SIP Server HA Deployment Guide

HA Configuration Options

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Contents

HA Configuration Options

This topic describes configuration options that are specific to the high availability (HA) configuration. For Business Continuity-specific options, see the BC Configuration Options topic for details.

For a complete list of configuration options, refer to the *SIP Server Deployment Guide*.

backup-init-check

Setting: [TServer] section, Application level
Default Value: `false`
Valid Values: `true, false`
Changes Take Effect: After restart
Related Feature: Verifying Initialization Status in Backup SIP Servers

When set to `true`, SIP Server in Backup mode verifies that all internal components (T-Controller, Smart Proxy, Interaction Proxy, and Operational Information thread) are successfully initialized, and can provide the service when SIP Server switches to Primary mode. If some components fail to complete initialization, SIP Server reports the SERVICE_UNAVAILABLE status to LCA/SCS. The timeout for internal components to complete initialization is defined by the **backup-init-check-timeout** option.

backup-init-check-timeout

Setting: [TServer] section, Application level
Default Value: `60`
Valid Values: `15-3600`
Changes Take Effect: After restart
Related Feature: Verifying Initialization Status in Backup SIP Servers

Restricted option. Specifies the timeout, in seconds, during which SIP Server verifies that all internal components are successfully initialized in a scenario described by the backup-init-check option.

backup-sip-port-check

Setting: [TServer] section, Application level
Default Value: `true`
Valid Values: `true, false`
Changes Take Effect: After restart
Related Feature: Verifying Initialization Status in Backup SIP Servers

When set to `true`, SIP Server in Backup mode attempts to open a SIP port. If the port opens successfully, no SIP messages are processed, and SIP Server closes the port immediately. If the SIP port does not open, SIP Server reports the SERVICE_UNAVAILABLE status to LCA/SCS. This functionality is enabled only when **backup-init-check** is set to `true`. The functionality is disabled in the IP Address Takeover configuration, when the **control-vip-scripts** option is set to `true`.

control-vip-scripts

Setting: [TServer] section, Application level
Default Value: `false`
Valid Values: `true, false`
Changes Take Effect: After SIP Server restart

For the Hot Standby configuration. When set to `true`, SIP Server itself controls execution of Virtual IP address control scripts through the LCA component. The names of the Application objects representing scripts are configured using the **sip-vip-script-up** and **sip-vip-script-down** options. SIP Server instructs LCA to execute the **sip-vip-script-up** option when switching to the primary mode, or the **sip-vip-script-down** option when switching to the backup mode.

control-remote-vip-scripts

Setting: [TServer] section, Application level
Default Value: `true`
Valid Values: `true, false`
Changes Take Effect: After SIP Server restart

If only a single SIP Server is started out of the HA pair, the **sip-vip-script-down** option might need to be executed on the host where SIP Server is not started. When set to `true`, SIP Server connects to the remote LCA and executes the Virtual IP address control scripts on the remote host. This option applies only if the value of the **control-vip-scripts** option is set to `true`.
Note: This option is reserved by Genesys Engineering. Use it only when requested by Genesys Customer Care.

ha-max-calls-sync-at-once

Setting: [TServer] section, Application level
Default Value: `500`
Valid Values: `200-1000`
Changes Take Effect: When the HA connection is established
Related Feature: Enhanced Procedure for Upgrading of SIP Server HA Pair

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.

network-monitoring-timeout

Setting: [TServer] section, Application level
Default Value: `1`
Valid Values: `1-30`
Changes Take Effect: Immediately
Dependent Options: **sip-nic-address**, **tlib-nic-monitoring**, **sip-iptakeover-monitoring**
Related Feature: Network Status Monitoring

Defines the time interval (in seconds) for which SIP Server checks the network status of:

- The SIP NIC, if a dedicated NIC is used and the **sip-nic-address** option is configured.

- The T-Library NIC, if the value of the **tlib-nic-monitoring** option is set to `true`.
- The Virtual IP address for the IP Address Takeover configuration, if the value of the **sip-iptakeover-monitoring** option is set to `true`.

sip-error-codes-overflow

Setting: [TServer] section, Application level
Default Value: An empty string (or 503 error code)
Valid Values: A list of patterns for numeric error codes separated by a comma (,). Letter X in a pattern represents any digit. A single pattern must start with a digit and contain all 3 digits, and a pattern containing "X" should conclude the pattern's list, if present. Examples:

- `503`
- `503,504`
- `487,50X`
- `487,5XX`
- Patterns `5X3,XXX` are invalid

Changes Take Effect: For the next call
Related Feature: Enhanced disaster recovery solution for outbound calls

When, on an initial INVITE message, SIP Server receives a negative response containing the error code that matches the option value setting, SIP Server attempts to find an alternative trunk or softswitch to initiate a call.

sip-iptakeover-monitoring

Setting: [TServer] section, Application level
Default Value: `false`
Valid Values: `true, false`
Changes Take Effect: After SIP Server restart
Dependent Option: **sip-address**
Related Feature: Network Status Monitoring

For the Hot Standby IP Address Takeover configuration. When set to `true`, this option enables the Virtual IP address status monitoring. The Virtual IP address is taken from the **sip-address** option.

sip-nic-address

Setting: [TServer] section, Application level
Default Value: NULL
Valid Values: Any valid IP address or FQDN
Changes Take Effect: After SIP Server restart
Dependent Option: **sip-nic-monitoring**
Related Feature: Network Status Monitoring

This option can be set in deployments with dedicated SIP NICs where the SIP traffic is separated from the T-Library network traffic. This option specifies the IP address of the NIC that belong to the host where the SIP Server runs and is used for SIP traffic. This IP address must always be present on this

host regardless of the role of SIP Server (primary or backup). For the IP Address Takeover configuration, its unique IP address is associated with the SIP NIC, not the Virtual IP address.

