



network interface commands

ONTAP 9.3 commands

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network interface commands

network interface create

Create a logical interface

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

Description

The `network interface create` command creates a logical interface (LIF).



A logical interface is an IP address associated with a physical network port. For logical interfaces using NAS data protocols, the interface can fail over or be migrated to a different physical port in the event of component failures, thereby continuing to provide network access despite the component failure. Logical interfaces using SAN data protocols do not support migration or failover.



On some cloud platforms, this operation might perform changes to the external route tables.

Parameters

-vserver <vserver> - Vserver Name

Use this parameter to specify the Vserver on which the LIF is created.

-lif <lif-name> - Logical Interface Name

Use this parameter to specify the name of the LIF that is created. For iSCSI and FC LIFs, the name cannot be more than 254 characters.

-role {cluster|data|node-mgmt|intercluster|cluster-mgmt} - Role

Use this parameter to specify the role of the LIF. LIFs can have one of five roles:

- Cluster LIFs, which provide communication among the nodes in a cluster
- Intercluster LIFs, which provide communication among peered clusters
- Data LIFs, which provide data access to NAS and SAN clients
- Node-management LIFs, which provide access to cluster management functionality
- Cluster-management LIFs, which provide access to cluster management functionality

LIFs with the cluster-management role behave as LIFs with the node-management role except that cluster-management LIFs can failover between nodes.

[-data-protocol {nfs|cifs|iscsi|fcp|fcache|none}] - Data Protocol

Use this parameter to specify the list of data protocols that can be configured on the LIF. The supported protocols are NFS, CIFS, FlexCache, iSCSI, and FCP. NFS, CIFS, and FlexCache are available by default when you create a LIF. If you specify "none", the LIF does not support any data protocols. Also, none, iscsi, or fcp cannot be combined with any other protocols.



The data-protocol field must be specified when the LIF is created and cannot be modified later.

-home-node <nodename> - Home Node

Use this parameter to specify the LIF's home node. The home node is the node to which the LIF returns when the [network interface revert](#) command is run on the LIF.

-home-port {<netport>|<ifgrp>} - Home Port

Use this parameter to specify the LIF's home port or interface group. The home port is the port or interface group to which the LIF returns when the [network interface revert](#) command is run on the LIF.

-address <IP Address> - Network Address

Use this parameter to specify the LIF's IP address.



A cluster LIF cannot be on the same subnet as a management or data LIF.

{ -netmask <IP Address> - Netmask

Use this parameter to specify the LIF's netmask.

| -netmask-length <integer> - Bits in the Netmask

Use this parameter to specify the length (in bits) of the LIF's netmask.

{ -auto {true|false} - IPv4 Link Local

Use this parameter to specify whether IPv4 link local addressing is enabled for this LIF.

| [-subnet-name <subnet name>] - Subnet Name }

Use this parameter to allocate the interface address from a subnet. If needed, a default route will be created for this subnet.

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

Use this parameter to specify whether the initial administrative status of the LIF is up or down. The default setting is `up`. The administrative status can differ from the operational status. For example, if you specify the status as `up` but a network problem prevents the interface from functioning, the operational status remains as `down`.

[-failover-policy {system-defined|local-only|sfo-partner-only|disabled|broadcast-domain-wide}] - Failover Policy

Use this parameter to specify the failover policy for the LIF.

- `system-defined` - The system determines appropriate failover targets for the LIF. The default behavior is that failover targets are chosen from the LIF's current hosting node and also from one other non-partner node when possible.
- `local-only` - The LIF fails over to a port on the local or home node of the LIF.
- `sfo-partner-only` - The LIF fails over to port on the home node or SFO partner only.
- `broadcast-domain-wide` - The LIF fails over to a port in the same broadcast domain as the home port.
- `disabled` - Failover is disabled for the LIF.

The failover policy for cluster logical interfaces is `local-only` and cannot be changed. The default failover policy for data logical interfaces is `system-defined`. This value can be changed.



Logical interfaces for SAN protocols do not support failover. Thus, such interfaces will always show this parameter as `disabled`.

`[-firewall-policy <policy>]` - Firewall Policy

Use this parameter to specify the firewall policy for the LIF. A LIF can use a default firewall policy that corresponds to its role (management, cluster, intercluster, or data) or a custom firewall policy created by an administrator. View and modify existing firewall policies using the [system services firewall policy show](#) and [system services firewall policy modify](#) commands, respectively.

`[-auto-revert {true|false}]` - Auto Revert

Use this parameter to specify whether a data LIF is automatically reverted to its home node under certain circumstances. These circumstances include startup, when the status of the management database changes to either master or secondary, or when the network connection is made. The default setting is `false`. If you set the value of this parameter to `true`, load balancing migration capability of the data LIF is disabled (the `-allow-lb-migrate` parameter is set to `false`).



Logical interfaces for SAN traffic do not support auto-revert. Thus, this parameter is always `false` on such interfaces.

`[-dns-zone {<zone-name>|none}]` - Fully Qualified DNS Zone Name

Use this parameter to specify a unique, fully qualified domain name of a DNS zone to which this data LIF is added. You can associate a data LIF with a single DNS zone. All data LIFs included in a zone must be on the same Vserver. If a LIF is not added to a DNS zone the data LIF is created with the value `none`.

`[-listen-for-dns-query {true|false}]` - DNS Query Listen Enable

Use this parameter to specify if the LIF has to listen for DNS queries. The default value for this parameter is `true`.

`[-allow-lb-migrate {true|false}]` - (DEPRECATED)-Load Balancing Migrate Allowed (privilege: advanced)



This parameter has been deprecated and may be removed in a future version of Data ONTAP.

