



IBM Workload Deployer V3.0 adds dynamic management features to improve cost effectiveness and efficiency

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At a glance

Enhancements for IBM® Workload Deployer V3.0 provide:

- End-to-end management of web applications with support for IBM Workload Deployer Pattern for Web Applications V1.0
- Increased compute power and storage capacity with support for more robust hardware platforms
- Support for automated elasticity of environments in which IBM WebSphere® Application Server Hypervisor™ Edition Intelligent Management Pack is leveraged
- Relocation of virtual machine workloads to optimize resource utilization
- Support for Computer Associates' VM:Secure product in IBM z/VM® environments
- Creation of usage reports as human-readable Microsoft® Excel spreadsheets
- More finely grained control of IP address assignment and node naming in pattern deployments

Overview

IBM Workload Deployer V3.0, previously known as IBM WebSphere Cloudburst Appliance, dispenses and manages IBM middleware to virtualized servers and private cloud computing environments. There are two styles of patterns managed by Workload Deployer:

- The first style is "topology patterns," which are customizable patterns of IBM middleware packaged as "Hypervisor Edition" images. This familiar class of pattern has been available since WebSphere CloudBurst V1.0, but has become more dynamic in Workload Deployer V3.0. When IBM WebSphere Application Server Hypervisor Edition Intelligent Management Pack is enabled in a deployed environment, users may enable automated elasticity to allow patterns to grow and shrink without manual input.
- The second style of pattern is "workload patterns," which contain all IT components needed to run a certain type of workload. This type of pattern is less customizable, but is designed to meet the needs of common use cases with very little modification. As such, workload patterns offer a much more cost-effective way of deploying and managing suitable applications.

For your convenience, a set of Hypervisor Edition virtual images and workload patterns, including WebSphere Application Server Hypervisor Edition, DB2®, and IBM Workload Deployer Pattern for Web Applications V1.0, are preloaded on Workload Deployer. Licenses to use these products must be purchased separately.

IBM Workload Deployer now supports Red Hat Enterprise Linux® in z/VM environments, in addition to previously existing support for IBM AIX® in PowerVM™ environments, Novell SUSE Linux Enterprise Server in z/VM environments, and Novell SUSE Linux Enterprise Server and Red Hat Enterprise Linux in VMware ESX environments.

IBM Workload Deployer also adds support for the new WebSphere Application Server Hypervisor Edition for Red Hat Enterprise Linux for IBM System z® virtual image to support Red Hat Enterprise Linux for z/VM.

The ability to initiate virtual machine mobility, coupled with more finely grained control of IP address assignment and node naming, helps make it easier to use Workload Deployer in association with production environments.

IBM Workload Deployer delivers value in several ways by helping to:

- Lower costs, as higher hardware utilization rates are reached in virtualized environments, reducing power consumption.
- Increase agility and reduce time to value. It empowers individual application managers, developers, and testers to manage IT infrastructure in a more autonomous and agile fashion by leveraging a shared self-service, multi-tenant environment. As a result, your company can quickly adapt to changing business needs. Workload Deployer factors out repetitive, time-consuming manual tasks, such as hardware approvals, operating system installation and configuration, middleware installation and configuration, application installation and configuration, and maintenance applications, and replaces them with a single interaction on the administrative console.
- Increase repeatability and reduce costly errors by allowing you to customize environments once, capture them, and redeploy them at the click of a button. This gives application managers, developers, and testers a standard, known starting point from which to make exploratory changes, evaluate development fixes, apply maintenance, and install applications.
- Provide a physically secure hardware appliance. IBM Workload Deployer manages a shared, multi-tenant environment, where isolation and security are of utmost importance. The secure nature of the appliance is rooted in a self-disabling switch, triggered if the appliance cover is removed. This physical security allows Workload Deployer to serve as a secure vault for credentials, which can be tied to virtual images throughout their entire life cycle (in storage, being dispensed, running in the cloud, or being removed from the cloud).
- Manage users and groups and their access. It tracks and reports usage statistics based on user and group information and can be used for internal chargeback purposes.

