



# Outbound Option Business Concepts

---

- [Overview, on page 1](#)
- [Outbound API, on page 4](#)
- [Dialing Modes, on page 5](#)
- [Callbacks, on page 6](#)
- [Relationships Between Outbound Option Components, on page 9](#)
- [Imports, on page 10](#)
- [Query Rules, on page 12](#)
- [Campaigns, on page 13](#)
- [Campaign Skill Groups, on page 16](#)
- [Customer Time Versus System Time, on page 17](#)
- [Call Progress Analysis \(Answering Machine Detection\), on page 18](#)
- [Two-Way Outbound Option Database Replication, on page 19](#)

## Overview

This section provides a high-level overview of automatic dialers and the Cisco Outbound Option solution.

## Automatic Dialers

Automatic dialers increase contact center efficiency because they save time, eliminate misdialing numbers, and make contact center agents more productive. By automatically dialing and screening for busy signals, no answer, and answering machines, dialers ensure that agents do not waste time on the mechanical tasks of placing a call. Only when the dialer reaches a live contact does the solution transfer the call to the next available agent.

## Cisco Outbound Solution

Cisco Unified Intelligent Contact Management Enterprise and Cisco Unified Contact Center Enterprise help companies distribute inbound calls to various termination points:

- Automatic call distributors (ACDs)
- Voice response unit (VRU) systems
- Home agents

The *Cisco Outbound Option* application, with its combination of outbound dialing modes, enables call centers to manage outbound calls. The ability for agents to handle both inbound and outbound contacts enables contact center resource optimization.

## Overview of Cisco Outbound Option

The Cisco Outbound Option application provides outbound dialing functionality along with the existing inbound capabilities of Cisco Unified Contact Center Enterprise (Unified CCE). This application enables the contact center to dial customer contacts and directly contacted customers to agents or VRUs.

With the Cisco Outbound Option, configure a contact center for automated outbound activities.

Enable the outbound option high availability to deploy a redundant pair of Campaign Managers. Combined with redundant SIP Dialers and bidirectional database replication, Outbound Option High Availability provides uninterrupted services.

## Outbound Option Features

### Unified CCE Compatible Dialer

You can implement Unified CCE in a single-site environment or integrated into a multisite contact center enterprise. Unified CCE includes intelligent call routing, ACD functionality, network-to-desktop computer telephony integration (CTI), VRU integration, call queuing, and consolidated reporting.

With Unified CCE integration, you place customer calls through the Cisco Voice Gateway using Unified CM for call control.

Outbound Option on Unified CCE provides a built-in, multisite outbound dialing solution.

### Campaign Management

Outbound Option supports advanced list management, which provides you with the following capabilities:

- You can assign customer records to multiple lists, which you can merge into a single campaign.
- You set up rules that decide when to call the various lists.
- You assign agents to campaigns using skill groups.

### Dedicated and Blended Dialing Modes

You assign agents to one of the following types:

#### Dedicated mode

Used for agents who only make calls for Outbound Option campaigns.

#### Blended mode

Enables agents to receive inbound calls and Outbound Option calls without switching between Inbound and Outbound skill groups. (In Blended mode, inbound calls receive precedence over Outbound Option calls.)

Outbound Option maximizes performance in both pure outbound and blended modes.

The outbound mode is a skill group attribute. You can control the outbound mode using administrative scripts.



---

**Note** The skill group mode variable is only a setting and has no impact on how the Router routes calls. For skill groups in Dedicated mode, create a corresponding routing script with an IF node to enforce the Dedicated mode. The IF node must state that, if the Outbound Control skill group setting is set to Dedicated, do not route inbound calls to that skill group.

---

## Call Progress Analysis (CPA)

Call Progress Analysis (CPA) uses a combination of call signaling and media stream analysis to differentiate various types of calls.

You can enable CPA in the **Outbound Option Campaign** dialog box. On the **Campaign Purpose** tab, check the **Call Progress Analysis** checkbox.

You can enable CPA for each campaign individually on the Dialer. To enable record CPA, check the **Record CPA** checkbox.



---

**Note** You must enable the Record CPA option for debugging purposes only.

---

The Dialer can record a maximum of 100 simultaneous CPA streams. The streams are stored in .wav format. By default, the system automatically purges old recording files when the total size of CPA files stored reaches 500 MB.

### Related Topics

[Call Progress Analysis \(CPA\)](#), on page 3  
[Create a Campaign](#)

## Transfer to VRU

The transfer to VRU feature provides Outbound Option with another outbound mode. In this mode, the Dialer transfers every customer call for a specific skill group to a service control-based VRU, instead of an agent. This feature enables a contact center to run unassisted outbound campaigns using prerecorded messages in the Unified IP-IVR and Unified CVP products.

