



IBM PureApplication System W1500, an expert integrated system that can optimally deploy and run applications for rapid time to value

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At a glance

IBM® PureApplication System W1500 delivers the following function:

- Provides complete cloud system shipped including pattern-based deployment, virtualization, monitoring, usage management, usage tracking, and other cloud management capabilities.
- Provides integrated monitoring and management via an integrated UI.
- Includes integrated, optimized, compute, network, and storage resources.
- Supports growth to larger systems without a system outage.
- Provides built-in elasticity of application workloads.
- Provides updates for entire infrastructure stack.
- Integrates database and application server capability, with virtually unlimited capacity for the system purchased.
- Supports IBM and partner content optimized for PureApplication System, in addition to third-party software.
- Provides a single point of contact for IBM hardware and support.

Overview

IBM PureApplication System W1500 (PureApplication System) is an expert integrated system. It combines the flexibility of a general-purpose system and the simplicity of an appliance. Integrated expertise throughout the system help fundamentally change the economics of IT. The PureApplication System comes integrated from the IBM factory, designed by IBM experts.

This integration helps remove the need for expensive and time-consuming interaction between multiple teams in a traditional IT organization.

Designing, developing, and deploying a web or database application, or an application environment, often requires expertise to manually architect, install, configure, integrate, optimize, and scale the components of a multi-server deployment. With PureApplication System, this process is as simple as logging into a self-service console. The availability of self-service deployment access raises a challenge for administrators to ensure that resources are used efficiently, responsibly, and fairly. To address this, PureApplication System allows administrators to control user access to hardware, software patterns, and licenses. Administrators

can also set limits on usage, track usage for chargeback, and manage licenses through the PureApplication System console.

Planned availability date

July 31, 2012

Description

IBM PureApplication System W1500 is a member of a new IBM family of products called expert integrated systems. These IBM solutions are designed to greatly simplify the tasks of designing, acquiring, using, and managing IT environments. By adopting one of these systems, the design and implementation of a solution is handled by expert engineers in IBM . This shift in responsibility allows IT managers to task their workers with more strategic and productive assignments.

PureApplication System includes an integrated management system which is purpose built for PureApplication System. A unified console provides the capability to:

- Deploy application environments in a self-service fashion.
- Monitor the resultant virtual machines, databases, and application systems.
- Apply maintenance to deployed virtual machines.
- Assign user and group permissions.
- Obtain usage data for chargeback purposes.
- Manage license usage and entitlements.
- Create customized deployment patterns to share with other team members.
- Monitor hardware utilization.
- Visualize the resource consumption of the system.
- Observe as the system routes around hot spots within the system.

Pattern-based deployment is an important component of PureApplication System, providing the deployment and management of a multi-server application environment. Multiple types of patterns are supported in PureApplication System.

Virtual application patterns are application-centric patterns. They require the user to enter only a few inputs, such as application artifacts and policies. Then, the pattern management system maps those inputs into a configured, running application environment. Virtual application patterns require no scripting.

Virtual system patterns are designed for IBM middleware. Based on individual virtual images built on the .ovf standard, these patterns are either shipped pre-assembled by IBM , or created through use of the IBM Image Construction Tool. These patterns require some scripting that allows additional control for situations that demand it.

PureApplication System is shipped a fully assembled, cabled, integrated rack from IBM . It is offered in four distinct configurations:

- IBM PureApplication System W1500-96 (96 cores, 1.5 TB RAM)
- IBM PureApplication System W1500-192 (192 cores, 3.0 TB RAM)
- IBM PureApplication System W1500-384 (384 cores, 6.1 TB RAM)
- IBM PureApplication System W1500-608 (608 cores, 9.7 TB RAM)

Users may upgrade from one configuration to the next by buying the appropriate upgrade. Upgrades may be completed without powering down the installed machine.

