAppServer2002 benchmark using BEA WebLogic Server 8.1 that was less than half the result achieved on an Itanium 2-based server running WLS 7.0—48.72 versus 102.01 TOPS per processor. The really bad news for Sun is that WLS 8.1 has better performance than WLS 7.0, and the performance superiority of HP Integrity servers over Sun UltraSPARC-based servers can be as much as a four to one.
- Beginning with J2SE 1.4.1, the Java HotSpot server JVM does not support operation on chips with SPARC v8 architecture. The SPARCstation family of processors, including the SPARCstation Workstation, SPARCstation Classic, SPARCstation 2, SPARCstation 4, SPARCstation 5, SPARCstation 10, SPARCstation 20, and SPARCstation Voyager processors are affected by this change.
- There are no notable customer successes involving Sun and Sun ONE. This has already been used to successfully counter Sun and Sun ONE in competitive situations.

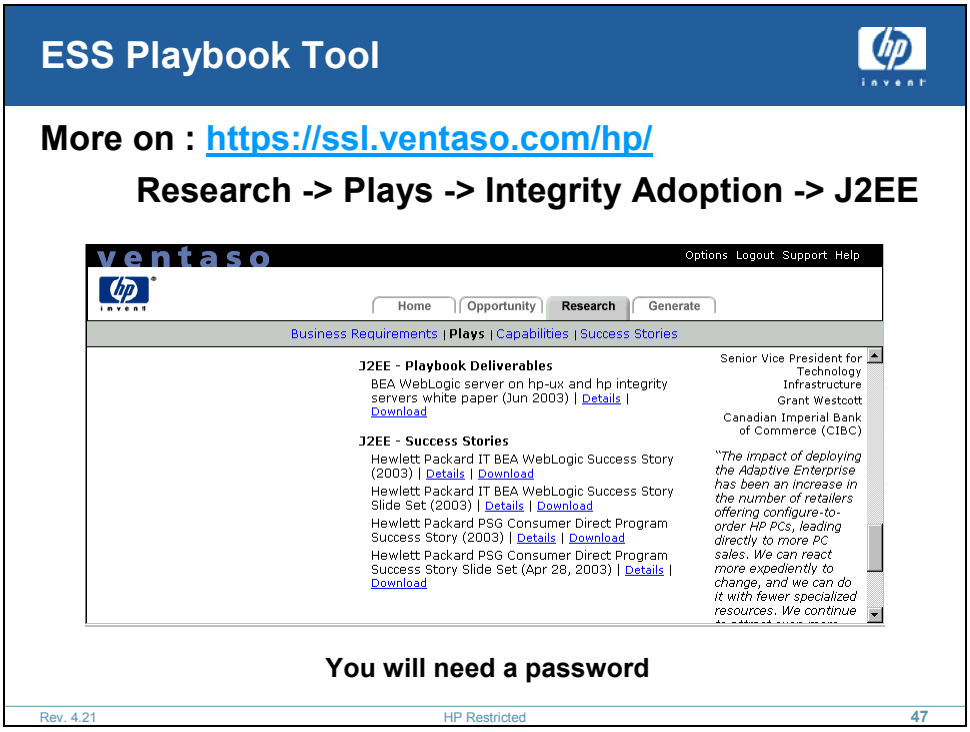
ESS Playbook exercise



ESS Playbook exercise

ESS Playbook Tool

To make it even easier for you to successfully sell using plays, HP has a new tool for you to use.

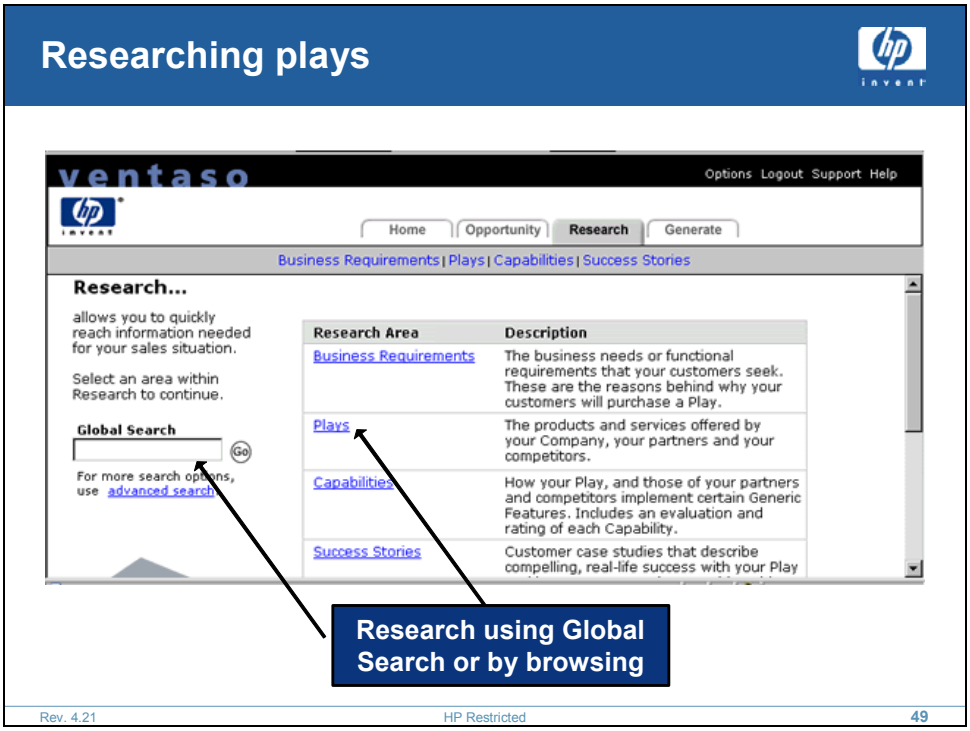


ESS Playbook Tool

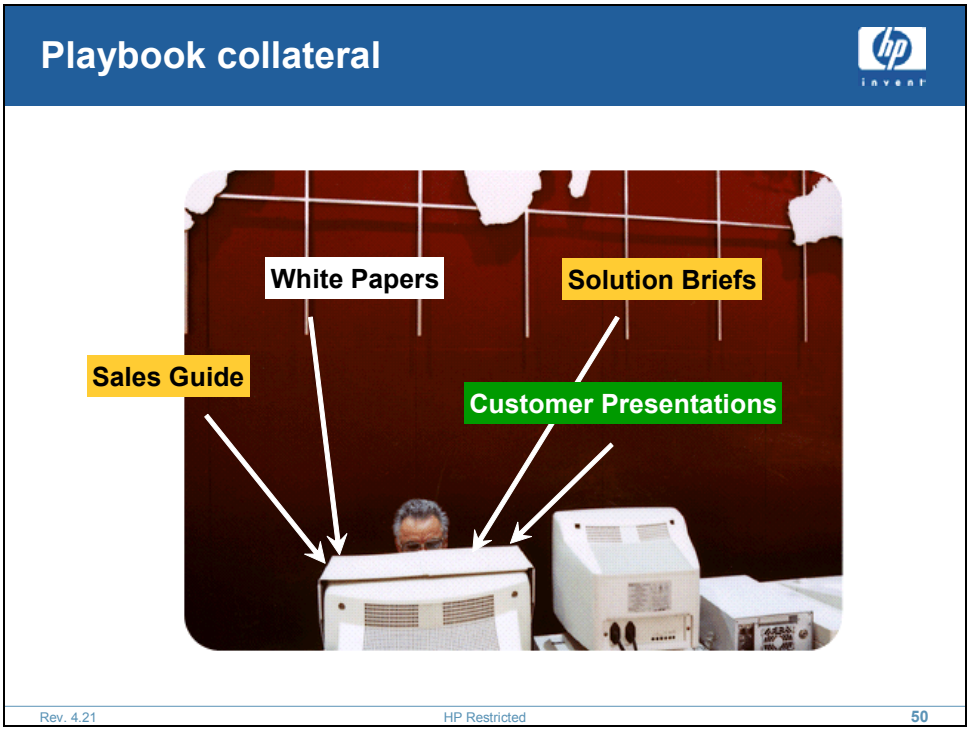
Additional information on all the available ESS plays is available using the ESS Playbook Tool. There you will find the BEA Weblogic whitepaper, several success stories, and additional information on the customer's business requirements and HP's capabilities in this area.

Or go to plays, select High Performance Technical Solutions, and select the CAE play.

ESS Playbook Tool: Logon



Researching plays



Playbook collateral

The Sales Guide

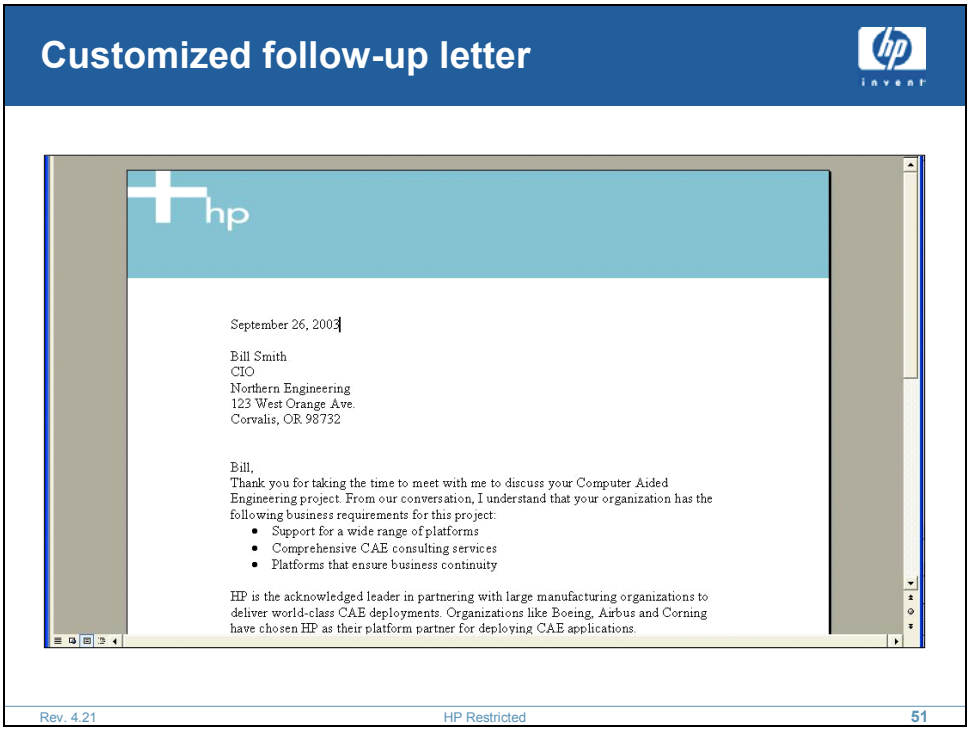
The Sales Guide typically includes:

- A customer profile
- Competitive information
- Business drivers
- Tips for the first meeting
- Tips for follow up meetings
- Customer impacts and benefits

The sales guide is NOT something you would share with a customer.

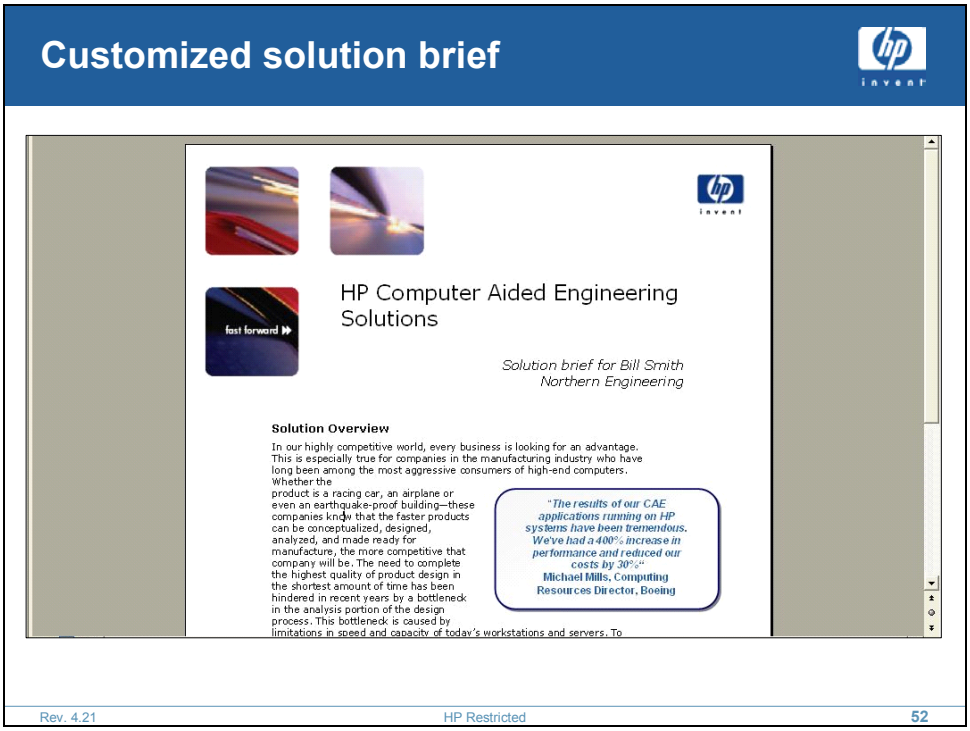
Other information available

- **White papers** address key topics and technologies relevant to the particular play. Some white papers are suitable for sharing with customers. Look for restriction information.
- **Solution Briefs** provide key information about the play or supporting activity and are typically customer viewable.
- **Customer presentations** are slide sets about the play or activities that support the play and are suitable for customer viewing.



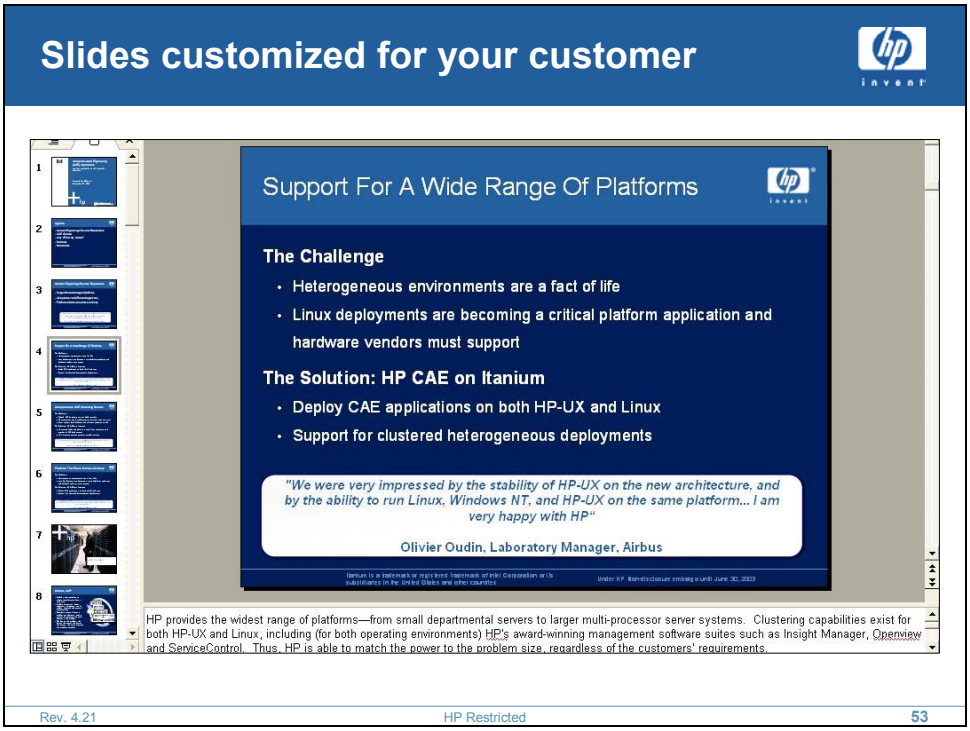
Customized follow-up letter

Based on the information you input into the system, the ESS Playbook Tool generates a follow-up letter for you to send to your customer. Depending on what you chose for output styles, the letter will be in black and white or color and will be saved so you can print or email it to your customer.



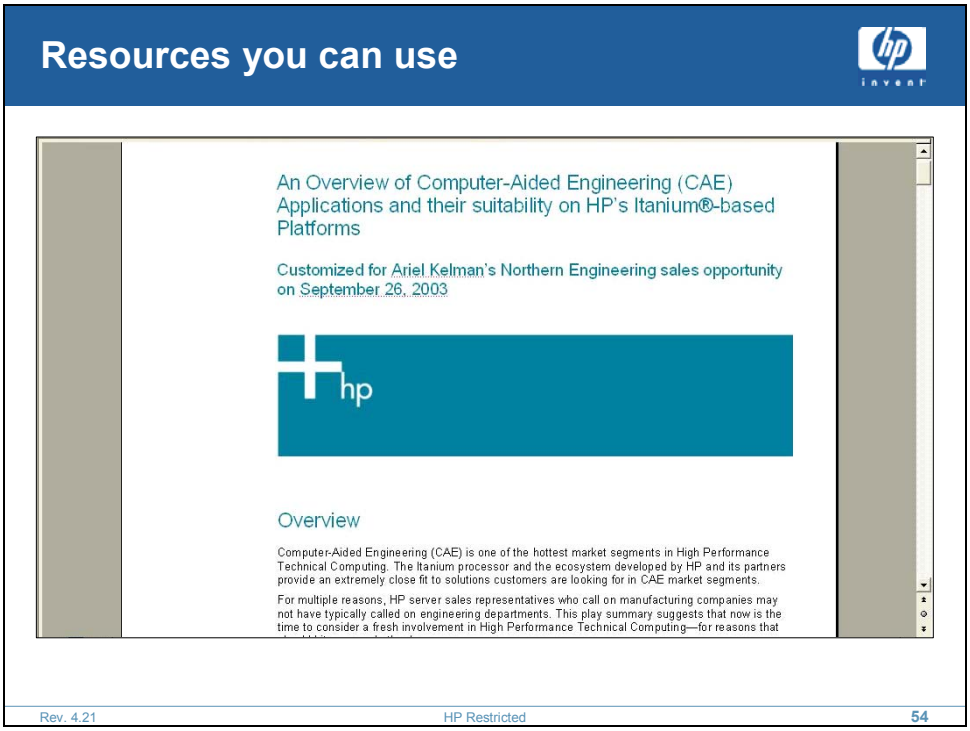
Customized solution brief

Tired of searching the Internet for product briefs and then having to hand your customer a stack of them or make up your own customized solution brief from all the product briefs? Based on the information you input into the system, the tool puts together a solution brief for your specific customer and the solution you plan to recommend.



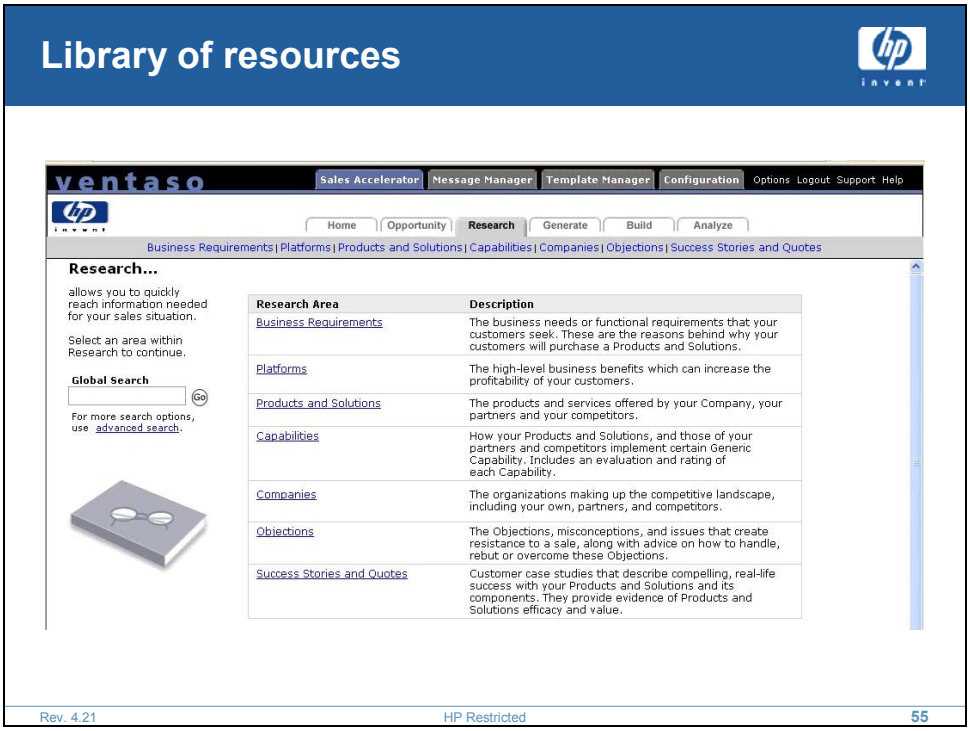
Slides customized for your customer

This is an example of the slide presentation generated by the tool containing the information you entered. Notice that it even has notes and an appropriate success-story quote.



Resources you can use

Make preparing for the sales call easier. Get information from the play experts to combine with your own knowledge so you can listen to the customer from a position of strength and be prepared to give the advice the customer wants.



Library of resources

If you need additional resources or information about play building blocks or to complete your play activities, the ESS Playbook Tool has a wealth of resources organized by research areas.

Summary

- Definitions of plays and playbook
- How plays facilitate selling
- Play example: Computer-aided engineering
- Play example: J2EE
- An overview of the ESS Playbook Tool

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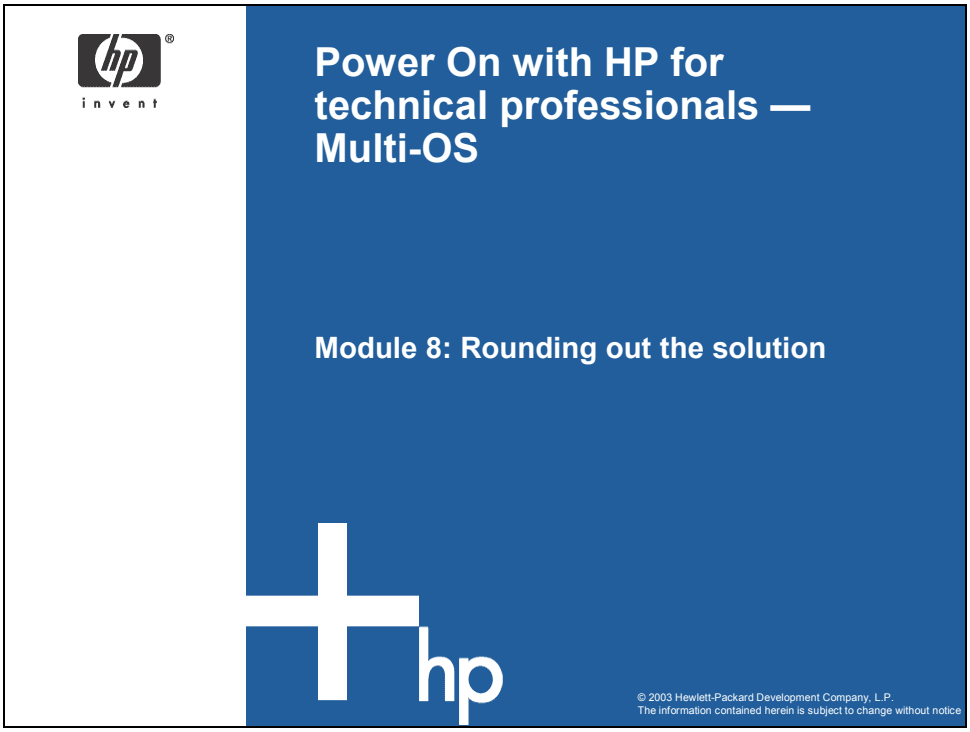
Summary

ROUND OUT
SOLUTION



Rounding out the solution

Objectives

At the end of this module you should be able to:

- Identify HP OpenView opportunities and competitive challenges
- Recognize the value of storage
- Describe HP networking products and uses

Objectives

Agenda

- HP management
- HP storage
- HP networking

The offerings

- **Management**
- Storage
- Networking

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The offerings

Why sell software?

- Sell a total solution
- Differentiate yourself in the market
- Strengthen relationships
- Software spending drives hardware spending
- Get more customer referrals
- Reduce competitors' control
- Demonstrate business impact
- Commission
- More sales

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Why sell software?

Why now?

Market trends

Managing IT using a more service-driven approach is referred to as IT Service Management (ITSM). ITSM promotes the use of best practices within IT, based on the IT Information library (ITIL), to do a more competent and more professional job within IT. ITSM is coming into its mass adoption stage right now.

The compound annual growth rate (CAGR) estimates for market adoption of ITSM are:

- Gartner Group 32% CAGR
- IDC 30% CAGR
- Meta Group 26% CAGR

In 2004 it is estimated that:

- $7.7 billion will be spent on all enterprise management software in the US and Canada
- $2.3 billion will be spent on service level management-specific management software worldwide

The mass adoption of service management represents a substantial sales opportunity for you. IT Service Management is a significant factor to consider when you are building your plans and your activities for this year.

Why HP OpenView?

Analyst ratings

This year the top three industry analysts—Gartner Group, META Group, and Forrester Research—have rated HP as the leader in enterprise management. This is very rare. HP has done a good job and deserves its leadership position. It is a good time to be selling software while HP has the lead.

White papers of these analyst reports are available at:

Picking an Organic IT Management Vendor, June 2003, The TechStrategy Report, © 2003, Foresster Research, Inc.

Magic Quadrant for Enterprise Event Management, 2003, Gartner Research, Markets, M-19-8835, 29 May 2003, © 2003 Gartner, Inc.

Event Management Tools, METAspectrum Market Summary, 7 October 2003, © 2003 META Group, Inc.

Awards

At the Tech Ed show in 2003, HP OpenView Operations for Windows won Best of Show in the management category. Winning involved pitting HP OpenView against 20 competitors in a specific demonstration addressing very specific capabilities. HP also won six Windows Greeters Choice awards for HP OpenView.

The fact that HP OpenView won all the awards possible for management shows how strong their capabilities are for managing the entire Windows IT environment.

Experience

- HP is the market leader in business process software.
- HP OpenView is used by 20 of the 25 largest worldwide Internet service providers.
- HP OpenView is used by 100% of Fortune 50 companies and 99 out of the Fortune 100 to manage applications, services, networks, computing devices, and storage media.
- It is #1 in market share for routing and control of voice and data traffic across converged networks.
- There are 1000 installations in wireline and wireless networks in over 50 countries.
- 70% of Internet devices are managed using HP OpenView.
- There are 135,000 deployments in Internet protocol (IP)-based environments.
- HP OpenView is the market leader in “metering” the Internet

Key facts

HP OpenView has a modular, integrated tool set, so customers can realize ROI much sooner by saving as much as 50% of the time it takes to identify and fix downtime incidents manually. And it takes fewer people to manage the infrastructure with HP OpenView, which is a further reduction in costs of almost 70%.

HP OpenView promotes customer-directed implementation not vendor-directed, so customers can start at any place and there is no difference in the end state.

HP OpenView has powerful, integrated capabilities such as streamlining workflow processes, supporting business-based prioritization, and accelerating time to resolution based on best practices.

HP OpenView promotes a standardized technology environment, driving down training and support costs within IT with a unified tool set.

Channel Partner Certification program overview

Partners authorized to sell OpenView solutions are certified specialists who have the expertise to provide total OpenView solutions.

Overview and structure:

- The HP OpenView Consultant Certification program is integrating with other HP and Compaq certification programs into a single, new worldwide certification program: the HP Certified Professional Program. This program will increase the value and recognition of your credentials.
- For more information; click on HP Certified Professional Program. You must click on the map on the HP Certified Professional page to find region-specific information.
- See the new tests, retired tests, program changes page for more information.

HP OpenView program goals and information:

- The goal of the HP OpenView certification program is to assist candidates in their endeavor to keep pace with the complex nature of the IT industry. Recognition as an HP OpenView Certified Professional shows that the individual has developed superior skills in the IT industry.
- Your investment will be protected under the new HP program and a smooth transition will be made.
- Certification levels and basic requirements will continue unchanged, although the names may change:
  - HP OpenView Certified Consultant will become HP OpenView Accredited Integration Specialist (AIS)
  - HP OpenView Certified Integration Expert will become HP OpenView Accredited System Engineer (ASE)

Please visit your HP Channel Partners website for information on any requirement changes.

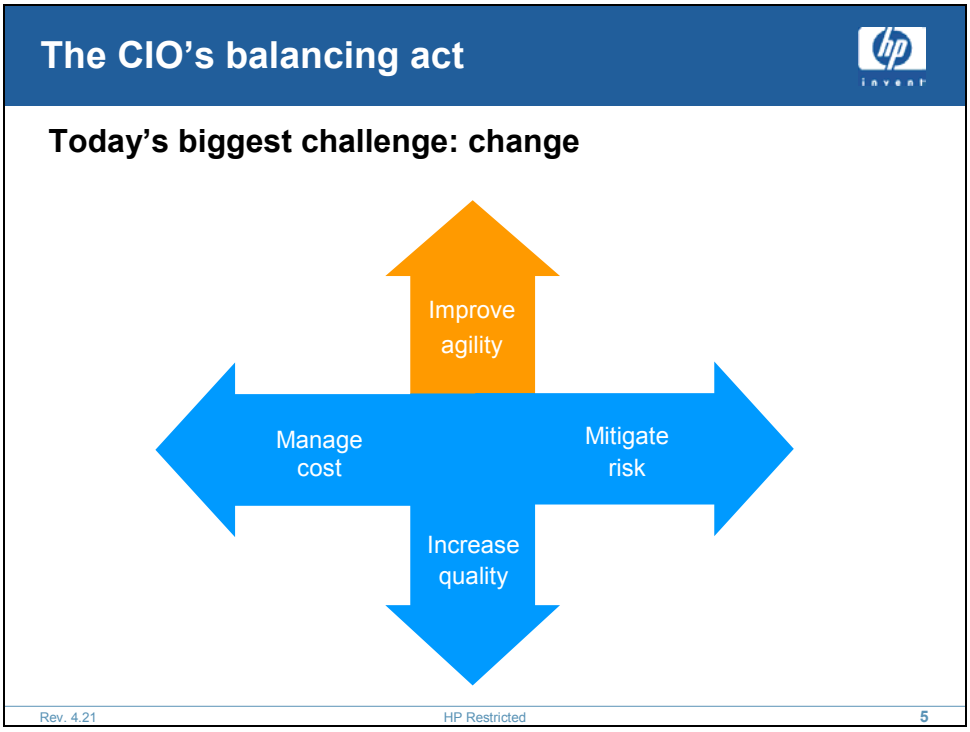
Additional Information

- Each region (Americas, Europe-Middle East-Africa (EMEA), AAA) will independently decide when they want to send out new HP CP certificates and ID cards. Please check out your regional information at www.hp.com/go/certification.
- In Asia Pacific use: www.hp.com/go/appa for training available through the Asia Pacific Partner Academy.

HP Software Business Partner Program

HP Software Business Partner Program offers an ecosystem for partners worldwide, ranging from value-added resellers, management service providers, system integrators and consultants, to independent software vendors, service providers and OEMs.

Becoming authorized to work with HP Software means being able to offer the most flexible foundation for integrating and developing services, and world-class management solutions to deliver the optimal experience to your customers. In other words, it's a huge, new opportunity for you.



The CIO's balancing act

Customers face unrelenting pressure to do more with less in an environment of constant change. Today's CIOs have to balance traditional IT requirements of managing costs, increasing quality of service, and mitigating risks—with the new dimension of improving business agility. How quickly can a customer's business sense and respond to change? Better yet, how can customers capitalize on change and turn it to a company advantage?

All of these challenges are interconnected. It is never one or the other. Every CIO has to try to strike the right balance.

The real business value that our customers are seeking is adaptability, or agility, giving them the ability to drive and match IT services to the business changes over time.

What is the HP Adaptive Management strategy?

Integrate people, process and technology to automate the dynamic link between business and IT.

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What is the HP Adaptive Management strategy?

The HP Adaptive Enterprise vision is the ultimate state of fitness. It is business and IT synchronized to take advantage of change. The Adaptive Enterprise vision is about creating a dynamic link between IT and business to minimize the lag time between a business change, a business competitive environment, or a change in direction and the ability of IT to support that in a heterogeneous environment. The Adaptive Enterprise vision is powerful because it links business processes and goals with IT components and infrastructure.

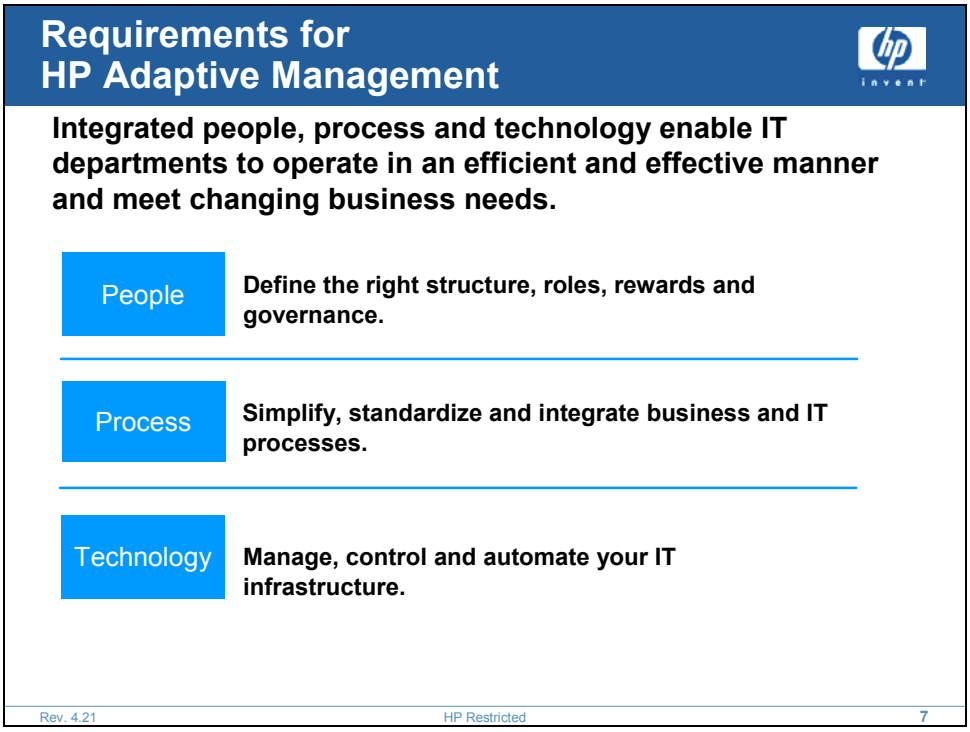
Adaptive Management refers to the integration of people, process, and technology. With Adaptive Management, HP offers its customers the ability to manage, control, and have value across infrastructure, applications, and business processes by supporting the applications that drive the entire IT environment. It is not just software and it is not just services—it automates the dynamic link between business and IT.

Adaptive Management gives the CIO the ability to run IT as a business, the same way the CFO runs finance and the VP of manufacturing runs the supply chain. With Adaptive Management, the CIO is directly connected to business profitability. The CIO is empowered to deliver not just service level agreements (SLAs), but business-oriented services that are tied to business metrics such as customer satisfaction and order fulfillment.

Adaptive Management positions IT as a critical service provider within the business. In this way, IT becomes a competitive advantage for the business, not just a cost center.

Automation is a key differentiator here. The goal of automation is not to get rid of people, but rather to reduce how long it takes to get information, make decisions, take action based on those decisions, get proof of results faster, and to facilitate inventory tuning of all processes to free up trapped resources. And that frees up people to do more innovative, higher-level work.

This approach to adaptive management embraces not just IT services focused on the availability and the number of users per system. It also embraces and elevates IT to address business-oriented service levels, revenue, customer satisfaction, order fulfillment, and more. It elevates the business value of IT to the enterprise.



Requirements for HP Adaptive Management

People

The IT staff is a critical resource for helping a company achieve adaptive management. It is important that people are organized, prepared, and aligned with the shift in strategy to achieve adaptive management.

Does your customer have the right organizational structure? What about roles, rewards, incentives, and culture? In your customer's organization, do people think about IT as a business? Is your customer making sure they are not only delivering services on time but delivering the value needed by the business? Does your customer worry about cost structures? What about service level agreements (SLAs) and business strategies? How do you deliver cultural change to a siloed organization?

Process

Here we are talking about creating accurate and detailed process descriptions that are then standardized and automated. The right processes lower errors, failures, and costs. Process also deals with reallocating resources to foster innovation and enable proactive management.

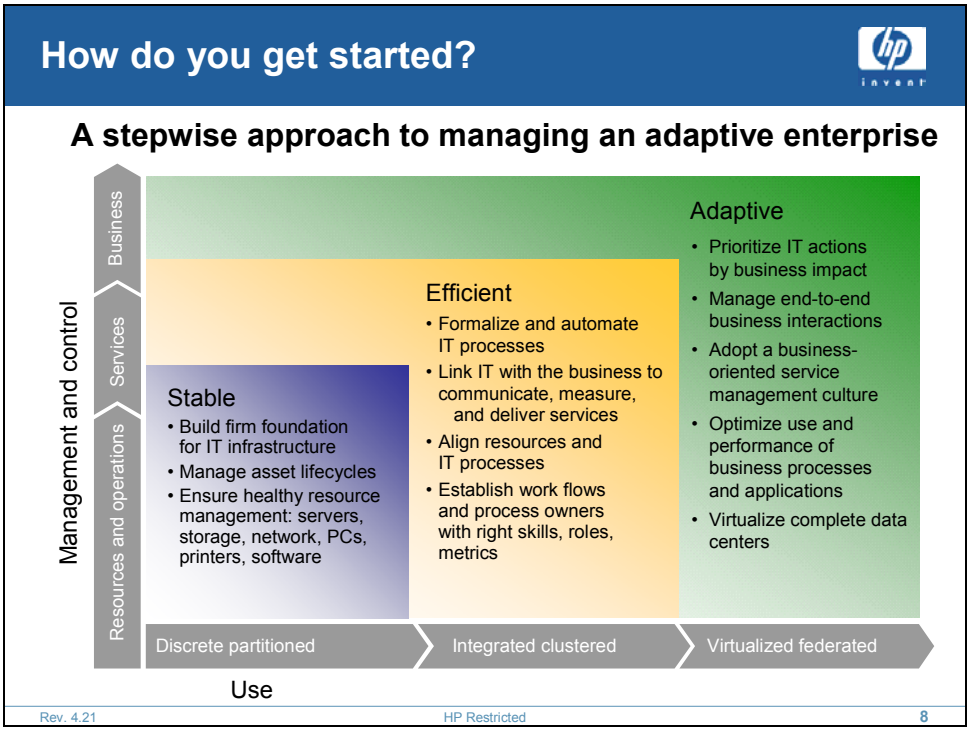
Technology

This involves making sure that the right people have the right information to identify the right resources. They also need the ability to deliver flexible, business-oriented services consistently, and to match IT supply to business demand.

To really get value out of people, process, and technology, IT fundamentally needs to shift its thinking about how these three assets work together.

- How do technologies support particular IT processes?
- How does technology enable people to make smarter decisions faster?
- How do people execute processes with more efficiency?

Understanding and enabling the linkages between people, process, and technology is foundational to adapt in management. HP has a range of technologies and capabilities that enable us to bring these things together.



How do you get started?

A step-wise approach to Adaptive Management

Achieving an adaptive management is a journey, and HP advocates taking a stepwise approach to implementation. We believe that focused, two to four-month projects with defined ROI and tangible success metrics are much more effective than big-bang approaches. Our goal is to optimize and build on existing customer investments so customers do not have to replace everything they have.

Stable stage

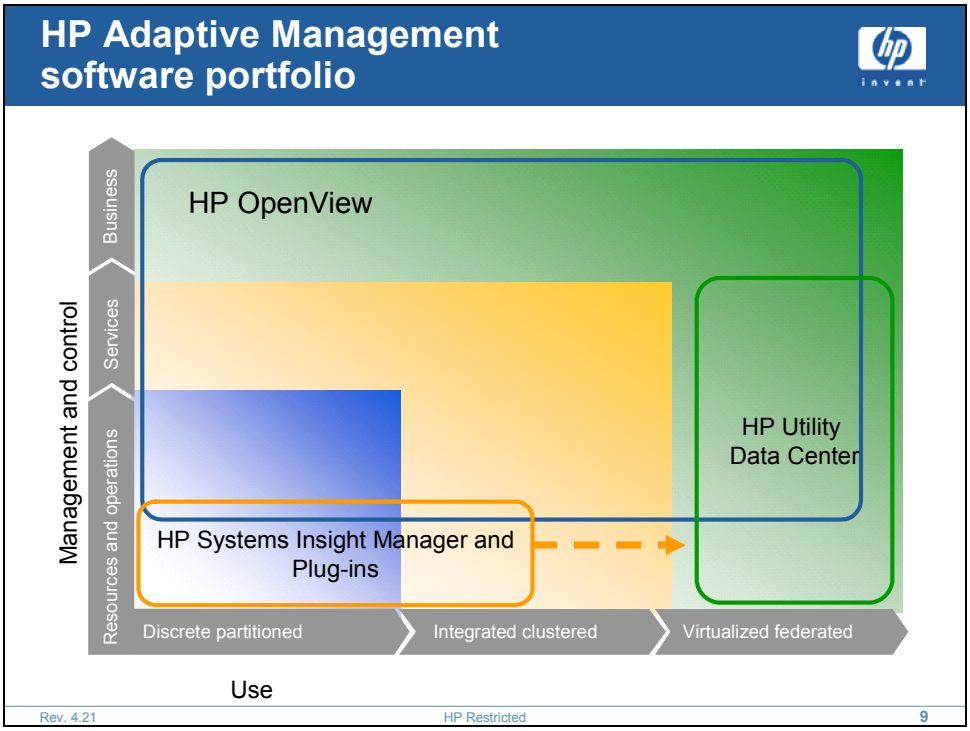
Roughly 80% of HP customers are focused on providing a highly available, well-performing, stable, and secure IT environment. This provides a firm foundation for IT infrastructure and healthy resources within that infrastructure.

Efficient stage

About 15%of HP customers are in the middle stage. They have stabilized their infrastructure and are now looking to improve operational efficiencies. They are beginning to deliver IT as a portfolio of services rather than just managing systems, networks, and storage. They are adopting technologies that help them communicate more effectively with their lines of business. And they are beginning to establish processes for how to support the services they deliver over time.

Adaptive stage

Adaptive management is used by a small percentage of HP customers. These are organizations that have not only adopted best practices, but have found ways to automate those practices and put them in the context of enterprise business requirements. They are dynamically provisioning and re-provisioning IT capability. They are examining new technologies to adopt that will enable new levels of agility. They are adopting technology that enables them to understand their critical business processes and how IT supports them. At this point, IT is a strategic partner and leader to the business. Over the next several years, you are going to see customers do more to make IT more business-aware and agile to help the enterprise compete most effectively within their particular industry.

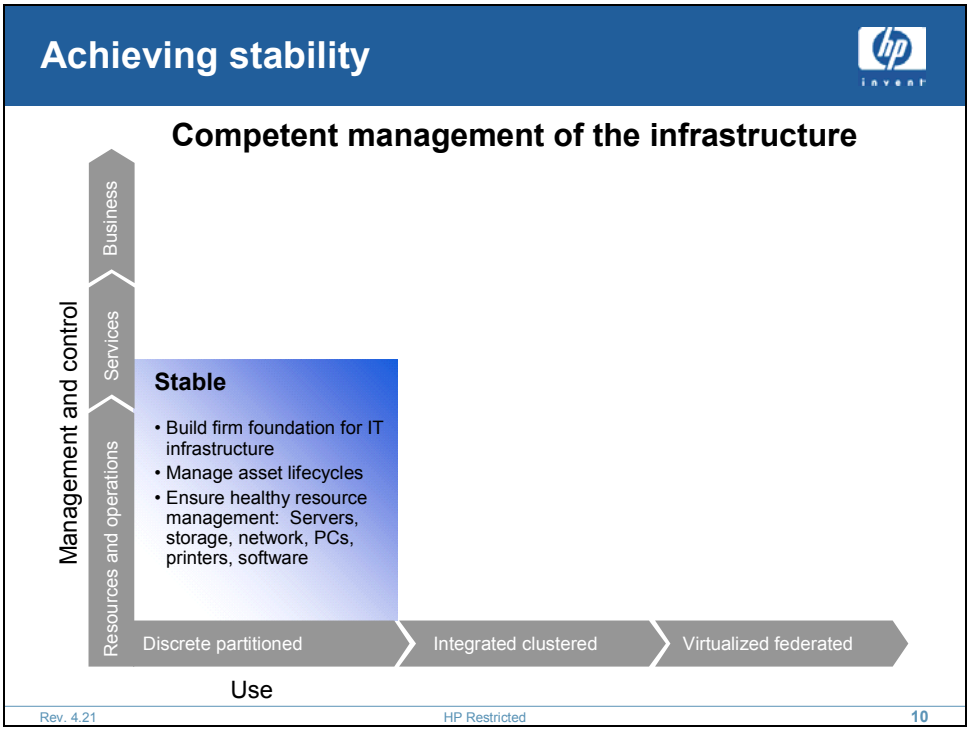


HP Adaptive Management software portfolio

HP has a portfolio of management offerings to enable Adaptive Management. HP Systems Insight Manager plays a key role—initially focused on the control and optimization of resources—with the potential to deliver automated policies in the future for dynamic allocation and re-allocation of resources. System Insight Manager builds the foundation for the HP Adaptive Management portfolio.

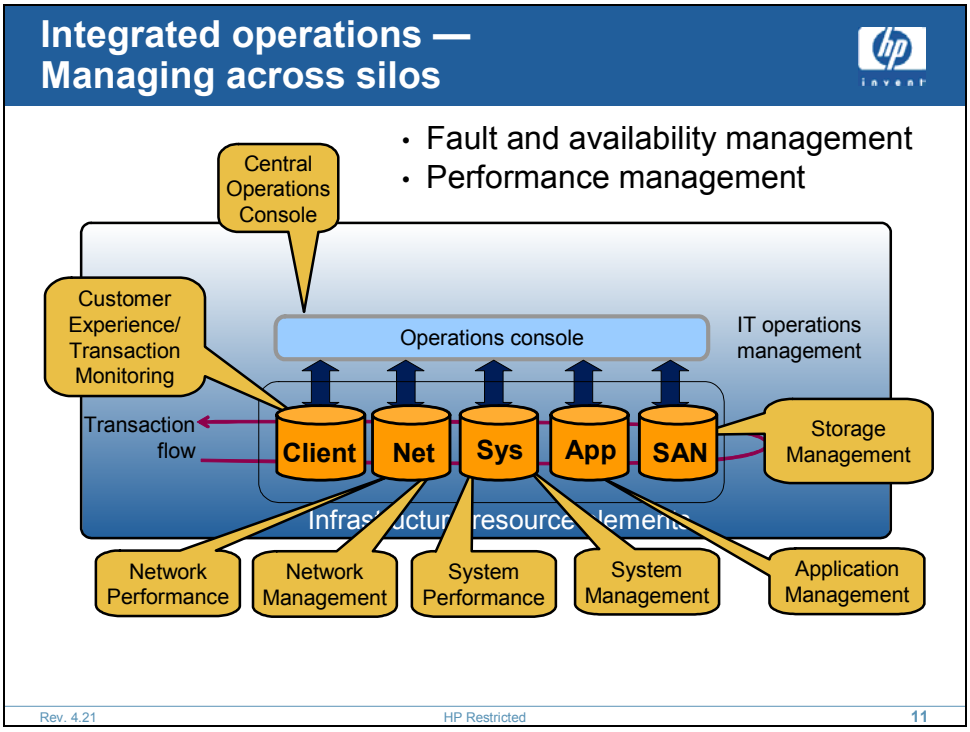
HP OpenView applies to all three management stages:

- For IT organizations that are looking to achieve stability, a combination of what HP can do to manage platforms coupled with HP OpenView Operations is relevant.
- In the efficient stage, HP OpenView Service Desk is very prominent.
- As IT organizations approach the adaptive stage, they pick up adaptive technologies and may look at utility computing concepts, such as what is offered with Utility Data Center, as a way of automating how they provision capabilities to enable business processes.



Achieving stability

HP can help customers get stable and stay stable, and be more confident in how they manage their IT infrastructure.



Integrated operations — Managing across silos

The slide graphic illustrates how IT can build a stable foundation and have an environment where they are confident in managing their IT resources.

The bottom part of this slide refers to traditional siloed hardware architectures as opposed to an integrated, clustered environment or virtualized environment. HP can help customers manage their infrastructure by providing integrated operations and management across the silos.

HP drives availability management and performance management across those environments by using the Central Operations Console. There, IT can manage the performance of the network and systems and bring instrumentation to the application and storage environments.

The integrated operations console provides capabilities that bring broad end-to-end value to the enterprise.

Infrastructure management — Network

Network Fault management

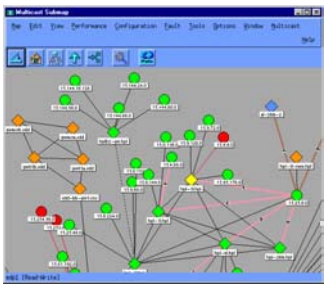
- Discovery, visualization, monitoring
- Event handling and analysis
- Root cause and troubleshooting

Smart Plug-ins for network services

- IP Telephony
- IP Multicast
- Wireless LAN
- MPLS VPN

Performance management

- End-to-end response, user-client experience
- Troubleshooting and resolution
- Service reporting and break-down
- Resource optimization, capital planning



OpenView Network Node Manager

OpenView Network Node Manager Extended Topology

OpenView Smart Plug-ins

OpenView Problem Diagnosis

OpenView Performance Insight for Networks

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Infrastructure management — Network

HP OpenView helps customers manage their network infrastructure by providing fault and availability management of network elements. As networks are changing, HP is keeping pace.

- HP is the number one vendor in network management.
- HP has 135,000 customers.
- From the IP Telephony, HP has the ability to see all the elements and determine what instruments need to be engaged to fix a problem.

HP can help with the management and delivery of new wireless technologies, such as multicast, webcast, and the new multi-protocol environments that are being introduced. In this arena, HP cannot only manage by identifying what is wrong, but has the added capability of being able to fix what is wrong by providing equivalent diagnosis performance management tools.

- HP Network Node Manager is the network services manager.
- HP Smart Plug-ins (or SPI) allow instrumentation for very specific areas and bring that information into the console.
- HP Internet Services allows us to capture and manage from a customer experience environment.
- HP Performance Insight Manager is the network performance management tool.

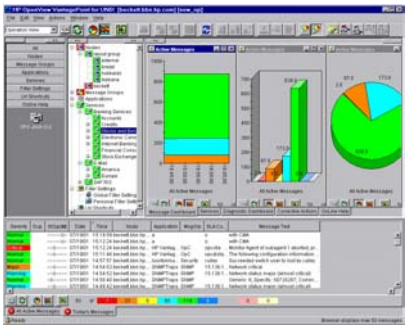
HP OpenView offerings for infrastructure management — Network

HP OpenView offering	Brief description
HP OpenView Network Node Manager (NNM)	Enables problem detection with statistics, alarms, and maps on a single display
HP OpenView Network Node Manager Extended Topology	Offers reduced problem resolution in complex networks with accurate views and automated problem analysis
HP OpenView Problem Diagnosis	Provides status and performance information on static and dynamic network paths
HP OpenView Performance Insight for Networks	Turnkey application monitors and reports on network protocols and devices
HP OpenView Smart Plug-ins (SPIs)	Provides integrated, out-of-the-box solutions that plug into HP OpenView products, extending the managed domain For a current list of HP OpenView SPIs: http://www.openview.hp.com/products/spi/index.html

For information on HP OpenView IP telephony, go to IP Telephony Partner Pack at http://hppartnerpacks.com

Infrastructure management — System and application

- **Events, correlation, root-cause analysis, automated actions**
- **System management platform (UNIX, Windows, Linux, OpenVMS, Sun OS, AIX, and more)**
- **Application management platform for Smart Plug-ins, such as:**
  - SAP, Oracle, and Exchange
  - Active Directory and databases
  - Web Services, BEA, .NET



OpenView GlancePlus
OpenView Operations for UNIX
OpenView Operations for Windows
OpenView Smart Plug-ins
OpenView Internet Services
OpenView Performance Manager
OpenView Performance Insight

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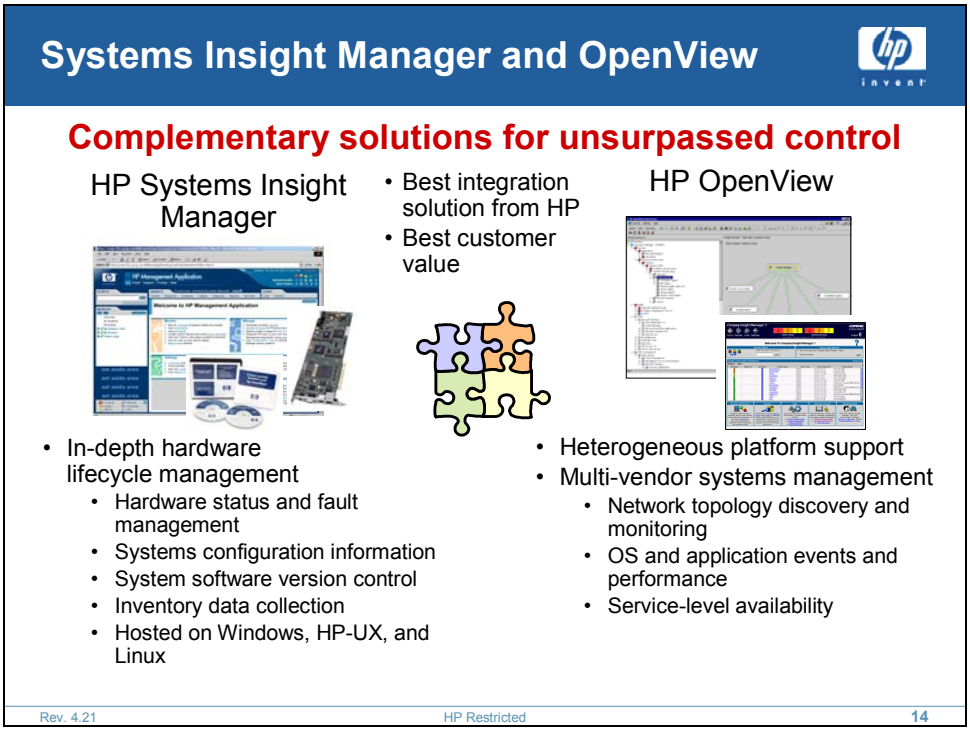
Infrastructure management — System and application

The central console allows IT to manage system and application infrastructure across silos.

- With Event Correlation Services, HP OpenView brings together IT events and correlates them with what is happening in the environment, helping IT get to the cause and resolution of problems quickly and efficiently.
- Through automated and one-click actions, HP OpenView pre-programs the policies, alarms, and thresholds needed to manage the infrastructure the way the customer wants it managed.
- HP OpenView has a visual service model that provides a tactical display of the entire IT environment where people have the information they need to make prioritized decisions about what is most important to act on from an IT standpoint.
- HP OpenView can gather, manage, and apply information for the enterprise from many different hardware platforms—UNIX, Windows, Sun OS, HP-UX, Linux, and Open VMS, as well as IBM AIX, OS390, and the AS400.
- Whether they are major business applications such as SAP, Oracle, or Microsoft, or new web applications and environments such as WebSphere, BEA, and .NET, the main HP OpenView tools provide specific application and platform capabilities. For example, Service Reporter provides information on the services IT is actually delivering. HP Services also has a great set of deployment services to deliver this tool in a simple, effective manner.

HP OpenView offerings for infrastructure management — System and application

HP OpenView offering	Brief description
HP OpenView GlancePlus	Performance monitoring and diagnostic tool providing immediate system information
HP OpenView Operations for UNIX	Distributed solution that monitors, controls, and reports on IT environment health for UNIX
HP OpenView Operations for Windows (OVOW)	Distributed solution that monitors, controls, and reports on IT environment health for Windows
HP OpenView Performance Manager	Performance manager, monitor, and agent provide a single interface for monitoring, analyzing, and forecasting resource use
HP OpenView Performance Insight	Powerful reporting solution that gives customers the insight they need for more effective service level management Performance Insight for Networks is a turnkey application that monitors and reports on network protocols and devices
HP OpenView Internet Services (OVIS)	Single, integrated view of the complete Internet infrastructure
HP OpenView Smart Plug-ins (SPIs)	Integrated, out-of-the-box solutions that plug into HP OpenView products, extending the managed domain For a current list of HP OpenView SPIs: http://www.openview.hp.com/products/spi/index.html



System Insight Manager and HP OpenView

HP Systems Insight Manager

HP Systems Insight Manager (SIM) combines the strengths of HP Insight Manager 7, HP Toptools, and HP Servicecontrol Manager 3.0 to deliver a single tool for managing ProLiant, Integrity, and HP 9000 systems running Windows, Linux, or HP-UX. It is the industry's first cross-platform hardware platform management solution hosted on those three OSs that manages the lifecycle of HP servers, storage, clients, printers, and other networked devices. HP Systems Insight Manager helps IT organizations proactively manage system faults, assets, and hardware configurations on servers and other HP devices from a single application. It can also manage the devices of third-party vendors through management standards and by launching vendor-specific management tools.

HP OpenView Operations

HP OpenView Operations (OVO) provides a service and business-driven approach to achieve rapid control and availability of IT operations across the heterogeneous enterprise. Used to correlate the effects of IT infrastructure on business-critical services, such as email, ERP, and e-commerce, HP OpenView Operations builds on an extensive base to monitor operating system and application attributes and provide automated responses to common events. HP OpenView Network Node Manager (NNM) provides robust, standards-based management for heterogeneous networks of all sizes that require advanced management of routers and switches, sophisticated root-cause analysis, and distributed management for large or complex networks.

Complementary solutions for unsurpassed control

HP OpenView and HP Systems Insight Manager complement each other strongly, enabling administrators to:

- Develop a consolidated management platform for the heterogeneous IT environment
- Link IT platform resource availability with service level requirements and business needs
- Simplify IT operations, increase resource availability, and improve business agility

With HP OpenView as the primary interface to manage the availability and performance of critical business services, integration with HP Systems Insight Manager enables administrators to correlate HP hardware status with the availability of business service levels and obtain in-depth data for more accurate root-cause analysis and faster problem resolution.

The integration of HP Systems Insight Manager and HP OpenView delivers the deepest and broadest knowledge of the entire computing environment available in the industry, and can be used to develop a highly optimized and more agile adaptive enterprise.

Return on IT investment (RoIT)

HP Systems Insight Manager and HP OpenView are better together:

- HP OpenView provides a common enterprise platform for hardware and service-level management.
- HP Systems Insight Manager can be integrated with HP OpenView through embedded policies and plug-in components.

