BROCADE
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FAQ

Brocade® SAN Health®

Frequently Asked Questions

Version 4.2.2a

Overview

Brocade® SAN Health® is an easy-to-use fabric auditing tool that is provided to all Brocade customers and partners free of charge. With a simple download and installation to any modern Windows machine that has connectivity to the switches to be audited, SAN administrators can get a comprehensive report and diagram of their Fibre Channel switches and the attached devices.

For additional product information, go to www.broadcom.com/sanhealth.

General Questions and Answers

How much does SAN Health cost?

Brocade SAN Health is a free tool that you can use as many times as you want.

What is required to install and use SAN Health?

To use SAN Health, download the latest installation file from www.broadcom.com/sanhealth and install it on any modern Windows machine with the following:

- Intel P4 or AMD equivalent (AMD K7)
- Microsoft Windows XP or higher
- 512 MB of RAM and 20 MB of available hard disk space

How do I use SAN Health?

Prior to using the Brocade SAN Health tool, please review the videos and sample report at www.broadcom.com/sanhealth. Here you'll find all the instructions necessary to run SAN Health in your environment. As a reminder, a SAN is composed of one or more related fabrics and devices (for example, a dual-fabric SAN). A fabric consists of one or more connected switches. While many users of SAN Health run the capture tool on each fabric in a SAN simultaneously, it might make sense to run SAN Health sequentially on each fabric in the SAN (for example, Fabric A first and then Fabric B). It is perfectly acceptable to run SAN Health by capturing the fabric on one side of a redundant SAN and then capturing the other fabric.

What is the best way to name my fabrics and SAN when running SAN Health?

You should think carefully about the names that you choose because they are used extensively in the report and are the basis of section headings. Using logical names will help produce a report that is easier to read. You can base the names on the physical location of the switches, the logical location of the switches, or even the use of the switches (for instance, switches attached to the backup portion of the SAN).

What levels of Brocade's Fabric Operating Systems are supported in SAN Health?

Product	SAN Health Version		
	4.0	4.1	4.2
Brocade FC Switch			
Audit Switch	FOS 5 or above	FOS 5 or above	FOS 6 or above
Port Performance Capture	FOS 5 or above	FOS 6.2 or above	FOS 7.4 or above
Brocade M Series (McDATA)			
Audit Switch	Yes	Yes	No
Port Performance Capture	No	No	No
Cisco FC Switch			
Audit Switch	Yes	Yes	Yes
Port Performance Capture	No	No	No

How long can I capture performance data?

Version 4.2.2 of SAN Health can capture performance data for a maximum of 24 hours. To capture additional performance data, simply schedule a new instance of SAN Health to run after the initial 24-hour period has expired. For long-term performance capture, please look at other products that Brocade offers.

When SAN Health is running, occasionally I see an unknown command response. Should I worry?

No, this is normal and expected. For example, when you issue the `slotshow` command against a non-chassis-based system, newer switches respond with `command not available on this platform`, whereas older switches respond with `command unknown`. In addition, the older the firmware level is, the fewer commands that respond with values.

I can't remember where to submit my data file. Where do I send it?

If you open the .BSH file (using any text editor), the details are at the top of the page. You can attach the .BSH file to an email message and send it to SANHealth.Upload@broadcom.com, or you can upload it via the Web at www.sanhealth.broadcom.com/upload/.

When SAN Health saves the .BSH file, what type of encryption is used?

When the file is complete, SAN Health double-encrypts and compresses the file. The first encryption pass uses 256-bit AES. The second encryption pass (after the compression) is Triple DES.

I have an existing .SET file that I've been using, but now I've added or changed a switch in the fabric. How can I make sure that SAN Health sees the changed fabric?

Whenever a new switch is added or a switch is swapped out of a fabric, you'll need to manually open the .SET file in SAN Health and click the **Test Fabric Connectivity, Get Switch Details** button so that SAN Health automatically finds all the newly attached fabric members. Or you can add the new switches using their IP addresses on the **Add Switches** tab. Either way, you'll also need to input the user names and passwords (although if they are the same credentials as existing switches in that fabric, you can set them as such on the **Fabric** tab with one click of a button). Then, start the audit to make sure that all switches can be logged in to and successfully audited. After that, make sure to resave the .SET file before closing SAN Health. There is no fully automatic way to do this.

What ports need to be opened on my network to use SAN Health?

SAN Health uses Telnet and/or SSH (depending on how you have it set under Options). For that reason, either port 23 or port 22, or both, need to be open through any firewalls between your switch and the workstation that is running SAN Health.