Each of these offerings comes with 54.4 TB of storage, divided between hard disks (88%) and solid state disks (12%). Technology built into PureApplication System

helps to optimize the placement of data across these disks, such that data accessed most frequently and recently is stored on the faster solid state disks. The system monitors disk usage helping to prevent hotspots, resulting in improve performance.

PureApplication System allows consolidation of multiple types of workloads onto a single system. To ease the acquisition of IBM and ISV solutions optimized for use with PureApplication System, IBM created the PureSystems Center. The PureSystems Center is hosted at

<http://www.ibm.com/PureSystems/Centre>

The Center allows PureApplication System users to search, browse, and acquire solutions to use in conjunction with PureApplication System.

The following products are delivered as integrated patterns, available for deployment on PureApplication System. A purchase of a particular configuration of PureApplication System includes entitlement to run the following products up to the total capacity of that configuration:

- IBM WebSphere® Application Server Hypervisor Edition, V7.0 and V8.0
- IBM DB2® Enterprise Server Edition, V9.7 FP5 and V10.1
- IBM Web Application Pattern, V1.0 and V2.0
- IBM Transactional Database Pattern V1.1
- IBM Data Mart Pattern V1.1
- IBM Application Pattern for Java™ V1.0
- IBM OS Image for Red Hat Linux™ Systems V2.0

For information on the Transactional Database Pattern and Data Mart Pattern, refer to the [IBM Transactional Database Pattern and IBM Data Mart Pattern](#) section.

The following patterns can be used with PureApplication System. These patterns are separately entitled and available on the PureSystems Center:

- WebSphere MQ Hypervisor Edition V7.0.1 for Red Hat Enterprise Linux for x86
- IBM Message Broker Hypervisor Edition V8.0 for Red Hat Enterprise Linux for x86
- WebSphere Portal Server and IBM Content Manager V7.0 Hypervisor Editions for Red Hat Enterprise Linux for x86

ISV applications optimized for use in PureApplication System can be found and acquired from PureSystems Center.

Components in the PureApplication System are designed for redundancy, such that the system can recover from any single failure.

- Storage is arranged in multiple RAID arrays with spare drives.
- Management system is redundant.
- Power® supplies are redundant.
- All compute nodes are stateless, so work automatically fails over to a different compute node at hardware failure.

Accessibility by people with disabilities

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

Section 508 of the US Rehabilitation Act

Yes

Statement of direction

IBM intends to offer IBM PureApplication System configurations based on the POWER® architecture within the IBM PureApplication System family in second half, 2012. Specific configuration details are planned to align closely with the configurations described in this announcement.

IBM intends to provide consistent capabilities and business value across the IBM PureApplication System family, particularly in terms of patterns of expertise, integration by design, and simplified experience.

Additionally, IBM intends to work with IBM partners to offer an ecosystem of partner optimized solutions for IBM PureApplication System configurations based on the POWER architecture.

IBM intends to deliver the following new, separately licensed software patterns for PureApplication System in second half, 2012.

- A messaging extension to Web Application Pattern to enable automatic provisioning of messaging resources during application deployment. The automatic provisioning of a WebSphere MQ infrastructure can help application developers spend less time learning, installing, and configuring the messaging middleware, and more time focusing on delivering the actual application.
- A new pattern to provide end-to-end visibility across the service-oriented architecture (SOA) lifecycle with built-in policy enforcement.

IBM plans to combine a broad set of service management and enterprise service bus (ESB) capabilities in this pattern to enable enterprises that adopt SOA to manage their service consumers and providers, track consumption, identify and eliminate rogue services, reduce costs, and demonstrate a return on investment.

- New Business Process Manager (BPM) patterns designed to enable rapid scaling of business process applications within a private cloud. IBM Business Process Manager is a comprehensive and consumable business process management platform that provides visibility and management of business processes.

IBM intends to provide separately licensed BPM Advanced and BPM Standard patterns optimized for high availability to help accelerate the setup of complex, highly available environments. This support can enable customers to focus their critical resources on value add activities instead of installation and configuration.

