



# IBM 7042-CR8 Rack-mounted Hardware Management Console enables control and management of IBM POWER processor-based servers

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## At a glance

The Hardware Management Console (HMC) version 8 release 8.1.0 is designed to deliver support for:

- RAID 1, enabling data redundancy
- Up to 16 concurrent Live Partition Mobility (LPM) activities with IBM® PowerVM®
- Latest web browsers

For ordering, contact your IBM representative, an IBM Business Partner, or IBM Americas Call Centers at 800-IBM-CALL (Reference: YE001).

## Overview

The underlying appliance hardware of the Hardware Management Console (HMC) is updated to stay current with updates in hardware technology. The 7042-CR7 system is being replaced with the 7042-CR8.

### RAID 1

HMCs continue to offer a high-availability feature. The new 7042-CR8, by default, includes two hard drives with RAID 1 configured. If you prefer not to have RAID 1 enabled on the HMC, you can override it in the ordering system and remove the additional hard disk drive (HDD) from the order.

RAID 1 is also offered on the 7042-CR6, 7042-CR7, and 7042-CR8 as an MES upgrade option.

RAID 1 uses data mirroring. Two physical drives are combined into an array and the same data is written to both drives. This makes the drives a "mirror image" of each other. If one of the drives experiences a failure, it is taken offline and the HMC continues operating with the other drive.

### Removal of internal/external modem

The 7042-CR8 HMC does not offer an internal or external modem or support for these.

**New features:**

- Updated browser support: With the release of version 8 release 8.1.0, the HMC now supports Mozilla Firefox ESR 17 and 24, Microsoft™ Internet Explorer 9 through 11, Chrome 31 and Java™ 7 Runtime Environment.
- Virtualization-oriented capacity and performance monitor and performance statistics are available through the HMC. These performance statistics can help you understand the workload characteristics and to plan for capacity planning.

**Supported models**

HMC V8.8.1.0 is supported on HMC models 7042-CR5, 7042-CR6, 7042-CR7, 7042-CR8, and 7042-C08. No other HMC hardware models support version 8 release 8.1.0.

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**Key prerequisites**

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HMC V.8.8.1.0 supports POWER6® technology-based servers, or higher.

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**Planned availability date**

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June 10, 2014

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**Description**

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Transitioning from SDMC/IVM management to HMC management: Transitioning from SDMC management of blades to HMC management of blades simply requires the user to add the blades to the management domain of the new console (HMC). This can be performed without a blade server outage.

The process for converting IVM-managed blades to be HMC managed is the same as the process for converting IVM-managed rack servers to HMC-managed rack servers. When converting from IVM-managed to HMC-managed blades, all partitions must be manually reconfigured and a blade server outage is required.

Refer to the Power Systems™ hardware information in IBM Knowledge Center for more information.

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**Accessibility by people with disabilities**

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A US Section 508 Voluntary Product Accessibility Template (VPAT) containing details on accessibility compliance can be requested at

[http://www.ibm.com/able/product\\_accessibility/index.html](http://www.ibm.com/able/product_accessibility/index.html)

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**Section 508 of the US Rehabilitation Act**

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The IBM 7042-CR8 Rack-mounted Hardware Management Console is capable as of June 10, 2014, when used in accordance with IBM's associated documentation, of minimally satisfying the applicable requirements of Section 508 of the Rehabilitation Act, provided the user attaches another system that contains the assistive technology necessary to interact through a command-line interface.

## Product number

The following are newly announced features on the specific models of the IBM Power Systems 7042 machine type:

Description	Machine type	Model	Feature number
Rack-mount Hardware Management Console	7042	CR8	
Custom Service Specify, Poughkeepsie, USA	7042	CR8	ECSP
ADDTNL 8GB(1X8GB), 1.600GHZ DDR3 LP RDIMMS	7042	CR8	EM0A

The following are features already announced for the IBM Power Systems 7042 machine type:

Description	Machine type	Model	Feature number
One CSC Billing Unit	7042	CR8	0010
Ten CSC Billing Units	7042	CR8	0011
Balanced Warehouse Solution Indicator	7042	CR8	0710
Power Cloud Integrated Solution Indicator For Order Routing	7042	CR8	0712
Hardware Management Console Licensed Machine Code v7	7042	CR8	0962
US TAA Compliance Indicator	7042	CR8	0983
Smart Analytics System routing indicator	7042	CR8	1114
Custom Service Specify, Rochester Minn, USA	7042	CR8	1140
8GB Pluggable USB Memory Option	7042	CR8	1208
ADDTNL 500GB SATA HDD, 2.5" SLIM-HS	7042	CR8	1998
Widescreen LCD Monitor	7042	CR8	3632
IBM T120 Flat Panel Monitor	7042	CR8	3643
IBM T119 Flat Panel Monitor	7042	CR8	3644
IBM T117 Flat Panel Monitor	7042	CR8	3645
1.8 M (6-ft) Extender Cable for Displays (15-pin D-shell to 15-pin D-shell)	7042	CR8	4242
Extender Cable - USB Keyboards, 1.8M	7042	CR8	4256

One and only one rack indicator feature is required on all orders (#4650 to #4666).

Rack Indicator- Not Factory Integrated	7042	CR8	4650
Rack Indicator, Rack #1	7042	CR8	4651
Rack Indicator, Rack #2	7042	CR8	4652
Rack Indicator, Rack #3	7042	CR8	4653
Rack Indicator, Rack #4	7042	CR8	4654
Rack Indicator, Rack #5	7042	CR8	4655
Rack Indicator, Rack #6	7042	CR8	4656
Rack Indicator, Rack #7	7042	CR8	4657
Rack Indicator, Rack #8	7042	CR8	4658
Rack Indicator, Rack #9	7042	CR8	4659
Rack Indicator, Rack #10	7042	CR8	4660
Rack Indicator, Rack #11	7042	CR8	4661
Rack Indicator, Rack #12	7042	CR8	4662
Rack Indicator, Rack #13	7042	CR8	4663
Rack Indicator, Rack #14	7042	CR8	4664
Rack Indicator, Rack #15	7042	CR8	4665
Rack Indicator, Rack #16	7042	CR8	4666
RFID Tags for Servers, Blades, BladeCenters, Racks, and HMCs	7042	CR8	5524
Full width keyboard -- USB, US English, #103P	7042	CR8	5951
Full width keyboard -- USB, French, #189	7042	CR8	5952
Full width keyboard -- USB, Italian, #142	7042	CR8	5953
Full width keyboard -- USB, German/Austrian, #129	7042	CR8	5954
Full width keyboard -- USB, UK English, #166P	7042	CR8	5955
Full width keyboard -- USB, Spanish, #172	7042	CR8	5956
Full width keyboard -- USB, Japanese, #194	7042	CR8	5957
Full width keyboard -- USB, Brazilian Portuguese, #275	7042	CR8	5958
Full width keyboard -- USB, Hungarian, #208	7042	CR8	5959