Business benefits

- Create more efficient, agile, and available business operations
- Maximize existing IT investments
- Synchronize IT resources and business needs
- Simplify enterprise management

HP OpenView's knowledge of the relationship of infrastructure to IT services and System Insight Manager's knowledge of hardware configurations are an unbeatable combination.

Web application and customer experience management

HP OpenView Internet Services

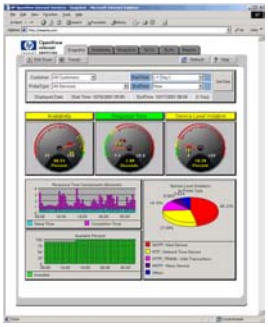
- Measure, monitor and report against service level objectives
- Monitor standard protocols via simulated transactions or real transactions providing last-mile details

HP OpenView Web Transaction Observer

- Identify those web pages with long wait times, or high numbers of failures or aborts
- Establish thresholds and service level objectives, which can be configured to alert on excessive wait times, failures or aborts

HP OpenView Transaction Analyzer

- Analyze transactions from the client, over the network, and throughout the web application environment
- Non-intrusive transaction analysis does not require code changes



OpenView Internet Services

OpenView Web Transaction Observer

OpenView Transaction Analyzer

OpenView Performance Manager

OpenView Smart Plug-ins

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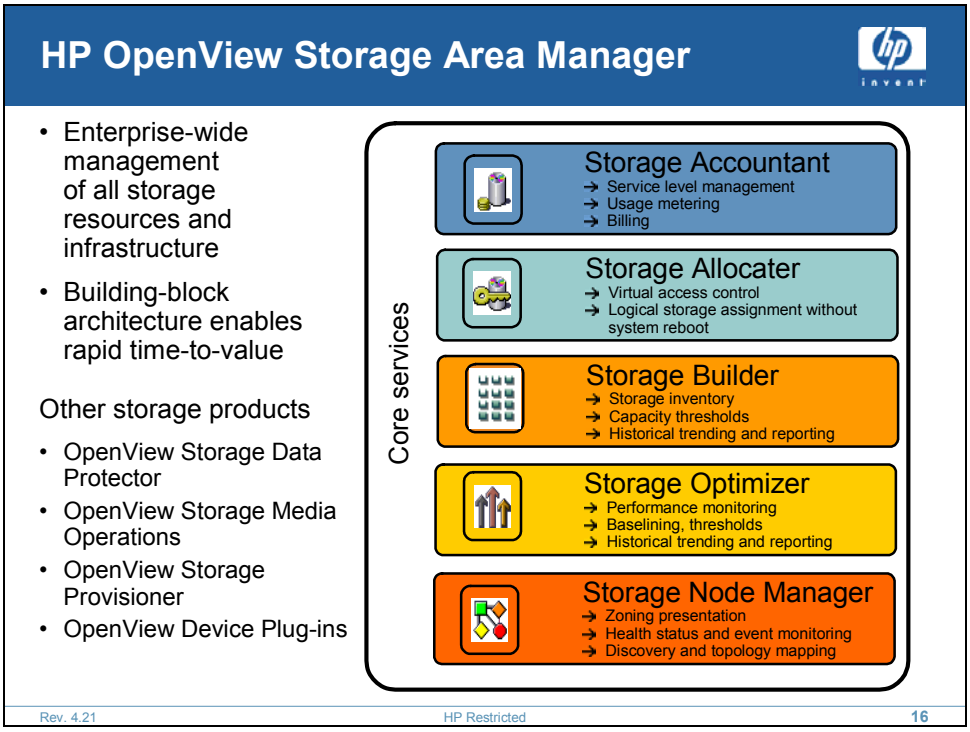
Web application and customer experience management

The advantages of Web applications are stability and low cost. What it delivers is the most complex environment in IT today.

HP OpenView offerings for Web application and customer experience management

HP OpenView offering	Brief description
HP OpenView Internet Services	A single integrated view of the complete Internet infrastructure
HP OpenView Web Transaction Observer	Monitors customer experience on specific URLs by integrating performance metrics
HP OpenView Transaction Analyzer	Facilitates web application problem resolution by directing attention to specific performance bottlenecks
HP OpenView Performance Manager	Single interface for monitoring, analyzing, and forecasting resource use
HP OpenView Smart Plug-ins (SPIs)	Integrated, out-of-the-box solutions that plug into HP OpenView products, extending the managed domain For a current list of HP OpenView SPIs: http://www.openview.hp.com/products/spi/index.html

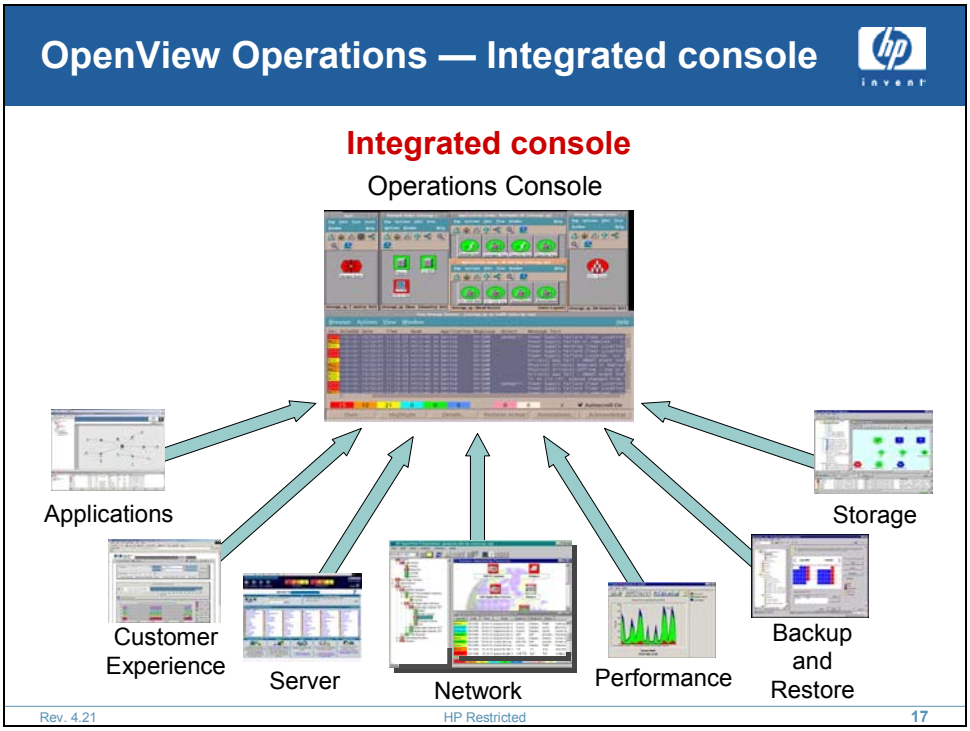


HP OpenView Storage Area Manager

HP OpenView allows customers to bring all the information about the storage environment into a central console to provide consolidated, correlated information for the IT team. This information can be valuable in determining what might affect a problem that people are experiencing across silos.

HP OpenView offerings for other storage products

HP OpenView offering	Brief description
HP OpenView Storage Data Protector	Delivers new levels of recovery with a service-driven management approach
HP OpenView Media Operations	Automates tracking and management solution for productively managing the complete life cycle of removable storage media
HP OpenView Storage Provisioner	Capacity management and use tool resolves complex IT environments and unpredictable storage demands
HP OpenView Device Plug-ins (DPIs)	Extends HP OpenView Storage Area Manager capabilities through seamless integration with the rest of the IT environment



HP OpenView Operations — Integrated console

The capabilities of the HP OpenView Operations integrated console extend to the network, performance management of servers or the network, and storage management console information, including backup and restore capabilities.

Value of the integrated console — Proactive operations management

Another value provided by the integrated console is in moving customers from being reactive to proactive.

Mean time to resolution is not merely defined as time to repair or time to resolution. It includes being able to:

- Shorten the time to awareness of a problem and to diagnose its source
- Identify what portion of the infrastructure is affected and what action needs to be taken
- Prioritize problems and determine whether it is something that needs to be acted upon before something else
- Give customers the ability to conduct business prioritization based on the business goals and priorities set by IT, then fix and verify the problem, driving the mean time to resolution

HP OpenView productivity improvements

- **Time to complete infrastructure management tasks cut in half**
  - Reduced by 54%
    (Average improvement among 14 firms and measured in 13 different categories)
  - Time to identify and fix downtime incidents reduced by 49%
  - Time to implement a new service reduced by 2 ½ weeks, 39% reduction
- **Each IT staff member can manage on average 26% more**
  - # Servers managed improved by 30%
  - # Network segments managed improved by 75%
  - # LANs managed improved by 300%
- **Server downtime reduced by 79%**
- **Network downtime reduced by 74%**
- **Nine out of 14 installations had Tivoli, BMC or CA tools in place before installing HP OpenView**
- **Productivity gains reflect the incremental improvement from using HP OpenView compared with competitive tools**

Source: IDC ROI Study Results, May 2002

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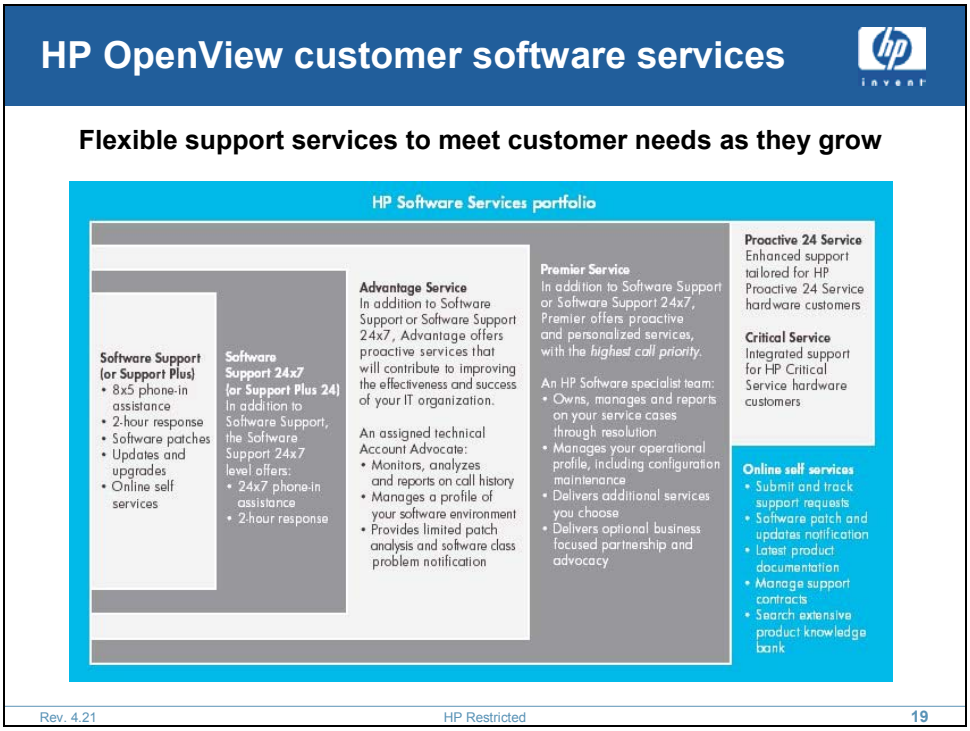
HP OpenView productivity improvements

- HP partnered with IDC in May 2002 in a study of 14 firms and nearly 2000 IT people. The results indicate the high value you can add to a CIO caught in between having too few people and having to manage an increasingly complex infrastructure.
- While those are impressive productivity improvements by themselves, consider that every one of the firms in the study had BMC, Tivoli, or another competitor in place before implementing HP OpenView. The productivity improvements cited in the study are incremental, meaning they represent the differential between managing with competitor tools and managing with HP OpenView. That is the real power demonstrated by this study.



HP OpenView customer software services

HP OpenView offers its own customer software services outside of those offered by HP Services consisting of a focused team of people strictly there to provide value for HP OpenView.

Main goals of HP OpenView Software Services

1. Help the customer manage all the elements that make business sense. Some infrastructure elements may not be as critical as others or may not be managed as carefully.
2. Manage the way customers want the infrastructure managed. Set up the automation and the one-click actions to make sure things are available and that the customer knows how to use them.
3. Manage using the complete set of tools within HP OpenView. Studies have shown that if customers do not receive the proper training and support, they use only 15%–20% of a typical application.

Standard HP OpenView support has a 96% customer satisfaction rating, very high for an enterprise software vendor.

HP Software Services provide pre-emptive, proactive support services delivered by a comprehensive team of engineers. This team is coordinated by a single, onsite representative who understands the intricacies of the customer's IT environment, can initiate action in anticipation of problems, and helps to optimize performance before problems occur.

Some HP software installations require more proactive support. HP OpenView Advantage Service and HP OpenView Premier Service provide a high level of consistent, focused attention and expertise needed to meet the demands for IT availability and performance.

Benefits of HP Software Services

- HP has a support team of 180 engineers with 640 years of combined experience in just the Americas. Beyond that are 500 engineers worldwide who provide support 24x7 from 50 Response Centers around the world.
- HP OpenView Premier Service, HP Proactive 24 Service, and HP Critical Service are now part of an expanded Asia Pacific support portfolio.
- Technical support problems are solved quickly through online support or through HP regional support centers.
- There is significant mutual knowledge transfer as the customer's IT staff works side by side with an HP expert.
- Effective partnerships are formed with customers based on a shared knowledge base and aligned goals.

Additional HP OpenView Services and Support

HP OpenView Self-Healing Services

HP OpenView Self-Healing Services for Network Node Manager and HP OpenView Operations are now available to customers as a free download from eCare. Beyond detecting, analyzing, and responding to management faults in the customer environment, these services enable real-time problem detection, data collection, streamlined problem analysis and recommendation, and efficient support case initiation.

For more information on self-healing services, go to: http://support.openview.hp.com/self_healing.jsp

HP Partner Care

HP Partner Care offers direct, quick access to deep-level technical expertise in development and deployment to provide reduced time to market with assured quality.

For more information, go to: http://support.openview.hp.com/pc_service_level.jsp

HP OpenView Software Services portfolio (1 of 2)

	Foundation support		Personalized services	
	Software Support	**Software Support 24 x 7**	**HP OpenView Advantage Service**	**HP OpenView Premier Service**
Service overview	Break-fix reactive product support, provides 8 x 5 call submittal and software updates	Break-fix reactive product support, provides 24 x 7 call submittal and software updates	Proactive support for software management servers. Provides technical account advocate to proactively maintain customers; software management server(s)	Personalized service for software management environments. Provides names software engineer to partner with customer to manage their environments in the most cost-effective and efficient way
Target customers	Customers requiring reactive product support during work hours	Customers requiring around-the-clock reactive product support	Enterprise customers whose business is IT-dependent. Require proactive support to ensure stability and availability of software management servers	Enterprise customer with *business-critical IT*; extreme IT-dependency. Require personalized support relationship to operate, manage, and evolve complex, *business-critical* software environments.
Primary service benefits	Provides resolution for reactive problems Note[1]: No focus on problem prevention	Provides resolution for reactive problems Note[1]: No focus on problem prevention	Proactively prevents problems and reduces risks of unplanned downtime. Minimizes customers' support overhead Note[2]: Server support only; no focus on software environment as a whole	*All of Advantage Service benefits plus*: Names contact for reactive and proactive support activities. Trusted relationships, personalized knowledge and attention to customer needs. Maximizes customers' ROI in HP management software. Reduces risks of IT crisis. Minimizes customers' support and operational overhead.
ITIL reference	Incident management	Incident management	Incident and problem management	Incident, problem and change management
Prerequisites	Requires software license purchase	Requires software license purchase	Requires Software Support or Software Support 24 x 7	Requires Software Support of Software Support 24 x 7
Deliverables	**Software Support**	**Software Support 24 x 7**	**HP OpenView Advantage Service**	**HP OpenView Premier Service**
Assigned support team	None	None	Account Advocate for proactive calls only; no reactive calls	■ Named HP OpenView Engineer, reactive and proactive calls ■ Customer Alliance Manager; business ally optional
Reactive call submittal	8 x 5	24 x 7	8 x 5 or 24 x 7 according to underlying Software Support level	8 x 5 or 24 x 7, to Named Engineer during work hours
Response time	<2 hours	<2 hours	<2 hours	Best effort direct connect and fast response from Named Engineer
Proactive call submittal	None	None	8 x 5 to Account Advocate	8 x 5 to Names HP OpenView Engineer

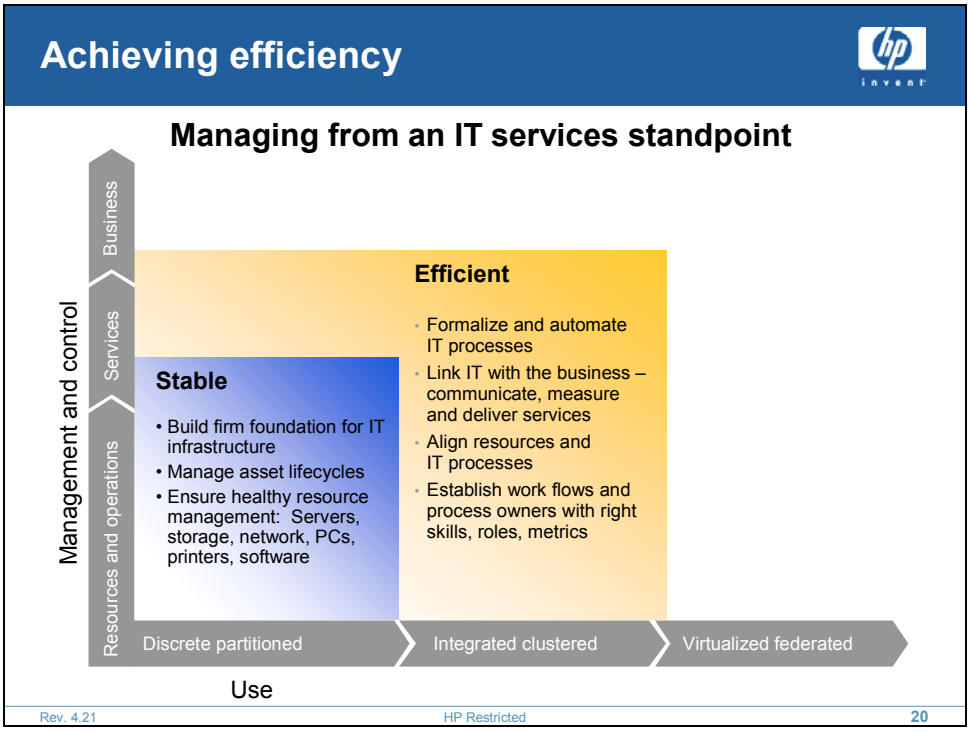
	Foundation support		Personalized services	
Account services	None	None	■ Operation profile management ■ 1 onsite review visit per year	■ Onsite kick off meeting ■ Operational profile management ■ Account support plan ■ Monthly remote technical review ■ 2 onsite account review visits per year ■ 8 technical service days, remote or onsite
Deliverables	**Software Support**	**Software Support 24 x 7**	**HP OpenView Advantage Service**	**HP OpenView Premier Service**
Proactive services	None	None	■ Remote patch bundling 2 per year per server ■ Software critical problem notification ■ Call history reports 2 per year	■ Critical Patch notification ■ Enhanced patch management, remote and onsite ■ Priority notification of software critical problems ■ Call history trend analysis 4 per year ■ Choice of technical services, such as onsite upgrade assistance
Note[1]: The HP OpenView services portfolio does not include services for the Telecommunications Management Information Platform (TeMIP). All service levels provide software updates and online support facility eCare and personalized My eCare for Premier Service. Note[2]: HP OpenView Advantage Service and HP OpenView Premier Service provide a selection of optional technical services. Refer to www.openview.hp.com/services for more information.				

HP OpenView Software Services portfolio (2 of 2)

	HP OpenView enhancements for HP Mission Critical Services	
	Proactive 24 Service for HP OpenView	**Critical Service for HP OpenView**
Service overview	Optional enhanced service coverage for HP OpenView applications. Tailored for HP Proactive 24 Service customers. Adds an HP OpenView expert to the customer's assigned HP support team	Optional critical service coverage for HP OpenView applications. Tailored integrated support solution for HP mission critical customers. Adds an assigned HP OpenView expert to the mission critical support team
Target customers	Enterprise customers subscribing to HP Proactive 24 Service who use HP OpenView applications in mission sensitive environments. Require their HP OpenView managed IT infrastructure to be consistently reliable and readily scalable.	Enterprise customers subscribing to HP Critical Services who use HP OpenView applications in mission critical environments. Require their Hp OpenView managed IT infrastructure to be highly available, consistently reliable, and readily scalable.
Primary service benefits	■ Supports IT environment as a whole, from hardware to applications; single point of accountability ■ Maximizes availability and performance across IT environment via proactive services ■ Assigned HP customer support team includes HP OpenView expert ■ HP OpenView collaboration and knowledge transfer, technical advice, and proactive change management ■ Quick resolution to complex problems via integrated processes and problem diagnosis for the whole IT infrastructure	
ITIL reference	Incident, problem, and change management	Incident, problem, and change management
Prerequisites	Requires HP Proactive 24 Service and 24 x 7 reactive software support on HP OpenView products	Requires HP Critical Service and reactive critical software support on HP OpenView products
Deliverables	**Proactive 24 Service for HP OpenView**	**Critical Service for HP OpenView**
Assigned support team	■ HP Critical Services Account Support Manager ■ HP OpenView Response Center Account Advocate	■ HP Critical Services Account Support Manager ■ HP Critical Services Account Support Center Engineer ■ HP Critical Services Mission Critical Engineer with

	HP OpenView enhancements for HP Mission Critical Services	
		hardware focus ■ HP OpenView Names Response Center Engineer
Reactive call submittal	24 x 7	24 x 7 to HPCS Mission Critical Response Center via dedicated phone number
Response time	<2 hours	Immediate response and intervention for critical problems. <2 hours for non-critical calls
Proactive call submittal	8 x 5 to Account Support Manager	8 x 5 to Account Support Manager
Deliverables	**Proactive 24 Service for HP OpenView**	**Critical Service for HP OpenView**
Account services	■ HP OpenView collaboration and technical advice ■ 2 onsite Support Planning and Review meetings per year ■ Quarterly Support Activity Review meetings ■ HP OpenView integration into Account Support Plan ■ HP OpenView integration into Customer Operational Profile	■ HP OpenView collaboration and technical advice ■ 4 onsite Support Planning and Review meetings per year ■ Quarterly Support Activity Review meetings ■ HP OpenView integration into Account Support Plan ■ HP OpenView integration into Customer Operational Profile
Proactive services	■ Assessment of HP OpenView configuration on HP OpenView management server ■ Annual HP OpenView Application Health Check on a management server and one OpenView application ■ Bi-annual patch analysis on HP OpenView management server ■ Quarterly Case History and Trend Analysis ■ Proactive notification of software critical problems	■ Assessment of HP OpenView configuration on a management server for availability checkup ■ Annual HP OpenView Application Health Check on a management server and all OpenView applications ■ Quarterly patch analysis on HP OpenView management server ■ Quarterly Case History and Trend Analysis ■ Proactive notification of software critical problems

For more information on HP Software Services, go to:
http://www.openview.com/customesoftwareservices

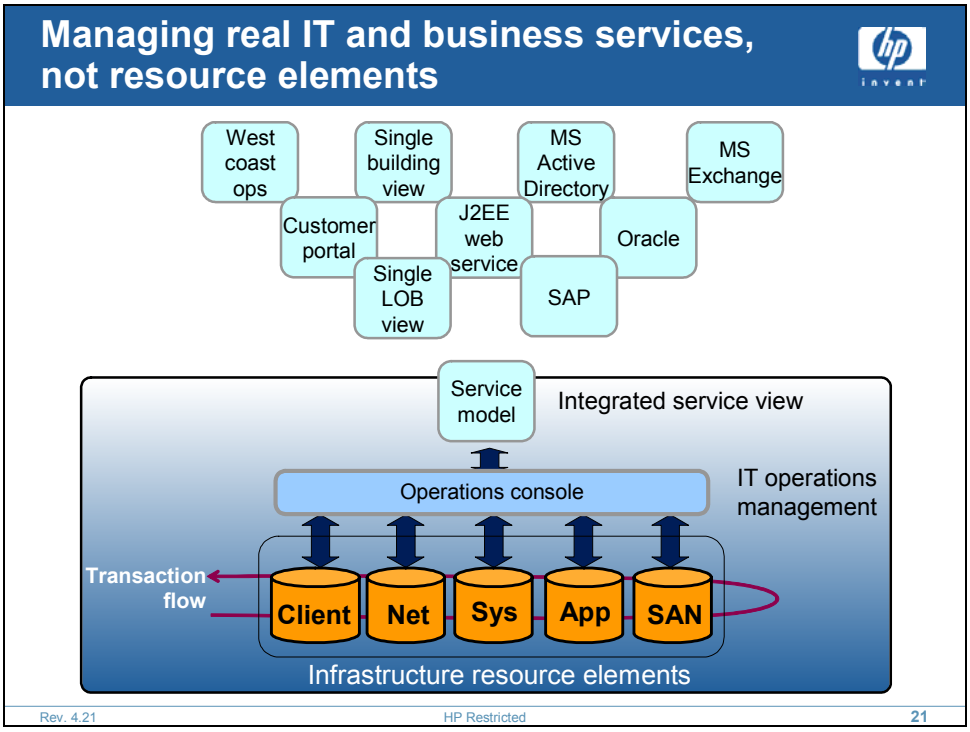


Achieving efficiency

As mentioned before, at the efficient stage, customers begin to manage services rather than elements—services that have value to the business. They want to implement best practices and repeatable, reliable processes.

> "Getting the right people working on the right things at the right time so they can assure critical business services."

This phrase highlights the importance of IT service visibility, which is the ability to understand the effects of prioritization and to optimize the daily workflow of IT staff based on industry-proven best practices.



Managing real IT and business services, not resource elements

The bottom part of this graphic illustrates how IT was traditionally organized into siloed, element-focused environment:

- Many IT operation environments mature with each element silo purchasing its own management tools.
- Each silo has its own tools for managing their portion of the infrastructure independent of the other elements.
- Reactive capabilities are foremost as they focus on their silo's needs alone.
- There is limited ability to coordinate between element silos, slowing overall IT response and keeping IT stuck in reactive mode.

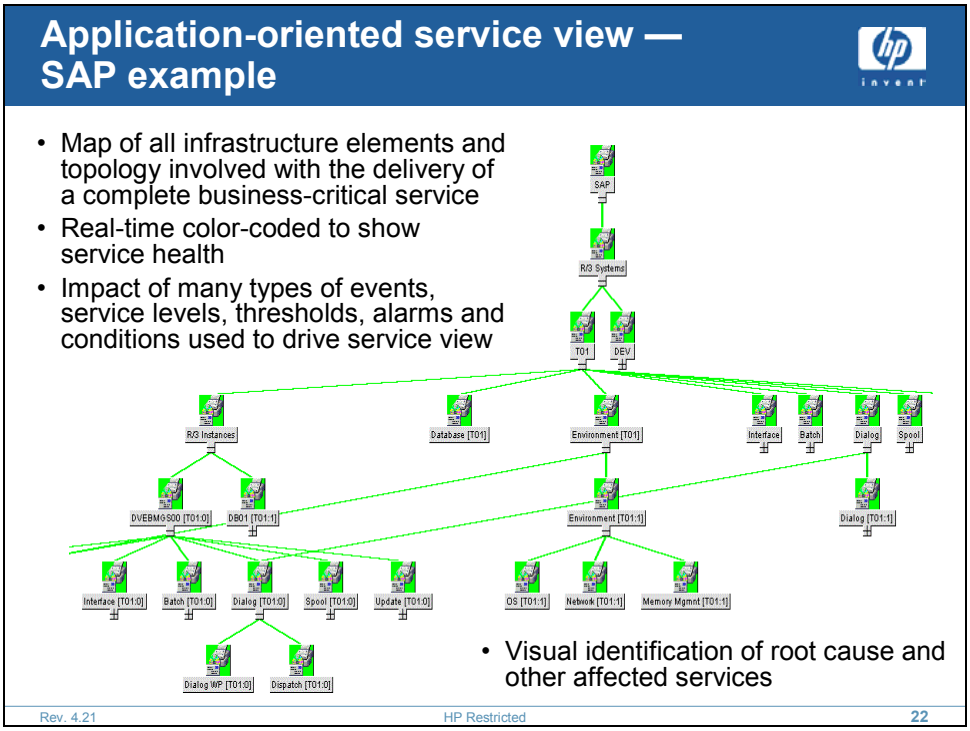
With silo-focused management tools, IT can only be reactive within each silo because they are only focusing on each silo's needs. This limits IT's ability to work across silos as a team, understand where problems exist, or find root causes to problems.

HP OpenView provides IT with a single service view—a visual map to all the IT services. HP OpenView brings information out of the operations environment and uses it to bridge to services. This enables IT to:

- View a major application, such as SAP to Oracle
- View Exchange or Active Directory

- Monitor a web service
- Have a single line of business view or manage one line of business

IT can organize these views any way they want. If they want to mirror the organizational structure, they can do it by geographic location, company, single campus, single building, or by customer portal.



Application-oriented service view — SAP example

Service views become a real time display of all the infrastructure elements that are required to deliver a particular service, coded to show the health of the service. But it also includes information related to customer experience, about processes and whether they fail, and about the global IT environment. Service views can be alarmed with thresholds based on different criteria.

Does that get customers all the way to managing services instead of elements? No, just having the right tools and the right infrastructure in place does not create a full service management approach because people are involved. To make service management a reality, customers must change people's daily activities and work habits. People need to be doing the right things for the right reasons.

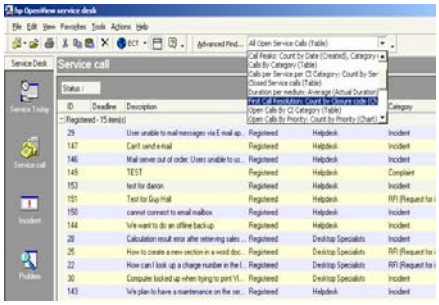
Service Desk and IT process consulting

Product modules to integrate IT service support and delivery

- Help desk management
- Incident and problem management
- Configuration management database (CMDB)
- Change, release, workflow management
- Service level management

ITSM process consulting

- Evaluate and assess current processes
- Apply industry standards and proven best practices (ITIL)
- Develop transformation roadmap
- Deploy Service Desk (automate and enforce)



OpenView Service Desk

OpenView Service Navigator

OpenView Service Information Portal

OpenView Reporter

Managed Services

Services ITSM Consulting

Education ITIL courses and certification

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Service Desk and IT process consulting

Service Desk provides information about the IT staff, such as their strengths, how they are organized, which workgroups they are assigned to, how busy they are, and when they can be assigned service calls. In addition, higher-order information is made available as IT works through incidents, problems, and changes to the production environment. As IT does project management and work orders, they are able to create a configuration database and keep track of the information required for maintenance contracts.

Bringing together processes that used to be disparate has an enormous value to IT. As IT drives toward taking a higher-level service view and managing to that service view, Service Desk helps them create service value by providing the ability to do help desk management, configuration management, change release workflow, and service level management.

HP OpenView offerings for Service Desk and IT process consulting

HP OpenView offering	Brief description
HP OpenView Service Desk	Implement help desk, problem, change, configuration, and service level agreement management processes into a single workflow
HP OpenView Service Navigator	Manage applications and services from a business perspective with graphical views
HP OpenView Service Information Portal	Create a “portal” view to show status information of a customer’s environment
HP OpenView Reporter	Enable IT to provide timely, accurate reports to prove IT service quality levels
HP Managed Services	Provide standardized global outsourcing services on HP OpenView products
HP Services ITSM consulting	Help IT organizations make service management changes a reality
HP Education ITIL courses and certification	HP services [such as?]

Consulting and education services

HP Managed Services

HP Operations is the IT service provider for all of HP and many other large companies. For more than a decade, HP Operations’ outsourcing services have helped businesses improve productivity, manage costs and assets, improve customer service, and capitalize on market changes. HP Operations also manages HP’s 100,000-node worldwide IT infrastructure and provides HP internal support to all HP employees.

HP Operations is using the ITIL IT service management framework to structure and standardize services, operation infrastructure, processes, and tools across countries and regions. HP OpenView is the core technology platform for HP operation centers around the world.

For more information on HP Managed Services: www.hp.com/hps

HP Services ITSM consulting

As a leader in IT infrastructure management, HP Consulting provides more than 160 experienced consultants who apply ITIL best practices and proven methods to help customers transform their business so it will thrive and win in the new economy. HP Consulting can help customers design and implement IT processes that reduce the complexity of IT management and align IT service delivery with the needs of the business. HP consultants bring world-class design expertise, proven methodologies focused on time-to-market with knowledge transfer, and leading technologies that meet business goals.

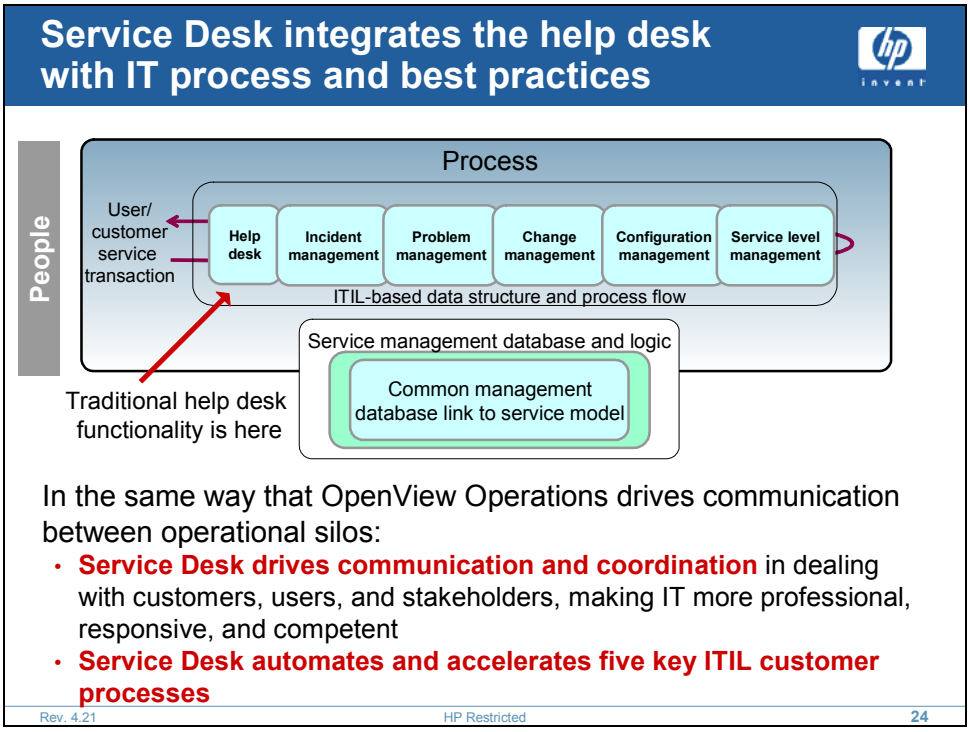
Because HP Services provides about 30% of the consulting services required by HP OpenView customers, HP OpenView partners with other vendors to provide consulting services to customers including Pepperweed, Mellilo, and others.

For more information on HP Consulting Services: www.hp.com/hps/itsm

HP education ITIL courses and certification

Drawing on global delivery capabilities, HP can train project teams on a broad range of IT Infrastructure Library topics. With more than 120 education centers worldwide and e-learning through the award-winning IT Resource Center, HP can provide IT service management training to thousands of employees all over the world. Or, if the customer prefers, they can have custom training developed and delivered onsite to meet the needs of their organization. Based on an integrated learning approach, the HP ITSM curriculum uses an innovative blend of classroom and online courses for maximum learning effectiveness and flexibility.

For more information on HP Education courses and certification: www.education.hp.com/itsm



Service Desk integrates the help desk with IT process and best practices

The IT Infrastructure Library (ITIL) has become the most widely accepted approach to IT service management in the industry. ITIL is based on the collective experience of commercial and government practitioners worldwide. ITIL provides a comprehensive and consistent set of best practices for IT service management, promoting a quality approach to achieving business effectiveness and efficiency in the use of information systems.

HP has been an active supporter of ITIL since 1995 and the first major corporate sponsor of the IT Service Management Forum (itSMF) in the United States. Over 10,000 firms are part of that structure today. HP uses ITIL and the HP ITSM Reference Model, presented later in this module, to help customers achieve maximum IT operational effectiveness. HP is a significant, ongoing contributor to the IT Infrastructure Library and a vital and important presence in the IT service management field.

HP OpenView Service Desk supports five key IT process areas and the help desk function, which are shown in italics:

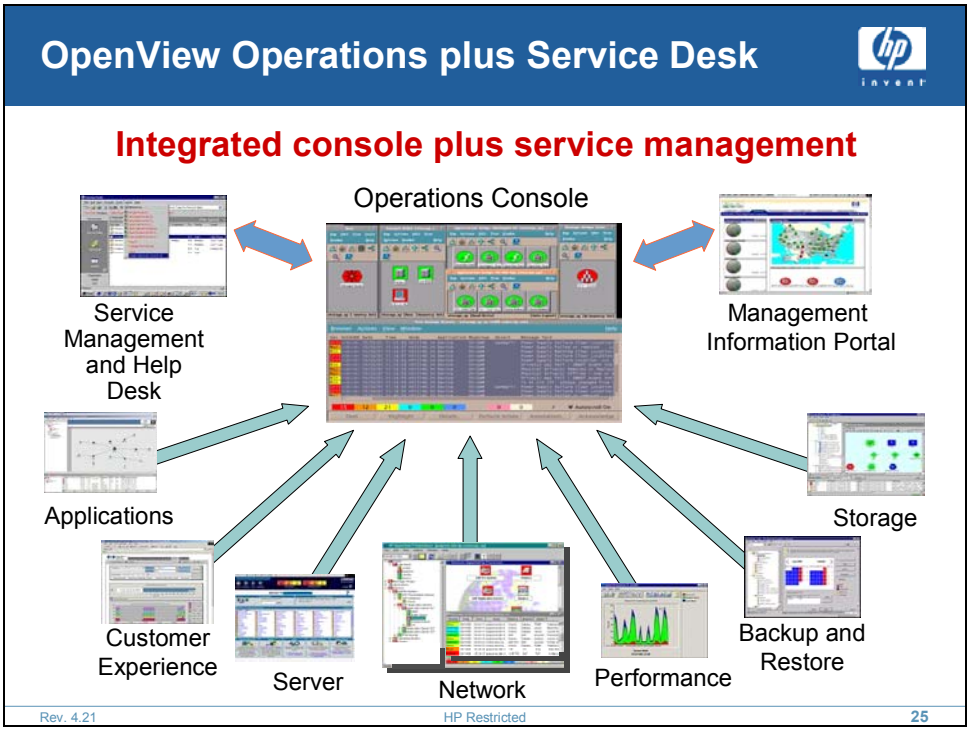
Service Support	Service Delivery
Help Desk (functional area)	*Service Level Management*
Incident Management	Availability Management
Problem Management	Capacity Management
Change Management	Business Continuity
Configuration Management	Financial Management
Release Management	

HP OpenView offers a complete portfolio of service-driven management software solutions. These solutions dramatically reduce the effort of implementing ITIL best practices and provide a one-stop shopping experience around ITIL for IT and service provider organizations.

Unlike other software offerings, HP OpenView's integrated service management solutions cover all aspects of service management for all types of IT and service provider organizations. HP has brought HP OpenView Service Desk and the HP OpenView technology service management solutions to a level of integration that is unparalleled in the industry.

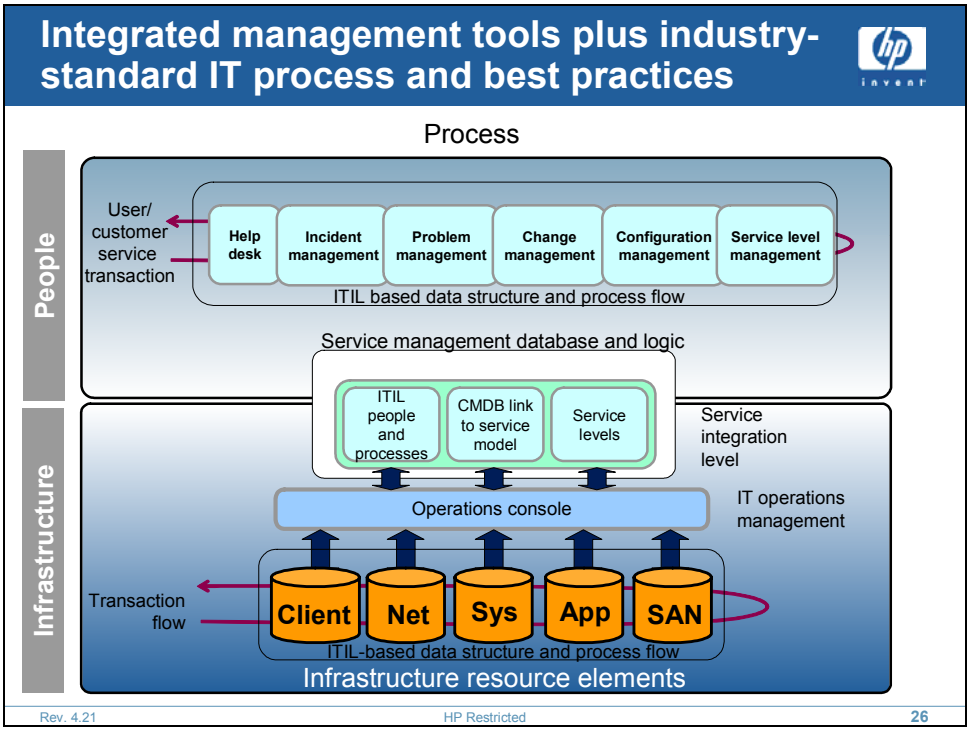
- HP OpenView Service Desk helps to totally control and automate business processes, services, and infrastructure, offering out-of-the-box functionality without compromising flexibility or openness. Critical service delivery and support processes can be streamlined with a single workflow.
- HP OpenView technology service management solutions allow end-to-end management for networks, systems, applications, and storage of distributed, multi-vendor environments.

For more information, go to www.openview.hp.com or visit the official ITIL website at www.itil.co.uk.



HP OpenView Operations plus Service Desk

Data gathered from Service Desk is used to help prioritize the workflow of the IT staff working on the help desk. It can provide information to the lines of business using the Management Information Portal, allowing IT to provide a real-time view into their portion of the infrastructure.



Integrated management tools plus industry-standard IT process and best practices

The whole IT picture

In the operations environment, IT gathers information from all the silos. Through the operations console, IT is able to initiate coordinated actions based on an understanding of what is happening and where faults and issues occur.

Operations is linked to higher-order IT processes through the service integration level, independent of the silo that may be affected. The value of HP OpenView is in driving even higher increments of productivity into IT to enable management of the user and customer experience.

A new HP study, similar to the productivity improvements study mentioned previously, is finding that providing and automating the higher-order IT processes can boost productivity even farther.

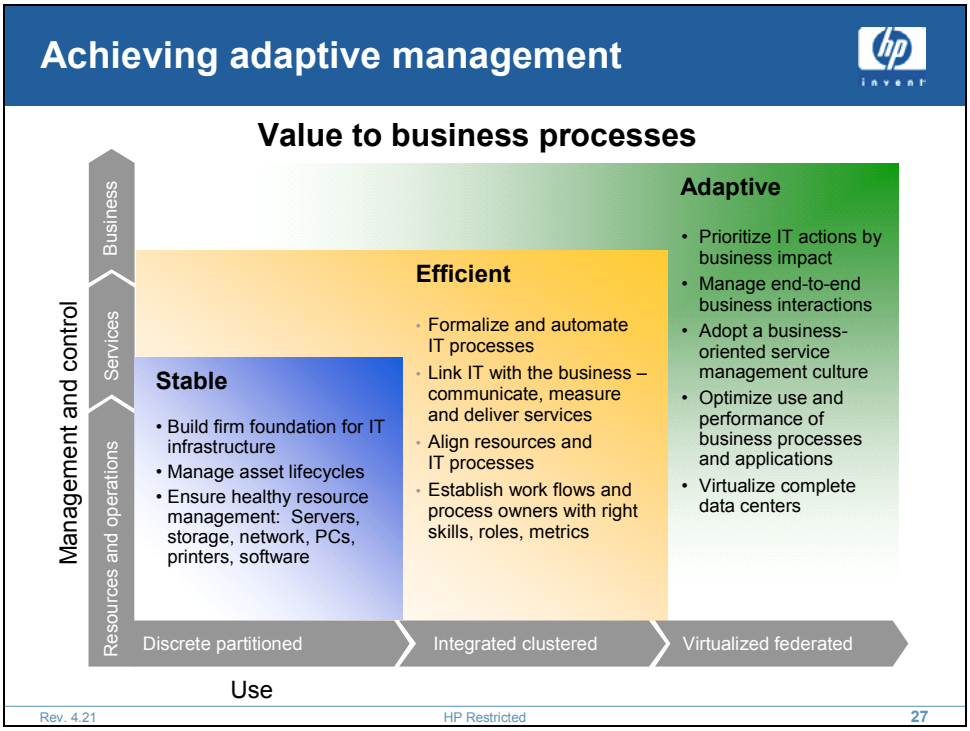
Putting it all together

HP OpenView can help customers know there is a problem before the customer does through intelligence and automation.

When something is not right, the operations console is notified and IT initiates a trouble ticket to notify someone in IT of the problem so it can be assigned to a specialist.

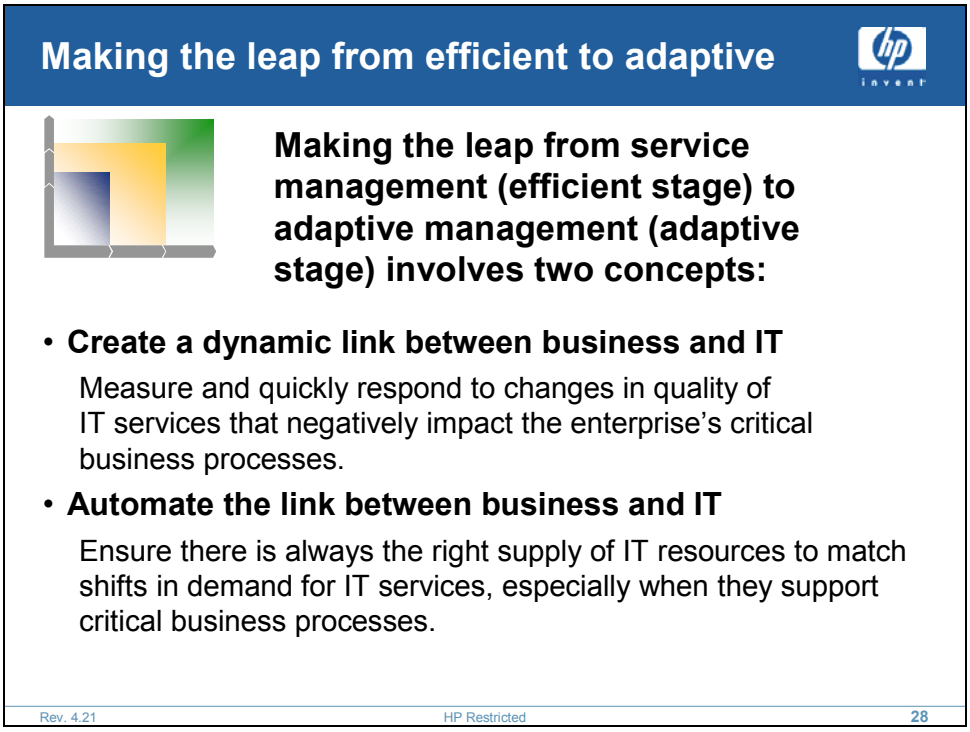
The specialist uses the diagnostic performance tools available in HP OpenView to identify the source almost immediately from the console, and then see how to resolve it. These tools are available for networks, transactions, servers, operating systems, or for specific job applications.

The specialist can see the problem, fix it, and close out the trouble ticket in Service Desk, creating a unified workflow. It puts together all the things that IT needs to do to be more effective.



Achieving adaptive management

The last stage in achieving Adaptive Management is the adaptive stage.



Making the leap from efficient to adaptive

Making the leap from service management in the efficient stage to adaptive management in the adaptive stage involves two things:

1. Establish a dynamic link between business and IT. This involves understanding the enterprise's critical business processes and mapping out how IT supports those business processes. As business processes change, IT understands what needs to be done and can react quickly. Conversely, when IT experiences failures, availability, and performance problems, the effect those problems have on business processes is understood.
2. Automate as much of the IT infrastructure supporting critical business processes as possible. This ensures a constant balance of the supply of IT capability with the demand for IT resources because that is what a business process requires.

So far, we have talked about the delivery of IT services and how IT services take infrastructure components and deliver them in a way that provides end-to-end value to the enterprise.

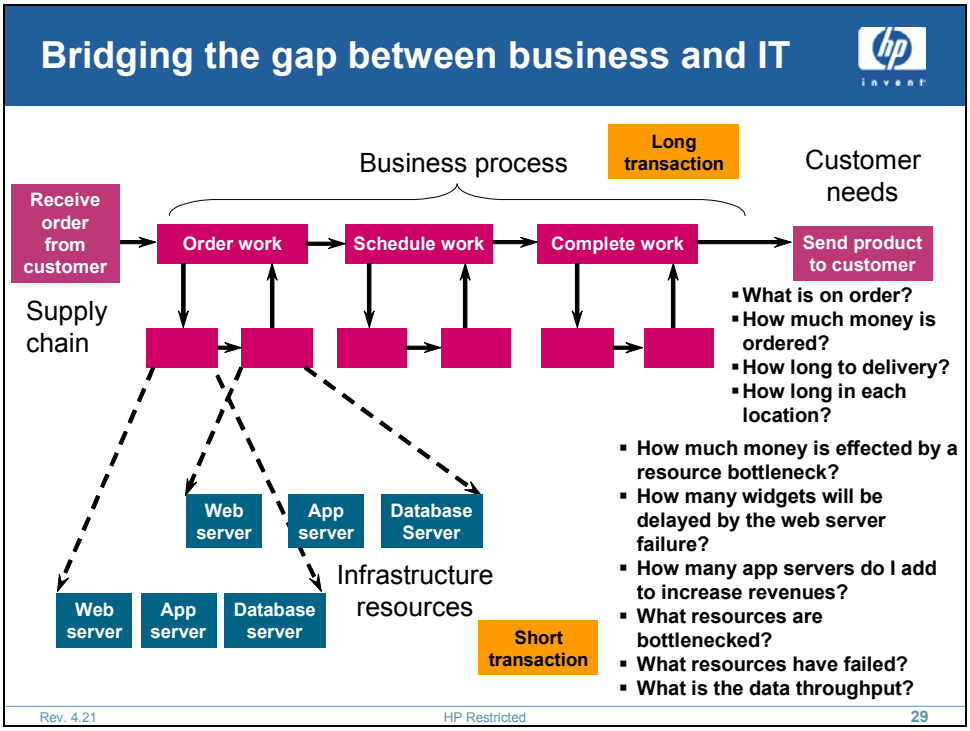
The next step in the evolution of Adaptive Management is Business Process Management. This allows customers to look at a business process from the perspective of a line of business, such as manufacturing or a product generation unit within an enterprise.

If an element within IT fails, IT understands which IT service has been affected and can quickly determine:

- What is the impact to the business?
- What is the problem to the enterprise?

HP OpenView provides technologies that can help model a business process, including its economic and strategic effects and its infrastructure and IT requirements. HP OpenView puts that information together to create a dynamic link between business and IT by identifying business processes and which elements of the IT infrastructure are supporting them.

By understanding where in a particular business process something has failed, IT gains a keen insight into what are the most critical things for the enterprise to deal with first and what are less critical that can be dealt with later.



Bridging the gap between business and IT

The focus up to this point has been about the delivery of IT services and how IT services can take infrastructure components and deliver them in a way that provides end-to-end value to the enterprise.

The next step in the evolution of Adaptive Management is Business Process Management. This allows customers to look at a business process from the perspective of a line of business, such as manufacturing or a product generation unit within an enterprise.

We will use the example of an order to shipment process and examine the tasks that need to be performed to go from placing a product order to being able to ship the product. Shipping is a vital step in the process because it is only after the product is shipped that the business can recognize revenue, which is the goal of most enterprises.

Placing an order may involve multiple applications. For each application involved, a transaction is created, something that is going to span the network and interact with applications, systems, storage devices, and the like. There may be various transactions taking place at the same time.

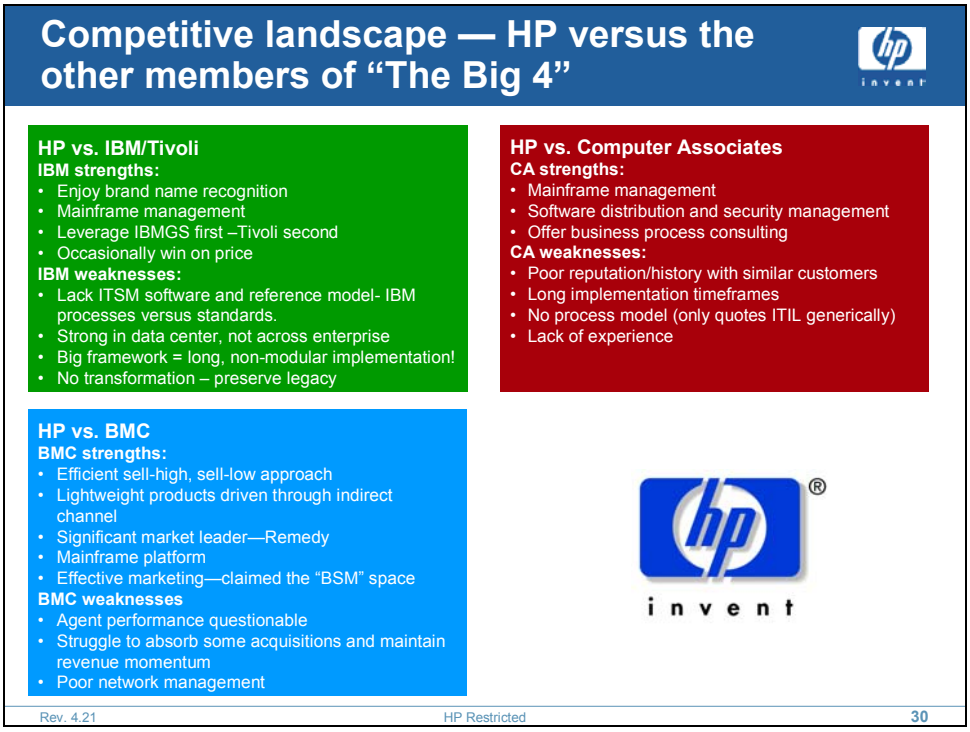
Assuring the availability of these transactions while assuring the availability of business processes, like email, is the concern of IT service management. Now IT not only relates the performance of a web application or database server to a particular IT service but maps it to one or more steps in a business process.

In this example, if the database server involved should fail, IT understands what IT service has been put at risk.

- What is the impact to the business?
- What is the problem to the enterprise?

By understanding where in a particular business process something has failed, IT gains a keen insight into what are the most critical things for the enterprise to deal with first and what are the less critical issues that can be dealt with later.

HP OpenView provides technologies that can help model a business process, including its economic and strategic impacts and its infrastructure and IT requirements. HP OpenView puts that information together to create a dynamic link between business and IT by identifying business processes and the IT infrastructure supporting them.



Competitive landscape — HP versus other members of "The Big 4"

Competitive landscape

The management software industry is a $13 billion industry and our competition is interested in getting as much of that $13 billion pie as possible.

HP OpenView faces two kinds of competitors:

- The first participates along side us in what we call "The Big 4." These are the major software vendors who offer an extensive range of management software products integrated in a suite-like fashion. Typically, these competitive products have a more open architecture and enable more integration but are more complex.
- The second is what we call a "point tool vendor". They compete based on having a deep, specific capability in a particular area and target particular departments within IT. Each of these products has its strengths and weaknesses relative to HP OpenView.

HP versus "The Big 4"

HP versus IBM/Tivoli

IBM/Tivoli does not have capabilities such as an integrated service desk where customers can model critical IT processes to make sure that the right people are working on the right things at the right time.

While IBM is strong in data centers with mainframes, they are weak outside the data center. IBM uses a 10-year-old version of HP Network Node Manager as the core of their network management offering. HP has aggressively invested in network management and provides a significantly superior offering.

The biggest weakness of IBM is their management framework. Their suite of software is not only large and complex, but has to be installed as a prerequisite to achieving any kind of value. This is in contrast to HP OpenView's pure suite management approach where customers can take a particular product, implement it, and immediately achieve value and add other products. Many IBM customers will spend 12-15 months just getting their core framework implemented. From there they have to implement products to achieve value. HP competes very aggressively with IBM on this and they still do not have a strong defense against us when we bring this advantage to their attention.

HP versus Computer Associates

Computer Associates is similar to IBM with a heritage in mainframes. Consequently, they have many of the same weaknesses. CA struggles with two other issues:

1. Long implementation times
2. Their reputation within the industry with a number of their customers

HP versus BMC

BMC is a strong competitor, particularly in the area of application management.

While BMC has Remedy for help desk management, they do not have the full service management solution that HP OpenView has.

HP versus other significant competitors

HP vs. Microsoft	HP vs. NetIQ
Microsoft strengths: ■ Large installed base ■ Pricing—it is hard to beat "free" ■ Can spread "nobody does Microsoft better" FUD	NetIQ strengths: ■ Strong solutions focus—IP telephony, security ■ Favorite Microsoft solution at one time ■ Core OS + application management
Microsoft weaknesses: ■ No service management capabilities in management products ■ Does not support heterogeneous environments well	NetIQ weaknesses: ■ On shaky ground with end of Microsoft OEM agreement ■ No field support, handled exclusively by partners ■ No service level management capability

HP versus Microsoft and NetIQ

HP and Microsoft partner in a number of areas in the technology industry. However, management software is not one of the areas where we import Microsoft's technology. In fact, HP competes and wins big against Microsoft. The major reason is that Microsoft provides a cheap, bundled management software offering called Microsoft Operations Manager (MOM). HP wins deals against Microsoft and their closest partner, NetIQ, in the management software space because as soon as customers want to start integrating their networks, systems, applications, and storage management data into a common console, Microsoft Operations Manager is immediately out of its league.

Historically, the HP Industry Standards Service division partnered very closely with NetIQ as well as Microsoft. That is no longer true. As this point, it is important for you to discontinue those types of relationships and position HP OpenView products against Microsoft and NetIQ in large, strategic management opportunities.