- A new Informix® pattern to enable customers to rapidly deploy Informix databases in virtual environments. This pattern is intended to deliver the same high-performance, linear scalability, and continuous availability capabilities that Informix customers have come to expect. It will provide an environment for managing large amounts of time-variant data through its unique TimeSeries capabilities for Smart Meter and sensor-driven solutions.
- A new IBM Connections pattern designed to enable clients to quickly provide their employees with social capabilities fostering collaboration, expertise location, and sharing. Enterprises that realize the value of social business practices can help improve efficiency through collaboration and idea generation as well as more effective communication with customers and partners.

IBM plans to provide an integrated set of capabilities in this pattern to deliver new levels of social business effectiveness in a private cloud.

- A new business intelligence pattern designed to enable rapid deployment and scaling of IBM Cognos® Business Intelligence applications. IBM Cognos Business Intelligence equips business users with reporting, analysis, dashboard, and scorecards to help them easily analyze all information to drive better business decisions.

IBM intends to incorporate best practices within this pattern for faster deployment of Cognos Business Intelligence and optimized installations with elastic scaling, enabling customers to roll out to broader user populations,

manage peak usage and ensure high availability, all with more efficient use of resources.

IBM's statements regarding its plans, directions, and intent are subject to change or withdrawal without notice at IBM's sole discretion. Information regarding potential future products is intended to outline our general product direction and it should not be relied on in making a purchasing decision. The information mentioned regarding potential future products is not a commitment, promise, or legal obligation to deliver any material, code, or functionality. Information about potential future products may not be incorporated into any contract. The development, release, and timing of any future features or functionality described for our products remains at our sole discretion.

Program number

Program number	VRM	Program name
5725-G32	V1.0.0	IBM PureApplication System w1500

Additional information

IBM Transactional Database Pattern and IBM Data Mart Pattern

PureApplication Systems deliver built-in database expertise

The PureApplication System lets customers rapidly and consistently deploy production ready databases that are built in with years of optimization best practices.

Customers identify their database requirements and the PureApplication System automatically builds and tailors the underlying database to meet those requirements. The PureApplication System comes with two database patterns installed and ready-to-use with patterns representing two of the most common workload types found today:

- The IBM Transactional Database Pattern can be used to create DB2 databases optimized to support online transaction processing applications.
- The IBM Data Mart Pattern can be used to create DB2 databases optimized to support operational analysis and reporting workloads.

These patterns can help IT organizations cost-effectively deploy and manage database infrastructure, and enable self-service for application groups. This helps reduce the time and costs associated with database administration.

IBM Transactional Database Pattern is a set of integrated capabilities that specifically support the creation and management of databases for online transaction processing applications. These types of applications typically support hundreds of users running short query and update requests (for example, order-processing systems, shopping cart applications, and package tracking systems). The most important service level metrics for these applications are availability, performance, and cost.

Key functions enabled by the Transactional Database Pattern are:

- Simple, optimal database creation, and configuration
- Easy integration with security processes
- Support for database back-up processing
- Simple database deployment cloning
- Compatibility support for Oracle-based applications
- Integrated data modeling, monitoring, and diagnostics

Using Transactional Database Pattern, databases can be created that are optimized for transactional processing. Pattern use can:

- Allocate appropriately sized buffers and log buffers.
- Enable parallel I/O which allows the system to prefetch requests in parallel.
- Set the currently committed value to **On** to help ensure the queries returned contain the currently committed value of the data at the time the query is submitted.

The Transactional Database Pattern consists of:

- Database back-up schedule
- Templates for sizing virtual machines, used to accurately size databases
- Scripts to set the database configuration parameters for optimize performance and resource utilization for transactional processing. These scripts tune the operating system and database instance configuration, create the database and accompanying objects, and optionally load initial data into the new database.

This built-in expertise makes it possible to create and deploy workload-optimized test and production-ready databases in minutes¹ providing greater business flexibility while helping to lower costs and risks.