### Related Topics

[Transfer to VRU Campaigns](#), on page 14

## Sequential Dialing

The sequential dialing feature enables you to associate up to ten phone numbers with a customer record.

### Related Topics

[Sequential Dialing](#), on page 14

## Cisco Unified CCE Agent Re-Skilling

Cisco Unified CCE agent re-skilling is an optional feature that enables supervisors to change the skill groups for their agents. Use the Unified CCE Web Administration application to change the skill group designations of agents on your team. You can also quickly view skill group members and details about individual agents

in this tool. Changes that you make to an agent's skill group membership take place immediately without requiring the agent to re-logout to the system.

#### Related Topics

[Agent Re-skilling](#)

## Abandoned and Retry Call Settings

The Campaign component contains fields to support abandoned and retry calls.

For more information on the abandoned and retry call settings, see the *Outbound Option online help*.

## Campaign Prefix Digits for Dialed Numbers

The **Campaign prefix digits** field on the **Campaign General** tab enables you to configure prefix digits for dialed numbers by campaign. If you configure a prefix, the dialer inserts those digits before the Dial prefix for all numbers dialed in a campaign. This prefix enables an administrator to create campaign-specific Unified CM translation patterns. You can use the translation patterns to tailor the Automatic Number Identification (ANI) seen by a customer. For example, customers for Campaign A see a caller ID of "1-800-333-4444," and customers for Campaign B see a caller ID of "1-800-555-1212."

#### Related Topics

[Create a Campaign](#)

## Outbound API

Outbound API allows you to use REST APIs to create, modify, and delete Outbound Option campaigns.

Outbound API provides a streamlined mechanism for creating campaigns with a single preconfigured query rule and import rule. As such, if you use the API to create a campaign, that campaign is not available in the Outbound Option Campaign Configuration tool. If a campaign was created with the API, you must use the API to view, edit, or delete it. If a campaign was created with the Outbound Option Campaign Configuration tool, you must use that tool to view, edit, or delete it.

Administrative scripts are not required for Outbound Option campaigns created with the Outbound API. If an administrative script is provided, the information in the script overrides the information defined in the API.

Outbound API consists of the following APIs:

- **Outbound Campaign API:** Use this API to define new Outbound Option campaigns, and to view, edit, or delete existing campaigns. You can also use this API to disable all campaigns at once (emergency stop).
- **Do Not Call API:** Use this API to set the Do Not Call (DNC) import rule configuration for Outbound Option. This prevents the Dialer from dialing the numbers on the DNC list.
- **Import API:** Use this API to import customer contact information for an Outbound Option campaign.
- **Time Zone API:** Use this API to list all available time zones and to get information for a specified time zone. You also use this API with the Outbound Campaign API to set the default time zone for an Outbound Option campaign.
- **Campaign Status API:** Use this API to get the real-time status of running Outbound Option campaigns.

- **Personal Callback (PCB) API:** Use this API to configure your Outbound Option campaign to handle personal callbacks. You can create personal callback records individually or in bulk. You can also use this API to update or delete personal callback records.

For more information about Outbound API, see the *Cisco Unified Contact Center Enterprise Developer Reference Guide* at <https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-programming-reference-guides-list.html>.

## Dialing Modes

Outbound Option supports various dialing modes, described in the following sections.



---

**Note** All dialing modes reserve an agent at the beginning of every Outbound Option call cycle by sending a reservation call to the agent.

---

## Predictive Dialing

In predictive dialing, the dialer determines the number of customers to dial per agent based on the number of lines available per agent and the configured maximum abandon rate. The agent must take the call if that agent is logged in to a campaign skill group.

A Predictive Dialer is designed to increase the resource utilization in a call center. It is designed to dial several customers per agent. After reaching a live contact, the Predictive Dialer transfers the customer to a live agent along with a screen pop to the agent's desktop. The Predictive Dialer determines the number of lines to dial per available agent based on the target abandoned percentage.

Outbound Option predictive dialing works by keeping outbound dialing at a level where the abandon rate is below the maximum allowed abandon rate. Each campaign is configured with a maximum allowed abandon rate. In Predictive mode, the dialer continuously increments the number of lines it dials per agent until the abandon rate approaches the configured maximum abandon rate. The dialer lowers the lines per agent until the abandon rate goes below the configured maximum. In this way, the dialer stays just below the configured maximum abandon rate. Under ideal circumstances, the dialer internally targets an abandon rate of 85% of the configured maximum abandon rate. Due to the random nature of outbound dialing, the actual attainable abandon rate at any point in time may vary for your dialer.