Full width Keyboard -- USB, Korean, #413	7042	CR8	5960
Full width Keyboard -- USB, Chinese, #467	7042	CR8	5961
Full width Keyboard -- USB, French Canadian, #445	7042	CR8	5962
Full width Keyboard -- USB, Canadian French, #058	7042	CR8	5963
Full width Keyboard -- USB, Belgian/UK, #120	7042	CR8	5964
Full width Keyboard -- USB, Swedish/Finnish, #153	7042	CR8	5965
Full width Keyboard -- USB, Danish, #159	7042	CR8	5966
Full width Keyboard -- USB, Bulgarian, #442	7042	CR8	5967
Full width Keyboard -- USB, Swiss/French/German, #150	7042	CR8	5968
Full width Keyboard -- USB, Norwegian, #155	7042	CR8	5969
Full width Keyboard -- USB, Dutch, #143	7042	CR8	5970
Full width Keyboard -- USB, Portuguese, #163	7042	CR8	5971
Full width Keyboard -- USB, Greek, #319	7042	CR8	5972
Full width Keyboard -- USB, Hebrew, #212	7042	CR8	5973
Full width Keyboard -- USB, Polish, #214	7042	CR8	5974
Full width Keyboard -- USB, Slovakian, #245	7042	CR8	5975
Full width Keyboard -- USB, Czech, #243	7042	CR8	5976
Full width Keyboard -- USB, Turkish, #179	7042	CR8	5977
Full width Keyboard -- USB, LA Spanish, #171	7042	CR8	5978
Full width Keyboard -- USB, Arabic, #253	7042	CR8	5979
Full width Keyboard -- USB, Thai, #191	7042	CR8	5980
Full width Keyboard -- USB, Russian, #443	7042	CR8	5981
Full width Keyboard -- USB, Slovenian, #234	7042	CR8	5982
Full width Keyboard -- USB, US English Euro, #103P	7042	CR8	5983
Power Cord 4.3m (14-ft), Drawer to wall/IBM PDU (250V/10A)	7042	CR8	6458
Power Cord 4.3m (14-ft), Drawer To OEM PDU (125V, 15A)	7042	CR8	6460
Power Cord 4.3m (14-ft), Drawer to wall/OEM PDU (250V/15A) U. S.	7042	CR8	6469
Power Cord 1.8m (6-ft), Drawer to wall (125V/15A)	7042	CR8	6470
Power Cord 2.7m (9-ft), Drawer to wall/OEM PDU (125V/15A)	7042	CR8	6471
Power Cord 2.7m (9-ft), Drawer to wall/OEM PDU (250V/16A)	7042	CR8	6472
Power Cord 2.7m (9-ft), Drawer to wall/OEM PDU (250V/10A)	7042	CR8	6473
Power Cord 2.7m (9-ft), Drawer to wall/OEM PDU, (250V/13A)	7042	CR8	6474
Power Cord 2.7m (9-ft), Drawer to wall/OEM PDU, (250V/16A)	7042	CR8	6475
Power Cord 2.7m (9-ft), Drawer to wall/OEM PDU, (250V/10A)	7042	CR8	6476
Power Cord 2.7m (9-ft), Drawer to wall/OEM PDU, (250V/16A)	7042	CR8	6477
Power Cord 2.7 M(9-foot), To wall/OEM PDU, (250V, 16A)	7042	CR8	6478
Power Cord 2.7m (9-ft), Drawer to wall/OEM PDU, (125V/15A or 250V/10A )	7042	CR8	6488
Power Cord 2.7m (9-ft), Drawer to wall/OEM PDU, (250V/10A)	7042	CR8	6493
Power Cord 2.7m (9-ft), Drawer to wall/OEM PDU, (250V/10A)	7042	CR8	6494
Power Cord 2.7m (9-foot), To wall/OEM PDU, (250V, 10A)	7042	CR8	6495
Power Cord 2.7M (9-foot), To wall/OEM PDU, (250V, 10A)	7042	CR8	6496
Power Cable - Drawer to IBM PDU, 200-240V/10A	7042	CR8	6577
Power Cord 2.7M (9-foot), To wall/OEM PDU, (125V, 15A)	7042	CR8	6651
Power Cord 2.7M (9-foot), To wall/OEM PDU, (250V, 15A)	7042	CR8	6659
Power Cord 4.3m (14-ft), Drawer to wall/OEM PDU (125V/15A)	7042	CR8	6660
Power Cord 2.8m (9.2-ft), Drawer to wall/IBM PDU, (250V/10A)	7042	CR8	6665
Power Cord 4.3M (14-foot), Drawer to OEM PDU, (250V, 15A)	7042	CR8	6669
Power Cord (6-foot), To wall (125V, 15A), PT #59	7042	CR8	6670
Power Cord 2.7M (9-foot), Drawer to IBM PDU, 250V/10A	7042	CR8	6671
Power Cord 1.5M (5-foot), Drawer to IBM PDU,			

