Wave
Survey Application
Guide

Release 4.5

May 2014

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What's new in this version

REVISED FOR INITIAL WAVE 4.5 VERSION (MARCH 2014)

- Wave 4.5 includes two additional licensed Neospeech Text-To-Speech voices. To use the new voices UK English "Bridget" and Spanish "Violeta", obtain and install General HotFix 1061. See "Installing NeoSpeech TTS licensed voices" on page 2-3.
- Section "Editing the sample connector file" on page 4-4 has been updated. The maximum length of the data in any field is now 498 characters. Voice Server no longer needs to be reset if the maximum number of characters is exceeded.
- For all Scheduled and Recurring campaigns, the Remarks field now displays the "Time to next run" for the campaign. See "Launching the campaign" on page 4-18.
- The Answers Detail, Results Details, and Summary Report now show the Run Start, the date and time when the run began. See "Reporting on campaign results" on page 5-3.
- The CampaignClient and CampaignServer log files are now written to a subfolder of the previous location. See "Viewing log files" on page 6-3.
- Two new logs are now available, CampaignClient00.svclog and CampaignServer00.svclog. See "Viewing log files" on page 6-3
- Throughout this guide, cross-references to other manuals now point to WaveHelp topics. To launch WaveHelp, click the Help icon located at the top of the Global Administrator Management Console.

REVISED MAY 2014

- Expanded section "Phone number format", describing how Wave follows the Outbound Routing rules set up for the System Ports access profile when placing a call to a number specified in the "CallNumber" field in the input CSV file. If the number is not being dialed correctly, enter the *exact* digits to be dialed into the "CallNumber" field. See page 4-5.

For details on everything that's new in Wave 4.5, see the *Wave 4.5 Release Notes*.

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Introducing the Wave Survey Application

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Overview

You use the Wave Survey Application to develop customized outbound calling campaigns.

Outbound calling campaigns are used in a variety of industries for business-to-business campaigns, business-to-consumer campaigns, public service campaigns, and so forth. You can use the Survey Application to create customized outbound calling campaigns in the following ways:

- Customer follow-on surveys
- Outbound event marketing
- Outbound messaging that does not require customer feedback, for example automated sales outreach

The Survey Application can be an effective productivity tool to make your business more efficient, as well as a cost-effective solution when compared to out-sourcing similar services. The Survey Application is a potent marketing tool for businesses already using Wave, allowing you to contact customers, gather information, and improve customer service and feedback to enhance customer satisfaction.

Features and benefits

The Survey Application includes the following:

- Easy-to-use interface means that customized campaigns can be developed and run in-house.
- Included text-to-speech (TTS) engine automatically converts text and variables to audio prompts during campaign calls.
- Caller ID on campaign calls can come from a familiar local number.
- Campaigns can be personalized using information in your customer database.
- Pre-record your own voice if you want, or have your prompts professionally recorded.
- Collect live comments from current and potential customers.
- Included reports help you analyze campaign results.

About the Wave Survey Application and Voice Server

The Survey Application leverages Voice Server, the interactive voice response (IVR) engine built onto the Wave platform and included with Wave. The Survey Application and Voice Server are separately-licensed Wave components.

- The **Survey Application license** is included with Wave 4.0 or higher.
- One **Voice Server license** is included with Wave 4.0 or higher. You can purchase additional licenses to support more simultaneous calls. See "Configuring the Survey Application" on page 2-5 for details about the types of Voice Server licenses that are available.

This guide describes how to install and configure the Survey Application and use it to develop, test, and deploy custom calling campaigns.

Outbound calling campaign terminology

The following terms are used throughout this guide:

Campaign. A set of outbound calls with a specific delivery message or messages. Each campaign is associated with a call list of numbers to call, and a schedule.

Call flow. The sequence and content of the prompts and messages played during each campaign call, as well as the gathering and processing of callee responses.

Callee. A single call destination, typically a person at a specific phone number. Each callee may have multiple listed phone numbers (for example home, mobile, work) but the campaign will only try to contact a callee at one of those numbers that you specify.

Call list. A collection of callees and their associated phone numbers that is used during a campaign.

Connector file. The call list used with custom campaigns created using the Survey Application must be a comma-separated values (CSV) file. The required connector file format is described in Chapter 4.

Prompt. A voice message played to a callee. You can define a prompt that introduces the campaign and asks the callee if he or she wishes to continue, one or more questions or informational messages, and a closing prompt that thanks the callee, provides a follow-up action, and so forth. You can use pre-recorded prompts, or use the text-to-speech (TTS) engine included with the Survey Application to automatically convert a typed text prompt or prompt variable to an audio prompt during a campaign call.

Retry. If a campaign call is not answered, you can specify the number of retries to attempt and the time interval between each retry.

Schedule. A schedule defines the dates and times when a campaign's calls will be placed.

Installing and Configuring the Survey Application

Chapter Contents

Requirements

The Wave Survey Application requires the following:

- **Platform requirements:**
  - Wave 4.0 or higher
  - Voice Server 3.0 or higher
- **Required HotFix requirements:**
  - General HotFix 1024. Installs Microsoft Enterprise Library 5.0 to support the Survey Application user interface. GHF 1024 is included with the Wave Subscription Upgrade.
- **Optional HotFix requirements:**

  The following GHFs install NeoSpeech text-to-speech (TTS) licensed voices. Due to size constraints, licensed voices are distributed via GHFs. They are not included in the Wave Subscription Upgrade and must be obtained and installed separately.

  - General HotFix 1048. Installs the U. S. English voices “Paul” and “Kate”. These voices are supported on Wave 4.0/Voice Server 3.0 or higher.
  - General HotFix 1061. Installs the licensed voices UK English “Bridget” and Spanish “Violeta”. These voices are supported on Wave 4.5/Voice Server 3.1 or higher.

  See “Installing NeoSpeech TTS licensed voices” on page 2-3 for more information.

- **License requirements:**

  You use the same licenses for Voice Server 3.0 and 3.1.