IBM Workload Deployer is targeted for on-premise production, staging, development, and test environments, and can also serve as the foundation for hosted software-as-a-service environments.

For additional information on IBM WebSphere Cloudburst Appliance firmware V2.0, refer to Hardware Announcement [110-116](#), dated April 30, 2010.

Key prerequisites

Refer to the [Hardware requirements](#) and [Software requirements](#) sections for details.

Planned availability date

June 15, 2011

Description

IBM Workload Deployer V3.0, previously known as IBM WebSphere Cloudburst Appliance V2.0, helps enable you to more easily manage IBM middleware products in a cloud environment. This may help provide significant value to your data center or business by:

- Managing an IBM topology pattern or workload pattern environment across a pool of virtualized servers
- Ensuring security in a shared environment as the Workload Deployer serves as a secure, tamper-resistant vault for images and credentials
- Providing tooling to support virtual image customization, which allows you to easily modify images to contain applications, monitors, and corporate governance agents
- Simplifying maintenance and updates to virtual images and patterns to ensure correctness and consistency
- Providing automated maintenance and updates to virtual images (both in storage and running) to ensure correctness and consistency in updating images
- Providing Representational State Transfer (REST) APIs to help integrate Workload Deployer into existing data center management environments

IBM Workload Deployer V3.0 offers powerful new capabilities to dispense and manage IBM middleware virtualized servers and private cloud computing environments. These new capabilities include:

- **Use of WebSphere Application Server Hypervisor Edition Intelligent Management Pack, providing support for automated elasticity of environments**

When WebSphere Application Server Hypervisor Edition is deployed with Intelligent Management Pack enabled, the Intelligent Management Pack can call back to Workload Deployer and request additional resources to be made available. This is done using the same dynamic workload management technology that allows the Intelligent Management Pack to allocate additional Java™ virtual machines (JVMs) to an application within a dynamic cluster.

- **Increased compute power and storage capacity with support for more robust hardware platforms**

IBM Workload Deployer includes more on-board disk space for storage of Hypervisor Edition images and workload patterns. The new appliance also has a faster processor, which may help improve performance.

- **End-to-end management of web applications with support for new workload pattern**

IBM Workload Deployer ships with a preloaded workload pattern, IBM Workload Deployer Pattern for Web Applications V1.0. This preloaded workload pattern contains everything needed to deploy and manage a web application, including security and monitoring. By allowing Workload Deployer and Deployer Pattern for Web Applications to manage your application, you may experience savings in time to value and management cost. For more details on the Deployer Pattern for Web Applications, refer to Software Announcement [211-140](#), dated April 05, 2011.

- **Relocation of virtual machine workloads to increase efficiency**

IBM Workload Deployer can actuate virtual machine mobility capability (on hypervisor platforms where it is supported) in order to achieve a more efficient allocation of resource to workloads.

- **Support for security products in z/VM environments**

In addition to providing support for IBM RACF/VM and Directory Maintenance (DirMaint™) in a z/VM guest environment, IBM Workload Deployer now supports

the use of Computer Associates' VM:Secure in z/VM environments. VM:Secure is an alternative to IBM RACF/VM and DirMaint.

Computer Associates' VM:Secure gives you a comprehensive solution to secure your user, resource, data, and system audit assets. It also provides z/VM directory, DASD, and Shared File System (SFS) management and support for the IBM Systems Management APIs on the z/VM operating platform.

- **Creation of usage reports as comma separated files (CSV)**

Access to usage data, performance data, and license data is improved with Workload Deployer. It is now possible to obtain a comma separated value file which provides details of usage data in your environment. This file is consumable by spreadsheet software such as Lotus® Symphony™.

