

HD RAID Configuration Mode Commands

The HD RAID Configuration Mode is used to configure RAID parameters on the platform's hard disk drives.

Command Modes

Exec > Global Configuration > HD RAID Configuration

configure > hd raid

Entering the above command sequence results in the following prompt:

```
[local]host_name(config-hd-raid)#
```

Important The commands or keywords/variables that are available are dependent on platform type, product version, and installed license(s).

- disk, on page 1
- do show, on page 2
- end, on page 2
- exit, on page 3
- failure, on page 3
- overwrite, on page 3
- quarantine, on page 5
- read-ahead, on page 6
- select, on page 7
- speed, on page 8

disk

Enters the HD RAID Disk configuration mode, and enables the HD RAID disk parameter configuration. This command is applicable only for VPC-DI.

Product

All

Privilege

Security Administrator, Administrator

Command Modes

Exec > Global Configuration > HD RAID Configuration

configure > hd raid

Entering the above command sequence results in the following prompt:

```
[local]host_name(config-hd-raid)#
```

Syntax Description **`[ default ] disk`**

Usage Guidelines Use this command to configure the HD RAID disk parameters. This command is applicable only for VPC-DI.



Caution Use of the **hd raid** commands and keywords has the potential for deleting the contents of hard disk drives without the possibility of recovery. You should only use these commands under guidance from the Cisco Technical Assistance Center (TAC).

do show

Executes all **show** commands while in Configuration mode.

Product All

Privilege Security Administrator, Administrator

Syntax Description **`do show`**

Usage Guidelines Use this command to run all Exec mode **show** commands while in Configuration mode. It is not necessary to exit the Config mode to run a **show** command.

The pipe character **|** is only available if the command is valid in the Exec mode.



Caution There are some Exec mode **show** commands which are too resource intensive to run from Config mode. These include: **do show support collection**, **do show support details**, **do show support record** and **do show support summary**. If there is a restriction on a specific **show** command, the following error message is displayed:

```
Failure: Cannot execute 'do show support' command from Config mode.
```

end

Exits the current configuration mode and returns to the Exec mode.

Product All

Privilege Security Administrator, Administrator

Syntax Description **`end`**

Usage Guidelines Use this command to return to the Exec mode.

exit

Exits the current mode and returns to the parent configuration mode.

Product All

Privilege Security Administrator, Administrator

Syntax Description `exit`

Usage Guidelines Use this command to return to the parent configuration mode.

failure

Configures the disk failure handling options. This command is applicable only for the VPC-DI.

Product All

Privilege Security Administrator, Administrator

Command Modes Exec > Global Configuration > HD RAID Configuration

configure > hd raid

Entering the above command sequence results in the following prompt:

`[local]`*`host_name`*`(config-hd-raid)#`

Syntax Description `[ no ] failure switchover`

Usage Guidelines Use this command to set the RAID disk handling options. More specifically, this command initiates a planned switchover to the standby CFC if the RAID is unavailable due to invalid RAID image on a local disk.

Important This command is applicable only for the VPC-DI platform.

Caution Use of the **hd raid** commands and keywords has the potential for deleting the contents of hard disk drives without the possibility of recovery. You should only use these commands under guidance from the Cisco Technical Assistance Center (TAC).

overwrite

This command sets the disk overwriting options.

Product

All

Privilege

Security Administrator, Administrator

Command Modes

Exec > Global Configuration > HD RAID Configuration

configure > hd raid

Entering the above command sequence results in the following prompt:

```
[local]host_name(config-hd-raid)#
```

Syntax Description

```
[ default | no ] overwrite { invalid disk | unknown disk | valid disk }
 [ -noconfirm ]
```

default

For the ASR 5000, VPC-SI and VPC-DI platforms, the **overwrite** command sets the default overwrite option as:

- **invalid disk** — the disk with an invalid partition or RAID image (Default = On)
- **unknown disk** — the disk with an unknown RAID image (Default = Off)
- **valid disk** — the disk with a valid RAID image (Default = Off)

For the ASR 5500, the **overwrite** command sets the default overwrite option as:

- **invalid disk** — the disk with an invalid partition or RAID image (Default = On)
- **unknown disk** — the disk with an unknown RAID image (Default = On)
- **valid disk** — the disk with a valid RAID image (Default = On)

overwrite { invalid disk | unknown disk | valid disk }

When enabled, this command overwrites the specified disk and adds it to the current running RAID array.