## Preview Dialing

Preview dialing reserves an agent before initiating an outbound call and presents the agent with a popup window. The agent can then Accept or Reject the call with the following results:

- **Accept:** The customer is dialed and transferred to the agent.
- **Reject:** The agent is released. The system then delivers another call to the agent, either another Preview outbound call, or a new inbound call.
- **Rejects-Close:** The agent is released and the record is closed so it is not called again. The system then delivers another call to the agent, either another Preview outbound call or a new inbound call.

## Direct Preview Dialing

The Direct Preview mode is similar to the Preview mode, except that the dialer automatically places the call from the agent's phone after the agent accepts. Because the call is initiated from the agent's phone, the agent hears the ringing, and there is no delay when the customer answers. However, in this mode, the agent must deal with answering machines and other results that the Dialer Call Progress Analysis (CPA) handles for other campaign dialing modes.




---

**Note**

- The CPA and the transfer to VRU features are not available while using Direct Preview Dialing mode.
  - A *zip tone* is a tone that announces incoming calls. There is no zip tone in Direct Preview mode.
  - If you select *personal callback* as the callback option for a Direct Preview mode campaign, a *personal callback* is dialed in Preview mode. The *personal callback* is processed like a call in the Preview mode.
- 

## Progressive Dialing

Progressive Dialing is similar to predictive dialing (see [Predictive Dialing, on page 5](#)). The only difference is that in Progressive Dialing mode, Outbound Option does not calculate the number of lines to dial per agent, but allows users to configure a fixed number of lines that will always be dialed per available agent.




---

**Note**

In the Outbound dialer log, the Progressive dialing mode is also logged as Predictive.

---

## Callbacks

When the system contacts a customer and transfers the call to an agent, the customer can request to be called back later. The agent enters the date and time that the customer wants a callback in the agent application to schedule the callback. There are two types of callbacks: regular callbacks and personal callbacks.




---

**Note**

The callback number can be different from the number originally dialed.

---

Depending on the Outbound Option campaign settings, you can schedule a regular callback or a personal callback.

## About Regular Callbacks

Any agent who is assigned to the campaign can handle regular callbacks.

Callbacks are handled in the same mode as the campaign type. If an agent schedules a callback for a predictive campaign, the callback for that campaign is handled in Predictive mode.

The campaign dialing times do not constrain the callback time. `CallbackTimeLimit` determines the time range when the callback can occur.

If the dialer cannot reach the customer, the callback time is rescheduled.

The CallbackTime limit might be exceeded if no agents are available. If the elapsed time exceeds the CallbackTimeLimit and RescheduleCallback is enabled, the record returns to the Pending state at TimeToResetDailyStats.

## About Personal Callbacks

The Outbound Option *personal callback* feature schedules a specific agent to handle a customer callback. The feature enables the customer to continue working with the same agent who spoke with them initially.

Callbacks on personal callbacks are handled in the associated campaign mode.

Only an agent who dealt with the original call can set a personal callback. The dialer offers the agent the personal callback using a mode similar to the Preview dialing mode.

This feature is similar to Preview mode in that an agent reservation occurs first. When the agent is reserved, they can either accept the customer call or reject it. Clicking **Close** sets the *BAResponse* variable to indicate a close operation. The record is not dialed again.



---

**Note** Personal callbacks are not dependent on a particular campaign, and do not require a running campaign when the call is placed. This feature enables personal callbacks to occur with active campaigns containing either predictive or preview skill groups. Agents can receive a personal callback request while logged in to any inbound, outbound, or blended skill group. The callback is linked to the agent ID. If the agent logs in with a different agent ID, they cannot receive the callback request. Only one dialer on a particular peripheral is assigned personal callback records.

---



---

**Note** When an agent is on PCB reservation call, the real time reporting shows the agent's status as Talking. This status is shown because the dialer reserves the agent and puts a virtual hold.

---

The Personal\_Callback\_List table maintains a list of the customer records scheduled to be called back by a specific agent. The Campaign Manager creates records in the Personal\_Callback\_List table when an agent schedules a personal callback.

