

IBM System Storage N series Autosupport Overview



Autosupport is a sophisticated, event-driven logging agent featured in the Data ONTAP™ operating system inside IBM® System Storage™ N series storage systems that continuously monitors the health of your system. It keeps a watchful eye on a multitude of preset conditions.

How does Autosupport work?

The Autosupport feature triggers the automatic sending of notification messages to IBM Service and Support. Autosupport also has the ability to send notification messages to one or more customer-specified e-mail addresses which can alert recipients to potential problems with the N series storage system. As necessary, IBM Service and Support will contact customers based on the contact information in the customer's record for resolution of potential system problems.

Autosupport is enabled by default with Data ONTAP 7.1H2 or later when you configure your N series storage system for the first time. After a grace period of 24 hours, Autosupport messages start being generated. You can disable Autosupport at any time using the `autosupport.enable` option, but you are strongly advised to leave it enabled. Enabling Autosupport can significantly expedite the problem determination and resolution process should a problem occur on your system.

Interaction with mail hosts

N series storage systems do not function as mail hosts, they rely on another host at the customer site that listens on the SMTP port (25) to send mail to the customer specified e-mail addresses. Autosupport requires at least one host reachable by an N series storage system that runs an SMTP server or a mail forwarder, such as the `sendmail` program.

After an occurrence of an event, an Autosupport notification is sent to IBM Service and Support Network, via HTTPS by a direct connection to the predefined location specified in Data ONTAP.

Subject line of Autosupport e-mail messages

The subject line of the notification messages sent by the Autosupport mechanism contains a text string that identifies the reason for the notification. The subject also contains a relative prioritization of the message, using `syslog` severity levels from `DEBUG` to `EMERGENCY`. The messages and other information in the notification should be used to check on the problem being reported.

The format of the subject line is as follows:

System Notification from (message)

Short notification messages for urgent events

The system can also be configured to send a short alert notification containing only the reason for the alert to these recipients. The short e-mail messages contain the reason for the notification in the subject line and the time of failure. These messages are triggered only by specific urgent events. This feature is useful for system administrators who read e-mail messages on alphanumeric pagers.

Recipients of Autosupport e-mail messages

Customers can specify up to five e-mail recipient addresses for standard Autosupport notification.

Technical Support response

When IBM Service and Support receives an alert Autosupport notification, it takes corrective action to resolve the problem. IBM Service and Support initiates a case and then contacts the customer to further investigate the situation or to provide a corrective action to the customer.

Cluster considerations

The Autosupport notification messages from an N series storage system in a cluster are different from the Autosupport notification messages from a standalone N series storage system in the following ways:

- The subject line in the Autosupport notification messages from an N series storage system in a cluster reads "Cluster notification" instead of "System notification."
- The Autosupport notification messages from an N series storage system in a cluster contain information about the N series storage system's partner, such as the partner system ID and the partner host name.
- In takeover mode, if you reboot the live N series storage system, two Autosupport notification messages will be sent, notifying the e-mail recipients of the reboot. The live N series storage system sends one message; the failed N series storage system sends the other message.
- The live N series storage system sends an Autosupport notification message after it completes the takeover process.

How to configure Autosupport on an N series storage system

The Autosupport daemon is enabled by default on the N series storage systems with Data ONTAP versions 7.1H2 and later. The Autosupport options control how the N series storage system sends automatic status messages. Autosupport options can be set from FilerView or from the command line using the Option commands.

autosupport.cifs.verbose [on/off]

This option enables or disables inclusion of a CIFS session and share information in Autosupport messages. If **off**, the CIFS sections will be omitted. The default is **off**.

autosupport.content [complete | minimal]

This option defines the contents of the Autosupport notification record. Allowable values are **complete** or **minimal**. The default value is **complete**. The **minimal** option allows the delivery of a "sanitized", smaller version of the Autosupport record. Using the minimal option may require IBM Service and Support to request additional data.