sip-nic-monitoring

Setting: [TServer] section, Application level
Default Value: `false`
Valid Values: `true, false`
Changes Take Effect: After SIP Server restart
Dependent Option: **sip-nic-address**
Related Feature: Network Status Monitoring

When set to `true`, this option enables the SIP NIC IP address status monitoring. The SIP IP address is taken from the **sip-nic-address** option.

sip-pass-check

Setting: [TServer] section, Application level
Default Value: `false`
Valid Values: `true, false`
Changes Take Effect: Immediately
Related Feature: SIP Traffic Monitoring

When set to `true`, this option enables tracking of SIP messages that reach the primary SIP Server, including responses from SIP devices configured for Active Out-of-Service Detection.

The primary SIP Server reports the SERVICE_UNAVAILABLE status to LCA/SCS when all devices configured with the Active OOS check have failed and no other SIP messages have been received for a period of time. The period of time is calculated as the maximum of the sums of the **oos-check** and **oos-force** option values configured for service DNs (if **oos-force** is less than 5, 5 is used). When SIP Server reports the SERVICE_UNAVAILABLE status to LCA/SCS, SCS switches the primary SIP Server to the backup role, and SIP Server reports the SERVICE_RUNNING status to LCA/SCS. The backup SIP Server becomes the primary, and starts monitoring SIP traffic.

Note: If both the primary and backup servers receive no SIP traffic, a switchover would occur each time the effective out-of-service timeout expires. To prevent frequent switchovers in this case, SIP Server detects the “double switchover” condition and doubles the effective out-of-service timeout each time the double switchover happens, up to two times, or until one of the two servers detects SIP traffic. As soon as SIP traffic is detected, the server that detected the traffic remains the primary SIP Server and continues normal operation.

sip-vip-script-down

Setting: [TServer] section, Application level
Default Value: NULL
Valid Values: Valid name of the Application object
Changes Take Effect: After SIP Server restart
Dependent Option: **control-vip-scripts**

For the Hot Standby configuration, if the **control-vip-scripts** option is set to `true`. It specifies the name of the Application object representing the scripts that is used to disable the Virtual IP address (or the port for Windows NLB Cluster) when SIP Server is switching to backup mode. The script must

be configured as an Application object of type `Third Party Server`.

For example, for a primary SIP Server, you will set the value of this option to `SIP_SERVER_PRIMARY_VIP_DOWN`, and for a backup SIP Server, you will set the value of this option to `SIP_SERVER_BACKUP_VIP_DOWN`.

sip-vip-script-up

Setting: [TServer] section, Application level
Default Value: NULL
Valid Values: Valid name of the Application object
Changes Take Effect: After SIP Server restart
Dependent Option: **control-vip-scripts**

For the Hot Standby configuration, if the **control-vip-scripts** option is set to `true`. It specifies the name of the Application object representing the script that is used to enable the Virtual IP address (or the port for Windows NLB Cluster) when SIP Server is switching to primary mode. The script must be configured as an Application object of type `Third Party Server`.

For example, for a primary SIP Server, you will set the value of this option to `SIP_SERVER_PRIMARY_VIP_UP`, and for a backup SIP Server, you will set the value of this option to `SIP_SERVER_BACKUP_VIP_UP`.

switchover-on-msml-oos

Setting: [TServer] section, the SIP Server Application (in standalone mode) or the VOIP Service DN with **service-type**=`sip-cluster-nodes` (SIP Cluster mode)
Default Value: `false`
Valid Values: `true, false`
Changes Take Effect: For the next call
Related Feature: Enhanced HA Resilience for Network Disruptions

Specifies the SIP Server action in case of losing connectivity with MSML VOIP Service DNs. When set to `true`, in the case of strict matching only, VOIP Service DNs with the same or alternative geo-location are considered. After detecting that those DNs are out of service, SIP Server checks one more time that MSML VOIP Service DNs are unresponsive, before reporting the SERVICE_UNAVAILABLE status to LCA/SCS in order to trigger a switchover.

switchover-on-trunks-oos

Setting: [TServer] section, the SIP Server Application (in standalone mode) or the VOIP Service DN with **service-type**=`sip-cluster-nodes` (SIP Cluster mode)
Default Value: `false`
Valid Values: `true, false`
Changes Take Effect: For the next call
Related Feature: Enhanced HA Resilience for Network Disruptions

Specifies the SIP Server action in case of losing connectivity with Trunk DNs. When set to `true`, in the case of strict matching only, Trunk DNs with the same or alternative geo-location are considered. After detecting that those DNs are out of service, SIP Server checks one more time that Trunk DNs are unresponsive, before reporting the SERVICE_UNAVAILABLE status to LCA/SCS in order to trigger a switchover.

tlib-nic-monitoring

Setting: [TServer] section, Application level
Default Value: `false`
Valid Values: `true, false`
Changes Take Effect: After SIP Server restart
Related Feature: Network Status Monitoring

When set to `true`, this option enables T-Library NIC IP status monitoring. The T-Library IP address is taken from the Host object associated with the SIP Server application. The Host object name is used to resolve the T-Library NIC IP address.

vip-state-change-timeout

Setting: [TServer] section, Application level
Default Value: `10`
Valid Values: `3-60`
Changes Take Effect: Immediately

Defines the maximum time allotted (in seconds) for the Virtual IP control script to execute. If the script fails to change the Virtual IP state during this timeout, SIP Server executes the script again. After several unsuccessful attempts, SIP Server declares that the Virtual IP script failed. The same script is not executed after the timeout expires.