network fcp commands

ONTAP 9.10.1 commands

NetApp
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network fcp commands

network fcp adapter modify

Modify the fcp adapter settings

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

Description

Modifies the FCP target adapter information.

The adapter argument is in the form Xy or Xy_z where X and z are integers and y is a letter. An example is 4a or 4a_1.

You cannot bring an adapter offline until all logical interfaces connected to that adapter are offline. Use the network interface modify command to take your logical interfaces offline.

The speed option sets the Fibre Channel link speed of an adapter. You can set adapters that support:

- 10Gb/s to 10 or auto
- 8Gb/s to 2, 4, 8 or auto
- 4Gb/s to 2, 4 or auto
- 2Gb/s to 2 or auto

By default, the link speed option is set to auto for auto negotiation. Setting the link speed to a specific value disables auto negotiation. Under certain conditions, a speed mismatch can prevent the adapter from coming online.

> The system reports the actual link speed with the "Data Link Rate (Gbit)" field in the output of network fcp adapter show`-instance`.

Parameters

`-node {<nodename>|local}` - Node

Specifies the node of the target adapter.

`-adapter <text>` - Adapter

Specifies the target adapter.

`[-status-admin {down|up}]` - Administrative Status

Specifies the desired (administrative) status of the adapter. To view the actual operational status, run network fcp adapter show`-fields`*`status-oper`*.

`[-speed {1|2|4|8|10|16|32|auto}]` - Configured Speed

Specifies the adapter configuration speed in Gigabytes.

Examples

```
cluster1::> network fcp adapter modify -node node1 -adapter 0d -speed 2
```

Configures the speed of FCP adapter 0d on node1 to 2 Gb/s.

Related Links

- network interface modify
- network fcp adapter show

network fcp adapter show

Display FCP adapters

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

Description

Displays FCP target adapter information. You can also use this information to determine if adapters are active and online.

The adapter argument is in the form Xy or Xy_z where X and z are integers and y is a letter. An example is 4a or 4a_1.

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.

| [-instance] }

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

[-node {<nodename>|local}] - Node

If this parameter is specified, the command displays information only about the FCP target adapters that are present on the specified node.

[-adapter <text>] - Adapter

If this parameter is specified, the command displays information only about the FCP target adapters that match the specified name.

[-description <text>] - Description

If this parameter is specified, the command displays information only about the FCP target adapters that match the specified description.

[-physical-protocol {fibre-channel|ethernet}] - Physical Protocol

If this parameter is specified, the command displays information only about the FCP target adapters that

match the specified physical protocol. Possible values are *fibre-channel* and *ethernet* .

[-max-speed {1|2|4|8|10|16|32|auto}] - Maximum Speed

If this parameter is specified, the command displays information only about the FCP target adapters that match the specified maxium speed.

[-status-admin {down|up}] - Administrative Status

If this parameter is specified, the command displays information only about the FCP target adapters that match the administrative state. Possible values are *up* and *down* .

[-status-oper <text>] - Operational Status

If this parameter is specified, the command displays information only about the FCP target adapters that match the specified operational status.

[-status-extended <text>] - Extended Status

If this parameter is specified, the command displays information only about the FCP target adapters that match the specified extended status.

[-portaddr <Hex Integer>] - Host Port Address

If this parameter is specified, the command displays information only about the FCP target adapters connected with the specified fabric port address.

[-firmware-rev <text>] - Firmware Revision

If this parameter is specified, the command displays information only about the FCP target adapters that match the specified firmware revision.

[-data-link-rate <integer>] - Data Link Rate (Gbit)

If this parameter is specified, the command displays information only about the FCP target adapters that match the specified data link rate.

[-fabric-established {true|false}] - Fabric Established

If this parameter is specified, the command displays information only about the FCP target adapters that match the specified fabric login establishment state.

[-fabric-name <text>] - Fabric Name

If this parameter is specified, the command displays information only about the FCP target adapters that are logged in to the fabric with the specified WWN.

[-conn-established {loop|ptp}] - Connection Established

If this parameter is specified, the command displays information only about the FCP target adapters that match the specified connection type. Possible values are *loop* and *ptp* .

[-is-conn-established {true|false}] - Is Connection Established

If this parameter is specified, the command displays information only about the FCP target adapters that match the specified connection established state.

[-media-type {loop|ptp|auto}] - Mediatype

If this parameter is specified, the command displays information only about the FCP target adapters that match the specified configured media type. Possible values are *loop* , *ptp* , and *auto* .

[-speed {1|2|4|8|10|16|32|auto}] - Configured Speed

If this parameter is specified, the command displays information only about the FCP target adapters that match the specified configured speed. If the adapter is set to auto-negotiate, then the value will be *auto* .

