IBM XIV Storage System Gen3 Model 214 with software version 11.4 enables 800 GB flash caching option for 4 TB systems

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Overview

IBM® XIV® Storage System Gen3 Model 214 for machine types 2810 and 2812 with software version 11.4.0 is designed to help improve your bottom line with world-class efficiency-based and price-performance through cost-efficient and higher density 4 TB drive systems strengthened by the new 800 GB flash caching option.

Key prerequisites

IBM XIV Storage System Gen3 Model 214 4 TB drives with IBM XIV Storage System software version 11.3.0, or later, installed.

Planned availability date

November 15, 2013

Description

IBM XIV Storage System Gen3 Model 214 is designed to offer a performance boost for 4 TB drive based systems with an option for up to 12 TB flash caching to improve disk-to-cache ratio. Customers can now choose to empower their 4 TB systems with 800 GB flash caching per module (up to 12 TB per system), or with 400 GB flash caching per module (up to 6 TB per system) option, according to their business needs.

IBM XIV Storage System Gen3 with software version 11.4.0 is designed to enhance 4 TB drive based configurations strengthened by optional 800 GB flash drives.

XIV algorithms enhance the power of commodity flash drives to help deliver ultra-high cache performance to all system data. The new 800 GB flash caching option available for 4 TB systems supports top performance levels at a much higher density and an exceptionally low cost per TB.

Customers can optionally order 400 GB flash drives, allowing them to choose the best fit for their business objectives.
The following table depicts the configurations supported on the IBM XIV Storage System Gen3 with 4 TB SED disk drives:

<table>
<thead>
<tr>
<th>4 TB SED HDD modules</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Modules</td>
</tr>
<tr>
<td>-------------</td>
</tr>
<tr>
<td>Usable Capacity (TB)</td>
</tr>
<tr>
<td>Interface Modules (Feature 2041)</td>
</tr>
<tr>
<td>Data Modules (Feature 2042)</td>
</tr>
<tr>
<td>Disk Drives</td>
</tr>
<tr>
<td>Fibre Channel Ports</td>
</tr>
<tr>
<td>iSCSI 1GbE Ports</td>
</tr>
<tr>
<td>iSCSI 10GbE Ports</td>
</tr>
<tr>
<td>Memory (GB)</td>
</tr>
</tbody>
</table>

Flash Cache extension (TB)

<table>
<thead>
<tr>
<th>Total Modules</th>
<th>6</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
<th>15</th>
</tr>
</thead>
<tbody>
<tr>
<td>400GB/module</td>
<td>2.4</td>
<td>3.6</td>
<td>4.0</td>
<td>4.4</td>
<td>4.8</td>
<td>5.2</td>
<td>5.6</td>
<td>6.0</td>
</tr>
<tr>
<td>(with feature number 2255)</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>800GB/module</td>
<td>4.8</td>
<td>7.2</td>
<td>8.0</td>
<td>8.8</td>
<td>9.6</td>
<td>10.4</td>
<td>11.2</td>
<td>12.0</td>
</tr>
<tr>
<td>(with feature number 2265)</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
</tbody>
</table>

Accessibility by people with disabilities

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


Product positioning

The IBM XIV Storage System is high-end disk storage that designed to support the need for high performance, reliability, flexibility, and security, while helping keep costs and complexity low. Efficient by design and created to simplify storage, the XIV Storage System exemplifies IBM Smarter Storage for Smarter Computing, empowering thousands of organizations worldwide to treat their data as an economic asset that is the basis for new business opportunity. Designed for consistent Tier 1 performance and high availability, XIV storage offers low total cost of ownership and can help address even the most demanding and diverse workloads.

XIV storage is designed to deliver smart, autonomous, rapidly deployed security solutions, with data-at-rest encryption available across all XIV hard drives, and software-based encryption of (optional) flash drives (from software version 11.4). Unlike some traditional storage systems, XIV is designed to offer tuning-free encryption while sustaining high performance. Customers can upgrade to encryption when they wish, nondisruptively, and use Tivoli® Key Lifecycle Manager to centrally manage and simplify the encryption key lifecycle. XIV supports diverse industry security, identity, and access-protocol standards. A recognized leader in storage manageability, XIV is designed to deliver a simple and exceptional user experience through its highly intuitive user interface. Now implemented through the IBM storage portfolio, the interface is able to automate many tasks, consolidate management of multiple XIV systems, and deliver a rich and comprehensive command-line interface for tailoring the system to user requirements.

XIV storage is designed to deliver strengths that are well-suited to the requirements of cloud computing. The system is designed to be hotspot-free, eliminate the need
for tuning, and is particularly adept at handling dynamic, heterogeneous workloads. Through IBM Hyper-Scale technologies, XIV storage offers scale-out capabilities that set a new standard for efficiently managed, cost-saving growth:

- IBM Hyper-Scale Mobility enables volumes to be moved online between multiple XIV systems and without interruption to host applications
- IBM Hyper-Scale Manager enables multiple XIV systems to be managed and monitored with simplicity through a consolidated, integrated display
- IBM Hyper-Scale Consistency enables a consistent snapshot of all application volumes across one or more XIV systems to be coordinated

These empowering features support the IBM goal of enabling seamless XIV scale-out and management, driving operational agility and efficiency for large deployments.

IBM empowers IT staff through the XIV Mobile Dashboard, a handy app that supports mobile devices running on iOS and Android operating systems. The app supports the monitoring of storage performance, capacity status, and health across XIV systems.

