



# **volume reallocation commands**

ONTAP 9.15.1 commands

NetApp  
May 17, 2024

# Table of Contents

- volume reallocation commands ..... 1
  - volume reallocation measure ..... 1
  - volume reallocation off ..... 2
  - volume reallocation on ..... 2
  - volume reallocation quiesce ..... 3
  - volume reallocation restart ..... 3
  - volume reallocation schedule ..... 4
  - volume reallocation show ..... 5
  - volume reallocation start ..... 7
  - volume reallocation stop ..... 9

# volume reallocation commands

## volume reallocation measure

Start reallocate measure job

**Availability:** This command is available to *cluster* administrators at the *admin* privilege level.

### Description

Performs a measure-only reallocation check on a LUN, NVMe namespace, file, or volume. At the end of each check, the system logs the optimization results in the Event Message System (EMS). If you use the `logfile`, the system records detailed information about the LUN, NVMe namespace, file, or volume layout in the log file. To view previous measure-only reallocation checks, use the [volume reallocation show](#) command.



This command is not supported for FlexGroups or FlexGroup constituents.

### Parameters

**-vserver <vserver name> - Vserver**

Specifies the Vserver.

**-path <text> - Path**

Specifies the path of the reallocation for a LUN, NVMe namespace, file, or volume.

**{ [-i, -interval <text>] - Interval Schedule**

Specifies the reallocation scan interval in

- m for minutes
- h for hours
- d for days

For example, 30m is a 30 minute interval. The countdown to the next scan begins after the first scan is complete.

The default interval is 24 hours.

**| [-o, -once <>true>] - Once }**

Specifies that the job runs once and then is automatically removed from the system when set to true. If you use this command without specifying this parameter, its effective value is false and the reallocation scan runs as scheduled. If you enter this parameter without a value, it is set to true and a reallocation scan runs once.

**[-l, -logpath <text>] - Log Path**

Specifies the path for reallocation logs.

**[-t, -threshold <integer>] - Threshold**

Specifies the threshold when a LUN, NVMe namespace, file, or volume is considered unoptimized and a reallocation should be performed. Once the threshold is reached, the system creates a diagnostic message

that indicates that a reallocation might improve performance.

The threshold range is from 3 (the layout is moderately optimized) to 10 (the layout is not optimal). The threshold default is 4.

## Examples

```
cluster1::> volume reallocation measure -path /vol/vol2 -once
[Job 167] Job is queued: Reallocate Job.
```

Performs a one-time, measure-only reallocation scan on volume vol2.

## Related Links

- [volume reallocation show](#)

# volume reallocation off

Disable reallocate jobs

**Availability:** This command is available to *cluster* administrators at the *admin* privilege level.

## Description

Disables all reallocation jobs globally in a cluster. After you use this command, you cannot start or restart any reallocation jobs. All jobs that are executing when you use this command are stopped. You must use the `reallocate on` command to enable or restart reallocation jobs globally in a cluster.



This command is not supported for FlexGroups or FlexGroup constituents.

## Examples

```
cluster1::> volume reallocation off
```

Disables all reallocation jobs globally in a cluster.

# volume reallocation on

Enable reallocate jobs

**Availability:** This command is available to *cluster* administrators at the *admin* privilege level.

## Description

Globally enables all reallocation jobs in a cluster. You must globally enable reallocation scans in the cluster before you can run a scan or schedule regular scans. Reallocation scans are disabled by default.



This command is not supported for FlexGroups or FlexGroup constituents.

## Examples

```
cluster1::> volume reallocation on
```

Globally enables all reallocation jobs on a cluster.

## volume reallocation quiesce

Quiesce reallocate job

**Availability:** This command is available to *cluster* administrators at the *admin* privilege level.

### Description

Temporarily stops any reallocation jobs that are in progress. When you use this command, the persistent state is saved. You can use the [volume reallocation restart](#) command to restart a job that is quiesced.

There is no limit to how long a job can remain in the quiesced state.



This command is not supported for FlexGroups or FlexGroup constituents.

### Parameters

**-vserver <vserver name> - Vserver**

Specifies the Vserver.

**-path <text> - Path**

Specifies the file path of the LUN, NVMe namespace, file, or volume that you want to stop temporarily.

## Examples

```
cluster1::> volume reallocation quiesce /vol/vol2
2 entries were acted on.
```

Temporarily stops all reallocation jobs on volume vol2.

### Related Links

- [volume reallocation restart](#)

## volume reallocation restart

Restart reallocate job

**Availability:** This command is available to *cluster* administrators at the *admin* privilege level.

## Description

Starts a reallocation job. Use this command to start a quiesced (temporarily stopped) job or a scheduled scan that is idle.



