Learn about AutoSupport

ONTAP 9

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About AutoSupport

AutoSupport is a mechanism that proactively monitors the health of your system and automatically sends messages to NetApp technical support, your internal support organization, and a support partner. Although AutoSupport messages to technical support are enabled by default, you must set the correct options and have a valid mail host to have messages sent to your internal support organization.

Only the cluster administrator can perform AutoSupport management. The storage virtual machine (SVM) administrator has no access to AutoSupport.

AutoSupport is enabled by default when you configure your storage system for the first time. AutoSupport begins sending messages to technical support 24 hours after AutoSupport is enabled. You can shorten the 24-hour period by upgrading or reverting the system, modifying the AutoSupport configuration, or changing the system time to be something other than a 24-hour period.

You can disable AutoSupport at any time, but you should leave it enabled. Enabling AutoSupport can significantly help speed problem determination and resolution should a problem occur on your storage system. By default, the system collects AutoSupport information and stores it locally, even if you disable AutoSupport.

For more information about AutoSupport, see the NetApp Support Site.

Related information

- NetApp Support
- Learn more about the AutoSupport commands in the ONTAP CLI

About Active IQ Digital Advisor and AutoSupport

The AutoSupport component of ONTAP collects telemetry and sends it for analysis. Active IQ Digital Advisor analyzes the data from AutoSupport and provides proactive care and optimization. Using artificial intelligence, Active IQ can identify potential problems and help you resolve them before they impact your business.

Active IQ enables you to optimize your data infrastructure across your global hybrid cloud by delivering actionable predictive analytics and proactive support through a cloud-based portal and mobile app. Data-driven insights and recommendations from Active IQ are available to all NetApp customers with an active SupportEdge contract (features vary by product and support tier).

Here are some things you can do with Active IQ:

- Plan upgrades. Active IQ identifies issues in your environment that can be resolved by upgrading to a newer version of ONTAP and the Upgrade Advisor component helps you plan for a successful upgrade.
- View system wellness. Your Active IQ dashboard reports any issues with wellness and helps you correct those issues. Monitor system capacity to make sure you never run out of storage space. View support cases for your system.

- Manage performance. Active IQ shows system performance over a longer period than you can see in System Manager. Identify configuration and system issues that are impacting your performance.
- Maximize efficiency. View storage efficiency metrics and identify ways to store more data in less space.
- View inventory and configuration. Active IQ displays complete inventory and software and hardware configuration information. See when service contracts are expiring and renew them to ensure you remain supported.

Related information

NetApp Documentation: Active IQ Digital Advisor

Launch Active IQ

SupportEdge Services

When and where AutoSupport messages are sent

AutoSupport sends messages to different recipients, depending on the type of message. Learning when and where AutoSupport sends messages can help you understand messages that you receive through email or view on the Active IQ (formerly known as My AutoSupport) web site.

Unless specified otherwise, settings in the following tables are parameters of the `system node autosupport modify` command.

Event-triggered messages

When events occur on the system that require corrective action, AutoSupport automatically sends an event-triggered message.

When the message is sent	Where the message is sent
AutoSupport responds to a trigger event in the EMS	Addresses specified in `-to` and `-noteto`. (Only critical, service-affecting events are sent.) Addresses specified in `-partner-address` Technical support, if `-support` is set to `enable`

Scheduled messages

AutoSupport automatically sends several messages on a regular schedule.

When the message is sent	Where the message is sent
Daily (by default, sent between 12:00 a.m. and 1:00 a.m. as a log message)	Addresses specified in `-partner-address` Technical support, if `-support` is set to `enable`

When the message is sent	Where the message is sent
Daily (by default, sent between 12:00 a.m. and 1:00 a.m. as a performance message), if the `-perf` parameter is set to `true`	Addresses specified in -partner-address`  Technical support, if `-support` is set to `enable`
Weekly (by default, sent Sunday between 12:00 a.m. and 1:00 a.m.)	Addresses specified in `-partner-address` Technical support, if `-support` is set to `enable`

Manually triggered messages

You can manually initiate or resend an AutoSupport message.

