

Eight Easy Steps to Build an HP BladeSystem c-Class Solution



1. Select the HP BladeSystem c7000 or c3000 Enclosure.

2. Choose your blades and options.

3. Choose your storage options.

4. Select power and cooling configurations.

5. Choose Ethernet mezzanine cards, HBAs, and interconnects.

6. Choose your operating system and applications.

7. Add HP Insight software.

8. Choose your services.

HP BladeSystem c7000 rack enclosure
Removable bay height dividers (half/full-height)

Built-in HP Onboard Administrator with interactive LCD

*Only BTO SKUs

HP BladeSystem c3000 Rack Enclosure
HP BladeSystem c3000 Tower Enclosure

BL280c BL2x220c BL460c BL465c
BL490c BL495c WS460c PCI expansion blade
BL680c BL685c BL860c BL870c

Options
Hard drive Solid State drive Memory

SB40c direct-attach storage blade
SB40c with VSA for iSCSI storage in VMware environments
X1800sb (for file and iSCSI storage)
SB1760c tape blade (LTO-4)
SB920c tape blade (LTO-3)

HP external storage (SAN storage)
EVA4400 MSA2000 G2 (FC, iSCSI, or SAS)
X1600 Unified Storage (File and iSCSI)
X1800 Unified Storage (File and iSCSI)
MDS600

Active Cool Fan
Power outlets
Rack PDU UPS

Flex-10 Virtual Connect
Virtual Connect Ethernet and Fibre Channel modules
Flex-10 NC532m Flex-10 Ethernet
New! HP ProCurve Ethernet Blade Switches
New! 10Gb Ethernet Pass-Thru Module
PCI Express Quad-port Gigabit Server Adapter
Emulex Fibre Channel HBAs
QLogic Fibre Channel HBAs
Brocade SAN Switch
Cisco MDS 9124e Fabric Switch
Cisco Catalyst Blade Switches
I/O Accelerator
SAS Switch

Linux
Microsoft
HP-UX 11i
30th ANNIVERSARY
vmware
CITRIX

HP Insight Dynamics
HP Virtual Connect Enterprise Manager
HP Insight Control

- HP Care Pack services
- HP Factory Express: factory-based CTO solutions
- HP Education Services
- HP Financial Services
- HP BladeSystem Matrix

Or choose an HP BladeSystem Matrix...

and get the benefits of shared services today

- 1. Select the HP BladeSystem enclosure.**
* For BTO models, choose HP BladeSystem enclosures bundled with Insight Control (bundle is highly recommended as the lower-cost option)
c7000*
– 16 half-height, eight full-height bays or a combination of both
c3000
– Eight half-height, four full-height bays or a combination of both
- 2. Choose your blades and options.**
HP ProLiant BL280c G6 server blade
– Half-height; up to 16 per c7000 enclosure/up to eight per c3000 enclosure
– Up to two Intel® Xeon® dual- or quad-core processors
HP ProLiant BL2x220c G6 server blade
– Half-height chassis, with two independent server nodes
– Up to two Intel Xeon dual- or quad-core processors per server node
HP ProLiant BL460c G6 server blade
– Half-height; up to 16 per c7000 enclosure/up to eight per c3000 enclosure
– Two embedded 10-Gigabit Flex-10 LAN ports
– Up to two Intel Xeon dual- or quad-core processors
HP ProLiant BL465c G6 server blade
– Half-height; up to 16 per c7000 enclosure/up to eight per c3000 enclosure
– Up to two AMD Opteron™ 2400 series six-core processors
HP ProLiant BL490c G6 server blade
– Half-height; up to 16 per c7000 enclosure/up to eight per c3000 enclosure
– Two embedded 10-Gigabit Flex-10 LAN ports
– Up to two AMD Opteron™ 2400 series six-core processors
HP ProLiant BL495c G6 server blade
– Half-height; up to 16 per c7000 enclosure/up to eight per c3000 enclosure
– Two embedded 10-Gigabit Flex-10 LAN ports
– Up to two AMD Opteron™ 2400 series six-core processors

