Optimized IT with the next-generation IBM WebSphere DataPower Integration Blade

Table of contents

1 Overview  
2 Key prerequisites  
3 Planned availability date  
4 Description  
5 Product number  
6 Publications  
7 Technical information  
14 Pricing  
14 Announcement countries

At a glance

The WebSphere® DataPower® Integration Blade XI50B is a specialized, high-performance hardware appliance that can empower you to:

- Improve competitiveness by helping to strengthen business connectivity with partners and customers, and between internal organizations
- Add specialized connectivity, integration, and security processing to your existing IBM® BladeCenter® infrastructure
- Streamline seemingly complex but highly valuable SOA and XML applications with specialized, low total cost of ownership, drop-in appliances
- Load balance service requests across your existing BladeCenter infrastructure
- Leverage z/OS® infrastructure as part of your SOA enterprise
- Shorten SOA application deployment times when using DataPower configuration-driven simplicity
- Accelerate protocol mediation, message distribution, and Web services processing with dedicated, high-performance capabilities
- Assist in governing ever-valuable SOA infrastructure by adopting standardized run-time control points through DataPower

Overview

The IBM WebSphere DataPower Integration Blade XI50B is the latest addition to the WebSphere DataPower appliance family. WebSphere DataPower appliances help simplify, govern, and enhance the security of XML and IT services by providing connectivity, gateway functions, data transformation, protocol bridging, and intelligent load distribution. The WebSphere DataPower Integration Blade XI50B extends these capabilities and can provide enhanced operational efficiency with the adoption of the latest IBM BladeCenter technologies, enhanced performance with next-generation XML hardware acceleration and 10 gigabit Ethernet, and optimized load distribution with the Option for Application Optimization. By offering an innovative, pragmatic approach to security, integration, and load distribution as a purpose-built, easy-to-consume, and easy-to-use product, the XI50B can help you leverage the value of your existing infrastructure investments and help reduce the total cost of ownership for security and integration projects.

The WebSphere DataPower Integration Blade XI50B features and capabilities include:

New hardware form-factor
- Blade form-factor that allows you to deploy WebSphere DataPower capabilities within your existing IBM BladeCenter infrastructure
- Next-generation XML hardware acceleration that can increase performance
- Support for two 10 gigabit network interfaces, which can increase network throughput and reduced network latency
- Latest-generation IBM blade technology that can increase performance and capacity
- Use of IBM BladeCenter technology, which can reduce overall datacenter footprint
- Increased serviceability with multiple customer-replaceable parts

**Enhanced intelligent load distribution (requires Option for Application Optimization)**

- Integration with IBM z/OS Communications Server Sysplex Distributor, which can balance workload to DataPower appliances.
- Support for interruption-free back end application upgrades through support for application edition management. New editions of an application can be rolled out using either group or atomic updates.

**Enhanced interoperability**

- Support for WS-Policy attachments authored within WebSphere Service Registry and Repository (WSRR)
- Enhanced WSRR subscriptions via support for saved queries
- Local mode support when integrating with Tivoli® Access Manager
- Full support for WS-Proxy validation of Message Transmission Optimization Mechanism (MTOM)-based SOAP messages
- Increased WS-Security interoperability with WebSphere Application Server
- Improved integration with WebSphere Transformation Extender

**Enhanced connectivity**

- Support for WebSphere MQ 7 software-based high availability
- Support for WebSphere MQ Channel exits for increased security
- Secure File Transfer Protocol (STFP) client and polling support
- Improved transactional integrity with IMS™ Connect

**Enhanced manageability**

- Simplified back-up and restore process
- Java-based appliance management API

The WebSphere DataPower Integration Blade XI50B is supported in the BladeCenter H chassis (8852), the BladeCenter HT chassis (8740, 8750), and the BladeCenter E chassis (8677).

**Key prerequisites**

- BladeCenter chassis (H, HT, or E)
- Monitor, keyboard, and mouse for setup
- Network switch module
- Advanced Management Module with latest-level firmware
- Rack and appropriate PDUs and main power distribution
Planned availability date

June 15, 2010

Availability of programs with an encryption algorithm in France is subject to French government approval.

