



Red Hat Enterprise Linux Release 9.2 Manual Pages on 'nvme.1' command

\$ man nvme.1

NVME(1) NVMe Manual NVME(1)

NAME

nvme - the NVMe storage command line interface utility (nvme-cli)

SYNOPSIS

built-in plugin:

nvme <command> <device> [<args>]

extension plugins:

nvme <plugin> <command> <device> [<args>]

DESCRIPTION

NVM-Express is a fast, scalable host controller interface designed to address the needs for not only PCI Express based solid state drives, but also NVMe-oF(over fabrics).

This nvme program is a user space utility to provide standards compliant tooling for NVM-Express drives. It was made specifically for Linux as it relies on the IOCTLs defined by the mainline kernel driver.

NVME COMMANDS

The utility has sub-commands for all admin and io commands defined in the specification and for displaying controller registers. There is also an option to submit completely arbitrary commands. For a list of commands available, run "nvme help".

NVME CLI SUB-COMMANDS

Main commands

nvme-admin-passthru(1)

Admin Passthrough Command

nvme-compare(1)

IO Compare

nvme-error-log(1)

Retrieve error logs

nvme-flush(1)

Submit flush

nvme-dsm(1)

Submit Data Set Management

nvme-format(1)

Format namespace(s)

nvme-fw-activate(1)

F/W Activate (in old version < 1.2)

nvme-fw-commit(1)

F/W Commit (in > 1.2)

nvme-fw-download(1)

F/W Download

nvme-fw-log(1)

Retrieve f/w log

nvme-get-feature(1)

Get Features

nvme-get-log(1)

Generic Get Log

nvme-telemetry-log(1)

Telemetry Host-Initiated Log

nvme-changed-ns-list-log(1)

Retrieve Changed Namespace List Log

nvme-smart-log(1)

Retrieve Smart Log

nvme-ana-log(1)

Retrieve ANA(Asymmetric Namespace Access) Log

nvme-endurance-log(1)

Retrieve endurance Log

nvme-effects-log(1)

Retrieve effects Log

nvme-self-test-log(1)

Retrieve Device Self-test Log

nvme-get-ns-id(1)

Retrieve namespace identifier

nvme-help(1)

NVMe CLI Help

nvme-id-ctrl(1)

Identify Controller

nvme-id-ns(1)

Identify Namespace

nvme-id-nvmset(1)

Identify NVM Set List

nvme-id-iocs(1)

Identify I/O Command Set

nvme-create-ns(1)

Create a new namespace

nvme-delete-ns(1)

Delete existing namespace

nvme-attach-ns(1)

Attach namespace

nvme-detach-ns(1)

Detach namespace

nvme-io-passthru(1)

IO Passthrough Command

nvme-list-ns(1)

List all nvme namespaces

nvme-ns-descs(1)

Identify Namespace Identification Descriptor

nvme-list(1)

List all nvme controllers

nvme-list-ctrl(1)

List controller in NVMe subsystem

nvme-list-subsys(1)

List NVMe subsystems

nvme-reset(1)

Reset a NVMe controller

nvme-device-self-test(1)

Issue Device Self-test Command

nvme-read(1)

Issue IO Read Command

nvme-write(1)

Issue IO Write Command

nvme-write-zeroes(1)

Issue IO Write Zeroes Command

nvme-write-uncor(1)

Issue IO Write Uncorrectable Command

nvme-resv-acquire(1)

Acquire Namespace Reservation

nvme-resv-register(1)

Register Namespace Reservation

nvme-resv-release(1)

Release Namespace Reservation

nvme-resv-report(1)

Report Reservation Capabilities

nvme-security-recv(1)

Security Receive

nvme-security-send(1)

Security Send

nvme-dsm(1)

Issue Data Set Management Command

nvme-copy(1)

Issue Simple Copy Command

nvme-set-feature(1)

Set Feature

nvme-show-regs(1)

Show NVMe Controller Registers

nvme-discover(1)

Send Get Log Page request to Discovery Controller

nvme-connect-all(1)

Discover and connect to all NVMe-over-Fabrics subsystems

nvme-connect(1)

Connect to an NVMe-over-Fabrics subsystem

nvme-dim(1)

Send Discovery Information Management command to a Discovery
Controller

nvme-disconnect(1)

Disconnect from an NVMe-over-Fabrics subsystem

nvme-disconnect-all(1)

Disconnect from all NVMe-over-Fabrics subsystems

nvme-get-property(1)

Reads and shows NVMe-over-Fabrics controller property

nvme-media-unit-stat-log(1)

Retrieve and show the configuration and wear of media units

nvme-supported-cap-config-log(1)

