Outbound Contact Deployment Guide

Connection and Reconnection

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Contents

Outbound Contact components connect to servers to deliver and receive information about the contact center. OCS and CPD Server can be set up with the warm standby mode.

Note:	Currently, Outbound Contact components cannot be set up in cold standby or hot standby modes.

OCS has a warm standby mode to handle situations in which OCS stops working for any reason.

In Outbound Contact, the primary and backup OCS communicate through a direct TCP/IP connection. In the warm standby mode, a secondary OCS receives all of the same data about a dialing session/campaign group status (for example, `start, stop, load, unload`) as the primary OCS. If the primary OCS stops working for any reason, the secondary OCS takes over the operations of the primary OCS without interruption. All client applications are connected to the primary OCS.

For more information about the standby modes, refer to the Framework Deployment Guide.

OCS Connections

OCS has connections to these components:

- DB Server
- T-Server or SIP Server, see OCS and T-Server or SIP Server
- Stat Server, see OCS, Stat Server, and Reporting
- Configuration Server, see OCS and Configuration Server
- CPD Server, see OCS and CPD Server
- CPD Proxy Server (if used), see OCS and CPD Proxy Server
- Backup or primary OCS
- Interaction Server (if used), see OCS and Interaction Server
- OBN Manager (optional), see OCS and OBN Manager (Optional)

Using the `outbound_contact_server` option, you can set up special options for the Communication DN that OCS uses. The Communication DN communicates information about the status of dialing sessions/campaign groups (for example, `start, stop, load, unload`, and so on) between the backup and primary OCS as well as third-party applications, which can be used in place of OCM or Genesys Administrator.

OCS and DB Server

If the connection between OCS and DB Server is lost, OCS sends an error message. Depending on how long the loss of connection lasts, a message may display in real-time reporting and historical reporting to indicate that OCS is waiting for records.

Warm Standby

OCS supports DB Server in warm standby mode without manual intervention and without double dialing of records.

If the OCS connection to the primary DB Server is lost, the currently running dialing session for a campaign continues to dial calls until all records in the OCS buffer are depleted. OCS sends a `Waiting-for-Records` message to Stat Server, which causes the message to display also in CCPulse+. OCS then connects to the backup DB Server. The dialing session for a campaign continues to run after the switchover is complete. After switching to the backup DB Server, OCS retries the failed transactions from the transaction buffer. Double dials due to failed transactions are not induced by the switchover.

If the connection to the backup DB Server is lost, OCS will reconnect to the primary DB Server. OCS retries any failed transactions. During the switchover to the primary DB Server, OCS runs without manual intervention.

Because OCS periodically queries calling lists for the number of ready records and notifies Stat Server of the estimated time to complete the campaign calculation, this function may be interrupted during the loss of connection. However, OCS continues to send this information after the connection is reestablished.

No Standby

OCS tries to reconnect to DB Server without manual intervention and without double dialing of records. Failed transactions are retried.

OCS and T-Server or SIP Server

The OCS connection to T-Server or SIP Server is set up on the `Connections` list on the `Configuration` tab of the `OCS` Application object in Genesys Administrator.

Note:	Starting with release 7.5, the backup OCS application maintains a direct connection to the primary OCS application.

Hot Standby

T-Server can operate in hot standby mode; however, this mode is transparent to OCS. That is, although OCS is connected to T-Server, the switchover between primary and secondary T-Servers does not affect OCS call processing.

Warm Standby

OCS reconnects to T-Server without manual intervention and without double dialing of records.

OCS cannot send statistics during the switch to a backup server. OCS does not re-send the statistics after the reconnection; therefore, some campaign statistics might be lost.

Some calls are lost while OCS tries to reconnect to T-Server. According to an internal timer expiration, OCS is able to track the lost calls, and mark the call records with `stale` call result, which prevents double dialing of records.

If the OCS connection to the primary T-Server is lost, the currently running dialing session for a campaign pauses. OCS connects to the backup T-Server and then queries the backup T-Server for Queue, Agent, and Call Status. The dialing session for a campaign continues to run after the switchover is complete.

If the connection to the backup T-Server is lost, OCS reconnects to the primary T-Server.

ADDP

OCS supports Advanced Disconnect Detection Protocol (ADDP), which enables fast disconnect detection. Configure the connection protocols in the OCS application object (`Connections` section of the `Configuration` tab in Genesys Administrator).

The connection between OCS and T-Server is a passive connection; OCS receives information from T-Server and relies on TCP/IP timeouts to identify whether the disconnection might be too long. ADDP speeds up the detection of the disconnect.

