



Manage data-entropy statistics

REST API reference

NetApp
February 06, 2026

This PDF was generated from https://docs.netapp.com/us-en/ontap-restapi/security_antiransomware_volume_entropy-stats_endpoint_overview.html on February 06, 2026. Always check docs.netapp.com for the latest.

Table of Contents

Manage data-entropy statistics	1
Manage data-entropy statistics	1
Overview	1
Examples	1
Retrieve data-entropy statistics for volumes	2
Parameters	2
Response	4
Error	5
Definitions	6
Retrieve a data-entropy statistic for a volume	8
Parameters	9
Response	9
Error	10
Definitions	11

Manage data-entropy statistics

Manage data-entropy statistics

Overview

This API returns the percentage of data classified as encrypted using an entropy algorithm, measured at various time intervals at the volume level. If no volume UUID is specified, entropy statistics of all the volumes will be returned. The `entropy_stats_type` parameter can be used to retrieve statistics with `sub_hourly`, `hourly`, or `daily` granularity. Additionally, it can be used to identify intervals that exhibited high (`high_enc_pct`) percentages of encrypted data. If no type is specified, all types of entropy statistics will be returned for the volumes.

Examples

Retrieving volume stats

In this example, the API returns the data-entropy statistics for the volumes.

```
# The API:  
/security/anti-ransomware/volume/entropy-stats  
  
# The call:  
curl -X GET "https://<mgmt-ip>/api/security/anti-  
ransomware/volume/entropy-stats" -H "accept: application/json"  
  
# The response:  
{  
  "records": [  
    {  
      "volume": {  
        "uuid": "61edb8bb-b7d1-11ef-932d-005056bbaeff",  
        "name": "v2"  
      },  
      "entropy_stats_type": "sub_hourly",  
      "timestamp": "2024-12-13T03:36:24-05:00",  
      "data_written_in_bytes": 13249687,  
      "encryption_percentage": 51,  
      "duration": "PT10M21S",  
      "_links": {  
        "self": {  
          "href": "/api/security/anti-ransomware/volume/entropy-  
stats/61edb8bb-b7d1-11ef-932d-005056bbaeff/sub_hourly/2024-12-  
13T03%3A36%3A24-05%3A00"  
        }  
      }  
    },  
    {  
    }
```

```

"volume": {
  "uuid": "61edb8bb-b7d1-11ef-932d-005056bbaeff",
  "name": "v2"
},
"entropy_stats_type": "hourly",
"timestamp": "2024-12-13T04:16:06-05:00",
"data_written_in_bytes": 13249687,
"encryption_percentage": 51,
"duration": "PT1H2M36S",
"_links": {
  "self": {
    "href": "/api/security/anti-ransomware/volume/entropy-
stats/61edb8bb-b7d1-11ef-932d-005056bbaeff/hourly/2024-12-13T04%3A16%3A06-
05%3A00"
  }
}
},
"num_records": 20,
"_links": {
  "self": {
    "href": "/api/security/anti-ransomware/volume/entropy-stats/61edb8bb-
b7d1-11ef-932d-005056bbaeff"
  }
}
}

```

Retrieve data-entropy statistics for volumes

GET /security/anti-ransomware/volume/entropy-stats

Introduced In: 9.17

Retrieves the data-entropy statistics for the volumes.

Parameters

Name	Type	In	Required	Description
volume.name	string	query	False	Filter by volume.name
volume.uuid	string	query	False	Filter by volume.uuid
timestamp	string	query	False	Filter by timestamp

Name	Type	In	Required	Description
data_written_in_bytes	integer	query	False	Filter by data_written_in_bytes
encryption_percentage	integer	query	False	Filter by encryption_percentage
duration	string	query	False	Filter by duration
entropy_stats_type	string	query	False	Filter by entropy_stats_type
fields	array[string]	query	False	Specify the fields to return.
max_records	integer	query	False	Limit the number of records returned.
return_records	boolean	query	False	<p>The default is true for GET calls. When set to false, only the number of records is returned.</p> <ul style="list-style-type: none"> Default value: 1
return_timeout	integer	query	False	<p>The number of seconds to allow the call to execute before returning. When iterating over a collection, the default is 15 seconds. ONTAP returns earlier if either max records or the end of the collection is reached.</p> <ul style="list-style-type: none"> Default value: 15 Max value: 120 Min value: 0

Name	Type	In	Required	Description
order_by	array[string]	query	False	Order results by specified fields and optional [asc]

Response

Status: 200, Ok

Name	Type	Description
_links	_links	
num_records	integer	Number of records
records	array[records]	

Example response

```
{  
  "_links": {  
    "next": {  
      "href": "/api/resourcelink"  
    },  
    "self": {  
      "href": "/api/resourcelink"  
    }  
  },  
  "num_records": 1,  
  "records": [  
    {  
      "_links": {  
        "self": {  
          "href": "/api/resourcelink"  
        }  
      },  
      "data_written_in_bytes": 0,  
      "duration": "PT15M",  
      "encryption_percentage": 0,  
      "entropy_stats_type": "string",  
      "timestamp": "string",  
      "volume": {  
        "_links": {  
          "self": {  
            "href": "/api/resourcelink"  
          }  
        },  
        "name": "volumel",  
        "uuid": "028baa66-41bd-11e9-81d5-00a0986138f7"  
      }  
    }  
  ]  
}
```

Error

Status: Default, Error

Name	Type	Description
error	returned_error	

Example error

```
{  
  "error": {  
    "arguments": [  
      {  
        "code": "string",  
        "message": "string"  
      }  
    ],  
    "code": "4",  
    "message": "entry doesn't exist",  
    "target": "uuid"  
  }  
}
```

Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

Name	Type	Description
next	href	
self	href	

_links

Name	Type	Description
self	href	

volume

Name	Type	Description
_links	_links	
name	string	The name of the volume. This field cannot be specified in a PATCH method.
uuid	string	Unique identifier for the volume. This corresponds to the instance-uuid that is exposed in the CLI and ONTAPI. It does not change due to a volume move. <ul style="list-style-type: none">example: 028baa66-41bd-11e9-81d5-00a0986138f7Introduced in: 9.6x-nullables: true

records

Volume data-entropy statistics derived from block analysis.

