



## **network fcp commands**

### **ONTAP 9.7 commands**

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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 maximum 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*.

**`[-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 WWPNN`**

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-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 visibility 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 Id	Port WWN	State	Type	Attached WWPN
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 Id	Port WWN	State	Type	Attached WWPN
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.

**Examples**

```
cluster1::> network fcp adapter zone show
```

Zone Name	Member 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.

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