Description

The WebSphere DataPower Integration Blade XI50B provides support for:

- Any-to-any data transformation between a wide range of data formats, including wire-speed XML transformation, text, binary, COBOL copybooks, industry standards, and custom formats
- Sophisticated multistage pipeline processing and content-based message routing
- Optimized bridging between wire-line messaging protocols including MQ, WebSphere JMS, third-party JMS, FTP, and HTTP
- Data validation, field-level security, Web services management, and access control
- Direct-to-database access including DB2®, Oracle, and Sybase

The WebSphere DataPower Integration Blade XI50B can connect natively to a DB2 V9 database, running on a range of platforms including z/OS. The WebSphere DataPower Integration Blade XI50B can use the XML capabilities built into DB2 V9 to:

- Insert XML text directly into the database
- Modify XML text stored in the database
- Query XML data using XQuery and SQL
- Retrieve XML data

WebSphere DataPower Integration Blade XI50B is a complete, purpose-built hardware platform for delivering highly manageable, security-enhanced, and scalable SOA solutions. As specialized SOA hardware, the WebSphere DataPower Integration Blade XI50B provides, in a single hardened device, many core functions to SOA deployments, such as service level management, routing, data and policy transformations, policy enforcement, and access control. Additional advantages of a hardware appliance in the network layer include the ability to perform more security and structural checks without performance degradation.

There are numerous opportunities to take advantage of the XI50B Enterprise Service Bus (ESB) capabilities, its legacy enablement and integration features, and its capacity to improve Web services management and SOA governance. Some sample use cases for the WebSphere DataPower Integration Blade XI50B include:

- Drop-in integration for heterogeneous environments
  
  As a core offering in the IBM ESB product portfolio, the WebSphere DataPower Integration Blade XI50B is a purpose-built hardware ESB for simplified deployment and hardened security that can quickly transform data between a wide variety of formats, including XML, legacy, industry standards, and custom formats. The WebSphere DataPower Integration Blade XI50B provides core ESB functionality, including routing, bridging, transformation, and event handling. The WebSphere DataPower Integration Blade XI50B can provide a reliable, performance-oriented solution to many integration challenges. Because it is not limited to handling just XML, the XI50B can resonate with IT organizations that need to benefit from the connectivity of SOA deployments but must also deal with their current reality of managing multiple proprietary, industry, company-specific, or legacy data formats. The XI50B is a true drop-in integration point for such environments, helping
to reduce the time and cost of integrations, and speed the time-to-market for services.

- Innovative XML and Web-services enablement of legacy infrastructure

For accelerated, security-rich integration capabilities, the XI50B provides transport mediation, routing, and transformations among binary, text, and XML message formats. Visual tools can be used to describe data formats, create mappings between different formats, and define message flows. With native connectivity to DB2 and System z®, the XI50B offers an innovative solution for security-rich XML enablement of legacy systems, as well as mainframe connectivity.

- Policy-driven approach to Web services management and SOA governance

Centralized Web services management tasks and policy enforcement, decoupled from applications, can help the XI50B increase your SOA infrastructure flexibility and scalability while simultaneously offering you improved insight, visibility, and control. Moving functions such as access control, Web services management, security, and policy enforcement onto the XI50B means that IT architects and operations, security, and business personnel can decouple these functions from the core business applications, helping to simplify development, deployment, and manageability.

- Integration with registry and repository, security, identity, and service management software

The XI50B integrates with a variety of registry and repository, security, identity, and service management software applications. Coupled with access control software such as IBM Tivoli Access Manager, the XI50B enforces fine-grained access controls. Working with the IBM Tivoli Federated Identity Manager, the XI50B provides federated Web services identity, and policy management between organizations and enterprises. Integrated with IBM Tivoli Composite Application Manager for SOA, the XI50B monitors Web service and SOA traffic flows for end-to-end service management and dashboard monitoring. Using a registry and repository such as WebSphere Registry and Repository can help you discover and reuse services and configure new services for DataPower policy and security enforcement. The combination of these applications and the robust XI50B security features can provide the comprehensive capabilities for SOA security and Web services management that enterprises increasingly require.

- Advanced Web services standards support and interoperability

IBM recognizes that SOA must address the need to integrate heterogeneous environments both within and outside the enterprise. The WebSphere DataPower SOA Appliance portfolio has a long-standing history of support for key and advanced standards, including WS-Security, WS-Policy, WS-ReliableMessaging, Simple Object Access Protocol (SOAP), Web Services Distributed Management (WSDM), WS-I Profiles, WS-Addressing, eXtensible Access Control Markup Language (XACML), Security Assertion Markup Language (SAML), Secure Socket Layer (SSL), and proprietary single sign-on (SSO) tokens. Additional third-party interoperability capabilities include Universal Description, Discovery, and Integration (UDDI) registries, and such databases as Oracle and Sybase.

