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metrocluster interconnect commands

metrocluster interconnect adapter modify

Modify MetroCluster interconnect adapter settings

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

Description

The `metrocluster interconnect adapter modify` command enables you to modify settings of the MetroCluster interconnect adapter.

Parameters

- `node {<nodename>|local}` - Node Name (privilege: advanced)
  
  This parameter specifies the node name.

- `is-ood-enabled {true|false}` - Is Out-of-Order Delivery Enabled? (privilege: advanced)
  
  This parameter specifies the out-of-order delivery setting on the adapter.

Examples

The following example enables out-of-order delivery for the port 'fcvi_device_0' on the node 'clusA-01':

```
clusA::*> metrocluster interconnect adapter modify -node clusA-01 -adapter -port-name fcvi_device_0 -is-ood-enabled true
```

metrocluster interconnect adapter show

Display MetroCluster interconnect adapter information

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

Description

The `metrocluster interconnect adapter show` command displays interconnect adapter information for the nodes in a MetroCluster configuration.

This command displays the following details about the local node and the HA partner node:

- Node: This field specifies the name of the node in the cluster.
- Adapter Name: This field specifies the name of the interconnect adapter.
- Adapter Type: This field specifies the type of the interconnect adapter.
- Link Status: This field specifies the physical link status of the interconnect adapter.
- Is OOD Enabled: This field specifies the out-of-order delivery status of the interconnect adapter.
• IP Address: This field specifies the IP address assigned to the interconnect adapter.
• Port Number: This field specifies the port number of the interconnect 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.

| [-connectivity ] 
   Displays the connectivity information from all the interconnect adapters to the connected nodes.

| [-switch ] 
   Displays details of switches connected to all the interconnect adapters.

| [-connectivity-hidden ] (privilege: advanced) 
   Displays additional connectivity information (IP address, Area ID, Port ID) from all the interconnect adapters to the connected nodes.

| [-instance ] }
   If you specify the -instance parameter, the command displays detailed information about all fields.

[-node {<nodename>|local}] - Node Name 
   Displays information only about the interconnect adapters that are hosted by the specified node.

[-adapter <text>] - Adapter 
   Displays information only about the interconnect adapters that match the specified name.

[-port-name <text>] - Port Name 
   Displays information only about the interconnect adapters that host the specified port name.

[-type <text>] - Adapter Type 
   Displays information only about the interconnect adapters that match the specified adapter type.

[-physical-status <text>] - Physical Status 
   Displays information only about the interconnect adapters that match the specified physical status.

[-wwn <text>] - Adapter Port World Wide Name 
   Displays information only about the interconnect adapters that match the specified world wide name.

[-address <text>] - IP Address 
   Displays information only about the interconnect adapters that match the specified IP address.

[-firmware-version <text>] - Firmware Version 
   Displays information only about the interconnect adapters that match the specified firmware version.

[-link-speed <text>] - Link Speed 
   Displays information only about the interconnect adapters that match the specified link speed.
[-link-speed-neg-type <text>] - Link Speed Negotiation Type
Displays information only about the interconnect adapters that match the specified negotiated link speed type.

[-switch-name <text>] - Switch Name
Displays information only about the interconnect adapters that are connected to the specified switch.

[-switch-model <text>] - Switch Model
Displays information only about the interconnect adapters that are connected to the switch with the specified model.

[-switch-wwn <text>] - Switch WWName
Displays information only about the interconnect adapters that are connected to the switch with the specified world wide name.

[-switch-vendor <text>] - Switch Vendor
Displays information only about the interconnect adapters that are connected to the switch with the specified vendor.

[-switch-status <text>] - Switch Status
Displays information only about the interconnect adapters that are connected to the switch with the specified operational status.

[-switch-port-number <text>] - Switch Port Number
Displays information only about the interconnect adapters that are connected to the switch with the specified port number.

[-switch-port-wwpn <text>] - Switch Port WWPN
Displays information only about the interconnect adapters that are connected to the switch with the specified word wide port name.

[-remote-adapter-name-list <text>,...] - Remote Adapter Name List
Displays information only about the interconnect adapters that are connected to the specified remote adapters.

[-remote-adapter-wwn-list <text>,...] - Remote Adapter WWName List
Displays information only about the interconnect adapters that are connected to the remote adapters with the specified world wide names.

[-remote-adapter-address-list <text>,...] - Remote Adapter IP Address List
Displays information only about the interconnect adapters that are connected to the remote adapters with the specified IP addresses.

[-remote-adapter-port-id-list <Hex Integer>,...] - Remote Adapter Port ID List
Displays information only about the interconnect adapters that are connected to the remote adapters with the specified port IDs.