If no warm standby mode is specified, OCS will keep trying to connect to the currently configured T-Server. The currently running dialing session for a campaign will be paused until connection is resumed.

OCS, Stat Server, and Reporting

OCS can now connect directly with Stat Server, and submit data required for statistical calculations for Stat Server extensions. OCS also communicates with Stat Server through a Communication DN. OCS can send statistics to multiple Stat Servers through one or more Communication DNs.

There is no warm standby or hot standby mode for Stat Server. Redundancy for Outbound Contact real-time reporting can be achieved by:

- OCS sending statistics to multiple Stat Servers running simultaneously.
- CCPulse+ reconnecting to a backup Stat Server when the primary is down.

If the OCS connection to Stat Server is lost, real-time reporting and data collection for historical reporting resume without manual intervention after Stat Server is running again. Note that real-time reporting and data collection for historical reporting is interrupted when Stat Server is down.

In a multi-site environment, OCS is able to identify the statistics for each T-Server and thus send statistics using the Communication DN registered with each T-Server. Redundancy for Outbound reporting is possible by setting up multiple Stat Servers running simultaneously.

OCS and Configuration Server

If the connection between OCS and Configuration Server is lost, OCS sends an error message to Management Layer and does the following:

- After waiting the length of time specified in the `Reconnect Timeout` parameter set in the application object, OCS tries to connect to a backup Configuration Server.
- If no backup Configuration Server exists, after the timeout it tries to reconnect to the primary Configuration Server.

OCS also supports Advanced Disconnect Detection Protocol (ADDP) to Configuration Server. To enable ADDP between this server and Configuration Server, add the Configuration Server Application (named `confserv`) to the `Connections` list on the `Configuration` tab of the OCS Application in Genesys Administrator, and specify the values in seconds for the connection protocol. For more information, refer to *Framework Genesys Administrator Help.*

OCS and CPD Server

OCS can connect to multiple CPD Servers. In the Outbound Contact Wizard, the association with CPD Server is set at the application level. To set it on the group level, use Genesys Administrator or Configuration Manager.

OCS also supports ADDP to CPD Server. To enable ADDP between OCS and CPD Server, add the CPD Server Application to the `Connections` list on the `Configuration` tab of the OCS Application in Genesys Administrator, and specify the values in seconds for the connection protocol. For more information, refer to Framework Genesys Administrator Help.

Warm Standby

OCS supports CPD Server in warm standby mode without manual intervention and without double dialing of records.

If OCS loses connection to CPD Server, OCS will send a message to Management Layer and a system error message to Stat Server for real-time and historical reporting.

If the OCS connection to the primary CPD Server is lost, the currently running dialing session for a campaign is paused. OCS then connects to the backup CPD Server and the dialing session for a campaign will continue to run after the switchover to the backup CPD Server is complete.

After switching over to the backup server, OCS does not retry the previous transactions handled by the disconnected CPD Server. Instead, call records in those transactions are marked with the `stale` call result when the OCS internal timer for those records expires. Double dialing of the same call record does not occur.

If the connection to a backup CPD Server is lost, OCS reconnects to the primary CPD Server without attempting to redial failed transactions.

No Backup

If there is no warm standby, OCS supports reconnection without manual intervention and without double dialing of records. OCS tries to connect to the currently configured CPD Server. The currently running dialing session for a campaign pauses until the connection is restored.

Some calls are lost while OCS tries to reconnect to CPD Server. OCS tracks lost calls according to the expiration of the internal timer for those records and marks the call records with the `stale` call result, which prevents double dialing of records.

OCS and CPD Proxy Server

OCS can connect to multiple CPD Proxy Servers. In the Outbound Contact Wizard, the association with CPD Proxy Server is set at the application level. To set it on the group level, use Genesys Administrator or Configuration Manager.

OCS also supports ADDP to CPD Proxy Server. CPD Proxy can also use ADDP to connect to CPD Servers.

Warm Standby

OCS supports CPD Proxy Server in warm standby mode without manual intervention and without double dialing of records.

If OCS loses connection to CPD Proxy Server, OCS will send a message to Management Layer and a system error message to Stat Server for real-time and historical reporting.

If the OCS connection to the primary CPD Server is lost, the currently running dialing session for a campaign is paused. OCS then connects to the backup CPD Proxy Server and the dialing session for a campaign will continue to run after the switchover to the backup CPD Server is complete.

After switching over to the backup server, OCS does not retry the previous transactions handled by the disconnected CPD Proxy Server. Instead, call records in those transactions are marked with the `stale` call result when the OCS internal timer for those records expires. Double dialing of the same call record does not occur.

If the connection to a backup CPD Proxy Server is lost, OCS reconnects to the primary CPD Proxy Server without attempting to redial failed transactions.