Options

Options can be left as default, and they generally are. If you are running SAN Health for the first time, best practices are to leave the options at their default and run one report to see if there is anything that you want to change. If there is, then check the options for items that can be changed.

General Options

- Working Directory. The working directory can be changed to anywhere the logged-in user has read/write access.
- Timeouts. If communication from the SAN Health workstation and the switches is problematic, adjust the timeout appropriately here.
- CPU Load. Adjust the processing load on the CPU here. This is rarely needed because SAN Health automatically adjusts to most capable workstations.
- Protocol. Select Telnet or SSH here.
- IP Privacy. IP addresses that will show in the report can be masked ahead of time by selecting this option.

Switch Diagnostic Options

This tab allows you to select (or deselect) the commands that will be run against the switches in your fabric. Refer to the *Brocade Fabric OS Command Reference Manual* for information about any Brocade command. Refer to Cisco documentation for information about any Cisco command. Also, look under **Options > Switch Diagnostics** to ensure which commands are present and selected.

Note that it is undesirable to deselect commands because this will result in blank or completely missing sections in the resulting SAN Health report.

On this tab, you can also set the option to have the Port Statistic counters on the switch reset at the end of the audit. Doing this will enable you to compare the port stats between two consecutive SAN Health reports to see how they've incremented over time.

Device Names Options

This tab has three main functions: choosing which value to use when naming your devices in the report, adding a custom file of names and/or values, and loading a DCFM or EFCM Nicknames file into the SAN Health audit. Please see the on-screen instructions for each function.

Report Format Options

Use this tab to select the content and format of the Excel report that will be provided when the SAN Health audit is processed. This tab has the following options:

- Create full length SAN Health report vs. Create a shorter summary report

  Selecting the first option, or leaving it default, will include all the possible pages within the Excel report. Selecting the second option will eliminate the port tables, the hidden performance data, the visible performance graphs, and the zoning sheets. This second option greatly speeds up the time to generate the report but obviously reduces the amount of content in the report.
- Include performance graphs in the report

  This is also available as a standalone option aside from the shorter summary report.
- Include the Visio placeholder page

  Please note that you may eliminate the Visio image page if you are not embedding an image.
- Use the device name rather than the port number

  This option is included in case you prefer the graph to have a device name rather than the port number. This may make it easier for you to troubleshoot performance issues.
- Include empty ports in the report

  You have the option to either list all of the empty ports or, with the default setting, exclude empty ports to reduce the page count of the report. If you choose to list the empty ports, you will be able to see what SFPs are inserted, if any, in the empty ports.
- Excel Report Formatting Options

  Here you can change the report to be formatted for “Letter Size” paper or “A4 Size” paper. You can also add a company logo throughout the report.

Diagram Format Options

The options on this tab are for the Visio diagram. The labels used for the icons can be configured to display the information that you choose.

Audit Data File Upload Options

The Audit Data File Upload options provide the ability to have SAN Health automatically send the resulting BSH audit file to the report generation queue using one of two technologies: Email or HTTPS.

Email

The SMTP protocol can be used to send the BSH file to an email address of your specification. Usually this is directly to the report generation queue at SANHealth.Upload@broadcom.com. However, it is dependent on your company’s firewall restrictions for emails originating from workstations that are not designated email servers. You may need to send the BSH file to an email box within your company’s domain and then use an inbox rule to automatically forward it to the Brocade report generation queue. To set up this option, do the following:

1. Check the box next to **Automatically send the BSH file to the report generation queue on audit completion**.
2. Click the radio button next to **Submit the BSH file using email**.
3. Enter the “From” address in the box next to **Set The From Address As**.

   This will typically be your own email address. Ensure that you have permission to send email from the address that you input here.
4. Enter the “To” address in the box next to **Email the BSH Data File To**.

   This will typically be SANHealth.Upload@broadcom.com.
5. Optionally enter the SMTP server address in the box next to **SMTP Server (Optional)**.

   It is acceptable to leave this field blank since SAN Health will automatically look up the MX record for the domain specified on the email address. The field has been included only because some people may wish to pass the email through a different SMTP gateway than the one that is specified in the MX record for the given domain name. Check with your IT department for the internal SMTP server address, if needed.
6. If successful, you will receive an email reply.
7. If unsuccessful, there are several places where the email could be blocked before reaching Brocade’s servers:

- At the SAN Health workstation itself

  Check the locally installed virus software and firewall software for SMTP port blocking.
- At the LAN router or firewall

  Check with your IT department to see if SMTP is being actively blocked.
- At the SMTP server

  Check with your IT department to see if SMTP emails that do not originate from the SMTP server itself are allowed.