This command is not supported for FlexGroups or FlexGroup constituents.

## Parameters

**-vserver <vserver name> - Vserver**

Specifies the Vserver.

**-path <text> - Path**

Specifies the file path of the LUN, NVMe namespace, file, or volume on which you want to restart reallocation scans.

**[-i, -ignore-checkpoint <>true>] - Ignore Checkpoint**

Restarts the job at the beginning when set to true. If you use this command without specifying this parameter, its effective value is false and the job starts the scan at the point where it stopped. If you specify this parameter without a value, it is set to true and the scan restarts at the beginning.

## Examples

```
cluster1::> volume reallocation restart /vol/vol2
2 entries were acted on.
```

Restarts two reallocation jobs on volume vol2.

## volume reallocation schedule

Modify schedule of reallocate job

**Availability:** This command is available to *cluster* administrators at the *admin* privilege level.

## Description

Schedules a reallocation scan for an existing reallocation job. If the reallocation job does not exist, use the [volume reallocation start](#) command to define a reallocation job.

You can delete an existing reallocation scan schedule. However, if you do this, the job's scan interval reverts to the schedule that was defined for it when the job was created with the [volume reallocation start](#) command.



This command is not supported for FlexGroups or FlexGroup constituents.

## Parameters

### **-vserver <vserver name> - Vserver**

Specifies the Vserver.

### **-path <text> - Path**

Specifies the path of the reallocation for a LUN, NVMe namespace, file, or volume.

### **[-d, -del <true>] - Delete**

Deletes an existing reallocation schedule when set to true. If you use this command without specifying this parameter, its effective value is false and the reallocation schedule is not deleted. If you specify this parameter without a value, it is set to true and the reallocation schedule is deleted.

### **[-s, -cron <text>] - Cron Schedule**

Specifies the schedule with the following four fields in sequence. Use a space between field values. Enclose the values in double quotes.

- minute is a value from 0 to 59.
- hour is a value from 0 (midnight) to 23 (11:00 p.m.).
- day of week is a value from 0 (Sunday) to 6 (Saturday).
- day of month is a value from 1 to 31.



If you specify 31 as the value for the day of month, reallocation scans will not run in any months with fewer than 31 days.

Use an asterisk "\*" as a wildcard to indicate every value for that field. For example, an \* in the day of month field means every day of the month. You cannot use the wildcard in the minute field.

You can enter a number, a range, or a comma-separated list of values for a field.

## Examples

```
cluster1::> volume reallocation schedule -s "0 23 6 *" /vol/db/lun1
```

Schedules a reallocation job to run at 11 pm every Saturday on lun1.

## Related Links

- [volume reallocation start](#)

## volume reallocation show

Show reallocate job status

**Availability:** This command is available to *cluster* administrators at the *admin* privilege level.

## Description

Displays the status of a reallocation scan, including the state, schedule, interval, optimization, and log files. If you do not specify the `path` for a particular reallocation scan, then the command displays all the reallocation scans.

## Parameters

**{ [-fields <fieldname>,...]**

If you specify the `-fields <fieldname>, ...` parameter, the command output also includes the specified field or fields. You can use `'-fields ?'` to display the fields to specify.

**| [-v ]**

Specify this parameter to display the output in a verbose format.

**| [-instance ] }**

If you specify the `-instance` parameter, the command displays detailed information about all fields.

**[-vserver <vserver name>] - Vserver**

Specify this parameter to display reallocation scans that match the Vserver that you specify.

**[-path <text>] - Path**

Specify this parameter to display reallocation scans that match the path that you specify.

**[-t, -threshold <integer>] - Threshold**

Specify this parameter to display reallocation scans that match the threshold that you specify.

**[-id <integer>] - Job ID**

Specify this parameter to display reallocation scans that match the reallocation job ID that you specify.

**[-description <text>] - Job Description**

Specify this parameter to display reallocation scans that match the text description that you specify.

**[-state**

**{ Initial | Queued | Running | Waiting | Pausing | Paused | Quitting | Success | Failure | Reschedule | Error | Quit | Dead | Unknown | Restart | Dormant } ] - Job State**

Specify this parameter to display reallocation jobs that match the state that you specify.

**[-progress <text>] - Execution Progress**

Specify this parameter to list the running reallocation jobs whose progress indicator matches the text that you provide. For example, if you specify "Starting ..." as the text string for the progress option, then the system lists all of the jobs that are starting.

**[-schedule <job\_schedule>] - Schedule Name**

Specify this parameter to display reallocation scans that match the schedule name that you specify. If you want a list of all job schedules, use the [job schedule show](#) command.

