



IBM PureApplication System W1500 product family offers new 32- and 64-core models

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At a glance

IBM® PureApplication™ System W1500 delivers the following function:

- Complete cloud system shipped including pattern-based deployment, virtualization, monitoring, usage management, usage tracking, and other cloud management capabilities.
- Integrated monitoring and management via an integrated UI.
- Integrated and optimized compute, network, and storage resources.
- Support for growth to larger systems without a system outage.
- Built-in elasticity of application workloads.
- Updates for entire infrastructure stack.
- Integrates database and application server with virtually unlimited capacity for the system purchased.
- Support for IBM and partner content optimized for PureApplication System, in addition to third-party software.
- 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 helps fundamentally change the economics of IT. The PureApplication System comes integrated from the IBM factory, architected 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 design, install, configure, integrate, optimize, and scale the components of a multiserver 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 can enable 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.

Key prerequisites

None

Planned availability date

January 11, 2013

Description

IBM PureApplication System W1500 is a member of the family of 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 can enable IT managers assign their workers more strategic and productive activities.

PureApplication System includes an integrated management system that is purpose-built for PureApplication System. A unified console can enable you 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 usage.
- Visualize the resource consumption of the system.
- Observe as the system routes around hotspots within the system.

Pattern-based deployment is an important component of PureApplication System, enabling the deployment and management of a multiserver 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 preassembled by IBM or created using the IBM Image Construction Tool. These patterns require some scripting that allows additional control for situations that demand it.

PureApplication System W1500 is shipped as a fully assembled, cabled, integrated rack from IBM . It is offered in two new configurations:

- IBM PureApplication System W1500-32 (32 cores, 512 GB RAM)
- IBM PureApplication System W1500-64 (64 cores, 1024 GB RAM)

To upgrade from one configuration to the next, you simply buy the appropriate upgrade. You can complete an upgrade without powering down the installed machine.

Each of these offerings comes with 26.4 TB of storage, divided between hard disks (24 TB) and solid state disks (2.4 TB). Technology built into PureApplication System helps to optimize the placement of data across these disks. Data accessed most frequently and recently is stored on the faster solid state disks. The system monitors disk usage to prevent hotspots, helping to improve performance.

PureApplication System consolidates 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™ Centre. The PureSystems Centre is hosted at

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

PureApplication System users can search and browse the Centre and acquire solutions to use in conjunction with PureApplication System.

The following products are delivered as integrated patterns, available for deployment on PureApplication System. 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 9.7 FP5 and 10.1
- 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

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

- 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 Centre.

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

- Storage is arranged in multiple RAID arrays with spare drives.
- Management system is redundant.
- Power supplies are redundant.
- Because all compute nodes are stateless, they can automatically fail 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

IBM PureApplication System W1500 Hardware is capable as of January 11, 2013, when used in accordance with associated IBM documentation, of satisfying the applicable requirements of Section 508 of the Rehabilitation Act, provided that any

assistive technology used with the product properly interoperates with it. A U.S. Section 508 Voluntary Product Accessibility Template (VPAT) can be requested via the IBM website

http://www-03.ibm.com/able/product_accessibility/index.html

Program number

Program number	VRM	Program name
5725-G32	V1.0.0	IBM PureApplication System W1500

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? Call 800-IBM-TEACH (426-8322).

Offering Information

Product information is available via the Offering Information website

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

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=213-038>

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 online on January 11, 2013, at

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

Specified operating environment

Hardware requirements

IBM PureApplication System W1500

- IBM PureApplication System W1500-32
- IBM PureApplication System W1500-64
- Height: 1267 mm (48.9 in)
- Depth: 997 mm (39.25 in)
- Width: 605 mm (23.8 in)
- Maximum weight
 - IBM PureApplication System W1500-32: 385.6 kg (850 lb)
 - IBM PureApplication System W1500-64: 385.6 kg (850 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 W1500-32: 5.79 kVA, 5.50 kW, 18.2 kBTU/hr
 - IBM PureApplication System W1500-64: 6.84 kVA, 6.50 kW, 21.45 kBTU/hr
1. 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. For more information refer to the distribution unit and line cord specifications in the *Planning for the IBM PureApplication System appliance* document.
 2. 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.

Note: All weights and measurements are approximate.

Software requirements

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

The program's specifications and specified operating environment information may be found in documentation accompanying the program, if available, such as a README file, or other information published by IBM, such as an announcement letter. Documentation and other program content may be supplied only in the English language.