When the message is sent	Where the message is sent
You manually initiate a message using the `system node autosupport invoke` command	If a URI is specified using the `-uri` parameter in the `system node autosupport invoke` command, the message is sent to that URI. If `-uri` is omitted, the message is sent to the addresses specified in `-to` and `-partner-address`. The message is also sent to technical support if `-support` is set to `enable`.
You manually initiate a message using the `system node autosupport invoke-core-upload` command	If a URI is specified using the `-uri` parameter in the `system node autosupport invoke-core-upload` command, the message is sent to that URI, and the core dump file is uploaded to the URI. If `-uri` is omitted in the `system node autosupport invoke-core-upload` command, the message is sent to technical support, and the core dump file is uploaded to the technical support site. Both scenarios require that `-support` is set to `enable` and `-transport` is set to `https` or `http`. Due to the large size of core dump files, the message is not sent to the addresses specified in the `-to` and `-partner-addresses` parameters.

When the message is sent	Where the message is sent
You manually initiate a message using the `system node autosupport invoke-performance-archive` command	If a URI is specified using the `-uri` parameter in the `system node autosupport invoke-performance-archive` command, the message is sent to that URI, and the performance archive file is uploaded to the URI. If `-uri` is omitted in the `system node autosupport invoke-performance-archive`, the message is sent to technical support, and the performance archive file is uploaded to the technical support site. Both scenarios require that `-support` is set to `enable` and `-transport` is set to `https` or `http`. Due to the large size of performance archive files, the message is not sent to the addresses specified in the `-to` and `-partner-addresses` parameters.
You manually resend a past message using the `system node autosupport history retransmit` command	Only to the URI that you specify in the `-uri` parameter of the `system node autosupport history retransmit` command

Messages triggered by technical support

Technical support can request messages from AutoSupport using the AutoSupport OnDemand feature.

When the message is sent	Where the message is sent
When AutoSupport obtains delivery instructions to generate new AutoSupport messages	Addresses specified in `-partner-address` Technical support, if `-support` is set to `enable` and `-transport` is set to `https`
When AutoSupport obtains delivery instructions to resend past AutoSupport messages	Technical support, if `-support` is set to `enable` and `-transport` is set to `https`
When AutoSupport obtains delivery instructions to generate new AutoSupport messages that upload core dump or performance archive files	Technical support, if `-support` is set to `enable` and `-transport` is set to `https`. The core dump or performance archive file is uploaded to the technical support site.

How AutoSupport creates and sends event-triggered messages

AutoSupport creates event-triggered AutoSupport messages when the EMS processes a

trigger event. An event-triggered AutoSupport message alerts recipients to problems that require corrective action and contains only information that is relevant to the problem. You can customize what content to include and who receives the messages.

AutoSupport uses the following process to create and send event-triggered AutoSupport messages:

1. When the EMS processes a trigger event, EMS sends AutoSupport a request.

   A trigger event is an EMS event with an AutoSupport destination and a name that begins with a `callhome.` prefix.

2. AutoSupport creates an event-triggered AutoSupport message.

   AutoSupport collects basic and troubleshooting information from subsystems that are associated with the trigger to create a message that includes only information that is relevant to the trigger event.

   A default set of subsystems is associated with each trigger. However, you can choose to associate additional subsystems with a trigger by using the `system node autosupport trigger modify` command.

3. AutoSupport sends the event-triggered AutoSupport message to the recipients defined by the `system node autosupport modify` command with the `-to`, `-noteto`, `-partner-address`, and `-support` parameters.

   You can enable and disable delivery of AutoSupport messages for specific triggers by using the `system node autosupport trigger modify` command with the `-to` and `-noteto` parameters.

Example of data sent for a specific event

The `storage shelf PSU failed` EMS event triggers a message that contains basic data from the Mandatory, Log Files, Storage, RAID, HA, Platform, and Networking subsystems and troubleshooting data from the Mandatory, Log Files, and Storage subsystems.

You decide that you want to include data about NFS in any AutoSupport messages sent in response to a future `storage shelf PSU failed` event. You enter the following command to enable troubleshooting-level data for NFS for the `callhome.shlf.ps.fault` event:

```
        cluster1::\>
        system node autosupport trigger modify -node node1 -autosupport
-message shlf.ps.fault -troubleshooting-additional nfs
```

Note that the `callhome.` prefix is dropped from the `callhome.shlf.ps.fault` event when you use the `system node autosupport trigger` commands, or when referenced by AutoSupport and EMS events in the CLI.

