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

$ man nvme-connect-all.1

NVME-CONNECT-ALL(1) NVMe Manual NVME-CONNECT-ALL(1)

NAME

nvme-connect-all - Discover and Connect to Fabrics controllers.

SYNOPSIS

nvme connect-all

[--transport=<trtype> | -t <trtype>]

[--nqn=<subnqn> | -n <subnqn>]

[--traddr=<traddr> | -a <traddr>]

[--trsvcid=<trsvcid> | -s <trsvcid>]

[--host-traddr=<traddr> | -w <traddr>]

[--host-iface=<iface> | -f <iface>]

[--hostnqn=<hostnqn> | -q <hostnqn>]

[--hostid=<hostid> | -I <hostid>]

[--raw=<filename> | -r <filename>]

[--cfg-file=<cfg> | -C <cfg>]

[--keep-alive-tmo=<#> | -k <#>]

[--reconnect-delay=<#> | -c <#>]

[--ctrl-loss-tmo=<#> | -l <#>]

[--hdr-digest | -g]

[--data-digest | -G]

[--nr-io-queues=<#> | -i <#>]

[--nr-write-queues=<#> | -W <#>]

[--nr-poll-queues=<#> | -P <#>]

[--queue-size=<#> | -Q <#>]

[--persistent | -p]

[--quiet | -S]

[--dump-config | -O]

DESCRIPTION

Send one or more Discovery requests to a NVMe over Fabrics Discovery Controller, and create controllers for the returned discovery records.

If no parameters are given, then nvme connect-all will attempt to find a /etc/nvme/discovery.conf file to use to supply a list of connect-all commands to run. If no /etc/nvme/discovery.conf file exists, the command will quit with an error.

Otherwise a specific Discovery Controller should be specified using the --transport, --traddr and if necessary the --trsvcid and a Discovery request will be sent to the specified Discovery Controller.

See the documentation for the nvme-discover(1) command for further background.

OPTIONS

-t <trtype>, --transport=<trtype>

This field specifies the network fabric being used for a NVMe-over-Fabrics network. Current string values include:

??????????????????????????????????????

?Value ? Definition ?

??????????????????????????????????????

?rdma ? The network fabric is an ?

? ? rdma network (RoCE, iWARP, ?

? ? Infiniband, basic rdma, ?

? ? etc) ?

??????????????????????????????????????

?fc ? WIP The network fabric is ?

? ? a Fibre Channel network. ?

??????????????????????????????????????

?tcp ? The network fabric is a ?

? ? TCP/IP network. ?

??????????????????????????????????

?loop ? Connect to a NVMe over ?

? ? Fabrics target on the ?

? ? local host ?

??????????????????????????????????

-n <subnqn>, --nqn <subnqn>

This field specifies the name for the NVMe subsystem to connect to.

-a <traddr>, --traddr=<traddr>

This field specifies the network address of the Discovery Controller. For transports using IP addressing (e.g. rdma) this should be an IP-based address (ex. IPv4).

-s <trsvcid>, --trsvcid=<trsvcid>

This field specifies the transport service id. For transports using IP addressing (e.g. rdma) this field is the port number. By default, the IP port number for the RDMA transport is 4420.

-w <traddr>, --host-traddr=<traddr>

This field specifies the network address used on the host to connect to the Controller. For TCP, this sets the source address on the socket.

-f <iface>, --host-iface=<iface>

This field specifies the network interface used on the host to connect to the Controller (e.g. IP eth1, enp2s0, enx78e7d1ea46da). This forces the connection to be made on a specific interface instead of letting the system decide.

-q <hostnqn>, --hostnqn=<hostnqn>

Overrides the default Host NQN that identifies the NVMe Host. If this option is not specified, the default is read from /etc/nvme/hostnqn first. If that does not exist, the autogenerated NQN value from the NVMe Host kernel module is used next. The Host NQN uniquely identifies the NVMe Host, and may be used by the the Discovery Controller to control what NVMe Target resources are allocated to the NVMe Host for a connection.

-I <hostid>, --hostid=<hostid>

UUID(Universally Unique Identifier) to be discovered which should be formatted.

-r <filename>, --raw=<filename>

This field will take the output of the nvme connect-all command and dump it to a raw binary file. By default nvme connect-all will dump the output to stdout.

-C <cfg>, --config-file=<cfg>

Use the specified JSON configuration file instead of the default /etc/nvme/config.json file or none to not read in an existing configuration file. The JSON configuration file format is documented in https://github.com/linux-nvme/libnvme/doc/config-schema.json

-k <#>, --keep-alive-tmo=<#>

Overrides the default keep alive timeout (in seconds). This option will be ignored for discovery, but will be passed on to the subsequent connect call.

-c <#>, --reconnect-delay=<#>

Overrides the default delay (in seconds) before reconnect is attempted after a connect loss.

-l <#>, --ctrl-loss-tmo=<#>

Overrides the default controller loss timeout period (in seconds).

-g, --hdr-digest

Generates/verifies header digest (TCP).

-G, --data-digest

Generates/verifies data digest (TCP).

-i <#>, --nr-io-queues=<#>

Overrides the default number of I/O queues create by the driver. This option will be ignored for discovery, but will be passed on to the subsequent connect call.

-W <#>, --nr-write-queues=<#>

Adds additional queues that will be used for write I/O.

-P <#>, --nr-poll-queues=<#>

Adds additional queues that will be used for polling latency

sensitive I/O.

-Q <#>, --queue-size=<#>

Overrides the default number of elements in the I/O queues created by the driver. This option will be ignored for discovery, but will be passed on to the subsequent connect call.

-p, --persistent

Don?t remove the discovery controller after retrieving the discovery log page.

-S, --quiet

Suppress error messages.

-O, --dump-config

Print out resulting JSON configuration file to stdout.

EXAMPLES

? Connect to all records returned by the Discover Controller with IP4 address 192.168.1.3 for all resources allocated for NVMe Host name host1-rogue-nqn on the RDMA network. Port 4420 is used by default:

```
# nvme connect-all --transport=rdma --traddr=192.168.1.3 \
--hostnqn=host1-rogue-nqn
```

? Issue a nvme connect-all command using a /etc/nvme/discovery.conf file:

```
# Machine default 'nvme discover' commands.  Query the
# Discovery Controller's two ports (some resources may only
# be accessible on a single port).  Note an official
# nqn (Host) name defined in the NVMe specification is being used
# in this example.
-t rdma -a 192.168.69.33 -s 4420 -q nqn.2014-08.com.example:nvme:nvm-subsystem-sn-d78432
-t rdma -a 192.168.1.4   -s 4420 -q nqn.2014-08.com.example:nvme:nvm-subsystem-sn-d78432
At the prompt type "nvme connect-all".
```

SEE ALSO

nvme-discover(1) nvme-connect(1)

NVME

Part of the nvme-user suite