  - **Voice Server 3.0 license**—Required to run and program Voice Server. The following two types are available—you can only install one type or the other. If you need more ports, you can obtain and activate additional Voice Server licenses of the same type.
    - VW-VS3-TTS-L Voice Server 3.0 (with NeoSpeech TTS)—Allows a maximum of 6 ports to use the NeoSpeech TTS engine, according to Vertical's licensing agreement with NeoSpeech.
    - VW-VS3-L Voice Server 3.0 (without TTS)—Supports up to 48 Voice Server ports, but does not support the NeoSpeech TTS engine. Use this license if you do not need the NeoSpeech voices.
  - **Survey Application license**—Required to run, develop, and manage custom survey campaigns. This license is included with Wave 4.0 or higher.

Installing Voice Server and the Survey Application

The Wave 4.5 Subscription Upgrade is distributed via a multi-CAB file that automatically installs all of the following:

- Wave 4.5
- Voice Server 3.1
- Survey Application 1.0
- Appointment Reminder Application for CSV File 1.0, another Wave Outbound IVR application. For more information, see the *Wave 4.5 Appointment Reminder for CVS File Guide*)
- GFH 1024. See "Requirements" on page 2-1.

The components are installed in the following locations:

```
C:\Program Files\CMS\VoiceServer
C:\Program Files\CMS\VoiceServer\Applications\Customer Survey
C:\Program Files\CMS\VoiceServer\Applications\CSVReminder
```

Installing NeoSpeech TTS licensed voices

- You need to install NeoSpeech TTS licensed voices *only* if:
    - You plan to use the voices for text prompts or prompt variables. For more about prompt options, see “About prompts” on page 4-1.

      - or -

    - You are *upgrading* to Wave 4.0 or higher from an earlier version. (GHFs 1048 and 1061 are installed automatically on a *new* Wave Server or when you use a Wave System Recovery USB Flash Drive to *reset* a Wave Server to factory default settings.)
        - A Wave 4.0 System Recovery USB Flash Drive includes GHF 1048.
        - A Wave 4.5 System Recovery USB Flash Drive includes GHFs 1048 and 1061.
- You do *not* need to install NeoSpeech TTS licensed voices if:
    - You will exclusively use recorded audio files for prompts. You can record your own prompts or have them professionally recorded.

      - or -

    - You will use the default Microsoft voice (“Microsoft Sam”) or another purchased Microsoft voice for text prompts or prompt variables.

Installation steps

To install Voice Server components

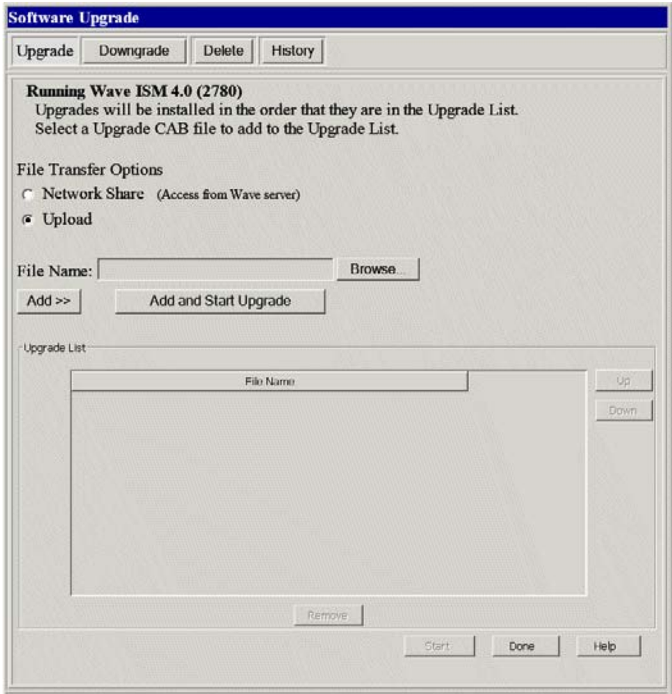
1 Install the Wave 4.5 Subscription Upgrade. For details, see the *Wave 4.5 Release Notes*. The components installed via the Subscription Upgrade are listed on page 2-2.

To install Neospeech TTS voices

2 **Optionally, if you need to install a General HotFix to support NeoSpeech TTS voices:** In the Global Administrator Management Console, click the Software Upgrade icon, located in the General Administration section.

Click

3 Click **Upgrade**, if it is not already selected.



4 Click **Upload**.

5 Click **Browse** and navigate to the GHF 1048 CAB file location. The CAB filenames are:

GHF_99_99_0_1048_1231.CAB

GHF_99_99_0_1061_1268.CAB

6 Click **Add** to add the first CAB file to the Upgrade List.

7 Click **Start**.

8 When you are prompted to confirm that you want to proceed with the upgrade, click **OK**.

When you start an upgrade, the SNMP Alarm panel pops up and you can monitor the progress of your upgrade. If you have a browser pop-up blocker on your system, the SNMP Alarm panel is blocked and doesn't come up. You can usually configure these blockers to allow pop-ups from specific domains and IP addresses.

Wait for the “Vertical Wave upgrade completed” message in the SNMP alarm window. Then, close the SNMP Alarms window.

9 If necessary, click **Done** to close the Software Upgrade applet and then exit the Global Administrator Management Console.

10 When the software upgrade is complete and the Wave Server is accessible, log on to the Global Administrator Management Console again and check the Software Version applet to confirm that the GHF(s) were installed successfully.

To activate required licenses

11 Obtain and activate the required licenses on the Wave Server. See “License requirements:” on page 2-2.

For details about Wave licensing, launch WaveHelp in the Global Administrator Management Console. Expand the Contents pane and then choose **Entering and Activating Wave Licenses**.

Configuring the Survey Application

After installing Voice Server and the Survey Application, make the following configuration changes:

- **Allocate outbound IVR resources**.
- **Specify the number of simultaneous outbound calls** that you want the campaign to handle.
- **Select the TTS voice to use to generate prompts**, if you are using text prompts or prompt variables.