IBM Data Mart Pattern - Most customers need one or more data marts, which contain a subset of online operational data. These data marts typically exist to serve a particular user population and are used for specialized analysis and reporting such as Online Analytical Processing (OLAP). Data marts have unique operational demands stemming from ad-hoc business analysis.

The IBM Data Mart Pattern provides a set of capabilities essential to the provisioning and management of data mart infrastructure in a security-enhanced, private cloud. Tuned for the unique I/O throughput requirements of data mart workloads, the Data Mart Pattern includes data compression capabilities and data movement tools, designed to help businesses gain insight quickly and efficiently.

Key functions enabled by the Data Mart Pattern include:

- Simple, optimal data mart creation, configuration, and deployment
- Compression to help improve performance
- SQL warehousing tools for creating and modifying physical models, control flows, and data flows
- Easy integration with security processes
- Support for data mart back-up processing
- Simple data mart deployment cloning
- Compatibility support for Oracle-based applications
- Integrated diagnostic and monitoring

The nature of Data Mart queries is generally different from those that run in transaction processing environments. For example, a data mart user might run a monthly sales analysis query that examines 50 gigabytes of data. Rather than having to manually tune the underlying database to handle this type of I/O intensive processing, the Data Mart Pattern can be used to automatically configure the data mart.

For example, use of the pattern will:

- Allocate larger page sizes, buffer pools, log buffers, and log files to help improve performance of handling larger sets of data.
- Allocate bigger lock lists to minimize the chance of lock escalation, which can degrade performance.
- Allocate a larger sort heap to handle frequent sorting of large volumes of data.

- Define additional I/O servers to enable more prefetch I/O which can greatly help improve query performance.

The Data Mart pattern consists of:

- DB2 templates that are used for database deployment. Customers can choose to create data marts using IBM InfoSphere® Warehouse V9.7 or V10.1 and can specify if the data mart is for production or non-production use.
- Data Studio web console client used to monitor data mart instances.
- IBM Tivoli® Storage Manager client be used to manually and automatically to back up and recover data marts.
- Data mart back-up schedule.
- Data mart cloning capabilities to allow the user to create patterns based on an existing data mart image. This allows the creation of a new virtual machine with the same resource settings.
- Sizing templates to remove the guess work of accurately sizing virtual machines and data marts.
- Scripts to set the data mart configuration parameters for optimize performance and resource utilization for transactional processing. These scripts tune the operating system and data mart instance configuration, create the data mart and accompanying objects, and optionally load the initial data into the new data mart.
- SQL warehouse tools for creating and modifying physical models, control flows, and data flows.
- Data customization tools.

Both the patterns support:

- Use of international applications through National Language Support.
- Choice of DB2 release used for database deployment. Customers can choose to create databases using DB2 V9.7 or V10.1 Enterprise Server Edition and can specify if the database is for production or non-production use.
- IBM Optim™ Data Studio 3.1 web console client which can be used to monitor database instances.
- Optim Development Studio, Optim Database Administrator, and Data Studio Health Monitor for end-to-end development and management.
- Integration with Optim Performance Monitor for integrated system monitoring.
- IBM Tivoli Storage Manager client used to manually and automatically back up and recover databases.
- Data compression capabilities to help improve performance in shared disk environments.

For additional information about IBM Transactional Database Pattern and IBM Data Mart Pattern, refer to Software Announcement [211-474](#), dated November 1, 2011.

PureApplication Systems deliver database integration by design

A key characteristic of an expert integrated system is integration by design - that is, the hardware and software components of the system are deeply integrated and tuned at the factory to provide optimal performance and resource efficiency. An example of this integration by design found in the IBM PureApplication System is the DB2 Workload setting. This feature of DB2 can be viewed as a special knob that configures DB2 databases specifically for the workload selected.

