



# Configuring System-Level High Availability

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## Information About System-Level High Availability

## Configuring System-Level High Availability

## Changing the InterCloud Link High Availability Deployment Mode

The High Availability feature can be enabled on a previously deployed standalone InterCloud Link. In doing so, the previously standalone InterCloud Link is given the HA role primary and remains active after the feature is enabled. A standby InterCloud Link is created and paired with the existing InterCloud Link.



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**Caution**

HA to standalone deployment mode change is not supported in this release.

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## Procedure

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- Step 1** Login to the Cisco Prime Network Services Controller.
- Step 2** Navigate to the **InterCloud Management > InterCloud Link** .
- Step 3** Click on VPCs and select the InterCloud Link to be modified.
- Step 4** Check the **Enable HA** checkbox. In the Extend Network to Cloud wizard, enter the information to create the additional, standby InterCloud Link. See the *Cisco Prime Network Services Controller 3.0 User Guide* for more information.  
Once completed, the standby InterCloud Link will deploy and HA will be enabled.
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# High Availability Commands

Use one of the following commands to display High Availability related information or perform a switchover:

Command	Source	Purpose
<b>show intercloud redundancy configuration</b>	InterCloud Switch InterCloud Extender	Display the HA configuration and status of the local system and remote peers.
<b>show intercloud redundancy statistics heartbeat</b>	InterCloud Extender	Display handshake and heartbeat related statistics between ICX's in an HA deployment.
<b>show intercloud redundancy statistics platform</b>	InterCloud Switch InterCloud Extender	Display platform related statistic for a gateway.
<b>intercloud redundancy switchover</b>	Active InterCloud Extender (HA)	Initiate a switchover in HA deployment.
<b>show processes</b>	InterCloud Switch InterCloud Extender Cisco Nexus 1000V InterCloud VSM	Displays the state of all processes and the start count of all the processes.
<b>show module service-module</b>	Cisco Nexus 1000V InterCloud VSM	Displays information about available InterCloud Extender's and InterCloud Switches in the system.

### **show intercloud redundancy configuration**

```
switch# show intercloud redundancy config
```

```
Redundancy Manager Information:
```

```

Cluster Node Count: 3

Local Node:
state : Active
HA mode : High Availability
uuid : A65AD6DC-D80F-0D5D-3341-58AEA0D0938C
version : 521111
cluster_id : 4
priority : Secondary
type : InterCloud Extender
ipaddr [mgmt] : 10.193.73.171

Tunnel Peer:
state : Active
uuid : 92566D7A-E0BD-9977-84E9-78037EE4BC94
type : InterCloud Switch
ipaddr [public]: 107.21.132.239

HA Peer:
state : Standby
uuid : AC5A0B56-51CF-397A-7529-CC0920BC87A3
type : InterCloud Extender
ipaddr [mgmt] : 10.193.73.174

```

### show intercloud redundancy statistics heartbeat

```
switch# show intercloud redundancy statistics heartbeat
```

```
HA Manager Heartbeat Stats:
```

```
Heartbeat Frequency (s) : 5
Heartbeat Timeout (s) : 30
```

```
rx_handshake_pkts : 2
tx_handshake_pkts : 4
```

```
rx_heartbeat_pkts : 143
tx_heartbeat_pkts : 143
```

```
rx_drops_invalid_src_addr : 0
rx_drops_wrong_cluster : 0
rx_drops_queue_full : 0
rx_drops_not_ready : 0
rx_drops_wrong_version : 0
rx_unknown_pkts : 0
```

```
WAN Timeout (s) : 300
WAN HB Count : 0
```

### show intercloud redundancy statistics platform

```
switch# show intercloud redundancy statistics platform
```

```
HA Manager Platform Stats:
```

```
rx_cncl : 2
rx_cncl_inval : 0
tx_cncl : 2
tx_cncl_err : 0
```

```
rx_cnc_state_push_req : 0
rx_cnc_state_push_req_inval : 0
rx_cnc_state_push_rsp : 2
rx_cnc_state_push_rsp_inval : 0
tx_cnc_state_push_req : 2
tx_cnc_state_push_req_err : 0
tx_cnc_state_push_rsp : 0
tx_cnc_state_push_rsp_err : 0
```

```
tx_cnc_state_push_req_timeouts: 0
```

# High Availability Troubleshooting

## Configuring Redundancy Manager Event-Logs

The Redundancy Manager event-logs can be configured using the following command:

Command	Source	Purpose
<code>[ no ] event-log redundancy-mgr { trace   info   error } [ terminal ]</code>	InterCloud Switch InterCloud Extender	Configures the Redundancy Manager event logs.

There are three levels of event-logs: Trace, Info, and Error (most critical). Info and Error event logs are enabled by default.

The optional parameter **terminal** will display the event-logs in real time on the terminal.