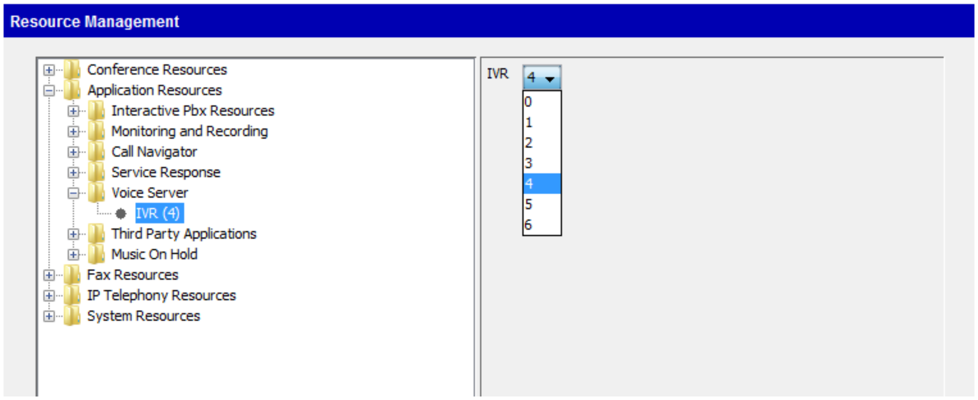
To allocate outbound IVR resources

1 Click the Applications tab in the Global Administrator Management Console.

Click

2 Click Resource Management, located in the PBX Administration section.

3 Expand the left pane as shown below, and then set **IVR** to a non-zero value. This determines how many campaign calls can be handled concurrently.



The number of available IVR ports displayed here depends on the ports provided by the number and type of Voice Server licenses installed on the Wave Server, as described on page 2-5.

4 Save your change. Since changes to the number of IVR ports will not take effect until the next time that Voice Server restarts, you will be prompted to restart now.

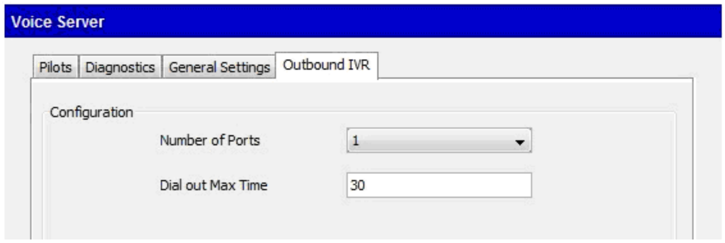
To specify the number of simultaneous outbound calls

Click

5 Click Voice Server, located in the Outbound Voice Applications section. The Voice Server dialog opens.

6 On the Outbound IVR tab, specify the following:

- **Number of Ports**. Set to the number of simultaneous outbound calls you want the campaign to handle. (Be aware that setting this field to the maximum number available may prevent other IVR applications from being able to accept or make calls.)

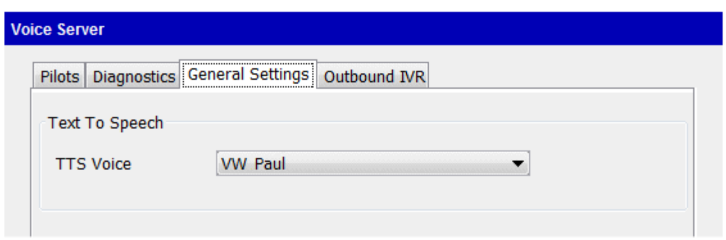


Note: The number of available ports here reflects the number of IVR ports you specified in step .

- **Dial out Max Time**. Specifies how long to ring a number before that call attempt is considered a failure and a retry is scheduled, if you set up retries as part of creating a campaign. This value appears in reports and logs, for example “Failed to pick up within 00 min 30 sec”.

To specify the TTS voice to use to generate prompts

7 **If you are using text prompts or prompt variables:** On the General Settings tab, select the voice to use to generate prompts from the **TTS Voice** drop-down list. If you installed one or more General HotFixes to support Neospeech TTS licensed voices, the included voices are listed. Otherwise, only “Microsoft Sam” and any other installed Microsoft voices are listed.



8 Save your changes.

Using the Survey Application

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About Survey Application user accounts

In order for a Wave user to run the Survey Application, a user account needs to be set up via Wave Password Administration in the Global Administrator Management Console.

You can either set up an individual account for each user, or add each user as a member of a Windows Active Directory domain group that has access permission to run the Survey Application.

For more information about setting up Active Directory-integrated users in Wave, launch WaveHelp in the Global Administrator Management Console. Expand the Contents pane and then choose **Before You Begin > Adding accounts and passwords**.