- Integration across the IBM SOA foundation for smart SOA deployments

The XI50B has broad and deep integration across the IBM SOA foundation. Integration with popular integrated development environments such as the IBM Rational® portfolio can help reduce the time you spend in development and debugging. In addition to interoperability, the XI50B also features deep integration with products such as WebSphere MQ, WebSphere Enterprise Service Bus, WebSphere Message Broker, and DB2 to help process SOA transactions in a faster, more secure and simplified way. Additionally, the XI50B enables you to take advantage of the IBM autonomic computing self-management capabilities, creating infrastructures that require minimal intervention, which can help lower cost of ownership and improve service availability.

Application Integration functions include:
• Virtually any-to-any data transformation between a wide range of data formats, including wire-speed XML transformation, text, binary, COBOL copybooks, industry standards, and custom formats
• Sophisticated multistage pipeline processing and content-based message routing
• Optimized bridging between wire-line messaging protocols including MQ, WebSphere JMS, third-party JMS, FTP, and HTTP (XB60)
• Data validation, field-level security, Web services management, and access control
• Direct-to-database access including DB2, Oracle, and Sybase
• Extensive Web services support (SOAP, WSDL, WS-Security, WS-Addressing, WS-Policy, and WS-ReliableMessaging)

The following options are available on the WebSphere DataPower Integration Blade XI50B:

• IBM WebSphere DataPower Option for Tivoli Access Manager
• IBM WebSphere DataPower Option for TIBCO
• IBM WebSphere DataPower Option for Database Connectivity
• IBM WebSphere DataPower Option for Application Optimization


Accessibility by people with disabilities

A U.S. Section 508 Voluntary Product Accessibility Template (VPAT) containing details on accessibility compliance can be requested at
http://www-03.ibm.com/able/product_accessibility/index.html

Reference information

For information on IBM WebSphere DataPower Integration Blade XI50B software, refer to Software Announcement ZP10-0138, dated April 27, 2010.

Product number

WebSphere DataPower Integration Blade XI50B

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<th>Model</th>
<th>Feature</th>
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<td>4BX</td>
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<td>IBM WebSphere DataPower Basic Enablement</td>
<td>4195</td>
<td>4BX</td>
<td>4940</td>
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<td>IBM WebSphere DataPower Option for Tivoli Access Manager Preload</td>
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<td>4BX</td>
<td>4950</td>
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Feature rules:

- The WebSphere DataPower Basic Enablement feature code 4940 will be automatically added to all orders placed for 4195-4BX.
- The WebSphere DataPower Option for Tivoli Access Manager feature code 4950 can be specified only with the initial order of 4195 Model 4BX.
- The WebSphere DataPower Option for TIBCO feature code 4956 can be specified only with the initial order of 4195 Model 4BX.
- The WebSphere DataPower Option for Database Connectivity feature code 4963 can be specified only with the initial order of 4195 Model 4BX.
- The WebSphere DataPower Option for Application Optimization feature code 5046 can be specified only with the initial order of 4195 Model 4BX.
- The WebSphere DataPower Option for Application Optimization upgrade feature code 5050 can be specified only as an upgrade order of 4195 Model 4BX.

Publications

WebSphere DataPower Integration Blade XI50B publications are available on the Documentation CD, included with the WebSphere DataPower Integration Blade XI50B:

- Installation and User's Guide
- Safety Guide
- Environmental Notices and User Guide

Hardcopy information:

- Important Notices booklet
- Warranty information

Services

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

For details on education offerings related to specific products, visit

Select your country, and then select the product as the category.

