SIP Server HA Deployment Guide

HA Redundancy Types

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HA Redundancy Types

When you deploy a SIP Server HA configuration, you can choose a hot-standby or warm-standby redundancy type, both are supported for the Virtual IP interface–based HA configuration.

The redundancy-type selection is made in the Configuration Layer or Genesys Administrator when you configure the primary SIP Server.

When you deploy a hot-standby configuration, there are additional steps for enabling data synchronization between the primary and backup SIP Servers. Configuration steps for both hot- and warm-standby redundancy types are included in the deployment procedures that are provided in SIP Server HA Deployment.

Hot-Standby Redundancy Type

Genesys uses the expression *hot standby* to describe the high-availability configuration in which a backup-server application remains initialized, clients connect to both the primary and backup servers at startup, and the backup-server data is synchronized from the primary server.

Data synchronization and existing client connections to the backup server guarantee a higher degree of availability. Data synchronization includes information about calls, device states, monitoring subscriptions, and agent states.

SIP Server supports Hot Standby mode for established calls, calls that are in the ringing state, and calls that are parked on a Routing Point. All telephony functions can be performed on synchronized calls after a switchover.

While the hot-standby redundancy type provides a higher degree of availability than the warm-standby redundancy type, hot standby has limitations that include the following:

- Client requests that are sent during the time in which a failure occurs until switchover completes might be lost.
- IP requests that are sent by SIP endpoints during the failure and switchover might be lost.
- Some T-Library events might be duplicated or lost.
- The Client request `Reference ID` might be lost for client requests that are received just before a failure occurs and processed after the switchover completes.

Starting with version 8.1.102.58, primary and backup SIP Servers, after establishing the HA connection, will synchronize missing calls to the backup SIP Server. Some limitations apply. See Enhanced Procedure for Upgrading of SIP Server HA Pair for details.

When you deploy an HA configuration of the hot-standby redundancy type, Genesys recommends that Advanced Disconnect Detection Protocol (ADDP) be configured on the connection between the primary and backup SIP Servers. The primary SIP Server uses this connection to deliver synchronization updates.

Warm-Standby Redundancy Type

Genesys uses the expression *warm standby* to describe the high-availability configuration in which a backup-server application remains initialized and ready to take over the operations of the primary server.

Unlike the hot-standby redundancy type, there is no propagation or synchronization of information from the primary SIP Server to the backup SIP Server about calls, devices, monitoring subscriptions, and agent states.