Types of AutoSupport messages and their content

AutoSupport messages contain status information about supported subsystems. Learning what AutoSupport messages contain can help you interpret or respond to messages that you receive in email or view on the Active IQ (formerly known as My AutoSupport) web

site.

Type of message	Type of data the message contains
Event-triggered	Files containing context-sensitive data about the specific subsystem where the event occurred
Daily	Log files
Performance	Performance data sampled during the previous 24 hours
Weekly	Configuration and status data
Triggered by the `system node autosupport invoke` command	Depends on the value specified in the `-type` parameter: • `test` sends a user-triggered message with some basic data. This message also triggers an automated email response from technical support to any specified email addresses, using the `-to` option, so that you can confirm that AutoSupport messages are being received. • `performance` sends performance data. • `all` sends a user-triggered message with a complete set of data similar to the weekly message, including troubleshooting data from each subsystem. Technical support typically requests this message.
Triggered by the `system node autosupport invoke-core-upload` command	Core dump files for a node
Triggered by the `system node autosupport invoke-performance-archive` command	Performance archive files for a specified period of time

Type of message	Type of data the message contains
Triggered by AutoSupport OnDemand	AutoSupport OnDemand can request new messages or past messages: • New messages, depending on the type of AutoSupport collection, can be `test`, `all`, or `performance`. • Past messages depend on the type of message that is resent. AutoSupport OnDemand can request new messages that upload the following files to the NetApp Support Site at mysupport.netapp.com: • Core dump • Performance archive

View AutoSupport subsystems

Each subsystem provides basic and troubleshooting information that AutoSupport uses for its messages. Each subsystem is also associated with trigger events that allow AutoSupport to collect from subsystems only information that is relevant to the trigger event.

AutoSupport collects context-sensitive content.

Steps

1. View information about subsystems and trigger events:

```
system node autosupport trigger show
```

AutoSupport size and time budgets

AutoSupport collects information, organized by subsystem, and enforces a size and time budget on content for each subsystem. As storage systems grow, AutoSupport budgets provide control over the AutoSupport payload, which in turn provides scalable delivery of AutoSupport data.

AutoSupport stops collecting information and truncates the AutoSupport content if the subsystem content exceeds its size or time budget. If the content cannot be truncated easily (for example, binary files), AutoSupport omits the content.

You should modify the default size and time budgets only if asked to do so by NetApp Support. You can also review the default size and time budgets of the subsystems by using the `autosupport manifest show` command.

Files sent in event-triggered AutoSupport messages

Event-triggered AutoSupport messages only contain basic and troubleshooting information from subsystems that are associated with the event that caused AutoSupport to generate the message. The specific data helps NetApp support and support partners troubleshoot the problem.

AutoSupport uses the following criteria to control content in event-triggered AutoSupport messages:

- Which subsystems are included

  Data is grouped into subsystems, including common subsystems, such as Log Files, and specific subsystems, such as RAID. Each event triggers a message that contains only the data from specific subsystems.

- The detail level of each included subsystem

  Data for each included subsystem is provided at a basic or troubleshooting level.

You can view all possible events and determine which subsystems are included in messages about each event using the `system node autosupport trigger show` command with the `-instance` parameter.

In addition to the subsystems that are included by default for each event, you can add additional subsystems at either a basic or a troubleshooting level using the `system node autosupport trigger modify` command.

Log files sent in AutoSupport messages

AutoSupport messages can contain several key log files that enable technical support staff to review recent system activity.

All types of AutoSupport messages might include the following log files when the Log Files subsystem is enabled:

Log file	Amount of data included from the file
• Log files from the `/mroot/etc/log/mlog/` directory • The MESSAGES log file	Only new lines added to the logs since the last AutoSupport message up to a specified maximum. This ensures that AutoSupport messages have unique, relevant—not overlapping—data. (Log files from partners are the exception; for partners, the maximum allowed data is included.)
• Log files from the `/mroot/etc/log/shelflog/` directory • Log files from the `/mroot/etc/log/acp/` directory • Event Management System (EMS) log data	The most recent lines of data up to a specified maximum.

The content of AutoSupport messages can change between releases of ONTAP.

Files sent in weekly AutoSupport messages

Weekly AutoSupport messages contain additional configuration and status data that is useful to track changes in your system over time.