Currently DB2 can be easily optimized for the following types of workloads:

- 1C
- Infor ERP Baan
- SAP
- IBM Content Manager
- IBM Cognos Content Server

- IBM FileNet Content Manager
- IBM Maximo®
- IBM Master Data Management
- IBM Tivoli Provisioning Manager
- WebSphere Application Server
- WebSphere Commerce
- WebSphere Portal

PureApplication System - deep integration of DB2 and WebSphere Application Server

The PureApplication System captures years of IBM experience in helping clients design, build, and deploy new web applications. The core middleware components of this system are WebSphere Application Server and DB2 , two technologies essential to running mission-critical applications.

In the PureApplication System, these two components are deeply integrated and tuned so IT staffs no longer need to understand the interdependencies and connections between the two subsystems. Using the PureApplication System, organizations can take advantage of the benefits of this deep integration right out of the box.

Some examples of the deep integration between WebSphere Application Server and DB2 include:

- Ability to establish a trusted connection between WebSphere Application Server and DB2 to leverage connection pooling and minimize the performance penalty of closing and reopening connections with a different identity
- Use of a single sign-on token between WebSphere Application Server and DB2 to ensure access is being enforced at both the application and database level
- Targeted, integrated testing, and verification of WebSphere Application Server and DB2 versions, releases, and fix packs to provide easy, fast, and less error-prone installation of upgrades and maintenance
- Integrated, end-to-end tracing and monitoring for easy problem determination and resolution
- Automatic client re-route, which automatically redirects client applications from a failed server to an alternate server so the applications can continue to work with minimal interruption
- Common integrated tools and application development environment to help improve developer productivity

1 Any performance data contained herein was determined in a controlled environment. Therefore, the results obtained in other operating environments may vary significantly. Some measurements may have been made on development-level systems and there is no guarantee that these measurements will be the same on generally available systems. Furthermore, some measurements may have been estimated through extrapolation. Actual results may vary. Users of this document should verify the applicable data for their specific environment.

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=212-117>

Education support

IBM Global Services, IT Education Services, supports many IBM offerings.

Visit

<http://www.ibm.com/training/us>

For descriptions of courses for IT professionals and managers, visit

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

Questions? Contact 800-IBM-TEACH (426-8322).

Offering Information

Product information is available via the Offering Information website

<http://www.ibm.com/common/ssi>

Publications

The IBM PureApplication System Information Roadmap is included with the IBM PureApplication System W1500 software.

The IBM PureApplication System Information Center will be available on online July 31, 2012, at:

<http://publib.boulder.ibm.com/infocenter/psappsys/v1r0m0/index.jsp>

Technical information

Specified operating environment

Physical specifications

IBM PureApplication System W1500

- IBM PureApplication System W1500-96
- IBM PureApplication System W1500-192
- IBM PureApplication System W1500-384
- IBM PureApplication System W1500-608
- Height: 2015 mm (79.3 in)
- Depth: 1098 mm (43.3 in)
- Width: 644 mm (25.4 in)
- Maximum weight
 - IBM PureApplication System W1500-96: 936 Kg (2027 lb)
 - IBM PureApplication System W1500-192: 953 Kg (2095 lb)
 - IBM PureApplication System W1500-384: 1016 Kg (2232 lb)
 - IBM PureApplication System W1500-608: 1088 Kg (2391 lb)

Electrical and power requirements

The following data represents the maximum label rated power requirements based on the hardware configuration in the PureApplication System rack. The actual power consumption will vary depending upon the workloads running on the system and the typical power consumption values are expected to be lower than the maximum rated power. When planning the electrical system, it is important to use maximum values to account for internal or environmental conditions that result in power consumption increasing beyond typical values.