Use this parameter to specify whether load balancing migration is activated for this data LIF. The default value of this parameter is `false`. If you set the value of this parameter to `true`, automatic revert capability for this data LIF is disabled (the `-auto-revert` parameter is set to `false`). Also, data LIFs that migrate as a result of load balancing adhere to network interface failover rules.



During times when a LIF is hosting active NFSv4, CIFS, or NRV connections, load balancing based LIF migrations between nodes will be temporarily disabled.

`[-lb-weight {load|0..100}]` - Load Balanced Weight (privilege: advanced)

Use this parameter to specify a load balancing weight for a data LIF. A valid numeric load balancing weight is any integer between 0 and 100. When you specify the same load balancing weight for all data LIFs in a DNS zone, client requests are uniformly distributed, similar to round-robin DNS. A data LIF with a low load balancing weight is made available for client requests less frequently than one that has a high load balancing weight. "load" is the default value of this parameter. If set to "load", node utilization statistics are used to dynamically assign the load balancing weight.

`[-failover-group <failover-group>]` - Failover Group Name

Use this parameter to specify the name of the failover group to associate with the LIF. Manage failover groups by using the `network interface failover-groups` command. Each broadcast domain has a default failover group which is created by the system automatically and has the same name as the broadcast domain. The failover group associated with the broadcast domain includes all ports in the broadcast domain. A logical interface's failover group is set to the failover group of the home port's broadcast domain by default, but this value can be modified.



Logical interfaces for SAN protocols do not support failover. Thus, this parameter cannot be specified for such interfaces.

`[-comment <text>]` - Comment

Use this parameter to specify the comment to associate with the LIF.

`[-force-subnet-association <true>]` - Force the LIF's Subnet Association

This command will fail if the IP address falls within the address range of a named subnet. Set this to `true` to acquire the address from the named subnet and assign the subnet to the LIF.

`[-is-dns-update-enabled {true|false}]` - Is Dynamic DNS Update Enabled?

If this parameter is set to `true`, then dynamic DNS update is sent to the DNS server for the particular LIF entry if dynamic DNS updates are enabled for the corresponding Vserver. This field is set to `true` by default for both IPv4 and IPv6 LIFs. DNS Update is not supported on LIFs not configured with either the NFS or CIFS protocol.

Examples

The following example creates an IPv4 LIF named `datlif1` and an IPv6 LIF named `datlif2` on a Vserver named `vs0`. Their home node is `node0` and home port is `e0c`. The failover policy `broadcast-domain-wide` is assigned to both LIFs. The firewall policy is `data` and the LIFs are automatically reverted to their home node at startup and under other circumstances. The `datlif1` has the IP address `192.0.2.130` and netmask `255.255.255.128`, and `datlif2` has the IP address `3ffe:1::aaaa` and netmask length of 64.

```
cluster1::> network interface create -vserver vs0 -lif datlif1 -role data
-home-node node0 -home-port e0c -address 192.0.2.130 -netmask
255.255.255.128 -failover-policy broadcast-domain-wide -firewall-policy
data -auto-revert true
cluster1::> network interface create -vserver vs0 -lif datlif2 -role data
-home-node node0 -home-port e0c -address 3ffe:1::aaaa -netmask-length 64
-failover-policy broadcast-domain-wide -firewall-policy data -auto-revert
true
```

Related Links

- [network interface revert](#)
- [system services firewall policy show](#)
- [system services firewall policy modify](#)

network interface delete

Delete a logical interface

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

Description

The `network interface delete` command deletes a logical interface (LIF) from a Vserver. Only administratively down LIFs can be deleted. To make a LIF administratively down, use the [network interface modify](#) command to set the "status-admin" parameter to "down".



If the LIF is configured for a SAN protocol and is part of a port set, the LIF must be removed from the port set before it can be deleted. To determine if a LIF is in a port set, use the [lun portset show](#) command. To remove the LIF from the port set, use the [lun portset remove](#) command.



On some cloud platforms, this operation might perform changes to the external route tables.

Parameters

-vserver <vserver> - Vserver Name

Use this parameter to specify the Vserver on which the logical interface to be deleted is located.

-lif <lif-name> - Logical Interface Name

Use this parameter to specify the logical interface to delete.

Examples

The following example deletes a logical interface named `cluslif3` that is located on a Vserver named `vs0`.

```
cluster1::> network interface delete -vserver vs0 -lif cluslif3
```

Related Links

- [network interface modify](#)
- [lun portset show](#)
- [lun portset remove](#)

network interface migrate-all

Migrate all data logical interfaces away from the specified node

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

Description

The `network interface migrate-all` command migrates all data logical interfaces from the node you specify.



Manual migration of a logical interface can take up to 15 seconds to complete. Logical interface migration is a best-effort command and can only be completed if the destination node and port are operational. Logical interface migration requires that the logical interface be pre-configured with valid failover rules to facilitate failover to a remote node.



Logical interfaces for SAN protocols do not support migration. Attempts to do so will result in an error.



On some cloud platforms, this operation might perform changes to the external route tables.

Parameters

-node <nodename> - Node

Use this parameter to specify the node from which all logical interfaces are migrated. Each data logical interface is migrated to another node in the cluster, assuming that the logical interface is configured with failover rules that specify an operational node and port.

[-port {<netport>|<ifgrp>}] - Port

Use this parameter to specify the port from which all logical interfaces are migrated. This option cannot be used with asynchronous migrations. If this parameter is not specified, then logical interfaces will be migrated away from all ports on the specified node.

Examples

The following example migrates all data logical interfaces from the current (local) node.

```
cluster1::> network interface migrate-all -node local
```

network interface migrate

Migrate a logical interface to a different port

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

Description

The `network interface migrate` command migrates a logical interface to a port or interface group on the node you specify.