250V/10A	7042	CR8	6672
Power Cord 2.7m (9-ft), Drawer to wall/OEM PDU, (250V/10A)	7042	CR8	6680
Power Cord 1.8m (6-foot), To Wall, (250V, 15A)	7042	CR8	6687
Ethernet Cable, 6M, Hardware Management Console to System Unit	7042	CR8	7801
Ethernet Cable, 15m, Hardware Management Console to System Unit	7042	CR8	7802
Mouse - USB, with Keyboard Attachment Cable	7042	CR8	8841
USB Mouse	7042	CR8	8845
HMC/Server Order Linkage Indicator	7042	CR8	9069
Order Routing Indicator- System Plant	7042	CR8	9169
Language Group Specify - US English	7042	CR8	9300
Month Indicator	7042	CR8	9461
Day Indicator	7042	CR8	9462
Hour Indicator	7042	CR8	9463
Minute Indicator	7042	CR8	9464
Qty Indicator	7042	CR8	9465
Countable Member Indicator	7042	CR8	9466
Language Group Specify - Dutch	7042	CR8	9700
Language Group Specify - French	7042	CR8	9703
Language Group Specify - German	7042	CR8	9704
Language Group Specify - Polish	7042	CR8	9705
Language Group Specify - Norwegian	7042	CR8	9706
Language Group Specify - Portuguese	7042	CR8	9707
Language Group Specify - Spanish	7042	CR8	9708
Language Group Specify - Italian	7042	CR8	9711
Language Group Specify - Canadian French	7042	CR8	9712
Language Group Specify - Japanese	7042	CR8	9714
Language Group Specify - Traditional Chinese (Taiwan)	7042	CR8	9715
Language Group Specify - Korean	7042	CR8	9716
Language Group Specify - Turkish	7042	CR8	9718
Language Group Specify - Hungarian	7042	CR8	9719
Language Group Specify - Slovakian	7042	CR8	9720
Language Group Specify - Russian	7042	CR8	9721
Language Group Specify - Simplified Chinese (PRC)	7042	CR8	9722
Language Group Specify - Czech	7042	CR8	9724
Language Group Specify -- Romanian	7042	CR8	9725
Language Group Specify - Croatian	7042	CR8	9726
Language Group Specify -- Slovenian	7042	CR8	9727
Language Group Specify - Brazilian Portuguese	7042	CR8	9728
Language Group Specify - Thai	7042	CR8	9729
RAID 1 Upgrade for CR7/CR8	7042	CR8	EB2S
Custom Service Specify, Shenzhen, China	7042	CR8	ECSC
Custom Service Specify, Mexico	7042	CR8	ECSM
Full width Keyboard -- USB, US English, #103P	7042	CR8	EK51
Full width keyboard -- USB, French, #189	7042	CR8	EK52
Full width Keyboard -- USB, Italian, #142	7042	CR8	EK53
Full width Keyboard -- USB, German/Austrian, #129	7042	CR8	EK54
Full width Keyboard -- USB, UK English, #166P	7042	CR8	EK55
Full width Keyboard -- USB, Spanish, #172	7042	CR8	EK56
Full width keyboard -- USB, Japanese, #194	7042	CR8	EK57
Full width Keyboard -- USB, Brazilian Portuguese, #275	7042	CR8	EK58
Full width keyboard -- USB, Hungarian, #208	7042	CR8	EK59
Full width keyboard -- USB, Korean, #413	7042	CR8	EK60
Full width keyboard -- USB, Chinese, #467	7042	CR8	EK61
Full width keyboard -- USB, French Canadian, #445	7042	CR8	EK62
Full width keyboard -- USB, Belgian/UK, #120	7042	CR8	EK64
Full width keyboard -- USB, Swedish/Finnish, #153	7042	CR8	EK65
Full width keyboard -- USB, Danish, #159	7042	CR8	EK66
Full width keyboard -- USB, Bulgarian, #442	7042	CR8	EK67
Full width keyboard -- USB, Swiss/French/German, #150	7042	CR8	EK68
Full width keyboard -- USB, Norwegian, #155	7042	CR8	EK69
Full width keyboard -- USB, Dutch, #143	7042	CR8	EK70
Full width keyboard -- USB, Portuguese, #163	7042	CR8	EK71
Full width keyboard -- USB, Greek, #319	7042	CR8	EK72
Full width keyboard -- USB, Hebrew, #212	7042	CR8	EK73
Full width keyboard -- USB, Polish, #214	7042	CR8	EK74
Full width keyboard -- USB, Slovakian, #245	7042	CR8	EK75
Full width keyboard -- USB, Czech, #243	7042	CR8	EK76
Full width keyboard -- USB, Turkish, #179	7042	CR8	EK77

Full width Keyboard -- USB, LA Spanish, #171	7042	CR8	EK78
Full width Keyboard -- USB, Arabic, #253	7042	CR8	EK79
Full width Keyboard -- USB, Thai, #191	7042	CR8	EK80
Full width Keyboard -- USB, Russian, #443	7042	CR8	EK81
Full width Keyboard -- USB, Slovenian, #234	7042	CR8	EK82
Full width Keyboard -- USB, US English Euro, #103P	7042	CR8	EK83
RFID Tags for Servers, Compute Nodes, Chassis, Racks, and HMCs	7042	CR8	ERF1
S&H - No Charge	7042	CR8	ESC0
S&H	7042	CR8	ESC3
HMC CR7/CR8 Redundant Power® Supply, 550 W	7042	CR8	EU02

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## Business Partner information

If you are a Direct Reseller - System Reseller acquiring products from IBM, you may link directly to Business Partner information for this announcement. A PartnerWorld® ID and password are required (use IBM ID).

<https://www.ibm.com/partnerworld/mem/sla.jsp?num=114-060>

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## Publications

IBM Power Systems hardware documentation provides you with the following topical information:

- System overview
- Planning for the system
- Installing and configuring the system
- Working with consoles, terminals, and interfaces
- Managing system resources
- Working with operating systems and software applications
- Troubleshooting, service, and support

You can access the product documentation at

<http://publib.boulder.ibm.com/infocenter/powersys/v3r1m5/index.jsp>

Product documentation is also available on DVD (SK5T-7087).

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## Services

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### Global Technology Services®

IBM services include business consulting, outsourcing, hosting services, applications, and other technology management.

These services help you learn about, plan, install, manage, or optimize your IT infrastructure to be an on-demand business. They can help you integrate your high-speed networks, storage systems, application servers, wireless protocols, and an array of platforms, middleware, and communications software for IBM and many non-IBM offerings. IBM is your one-stop shop for IT support needs.

For details on available services, contact your IBM representative or visit

<http://www.ibm.com/services/>

For details on available IBM Business Continuity and Recovery Services, contact your IBM representative or visit

<http://www.ibm.com/services/continuity>

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## Technical information

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### Specified operating environment

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#### **Physical specifications**

- Height: 43 mm (1.7 in.)
- Width: 429 mm (16.9 in.)
- Depth: 734 mm (28.9 in.)
- Weight: 16.4 kg (36.2 lb)

To assure installability and serviceability in non-IBM industry-standard racks, review the installation planning information for any product-specific installation requirements.