[-data-protocols-supported {fcp|fc-nvme}] - Data Protocols Supported

If this parameter is specified, the command displays information only about the FCP target adapters that may host LIFs with the specified data protocol. Possible values are *fcp* and *fc-nvme* .

[-domain-id <integer>] - Domain ID

If this parameter is specified, the command displays information only about the FCP target adapters with a domain identifier that matches the specified domain identifier.

[-fc-wwnn <text>] - Adapter WWNN

If this parameter is specified, the command displays information only about the FCP target adapters that match the specified world wide node name.

[-fc-wwpn <text>] - Adapter WWPN

If this parameter is specified, the command displays information only about the FCP target adapters that match the specified world wide port name.

[-switch-port <text>] - Switch Port

If this parameter is specified, the command displays information only about the FCP target adapters that are connected to the specified switch port.

[-sfp-formfactor <text>] - Form Factor Of Transceiver

If this parameter is specified, the command displays information only about the FCP target adapters that match the specified SFP form factor.

[-sfp-vendor-name <text>] - Vendor Name Of Transceiver

If this parameter is specified, the command displays information only about the FCP target adapters that match the specified SFP vendor name.

[-sfp-part-number <text>] - Part Number Of Transceiver

If this parameter is specified, the command displays information only about the FCP target adapters that match the specified SFP part number.

[-sfp-rev <text>] - Revision Of Transceiver

If this parameter is specified, the command displays information only about the FCP target adapters that match the specified SFP revision number.

[-sfp-serial-number <text>] - Serial Number Of Transceiver

If this parameter is specified, the command displays information only about the FCP target adapters that match the specified SFP serial number.

[-sfp-fc-speed-capabilities <text>] - FC Capabilities Of Transceiver

If this parameter is specified, the command displays information only about the FCP target adapters that match the specified SFP speed capabilities.

[-sfp-vendor-oui <text>] - Vendor OUI Of Transceiver

If this parameter is specified, the command displays information only about the FCP target adapters that match the specified SFP vendor OUI.

[-sfp-wavelength <integer>] - Wavelength In Nanometers

If this parameter is specified, the command displays information only about the FCP target adapters that match the specified SFP wavelength.

[-sfp-date-code <text>] - Date Code Of Transceiver

If this parameter is specified, the command displays information only about the FCP target adapters that match the specified SFP date code.

[-is-sfp-optical-transceiver-valid {true|false}] - Validity Of Transceiver

If this parameter is specified, the command displays information only about the FCP target adapters that match whether the SFP is installed and valid.

[-sfp-connector <text>] - Connector Used

If this parameter is specified, the command displays information only about the FCP target adapters that match the specified SFP connector type.

[-sfp-encoding <text>] - Encoding Used

If this parameter is specified, the command displays information only about the FCP target adapters that match the specified SFP physical encoding.

[-is-sfp-diagnostics-internally-calibrated {true|false}] - Is Internally Calibrated

If this parameter is specified, the command displays information only about the FCP target adapters that match whether the SFP diagnostics are internally calibrated or not.

[-sfp-diagnostic-monitoring-type <Hex Integer>] - Diagnostic Monitoring Type

If this parameter is specified, the command displays information only about the FCP target adapters that match the specified SFP diagnostic monitoring type.

[-sfp-ddm-capabilities <text>] - Status Monitoring Available

If this parameter is specified, the command displays information only about the FCP target adapters that match whether the specified SFP digital diagnostics monitoring are supported or not.

[-sfp-sff8472-compliance <Hex Integer>] - SFF-8472 Compliance

If this parameter is specified, the command displays information only about the FCP target adapters that match the specified SFP SFF8472 compliance.

[-sfp-rx-power <text>] - Received Optical Power

If this parameter is specified, the command displays information only about the FCP target adapters that match the specified observed SFP receive power.

[-is-sfp-rx-power-in-range {true|false}] - Is Received Power In Range

If this parameter is specified, the command displays information only about the FCP target adapters that match whether the observed SFP receive power is within the valid range for the SFP.

[-sfp-tx-power <text>] - SFP Transmitted Optical Power

If this parameter is specified, the command displays information only about the FCP target adapters that

match the specified SFP transmit power.

[-is-sfp-tx-power-in-range {true|false}] - Is Xmit Power In Range

If this parameter is specified, the command displays information only about the FCP target adapters that match whether the observed SFP transmit power is within the valid range for the SFP.

[-sfp-ddm-status-control <Hex Integer>] - DDM Status

If this parameter is specified, the command displays information only about the FCP target adapters that match the specified SFP DDM status and control.