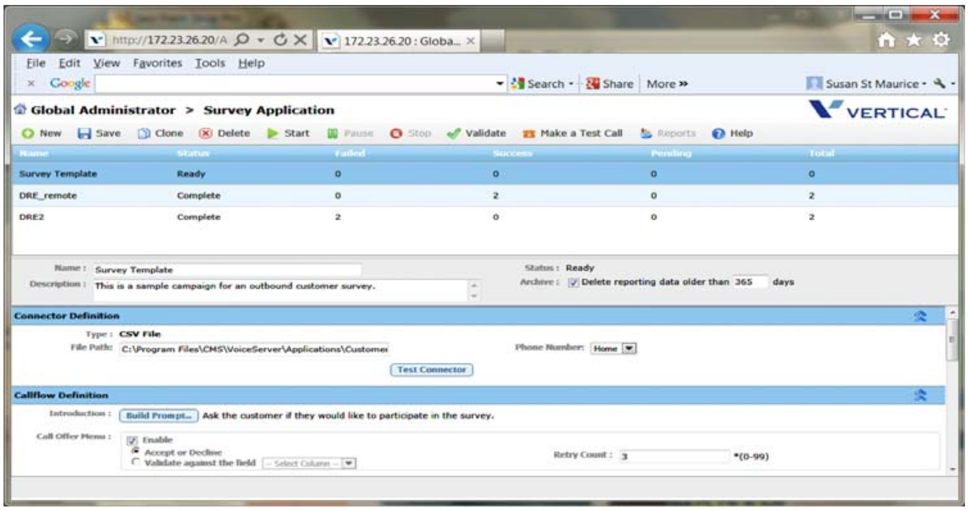
Launching the Survey Application

To launch the Survey Application

1 Click the Applications tab in the Global Administrator Management Console.

Click

2 Click Survey Application, located in the Outbound Voice Applications section. The Survey Application opens:

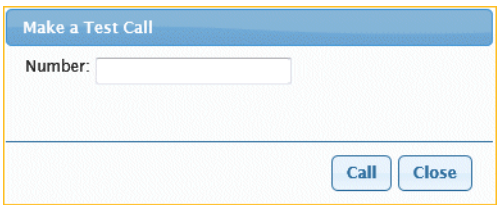


Working with the Sample Campaign

The Survey Application comes with a sample campaign called “Survey Template” and an associated CSV call info file. The Survey Template is a simple outbound customer survey campaign that you can try out.

To get a quick idea of how a campaign call sounds to a callee

1. Select the Survey Template.
2. Click **Make a Test Call** on the toolbar.
3. Enter the **Number** of a test extension and then click **Call**.



Navigating the Survey Application

The Survey Application window is divided into the following sections. Chapter 4 describes how to use these sections to create a custom campaign.

- Toolbar
- Main section
- Connector Definition section
- Callflow Definition section
- Schedule section

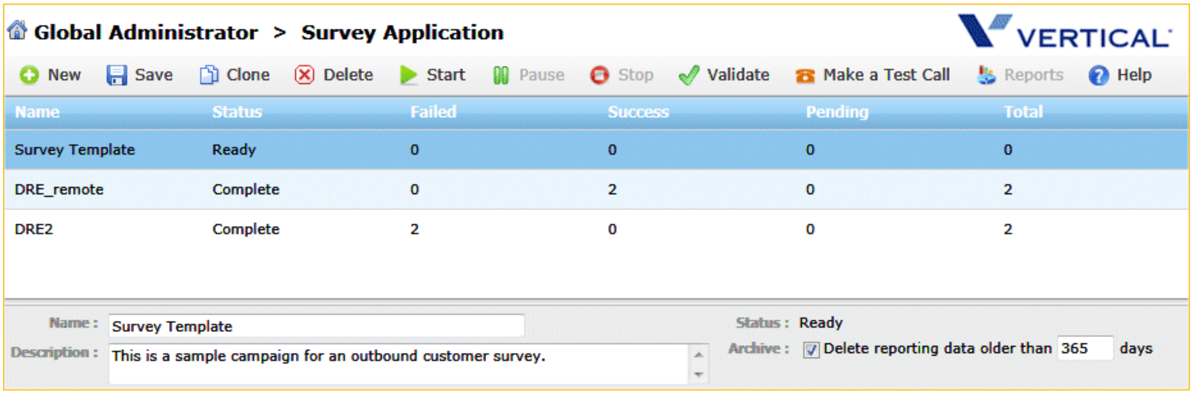
Toolbar

The following options are available on the toolbar at the top of the window:

- **New.** Click to create a new campaign. Creating a new campaign is described in detail in Chapter 4.
- **Save**. Click to save the selected campaign using all current settings.
- **Clone**. Click to create a new campaign using all current settings for the selected campaign. Cloning an existing campaign is described in detail in Chapter 4.
- **Delete**. Click to delete the selected campaign.
- **Start**. Click to launch the selected campaign. Calls are queued until the scheduled time for making calls is reached.
- **Pause**. Click to pause the selected campaign. When you press **Pause**, a running campaign will make no further calls, and a scheduled (but not yet running) campaign will not start even when the scheduled time for making calls is reached.
- **Stop**. Click to stop the selected campaign. When you press **Stop**, a running campaign will make no further calls, and a scheduled (but not yet running) campaign will not start even when the scheduled time for making calls is reached.
- **Validate**. Click to validate the campaign's setting.
- **Make a Test Call**. Click to test the campaign by making a call to a phone number that you specify.
- **Reports**. Click to report on results for the selected campaign. Campaign reports are described in detail in "Reporting on campaign results" on page 5-3.
- **Help**. Click to view Survey Application Help.

Main section

The grid displays the Survey Template and any custom campaigns created so far.

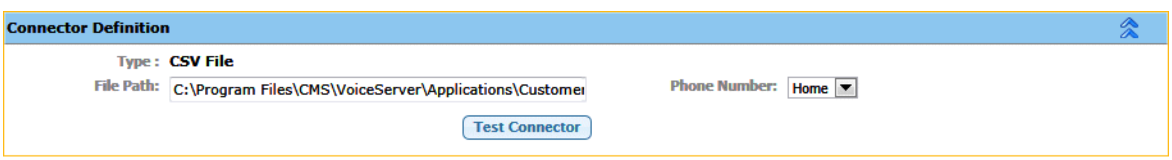


Campaign statuses and statistics are described in detail in Chapter 5.

The fields below the grid reflect the currently-selected campaign. You specify this information when you create or clone a campaign, and can change it later.

