New IBM Flex System V7000 features deliver high performance and scalable storage

At a glance

IBM Flex System™ V7000 Storage Node is a powerful block storage system designed to integrate into the IBM® PureFlex™ System and IBM Flex System infrastructure for extremely rapid storage deployment and breakthrough management simplicity. Flex System V7000:

- Is built on the industry-leading storage virtualization and efficiency capabilities of IBM Storwize® V7000
- Features sophisticated storage technologies, including thin provisioning, automated tiering, external storage virtualization, Real-time Compression™, clustering, replication, and a next-generation GUI
- Supports 8 Gb Fibre Channel (FC) and 10 Gb Fibre Channel over Ethernet (FCoE) and iSCSI host connectivity,
- Supports any combination up to twenty-four 2.5-inch SAS drives, nearline drives, and SSDs per enclosure.
- Is scalable to 240 drives per system and 960 drives per clustered system with the attachment of Flex System V7000 and Storwize V7000 expansion enclosures

Overview

IBM Flex System V7000 Storage Node is an integrated storage system for IBM PureFlex System, and the IBM Flex System is designed to deliver high performance, advanced function, high availability, and modular and scalable storage capacity.

IBM Flex System V7000 Storage Node is built on the industry-leading storage virtualization and efficiency capabilities of IBM Storwize V7000, including:

- IBM System Storage® Easy Tier® for automated SSD optimization
- IBM Real-time Compression for data footprint reduction

New 800 GB SSDs running at 6 Gbps are now being offered. This SSD doubles the capacity of the largest SSD previously offered on the Flex System V7000.

Key prerequisites

Flex System V7000 Storage Node requires:

- Flex System V7000 Control Enclosure with optional Flex System V7000 or Storwize V7000 Expansion Enclosures.
• Flex System V7000 software version 6.4, or later, for operation. Use of the software is entitled through the acquisition of Flex System V7000 software licenses.

• Flex System Enterprise Chassis with all necessary components to support Flex System V7000 as a node, and a switch module supporting the connectivity option configured with the Flex System V7000.

Planned availability date

December 6, 2013

Description

IBM PureFlex System and IBM Flex System integrate multiple server architectures, networking, storage, and system management capabilities into a single system that is easy to deploy and manage. IBM PureFlex System and IBM Flex System have built-in virtualization support of servers, storage, and networking to speed provisioning and increase resiliency. In addition, they support multiple open-industry standards, operating systems, networking and storage fabrics, virtualization, and system management protocols to easily fit within existing and future datacenter environments. IBM PureFlex System and Flex System are scalable and extendable with multi-generational upgrades to protect and maximize IT investments.

The IBM Flex System V7000 Storage Node is a powerful block storage system designed to integrate into the IBM PureFlex System or IBM Flex System infrastructure for extremely rapid storage deployment and breakthrough management simplicity. By enabling virtualization, consolidation, and tiering in businesses of all sizes, it is designed to improve application availability and resource utilization. Flex System V7000 offers easy-to-use, efficient and cost-effective management capabilities for both new and existing storage resources in your IT infrastructure. This storage system combines no-compromise design along with virtualization, efficiency, and performance capabilities, while also being physically and logically integrated.

IBM Flex System V7000 helps simplify and speed IBM PureFlex System and IBM Flex System deployment, providing superior integration of server and storage management to automate and streamline provisioning for greater responsiveness to business needs and lower overall cost. Speed time to value with:

• Integration by design: Automates deployment with integration into IBM PureFlex System or IBM Flex System infrastructure for deployment in minutes, not weeks.

• Simplified experience: Simplifies management with an integrated, intuitive user interface for ease of use and faster system accessibility to increase administrative efficiency and simplicity.

• Built-in expertise:
  – Virtualized storage: Virtualizes third-party storage for investment protection and nondisruptive migration of the current storage infrastructure.
  – Optimized performance and costs for mixed workloads: Optimizes SSD usage with Easy Tier for increased performance of up to 3 times more throughput with only 5% flash storage in the configuration as compared with an all-disk configuration.

Accessibility by people with disabilities

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

Product number

<table>
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<th>Description</th>
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<th>Model number</th>
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Publications

No publications are shipped with the announced products.

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/](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](http://www.ibm.com/services/continuity)


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

Technical information

**Specified operating environment**

**Compatibility**

Refer to the IBM System Storage Interoperation Center (SSIC) for a comprehensive list of supported environments, devices, and configurations


**Planning information**

You are responsible for downloading or obtaining from IBM, and installing designated Machine Code (microcode, basic input/output system code (called BIOS), utility programs, device drivers, and diagnostics delivered with an IBM machine) and other software updates in a timely manner from an IBM Internet website or from other electronic media, and following the instructions that IBM provides. You may
request IBM to install Machine Code changes; however, you may be charged for that service.

**Cable orders**

No cables required.

**Security, auditability, and control**

This product uses the security and auditability features of host hardware.

