



# Troubleshooting High Availability

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## Node States, Causes and Recommended Actions

Table 21-1 describes the node states, reasons, causes, and recommended actions for failed states.

**Table 21-1** Node High Availability states, causes and recommended actions

Node 1		Node 2		Cause/Recommended Actions
State	Reason	State	Reason	
Normal	Normal	Normal	Normal	High Availability is running on both nodes in the subcluster.  Subcluster is running normally (it is in non failover mode). The critical services on both nodes in the subcluster are running.
Failing Over	On Admin Request	Taking Over	On Admin Request	The administrator initiates a manual failover from node 1 to node 2. The manual failover is in progress.
Idle	On Admin Request	Running in Backup Mode	On Admin Request	The manual failover from node1 to node 2 (initiated by the administrator) is complete.
Taking Back	On Admin Request	Falling Back	On Admin Request	The administrator initiates a manual fallback from node 2 to node 1. The manual fallback is in progress.
Idle	Initialization	Running in Backup Mode	On Admin Request	The administrator restarts the SRM service on node 1 while node1 is in Idle state.
Idle	Initialization	Running in Backup Mode	Initialization	The administrator restarts both nodes in the subcluster, or restarts the SRM service on both nodes in the subcluster, while the subcluster was in manual failover mode (failover initiated by the administrator).
Idle	On Admin Request	Running in Backup Mode	Initialization	The administrator restarts the SRM service on node 2 while node 2 is running in backup mode, but before the heartbeat on node1 times out.

Table 21-1 Node High Availability states, causes and recommended actions (continued)

Node 1		Node 2		Cause/Recommended Actions
State	Reason	State	Reason	
Failing Over	On Admin Request	Taking Over	Initialization	The administrator restarts the SRM service on node 2 while node 2 is taking over, but before the heartbeat on node 1 times out.
Taking Back	Initialization	Falling Back	On Admin Request	The administrator restarts the SRM service on node 1 while taking back, but before the heartbeat on node 2 times out. After the taking back process is complete, both nodes are in Normal state.
Taking Back	Automatic Fallback	Falling Back	Automatic Fallback	Automatic Fallback has been initiated from node 2 to node 1 and is currently in progress. <b>Note:</b> This state applies to Cisco Unified Presence Release 8.6(4) and later only.
Failed Over	Initialization or Critical Services Down	Running in Backup Mode	Critical Service Down	Node 1 transitions to Failed Over state when: <ul style="list-style-type: none"> <li>- Critical service(s) come back up due to reboot of node 1, or</li> <li>- The administrator starts critical service(s) on node1 while node1 is in "Failed Over with Critical Services Not Running" state</li> </ul> When node1 transitions to Failed Over state the node is ready for the administrator to perform a manual fallback to restore the nodes in the subcluster to Normal state.
Failed Over with Critical Services not Running	Critical Service Down	Running in Backup Mode	Critical Service Down	A critical service is down on node 1. Cisco Unified Presence performs an automatic failover to node 2. <b>Recommended Actions:</b> <ol style="list-style-type: none"> <li>1. Check what critical services are down on node 1, and try to start these services manually.</li> <li>2. If the critical services on node 1 do not start, reboot node 1.</li> <li>3. After the reboot and when all the critical services are running, perform a manual fallback to restore the nodes in the subcluster to Normal state.</li> </ol>
Failed Over with Critical Services not Running	Database Failure	Running in Backup Mode	Database Failure	A database service is down on node 1. Cisco Unified Presence performs an automatic failover to node2. <b>Recommended Actions:</b> <ol style="list-style-type: none"> <li>1. Reboot Node 1.</li> <li>2. After the reboot and when all the critical services are running, perform a manual fallback to restore the nodes in the subcluster to Normal state.</li> </ol>

Table 21-1 Node High Availability states, causes and recommended actions (continued)