8. To test without IT involvement, try sending emails to different addresses: to your own corporate address, then out to another address on your domain, and then out to a web-based address.

   If any of these tests fail, you’ll be able to determine whether your SMTP emails should be getting to Brocade.
9. If all these steps fail, contact SANHealth.Admin@broadcom.com for more assistance.

   The automatic upload option is particularly useful when combined with scheduled/unattended audits.

HTTPS

If the workstation running SAN Health has Internet connectivity, you may be able to automatically submit the BSH file via HTTPS. To set up this option, do the following:

1. Check the box next to **Automatically send the BSH file to the report generation queue on audit completion**.
2. Click the radio button next to **Submit the BSH file using HTTPS**.
3. Click the **Send A Test https File** button.

   A .BSHTest file will be sent to the report generation queue.
4. If this .BSHTest file is successfully sent, you will receive an email at the address previously entered in the **Report Return** section on the **Details** tab.
5. If this .BSHTest file is not successfully sent, check with your IT department for any firewall settings that may need to be changed.
6. Contact SANHealth.Admin@broadcom.com for assistance if these steps fail.

The automatic upload option is particularly useful when combined with scheduled/unattended audits. See this same **Options** tab, **Audit Data File Upload**, for instructions with scheduling unattended audits.

Advanced-Level Usage of SAN Health

The following is for experienced SAN administrators only. Please consult a Brocade certified technician before using this section. Do not proceed with any actions on any switches without first verifying the procedure.

Zone Migration Scripts

This process should be undertaken only by an experienced SAN administrator. Please see the "What are the steps to obtain a zone migration text?" question and the end of this document for step-by-step detailed instructions. There is no cost to use this service. No existing service contract is required. It is completely free and can be used as many times as needed.

The SAN Health team has a tool called Zone Migration that can be used to simplify the process of migrating to a new fabric by assisting with the re-creation of an existing zone configuration in a new fabric. By utilizing the zone information captured in a SAN Health report, the SAN Health team can create a text file that contains all the CLI commands necessary to build those zones in the new fabric. This can massively reduce the time needed to manually enter the zone data, and it can eliminate costly typos and other human errors.

SAN Health itself does not alter switches or switch zone configurations, so this Zone Migration tool is treated a bit differently.

What are the scenarios that would benefit from the Zone Migration Tool?

Re-creating the existing zone configuration from a legacy fabric into a new fabric will allow you to move the existing devices and have them be properly zoned from the start. Common scenarios are the following:

- Moving from Cisco to FOS
- Moving from McDATA or Mi10k to FOS
- Moving from Domain,Port zoning to FOS WWN
- Moving from Legacy FOS to a new FOS fabric

In addition, several customers have used the Zone Migration tool to actually rebuild an existing zone configuration that was accidentally deleted or corrupted by user error. (This can only be accomplished if a complete SAN Health audit of the fabric exists from *before* the accidental deletion, so make sure to run SAN Health early and often. The more current the SAN Health audit is, the more accurate the rebuild will be.)

What if I can't move my whole fabric at once or I want some guidance on how to group devices for the move?

Along with the zone migration text, a zone group text will be provided. This file will contain all the devices divided into groups based on their zone and other devices connected to them through common zones. This way, groups of devices can be scheduled to be moved while limiting their effect on other devices in the fabric. Please request a sample zone migration text and a zone group text from the SAN Health administrator so that you can get a good idea of what you will receive for your own fabric.

Will this process work if I'm moving from a QLogic fabric to a Brocade fabric?

SAN Health does not work against QLogic switches. But there is a workaround if you would like to obtain the zone migration text from a QLogic fabric. In some instances, QLogic and Brocade switches can be put in interop mode and attached together to form a single fabric. When this is done, the zone database should be copied to the Brocade switch. Then, SAN Health can be run against this Brocade switch.

What are the steps to obtain a zone migration text?

To use the Zone Migration tool, first run SAN Health and send in the audit to be processed. After the completed report has been sent back to you, ask a for the zone migration text from SANHealth.Admin@broadcom.com. They will need to know the filename of the SAN Health report for the request. (You do not need to send in a copy of the file, just the filename.) The SAN Health team will then create a copy of the zone migration texts, check them for accuracy, and send them to you with basic instructions to help you with the migration. Please allow 48 hours for return. If you do not currently have a Brocade SE or other experienced Brocade technical employee that you are working with, please find one before making any changes to your fabric zoning.

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