You can use an Outbound API to insert customer records directly into the Personal\_Callback\_List table to support scheduling customer calls for a specific time. For information on Outbound APIs, see the *Cisco Unified Contact Center Enterprise Developer Reference* at <https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-programming-reference-guides-list.html>




---

**Note** When modifying the Personal\_Callback\_List table, be aware of the following restrictions:

- Applications that insert new records into this table must populate the InsertedIntoDBDateTime column with the current date and time. However, do not modify SentToDialerDateTime. This date and time is set by the Campaign Manager.
  - Do not close or delete Records when the Status is 'A'. Records that are pending can be marked as closed or deleted in a Campaign Dialing List if they are not in the Active state.
  - If Outbound Option High Availability is enabled, you must use the Personal\_Callback API to insert data into the Personal\_Callback\_List table.
- 

Personal callback supports three callback modes:

- Use Campaign DN
- Reschedule the personal callback to the same time the next business day.
- Abandon the personal callback.

The following actions can take place during a personal callback:

- If the customer is unreachable during the callback time, the call is rescheduled up to the maximum attempts or abandoned based on the configuration setup.
- If the dialer detects an answering machine response, the call is still transferred to the scheduled agent. The agent can leave a message or reschedule the callback for another convenient time.
- When the callback mode is set to Reschedule or Abandon:
  - If the agent is logged in at any point during the callback period, Outbound Option reserves the agent and places the callback.
  - If the agent is unavailable during the entire callback period, the personal callback fails. The call is rescheduled or abandoned based on the configuration setup.
- When the callback mode is set to Campaign DN:
  - If the agent is unavailable at the callback time, Outbound Option reserves another agent for the callback using the dialed number of the associated campaign skill group.
  - If an alternate agent is also unavailable from Campaign DN script, retry action is No Answer.

For more information, see Appendix F, "Personal\_Callback\_List Table".




---

**Note** The valid range for Callbacktime is from midnight, January 1, 1970 through December 31, 3000 Universal Coordinated Time (UTC). If Callbacktime is specified out of range then it is defaulted to NULL.

---

### Related Topics

[Personal\\_Callback\\_List Table](#)



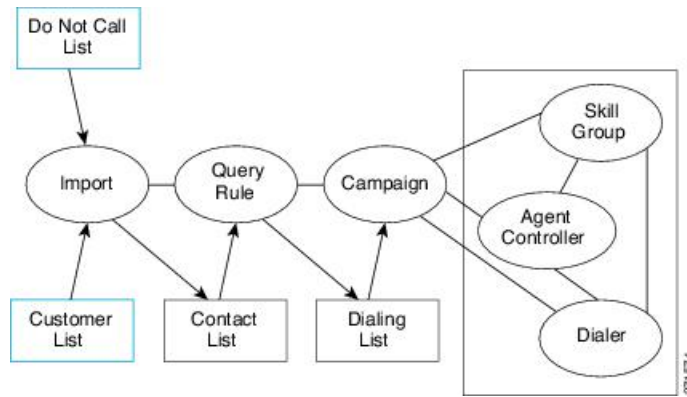
# Relationships Between Outbound Option Components

The following figure shows the component relationships within Outbound Option.



**Note** The following figure and table only describe Outbound Option components and concepts; they do not describe the Outbound Option process.

**Figure 1: Outbound Option Component Relationships**



**Note** You configure the blue-outlined items in this figure.

**Table 1: Outbound Option Component Concepts**

Concept	Description
Import	Defines when and how Outbound Option reads in user-generated lists of customers to call and not to call.
Query Rule	A set of criteria for selecting customer contacts from a customer list.
Campaign	<p>Create the agent skill groups and associate them with one or more dialing lists by assigning them to a campaign.</p> <p>With Outbound Option, you can configure these types of campaigns:</p> <ul style="list-style-type: none"> <li>• <b>Agent-based campaign</b>—In this campaign type, the Dialer transfers customer calls to an agent.</li> <li>• <b>Transfer to VRU campaign</b>—In this campaign type, the Dialer transfers customer calls to a service control-based VRU, instead of an agent. This feature enables a contact center to run unassisted outbound campaigns using pre-recorded messages in the VRU.</li> </ul>

Concept	Description
Skill Group	<p>Defines a selection of agents for a campaign. Each skill group can only have one campaign assignment, but a campaign can service multiple skill groups.</p> <p>Their skill group associations tie the agents to the campaign. Agents might belong to multiple skill groups and be part of multiple campaigns.</p> <p>You cannot associate a specific dialing list to a specific skill group unless there is only <i>one</i> dialing list and <i>one</i> skill group in the campaign.</p>
Agent Peripheral Gateway (PG)	A collection of agents and skill groups that are bound to a specific Unified CM. The dialer is bound to serve the group of agents in a specific call center site.
Dialer	The component that places Outbound Option calls. The dialer is associated with the agent peripheral at a call center site. Outbound Option sends calls to a dialer based on the campaign skill group relationship for the agent controller at that site. The dialer monitors campaign skill groups and is mapped to an agent peripheral.
Customer List	List of contact information that you provide during import. This is a user-configured item.
Do Not Call List	List of contact information that must not be included in the Dialing List. This is a user-configured item.
Contact List	An internal table, to which an import applies a query rule to determine which records to insert in the dialing list. There is one Contact List for each import.
Dialing List	<p>The list of customer contacts to which Outbound Option makes calls. There is one dialing list for each campaign query rule.</p> <p>Each campaign query rule combination results in a unique dialing list.</p> <p>Only one dialing list is active at a time for a particular campaign. Whenever a dialing list is active, the list is distributed to all skill groups in the campaign.</p> <p>You cannot map a specific dialing list to a specific skill group in a campaign.</p>