200 to 240 (nominal) volts AC; 50 Hz or 60 Hz

- IBM PureApplication System W1500-96: 14.7 kVA, 14.0 kilowatts (kW), 47.7 kBTUs/hr
- IBM PureApplication System W1500-192: 18.3 kVA, 17.4 kW, 59.4 kBTUs/hr
- IBM PureApplication System W1500-384: 25.5 kVA, 24.3 kW, 82.8 kBTUs/hr
- IBM PureApplication System W1500-608: 32.8 kVA, 31.1 kW, 106.2 kBTUs/hr

Notes

- The input voltage is based on the power distribution unit (PDU) and associated line cord. In countries that support line-to-line 200 - 208 V ac, the PDU input voltage matches the PDU output voltage. In countries that support line-to-line 380 - 415 V ac, the PDU output voltage is in the range of 220 - 240 V ac. Refer to the **distribution unit and line cord specifications** in *Planning for the IBM PureApplication System appliance* document for more information.
- All drawers mounted in the rack are rated 200 - 240 V ac. The power supplies automatically accept any voltage within the rated voltage range. With dual power supplies installed and operating, the power supplies draw approximately equal current from the utility (mains) and provide approximately equal current to the load.
- All weights and measurements are approximate.

Standards

The IBM PureApplication System W1500 supports or complies to 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 equipment approval and safety

- FCC - Verified to comply with Part 15 of the FCC Rules, Class A
- Canada ICES-004, issue 3, Class A
- UL Mark UL 60950-1 First Edition
- CSA22.2 No.60950-1 First Edition
- NOM-019
- Argentina IEC 60950-1

Operating environment

The IBM PureApplication System W1500 is designed to operate in the chassis and nodes are designed to meet ASHRAE Class A2.

Power on ²

- Temperature: 5 C - 35 C (41 F - 91 F)⁴
- Humidity, non-condensing: -12 C dew point (10.4 F) and
- 8% - 85% relative humidity^{6,7}

- Maximum dew point: 24 C (75 F)
- Maximum altitude: 3048 m (10,000 ft)
- Maximum rate of temperature change: 5 C/hr (41 F/hr)⁵

Power off³

- Temperature: 5 C to 45 C (41 F - 113 F)
- Relative humidity: 8% - 85%
- Maximum dew point: 27 C (80.6 F)

Storage (non-operating)

- Temperature: 1 C to 60 C (33.8 F - 140 F)
- Altitude: 3050 m (10,006 ft)
- Relative humidity: 5% - 80%
- Maximum dew point: 29 C (84.2 F)

Shipment (non-operating)⁸

- Temperature: -40 C to 60 C (-40 F - 140 F)
- Altitude: 10,700 m (35,105 ft)
- Relative humidity: 5% - 100%
- Maximum dew point: 29 C (84.2 F)⁹

2 Chassis is powered on.

3 Chassis is removed from original shipping container and is installed but not in use, for example, during repair, maintenance, or upgrade.

4 A - Derate maximum allowable temperature 1 C/175 m above 950 m.

5 5 C/hr for data centers employing tape drives and 20 C/hr for data centers employing disk drives.

6 The minimum humidity level for class A3 is the higher (more moisture) of the -12 C dew point and the 8% relative humidity. These intersect at approximately 25 C. Below this intersection (25 C) the dew point (-12 C) represents the minimum moisture level, while above it relative humidity (8%) is the minimum.

7 Moisture levels lower than 0.5 C DP, but not lower than -10 C DP or 8% relative humidity, can be accepted if appropriate control measures are implemented to limit the generation of static electricity on personnel and equipment in the data center. All personnel and mobile furnishings and equipment must be connected to ground via an appropriate static control system. The following items are considered the minimum requirements:

- Conductive materials (conductive flooring, conductive footwear on all personnel that go into the datacenter, all mobile furnishings and equipment will be made of conductive or static dissipative materials).
- During maintenance on any hardware, a properly functioning wrist strap must be used by any personnel who contacts IT equipment.

8 The equipment acclimation period is 1 hour per 20 C of temperature change from the shipping environment to the operating environment.