Manual migration of a logical interface can take up to 15 seconds to complete. Also, when you migrate a cluster logical interface, you must do so from the local node. Logical interface migration is a best-effort command, and can only be completed if the destination node and port are operational.



Logical interfaces for SAN protocols do not support migration. Attempts to do so will result in an error.



On some cloud platforms, this operation might perform changes to the external route tables.

Parameters

-vserver <vserver> - Vserver Name

Use this parameter to specify the Vserver that owns the logical interface that is to be migrated.

-lif <lif-name> - Logical Interface Name

Use this parameter to specify the logical interface that is to be migrated.

-destination-node <nodename> - Destination Node

Use this parameter to specify the node to which the logical interface is to be migrated.

[-destination-port {<netport>|<ifgrp>}] - Destination Port

Use this parameter to specify the port or interface group to which the logical interface is to be migrated.

[-force <true>] - Force Migrate Data LIF Flag (privilege: advanced)

Use this parameter to force the migration operation.

Examples

The following example migrates a logical interface named datalif1 on a Vserver named vs0 to port e0c on a node named node2:

```
cluster1::> network interface migrate -vserver vs0 -lif datalif1 -dest
-node node2 -dest-port e0c
```

network interface modify

Modify a logical interface

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

Description

The `network interface modify` command modifies attributes of a logical interface (LIF).



You cannot modify some properties of an iSCSI or FCP LIF, such as `-home-node` or `-home-port`, if the LIF is in a port set. To modify these properties, first remove the LIF from the port set. To determine if a LIF is in a port set, use the [lun portset show](#) command. To remove the LIF from the port set, use the [lun portset remove](#) command.



On some cloud platforms, this operation might perform changes to the external route tables.

Parameters

-vserver <vserver> - Vserver Name

Use this parameter to specify the Vserver on which the LIF to be modified is located.

-lif <lif-name> - Logical Interface Name

Use this parameter to specify the name of the LIF that is to be modified

[-home-node <nodename>] - Home Node

Use this parameter to modify the LIF's home node. The home node is the node to which the LIF returns when the [network interface revert](#) command is run on that LIF.

[-home-port {<netport>|<ifgrp>}] - Home Port

Use this parameter to modify the LIF's home port. The home port is the port or interface group to which the LIF returns when the [network interface revert](#) command is run on that LIF.



If you change this parameter for a cluster or management LIF, you must reboot the storage system to force the change to take effect.

[-address <IP Address>] - Network Address

Use this parameter to modify the LIF's IP address.



A cluster LIF cannot be on the same subnet as a data or management LIF.

{ [-netmask <IP Address>] - Netmask

Use this parameter to modify the LIF's netmask.

| [-netmask-length <integer>] - Bits in the Netmask

Use this parameter to modify the length (in bits) of the LIF's netmask.

[-subnet-name <subnet name>] - Subnet Name

Use this parameter to allocate the interface address from a subnet. Modifying this parameter will cause a new IP address to be allocated and assigned to the interface.

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

Use this parameter to modify the administrative status of the LIF. The administrative status can differ from the operational status. For example, if you specify the status as `up` but a network problem prevents the interface from functioning, the operational status remains as `down`.

[-failover-policy {system-defined|local-only|sfo-partner-only|disabled|broadcast-domain-wide}] - Failover Policy

Use this parameter to modify the failover policy for the LIF.

- `system-defined` - The system determines appropriate failover targets for the LIF. The default behavior is that failover targets are chosen from the LIF's current hosting node and also from one other non-partner node when possible.
- `local-only` - The LIF fails over to a port on the local or home node of the LIF.
- `sfo-partner-only` - The LIF fails over to a port on the home node or SFO partner only.

- broadcast-domain-wide - The LIF fails over to a port in the same broadcast domain as the home port.
- disabled - Failover is disabled for the LIF.



The failover policy for cluster logical interfaces is local-only and cannot be changed. The default failover policy for data logical interfaces is system-defined. This value can be changed.



Logical interfaces for SAN protocols do not support failover. Thus, such interfaces always show this parameter as `disabled`.

`[-firewall-policy <policy>]` - Firewall Policy

Use this parameter to set the firewall policy for the LIF. A LIF can use a default firewall policy that corresponds to its role (management, cluster, or data) or a custom firewall policy created by an administrator. When using a custom policy, the interface will fallback on its role's default policy for unspecified services. View existing firewall policies with the "[system services firewall policy show](#)" command. Modify existing firewall policies with the "[system services firewall policy modify](#)" command.

`[-auto-revert {true|false}]` - Auto Revert

Use this parameter to modify whether a data LIF is reverted automatically to its home node under certain circumstances. These circumstances would include startup, when the status of the management database changes to either master or secondary, and when the network connection is made. The default setting is `false`. If you set the value of this parameter to `true`, the load balancing migration capability of the data LIF is disabled (the `-allow-lb-migrate` parameter is set to `false`).



Logical interfaces for SAN traffic do not support auto-revert. Thus, this parameter is always `false` on such interfaces.

`[-dns-zone {<zone-name>|none}]` - Fully Qualified DNS Zone Name

Use this parameter to modify the unique, fully qualified domain name of the DNS zone to which this data LIF belongs. You can associate a data LIF with a single DNS zone. All data LIFs included in a zone must be on the same Vserver. If you do not specify a value for this parameter, the data LIF is created with the value `none`.

`[-listen-for-dns-query {true|false}]` - DNS Query Listen Enable

Use this parameter to specify if the LIF has to listen for DNS queries. The default value for this parameter is `true`.

`[-allow-lb-migrate {true|false}]` - (DEPRECATED)-Load Balancing Migrate Allowed (privilege: advanced)



This parameter has been deprecated and may be removed in a future version of Data ONTAP.