Retrieve and show the list of Supported Capacity Configuration
Descriptors

nvme-boot-part-log(1)

Retrieve Boot Partition Log

nvme-capacity-mgmt(1)

Capacity Management Command

nvme-check-dhchap-key(1)

Generate NVMeoF DH-HMAC-CHAP host key

nvme-check-tls-key(1)

Validate NVMeoF TLS PSK

nvme-cmdset-ind-id-ns(1)

I/O Command Set Independent Identify Namespace

nvme-endurance-event-aggr-log(1)

Retrieve Endurance Group Event Aggregate Log

nvme-fid-support-effects-log(1)

Retrieve FID Support and Effects log

nvme-gen-dhchap-key(1)

Generate NVMeoF DH-HMAC-CHAP host key

nvme-gen-hostnqn(1)

Generate NVMeoF host NQN

nvme-gen-tls-key(1)

Generate NVMeoF TLS PSK

nvme-get-lba-status(1)

Get LBA Status command

nvme-id-domain(1)

NVMe Identify Domain List

nvme-id-ns-lba-format(1)

NVMe Identify Namespace for the specified LBA Format index

nvme-lba-status-log(1)

Retrieve LBA Status Information Log

nvme-list-endgrp(1)

NVMe Identify Endurance Group List

nvme-ns-rescan(1)

Rescans the NVME namespaces

nvme-nvm-id-ctrl(1)

NVMe Identify Controller NVM Command Set

nvme-nvm-id-ns(1)

NVMe Identify Namespace NVM Command Set

nvme-nvm-id-ns-lba-format(1)

NVMe Identify Namespace NVM Command Set for the specified LBA
Format index

nvme-persistent-event-log(1)

Retrieve Persistent Event Log

nvme-predictable-lat-log(1)

Retrieve Predictable Latency per Nvmset Log

nvme-pred-lat-event-agg-log(1)

Retrieve Predictable Latency Event Aggregate Log

nvme-primary-ctrl-caps(1)

NVMe Identify Primary Controller Capabilities

nvme-reset(1)

Resets the controller

nvme-rpmb(1)

Replay Protection Memory Block commands

nvme-sanitize-log(1)

Retrieve sanitize log

nvme-set-property(1)

Set a property and show the resulting value

nvme-show-hostnqn(1)

Show NVMeoF host NQN

nvme-subsystem-reset(1)

Resets the subsystem

nvme-supported-log-pages(1)

Retrieve the Supported Log pages details

nvme-verify(1)

verify command

nvme-show-topology(1)

Show NVMe topology

Plugins/Vendor extension commands

nvme-intel-id-ctrl(1)

Intel - NVMe Identify Controller

nvme-intel-internal-log(1)

Retrieve Intel device's internal log and save to file

nvme-intel-lat-stats(1)

Retrieve NVMe Identify Controller, return result and structure

nvme-intel-market-name(1)

Intel vendor specific marketing name log page

nvme-intel-smart-log-add(1)

NVMe Intel Additional SMART log page

nvme-intel-temp-stats(1)

NVMe Intel Additional SMART log page for temp stats

nvme-huawei-id-ctrl(1)

NVMe huawei Identify Controller

nvme-huawei-list(1)

List all recognized Huawei NVMe devices

nvme-dera-stat(1)

NVMe Dera Device status and Additional SMART log page request

nvme-micron-clear-pcie-errors(1)

Clears correctable PCIe correctable errors of given Micron device

nvme-micron-internal-log(1)

Retrieve Micron device's internal logs and save to given zip file

nvme-micron-nand-stats(1)

Retrieves NAND statistics of given micron device

nvme-micron-pcie-stats(1)

Retrieves pcie error statistics for given micron device

nvme-micron-selective-download(1)

Performs selective firmware download

nvme-micron-smart-add-log(1)

Retrieves NAND statistics

nvme-micron-temperature-stats(1)

Retrieves temperature information of given micron device

nvme-netapp-ontapdevices(1)

Display information about ONTAP devices

nvme-netapp-smdevices(1)

Display information for each NVMe path to an E-Series volume

nvme-toshiba-clear-pcie-correctable-errors(1)

Reset the PCIe correctable errors count to zero

nvme-toshiba-vs-internal-log(1)

Retrieve a Toshiba device's vendor specific internal log

nvme-toshiba-vs-smart-add-log(1)

Retrieve a Toshiba device's vendor specific extended SMART log page

nvme-transcend-badblock(1)

Retrieve Transcend NVMe device's bad blocks

nvme-transcend-healthvalue(1)

Use NVMe SMART table to analyze the health value of Transcend device

nvme-virtium-show-identify(1)

