Outbound Contact Deployment Guide

Call Progress Detection Server

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Call Progress Detection Server is an optional component for switches that do not have Call Progress Detection (CPD) capability. This server uses a Dialogic board to perform CPD for outbound calls and, if configured, to record voice files. As the dialer, CPD Server interfaces with OCS and the Dialogic board.

Dialing Methods

The way in which outbound dialing is performed depends on the dialing method and equipment that you use. There are several ways to perform outbound dialing:

- No Call Progress Detection (CPD) Server required if
  - A switch already has call progress detection capability, or
  - SIP Server is used with GVP applications.
- Transfer modes—The dialing mode in which calls successfully placed and identified with a positive CPD are transferred from the dialing resource to the VDN (Vector DN) for distribution to agents.
- ASM (Active Switching Matrix mode) modes:
  - For the Dialogic boards, the board connects to the switch through an ISDN carrier. In this mode, outbound calls are a combination of the following:
    - An internal call from the board to the agent desktop (an *engaging* call).
    - An outbound call from the board to the public switched telephone network (PSTN).

CPD Server connects these two calls on the Dialogic board when it is time to establish a call between an agent and a dialed number. Therefore, this method requires twice as many Dialogic ports as Transfer mode requires.

Note:	ASM mode is the only supported dialing mode when using T-Server for Cisco Call Manager or Unified Communications Manager and CPD Server with Dialogic boards. This limited support is due to T-Server's inability to monitor CPD or IVR ports.

For more information on these dialing modes, see Dialing Modes.

Engaging Calls

An *engaging* call usually is an internal call dialed from the call-processing port (dialing modes that used in conjunction when using CPD server) or from the Trunk Group DN (dialing modes that used in conjunction when using VoIP environment) to the Voice Transfer Destination DN and is delivered to an agent from this DN. An agent answers this call, which makes the agent engaged—that is ready to be connected (bridged) to an outbound call with a customer.

The ASM mode provides the following functionality to enhance performance:

- Eliminates unacceptable delays between the time when a customer picks up the phone and when the call is connected to an agent.
- Avoids lack of support for call transfers.

- Eliminates force-tone problems in which a customer can hear a signal intended only for an agent — for example, when a signal alerts the agent that a call is transferred.

In the Predictive with seizing dialing mode, a call is dialed automatically, based on a prediction of agent availability; the agent is then *seized (engaged)* before the called party answers. There is no delay after the customer is connected. OCS includes a campaign-pacing engine with a Predictive dialing algorithm that initiates the record dialing. In the *Progressive with seizing dialing mode*, a call is dialed automatically when an agent is already on the line and ready to take the call. *Progressive with seizing* means Progressive dialing in ASM mode.

In both modes, the agent should be on the line *(engaged)* before the customer answers. The differences between these two dialing modes are as follows:

- In *Progressive with seizing* mode, the agent is already reserved for the call when it is dialed.
- In Predictive with seizing mode, the agent is *predicted* to be available when the dialer places the call.

Note:	In release 7.6.101 and higher, the predictive algorithm accounts for the average engaging call dialing duration (defined as the time between an agent going ready and becoming ASM Engaged when the engaging call is delivered to the agent) for a given campaign and uses this value when calculating dialing pacing.

Centralized CPD Server

Outbound Contact supports a centralized CPD Server.

A contact center that has a multi-site environment can use a single CPD Server at its central location. With a centralized CPD Server, a routing strategy at the central site can send calls and events to Routing Points that are distributed across the network.

For example, in a multi-site environment where a group of agents are logged into a switch, you can use a single CPD Server that is connected to any T-Server at that same site. The agents do not have to be logged in to the same switch to which the CPD Server is connected. With a centralized CPD Server, a routing strategy at the central site can send calls and events to Routing Points that are distributed across the network. For more information, see also Multi-Sites.

Sample Call Flow with Centralized CPD Server

The following is a sample call flow using a centralized CPD Server. In this example, Steps 1 through 7 occur at the central location in a wide-area network (WAN).

The OCS sends a dial request to the CPD Server. (Both the OCS and CPD Server are at the central location.)

CPD Server sends a dial request to its Dialogic board.

The Dialogic board dials the customer's number. A switch conveys the call to the customer, while the Dialogic board performs call-progress detection.

After receiving an Answer call result, the CPD Server transfers the call to a Routing Point.

A T-Server, that is monitoring the switch to which it is linked (by a CTI link), informs the Router about the call at the Routing Point.