[-is-sfp-tx-in-disable {true|false}] - Is Xmit Disabled

If this parameter is specified, the command displays information only about the FCP target adapters that match whether the observed SFP transmitter is in disabled state.

[-is-sfp-tx-in-fault {true|false}] - Is Xmit In Fault

If this parameter is specified, the command displays information only about the FCP target adapters that match whether the observed SFP transmitter is in faulted state.

[-is-sfp-rx-in-los {true|false}] - Is Receiver In LOS

If this parameter is specified, the command displays information only about the FCP target adapters that match whether the observed SFP receiver is in loss of signal state.

Examples

```
cluster1::> fcp adapter show
                      Connection  Host
Node         Adapter Established Port Address
------------ ------- ----------- ------------
sti6280-021   0a      ptp         30012c
```

The example above displays information regarding FCP adapters within cluster1.

```
cluster1::> fcp adapter show -instance -node sti6280-021 -adapter 0a
Node: sti6280-021
                       Adapter: 0a
                   Description: Fibre Channel Target Adapter 0a (QLogic
2532 (2562), rev. 2, 8G)
             Physical Protocol: fibre-channel
                 Maximum Speed: 8
         Administrative Status: up
            Operational Status: online
               Extended Status: ADAPTER UP
             Host Port Address: 30012c
             Firmware Revision: 5.8.0
         Data Link Rate (Gbit): 4
            Fabric Established: true
                   Fabric Name: 20:14:54:7f:ee:54:b9:01
```

```
         Connection Established: ptp
     Is Connection Established: true
                     Mediatype: ptp
              Configured Speed: auto
                  Adapter WWNN: 50:0a:09:80:8f:7f:8b:1c
                  Adapter WWPN: 50:0a:09:81:8f:7f:8b:1c
                   Switch Port: RTP-AG01-410B51:1/41
    Form Factor Of Transceiver: SFP
    Vendor Name Of Transceiver: OPNEXT,INC
    Part Number Of Transceiver: TRS2000EN-SC01
       Revision Of Transceiver: 0000
  Serial Number Of Transceiver: T10H64793
FC Capabilities Of Transceiver: 10 (Gbit/sec)
     Vendor OUI Of Transceiver: 0:11:64
      Wavelength In Nanometers: 850
      Date Code Of Transceiver: 10:08:17
       Validity Of Transceiver: true
                Connector Used: LC
                 Encoding Used: 64B66B
      Is Internally Calibrated: true
    Diagnostic Monitoring Type: 68
   Status Monitoring Available: fa {Rx_Loss_of_Sig, Tx_Fault, Tx_Disable}
           SFF-8472 Compliance: 5
        Received Optical Power: 441.3 (uWatts)
    Is Received Power In Range: true
 SFP Transmitted Optical Power: 600.4 (uWatts)
        Is Xmit Power In Range: true
                    DDM Status: 30
              Is Xmit Disabled: false
              Is Xmit In Fault: false
            Is Receiver In LOS: false
```

The example above displays detailed information regarding FCP adapter 0a in sti6280-021 within cluster1.

network fcp topology show

FCP topology interconnect elements per adapter

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

Description

Display FCP topology interconnect elements per adapter.

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.

| [-instance] }

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

[-node {<nodename>|local}] - Node

Use this parameter to select the interconnect elements for adapters that are located on the node that you specify.

[-adapter <text>] - Adapter

Use this parameter to select the interconnect elements for the specified adapter.

[-domain-id <integer>] - Domain Id

Use this parameter to select the interconnect elements with the specified domain identifier.

[-port-wwpn <text>] - Port WWPN

Use this parameter to select the interconnect elements with the specified port world wide name.

[-switch-name <text>] - Switch Name

Use this parameter to select the interconnect elements with the specified switch.

[-switch-vendor <text>] - Switch Vendor

Use this parameter to select the interconnect elements with the specified vendor.

[-switch-release <text>] - Switch Release

Use this parameter to select the interconnect elements with the specified release.

[-switch-wwpn <text>] - Switch WWPN

Use this parameter to select the interconnect elements with the specified world wide port name.

[-switch-wwn <text>] - Switch WWN

Use this parameter to select the interconnect elements with the specified world wide name.

[-port-count <integer>] - Port Count

Use this parameter to select the interconnect elements with the specified port count.

[-port-slot <text>] - Port Slot

Use this parameter to select the interconnect elements with the specified port slot.

[-port-state {Unknown|Online|Offline|Testing|Fault}] - Port State

Use this parameter to select the interconnect elements with the specified port state.