9 Condensation is acceptable, but not rain.

Cooling requirements

- IBM PureApplication System W1500-96: 2157 Cubic Feet per Min (CFM)
- IBM PureApplication System W1500-192: 2612 CFM
- IBM PureApplication System W1500-384: 3294 CFM
- IBM PureApplication System W1500-608: 3522 CFM

Limitations

Solid-state memory cells have an intrinsic, finite number of cell write cycles. The maximum number of write cycles for these devices is defined as total bytes written (TBW).

IBM is not responsible for replacement of hardware that has reached TBW. Device failure indications may include:

- Device fails to communicate to system commands
- Device fails to accept write commands

IBM Official Specifications for IBM PureApplication System hardware

Contact your local marketing representative for a copy of the IBM Official Published Specifications for IBM PureApplication System hardware.

Planning information

Direct customer support

For technical support or assistance, contact your IBM representative or visit

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

Global Technology Services

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

These services help you learn, plan, install, manage, or optimize your IT infrastructure to be an On Demand Business. These services 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

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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>

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Ordering information

This product is only available via Passport Advantage® .

Charge metric

Program name	PID number	Charge metric
IBM PureApplication System W1500	5725-G32	Per appliance Install

Appliance Install

Appliance Install is a unit of measure by which the program can be licensed. An Appliance Install is an installed copy of the program that is included on a single unit of supporting hardware. Licensee must obtain an entitlement for each Appliance Install of the program.

Entitled maintenance offerings

Passport Advantage

Program name/Description	Part number
IBM PureApplication System W1500-96	
Appliance Install	
Appliance Install, maintenance + S&S 12 Mo	D0NYKLL
Appliance maintenance + S&S renewal 12 Mo	E0DJILL
Appliance maintenance + S&S reinstatement 12 Mo	D0NYJLL
Business Critical Service upgrade per Appliance Install	
Initial upgrade 12 Months	D0NYELL
Subsequent upgrade 12 Months	E0DJDLL
Hard Drive Retention Service upgrade per Appliance Install	
Initial 12 Months	D0NYILL
Subsequent 12 Months	E0DJHLL
IBM PureApplication System W1500-192	
Appliance Install	
Appliance Install, maintenance + S&S 12 Mo	D0NYMLL
Appliance maintenance + S&S renewal 12 Mo	E0DJJLL
Appliance maintenance + S&S reinstatement 12 Mo	D0NYLLL
Appliance Upgrade - IBM PureApplication System W1500-192 with install, maintenance + S&S 12 Mo	
Upgrade from IBM PureApplication System W1500-96	D0NYTLL
Business Critical Service upgrade per Appliance Install	
Initial upgrade 12 Months	D0NYBLL
Subsequent upgrade 12 Months	E0DJALL
Hard Drive Retention Service upgrade per Appliance Install	
Initial 12 Months	D0NYGLL
Subsequent 12 Months	E0DJFLL
IBM PureApplication System W1500-384	
Appliance Install	
Appliance Install, maintenance + S&S 12 Mo	D0NYPLL
Appliance maintenance + S&S renewal 12 Mo	E0DJKLL
Appliance maintenance + S&S reinstatement 12 Mo	D0NYNLL

Appliance Upgrade - IBM PureApplication System W1500-384 with install, maintenance + S&S 12 Mo Upgrade from IBM PureApplication System W1500-192	D0NYULL
Business Critical Service upgrade per Appliance Install Initial upgrade 12 Months Subsequent upgrade 12 Months	D0NYDLL E0DJCLL
Hard Drive Retention Service upgrade per Appliance Install Initial 12 Months Subsequent 12 Months	D0NYFLL E0DJELL
IBM PureApplication System W1500-608 Appliance Install Appliance Install, maintenance + S&S 12 Mo Appliance maintenance + S&S renewal 12 Mo Appliance maintenance + S&S reinstatement 12 Mo	D0NYRLL E0DJLLL D0NYQLL
Appliance Upgrade - IBM PureApplication System W1500-608 with install, maintenance + S&S 12 Mo Upgrade from IBM PureApplication System W1500-384	D0NYSLL
Business Critical Service upgrade per Appliance Install Initial upgrade 12 Months Subsequent upgrade 12 Months Hard Drive Retention Service upgrade per Appliance Install Initial 12 Months Subsequent 12 Months	D0NYCLL E0DJBLL D0NYHLL E0DJGLL