#### **Operating environment**

- Temperature:
  - System on: 10° to 35° C (50° to 95° F)
  - System off: 5° to 45° C (41° to 113° F)
- Relative humidity:
  - System on: 20% to 80%
  - System off: 8% to 80%
- Acoustical noise emissions:
  - Idle: 6.1 bels
  - Operating: 6.1 bels
- Maximum altitude: 2,133 m (7,000 ft)

#### **Power requirements**

- Operating voltage: Sine-wave input (50 or 60 Hz) required; input voltage and frequency ranges automatically selected
  - Low range: 100 to 127 V ac
  - High range: 200 to 240 V ac
- Power source loading:
  - Minimum: 0.194 kVA
  - Maximum: 0.351 kVA
- Thermal output:
  - Minimum: 662 Btu/hr (194 watts)
  - Maximum: 1,198 Btu/hr

#### Equipment approvals and safety

- FCC - Verified to comply with Part 15 of the FCC Rules, Class A
- Canada ICES-003, issue 4, Class A
- UL/IEC 60950-1
- CSA C22.2 No. 60950-1
- NOM-019
- Argentina IEC60950-1

#### **Homologation**

- Each HMC must have access to a display, a keyboard, and a mouse.

- Information regarding supported Linux™ distributions on Power Systems servers is available at  
<http://www-03.ibm.com/systems/power/software/linux/index.html>
- If you need redundant HMC function, the servers can be attached to two separate HMCs to address availability requirements. Environments may include 7042-CR5, 7042-CR6, 7042-CR7, 7042-CR8, or 7042-C08. All HMCs must have the same level of HMC Licensed Machine Code.
- Management of multiple servers from an HMC may require the use of an Ethernet hub. An Ethernet hub will provide a physical connection from the HMC to each server rather than a logical Ethernet connection over a LAN.
- Each console must be configured with feature number 0962.

### **Software requirements**

The following web browsers have been tested for connection support with the HMC Licensed Machine Code Version 8 Release 8.1.0:

- Microsoft Internet Explorer 9.0 through 11.0
  - Internet Explorer 9.0, or later, is required if you are using IPv6 addresses on the network interface over which the browser is connected.
  - If your browser is configured to use an Internet proxy, then local Internet addresses should be included in the exception list. Consult your network administrator for more information. If you still need to use the proxy to get to the HMC, enable "Use HTTP 1.1 through proxy connections" under the Advanced tab in your Internet Options window.
- Firefox
  - Firefox versions ESR 17 and 24 are supported.
- Chrome 31 and Java 7 Runtime Environment is supported.

### **Limitations**

- The HMC is a dedicated-function device used only for the control and service functions of the Power servers. It is not available for use as a general purpose computing resource.
- The CR8 HMC requires a minimum HMC code level of Version 8 Release 8.1.0. This code level restricts the CR8 to management of POWER6, or later, servers.

The HMC user interface is available in the following languages:

- Brazilian Portuguese
- Catalan
- Czech
- Dutch
- English
- French
- French/Canadian
- German
- Hungarian
- Italian
- Japanese
- Korean
- Polish
- Portuguese
- Russian
- Simplified Chinese
- Slovakian
- Spanish



- Traditional Chinese

However, integrated Repair and Verify for CRUs is available at this time in English only. Clients who want access to the translated services guides will be directed to an external website from their HMC.

If additional assistance is required with interpreting English Repair and Verify:

- Contact the IBM Hardware Support Center (using the method you would normally use to obtain support for your hardware), and ask for Hardware Support. Be sure to have your HMC machine type and serial number available. Indicate that you have problems with translated Repair and Verify.
- An IBM Service Support Representative (SSR) may be dispatched to your site to assist with your Repair and Verify activity.
- The HMC and attached servers may not be accessible to you while the SSR is working.

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## **Planning information**

### ***Cable orders***

One Ethernet cable is required to attach the HMC to the system CPC. This cable can be customer-supplied or purchased from IBM.

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## **Security, auditability, and control**

This product uses the security and auditability features of the server operating system. Use of these facilities is optional. For servers with the IBM i operating system, the security measures supplied by IBM i are designed to reduce the risk of users changing or destroying data resources, but do not prevent it. The IBM i security features include the use of passwords, a security option to limit a user to only the functions provided by customer-designed menus, and a security option to limit read/write access for files, libraries, and folders during normal operations. To achieve increased security, the IBM i controls should be combined with physical security, division of duties, and other appropriate measures.

This product uses the security and auditability features of the AIX® operating system on an AIX partition that the HMC controls. The HMC V8.8.1.0 introduces support for the more secure cipher sets defined in NIST 800-131a. The more secure cipher sets are supported on the HMC user web and SSH interfaces.

The HMC network connection to the partitions is based on a component of IBM's Reliable, Scalable Cluster Technology (RSCT) called *Resource Monitoring and Control (RMC)*. The only operations permitted through this connection are hardware error event collection and hardware inventory data collection, dynamic LPAR resource movement coordination for AIX and Linux partitions, and partition shutdown and reboot for AIX and Linux partitions.

The customer is responsible for evaluation, selection, and implementation of security features, administrative procedures, and appropriate controls in application systems and communications facilities.

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## **IBM Electronic Services**

Electronic Service Agent™ and the IBM Electronic Support web portal are dedicated to providing fast, exceptional support to IBM Systems customers. The IBM Electronic Service Agent tool is a no-additional-charge tool that proactively monitors and reports hardware events, such as system errors, performance issues, and inventory. The Electronic Service Agent tool can help you stay focused on your company's strategic business initiatives, save time, and spend less effort managing day-to-day IT maintenance issues. Servers enabled with this tool can be monitored remotely around the clock by IBM Support all at no additional cost to you.

Now integrated into the base operating system of AIX 5.3, AIX 6.1, and AIX 7.1, Electronic Service Agent is designed to automatically and electronically report system failures and utilization issues to IBM, which can result in faster problem resolution and increased availability. System configuration and inventory information collected by the Electronic Service Agent tool also can be viewed on the secure Electronic Support web portal, and used to improve problem determination and resolution by you and the IBM support team. To access the tool main menu, simply type "smitty esa\_main", and select "Configure Electronic Service Agent." In addition, ESA now includes a powerful Web user interface, giving the administrator easy access to status, tool settings, problem information, and filters. For more information and documentation on how to configure and use Electronic Service Agent, refer to

<http://www.ibm.com/support/electronic>

The IBM Electronic Support portal is a single Internet entry point that replaces the multiple entry points traditionally used to access IBM Internet services and support. This portal enables you to gain easier access to IBM resources for assistance in resolving technical problems. The My Systems and Premium Search functions make it even easier for Electronic Service Agent tool-enabled customers to track system inventory and find pertinent fixes.

## Benefits

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**Increased uptime:** The Electronic Service Agent tool is designed to enhance the Warranty or Maintenance Agreement by providing faster hardware error reporting and uploading system information to IBM Support. This can translate to less wasted time monitoring the "symptoms," diagnosing the error, and manually calling IBM Support to open a problem record. Its 24x7 monitoring and reporting mean no more dependence on human intervention or off-hours customer personnel when errors are encountered in the middle of the night.