No Backup

If there is no warm standby, OCS supports reconnection without manual intervention and without double dialing of records. OCS tries to connect to the currently configured CPD Proxy Server. The currently running dialing session for a campaign pauses until the connection is restored.

Some calls are lost while OCS tries to reconnect to CPD Proxy Server. OCS tracks lost calls according to the expiration of the internal timer for those records and marks the call records with the `stale` call result, which prevents double dialing of records.

OCS and Interaction Server

For OCS to process requests and responses from Interaction Server, OCS must be a server for Interaction Server and must receive these responses on a special ESP-type port rather than its default listening port. This ESP PortID must be used instead of the default PortID, when configuring a connection to the OCS `Application` object on the `Configuration` tab of the Interaction Server `Application` object in Genesys Administrator. This makes OCS a server for Interaction Server and Interaction Server a client for OCS.

OCS and OBN Manager (Optional)

OCS uses the Outbound Notification Manager (OBN) application as a connector to GVP to request that GVP dial records. The OBN Manager GVP application should be created in Genesys Administrator or Configuration Manager to provide its host and port information to OCS. This application must be specified on the `Connections` list on the `Configuration` tab of the Campaign Group configuration object in Genesys Administrator to enable GVP integration. This configuration will enable basic connection capabilities.

If full connection abilities are required, including Advanced Disconnect Detection Protocol (ADDP),

then this application should also be present on the `Connections` list on the `Configuration` tab of the OCS application object in Genesys Administrator, where the ADDP connection protocol can be specified.

For more information about Outbound Contact and GVP integration, see Genesys Voice Platform. See also the *Genesys 8.0 Proactive Contact Solution Guide.*

OCS, Failover, Campaigns

If OCS is running dialing sessions for campaigns and then stops functioning due to software, hardware, or network issues, the campaigns and records associated with outbound calls are affected.

Note:	You can configure OCS to restart automatically if you have configured LCA, Solution Control Server, and Solution Control Interface accordingly.

Impact on Campaigns

When OCS stops functioning, dialing sessions/campaign groups will not be loaded and will not restart automatically even if OCS restarts.

If OCS is operating in the Warm Standby mode and running dialing sessions for campaigns, the failure of the primary OCS causes the backup OCS to continue running the dialing sessions for campaigns with a new set of available records, which must be retrieved from the database. The retrieval occurs immediately after the switchover to the backup OCS.

For Do Not Call records, when OCS switches from the backup server to the primary server, OCS rereads those records that were added after the Do Not Call list was initially read by OCS for all Tenants that have active/ running dialing sessions for campaigns and whose Do Not Call list(s) were imported. This synchronizes the Do Not Call list between the backup and primary OCS if the primary OCS updates the list after the backup reads it, due to the addition of new records to the Do Not Call list. No call requests will be created by OCS until the Do Not Call list table is completely read.

Note:	The primary and backup Outbound Contact Servers synchronize not only the state of the campaigns and sequences, but also the predictive algorithm information. The backup OCS is capable of taking over and continuing dialing as efficiently as the primary if a `Predictive` dialing mode is used.

Impact on Records and Calls

When a failure and switchover occurs, be aware that:

- Records in use by the primary OCS remain in the `retrieved` state in the database. These must be manually updated if you want those records to be in a final state or if you want the associated numbers to be dialed again when you run the dialing session for the campaign another time.
- The internal state of the records and associated outbound calls stored in the memory of the primary OCS are lost when it stopped functioning.
- Any calls or interactions (if using the `Push Preview` dialing mode) being processed by the OCS at the time of the failure continue to be queued, routed, established with an agent DN, transferred, and so on.

- As these calls are processed, however, the agents handling them cannot update the associated records because the records were lost when the primary OCS stopped functioning.

Impact on Connections for Genesys Administrator

Genesys Administrator connects to OCS only when some action for a Campaign Group is required. It attempts to connect to a backup server if no primary server can be connected.

If no connection with OCS can be established, Genesys Administrator makes associated its controls unavailable.

Impact on Connections for Outbound Contact Manager

When Outbound Contact Manager loses its connection to the primary OCS, OCM displays a dialog box that allows the user to retry the connection to the primary server or connect to the backup server.

Note:	Starting with release 7.5, OCM supports a silent reconnection.

This reconnection issue does not apply to other servers or dialers to which OCS connects (for example, CPD Server, T-Server, DB Server, and so on), because connections to them should already be specified in the backup OCS `Application` object. Agent Desktops are also not affected as they do not have a direct connection to OCS. They only need the new OCS DBID, which will be delivered to the Desktop with a record's attached data.