**[-global-status <text>] - Global State of Scans**

Specify this parameter to indicate if reallocation scans are on or off globally. You must type either of the following text strings:



- "Reallocation scans are on"
- "Reallocation scans are off"

## Examples

```
cluster1::> volume reallocation show
Vserver      Description                Schedule      State
-----      -
Reallocation scans are on
vs0          /vol/vol2,space-optimized  reallocate_1d  Queued
```

Displays the Vserver, description, schedule, and state for the reallocation scans on the local node.

## Related Links

- [job schedule show](#)

# volume reallocation start

## Start reallocate job

**Availability:** This command is available to *cluster* administrators at the *admin* privilege level.

## Description

Begins a reallocation scan on a LUN, NVMe namespace, file, or volume when you specify the path. If a volume has several small files that would benefit from periodic optimization, specify the `/vol/volname`.

Before performing a reallocation scan, the reallocation job normally performs a check of the current layout optimization. If the current layout optimization is less than the threshold, then the system does not perform a reallocation on the LUN, NVMe namespace, file, or volume.

You can define the reallocation scan job so that it runs at a specific interval, or you can use the [volume reallocation schedule](#) command to schedule reallocation jobs.



This command is not supported for FlexGroups or FlexGroup constituents.

## Parameters

**-vserver <vserver name> - Vserver**

Specifies the Vserver.

**-path <text> - Path**

Specifies the path of the reallocation for a LUN, NVMe namespace, file, or volume.

**{ [-i, -interval <text>] - Interval Schedule**

Specifies the reallocation scan interval in

- m for minutes
- h for hours
- d for days

For example, 30m is a 30 minute interval. The countdown to the next scan begins after the first scan is complete.

The default interval is 24 hours.

#### | [-o, -once <true>] - Once

Specifies that the job runs once and then is automatically removed from the system when set to true. If you use this command without specifying this parameter, its effective value is false and the reallocation scan runs as scheduled. If you enter this parameter without a value, it is set to true and a reallocation scan runs once.

#### | [-f, -force <true>] - Force }

Performs a one-time full reallocation on a LUN, file, or volume when set to true. A forced reallocation rewrites blocks on a LUN, file, or volume unless the reallocation would result in worse performance. If you use this command without specifying this parameter, its effective value is false and a forced reallocation is not performed. If you specify this parameter without a value, it is set to true, and a forced reallocation is performed.

#### { [-p, -space-optimized <true>] - Space Optimized

Specifies that snapshot blocks are not copied to save space when set to true. If you use this command without specifying this parameter, its effective value is false and snapshot blocks are copied. However, reads from snapshots might have a slightly higher latency. If you specify this parameter without a value, it is set to true and snapshot blocks are not copied. You cannot use the `space-optimized` option with the `unshare` option.

#### | [-u, -unshare <true>] - Unshare Deduplicated Blocks }

Specifies that blocks that are shared by deduplication will be unshared. This option can help remove fragmentation caused on dense volumes. This may result in increased disk usage, especially for full reallocation. You cannot use the `unshare` option with the `space-optimized` option.

#### { [-t, -threshold <integer>] - Threshold

Specifies the threshold when a LUN, NVMe namespace, file, or volume is considered unoptimized and a reallocation should be performed. Once the threshold is reached, the system creates a diagnostic message that indicates that a reallocation might improve performance.

The threshold range is from 3 (the layout is moderately optimized) to 10 (the layout is not optimal). The threshold default is 4.

#### | [-n, -no-check <true>] - No Threshold Check }

Does not check the current layout to determine if a reallocation is needed when set to true. If you use this command without specifying this parameter, its effective value is false and the system does check the current layout to determine if a reallocation is needed. If you specify this parameter without a value, it is set to true and the system does not check the current layout to determine if a reallocation is needed.

## Examples

```
cluster1::> volume reallocation start -path /vol/vol2 -interval 30m
[Job 165] Job is queued: Reallocate Job.
```

Starts a reallocation job on volume vol2 every 30 minutes.

## Related Links

- [volume reallocation schedule](#)

## volume reallocation stop

Stop reallocate job

**Availability:** This command is available to *cluster* administrators at the *admin* privilege level.

## Description

Stops and deletes any reallocation scans on a LUN, NVMe namespace, file, or volume. This command stops and deletes in-progress, scheduled, and quiesced scans.



This command is not supported for FlexGroups or FlexGroup constituents.

## Parameters

**-vserver <vserver name> - Vserver**

Specifies the Vserver.

**-path <text> - Path**

Specifies the path of the reallocation for a LUN, NVMe namespace, file, or volume.

## Examples

```
cluster1::> volume reallocation stop /vol/vol2
1 entry was deleted.
```

Stops and deletes one reallocation scan on volume vol2.

## Copyright information

Copyright © 2024 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—without 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.