- **More finely grained control of IP address assignment and node naming in pattern deployments**

IBM Workload Deployer allows for more finely grained control of IP assignments, virtual machine naming, and departmental environments. You can now build logical environments with processors, memory, and license constraints, allowing Workload Deployer to act as a multi-tenant cloud deployment system. The system can track processors, memory, and licenses at an appliance-wide level as well as a department level.

Entitlement requirements

In order to use IBM Workload Deployer, one or both of the following parts is required, depending on the usage scenario:

- **IBM Cloud Capacity Entitlement**

One PVU of Cloud Capacity Entitlement is required for each PVU of hardware capacity that is managed by Workload Deployer. Cloud Capacity Entitlement is required for both topology patterns and workload patterns. One Thousand (1000) PVUs of Cloud Capacity Entitlement are included with each initial IBM Workload Deployer purchase.

- **IBM Workload Deployer Image for x86 Systems V1.0**

One PVU of Deployer Image for x86 Systems, program number 5725-D64, is required for each PVU of hardware capacity that is used to run a workload pattern such as Deployer Pattern for Web Applications. Deployer Image for x86 Systems is **not** required for topology patterns.

Reference information

For information on Deployer Pattern for Web Applications and Deployer Image for x86 Systems, refer to Software Announcement [211-140](#), dated April 05, 2011.

For information on IBM Workload Deployer support registration, refer to Software Announcement [211-136](#), dated April 05, 2011.

For information on WebSphere CloudBurst Appliance V2.0, refer to Hardware Announcement [110-116](#), dated April 30, 2010.

For information on WebSphere CloudBurst Appliance V1.0, refer to Hardware Announcement [109-318](#), dated June 02, 2009.

For information on WebSphere Application Server Hypervisor Edition on Red Hat Enterprise Linux for IBM System z, IBM HTTP Server for WebSphere Application Server Hypervisor Edition on Red Hat Enterprise Linux for IBM System z, and WebSphere Application Server Hypervisor Edition Intelligent Management Pack, refer to Software Announcement [210-137](#), dated April 30, 2010.

For information on WebSphere Application Server Hypervisor Edition for Novell SUSE Linux Enterprise Server for IBM System z, refer to Software Announcement [210-071](#), dated March 29, 2010.

For information on WebSphere Application Server Hypervisor Edition for IBM AIX, refer to Software Announcement [209-388](#), dated November 17, 2009.

Product number

New IBM workload Deployer machine model:

Description	Machine Model	
IBM workload Deployer	7199	72X

Existing IBM workload Deployer machine models but renamed with this announcement:

Description	Machine Model	Feature	
IBM Cloud Capacity Entitlement (in PVU)	9231	200	
IBM Cloud Capacity Entitlement (in PVU) (bundled with initial purchase) 1000 PVUs	9231	200	1773
IBM Cloud Capacity Entitlement (in PVU) 1 PVU	9231	200	1760
IBM Cloud Capacity Entitlement (in PVU) 100 PVUs	9231	200	1761
IBM Cloud Capacity Entitlement (in PVU) 1000 PVUs	9231	200	1762

Entitlement requirements

In order to use IBM Workload Deployer, one or both of the following parts is required, depending on the usage scenario:

- **IBM Cloud Capacity Entitlement**

One PVU of Cloud Capacity Entitlement is required for each PVU of hardware capacity that is managed by Workload Deployer. Cloud Capacity Entitlement is required for both topology patterns and workload patterns. One Thousand (1000) PVUs of Cloud Capacity Entitlement are included with each initial IBM Workload Deployer purchase.

- **IBM Workload Deployer Image for x86 Systems V1.0**

One PVU of Deployer Image for x86 Systems, program number 5725-D64, is required for each PVU of hardware capacity that is used to run a workload pattern such as Deployer Pattern for Web Applications. Deployer Image for x86 Systems is **not** required for topology patterns.

Feature rule

9231-200 Cloud Capacity Entitlement (in PVU) feature option 1773 is required and available only with the initial order of each 7199-72X model.