OCM/Genesys Administrator Connections

OCM/Genesys Administrator have connections to the following components:

- OCS
- DB Server
- Configuration Server

OCM/Genesys Administrator and OCS

OCM

OCM connects to one OCS at a time by prompting the user during login. OCM supports dynamic reconfiguration of all OCS Application objects listed on OCM's `Connections` tab. Multiple instances of OCM can be connected to one OCS concurrently. If multiple OCS Application objects are defined on the OCM Application object's `Connections` tab, the list of OCS Application objects is displayed for the user to select.

If the connection between OCM and OCS is lost, OCM prompts the user to reconnect or to select a backup OCS (if available).

Genesys Administrator

Genesys Administrator allows the user to select OCS any time an operation for a Campaign Group is required.

OCM/Genesys Administrator and DB Server

OCM and Genesys Administrator establish an active connection to the DB Server that is associated with the calling list on which the user is working.

If the original connection fails, OCM prompts the user to reconnect to the DB Server or to select a backup DB Server (if available).

CPD Server Connections

A CPD Server connects to one T-Server (and one switch) only.

In a multi-site/multi-switch environment, Outbound Contact needs at least one CPD Server per switch.

CPD Server and T-Server

The CPD Server connection to T-Server is set up on the `Connections` list on the `Configuration` tab of the CPD Server Application object.

Warm Standby

CPD Server with a T-Server in Warm Standby mode supports reconnection without manual intervention and without double dialing of records.

If CPD Server's connection to the primary T-Server is lost, the currently running dialing session for the campaign pauses. CPD Server connects to the backup T-Server. The currently running dialing session for the campaign continues to run after the switchover to the new server. Some calls might be lost in warm standby mode. According to an internal timer expiration, OCS tracks the lost call and marks the calls record as `stale` to prevent double dialing.

If the connection to the backup T-Server is lost, CPD Server reconnects to the primary T-Server. After switching over to the primary T-Server, CPD Server runs without manual intervention.

No Backup

If CPD Server loses its connection to a T-Server that is not in a standby mode, CPD Server tries to reconnect to the same T-Server. It reconnects without manual intervention and without double dialing of records. The currently running dialing session for the campaign pauses until the connection is restored.

Some calls might be lost while CPD Server is trying to reconnect to T-Server. OCS tracks the lost calls and marks the call record as `stale` to prevent double dialing.

CPD Proxy Server Connections

A CPD Proxy Server connects to several CPD Servers, which must be connected to the same switch only.

CPD Proxy Server and CPD Server(s)

The CPD Proxy Server connections to CPD Servers are set up on the `Connections` list on the `Configuration` tab of the CPD Proxy Server Application object.

Warm Standby

CPD Proxy Server with a CPD Server in Warm Standby mode supports reconnection without manual intervention and without double dialing of records. If CPD Proxy Server's connection to the primary CPD Server is lost, the currently running dialing session for the campaign slows down due to a decreasing of the number of available dialing resources. CPD Proxy Server connects to the backup CPD Server. After the switchover to the backup CPD Server is completed the currently running dialing session for the campaign speeds up due to an increasing of the available dialing resources. Some calls might be lost during reconnection in warm standby mode on CPD Server side. CPD Proxy Server reports to OCS about such calls as an Error to OCS. OCS tracks the lost call and marks the calls record accordingly to prevent double dialing.

If the connection to the backup CPD Server is lost, CPD Proxy Server reconnects to the primary CPD Server. After switching over to the primary CPD Server, CPD Proxy Server runs without manual intervention.

No Backup

If CPD Proxy Server loses its connection to CPD Server that is not in a standby mode, CPD Proxy Server tries to reconnect to the same CPD Server. It reconnects without manual intervention and without double dialing of records. The currently running dialing session for the campaign slows down until the connection is restored.

Some calls might be lost while CPD Proxy Server is trying to reconnect to CPD Server.

CPD Proxy Server reports to OCS about such calls as an Error to OCS. OCS tracks the lost calls and marks the calls record accordingly to prevent double dialing.

Transport Layer Security Connections

Outbound Contact Server, CPD Server, and CPD Proxy Server support Transport Layer Security (TLS) with any Genesys TLS-supporting client/server.

Outbound Contact Manager and the Outbound Contact Configuration Wizard do not support TLS.

Note:	If you are configuring TLS between OCS and DB Server, add a Database Access Point (DAP) to DB Server on the `Connections` list on the `Configuration` tab of the OCS `Application` object

	in Genesys Administrator. Genesys Administrator also supports TLS.

See the TLS section of the *Genesys Security Deployment Guide* for more information.