[-port-type {None|N-Port|NL-Port|FNL-Port|NX-Port|F-Port|FL-Port|E-Port|B-Port|TNP-Port|TF-Port|NV-Port|FV-Port|SD-Port|TE-Port|TL-Port}] - Port Type

Use this parameter to select the interconnect elements with the specified port type.

[-port-attached-wwpn <text>] - Attached Port WWPN

Use this parameter to select the interconnect elements with the specified attached wwpn.

[-port-attached-id <text>] - Attached Port Id

Use this parameter to select the interconnect elements with the specified attached id.

[-port-attached-visible <text>] - Visible

Use this parameter to select the interconnect elements with the specified visiblity flag on attached port structure.

Examples

```
cluster1::> network fcp topology show
Switch connected to the adapter 0c
      Switch Name: ssan-fc0e-d58
    Switch Vendor: Cisco Systems, Inc.
   Switch Release: 5.2(1)N1(9)
    Switch Domain: 4
       Switch WWN: 20:05:00:05:9b:26:f4:c1
       Port Count: 20

Port    Port WWN                State     Type      Attached WWPN
Port Id
------- ----------------------- --------- ---------
----------------------- ------------
vfc9    20:08:00:05:9b:26:f4:ff Offline   None      -
-
vfc10   20:15:00:05:9b:26:f4:ff Online    TF-Port
50:0a:09:82:8d:92:4c:ff 0x0407c0  *
vfc11   20:16:00:05:9b:26:f4:ff Online    TF-Port
50:0a:09:81:8d:e2:4e:ec 0x040800  *

Switch connected to the adapter 0c
      Switch Name: ssan-fc0e-d58
    Switch Vendor: Cisco Systems, Inc.
   Switch Release: 5.2(1)N1(9)
    Switch Domain: 4
       Switch WWN: 20:05:00:05:9b:26:f4:c1
       Port Count: 20

Port    Port WWN                State     Type      Attached WWPN
Port Id
------- ----------------------- --------- ---------
----------------------- ------------
vfc20   20:13:00:05:9b:26:f4:ff Offline   None      -
-
vfc21   20:14:00:05:9b:26:f4:ff Online    TF-Port
50:0a:09:81:8d:92:4c:ff 0x0407a0  *

5 entries were displayed.
```

The example above show FCP topology interconnect information for the cluster.

network fcp zone show

Display the active zone set information

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

Description

Displays the active zone set information.

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.

| [-instance] }

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

[-node {<nodename>|local}] - Node

Use this parameter to select the active zone set information for adapters that located on the node name that you specify.

[-adapter <text>] - Adapter

Use this parameter to select the active zone set information for the specified adapter.

[-zoneset-name <text>] - Zoneset Name

Use this parameter to select the active zone set information for the specified zone set name.

[-zone-name <text>] - Zone Name

Use this parameter to select the active zone set information for the specified zone name.

[-unique <integer>] - Unique

A unique index for each zoneset record.

[-type-name <text>] - Type Name

Use this parameter to select the active zone set information with the specified symbolic type.

[-type <integer>] - Type

Use this parameter to select the active zone set information with the specified port type.

[-port-id <Hex Integer>] - Member Port Id

Use this parameter to select the active zone set information with the specified member port id.

[-domain-id <integer>] - Member Domain Id

Use this parameter to select the active zone set information with the specified member domain id.

[-port <integer>] - Member Port

Use this parameter to select the active zone set information with the specified member port.

[-wwn <text>] - Member WWN

Use this parameter to select the active zone set information with the specified member WWN.

[-zone-count <integer>] - Zone Count

Use this parameter to select the active zone set information with the specified number of zones.

[-zone-member-count <integer>] - Zone Member Count

Use this parameter to select the active zone set information with the specified number of zone members in a zone.

[-contents <text>] - Member Contents

Use this parameter to select the active zone set information using any type.

Examples

```
cluster1::> network fcp adapter zone show
                                            Member
                        Zone Name           Type                WWN
 --------------------- ------------------ -------------------
-----------------
Active Zone Set on adapter 0c
   Zone Set Name: zoneset_name
                        zone_name_1        Port ID             -
                        zone_name_1        Port ID             -
                        zone_name_1        Port ID             -
                        zone_name_2        Domain ID/Port      -
                        zone_name_2        Domain ID/Port      -
                        zone_name_2        Domain ID/Port      -
                        zone_name_3        Fabric Port Name
00:00:00:00:00:00:00:00
                        zone_name_3        Fabric Port Name
01:00:00:00:00:00:00:00
                        zone_name_3        Fabric Port Name
02:00:00:00:00:00:00:00

9 entries were displayed.
```

The example above displays information regarding active zone set information for the cluster.