Using some of the preceding terms, the following example demonstrates what happens during an Outbound Option import:

1. Outbound Option imports your customer list into an internal table of customer contacts.
2. During the import process, a query rule filter selects and inserts data from the customer contacts into a dialing list.
3. Outbound Option reads in records from the dialing list for the campaign. Outbound Option sends the records to contact to dialers that are colocated on the peripherals for the associated skill groups.

## Imports

You can import a list of customer contact information and a list of customers to not call. You can configure Outbound Option to import both types of lists either by continuously polling or at scheduled intervals. Imported lists can replace existing lists or be appended to them.

## Do Not Call List Imports

Many countries require phone solicitors to maintain do not call lists. A Do Not Call (DNC) list ensures that your contact center does not call those customers who request that you do not contact them.

The Do Not Call list is a list of numbers that are identified as off-limits for outbound calling. This list can include numbers from a national DNC list and numbers from customers who have directly requested that you not contact them. Outbound Option does not dial entries in the Do Not Call list even if they are included in a contact list. The DNC list is shared across all campaigns and contains only phone numbers.

The campaign validates that a number in the dialing list is not in the Do Not Call list before sending it to a dialer. The solution checks the list at the last minute before placing the call. You can update a Do Not Call list while a campaign is running.

When you enable Outbound Option High Availability and import the Do Not Call list data to the active Campaign Manager side, it may some time for the import of data (from the Do\_Not\_Call table in the database) to complete. It may take additional time for the data to replicate to the standby side before the standby Campaign Manager is able to read the data. After Campaign Manager loads records, Do Not Call numbers are in effect. If the Campaign Manager has already sent a record to the dialer, an update to the list does not stop the dialer from placing the call.

The import process validates Do Not Call imports for improper formatting and field lengths. The import process flags invalid records and writes them to an error file.

### Related Topics

[Create Do Not Call List](#)

## Contact List Imports

The contact list import reads in a user-generated text file of customer contacts and associated phone numbers to an internal contact table. The import includes validation that flags improperly formatted records and writes them to an error file. The error files are in the `\la\logfiles` directory on the Side A Logger and `lb\logfiles` directory on the Side B Logger. The filenames are based on the Target Table Name, the date, and time of the import. Phone numbers without prefix matches aren't placed in a file.

You can add business-specific attributes to the contact list import file before the import occurs. You can use these attributes to segment a campaign with a query rule. In this way, a single import can contain records for multiple dialing lists for the same campaign. However, don't include the campaign customer contacts in multiple dialing lists because you might dial the same customer twice.

The U.S. area code mappings are available in the product. International customers must add their own data to the database.

The contact list import process assigns time zone and daylight saving time information to each contact by matching phone numbers to region prefix strings. If a phone number for a contact doesn't match a configured region prefix, the import uses the default time zone data for the campaign.



---

**Note** Things to know about campaign imports:

- Continuous imports of 10,000 records or more can cause the Campaign Manager to reach congestion control level which reduces system port throttle until it catches up with requested work in its queue.
  - Continuous imports for a given campaign can cause problems for the import process.
  - Overwrite imports are more intensive than append imports. We recommend that you run overwrite imports during off hours to clear out the day's activity, if possible.
  - The import fails if the import file has more than 10,000 errors.
  - Typically, the Campaign Manager sends dialing records to the dialer based on the DialingListID in an increasing order. However, the records imported on the Logger-B side will have a negative DialingListID, so the newer records are sent for dialing before the older records.
- 

## Import Rule Reports

The Do Not Call and Contact List imports use the same import rule reports. The reports display the following historical data:

- When an import occurred
- The number of imported records
- The number of invalid records due to length constraints or improper formatting

For contact list imports, the reports also list:

- The number of contacts that the import assigned to the default time zone
- The number of contacts that the import included in the dialing list after performing the query rule and format validation

### Related Topics

[Administrative and Supervisory Tasks](#)

## Query Rules

The query rule determines which customer contacts from the import to use for a campaign. You can associate multiple query rules with a campaign. You can use the query rules to segment a campaign for prioritization or other logical groupings. For example, if you want to dial certain customers between 9 AM and 11 AM, set up a query rule to only dial during those times. You then configure the campaign to switch to another query rule outside those times.