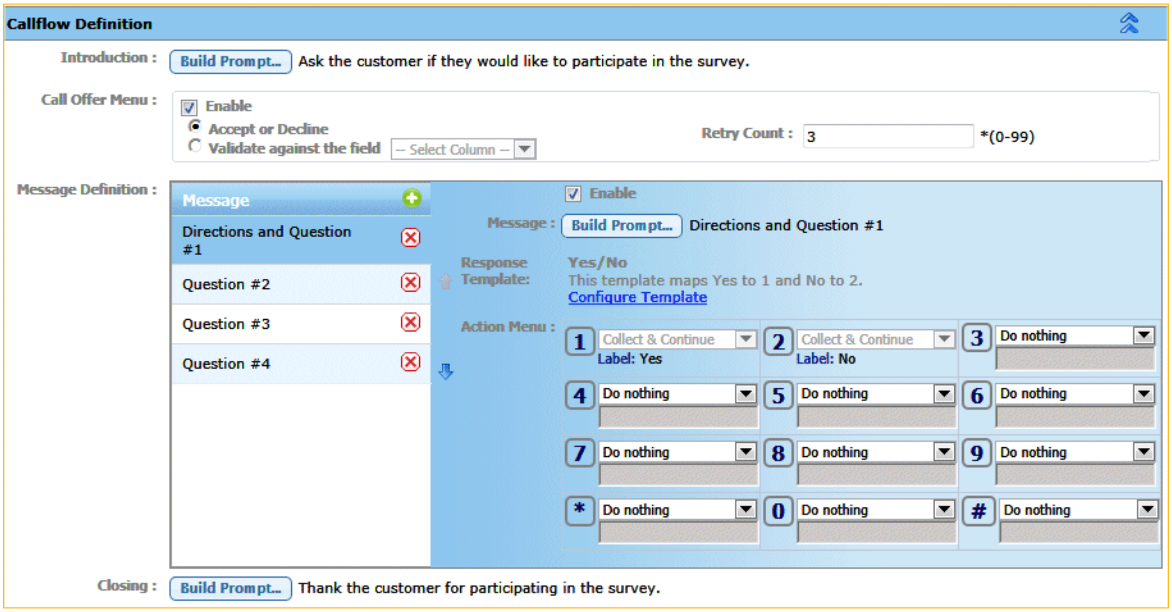
Connector Definition section

You use this section to identify the comma separated values (CSV) file that contains the phone numbers to be called during the campaign.



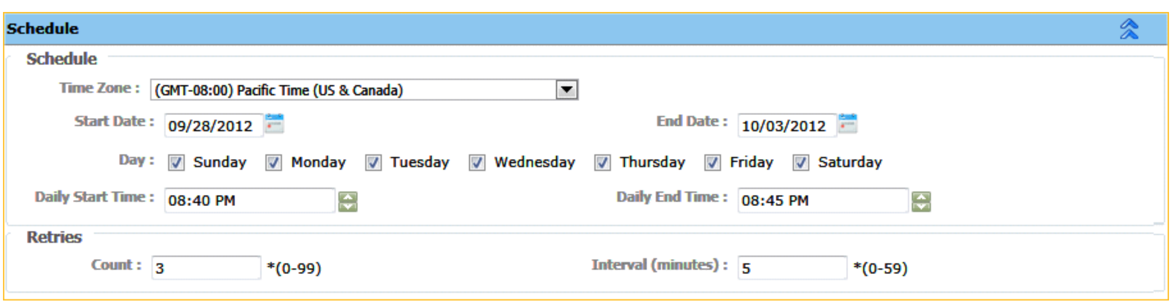
Callflow Definition section

You use this section to define the call flow for each campaign call.



Schedule section

You use this section to schedule the days and times when a campaign will run.



Creating a Custom Survey Campaign

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Before you start developing a custom calling campaign, you need to decide how you will handle prompts, and set up the data source that contains callee information, including phone numbers.

About prompts

There are three ways to specify prompts in the Survey Application:

- **Text prompts.** This option requires a text-to-speech (TTS) engine.
- **Pre-recorded audio files.**
- **Variables.** This option requires a TTS engine.

You can mix and match different types of prompts in a single campaign, but be aware that this may result in a mismatch of voices within a campaign.

Using a text-to-speech (TTS) engine

The NeoSpeech TTS engine is included with the Survey Application. Optionally, you can install Neospeech TTS licensed voices to use in your campaigns. When you type a prompt into a text box or use a prompt variable, NeoSpeech automatically converts the text or variable into an audio prompt during a campaign call.

The TTS license is built into the Voice Server 3.0 (with NeoSpeech TTS) license, so you have one TTS license for every Voice Server license installed on the Wave Server.

Using pre-recorded audio files

You can pre-record audio files yourself to use as a prompts or have them recorded professionally.

To create a campaign targeted to non-English speakers, you can record your own prompts in the target language.

Audio files to be used in the Survey Application must be WAV files in MuLaw PCM Mono 8 kHz format, and must reside in one the following locations on the Wave Server. (You can import a new audio file from any location to either the Prompts or Questions folder while building prompts for a campaign.)

```
C:\Program Files\CMS\VoiceServer\Applications\Customer
Survey\Prompts
```

```
C:\Program Files\CMS\VoiceServer\Applications\Customer
Survey\Prompts\Questions
```

The Survey Application itself does not include a recording feature. For some general information about recording files for use on the Wave platform, launch WaveHelp in the Global Administrator Management Console. Expand the Contents pane and then choose **Managing System Prompts and Audio > Recording over system prompts**. Since this topic focuses on recording Wave system prompts, not all of it will apply to recording audio files for use in the Survey Application.

Using prompt variables

You can customize your campaign prompts by including customer-related information contained in the connector file, for example, “Hello, this is a call for <FirstName> <LastName>”. Each time a campaign call is placed, the complete prompt is built using the variable values specific to that callee.

You can use any of the fields in the connector file as a variable in a prompt. The connector file format is described on page 4-3.

Mapping callee information for use in a campaign

Typically, customer names, phone numbers, and other information reside in a database. In a campaign, you’ll want to use that information to call a specific phone number (home, mobile, or work), greet each callee by name, verify an account number, Social Security Number, or other identification, and so forth.

The campaign does not directly access your database. You need to create a connector file, a CSV file that maps to database fields that can be used in the campaign.

The sample connector file included with the Survey Application is installed automatically in the following location:

```
C:\Program Files\CMS\VoiceServer\Applications\Customer
Survey\Data\customers.csv
```

Connector file format

The connector file must be a CSV file formatted as follows:

```
ID,Home,Mobile,Work,Address,FirstName,LastName
```

The sample file contains the following information:

```
1,14084041600,,14084045555,3940 Freedom Cir Santa
Clara,Bob,Roberts

2,,14085551234,16502345678,Mountain View,Jeff,Jefferson

3,15102121212,14158765432,,123 Fake St San Francisco,John,Smith

4,14084041600,,14084045555,3940 Freedom Cir Santa
Clara,Bob,Roberts

5,14084041600,14082427478,14084041668,3940 Freedom Cir Santa
Clara,Patrick,Smith
```

Editing the sample connector file

You can base your own connector file on the sample file. To change the location of the connector file for a campaign, update the **File Path** field in the Connector section when you create or edit a campaign.