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

**Global Technology Services**

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

**IBM Electronic Services**

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

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

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

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

**Benefits**

**Increased uptime:** The Electronic Service Agent tool is designed to enhance the Warranty or Maintenance Agreement by providing faster hardware error reporting and uploading system information to IBM Support. This can translate to less wasted time monitoring the "symptoms," diagnosing the error, and manually calling IBM Support to open a problem record. Its 24 x 7 monitoring and reporting mean no
more dependence on human intervention or off-hours customer personnel when errors are encountered in the middle of the night.

**Security:** The Electronic Service Agent tool is designed to be secure in monitoring, reporting, and storing the data at IBM. The Electronic Service Agent tool securely transmits either via the Internet (HTTPS or VPN) or modem, and can be configured to communicate securely through gateways to provide customers a single point of exit from their site. Communication is one way. Activating Electronic Service Agent does not enable IBM to call into a customer’s system. System inventory information is stored in a secure database, which is protected behind IBM firewalls. It is viewable only by the customer and IBM. The customer’s business applications or business data is never transmitted to IBM.

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

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

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

My Systems provides valuable reports of installed hardware and software using information collected from the systems by Electronic Service Agent. Reports are available for any system associated with the customer’s IBM ID. Premium Search combines the function of search and the value of Electronic Service Agent information, providing advanced search of the technical support knowledge base. Using Premium Search and the Electronic Service Agent information that has been collected from your system, customers are able to see search results that apply specifically to their systems.

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

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

**Terms and conditions**

To obtain copies of the IBM Statement of Limited Warranty, contact your reseller or IBM.

**Warranty period**

- System (including the battery): Three years
- Optional features: Three years, unless specified otherwise

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 which 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 is the same as the machine it is installed.

The following have been designated as consumables or supply items and are, therefore, not covered by this warranty:

- None
**Warranty service**

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

The type of service is Customer Replaceable Unit (for example, keyboard, mouse, speaker, memory, or hard disk drive) Service and On-site Service.

Customer Replaceable Unit (CRU) Service: IBM provides a replacement CRU to you for you to install. CRU information and replacement instructions are shipped with your machine and are available from IBM at any time on your request. A CRU is designated as being either a Tier 1 (mandatory) or a Tier 2 (optional) 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. You may install a Tier 2 CRU yourself or request IBM to install it, at no additional charge, under the type of warranty service designated for your Machine.

Based upon availability, a CRU 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, and 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 or features have been designated as Tier 1 CRUs:

- Battery
- Bezel
- Canister
- Drive
- Filler panel
- I/O adapter
- I/O cable
- Tag

**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. If required, On-site Repair is provided, 9 hours per day, Monday through Friday excluding holidays, NBD response. 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. On-site Service is not available in all countries, and some countries have kilometer or mileage limitations from an IBM service center. In those locations where On-site Service is not available, the normal in-country service delivery is used.

**Licensing:** Programs included with this product are licensed under the terms and conditions of the License Agreements that are shipped with the system.
Maintenance services

ServicePac®, ServiceSuite®, ServiceElect, and ServiceElite: ServicePac, ServiceSuite, ServiceElect, and ServiceElite provide hardware warranty service upgrades, maintenance, and selected support services in one agreement.

Warranty service upgrade: During the warranty period, a warranty service upgrade provides an enhanced level of On-site Service for an additional charge. A warranty service upgrade must be purchased during the warranty period and is for a fixed term (duration). It is not refundable or transferable and may not be prorated. If required, IBM will provide the warranty service upgrade enhanced level of On-site Service acquired by the customer. Service levels are response-time objectives and are not guaranteed.

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

CRUs will be provided as part of the machine's standard warranty CRU Service except that you may install a Tier 1 CRU yourself or request IBM installation, at no additional charge, under one of the On-site Service levels specified below.

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.

Maintenance service: If required, IBM provides repair or exchange service, depending on the type of maintenance service specified below for the machine. IBM will attempt to resolve your problem over the telephone or electronically by access to an IBM Web site. Certain machines contain remote support capabilities for direct problem reporting, remote problem determination, and resolution with IBM. You must follow the problem determination and resolution procedures that IBM specifies. Following problem determination, if IBM determines On-site Service is required, scheduling of service will depend upon the time of your call, machine technology and redundancy, and availability of parts. Service levels are response-time objectives and are not guaranteed.

CRU Service: If your problem can be resolved with a CRU (for example, keyboard, mouse, speaker, memory, or hard disk drive), IBM will ship the CRU to you for you to install. CRU information and replacement instructions are shipped with your machine and are available from IBM at any time on your request.

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, and 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.

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.

Maintenance service (ICA)

Maintenance services are available for ICA legacy contracts.

Non-IBM parts support

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 its customers, and normal warranty service procedures for the IBM machine apply.

**Warranty service upgrades and maintenance services:** Under certain conditions, IBM Integrated Technology Services repairs selected non-IBM parts at no additional charge for machines that are covered under warranty service upgrades or maintenance services.

IBM Service provides hardware problem determination on non-IBM parts (for example, adapter cards, PCMCIA cards, disk drives, or memory) installed within IBM machines covered under warranty service upgrades or maintenance services 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.

**Prices**

For all local charges, contact your IBM representative.

**Announcement countries**

All European, Middle Eastern, and African countries.

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