Reference information

For information on IBM XIV Storage System Gen3, refer to:

- Hardware Announcement ZG13-0019, dated February 05, 2013, new Model 214 for IBM XIV Storage Systems machine types 2810 and 2812
- Hardware Announcement ZG13-0147, dated June 10, 2013, IBM XIV Storage System Gen3 version 11.3 features support for 4 TB disk drives for increased maximum usable capacity for Model 214
- Preview Announcement ZG13-0179, dated July 09, 2013, Preview: IBM XIV Storage System Model 214 for machine types 2810 and 2812 offers data at rest encryption support with the use of self-encrypting drives
- Hardware Announcement ZG13-0295, dated October 08, 2013, IBM XIV Storage System Gen3, Model 214 with software version 11.4 provides data-at-rest encryption for 1 TB, 2 TB, 3 TB, 4 TB systems, and software-based encryption of (optional) flash drives

For information on IBM Security Key Lifecycle Manager, refer to Software Announcement ZP11-0136, dated April 12, 2011, IBM Security Key Lifecycle Manager for z/OS® V1.1 manages encryption keys for storage, simplifying deployment and maintaining availability to data at rest.

Product number

<table>
<thead>
<tr>
<th>Description</th>
<th>Machine type</th>
<th>Model</th>
<th>Feature number</th>
</tr>
</thead>
<tbody>
<tr>
<td>800GB flash cache option</td>
<td>2810</td>
<td>214</td>
<td>2265</td>
</tr>
<tr>
<td>800GB flash cache option</td>
<td>2812</td>
<td>214</td>
<td>2265</td>
</tr>
</tbody>
</table>

Publications

The following publications are shipped with this product:

<table>
<thead>
<tr>
<th>Title</th>
<th>Order number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Licensing Documentation CD</td>
<td>98YS055</td>
</tr>
<tr>
<td>IBM XIV Storage System Safety Notices</td>
<td>GA32-0832</td>
</tr>
<tr>
<td>(standard - 29 languages)</td>
<td></td>
</tr>
<tr>
<td>IBM System Storage® XIV Storage System Machine type 2810 and 2812 Statement of Limited Warranty</td>
<td>GC27-2268</td>
</tr>
</tbody>
</table>

Product publications can be viewed and downloaded online from the IBM XIV Storage System Gen3 Information Center at
Services

Global Technology Services®

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

These services help you learn about, plan, install, manage, or optimize your IT infrastructure to be an on-demand business. They can help you integrate your high-speed networks, storage systems, application servers, wireless protocols, and an array of platforms, middleware, and communications software for IBM and many non-IBM offerings. IBM is your one-stop shop for IT support needs.

For details on available services, contact your IBM representative or visit

http://www.ibm.com/services/

For details on available IBM Business Continuity and Recovery Services, contact your IBM representative or visit

http://www.ibm.com/services/continuity

For details on education offerings related to specific products, visit


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

Technical Information

Specified Operating Environment

Hardware Requirements

The 2810-214 and 2812-214 must have the 5639-YYB IBM XIV Storage Software for operation.

Software Requirements

IBM XIV Storage Software version 11.4.0 (5639-YYB), or later, must have the IBM XIV Storage System Gen3 (Machine type 2810 or 2812) Model 214 for operation.

IBM XIV Storage System software version 11.4.0 supports attachment in multiple host operating system environments.

Information about the IBM XIV Host Attachment Kit can be found at


For current supported software levels and related XIV interoperability, visit the XIV Support website

http://www-03.ibm.com/systems/support/storage/ssic/interoperability.wss

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.
**Limitations**

Intermixing of port bandwidth between 10 GbE and 1 Gb within the same system is not supported (mutually exclusive).

Partially populated IBM XIV Storage Systems Gen3 that are shipped from the factory with any of the raw capacity per drive options must continue to be populated with the same raw capacity per drive option.

Intermixing of any of these capacity points options in a single XIV Storage System Gen3 frame is not allowed: 1 TB, 2 TB, 3 TB, or 4 TB.

Intermixing of 400 GB SSD, 800 GB SSD, or no SSD modules in a single XIV Storage System Gen3 frame is not allowed. 800 GB SSD is only available on 4 TB configurations.

**Planning information**

**Customer responsibilities**

**Installation planning**

Installation planning is a customer responsibility. Installation planning and usage documentation and resources may be found at the IBM product support website

http://www-03.ibm.com/systems/support/storage/ssic/interoperability.wss

Customer documentation, safety, and warranty information for the IBM XIV Storage System Gen3 and IBM XIV Storage System Software products can also be found at

http://publib.boulder.ibm.com/infocenter/ibmxiv/r2/index.jsp

**Logical configuration planning and creation**

Logical configuration planning and creation are customer responsibilities. Logical configuration refers to defining hosts, volumes, and LUNs mapping to hosts, defining event notifications, defining target connectivity, defining mirroring, defining snapshots, and all actions related to implementation of the IBM XIV Storage System Gen3 within the customer's IT environment, other than physical installation.

Creation of the initial logical configuration and all subsequent modifications to the logical configuration are customer responsibilities. The logical configuration can be created, applied, and modified using the IBM XIV GUI or XCLI. Additional services are also available. Refer to the Services section for more information on available services.

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**

There are two types of cables available for host attachment to the IBM XIV Storage System Gen3. Feature number 3900 should be used to attach iSCSI hosts, and feature numbers 3910 and 3920 are to be used to connect hosts with fiber optic cables. All FC connections to the XIV device should be made with 50 micron (multimode) fiber optic cables.
Security, auditability, and control

This product uses the security and auditability features of host hardware, host software, or application software to which it is attached.

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 website 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

#### Terms and conditions features section

**Field installable feature**

Yes

**Warranty period**

One year or three years

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.

**Customer setup**

No

**Machine code**

Same license terms and conditions as base machine

**Optional features warranty period**

One year or three years
Prices

For all local charges, contact your IBM representative.

Announcement countries

All European, Middle Eastern, and African countries.

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http://www.ibm.com/planetwide/