HP versus Mercury Interactive and Best of Breed

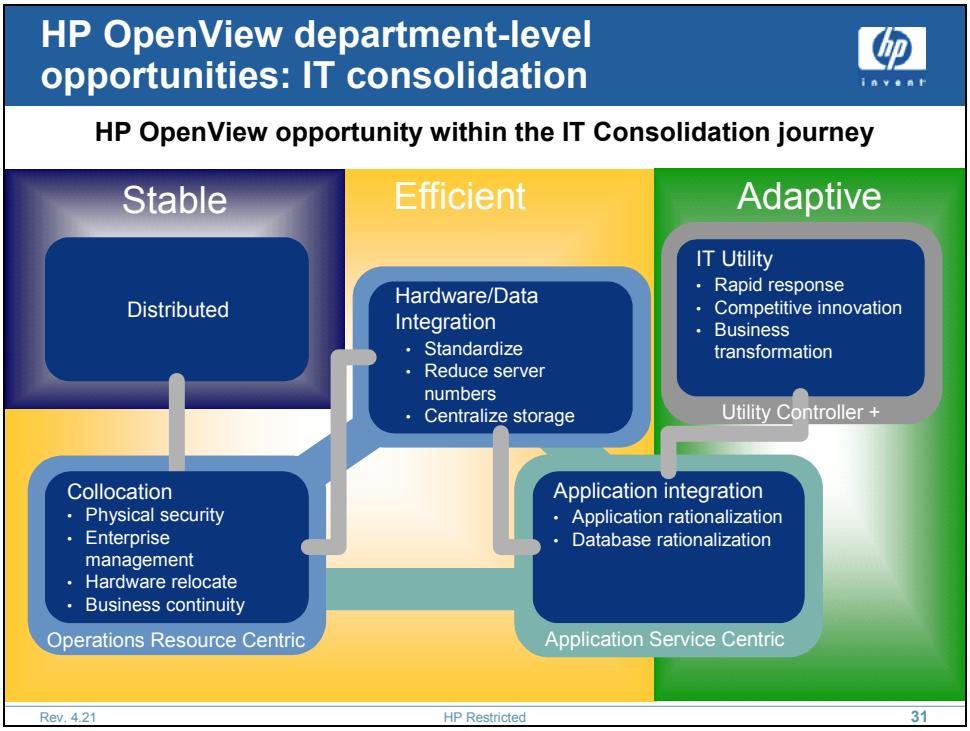
HP vs. Mercury Interactive	HP vs. Best of Breed/SIs
MERQ strengths: ■ Appeal to executive level with developer-oriented management message ■ Have had success by touting "agent-less" technology ■ Strong year-to-year growth: the trend leader for now	Strengths: ■ Modular, quick implementation ■ Unique functionality ■ Offer business process consulting
MERQ weaknesses: ■ Questionable ITSM capability ■ Cannot measure the breadth of applications and networks that HP can ■ Can only tell customers "what happened," not "why"	Weaknesses: ■ Increased cost through integration and support ■ Lost functionality from no integration and the like ■ Support is arranged through many vendors—no "single neck to choke"

HP — The leader in management

Attribute	Description	Customer benefit
Size and scale of a single vendor with the agility of a smaller company	Entire solution from a single vendor— software, hardware, services	■ Flexibility ■ Choice ■ Partnership model between client and HP ■ Simplified vendor management
Innovative HP methodology for management of the adaptive enterprise	HP IT Service Management Reference Model	■ Standards-based ■ Collaborative ■ Experienced ■ Short time to market ■ Proven results ■ Stands the test of time

HP has the breadth of the management portfolio, allowing IT organizations to make rapid, stepwise implementations. HP has the agility of smaller vendors but their portfolio brings us into parity with “the big 4” vendors. HP wins against the competition because they have a much faster implementation.

HP also provides an innovative methodology for managing the adaptive enterprise. As customers get smarter about what it takes to manage IT, organizations are looking to vendors like HP to provide insight, expertise, and capability around how they improve their processes. It is about the integration of people, process, and technology. You cannot win these deals if you are a vendor who only sells a handful of products without that process expertise.



HP OpenView department-level opportunities: IT consolidation

IT consolidation is all about economics. By adding HP OpenView, the total cost of ownership is reduced, the quality of the solution is increased, the risk is reduced by removing performance degradation and downtime, and agility is increased by automating key processes. Because IT staff expenses can represent up to 50% of an IT budget, implementing HP OpenView can significantly improve staff efficiency and add financial value to your customers with higher return on their investment (ROI).

To help you promote the financial advantages of HP OpenView, there are two ROI calculators—one for the non-profit, public sector and one for the commercial customers. With these calculators, it is possible to forecast, in hard dollars, the value of IT staff productivity improvements. An HP OpenView specialist can assist you in developing a financial case for IT consolidation with your customers.

Characteristics of HP OpenView IT consolidation customers

What are ideal characteristics of HP OpenView IT consolidation customers?

Category	Customer characteristics
Business characteristics	■ The customer has an IT budget. If the customer has no money and is cutting costs, there is no way to justify the expense of management software. But, if the customer is looking for consolidation to help bring efficiencies into the IT environment, you have something to talk about with them. ■ Customers are experiencing growth in business but want to hold IT staff levels constant. ■ Consolidation customers should be willing to consider management software as part of the consolidation solution because of the potential high cost of failure. ■ Customers are involved in Financial Services, Government, Healthcare, Retail, and Manufacturing where the cost of failure is high. ■ They must understand financial effects of downtime and SLA violations ■ They must suffer negative business effects from poor user or customer IT experience or service.
Organizational characteristics	■ New leadership ■ Help desk and operations people do not communicate ■ People frustrated by being reactive or driven by trouble tickets ■ IT staff not able to implement required new initiatives ■ Change driven top-down ■ Currently weak in change and configuration management ■ Willing to adopt IT Service Management processes and practices
Technical characteristics	■ Comfortable with evaluating processes, technology, and people ■ Lack of common IT data repository ■ Some operations management, but no service management ■ Considering or recently adopted new technology ■ Complexity of the total environment will still be an issue even after hardware consolidation
Buying characteristics	■ Open to limiting the number of suppliers ■ Desires fully supportable, professional environment ■ Willing to consider IT staff efficiencies ■ Environment on higher-than-standard support contracts already

Possible bidders in IT consolidation deals

Sun

Sun is going to use their installed base as a competitive advantage. You will find customers who say they want to keep their costs running by staying with Sun but do not let that stop you.

15%–20% of all HP OpenView customers are running Sun hardware. Sun has no equivalent to HP OpenView.

Dell

Dell is going to compete on price. They will pitch a low purchase price and promote a product feature sell to the customer's purchasing department.

To counter Dell, use HP OpenView services to differentiate the deal.

Neither firm has a solution like HP OpenView so use it to differentiate the deal and make it so that Dell cannot follow and Sun has difficulty.

The main competitor in IT consolidation is IBM

- They come into accounts aggressively, saying they know their business and everything else.
- They will probably lead with Global Services and their consulting support.
- They will probably try to mix profit and loss between software, hardware, and services to win the account.
- They have strong outsourcing capabilities.

But do not forget, they are going to push Tivoli to manage whatever solution they present. That brings up some opportunities for you.

IBM strengths

- Solid solution selling, blending hardware, software, and services
- Extensive Global Services capability
- Comprehensive, controlled software and hardware portfolio
- Excellent mindshare
- Account P&L model—can shift margin between hardware and services to win business
- Strong outsourcing capability for IBM and non-IBM environments
- Will push Tivoli to manage the data center

IBM weaknesses

- Offer proprietary solutions because they want complete control
- Biased toward mainframes
- Compete with Microsoft and Oracle
- Drive customer to outsourcing, proprietary infrastructure, and technology
- No competition for HP OpenView Service Desk and process focus for Integrated Service Management—Tivoli is operations and software distribution
- No competition for System Insight Manager connection into HP OpenView

The mainframe bias in Tivoli exposes that it is less capable than HP of managing distributed heterogeneous environments. IBM loves to keep their own hardware and software pure in a proprietary stack.

When going against IBM, there is no competition with the process focus and value provided by HP Service Desk.

- IBM does not have the capabilities that HP Service Desk has to automate the processes, work with disparate tools, and provide high-level service management.
- IBM does not have the capabilities that HP has with Systems Insight Manager to integrate from the chassis up to business services.

How to win against IBM

- Use HP OpenView's integrated management environment.
- Use the power of Integrated help desk, the service management automation within Service Desk, and the integrated operation environment.
  - In response, IBM will pitch Tivoli's operations. The superior value that HP OpenView brings is being able to link operations to service management, which drives unmatched productivity improvements.
  - The solution really becomes Service Desk integrated with Operations, integrated with the hardware, and the ability to manage to service level.
- When you drive staff efficiency as a competitive advantage, IBM will say that Tivoli does the same thing. However:
  - HP OpenView has a greater ROI versus Tivoli
  - HP OpenView has a greater TCO versus Tivoli
  - HP OpenView is the best solution for ISS server management—they have won awards for that

Remember to use all of your software and service resources in a consolidation deal—you are going to need them.

HP OpenView value within IT consolidation

What value can you provide to differentiate your consolidation deal versus any other hardware vendor?

If consolidation is being pushed from the software standpoint, there is no reason the customer cannot change hardware at the same time. That creates an opportunity for a competitor.

Fight those battles with HP OpenView:

- It can cut IT staff management time in half
- It can increase the efficiency of each IT person by 26%

- It can reduce server downtime by at least 79% and reduce network downtime by 74%
- It can help assure the performance availability of applications

What you get is a new end state—HP OpenView augmented IT consolidation.

Let HP OpenView be a differentiator with customers—it can change the playing field in close consolidation deals.

Key points for HP OpenView and IT consolidation

Why?

With IT consolidation, cost rules. IT staff expenses alone can represent up to 50% of an IT budget. In a traditional IT environment, manually resolving incidents when they occur results in hard costs to IT in tools, people, and time. IT consolidation deals often involve many companies, each making its own contribution to the consolidation effort.

Why Now?

IT environments are no longer able to fund or support rapid expansion of infrastructure elements as occurred in the last five years. IT organizations today are looking toward IT consolidation as a way to get more efficiency out of their increasingly complex IT environments and save money. During a consolidation deal, it is important to know that critical applications must continue to run well, especially while the underlying hardware is being changed.

Why HP?

- Economics is the most important discussion point in an IT consolidation deal. With HP OpenView, customers gain the ability to provide a more complete ROI value structure to the enterprise. HP OpenView drives hard savings within IT by reducing the time required to manage the infrastructure by as much as 25%. Outside of IT, HP OpenView provides soft savings by reducing downtime and productivity performance degradations. These savings represent revenue that can be kept within the company.
- Customers are assured that during their IT consolidation implementation, their hardware and data will keep running well.
- With HP OpenView, it takes fewer people to manage the infrastructure which reduces costs. HP OpenView allows for further reductions in cost of almost 70% with scalability improvements and streamlining the daily workflow of IT staff. HP OpenView gets the right people working on the right things at the right time to ensure critical business services.

HP OpenView department-level opportunities: Windows management

- Service-driven operations management from Windows
- Heterogeneous management from Windows Console
- Engineered specifically for Windows administrators
- Extensive management of key applications
- Open architecture/integration

Winner – Best of Show in the management category at Tech Ed 2003

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HP OpenView department-level opportunities: Windows management

HP OpenView Operations for Windows won Best of Show in the management category at the Tech Ed show in 2003, which was a Windows-sponsored show. HP OpenView also won six Windows Greeters Choice awards. The fact that HP OpenView won all the awards possible for management software points to how strong their capabilities are for managing the entire Windows IT environment.

From the Windows Management Console, customers can manage IBM, AIX, OS/390, and Linux—all the parts of the infrastructure that are critical—from an open management console.

Microsoft may say that only Microsoft should be used to manage Microsoft. However, they do not have a history of enterprise management while HP OpenView does.

- Using standard Windows technology, HP OpenView enterprise management is scalable, extendable, open, and performs well.
- HP OpenView is able to manage the key applications between 35 different business applications and business services that Microsoft provides in their applications suites.
- Not only can HP OpenView manage the Microsoft applications, such as Active Directory and Exchange, but it can also manage Oracle and key SAP applications on Windows.

Whom do you approach for Windows management?

- If a company is large, the IT Director
- If the company is smaller, the Operations Manager

Characteristics of HP OpenView Windows management customers

What are the characteristics of Windows and Windows Management customers?

Category	Customer characteristics
Business characteristics	■ Enterprise customer with >50 servers, 500–1000 employees, and $100M + in revenues ■ Crosses all verticals ■ Windows portion of IT ■ Successful completion of IT reengineering or consulting
Technical environment	■ Largely Windows, but heterogeneous ■ [need to make or already done?]Technology migrations (ADS, Windows 2003, Exchange) ■ Committed to business-critical applications on Microsoft ■ Wants to create formal reports ■ Has “basic” tools for management
Organizational characteristics	■ Key decision makers with mix of OS backgrounds ■ Signs they value management ■ Personnel focused on cross-domain coordination or specific IT service responsibility ■ Hiring IT personnel ■ Cobbles together formal reports
Buying characteristics	■ Long-term, trusted partner purchases ■ Short-term investment for 12-month payback ■ Buys standalone, “best-of-breed” tools

The main competitor for Windows management is Microsoft

Microsoft has recovered competitively and has developed their own, cheap Microsoft Operations Manager.

HP OpenView versus Microsoft Operations Manager

Key differentiators	Proof points
Big league enterprise management "We know management"	■ Success stories ■ Analyst reports (GIGA, Windows, and .NET magazine) ■ Microsoft Tech Ed "Best of Show" in Management and Reader's Choice awards ■ HP OpenView reputation
Key Microsoft technology and services partner "We know Microsoft"	■ Frontline partnership ■ .NET Results program ■ Microsoft technology in product ■ Nationwide network of Microsoft professionals
Expert consulting services via channel partner network, maintenance and support "We know business—and we work with business every day to solve problems like yours"	■ CRN Awards/Channel Champions ■ Reputation in Microsoft space ■ Analysts (GIGA report) ■ Joint success stories

Key differentiators for HP OpenView

HP OpenView is the best at enterprise management and provides:

- Proven success stories
- Analysts reports
- Awards
- A good reputation

Why not use Microsoft to manage Microsoft?

- HP knows Microsoft application technology as well as Microsoft does because HP is one of their frontline partners.
- HP has gotten great results managing .NET.
- The last differentiator with Microsoft is business.

HP is winning business. With HP OpenView, HP has the integration and consulting expertise and partnerships that provide a comprehensive success story for you to use with your customers.

Opportunities for Windows management

Windows Server and Exchange migrations

With 60% of the Windows Server installed base still running NT, there is an opportunity for HP OpenView. Approximately one third of that installed base will be migrating to Windows 2003 by the end of this year.

Most migrations to Windows Server will occur when customers are attempting hardware refreshes, operating system upgrades, and probably implementing packages such as .NET, Active Directory, Microsoft SQL, or new versions of Exchange.

This represents a chance for you to leverage many different areas and provide value to your customers.

- Sell the hardware and software together and you will be able to provide a much more complete solution.
- Use partnerships to help with Exchange migrations. HP OpenView has partnerships in place to make this work for you and your customers.

HP ProLiant installed base

With HP OpenView, you have a weapon you can use against Microsoft with customers who have a ProLiant installed-base—the market leader in Windows servers.

As Insight Manager transitions to Systems Insight Manager, you have a great opportunity to tell customers about the value of bringing their service and multi-platform management up into the management console. This solution is unmatched in the industry today.

No other competitor has the breadth of HP OpenView operations for Windows:

- Service maps within HP OpenView operations for Windows
- Message descriptions and cross-launching of tools
- Integrated tools that provide true system-to-service level management, from fan problems to email SAP

If customers within the ProLiant installed base need help, HP OpenView can provide assessments, integration, and consulting expertise.

How to capitalize on Windows management opportunities

Look for key drivers in the Windows Management market to help identify where you could act:

- Look for new migration and new application installation.
- Make sure to tap the ProLiant installed base in your territory and use the opportunity to promote Insight Manager up to System Insight Manager.
- Find ways to elevate the conversation.
- Deliver the big picture and do not get bogged down in details.

Offer service management, such as the value of the integrated console and the ability to tie into the help desk.

There is stiff competition in this market with price competition similar to that practiced by Dell.

Be confident. HP OpenView is the number one solution in this market.

Key points for HP OpenView and Windows management

Why?

Customers are having problems trying to manage their applications, such as Exchange, SQL, and Oracle, along with their systems, such as Windows servers alongside UNIX and Linux servers. The majority of IT budgets are eaten up by maintenance of the infrastructure instead of funding new projects.

Why Now?

60% of the Windows Server installed base is still running NT, representing an opportunity for HP OpenView. Approximately one-third of that installed base will be migrating to Windows 2003 by the end of 2004. Most migrations will occur when the hardware is refreshed.

Microsoft has developed their own, cheap Microsoft Operations Manager (MOM).

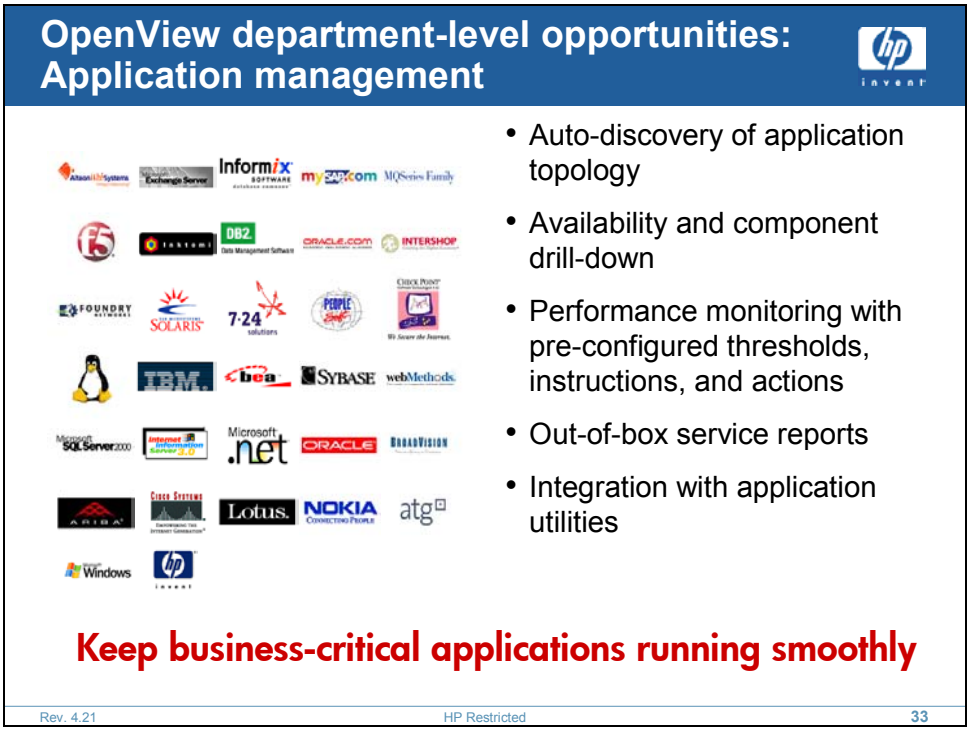
Why HP?

In Windows environment management, HP OpenView has the number one solution. With its multi-platform management capabilities, it is able to bring a professional service management approach into the Windows environment and to the enterprise. HP ProLiant installed base is the market leader in Windows servers. As Insight Manager transitions to Systems Insight Manager, there is a great opportunity to tell customers about the value of bringing their service and multi-platform management up into the management console. This solution is unmatched in the industry today.

Resources for Windows management

Leverage 2003 Windows Management Awards:
www.hp.com/go/openview_thankyou

“Plan, Migrate, Manage: Shifting Seamlessly from NT4 to Windows 2003” On Demand Webinar downloadable on Channel Web:
www.hp.com/go/plan_migrate_manage



HP OpenView department-level opportunities: Application management

HP OpenView manages customer applications and correlates them to business processes. To understand this better, we need to identify the important business applications within the account.

There are many different applications available, as you can see on this slide. So what do we do to help those applications?

- Break down silos and unify the entire environment
- Provide availability, component drilldown, and making sure that all the key processes are running
- Monitor performance with pre-configured thresholds in instructions and actions

Most major applications have their own manager utility, such as Oracle Enterprise Manager and SAP CCMS, but they only have visibility to problems within the application.

We instrument the application and the supporting infrastructure by:

- Correlating system, network, performance, customer experience, and customer transaction issues while also mirroring internal application issues and alerts
- Providing a more complete view of the health of the application environment
- Automating administrator tasks to reduce workload and ensure exceptions are flagged and raised to the operations staff

- Allowing for prioritized service-level management
- Providing the power of the IT service and application views

The value is in keeping the business-critical applications up and running smoothly and being managed from an environment that is very professional, very competent, and is focused on the business result. HP OpenView accomplishes this through:

- Monitoring of the network infrastructure
- Monitoring of the system infrastructure
- Monitoring of the application components and interfaces
- Cooperatively managing with the application's own utilities
- Monitoring of the web components: Firewalls, web-servers, and transactions
- Interfacing to other IT management disciplines, such as help desk, console events or alarms, and job scheduling
- Out-of-the-box reporting on service level objectives and metrics
- Improving response time, availability, server use

Smart plug-ins

Smart plug-ins (SPIs) are fully integrated, out-of-the-box solutions that expand HP OpenView management to cover the entire application stack—from network services through storage, systems, Internet middleware, databases all the way to business applications.

There are three kinds of smart plug-ins available for HP OpenView:

	HP OpenView SPIs	HP OpenView Partner SPIs	HP OpenView Gallery
Where to get them	Sold by HP and channel partners	Sold by partners	Free download from Hp OpenView Web
What they do	Events, processes, actions, performance metrics, service reports, service views, service discovery, transaction management	Events, processes, actions, performance metrics, service reports	Events, process monitoring and some actions
How they are supported	Full support by HP OpenView	Full support by partner	Self-help community
How quality is assured	HP OpenView's operations experts develop the SPI closely with application vendors and key customers	HP OpenView Certification guarantees the quality assurance of an expert HP review team	Co-developed and co-marketed by HP OpenView with leading application vendors

HP OpenView Smart plug-ins available include:

HP OpenView Smart plug-ins		
BEA Tuxedo	Microsoft Exchange Server	Remedy Action Request System
BEA WebLogic Application Server	Microsoft SQL Server	SAP
Broadvision	Netegrity SiteMinder Manager	Sybase
IBM WebSphere	OpenCall	TIBCO WebMethods
Informix	Oracle	Windows BackOffice-based applications
Microsoft Active Directory	PeopleSoft	

Partner Smart plug-ins		
Lotus Domino/Notes by nworks	Siebel eBusiness SPI by HERMES SoftLab	SoftLab Custom Java Applications SPI by HERMES SoftLab
e-Sentinem by e-Security, Inc.	UpdateEXPERT by St. Bernard Software	Tripwire for Servers by Tripwire
SoftLab SPI for Citrix MetaFrame by HERMES SoftLab		

Gallery Smart plug-ins		
Ariba Buyer	Sun iPlanet	Sun ONE Application Server
ATG Dynamo	ISS RealSecure	Sun ONE Directory Server
Check Point FireWall-1	Microsoft Navision Axapta	Sun ONE Identity Server
Cisco PIX Firewall	Oracle Enterprise Manager	Sun ONE Portal Server
Documentum e-content server	Nokia WAP Server	Sun ONE Web Services—SOAP engine
HP-UX Host IDS	Portal Infranet	TIBCO Hawk
Inktomi Traffic Server	Resonate Central Dispatch	Web Service UDDI Server
Intershop Enfinity	SOAP	

Whom do you approach for application management?

There is a new buyer to consider called an Application Manager.

- They are usually not in IT and are assigned to take care of a specific application.
- They are absolutely driven by the results of an application management project.

Characteristics of HP OpenView application management customers

Category	Customer characteristics
Business characteristics	■ Enterprise ■ 1000s of employees ■ 100s of servers ■ $100+ million in revenue
Technical environment	■ Heterogeneous platforms ■ Complex application structures and layers ■ Not satisfied with current management tools
Organizational characteristics	■ Major applications critical to important business processes ■ Availability, performance, and quality are valued and visible
Buying characteristics	■ Driven by long-term growth ■ Having a connection to HP is good ■ Looking for comprehensive solution

BMC is a strong competitor in application management

BMC is a strong competitor in this arena and is focused on application management.

While they have Remedy for help desk, they do not have the full-service management solution that HP OpenView has.

You want to sell application management. If they have any HP OpenView in place, you have a great opportunity to sell HP OpenView for application management and not have to bring in another tool set to do the management. You are trying manage and sell across silos. This is just another area where HP OpenView can add value.

Business value of application management

- The business value of application management is in reducing application administrative costs. As servers get easier to manage, applications have more resources available to them.
- Application complexity can lead to a huge number of application components and platforms.
- HP OpenView's ability to simultaneously manage those multiple versions and custom instances brings value to the business.
- Reducing application downtime is absolutely essential.
- HP OpenView has the ability to provide high levels of service where the customer needs it—their business-critical applications.

Key points for HP OpenView and application management

Why?

Customers have increasingly heterogeneous platforms on which they are running complex application structures and layers. Many are not satisfied with the ability of their current management tools to keep their business-critical applications available, performing, and maintaining quality.

Most major applications have their own manager utility but they only have visibility to problems within the application.

Why Now?

The complexity of running many critical applications is increasing exponentially. For example, there are 15 key processes that have to be kept running within SAP. If customers are also using Oracle, there are nine key processes that have to be kept running within Oracle. Then there is the operating system, the network, and the server health underneath to consider.

Why HP?

With HP OpenView, customers can configure? the application and the supporting infrastructure. HP OpenView correlates system, network, performance, and customer experience and transaction issues while mirroring internal applications issues and alerts. In this way, HP OpenView provides a more complete picture into the health of the application operating environment.

HP OpenView provides value by keeping the business-critical applications up and running smoothly, managed from an environment that is professional, competent, and focused on the business result.

Additional OpenView department-level opportunities

Network service management

- Merger or acquisition need
- #1 vendor in this space

Help desk replacement

- Remedy and Peregrine replacement
- Service Desk is much more than a help desk, it drives ITSM process automation—stay tuned

Web application and web service management

- Manage web operations, web performance, and web experience
- Proactively identify and prevent web performance bottlenecks before customers are affected

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HP OpenView department-level opportunities: Additional HP OpenView department-level opportunities

Network service management

Why?

If there is not stable infrastructure, it is easy for customers to lose data and performance when scaling up.

Why Now?

With the huge HP installed base of network management customers, there is a big opportunity for partners to make a profit and help HP gain business now:

- Actively develop existing accounts for new revenue opportunities
- Evaluate existing relationships and installations
- Consider competitive positions
- Execute, defend, and develop strategies to improve account positioning
- Leverage the complete HP team to increase sales effectiveness

Why HP?

HP is the leading vendor of network management solutions. There is no reason HP OpenView should lose in a network management deal—it is an easy sell.

If you have customers interested in network management, call in the HP OpenView application specialists to help close the deal.

Help desk replacement

Why?

Traditional help desks support the day-to-day operations of IT and handle incidents in the infrastructure as they occur. As IT evolves and complexity in the data center increases, it becomes increasingly important for IT to have additional information about critical aspects of the infrastructure available to them to make decisions and manage the infrastructure more effectively.

Why Now?

With IT budgets and personnel numbers shrinking and IT demands increasing, IT is in a difficult position. Any disruption in service can result in a large loss of revenue and customers to competitors.

Why HP?

HP OpenView Service Desk gives enterprises and service providers a unique solution to manage service levels. The integrated Service Desk allows customers to manage crucial support and service processes to deal with complex IT management challenges.

Web application and web service management

Why?

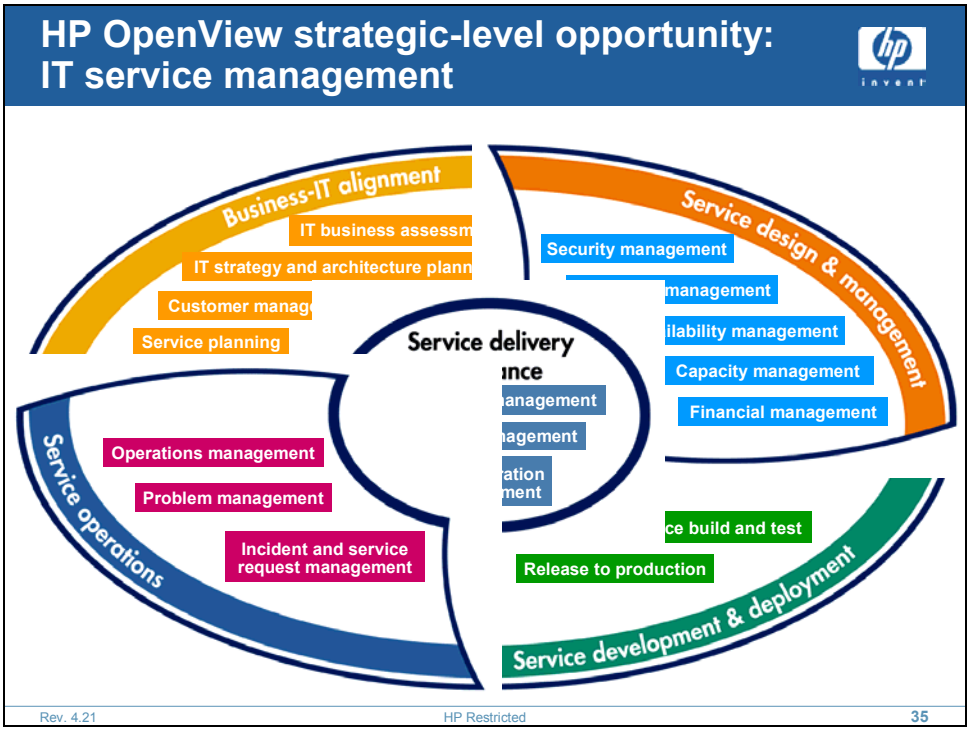
If customers are developing custom applications, then their main concerns are the same as for the purchase of a business application.

Why Now?

Buying a custom application is expensive, visible, and highly supported from a sponsorship standpoint in the corporation.

Why HP?

The ability of HP OpenView to manage production and manage custom applications professionally gets people’s attention from a technical standpoint.



HP OpenView strategic-level opportunity: IT service management

What is IT Service Management?

IT Service Management is a strategy, implemented through consulting services and software, that allows enterprise IT organizations to:

- Achieve breakthrough reductions in cost structures
- Ensure availability of critical business services
- Demonstrate the value IT delivers to the enterprise
- Comply and validate governance standards established by internal and external stakeholders

The ITSM Reference Model

The concept that surrounds IT transformation is what HP calls the IT Service Management Reference Model. The ITSM Reference Model is a consolidated, assimilated view of various IT processes and how they work together. From a high-level view, processes might include:

- Key areas of process capabilities, such as processes that achieve business IT alignment
- Processes that achieve service design
- Processes for the deployment and delivery of services and processes that are to be operated on an ongoing basis

The layers of IT processes can be peeled away until you get down to a specific process, the procedures involved, and ultimately to the work instructions and work flow required for implementation. This gives a comprehensive view of what HP can do for the management of IT. HP can provide specific definitions in 17 different process areas.

There are two important things to take away from this:

1. The HP ITSM Reference Model is proof that HP has the capability of enabling IT organizations to take an IT service from conception all the way through deployment and on-going operational life.
2. By being able to look at these processes separately, HP can offer them to IT organizations on an ala carte basis.
    - Maybe an IT organization only needs to address availability and capacity management in the short term and is less concerned about problem management.
    - HP can provide just the process capabilities the customer is interested in and help them roll out new process capabilities in a step-wise fashion.

The challenge for IT

Without a clear picture, IT struggles to determine:

- The current state of IT with regard to IT Service Management—the “as-is”
- The desired future state of IT—the “to-be”
- The gap between the “as-is” and the “to-be”
- The steps necessary to bridge the gap and achieve IT’s service management goals

HP uses a very straightforward formula for closing the gap that involves three key components:

1. The equation begins with leveraging integrated management tools.
2. Then leverage technology where appropriate and combine it with industry-standard IT processes and best practices.
3. Next, combine that with re-examining the IT strategy, the tactics of the organization, and the reward structures, and align them with the business requirement.

When you can address each of these three components, you have the foundation of IT Service Management.

Meeting the challenge—closing the gap

Remember, the definition of Adaptive Management is the integration of people, process, and technology. When you look at this formula, HP can deliver any of these components in any permutation to the customer.

- If that customer just picks up the tools, they will benefit.
- If they only improve their practices, they will benefit.
- If they look at their IT strategy and make some improvements as a result of HP working with them, they will benefit.

But the largest benefit will be received when you take those three areas of benefit and bring them together. You can create an exponential return where the whole is definitely worth more than the sum of its parts.

Why offer ITSM?

When offering ITSM, you become a strategic partner to the CIO. What you are helping the CIO do is understand what an ideal world might look like and what you can do, pragmatically, to help the CIO make the transition from the “as is” environment to a more desirable “to be” environment.

Offering ITSM:

- Presents immediate, tangible, quota-retiring proof-point for Adaptive Enterprise and Adaptive Management
- Drives account control and sustains CIO relevance
- Elevates HP from infrastructure vendor to strategic partner
- Ranges for typical ITSM deals:
  - 6–12 month sales cycle
  - $500 thousand to $1.5 million and more in HP OpenView product licenses
  - $250 thousand to $1.5 million and more in HP Services consulting and deployment services

Whom do you approach for ITSM?

Where HP OpenView department-level selling opportunities were directed to the IT Director and Operations Manager, IT Service Management gives us the opportunity to take a message directly to the CIO.

Why do we need to get these people to buy in?

- First of all, IT Service Management suggests a shift in strategy for the IT organization. We are asking IT to perform their job in a fundamentally different way. That is not only an implementation of new tools and processes, but a cultural discussion as well.
- Cultural changes within the organization really need to be driven by the CIO. The CIO is also responsible for the coordinated investment planning that will be required by the IT organization to create an IT Service Management opportunity.

Paths for adoption of ITSM

According to HP primary research conducted in 2002–2003 with 27 IT Directors and CIOs, there are three main paths to use in directing customers toward adopting IT service management:

Service-driven operations management

Service-driven operations management means adding a service orientation to management information so that, rather than just knowing a particular server, network, or storage device is affected by an outage, customers get information about which IT service is being affected. They know when email as an IT service is no longer available, when the corporate web presence as an IT service is no longer available, or when payroll as an IT service is no longer available.

- CIO or customer profile
  - Tactical focus, often skeptical of consulting-led projects
  - Likely promoted through IT ranks
  - Looking for tangible, quick results
  - Purchase motivation often coincides with new business-critical application project, or follows a severe, business-critical application outage
  - Wants deployment services that are practical to save deployment time and accelerate IT's expertise

  Selling IT transformation to this CIO would clearly be difficult. But, if you lead with a more service-driven operations approach based around technology, you can offer them a solution that resonates more with where they are focused.

- Optional approaches for building service-driven operations management

  When looking for ways to build a service-driven operations management, you might build it around a high-level application service, such as SAP Exchange. Or you might build an approach around a particular IT service that could otherwise be outsourced, like email or web hosting. In other cases, you might choose to deliver services on a largely geographic model with less sensitivity to the service being delivered.

  In any case, here are some tips for creating an effective approach:

  - Illustrate the effect of infrastructure on IT services.
  - Design the approach to be mostly product license, support, and implementation, with little consulting.
  - Plan on a 2–8 month implementation, depending on the complexity of the infrastructure.

- What is in it for you?
  - The opportunity to discuss new business initiatives with your customer
  - The chance to gain a “quick victory” in your account, increasing their confidence in you

HP OpenView offerings for building service-driven operations management

HP OpenView offering	Brief description
HP OpenView Operations (OVO), especially Service Navigator	Specific for UNIX or Windows, OVO is a distributed solution that monitors, controls, and reports on IT environment health. Service Navigator manages applications and services from a business perspective with graphical views.
HP OpenView Internet Services	A single integrated view of the complete Internet infrastructure
HP OpenView Reporter	Enables IT to provide timely, accurate reports to prove IT service quality levels
HP OpenView Service Information Portal	Create a “portal” view to show status information of a customer’s environment

Integrated Service Desk

Unlike the first path that was primarily technology driven, this path gets into a solution that involves not only applied technology to address the service management challenge, but also incorporates necessary and sufficient IT processes for making IT happen.

This involves two key things:

1. Deploying Service Desk technology in an integrated fashion. Service Desk capabilities need to be provided—not just the capabilities of a traditional help desk, but also capabilities that address how customers should handle problems and incidents in the IT structure.
2. In addition to the technology being delivered, customers are helped to optimize and document the processes that they are automating with Service Desk technology.

- CIO or customer profile
  - Desiring IT excellence through improved process and best practices
  - Potentially trying to stave off outsourcing
  - Potential IT consolidation or merger

  The CIO in these organizations is exposed to the disorganization and inefficiencies in the way people do their jobs and sees the Integrated Service Desk solution as the most direct way to cut costs, build efficiencies in the organization, and improve the efficiency rate of IT staff.
- Optional approaches for integrating Service Desk
  - Create or reengineer and document those processes that will be automated in Service Desk.
  - Establish Service Catalog, service level agreements, and IT people and asset inventory in Service Desk.
  - Try to craft the deal to include 50% software and 50% services.
  - Plan on a 4–12 month implementation.

  The processes involved along this path are based on an industry standard called ITIL. ITIL is a library of best practices designed to share information about how to most effectively deliver IT processes.

  For example, change management is a process that is addressed by ITIL. Through ITIL, answers are found to pragmatic questions, such as “What kind of procedures are involved?” “What kinds of work instructions are involved?” “Who in the IT organization needs to be involved and what kind of data needs to be effectively delivered to them?”
- What is in it for you?
  - Appear strategic to the CIO by presenting a solution that is more than just technology.
  - Service Desk deals scale up quickly.

HP OpenView offerings for integrating Service Desk

HP OpenView offering	Brief description
HP OpenView Service Desk	Implement help desk, problem change, configuration, and service level agreement management processes into a single workflow.
HP OpenView Operations (OVO) for event management integration	Specific for UNIX or Windows, OVO is a distributed solution that monitors, controls, and reports on IT environment health.
Implementation and process consulting	HP Services, HP Operations Managed Services
ITIL education	HP Services

Comprehensive IT transformation

The third path to ITSM chosen by 30% of CIOs is comprehensive IT transformation, led by HP Services, which aligns services to the IT strategy and tactics—basically helping the IT organization start to think, act, and run as a business. The value is to improve how the IT organization is structured to succeed, such as choosing the right processes to enable the IT organization to do what it needs to do.

- CIO or customer profile
  - Long-term, strategic thinker who is not versed in management tools and delegates day-to-day operations to IT Directors
  - Potentially experienced sweeping changes to executive organization or business, so now they are ready to align IT
  - Wants a complete roadmap and method to get full organization on the same page
  - Expects objective consulting services, preferably with vertical industry expertise

  New leadership may be the best environment for Comprehensive IT Transformation projects. When there are few barriers to change within the IT organization, these kinds of projects become much more plausible to the IT organization.
- Optional approaches for IT transformation
  - System Integrator from HP Services brought in as a trusted advisor to CIO
  - Culture, skills, processes, and governance are addressed
  - Implementation is 6–24 months, largely delivered in a step-wise process and highly varies depending on project scope

While these projects are typically led through a consulting opportunity, at some time there will be a need to codify and automate the effective IT processes that have been designed and implemented and that the right information is feeding those processes. Sooner or later, HP OpenView becomes a critical part of realizing and executing against the IT transformation that has been defined.

- What is in it for you?
  - Account control through multi-phase implementation and upfront strategy proposal and acceptance
  - The opportunity to present a multi-faceted strategy that only HP can offer

HP OpenView offerings for IT transformation

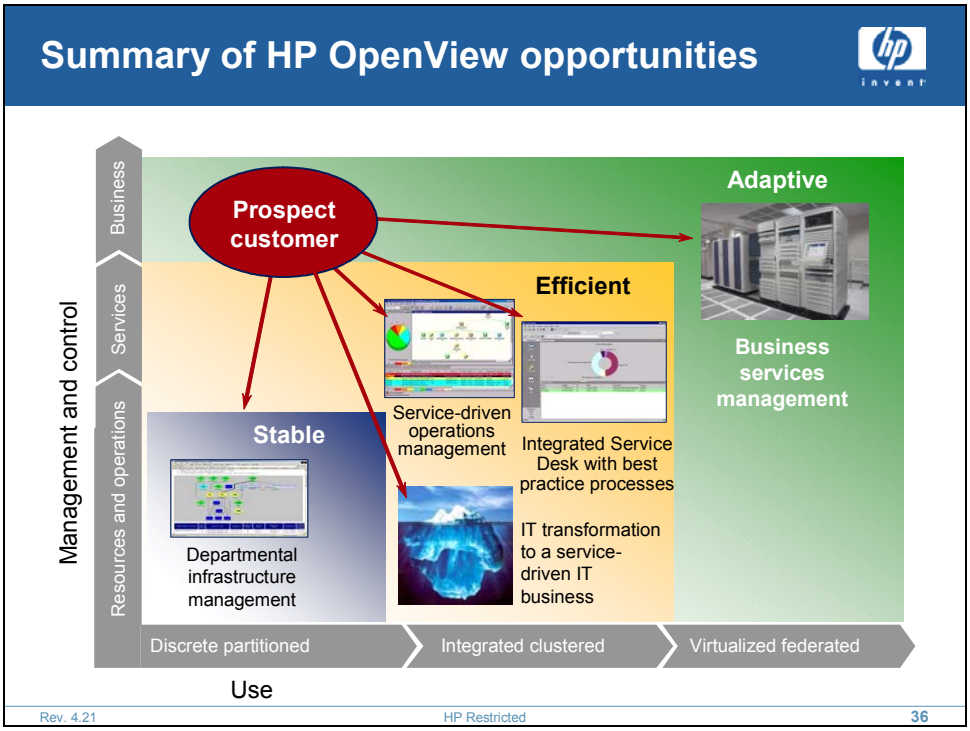
HP OpenView offering	Brief description
ITIL education	HP Services
IT Strategy Consulting	HP Services
Process Consulting	HP Services
HP OpenView products used to automate defined processes	Products depend on particular customer situation

Resources for ITSM

ITSM Success Guide: http://www.openview.hp.com/itsmsuccess

ITSM Partner Pack: http://hppartnerpacks.com

IT Service Management Forum (itSMF): http://www.itsmf.net



Summary of HP OpenView opportunities

Adaptive Management provides a modular approach that can be implemented individually or together. Use HP OpenView to help move customers from the stable stage toward adaptive management.

Why HP OpenView is a tremendous opportunity for you

Opportunities are everywhere and they are lucrative.

- Businesses have too many management tools with no end-to-end view.
- HP OpenView delivers significant cost savings and improved efficiency.
- It is the foot in the door to surround and replace a single solution.

Management software represents an opportunity for you and for your customers.

- It is a way for you to increase your relevance with the CIO and that person's direct reports.
- It provides support for increasing your effectiveness in addressing the real needs of CIOs to help them improve business processes.
- It gives you new tools to use in helping customers deal with complex software installations and implementations that must be done in an environment of shrinking staff and budgets.
- It encourages you to have new and different conversations at higher levels in your accounts.

Your success is measured by how much value you bring to customers, enabling them do their jobs better. That is the essence of significant knowledge transfer, of real trust and value. HP OpenView enables you to add value at every stage in your customer's IT development—stable, efficient, and adaptive. Through department-level opportunities, you can target your conversations to specific solutions. At the strategic level, you can engage CIOs in deeper conversations as a trusted advisor and help them improve their IT operations and the organization's bottom line.

Additional resources for HP OpenView

HP OpenView Channel Web

- Sales Action Guide
- Whiteboard scripts for the four major sales initiatives

HP OpenView Web Demos and Seminars — Use to create your own local seminars

- http://www.hp.com/go/ovweb

Partner Packs

- http://hppartnerpacks.com

Use white papers — An example of good use of white papers by a channel partner:

- http://www.InterPromUSA.com — Executive papers

C3 Outfitters Conference, HP Software Americas Marketing Team, December 2003 — Final presentations on the four major sales initiatives

- http://www.hpswtraining.com

The offerings

- Management
- **Storage**
- Networking

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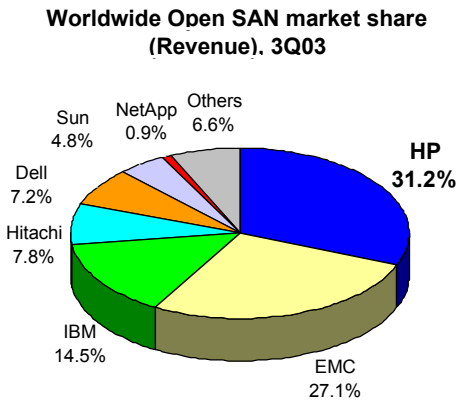
Storage

Open SANs — Vendor revenue market shares



Source: IDC, *"Worldwide Quarterly Storage Tracker, Q303 (Dec 2003)*

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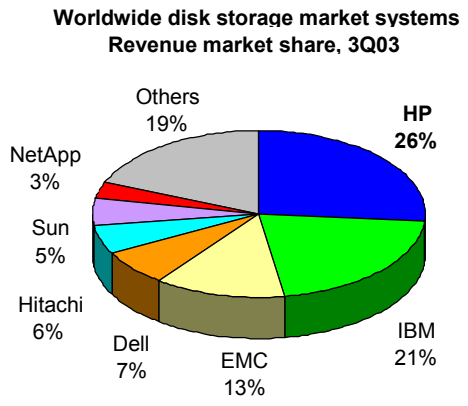
Open SANs — Vendor revenue market shares

Worldwide disk storage systems — Vendor revenue market shares



Source: IDC, *"Worldwide Quarterly Storage Tracker, Q303 (Dec 2003)*

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Worldwide disk storage systems — Vendor revenue market share

CIO's top 10 business trends

- Costs and budget pressures
- Data security concerns
- Faster innovation
- Business risk management
- Single view of customer
- Stakeholder pressure
- Greater transparency of reporting
- E-enabled business/government
- Growing value of knowledge capital
- Personal data privacy concerns

Source: Gartner, *CIO Agenda 2003: Leading for Productivity and Growth*, Ellen Kitzis, June 2003

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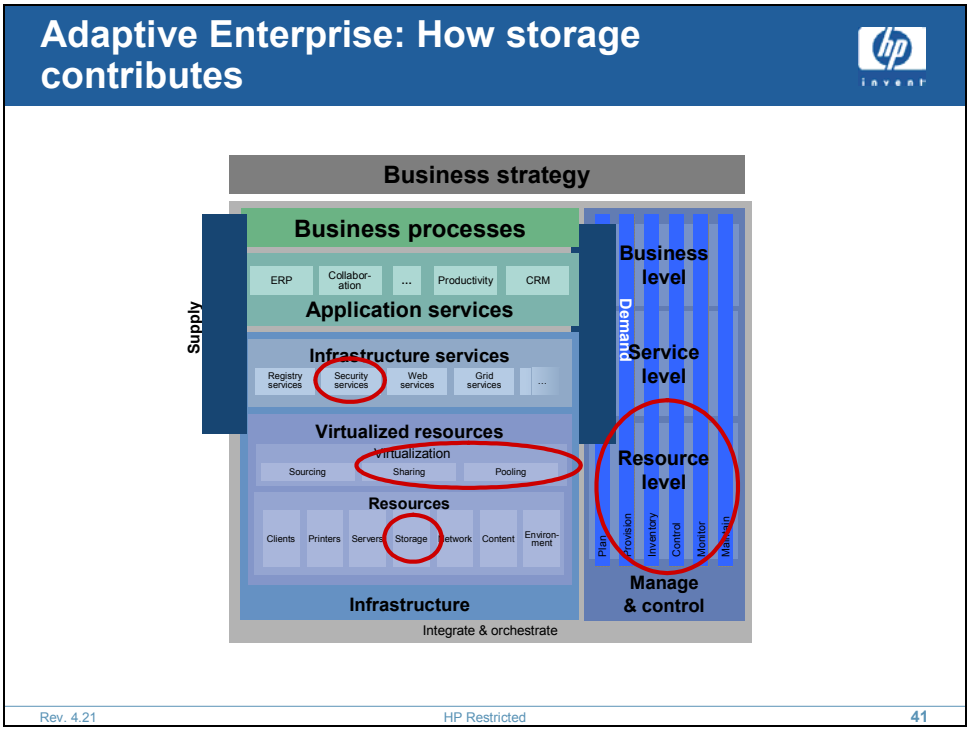
CIO's top 10 business trends



Adaptive Enterprise: How storage contributes

Resource storage provides raw resources that can be delivered to applications with increasing levels of managed behavior. Storage also provides resources in the form of structured overlays on native storage device formats.

Virtualization

Storage virtualization is more than just pooling storage capacity. It is also a way to deliver data. There are multiple levels and kinds of virtualization. For example, we virtualize storage network paths between applications and data. The more complex the network, such as one with more switches, more ISLs (inter-switch links), and different resiliency options, the more virtualized the data paths. Virtualization will become even richer as we evolve the resilience and self-managing capabilities of the overall network.

Infrastructure services

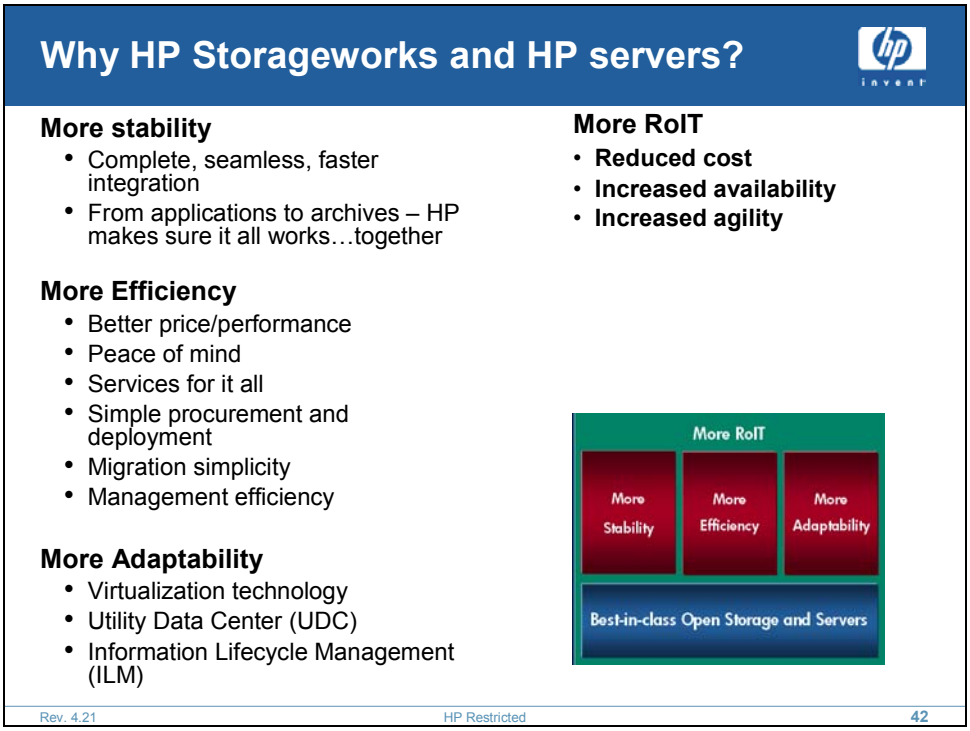
Storage services provide the mechanisms to reliably deliver information to applications from virtualized storage resources. While this picture highlights security, there are other storage elements which are not shown here. For example, application-specific interfaces can provide “application awareness,” as we will see later when ILM is discussed. Unlike the APIs that link resource management applications to resources such as SMI-S , these interfaces are business application oriented.

Storage security needs to be intimately tied to a general Darwin Architecture security model. Today, we offer capabilities such as secure LUN presentation, which is assured through the fabric as well as from the storage system, and logon to the management appliance. We are currently working on a comprehensive storage security model that covers the basic "A's"—Access, Authorize, and Audit—within the Darwin Architecture framework.

Data movement, the various replication technologies, and the other capabilities that were referred to as infrastructure services in the ENSA storage architecture are all embedded in AE infrastructure services.

Management and control

Today, we deliver many storage management capabilities through HP OpenView SAM. These all fall into the AE "resource level" management category. ILM will push us up a bit into "service level" management. Notice that, as is the case for our storage architecture, many aspects of resource-level management are affected by managing the infrastructure services we discussed earlier. For example, backup, restore, and business copy take advantage of various data movement and replication services.



Why HP Storageworks and HP servers?

More stability

Seamless integration

HP Servers are developed on Storageworks. The result is unsurpassed product integration with in-house cross testing of storage and servers.

Complete integration

HP makes sure all the components work together.

Faster integration

New HP Server and Storage products are supported first on HP. Customers can count on HP to fully support the next evolution.

Guarantee

Industry's best written uptime guarantee available for total end-to-end solution.

More efficiency

Gain peace of mind with single vendor accountability. HP makes the process simple to procure and deploy storage with complete factory-integrated solutions. The entire data center can be managed through HP Openview software—both Storage and Servers!

More adaptability

Virtualization is a powerful, simplifying technology that is used in various products across HP's Server and Storage portfolio to save customers time, resources, and costs. Virtualization provides significant values to the IT organization by providing for:

- Increased use of storage assets
- Consolidated, standardized, and simplified management
- Reduction or elimination of application downtime due to storage maintenance activities
- Value-added services, such as snapshots, mirroring, data migration, and data replication, can be performed across and between unlike storage devices. Customers can cost effectively add functionality to mid and low-range storage.

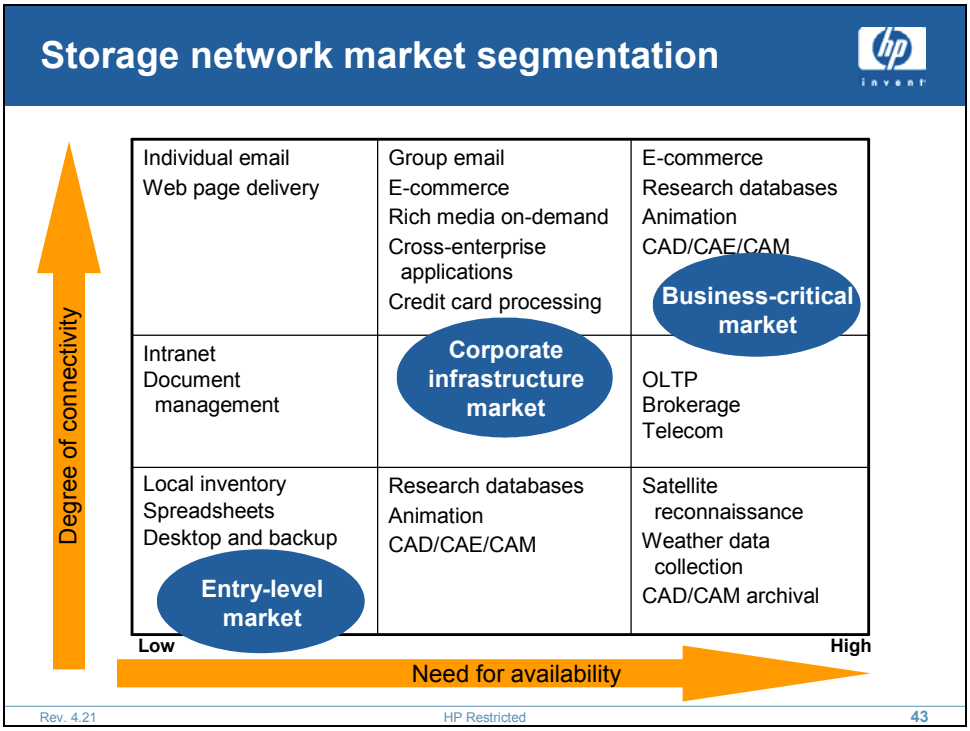
Utility Data Center (UDC) — All network, storage, and server components can be wired once. A simple user interface allows administrators to configure and activate new systems using available resources.

Information Lifecycle Management (ILM) is an important component to an adaptive enterprise. ILM is not just about an NAS device or a storage array, it is much more than just hardware or software. The single biggest component of ILM is services. HP is not just a storage center play but rather a business process play. It provides for agility and archiving of information based on the needs of the business. For this reason, HP is in a unique position to deliver all of these capabilities in an adaptive enterprise, including ILM.

More RoIT

Networked storage advantages

DAS	Networked storage	Advantages
Proliferation of servers with storage	Consolidation of storage, servers and tape libraries	Lower TCO
"Islands" of storage	Shared pools of physical storage	▪ Reduced storage isolation ▪ Greater use of what you buy
People-intensive management due to number of servers and storage-higher TCO	Fewer boxes to manage and a unified view of storage	Improved staff productivity
One-to-one relationship of application to storage	One-to-many relationship of application to storage pool	Higher availability and inherent redundancy



Storage network market segmentation

Business-critical enterprise market

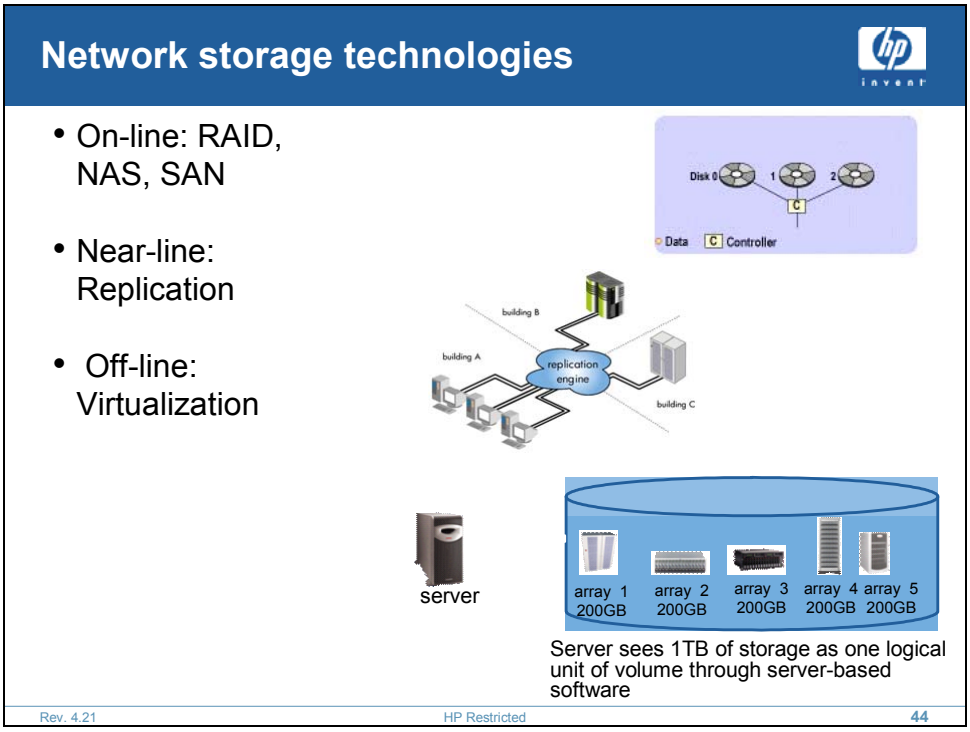
Addresses the unique needs of mission-critical applications in terms of performance, availability, and non-disruptive 24x7 operations

Corporate infrastructure market

Addresses the use of storage networks to consolidate departmental storage needs into a centrally managed corporate structure, also called the “fabric backbone”

Entry-level market

Environment that is cost-sensitive, often isolated, and typically application-centric in medium to large organizations or SAN adoption by small enterprises.