Show a complete detail of identify device information in json format

nvme-virtium-save-smart-to-vtview-log(1)

Periodically save smart attributes into a log file

nvme-wdc-cap-diag(1)

Retrieve WDC device's diagnostic log and save to file

nvme-wdc-capabilities(1)

Display WDC plugin command capabilities

nvme-wdc-clear-assert-dump(1)

Clears the assert dump (if present)

nvme-wdc-clear-fw-activate-history(1)

Clears the firmware activate history table

nvme-wdc-clear-pcie-corr(1)

Clears the pcie correctable errors field

nvme-wdc-clear-pcie-correctable-errors(1)

Clears the pcie correctable errors returned in the smart-log-add command

nvme-wdc-cloud-SSD-plugin-version(1)

Display WDC plugin Cloud SSD Plugin Version

nvme-wdc-drive-essentials(1)

Retrieve WDC device's drive essentials bin files

nvme-wdc-drive-log(1)

Retrieve WDC device's drive log and save to file

nvme-wdc-drive-resize(1)

Send NVMe WDC Resize Vendor Unique Command

nvme-wdc-enc-get-log(1)

Send NVMe WDC enc-get-log Vendor Unique Command

nvme-wdc-get-crash-dump(1)

Retrieve WDC device's crash dump

nvme-wdc-get-drive-status(1)

Send the NVMe WDC get-drive-status command

nvme-wdc-get-latency-monitor-log(1)

Display latency monitor log page data in human readable format

nvme-wdc-get-pfail-dump(1)

Retrieve WDC device's pfail crash dump

nvme-wdc-id-ctrl(1)

Send NVMe Identify Controller, return result and structure

nvme-wdc-log-page-directory(1)

Retrieves the list of Log IDs supported by the drive

nvme-wdc-namespace-resize(1)

Resizes the device's namespace

nvme-wdc-purge-monitor(1)

Send NVMe WDC Purge-Monitor Vendor Unique Command

nvme-wdc-purge(1)

Send NVMe WDC Purge Vendor Unique Command

nvme-wdc-smart-add-log(1)

Send NVMe WDC smart add log Vendor Unique Command

nvme-wdc-vs-drive-info(1)

Send the NVMe WDC vs-drive-info command

nvme-wdc-vs-error-reason-identifier(1)

Retrieve WDC device's telemetry log error reason identifier field

nvme-wdc-vs-fw-activate-history(1)

Execute NVMe WDC vs-fw-activate-history Vendor Unique Command

nvme-wdc-vs-internal-log(1)

Retrieve WDC device's internal firmware log and save to file

nvme-wdc-vs-nand-stats(1)

Send NVMe WDC vs-nand-stats Vendor Unique Command

nvme-wdc-vs-telemetry-controller-option(1)

Disable/Enable the controller initiated option of the telemetry log
page

nvme-wdc-vs-temperature-stats(1)

Display temperature-related statistics

nvme-zns-changed-zone-list(1)

Retrieve Changed Zone log for the given device

nvme-zns-close-zone(1)

Closes one or all zones

nvme-zns-finish-zone(1)

Finishes one or all zones

nvme-zns-id-ctrl(1)

Send NVMe Zoned Command Set Identify Controller

nvme-zns-id-ns(1)

Send NVMe Zoned Command Set Identify Namespace

nvme-zns-offline-zone(1)

Offlines one or all zones

nvme-zns-open-zone(1)

Opens one or all zones

nvme-zns-report-zones(1)

Retrieve and display the Report Zones data structure

nvme-zns-reset-zone(1)

Resets one or all zones

nvme-zns-set-zone-desc(1)

Set extended descriptor data for a zone

nvme-zns-zone-append(1)

Send an NVMe write command, provide results

nvme-zns-zone-mgmt-recv(1)

Zone Management Receive command

nvme-zns-zone-mgmt-send(1)

Zone Management Send command

nvme-zns-zrwa-flush-zone(1)

Flush LBAs associated with a ZRWA to a zone

RETURNS

All commands will behave the same, they will return 0 on success and 1 on failure.

FURTHER DOCUMENTATION

See the freely available references on the Official NVM-Express

Site[1].

AUTHORS

This is written and maintained by Keith Busch[2].

REPORTING BUGS

Patches and issues may be submitted to the official repository at

<https://github.com/linux-nvme/nvme-cli> or the Linux NVMe mailing list

linux-nvme[3]

NVME

Part of the nvme suite

NOTES

1. Official NVM-Express Site

<http://nvmexpress.org>

2. Keith Busch

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3. linux-nvme

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NVMe

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