- 3. Choose storage options.**
HP StorageWorks SB40c direct storage blade
– Add up to six SFF hot-plug SAS or SATA HDDs for direct attach storage
– 1800 GB capacity
– Turn the SB40c into iSCSI shared storage with the Virtual SAN Appliance Software
HP StorageWorks X1800sb Shared Storage Blade
– Connect X1800sb to SB40c to provide shared storage for servers inside the enclosure
– Consolidates file serving (NAS), shared application storage (iSCSI SAN), and data protection under unified management
HP StorageWorks X3800sb SAN Network Storage Gateway
– Use the X3800sb Gateway to store file data on your existing SAN
– iSCSI connectivity
HP StorageWorks sb1760c Tape Blade
– Direct data backup of adjacent server blade with network backup capability for storage residing within the enclosure
– LTO-4 Ultrium technology (SB1760) and LTO-3 Ultrium technology (SB920c)

- 4. Select power and cooling configurations.**
c7000
– Up to six power supplies and up to ten fans
– Single- or three-phase power options and N+N and N+1 for power supply redundancy
c3000
– Up to six power supplies and up to six fans
– Single-phase 110/220 V power
Choose your HP PDU and UPS.
– Choice of Modular or Monitored PDU
– 4.9 kVA to 17.3 kVA single- or three-phase
– Single- or three-phase UPS systems ranging from 5000 VA to 60 kW (N+1)
Choose your HP 10000 G2 Rack or Modular Cooling System.
– Capabilities up to 35 kW per rack
- 5. Choose Ethernet mezzanine cards, HBAs, and interconnects.**
Integrated HP BladeSystem c-Class Interconnects pass the network adapter signals from the server blades to external networks.
Interconnect options include:
– Ethernet mezzanine cards, Fibre Channel HBAs
– HP Virtual Connect Ethernet and Virtual Connect Fibre Channel modules
– Fibre Channel switch modules
– Ethernet and Fibre Channel signal pass-thru modules
– InfiniBand HBAs and switches
– SAS HBAs and switch to connect to MSA2000sa or MDS600
– I/O Accelerator—solid-state storage for applications requiring ultra high transaction rates and real-time data access
– Up to eight interconnects per c7000 enclosure/up to four interconnects per c3000 enclosure
– All interconnects should be deployed in pairs for high availability
- 6. Choose your operating system and applications.**
– Linux
– Microsoft® Windows® Server
– Microsoft Windows Server Hyper-V
– HP-UX 11i
– OpenVMS

- 7. Add HP Insight software.**
HP Insight Dynamics
– HP Insight Dynamics for ProLiant
– HP Insight Dynamics – VSE for Integrity
– HP-UX 11i v3 Virtual Server Operating Environment
HP Virtual Connect Enterprise Manager software
– Simplified management to reduce complexity and operating costs
– Centralizes Virtual Connect management to control connectivity to LANs/SANs—configure and manage groups of Virtual Connect domains
– Respond quickly to change
– Add, change, and recover servers across the data center in minutes
HP Insight Control for essential infrastructure management
– HP Insight Control
– HP Insight Control for Linux
- 8. Choose your services.**
HP Care Pack services:
– HP Installation and Startup Service for c-Class BladeSystem Service
– HP BladeSystem Enhanced Network Installation and Startup Service for c-Class Service
– HP Installation and Startup Service for HP Insight Dynamics for ProLiant
– HP Installation and Startup Service for HP Virtual Connect Enterprise Manager software
– HP Installation and Startup Service for HP Insight Control
– HP Support Plus 24 Service
– HP Proactive BladeSystem Service
– HP Data Center services
HP Factory Express: factory-based CTO solutions
HP Education Services
HP Financial Services
HP BladeSystem Matrix

...it's simply a question of choosing the components that fit your needs.



Select the HP BladeSystem c7000 or c3000 Enclosure.