Network storage technologies

When thinking about storage, there are two considerations:

1. How accessible is my data?
2. How and where is my data stored?

Accessibility

There are three levels of data accessibility:

1. **On-line data** is immediately accessible through products such as RAID and Replication using clones, snapshots, and site mirroring. Our offerings include NAS or SAN disk arrays and enterprise features such as mirroring, cloning, and snapshots.
2. **Near-line data** is not immediately accessible, but it can be accessed without human intervention. Near-line products include stand-alone tape drives, automation tape libraries, and data recovery, where data is restored.

   Our offerings range from a 20GB stand-alone DAT drive up to about a 93TB tape library, with in-between options based on how many drives and how you want to scale it. HP has optical jukeboxes as well.
3. **Off-line data** is not accessible without human intervention.

Storage media

Data has to be stored on some type of media. It will likely be stored on one of three media types.

- **Hard drives** are the most common type of media. You can almost always assume that whenever data is saved, it is saved directly to a hard drive somewhere. The major advantage of hard drive storage is its speed.
- **Tape media** is primarily used for secondary storage or backup. The main advantage of tape storage is its relatively inexpensive cost.
- **Magneto-optical** rewriteable and permanent write-once disks for optical jukeboxes and drives have capacities ranging from 1.2GB to 9.1GB per disk. The major advantage of Magneto-optical storage is the reliably long archival life of 100 years. Last year, optical sales reached US$200 million in North America.

Ways that data are stored

Write Once, Read Many (WORM)

Designed for permanent storage of data that cannot be altered or erased, these disks are ideal for business or government entities with legal audit and regulatory liability.

Rewriteable

Designed for virtually unlimited read/write cycles, rewriteable optical disks are the best choice for managing huge amounts of data in information-intensive environments.

There are technologies associated with making sure that data is always available (data availability), others with protecting the data (data protection), and others with restoring data in the event of failure (recovery) or if the data must be moved somewhere for safekeeping (archiving).

Data protection relates specifically to storage of data on tapes, either stand-alone or automated tape libraries.

Storage vocabulary

Arrays

A group of individuals can usually accomplish more than a single person, provided that the team is well managed and given a clear purpose. The same holds true in the world of storage. A group of drives, appropriately configured for a specific task, can usually accomplish more than a single drive. This team of drives is referred to as an array.

RAID

One type of array is a redundant array of independent disks (RAID). RAID takes physically separate hard drives and allows them to work together as if they were one. Depending upon the level of RAID selected, this can provide greater data availability, performance, or both. There are several levels of RAID:

- RAID 0 — Data striping
- RAID 1 — Drive mirroring
- RAID 5 — Distributed Parity
- RAID 5DP — Distributed Double Parity
- RAID 0+1 — Mirroring and striping

Replication

Replication technologies can affect a company's security, data availability, and performance. The more familiar you are with these technologies, the better able you will be to position our capabilities and help customers align storage technology with the challenge of their business.

The terms "mirroring" and "replication" are sometimes used interchangeably. Although they may mean the same thing in some cases, replication can take several forms. Some of these forms are similar to mirroring. Others, such as creating snapshots, are much different.

Mirroring, cloning, and snapshots are forms of replication.

Mirroring

Mirroring is achieved in many ways. Drives can be mirrored. Arrays can be mirrored. Data stored at a company site can be mirrored to a secondary site in a different state. Regardless of how the term is used, the basic principle is always the same: the data that exists in one location is copied to another, presumably in real-time.

In mirroring, each drive has a partner and each partner is identical. That means there is a copy of everything and all copies can be read at once. Unfortunately, it also means 100% duplication in cost.

If anything happened to any type of information in the storage subsystem at one site, there is a mirrored copy or a replicated copy of that information at another site. So using technology such as clustering is non-disruptive to the business application and application processing can continue with no disruption to the business.

Clones

- Clones are block-for-block copies of production data.
  - Point in time
  - Split off one of a disk in a mirrored array
  - Physical copy of point-in-time data
  - Requires same disk space as source
- Why use clones?
  - Reduced planned downtime
  - Unlimited backup window
  - Data mining
  - Restarting a business
- Disadvantages.
  - Takes longer to create than a snapshot
  - Uses as much space as original data
  - Requires a fully separate copy of data
- What can clones do for me?
  - Parallel operations
  - Data mining
  - Online backups
- Where can I get clones?
  - Business Copy software
  - EVA or MA hardware
  - CASA (Continuous Access Storage Appliance) or VersaStor network

Snapshots

- Snapshots are pictures of volume at a point in time.
  - Created in seconds
  - Consumes little space
  - Can be created with hardware or software

- Why use snapshots?
  - Unlimited backup window
  - User-initiated restores
  - Testing and development
  - Immediately available
  - Consumes minimal space
  - Points back to production data
- What can snapshots do for me?
  - Quickly restore deleted files
  - Test applications
  - Extend shrinking backup windows
- Where can I get snapshots?
  - Virtual Replicator software
  - Business Copy software
  - EVA or MA hardware
  - CASA (Continuous Access Storage Appliance) or VersaStor network

Virtualization

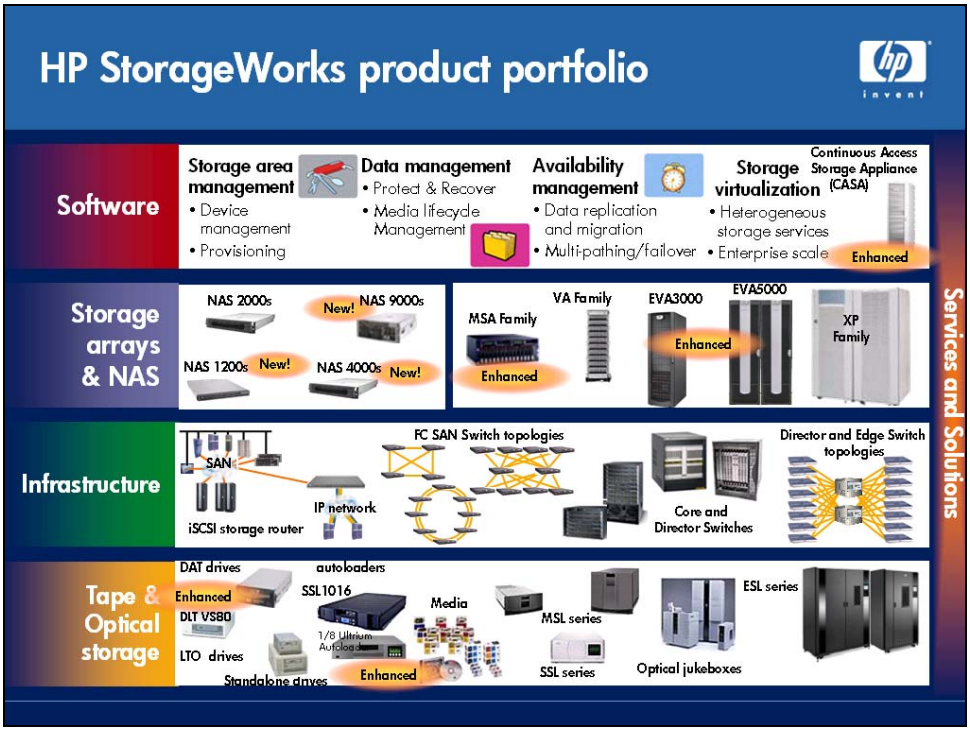
Virtualization is basically a logical view of physical resources, so information can be managed on the physical resources instead of managing the physical resources themselves. Storage can be pooled and then capacity created or allocated from that pool across multiple storage volumes or storage systems.

Virtualization starts with pooling information and allocating and managing that information from a pool of storage. The equipment does not have to be standardized. Many different vendor systems can be virtualized to access data from those systems transparently so capacity can be pooled together. This simplifies management. It also enables other technologies such as virtual snaps, virtual clones, snapshots, and mirroring. So it provides higher availability and protection as well.

Virtualization is not a new technology. It has been implemented in every aspect of computer systems, so that everything done on a computer is some form of virtualization. It is a single, defined technology, but it is not defined the same way by all vendors. So it takes a deeper look to differentiate virtualization and the benefits of virtualization from one vendor to the other.

Uses of virtualization

- Simplifies storage management
  - Unified storage in a common pool
  - LUN management based on application-relevant attributes
  - One set of tools across all platforms
- Improves capacity use
  - Vastly reduces stranded capacity
  - Reduces the amount of storage needed
- Improves application availability
  - Dynamic pool and LUN expansion
  - Dynamic data movement within pool
  - Local mirrors and snapshots
- Improves performance through load balancing across all disks in a pool



HP Storageworks product portfolio

HP Storageworks products and solutions support various levels of customer needs that include availability, consolidation, and cost considerations.

Storage management software

HP NSS offers the industry's broadest set of network storage management software solutions that are divided into the following categories.

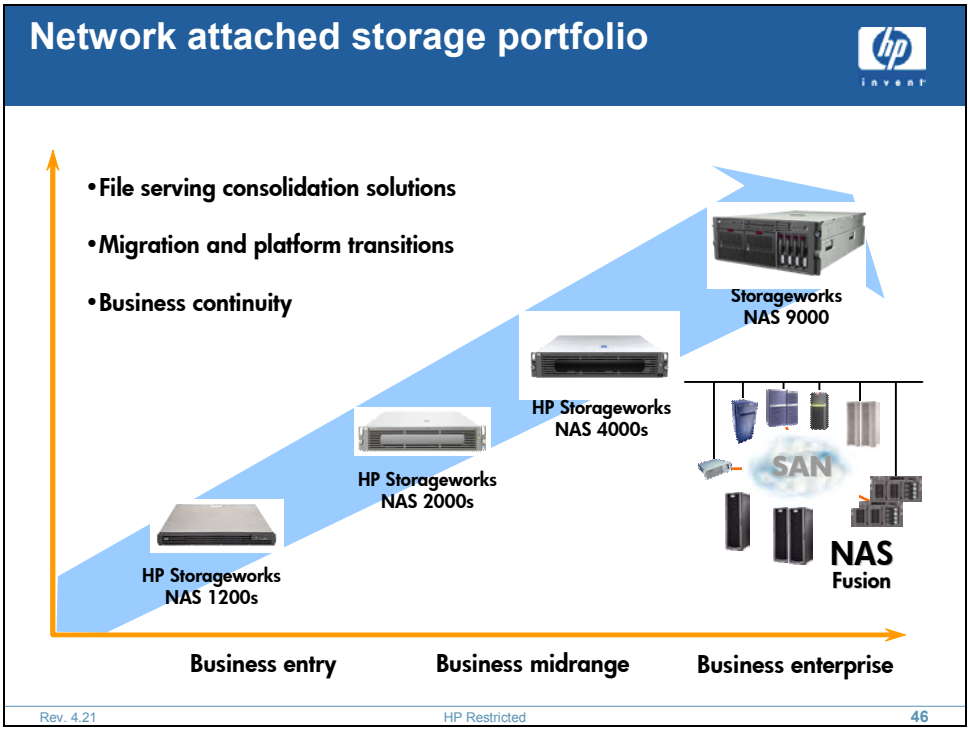
Software category	Description	Solutions
Storage area management (SAM)	Suite of integrated storage area management tools to improve management efficiencies across distributed, multi-vendor environments. HP OpenView SAM is part of HP OpenView software, which enables customers to manage their infrastructure from a single console rather than a collection of individual devices and to visualize their infrastructure as a variety of services, enabling immediate root cause analysis of potential problems.	■ HP OpenView SAM suite: - HP OpenView Storage NodeManager - HP OpenView Storage Allocator - HP OpenView Storage Optimizer - HP OpenView Storage Builder - HP OpenView Storage Accountant ■ HP OpenView Storage Provisioner ■ HP Storageworks Command View SDM HP Storageworks Command View XP, EVA
Data protection and management	Includes tape-based and disk-based backup and recovery for DAS, LAN, and SAN environments. HP also offers archival management tools for longer term backup and recovery	■ HP OpenView Storage Data Protector ■ HP OpenView Storage Media Operations

Software category	Description	Solutions
High availability and disaster recovery	Includes server-based , controller-based, and host-based software to help keep server applications and storage running 24x7 and to protect business against unplanned downtime and loss of data	■ Microsoft Shadow Copy (VSS) for snapshots ■ HP Storageworks Auto Path XP, VA ■ HP Storageworks Secure Path ■ HP Storageworks Business Copy XP, VA, EVA ■ HP Storageworks Secure Manager VA ■ HP Storageworks Continuous Access XP, EVA ■ Cluster support for XP, VA, EVA ■ HP OpenView Storage Mirroring ■ HP Storageworks Data Replication Manager
Array Management and Virtualization	Host, array, and network-based virtualization solutions	■ HP Storageworks XP ■ HP Storageworks Virtual Controller Software with VCS snapshot for EVA ■ HP OpenView Continuous Access Storage Appliance (CASA) ■ HP OpenView Storage Virtual Replicator ■ HP OpenView Storage Management Appliance ■ HP OpenView Storage Operations Manager ■ HP Openview Storage Volume Growth ■ HP Storageworks Command Scripter

Network storage

HP Storageworks disk arrays

Positioning	Array System	Description
Entry-level	HP Storageworks Modular Smart Array 1000	■ Full open-system operating system support with full multi-clustering ■ Multi-pathing support for Windows, NetWare, and Linux ■ DAS-to-SAN support ■ Universal SCSI disk drives ■ No business copy ■ No continuous access ■ No Fibre Channel disk drives
Entry-level	HP Storageworks Virtual Array 7110	■ Entry-level UNIX array ■ Fibre Channel disk drives ■ No RAID-level allocation ■ No virtual snapshots ■ No continuous access
Mid-range	HP Storageworks Virtual Array 7410	■ Mid-range array ■ Full heterogeneous support ■ Fibre Channel disk drives ■ Business copy ■ No RAID-level allocation ■ No virtual snapshots ■ No continuous access
Enterprise	HP Storageworks Enterprise Virtual Array 3000 5000	■ Enterprise array ■ Modular, TCO and price advantages ■ Full heterogeneous support ■ Fibre Channel disk drives ■ Business copy ■ Continuous access
Enterprise	HP Storageworks XP - xp128 - xp1024	■ Enterprise array ■ Designed for the largest HP-UX centric consolidation applications and offers highest levels of performance, scalability, and availability ■ Full heterogeneous support ■ Fibre Channel disk drives ■ Business copy ■ Continuous access



Network attached storage portfolio

The NAS portfolio includes entry-level, mid-range, and enterprise array systems.

Positioning	NAS System	Description
Entry-level	HP Storageworks NAS 1200s	▪ Designed for remote, small, and branch office environments ▪ Provides multi-protocol file service support ▪ Provides file and print serving capability ▪ 320GB, 640GB, and 1TB capacity points ▪ Volume Shadow Copy Service ▪ Supports multiple management methods
Mid-range	HP Storageworks NAS 2000s	▪ Designed for customers who require file-sharing capabilities ▪ Provides multi-protocol file service support ▪ Provides file and print serving capability ▪ Scales to over 24TB ▪ Volume Shadow Copy Service ▪ Supports multiple management methods
Enterprise	HP Storageworks NAS 4000s	▪ Entry-level NAS/SAN fusion solution ▪ Provides multi-protocol file service support ▪ Enables print serving ▪ Scales to over 48TB, with 146GB universal drives ▪ Cluster support ▪ Snapshot capabilities ▪ Backup support ▪ Anti-virus software support

Positioning	NAS System	Description
Enterprise	HP Storageworks NAS 9000s	■ Flagshp NAS/SAN fusion ■ Provides multi-protocol file services ■ Enables print serving ■ Scalability determined by SAN limits ■ Cluster support ■ Snapshot capabilities ■ Backup support ■ Anti-virus software support

Infrastructure products

HP supports infrastructure products that contribute to varying degrees of connectivity, availability, performance, and cost.

Device	Description
HP Storageworks Fibre Channel switches	Storage network infrastructure component with multiple nodes attached. Typical switches: ■ Have internal bandwidth that is a multiple of link bandwidth ■ Can rapidly switch node connections from one to another ■ Can accommodate several simultaneous, full-link bandwidth transmissions between different pairs of nodes
HP Storageworks SR2122 iSCSI storage router	An Internet protocol (IP) storage solution that enables server and storage connectivity to Fibre Channel storage area networks across an Ethernet network. The solution provides a cost-efficient entry point to IP storage by extending the benefits of existing SANs to isolated, “stranded” servers through IP networks.

Tape and optical storage

The near-line storage portfolio includes entry-level, mid-range, and enterprise backup systems.

Positioning	Tape Library	Description
Entry-level	HP Storageworks autoloaders and stand-alone tape drives	■ Typically less than 5TB of data ■ System and server protection ■ Autoloaders support DLT, SDLT, and LTO
Mid-range	HP Storageworks MSL 5000 Series	■ DAS and entry -evel SAN ■ Typically between 5TB and 50TB of data ■ Network and department data protection ■ DLT, SDLT, LTO, hot-plug drives
Mid-range	HP Storageworks MSL 6000 Series	■ DAS and entry-level SAN ■ Typically between 5TB and 50TB of data ■ Network and department data protection ■ DLT, SDLT, LTO, hot-plug drives
Enterprise	HP Storageworks ESL 9000 Series	■ 200-595 cartridge slots ■ Networked storage environments ■ Multi-operating system and ISVs ■ Typically >50TB of data ■ Database protection and data archiving applications ■ DLT, SDLT, LTO, hot-plug drives

Positioning	Tape Library	Description
Enterprise	HP Storageworks ESL E-Series	■ Not a replacement for existing ESL libraries ■ 595+ cartridge slots ■ High storage and drive density ■ Native Fibre tape drives ■ Removable magazines and bulk loading and unloading ■ Path failover capabilities ■ High-capacity load ports
Mid-range and enterprise	HP Storageworks network storage routers	■ Tape interconnects that offload backup traffic from servers and route data directly from hard drive storage on the SAN to tape libraries on the SAN
Enterprise	HP Storageworks interface controller	■ Similar to a disk array controller in front of the disk drives in that it manages shared access to the ESL tape library and intelligently handles conflict and storage network events

The offerings

- Management
- Storage
- **Networking**

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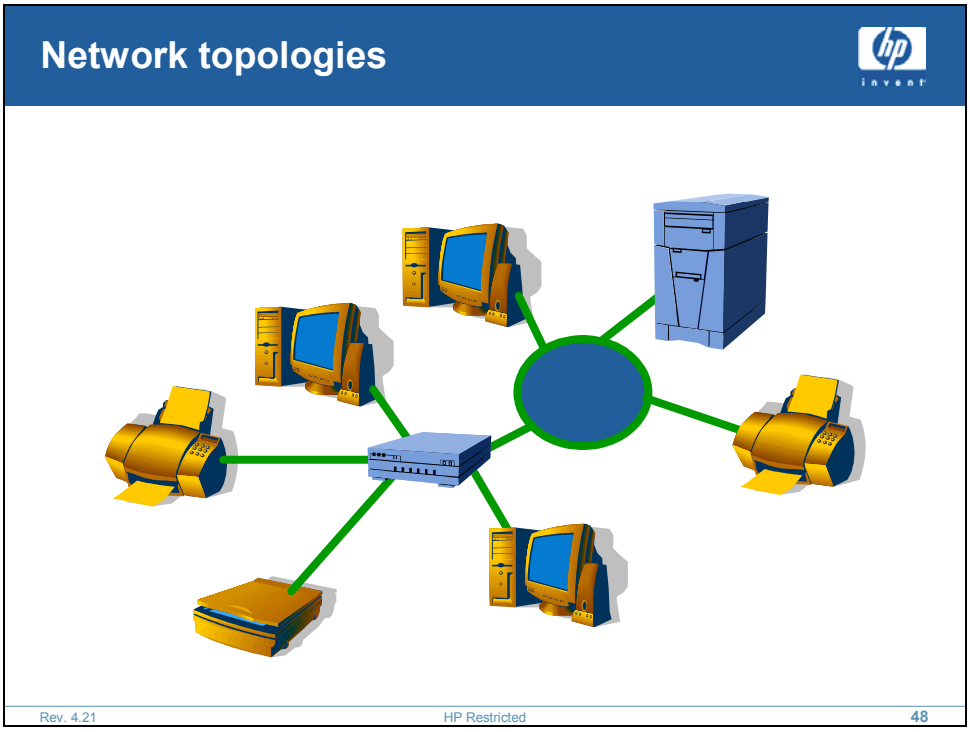
The offerings

Networking and HP network products are a broad area. Today we will focus on HP ProCurve products only.



Network topologies

The network consists primarily of switches and routers.

Switches

Switches are used to connect groups of clients, and possibly local servers, and make very basic decisions on forwarding information.

What does a switch do?

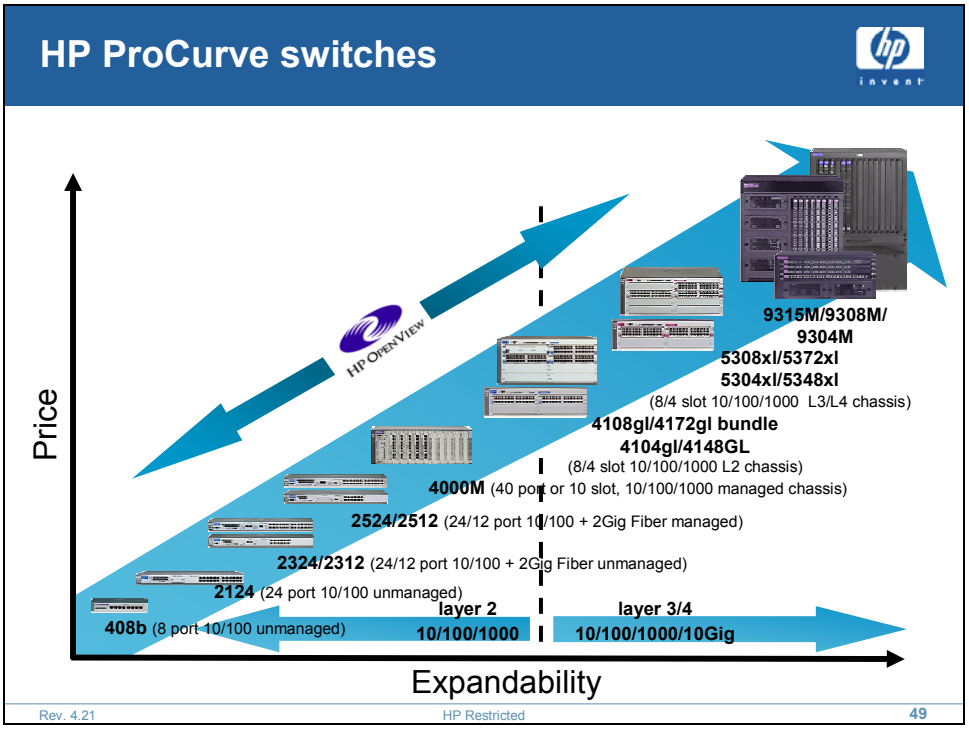
- Inspects the data packets as they are received
- Determines the source and destination device of that data packet, and forwards the data packet appropriately
- Only sends data to the intended destination

Routers

Routers typically look deeper into each data packet and make more intelligent decisions on where each packet is to be sent to reach its ultimate destination.

What is a router?

- Routers use information within each packet to route it from one LAN (Local Area Network) to another, and communicate with each other to share information that allows them to determine the best route through a complex network of many LANs.
- Routers also determine whether a destination is on the local network segment or must be forwarded to another network



HP ProCurve switches

One of the key factors in network performance is the efficient and effective use of hubs, routers, and switches. HP has industry-leading switches you can use to enhance your customer's network performance and ease of management. These switches are high quality to begin with but also come with a lifetime guarantee!

The ProCurve product line provides customers with complete LAN solutions. Based on the mature Ethernet standard, HP ProCurve chassis and stackable products meet the needs of most customers.

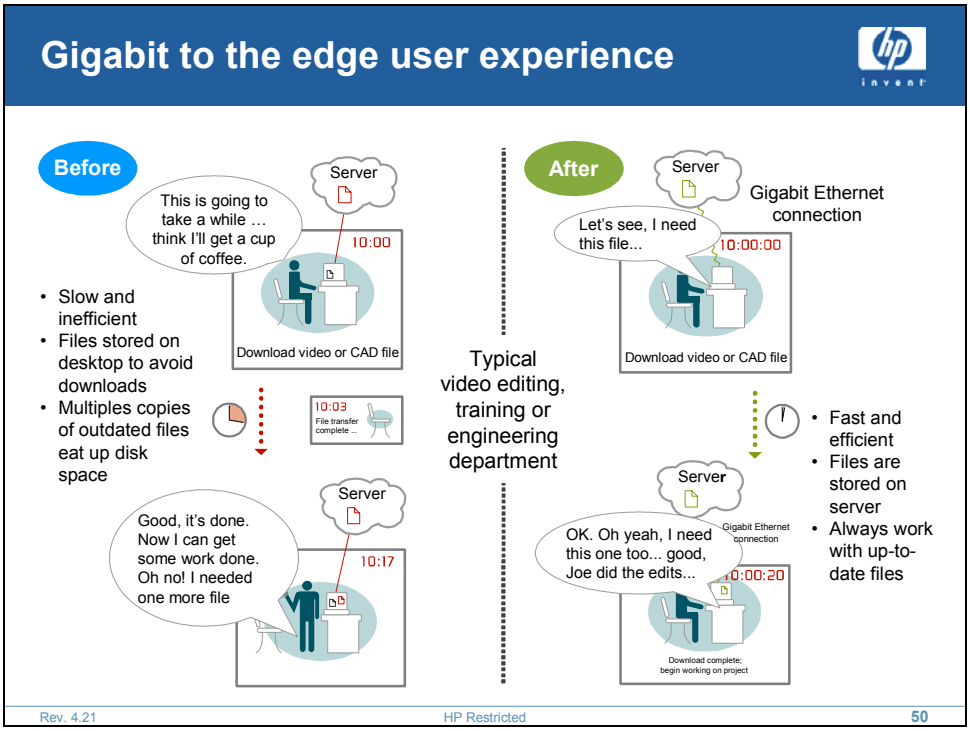
- Chassis products offer flexibility in connection and port density, while stackables offer price/performance with the most preferred form factor in the industry—1U, 1.75-inch height, with 19-inch rackmount capability.
- HP ProCurve technology is based on the Ethernet standard. With the Ethernet standard, LANs have evolved in speed. 10MB to 100MB to 1GB and now 10GB speeds are achievable in a LAN.
- HP ProCurve products now range at all these speeds. With ProCurve high-end chassis products, 10GB is now available. With the stackables, 1GB speeds are available, with price/performance a design priority.

HP ProCurve wireless access

HP ProCurve Wireless Access Points offer customers a cost-effective approach to enhancing the productivity of a mobile workforce without sacrificing flexibility and choice in securing a wireless network. Affordable wireless access points are available for enterprises of any size.

HP ProCurve Wireless Access Points (420wl and 520wl) extend the range of your cabled Ethernet environment to an entire building or campus by providing easy network access for mobile users or for hard-to-wire locations, such as conference rooms.

HP ProCurve wireless solutions cost-effectively respond to the growing demands of enterprise and small-business users for anytime, anywhere access to files, e-mail, and the Internet.



Gigabit to the edge user experience

Although 100Mbit makes up the majority of Local Area Networks (LANs) today, with speeds that are 10 times faster than 10Base-T, Gigabit Ethernet is rapidly emerging as the preferred network technology. Due to the growing need for fast networking speeds and the availability and affordability of Gigabit Ethernet technologies, it has become feasible to implement a gigabit solution from the center of the network all the way to the edge and achieve immense network performance gains.

Gigabit to the edge benefits users and network administrators by improving efficiency and profitability.

It also means bringing Gigabit Ethernet connectivity from the network backbone all the way to the edge of the network and to individual desktops. Until recently, the cost of Gigabit Ethernet limited it to the network center and its use was reserved for the highest priority applications.

For users, Gigabit to the edge means:

- Reduced transfer times of large data files from minutes to seconds, increasing productivity with simplified workflow and decreasing time to market and product lifecycle development
- Instant access to business assets and resources
- Easy access and sharing of bandwidth-intensive applications, such as computer-aided design (CAD), video editing, animation, and high-resolution imaging

- Improved ability to multi-task within multiple applications. For example, one user might simultaneously use video conferencing software to watch a CEO telecast, check e-mail, surf the Internet, and update a CAD file on the network.
- Enhanced access to mobile computing solutions from wherever users are connecting

For network administrators, Gigabit to the edge means:

- Higher network performance with less costly downtime and the elimination of frustrated users waiting for the network
- Robust security at the network edge with secure transactions taking place at 10 times the speed of 100Base-TX
- Increased flexibility to do more with the entire network
- A seamless transition from 100Mbit and 10Mbit technologies to Gigabit Ethernet, leveraging existing investments in network infrastructure
- Flexibility and an affordable price in upgrading to Gigabit Ethernet all at once or incrementally

With the benefits Gigabit to the edge provides to both users and networks, the reasons for migrating to Gigabit Ethernet are clear eith recent improvements in three key areas:

- Ease of deployment
- Improved network performance
- Affordability

Deploying Gigabit to the network edge is no longer out of reach for most organizations. At a cost that is only incrementally higher than that of Ethernet or Fast Ethernet technologies, Gigabit to the edge offers the best return on investment for new hardware purchases today. In addition, enterprises overall can experience improved profitability through a more productive workforce.

With this increase in bandwidth and network-based applications, administrators require more control and performance at the edge of the network. By deploying Gigabit to the edge, network administrators and information technology (IT) groups are able to support these and other applications, such as remote software installations, backups, e-mail, and database management, all at huge performance increases over 100Base-TX.

As users access multiple network applications on their computers at the same time, Gigabit to the edge prevents desktop clients from getting bogged down waiting on the network to catch up to the faster GHz processors of their desktop PCs.

Finally, the increase of mobile users has created a greater need for secure access to communications and services based on an individual’s profile and business needs, no matter where a user is when connecting to the network.

By implementing Gigabit to the edge, clients can communicate with the server to perform secure transactions at 10 times the speed, which frees up the client and server to move on to other tasks, minimizing the need for additional investments in server upgrades.

Previous migrations from 10Mbit networks to 100Mbit networks required costly and time-consuming cabling upgrades and additional training. Because Gigabit Ethernet runs perfectly on virtually all existing CAT-5 cabling, there is no rewiring expense and administrators can spend their time focusing on other IT issues.

How to implement Gigabit to the edge

When an enterprise is ready to migrate to Gigabit Ethernet, it can simply replace the switches that do not support Gigabit speeds with those that support auto-negotiation of 10Mbit, 100Mbit, and Gigabit technology. Auto-negotiation allows both the new Gigabit devices and any legacy devices on the network, such as printers, to operate seamlessly in the new, faster infrastructure. These switches are simply placed at the edge of the network and clients are directly connected into them to achieve all the benefits. As the network expands, an organization need only add Gigabit switches to maximize its IT investment in new hardware.

HP ProCurve networking's approach

HP ProCurve networking is responding to the need for Gigabit to the edge with the HP ProCurve Networking Adaptive EDGE Architecture™, designed to create easier-to-use networks while bringing greater functionality, performance, power, and intelligence to the network edge at affordable prices.

HP ProCurve networking's intelligent switches—including the new HP ProCurve Switch 2800 series, 4100gl series, and 5300xl series—can automatically bring Gigabit speeds to the network edge without added complexity and are priced to meet the needs of virtually any enterprise.

HP ProCurve switch 2800 series

Ideal for medium to large networks, the HP ProCurve Switch 2800 series offers the best Gigabit performance and network-edge intelligence at a cost-effective price point. The Switch 2800 series consists of two switches: the HP ProCurve Switch 2824 with 20 10/100/1000 UTP ports and 4 customizable ports for flexible uplink connectivity, and the 48-port HP ProCurve Switch 2848 with 44 10/100/1000 UTP ports and 4 customizable ports. Each switch can auto-negotiate the right speed for the machine accessing it so that Gigabit-capable clients receive maximum bandwidth.

HP ProCurve switch 4100gl series

The HP ProCurve Switch 4100gl series is cost-effective, intelligent, easy to –use, and available in compact 8-slot and 4-slot modular form factors. Based on HP Fast Path Technology, these switches provide top performance and high reliability. The Switch 4100gl series' modular design allows for easy expansion as the network grows, providing the flexibility to add more users, more bandwidth, and various levels of Ethernet Fiber connectivity as the network grows. A new module offering 20 10/100/1000 ports and 2 mini-GBIC slots delivers high-density Gigabit to the edge to the existing switch. For added convenience, there are two pre-bundled 4100gl switches, the 4140gl and the 4160gl, that have these Gigabit modules pre-installed. At maximum, the Switch 4100gl series supports 192 10/100 ports or 160 Gigabit ports and 16 mini-GBICs.

HP ProCurve switch 5300xl series

Designed to accommodate the most demanding network needs, the HP ProCurve Switch 5300xl series offers scalable layer 2, 3, and 4 switching in compact 4 or 8-slot modular form factors with future modules enabling expansion to as many as 128 Gigabit ports. These convergence-ready switches provide flexibility, high port density, free software updates, and a lifetime warranty. The easy-to-use Switch 5300xl series provides the latest in technology with unparalleled investment protection and superior return on IT. As with the Switch 4100gl series, the 5300xl series' modularity provides the flexibility to add more users and more bandwidth as a network grows.

HP ProCurve Networking solutions offer several additional products for enterprises of all sizes considering deploying Gigabit speeds to the network edge, including:

- HP ProCurve Switch 6108
- HP ProCurve Switch 2700 series
- HP ProCurve Routing Switch 9300m series

Designed for speeds of up to 10Gbps, the Routing Switch 9300m series sits at the network center, providing high-performance throughput from the wiring closet into the data center and out to the edge of the WAN.

Questions to ask

- What types of devices will be connected to the network?
- Where will they be located?
- How many additional devices might be connected in the future?
- How will the network be used?
- What tasks will users need to do?
- How quickly will they need results?

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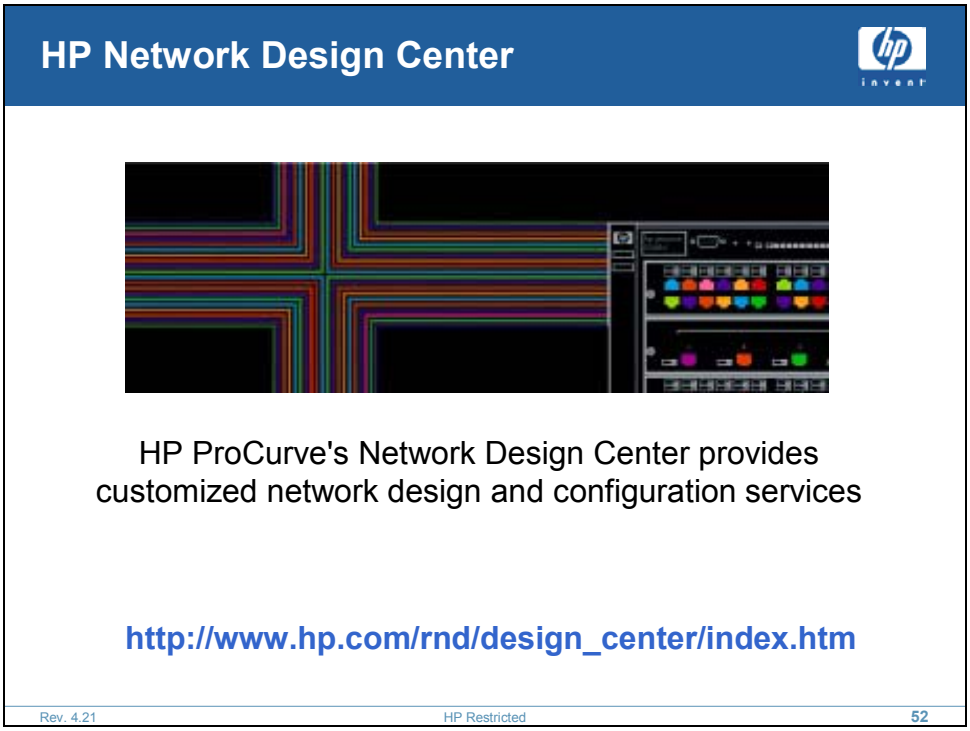
Questions to ask



HP Network Design Center

Designing customer networks can be a time-consuming effort, requiring considerable expertise. By using HP ProCurve Network Design and Configuration Services, HP becomes your network design partner.

The HP Network Design Center is a team of qualified network professionals who provide free, customized, comprehensive network designs to channel partners worldwide. Working hand-in-hand with you, the Design Center develops proposals based on customer budget constraints, legacy equipment, and other requirements, incorporating a wide variety of multivendor, high-performance technologies.

If you are designing a network, the network professionals in the HP Network Design Center are ready to help you accomplish the following:

- Review the existing network design
- Draw a proposed network topology using Visio 5.0
- Provide tools to customize the proposal
- Provide a Bill of Materials in Microsoft Excel 97
- Answer technical design questions

Submitting a job to the Network Design Center is easy:

1. Complete the appropriate online job submittal form:
   - If you are located within the U.S. and Canada**:** http://www.hp.com/cgi-bin/rnd/designcenter/designcenter.cgi
   - If you are located in Europe:
     - English: http://www.hp.com/cgi-bin/rnd/designcenter/designcenter_eu.cgi
     - French: http://www.hp.com/cgi-bin/rnd/designcenter/designcenter_fr.cgi
     - German: http://www.hp.com/cgi-bin/rnd/designcenter/designcenter_de.cgi
   - If you are located in Asia**:** http://www.hp.com/cgi-bin/rnd/designcenter/designcenter.cgi
2. Submit the completed online form by clicking "submit." In the U.S. and Canada, you can also fax the form to 1-916-785-2606. In Europe, you can fax it to 49-7031-14-5066. In Asia, you can fax it to 1-970-278-8471.
3. Record the job ID number. It will be the identifier used by the Network Design Center to track your proposal and design.

Your network design will usually be delivered within one week.

HP Phone Network Consultation Service

If you are in the process of designing a network and need technical design consultation, you may also contact the Phone Consultation Service.

Summary of networking

Networking and the Internet are fast-changing technologies. What we have covered in this module has been very basic. We are simply trying to make you aware of some of the solutions and the part they play in solving customer problems. In recommending solutions to your customers, you should have access to a security specialist and a networking specialist who keep current with the latest networking technology.

Summary

- Management
- HP Storage
- HP Networking

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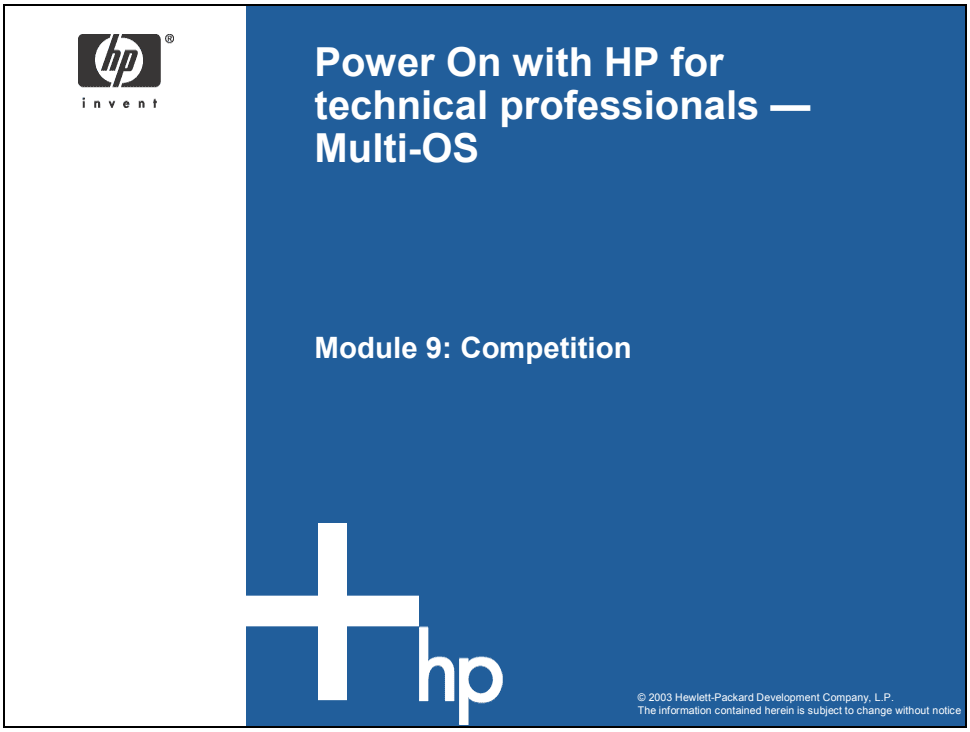
Summary

COMPETITION



Competition

Objectives

At the end of this module you should be able to:

Analyze competitive information for use with customers.

- Identify primary competitors
- Recognize competitor claims about HP BCS
- Describe HP strengths in relation to those claims
- Describe competition related resources and when to use each

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Objectives

Agenda

- Competitive resources
  - UNIX Systems Competitive Attack portal
  - Sales portal
  - Competitive War Room
- IBM
- Sun
- Dell

Competitive resources are available at the BCS hpcompetition portal—esp keyword HPCOMPETITION

Win!

Challenges

- Stop fraud
  - The key to minimizing losses due to fraud is by quickly identifying unusual spending patterns.
  - The key to successfully identifying fraud and analyzing customer spending patterns is how to speed the transmission of spending data from over 1,700 worldwide “end points” to the central clearing and settling facilities.
- Increase customer loyalty by providing always up online services

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Win!

HP NonStop beats IBM: Visa

Visa processes 35 billion transactions and settles US$800 billion annually. Some 1,700 globally distributed "endpoints" funnel these transactions to central clearing and settling facilities, including Visa USA. To provide fresh Internet Protocol (IP)-based member services, Visa USA created a next generation payments system, “Direct Exchange.” The NonStop Himalaya platform acts as the critical gateway for the system.

Business need

Visa USA has traditionally achieved its rigorous uptime objectives through massive redundancy of mainframes and critical network components. The data-heavy “Visa host” consists of mated pairs of IBM MVS systems, which connect to member endpoints using IBM SNA protocols on private networks. Constant growth in transaction volume and relentless competition pointed to the need for a fresh set of Internet Protocol (IP)-based member services. The legacy mainframe environment was not set up to accommodate the needed expansion and support the new services, so Visa USA brought the NonStop Himalaya platform on board to do the job.

Solution overview

On one side of Direct Exchange is the legacy environment. These host systems collect and distribute the clearing and settling transactions that are generated when people use their Visa cards.

Next is the Open File Delivery Gateway, a pair of four-processor NonStop Himalaya S72000 servers that bridge the new IP network with the legacy host systems. Both gateway servers are sized to carry the entire traffic load if the other should fail for some reason. The files are passed from the Visa host to the Visa Open File Delivery (OFD) Gateway with a routing number that specifies the destination. The file then goes to the transport software, which establishes a communications session and sends the file through the Visa WAN router, across the new Visa IP network to a Visa router on the other end, and into the endpoint host. If the endpoint has opted for encryption, the file is compressed and encrypted by XYPRO's XYGATE software on the OFD Gateway prior to transmission.

Results and benefits

- Provides significant savings in terms of IT staff investment and training
- Enables the addition of new IP-based member services that the existing legacy mainframe environment could not accommodate
- Provides industry-leading scalability, availability, and data integrity, coupled with mature application tools
- Provides superior Total Cost of Ownership
- Open architecture helps Visa USA protect investment in mainframe technology
- Visa USA expects to process US$60 million an hour and handle 100 billion transactions a year with Direct Exchange

Solution components

- Hardware:
  - Legacy IBM environment: Legacy environment (collects and distributes clearing and settling transactions)
  - Two 4-processor NonStop Himalaya S72000 servers (Open File Delivery Gateway — Links new IP network with legacy host systems)
  - Visa WAN routers
  - Endpoint hosts with various platforms
- Software:
  - NonStop Himalaya system middleware
  - XYPRO security software
  - EPIQ file transfer software
  - ESQ operations automation tools
  - Sterling Commerce transport software

Customer quotes

According to Gordon Tannura, Vice President of Technology and Support Services, Visa USA:

> "By moving to an open standards environment, and to an open product like the NonStop Himalaya platform, we are able to introduce new services more easily and in a much more timely fashion."
>
> "We were able to meet our business requirements with very little modification of the existing infrastructure. Of course, the IP capability of the NonStop Himalaya platform itself was also critical. Direct Exchange was a phenomenal undertaking, and it was achieved with incredible speed and quality."
>
> "The primary task was to establish the OFD Gateway as an additional connection point to the Visa host environments. We made only minor software modifications to those host systems to identify the new OFD delivery mechanism. This practically seamless integration delivered significant savings in terms of IT staff investment and training."
>
> "The operations staff has quickly grown to love the NonStop Himalaya platform. They appreciate the fact that the system is delightfully uneventful—it just runs. We wanted to build an infrastructure that was stable and efficient, and then not worry about it. That is what we have done. Direct Exchange will bring enormous value to both Visa USA and our member organizations."
>
> "Visa goes to great lengths to protect its name, and part of that Visa name is security. Having the proper tools to ensure safe transactions is paramount. XYGATE software running in the NonStop Himalaya platform environment gives Visa USA those tools."

Win!

Challenges

- This customer is focused on aggressive growth. To achieve the infrastructure needed for the growth, they planned to implement the full Oracle suite of products.
- The customer uses Dell for Intel solutions and planned to use IBM for their Oracle solutions. The customer had actually ordered Oracle on AIX and IBM had announced the win and held a local party.

Engineering services

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Win!

Engineering services

Company information

- Canadian engineering services firm with 3,500 employees
- Projected growth: 10,000 employees

Solution

Full Oracle suite including ERP, Financials, HR, Portal and more.

Competition

The customer had Dell installed for Windows and Intel applications, and planned to go with IBM for Oracle applications. In fact the customer had already placed an order for Oracle on AIX, IBM had announced the win and had a local party. Sun competed aggressively.

Competitive challenges:

- eLiza products from IBM were difficult to overcome
- Aggressive pricing from Sun
- HP-UX server higher I/O throughput was a big advantage

How did HP overcome the competition?

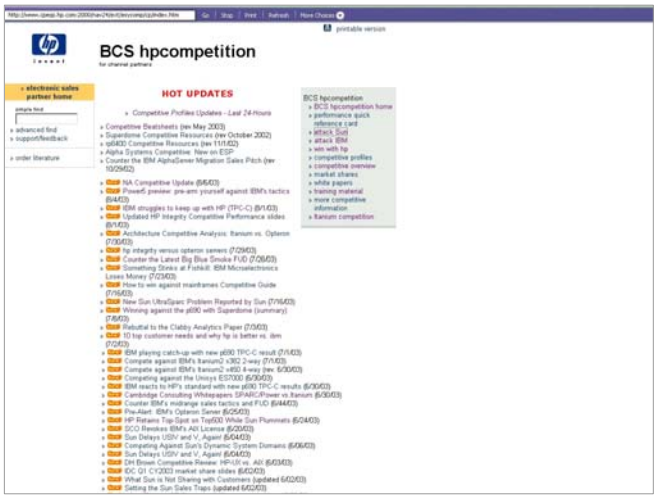
- Oracle account manager worked closely with HP and the customer
- Met every customer demand including demo
- Discussed power of Itanium upgrade as investment protection
- Brought in the full spectrum of HP resources and worked together as a team
- Aggressive pricing

BCS products purchased

The HP rp8400 now, potentially 10 to 11 rp5470s.

BCS competitive portal

ESP keyword HPCOMPETITION



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BCS competitive portal

- Enter HP Partnership Web: www.hp.com/partners/us
- Select 'toolkit'
- Select 'competitive intelligence tools'
- Select 'business critical systems'

Competition exercise 1: Competing against HP

Using the material in this module and your knowledge of Sun or IBM, prepare a brief presentation to the server customer of your choice—**selling against HP**

Competition exercise 1: Competing against HP

Instructions to students

1. Each team will choose a company and manager or officer of that company to make a presentation. For example, CEO, CFO, COO, IT Manager, etc.
2. Select someone from your team to make the presentation.
3. Read the following competitive information about your company (IBM or Sun) and prepare a brief (not more than 15 minutes) presentation against HP.
4. Based on the information you will read about Sun or IBM, and your own experiences, what would you present to a company when selling servers?

Some points to consider

- What FUD are you likely to encounter from HP?
- How will you counter?

Competition exercise 2: Selling HP against the competition

Using the material in this module and your knowledge of Sun or IBM and HP, **represent HP** to the server customer from the first competitive exercise, and counter the competitive claims you made against HP

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Competition exercise 2: Selling HP against the competition

Instructions to students

1. Each team will now make a presentation to the same company and manager or officer of that company.
2. Select someone from your team to make the presentation.
3. Using the same competitive information about your previous company (IBM or Sun), prepare a brief (not more than 15 minutes) presentation countering the claims you made previously and selling HP into the company.
4. Based on the information you have read about Sun or IBM, and your own experiences, what would you present to a company when selling servers?

Some points to consider

- What FUD are you likely to encounter?
- How will you counter the FUD?

The major enterprise servers competitors

Founded: 1911 as C-T-R

Employees: 315,889 worldwide

Revenues: $81.2 billion 2002 year-end

Business philosophy: Strive to lead in the invention, development and manufacture of the industry's most advanced information technologies.

Founded: February 1982

Employees: Over 35,700 worldwide

Revenues: $12.5 billion in fiscal 2002

Business philosophy: Open standards and open programming interfaces increase the value of Net-based solutions and create a larger market for all players.

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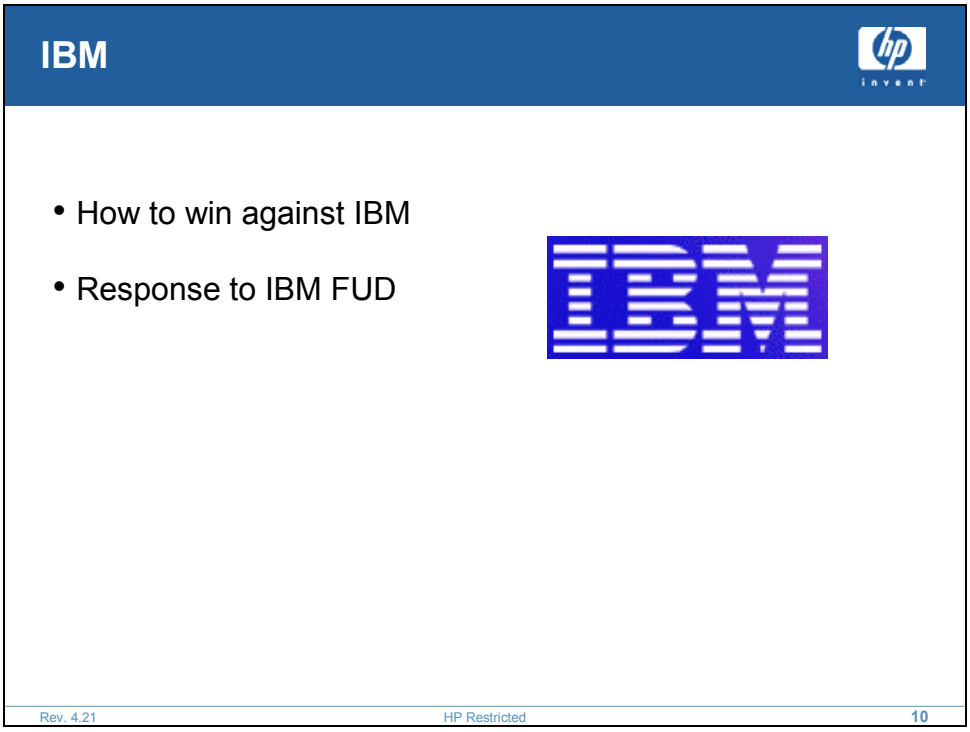
The major enterprise servers competitors

IBM and Sun are the primary competitors to HP BCS servers. Dell is trying to position itself as a competitor in the Itanium-based servers markets. We will talk briefly about Dell later.



IBM

How to win against IBM

How IBM will position Itanium

Often IBM positions POWER in competition with Itanium.

- POWER (pSeries) is their preference in the Linux/UNIX 64-bit space
- IBM would like to see POWER as the 64-bit standard for Linux, not Itanium
- No UNIX for Itanium
- Will try to position POWER as a better architecture, Itanium for specific niches

IBM weak points	How to win with HP
How will IBM meet your RoIT needs? IBM has four competing platforms, each with different solution sets. IBM is weak in in-box upgrades and cannot repurpose your systems with your choice of operating environment.	HP's Integrity servers have a complete product family from entry to high-end, with a broad ISV portfolio. With HP you get a long-term road map and in-box upgrades, high performance chipsets, and the ability to repurpose your systems with your choice of OS for unbeatable investment protection.
No multi-OS strategy on a single platform. Want UNIX? Want Windows? You'll be locked into different platforms. IBM does not want AIX to run on a standards-based architecture.	HP Integrity servers offer full multi-OS support with HP-UX, Windows, Linux, and OpenVMS. HP can consolidate multiple OEs on one standards-based architecture.
Weak Itanium support. IBM has not developed any strong Itanium partnerships and is slow to market with Itanium. IBM has lackluster results trying to scale up with Xeon and uses the same architecture for Itanium.	HP's strong partnerships with Intel, Microsoft and leading ISVs are bringing Itanium to you today. HP can scale up to 64-way with proven performance, with enterprise tools such as goal-based workload management and unified manageability. IBM is trying to catch up to what HP offers today in utility computing solutions such as PPU, iCOD, CiCOD, and TiCOD. HP has superior Microsoft support and unmatched Linux support.

IBM positioning for the future

- IBM is claiming "4x" p690 performance with Power5 (e.g.: 1.4M-1.6M tpmC) from the following:
  - 2x processors (but AIX does not scale well)
  - Simultaneous multithreading (SMT) which creates "logical" processors (but can actually reduce performance on certain types of applications)
  - AIX 5.3 enhancements (AIX 5.3 may be delayed until the fourth quarter of 2004)
- IBM sub CPU partitioning
  - Requires AIX 5.3 (late 2004) and Power5
  - Probably will be up to 10 partitions per processor like the iSeries today
  - Increases LPARs performance degradation from 10-15% to 15-20%
  - Not certain if ISVs will support it with current applications
  - Still no electrical isolation, and the increased dependency on a single software virtualization layer can further reduce HA/isolation
  - More complex, more costly than purchasing multiple smaller servers (e.g.: blades) or than using PRM/WLM with a single OS instance to manage resources and increase system utilization
  - PRM/WLM provide better isolation and functionality than IBM's resource management tools

IBM challenges

- **CEC boxswap upgrades** — Power4 systems will be EOL in 2004, with new Power5 systems taking their place. IBM has stated no guarantees of compatibility or upgradeability. Given IBM history, customers will likely have to do a full boxswap or minimally swap out all major components, such as backplane and power supplies, not just cellboards.
- **Proprietary versus open approach** — Linux on Power/RISC rather than an open architecture like Intel does not make sense according to analysts (Aberdeen Group, Radcliff and Willison, Gartner, Illuminata). Will the Linux application you need be available on POWER? IBM wants to lock customers in with middleware and software, competing with best of breed "partners."
- **No electrical isolation** — No electrical isolation means a hardware resource failure in one LPAR, or problems with the virtualization layer, could bring down all partitions. Also, no online hardware add/replace. They can only move around existing resources dynamically, not add new ones. IBM also has no goal-based resource partitioning/management.
- **IBM's midranges are not optimized for the enterprise** — Do not be fooled by the p650's low-price—it comes with only a fraction of the I/O capacity and bandwidth in the base chassis, is not fully enabled for partitioning or clustering without add-ons, and cannot match HP on performance. IBM's p650 uses entirely different architecture from the p690 which is optimized more for cost than performance. IBM has no TPC-C results in the midrange because the fact is they would not do nearly as well as their high-end.
- **Itanium beats Power4 midrange and entry servers, 2 for 1**:
  - A 4-way rx5670 matches the 8-way p650 on SPECjbb2000 and provides 70% of the p650's SAP performance and on estimated OLTP.
  - A 2-way rx2600 nearly matches a 4-way p630 on SPECweb99_SSL and SPECcpu_rate and on estimated OLTP.
  - A 1-way rx2600 matches a 2-way p615 on SPECcpu_rate and on estimated OLTP.
- **How many applications support IBM?** — HP and other vendors have worked hard to make sure applications are and will be supported on Itanium, with 90% of the major ISVs committed today. Do you know how many 64-bit AIX5L applications were available for Power4 by the time of the Regatta/p690 launch? Do you know how many Linux applications run on the mainframe?

Setting IBM pseries traps

- Does IBM offer a single 64-bit strategy to run UNIX, Linux, and Windows? — No, multiple competing eServer platforms.
- Does IBM offer the same Linux and application software across platforms? — No, multiple OS and application releases.
- Can I scale p690 beyond 32-way and in-box upgrade to POWER 5? — No, p690 requires $ box swap to POWER 5.
- How does the p690 fare in performance vs. Superdome across many benchmarks?
  — SD has better performance, price/performance, and scalability.
- Does the p690 offer electrically isolated hardware partitions for availability and flexibility?
  — No, p690 failure brings down all partitions and maintenance requires system to be down.

Anticipating IBM traps

- IPF is unproven and a high-risk strategy.
  — No, IPF performance is #1, supported by many vendors, for best “open” system choice.
- HP is forcing customers to IPF.
  — No, HP provides in-box upgrades to future PA-RISC or IPF + binary compatible HP-UX.
- Very few ISVs support IPF.
  — No, over 1,000 applications available and 90% of top ISVs + 80% top technical ISVs committed.
- POWER offers equal performance with half the CPUs.
  — IPF has #1 performance and more price/performance than POWER/SPARC in benchmarks across multi-OSs.
- HP IPF servers lack functionality of PA-RISC.
  — Yes, vPARs is not available on IPF. HP can meet your needs via nPARs, PRM/WLM or deploy PA-RISC + later upgrade to IPF.

Respond to IBM FUD

Manageability

- **IBM will say —** IBM manageability is focused on single-system sensing and reporting.
- **HP response —** HP has the most popular vendor-supplied management product for Windows and Linux and comprehensive tools for UNIX integrated with system and workload managements. HP is working toward the next generation that will manage the multi-OS environment of Itanium, all on one manageability tool.