The following information is sent in weekly AutoSupport messages:

- Basic information about every subsystem
- Contents of selected `/mroot/etc` directory files
- Log files
- Output of commands that provide system information
- Additional information, including replicated database (RDB) information, service statistics, and more

How AutoSupport OnDemand obtains delivery instructions from technical support

AutoSupport OnDemand periodically communicates with technical support to obtain delivery instructions for sending, resending, and declining AutoSupport messages as well as uploading large files to the NetApp support site. AutoSupport OnDemand enables AutoSupport messages to be sent on-demand instead of waiting for the weekly AutoSupport job to run.

AutoSupport OnDemand consists of the following components:

- AutoSupport OnDemand client that runs on each node
- AutoSupport OnDemand service that resides in technical support

The AutoSupport OnDemand client periodically polls the AutoSupport OnDemand service to obtain delivery instructions from technical support. For example, technical support can use the AutoSupport OnDemand service to request that a new AutoSupport message be generated. When the AutoSupport OnDemand client polls the AutoSupport OnDemand service, the client obtains the delivery instructions and sends the new AutoSupport message on-demand as requested.

AutoSupport OnDemand is enabled by default. However, AutoSupport OnDemand relies on some AutoSupport settings to continue communicating with technical support. AutoSupport OnDemand automatically communicates with technical support when the following requirements are met:

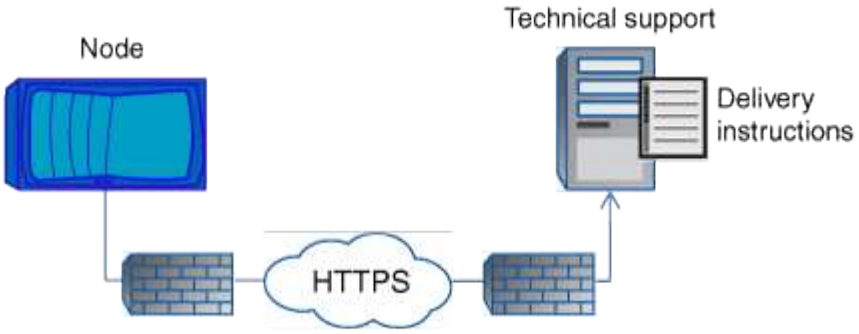
- AutoSupport is enabled.
- AutoSupport is configured to send messages to technical support.
- AutoSupport is configured to use the HTTPS transport protocol.

The AutoSupport OnDemand client sends HTTPS requests to the same technical support location to which AutoSupport messages are sent. The AutoSupport OnDemand client does not accept incoming connections.

AutoSupport OnDemand uses the “autosupport” user account to communicate with technical support. ONTAP prevents you from deleting this account.

If you want to disable AutoSupport OnDemand, but keep AutoSupport enabled, use the command: `system node autosupport modify -ondemand-state disable`.

The following illustration shows how AutoSupport OnDemand sends HTTPS requests to technical support to obtain delivery instructions.



The delivery instructions can include requests for AutoSupport to do the following:

- Generate new AutoSupport messages.

  Technical support might request new AutoSupport messages to help triage issues.

- Generate new AutoSupport messages that upload core dump files or performance archive files to the NetApp support site.

  Technical support might request core dump or performance archive files to help triage issues.

- Retransmit previously generated AutoSupport messages.

  This request automatically happens if a message was not received due to a delivery failure.

- Disable delivery of AutoSupport messages for specific trigger events.

  Technical support might disable delivery of data that is not used.

Structure of AutoSupport messages sent by email

When an AutoSupport message is sent by email, the message has a standard subject, a brief body, and a large attachment in 7z file format that contains the data.

If AutoSupport is configured to hide private data, certain information, such as the hostname, is omitted or masked in the header, subject, body, and attachments.

Subject

The subject line of messages sent by the AutoSupport mechanism contains a text string that identifies the reason for the notification. The format of the subject line is as follows:

HA Group Notification from *System_Name* (*Message*) *Severity*

- *System_Name* is either the hostname or the system ID, depending on the AutoSupport configuration

Body

The body of the AutoSupport message contains the following information:

- Date and timestamp of the message
- Version of ONTAP on the node that generated the message
- System ID, serial number, and hostname of the node that generated the message
- AutoSupport sequence number
- SNMP contact name and location, if specified
- System ID and hostname of the HA partnernode

Attached files

The key information in an AutoSupport message is contained in files that are compressed into a 7z file called `body.7z` and attached to the message.