**Technical information**

**Specified operating environment**

**Physical specifications**
- Width: 59 mm (2.32 inches)
- Depth: 457 mm (18.0 inches)
- Height: 245 mm (9.65 inches)
- Weight: 7.4 kg (16.3 pounds)

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

**Standards**
This system supports or complies with the following standards:
- Multiprocessor Specification (MPS) 1.4
- Hardware-enabled to meet the International Organization for Standardization (ISO) 9241, Part 3

**Equipment approvals and safety**
- CE Mark (EN55022:2006 Class A, EN55024:1998, EN61000-3-2 and EN61000-3-3)
- CISPR 22, Class A
- FCC - Verified to comply with Part 15 of the FCC Rules (Class A) prior to product delivery
- IEC 60950-1 CB Certificate and CB Test Report indicating compliance to Group Differences

**Operating environment**
Temperature:
- 10.0 to 35.0 degrees C (50 to 95 degrees F) at 0 to 914 m (0 to 3,000 ft)
- 10.0 to 32.0 degrees C (50 to 90 degrees F) at 914 to 2,133 m (3,000 to 7,000 ft)

Relative humidity: 8% to 80%

Maximum altitude: 2,133 m (7,000 ft)

**Hardware requirements**
The WebSphere DataPower Integration Blade XI50B is compatible with IBM BladeCenter E, H, and HT units. The appliance is a double-wide configuration that installs in two adjacent blade bays of the BladeCenter unit. For ordering your BladeCenter chassis, contact your IBM representative or an IBM Business Partner.

For information on the BladeCenter HT chassis, refer to Refer to Hardware Announcement ZG07-0187, dated February 13, 2007.

For information on the BladeCenter E chassis, refer to Refer to Hardware Announcement ZG09-0141, dated March 10, 2009.

For information on the BladeCenter H chassis, refer to Refer to Hardware Announcement ZG09-0505, dated July 21, 2009.
**Programming requirements**

WebSphere DataPower Integration Blade XI50B comes with IBM-supplied software.

For information on software features for the WebSphere DataPower Integration Blade XI50B, refer to Software Announcement ZP10-0138, dated April 27, 2010.

**Planning information**

**Customer responsibilities**

This product is designated as customer setup. Customer setup instructions are shipped with the product.

**Configuration information**

The IBM WebSphere DataPower Integration Blade XI50B must be installed in an IBM BladeCenter chassis.

**BladeCenter configuration**

- BladeCenter H and E contain 14 blade server bays supporting up to 7 hot-swap DataPower Blades.
- BladeCenter HT contains 12 blade server bays supporting up to 6 hot-swap DataPower Blades.

A control panel in the unit contains the following LEDs:

- Power good
- Blade location
- Over temperature
- Information
- General fault

**Power considerations**

The WebSphere DataPower Integration Blade XI50B is supported in the BladeCenter chassis.

**Note:** Consult specific chassis announcements for more information on setup.

**Cable orders**

Each WebSphere DataPower Integration Blade XI50B has two Gigabit Ethernet connections and two ten gigabit (10 gb) Ethernet connections. An optional BladeCenter Gigabit Ethernet Switch module must be installed in the BladeCenter to support external Ethernet connections. An optional high-speed 10 gb switch module must be installed to use the 10 gb Ethernet connections.

Cabling is not included with the server. Consult the appropriate switch module documentation for external cabling requirements.

**Installability**

Each DataPower Blade requires approximately 15 minutes for installation. The following tasks are required:

- Unpacking the blade
- Setting up the blade
- Installing the blade in BladeCenter
- Powering on the system
- Configuring the administrative password
• Setting up basic networking

**Packaging**

Each IBM WebSphere DataPower Integration Blade XI50B comes with the following:

<table>
<thead>
<tr>
<th>Product</th>
<th>Package description</th>
<th>Boxes</th>
</tr>
</thead>
<tbody>
<tr>
<td>4195-4BX</td>
<td>XI50B Assembly</td>
<td>1</td>
</tr>
<tr>
<td>59Y7409</td>
<td>Pubgroup</td>
<td></td>
</tr>
</tbody>
</table>

• Single pack dimensions: 605 mm x 345 mm x 202 mm (23.8 in x 13.6 in x 8 in)
• Single pack weight: 8.68 kg (19.1 lb)

**Security, auditability, and control**

This product has many built-in security features:

• Multiple levels of Command Line Interface (CLI) login capabilities allow different levels of system administration.
• Encrypted firmware that cannot be moved between systems prevents installation of arbitrary code on the device.
• Customer data can be removed if system replacement is required for hardware failure.
• Mediated access to the device includes network services and access.
• System is secure by default. There are no unneeded services.
• Initial access after first power up is via serial-over-LAN.

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

**Global Technology Services**

Contact your IBM representative for the list of selected services available in your country, either as standard or customized offerings, for the efficient installation, implementation, and/or integration of this product.