Companion products

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

Power on ¹

- Temperature: 5 C - 35 C (41 F - 91 F) (3)
- Humidity, non-condensing: -12 C dew point (10.4 F) and 8% - 85% relative humidity (5,6)
- 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) (4)

Power off ²

- 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) ⁷

- 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) (8)

1. Chassis is powered on.
2. Chassis is removed from original shipping container and is installed but not in use, for example, during repair, maintenance, or upgrade.
3. A - Derate maximum allowable temperature 1 C/175 m above 950 m.
4. 5 C/hr for data centers employing tape drives and 20 C/hr for data centers employing disk drives.
5. 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.
6. 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.
7. The equipment acclimation period is 1 hour per 20 C of temperature change from the shipping environment to the operating environment.
8. Condensation is acceptable, but not rain.

Cooling requirements

- IBM PureApplication System W1500-32: 2157 Cubic Feet per Min (CFM)
- IBM PureApplication System W1500-64: 2612 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>

Software Services

IBM Software Services has the breadth, depth, and reach to manage your services needs. You can leverage the deep technical skills of our lab-based, software services team and the business consulting, project management, and infrastructure expertise of our IBM Global Services team. Also, we extend our IBM Software Services reach through IBM Business Partners to provide an extensive portfolio of capabilities. Together, we provide the global reach, intellectual capital, industry insight, and technology leadership to support a wide range of critical business needs.

To learn more about IBM Software Services or to contact a Software Services sales specialist, visit

<http://www.ibm.com/software/sw-services/>

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<http://www.ibm.com/partnerworld/wps/bplocator/>

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.

Passport Advantage

PureApplication System W1500 offerings

IBM PureApplication System W1500-32

Program name/Description	Part number
IBM PureApplication System W1500-32 Appliance Install	
Appliance Install, maintenance + S&S 12 Mo	D0WHCLL
Appliance maintenance + S&S renewal 12 Mo	E0FZQLL
Subscription and Support 12 Mo restatement	D0WHBLL

Business Critical Service offerings

Business Critical Service upgrade per Appliance Install	
Initial upgrade 12 Months	D0WHDLL
Subsequent upgrade 12 Months	E0FZRLL

Hard Drive Retention Service

Hard Drive Retention Service upgrade per Appliance Install	
Initial 12 Months	D0WHELL
Subsequent 12 Months	E0FZSLL

IBM PureApplication System W1500-64

IBM PureApplication System W1500-64 Appliance Install	
Appliance Install, maintenance + S&S 12 Mo	D0WHGLL
Appliance maintenance + S&S renewal 12 Mo	E0FZTLL
Appliance maintenance + S&S reinstatement 12 Mo	D0WHFLL

Appliance Upgrade - IBM PureApplication System W1500-64 with install, maintenance + S&S 12 Mo	
Upgrade from IBM PureApplication System W1500-32	D0WHJLL

Business Critical Service offerings

Business Critical Service upgrade per Appliance Install	
Initial upgrade 12 Months	D0WHLLL
Subsequent upgrade 12 Months	E0FZULL

Hard Drive Retention Service

Hard Drive Retention Service upgrade per Appliance Install

Initial 12 Months

Subsequent 12 Months

D0WHILL

E0FZVLL

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-304.ibm.com/support/customercare/sas/f/handbook/home.html>

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 Software Support Handbook found at

<http://www-304.ibm.com/support/customercare/sas/f/handbook/home.html>

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

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:

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

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

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

IBM Operational Support Services - SoftwareXcel

No

System i® Software Maintenance applies

No

Variable charges apply

No

Educational allowance available

Academic use allowance: No

Statement of good security practices

IT system security involves protecting systems and information through prevention, detection, and response to improper access from within and outside your enterprise. Improper access can result in information being altered destroyed or misappropriated or can result in misuse of your systems to attack others. Without a

comprehensive approach to security, no IT system or product should be considered completely secure and no single product or security measure can be completely effective in preventing improper access. IBM systems and products are designed to be part of a comprehensive security approach, which will necessarily involve additional operational procedures, and may require other systems, products, or services to be most effective. IBM does not warrant that systems and products are immune from the malicious or illegal conduct of any party.

Prices

For current prices, contact your IBM representative.

Passport Advantage

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

Corrections

(Corrected on November 7, 2013)

Corrected information in the Publications section.