Use this parameter to modify whether or not load balancing migration is enabled for this data LIF. The default value of this parameter is `false`. If you set the value of this parameter to `true`, the automatic revert capability of the data LIF is disabled (the `-auto-revert` parameter is set to `false`). Also, data LIFs that migrate as a result of load balancing adhere to network interface failover rules.



During times when a LIF is hosting active NFSv4, CIFS, or NRV connections, load balancing based LIF migrations between nodes will be temporarily disabled.

`[-lb-weight {load|0..100}] - Load Balanced Weight (privilege: advanced)`

Use this parameter to modify the load balancing weight of the data LIF. A valid load balancing weight is any integer between 1 and 100. If you specify the same load balancing weight for all data LIFs in a DNS zone, client requests are uniformly distributed, similar to round-robin DNS. A data LIF with a low load balancing weight is made available for client requests less frequently than one that has a high load balancing weight.

`[-failover-group <failover-group>] - Failover Group Name`

Use this parameter to modify the name of the failover group to associate with the network interface. Manage failover groups using the `network interface failover-groups` command. Each broadcast domain has a default failover group which is created by the system automatically and has the same name as the broadcast domain. The failover group associated with the broadcast domain includes all ports in the broadcast domain. A logical interface's failover group is set to the failover group of the home port's broadcast domain by default, but this value can be modified.



Logical interfaces for SAN protocols do not support failover. Thus, this parameter cannot be specified for such interfaces.

`[-comment <text>] - Comment`

Use this parameter to modify the comment associated with the LIF.

`[-force-subnet-association <true>] - Force the LIF's Subnet Association`

This command will fail if the IP address falls within the address range of a named subnet. Set this to true to acquire the address from the named subnet and assign the subnet to the LIF.

`[-is-dns-update-enabled {true|false}] - Is Dynamic DNS Update Enabled?`

If this parameter is set to `true`, then dynamic DNS update is sent to the DNS server for the particular LIF entry if dynamic DNS updates are enabled for the corresponding Vserver. This field is set to `true` by default for both IPv4 and IPv6 LIFs. DNS Update is not supported on LIFs not configured with either the NFS or CIFS protocol.

Examples

The following example modifies a LIF named `datalif1` on a logical server named `vs0`. The LIF's netmask is modified to `255.255.255.128`.

```
cluster1::> network interface modify -vserver vs0 -lif datalif1 -netmask
255.255.255.128
```

Related Links

- [lun portset show](#)
- [lun portset remove](#)
- [network interface revert](#)
- [system services firewall policy show](#)
- [system services firewall policy modify](#)

network interface rename

Rename a logical interface

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

Description

Use the `network interface rename` command to change the name of an existing logical interface.

Parameters

-vserver <vserver> - Vserver Name

Use this parameter to specify the Vserver on which the logical interface to rename is located.

-lif <lif-name> - Logical Interface Name

Use this parameter to specify the name of the logical interface to rename.

-newname <text> - LIF

Use this parameter to specify the new name of the logical interface. For iSCSI and FC LIFs, the name cannot be more than 254 characters.

Examples

The following example renames a cluster logical interface named `cluslif1` to `cluslif4` on a Vserver named `vs0`.

```
cluster1::> network interface rename -vserver vs0 -lif cluslif1 -newname  
cluslif4
```

network interface revert

Revert a logical interface to its home port

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

Description

The `network interface revert` command reverts a logical interface that is not currently on its home port to its home port, assuming that the home node and port are both operational. A logical interface's home port is specified when the logical interface is created. Determine a logical interface's home port by using the [network interface show](#) command.



When you revert a cluster logical interface, you must do so from the local node.



On some cloud platforms, this operation might perform changes to the external route tables.

Parameters

-vserver <vserver> - Vserver Name

Use this parameter to specify the Vserver on which the logical interface to be reverted is located.

-lif <lif-name> - Logical Interface Name

Use this parameter to specify the logical interface that is to be reverted.



Logical interfaces for SAN protocols are always home. Thus, this command has no effect on such interfaces. The same applies to logical interfaces for NAS protocols that are already home.

Examples

The following example returns any logical interfaces that are not currently on their home ports to their home ports.

```
cluster1::> network interface revert -vserver * -lif *
```

Related Links

- [network interface show](#)

network interface show

Display logical interfaces

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

Description

The `network interface show` command displays information about logical interfaces.

Running the command with the `-failover` parameter displays information relevant to logical interface failover rules.

Running the command with the `-status` parameter displays information relevant to logical interface operational status.

Running the command with the `-by-ipspace` parameter displays information relevant to logical interfaces on a specific IPspace.

See the examples for more information.

You can specify additional parameters to display only information that matches those parameters. For example, to display information only about logical interfaces whose operational status is down, run the command with the `-status-oper down` parameter.

Parameters

{ [-fields <fieldname>,...]

If you specify the `-fields <fieldname>,...` parameter, the command displays only the fields that you specify.

| [-by-ipSPACE]

Use this parameter to display logical-interfaces sorted by IPspace and Vserver.

| [-dns-zones]

Use this parameter to display logical-interfaces and whether the interface is associated with a Domain Name System (DNS) load balancing zone.

| [-failover]

Use this parameter to display logical-interface failover information.

| [-status]

Use this parameter to display detailed logical-interface status information.

| [-instance] }

Use this parameter to display all the fields for the specified logical-interfaces.

[-vserver <vserver>] - Vserver Name

Use this parameter to display information only about logical interfaces on the Vserver you specify.

Use this parameter plus the `-lif` parameter to display detailed information only about the logical interface you specify.