Node 1		Node 2		Cause/Recommended Actions
State	Reason	State	Reason	
Running in Failed Mode	Start of Critical Services Failed	Running in Failed Mode	Start of Critical Services Failed	<p>Critical services fail to start while a node in subcluster is taking back from the other node.</p> <p><b>Recommended Actions:</b> (on the node that is taking back)</p> <ol style="list-style-type: none"> <li>1. Check what critical services are down on the node. To start these services manually, choose <b>Recovery</b> on the subcluster details screen.</li> <li>2. If the critical services do not start, reboot the node.</li> <li>3. After the reboot and when all the critical services are running, perform a manual fallback to restore the nodes in the subcluster to Normal state.</li> </ol>
Running in Failed Mode	Critical Service Down	Running in Failed Mode	Critical Service Down	<p>Critical services go down while a node in subcluster is running in backup mode for the other node.</p> <p><b>Recommended Actions:</b></p> <ol style="list-style-type: none"> <li>1. Check what critical services are down on backup node. To start these services manually, choose <b>Recovery</b> on the subcluster details screen.</li> <li>2. If the critical services do not start, reboot the subcluster.</li> </ol>
<i>Node1 is down due to loss of network connectivity or the SRM service is not running.</i>		Running in Backup Mode	Peer Down	<p>Node2 has lost its heartbeat with node 1. Cisco Unified Presence performs an automatic failover to node 2.</p> <p><b>Recommended Action:</b></p> <p>(If node 1 is up)</p> <ol style="list-style-type: none"> <li>1. Check and repair the network connectivity between nodes in the subcluster. When you reestablish the network connection between the nodes, the node may go into a failed state. Choose <b>Recovery</b> on the subcluster details screen to restore the nodes in the subcluster to Normal state.</li> <li>2. Start the SRM service, and perform manual fallback to restore the nodes in the subcluster to Normal state.</li> </ol> <p>(If the node is down)</p> <ol style="list-style-type: none"> <li>1. Repair/Power up node1.</li> <li>2. When node is up and all critical services are running, perform manual fallback to restore the nodes in the subcluster to Normal state.</li> </ol>

Table 21-1 Node High Availability states, causes and recommended actions (continued)

Node 1		Node 2		Cause/Recommended Actions
State	Reason	State	Reason	
<i>Node1 is down (due to possible power down, hardware failure, shutdown, reboot)</i>		Running in Backup Mode	Peer Reboot	<p>Cisco Unified Presence performs an automatic failover to node 2 due to possible hardware failure/power down/restart /shutdown of Node 1.</p> <p><b>Recommended Action:</b></p> <ol style="list-style-type: none"> <li>1. Repair/Power up node 1.</li> <li>2. When node is up and all critical services are running, perform manual fallback to restore the nodes in the subcluster to Normal state.</li> </ol>
Failed Over with Critical Services not Running OR Failed Over	Initialization	Backup Mode	Peer Down During Initialization	<p>Node 2 does not see Node 1 during startup.</p> <p><b>Recommended Action:</b></p> <p>When node1 is up and all critical services are running, perform manual fallback to restore the nodes in the subcluster to Normal state.</p>
Running in Failed Mode	Cisco UP Server Recovery Manager Take Over Users Failed	Running in Failed Mode	Cisco UP Server Recovery Manager Take Over Users Failed	<p>User move fails during taking over process.</p> <p><b>Recommended Action:</b></p> <p>Possible database error. Choose <b>Recovery</b> on the subcluster details screen. If that doesn't resolve the issue, reboot the subcluster.</p>
Running in Failed Mode	Cisco UP Server Recovery Manager Take Back Users Failed	Running in Failed Mode	Cisco UP Server Recovery Manager Take Back Users Failed	<p>User move fails during falling back process.</p> <p><b>Recommended Action:</b></p> <p>Possible database error. Choose <b>Recovery</b> on the subcluster details screen. If that doesn't resolve the issue, reboot the subcluster.</p>
Running in Failed Mode	Unknown	Running in Failed Mode	Unknown	<p>The SRM on a node restarts while the SRM on the other node is in a failed state, or an internal system error occurs.</p> <p><b>Recommended Action:</b></p> <p>Choose <b>Recovery</b> on the subcluster details screen. If that does not resolve the issue, reboot the subcluster.</p>
Backup Activated	Auto Recover Database Failure	Failover Affected Services	Auto Recovery Database Failure	<p>The Database goes down on the backup node. The peer node is in failover mode and can take over for all users in the subcluster. Auto-recovery operation automatically occurs and all users are moved over to the primary node.</p>
Backup Activated	Auto Recover Database Failure	Failover Affected Services	Auto Recover Critical Service Down	<p>A critical service goes down on the backup node. The peer node is in failover mode and can take over for all users in the subcluster. Auto-recovery operation automatically occurs and all users are moved over to the peer node.</p>