IBM Scale Out Network Attached Storage offers new disk capacities for models DR2 and DE2 for machine type 2851

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At a glance

IBM® Scale Out Network Attached Storage (SONAS) provides support for:

- Extended capacity for the 2851 DR2 and DE2 models
- 4 TB 7.2k rpm Nearline SAS disks (240 TB per model)

Overview

IBM SONAS now offers 4 TB 7.2k rpm Nearline SAS disks for the SONAS Storage Controller 2 (2851-DR2) and SONAS Storage Expansion 2 (2851-DE2).

**SONAS Storage Controller 2 (IBM Machine type model 2851-DR2):** This storage controller is a 4U x 60 disk drive storage controller with redundant RAID controllers, redundant power supplies and cooling modules, and HDD slots for sixty 3.5-inch or 2.5-inch HDDs or SSDs. Two types of RAID controllers are available:

- Base RAID controller
- Performance Module controllers (feature #3100)

With the base RAID controllers, two cache memory sizes are available: 4 GB and 8 GB per storage controller. With the Performance Module Controllers, three cache memory sizes are available: 12 GB, 24 GB, and 48 GB per storage controller.

**SONAS Storage Expansion 2 (IBM Machine type model 2851-DE2):** This storage expansion unit is a 4U x 60 disk drive expansion unit with redundant environmental services modules (ESMs), redundant power supplies and cooling modules, and HDD slots for sixty 3.5-inch or 2.5-inch HDDs or SSDs.

This storage controller and storage expansion units are able to be ordered with a SONAS system and configured as a SONAS Gateway-attached storage system. The MES upgrade process will support additional storage controller and storage expansion units, and they will be configured at the customer location as SONAS Gateway attached storage.

When fully populated with sixty 4 TB 7.2k rpm SAS disk drives, each enclosure supports a maximum raw capacity of 240 TB.
Key prerequisites

Hardware requirements

The SONAS Storage Controller 2 (2851-DR2) requires:

- Controller Firmware level 07.84, or later
- DS Storage Manager version 10.77, or later

Refer to the SONAS product documentation and the IBM Systems Support site for additional information on firmware levels and other requirements

http://www.ibm.com/systems/support/storage/

Software requirements

SONAS Software level 1.4.1 is required.

Planned availability date

October 18, 2013

Description

**SONAS Storage Controller 2 (2851-DR2)**

The SONAS Storage Controller 2 is a 4U x 60 storage controller supporting the following features:

- Redundant RAID controllers, each with the following features:
  - 2 GB or 4 GB cache (without feature #3100), or 6 GB, 12 GB, or 24 GB cache with feature #3100
  - Two 1 Gb Ethernet management ports
  - Four 8 Gbps Fibre Channel ports
  - Two drive-side 6 Gbps SAS expansion ports
- Sixty drive slots
- Redundant power supplies and cooling modules

The SONAS Storage Controller 2 may only be attached to a pair of SONAS storage nodes via four Fibre Channel LC-LC optical cables. There are one or two SONAS Storage Controller 2 in a SONAS storage POD. If there are two SONAS Storage Controller 2 in a pod, the RAID controller type and cache size (feature #3000, #3001, #3100, #3110, #3111, #3112) must be identical for both SONAS Storage Controller 2.

**SONAS Storage Expansion 2 (2851-DE2)**

The SONAS Storage Expansion 2 is a 4U x 60 disk storage expansion unit supporting the following features:

- Redundant SAS switch modules
- 60 HDD or SSD slots
- Redundant power supplies and cooling modules

The SONAS Storage Expansion 2 may only be attached to the SONAS Storage Controller 2 (MTM 2851-DR2). If the Storage Controller 2 has the base RAID controllers (without feature #3100), then a maximum of two SONAS Storage
Expansion 2 may be attached to SONAS Storage Controller 2. If the Storage Controller 2 has the Performance Module Controllers (with feature #3100), then a maximum of five SONAS Storage Expansion 2 enclosures may be attached to the Storage Controller 2.