Specify features

Two power cords are shipped with each machine because IBM Workload Deployer 7199 contains two power supplies. These features are available for the new 7199 models.

Description	Machine	Model	Feature
Rail Kit	7199	72X	6799
Line cord - 2.8m, 10A/250V, C13 to GB 2099.1 (China)	7199	72X	6210
Line cord - 2.8m, 10A/250V, C13 to AS/NZ 3112 (Australia/NZ)	7199	72X	6211
Line cord - 2.8m, 10A/250V, C13 to IEC 309 Type 2P + Gnd (Europe)	7199	72X	6212
Line cord - 2.8m, 10A/250V, C13 to DK2-5a (Denmark)	7199	72X	6213
Line cord - 2.8m, 10A/250V, C13 to SABS 164 (S Africa)	7199	72X	6214
Line cord - 2.8m, 10A/250V, C13 to BS 1363/A (UK)	7199	72X	6215
Line cord - 2.8m, 10A/250V, C13 to SEV 1011-S24507 (Swiss)	7199	72X	6216
Line cord - 2.8m, 220-240V, C13 to IMQ CEI 23-16 (Italy/Chile)	7199	72X	6217
Line cord - 2.8m, 10A/250V, C13 to SI 32 (Israel)	7199	72X	6218
Line cord - 2.8m, 12A/100V, C13 to KETI (Korea)	7199	72X	6219
Line cord - 2.8m, 10A/250V, C13 to IRAM 2073 (Argentina)	7199	72X	6222
Line cord - 2.8m, 10A/125V, C13 to IEC320 (Brazil)	7199	72X	6223
Line cord - 2.8m 10A/250V, C13(2P+Gnd) (India)	7199	72X	6269
Line cord - 2.8m, 10A/125V, C13 to NEMA 5-15P (US)	7199	72X	6313
Line cord - 2.8m, 12A/100V, C13 to JIS C-8303(Japan)	7199	72X	6314
Line cord - 2.8m, 10A/125V, C13 to CNS 10917-3 (Taiwan)	7199	72X	6386

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=111-073>

Education support

Call IBM IT Education Services at 800-IBM-TEACH (426-8322) for catalogs, schedules, and enrollments.

Publications

No publications are shipped with this product.

Displayable softcopy publications

IBM Workload Deployer V3.0 installation softcopy documentation is available from the Workload Deployer documentation Library page. Workload Deployer product information is also available from the IBM Workload Deployer information center.

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

<http://www.ibm.com/services/learning/index.html>

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

Technical information

Specified operating environment

Physical specifications

- Height: 8.89 cm (3.5 in)
- Width: 43.8 cm (17.25 in)
- Depth: 58.4 cm (23 in)
- Weight, maximum: 21 kg (46.2 lb)

The IBM 7199 Workload Deployer must be installed in an EIA-310-D 48.3-cm (19-in) rack with at least 71.1 cm (28 in) of depth (from rail flange to flange).

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

Standards

- 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. 60950-1-03
- NOM-019

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)

- Powered off: 10 to 43 degrees C (50 to 109.4 degrees F), maximum altitude: 2133.6 m (7,000 ft)
- Relative humidity: 8% to 80%

Shipping environment

- Temperature: -40 to 60 degrees C (-40 to 140 degrees F)
- Relative humidity: 8% to 80%

Electrical power

100 to 127 or 200 to 240 V ac at 50 Hz or 60 Hz

Power usage:

- 10 A for 120 V ac
- 5 A for 220 V ac

The 7199 appliance contains two 720-watt power modules that operate at 100 to 127 V ac or 200 to 240 V ac at 50 or 60 Hz.

Both power supply modules must be connected to the same power source to prevent ground voltage potential difference between the two power modules.