- Insight Control suites’ benefits: cost savings, fewer SKUs, and removal of guesswork
- Pre-integrates hot-pluggable power and cooling components
- All components are modular and hot swappable, and support a variety of configurations and redundancy modes
- Designed for use in industry-standard server racks

c7000

- Eight interconnect bays for network and storage connectivity
- c7000 = 10U

c3000

- Four interconnect bays for network and storage connectivity
- c3000 = 6U
- Support for HP 1200 W –48 V DC common slot power supply
- Support for HP c3000 tower security option

Each enclosure comes with one HP Onboard Administrator (OA) module.

- Built-in three-inch LCD display for fast setup and configuration of up to 64 servers in 15 minutes
- Add a second OA module for full redundancy

Note: 1U = 1.75 inches

Choose your blades and options.

HP ProLiant BL280c G6 server blade

- Maximum memory (optional) 48 GB PC2-5300 DDR2 registered DIMMs
- Up to two SFF NHP SATA drives
- Dual-port Fibre Channel mezzanine (4 GB) options for SAN connectivity

HP ProLiant BL2x220c G6 server blade

- 48 GB per server node, 96 GB per chassis—DDR3 registered or unbuffered memory
- 6 sockets, DDR3 registered DIMMs (per server node)
- 4X DDR InfiniBand (IB) mezzanine (20 Gb/s) options for low-latency server interconnectivity
- Requires four interconnect modules

HP ProLiant BL460c G6 server blade

- Maximum memory (optional): 192 GB using 16 GB DDR3 RDIMMs (96 GB using 8 GB DDR3 RDIMMs)
- Up to two SFF hot-plug Solid State, SAS, or SATA hard drives
- Dual-port Fibre Channel mezzanine (84 Gb) options for SAN connectivity

HP ProLiant BL465c G6 server blade

- Maximum memory (optional): 64 GB PC2-5300 DDR2 registered DIMMs
- Up to two SFF hot-plug Solid State, SAS, or SATA hard drives
- Dual-port Fibre Channel mezzanine (4 Gb) options for SAN connectivity

HP ProLiant BL490c G6 server blade

- Maximum memory (optional): 192 GB using 16 GB DDR3 registered DIMMs (144 GB using 8 GB RDIMMs)
- Up to two non-hot-plug SATA Solid State hard drives (SSD)
- Optional Smart Array P712m for SSD hardware mirroring (4Q09)
- Dual-port Fibre Channel mezzanine (8 Gb) options for SAN connectivity

HP ProLiant BL495c G6 server blade

- Maximum memory (optional) 128 GB PC2-5300 DDR2 registered DIMMs
- Up to two non-hot-plug SATA Solid State hard drives (SSD)
- Optional Smart Array P712m for SSD hardware mirroring
- Dual-port Fibre Channel mezzanine (4 Gb) options for SAN connectivity

HP ProLiant ws460c G6 Workstation Blade

- High-performance remote access via HP Remote Graphics Software
- Range of 3D graphics card performance
- Certified for Microsoft® Windows® XP 32-bit, X64, and Windows Vista® Business Ultimate (32-bit and 64-bit) and Red Hat Enterprise Linux
- Major CAD and Oil & Gas application certifications
- Access blade workstation from any Windows XP/Vista desktop/laptop or an XPe or Thin Client
- Multi-user/site remote collaboration with higher performance over WAN
- Mature/Proven solution with customer references

HP PCI expansion blade

- Same configuration rules as the SB40c storage blade
- PCI Express mezzanine pass-thru card required for full-height server blades
- Provides customers with the opportunity to use existing large form factor PCI-X or PCIe cards (e.g., XML or SSL acceleration, VoIP, or fax cards)

HP ProLiant BL680c server blade

- Maximum memory (optional): 128 GB PC2-5300 fully buffered DDR2 DIMMs
- Up to two SFF hot-plug Solid State, SAS, or SATA hard drives
- Fibre Channel SAN support: dual-port Fibre Channel adapter option

HP ProLiant BL685c G6 server blade

- Maximum memory (optional): 128 GB PC2-5300 DDR2 registered DIMMs
- Up to two SFF hot-plug Solid State, SAS, or SATA hard drives
- Fibre Channel SAN support: dual-port Fibre Channel adapter option

HP Integrity BL860c server blade

- Maximum memory (optional): 48 GB PC4200 ECC double chip spare DDR2
- Up to two hot-plug SFF Solid State or SAS hard drives
- Operating systems: HP-UX 11i; Red Hat and SUSE Linux; Windows Server 2003; OpenVMS

HP Integrity BL870c server blade

- Maximum memory (optional): 192 GB PC4200 ECC double chip spare DDR2
- Up to four hot-plug SFF SAS hard drives
- Operating systems: HP-UX 11i; Red Hat and SUSE Linux; Windows Server 2003; OpenVMS

Choose your storage options.