[-lif <lif-name>] - Logical Interface Name

Use this parameter to display information only about logical interfaces that match the name you specify.

Use this parameter with the `-vserver` parameter to display detailed information only about the logical interface you specify.

[-role {cluster|data|node-mgmt|intercluster|cluster-mgmt}] - Role

Use this parameter to display information only about logical interfaces that are associated with network ports that have the role you specify.

[-data-protocol {nfs|cifs|iscsi|fcp|fcache|none}] - Data Protocol

Use this parameter to display information only about logical interfaces that have the enabled data protocols you specify.

[-home-node <nodename>] - Home Node

Use this parameter to display information only about logical interfaces that have the home node you specify.

[-home-port {<netport>|<ifgrp>}] - Home Port

Use this parameter to display information only about logical interfaces that have the home port or interface group you specify.

[-curr-node <nodename>] - Current Node

Use this parameter to display information only about logical interfaces that are currently located on the node you specify.

[-curr-port {<netport>|<ifgrp>}] - Current Port

Use this parameter to display information only about logical interfaces that are currently located on the port or interface group you specify.

[-status-oper {up|down}] - Operational Status

Use this parameter to display information only about logical interfaces that have the operational status you specify.

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

Use this parameter to display information only about logical interfaces that match the extended status that you specify.

[-numeric-id <integer>] - Numeric ID (privilege: advanced)

Use this parameter to display information only about logical interfaces with the numeric ID (or range of IDs) you specify. The numeric ID is an integer that identifies the logical interface in the cluster.

[-is-home {true|false}] - Is Home

Use this parameter to display information only about logical interfaces that are (true) or are not (false) currently located on their home node and port.

[-address <IP Address>] - Network Address

Use this parameter to display information only about logical interfaces that match the IP address or address range you specify.

[-netmask <IP Address>] - Netmask

Use this parameter to display information only about logical interfaces that have the netmask you specify.

[-netmask-length <integer>] - Bits in the Netmask

Use this parameter to display information only about logical interfaces with a netmask that has the number of bits you specify.

[-subnet-name <subnet name>] - Subnet Name

Use this parameter to display the logical interfaces that matches the subnet name.

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

Use this parameter to display information only about logical interfaces that have the administrative status you specify.

[-failover-policy {system-defined|local-only|sfo-partner-only|disabled|broadcast-domain-wide}] - Failover Policy

Use this parameter to display information only about logical interfaces that use the failover policy you specify.

[-firewall-policy <policy>] - Firewall Policy

Use this parameter to display information only about logical interfaces that use the firewall policies you specify.

[`-auto-revert {true|false}`] - Auto Revert

Use this parameter to display information only about logical interfaces that have auto-revert setting you specify.

[`-sticky {true|false}`] - Sticky Flag (privilege: advanced)

Use this parameter to display information only about logical interfaces that are "sticky". A sticky logical interface is one that has been manually migrated to another node and is not subject to auto-revert settings. A sticky logical interface remains at the migrated location until it is manually reverted or until it fails over to another node.

[`-dns-zone {<zone-name>|none}`] - Fully Qualified DNS Zone Name

Use this parameter to display information only about logical interfaces in the specified DNS zone.

[`-listen-for-dns-query {true|false}`] - DNS Query Listen Enable

Use this parameter to display information only about logical interfaces that have the DNS query listen value you specify.

[`-allow-lb-migrate {true|false}`] - (DEPRECATED)-Load Balancing Migrate Allowed (privilege: advanced)



This parameter has been deprecated and may be removed in a future version of Data ONTAP.

Use this parameter to display information only about logical interfaces for which load balancing migration is activated (true) or not activated (false).

[`-lb-weight {load|0..100}`] - Load Balanced Weight (privilege: advanced)

Use this parameter to display information only about logical interfaces that have the load balancing weight you specify.

[`-failover-group <failover-group>`] - Failover Group Name

Use this parameter to display information only about logical interfaces that are in the failover group you specify. Logical interfaces in the same failover group are capable of failing over to the same set of ports.

[`-wwpn <text>`] - FCP WWPN

Use this parameter to display information only about logical interfaces that have the Fibre Channel Protocol port identifier (World Wide Port Name) you specify.

[`-address-family {ipv4|ipv6|ipv6z}`] - Address family

Use this parameter to view the address family that is in use on the interface. Only IPv4 and IPv6 non-zoned addresses can be configured. Configuration of IPv6z addresses is not allowed.

[`-comment <text>`] - Comment

Use this parameter to display information only about logical interfaces that have the comment you specify.

[`-ipspace <IPspace>`] - IPspace of LIF

Use this parameter to display information only about logical interfaces on the IPspace you specify.

[`-is-dns-update-enabled {true|false}`] - Is Dynamic DNS Update Enabled?

Use this parameter to display information only about logical interfaces that have (true) or do not have (false) dynamic DNS updates enabled for them.