The most straightforward way to edit a connector file is to use a text editor such as NotePad. You can use Microsoft Excel to view the data as a spreadsheet, but you must be sure to save the file as type "CSV (Comma delimited) (*.csv)". If you specify a connector file with an extension of XLS or a file that is formatted in any other way, the file will not be processed correctly and the campaign will not run.

Warning: *Do not make any changes to the connector file format described above. The first line of the file must contain the field header names—do not delete this line. Also, each line must contain the correct number of fields, even if a field is blank. Count the commas—if a field is missing, the data will not be read correctly.*

Note the following:

- **Maximum number of lines:** There is no limit to how many lines of data can be in a single connector file.
- **Maximum field length:** The maximum length of the data in any field is 498 characters. Any additional characters will be truncated and will not be spoken.

- **Restricted characters:** There are no restrictions on the characters you can include in a field, except for a comma. Since a comma indicates the end of an input field, you cannot use a comma inside a field—if you do so, the call or campaign will fail because the line does not have the expected number of fields. For example, an address of “123 Main Street, Anytown, CA” must be edited to remove the commas so that the input field entry reads “123 Main Street Anytown CA”.
- **Field data formats:** All fields are character fields, including “ID” (which can be any identifying number, for example account number, Social Security Number, membership number, and so forth.).

  Try to use standard character formats when specifying dates and times. For example, Voice Server will recognize all of the following as valid times—“1:00 pm”, “1:00pm”, “1:00 PM”, and “1300”, but you may see unexpected results if you enter a string like “one o’clock”.
- **Phone number format:** “CallNumber” must be a valid digits-only phone number. You should not normally need to prepend the trunk access code (for example “9”) to the number, but be aware that when Wave places an outgoing call to that number it will follow the Outbound Routing rules set up for the System Ports access profile, so whatever routing you require must be implemented for that access profile via Outbound Routing. If the number is not being dialed correctly, enter the *exact* digits to be dialed into the “CallNumber” field in the CSV file.

Creating a custom campaign

Creating a custom campaign consists of the following steps:

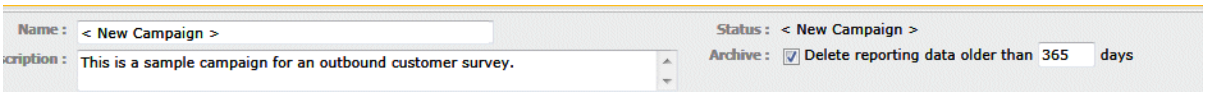
- Create a new campaign, or clone an existing one.
- Identify the phone numbers to be called. See page 4-6.
- Create an introduction prompt. See page 4-7.
- Define a call offer menu. See page 4-7.
- Define campaign messages. See page 4-13.
- Create a closing prompt. See page 4-17.
- Schedule when the campaign will run. See page 4-17.

Creating a new campaign

1 Click **New** on the toolbar to create a new campaign, or select a campaign and click **Clone** to create a new campaign based on an existing one.

You can save your campaign-in-progress at any time by clicking **Save** on the toolbar.

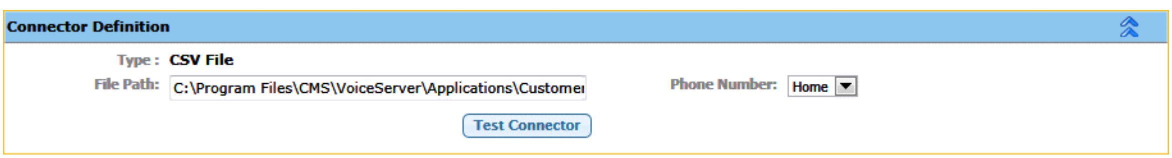
2 Enter a **Name** and **Description** for the new campaign.



3 Select the **Archive** checkbox to delete reporting data older than the number of days you specify. If this checkbox is not selected, reporting data will be retained indefinitely.

Identifying the phone numbers to be called

In the Connector Definition section, you specify the comma separated values (CSV) file that contains the phone numbers to be called during the campaign and other information about each callee. For more information, see “Mapping callee information for use in a campaign” on page 4-3.



1 Enter the following:
   - **Type**. Only CSV files are supported.
   - **File Path**. Enter the folder and filename of the connector file.
   - **Phone Number**. Select which of the callee’s numbers to use for campaign calls (Mobile, Work, or Home).

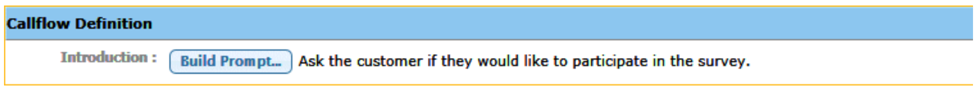
     Phone number type—home, mobile, or work—is specified per campaign, not per call. So if you select Home here, each entry in the connector file must have a phone number in the Home column, or the call will to that entry not be made.

2 Click **Test Connector** to verify that the connector file can be opened and read. Note that this does *not* verify that the file is formatted correctly, only that it is accessible.