HP StorageWorks SB40c direct storage blade

- Direct-attach storage to adjacent server blade with high-speed PCI Express connection
- iSCSI—convert the SB40c to shared storage with the Virtual Server Appliance license

HP StorageWorks X1800 and X3800 Shared Storage and Gateway Blade

- Add file serving and iSCSI shared storage to any server in the enclosure
- Use the Gateway Blade (X3800) to add file services to a SAN

HP StorageWorks Ultrium 1760 and 920 Tape Blades

- Ships standard with HP StorageWorks Data Protector Express Single Server Edition
- Includes One-Button Disaster Recovery (OBDR)

HP External Storage (FC, iSCSI, NAS, and zoned DAS)

- MSA2000 series supports a mixture of SAS and SATA hard drives in the same enclosure, up to 60 TB (SATA)
- MDS600: add 70 LFF drives for high-density, low-cost zoned direct-attach storage
- P4000: add highly available iSCSI with HP LeftHand P4000 SANs
- HP StorageWorks EVA4400 external shared storage
- EVA4400: utilizes Fibre Channel and SATA hard drives, a fully virtualized SAN array
- HP StorageWorks Network Storage Systems X1000
- X1000: add file storage (NAS), shared application storage (iSCSI SAN), and data protection

Select power and cooling configurations.

Fan and power placement rules for c7000 enclosure:

- Full enclosure requirements: six power supplies and eight fans (ideal: ten fans to reduce noise and electricity)
- Half-filled enclosure: four power supplies and six fans
- All power supplies are hot-pluggable for easy service

| Blade inserted in: | Zone 1 | Zone 2 | Zone 1-3 | Zone 1-4 |
|--|------------|------------|-------------|-------------|
| Blade (from front of unit) | | | | |
| Maximum number of blades | 4 HH, 2 FH | 8 HH, 4 FH | 12 HH, 6 FH | 16 HH, 8 FH |
| Fan placement (from rear of unit) | | | | |
| PS = N | | | | |
| PS = N+1 | | | | |
| PS = N+N | | | | |

Fan and power placement rules for c3000 enclosure:

- For a full c3000 enclosure, order four power supplies in a Power Supply Redundant (N+1) configuration and add six total fans.
- For a full c3000 enclosure, order six power supplies in an AC redundant (N+N) configuration and add six total fans.

Note: Recommend all customers purchase eight fans. Ten fans for optimum power and cooling.

Choose your PDU and UPS.

- The online tool www.upssizer.com can help you determine the best power products for your BladeSystem configuration.
- Additional Power Product Information can be found at www.hp.com/go/rackandpower.

Choose your HP 10000 G2 Rack or Modular Cooling System.

- Choose from a large array of rack sizes to securely mount your HP BladeSystem Solution.
- The HP Modular Cooling System can also be used when higher cooling capacities are needed (up to 35 kW).
- Go to www.hp.com/go/rackandpower for more information.

Additional questions can be directed to rackandpoweramericas@hp.com

Choose Ethernet mezzanine cards, HBAs, and interconnects.

- Total number of interconnect modules required depends on the number of NICs and HBAs supported on the server blades.
- HP BladeSystem switches and HP Virtual Connect modules consolidate NIC and HBA connections, reducing the number of cables required to connect to your network.
- c7000: One interconnect module supports one corresponding NIC or HBA connection for up to 16 half-height server blades, or two corresponding ports for up to eight full-height server blades.¹
- c3000: One interconnect module in bay 1 supports two corresponding embedded NIC connections for up to eight half-height server blades, or four embedded NIC connections for up to four full-height server blades. One interconnect module in bay 2 supports two corresponding connections (or four on full-height servers) from mezzanine 1. Interconnect modules in bay 3 and 4 each support one corresponding port from the mezzanine 2 option on each of the eight half-height server blades, or two corresponding ports from mezzanine 2 and 3 options for each of the full-height server blades.²

Choose Ethernet mezzanine cards, HBAs, and interconnects.