Examples

The following example displays general information about all logical interfaces.

cluster1::> network interface show

Is	Logical	Status	Network	Current	Current
Vserver	Interface	Admin/Oper	Address/Mask	Node	Port
Home					
-----	-----	-----	-----	-----	-----

cluster1	cluster_mgmt	up/up	192.0.2.1/192	node0	e0M
true	node0_mgmt1	up/up	192.0.2.2/192	node0	e0M
true	node1_mgmt1	up/up	192.0.2.3/192	node1	e0M
true					
Cluster	node0_clus1	up/up	192.0.2.66/192	node0	e0a
true	node0_clus2	up/up	192.0.2.67/192	node0	e0b
true	node1_clus1	up/up	192.0.2.68/192	node1	e0a
true	node1_clus2	up/up	192.0.2.69/192	node1	e0b
true					

The following example displays failover information about all logical interfaces.

```

cluster1::> network interface show -failover

```

Vserver	Logical Interface	Home Node:Port	Failover Policy	Failover Group
cluster1	cluster_mgmt	node0:e0M	broadcast-domain-wide	Default
		Failover Targets:	node0:e0M, node0:e0d, node0:e0e, node0:e0f, node1:e0M, node1:e0d, node1:e0e, node1:e0f	
	node0_mgmt1	node0:e0M	local-only	Default
		Failover Targets:	node0:e0M, node0:e0d, node0:e0e, node0:e0f	
	node1_mgmt1	node1:e0M	local-only	Default
		Failover Targets:	node1:e0M, node1:e0d, node1:e0e, node1:e0f	
Cluster	node0_clus1	node0:e0a	local-only	Cluster
		Failover Targets:	node0:e0a, node0:e0b	
	node0_clus2	node0:e0a	local-only	Cluster
		Failover Targets:	node0:e0b, node0:e0a	
	node1_clus1	node1:e0a	local-only	Cluster
		Failover Targets:	node1:e0a, node1:e0b	
	node1_clus2	node1:e0a	local-only	Cluster
		Failover Targets:	node1:e0b, node1:e0a	

network interface start-cluster-check

Start the cluster check function

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

Description

The `network interface start-cluster-check` command initiates an accessibility check from every logical interface to every aggregate. Automatic checks run periodically, but this command manually initiates a check immediately.

This command produces no direct output. Any errors encountered during the check are reported in the event log. See the [event log show](#) command for more information.

Examples

This example shows an execution of this command, with all parameters and output.

```
cluster1::> network interface start-cluster-check
```

Related Links

- [event log show](#)

network interface capacity show

Display the number of IP data LIFs capable of being configured on the cluster.

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

Description

The `network interface capacity show` command displays the number of IP LIFs of role *data* supported on the cluster, as well as the number of IP LIFs of role *data* currently configured on the cluster.



The number of IP LIFs of role *data* that are supported on a node depends on the hardware platform and the Cluster's Data ONTAP version. If one or more nodes in the cluster cannot support additional LIFs, then none of the nodes in the cluster can support additional LIFs.

Examples

The following displays the IP data LIF capacity.

```
cluster1::> network interface capacity show

  IP Data LIF          IP Data LIF
  Supported Limit      Count
-----
                1024          256
```

network interface capacity details show

Display details about the IP data LIFs capable of being configured on each node.

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

Description

The `network interface capacity details show` command displays the number of IP LIFs of role *data* that can be configured on each node, the number of IP data LIFs of role *data* that are supported on each node, and the number of IP data LIFs of role *data* that are configured to be homed on each node.



The number of IP LIFs of role *data* that are supported on a node depends on the hardware platform and the Cluster's Data ONTAP version. If one or more nodes in the cluster cannot support additional LIFs, then none of the nodes in the cluster can support additional LIFs.

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 Name (privilege: advanced)

Use this parameter to specify the node for which to obtain data LIF capacity.

[-capacity-for-node <integer>] - Number of IP data LIFs that can be configured on the node (privilege: advanced)

This parameter specifies the number of IP LIFs of role *data* that can be configured on the node at the currently running Data ONTAP version. To view the version of a node, use the [cluster image show](#) command.

[-limit-for-node <integer>] - Number of IP data LIFs that are supported on the node (privilege: advanced)

This parameter specifies the number of IP LIFs of role *data* that are supported on the node at the current effective cluster version (ECV). To view the version of a node, use the [cluster image show](#) command.

[-count-for-node <integer>] - Number of IP data LIFs that are assigned to the node (privilege: advanced)

This parameter specifies the number of IP LIFs of role *data* currently configured to be homed on the node. To view LIFs homed on this node, use the [network interface show -home-node](#) command.

Examples

The following displays the IP data LIF capacity.

```
cluster1::> network interface capacity details show
```

Node	IP Data LIF Capacity	IP Data LIF Supported Limit	IP Data LIF Count
node1	512	512	128
node2	512	512	128

Related Links

- [cluster image show](#)
- [network interface show](#)

network interface check failover show

Discover if any LIFs might become inaccessible during a node outage, due to over-provisioning

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

Description

This command identifies logical interfaces (LIFs) at risk of becoming inaccessible if their hosting nodes were to experience an outage. The source-nodes parameter is the only required input.

The tuple <destination-nodes, vservers-name, lif-name> is sufficient to uniquely identify a record in the returned listing. All fields other than source-nodes can be filtered on in the usual fashion. There are some examples of this filtering below.

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.

[-destination-nodes <nodename>,...] - Set Of Nodes Over Capacity

Use this parameter to display the nodes an at-risk LIF or LIFs could fail over to.

[-vservers-name <vservers>] - Vservers Name

Use this parameter to display only LIFs on the Vservers you specify.

[-lif-name <lif-name>] - LIF Name

Use this parameter to display at-risk information only about the LIF or LIFs whose name you specify.

-source-nodes <nodename>,... - Nodes Going Down

List of nodes to test. At-risk LIFs currently hosted on these nodes will be identified. The list should contain no more than half the nodes in the cluster.

[-over-amount <integer>] - Amount Capacity Exceeded

Use this parameter to select only at-risk LIFs associated with a set of destination nodes whose amount over capacity matches the number you specify.

Note that the number of LIFs considered to be at risk may be higher than the actual amount over capacity a given set of nodes is. Once a given set of nodes is determined to be potentially over capacity, all LIFs whose set of failover target nodes is an exact match are marked as at risk. The amount over capacity is an upper bound on the number LIFs which could become unhosted if LIFs were to fail over in a random order, each to a target randomly selected from that LIF's configured failover targets.