- **invalid disk** — Specifies the disk with an invalid partition (empty, incorrectly partitioned or partially constructed) or RAID image.
- **unknown disk** — Specifies the disk with an unknown RAID image that has a valid RAID superblock but is not configured in the standard way.
- **valid disk** — Specifies the disk with a valid RAID image that is a clean RAID component but is not part of the current or selected RAID.

-noconfirm

Executes the command without displaying "are you sure" prompts.

Usage Guidelines

Use this command to set the RAID disk overwriting options.

Caution Use of the **hd raid** commands and keywords has the potential for deleting the contents of hard disk drives without the possibility of recovery. You should only use these commands under guidance from the Cisco Technical Assistance Center (TAC).

Example

The following instructs StarOS to overwrite an invalid hard disk drive.

```
overwrite invalid disk
```

quarantine

This command recovers and quarantines the dirty-degraded RAID. This command is not supported on the ASR 5000.

Product All

Privilege Security Administrator, Administrator

Command Modes Exec > Global Configuration > HD RAID Configuration

configure > hd raid

Entering the above command sequence results in the following prompt:

```
[local]host_name(config-hd-raid)#
```

Syntax Description

```
quarantine [ directory dir_name | limit number_files | mtime minutes ] [
-noconfirm ]
```

```
{ default | no } quarantine
```

default

When enabled without any options, it restores the default quarantine parameters (directory = lost+found; limit = 3000 files; mtime = 5 minutes).

no

The **no** variant of this command turns off quarantine and lets the dirty degraded RAID to fail.

directory *dir_name*

This keyword sets the directory name for recovery and quarantine of the dirty-degraded RAID. The *dir_name* must be an alphanumeric string of 1 through 39 characters. Default: lost+found.

limit *number_files*

This keyword sets the maximum number of files to quarantine. The *number_files* must be an integer from 0 through 1000000. Default: 3000.

mtime *minutes*

Specifies within how many minutes the file is modified to be considered suspects for quarantine. The *minutes* must be an integer from 0 through 1440, where 0 means no files will be quarantined. Default: 5 minutes.

-noconfirm

Executes the command without displaying "are you sure" prompts.

Usage Guidelines

Use this command to recover and quarantine the dirty-degraded RAID.

This command is not supported on the ASR 5000. On the ASR 5500 it is disabled by default.



Caution Use of the **hd raid** commands and keywords has the potential for deleting the contents of hard disk drives without the possibility of recovery. You should only use these commands under guidance from the Cisco Technical Assistance Center (TAC).

Example

The following instructs StarOS to perform quarantine operation for up to 3000 files.

```
quarantine limit 3000
```

read-ahead

Configures the read ahead buffer size for disks which are part of a RAID array. This command is applicable only for VPC-DI.

Product

All

Privilege

Security Administrator, Administrator

Command Modes

Exec > Global Configuration > HD RAID Configuration

configure > hd raid

Entering the above command sequence results in the following prompt:

```
[local]host_name(config-hd-raid)#
```

Syntax Description

read-ahead *kilobytes*

default read-ahead

read-ahead *kilobytes*

Sets the size of data in KB from 128 to 32768 KB that will be read beyond the block of data that was requested. This parameter is ignored if RAID is not available on the VPC-DI node. Default: 128 KB

Note This setting applies for RAIDs only. A separate **read-ahead** command is available to configure read ahead buffer size for individual hard disks. Refer to the *HD RAID Disk Mode Configuration Mode* chapter for more information.