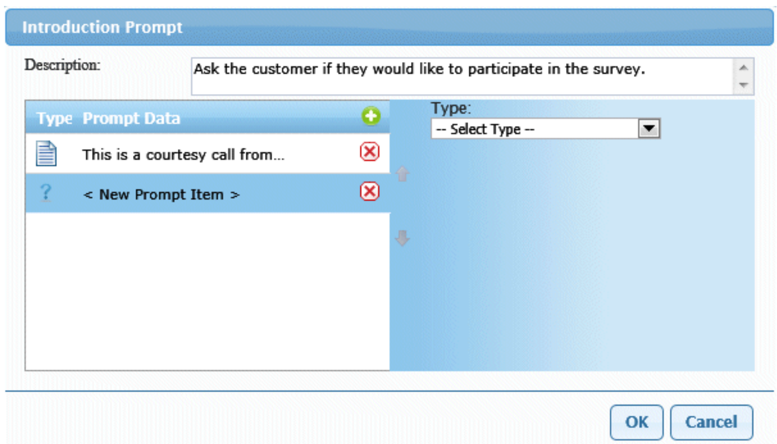
Creating an introduction prompt

An introduction prompt can identify who is calling, greet the callee by name, inform the callee of the purpose of the call, accept or decline to participate, and so forth. For more about prompt options, see “About prompts” on page 4-1.

1 At the top of the Callflow Definition section, click **Build Prompt**.

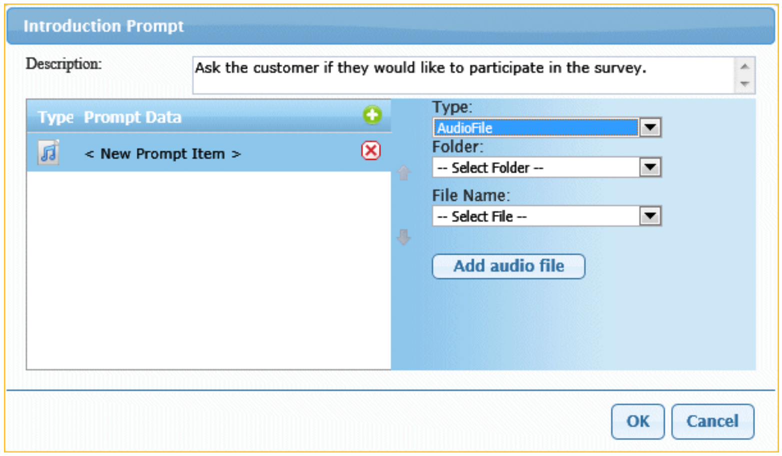


2 Enter a prompt **Description**.



3 Select one of the following from the **Type** drop-down list

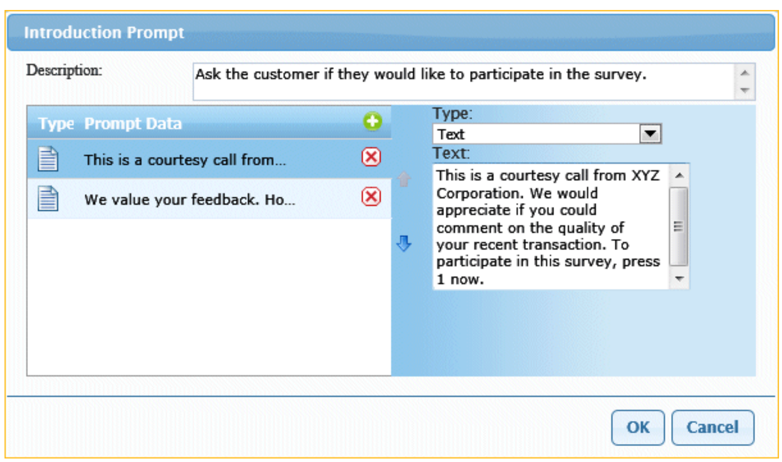
- **AudioFile**. Select this option to specify a pre-recorded audio file of the prompt to use.



Use the **Folder** and **File Name** drop-down lists to select the audio file to use as the prompt.

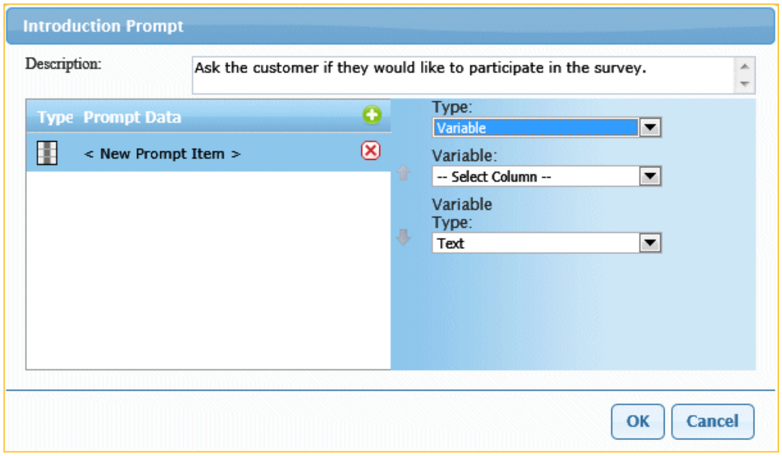
  - If the file already exists in one of the pre-defined folders (Prompts or Questions), it will be listed in the **File Name** drop-down list.
  - Otherwise, click **Add audio file** to identify the file's location and copy it to the Prompts or Questions folder.

- **Text**. Select this option to type a text prompt that will be automatically converted to speech.



Type the text of the prompt directly into the box.

- **Variable**. Select this option to customize a prompt by including information from the connector file for each call. See “Breaking a prompt into multiple prompts” below for details.



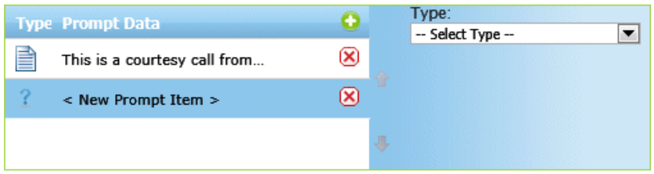
4 Click **OK** to save the new prompt.