The files contained in the attachment are specific to the type of AutoSupport message.

AutoSupport severity types

AutoSupport messages have severity types that help you understand the purpose of each message—for example, to draw immediate attention to an emergency problem, or only to provide information.

Messages have one of the following severities:

- **Alert**: Alert messages indicate that a next-higher level event might occur if you do not take some action.

  You must take an action against alert messages within 24 hours.

- **Emergency**: Emergency messages are displayed when a disruption has occurred.

  You must take an action against emergency messages immediately.

- **Error**: Error conditions indicate what might happen if you ignore.
- **Notice**: Normal but significant condition.
- **Info**: Informational message provides details about the issue, which you can ignore.
- **Debug**: Debug-level messages provide instructions you should perform.

If your internal support organization receives AutoSupport messages through email, the severity appears in the subject line of the email message.

Get AutoSupport message descriptions

The descriptions of the AutoSupport messages that you receive are available through the ONTAP Syslog Translator.

Steps

1. Go to the Syslog Translator.
2. In the **Release** field, enter the the version of ONTAP you are using. In the **Search String** field, enter "callhome". Select **Translate**.
3. The Syslog Translator will alphabetically list all events that match the message string you entered.

Commands for managing AutoSupport

You use the `system node autosupport` commands to change or view AutoSupport configuration, display information about previous AutoSupport messages, and send, resend or cancel an AutoSupport message.

Configure AutoSupport

If you want to…	Use this command…
Control whether any AutoSupport messages are sent	`system node autosupport modify` with the `-state` parameter
Control whether AutoSupport messages are sent to technical support	`system node autosupport modify` with the `-support` parameter
Set up AutoSupport or modify the configuration of AutoSupport	`system node autosupport modify`
Enable and disable AutoSupport messages to your internal support organization for individual trigger events, and specify additional subsystem reports to include in messages sent in response to individual trigger events	`system node autosupport trigger modify`

Display information about the AutoSupport configuration

If you want to…	Use this command…
Display the AutoSupport configuration	`system node autosupport show` with the `-node` parameter
View a summary of all addresses and URLs that receive AutoSupport messages	`system node autosupport destinations show`
Display which AutoSupport messages are sent to your internal support organization for individual trigger events	`system node autosupport trigger show`
Display status of AutoSupport configuration as well as delivery to various destinations	`system node autosupport check show`

If you want to…	Use this command…
Display detailed status of AutoSupport configuration as well as delivery to various destinations	`system node autosupport check show-details`

Display information about past AutoSupport messages

If you want to…	Use this command…
Display information about one or more of the 50 most recent AutoSupport messages	`system node autosupport history show`
Display information about recent AutoSupport messages generated to upload core dump or performance archive files to the technical support site or a specified URI	`system node autosupport history show-upload-details`
View the information in the AutoSupport messages including the name and size of each file collected for the message along with any errors	`system node autosupport manifest show`

Send, resend, or cancel AutoSupport messages

If you want to…	Use this command…
Retransmit a locally stored AutoSupport message, identified by its AutoSupport sequence number If you retransmit an AutoSupport message, and if support already received that message, the support system will not create a duplicate case. If, on the other hand, support did not receive that message, then the AutoSupport system will analyze the message and create a case, if necessary.	`system node autosupport history retransmit`
Generate and send an AutoSupport message—for example, for testing purposes	`system node autosupport invoke` Use the `-force` parameter to send a message even if AutoSupport is disabled. Use the `-uri` parameter to send the message to the destination you specify instead of the configured destination.
Cancel an AutoSupport message	`system node autosupport history cancel`

Related information

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Information included in the AutoSupport manifest

The AutoSupport manifest provides you with a detailed view of the files collected for each AutoSupport message. The AutoSupport manifest also includes information about collection errors when AutoSupport cannot collect the files it needs.

The AutoSupport manifest includes the following information:

- Sequence number of the AutoSupport message
- Which files AutoSupport included in the AutoSupport message
- Size of each file, in bytes
- Status of the AutoSupport manifest collection
- Error description, if AutoSupport failed to collect one or more files

You can view the AutoSupport manifest by using the `system node autosupport manifest show` command.

The AutoSupport manifest is included with every AutoSupport message and presented in XML format, which means that you can either use a generic XML viewer to read it or view it using the Active IQ (formerly known as My AutoSupport) portal.

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