High availability and Clustering

- **IBM will say**:
  - IBM delivers the most extensive clustering in UNIX, with partitions as clusters and heterogeneous cluster support.
  - IBM's HA clusters support twice the nodes and comes with a cluster file system (CFS).
- **HP responses**:
  - HP Serviceguard is a core component of Virtual Server Environment (VSE) for the best ROI in the business:
    - Serviceguard supports hard and soft partitions on HP-UX
    - Clustering in a box was first introduced with Superdome
    - HP Serviceguard runs on Linux with the same management GUI, IBM's HACMP does not run on Linux
    - SGeRAC combined with HP's HyperFabric2 provides extremely fast DB server recovery and can support more high-end nodes
    - HP supports Microsoft Cluster Service (MSCS) on all Integrity, IBM supports MSCS only on the xSeries and not on the pSeries.
  - Serviceguard supports up to 16 nodes—twice as many as standard IBM HACMP. You need an add-on (HACMP/ES), at added cost, to support more nodes. Basic Serviceguard simply provides better business value that includes high availability clustering, virtualization, and disaster tolerance. Future releases of Serviceguard will contain a clustered file system and proven technology inherited from TruCluster.

Platforms

- **IBM will say** — They have specialized platforms for specific needs, and that HP still has multiple architectures.
- **HP response** — IBM's many architectures lock you into one solution, preventing you from repurposing your servers. HP Integrity servers bridge the space between low-cost ProLiant and highly available Non-Stop computing with a standards-based architecture, and the greatest flexibility and proven performance.

OS

- **IBM will say** — They have more choices.
- **HP response** — IBM cannot match HP's multi-OS on one architecture. HP's migration services help you evolve to the Itanium platform—how will IBM help you migrate when you need to? AIX's future is in question, will customers be forced to transition to Linux in the future? HP-UX is rated #1 of all UNIX systems (DH Brown) and HP has a clear commitment to HP-UX.

Storage

- **IBM will say** — They are a market leader that offers a “Total Storage Solution” and offer the SSA-based “Shark” as an example. IBM may quote less expensive storage, but configure their higher-end SSA arrays for superior performance.
- **HP response** — IBM continues to base its strategic storage products on proprietary SSA technology. HP leads all storage vendors in storage revenue, units shipped and terabytes shipped per IDC in the fourth quarter of 2002 worldwide market shares beating IBM and EMC. HP beats IBM in total UNIX server revenue market share.

ISVs

- **IBM will sa**y — HP has a lack of ISV solutions for Itanium.
- **HP response** — The number of ISVs supporting Itanium has been growing continuously and already has top solution vendors such as Oracle, BEA, SAP, and DB2.

Platform support/services

- **IBM will say** — They are #1 in support, and will claim lowest cost for maintenance level support.
- **HP response** — Only HP has standard repair time commitments, offering 6 hour call-to-repair, available worldwide, 4 hours for HP's Critical Service with HP-UX. HP’s standard contracts give reliable results.
  - IBM must piece together contracts, prices vary widely. HP partners with world-class firms such as Microsoft, Oracle, and BEA, to deliver the solution you want. IBM wants to fit you into their solutions.
  - With HP you can choose the best-in-breed solution and you can choose who you want to work with and what solution best meets your requirements.

Consulting

- **IBM will say** — IBM Global Services has a comprehensive systems consolidation offering and capacity on demand programs.
- **HP response** — HP has a comprehensive consolidation program and migration services. HP offers the industry's broadest on-demand computing solutions across multiple operating environments while IBM’s are limited by comparison. HP Services is the #1 rated outsourcing company by 700 IT professionals who also rated IBM Global Services absolutely last in cost and value.

About HP's business

- **IBM will say** — HP is predominantly a printer company. 75% of profits come from printers.
- **HP response** — HP has a better-balanced portfolio by revenue than IBM (IPG: 30%, ESG: 22%, HPS: 17%, PS: 28%, HPFS: 3%).
  - IBM's business heavily depends on services—50% of revenues. In the second quarter of 2003, only IBM service grew while all others declined year-on-year.
  - IBM's hardware revenues and profitability is largely derived from legacy mainframes, which are progressively being displaced.
- **IBM will say** — IBM is taking market share away from HP's enterprise business.
- **HP response** — IDC second quarter 2003 figures show that HP grew in overall UNIX share. In the volume and high-end segments HP took share away from IBM (Vol: HP: +7.6%, IBM -4.1%; Mid: HP: -6.2%, IBM: +16.1%; High: HP: +7.3%, IBM: -9%).
  - IBM is a second or third place player in key markets. HP is the #1 market share leader in UNIX, PC, Linux and storage.
  - HP is also the number one partner with the industry leaders Oracle, SAP, Microsoft, PeopleSoft, and Seibel.
- **IBM will say** — HP services lack experience in business processes and heterogeneous environments.
- **HP response** — HP Services has 65,000 professionals in 160 countries. With the addition of Compaq, HP is #1 in Windows expertise and service/support capabilities. HP is #1 in non-outsourced storage services and #1 in SAP R/3 operations services.
  - Recent HP Services wins include Proctor & Gamble, Ericsson, Telecom Italia and Bank of Ireland.
  - HP manages over 50,000 multi-vendor systems worldwide, including significant mainframe operations.
  - HP manages the world's largest SAP implementation on the Sun platform.
  - IGS has been criticized for being too IBM centric, and large consultancies like Accenture and Deloitte tend not to work with IBM since they know IBM will want to eventually convert contracts to IGS. IBM's acquisition of PWC is its primary means of addressing heterogeneous support.

- HP Services was ranked #1 in customer satisfaction in a recent 700+ customer Information Week study — IBM was ranked #7 overall. In fact, some IBM customers are suing IBM for overcharges (Cable and Wireless). Clearly "bigger" does not always mean "better" able to meet customer needs.

About HP technology

- **IBM will say** — HP is forcing customers to move to Itanium—an unproven architecture with just 300 applications. Customers will have to migrate hardware, middleware, applications and tools.
- **HP response** — HP provides in-chassis upgrade paths for customers to move at their own pace, with HP-UX binary compatibility through Aries (most current HP-UX applications will run unchanged). 90% of the top ISVs are already committed to Itanium (including Oracle, SAP, SAS, BEA, IBM DB2, Microsoft, etc.) and 80% of HPTC ISVs are committed. Unlike HP, IBM's approach is to force customers into painful CEC or full boxswaps every two years. This was the case with PowerPC/3 to Power4 and will be the case with Power5.
- **IBM will say** — Power is the #1 64-bit architecture with more than 10,000 applications and plans for Power5 and 6.
- **HP response** — HP Itanium servers rank #1 across a multitude of benchmarks, Gartner Group's SEM ranks HP architecture #1 UNIX in OLTP, and HP-UX is ranked #1 OS by DH Brown.
  - How many ISVs were behind AIX5L when IBM launched Regatta/Power4? There were only 17 certified 64-bit applications (Oracle and SAP missing).
  - IBM is counting mainly AIX 4.3 32-bit applications in their "10,000" count, none of which are optimized for Power4, 5, or 6. HP similarly can count all current HP-UX applications that run unchanged (same performance as PA-RISC) on Itanium with Aries.
- **IBM will say** — HP is just a hardware vendor because 80% of its revenues come from hardware.
- **HP response** — HP has a better-balanced portfolio by revenue than IBM. (IPG: 30%, ESG: 22%, HPS: 17%, PS: 28%, HPFS: 3%).
  - HP Services generates ~$12B in annual revenue and is the #3 IT services company.
  - HP's Managed Services business is growing at twice the market rate. We are growing our reputation and presence as a total solution company.

- Our growing capabilities in the services space have been validated by Gartner, Meta, Forrester, and TPI. IBM's business heavily depends services—50% of revenues. In the second quarter of 2003, only IBM service grew while all others declined year-on-year. IBM's hardware revenues and profitability is largely derived from legacy mainframes.

- **IBM will say** — HP has no competitive advantage in any of its product lines other than printers.
- **HP response** — HP is #1 in UNIX, #1 in Windows, and #1 in Linux server market share (IDC, Gartner). Clearly HP must have some competitive advantages to be a market share leader. Itanium leads in performance (benchmarks) and HP-UX leads in features (DH Brown).
- **IBM will say** — IBM is more of a technology company because it registers more patents each year than HP. In 2002 IBM registered 5668, HP only 2240.
- **HP response** — Actually, HP applied for 7,000 new patents in 2002. Patents do not run businesses, real products do.
  - HP was first to market with Utility Data Center. In fact, Gartner stated that HP has a 12-18 month lead over its competitors with UDC.
  - HP co-developed the next generation technology to RISC, Itanium/EPIC.
  - HP has many significant technology firsts that IBM and others are just now playing catch-up.
  - HP has more systems in the top 500 Supercomputer list (and these are more recent models compared to IBM).
  - HP's leading technologies have already given HP a lead over IBM (as evidenced by market share and benchmarks).

About HP solutions

- **IBM will say** — HP cannot provide end-to-end solutions because it has no credible services or software capability. It partners on a loose case-by-case basis.
- **HP response** — Unlike IBM, HP embraces partnerships—not simply tolerates them. HP partners with industry leaders such as Oracle, Microsoft, BEA, and many others, for best-in-class solutions and does not compete with them.
  - "IBM only" solutions will give customers a vendor-limited solution.
  - OpenView is the leading heterogeneous environment management software. HP's strategic partnerships are an advantage for customers, who will get best-in-class solutions not an IBM lock-in monopoly. DB2, Websphere, etc. may work well for some customers, but not all.
  - IBM cannot provide the same storage solutions as HP (Shark technology lags XP, HP leads in storage services).

- **IBM will say** — HP has to depend heavily on third party vendors for middleware and services so it cannot provide an end-to-end solution.
- **HP response** —HP works closely with partners to ensure HP solutions are well integrated and prepared to function in real customer environments (not just homogeneous IBM datacenters).
  - HP's OpenView platform is an industry leading software solution to tie together the entire solution stack.
  - ServiceGuard has both Oracle and SAP HA extensions and PRM works with Oracle's resource management tools.
  - HP will guarantee its partner solutions. IBM wrongly thinks middleware can solve customer transformation requirements. Middleware does not address the full IT lifecycle.
  - IBM has difficulty working with partners since IBM competes directly with them, while HP's extensive partnerships better address individual customer needs and provide superior technology integration.

About HP services

- **IBM will say** — HP market share in services mainly comes from hardware related warranties service upgrades etc. MS revenue is growing at twice the market rate.
- **HP response** — Our support business provides a rich opportunity for us to expand services sales into those accounts. Since the success of the HP merger, managed services has closed 250 new deals, increased backlog by 100%, and increased their average contract size by 40%. They have won key deals such as P&G, Telecom Italia, and Bank of Ireland.
- **IBM will say** — HP's future with outsourcing is questionable because of its lack of experience in business process and heterogeneous environments.
- **HP response** — HP delivers services in 160 countries worldwide. We have the commitment and the financial strength, and the talent to be a leader in this area. We have 50,000 multi-vendor servers under management. HP successfully pulled off the biggest technology merge in history—on day one we had full access for all employees and less than a year later we had consistent access for customers and vendors.
- **IBM will say** — HP relies on partners like Accenture for business consulting but competes with them for outsourcing and infrastructure.
- **HP response** —HP's strategy is to partner in services where it makes sense but also to provide them directly. Wins like the $3B P&G against IBM validate our strategy. HP won, in part, because it was flexible—not prescriptive like IBM.

Adaptive Enterprise (AE) versus E-Business On Demand (EBOD)

- **IBM will say** — Adaptive Enterprise is marketing hype for an infrastructure only UDC solution.
- **HP response** — Adaptive Enterprise is a strategy consisting of business processes, business applications, application services, virtualized resources, end-to-end management, measure, assess, architect and integrate services.
  - AE is based on a heterogeneous reference architecture and supported by innovative agility services which enable customers to realize ROI quickly at every step-by-step transformation. UDC is only one part of the virtualized resources solution and a proof point of HP's ability to deliver on its promises.
  - "On demand" is IBM's way of locking customers into lengthy business process engineering engagements for its acquired PWC group. It takes years before ROI can be realized and measured. It is a glorified leasing or outsourcing ploy. Does autonomic computing utilize the non-IBM resources (for example. BEA web servers, Oracle databases, HP and Sun hardware, HP and EMC storage, and so forth.) that many company uses today, or do we have to start over with DB2 and WebSphere? What about Microsoft.Net support? Linux support? What about Solaris, OpenView and iPlanet?
- **IBM will say** — UDC is unproven and does not work well in a multi-vendor environment.
- **HP response** — UDC was introduced in November 2001. HP has worked with a number of customers who have implemented UDC. HP has UDC running its HP labs operations in Cupertino and Bristol. HP announced that Phillips has implemented a UDC. UDC works not just with HP, but runs AIX and Solaris in addition to Windows and Linux. It supports Cisco, HP networkingas well as XP, EVA and EMC storage.
  - Questions to ask: I want to buy/build an autonomic computing infrastructure, IBM. When can I buy all the products you have announced? What will it cost me, in total? Can I run it myself or do I have to pay IBM? Can I hire Accenture, for example, to run it? Do I need a Sysplex architecture mainframe to get five-nines high availability?
- **IBM will say** — HP does not have the resources to solve customer's key business problems.
- **HP response** — HP's Adaptive Enterprise infrastructure and management solutions directly address customers business needs to increase agility, reduce costs, increase quality of service and reduce risk.
  - HP strategy is to partner with industry leaders like SAP, Oracle, Accenture, and CGEY to deliver best of breed solutions.
  - HP has resources of over 141,000 employees in 178 countries with annual revenues over $56B.

- HP has moved from #28 to #14 on the Fortune 100 list for 2003.
- Questions to ask: How many Oracle, BEA, Microsoft based solutions has IBM delivered? HP is not just about printers, HP's second quarter 2002 and third quarter 2003 enterprise systems and services revenues accounted for 35-40% of the total. HP sets aside billions for R&D, but also leverages partners—unlike IBM—HP does not have to be a "lone ranger".

- **IBM will say** — IBM acquired ThinkDynamics(in May 2003, to transform existing environment into "On-demand" environment, unlike HP UDC which is a "rip and replace" solution. Think costs $20K Vs $1M for UDC. This is proof of IBM is delivering on its "On-demand" vision.
- **HP response** — Think does not virtualize the infrastructure. Think is not a fully integrated solution; integration is left to the customer. It only automates server provisioning—not storage resources.
  - Think has no billing and metering capability.
  - UDC is not a rip and replace solution. Customers can integrate new and existing assets into their UDC. The $20K is for only 10 servers. These costs are deceptive—customers will need IBM consulting services. UDC is a fully integrated hardware, software and consulting services solution for 100+. HP and others have moved towards standards-based and increasingly modular systems. How can IBM continue to afford proprietary architectures like E-Business On Demand?

Why customers should switch to IBM

- **IBM will say** — HP is more about marketing than innovation.
- **HP response** — HP delivers utility computing and virtualization products today. Itanium delivers superior performance vs. Power4/4+ with better price/performance (such as audited $/tpm, fewer processors).
  - HP introduced the Agility Assessment Service, an innovative service that gives customers a benchmark as to the "agility" of their enterprise.
  - Question to ask: IBM, whatever happened to eLiza? While IBM is talking about "OnDemand" in the datacenter, IBM only delivers silo technology while HP today has full datacenter technologies (UDC, ZLE). While IBM is hyping Power5's improved performance that will not be fully enabled until fourth quarter of 2004, HP is delivering with Itanium.

- **IBM will say** — HP is still struggling to recover from the merger.
- **HP response** —HP's merger with Compaq will result in an annual cost savings of $3 billion by the end of fiscal2003—a year earlier than originally predicted. Analysts have labeled it as one of the most successful in history.

  Mergers are not an easy thing, especially the largest in history. IBM knows this from its previous experiences that did not go nearly as well, including Sequent and Lotus. IBM is also working out the kinks with its PWC acquisition.
- **IBM will say** — HP is forcing customers down a risky path with Itanium.
- **HP response** —In addition to HP, Dell, SGI, Unisys, NEC, Bull, and even IBM are backing Itanium. 90% of key ISVs are behind Itanium. IBM's CPU division lost $110M in the second quarter of 2003, but Intel's revenues doubled in the second quarter of 2003. Which is riskier, investing in an architecture with multi-vendor (industry) backing or continuing to invest in proprietary lock-in solutions from a single vendor?

  For additional counters to IBM FUD against HP, see IBMHPCOUNTER on ESP.

Sun

- How to win against Sun
- Respond to Sun FUD

Sun

How to win against Sun

Sun weak points	How to win with HP
Single-solution choice does not have the flexibility you need. Sun lacks any Windows support, any 64-bit Linux support, and is selective on commitment to industry standards.	HP offers a full multi-OS strategy today with HP-UX, Windows, Linux, and OpenVMS, all on one standards-based platform. HP has a complete product family, from entry to high-end, with a broad ISV portfolio.
SPARC performance continues to fall behind. Sun refuses to benchmark their servers for TPC-C.	Itanium has a 2 to 1 performance advantage over SPARC today. Add to that HP's high performance chipsets and you get proven industry leading performance in both HPTC and commercial computing. HP's strong partnership with Intel will continue to deliver enhanced Itanium processors every 12 months. HP can scale up to 64-way today and to 128 in the future.
Can Sun meet your enterprise needs? Sun cannot consolidate multi-OS environments and cannot repurpose your systems with your choice of operating environment. Sun's N1 falls well short of HP's Adaptive Enterprise and has weak services like mission-critical support. Sun has no Windows support and no relationship with Microsoft.	Unlike Sun, HP can consolidate multiple OEs on one platform with Superdome. HP has unbeatable investment protection with a long-term road map, in-box upgrades, and the ability to repurpose with your choice of OS. Sun cannot match HP's utility computing solutions such as PPU, CiCOD, and TiCOD.

Sun challenges

- Platform confusion: SPARC, x86, and now Opteron
  — Sun used to focus exclusively on SPARC but because SPARC is too expensive and too slow they now are picking up any chip family that will sell.

  Platforms need software and Sun is diluting their ISV base, and confusing customers as well, with this sell any platform approach. Sell the consistency and long-range plan of our dual platform strategy leading to Itanium for all software.

- Linux strategy: Sun does not have one
  — Sun sells Linux but only reluctantly. Schwartz, their Vice President of Software, has stated unequivocally that they do not see a place for Linux on the server.

  Every customer should be reminded of the difference between HP's strategy to support Linux (indemnification) and our goal to give customers a choice.

- Poor investment protection: Sun has no Itanium upgrade path, and their chip strategy is soft.
  — Sun's SPARC is running out of momentum and selling Opteron in the low-end will sap SPARC volume. Where will Sun's enterprise customers go in the future? HP has a better answer with our strong investment protection story.

- Sun wants to be an ISV
  — Sun has struck out on an aggressive software strategy yet its historical success has relied on key software partners, which they now compete with. Why should customers put their faith in Sun, the software company? HP partners with leading software application suppliers, but we do not compete with them by selling second-rate software. Our solutions are leadership hardware, software, and services.

Setting Sun Fire traps

- Does Sun offer a single 64-bit strategy to run UNIX, Linux, and Windows?
  — No, all roads lead to SPARC/Solaris only.Will Sun SPARC R&D be able to keep up?
  — No, declining business model is forcing Sun to reach out to Fujitsu for potential R&D help.

- Why does Sun reliability continue to suffer?
  — Sun has struggled with reoccurring SPARC issues, such as lack of chip-kill memory and spotty QA.

- Will 15K support for dual-core USIV create more performance bottlenecks?
  — Yes, limited I/O bandwidth is stretched further.

- Why does Sun claim no SPOF on 15K?
  — Sun misleads with no SPOF claims as memory chips, ASICs, expander boards, and major OS failures all result in system reboots.

Anticipating Sun traps

- IPF is unproven and a high-risk strategy.
  — No, IPF performance is #1, supported by many vendors, for best "open" system choice.
- HP is forcing customers to IPF.
  — No, HP provides in-box upgrades to future PA-RISC or IPF + binary compatible HP-UX.
- Very few ISVs support IPF.
  — No, over 1,000 applications are available and 90% of top ISVs + 80% top technical ISVs are committed.
- POWER offers equal performance with half the CPU's.
  — IPF has #1 performance and better price/performance than POWER/ SPARC in benchmarks across multi-OS's.
- HP IPF servers lack functionality of PA-RISC.
  — Yes, vPARs is not available on IPF. HP can meet your needs via nPARs, PRM/WLM or deploy PA-RISC + later upgrade to IPF.

Respond to Sun FUD

Platforms

- **Sun will say** — They already have one unifying architecture with binary compatibility for your applications.
- **HP response** — Sun's "unifying architecture and OS strategy" has already proven it cannot do the job. Sun was forced to offer x86 and Linux, and now they say they are porting Solaris to Opteron. Their strategy is disjointed, but Sun's real goal has always been, and still is, to lock customers onto SPARC/ Solaris as quickly as they can.

OS

- **Sun will say** — Promote Solaris on Intel, over Microsoft and Linux.
- **HP response** — After many changes of direction, Sun is backing off from Linux on SPARC and now promoting Solaris on Intel. Just a month ago, Sun was saying N1 will support customer's full environments—including Windows and Linux. How serious are they about supporting anything other than Solaris? Sun also says "Diversity is good in your workplace, not in your data center."

Storage

- **Sun will say** — Their new enhanced storage offerings can be integrated into Windows and Linux solutions as well as Solaris.
- **HP response** — Sun continues to struggle with storage on Solaris and has never been successful with providing storage for other platforms. Their main focus will continue to be Sun systems. HP Storageworks has been an industry leader for years and with its inclusive platform support it can support a customer's entire data center.

ISVs

- **Sun will say** — Itanium lacks ISV solutions, pointing to their renewed Oracle alliance.
- **HP response** — The number of ISVs supporting Itanium continues to grow and already has top solution vendors such as Oracle, BEA, SAP, and DB2. HP has worked with Oracle for 20 years on x86 Linux and Windows, and now on Itanium. Sun is late to adopt Intel-based solutions.

Support

- **Sun will say** — They have the strongest UNIX support.
- **HP response** — Only HP has standard repair time commitments, offering 6 hour call-to-repair, available worldwide, 4 hours for HP's Critical Service with HP-UX. Sun cannot match HP Critical Service or HP Mission Critical Partnership. Sun has no experience with Windows and limited Linux support.

Consulting

- **Sun will say** —Their consulting services for Assessment and Architecture and Implementation is better than HP's.
- **HP response** — Sun has no migration services, their consolidation services are focused on selling more Sun hardware. HP's consolidation services and COD programs are broader and more flexible than Sun's.

HA/Clustering

- **Sun will say** —Sun Clusters for Solaris Operating Environments is better. Sun Clusters is fully integrated with dynamic reconfiguration capabilities of Sun Fire servers.
- **HP response** — Sun's HA story is weak, beginning with poor HA designs at the system level, such as no basic DPR, DMR or chip sparing in their Sun Fire servers. Their clustering solution has many limitations and product issues.
    - Their software is young and immature.
    - Sun Cluster Configurations is limited to 8 nodes versus HP's 16.

- Their choice is confusing for customers, should they choose Legacy clustering from Veritas or Sun Clusters.
- They have limited high-end interconnect options—very expensive Sun Fire link are only available for 6800 systems or higher. SCI interconnect is only supported on PCI adapters, not older Sbus.

HP Serviceguard is a much more mature field proven in thousands of installations:

- Available on HP-UX for PA-RISC, Itanium and Linux with common management tools.
- Greater flexibility in configurations (16 node support with HyperFabric, Gigabit Ethernet options).
- Better integration with ERP applications for fail-over with SGeRAC and SGeSAP.
- Integration of TruCluster technology in a future release.

HP supports Microsoft Cluster Service (MSCS) on all Integrity servers, Sun does not support MSCS on any Solaris or SPARC platform.

General Sun FUD

- **Sun will say** —Last year HP announced a delay of its UNIX OS (HP-UX 11i v3) until at least 2005.
- **HP response** — This FUD being raised by Sun about the HP-UX roadmap is off the mark. Since the roadmap was update in October 2003, significant customer feedback and input from our field has led to an engineering plan that accelerates delivery of select functionality and allows customers to better meet their business needs while also staging their adoption of these capabilities. These changes also help accelerate HP Integrity server adoption. The latest HP-UX plan of record now is:
  - Accelerate availability of vPars on HP Integrity servers by 8 months
  - Accelerate availability of a common release for both HP 9000 and Integrity servers by 15 months, with. HP-UX 11i v2 available on HP 9000 PA-RISC Systems
  - HP-UX 11i v2 ISV momentum is strong and will accelerate as volume continues to increase
    - There will be no impact for Integrity ISVs.
    - HP-UX 11i v2 on HP 9000 (PA-RISC) delivers binary compatibility with HP-UX 11i v1 allowing a simple paper certification for our ISVs.

- HP-UX 11i v3 functionality remains unchanged
  - HP-UX 11i v3 planned delivery includes security enhancements, Advanced File System (AdvFS), storage and I/O Stack enhancements, and the infrastructure for TruCluster Single System Image (SSI) for Serviceguard.
  - TruCluster SSI for Serviceguard is planned as an update.
  - This phased approach to delivering significant new capabilities is consistent with feedback from many customers who have indicated that they will first implement technologies such as AdvFS and when they are comfortable with these new technologies, will then introduce additional new technologies such as TruCluster SSI for Serviceguard.
  - An update provides a simple way for our customers to adopt new capabilities on existing version. No version change, no ISV impact.
  - HP-UX 11i v3 Beta Program will be introduced for early adopters.

- **Sun will say** — HP-UX is currently not available across all of HP's product line, unlike the Solaris OS which is available on every system Sun ships, and on key third party platforms.
- **HP response** — Solaris on SPARC has a sizable ISV portfolio but Solaris on SPARC has no binary compatibility with Solaris on x86 or 64-bit extensions to x86. Even the data formats are incompatible big vs. little endian.
  - The Solaris on x86 application portfolio is very limited. The Solaris on 64-bit Opteron application portfolio is non-existent. Applications will have to be recompiled for 64-bit extensions to x86.
  - Sun is now asking ISVs to support three separate versions of Solaris applications, SPARC, x86 and Opteron. Solaris x86 has limited ISV enthusiasm and there is no reason to believe, given the choices that ISVs must make for their limited engineering resources, that Solaris x86 will get any amount of attention going forward.
  - As for Solaris on Opteron, that is even farther down an ISV’s list of possible platform targets. Sun’s attempt to attach the ISV base for Solaris on x86 will only drain away resources from the SPARC franchise putting those products, and the customers that use them, at greater risk.

  UNIX: HP is number 1 in worldwide UNIX revenue market share while Sun continues to lose UNIX market share. HP-UX gets the most R&D investment of any enterprise software product at HP and involves over 2000 engineers in its development.

Gartner is forecasting growth for HP-UX. At the Gartner Datacenter conference held December 8-10 2003, Gartner predicted that only HP-UX (5.6% CAGR) and AIX (7.5 CAGR) would show revenue growth over the period 2003-2008. Gartner predicts that Solaris revenue will actually decline -2.4% over the same period (Ref: Gartner Presentation "Maximizing Success with Servers", Jeffrey Hewitt, Dec 8-10 2003).

HP is committed to HP-UX as a key part of our enterprise server strategy. Gartner is predicting growth for HP-UX, Linux and Windows. HP's Itanium strategy is best positioned to take advantage of this growth. Our HP-UX strategy of evolving from PA-RISC to Itanium is one that benefits customers and is clear to ISVs.

- **Linux:** HP is the leader in worldwide Linux server revenue market share while Sun is only a niche player with an ambivalent Linux strategy and only 1.5% worldwide Linux server revenue market share. In fact, Gartner reported that Sun is not perceived as a strategic Linux supplier: "…only 1 percent of respondents at Gartner's December 2003 Data Center conference rated Sun as a strategic Linux supplier."
- **Windows:** According to the IDC Quarterly Tracker for Q3 CY2003 HP was number 1 in worldwide Windows server unit share with 33.2% marketshare, Sun had zero.

  HP's Windows expertise is also validated by our real-world experience gained in maintaining one of the largest Windows environments in support of HP's own business. It takes more than getting someone else to certify the hardware you resell (it has been reported that Sun would obtain the Windows certification for their x86 servers) to be a true Windows solution provider. Sun is not offering or supporting Windows servers. HP is #1 in Microsoft enterprise support with over 5000 Microsoft Certified Engineers and over 23,000 Microsoft Trained Specialists. HP has a proven track record delivering mission-critical support in mixed environments that Sun cannot even begin to match. Sun is once again following an HP strategy but without the level of commitment required to really meet customers' needs.

Sun's ALL SPARC/ALL Solaris strategy is clearly dead. But it takes more than marketing rhetoric to deliver real solutions in the heterogeneous datacenter. Real world business needs require robust solutions for UNIX, Linux, and Windows. HP is a proven, one-stop vendor in multi-OS environments. Is Sun?

- **Sun will say** — HP's road map offers you something Sun's doesn't. Confusion.
- **HP response** — HP’s stated development strategy is one of focused innovation by building new value on top of industry standard building blocks. HP’s expansion of the ProLiant line to include x86 extensions is a direct continuation of our consistent strategy of building value on top of two industry standard building blocks, x86 and Itanium.

  While Sun’s adoption of x86 extensions in the form of Opteron is a major strategy change. As the majority of SUN SPARC server shipments are in the entry-level, where does SPARC fit in now? Given that Sun is porting Solaris to Opteron in addition to SPARC, what 64-bit platform does a Sun customer now choose for the low-end, SPARC or Opteron?

  Sun is attempting to portray Opteron and SPARC as complimentary but this will only confuse customers and frustrate Solaris ISVs. Why would a customer still want SPARC with its lackluster performance? The support of Opteron is another major strategy shift for Sun.

  Sun’s strategy and marketing messages change so frequently that customers should be concerned about their credibility. Opteron is added to the list of Sun flip-flops, which include Linux, all SPARC and x86. Given Sun’s ever changing directions, customers and ISVs should hesitate before make a strategic commitment to Sun’s Opteron strategy. For a presentation on Sun flip-flops see ESP keyword SUNFLIPFLOPS.
- **Sun will say** — Software applications must be extensively rewritten to run on Itanium. That means independent software vendors (ISVs) and internal IT departments must incur the time and expense of porting their software to Itanium, which is still a low-volume, unproven processor architecture. The result: Itanium has a very limited library of ISV applications today (around 1000, compared with more than 12,000 for Sun's SPARC platform running the Solaris Operating System), and there is no reason to expect that situation to change quickly.
- **HP response** — The total number of applications available on an operating system is largely a meaningless marketing number that changes depending on how the count is done and may include applications that are not supported on the most recent version of the operating system. The only thing that really matters is if the application that your customer needs is supported. For an internal site to check status of a particular application see: http://solutionstore.cac.cpqcorp.net/hpux/hpux/hpux.asp.

For example, Sun itself only sites 6600+ commercial applications for Solaris on SPARC. We are on track with the Itanium ISVs with over 1500 applications supported. With Itanium HP provides unifying architectures based upon industry-standard Itanium chipsets that provides vastly superior performance, price/performance, scalability, availability, and operating system choice (HP-UX, Linux, and Windows, with OpenVMS and NonStop Itanium systems in the future) to develop and run applications vs. a proprietary RISC approach. This will greatly simplify customer's environments and give them better flexibility and choice.

- **Sun will say** — They solves complex computing issues through R&D, not M&A (mergers and acquisitions).
- **HP response** — Sun must be forgetting their relative buying spree in the last couple of years. In the last two years Sun has acquired the following companies:
  - March 2002, Clustra, Focus — High availability clustering technology
  - July 2002, Afara, Focus — On chip multi-processing
  - November 2002, Pirus Networks, Focus — Multi-protocol, multi-vendor intelligent storage platform (for N1)
  - November 2002, Terraspring, Focus — Infrastructure automation software N1 support
  - June 2003, Pixo Inc., Focus — Content delivery and billing specialist Pixo Inc. for Java-based mobile applications and services
  - November 2003, Waveset, Focus — Security, RFID tag
  - January 2004, Nauticus, Focus — High performance layer 4-7 switches
  - February 2004, Kealia Inc., Focus — Advanced server technology

  This blatant disregard for the facts goes to point out the lack of credibility of Sun documents.

Bottom line: Do not believe the Sun FUD

Sun's continued FUD is only intended to take attention way from the fact that the future of SPARC is very much in doubt. Sun would like customers to believe that their strategies are consistent and inviolate and thus a safe haven for when you need to make a decision on where to migrate. But a cursory examination of Sun's current history would raise questions about which unchanging strategy they are talking about?

Be aware that HP is aggressively targeting Sun's install base with robust programs. See

http://www.hp.com/cgi-bin/large/parse.cgi?mcc=&src=&template=/large/promo/64595/index.html.

Dell

- How to win against Dell
- Respond to Dell FUD

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Dell

Dell weak points	How to win with HP
Weak Itanium roadmap. Dell needs others to deliver the technology, but has weak Itanium partnerships and no visible ISV support.	HP has a complete product family from entry to high-end, with a broad ISV portfolio. With HP you get a long-term road map and in-box upgrades for investment protection, high performance chipsets for Itanium, and partnership with the co-developer of the Itanium chip.
Incomplete business OS support. Dell has no experience with enterprise UNIX.	HP offers a better multi-OS strategy today with HP-UX, Windows, Linux, and OpenVMS.
No solutions for scale up, consolidation, resource utilization. Dell has no experience with systems larger than 8-way.	HP can scale up to 64-way today and to 128 in the future. HP can consolidate multiple OEs on one platform with Superdome. Dell has nothing like HP's partitioning continuum, HP's goal-based workload management, and HP's Virtual Server Environment and UDC.
Can Dell meet your enterprise needs? Dell has nothing like HP's Adaptive Infrastructure, mission-critical support.	HP offers unmatched utility computing solutions such as PPU, CiCOD, and TiCOD. Dell cannot touch HP Enterprise Services. HP has superior Microsoft support and unmatched Linux support.

Respond to Dell FUD

Platforms

- Dell will say — They are the price leader.
- HP response — For customers who have not reached the limits of their IA32 platforms, ProLiants are the best competitive match against Dell PowerEdge servers. Dell cannot bring Itanium to market until others deliver the technology for them.

OS

- Dell will say — Dell has strong Linux support especially in clusters.
- HP response — Dell does not have an enterprise UNIX solution. Dell's Linux strength is only in clusters on small systems, not in single large systems. HP has superior Microsoft Windows support and unmatched Linux support.

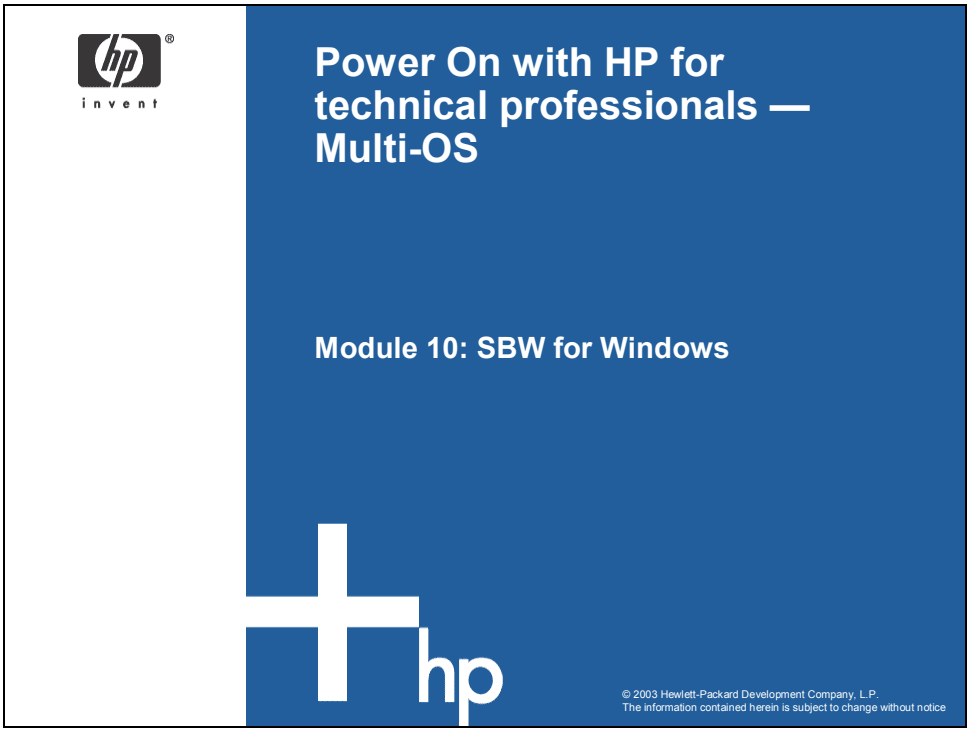
Storage

- Dell will say — Their Dell/EMC family provides cost effective solutions for applications that require highly available and scalable storage.
- HP response — Dell partners with EMC to provide storage comparable to HP midrange solutions, but Dell does not provide anything to match HP's high-end enterprise class products such as the HP Storageworks EVA and XP. Furthermore, Dell's storage products lack the long-term stability required by enterprise customers. HP leads all storage vendors in storage revenue, units shipped, and terabytes shipped, per IDC. In the fourth quarter of 2002 worldwide market shares beat IBM and EMC. Dell's manageability for storage products is less integrated with their server management than HP.

Summary

- Resources
- IBM
- Sun
- Dell

Summary



SBW for Windows

Objectives

At the end of this module you should be able to:

- List steps needed to import and export configurations
- Explain data file update processes
- Create and modify configurations, upgrades, and add-ons using SBW Configurator
- Initiate quotations from SBW Quoter
- Customize customer quotations
- Apply pricing and discounts

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Objectives

At the end of this module, the students should be able to:

- Use SBW to correctly configure new systems, upgrades, and add-ons, make changes to configurations and quotes, leverage configurations and quotes you have already done, and quickly change a configuration or quote to meet your customer's changing needs
- Update the Knowledge Base and Price Book, which are very important to providing correct quotes to your customers
- Customize customer quotes
- Initiate, modify, and print the quote for your customer
- Import configurations from other configuration tools and export configurations to Excel

Agenda

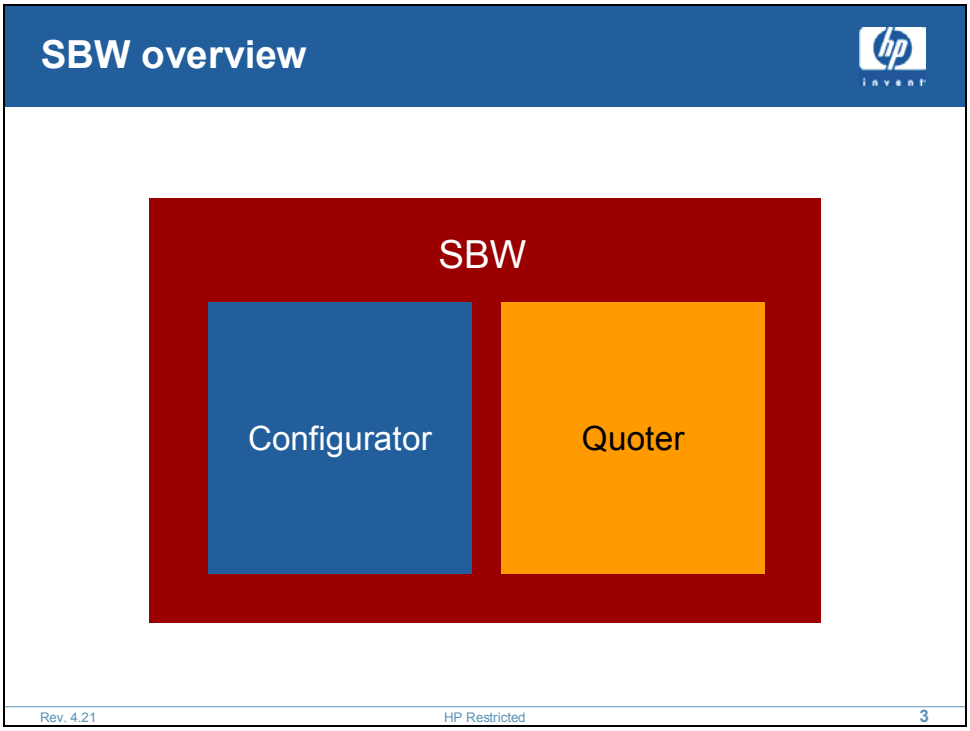
- SBW Configurator
  - SBW overview
  - User interfaces
  - Key terms
  - Making a configuration
  - Modify a configuration
  - Multiple systems

- Upgrade
- Add-ons

- SBW Quoter
  - Creating a quote
  - Learning about the Quoter menu/toolbars
  - Customizing the quotation
  - Finalizing the quote
- Course wrap-up

Directions for this module:

1. You should all have SBW loaded on your laptops.
2. We will look at some procedures and then you will have time for hands-on practice.
3. After learning other processes, you will again be able to practice with the SBW program.
4. After learning how to configure various products, we will take the configurations and produce a quote from the SBW Quoter.



SBW overview

SBW is HP's premier configuration and quotation tool for the sales force and channel partners. SBW is a downloadable tool designed to support HP's complete product portfolio of ESG and the related HPS products. With SBW you can configure a total solution including ISS, BCS, and NSS hardware and associated software and services, quote your solution with up-to-date pricing, and ensure your hardware and software choices are compatible.

SBW mission

- Provide configuration and quotation capabilities for the entire HP ESG product portfolio: BCS, NSS, ISS as well as associated Services and Support (HPS) and software.
- Increase efficiency by allowing users to quickly configure new systems, upgrades, and add-ons, and prepare budgetary quotes using a portable PC.
- Improve accuracy and timeliness of order delivery by providing the ability to export files to Configuration Centers for the creation of Legal Quotes and Convert-To-Order workflow process.
- Increase effectiveness of sales through linkages to Proposal Web.
- Improve selling time by exporting files to Eclipse for big deal discount approvals workflow process.

SBW features and benefits

The HP SBW tools let you develop accurate configurations and quotes for customers. Accurate orders mean you spend less time making corrections and your customers get their products on time. In addition, SBW can be used on your PC or notebook as a stand-alone application.

For the latest information on product strategy and announcements, visit the corporate web site at http://www.hp.com.

Configure and quote the total solution

- SBW has been used by HP professionals for over 10 years! The tool gives you the power at your fingertips to configure and quote the total solution!
- Solution selling of hardware, software, support, supplies, and accessories.
- Complex, high-end configuration functionality in one tool.
- Rules based configuration checking to build accurate solutions.
- Consistency provided with an external version available for our partners.

World-wide tool

- World-wide product data through one knowledge database.
- Over 150 regional price books to obtain accurate quotations!
- Portable—on the road with you at your customer’s site.
- Self managed turn around time of configurations.
- Easy to use—menu driven navigation.

Linkages to other tools provide additional productivity gains

- Eclipse — Manages the submittal, approval, and implementation of non-standard price offerings to win large and medium scale opportunities.
- Active Answers — Knowledge repository and virtual solutions community designed to help you achieve returns on your IT investments faster and with less risk.
- GoPAQ — Acts as a channel for the communication of structured content. Putting the power of relational technology into the user's hands.
- Proposal Web — Online proposal generator to simplify and support the automated production of winning proposals for the HP sales force and our business partners.
- eCo — A web based user interface linking to the SBW/Watson Knowledge Base providing product level configurations and budgetary quotations with exporting capabilities back to SBW/Watson (napkin to blueprint concept).

System requirements

System

- Intel Pentium 600MHz CPU or faster
- Minimum 128MB RAM, recommended 512 MB RAM
- At least 300MB free disk space on local hard drive
- Microsoft Windows 98,
  Microsoft Windows NT,
  Microsoft Windows 2000,
  Microsoft Windows XP
- Access to the internet and your regional HP Channel Partner site

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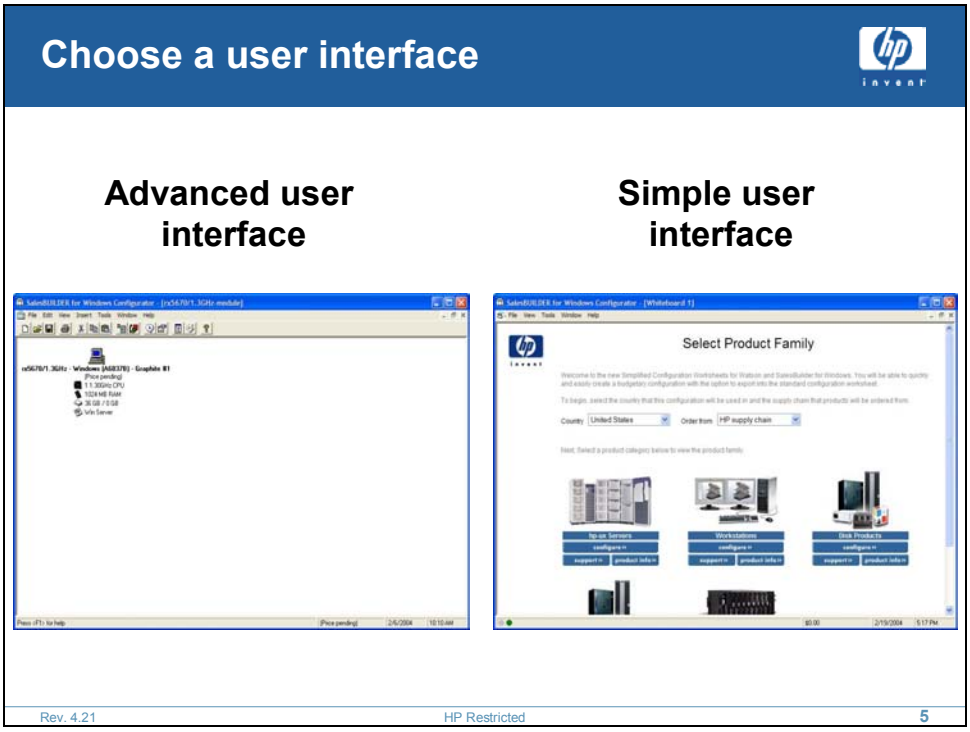
System requirements

The minimum amount of memory required for installation is 128MB RAM. To achieve optimum performance, 512MB RAM or more is recommended. At least 300MB of free disk space must be available on the local hard drive (drive C) for this application to be installed.

Note that Internet access is only needed to access the software prior to installations and for updates. Internet access is NOT required to do configurations or quotes.



Choose a user interface

Selecting a user interface that is right for you

SBW for Windows offers two user interface options. The NEW Simple user interface offers a graphic product selection screen for simple product configurations, whereas the Advanced user interface offers a graphical view for more complex product configurations.

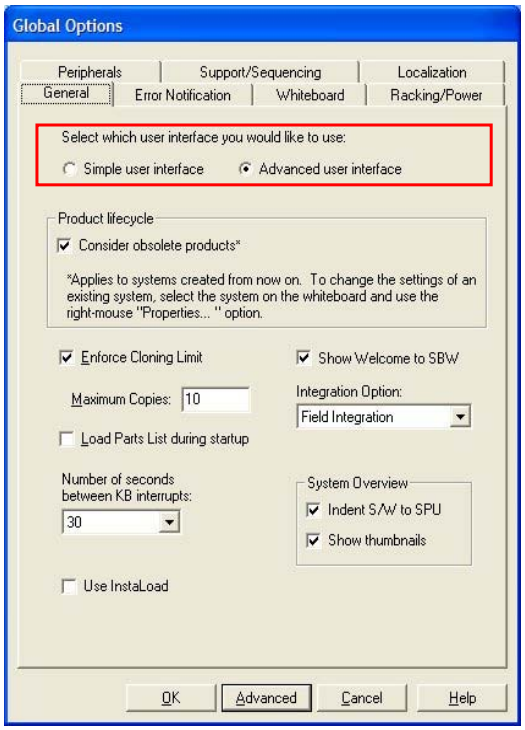
Which user interface to choose?

The NEW Simple user interface by definition is less complex. There are buttons in place for basic tasks. As a result, some options are only available in the Advanced user interface. However, users may switch between the two options during a configuration as needed.

Differences

Advanced user interface	Simple user interface
Graphical system representation	Graphical product selection screen
Designed for complex configurations	Designed for simple configurations
Direct export to Excel	Direct export to Excel formats
Copy and paste systems	Copy and paste buttons present
PLUS:	*PLUS:*
System Cloning	Links to product marketing information
Dynamic System diagram	
Connection List	
Hardware List	
Parts List	

Changing user interfaces



To change the user interface, choose the Options tab under the Tools menu item to select the user interface that best meets your needs. This sets the default interface to your selection. The change affects the next white board created. It does not change a currently open whiteboard. When you open a new whiteboard, it opens in your default interface.

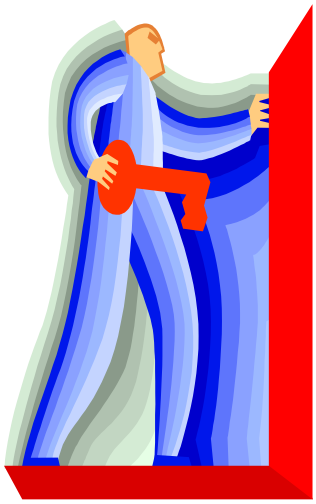
Simple user interface functionality

1. The “product family” button allows the user to view all of the models within a product family.
2. The “configure” button begins the configuration process.
3. The “support” button allows the user to view support information via a weblink as long as the user has an Internet connection to view this information.
4. The “product info” button allows the user to view product information via a weblink (user must have an internet connection to view this information).

For consistency in this module we will be using the “Advanced user interface” throughout this training session. You are encouraged to experiment with the Simple user interface at your convenience.

Key terms

- **Configurator** — Used to configure and customize technical solutions
  - **Whiteboard** — The center of SBW which shows technical solutions and is the unit of quoting and storing
  - **Config Worksheet** — Main configuration tool that allows you to configure complete technical solutions
  - **System Diagram** — - A graphical view of your configuration that can be used for modification



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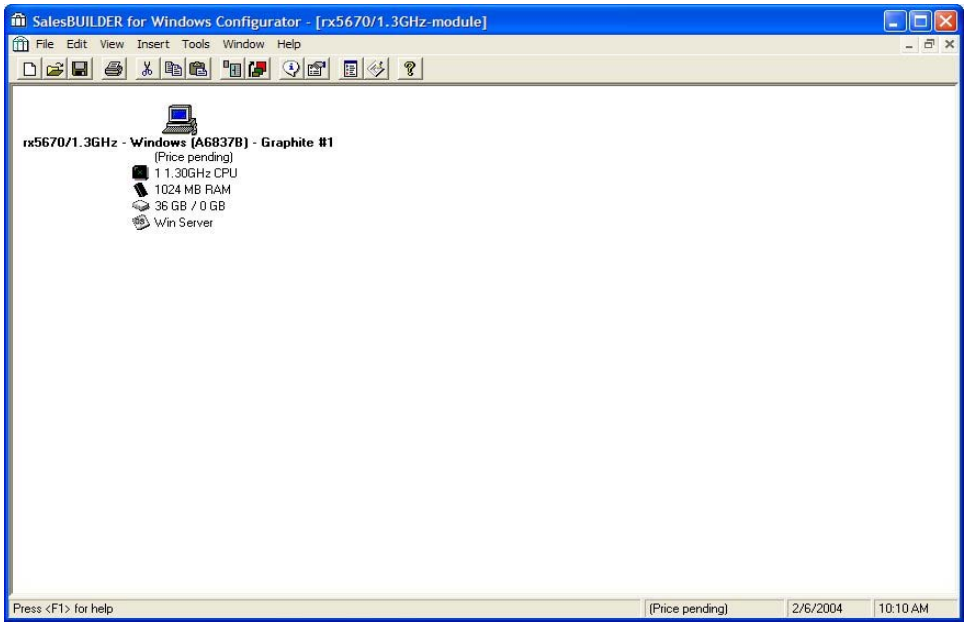
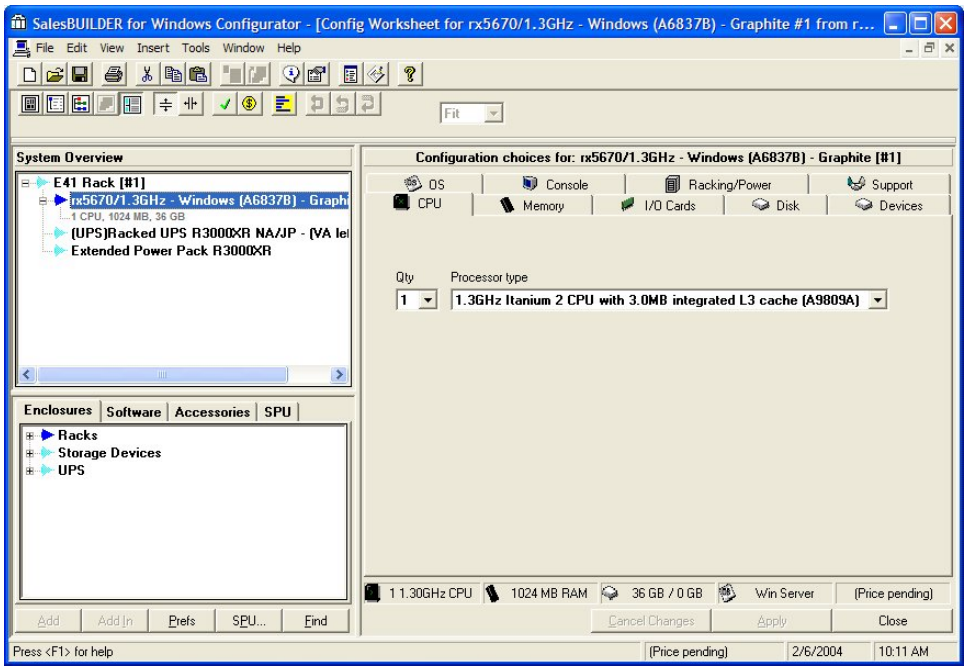
Key terms

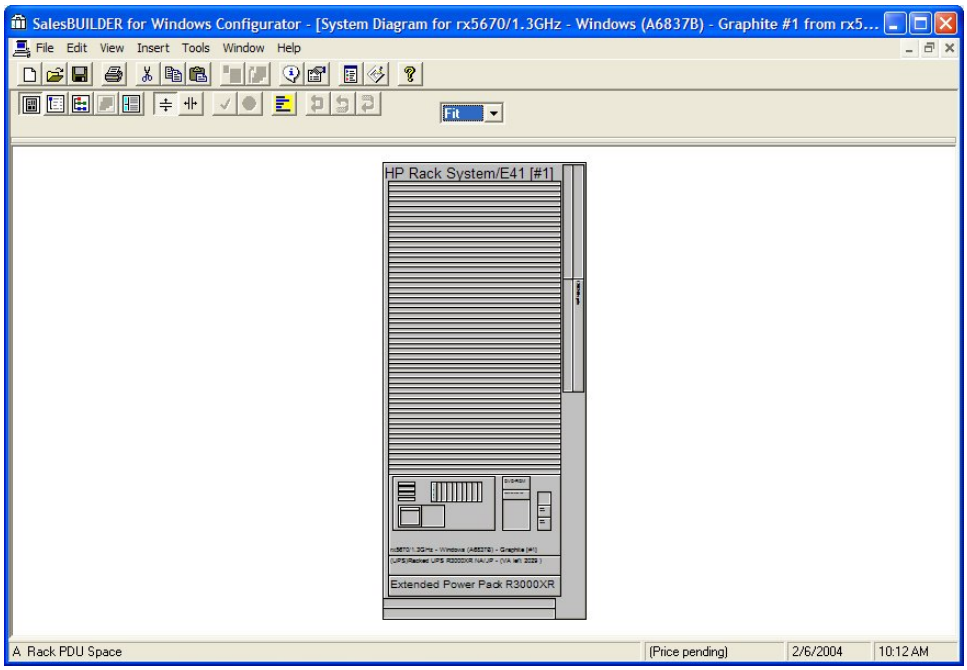
The whiteboard is the center of SBW. The Config Worksheet, the System Diagram, the Connections Diagram, the Hardware List and the Parts List are views of the whiteboard.



The Config Worksheet is a means of customizing attributes of the current solution. This window displays the Configuration Choices for the specific product that has been highlighted by the blue arrow in the System Overview pane. As you can see, the Config Worksheet has three windowpanes: System Overview, Configuration Choices and Additions as well as a System Specific Toolbar.

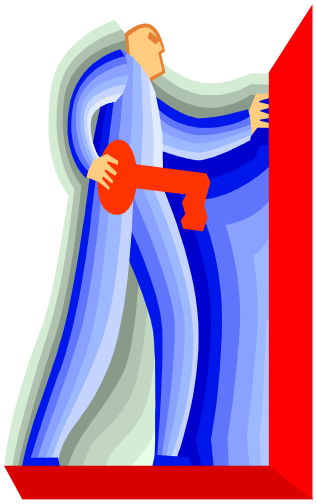


The System Diagram shows the configuration as a diagram you can share with the customer. You can even modify your configuration in the System Diagram view.