Hardware requirements

For first-time configuration of the software, this appliance requires a compatible RS-232c terminal or terminal emulator with a male DB-9 serial port connector. The terminal must support the following RS-232c serial parameters:

- 9600 baud
- 1 stop bit
- No parity
- XON/XOFF handshaking

The terminal must support ANSI/VT-100 control sequences. "Hyperterminal" in Microsoft Windows® and "Minicom" in Linux are appropriate terminal emulators.

Unattended or remote installation may be performed through a network-attached terminal server. IBM Workload Deployer V3.0 requires one of the following:

- System z server hardware supported by z/VM V5.4, V6.1, or later
- Power Series® server running PowerVM VMControl V2.1, V2.2.1, or V2.3.1.1 hypervisor
- x86 server supported by VMware ESX V4.1, V4.0, or V3.5

Software requirements

The IBM 7199 Model 72X Workload Deployer comes with IBM-supplied firmware. Firmware updates are available at FixCentral

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

IBM Workload Deployer V3.0 requires one of the following:

- z/VM V5.4, V6.1, or later including:
 - Directory Manager (DirMaint) feature
 - Resource Access Control Facility (RACF®) feature
- VMware ESX V3.5, V4.0, or V4.1
- PowerVM VMControl V2.1 or V2.2.1 hypervisor with these detailed specifications:
 - All of the following:

- Services contract for IBM Implementation Services for Power Systems™ AIX V6.1 and IBM Migration Services for Power Systems AIX V6.1
For more information, refer to Services Announcement [608-040](#), dated June 24, 2008.
- AIX V6.1.3 (5765-G62) license is required with
 - IBM Network Installation Manager Server V6.1
 - IBM System Director V6.2, or later
- IBM Systems Director VMControl™ Image Manager V2.1, or later (5765-I2P)
- IBM Systems Director for Power Systems, V6.2, or later (5765-DRP)
- IBM Hardware Management Console (7042-CR5) with firmware V7.3.4.0.3, or later (dedicated)

One of the following machines:

- IBM Power® System P5 with firmware SF240_382, or later
- IBM Power System P6 with firmware EL340_095, or later
- IBM Power System P7 with firmware AL720_066, or later

Planning information

Customer responsibilities

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

Cable orders

Each 7199 appliance contains one 2x10 GbE and one 8x1 GbE connection. The RJ-45 connectors provide a 10/100/1000 BASE-T interface (either at half-duplex or full-duplex) for connecting twisted-pair cable to the Ethernet network. Cabling is not included with the appliance.

To connect the Ethernet interface to a repeater or switch, use an unshielded twisted pair (UTP) cable with RJ-45 connectors at both ends. For 100 Mbps or higher operation, Category 5 cabling must be used. For 10 Mbps operation, Category 3, or better, cabling, must be used.

The provided SFP+ connectors allow for three options: 10GBASE-SR transceivers (for 300m multimode fiber), 10GBASE-LR transceivers (for 10km singlemode fiber), or 10GBASE-Cu "direct attach" twinaxial cables, up to 10m.

Each 7199 appliance contains a single RS-232c serial port connection. The RJ-45 connector provides a 9600 baud asynchronous serial interface for connecting a serial cable to a console terminal (typically a terminal emulator running on an IBM PC). A 6-foot long "NULL modem" cable, with one RJ-45 connector and one female DB-9 connector, is provided with the appliance for this purpose. The terminal's serial parameters should be set to 9600 baud, no parity, 1 stop bit, XON/XOFF handshaking.

Installability

Each 7199 series appliance requires approximately 30 minutes for installation. Installation includes unpacking, rack-mounting, connecting network and console cables, and powering on the system. Additional time is required to configure the software.

Packaging

IBM Workload Deployer is shipped in a single package.

