SIP Server HA Deployment Guide

Graceful Migration

4/7/2025

Graceful Migration

Business Continuity supports the graceful migration of operations from two active SIP Server Peer sites to a single site, in cases where one full site needs to be taken offline or powered off—for example, to perform maintenance on an entire data center. The goal of graceful migration is to gradually move all business activity to the second site with no lost calls. Agents must migrate to the second site.

To enable a graceful migration, you first configure your environment to stop sending calls to the SIP Server Peer site that you intend to shutdown. Using Genesys Administrator, you then initiate a graceful shutdown of the SIP Server itself, in which SIP Server stops accepting new calls while still allowing any ongoing calls to finish, ensuring that no calls are dropped when this SIP Server instance is finally stopped.

Assuming that Site 2 is going to be taken offline, the general procedure for graceful migration as follows:

1. Configure the media gateways to stop sending new calls to Site 2.

2. Configure the routing strategy to stop sending new calls to Site 2.

3. Initiate the graceful shutdown procedure for SIP Server. You can initiate this in one of two ways:

    - Using Genesys Administrator, initiate the graceful shutdown procedure from the SIP Server `Application` object.

    - Sending a `TPrivateRequest` with `serviceid=3019` from a T-Library client.

   Either of these actions starts the SIP Server graceful shutdown process.

During the graceful shutdown, SIP Server does the following:

- Rejects all new `INVITE` requests with a configurable error response (the **shutdown-sip-reject-code** option).

- Rejects all new calls initiated by T-Library requests.

- Terminates all nailed-up SIP connections automatically.

- Handles the agents depending on their state, as follows:

    - If agents are not on calls or not in the AfterCallWork (ACW) state, SIP Server forcibly logs them out. While graceful shutdown is in progress, new calls can no longer be distributed to the agents.

    - If agents are not on calls and are in the NotReady state with the ACW workmode, SIP Server waits for agents to complete the ACW and for the ACW timeout to expire, then sets the agents to Ready and logs them out.

    - If agents are on calls and have the ACW workmode, SIP Server waits for the end of their calls, sets the agents to NotReady and waits for the ACW timeout to expire, then sets agents to Ready and logs them out.

    - If agents are on calls and do not have the ACW workmode, SIP Server waits for the end of their calls and then logs them out.

- If agents have the untimed ACW period, SIP Server logs them out immediately.

    Note: When SIP Server logs agents out, it reports the ReasonCode `graceful_shutdown_logout` in AttributeExtensions of EventAgentLogout messages.

- If the agents use Genesys Interaction Workspace, they are logged in automatically at Site 1.

- When no calls remain, SIP Server starts the timeout (the **graceful-shutdown-sip-timeout** option) to retransmit BYE requests that were not confirmed with 200 OK responses.

- After the timeout expires and all agents are logged out, SIP Server (at Site 2) shuts down. SIP Server at Site 1 now handles all calls.