### event-log redundancy-mgr info terminal

```
switch# event-log redundancy-mgr info terminal
switch# event-log redundancy-mgr error terminal

switch# Thu Jun 27 14:37:25 2013 90000 usec hamgr_config_cg(394):Received configuration
from PA
Thu Jun 27 14:37:25 2013 90000 usec hamgr_config_cg(410):Received cgu_info configuration
Thu Jun 27 14:37:25 2013 90000 usec hamgr_cginfo_to_nodeinfo(772):cgu_info: uuid
[AC5A0B56-51CF-397A-7529-CC0
920BC87A3], cluster_id [4], ha_role [1], opcode [1] , ip [10.193.73.174]
Thu Jun 27 14:37:25 2013 90000 usec hamgr_cginfo_process_action(538):Received action ADD
Thu Jun 27 14:37:25 2013 90000 usec hamgr_node_add(404):Using MGMT IP address from config
Thu Jun 27 14:37:25 2013 90000 usec hamgr_node_add(407):Local node configured successfully
Thu Jun 27 14:37:25 2013 90000 usec hamgr_pss_config_write(556):Writing pss config for info
type HAMGR_NODE_INFO_LOCAL
Thu Jun 27 14:37:25 2013 90000 usec hamgr_pss_config_write(585):node_config pss does not
exist, creating uri volatile:/dev/shm/hamgr_node_configs
Thu Jun 27 14:37:25 2013 90000 usec hamgr_sockets_update(230):Updating sockets if needed...
Thu Jun 27 14:37:25 2013 90000 usec hamgr_sockets_update(271):Sockets not enabled, tunnel
must be up
Thu Jun 27 14:37:25 2013 100000 usec hamgr_config_cg(394):Received configuration from PA
Thu Jun 27 14:37:25 2013 100000 usec hamgr_config_cg(436):Received peer_info configuration
Thu Jun 27 14:37:25 2013 100000 usec hamgr_peerinfo_to_nodeinfo(909):Printing peer_info
Thu Jun 27 14:37:25 2013 100000 usec hamgr_peerinfo_to_nodeinfo(911):peer_info : uuid :
A65AD6DC-D80F-0D5D-3341-58AEA0D0938C
Thu Jun 27 14:37:25 2013 100000 usec hamgr_peerinfo_to_nodeinfo(912):peer_info : ip_addr
(int) : 2873737482
Thu Jun 27 14:37:25 2013 100000 usec hamgr_peerinfo_to_nodeinfo(914):peer_info : ip_addr
(str) : 10.193.73.171
Thu Jun 27 14:37:25 2013 110000 usec hamgr_peerinfo_to_nodeinfo(915):peer_info : opcode :
1
Thu Jun 27 14:37:25 2013 110000 usec hamgr_cginfo_process_action(538):Received action ADD
Thu Jun 27 14:37:25 2013 110000 usec hamgr_node_list_add(744):Peer node added successfully
Thu Jun 27 14:37:25 2013 110000 usec hamgr_pss_config_write(556):Writing pss config for
info type HAMGR_NODE_INFO_PEER
```

### Displaying Redundancy Manager Event-Logs

The Redundancy Manager event-logs can be displayed using the following command:

Command	Source	Purpose
<b>show system internal event-log redundancy-mgr</b>	InterCloud Switch InterCloud Extender	Displays the Redundancy Manager event logs.



#### Note

Since event logs are stored in a ring buffer, older logs may be overwritten by newer logs.

### show system internal event-log redundancy-mgr

```
switch# show system internal event-log redundancy-mgr
```

```
1) Event:E_MTS_RX, length:60, at 100000 usecs after Thu Jun 27 07:42:27 2013
[REQ] Opc:MTS_OPC_SDWRAP_DEBUG_DUMP(1530), Id:0X00006803, Ret:SUCCESS
Src:0x00000101/2682, Dst:0x00000101/1240, Flags:None
HA_SEQNO:0X00000000, RRtoken:0x00006803, Sync:UNKNOWN, Payloadsize:216
Payload:
0x0000: 01 00 2f 74 6d 70 2f 64 62 67 64 75 6d 70 35 33
```

```
2) Event:E_MTS_RX, length:60, at 600000 usecs after Thu Jun 27 07:42:11 2013
[REQ] Opc:MTS_OPC_SDWRAP_DEBUG_DUMP(1530), Id:0X000060E6, Ret:SUCCESS
Src:0x00000101/2678, Dst:0x00000101/1240, Flags:None
HA_SEQNO:0X00000000, RRtoken:0x000060E6, Sync:UNKNOWN, Payloadsize:216
Payload:
0x0000: 01 00 2f 74 6d 70 2f 64 62 67 64 75 6d 70 35 33
```

## Feature History for System-Level High Availability

This table includes only the updates for those releases that have resulted in additions or changes to the feature.

Feature Name	Releases	Feature Information
System -Level High Availability	5.2(1)IC1(1.1)	This feature was introduced.