[-remote-adapter-domain-id-list <integer>,...] - Remote Adapter Domain ID List
Displays information only about the interconnect adapters that are connected to the remote adapters with the specified domain IDs.
[-remote-adapter-area-id-list <integer>,...] - Remote Adapter Area ID List
Displays information only about the interconnect adapters that are connected to the remote adapters with the specified Area IDs.

[-remote-partner-system-id-list <integer>,...] - Remote Partner System ID List
Displays information only about the interconnect adapters that are connected to the remote nodes with the specified System IDs.

[-remote-partner-name-list {<nodename>|local}] - Remote Partner Name List
Displays information only about the interconnect adapters that are connected to the specified remote nodes.

[-is-ood-enabled {true|false}] - Is Out-of-Order Delivery Enabled?
Displays information only about the interconnect adapters that match the specified out-of-order delivery setting.

Examples
The following example shows the output of the command during normal operation (neither cluster is in switchover state):

```
clusA::> metrocluster interconnect adapter show

<table>
<thead>
<tr>
<th>Link</th>
<th>Is OOD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Node</td>
<td>Adapter</td>
</tr>
<tr>
<td>Number</td>
<td>--------</td>
</tr>
<tr>
<td></td>
<td>--------</td>
</tr>
<tr>
<td></td>
<td>--------</td>
</tr>
<tr>
<td>clusA-01</td>
<td>cxgb3_0</td>
</tr>
<tr>
<td>clusA-01</td>
<td>cxgb3_0</td>
</tr>
<tr>
<td>clusA-01</td>
<td>fcvi_device_0</td>
</tr>
<tr>
<td>clusA-01</td>
<td>fcvi_device_1</td>
</tr>
<tr>
<td>clusA-02</td>
<td>cxgb3_0</td>
</tr>
<tr>
<td>clusA-02</td>
<td>cxgb3_0</td>
</tr>
<tr>
<td>clusA-02</td>
<td>fcvi_device_0</td>
</tr>
<tr>
<td>clusA-02</td>
<td>fcvi_device_1</td>
</tr>
</tbody>
</table>
```

The following example shows the output of the command after MetroCluster switchover is performed:
clusA::> metrocluster interconnect adapter show

<table>
<thead>
<tr>
<th>Node Number</th>
<th>Adapter</th>
<th>Type</th>
<th>Status</th>
<th>Enabled?</th>
<th>IP Address</th>
<th>Port</th>
</tr>
</thead>
<tbody>
<tr>
<td>clusA-01</td>
<td>cxgb3_0</td>
<td>iWARP</td>
<td>Up</td>
<td>false</td>
<td>10.0.1.1</td>
<td>c0a</td>
</tr>
<tr>
<td>clusA-01</td>
<td>cxgb3_0</td>
<td>iWARP</td>
<td>Down</td>
<td>false</td>
<td>10.0.2.1</td>
<td>c0b</td>
</tr>
<tr>
<td>clusA-01</td>
<td>fcvi_device_0</td>
<td>FC-VI</td>
<td>Down</td>
<td>false</td>
<td>1.0.0.1</td>
<td>1a</td>
</tr>
<tr>
<td>clusA-01</td>
<td>fcvi_device_1</td>
<td>FC-VI</td>
<td>Down</td>
<td>false</td>
<td>2.0.0.3</td>
<td>1b</td>
</tr>
<tr>
<td>clusA-02</td>
<td>cxgb3_0</td>
<td>iWARP</td>
<td>Up</td>
<td>false</td>
<td>10.0.1.2</td>
<td>c0a</td>
</tr>
<tr>
<td>clusA-02</td>
<td>cxgb3_0</td>
<td>iWARP</td>
<td>Down</td>
<td>false</td>
<td>10.0.2.2</td>
<td>c0b</td>
</tr>
<tr>
<td>clusA-02</td>
<td>fcvi_device_0</td>
<td>FC-VI</td>
<td>Down</td>
<td>false</td>
<td>1.0.1.1</td>
<td>1a</td>
</tr>
<tr>
<td>clusA-02</td>
<td>fcvi_device_1</td>
<td>FC-VI</td>
<td>Down</td>
<td>false</td>
<td>2.0.1.3</td>
<td>1b</td>
</tr>
</tbody>
</table>

The following example shows the output of the command with connectivity field during normal operation (neither cluster is in wswitchover state):

clusA::> metrocluster interconnect adapter show -connectivity -node local
- type FC-VI
Adapter Name: fcvi_device_0
  WWName: 21:00:00:24:ff:32:01:68
  PortNo: 1a
Remote Adapters:
Adapter Name Partner Node Name World Wide Name  PortId
------------- ----------------- ----------------------- -----
fcvi_device_0 clusA-01 21:00:00:24:ff:32:01:80 65536
fcvi_device_0 clusB-01 21:00:00:24:ff:32:01:54 131072
fcvi_device_0 clusB-02 21:00:00:24:ff:32:01:60 131328