When dialing, only one query rule is active at any time for each campaign.

You can change query rules based on conditions such as configured time limit, several records attempted (referred to as penetration), current time, or current hit rate. The query rule automatically switches to another available query rule if the query rule runs out of numbers that can be dialed now.

# Campaigns

A campaign is made up of one or more dialing lists and one or more campaign skill groups. Outbound Option reads in contacts from the dialing list for the currently active query rule in the campaign. The Campaign Manager then directs dialers to place customer calls. The dialer then directs contacted customers to agents or a VRU in the campaign skill group.

In the Outbound Option Campaign component, you can:

- Create a campaign.
- Modify a campaign.
- Delete a campaign.

A campaign is either an agent-based campaign or a transfer to VRU campaign. A campaign cannot combine both types of calls.

## Related Topics

[Agent Campaigns](#), on page 13

[Create a Campaign](#)

[Transfer to VRU Campaigns](#), on page 14

# Agent Campaigns

In an agent campaign, Outbound Option dials customers and transfers them to agents in targeted skill groups. The dialer monitors for available agents. When the dialer finds an available agent, the peripheral gateway (PG) places a virtual reservation call to prevent the router from using that agent for other calls. The agent phone does not actually ring, but the agent desktop updates to show a call in progress. After the agent is reserved, the dialer places a call using the dialing mode for the campaign skill group. After the dialer identifies a customer, the call transfers to the agent. The agent should stay on the reservation call until a customer call is reached to avoid abandoned calls. Once a customer call is reached, the dialer disconnects the reservation call from the agent desktop.



---

**Note** An internal call can interrupt an agent on a reservation call. The dialer still sends the call to the agent. The call is dropped unless call waiting is enabled on the agent extension. You can avoid this scenario by giving the agent a second line for internal call use, and make sure the line is interruptible with call waiting enabled.

---

The agent can still mark the call as a wrong number, wrong party, or schedule a callback for later which does not close out the record. If more than one line is dialed for the agent, several customers might answer their calls. The first call is assigned to the agent. The dialer then determines what to do with the extra answered calls. If another agent is reserved in the campaign, the call transfers to that agent. Otherwise, the call may be transferred to a VRU to handle the abandoned call. If no VRU is configured, then the call drops with no treatment. Specify a VRU in the campaign's Abandon to IVR setting to avoid dialer abandons. The VRU can play prompts, collect data, and redirect the customer to a properly skilled agent in the contact center.

## CallerID Masking by Campaign

Outbound Option allows you to configure up to 15 prefix digits for dialed numbers in a campaign. If you configure a prefix, the dialer inserts the prefix before the Dial prefix for all numbers dialed in a campaign.

In a SIP Dialer deployment, the SIP Dialer uses the SIP message to make outbound calls directly to the gateway. The SIP interface allows the SIP Dialer to set the Automatic Number Identification (ANI) directly.

## Transfer to VRU Campaigns

A transfer to VRU campaign, also known as an unattended or unassisted campaign, can send both live customer and answering machine calls to VRUs for customer treatment. This customer treatment includes playing prompts, collecting data from the customer, and redirecting the call to appropriate agents in the contact center.

The configuration allocates the maximum VRU ports to use for transfer to VRU campaigns. The campaign attempts to keep them busy within the dialing constraints.

An unattended campaign can use either Progressive or Predictive modes. You can play a different prompt for a live customer or for an answering machine.




---

**Note** You cannot use the transfer to VRU feature in the Direct Preview mode or the regular Preview modes.

---

## Dialing Order

A contact can have several numbers configured (on the Call Target tab in the Campaign configuration). The campaign dials each number for the contact once, in the configured order. The campaign can then retry the numbers.

For more information, see Configuration of Campaigns and Imports chapter.

## Sequential Dialing

The sequential dialing feature enables you to associate up to ten phone numbers with each customer record. You can configure two time periods, called “zones,” to call the customers for each campaign. Each time period (zone) lists which of the ten phone numbers to call during that time. You can call a phone number during either zone or both zones.




---

**Note** Customers are dialed based on the time zone of the first phone that is configured on this tab. The time zone is based on the prefix of the phone number and the region prefix configuration. If two phone numbers for the same customer have different time zones, the time zone for the first phone number in the list sets the times for calling both numbers.