The routing strategy at the central location determines how to route the call. In this example, the routing strategy determines that the call should be routed to an agent at an outlying site.

The Router sends the call to Inter Server Call Control (ISCC), an external routing feature of T-Server.

ISCC sends the call to a second switch that is being monitored by a second T-Server. The second switch relays the call to an ACD Queue for a group of agents.

In this step, the second switch, the T-Server that monitors it, and the group of agents associated with the ACD Queue, are all at an outlying location in the network.

Voice File Recordings

CPD Server is able to record files in a plain VOX format (PCM/8000Hz/8bps). It creates two voice files for each outbound call:

- File 1 contains the line recording for the call-progress detection stage.
- File 2 records the conversation between an agent and the called party if the call result is answer (ASM mode only).

Recording on Dialogic Ports

CPD Server records these voice files on the Dialogic ports used for outbound dialing. *Specific* ports are *not* dedicated for recording, but the *number* of ports to use for recording is configurable.

The option max-number-ports-to-record specifies the maximum number of agent ports on which CPD Server records at the same time. You configure this option in the CPD Server Application object in Genesys Administrator or Configuration Manager.

The cpd-recording option enables or disables the recording of File 1 only (call progress detection stage).

CPD Server counts the ports being recorded, and stops recording when the specified number of ports is engaged for this purpose. CPD Server will not record on another port until one is disengaged.

The number of times that the same call transfers from Agent DN to Agent DN does not increase the number of ports being used for the recording of that call. The call remains on the same port when it passes from agent to agent. This extended port usage for recording might necessitate the allocation of more Dialogic resources—that is, an increased number of ports to be used for outbound dialing in general.

For information about the max-number-ports-to-record and cpd-recording options, See CPD Server Options.

Voice File Names and Content

Voice file names have the format <Prefix>_<RecRef>_<PhoneNumber>_<Date>_<Time>_<AgentCustPortNames> where each of the variables in angle brackets is replaced by an alpha/numeric string. The following table lists and

describes each of these variables.

Information in File Names

Variable in File Name Structure	Description
<Prefix>	Prefix for file type
<RecRef>	Recording reference number
<PhoneNumber>	Phone number
<Date>	Date of the recording
<Time>	Starting time of the recording
<Agent/CustPortNames>	Agent Dialogic port name

<Prefix>

The prefix in the file name is set by the following CPD Server configuration options:

- cpd-file-name-prefix for call result (the default is cpd_).
- conversation-file-name-prefix for conversation (the default is conv_).

For more information about these options, See CPD Server Options.

<RecRef>

CPD Server assigns a recording reference number to each voice file as part of its name.

<Date>

The date is presented in the following format:

<Month (two digits)> <day (two digits)> <year (two digits)>

For example, 060703 represents June 7, 2003.

<Time>

Time is presented in this format:

<Hour (two digits)> <Minutes (two digits)> <seconds (two digits)>

For example, 111545 represents 11 hours, 15 minutes, 45 seconds.

The hour is presented in 24-hour format as shown in these examples:

- 6:00 AM is 060000.

- 6:00 PM is 180000.

Examples of File Names

The following are sample file names:

- Sample file name for a call result voice file:

Call_Result_5551212_060703_060000_dtiB1T1.vox

- Sample file name for a conversation voice file:

Conv_5551212_060703_060005_dtiB1T1_dtiB1T2.vox

Note:	The call result file is created for call-progress detection only, and the file name contains only one CPD port. A conversation file, which records an actual conversation between an agent and a customer, is recorded in ASM mode only and the file name contains two CPD ports.

Answering Machine Final Beep Detection

Starting in release 8.1.1, CPD Server can be configured to detect the final beep after an answering machine greeting before processing the call any further. This functionality is especially useful when a message should be recorded on the customer's Answering Machine device as a result of the outbound campaign contact. Beep detection ensures that the message begins playing (and being recorded by the Answering Machine) only after AM greeting is fully over. This ensures that a message is recorded on the AM in full, and no starting part of the message is lost.

This functionality is available only when CPD Server is used with Dialogic DM3 boards or HMP software.

The following configuration options are used to provision this feature:

- am-beep-detect--Enables or disables this feature.
- am-beep-detect-timeout--Defines the time that CPD Server waits for the final beep.
- am-beep-tone-<n>--Defines AM final beep tones. See AM-beep-tones Section.