[-failover-group <failover-group>] - Failover Group Name

Use this parameter to display information only about at-risk LIFs whose failover-group you specify.

[-failover-policy {system-defined|local-only|sfo-partner-only|disabled|broadcast-domain-wide}] - Failover Policy

Use this parameter to display information only about at-risk LIFs whose failover-policy you specify.

Examples

The following example shows all the at-risk LIFs for a specific two-node outage in a six-node cluster.

```
cluster1::> network interface check failover show -source-nodes
node1,node5
```

Destination Nodes: node2, node3, node4, node6

Amount Over Capacity: 2

Vserver	Logical Interface	Failover Group	Failover Policy
vs0	data1	Default	broadcast-
domain-wide			
	data2	Default	broadcast-
domain-wide			
	data3	Default	broadcast-
domain-wide			
vs1	data1	Custom_Name	broadcast-
domain-wide			

Destination Nodes: node2

Amount Over Capacity: 1

Vserver	Logical Interface	Failover Group	Failover Policy
vs0	data6	Default	sfo-partner-only
vs1	data7	Default	sfo-partner-only

The following example shows the same two-node outage scenario, but now with some filtering applied to the results.

```
cluster1::> network interface check failover show -source-nodes
node1,node5 -destination-nodes node2,node3,node4,node6 -failover-group
Def*
```

Destination Nodes: node2, node3, node4, node6

Amount Over Capacity: 2

Vserver	Logical Interface	Failover Group	Failover Policy
vs0	data1	Default	broadcast-
domain-wide			
	data2	Default	broadcast-
domain-wide			
	data3	Default	broadcast-
domain-wide			

network interface dns-lb-stats show

Show the DNS load-balancer stats for this node

Availability: This command is available to *cluster* and *Vserver* administrators at the *advanced* privilege level.

Description

The `network interface dns-lb-stats show` command displays the statistics for DNS load-balancing lookups for the zones belonging to the specified Vserver. These statistics represent the data for the Vserver on the local node. The following counts can be seen in the statistics output:

- `success-count` : Number of successful lookups.
- `authoritative-count` : Number of authoritative answers sent.
- `nonauthoritative-count` : Number of non authoritative answers sent.
- `rr-set-missing-count` : Number of times the RR set was missing.
- `domain-missing-count` : Number of times the domain was not be found.
- `failure-count` : Number of failed lookups.
- `dropped-count` : Number of lookups dropped.

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.

[-vserver <vserver>] - Vserver (privilege: advanced)

Use this parameter to display DNS load-balancer statistics only for the specified Vservers.

[-zone <text>] - DNS Zone (privilege: advanced)

Use this parameter to display DNS load-balancer statistics only for the specified DNS zones.

[-success-count <integer>] - Successful Lookup Count (privilege: advanced)

Use this parameter to display DNS load-balancer statistics only for the specified number of successful lookups.

[-authoritative-count <integer>] - Authoritative Answer Count (privilege: advanced)

Use this parameter to display DNS load-balancer statistics only for the specified number of authoritative answers sent.

[-nonauthoritative-count <integer>] - Non Authoritative Answer Count (privilege: advanced)

Use this parameter to display DNS load-balancer statistics only for the specified number of non-authoritative answers sent.

[`-rr-set-missing-count <integer>`] - RR Set Missing Count (privilege: advanced)

Use this parameter to display DNS load-balancer statistics only for the specified number of times the RR set was missing.

[`-domain-missing-count <integer>`] - Name Missing Count (privilege: advanced)

Use this parameter to display DNS load-balancer statistics only for the specified number of times the domain was not found.

[`-failure-count <integer>`] - Failed Lookup Count (privilege: advanced)

Use this parameter to display DNS load-balancer statistics only for the specified number of failed lookups.

[`-dropped-count <integer>`] - Dropped Count (privilege: advanced)

Use this parameter to display DNS load-balancer statistics only for the specified number of dropped lookups.

Examples

The following example displays stats for the zone "x.com".

```
cluster1::> network interface dns-lb-stats show -zone x.com
Vserver      DNS Zone      SUCCESS      AUTH  NOAUTH  NORR  NODOM  FAILED
DROP
-----
vs2
          x.com      5          5          0          0          0          0          0
```

network interface failover-groups add-targets

Add failover targets to a failover group

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

Description

The `network interface failover-groups add-targets` command enables you to add a list of failover targets such as network ports, interface groups, or VLANs to an existing logical interface failover group.

Parameters

`-vserver <vserver>` - Vserver Name

Use this parameter to specify the name of the Vservers from which this failover group is accessible.

`-failover-group <text>` - Failover Group Name

Use this parameter to specify the failover group that you want to extend.

-targets [node>:<port] ,... - Failover Targets

Use this parameter to specify the failover targets such as network ports, interface groups, or VLANs you wish to add to the failover group.

Examples

This example shows the failover group "clyde" being extended to include additional failover targets.

```
cluster1::> network interface failover-group add-targets -vserver vs1
-failover-group clyde -targets xena1:e0c, xena1:e0d-100, xena2:a0a
```

network interface failover-groups create

Create a new failover group

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

Description

The `network interface failover-groups create` command creates a grouping of failover targets for logical interfaces on one or more nodes. Use this command to add a new network port or interface group to an existing failover group.



Interfaces for SAN protocols do not support failover. Such interfaces are not valid failover targets.

Parameters

-vserver <vserver> - Vserver Name

Use this parameter to specify the name of the Vservers from which this failover group is accessible.

-failover-group <text> - Failover Group Name

Use this parameter to specify the name of the logical interface failover group that you want to create.