---

## Contact Priority for Callbacks, Retries, and Pending Contacts

The contact priority order is as follows:

- Top priority is given to customers who requested *callbacks*. This priority ensures that the customers are called at the requested time.

- *Retries* get second priority. After all the numbers for the contact are tried once, the system can retry a contact if some of their numbers had an appropriate call result.
- *Pending* contacts get third priority. A customer record is pending until all of its eligible phone numbers are tried once.



---

**Note** You can change the default priority order by changing the PendingOverRetryEnabled registry setting to 1 in the Campaign Manager. This setting ensures that all numbers and records are tried once before retries are attempted.

---

#### Related Topics

[Registry Settings](#)

## Campaign Reports

The query rule call activity and pending record reports are available as campaign roll-ups for multiple query rules in a campaign.

There are also consolidated reports, that blend campaign call activity reporting information with skill group performance reports for a clear overview of the business activity. Because the consolidated reports mix data from different reporting engines, the reports have a few caveats. The reports include descriptions of these caveats. These reports provide a rough overview of agent activity, average time between calls, abandon rate, and so on.

#### Related Topics

[Administrative and Supervisory Tasks](#)

## Campaign Query Rule Reports

There are two general categories of campaign query rule reports:

- Reports that show the number of records closed, in Pending state, and the total records in the query rule's dialing list.
- Reports that provide different views into the call result activity.

## Transfer to VRU Reports

The campaign and query rule call activity reports display call activity for calls that are not transferred to a VRU. The campaign and query rule activity reports also count calls that are transferred to a VRU, but those reports do not show what happens after the call is sent to the VRU. If calls are queued and transferred back to an agent, the calls are treated as new inbound calls in the reports.

## Call Type Reports

The call type is a Unified CCE concept that maps a route point dialed number to a routing script. The call type is also a useful reporting object to describe all calls that traversed a specific routing script. The call type applies primarily to inbound traffic in the call center. The dialer does not use the routing script when placing outbound calls. However, the Outbound Option does use routing scripts to reserve agents and to transfer calls to the VRU. So, the call type can provide some insight into how calls are routed.

# Campaign Skill Groups

A campaign skill group describes the campaign resource pool and the information for managing the campaign. In deployments with multiple sites that have different hours and different equipment, you have different skill groups for each site. Dialing Mode is a skill group attribute that enables you to open and close skill groups at different times for shared campaigns.

The dialer uses campaign skill groups to monitor resource availability. In agent campaigns, the dialer looks at the number of available agents. In Transfer to VRU campaigns, the dialer monitors the number of calls in queue for each campaign skill group. The dialer ensures that no skill group exceeds its quota of configured VRU ports.

You associate each dialer with a peripheral (PG). The dialer monitors the skill groups on its own peripheral for resource availability and requests records for the appropriate campaigns.

The dialer only places calls for agents or VRUs that are located on its PG.



---

**Note** Multiple dialers can serve one campaign if skill groups from each dialer's PG are assigned to the campaign. This assignment enables campaigns to be site-specific or shared across the enterprise, depending on the configuration.

---

## Smaller Skill Groups

Predictive mode campaigns are more efficient when there are more agents or VRU ports in a campaign skill group. The dialer adjusts its dialing rate based on the abandon rate. The more frequently calls are placed, the more often the dialer can adjust the dialing rate. The dialer cannot make accurate adjustments frequently enough when there are fewer than 10 agents in the campaign.

## Blended Campaigns/Skill Groups

In blended campaigns, agents take inbound calls and outbound calls at the same time. The inbound program can use the same or a different skill group as the outbound campaign skill group. You can set up the campaign skill group to use a percentage of active agents and to reserve the rest for inbound calls. If an inbound customer is in queue, blended agents are not reserved for the campaign. These mechanisms result in the inbound calls generally receiving priority.

An agent on an outbound reservation call is not interrupted with a routed inbound call. An agent reservation call lasts until one of the following conditions occurs:

- The agent closes the reservation call.
- The campaign closes out for that skill group.
- The reservation times out.

An internal call can interrupt an agent on a reservation call. This interruption generally causes the reservation call to drop. Because the dialer is dialing customers for that agent during a reservation call, the interruption can also result in abandoned calls if no agents are available.





---

**Note** The configuration of blended agent with multiple skill groups per campaign is not supported in Preview/Direct Preview dialing.

---

## Agents Skilled for Multiple Active Campaigns

You can skills agents for multiple active campaigns. Multiple campaigns cannot place simultaneous reservations on the same available agent.