Key terms

- **Configurator** (continued)
  - **Upgrade View** — Enables the user to create an upgrade system either from an existing or unspecified system in the whiteboard
  - **Hardware List** — Displays the hardware products that exist in the configuration, but does not include Software or Support
  - **Connections Diagram** — Shows the connectivity of the devices and interfaces cards with the main server
  - **Line Item List** — Shows a list of all the parts by part number, description and price



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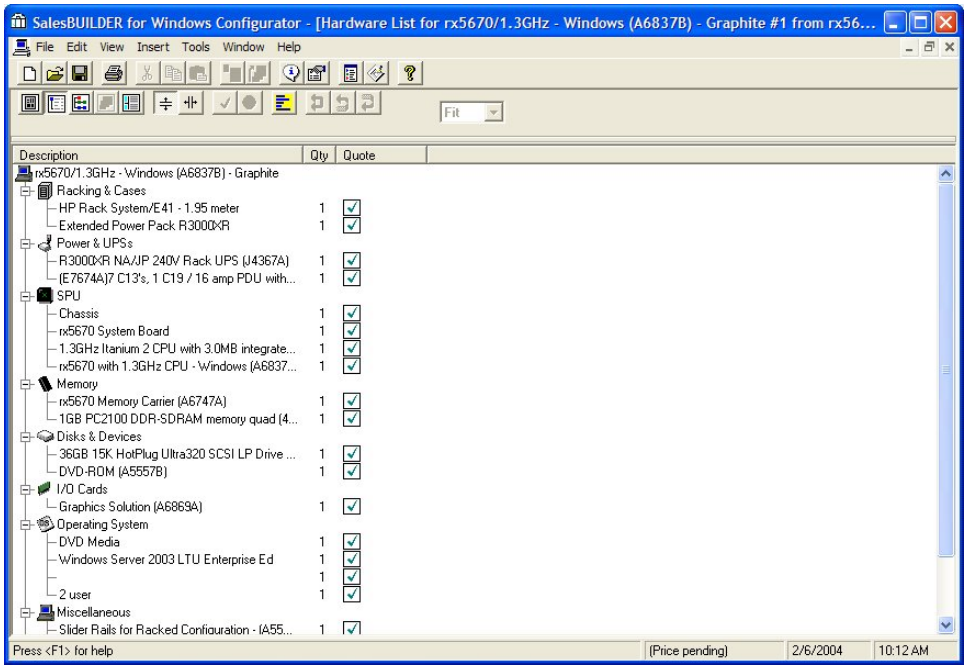
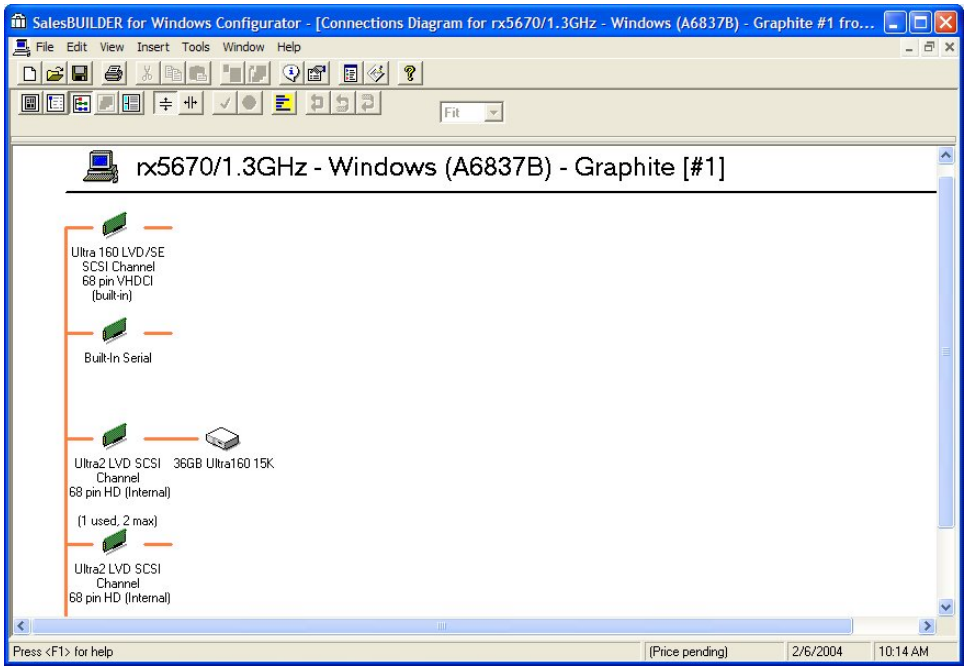
Key terms (continued)

The Hardware List shows all the hardware ordered and the part numbers. You can use this view to check your configured hardware and to mark specific items as “Do Not Quote” items. This is useful when configuring add-ons.



The Connections Diagram provides a graphic representation of the components and how they are connected. You can make modifications to the configuration here by dragging and dropping parts or using the shortcut menu to copy, paste, or delete parts.



The Line Items list shows all the parts included in the configuration including the software and support. Note that in the far right column for support items, the part number to which the support is related is listed.

SalesBUILDER for Windows Configurator - [Line Items for rx5670/1.3GHz-module]

File Edit

Qty	Product #		Description	Unit Price	Extended Price	WB Name/Support For
1	A4902D		HP Rack System/E, 41U, graphite color	$1,910.00	$1,910.00	rx5670/1.3GHz - Windows
1	A6837B		HP rx5670 Itanium2 1.3GHz CPU Solution	$17,500.00	$17,500.00	
1	A6833A		1GB DDR memory quad for HP rx5670	$1,200.00	$1,200.00	
1	A6833A	0D1	Factory integrated			
1	A6747A		Mem. carrier board for HP rx5670	$1,981.00	$1,981.00	
1	A6747A	0D1	Factory integrated			
1	A7049A		36GB 15K HotPlug Ultra320 disk, rx5670	$819.00	$819.00	
1	A7049A	0D1	Factory integrated			
1	A5557B		DVD ROM drive for HP Svr rp54X0, rx5670	$295.00	$295.00	
1	A5557B	0D1	Factory integrated			
1	A6869A		Graphics USB card for HP servers	$299.00	$299.00	
1	A6869A	0D1	Factory integrated			
1	A5581A		Factry Rack Kit, slides, install	$134.00	$134.00	
1	T2373A		Windows Server 2003 LTU Enterprise Ed.	$3,602.00	$3,602.00	
1	T2373A	0D1	Factory integrated			
1	T2373A	ABA	U.S. - English localization			
1	HA112A1		HP CP 1Y Critical Service			
5	HA112A1	398	Education Service Support Option	$1,000.00	$5,000.00	A6837B (5)
1	HA112A1	6BO	Support - HW, rx5670 Server w/1 CPU	$18,816.00	$18,816.00	A6837B (1)
1	HA112A1	6D8	Support - Microsoft E-OE for IA64	$2,400.00	$2,400.00	T2373A (1)
1	HA112A1	900	Critical Environment Services	$49,248.00	$49,248.00	A6837B (1)
1	J4367A		HP Rack System/E R3000 XR UPS	$1,948.00	$1,948.00	
1	J4367A	001	North America/Japan			
1	J4367A	0D1	Factory integrated			
1	J4368A		HP Rack System/E R3000 XR ERM	$1,005.00	$1,005.00	
1	J4368A	0D1	Factory integrated			

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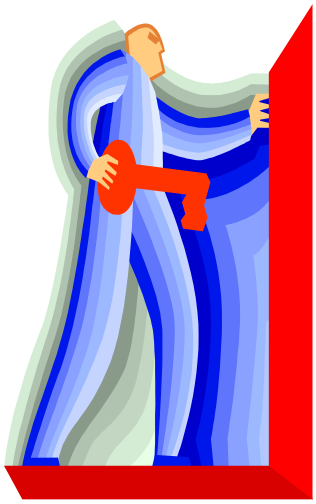
Key terms

- **Quoter** — Used to prepare a budgetary quotation for the customer that shows part numbers, descriptions, and prices of all the products included in the technical solution
- **Price Book** (PB) — Data files containing the latest product descriptions and prices
- **Knowledge Base** (KB) — Data file containing the rules and product modeling used by SBW to check configurations



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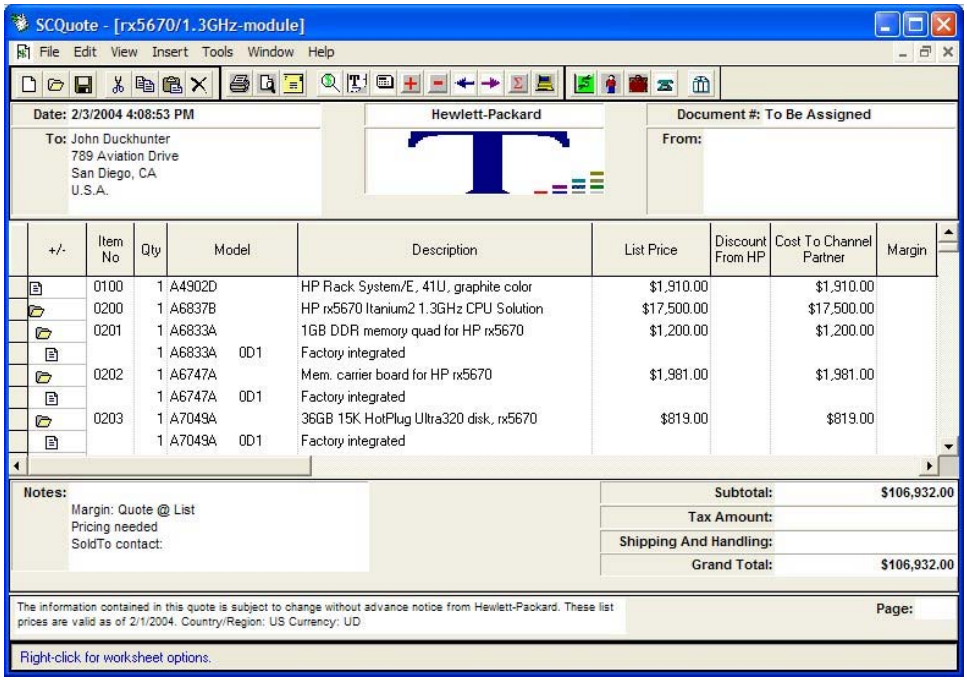
Key terms (continued)

Quoter is the section of SBW used to generate quotes, apply discounts, and perform many pricing tasks. You can make modifications to the configuration in Quoter, but those modifications are NOT reflected in the SBW Configurator.



Price Book

With SBW 10.0 you can now use auto-update for their Price Book (PB) files. The auto-update PB down load is only available as a local download from your local internal network.

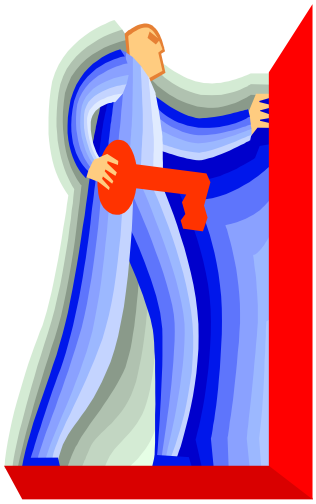
- The program starts automatically when your PC is started
- You can set auto-update default times
- You may also check for updates manually
- The auto-update service can retrieve Knowledge Base data via the Internet source or, to facilitate partners with many users, can be set to retrieve the data updates from a local source such as a group share drive

Knowledge Base updates and PB update messages appear in the lower left corner as updating is happening. Complete or incomplete messages are the final messages along with the last successful run date and time.

Key terms

- **Auto-update** — A stand-alone program designed to run at a user-specified time to check for updates to the knowledge base and price book files. Auto-update downloads and installs the appropriate files automatically without user intervention

- **Discount files** — Used by Direct Channel Partners and requires a password to download their discount files



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Key terms (continued)

Discount File

The Discount File is used primarily by HP direct partners. It shows the partner's purchase price for the products so you can see your net price. For example, the direct HP partner who gets a 40% discount and whose second tier partner gets a 35% discount the direct partner can manipulate the file so their partners can see their purchase price and net price.

Configurator features

- Portable - needs only a PC or notebook
- Fast configuration
- Easy to use
- Shows the system diagram and its modifications
- Configures HP clusters, servers, and storage
- Configures new systems, upgrades, and add-ons

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Configurator features

Portable: Install SBW on your notebook and take it with you anywhere. You can quickly configure systems right at the customer site or while traveling.

Fast configuration: Use the system diagram, configuration worksheet or parts list to quickly configure, upgrade or add on to systems.

Easy-to-use interfaces: Offer detailed help, built-in configuration rules, and ability to leverage existing configurations also allow you to quickly create and modify configurations for one or multiple systems.

Show system diagram and its modifications: With one click you can view the system diagram and any changes you have made.

Configure HP clusters, servers, and storage: With a server or on its own, you can use SBW with customers running HP-UX, MPE/iX, Windows, Linux, or mixed environments. You only need to learn one configuration tool!

Configures new systems, upgrades and add-ons: You can easily configure what your customer needs with a single tool.

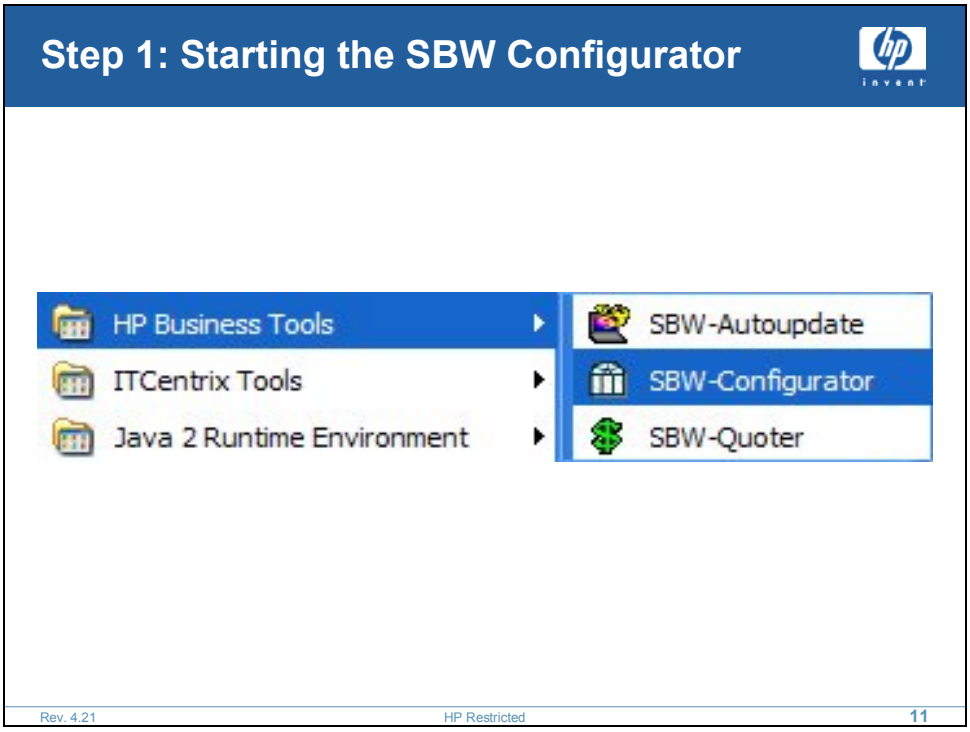
SBW reduces the need for the printed HP Configuration and Ordering Guides. SBW significantly reduces the time required to select all of the components necessary to build an HP system. The configuration engine checks the selections and alerts you of potential conflicts such as an operating system that does not support a desired peripheral.

Before you start configuring with SBW Configurator, you do need to know certain information about your customer's requirements, including:

- Memory required
- Storage required
- Type of network connection
- Support levels required
- Operating system, including version
- Additional software needs
- High availability requirements
- Which system model or models are best to meet the customer’s requirements

This means doing a basic “Needs Analysis” for your customer.

With this information and a little practice using SBW you should be able to very quickly configure a system or systems for a customer.



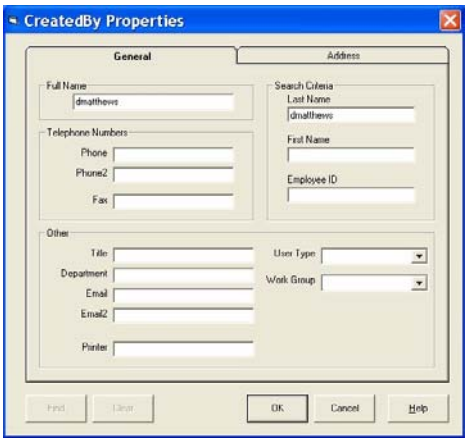
Step 1: Starting the SBW Configurator

Directions for this module

- We ask that you leave your laptop closed until the exercise part of the module
- You will have time to practice what you have learned and then we will discuss additional features and give you time to practice those

In the first part of this module we will start by setting preferences, then look at the icons you can use, and finally practice creating a simple configuration.

Start SBW



The first time you log on to SBW you have the opportunity to complete the “Created By” **General** and **Address** windows.

The information you provide here is displayed on quotations generated by SBW Quoter.

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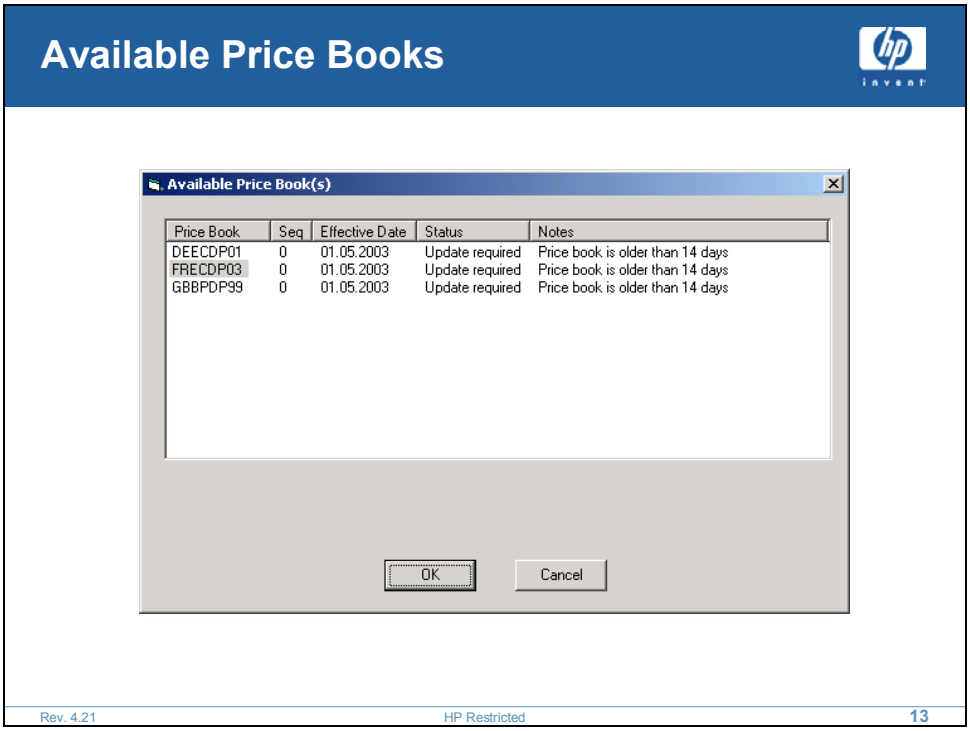
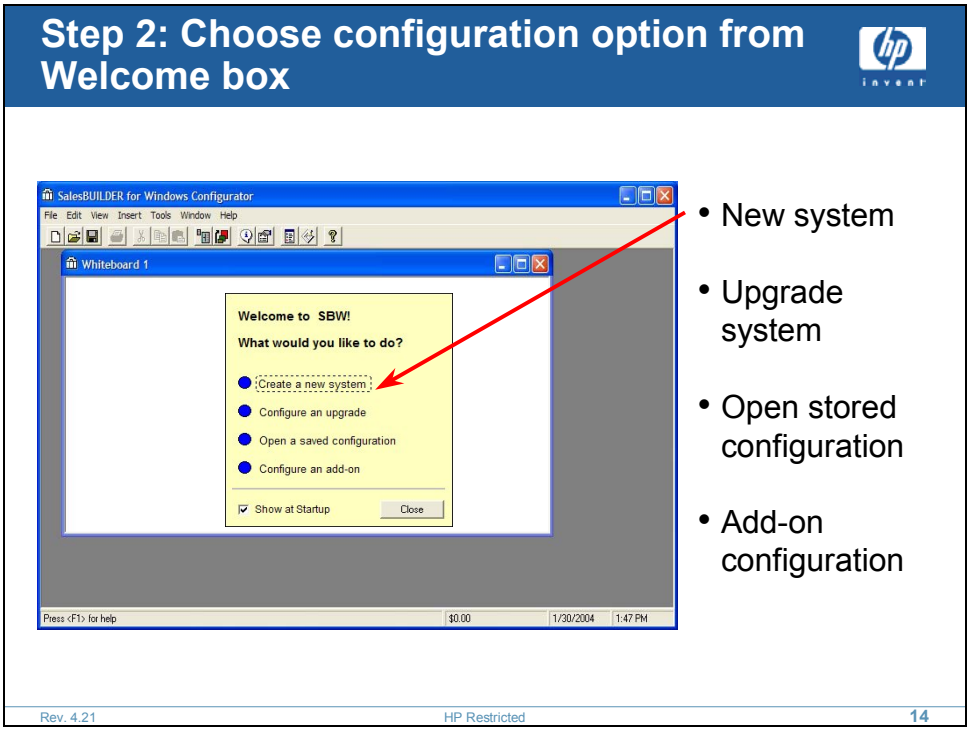
Start SBW



Available Price Books

Important note:

Each country has its own Price Book, but a high percentage of calls to the service desk occur because the wrong Price Book was downloaded. For example: In North America, the default is Canada. If you are in the United States you need to choose United States for the correct pricing.



Step 2: Choose configuration option from Welcome box

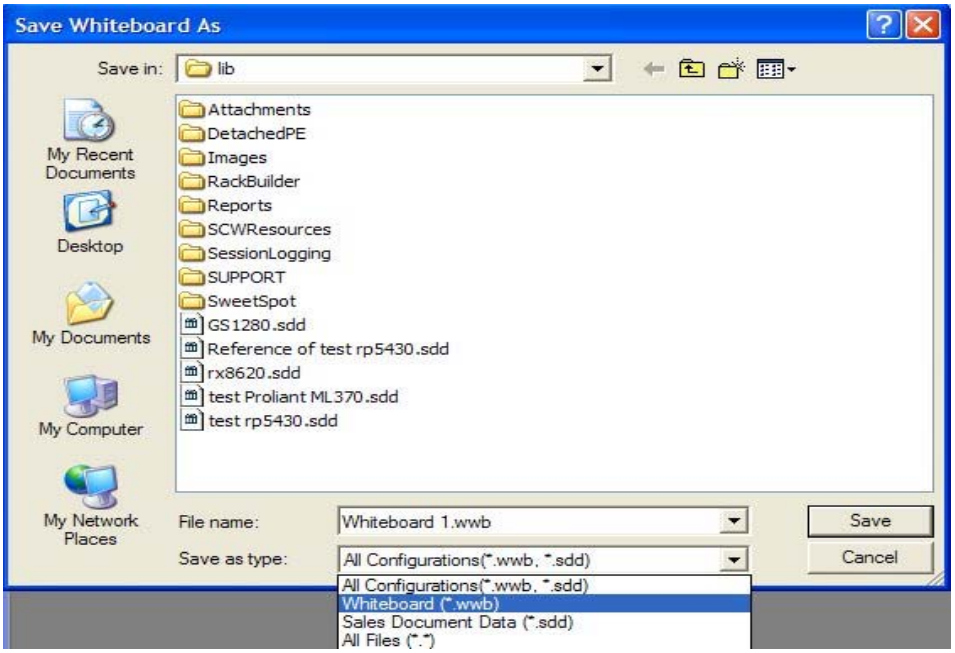
If you do not see this window, try one of these options:

- From the Main Menu, click **Insert-> System**
- Right-click the whiteboard, and from the shortcut menu, select **Insert System**

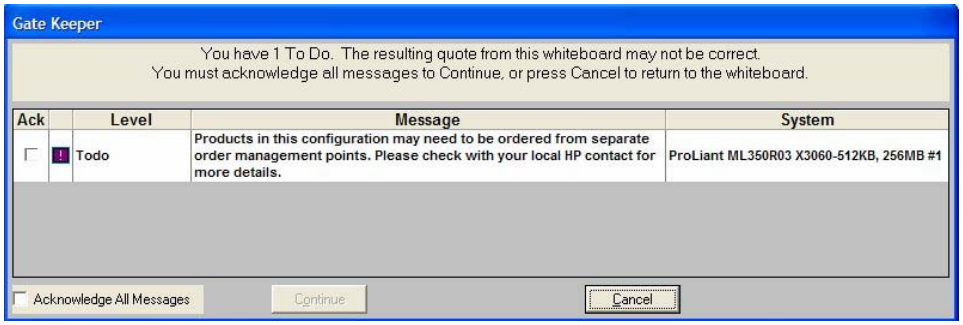
To Save As a whiteboard

After you create your system:

1. From the whiteboard menu bar click **File**.
2. From the **File** drop down menu click **Save To Local File**…

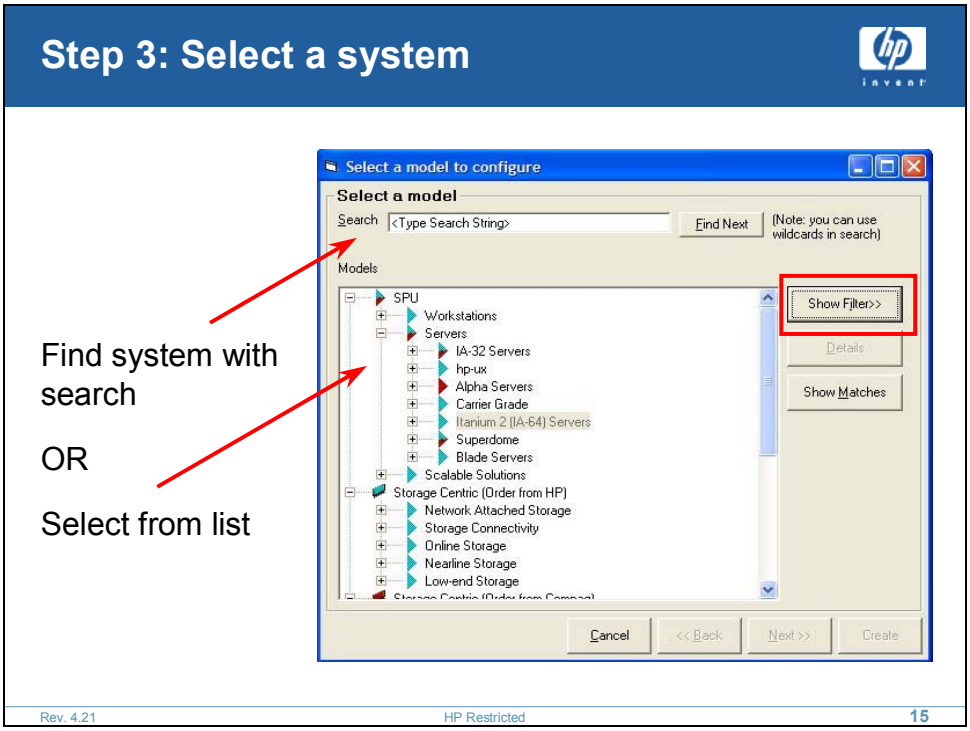


If you have any messages the Gate Keeper is displayed.

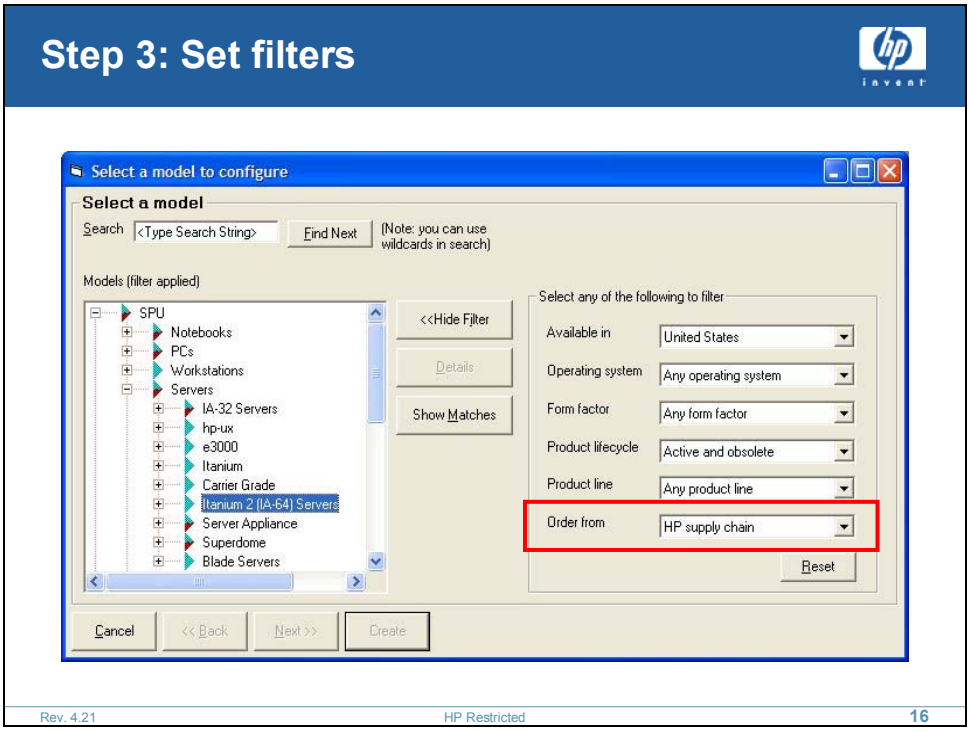


1. From the Gate Keeper window, click **Acknowledge All Messages**.
2. Click Continue.
3. From the **Save Whiteboard As** window, name your file and click **Save**.

The default directory is C:\Trilogy\lib. You can save to a different directory if you prefer.



Step 3: Select a system

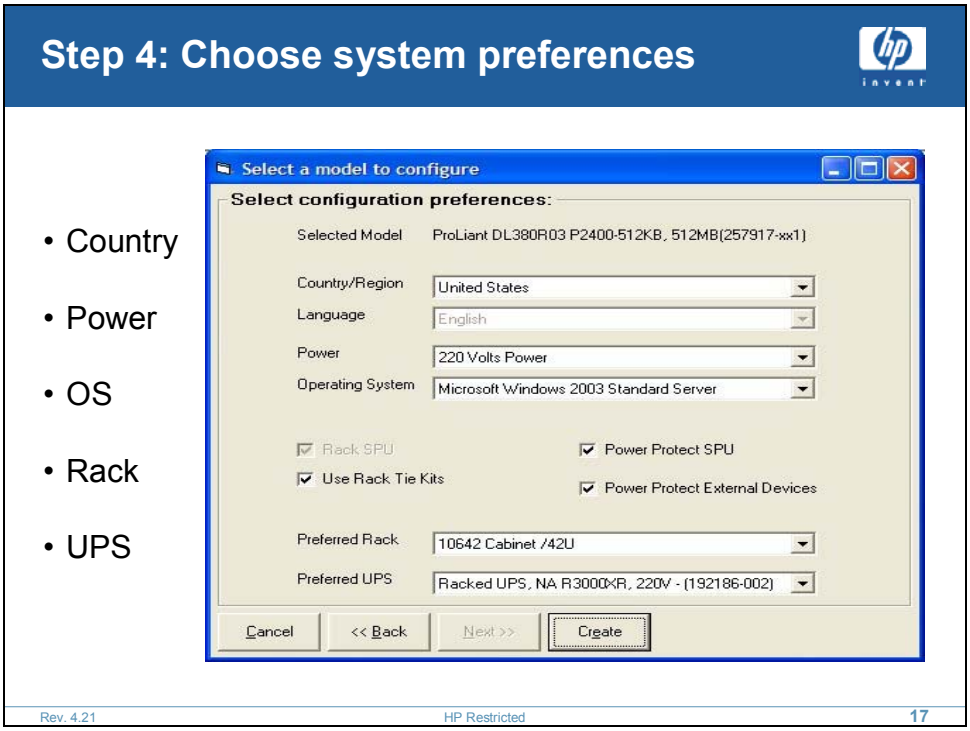


Step 3: Set filters

Two system selection options:

- Type model designation in the Auto Search field and click **Next**
- Scroll through the categories and expand until you get to the specific model needed, then click **Next**

Tip: Right-click on an empty whiteboard or open a new whiteboard. From the short cut menu click **Insert System**.

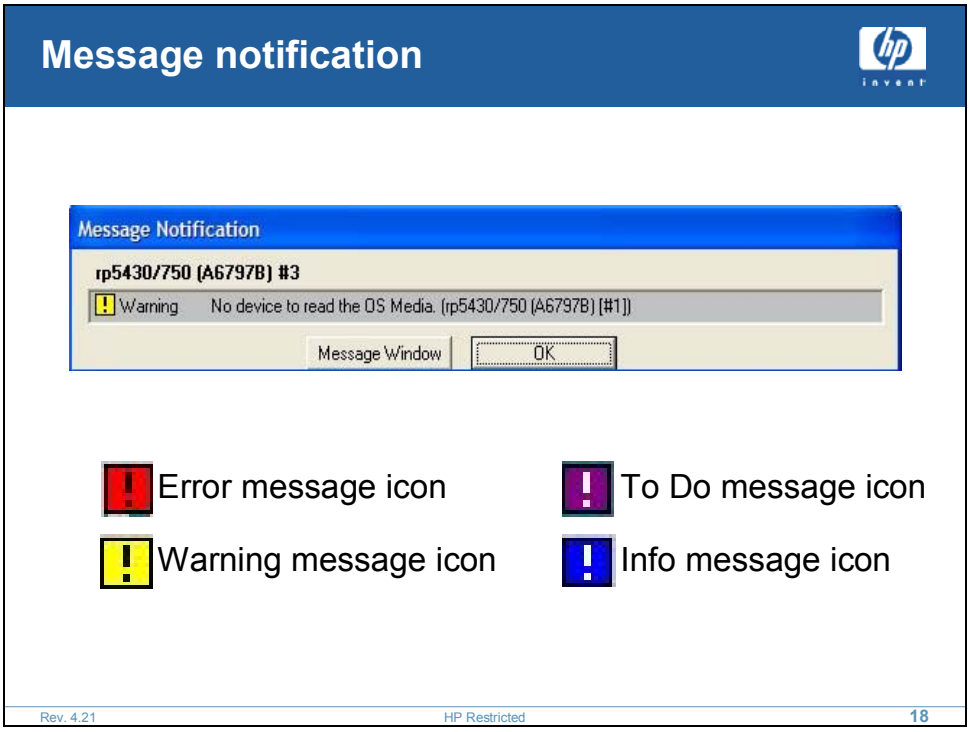


Step 4: Choose system preferences

In the Select configuration preferences pane, SBW displays preferences for operating system, racking, UPS, country, and power.

1. Modify the default preferences, if needed.
2. Choose **Create**.

Note: To skip this screen, click **Create** instead of **Next** in the previous screen.



Message notification

Error messages

Error messages are red and contain the following information:

- Type of message you are receiving
- Message content

This type of message may allude to obsolete products, or that the configuration cannot be built from a factory perspective.

Click **OK** to return to the application and continue the configuration process.

Warning messages

Warning messages are yellow. Dialog boxes appear when an entry is incompatible with the current system. The warning message dialog box suggests compatible choices.

TIP: When a message is followed by ‘Configuration will halt’, click **OK** to continue from the last time the configuration was applied, with changes still pending.

To Do messages

To Do messages are purple and indicate items you have to do before completing the configuration. These usually refer to supply chain sources.

Info messages

Info messages are blue. The Configurator displays info messages when you have an option of which action to take next. Info messages suggest an action. Click **Yes**, **No**, or **Cancel** to continue.

Mismatch messages (requested vs. actual)

Mismatch messages appear when the Configurator detects a mismatch or if you have chosen an incompatible product. You can view the detailed messages by clicking the **Show Messages** button. A window containing the following information is displayed:

- Type of message you are receiving
- Message content

Click **OK** to return to the application and continue the configuration process.

The Configurator can also display checklist messages and promotion messages.

If you have a mismatch message that seems irregular, check with your Help Desk.

Insert a system exercise — rp5430

- Open a blank whiteboard.
- In the toolbar, choose **Insert,** then **System.**
- Set your filters.
  - **Available in**: Set to your country and language
  - **Order From**: Either Supply Chain
- Insert an rp5430.
- Save as Whiteboard.

Insert a system exercise — rp5430

Insert a system exercise — rx7620

- Open a blank whiteboard.
- In the toolbar, choose **Insert,** then **System.**
- Set your filters.
  - **Available in**: Set to your country and language
  - **Order From**: Either supply chain
- Insert an rx7620.
- Save as Whiteboard.

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Insert a system exercise — rx7620

Insert a system exercise — rp5430 and rx7620 using Simple user interface

- Change user interface to Simple
  - Select Tools
  - Select Options
  - Leads you into the Global Options window
  - Select General tab
  - Change user interface from **Advanced** to **Simple**
- Open a new whiteboard to have this change in affect
- Configure rp5430
- Configure rx7620

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Insert a system exercise — rp5430 and rx7620 using Simple user interface

Why use window control icons?

- Switch between views quickly
- Activate special features with a single keystroke
- Save time
- Make accurate configurations

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Why use window control icons?

Hardware List: Displays the Hardware List for your configuration. The Hardware List refers to one specific system on the whiteboard. From the Hardware List you can exclude items from the quote. Does not include software or support.

Connection Diagram: Displays the Connection Diagram for your configuration. The Connection Diagram shows a graphical representation of the configuration components and their connections. From the Connection Diagram you can change connections, copy components, and delete components.

System Diagram: Displays the System Diagram view for your configuration. The System Diagram provides an internal graphical view of the system and its components. From the System Diagram you can modify the configuration in many ways including clone components, delete components, and replace components with a similar product.

Upgrade View: Displays the Upgrade Wizard, which offers the option to create an upgrade system from an existing or an unspecified system on the whiteboard.

Configuration Worksheet: Displays the Config Worksheet, which refers to one specific system on the whiteboard. Use the Config Worksheet to make changes to your configuration.

Show Systems Gauges: The Systems Gauges display the quantities of available resources such as memory, slots, power, and EIA rack units for a given system, both overall and on a per-rack basis. The resources are displayed using a gauge or text-only. A gauge is used when the resource has a minimum and maximum quantity, such as EIA rack units. The numerical quantity used is placed to the left of the gauge and the maximum quantity of that resource appears to the right. A text-only display is used when quantity is not the case, such as power expressed in VA. Click icon again to close this window.

Show Possibles: Marks selections that are compatible for the current configuration. Any options not possible in the current configuration, such as all internal bays are currently occupied, are marked with a red "X". Markings appear to the left of the products.

Show Quote Indicators: Displays items to be included in the quotation. With quote indicators on, products included in the quote are marked. Right clicking on an item changes the status of the item to not quote.

Parts List: Displays a list of all parts. Navigate through the list to select the desired hardware, software, or service, and drag it to the system. Search for the desired component by typing its name on the Search text box, then click **Find Next** button.

Re-sequence Rack: Enabled only if the System Diagram is displayed and the rack has focus. When chosen, the Configurator resequences the selected rack according to the factory-default rules.

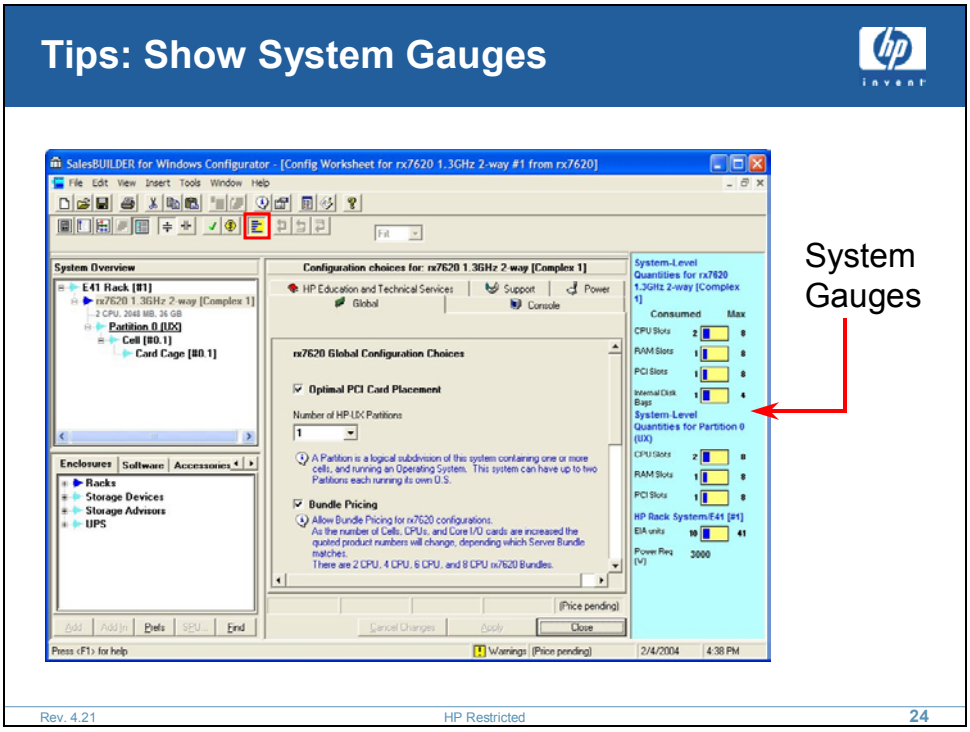
Move Case Up In Rack: Enabled only if the System Diagram is displayed and the rack has focus. When choosen a selected item may be moved up in the rack.

Move Case Down In Rack: Enabled only if the System Diagram is displayed and the rack has focus. When choosen a selected item may be moved down in the rack.

Horizontal Splitter: Divides the window into two views, one on top of the other. Use the split pointer to size windows.

Vertical Splitter: Divides the window into two views, one beside the other. Use the split pointer to size windows.

Tip: These last two icons allow use of two separate views at the same time when making configuration modifications. To undo the split, resize one window to its maximum.



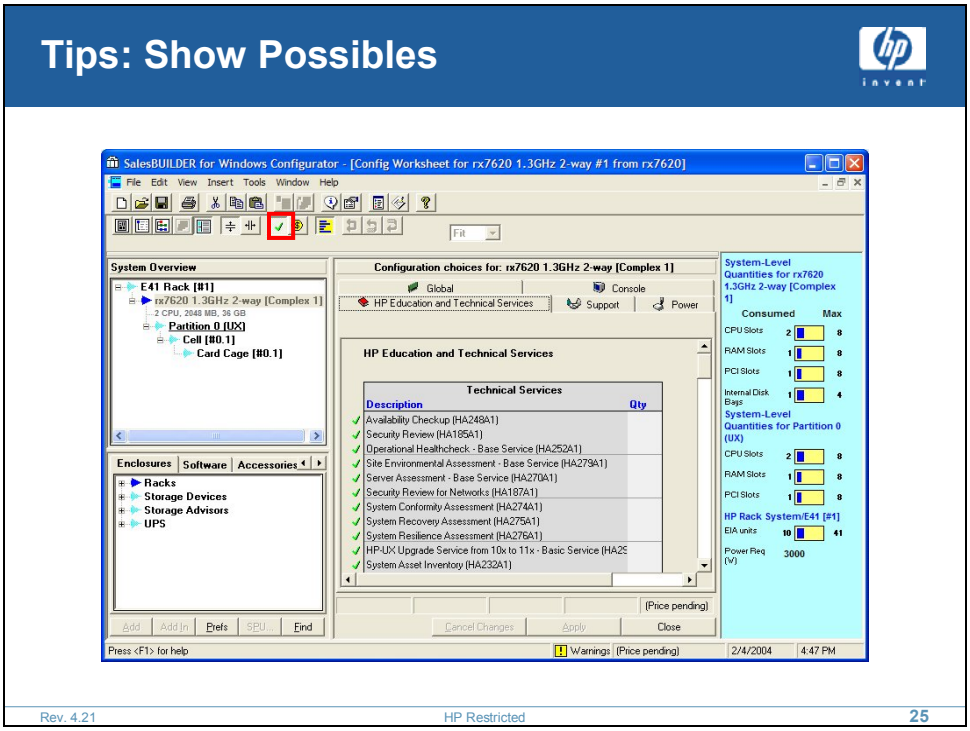
Tips: Show System Gauges

System Gauges

Allow you to view the minimum and maximum requirements for CPU slots, RAM slots, PCI slots, Internal Disk Bays, Power Requirements, and EIA Units. System Gauges display information broken down per cabinet and SPU.

Display System Gauges

From the configuration toolbar, click **System Gauges** icon.

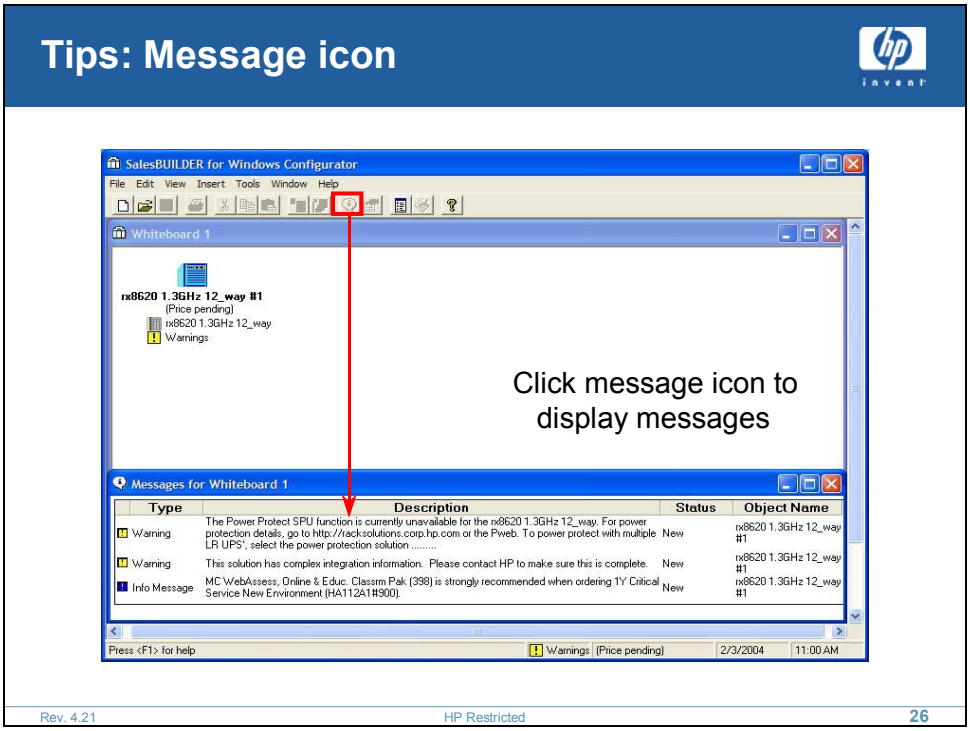


Tips: Show Possibles

The **Show Possibles** button puts a green checkmark or red cross at the left side of each configuration option.

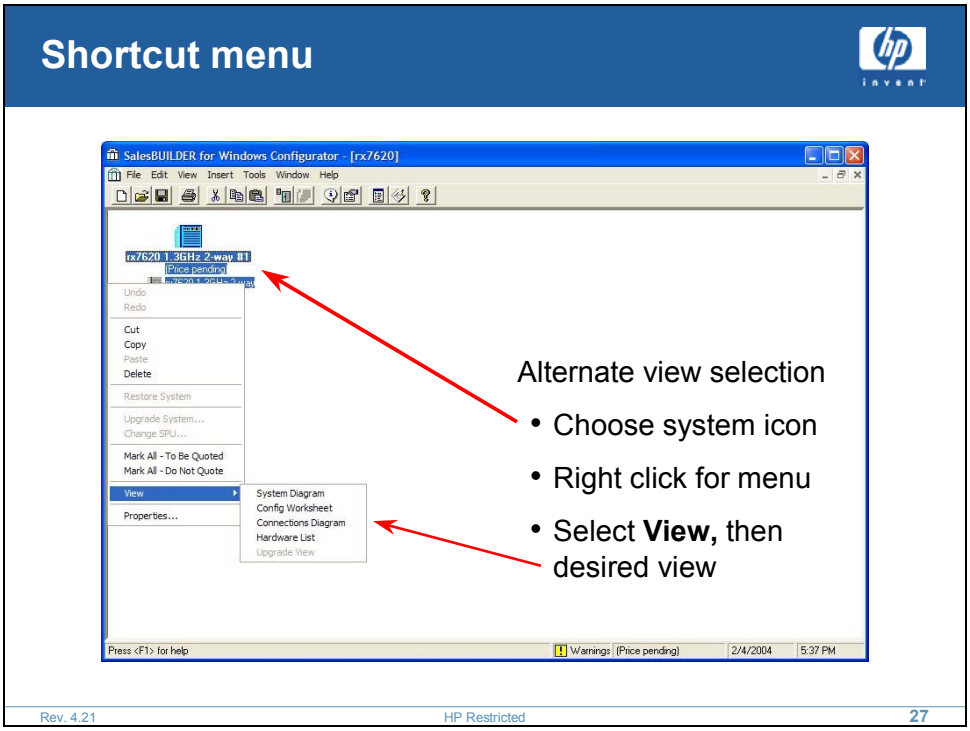
- Green: There is space left
- Red: This part is complete

The **Apply** button executes the configuration and revises the **Show Possibles** status.

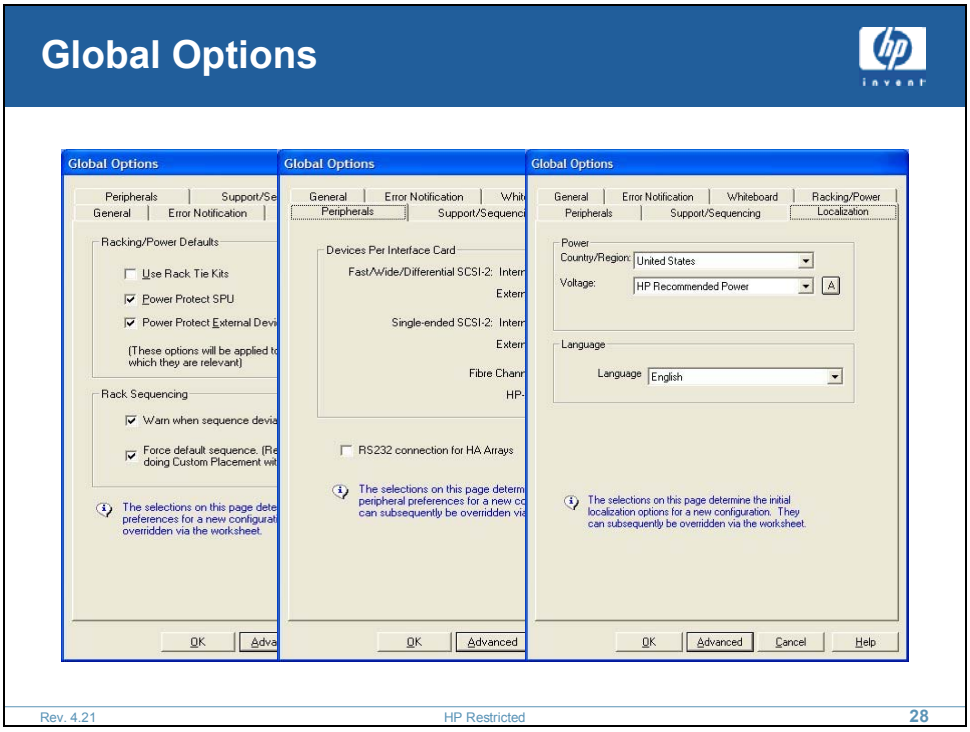


Tips: Message icon

A quick and easy way to get more information about a message or warning is to simply click the **Message** icon. Choosing a Message or Warning icon displays a detailed description in the message window.



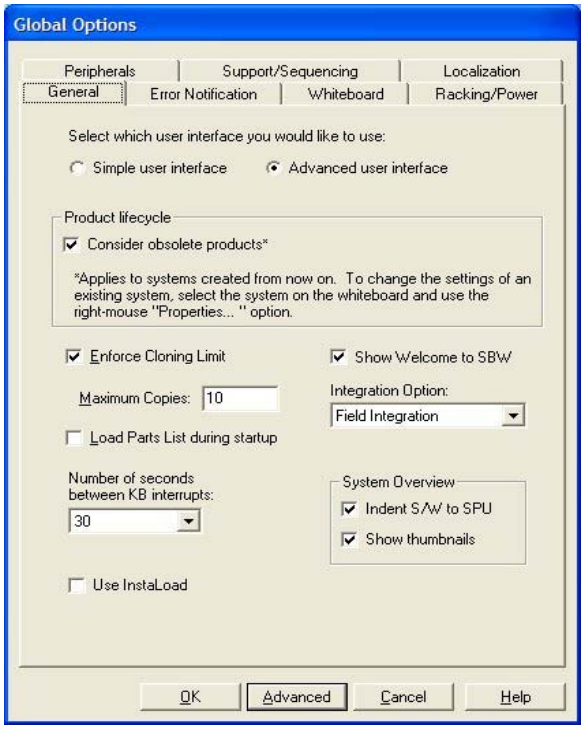
Short cut menu



Global Options

Most important Global Options:

General



Simple user interface or Advanced user interface

- This function enables the setting of the Simple or Advanced user interface. Use the Advanced user interface to make configuration of products with numerous options easier. The Advanced user interface organized your choices into tabs so you do not have to scroll as much. The Simple user interface is perfect for ProLiant servers and many storage devices. All the choices are listed in one pane so you just scroll through the list.
- Default is Advanced user interface.

Product lifecycle: Consider obsolete products

- This function enables the consideration of obsolete products. Obsolete products and systems are displayed when this option is activated. Toggle on when upgrading or adding on to obsolete products.
- Default is OFF.

Enforce Cloning Limit

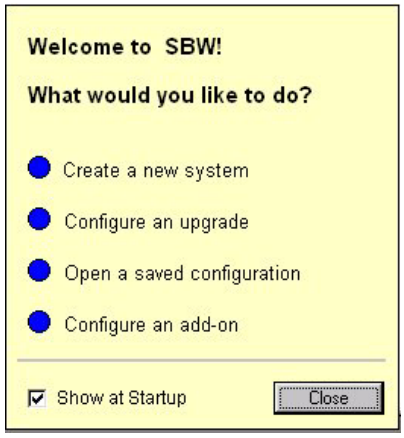
- Toggle cloning limit on and off, and set number of maximum copies
- Default is ON with 10 maximum copies

Number of seconds between KB interrupts

- Sets the time limit for operation involving the Knowledge Base. Set the limit for how long you are willing to wait before receiving a message asking if you want to continue the operation.
- Default is 30 seconds.
- If you set the time too short you will regularly have to respond to the operation continue message. If you find this message regularly occurring on standard operations, increase the KB interrupts time.

Show Welcome to SBW

- If this option is activated, SBW initially shows the following window:



- Default is ON

Integrating Option

- You have the choice between:
  - Factory Integration
  - Field Integration
- Select factory or field integration depending on which type of integration you configure the most
- Default is Factory Integration

System Overview

Controls the appearance of products within the System Overview pane of the Config Worksheet. Offers two options:

- Indent S/W (software) to SPU.
  - Toggle on and off to control how software is displayed in the System Overview pane.
  - Default is OFF.
- Show thumbnails.
  - Shows more details in the System Overview pane.
  - Default is OFF.

Use Instaload

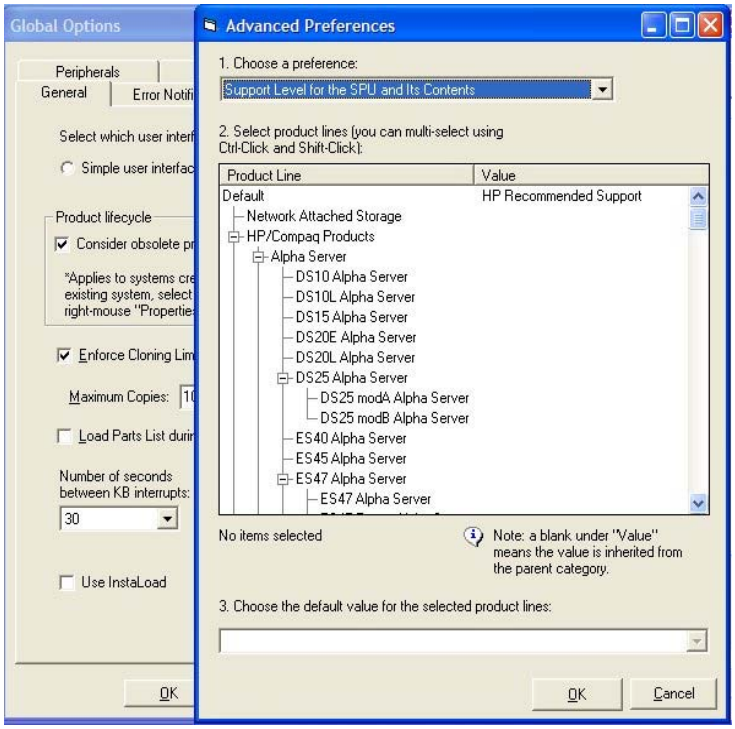
- First-time Knowledge Base (KB) load time longer with Instaload selected, as it takes time to create the files for Instaload usage.
- Subsequent startup time is dramatically lower with Instaload selected. Users benefit from the faster loading of the KB at the start of each session.

Load Parts List during startup

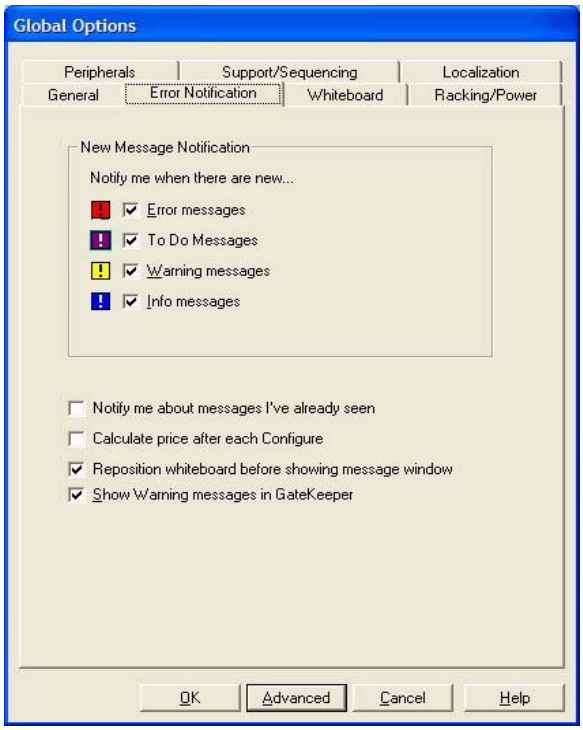
- Checking this loads the Parts List during startup
- Default is OFF

Advanced

- With the Advanced button, you can preset your preference per product line or even per server type
- For example, use Global Options Advanced Preferences to set a default support level by model or product line



Error notification



Controls which messages you receive while configuring systems.

New Message Notification

- Toggle Error messages on or off
- Toggle To Do messages on or off
- Toggle Warning messages on or off
- Toggle Info messages on or off
- Default is ON

Notify me about messages I've already seen

- Toggle on or off to control display of previously seen messages
- Default is OFF

Calculate price after each Configure

- Use this to see the price as you configure — Shows list price based on the Price Book you are using. Turning this option on may result in decreased performance as SBW recalculates the price each time you apply changes.
- Default is OFF.

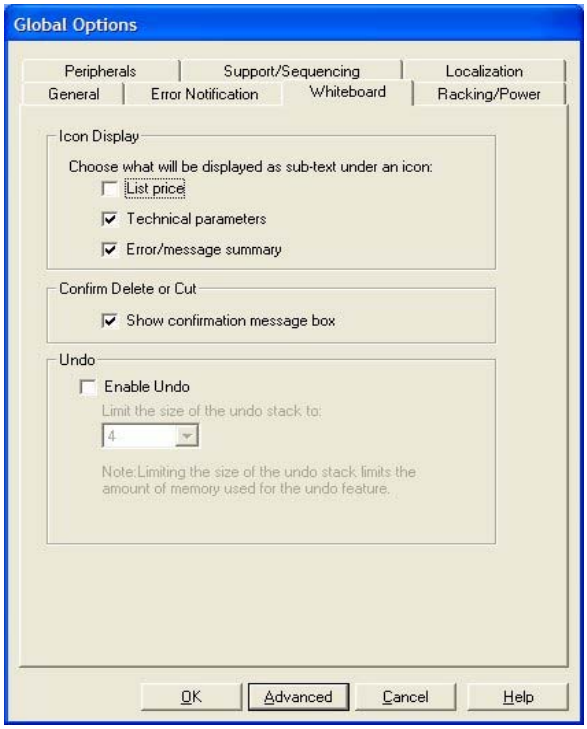
Reposition whiteboard before showing message window

- Position the whiteboard above the message window
- Default is ON

Show Warning messages in Gate Keeper

- The Gate Keeper is displayed when you save a configuration. It is a good idea to keep this on so you are sure to see your messages before saving a configuration.
- Default is ON.