### **Security:**

The Electronic Service Agent tool is designed to be secure in monitoring, reporting, and storing the data at IBM. The Electronic Service Agent tool is designed to securely transmit either via the Internet (HTTPS or VPN) or modem to provide customers a single point of exit from their site. Communication is one way. Activating Electronic Service Agent does not enable IBM to call into a customer's system.

For additional information refer to IBM Electronic Service Agent

<http://www-01.ibm.com/support/esa/>

**More accurate reporting:** Since system information and error logs are automatically uploaded to the IBM Support center in conjunction with the service request, customers are not required to find and send system information, decreasing the risk of misreported or misdiagnosed errors. Once inside IBM, problem error data is run through a data knowledge management system and knowledge articles are appended to the problem record.

**Customized support:** Using the IBM ID entered during activation, customers can view system and support information in the "My Systems" and "Premium Search" sections of the Electronic Support website at

<http://www.ibm.com/support/electronic>

My Systems provides valuable reports of installed hardware and software using information collected from the systems by Electronic Service Agent. Reports are available for any system associated with the customer's IBM ID. Premium Search combines the function of search and the value of Electronic Service Agent information, providing advanced search of the technical support knowledgebase. Using Premium Search and the Electronic Service Agent information that has been

collected from your system, customers are able to see search results that apply specifically to their systems.

For more information on how to utilize the power of IBM Electronic Services, contact your IBM Systems Services Representative, or visit

<http://www.ibm.com/support/electronic>

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## Terms and conditions

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### Volume orders

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Contact your IBM representative.

### IBM Global Financing

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Yes

### Products -- terms and conditions

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#### **Warranty period**

One year. An IBM part or feature installed during the initial installation of an IBM machine is subject to a full warranty effective on the date of installation of the machine. An IBM part or feature that replaces a previously installed part or feature assumes the remainder of the warranty period for the replaced part or feature. An IBM part or feature added to a machine without replacing a previously installed part or feature is subject to a full warranty effective on its date of installation. Unless specified otherwise, the warranty period, type of warranty service, and service level of a part or feature are the same as those for the machine in which it is installed.

#### **Warranty service**

If required, IBM provides repair or exchange service depending on the types of warranty service specified for the machine. IBM will attempt to resolve your problem over the telephone, or electronically via an IBM website. Certain machines contain remote support capabilities for direct problem reporting, remote problem determination, and resolution with IBM. You must follow the problem determination and resolution procedures that IBM specifies. Following problem determination, if IBM determines on-site service is required, scheduling of service will depend the time of your call, machine technology and redundancy, and availability of parts. If applicable to your product, parts considered Customer Replaceable Units (CRUs) will be provided as part of the machine's standard warranty service.

Service levels are response-time objectives and are not guaranteed. The specified level of warranty service may not be available in all worldwide locations. Additional charges may apply outside IBM's normal service area. Contact your local IBM representative or your reseller for country-specific and location-specific information.

#### **CRU Service**

IBM provides replacement CRUs to you for you to install. CRU information and replacement instructions are shipped with your machine and are available from IBM upon your request. CRUs are designated as being either a Tier 1 (mandatory) or a Tier 2 (optional) CRU.

##### *Tier 1 (mandatory) CRU*

Installation of Tier 1 CRUs, as specified in this announcement, is your responsibility. If IBM installs a Tier 1 CRU at your request, you will be charged for the installation.

### *Tier 2 (optional) CRU*

You may install a Tier 2 CRU yourself or request IBM to install it, at no additional charge.

Based upon availability, CRUs will be shipped for next-business-day (NBD) delivery. IBM specifies, in the materials shipped with a replacement CRU, whether a defective CRU must be returned to IBM. When return is required, return instructions and a container are shipped with the replacement CRU. You may be charged for the replacement CRU if IBM does not receive the defective CRU within 15 days of your receipt of the replacement.

The following parts have been designated as Tier 1 CRUs:

- AC power cord
- Battery
- Covers, front and side
- Cooling fan
- Disk drive
- Display
- DVD drive cable
- DVD Drive
- External cables
- Heat/Fan sink
- Keyboard
- Memory DIMM
- Mouse
- PCI adapters
- SAS riser and signal cable
- System bezel
- System labels
- Tape, diagnostics, and firmware media
- USB cable

### *CRU and On-site Service*

At IBM's discretion, you will receive specified CRU service, or IBM will repair the failing machine at your location and verify its operation. You must provide a suitable working area to allow disassembly and reassembly of the IBM machine. The area must be clean, well-lit, and suitable for the purpose.

Service level is:

- 9 hours per day, Monday through Friday, excluding holidays, next-business-day response. Calls must be received by 5:00 p.m. local time in order to qualify for next-business-day response.

### **Warranty services**

IBM is now shipping machines with selected non-IBM parts that contain an IBM field replaceable unit (FRU) part number label. These parts are to be serviced during the IBM machine warranty period. IBM is covering the service on these selected non-IBM parts as an accommodation to their customers, and normal warranty service procedures for the IBM machine apply.

### **Warranty service upgrades**

During the warranty period, warranty service upgrades provide an enhanced level of On-site Service for an additional charge. Service levels are response-time objectives

and are not guaranteed. See the **Warranty services** section above for additional details.

IBM will attempt to resolve your problem over the telephone or electronically by access to an IBM website. Certain machines contain remote support capabilities for direct problem reporting, remote problem determination, and resolution with IBM. You must follow the problem determination and resolution procedures that IBM specifies. Following problem determination, if IBM determines on-site service is required, scheduling of service will depend upon the time of your call, machine technology and redundancy, and availability of parts.

### ***Maintenance service options***

#### *CRU and On-site Service*

At IBM's discretion you will receive CRU service or IBM will repair the failing machine at your location and verify its operation. You must provide a suitable working area to allow disassembly and reassembly of the IBM machine. The area must be clean, well-lit, and suitable for the purpose. The following on-site response-time objectives are available as warranty service upgrades for your machine. Available offerings are:

- 9 hours per day, Monday through Friday, excluding holidays, 4-hour average, same-business-day response
- 24 hours per day, 7 days a week, 4-hour average response, same day
- 24 hours per day, 7 days a week, 2-hour average response, same day

Customer Replaceable Units (CRUs) may be provided as part of the machine's standard warranty CRU Service except that you may install a CRU yourself or request IBM installation, at no additional charge, under the CRU and On-site Service level specified above. For additional information on the CRU Service, see the warranty information.