Choose Ethernet and HBAs for server blades.

- Half-height server blades include two standard Ethernet 1 Gb NICs (two multifunction)
- Full-height server blades include four standard Ethernet 1 Gb NICs (two multifunction, two 1 Gb)
- Half-height server blades support two PCI Express mezzanine option slots
- Full-height server blades support three PCI Express mezzanine option slots

Note: BL495c G5, BL495c G6, BL460c G6, BL490c G6 include two standard Ethernet Flex-10 ports; BL685 G6 includes four standard Ethernet Flex-10 ports. Flex-10 Ethernet provides Flex-NIC features (up to four ports) per physical 10 Gb port when connected to a Virtual Connect Flex-10 module, a single 10 Gb port when connected to an HP ProCurve 6120XG or a 10 Gb Pass-thru module, or a single 1 Gb port when connected to a 1 Gb interconnect.

Available Ethernet mezzanine adapters

- NC382m Ethernet dual-port multifunction 1 GbE (replacement for NC373m, 73% reduction in power consumption, 15 W to 4 W)
- NC326m Ethernet dual-port 1 GbE
- NC325m Ethernet quad-port 1 GbE
- NC360m Ethernet dual-port 1 GbE (Intel)
- NC364m Ethernet quad-port 1 GbE (Intel)
- HP 10 Gb 516936-B21 Ethernet dual-port (Mellanox) XAUI (use with 10:10-Gb Ethernet BL-c switch)
- NC522m Flex-10 Ethernet dual-port 10 Gb (for DL/ML NC522 compatibility)
- NC532m Flex-10 Ethernet dual-port 10-GbE
- QMH4062 QLogic iSCSI adapter

HP PCI Express Mezzanine Pass-Thru Card for HP BladeSystem

- Four-lane PCIe pass-thru card that is required to provide PCIe connectivity from a full-height c-Class blade server to the SB40c storage blade or Ultrium 448c tape blade

Available Fibre Channel HBAs

- Emulex LPe1105-HP 4-Gb FC HBA (dual port)
- Emulex LPe1205-HP 8-Gb FC HBA (dual port)
- QLogic QMH2462 4-Gb FC HBA (dual port)
- QLogic QMH2562 HP 8-Gb FC HBA (dual port)

Available InfiniBand HBCs

- InfiniBand 4xDDR dual-port HBC
- InfiniBand 4xQDR dual-port HBC

Ethernet interconnect modules

- HP Virtual Connect Ethernet Module (add HP Virtual Connect Enterprise Manager software to simplify BladeSystem/Virtual Connect environments to significantly reduce operating costs)
- HP 1/10 Gb-F Virtual Connect Ethernet Module (supports fiber uplink connections)
- HP Virtual Connect Flex-10 Ethernet Module
- HP ProCurve 6120G/XG Switch (1/10 Gb)
- HP ProCurve 6120XG Switch (10/10 Gb) (single wide KR technology)
- Cisco Catalyst Blade Switch 3020, 3120G, 3120X
- GbE2c layer 2/3 Ethernet with Fibre
- 1:10-Gb Ethernet BL-c switch
- 10:10-Gb Ethernet BL-c switch (double-wide 10 Gb XAUI technology)
- Ethernet 1 Gb pass-thru module
- Ethernet 10 Gb pass-thru module (single-wide KR technology)

InfiniBand interconnect switch module

- HP 4xDDR InfiniBand Switch Module (double-wide, uses two interconnect bays)
- HP 4xQDR InfiniBand Switch Module (double-wide, uses two interconnect bays)