Whiteboard



Controls the appearance of the whiteboard and icons on the whiteboard.

Icon Display

Choose what to display as sub-text under an icon.

- Toggle List price on and off: Toggle ON to display list price. Default is OFF.
- Toggle Technical parameters on and off: Toggle ON for system technical parameters to display below each icon on the whiteboard. Default is ON.
- Toggle Error/message summary on and off: Toggle ON for a summary of error messages relating to each system to display below each icon on the whiteboard. Default is ON.

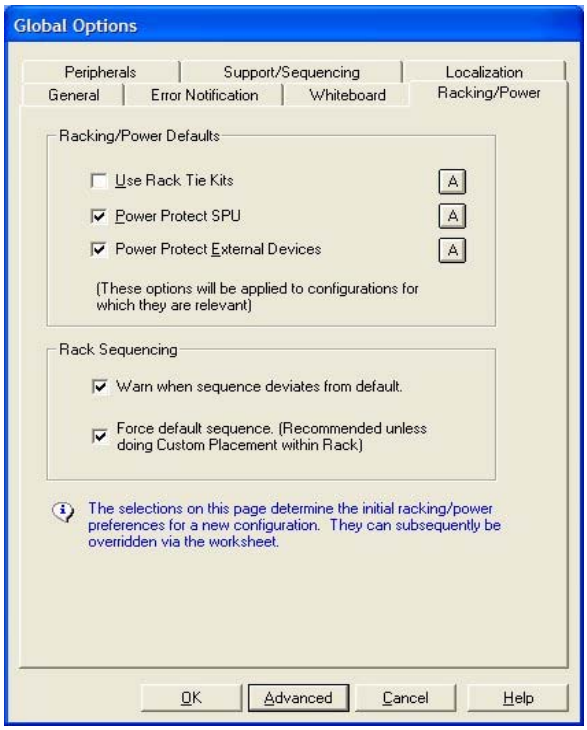
Confirm Delete or Cut

- Controls the display of the confirmation message box
- Default is ON

Enable Undo

- Toggle Enable Undo on and off and set the size of the undo stack. Turning Enable Undo OFF means you are not able to use the Undo function. When setting the Undo stack size, consider the amount of memory that will be used, as it may affect the performance of the application.
- Default is OFF.

Racking/Power



Racking/Power Defaults

Sets the defaults for racking and power protection in your configurations. You can set each racking/power default differently for each product line by choosing the A button. It is suggested not to start a configuration with these defaults enabled, as it is easier to add these to a configuration than remove them.

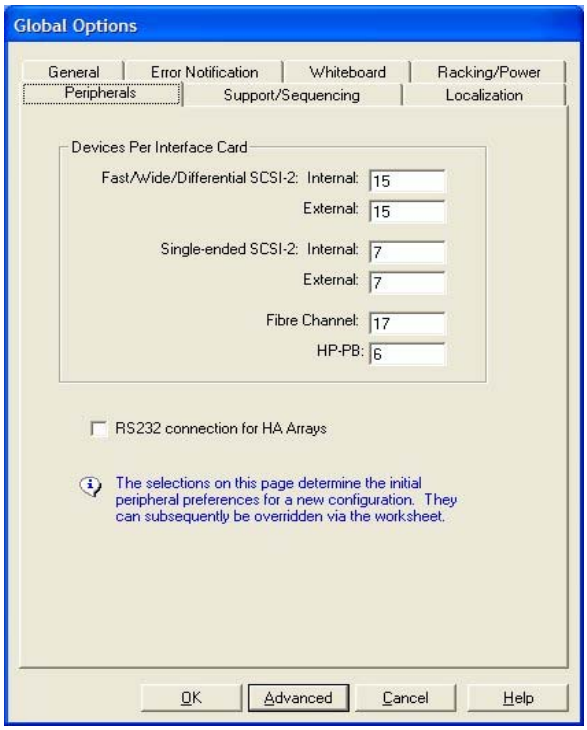
- Use Rack Tie Kits — Rack tie kits are used to tie two racks together. This means that one side panel is removed and the racks can no longer be separated.
  - Activate to set use Rack Tie Kits as the default.
  - Default is OFF.
- Power Protect SPU.
  - Activate to protect your SPU with a UPS as the default.
  - Default is ON.
- Power Protect External Devices.
  - Activate to protect your peripherals with a UPS as the default.
  - Default is ON.

Rack Sequencing

Controls default settings for rack sequencing. The Configurator includes sequencing within racks according to factory specified defaults. The rules are applied when Error Checking is turned on. Note that with Error Checking turned off, the user can specify a sequence that does not match the factory-default rules, but the actual system built and delivered will be according to those rules.

- Warn when sequence deviates from default
  - Activate to receive a warning when the rack sequencing on the system you are configuring deviates from the HP default sequence
  - Default is ON
- Force default sequence
  - Activate to force default sequencing on the systems you configure
  - Default is ON

Peripherals



Define how many peripherals you want to connect per interface card, such as SE or FWD.

Devices Per Interface Card

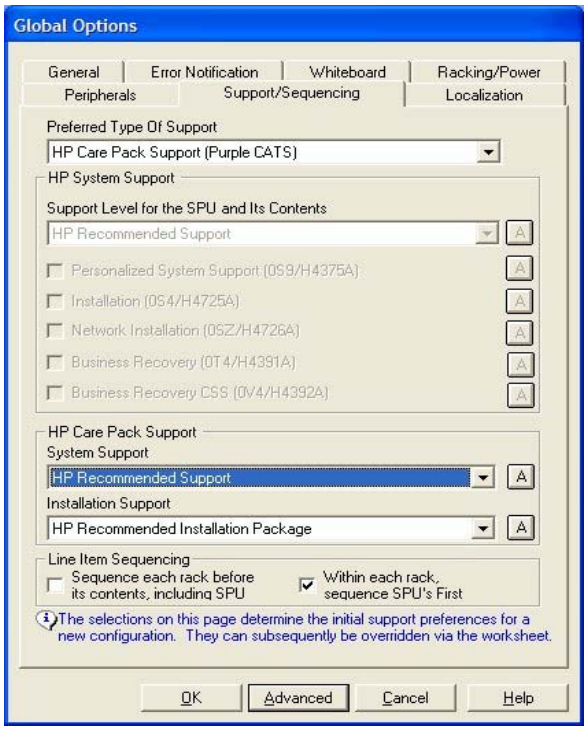
Set the maximum number of devices to be connected by interface card type. For example, FWD SCSI supports 15 devices, but to enhance performance you always configure a maximum of 4 devices. Set the FWD SCSI Internal and External fields to 4.

- FWD SCSI-2: Internal 15, External 15
- SE SCSI-2: Internal 7, External 7
- Fibre Channel: 17
- HP-PB: 6

RS232 connection for HA Arrays

- Activate to make RS232 the default connection for HA Arrays
- Default is OFF

Support/sequencing



The settings within this tab determine what level of support, installation, and business recovery is automatically added to each quote. Regardless of what is chosen the user can change the quote once it is started to add any of these services very easily. In some cases it might be recommended to leave the selections unchecked and add the services on an “as needed” basis. Line item sequencing should be left in the default settings as this could affect the configuration downstream.

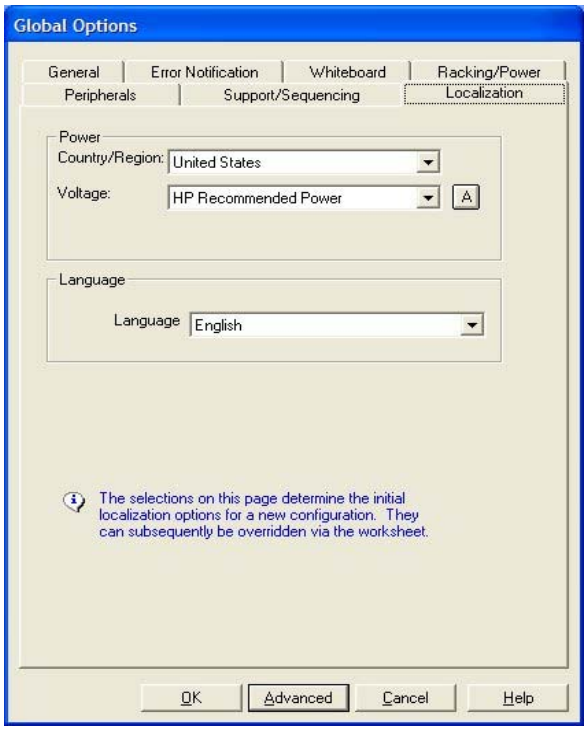
HP Care Pack

The new HP Care Pack services (Purple Cats) combine the best of pre-merger HP Support Packs, HP Support Options, and Compaq CarePaqs.

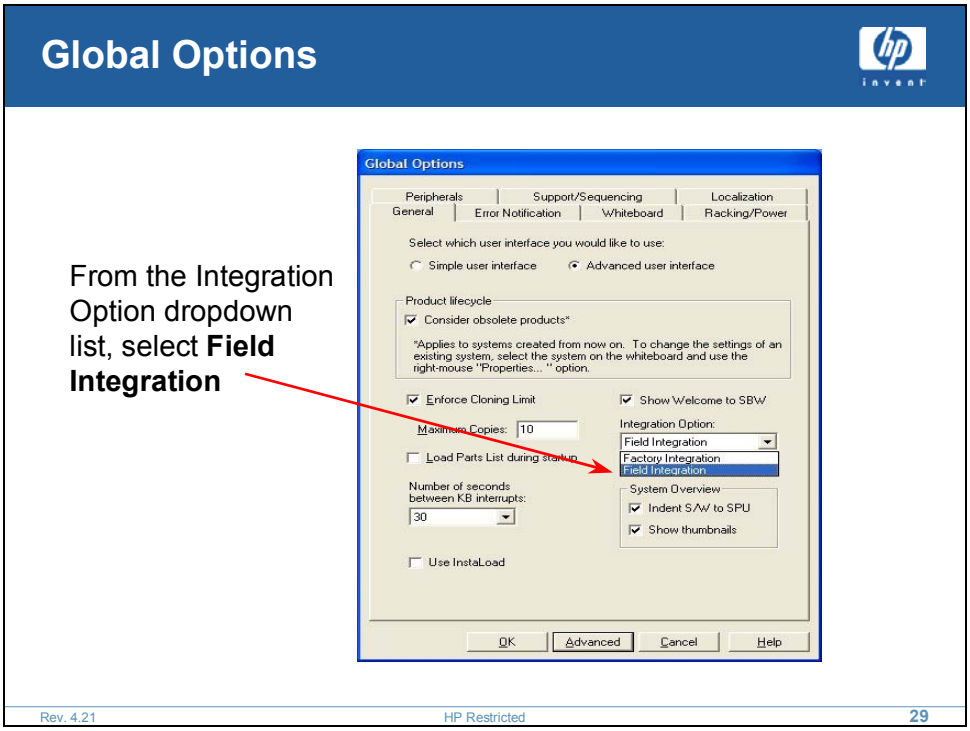
- Designed for ease-of-use and consistency, HP Care Pack services provide globally consistent, competitively-priced proactive and reactive service levels for HP products
- Designed for ease-of-use and consistency, HP Care Pack Services provide 20 globally-consistent, competitively-priced service levels covering all major proactive and reactive service levels for HP products
- Regional packages tuned to local needs round out the support offerings

The new HP Care Pack Services offerings replace the existing pre-merger support services wherever possible. Customers receive equal or better service levels with the new HP Care Pack Services portfolio.

Localization

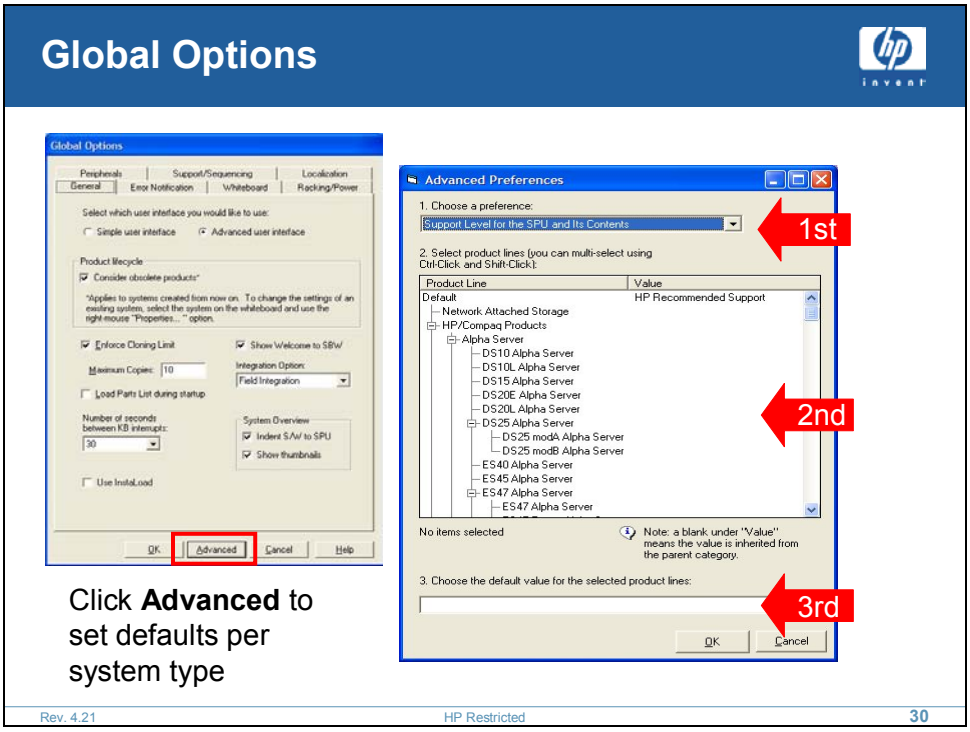


A very important tab! Offers selection of power and language specifications for specific countries. Defines the localization of your systems, such as German or 220V.



Global Options

1. From the whiteboard, display the shortcut menu by right-clicking anywhere on the whiteboard.
2. From the shortcut menu, select Options.
3. From the Option window/General tab, display the Integration Option drop down list.
4. From the Integration Option drop down list, select **Field Integration**.
5. Choose **OK**.



Global Options

Advanced Preferences

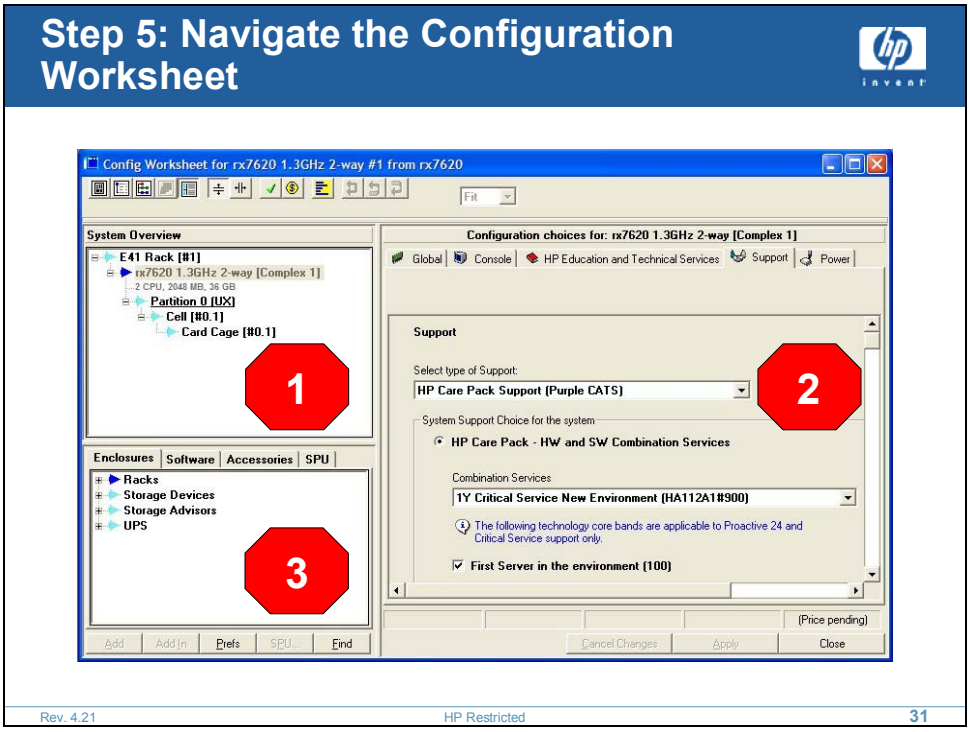
Clicking on the Advanced setting icon can access the Advanced settings. If a green check mark shows up on the face of the icon this is an indicator that at least one platform has a default.

1. From the Global Options page, any tab, click **Advanced**.
2. From the Choose a preference drop down list, select **Support Level for the SPU and Its Contents**. Other options include:
   - Personalized System Support (OS9/H4375A)
   - Installation (OS4/H4725A)
   - Network Installation (OSZ/H4726A)
   - Business Recovery (OT4/H4391A)
   - Business Recovery CSS (OV4/H4392A)
   - Care Pack System Support Level

- Care Pack Installation Support
- Power Protect SPU
- Use Rack Tie Kits
- Power Protect External Devices
- Power Choice

3. From the Select product line pane, use Ctrl-Click to select the rp8400 and 99x systems.
4. From the Choose a default value drop down list, select whichever BCS option typically applies to your situation.
5. Click **OK**.

If a green check mark shows up on the face of the Advanced setting icon, this is an indicator that at least one platform has a default.



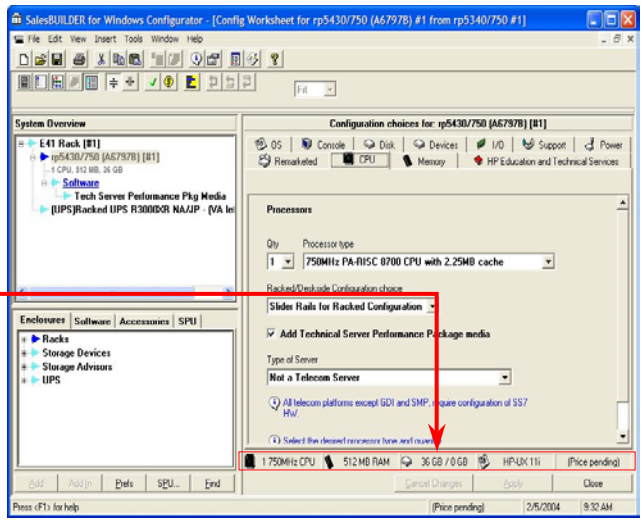
Step 5: Navigate the Configuration Worksheet

1. **System Overview** (upper left pane): This pane displays a list of the components and software included in the current system. This includes either the components that were added by “default”, or manually added by the user.
2. **Configuration choices** (right pane): The Worksheet is the means of customizing the attributes of the current solution. This window displays the Configuration choices for the specific product that has been highlighted by the blue arrow in the System Overview pane.
3. **Enclosures, Software, Accessories, SPU** (lower left pane): Selections shown in this windowpane correspond to the folder tab selected. The items in this pane can be added to your configuration by dragging and dropping them into the System Overview pane, by simply double-clicking the selection or click the selection and then the Add button.
   - These tabs are now controlled by the Knowledge Base. This makes them more dynamic in nature.
   - For example, if a configuration has no software components listed, the Software tab does not appear. Only tabs that have products compatible with the solution are displayed.

Tips: Status bar

Config worksheet **status bar** shows:

- Number of processors
- RAM
- Internal and external capacity of the selected disks
- Operating system



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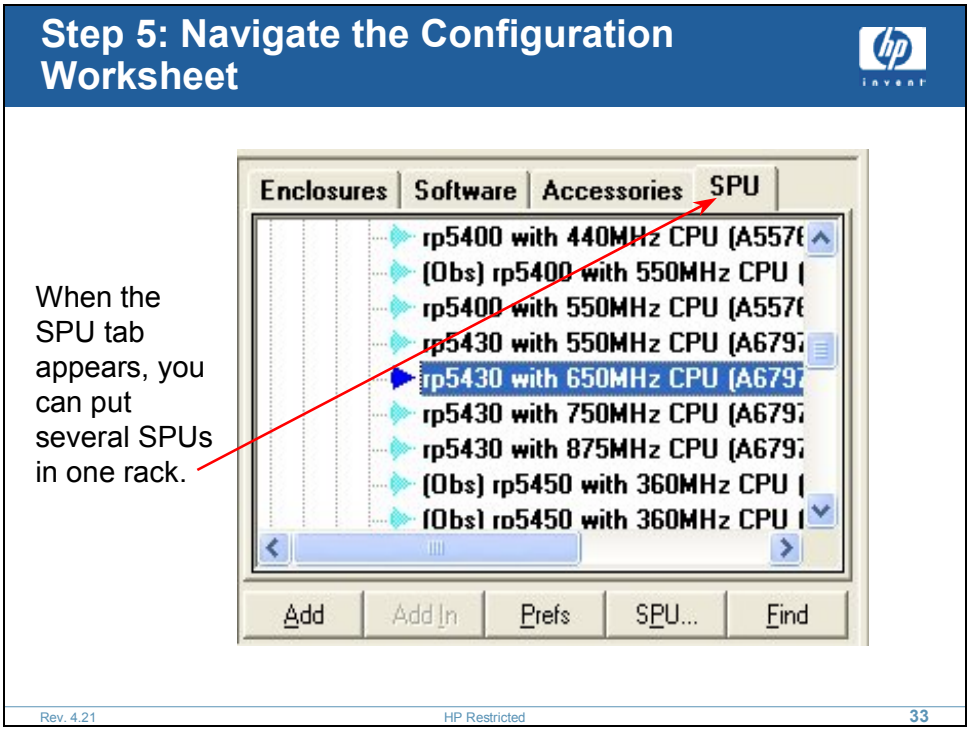
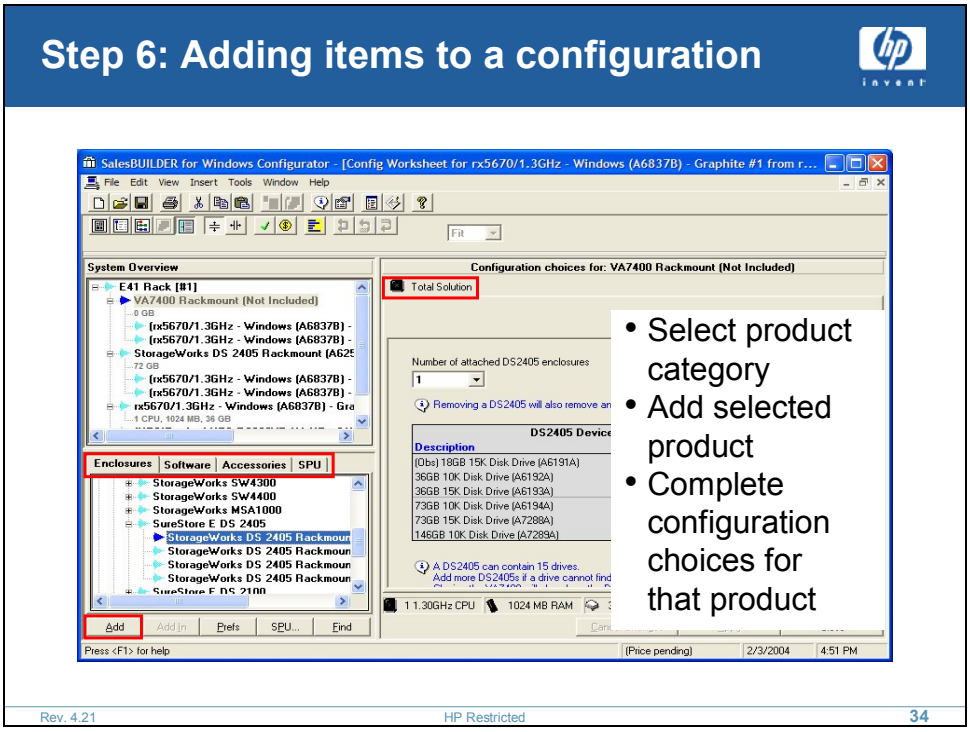
Tips: Status bar



Step 5: Navigate the Configuration Worksheet

Add SPUs three ways:

- Drag and drop
  a. From the Add pane, SPU tab, select the SPU
  b. Drag and drop it into the System Overview pane
- Double-click: From the Add pane, SPU tab, double-click the SPU
- Add button
  a. From the Add pane, SPU tab, select the SPU to add
  b. Choose **Add**



Step 6: Adding items to a configuration

Tip:

Before adding enclosures, software, and SPUs give the SPU a unique name to differentiate it from any additional SPUs added to the system solution.

The green checkmark appears next to items that can have other items added on. Activate the green checkmark by choosing **Show Possibles**.

The red cross appears next to sections that are filled to the maximum.

The red pencil on a tab means there are unapplied changes.

The dollar sign in a yellow circle is the quote indicator. It indicates which parts will be included in the quote.

Adding Enclosures

1. Make sure the SPU is highlighted.
2. Click the desired enclosure.
3. Add it to the solution by clicking **Add** or double-clicking the selected item.

Tip:

When you add the enclosure, a message appears with a To Do window message. Read the instructions fully, as the configuration of the enclosure is not complete until the action is completed.

Adding Software

From the Add pane:

1. Select the Software tab.
2. Click the **Find** button.
3. Type a partial description of software desired.
4. Select the type of software desired.
5. Click **Add**.

In the System Overview the software is labeled. You can choose to have media or no media. The correct tier option is automatically selected.

Adding Accessories

From the Add pane:

1. Click the Accessories tab.
2. Type the product number or description.
3. Click Find Next.
4. Make sure the correct product is highlighted.
5. Double-click the item selected or click the **Add** button.

Tip:

You can configure PDUs and add power cords:

1. From the System Overview pane, select an enclosure.
2. From the Add pane, click the SPU tab.
3. From the Power tab, select the PDU and power cords you want to configure.
4. Click **Apply**.

Add to system exercise — rp5430

1. Use the saved rp5430 whiteboard.
2. Add a second CPU.
3. Add 6GB memory and 1 memory carrier.
4. Add the Tech Server Performance Package Media Software to clear the error message.
5. Clear the device to read OS error by adding a DVD device.
6. Add an Ultrium Tape device.
7. Save as Whiteboard.

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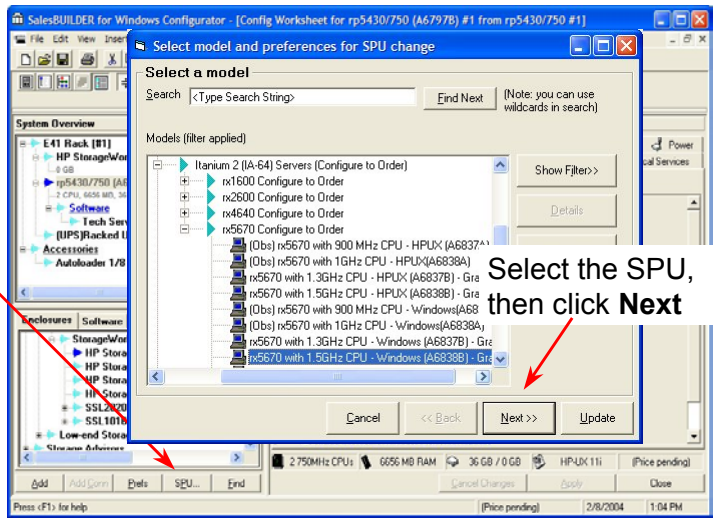
Add to system exercise — rp5430

Step 7: Change SPU

To change the preferences of the current configuration click **SPU**



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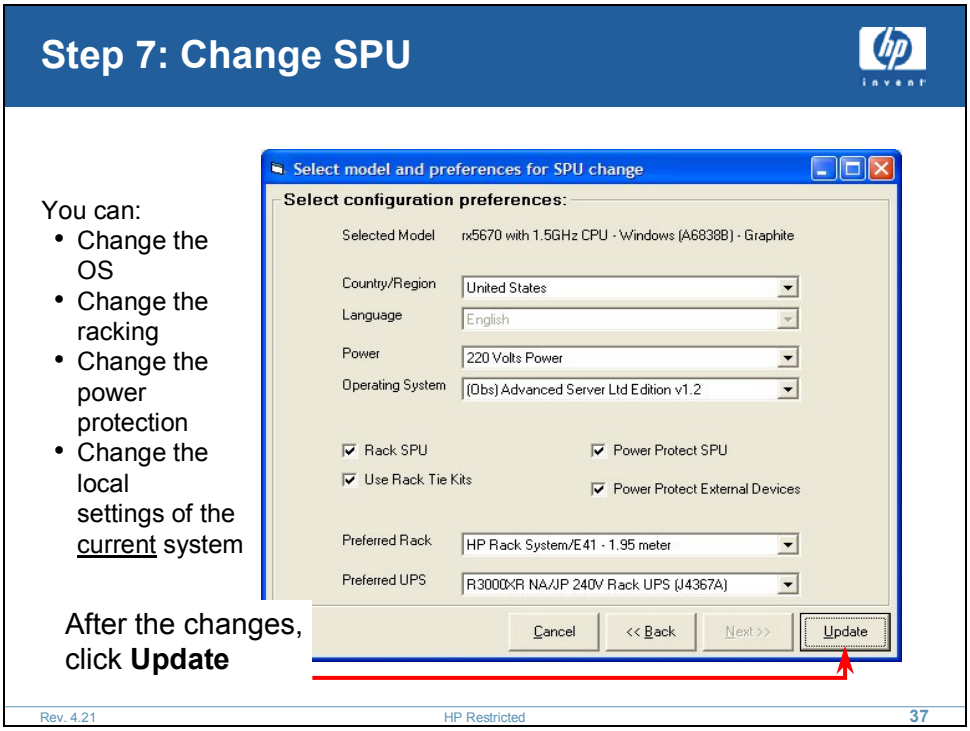
Step 7: Change SPU

Choose the **SPU** button to modify Preferences selections made in the Model Selection window.



Step 7: Change SPU

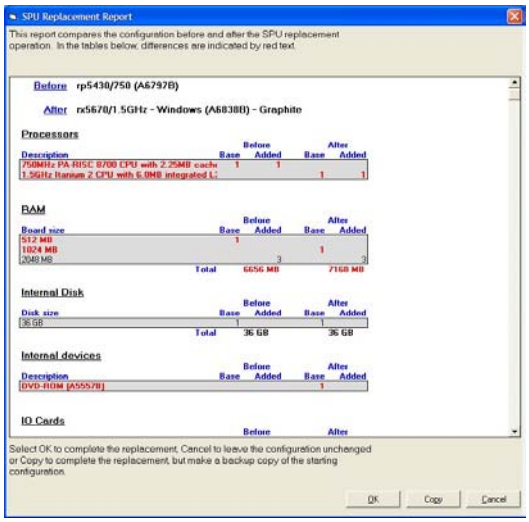
Be sure to choose **Update** after making modifications. The system displays a comparative table between the current and the new systems.

Note: Depending on UPS requirements, an additional cabinet may be added with each added solution component.

Step 7: Change SPU

The SPU replacement report compares the configuration before and after the SPU change is made.

- You can then complete or cancel the change
- In addition, you can click **Copy** to make a backup of the old configuration



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Step 7: Change SPU

The SPU Replacement Report indicates differences between the two systems by marking any changes in red text. Black text indicates that no changes have occurred to that item.

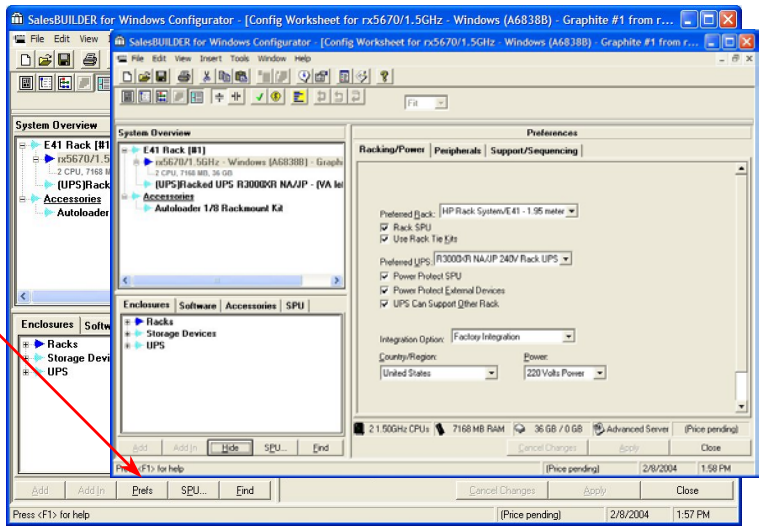
- To accept changes, click **OK**
- To cancel changes, click **Cancel**
- To make a backup of the "old" configuration, click **Copy**

You just saw one way to change the preferences selections you made for this system. Remember:

- The defaults were set by the application or could be set by you
- If you do not need to change the SPU, you can make changes using the **Prefs** button

Step 8: Change Preferences

To change the preferences of the current system, click **Prefs**



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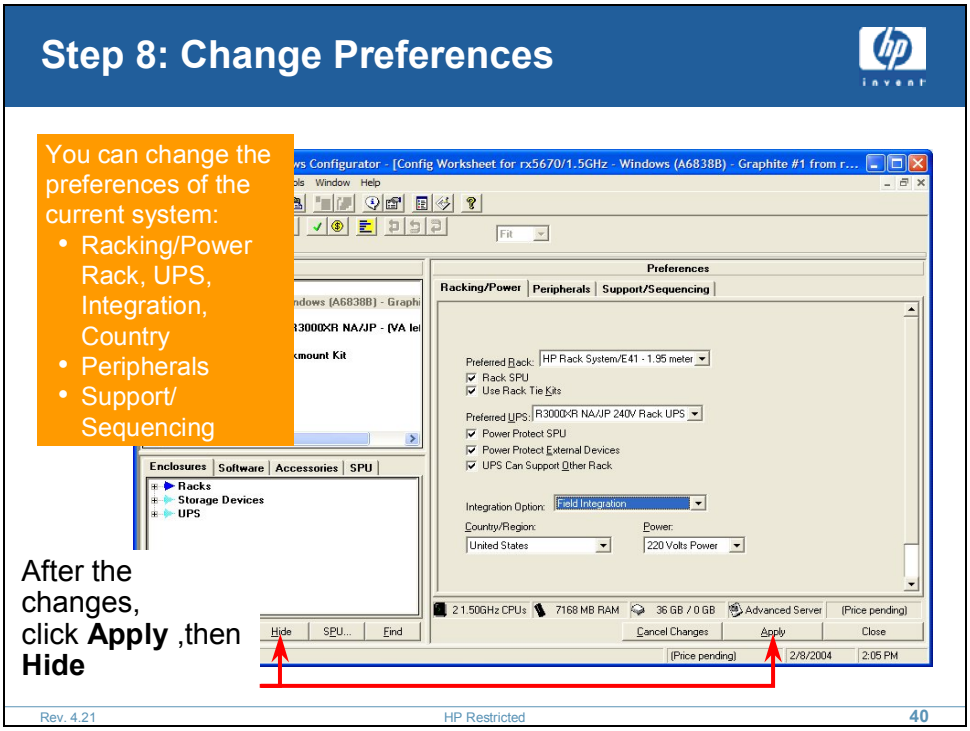
Step 8: Change Preferences



Step 8: Change Preferences

Use the drop down menus to select your changes, which are shown in red text. Changes in the Preferences panel are not handled one at a time, but are all applied at once by choosing the Configuration Worksheet **Apply** button.

Racking/Power

Allow you to:

- Change the rack size
- Deselect Rack SPU
- Deselect Use Rack Tie Kits
- Change the size of the UPS
- Deselect Power Protect on SPU
- Deselect Power Protect on External Devices
- Deselect UPS Can Support Other Rack
- Change the integration options
- Change the Country/Region
- Change the Power
- Change Factory Default Rack Sequencing
  - Deselect Warn when sequence deviates from default
  - Deselect Force default sequence

Peripherals

Allow you to change the number of devices that can be connected to the SPU on a particular channel. This controls how devices are shown on the connectivity diagram. The default settings are:

- Fast/Wide
  - Internal = 15
  - External = 15
- Single-Ended
  - Internal = 7
  - External = 7
- Fibre Channel = 17
- HP-PB = 6

Support/Sequencing

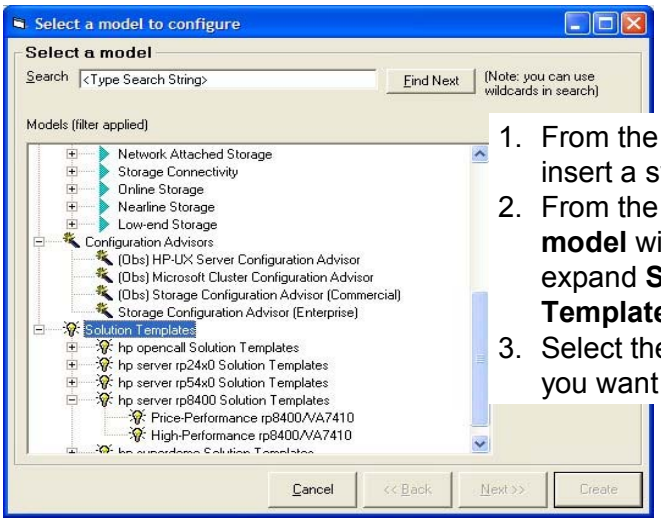
Allow you to choose which way racks are sequenced:

- Sequence rack before its contents, including SPU
- Within each rack, sequence SPU first

Allow you to choose whether to show price or not.

The Configuration Worksheet is a great tool, but what if you are not sure what to configure? SBW now includes Solution Templates to assist you. We will look at those next.

Solution Templates



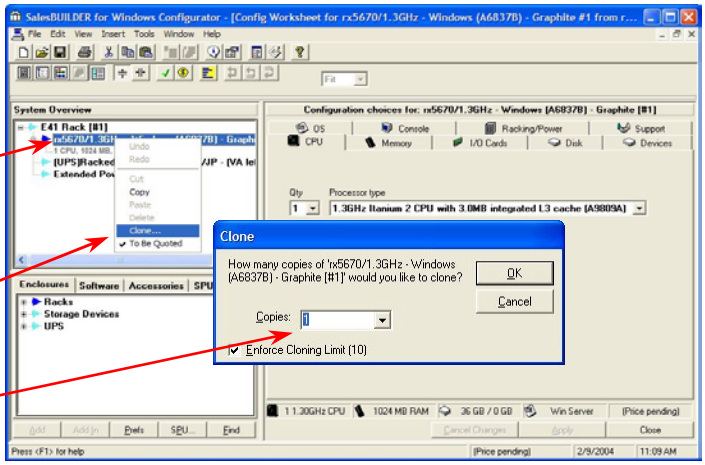
1. From the whiteboard, insert a system
2. From the **Select a model** window, expand **Solution Templates**
3. Select the template you want to use

Solution Templates

Modify a configuration

Add peripherals by cloning

1. In the Config Worksheet, highlight the SPU to be duplicated
2. Right click to activate menu
3. Select **Clone**
4. In the pop up window, enter number of copies



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Modify a configuration

1. From the Config Worksheet click on the SPU to be duplicated.
2. Right-click to display the shortcut menu.
3. From the shortcut menu, select **Clone**.
4. From the Copies drop down list, select 1.
5. Click **OK**.

Modify a configuration

Other tricks:

- What can go here
- What can replace this
- Delete a component

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Modify a configuration

To help you modify your configurations, HP has included three easy-to-use ways to add to an existing configuration.

What can go here

1. From the System Diagram, choose an empty slot or bay
2. Right-click the chosen slot or bay
3. From the shortcut menu, select **What can go here**
4. From the **What can go here** list, select the component

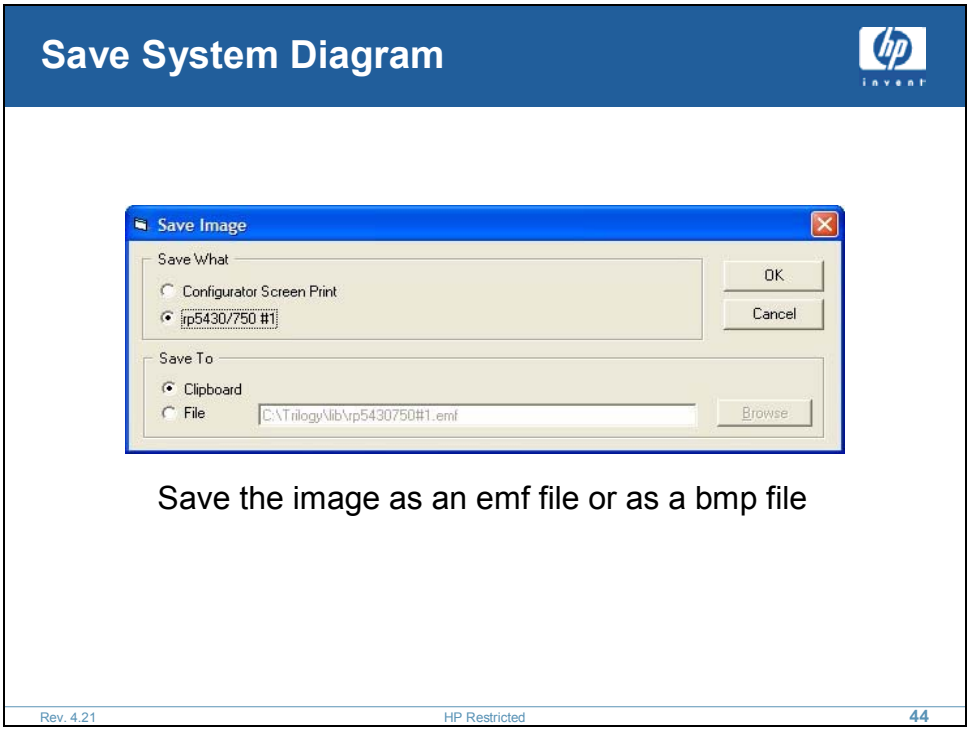
What can replace this

1. From the System Diagram, choose a component
2. Right-click the chosen component
3. From the shortcut menu, select **What can replace this**
4. From the **What can replace this** list, select the component needed

Delete component

1. From the System Diagram, choose a component
2. Right-click the chosen component
3. From the shortcut menu, select **Delete**

Tip: When saving your configurations it is important to name them in such a way that you can easily find and leverage them later.



Save System Diagram

To save a System Diagram as an emf file:

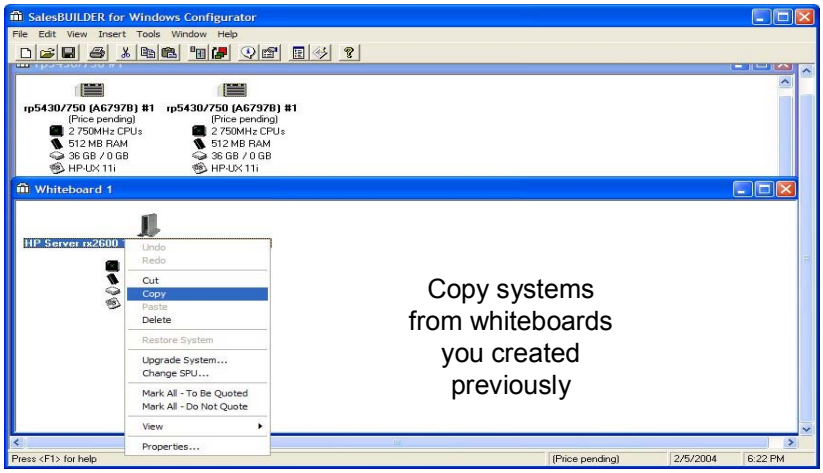
1. From the File menu, select **Save Image.**
2. Fill out the dialog box.
3. Choose **OK.**

You can also save to the clipboard.

Keyboard Shortcut: Use CTRL+W to display the **Save Image** dialog box.

Creating multiple systems

Step 1: Create multiple systems



Copy systems from whiteboards you created previously

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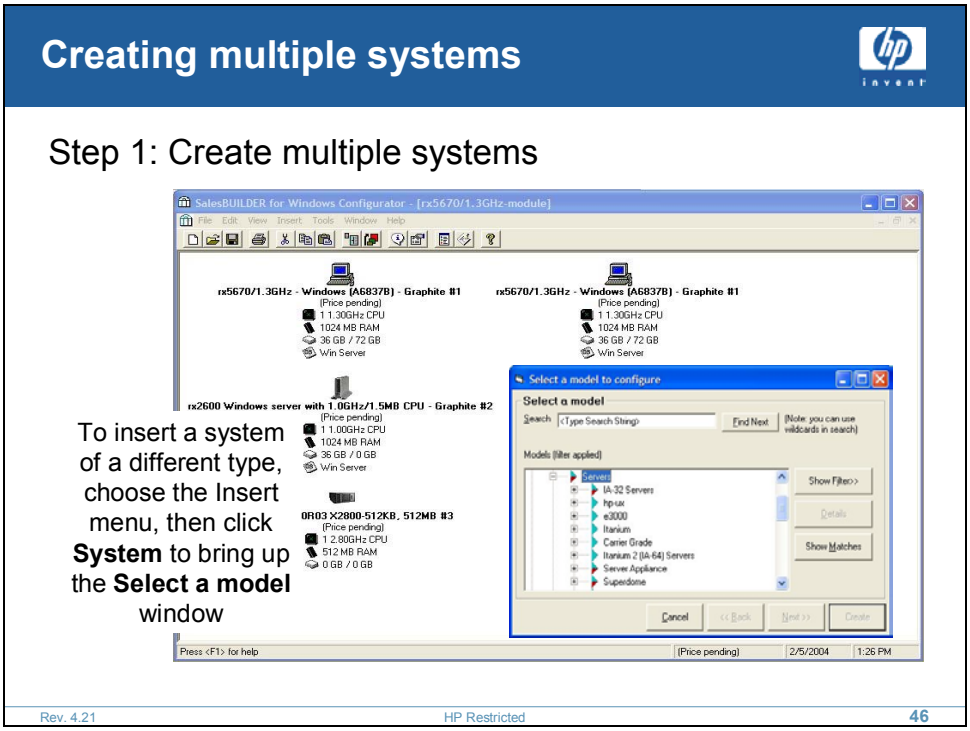
Creating multiple systems

To copy systems from one whiteboard to another:

1. From the File menu, select **Open From Local File**.
2. From the whiteboard you opened, display the shortcut menu by right-clicking a system you want to copy.
3. From the shortcut menu, click **Copy**.
4. Choose an open space on the whiteboard you are copying to.
5. Right-click to display the shortcut menu.
6. From the shortcut menu, click **Paste**.

Note: If only one system is in focus (selected in blue), the Paste item is not enabled. To shift the focus to the whole whiteboard, click an empty space on the whiteboard.

Tip: You can also use the Windows standard CRTL + C to copy and CRTL + V to paste.



Creating multiple systems

To copy systems on the whiteboard:

1. From the whiteboard, right-click the system you want to copy to display the shortcut menu.
2. From the shortcut menu, click **Copy**.
3. Choose an open space on the whiteboard.
4. Right-click to display the shortcut menu.
5. From the shortcut menu, click **Paste**.

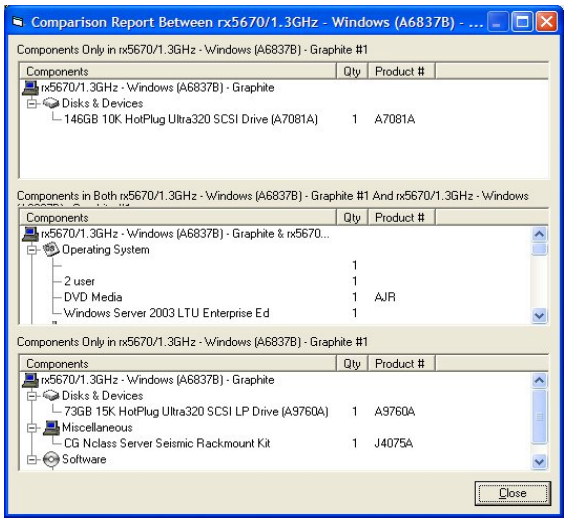
Note: If only one system is in focus (selected in blue), the Paste item is not enabled. To shift the focus to the whole whiteboard, click an empty space on the whiteboard.

1. Activate the whiteboard
2. Point to a system and CRTL + left mouse button
3. Drag and drop it to a blank space on the whiteboard

SBW copies the selected system.

Step 2: Comparing two systems

- Select the systems you want to compare
- From the Tools menu, click **compare two systems**



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Step 2: Comparing two systems

Multiple system exercise

Add systems and compare the configurations

- Copy your system configuration to create multiple systems and add several new systems via **insert**, then **system.**
- Select a system you copied and a system you inserted.
- Compare these two systems.

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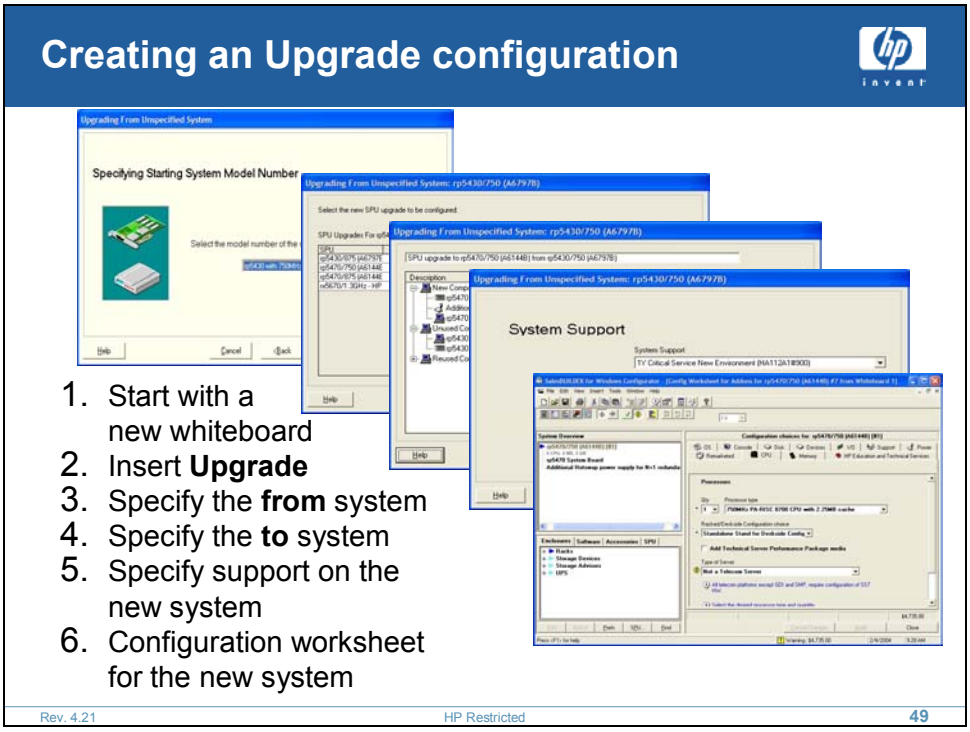
Multiple system exercise



Creating an Upgrade configuration

To access the Upgrade Wizard:

1. From the Welcome menu, click **Configure an Upgrade,** or
2. From the main menu, point to Insert**,** then click **Upgrade,** or
3. In the toolbar, click the **Upgrade** button

Configure an upgrade

1. From the whiteboard, select **Insert**
2. From the Insert menu, select **Upgrad**e
3. From the Upgrade Wizard, click **Next**
4. From the Select the model number of the system to be upgraded drop down list, select the current system
5. Click **Next**
6. From the Select the O/S version in the existing system drop down list, select the current operating system
7. Click **Next**
8. From the Select the number of processors in the existing system drop down list, select the current number of processors
9. Click **Next**

10. From the SPU upgrades list, select the new SPU with the number of processors you need
11. Review the components summary
12. Click **Next**
13. From the System support drop down list, select the new system support
14. If needed, choose additional support options
15. Click **Next**
16. Click **Finish** to return to the whiteboard

"Current" refers to the system or component as it is before the upgrade is applied.

"New" refers to the system or component, as it will be once the upgrade is applied.

Alternative upgrade method

Another way to upgrade an existing system is:

1. On the whiteboard, right-click a system.
2. From the shortcut menu, select **Upgrade**.
3. The Upgrade Wizard opens.
4. Follow the Upgrade Wizard prompts to mark the current system. **Do not quote** and select the upgrade.
5. Use the Config Worksheet or Parts List to add processors, memory, disk and other components to the upgraded system.

Upgrade exercise

- Create an upgrade for an rp5400 2-way 440MHz running HP-UX 11i to an rp5470 4-way 875MHz
- Upgrade support to 3 year 24x7, 4 hour (HA104A3)

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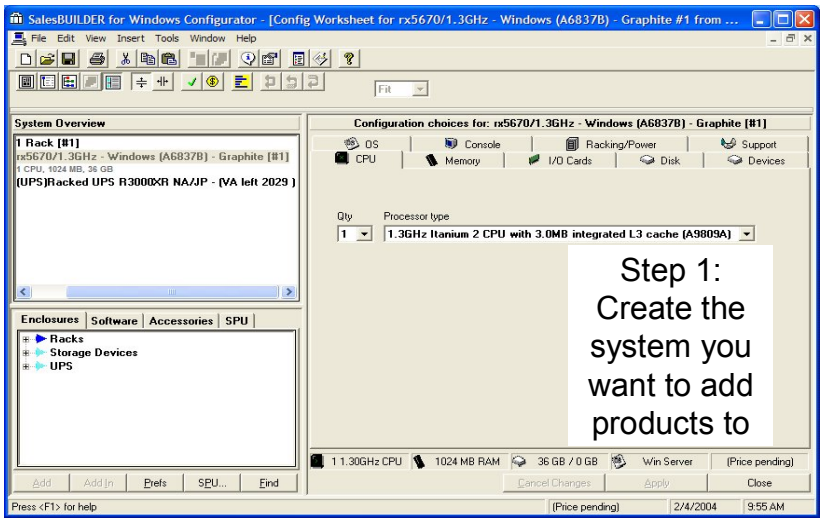
Upgrade exercise

Add-ons



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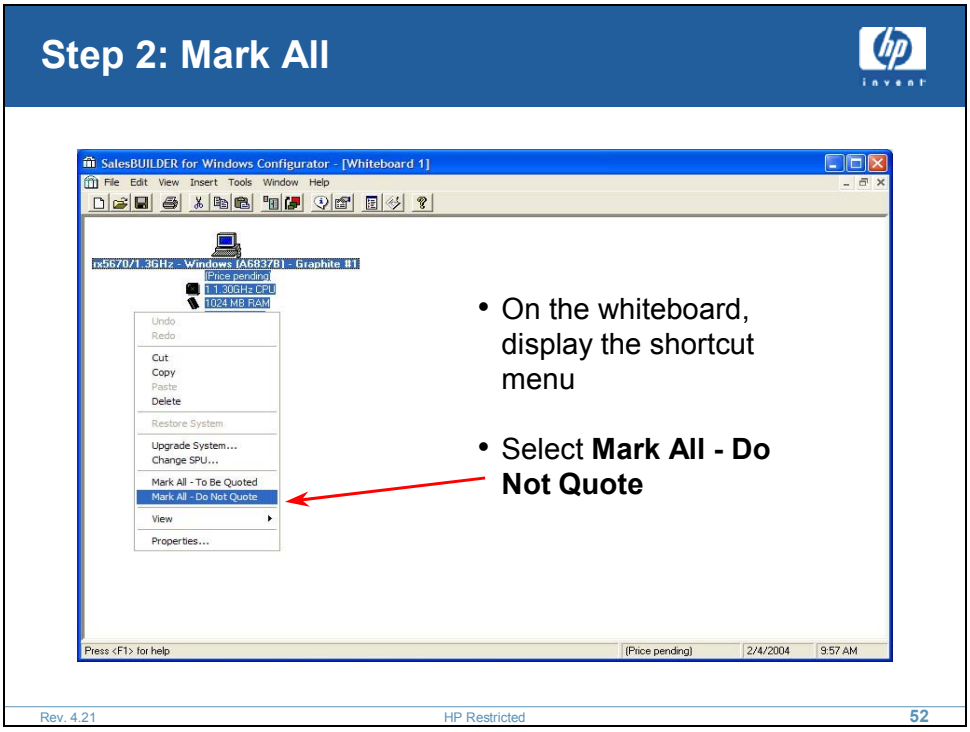
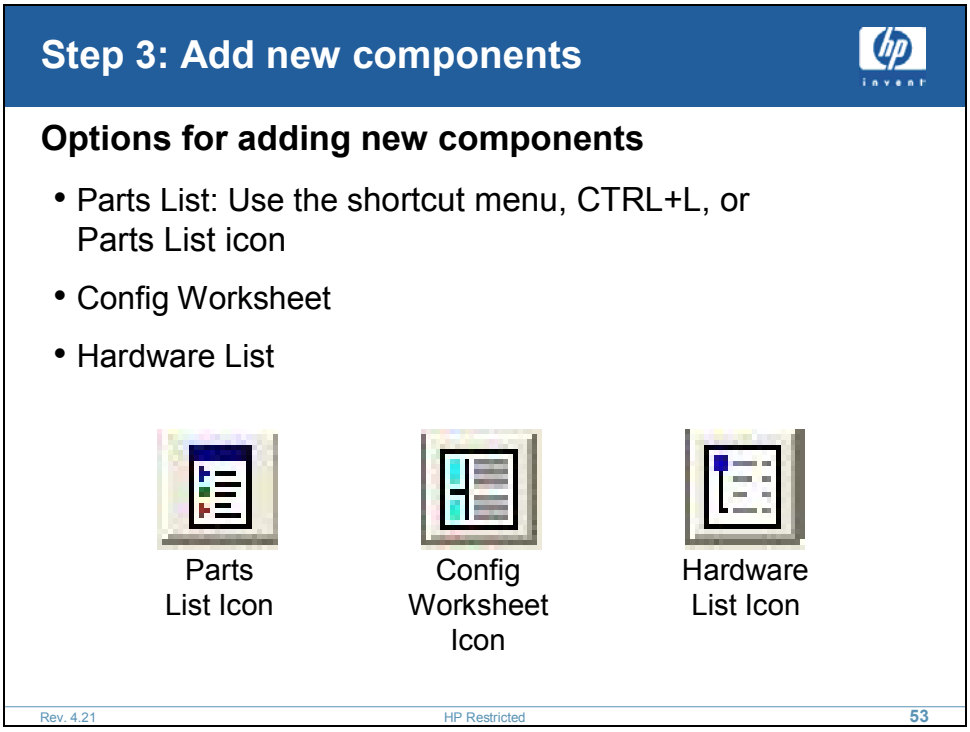
Add-ons



Step 2: Mark All

1. Create the system as it exists before the add-ons
2. From the whiteboard, right-click the current system to display the shortcut menu
3. From the shortcut menu, select **Mark All - Do Not Quote**



Step 3: Add new components

Parts List

- Use either the Parts List toolbar icon or **CTRL+L** to display the Parts List.
- Right-click the Parts List to display the shortcut menu. You can use the shortcut menu, double-click the category, or choose the + to view sub lists of parts.
- You can also use the **Find Now** option to locate the add-on parts you need.
- Use the Product Line drop down list to narrow your search.