- Single pack dimensions: 89 x 63 x 28 cm (35 x 24.8 x 11 in)

- Single pack weight: 23.2 kg (51 lb)

The 7199 series appliance carton contains:

- 7199 series appliance (model specific)
- Welcome flyer
- Quick Start Guide
- Safety Pointer Sheet
- Workload Deployer V3.0 Resource CD
- Warranty flyer
- Console serial cable
- Rack-mount kit, including two rack power cords
- Rail kit
- Two power cords

Security, auditability, and control

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

Terms and conditions

IBM Global Financing

Yes

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 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 the normal IBM 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 parts have been designated as Tier 1 CRUs:

- Hard disk drive
- Fan
- Ethernet modules
- Power cord
- Power supply
- Network modules
- Rack mounting kit

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 pm local time in order to qualify for next business day response.
- 24 hours per day, 7 days a week, 4-hour average, same day response. Same day service level includes the installation of Tier 1 CRUs at no additional charge.

CRU and Courier or Depot Service

At IBM's discretion, you will receive specified CRU service, or you will disconnect the failing machine for collection arranged by IBM. IBM will provide you with a shipping container for you to return your machine to a designated service center. A courier will pick up your machine and deliver it to the designated service center. Following its repair or exchange, IBM will arrange the return delivery of the machine to your location. You are responsible for its installation and verification.

CRU and Customer Carry-In or Mail-In Service

At IBM's discretion, you will receive specified CRU service, or you will deliver or mail, as IBM specifies (prepaid unless IBM specifies otherwise), the failing machine suitably packaged to a location IBM designates. After IBM has repaired or exchanged the machine, IBM will make it available for your collection or, for mail-in service,

IBM will return it to you at IBM's expense, unless IBM specifies otherwise. You are responsible for the subsequent installation and verification of the machine.

CRU and Machine Exchange Service

At IBM's discretion, you will receive specified CRU service, or IBM will initiate shipment of a replacement machine to your location. You are responsible for its installation and verification of operation. You must pack the failed machine into the shipping container that contained the replacement machine and return the failed machine to IBM. Transportation charges, both ways, are paid by IBM. You may be charged for the replacement machine if IBM does not receive the failed machine 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 services section 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

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 the normal IBM 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 holidays, NBD response
- 24 hours per day, 7 days a week, 4-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 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, 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.

CRU and Courier or Depot Service

At IBM's discretion you will receive CRU service or you must disconnect the failing machine for collection arranged by IBM. IBM will provide you with a shipping container for you to return your machine to a designated service center. A courier will pick up your machine and deliver it to the designated service center. Following its repair or exchange, IBM will arrange the return delivery of the machine to your location. You are responsible for its installation and verification.

CRU and Customer Carry-In or Mail-In Service

At IBM's discretion you will receive CRU service or you will deliver or mail, as IBM specifies (prepaid, unless IBM specifies otherwise), the failing machine suitably packaged to a location IBM designates. After IBM has repaired or exchanged the machine, IBM will make it available for your collection or, for mail-in service, IBM will return it to you at IBM's expense, unless IBM specifies otherwise. You are responsible for the subsequent installation and verification of the machine.

CRU and Machine Exchange Service

At IBM's discretion you will receive CRU service or IBM will initiate shipment of a replacement machine to your location. You are responsible for its installation and verification of operation. You must pack the failed machine into the shipping container that contained the replacement machine and return the failed machine to IBM. Transportation charges, both ways, are paid by IBM. You may be charged for

the replacement machine if IBM does not receive the failed machine within 15 days of your receipt of the replacement.

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.

Warranty service upgrades

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.

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 internal code and licensed machine code

This product does not contain Licensed Internal Code or Licensed Machine Code.

Educational allowance

Not applicable

Pricing

For all local charges, contact your IBM representative.

With each appliance acquired, IBM includes one year of appliance support consisting of 9 hours per day, Monday through Friday, excluding holidays, next business day (NBD) response. The initial period of maintenance can be upgraded by the purchase of a warranty service upgrade or extended by the purchase of a renewal option, if available.