For example, assume that you have an agent in three active campaign skill groups. That agent becomes available in all three skill groups at the same time. The dialer that monitors the skill groups for available agents sends up three reservation requests, one for each campaign skill group. The first campaign skill group in the dialer memory gets priority over the other requests. Over time, this situation results in an imbalance of agents between skill groups.

To work around this issue, you can queue reservation calls in a similar way to personal callbacks. This workaround services reservation requests in the second and third campaign skill groups first the next time an agent becomes available. This method evenly distributes calls across the active campaigns when agents are skilled in multiple campaigns.

### Related Topics

[Configuration of Campaigns and Imports](#)

## Campaign Skill Group Reports

Skill Group reports provide information about agent activity for outbound and inbound agents.

### Related Topics

[Administrative and Supervisory Tasks](#)

## Blended Campaign Skill Group Reports

If you use the same skill group for both inbound and outbound, then the campaign consolidated reports can provide a consolidated overview of business activity for both inbound and outbound calls.

## Customer Time Versus System Time

This section describes when Outbound Option activities use the *customer time zone* rather than the *system time*.

## Customer Time



---

**Note** The Outbound Option uses area code prefixes to determine the time zone. With cell phones or VoIP phones, the area code might not correspond to the actual time zone where the call is received.

---

A campaign can include customers across multiple time zones, as long as the time zones follow the same rules for when daylight saving time changes.

Unified CCE determines the time zone offset of each contact with a configurable *region prefix database*. The database contains area code prefixes, assigned time zone offsets, and a daylight saving time flag. The Outbound Option import uses this database to associate time zone offsets with customers. When the campaign searches for records in the active query rule's dialing list, the search considers the time zone offset when choosing contacts. This approach does not account for daylight saving time changes from time zone to time zone. Those changes are managed at the campaign level, so that campaigns take into account when each time zone changes over to daylight saving time.

For example, North America has time zone regions that do not observe daylight saving time, or that switch over on different days. A campaign that dials Houston, Texas and Mexico City, Mexico must account for these locations changing over to daylight saving time on different days.

If a contact's number does not match any of the configured region prefixes, then the campaign uses its default time zone offset. If all the customers are in one time zone, then you do not need the region prefix information.

Outbound Option receives its list of daylight saving zones from Microsoft Windows. Ensure that all Outbound Option components run on the same version of Windows as the Logger and AW VMs to keep the time zone information in synch.

## System Time

The system time is based on the Central Controller's time. System time is used in scheduled imports and in the query rule *time of day* for switching contact lists.

## Call Progress Analysis (Answering Machine Detection)

Call Progress Analysis (CPA) uses call signaling and media stream analysis to differentiate types of calls. CPA can detect the following:

- Fax or modem detection looks for specific tones in the media stream.
- Voice detection looks in the media stream for alternate voice and silence patterns after the call connects.
- Answering Machine Detection (AMD) uses media stream analysis to look for a longer voice stream with minimal silence periods. AMD can also use terminating tone detection.
- Operator Intercept relies on call signaling network identification. This method does not analyze the media stream looking for specific tri-tones.



**Note** CPA creates a delay before the call is transferred to an agent. Some countries require customer calls to be transferred to an agent in a certain amount of time. In those cases, you may not be able to use CPA.

Because virtual CUBE does not have the Digital Signal Processors (DSP) that a physical CUBE has, it cannot support CPA. Add a dedicated physical outbound gateway to support CPA.

### Answering Machine Detection

Enable Answering Machine Detection on a campaign-by-campaign basis, depending upon the requirements of the campaign or the purpose of the call.



---

**Note** Enable IP AMD when using CPA. If you do not enable IP AMD, the SIP dialer instructs the gateway to transfer the call to an agent without waiting for detection.

---

AMD uses speech patterns and silence between voice patterns to differentiate a live voice from an answering machine recording and background noise. There are parameters in the Outbound Option Campaign Configuration component that modify the amount of silence or the expected time of greeting. Accuracy levels depend on such factors as the campaign list quality and the phone number types.

## Two-Way Outbound Option Database Replication

If you choose to enable Outbound Option, you can also enable Outbound Option High Availability. Outbound Option High Availability supports two-way replication between the Outbound Option database on Logger Side A and the Outbound Option database on Logger Side B.

You create an Outbound Option database on Side A and Side B either by:

- Using the ICMDBA tool (if you haven't set up Outbound Option at all).
- Backing up the Outbound Option database on Logger Side A and restoring it to Logger Side B (if you have already set up Outbound Option on Side A).

You then use Web Setup to configure the Loggers to support Outbound Option and Outbound Option High Availability.

### Related Topics

[Configure the Logger for Outbound Option](#)

[Upgrade Outbound Option for High Availability in an Existing Deployment](#)