Parts List steps

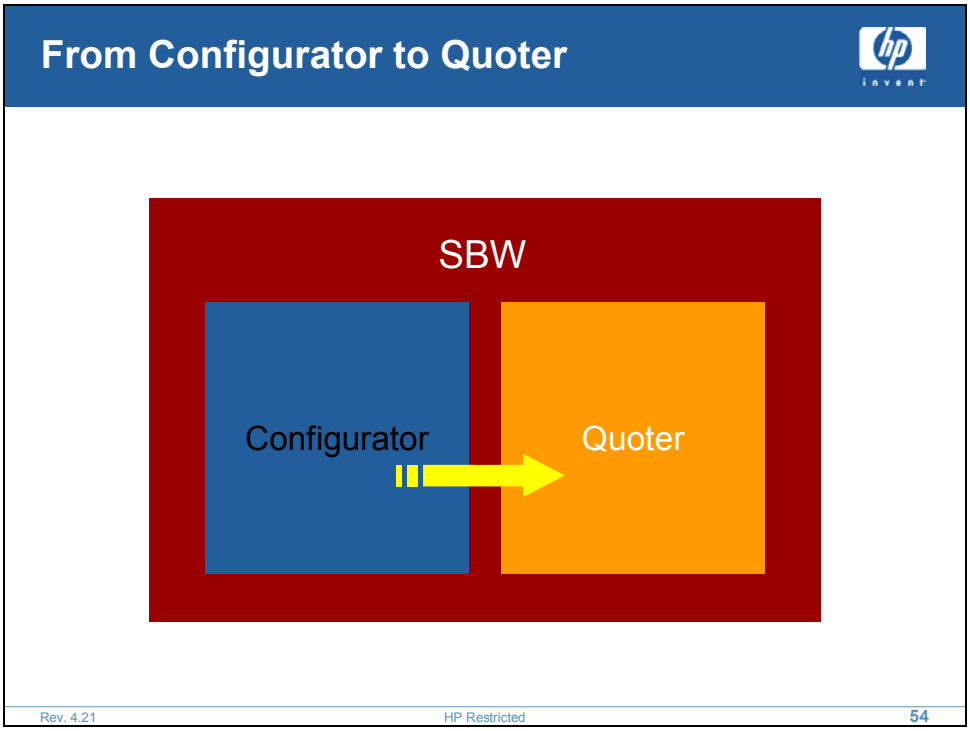
1. From the whiteboard, choose the current system.
2. CTRL+L to display the Parts List or click the toolbar Parts List icon.
3. From the Parts List, enter the name of the add-on product needed in the Find Now field and click **Find Now** In most cases, you can also search on product number. Use the Product Line drop down list to narrow your search.
4. Right-click the Parts List to display the shortcut menu. You can use the shortcut menu, double-click the category, or choose the + to view sub-lists of parts.
5. Drag and drop the add-on products onto the system icon.

Config Worksheet

- Enable the Quote Indicator by clicking on the Quote Indicator icon
- Use the Config Worksheet as you would to create a new system
- Whenever a carat appears beside a field, choose the carat to display a drop-down list of what is quoted, then adjust quoted products as necessary

Hardware List

- Use the Hardware List to view the quoted items
- You can still exclude items from the quote

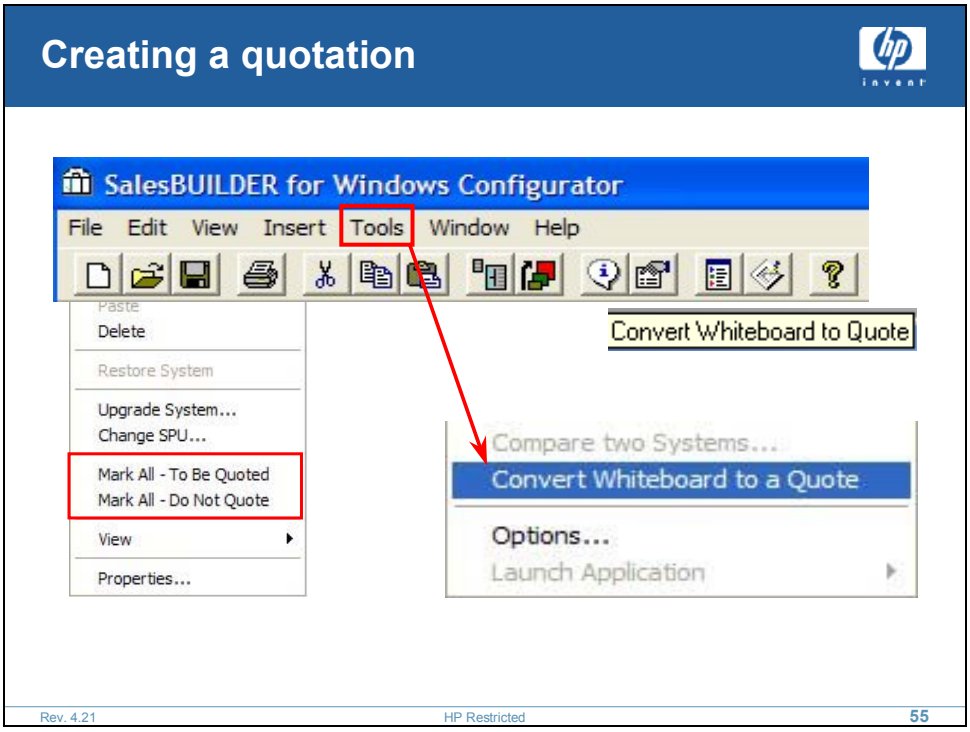


From Configurator to Quoter

You have learned how to configure a system for your customer. Now it is time to use that information to produce a customized quote you can present to your customer and submit to HP.

There are three ways to start the Quoter process in SBW.

1. From the SBW Configuration application, you can move your data into a quotation.
2. You can save the configuration, retrieve it at a later time, and then convert the data into a quotation.
3. You can retrieve a previous quote, saved in an earlier version of SBW.



Creating a quotation

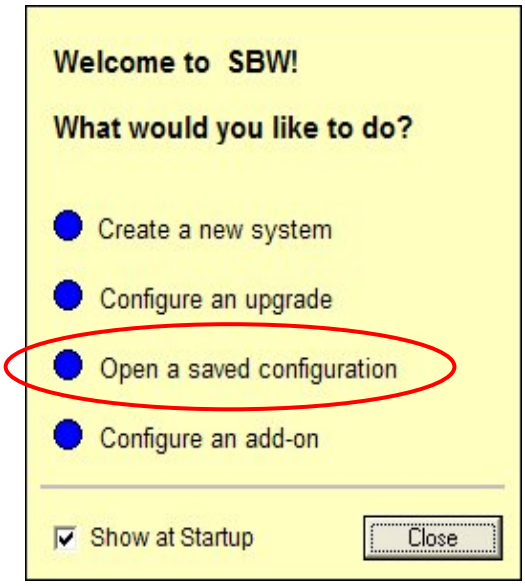
If parts have not been specifically marked **Do Not Quote** in SBW Configurator, SBW converts all objects on the whiteboard into a quote. To change this:

1. Right-click a system or parts in a system to show a shortcut menu.
2. From the shortcut menu, select the applicable comment, **Mark All - To Be Quoted / Mark All - Do Not Quote**.

When you have completed your configuration, save your file.

From the SBW Configuration application

When you have completed your configuration and saved your file, click the **Convert Whiteboard to Quote** toolbar button or in the Tools menu, click **Convert Whiteboard to a Quote**.

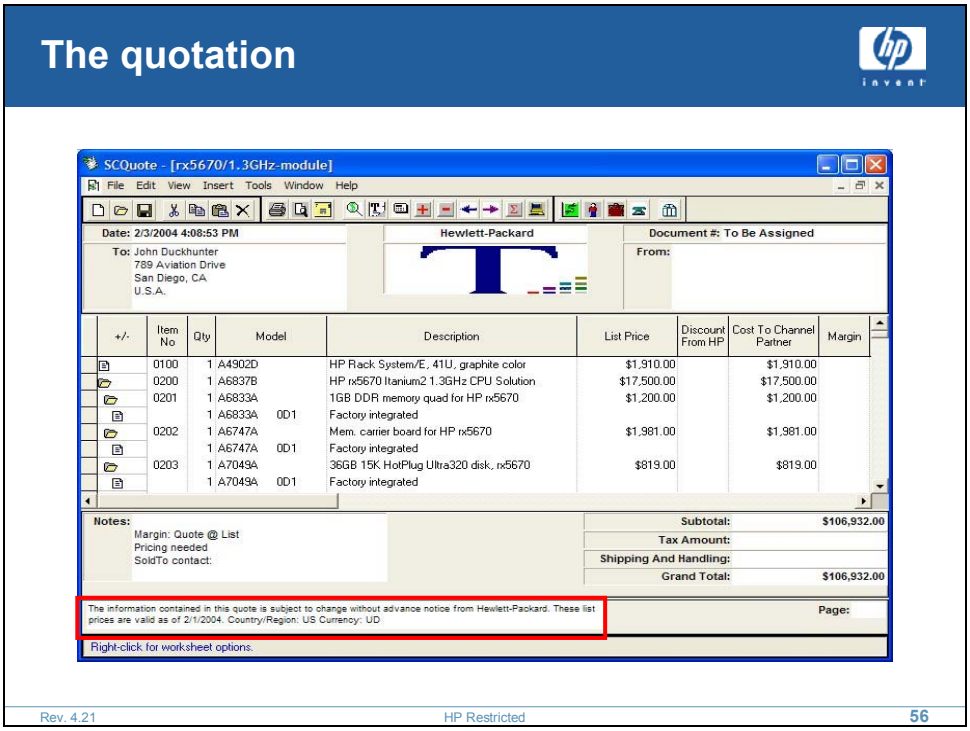


From a saved file

1. From the Welcome to SBW window, select **Open a saved configuration**.
2. Highlight the configuration you want. Your saved file is brought up on a whiteboard.
3. Click the **Convert Whiteboard to Quote** toolbar button or in the Tools menu, click **Convert Whiteboard to a Quote**.

Note: The Gatekeeper window may show you messages generated in the whiteboard before allowing you to save or convert to a quote.

You need to either correct the messages or acknowledge them before you can proceed.



The quotation

Price Book

- The Price Book date, country, and currency appear in the lower left corner of the “SC Quote” screen
- Users are responsible for using the most currently available Price Book
- Updated files are available weekly or bimonthly depending on the region

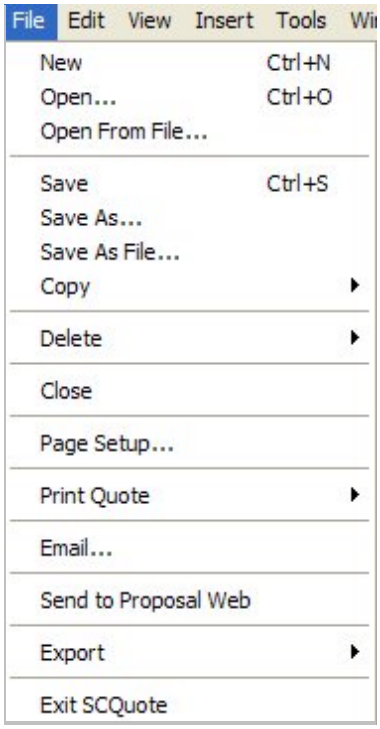
Instructions for Price Book updates can be found in the “Installation Guide”.

The SBW Quoter menu bar

You can find appropriate Quoter actions four ways:

- From the Menu bar select an item
- Click the appropriate toolbar button
- Right-click in the area you want to change and select the appropriate action
- Use a keyboard shortcut

Now let us look at Quoter-specific menu items:



File

New — Opens a new quote window.

Open — Selects existing quotes for viewing or editing.

Open From File — Opens sales documents (.sdd) or template files (.tpl).

Save — Saves the current quote.

Save As — Allows the current quote to be saved under a different name.

Save As File— Allows the active quote to be saved with the same or different filename and document type. The two types are sales documents (.sdd) or template files (.tpl).

Copy — Allows the active quote to be copied as a reference or as a change order.

Delete — Shows five submenus allowing deletion for Quotes, Customers, Sales Representative, Price Book or Primary Contact/SPOC.

- **Note**: Deleting a quote also deletes the configuration file attached to it. There is no delete function for configurations in the Configurator.

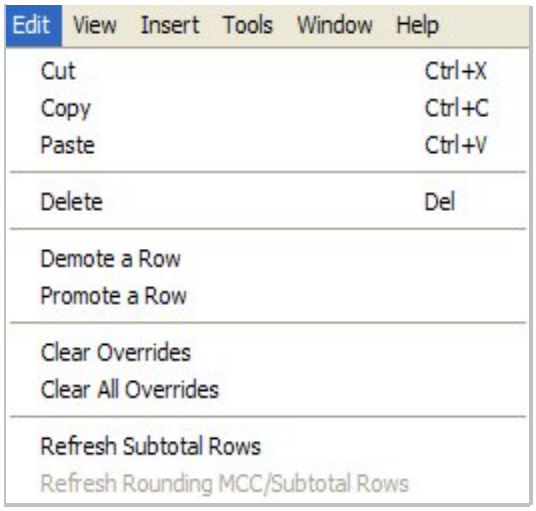
Page Setup — Displays a window for formatting product details and report options. User needs to select regional format.

Print Quote — Displays two submenu selections showing “Using quote report” or “From quoter screen.” “Using quote report” employs pre-built in Crystal reports as the basis for generating the output, while ”From quoter screen” prints as it shows on the Quoter screen.

Email — Quickly creates an email message from within the application. Microsoft Outlook is required for this function to operate.

Send to Proposal Web -- An email is sent to the Proposal Web server. Autoreply with a session ID is sent back. The user must have a login and, once entered, can create a proposal

Export — Allows users to export to QuoteBUILDER Output format or other format. Invokes a window to export the current quote with all its header and footer information as a file in another format.



Edit

Cut — Cuts the selection and places it on the system clipboard.

Copy — Copies the selection to the system clipboard.

Paste — Inserts a copy of the system clipboard contents into the selected location.

Delete — Removes selection without copying.

Demote a Row — Indents the selected rows to the next level down in the product hierarchy.

Promote a Row — Outdents the selected rows to the next level up in the product hierarchy.

Clear Overrides — Deletes the selected price and/or description overrides.

Clear All Overrides — Deletes all price and description overrides in the active quote.

Refresh Subtotal Rows — Recalculates the subtotal rows according to price changes made since created. This is **VERY IMPORTANT** to do if there were any manual changes. This must be refreshed, as it is not recalculated automatically.

View

Document Info

- *Pricing* — Displays the pricing information used for the active quote.
- *Pricing Messages* — Messages returned to the Quoter and pertaining to the products after the user prices the quote.
- *Customer* — Customer specific information including purchase agreement, price settings, standard paragraphs, and report preferences.
- *HP Contacts* — Displays information concerning Sales Representative information, Primary Contact/SPOC properties, and Other HP related contacts.
- *Document Text* — Contains list of standard paragraphs used in the quote.
- *General Quote Information* — Contains quote title and history.

Line Item Properties — Displays detailed information specific to the selected item, including information from each spreadsheet column, price adjustments and overrides.

Line Item Price Adjustment — Displays price adjustments specific to the selected item.

Pricing Messages — Displays any pricing messages for individual products.

Manufacturing View — Depicts how HP needs to see the order placed to be valid. This view is based on the output of the Configurator portion of the application.

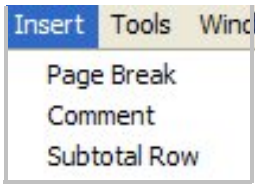
Delta Report — Generated by comparing line items of two documents. Normally, the first document is either the source quote or a previous change order and the second document is the current version of the change order.

Summary Data — Allows user to view the summary data information.

Document Views — This allows you to create different views of your quotation, name them and then choose which one you want to use.

Collapse All — Hides all child-level products from being displayed.

Expand All — Displays all child-level products under their top-level product.

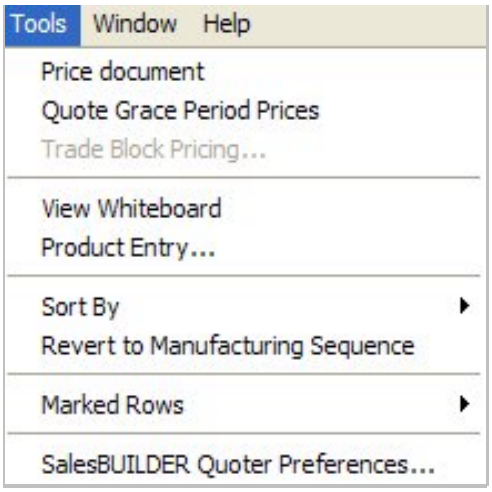


Insert

Page Break — Inserts a page break line above the selected row.

Comment — Inserts a comment row above the selected row.

Subtotal Row — Inserts a subtotal row below the selected row.



Tools

Price document — Triggers a request to the Price Engine to add the most recent prices and descriptions to the active quote.

Quote Grace Period Prices — Quotes Grace Period Prices, if applicable, in the quote.

Trade Block Pricing — If enabled for a region, allows user to convert US dollar prices into a different currency.

View Whiteboard — Opens Configurator whiteboard corresponding to the active quote.

Product Entry — Opens the Product Entry window for adding products to the active quote.

Sort By — Allows sorting of the items in the quote by product class.

Revert to Manufacturing Sequence — Returns the line items to their defaults as created by the Configurator.

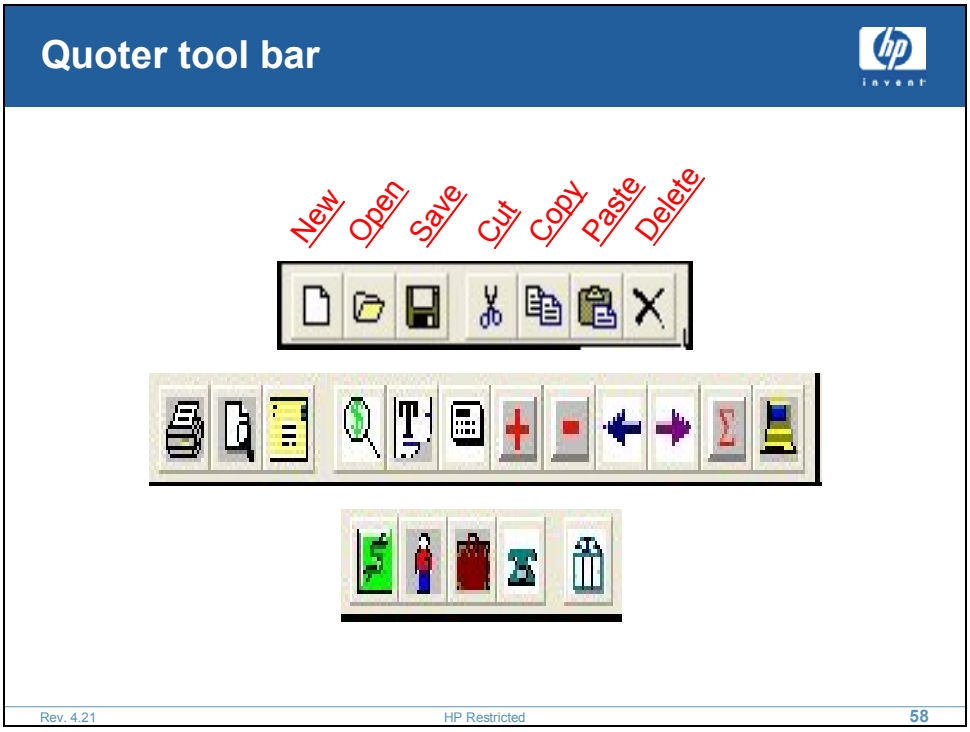
Marked Rows

- *Apply MCC to Marked Rows* — Apply the miscellaneous charge codes to the individually marked line items. This is for HP internal use.
- *Delete MCC from Marked Rows* — Clear the miscellaneous charge codes applied to line items.This is for HP internal use.

SBW Quoter Preferences — Opens the SBW Quoter Preferences window to allow you to set user preferences for Quote options, Pricing options, Control options, and Page Setup.

Window and Help

Offer the standard Microsoft choices.



Quoter tool bar

The Quoter-specific buttons are, from left to right:


Print Quote Report


Print Preview Quote Report


Create Email


View Pricing Info


View Document Text


Line Item Price Adjustment


Expand All Rows


Collapse All Rows


Promote a Row


Demote a Row


Insert Subtotal


Product Entry Tool


Price Document

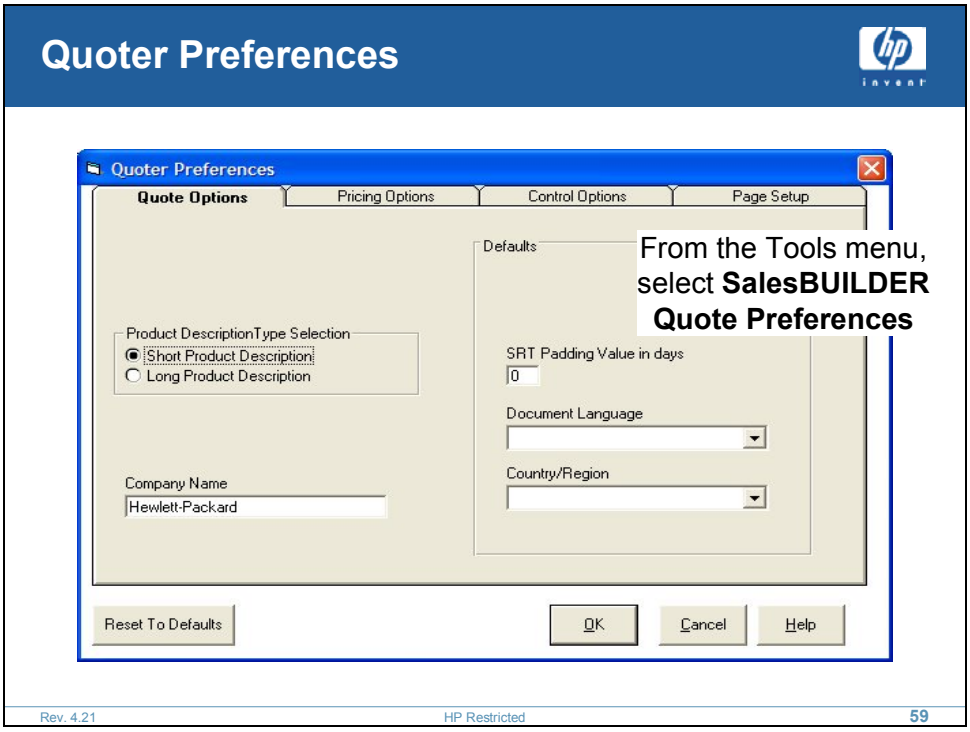

Customer Properties


SR Properties

SPOC Properties

SBW Whiteboard

Now, it is time to customize your quotation.



Quoter Preferences

There are two ways to set preferences in the Quoter spread sheet.

1. Using the Quoter Preferences window sets preferences for future quote sheets
2. Using the Menu and tool bar buttons to change items individually

First, let us look at how to set future preferences.

Preferences window

There are four major areas for customizing your quote:

- Quote Options
- Pricing Options
- Control Options
- Page Setup

All the items in these four areas can be changed in one major window—the Quoter Preferences window.

To open the Quoter Preferences window: From the Tools menu, select **SBW Quoter Preferences.**

Quote Options

- Product Description Type Selection — Allows you to choose between Short Product Description and Long Product Description.
- Company Name.
- SRT Padding Value in Days — The SRT field allows the user to pad the time that HP sets to allow for Build and Ship time once the order is placed. The value is in days.
- Document Language — Your Price Book determines what is listed here.
- Country — Your Price Book determines what is listed here.

Pricing Options

- Channel Type — A drop-down list enables you to select the desired channel type.
- Global Tax Rate — A global tax rate amount can be entered here and applies to the entire quote.
- Payment Terms — You can select a payment term of your choice from a drop-down list.
- Pricing Model — Click this button to get a window containing margin model choices and an option allowing you to enter an amount in the Rate Field.
- Shipping and Handling — Click this button to bring up another window entitled “Unbundled Freight”. This window allows you to choose the Delivery Speed, Ship to Country/Region, Terms of Delivery, Title passes at, and Delivery Services.

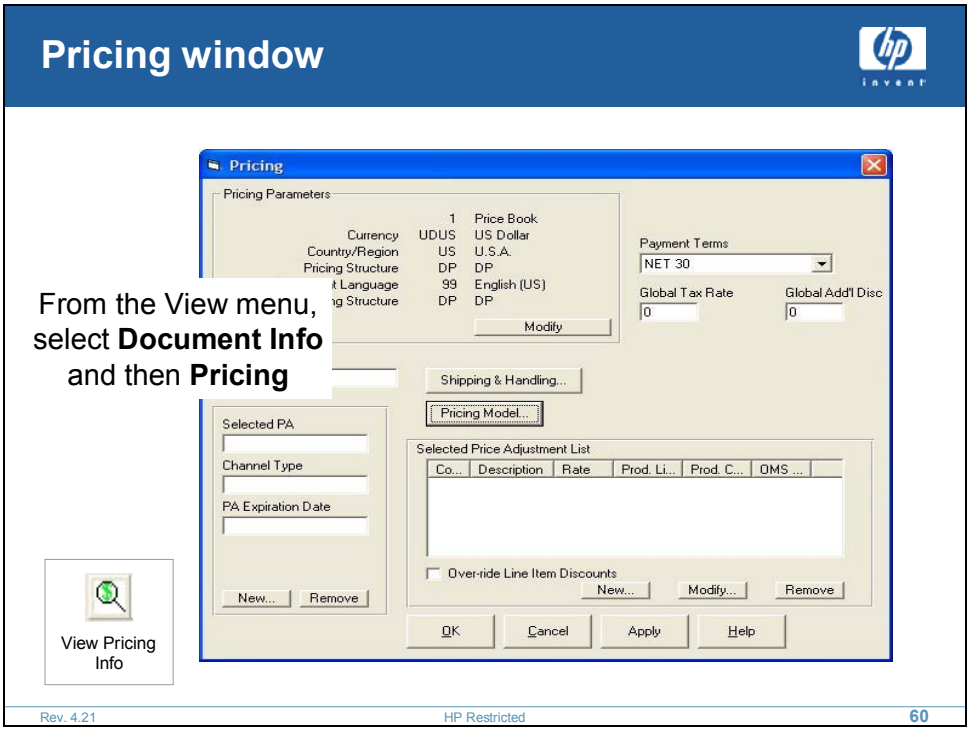
Control Options

- Default Sales Representative — Click this button to bring up the Sales Rep Properties window.
- Default Primary Contact/SPOC — Click this button to bring up the Primary Contact/SPOC Properties window.
- Suppress Currency Symbol in Spreadsheet — When activated this option hides the currency symbol in the spreadsheet.
- Create Quote Window Required — When this box is checked, each time a new quote is opened, a window appears allowing the user to enter information for the Customer Sales Representative, SPOC, and Customer contacts.

Page Setup

- Product Details
  - WYSIWYG Row Printing
  - Full explosion of line items
  - Main product level
  - Top level only
- Report Options
  - Cover/Summary Page
  - Include Grace Period Text
  - Suppress All $0 Options
  - Suppress $0 Support Options
- Report ID — Here is where you can select a report output for your quote, as well as export report output by selecting the **Modify** button

Remember: Any choices you make here are not reflected in your current quote. It sets the defaults for future quotes only.



Pricing window

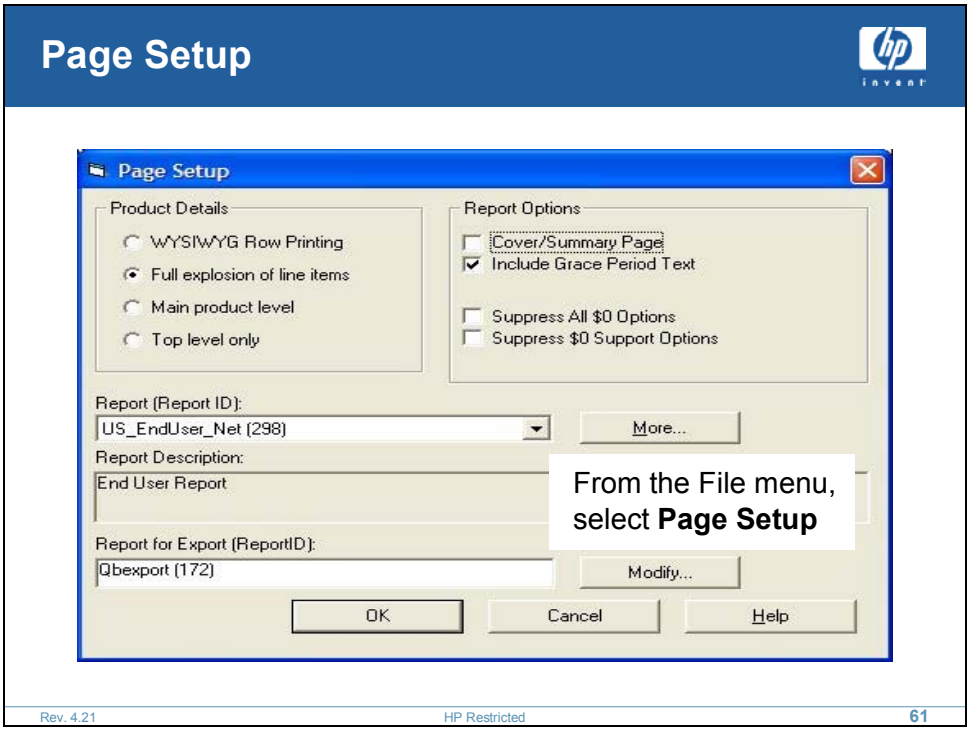
To change the current quote:

1. From the View menu, select Document Info and then **Pricing**.
2. From this path you can make similar pricing choices for your current quote sheet, or
3. Use the appropriate toolbar button as shown on the slide.

You have choices to change the following items:

- Price Adjustments — In **Pricing**, select **New** to adjust prices by applying discounts to all or some of the items in the quote:
  - 07 Promotional Discount — Used with an approval promotion from HP
  - 72 Special Negotiated Discount — Used when HP has approved Big Deal pricing
- Global Tax Rate — A global tax rate amount can be entered here and applies to the entire quote

- Payment Terms — You can select a payment term of your choice from a drop-down list:
  - [1] 80%/20%
  - [2] 90%/10%
  - [3] CASH IN ADVANCE
  - [4] CASH ON DELIVERY
  - [5] CREDIT
  - [6] FOB
  - [7] LAB
  - [8] LABP
  - [9] LETTER OF CREDIT
  - [10] NET 150
  - [11] NET 30
  - [12] NET 30 AFTER INVOICE DATE
  - [13] NET 35
  - [14] NET 45
  - [15] NET 60
  - [16] NET 90
  - [17] OTHER
  - [18] PRO-FORMA
  - [19] SECURED-30
  - [20] SIGHT DRAFT
  - [21] US LIST
- Pricing Model – Click this button to get a window containing margin model choices and an option allowing you to enter an amount in the Rate Field
  - Quote @ List –List price with no margin
  - Quote @ Cost – Cost to Channel Partner
  - List - %List – List minus margin percent of List
  - Cost + %Cost – Cost plus margin percent of Cost
  - Cost + %List – Cost plus margin percent of List



Page Setup

The Page Setup tab allows the user to choose from the following:

Product Details

- WYSIWYG Row Printing: Printing is basically “What You See Is What You Get.” Any changes in the format of the line items appear in the quote output.
- Full explosion of line items: Shows all products and options that are contained in the quote.
- Main product level: Rolls the options and pricing of the quote into the parent product number, but continues to show the children.
- Top level only: Rolls all children and pricing into the parent and shows one price for the parent.

Report Options

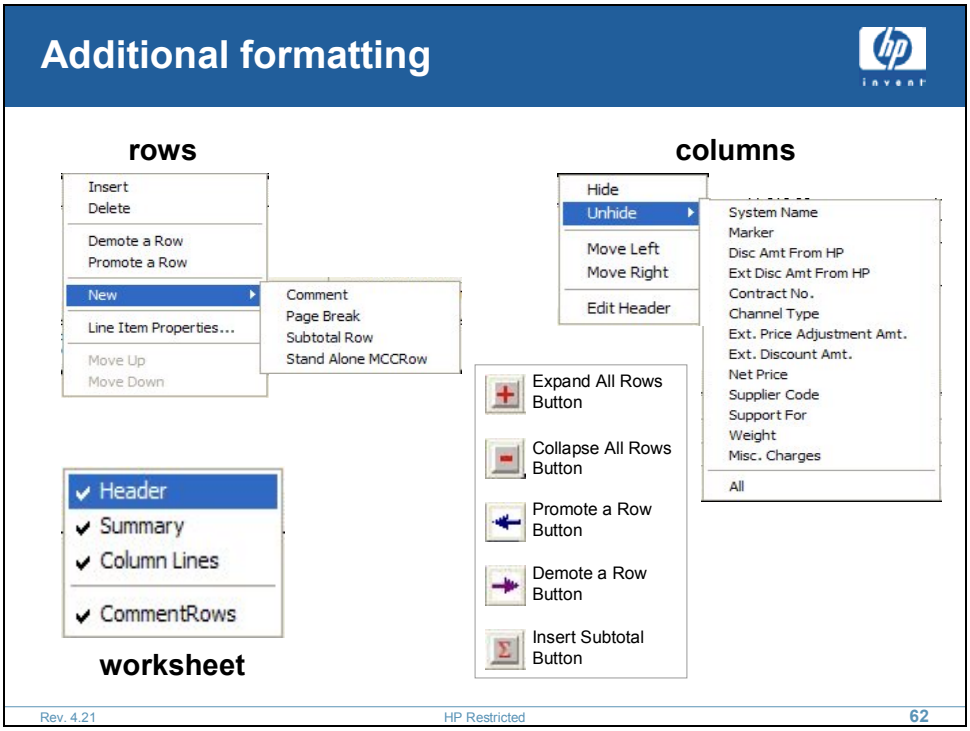
These options are critical as they control the printing, reporting, and mailing format for your quote.

- Cover/Summary Page: These pages are used in printing your quote in a Crystal Report forma
- Include Grace Period Text
- Suppress All $0 Options
- Suppress $0 Support Options

Report ID

Here is where you can select a report output for your quote, as well as export report output.

From the File menu, select **Page Setup.**



Additional formatting

To add a comment or page break, highlight the line directly beneath where the desired function is to go. From the Insert menu, select **Page Break** or right mouse click to complete the function.

Rows

1. Click in the header of a row
2. Right click to access a Row shortcut menu. This allows you to:
   - Insert or delete rows
   - Demote or promote rows
   - Add a new comment to a row
   - Insert a page break between rows
   - Insert a subtotal row below the row selected
   - Insert a miscellaneous charge code to a specific row
   - Move rows up or down
   - Show the Line Item Properties window

Columns

Columns need to be hidden, as the information is wider than the page.

1. Click in the header of a column
2. Right click to access a Column shortcut menu. This allows you to:
   - Hide or Unhide a column
   - Move a column left or right
   - Edit Header

Toolbar buttons

Remember you can use toolbar buttons for many modifications:

- Expand All Rows
- Collapse All Rows
- Promote a Row
- Demote a Row
- Insert Subtotal

Quote worksheet shortcut menu

You can right click anywhere in the quotation to see this menu.

This allows you to see which features are activated and you can toggle these items on or off.

Tip:

To edit a quotation, you can type information directly into the appropriate cell. For example, to add a comment or page break, highlight the line directly beneath where you want this to be and right click to complete the function

You can add a subtotal where desired. Highlight all of the lines to be included in the subtotal and right mouse click to enter the subtotal

You can check what a warranty code provides by typing the warranty code into Help to access information about the code such as the code warranty period, service location and level, and response time.

Sorting

Products listed in the quote can be sorted by product class, such as Hardware, Software, or Support. For this process, from the Tools menu, select Sort By and choose **Product Class**.

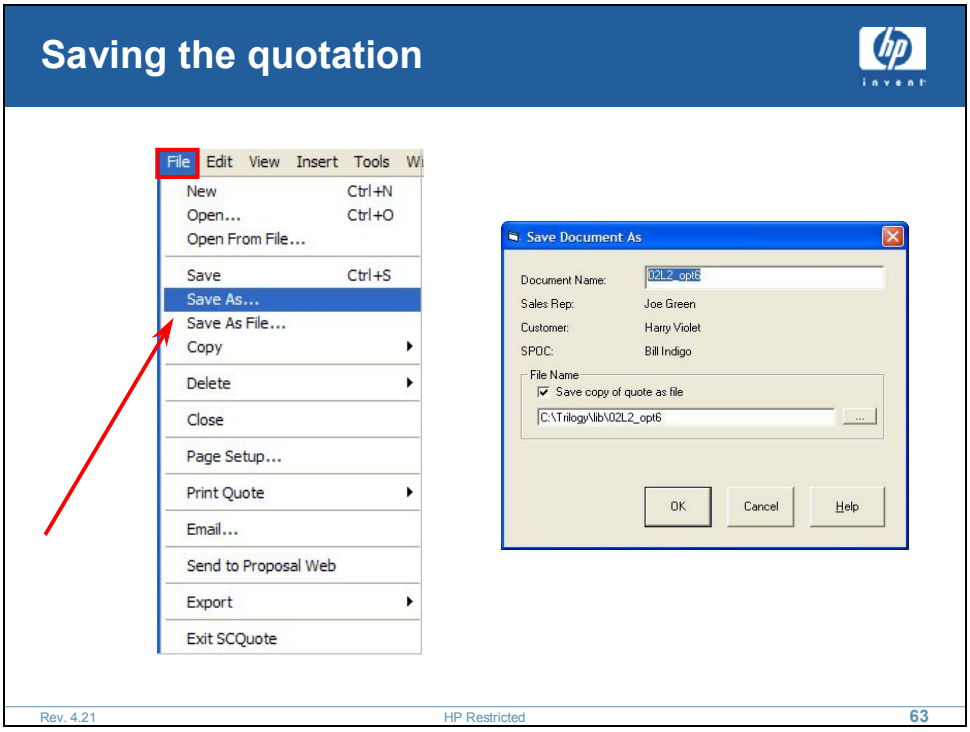
- When using this feature, the product classes are sorted with the category listed in the description field. The products listed in that category are listed below the title.
- Additionally, a sub-total line is added for each product class.
- The sort feature also affects the printed format of the quote.

To reverse the **Sort By** function, go to the Tools menu and select **Revert to Manufacturing Sequence**.

If the quotation is too big for the printed page, you need to hide some columns. The best way to do this for the current, and future quotes is:

1. Make a copy of the original quotation. Name it **Default 1**.
2. Make the necessary corrections to have only the columns you want for your customer. Select the columns you do not want and click **Hide**.
3. Name this **Default**.
4. From the View menu, select Documents Views and then **Manage Views.**
5. Click **Default**.

This is now your default format for printing a customer quote.



Saving the quotation

Before saving your quote, do a final pricing of your quote sheet.

1. From the Edit menu, select **Refresh Subtotal Rows.** This recalculates the subtotal rows according to any price changes made since the quote was created.
2. Click the **Price Document** button on the toolbar to add pricing information to the Notes window in the bottom left of your quote sheet

Note: Changing the page setup has a direct effect on the final layout.

Save

When a quote is saved in the SBW Configurator, the quote file and the whiteboard file are saved at the same time. The two files are merged into one and are part of the SC Quoter Database.

The document name reflects the whiteboard name. The name can be changed, but remember, it changes the name of the whiteboard as well.

Note: If changes are made in Quoter, such as changing the quantity or adding or removing lines, these changes are not reflected in the Configurator whiteboard.

When a quote is saved as a file, there are two types to choose from:

.sdd

- The .sdd file type contains both the quote as well as the whiteboard in one file.
- This file can be shared if saved on a share drive or sent to someone else that has the HP quote and configuration tool.

.tpl

The .tpl file is used when submitting orders via HP OrderLink application on the web. This is an HP-specific format and does not contain pricing information.

Note: Both of these formats can be opened from the File menu by choosing **Open From File**.

To save your quote: From the File menu, select **Save** or **Save As**.

Save

This file is saved into a local database on your PC.

You may also use the common Windows “Save” button on the toolbar.

Save As

The Save As window allows you to select a name for this quote and shows you the Sales Rep, Customer, and SPOC you have chosen.

This file is also saved into a local database on your PC.

Note: Remember to save your file often as you work on it to avoid losing any information.

Using this quote again

A Quoter file can be copied into revisions. The application copies not only the quote but also the whiteboard file so modifications can be made without affecting the original quote.

1. To open the whiteboard of the revision, select View Whiteboard from the Tools menu
2. When modifications are completed, reconvert to quote and the new quote is updated with the new charges

Starting a quote from Quoter

This is a stand-alone quote and does not contain any whiteboard information.

Exercise

Finalizing the Quotation

Exercise

Finalizing the quotation — Exercise

1. After you have saved your file in SBW Configurator, convert it to a quotation.
2. Make the payment terms Cash on Delivery and make the margin quotation At Cost.
3. The quotation is too wide, so hide any columns you think are not necessary.
4. Sort your products by hardware product class and be sure there is a subtotal for each class.
5. Save the quotation, showing the Sales Rep, Customer. and SPOC

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Finalizing the quotation — Exercise

Directions

1. After you have saved your file in SBW Configurator, convert it to a quotation.
2. Make the payment terms **Cash on Delivery** and make the margin **Quote At Cost**.
3. The quotation is too wide, so hide any columns you think are not necessary.
4. Sort your products by product class (hardware), and be sure there is a subtotal for each class.
5. Save the quote, showing the Sales Rep, Customer and SPOC.

Advantages of SBW 10.0

- New graphical Simple user interface
- Interoperability between other applications such as enterprise web Configurator and NSS sizers
- Config to Build (C2B) enhancements to support bundles
- Enhanced Visio outputs
- Option to apply more than one purchase agreement to a single quote
- Auto Update supporting multiple price book updates from local network
- Improved capabilities to handle system upgrades
- Performance improvements for large configurations

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Advantages of SBW 10.0

Summary

- SBW Configurator
- SBW Quoter

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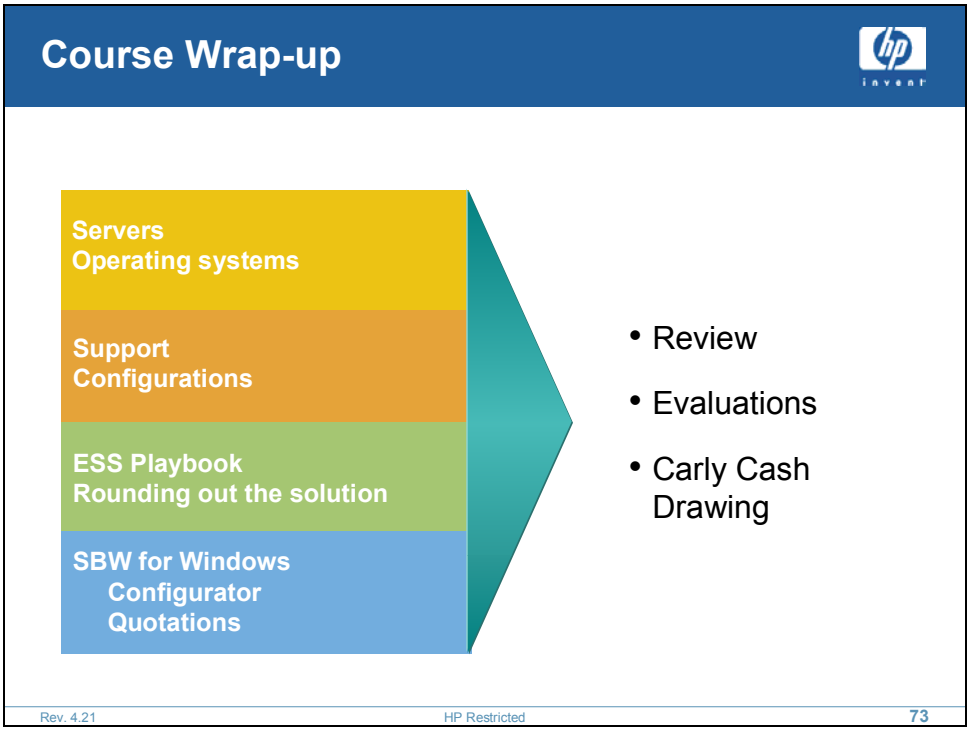
Summary



Course wrap-up

Thank you all for coming.

APPENDIX

Appendix

Glossary

Terms and Definitions

Analytics	Comprises all programming that analyzes data about an enterprise's customers, suppliers, employees, programs or products and presents it so that better and quicker business decisions can be made. For example: CRM analytics can be considered a form of online analytical processing (OLAP) and may employ data mining. According to an article in InfoWorld, CRM analytics can provide customer segmentation groupings (for example, at its simplest, dividing customers into those most and least likely to repurchase a product); profitability analysis (which customers lead to the most profit over time); personalization (the ability to market to individual customers based on the data collected about them); event monitoring (for example, when a customer reaches a certain dollar volume of purchases); what-if scenarios (how likely is a customer or customer category that bought one product to buy a similar one); and predictive modeling (for example, comparing various product development plans in terms of likely future success given the customer knowledge base).
Annualized Failure Rate (AFR)	As a predictive measure, the AFR gives an idea of the expected number of times a unit would fail in the period of a year. An AFR of 100% means the unit is expected to fail once per year. If it is 50%, it is expected to fail once every two years.
APO	Advanced Planner and Optimizer (SAP suite)
ATO	The Assemble-to-Order (ATO) Benchmark is the second most popular benchmark, and integrates process chains across mySAP Business Suite. The ATO scenario is characterized by high volume sales, short production times (from hours to a day), and individual assembly for each order. Examples include PCs, pumps, and cars.
Availability	A service characteristic and a component of service quality assessed by the end user. It indicates the percent of elapsed time users have access to the system, at an agreed upon level of performance and usability, during that period.
B-2-B Commerce	Companies buy and sell goods and services to each other via the Internet, instead of over the phone or by mail.

Cache	A special memory subsystem where frequently accessed data (such as web pages) is stored for quick retrieval
Cache Fusion	Cache Fusion architecture takes advantage of ultra-high bandwidth, low latency cluster interconnect technologies such as Virtual Interface Architecture (VIA), Gigabit Ethernet, Hyperfabric (HP-UX), and in the future Infiniband. Cache fusion architecture works extremely well in a “scaled out” environment where relatively lower cost server nodes are simply added to the total cluster as business demands grow.
CEC	Core Electronic Complex Chipset that controls CPUs, Memory, and IO
Chip “kill-like” technology	See Spare Memory Chip
Chip Spare	See Spare Memory Chip
CRM	Customer Relationship Management
Data Mining	Exploring detailed business transactions. It implies "digging through tons of data" to uncover patterns and relationships contained within the business activity and history. Data mining can be done manually by slicing and dicing the data until a pattern becomes obvious. Or, it can be done with programs that analyze the data automatically.
DMR	Dynamic Memory Resiliency
DRM	Data Replication Manager
EAI	Enterprise Application Integration
ELA	Enterprise Licensing Agreement
Encryption	Encryption is the conversion of data into a form, called a cipher, that cannot be easily intercepted by unauthorized people. Decryption is the process of converting encrypted data back into its original form, so it can be understood.
ERM	Enterprise Resource Management or Employee Relationship Management

ERP	ERP (enterprise resource planning) is an industry term for the broad set of activities supported by multi-module application software that help a manufacturer or other business manage the important parts of its business, including product planning, parts purchasing, maintaining inventories, interacting with suppliers, providing customer service, and tracking orders. ERP can also include application modules for the finance and human resources aspects of a business. Typically, an ERP system uses or is integrated with a relational database system. The deployment of an ERP system can involve considerable business process analysis, employee retraining, and new work procedures. In a recent trend, SAP, PeopleSoft, and J. D. Edwards are among ERP product providers offering ERP.
Ethernet	The first nonproprietary local area network hardware and software developed during the late 1970s through a partnership of DEC, Intel, and Xerox. It featured a 10-Mbps CMSA/CD bus network with thick coaxial cabling.
Fault-Tolerance	The ability to continue to function without interruption when a network hardware failure occurs. A fault-tolerant network has multiple instances of all critical components, such as servers, storage devices, and power supplies. If one component fails, another takes over seamlessly.
Firewall	A firewall is a set of related programs, located at a network gateway server, that protects the resources of a private network from users from other networks. (The term also implies the security policy that is used with the programs.) An enterprise with an intranet that allows its workers access to the wider Internet installs a firewall to prevent outsiders from accessing its own private data resources and for controlling what outside resources its own users have access to.
FSM	Financial Management Solutions
HAO	HP High Availability Observatory
HCM	Human Capital Management
HPS	HP Services
ILOE	Insight Lights-Out Edition
I^2C	Inter Integrated Circuit

Infiniband	InfiniBand is an architecture and specification for data flow between processors and I/O devices that promises greater bandwidth and almost unlimited expandability in tomorrow's computer systems. In the next few years, InfiniBand is expected to gradually replace the existing Peripheral Component Interconnect (PCI) shared-bus approach used in most of today's personal computers and servers. Offering throughput of up to 2.5 gigabytes per second and support for up to 64,000 addressable devices, the architecture also promises increased reliability, better sharing of data between clustered processors, and built-in security. InfiniBand is the result of merging two competing designs, Future I/O, developed by Compaq, IBM, and Hewlett-Packard, with Next Generation I/O, developed by Intel, Microsoft, and Sun Microsystems. For a short time before the group came up with a new name, InfiniBand was called System I/O.
J2EE	Java 2 Platform Enterprise Edition. J2EE is a platform-independent, Java-centric environment for developing, building and deploying Web-based enterprise applications online.
JAVA	Java is a programming language expressly designed for use in the distributed environment of the Internet. It was designed to have the "look and feel" of the C++ language, but it is simpler to use than C++ and enforces a completely object-oriented view of programming. Java can be used to create complete applications that may run on a single computer or be distributed among servers and clients in a network. It can also be used to build small application modules or applets for use as part of a Web page. Applets make it possible for a Web page user to interact with the page.
Java Virtual Machine (JVM)	JVM is used for the execution of Java applications and applets.
Mean Time Between Failure (MTBF)	A statement of the time between failures of a component or a system -- based upon past performance of a population of like components or systems. It can be used to compare the reliability of similar components such as HP disk drives vs. the competition's disk drives.
Memory chip spare	See Spare Memory Chip
MIB	Management Information Base
NSK	NonStop Kernel
ODBC	Open Database Connectivity

ODS	Operational Data Store
Oracle RAC	Real Application Clusters (RAC) is a database related computing environment that takes advantage of the processing power of multiple, interconnected server nodes and storage known as a clustered system. RAC is the follow on product to Oracle Parallel Server with more functionality while continuing to offer the following main features: ▪ Separate Oracle 9i instances running on different nodes operate against a set of common database files that reside on shared disks physically accessible by all nodes that make up the cluster. ▪ All instances can execute transactions concurrently against the same database, and each instance can have multiple users executing transactions concurrently.
Partition	To divide operating environments such that multiple customers' applications can coexist in the same server or cluster, while ensuring complete privacy.
PLM	Product Lifecycle Manager (SAP suite)
PRM	Partner Relationship Management
QBB	Quad Building Blocks
RDG	Reliable Data Grams are a low latency protocol that runs over memory channel.
RiLOE	Remote Insight Lights-Out Edition
SAN	The SNIA defines a Storage Area Network as: "A network whose primary purpose is the transfer of data between computer systems and storage elements and among storage elements. A SAN consists of a communication infrastructure, which provides physical connections, and a management layer, which organizes the connections, storage elements and computer systems so that data transfer is secure and robust."
SCM	Supply Chain Management
SCP	Supply Chain Planning

SCSI	Acronym for Small Computer System Interface. A high-speed parallel hardware interface that allows multiple peripheral devices to be connected to a board (called a SCSI host adapter or a SCSI controller) that is installed in a network device, such as a workstation or server. SCSI devices are connected in a daisy-chain configuration, and each one has a second port that connects the next device in line.
SD	The Sales and Distribution (SD) Benchmark, the most popular SAP benchmark, is usually reported on either 2-tier or 3-tier configurations and is measured in number of users.
SLC	Solution Life Cycle
SNA	Systems Network Architecture — IBM's mainframe network standards introduced in 1974. Originally a centralized architecture with a host computer controlling many terminals, enhancements, such as APPN and APPC (LU 6.2), have adapted SNA to today's peer-to-peer communications and distributed computing environment. Following are some of SNA's basic concepts.
SNMP	Simple Network Management Protocol
Spare Memory Chip	Memory chip technology with the ability to continue to run in the face of any single or multi-bit chip error on a DRAM.
SRM	Supplier Relationship Manager (SAP suite)
SSI	Single System Image
TOC	Transfer of Control
UDP	User Datagram Protocol — A TCP/IP protocol that allows an application to send a message to one of several applications running in the destination machine. The application is responsible for reliable delivery.
XML	EXtensible Markup Language. An open standard for describing data from the W3C. It is used for defining data elements on a Web page and business-to-business documents. Definition from Tech Encyclopedia.

Resources

Topic	Resource Access
BEA	www.bea.com
BEA and HP website	http://bea.alliance.hp.com
BEA: Java Developer's Journal "Readers' Choice Awards	http://www.sys-con.com/2001/PR/code.cfm?page=10302002a
Customer Marketing	http://esp.mayfield.hp.com:2000/nav24/ext/cust1st/sr/index.htm
Customer Marketing	http://esp.mayfield.hp.com:2000/nav24/ext/cust1st/sr/index.htm
Engage ESS	Phone: 408-447-7070 or 800-424-0993, email: CSPS_Americas@hp.com, or website: http://csps.fc.hp.com/ama
HPS Rep Locator	http://acbsii.cxo.cpqcorp.net/resource_list/i-resource_list1.asp?
HPTC Competitive Information on ESP	ESP Keyword: battle
HPTC ESP	ESP Keyword: sellhptc
HPTC Internal Portal	http://esp.mayfield.hp.com:2000/nav24/sellhptc
HPTC: External information	http://www.hp.com/go/hptc
HPTC: ISVs and Benchmarks	http://techmktg.rsn.hp.com/
HP-UX	http://www.hp/go/hp-ux, manageability->partitioning
IT Consolidation on ESP	ESP Keyword: SELLITCONSOLIDATION
IT Consolidation: External website	http:www.hp.com/large
NonStop Servers: Applications	http://solutionstore.cac.cpqcorp.net/
NonStop Servers: DSPP, the new HP partner program	http://espd.cup.hp.com/default.htm, search solution portfolio
Oracle and HP partnership information	http://www.oracle.hp.com
Oracle Awards	http://www.oracle.com, see Company Information/Oracle Awards
Oracle: AMR Report	http://www.oracle.com/features/9i/index.html?t1db_facts.html
Oracle: EBS Upgrade Program	http://www.oracle.hp.com/ebizupgrades
Oracle: FactPoint Survey	http://www.oracle.com/features/facts/index.html?9i_factpoint.html
Oracle: Forrester TechRankings	http://www.forrester.com/TechRankings/Reprints/oracleas.htm
Oracle: Java Developer's Journal "Readers' Choice Awards	http://www.sys-con.com/2001/PR/code.cfm?page=10302002a
Oracle: IBM's (and Oracle's plans for U2 users by IT Analysis	http://www.theregister.co.uk/
Oracle9i Collaboration Suite Release 2 Business Whitepaper	http://www.oracle.com/ip/deploy/cs/index.html, see Product Information->Business Whitepaper
Partitions: HP-UX Virtual Partitions book	http://www.hp.com/hpbooks/prentice/ptr_0130352128.html
Partitions: Customer Education	http://education.hp.com/
Partitioning: Network World Fusion Article	http://www.nwfusion.com/news/2003/0224specialfocus.html
PeopleSoft and HP website	http://www.peoplesoft-hp.com
PeopleSoft Awards	http://www.peoplesoft.com/corp/en/about/overview/awards.asp
PeopleSoft customer list in Annual Report	http://www.peoplesoft.com/media/en/pdf/corp_report_2001.pdf
PeopleSoft on ESP	ESP Keyword: PEOPLESOFT
PeopleSoft sizing tools	http://www.peoplesoft-hp.com
PeopleSoft: eCenter	http://www.hp.com/go/ecenter
PeopleSoft: product and services	www.peoplesoft.com
SAP and HP site	http://saphpcc.bbn.hp.com
SAP External information	http://www.hp.com/go/sap
SAP: Gartner Research SCP Magice Quadrant	http://www.gartner.com/webletter/sap_germany_issue3/index.html

Topic	Resource Access
Services: Customer Support Kit on ESP	http://esp.mayfield.hp.com:2000/nav24/ext/cskit/sr/index.html
ServiceControl	http://www.hp.com/go/servicecontrol
Services: Discovery	http://discovery.services.hp.com
Services: Discovery	http://discovery.services.hp.com
Services: Home Page	http://servicesonline.hp.com/index.htm
Services: HP Services Home Page	http://servicesonline.hp.com/index.htm
Services: HP Services Playbook	http://hps.corp.hp.com/
Services: HPS Rep Locator	http://acbsii.cxo.cpqcorp.net/resource_list/i-resource_list1.asp?
Services: Integrated Support Kit on ESP	http://esp.mayfield.hp.com:2000/nav24/ext/intkit/sr/index.html
Services: Playbook	http://hps.corp.hp.com/
Siebel sizing and configuration	siebel.hp@hp.com or call (650) 295-5595
Siebel Success stories and alliance information	http://www.hp-siebel.com
Siebel: Demos, ROI Tools, detailed product information	http://www.siebel.com
Software	
Support: Customer Support Kit on ESP	http://esp.mayfield.hp.com:2000/nav24/ext/cskit/sr/index.html
Support: Integrated Support Kit on ESP	http://esp.mayfield.hp.com:2000/nav24/ext/intkit/sr/index.html

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