Name	Type	Description
_links	_links	
data_written_in_bytes	integer	The amount of data written.

Name	Type	Description
duration	string	The duration of the interval associated with this statistic. The duration is represented in ISO-8601 standard format.
encryption_percentage	integer	The percentage of data that is encrypted.
entropy_stats_type	string	Volume metrics are retrieved based on this statistic type.
timestamp	string	Start time in date-time format.
volume	volume	

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

returned_error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Retrieve a data-entropy statistic for a volume

GET /security/anti-ransomware/volume/entropy-stats/{volume.uuid}/{entropy_stats_type}/{timestamp}

Introduced In: 9.17

Retrieves a data-entropy statistic for the volumes.

Parameters

Name	Type	In	Required	Description
volume.uuid	string	path	True	The UUID of the volume.
entropy_stats_type	string	path	True	The type of entropy statistics. <ul style="list-style-type: none"> enum: ["sub_hourly", "hourly", "daily", "high_enc_pct"]
timestamp	string	path	True	The timestamp of the statistics. <ul style="list-style-type: none"> format: date-time
fields	array[string]	query	False	Specify the fields to return.

Response

Status: 200, Ok

Name	Type	Description
_links	_links	
data_written_in_bytes	integer	The amount of data written.
duration	string	The duration of the interval associated with this statistic. The duration is represented in ISO-8601 standard format.
encryption_percentage	integer	The percentage of data that is encrypted.
entropy_stats_type	string	Volume metrics are retrieved based on this statistic type.
timestamp	string	Start time in date-time format.
volume	volume	

Example response

```
{  
  "_links": {  
    "self": {  
      "href": "/api/resourcelink"  
    }  
  },  
  "data_written_in_bytes": 0,  
  "duration": "PT15M",  
  "encryption_percentage": 0,  
  "entropy_stats_type": "string",  
  "timestamp": "string",  
  "volume": {  
    "_links": {  
      "self": {  
        "href": "/api/resourcelink"  
      }  
    },  
    "name": "volume1",  
    "uuid": "028baa66-41bd-11e9-81d5-00a0986138f7"  
  }  
}
```

Error

Status: Default, Error

Name	Type	Description
error	returned_error	

Example error

```
{  
  "error": {  
    "arguments": [  
      {  
        "code": "string",  
        "message": "string"  
      }  
    ],  
    "code": "4",  
    "message": "entry doesn't exist",  
    "target": "uuid"  
  }  
}
```

Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

Name	Type	Description
self	href	

volume

Name	Type	Description
_links	_links	
name	string	The name of the volume. This field cannot be specified in a PATCH method.
uuid	string	Unique identifier for the volume. This corresponds to the instance-uuid that is exposed in the CLI and ONTAPI. It does not change due to a volume move. <ul style="list-style-type: none">example: 028baa66-41bd-11e9-81d5-00a0986138f7Introduced in: 9.6x-nullable: true

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

returned_error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code

Name	Type	Description
message	string	Error message
target	string	The target parameter that caused the error.

Copyright information

Copyright © 2026 NetApp, Inc. All Rights Reserved. Printed in the U.S. No part of this document covered by copyright may be reproduced in any form or by any means—graphic, electronic, or mechanical, including photocopying, recording, taping, or storage in an electronic retrieval system—with prior written permission of the copyright owner.

Software derived from copyrighted NetApp material is subject to the following license and disclaimer:

THIS SOFTWARE IS PROVIDED BY NETAPP “AS IS” AND WITHOUT ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WHICH ARE HEREBY DISCLAIMED. IN NO EVENT SHALL NETAPP BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

NetApp reserves the right to change any products described herein at any time, and without notice. NetApp assumes no responsibility or liability arising from the use of products described herein, except as expressly agreed to in writing by NetApp. The use or purchase of this product does not convey a license under any patent rights, trademark rights, or any other intellectual property rights of NetApp.

The product described in this manual may be protected by one or more U.S. patents, foreign patents, or pending applications.

LIMITED RIGHTS LEGEND: Use, duplication, or disclosure by the government is subject to restrictions as set forth in subparagraph (b)(3) of the Rights in Technical Data -Noncommercial Items at DFARS 252.227-7013 (FEB 2014) and FAR 52.227-19 (DEC 2007).

Data contained herein pertains to a commercial product and/or commercial service (as defined in FAR 2.101) and is proprietary to NetApp, Inc. All NetApp technical data and computer software provided under this Agreement is commercial in nature and developed solely at private expense. The U.S. Government has a non-exclusive, non-transferrable, nonsublicensable, worldwide, limited irrevocable license to use the Data only in connection with and in support of the U.S. Government contract under which the Data was delivered. Except as provided herein, the Data may not be used, disclosed, reproduced, modified, performed, or displayed without the prior written approval of NetApp, Inc. United States Government license rights for the Department of Defense are limited to those rights identified in DFARS clause 252.227-7015(b) (FEB 2014).

Trademark information

NETAPP, the NETAPP logo, and the marks listed at <http://www.netapp.com/TM> are trademarks of NetApp, Inc. Other company and product names may be trademarks of their respective owners.