Fibre Channel interconnect modules

- HP Virtual Connect 4 Gb Fibre Channel module
- HP Virtual Connect 20- and 24-port 8 Gb Fibre Channel modules
- Brocade 8-Gb SAN Switch (Access Gateway)
- Cisco MDS 9124e Fabric Switch
- 4 Gb Fibre Channel pass-thru module

SAS interconnect modules

- P700 Mezzanine cards (256 MB and 512 MB)
- SAS switches: 8-port SAS Connectivity for MDS600 and MSA2000sa
- I/O Accelerator mezzanine solid-state storage cards in 80 GB, 160 GB, and 320 GB

¹ Note on c3000 Ethernet: Redundancy for embedded Ethernet ports requires an Ethernet mezzanine card in mezz 1 and a second Ethernet interconnect module in interconnect bay 2.

² Note on c3000 Fibre Channel: By installing the FC mezz card in mezz 2 (or mezz 3 on full-height servers), one port connects to interconnect bay 3 and one port to interconnect bay 4.

Choose your operating system and applications.

Linux

- HP, the worldwide market leader in Linux servers, provides a single interface for hardware, software services, and support.
- Enterprise Linux distributions from Red Hat and SUSE Novell can be purchased directly from HP.
- Red Hat, SUSE Novell, and Oracle EL are vendor certified and HP supported. Most ProLiant BladeSystem servers (x86) are enabled on community and regional Linux distributions.

Microsoft Windows Server

- Windows Server 2008 R2 Standard Enterprise & Datacenter Editions can be factory installed.
- Windows XP, X64, and Vista on the Workstation Blade is officially supported by HP and Microsoft.

Microsoft Windows Server Hyper-V

- Full integration with Windows Server 2008 (installed as server role)
- Support for both 64-bit and 32-bit guest operating systems
- Ability to assign up to four virtual CPUs and 32 GB RAM to each guest OS

HP-UX and OpenVMS

- The BL860c and BL870c are the perfect 64-bit platform for HP-UX 11i and OpenVMS.
- Opportunity to consolidate older HP-UX and OpenVMS platforms and to displace current UNIX® blades from IBM and/or Sun with a mission-critical, multi-OS environment
- Virtualization—Integrity Virtual Machines (IVMs) are an excellent way to virtualize your data center while increasing your server utilization. IVMs support multiple operating systems simultaneously as guests, including HP-UX, Windows, and Linux.

VMware

- VMware Sphere from HP combined with HP BladeSystem and HP Virtual Connect provide the ideal virtualization solution in the data center.
- Now available in an integrated solution on a USB key with VMware ESXi and broad server support to ensure the continuity of server standards

Citrix XenServer

- HP integrated Citrix XenServer combines the performance, security, and openness of the XenServer product line.

Sun Solaris 10

- Subscriptions and support from HP Technology Services

Add HP Insight software.

HP Insight software—infrastructure management software

HP Insight software helps businesses and organizations receive more from every hour, watt, and dollar of their IT infrastructure investments—physical and virtual

- Make more informed decisions.
- Accomplish more in less time.
- Deliver better service to the business.

For more information on HP Insight software, visit www.hp.com/go/insight.

Choose your services.

HP Installation and Startup Service for c-Class BladeSystem

- Onsite hardware installation of one blade enclosure, up to 16 server blades, up to eight single-wide interconnects, and power options
- Onsite software installation and configuration of HP Insight Control Environment for BladeSystem (or Insight Control Linux Edition for BladeSystem) and scripted OS

HP BladeSystem Enhanced Network Installation and Startup Service for c-Class

- Service planning interview—help assess network architecture needs such as: addressing, server/application bandwidth, LAN segmentation, uplinks and port aggregation, traffic prioritization, port security, and networking software revision check
- Configure network devices and verify connectivity (recommended for Virtual Connect implementations)

HP Installation and Startup Service for HP Insight Dynamics for ProLiant

- Verification prior to installation that all service prerequisites are met
- Expedited installation, provided all service prerequisites are met prior to commencement of service

HP Installation and Startup Service for HP Virtual Connect Enterprise Manager

- Provides for the installation and configuration of VCEM on one central management server (CMS)
- The importation of two HP BladeSystem c-Class enclosures (Virtual Connect domains) into the VCEM management application, and creation of one Virtual Connect domain group

