

# CISCO Data Loss and Component Failover User Guide

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### Contents

- [1 Data Loss from PIM Failure and Reporting](#)
- [2 Other Possible Points of Failover](#)
- [3 Documents / Resources](#)
  - [3.1 References](#)
- [4 Related Posts](#)

## Data Loss from PIM Failure and Reporting

Here are some reporting considerations when you experience data loss from PIM failure.

The Peripheral Interface Manager (PIM) is the process on the Peripheral Gateway responsible for the actual connection to the peripheral and for normalizing the CTI interface on behalf of Webex CCE. If a PIM fails, if the link between the PIM and the ACD goes down, or if the ACD goes down, then all of the reporting data that has been gathered for the peripheral associated with the PIM is deleted. When the PIM failures occur, the peripheral is marked offline to the central controller.

The state of all agents on that peripheral is set to logged out and is reported as such to the Call Router.

The Call Router has no way of determining what was going on at the ACD while the PIM was out of contact with the ACD. When the PIM reconnects to the ACD, the ACD does not send the PIM sufficient information to allow the recording of accurate historical reporting data for the interval(s) in which the disconnect took place.



### Note

When the PIM reconnects to the ACD, most ACDs do pass information to the PIM about each agent's state and duration in that state. While this is not enough to allow accurate historical reporting data to be recorded, it is enough to allow the Call Router to make accurate call routing decisions.

When the PG is duplexed, either the Side A or Side B PIM is active for each peripheral. If one side loses connection, the other comes up and activates

## Other Possible Points of Failover

### Peripheral Gateway / CTI Manager Service Failover

If the agent's PG shuts down or the CTI Manager service shuts down, the agent is momentarily logged out. The agent might be logged in again automatically once the backup PG or CTI Manager comes into service. The agent Media Logout Status reports for the agent, agent skill group, agent team, and agent peripheral show a logout reason code of 50002.

**Table 1: Agent State Before and After Peripheral Gateway/CTI Manager Service Failover**

| Agent State at Fail-Over | Agent State after Fail-over                                                                  |
|--------------------------|----------------------------------------------------------------------------------------------|
| Available                | Available                                                                                    |
| Not Ready                | Not Ready                                                                                    |
| Wrap-up                  | Available, if in Available state before the call. Otherwise, the agent reverts to Not Ready. |

### Agent Desktop/Finesse Server Failover

If the agent desktop (Finesse desktop) shuts down or loses communication with Finesse server, or if the Finesse server shuts down, the agent is logged out of all MRD supported by the peripheral that has lost communication with the contact center software.

The agent is logged in again automatically when one of the following occurs:

- The agent desktop comes back up or resumes communication with the Finesse server
- The agent is connected to the backup Finesse server

The agent Media Logout Status reports for the agent, agent skill group, agent team, and agent peripheral show a logout reason code of 50002.

The state to which the agent reverts after failover depends on the agent's state when the failover occurred, as described in the following table.

**Table 2: Agent State Before and After Agent Desktop/Finesse Server Failover**

| Agent state at failover | Agent state after failover                                                                   |
|-------------------------|----------------------------------------------------------------------------------------------|
| Available               | Available                                                                                    |
| Not Ready               | Not Ready                                                                                    |
| Reserved                | Available                                                                                    |
| Wrap-up                 | Available, if in Available state before the call. Otherwise, the agent reverts to Not Ready. |

### Application Instance / MR PG Failover

If the connection between the Application Instance and MR PG shuts down or either component shuts down, the Central Controller discards all pending NEW\_TASK requests received from the application.

The Application Instance waits for the connection to be restored and continues to send messages regarding existing tasks and new tasks assigned by the Application Instance to the Agent PG CTI server. When the connection, MR PIM, or Application Instance is restored, the Application Instance resends any pending NEW\_TASK requests for which it has not received a response from the Central Controller. The tasks that are assigned to the agent by the Application Instance while the connection is down and completed before the connection is restored do not appear in reports.



#### Note

If the Application Instance shuts down, this situation also affects Agent PG CTI server connections.

If the connection between the MR PIM and the Central Controller shuts down or the Central Controller shuts down, the MR PIM sends a ROUTING\_DISABLED message to the Application Instance that causes the Application Instance to stop sending routing requests to the Central Controller. Any request sent while the connection is down is rejected with a NEW\_TASK\_FAILURE message. The Application Instance continues to send messages regarding existing tasks and new tasks assigned by the Application Instance to the Agent PG CTI server.

When the connection or Central Controller is restored, the MR PIM sends the Application Instance a ROUTING\_ENABLED message that causes the Application Instance to start sending routing requests to the Central Controller again. The tasks that are assigned to the agent by the Application Instance while the connection is down and completed before the connection is restored do not appear in reports. If the connection between the Central Controller and the MR PG fails, the CallRouter deletes all pending new tasks. When the connection is restored, the application connected to MR PG will resubmit all the tasks.



#### Note

If the Central Controller shuts down, this situation also affects the Application Instance/Agent PG CTI server interface.

### **Application Instance / Agent PG CTI Server / PIM Failover**

If the connection between the Application Instance and Agent PG CTI server shuts down or either component shuts down, agents stay logged in. Tasks remain for a time, based on the task life attribute of the MRD. If the task life expires while the connection is down, tasks are terminated with the disposition code of 42(DBCD\_APPLICATION\_PATH\_WENT\_DOWN).



#### Note

For the email MRD, agents are not logged out automatically when the Agent PG CTI server or connection to CTI server shuts down. Instead the email Manager continues to record agent state and assign tasks to agents. When the connection is restored, the email Managers ends the updated agents state information on the peripherals serviced by the Agent PG CTI server to the CTI server, which sends the information to Webex CCE software. The software attempts to recreate historical data and corrects current agent state. If the connection or Agent PG CTI server is down for more than the time limit configured for the MRD, reporting on tasks might be ended prematurely and restarted with the connection is reestablished

The application instance can assign tasks to agents while the connection or CTI server is down and, if the

connection to the MR PG is up, can continue to send routing requests to the central controller and receive routing instructions. However, no reporting data is stored for the tasks while the connection is down. Also, any tasks that are assigned and completed while the connection or CTI server is down do not appear in reports. If the connection between the Agent PG CTI server and the Call Router shuts down or if the Call Router shuts down, the application instance continues to send messages to the CTI server and agent activity is tracked. However, this information is not sent to the Call Router until the connection or the Call Router is restored, at which time the cached reporting information is sent to the central controller.



#### Note


If the Central Controller shuts down, this situation also affects the Application Instance/MR PG interface.

If the PIM shuts down, voice media routing is unavailable for agents associated with the PIM. However, the Central Controller can continue to assign non-voice tasks to agents associated with the PIM, and the CTI server can continue to process messages and requests about agents associated with the PIM for non-voice MRDs. When the connection is restored, voice media routing is available again.



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## Documents / Resources

|                                                                                     |                                                                                                                                                                                                            |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p><a href="#">CISCO Data Loss and Component Failover</a> [pdf] User Guide</p> <p>Data Loss and Component Failover, Loss and Component Failover, and Component Failover, C omponent Failover, Failover</p> |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## References

- [User Manual](#)