**Accessibility by people with disabilities**

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


**Reference information**

For more information about IBM SONAS, refer to:

- Software Announcement ZG10-0043, dated February 09, 2010
- Software Announcement ZP11-0143, dated May 09, 2011
- Hardware Announcement ZG10-0390, dated November 30, 2010
- Hardware Announcement ZG11-0096, dated May 09, 2011
- Software Announcement ZP11-0459, dated October 11, 2011
- Hardware Announcement ZG11-0305, dated October 11, 2011
- Hardware Announcement ZG13-0145, dated June 10, 2013

**Product number**

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<th>Description</th>
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<th>Model number</th>
<th>Feature number</th>
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<tr>
<td>4 TB 7.2K NL-SAS HDD 10-pack</td>
<td>2851</td>
<td>DR2</td>
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**Education support**

Classroom courses are available to IBM employees, Business Partners, and customers.

<table>
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<th>Course number</th>
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<tr>
<td>SSD0</td>
<td>IBM Scale Out Network Attached Storage (SONAS) Technical Training</td>
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For more information and course schedules, visit


Search on the course number "SSD0".

You can link to course offering information directly.

SSD0 course information can be found at

http://www.ibm.com/services/learning/ites.wss/tp/en?pageType=tp_search_results&rowStart=0&rowsToReturn=20&searchString=ssd0

Contact your IBM representative for course information.
Information about IBM SONAS is provided on the Internet in the SONAS Information Center. The SONAS Information Center is also accessible through the product interface for easy access to task-specific topics. Adobe Acrobat PDF versions of the content for browsing or printing are also in the SONAS Information Center and available as no-charge downloads from the IBM Publications website. In addition, a CD-ROM containing the SONAS product documentation is shipped with each order. To access the latest SONAS product information, refer to the IBM Scale Out Network Attached Storage Information Center at

http://publib.boulder.ibm.com/infocenter/sonasic/sonas1ic/index.jsp

The following publications are shipped with the product.

<table>
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<tr>
<th>Title</th>
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<tr>
<td>Environmental Notices and User Guide</td>
<td>Z125-5823</td>
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<tr>
<td>IBM Translated Safety Notices</td>
<td>G229-9054</td>
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<td>IBM Statement of Limited Warranty</td>
<td>GA32-0722</td>
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The following publication will be available at product availability. To order, contact your IBM representative.

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<tr>
<td>SONAS Software Administration Guide</td>
<td>GA32-0713</td>
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<td>IBM Scale Out Network Attached Storage Software Configuration Guide</td>
<td>GA32-0718</td>
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<td>SONAS User’s Guide</td>
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<td>SONAS Installation Guide</td>
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<td>SONAS Introduction &amp; Planning Guide</td>
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<td>Problem Determination and Troubleshooting Guide</td>
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Displayable softcopy publications

An online IBM information center will be available on the general availability date at the following website

http://publib.boulder.ibm.com/infocenter/sonasic/sonas1ic/index.jsp
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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

Refer to the SONAS product documentation and the IBM Systems Support site for additional information on firmware levels and other requirements

http://www.ibm.com/systems/support/storage/

Software requirements

SONAS Software level 1.4.1 is required.

Planning information

Customer responsibilities

The IBM Scale Out Network Attached Storage machine type (2851) is designated as Customer Engineer (CE) installable. CE setup, operation, and service publications are available.

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

It is the customer’s responsibility to provide the appropriate type for connecting the host or network and the 2851.
The cables to connect the various components of the 2851 must be ordered on the initial order and replacements can be obtained by ordering via MES.

**Security, auditability, and control**

This product uses the security and auditability features of the host hardware, host software, and/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 Service Agent 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

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**Terms and conditions**

**Field installable feature**

Yes, and also Plant installable feature.

**Warranty period**

One year

An IBM part or feature installed during the initial installation of an IBM machine is subject to a full warranty effective on the date of installation of the machine. An IBM part or feature 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.

Technical Advisor support will be provided during the warranty period. This SONAS support will be delivered remotely and will include a documented support plan, coordinated problem management, reporting on client's hardware inventories and microcode levels, and consultation regarding SONAS microcode updates. The Technical Advisor will conduct a Welcome Call with the client and provide a statement of work for this support.
Customer setup
No

Machine code
Same license terms and conditions as base machine.

Prices

For all local charges, contact your IBM representative.

Announcement countries

All European, Middle Eastern, and African countries.

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