### **Maintenance services**

If required, IBM provides repair or exchange service depending on the types of maintenance service specified for the machine. IBM will attempt to resolve your problem over the telephone or electronically, via an IBM website. Certain machines contain remote support capabilities for direct problem reporting, remote problem determination, and resolution with IBM. You must follow the problem determination and resolution procedures that IBM specifies. Following problem determination, if IBM determines on-site service is required, scheduling of service will depend upon the time of your call, machine technology and redundancy, and availability of parts. Service levels are response-time objectives and are not guaranteed. The specified level of maintenance service may not be available in all worldwide locations. Additional charges may apply outside IBM's normal service area. Contact your local IBM representative or your reseller for country-specific and location-specific information. The following service selections are available as maintenance options for your machine type.

#### ***On-site Service***

IBM will repair the failing machine at your location and verify its operation. You must provide a suitable working area to allow disassembly and reassembly of the IBM machine. The area must be clean, well-lit, and suitable for the purpose.

Service levels are:

- 9 hours per day, Monday through Friday, excluding holidays, next-business-day response
- 9 hours per day, Monday through Friday, excluding holidays, 4-hour average response, same-business-day
- 24 hours per day, 7 days a week, 4-hour average response, same day
- 24 hours per day, 7 days a week, 2-hour average response, same day

### ***Customer Replaceable Unit (CRU) Service***

If your problem can be resolved with a CRU (for example, keyboard, mouse, speaker, memory, or hard disk drive), and depending upon the maintenance service offerings in your geography, IBM will ship the replacement CRU to you for you to install. CRU information and replacement instructions are shipped with your machine and are available from IBM upon your request.

Based upon availability, CRUs will be shipped for next-business-day delivery. IBM specifies, in the materials shipped with a replacement CRU, whether a defective CRU must be returned to IBM. When return is required, 1) return instructions and a container are shipped with the replacement CRU, and 2) you may be charged for the replacement CRU if IBM does not receive the defective CRU within 15 days of your receipt of the replacement.

CRUs may be provided as part of the machine's standard maintenance service except that you may install a CRU yourself or request IBM installation, at no additional charge, under any of the On-site Service levels specified above.

### ***Non-IBM parts service***

Under certain conditions, IBM provides services for selected non-IBM parts at no additional charge for machines that are covered under warranty service upgrades or maintenance services.

This service includes hardware problem determination (PD) on the non-IBM parts (for example, adapter cards, PCMCIA cards, disk drives, and memory) installed within IBM machines and provides the labor to replace the failing parts at no additional charge.

If IBM has a Technical Service Agreement with the manufacturer of the failing part, or if the failing part is an accommodations part (a part with an IBM FRU label), IBM may also source and replace the failing part at no additional charge. For all other non-IBM parts, customers are responsible for sourcing the parts. Installation labor is provided at no additional charge, if the machine is covered under a warranty service upgrade or a maintenance service.

### ***Usage plan machine***

No

### ***IBM hourly service rate classification***

Two

When a type of service involves the exchange of a machine part, the replacement may not be new, but will be in good working order.

### ***General terms and conditions***

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#### ***Field-installable features***

Yes

#### ***Model conversions***

No

#### ***Machine installation***

Customer setup. Customers are responsible for installation according to the instructions IBM provides with the machine.

#### ***Graduated program license charges apply***

No

### Licensed machine code

IBM Machine Code is licensed for use by a customer on the IBM machine for which it was provided by IBM under the terms and conditions of the IBM License Agreement for Machine Code, to enable the machine to function in accordance with its specifications, and only for the capacity authorized by IBM and acquired by the customer. You can obtain the agreement by contacting your IBM representative or visiting

[http://www.ibm.com/servers/support/machine\\_warranties/machine\\_code.html](http://www.ibm.com/servers/support/machine_warranties/machine_code.html)

If the machine does not function as warranted and your problem can be resolved through your application of downloadable Machine Code, you are responsible for downloading and installing these designated Machine Code changes as IBM specifies. If you would prefer, you may request IBM to install downloadable Machine Code changes; however, you may be charged for that service.

Machine using HMC Type Model: 7042-CR8

Access to Machine Code updates is conditioned on entitlement and license validation in accordance with IBM policy and practice. IBM may verify entitlement through customer number, serial number, electronic restrictions, or any other means or methods employed by IBM in its discretion.

Machine Code entitlement validation will be introduced in HMC V8 R8.1.0.

### Educational allowance

A reduced charge is available to qualified education customers. The educational allowance may not be added to any other discount or allowance.

The educational allowance is 15% for the products in this announcement.

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## Prices

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For additional information and current prices, contact your local IBM representative.

The following are newly announced features on the specific models of the IBM Power Systems 7042 machine type:

Description	Model number	Feature numbers	Purchase price	Minimum Monthly Maint. Charge	Initial/ Monthly MES/ Both/ Support	RP CSU MES
IBM 7042-CR8	CR8					Yes
One CSC Billing Unit	CR8	0010			Both	Yes No
Ten CSC Billing Units	CR8	0011			Both	Yes No
Balanced warehouse Solution	CR8	0710			Initial	N/A No
Power Cloud Solution Indicator	CR8	0712			Both	Yes No
HMC LMC v7	CR8	0962			Both	Yes No
US TAA Compliance Indicator	CR8	0983			Both	Yes No
Smart Analytics Sys routing	CR8	1114			Initial	N/A No
Custom Serv. Specify, Roch	CR8	1140			Both	Yes No
8GB Pluggable USB Memory Optio	CR8	1208			Both	Yes No
500GB SATA HDD, 2.5in						

	CR8	1998	Both	Yes	No
NOTE: The monitor or display features are subject to a \$8 Electronic Waste Recycling Fee (15-INCH TO 34-INCH VIDEO DEVICE.)					
Widescreen LCD Monitor					
	CR8	3632	Both	Yes	No
IBM T120 Flat Panel Monitor					
	CR8	3643	Support	Yes	No
19in. Flat Panel Monitor					
	CR8	3644	Support	Yes	No
17in. Flat Panel Monitor					
	CR8	3645	Support	Yes	No
6Foot Extend.Cbl for Displays					
	CR8	4242	Both	Yes	No
Extender Cable USB Keybo 1.8M					
	CR8	4256	Both	Yes	No

One and only one rack indicator feature is required on all orders (#4650 to #4666).

No Factory Integration Ind.