New IBM workload Deployer machine model:

Description	Machine Model	
IBM workload Deployer	7199	72X

IBM Cloud Capacity Entitlement

There are no changes to the pricing for IBM Cloud Capacity Entitlement (9231-200) from WebSphere CloudBurst Appliance V1.0. For pricing information, refer to Hardware Announcement [109-318](#), dated June 02, 2009.

Entitlement requirements

In order to use IBM Workload Deployer, one or both of the following parts is required, depending on the usage scenario:

- **IBM Cloud Capacity Entitlement**

One PVU of Cloud Capacity Entitlement is required for each PVU of hardware capacity that is managed by Workload Deployer. Cloud Capacity Entitlement is required for both topology patterns and workload patterns. One Thousand (1000) PVUs of Cloud Capacity Entitlement are included with each initial IBM Workload Deployer purchase.

- **IBM Workload Deployer Image for x86 Systems V1.0**

One PVU of Deployer Image for x86 Systems, program number 5725-D64, is required for each PVU of hardware capacity that is used to run a workload pattern such as Deployer Pattern for Web Applications. Deployer Image for x86 Systems is **not** required for topology patterns.

Feature rule

9231-200 Cloud Capacity Entitlement (in PVU) feature option 1773 is required and available only with the initial order of each 7199-72X model.

Specify features

Description	Machine Model		Feature
Rail Kit	7199	72X	6799
Line cord - 2.8m, 10A/250V, C13 to GB 2099.1 (China)	7199	72X	6210
Line cord - 2.8m, 10A/250V, C13 to AS/NZ 3112 (Australia/NZ)	7199	72X	6211
Line cord - 2.8m, 10A/250V, C13 to IEC 309 Type 2P + Gnd (Europe)	7199	72X	6212
Line cord - 2.8m, 10A/250V, C13 to DK2-5a (Denmark)	7199	72X	6213
Line cord - 2.8m, 10A/250V, C13 to SABS 164 (S Africa)	7199	72X	6214
Line cord - 2.8m, 10A/250V, C13 to BS 1363/A (UK)	7199	72X	6215
Line cord - 2.8m, 10A/250V, C13 to SEV 1011-S24507 (Swiss)	7199	72X	6216
Line cord - 2.8m, 220-240V, C13 to IMQ CEI 23-16 (Italy/Chile)	7199	72X	6217
Line cord - 2.8m, 10A/250V, C13 to SI 32 (Israel)	7199	72X	6218

Line cord - 2.8m, 12A/100V, C13 to KETI (Korea)	7199	72X	6219
Line cord - 2.8m, 10A/250V, C13 to IRAM 2073 (Argentina)	7199	72X	6222
Line cord - 2.8m, 10A/125V, C13 to IEC320 (Brazil)	7199	72X	6223
Line cord - 2.8M 10A/250V, C13(2P+Gnd) (India)	7199	72X	6269
Line cord - 2.8m, 10A/125V, C13 to NEMA 5-15P (US)	7199	72X	6313
Line cord - 2.8m, 12A/100V, C13 to JIS C-8303(Japan)	7199	72X	6314
Line cord - 2.8m, 10A/125V, C13 to CNS 10917-3 (Taiwan)	7199	72X	6386

Feature install summary

Machine Type	Feature number	Field install only	Plant install only	MES removal	MES add charge	Cables required
7199	6799	N	N	N	N	N
7199	6210	N	Y	N	N	N
7199	6211	N	Y	N	N	N
7199	6212	N	Y	N	N	N
7199	6213	N	Y	N	N	N
7199	6214	N	Y	N	N	N
7199	6215	N	Y	N	N	N
7199	6216	N	Y	N	N	N
7199	6217	N	Y	N	N	N
7199	6218	N	Y	N	N	N
7199	6219	N	Y	N	N	N
7199	6222	N	Y	N	N	N
7199	6223	N	Y	N	N	N
7199	6269	N	Y	N	N	N
7199	6313	N	Y	N	N	N
7199	6314	N	Y	N	N	N
7199	6386	N	Y	N	N	N

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

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