Usage Guidelines Use this command to configure the read ahead buffer size for disks which are part of a RAID array. This command is applicable only for VPC-DI.

Caution Use of the **hd raid** commands and keywords has the potential for deleting the contents of hard disk drives without the possibility of recovery. You should only use these commands under guidance from the Cisco Technical Assistance Center (TAC).

select

Sets the disk preference when both disks contain valid RAID. This command is not supported on the ASR 5500.

Product All

Privilege Security Administrator, Administrator

Command Modes Exec > Global Configuration > HD RAID Configuration

configure > hd raid

Entering the above command sequence results in the following prompt:

```
[local]host_name(config-hd-raid)#
```

Syntax Description For ASR 5000:

select { newer | none } [disk] [-noconfirm]

For VPC-SI and VPC-DI:

select { local1 | local2 | newer | none } [disk] [-noconfirm]

default select

default

Sets the default disk preference when both disks contain valid RAID. For the ASR 5000 and VPC platforms, the default setting is **newer disk**.

select { local1 | local2 | newer | none } [disk]

Selects the specified disk or Virtual Hard Disk (vHD) to assemble a RAID when two or more unrelated RAID disks are present in the system. The resulting RAID runs in degraded mode.

- **local1 disk** — Selects the specified vHD to assemble a RAID. This keyword is supported only on the VPC.
- **local2 disk** — Selects the specified vHD to assemble a RAID. This keyword is supported only on the VPC.
- **newer disk** — Specifies the newest disk by timestamp and event counter in superblocks. If all are the same, the array will start with both disks. A different array will need administrator intervention.

  This keyword is supported on the ASR 5000 and VPC platforms.
- **none disk** — Indicates wait for administrator intervention.

  This keyword is supported on the ASR 5000 and VPC platforms.

-noconfirm

Executes the command without displaying "are you sure" prompts.

Usage Guidelines

Use this command to set the disk preference when both disks contain valid RAID. This command is not supported on the ASR 5500.



Caution Use of the **hd raid** commands and keywords has the potential for deleting the contents of hard disk drives without the possibility of recovery. You should only use these commands under guidance from the Cisco Technical Assistance Center (TAC).

Example

The following instructs StarOS to select the specified vHD for RAID assembly.

```
select local1 disk
```

speed

Configures the minimum and maximum disk speeds which are used during RAID synchronization. This command is applicable only for VPC-DI.

Product

All

Privilege

Security Administrator, Administrator

Command Modes

Exec > Global Configuration > HD RAID Configuration

configure > hd raid

Entering the above command sequence results in the following prompt:

```
[local]host_name(config-hd-raid)#
```

Syntax Description

```
[ default ] speed { max mbps | min mbps }
```

default

Restores the hard disk speed to its respective default values:

- max: Default: 200 megabytes per second
- min: Default: 100 megabytes per second

speed { max *mbps* | min *mbps* }

Configures the minimum and maximum disk speeds which are used during RAID synchronization.

- **max** *mbps* : Sets the maximum disk speed in megabytes per second from 200-300. Default: 200 MBps.
- **min** *mbps* : Sets the minimum disk speed in megabytes per second from 1-100. Default: 100 MBps.

Usage Guidelines

Use this command to configure the minimum and maximum disk speeds which are used during RAID synchronization. This command is applicable only for VPC-DI.

This setting can be used to reduce the time needed to perform a resynchronization after a disk failure. This setting is applicable for all RAIDs as a whole and can be applied even when RAID is not available.



Caution Use of the **hd raid** commands and keywords has the potential for deleting the contents of hard disk drives without the possibility of recovery. You should only use these commands under guidance from the Cisco Technical Assistance Center (TAC).

Example

The following command sets the maximum speed to 200 MBps for RAID synchronization.

```
speed max 200
```