Rack Indicator, Rack 1	CR8	4650	Initial	N/A	No
Rack Indicator, Rack 2	CR8	4651	Initial	N/A	No
Rack Indicator, Rack 3	CR8	4652	Initial	N/A	No
Rack Indicator, Rack 4	CR8	4653	Initial	N/A	No
Rack Indicator, Rack 5	CR8	4654	Initial	N/A	No
Rack Indicator, Rack 6	CR8	4655	Initial	N/A	No
Rack Indicator, Rack 7	CR8	4656	Initial	N/A	No
Rack Indicator, Rack 8	CR8	4657	Initial	N/A	No
Rack Indicator, Rack 9	CR8	4658	Initial	N/A	No
Rack Indicator, Rack 10	CR8	4659	Initial	N/A	No
Rack Indicator, Rack 11	CR8	4660	Initial	N/A	No
Rack Indicator, Rack 12	CR8	4661	Initial	N/A	No
Rack Indicator, Rack 13	CR8	4662	Initial	N/A	No
Rack Indicator, Rack 14	CR8	4663	Initial	N/A	No
Rack Indicator, Rack 15	CR8	4664	Initial	N/A	No
Rack Indicator, Rack 16	CR8	4665	Initial	N/A	No
RFID Tags for Servers, Blades	CR8	4666	Initial	N/A	No
Full width Key USB, US English	CR8	5524	Initial	N/A	No
Full width Key USB, French	CR8	5951	Support	Yes	No
Full width Key USB, Italian	CR8	5952	Support	Yes	No
Full width Key USB, German/Aus	CR8	5953	Support	Yes	No
Full width Key USB, UK English	CR8	5954	Support	Yes	No
Full width Key USB, Spanish	CR8	5955	Support	Yes	No
Full width Key USB, Japanese	CR8	5956	Support	Yes	No
Full width Key USB, BrazilianP	CR8	5957	Support	Yes	No
Full width Key USB, Hungarian	CR8	5958	Support	Yes	No
Full width Key USB, Korean	CR8	5959	Support	Yes	No



Full width Key USB, Chinese	CR8	5960	Support	Yes	No
Full width Key USB, French Can	CR8	5961	Support	Yes	No
Full width Keyb-USB, Canad Fr	CR8	5962	Support	Yes	No
Full width Key USB, Belgian/UK	CR8	5963	Support	Yes	No
Full width Key USB, Swedish/Fi	CR8	5964	Support	Yes	No
Full width Key USB, Danish	CR8	5965	Support	Yes	No
Full width Key USB, Bulgarian	CR8	5966	Support	Yes	No
Full width Key USB, Swiss/Fr/G	CR8	5967	Support	Yes	No
Full width Key USB, Norwegian	CR8	5968	Support	Yes	No
Full width Key USB, Dutch	CR8	5969	Support	Yes	No
Full width Key USB, Portuguese	CR8	5970	Support	Yes	No
Full width Key USB, Greek	CR8	5971	Support	Yes	No
Full width Key USB, Hebrew	CR8	5972	Support	Yes	No
Full width Key USB, Polish	CR8	5973	Support	Yes	No
Full width Key USB, Slovakian	CR8	5974	Support	Yes	No
Full width Key USB, Czech	CR8	5975	Support	Yes	No
Full width Key USB, Turkish	CR8	5976	Support	Yes	No
Full width Key USB, LA Spanish	CR8	5977	Support	Yes	No
Full width Key USB, Arabic	CR8	5978	Support	Yes	No
Full width Key USB, Thai	CR8	5979	Support	Yes	No
Full width Key USB, Russian	CR8	5980	Support	Yes	No
Full width Key USB, Slovenian	CR8	5981	Support	Yes	No
Full width Key USB, US English	CR8	5982	Support	Yes	No
Pwr Crd 4.3m 14ft wall IBM PDU	CR8	5983	Support	Yes	No
Pwr Crd (14FT), Drwr - OEM PDU	CR8	6458	Both	Yes	No
Pwr Crd 4.3m 14ft wall OEM PDU	CR8	6460	Both	Yes	No
Pwr Crd 4.3m 14ft wall 125V/15A	CR8	6469	Both	Yes	No
Pwr Crd 1.8m 6ft wall OEM PDU	CR8	6470	Both	Yes	No
Pwr Crd 2.7m 9ft wall OEM PDU	CR8	6471	Both	Yes	No
Pwr Crd 2.7m 9ft wall OEM PDU	CR8	6472	Both	Yes	No
Pwr Crd 2.7m 9ft wall OEM PDU	CR8	6473	Both	Yes	No
Pwr Crd 2.7m 9ft wall OEM PDU	CR8	6474	Both	Yes	No
Pwr Crd 2.7m 9ft wall OEM PDU	CR8	6475	Both	Yes	No
Pwr Crd 2.7m 9ft wall OEM PDU	CR8	6476	Both	Yes	No
Pwr Crd 2.7m 9ft wall OEM PDU	CR8	6477	Both	Yes	No
Pwr Crd 2.7m 9ft wall OEM PDU	CR8	6478	Both	Yes	No
Pwr Crd 2.7m 9ft wall OEM PDU	CR8	6478	Both	Yes	No
Pwr Crd 2.7m 9ft wall OEM PDU	CR8	6488	Both	Yes	No
Pwr Crd 2.7m 9ft wall OEM PDU	CR8	6488	Both	Yes	No