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**Terms and conditions**

**Warranty period**

One year

**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 Web site. 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. 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 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 part has been designated as consumables or supply items and is not covered by this warranty:

- Battery

**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 public or national holidays, next business day response. Calls must be received by 15:00 local time in order to qualify for next business day response.
- 9 hours per day, Monday through Friday, excluding public or national holidays, 4 hour average, same business day response. Calls must be received by 12:00 local time in order to qualify for same business day response. Same business day service level includes the installation of Tier 1 CRUs at no additional charge.
- 24 hours per day, 7 days a week, 6 hour average, same day response. Same day service level includes the installation of Tier 1 CRUs at no additional charge.

**Additional reference for Europe**

For additional info, refer to the European HW Operations Guide and Service Level Description Table available at

  http://www-5.ibm.com/services/europe/maintenance/

**CRU Exchange Service**

At IBM's discretion, you will receive specified CRU service. You are responsible for its installation and verification of operation. You must pack the failed part into the shipping container that contained the replacement part and return the failed part to IBM. Transportation charges, both ways, are paid by IBM. You may be charged for the replacement part if IBM does not receive the failed part within 15 days of your receipt of the replacement.

**Non-IBM parts service**
**Warranty service**

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 service section for additional details.

IBM will attempt to resolve your problem over the telephone or electronically by access to an IBM Web site. 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.

**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. The following on-site response-time objectives are available as warranty service upgrades for your machine. Available offerings are:

- 24 hours per day, 7 days a week, 6 hour average, same day response.
  
  ESA and SSU customers: 2 hour coverage extension at no additional charge, 9 hours per day, Monday through Friday, excluding holidays, same business day response. Calls must be received by 12:00 local time in order to qualify for same business day response.

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 one of the On-site Service levels 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 Web site. 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 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 public or national holidays, next business day response. Calls must be received by 15:00 local time in order to qualify for next business day response.
- 9 hours per day, Monday through Friday, excluding public or national holidays, same business day response. Calls must be received by 12:00 local time in order to qualify for same business day response.
- 24 hours per day, 7 days a week, 6 hour average, same day response.

**Customer Replaceable Unit (CRU) Service**

If your problem can be resolved with a CRU (for example, memory or hard disk drive), and depending upon the maintenance service offerings in your geography, IBM will ship the 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 are designated as being either a Tier 1 (mandatory) or a Tier 2 (optional) CRU.

**Tier 1 (mandatory) CRUs:** 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.

For machines with On-site Same-day Response Service, IBM will replace a Tier 1 CRU part at your request, at no additional charge.

**Tier 2 (optional) CRUs:** You may install a Tier 2 CRU yourself or request IBM to install it, at no additional charge.

The following parts have been designated as Tier 1 CRUs:

- Blank EMC filler
- CPU filler
- Front bezel assembly
- DIMM filler
- Memory
- USB key
- Hard drive
- Operator panel
- BPE4 assembly

Service levels are:

- Customer On-site Repair, next business day parts arrival time, call registration 15:00, 9 hours per day, Monday through Friday, excluding public or national holidays

**Committed Services (CS) for Europe**

For service options with a committed level of service or any other special service option, contact your local business representative.

**Additional reference for Europe**
Refer to the following European documents:

- European Announcement Letter ZS03-0150 for IBM Customer Agreement (ICA)
- European Announcement Letter ZS04-0135 for Enterprise Agreement Contract
- European Announcement Letter ZS98-0118 for ServiceSuite™ Contract
- European HW Operations Guide and Service Level Description Table available at http://www-5.ibm.com/services/europe/maintenance/

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, 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

Not applicable

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.

Maintenance service offerings

This machine is eligible under terms and conditions of IBM ServiceElite, the IBM Enterprise Service Agreement (ESA), or the IBM Maintenance Agreement. Consult your IBM representative for details.

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
Pricing

For all local charges, contact your IBM representative.

IBM Global Financing

IBM Global Financing offers competitive financing to credit-qualified customers to assist them in acquiring IT solutions. Offerings include financing for IT acquisition, including hardware, software, and services, from both IBM and other manufacturers or vendors. Offerings (for all customer segments: small, medium, and large enterprise), rates, terms, and availability can vary by country. Contact your local IBM Global Financing organization or visit

http://www.ibm.com/financing

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Announcement countries

All European, Middle Eastern, and African countries.

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