-targets [node>:<port] ,... - Failover Targets

Use this parameter to specify the list of failover targets (network ports, interface groups, or VLANs on a node) belonging to this failover group.

Examples

The following example shows how to create a failover group named `failover-group_2` containing ports `e1e` and `e2e` on node `Xena`.

```
cluster1::> network interface failover-groups create -vserver vs0
-failover-group failover-group_2 -targets xena:e1e,xena:e2e
```

network interface failover-groups delete

Delete a failover group

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

Description

The `network interface failover-groups delete` command deletes a logical interface failover group.

Parameters

-vserver <vserver> - Vserver Name

Use this parameter to specify the name of the Vservers from which this failover group is accessible.

-failover-group <text> - Failover Group Name

Use this parameter to specify the name of the logical interface failover group to be deleted.

Examples

The following example shows how to delete a failover group named `failover-group_2`.

```
cluster1::> network interface failover-groups delete -vserver vs1  
-failover-group failover-group_2
```

network interface failover-groups modify

Modify a failover group

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

Description

The `network interface failover-groups modify` command enables you modify the list of network ports, interface groups, or VLANs belonging to an existing logical interface failover group. The specified list will overwrite the existing list of network ports, interface groups, and VLANs currently belonging to the logical interface failover group.

Parameters

-vserver <vserver> - Vserver Name

Use this parameter to specify the name of the Vserver(s) from which this failover group is accessible.

-failover-group <text> - Failover Group Name

Use this parameter to specify the failover group that you want to modify.

`[-targets [node>:<port] ,...]` - Failover Targets

Use this parameter to specify the network ports, interface groups, or VLANs you wish to now belong to the failover group.

Examples

This example shows the failover group "clyde" being modified to now contain the specified network ports.

```
cluster1::> network interface failover-group modify -vserver vs1 -failover
-group clyde -targets xena1:e0c, xena1:e0d-100, xena2:a0a
```

network interface failover-groups remove-targets

Remove failover targets from a failover group

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

Description

The `network interface failover-groups remove-targets` command enables you to specify a list of failover targets such as network ports, interface groups, or VLANs to be removed from an existing logical interface failover group.

Parameters

`-vserver <vserver>` - Vserver Name

Use this parameter to specify the name of the Vserver(s) from which this failover group is accessible.

`-failover-group <text>` - Failover Group Name

Use this parameter to specify the failover group that you want to remove failover targets from.

`-targets [node>:<port] ,...` - Failover Targets

Use this parameter to specify the failover targets such as network ports, interface groups, or VLANs you wish to remove from the failover group.

Examples

This example shows the failover targets xena1:e0c and xena1:e0d-100 being removed from the failover group "clyde".

```
cluster1::> network interface failover-group remove-targets -vserver vs1
-failover-group clyde -targets xena1:e0c, xena1:e0d-100, xena2:a0a
```

network interface failover-groups rename

Rename a logical interface failover Group

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

Description

The `network interface failover-groups rename` command enables you to rename an existing logical interface failover group.

Parameters

-vserver <vserver> - Vserver Name

Use this parameter to specify the name of the Vservers from which this failover group is accessible.

-failover-group <text> - Failover Group Name

Use this parameter to specify the failover group that you want to rename.

-new-failover-group-name <text> - New name

Use this parameter to specify the new name of the failover group.

Examples

This example shows the failover group "clusterwide" being renamed "clyde".

```
cluster1::> network interface failover-group rename -failover -vserver vs1  
-failover-group clusterwide -new-failover-group-name clyde
```

network interface failover-groups show

Display logical interface failover groups

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

Description

The `network interface failover-groups show` command displays information about logical interface failover groups.

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.

[-vserver <vserver>] - Vserver Name

Use this parameter to display information only about the logical interface failover groups that have the target Vserver you specify.

[-failover-group <text>] - Failover Group Name

Use this parameter to display information only about the logical interface failover groups you specify.

[-targets [node>:<port>],...] - Failover Targets

Use this parameter to display information only about the logical interface failover groups that have the failover target (physical port, interface group, or VLAN) you specify.

[-broadcast-domain <broadcast domain name>] - Broadcast Domain

Use this parameter to display information only about the logical interface failover groups that have the broadcast domain you specify.

Examples

The following example displays information about all logical interface failover groups on a two node cluster.

```
cluster1::> network interface failover-groups show
```

Vserver	Group	Failover Targets

Cluster	Cluster	node1:e1a, node1:e2a, node2:e1a, node2:e2a,
cluster1	Default	node1:e0M, node1:e0a, node1:e0b, node1:e0c, node1:e0d, node2:e0M, node2:e0a, node2:e0b, node2:e0c, node2:e0d

network interface lif-weights show

Show the load-balancer LIF weights

Availability: This command is available to *cluster* and *Vserver* administrators at the *advanced* privilege level.

Description

The `network interface lif-weights show` command displays the weights assigned to each LIF in a DNS load-balancing zone in a Vserver.

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.

[-vserver <vserver>] - Vserver (privilege: advanced)

Use this parameter to display information only for the specified Vservers.

[-zone <text>] - DNS Zone (privilege: advanced)

Use this parameter to display information only for the specified DNS zones.

[-address <IP Address>] - Network Address (privilege: advanced)

Use this parameter to display information only for the specified IP addresses.

[-weight <double>] - Load Balancer Weight (privilege: advanced)

Use this parameter to display information only for the specified load balancer weights

Examples

The following example displays LIF weights for vserver "vs1".

```
cluster1::> network interface lif-weights show -vserver vs1
```

Vserver	DNS Zone	Network Address	Weight
vs1			
	a.com	4.4.4.4	12.4206
	x.com	1.1.1.1	12.4206
	x.com	10.72.46.236	12.4206

3 entries were displayed.

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