Note: If this option is changed from **complete** to **minimal** then all previous and pending Autosupport messages will be deleted under the assumption that complete messages should not be transmitted.

autosupport.doit [message]

Used to send a test message on the system which triggers the Autosupport daemon to send an Autosupport notification immediately. The message can be a single word or a string enclosed in single quotation marks. The message is included in the subject line of the Autosupport notification and should be used to explain the reason for the notification.

autosupport.enable [on/off]

Enables/disables the Autosupport notification features. The default is **on** to cause Autosupport notifications to be sent. This option will override the **autosupport.support.enable** option.

autosupport.from [sender]

Specifies the sender of the automatic message. The information entered in this field should be the e-mail address of the person whom IBM contacts after receiving an automatic message.

autosupport.local.nht_data.enable [on/off]

Enables/disables the NHT data Autosupport to be sent to the recipients listed in the **autosupport.to** option. NHT data is the binary, internal log data from each disk drive, and in general, cannot be parsed by anyone other than IBM. There is no customer data in the NHT Autosupport. The default for this option is **off**.

autosupport.mailhost [host1[..., host 5]]

Defines up to 5 mail host names. Enter the host names as a comma-separated list with no spaces in between. The default is an empty list.

autosupport.minimal.subject.id [hostname | systemid]

Defines how the system is identified in the Autosupport message title when **autosupport.content** is set to **minimal**. The default is **systemid**.

autosupport.noteto [address1[, ..., address5]]

Defines the list of recipients for Autosupport short note e-mail messages. Up to five e-mail addresses are allowed. Enter the addresses as a comma-separated list with no spaces in between. The default is an empty list to disable short note e-mails.

autosupport.nht_data.enable [on/off]

Enables/disables the generation of the NHT data. Default is **off**

autosupport.retry.count

Number of times N series storage system will attempt to send the Autosupport notification. The minimum setting is 5 and the maximum is 4,294,967,295. The default is 15.

autosupport.retry.interval [interval]

Time in minutes to delay before trying to send the Autosupport again. Minimum is 30 seconds, maximum is 1 day. Values may end with 's', 'm' or 'h' to indicate seconds, minutes or hours respectively, if no units are specified than input is assumed to be in seconds. Values can range from 30 seconds to 24 hours. The default value is **4m** (4 minutes).

autosupport.support.enable [on/off]

Enables/disables the Autosupport notification to IBM Service and Support. The default is **on** to cause Autosupport notifications to be sent directly to IBM Service and Support.

autosupport.support.proxy

Allows the setting of an http based proxy if the **autosupport.support.transport** is **https**. The default value for this option is the empty string.

Note: The value used for this option is site-specific; see your IT department for the correct value.

autosupport.support.to

This option is read only and is shown for informational purposes only.

autosupport.support.transport [https]

Defines the type of delivery for Autosupport notifications. The default is https. This option is read only and is shown for informational purposes only.

autosupport.support.url

Shows where Autosupport notifications are sent to IBM Service and Support. This option is read-only and is shown for informational purposes only.

autosupport.throttle [on/off]

Enables Autosupport throttling. When too many Autosupports are sent in too short a time, additional messages of the same type will be dropped. Valid values for this option are **on** or **off**. The default value for this option is **on**.

autosupport.to [address1[, ..., address5]]

Defines the list of recipients for the Autosupport e-mail notification. Up to 5 e-mail addresses are allowed. Enter the addresses as a comma-separated list with no spaces in between. The default is an empty list.

Contents of Autosupport notification messages

Each message generated by Autosupport contains the following types of information:

- Date and time stamp of the message
- Data ONTAP software version
- System ID of the N series storage system
- Host name of the N series storage system
- Software licenses enabled for the N series storage system
- Product serial number
- SNMP contact name and location (if specified in `/etc/rc`)
- Contents of the messages log
- Output of the following console commands (some commands are applicable only to the licensed protocols):
 - `sysconfig -v`
 - `options`
 - `ifconfig -a`
 - `nfsstat -c`
 - `cifs stat` (included if CIFS is licensed)
 - `cifs sessions` (included if CIFS is licensed)
 - `cifs shares` (included if CIFS is licensed)
 - `httpstat`
 - `df`

- *df -i*
- *snap*
- *sched*
- *sysconfig -r*
- *contents of /etc/messages*
- *contents of /etc/serialnum*

Trademarks

The following terms are trademarks of International Business Machines Corporation in the United States, other countries, or both:

IBM
IBM logo

System Storage

Data ONTAP is a registered trademark of Network Appliance, Inc. in the United States, and/or other countries.

Printed in USA - Second Edition

March 2006

© Copyright International Business Machines Corporation 2006. All rights reserved.

US Government Users Restricted Rights – Use, duplication or disclosure restricted by GSA ADP Schedule Contract with IBM Corp.

GC26-7854-01

