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# SIP Server HA Deployment Guide

Enhanced Procedure for Upgrading SIP Server HA Pair

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# Enhanced Procedure for Upgrading SIP Server HA Pair

When a backup SIP Server is restarted or the HA connection between primary and backup was lost and then re-established, some calls would only exist on the primary SIP Server. Previously, SIP Server would not synchronize missing calls.

Starting with version 8.1.102.58, primary and backup SIP Servers, after establishing the HA connection, will exchange information about calls and trigger synchronization of missing calls to the backup SIP Server. The synchronization of new calls happens as soon as the HA connection is established.

Immediate switchover or failover after the HA connection is established (when either the primary or backup SIP Server reported readiness for a switchover equals 0) is considered as double failure.

## Readiness for Switchover or Upgrade

SIP Server reports readiness for a switchover or upgrade over its HTTP interface, as follows:

**http://<SIPSERVER\_HOST>:<HTTP\_PORT>/server?sipServer**

where <HTTP\_PORT> is defined by the **http-port** configuration option in the SIP Server application.

The primary SIP Server reports readiness for a switchover (set to **1**) when all of the following occur:

- The HA connection is established.
- 60 seconds passed after HA link connection is established.
- All non-multisite calls are synchronized.
- All multisite calls that existed before the HA connection is established are finished.

The backup SIP Server reports readiness for a switchover (set to **1**) when all of the following occur:

- The HA connection is established.
- All calls are synchronized.

SIP Server reports readiness for an upgrade (set to **1**), when:

- The primary SIP Server is never ready. It must be switched to backup mode.
- The backup SIP Server is always ready.

Follow this procedure for upgrading the SIP Server HA pair:

1. Check the SIP Server that is running in the backup role for readiness to upgrade (set to **1**) using the SIP Server web interface.
2. Stop the backup SIP Server. Install a new SIP Server version and start the SIP Server.

3. Check the primary and backup SIP Servers for readiness to a switchover using the SIP Server web interface. If both of them are set to **1**, initiate a switchover. The upgraded SIP Server is now primary.
4. Check the SIP Server that is running in the backup role for readiness to upgrade (set to **1**) using the SIP Server web interface.
5. Stop the backup SIP Server. Install a new SIP Server version and start the SIP Server.

### Configuration Option

#### ha-max-calls-sync-at-once

Section Name: **TServer**, Application level

Default Value: 500

Valid Values: 200-1000

Changes Take Effect: When the HA connection is established

Specifies the maximum number of calls that can be synchronized at once between the primary SIP Server and the backup SIP Server after the HA link connection is established, before waiting for 1 second to continue with synchronization. Only calls that are missing on the backup SIP Server are synchronized.