Adapter Name: fcvi_device_1
  WWName: 21:00:00:24:ff:32:01:69
  PortNo: 1b
Remote Adapters:
Adapter Name Partner Node Name World Wide Name  PortId
------------- ----------------- ----------------------- -----
fcvi_device_1 clusA-01 21:00:00:24:ff:32:01:81 196608
fcvi_device_1 clusB-01 21:00:00:24:ff:32:01:55 262144
fcvi_device_1 clusB-02 21:00:00:24:ff:32:01:61 262400
The following example shows the output of the command with connectivity field after MetroCluster swithover is performed.

```bash
clusA::> metrocluster interconnect adapter show -connectivity -node local -type FC-VI
Adapter Name: fcvi_device_0
  WWName: 21:00:00:24:ff:32:01:68
  PortNo: 1a
Remote Adapters:
  Adapter Name Partner Node Name World Wide Name         PortId
  ------------ ----------------- ----------------------- ------
  fcvi_device_0     clusA-01          21:00:00:24:ff:32:01:80  65536

Adapter Name: fcvi_device_1
  WWName: 21:00:00:24:ff:32:01:69
  PortNo: 1b
Remote Adapters:
  Adapter Name Partner Node Name World Wide Name         PortId
  ------------ ----------------- ----------------------- ------
  fcvi_device_1     clusA-01          21:00:00:24:ff:32:01:81 196608
```

**metrocluster interconnect mirror show**

Display MetroCluster interconnect mirror information

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

**Description**

The `metrocluster interconnect mirror show` command displays NVRAM mirror information for the nodes configured in a MetroCluster.

This command displays the following details about the local node and the HA partner node:

- **Node:** This field specifies the name of the node in the cluster.
- **Partner Name:** This field specifies the name of the partner node.
- **Partner Type:** This field specifies the type of the partner.
- **Mirror Admin Status:** This field specifies the administrative status of the NVRAM mirror between partner nodes.
- **Mirror Oper Status:** This field specifies the operational status of the NVRAM mirror between partner nodes.
- **Adapter:** This field specifies the name of the interconnect adapter used for NVRAM mirroring.
- **Type:** This field specifies the type of the interconnect adapter used for NVRAM mirroring.
- **Status:** This field specifies the physical status of the interconnect adapter used for NVRAM mirroring.
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
If this parameter is specified, mirror details of the specified node are displayed.

[-partner-type {HA|DR|AUX}] - Partner Type
If this parameter is specified, mirror details of the specified partner type are displayed.

[-adapter <text>] - Adapter
If this parameter is specified, mirror details of the specified adapter are displayed.

[-type <text>] - Adapter Type
If this parameter is specified, mirror details of the specified adapter type are displayed.

[-status <text>] - Status
If this parameter is specified, mirror details of the adapter with the specified status are displayed.

[-mirror-oper-status {unknown|online|offline}] - Mirror Operational Status
If this parameter is specified, only mirror details with the specified operational status are displayed.

[-partner-name <text>] - Partner Name
If this parameter is specified, mirror details of the specified partner are displayed.

[-mirror-admin-status {enabled|disabled}] - Mirror Administrative Status
If this parameter is specified, only mirror details with the specified administrative status are displayed.

Examples

The following example shows the output of the command during normal operation (neither cluster is in switchover state):
The following example shows the output of the command after MetroCluster switchover is performed:
clusA::> metrocluster interconnect mirror show

<table>
<thead>
<tr>
<th>Mirror</th>
<th>Mirror</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partner</td>
<td>Admin</td>
</tr>
<tr>
<td>Node</td>
<td>Partner Name</td>
</tr>
<tr>
<td>----</td>
<td>-----------</td>
</tr>
<tr>
<td>clusA-01</td>
<td>clusA-02</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>clusB-01</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>clusA-02</td>
<td>clusA-01</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>clusB-02</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

metrocluster interconnect mirror multipath show

Display multipath information

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

Description

The metrocluster interconnect mirror multipath show command displays the NVRAM mirror multipath policy for the nodes configured in a MetroCluster.

This command displays the following details about the local node and the HA partner node:

- Node: This field specifies the name of the node in the cluster.
- Multipath Policy: This field specifies the multipath policy used for NVRAM mirroring.
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
If this parameter is specified, mirror details of the specified node are displayed.

{-multipath-policy {no-mp|static-map|dynamic-map|round-robin}} - Multipath Policy
If this parameter is specified, nodes with the specified multipath policy are displayed.

Examples
The following example shows the output of the command:

```
clusA::> metrocluster interconnect mirror multipath show
  Node            Multipath Policy
  --------------- -----------------
  clusA-1         static-map
  clusA-2         static-map
```