HP Installation and Startup Service for HP Insight Control suite

- Deployment and configuration of key features such as: system monitoring and control, power management and control, remote control, performance management, rapid deployment, vulnerability scanning, and patch management

HP Support Plus 24 Service

- Onsite response time commitment
- Onsite hardware support, parts, and material (24x7 coverage)

HP Proactive BladeSystem Service

- Assigned Account Support Manager
- Account Support Plan

HP Data Center Optimization services

- Data Center Facility Assessment—provides a thorough review and analysis of the facility’s infrastructure
- Thermal Assessment—modeling tools and techniques to determine the unique thermal conditions
- Thermal Quick Assessment—a basic understanding of the capability of the data center to support high-density blade equipment
- Site Planning—a comprehensive site-preparation audit helps successfully integrate new equipment into a facility

HP Factory Express

- Customers choose how their solution is built, tested, integrated, shipped, and deployed
- Blade-level configuration—slot locations for mezzanine cards
- Enclosure-level configuration—c-Class enclosure can ship loaded with blades, fans, power, and switches
- Rack-level configuration—only supported in 10K G2 universal rack or MCS
- Factory Express services allow for:
 - Enclosure (customer-defined configuration) with blades
 - Above + customer-defined racking and cabling
 - All above + onsite final installation

- All above + more complex configurations
- All above + HP Design Services
- Standalone blade (customer-defined configuration)

HP Education and training services

- HP BladeSystem install and configure—hardware hands-on training for installation and setup
- HP BladeSystem Administration training (ProLiant or Integrity) including iLO, OA, etc.
- HP Insight Dynamics, Virtual Connect Enterprise Manager, and Boot-from-SAN training
- HP Workstation Blade/Blade PC and Remote Desktop/VDI training
- HP Care Pack Total Education One allows customers to budget upfront training credits for HP BladeSystem c-Class, HP BladeSystem Matrix, HP Insight Dynamics, HP Insight Control, HP Virtual Connect Enterprise Manager, Boot-from-SAN, Data Center, Storage, VMware, Citrix XenServer, HP-UX, Linux, Microsoft HyperV, etc. courses; training available in instructor-led classroom, live online HP RAIL, or self-paced formats

HP Financial Services

- Finance hardware, software, and services in one easy payment
- Refresh technology to regularly reduce maintenance and support costs associated with aging technology
- Customers can take advantage of new improvements in technology now and in the future

HP BladeSystem Matrix

- Provides converged shared services infrastructure for cloud computing

Resources

HP BladeSystem

www.hp.com/go/bladesystem – Main page for HP BladeSystem
www.hp.com/go/matrix – HP BladeSystem Matrix
www.hp.com/go/virtualconnect – Virtual Connect page
www.hp.com/go/bladesystem/powercalculator – Assists in sizing power infrastructure
www.hp.com/go/bladespecials – BladeSystem special offers page
www.hp.com/go/rackandpower – HP rack and power products information
www.hp.com/products/harddiskdrives – HP Hard Drives and Solid State Drives information
www.upssizer.com – Can help you choose your PDU and UPS, the best power products
www.hp.com/go/integrity – HP Integrity server family main page
www.hp.com/go/bladeworkstation – Blade workstation overview, customer reference, and solutions

HP Financial Services

www.hp.com/go/hpfinancialservices – HP Financial Services main page

Linux

www.hp.com/go/linux – Open Source and Linux from HP

HP management software

www.hp.com/go/insight – HP infrastructure management software (HP Insight software)

HP Services

www.hp.com/services/insight

www.hp.com/go/factoryexpress – HP Factory Express

Storage

www.hp.com/go/storage – Main page for HP StorageWorks

Technical training

www.hp.com/education/sections/proliant – HP BladeSystem training
www.hp.com/education – HP Education Services

Virtualization

www.hp.com/go/virtualize – Virtual product offerings

Windows

www.hp.com/go/proliantwindows – Windows Server on ProLiant
www.hp.com/go/WS2008R2 – Windows Server 2008 R2

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