	CR8	6493		Both	Yes	No
Pwr Crd 2.7m 9ft wall OEM PDU	CR8	6494		Both	Yes	No
Pwr Crd 2.7m 9ft wall OEM PDU	CR8	6495		Support	Yes	No
Pwr Crd 2.7m 9ft wall 250V,10A	CR8	6496		Both	Yes	No
Power Cable Drawer to IBM PD	CR8	6577		Both	Yes	No
Pwr Crd 2.7m 9ft wall 125V,15A	CR8	6651		Both	Yes	No
Pwr.Cord(9ft),To wall/OEM PDU	CR8	6659		Both	Yes	No
Pwr Crd 14ft 4.3m wall OEM PDU	CR8	6660		Both	Yes	No
Pwr Crd 2.8m 9.2ft wall PDU	CR8	6665		Both	Yes	No
Pwr Crd 4.3M, Drwr - OEM PDU	CR8	6669		Both	Yes	No
Pwr Crd 6-FT, (125V,15A)PT#59	CR8	6670		Support	Yes	No
Pwr Crd 2.7m, Drwr - IBM PDU	CR8	6671		Both	Yes	No
Pwr Crd 1.5M, Drwr - IBM PDU	CR8	6672		Both	Yes	No
Pwr Crd 2.7m 9ft wall OEM PDU	CR8	6680		Both	Yes	No
Power Cord 1.8m (6ft),To wall	CR8	6687		Support	Yes	No
Eth Cbl 6M HW Management	CR8	7801		Support	Yes	No
Eth Cbl 15M HW Management	CR8	7802		Both	Yes	No
Mouse-USB,Black KBD Att C	CR8	8841		Support	Yes	No
USB Mouse	CR8	8845		Both	Yes	No
HMC/Srv Order Linkage Ind	CR8	9069	NC	Initial	N/A	No
Order Routing Indicator Syste	CR8	9169		Initial	N/A	No
Language Group Spcf-US Eng	CR8	9300	NC	Initial	N/A	No
Month Indicator	CR8	9461		Initial	N/A	No
Day Indicator	CR8	9462		Initial	N/A	No
Hour Indicator	CR8	9463		Initial	N/A	No
Minute Indicator	CR8	9464		Initial	N/A	No
Qty Indicator	CR8	9465		Initial	N/A	No
Countable Member Indicator	CR8	9466		Initial	N/A	No
Language Group Spcf-Dutch	CR8	9700	NC	Initial	N/A	No
Language Group Spcf-French	CR8	9703	NC	Initial	N/A	No
Language Group Spcf-German	CR8	9704	NC	Initial	N/A	No
Language Group Spcf-Polish	CR8	9705	NC	Initial	N/A	No
Lang Group Specify - Norwegian	CR8	9706	NC	Initial	N/A	No
Lang.Group Spcf-Portuguese	CR8	9707	NC	Initial	N/A	No
Language Group Spcf-Spanish	CR8	9708	NC	Initial	N/A	No
Language Group Spcf-Italian	CR8	9711	NC	Initial	N/A	No
Langua Gr Speci Canadian Frenc	CR8	9712	NC	Initial	N/A	No
Language Group Spcf-Japanese						

Language Group Specify Tr Chin	CR8	9714	NC	Initial	N/A	No
Language Group Spcf-Korean	CR8	9715	NC	Initial	N/A	No
Language Group Spcf-Turkish	CR8	9716	NC	Initial	N/A	No
Language Group Spcf-Hungarian	CR8	9718	NC	Initial	N/A	No
Language Group Spcf-Slovakian	CR8	9719	NC	Initial	N/A	No
Language Group Spcf-Russian	CR8	9720	NC	Initial	N/A	No
Lang Group Spcf Simpl Chinese	CR8	9721	NC	Initial	N/A	No
Language Group Spcf-Czech	CR8	9722	NC	Initial	N/A	No
Language Group Spcf-Romanian	CR8	9724	NC	Initial	N/A	No
Lang Group Specify - Croatian	CR8	9725	NC	Initial	N/A	No
Language Group Spcf-Slovenian	CR8	9726	NC	Initial	N/A	No
Lang Group Specify - Braz Port	CR8	9727	NC	Initial	N/A	No
Lang Group Specify - Thai	CR8	9728	NC	Initial	N/A	No
RAID 1 Upgrade for CR7/CR8	CR8	9729	NC	Initial	N/A	No
Custom Serv. Specify, Shen	CR8	EB2S		Both	Yes	No
Custom Serv. Specify, Mexico	CR8	ECSC		Both	Yes	No
Custom Serv. Spec Poughkeepsie	CR8	ECSM		Both	Yes	No
Full width Key USB, US English	CR8	ECSP		Both	Yes	No
Full width Key USB, French	CR8	EK51		Both	Yes	No
Full width Key USB, Italian	CR8	EK52		Both	Yes	No
Full width Key USB, German/Aus	CR8	EK53		Both	Yes	No
Full width Key USB, UK English	CR8	EK54		Both	Yes	No
Full width Key USB, Spanish	CR8	EK55		Both	Yes	No
Full width Key USB, Japanese	CR8	EK56		Both	Yes	No
Full width Key USB, BrazilianP	CR8	EK57		Both	Yes	No
Full width Key USB, Hungarian	CR8	EK58		Both	Yes	No
Full width Key USB, Korean	CR8	EK59		Both	Yes	No
Full width Key USB, Chinese	CR8	EK60		Both	Yes	No
Full width Key USB, French Can	CR8	EK61		Both	Yes	No
Full width Key USB, Belgian/UK	CR8	EK62		Both	Yes	No
Full width Key USB, Swedish/Fi	CR8	EK64		Both	Yes	No
Full width Key USB, Danish	CR8	EK65		Both	Yes	No
Full width Key USB, Bulgarian	CR8	EK66		Both	Yes	No
Full width Key USB, Swiss/Fr/G	CR8	EK67		Both	Yes	No
Full width Key USB, Norwegian	CR8	EK68		Both	Yes	No
Full width Key USB, Dutch	CR8	EK69		Both	Yes	No
Full width Key USB, Portuguese	CR8	EK70		Both	Yes	No

Full width Key USB, Greek	CR8	EK71	Both	Yes	No
Full width Key USB, Hebrew	CR8	EK72	Both	Yes	No
Full width Key USB, Polish	CR8	EK73	Both	Yes	No
Full width Key USB, Slovakian	CR8	EK74	Both	Yes	No
Full width Key USB, Czech	CR8	EK75	Both	Yes	No
Full width Key USB, Turkish	CR8	EK76	Both	Yes	No
Full width Key USB, LA Spanish	CR8	EK77	Both	Yes	No
Full width Key USB, Arabic	CR8	EK78	Both	Yes	No
Full width Key USB, Thai	CR8	EK79	Both	Yes	No
Full width Key USB, Russian	CR8	EK80	Both	Yes	No
Full width Key USB, Slovenian	CR8	EK81	Both	Yes	No
Full width Key USB, US English	CR8	EK82	Both	Yes	No
8GB (1x8GB) Memory	CR8	EK83	Both	Yes	No
RFID Tags for Compute Nodes	CR8	EM0A	Both	Yes	No
S&H - No Charge	CR8	ERF1	Initial	N/A	No
S&H	CR8	ESC0	Initial	N/A	No
HMC CR7/CR8 Redundant Power Su	CR8	ESC3	Initial	N/A	No
	CR8	EU02	Both	Yes	No

## Pricing terms

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Prices in the following PDF prices link are suggested list prices on day of announcement for the US only. They are provided for your information only. Dealer prices may vary, and prices may also vary by country. IBM list price does not include tax or shipping and is subject to change without notice.

[ENUS-114-060-LIST\\_PRICES\\_2014\\_04\\_28.PDF](#)

## ServiceElect (ESA) charges

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For ServiceElect (ESA) maintenance service charges, contact IBM Global Services at 888-IBM-4343 (426-4343).

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## Order now

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