Note: Country-specific items - keyboards, line cords, and power distribution units are provided, based upon the country code of the order

Terms and conditions

The information provided in this announcement letter is for reference and convenience purposes only. The terms and conditions that govern any transaction with IBM are contained in the applicable contract documents such as the IBM International Program License Agreement, IBM International Passport Advantage Agreement, and the IBM Attachment for Appliance Service to Passport Advantage .

<http://www.ibm.com/software/lotus/passportadvantage/agreementsandforms.html>

Consult the *IBM Appliance Support Handbook* for further details on Appliance Warranty Service Upgrade options. Visit

<http://www.ibm.com/software/appliance/support>

This product is only available via Passport Advantage .

Licensing

IBM International Program License Agreement including the License Information document and Proof of Entitlement (PoE) govern your use of the program. PoEs are required for all authorized use.

License Information form number

IBM PureApplication System W1500 License - L-DDAC-8QWMN3

The program License Information will be available for review on the IBM Software License Agreement website

<http://www.ibm.com/software/sla/sladb.nsf>

Limited warranty applies

Yes

Limited warranty

IBM warrants that when the program is used in the specified operating environment, it will conform to its specifications. The warranty applies only to the unmodified portion of the program. IBM does not warrant uninterrupted or error-free operation of the program or that IBM will correct all program defects. You are responsible for the results obtained from the use of the program.

IBM provides you with access to IBM databases containing information on known program defects, defect corrections, restrictions, and bypasses at no additional charge. For further information, consult the *IBM Appliance Support Handbook* found at

<http://www.ibm.com/software/appliance/support>

IBM will maintain this information for at least one year after the original licensee acquires the program (warranty period).

Program technical support

This technical support allows you to obtain assistance (via telephone or electronic means) from IBM for product-specific, task-oriented questions regarding the installation and operation of the program product. Appliance Subscription and Support (Appliance Maintenance) also provides you with access to updates (modifications or fixes), releases, and versions of the program. You will be notified, via announcement letter, of discontinuance of support with 12 months' notice. If you require additional technical support from IBM, including an extension of support beyond the discontinuance date, contact your IBM representative or IBM Business Partner. This extension may be available for a fee.

Volume orders (IVO)

No

Passport Advantage applies

Yes, and through the Passport Advantage website at

<http://www.ibm.com/software/passportadvantage>

Usage restriction

Yes. IBM has the sole right to replace the software components within IBM PureApplication System with alternative software components during the support term of IBM PureApplication System.

Adding, removing, or replacing hardware components of PureApplication System must be performed by IBM.

Appliance Maintenance, Software Subscription and Support applies

Yes. For additional information on appliance services, consult the Appliance Services Attachment to Passport Advantage at

<http://www.ibm.com/software/lotus/passportadvantage/agreementsandforms.html>

Consult the IBM Appliance Support Handbook for further details on Appliance Warranty Service Upgrade options:

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No. For operating system software, the revised IBM Operational Support Services - SoftwareXcel offering will provide support for those operating systems and

associated products that are not available with the Software Subscription and Support (Software Maintenance) offering.

This will ensure total support coverage for your enterprise needs, including IBM and selected non-IBM products. For complete lists of products supported under both the current and revised offering, visit

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IBM Operational Support Services - SoftwareXcel

No

System i® Software Maintenance applies

No

Variable charges apply

No

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Corrections

(Corrected on November 7, 2013)

The Publications section is revised.

(Corrected on November 6, 2013)

The Publications section is revised.

(Corrected on July 23, 2012)

The Announcement countries and Ordering information sections are revised.