Breaking a prompt into multiple prompts

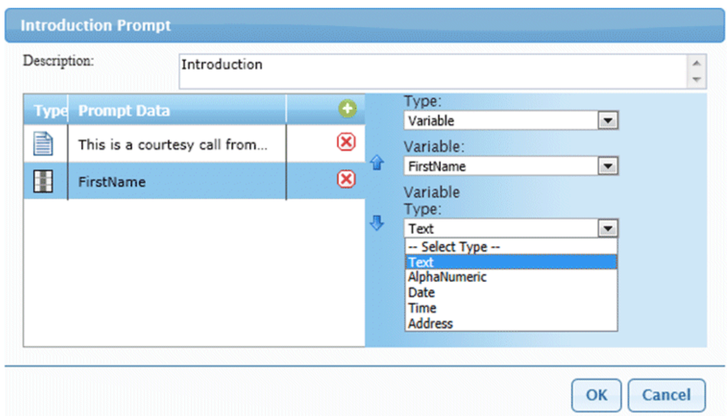
A prompt can contain multiple prompts that will be played in sequence. Reasons to use multiple prompts include:

- **When you use prompt variables to include callee-specific information in a prompt.** You need to break the prompt down into its multiple parts, including a separate part for each variable used, for example, “Hello, this is a call for <FirstName> <LastName>”. Each time a campaign call is placed, the complete prompt is built using the variable values specific to that callee.
- **When you define multi-part instructions, messages, and questions** played to each callee during a campaign call.
- **To reduce general prompt maintenance** if you frequently change only a portion of a prompt, for example the new dates for a recurring sales promotion.

1. Create and save a prompt as described in “Creating an introduction prompt” on page 4-7. In this example, the prompt starts with the text string “This is a courtesy call from Vertical Communications for”.
2. To add another part to the prompt, click **Build Prompt** again and then click .

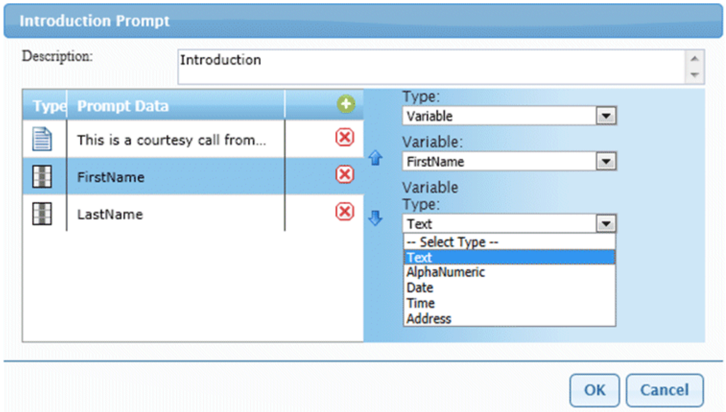


3. Select the <New Prompt Item> entry and then select **Variable** from the **Type** drop-down list.
4. Select the **Variable** to insert into the prompt, and then select the **Variable Type** from the drop-down lists.



5. Click **OK** to save the prompt. Repeat these steps to add additional variables or other parts to the prompt.

6 To reorder the prompts in the list, select a prompt and click the Up and Down arrows next to the prompt list.



7 Click **OK** when the prompt is complete.

Defining a call offer menu

A call offer menu provides each callee the option to accept or decline the call. You can also validate the callee's identity against a field in the connector file, and indicate the number of times to retry the number if the call is not answered.

Whether or not you choose to enable a call offer menu depends on the type of campaign you are designing:

- **If your campaign is informational** (for example special sale offers) and you don't require any callee response or input, you may only want to create messages that communicate the required information. In this case, it may not matter if the call is answered by a person or by voicemail, since you are not expecting a response.
- **For a survey campaign**, customer responses matter. A call offer menu will allow Voice Server to quickly determine if callee input has been received. Although Voice Server cannot distinguish whether a call is answered by a person or by voicemail (and a call will be counted as "Successful" once it is answered by either one), "No Input" will be recorded in the reports for a call that requests callee input but does not receive any.

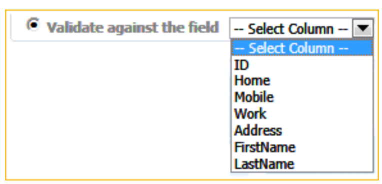
1 Select the **Enable** checkbox to enable the call offer options you specify.

   Important: If this checkbox is not selected, no call offer options are provided to callees, and none of the settings described below are applied.

2 Select one of the following options:

   - **Accept or Decline**. If selected, each callee will be given the option to accept the campaign call, as described in your introduction prompt (for example, “Press 1 to participate.”
   - **Validate against this field**. If selected, each callee can respond to your introduction prompt by pressing keys on his or her phone, for example, “Enter your account number followed by the pound key.”

     Select the field to validate against from the drop-down list:



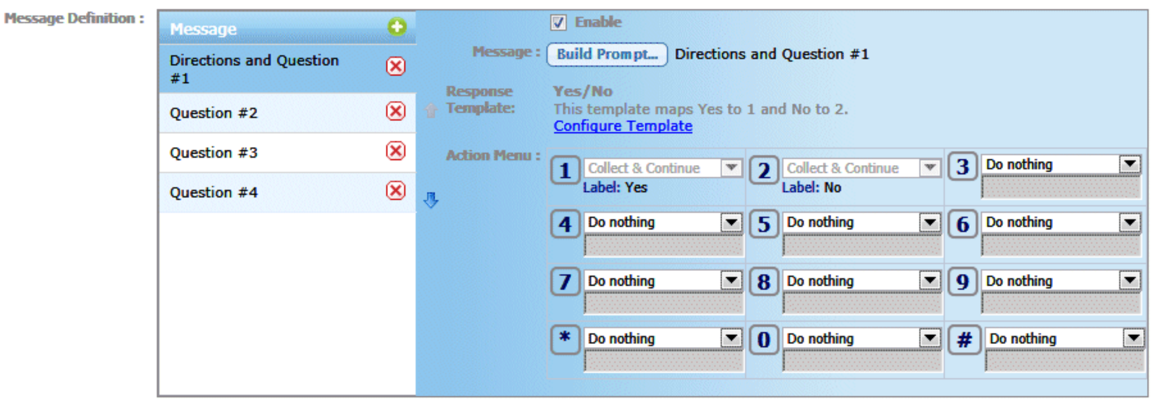
3 Enter a **Retry Count**, the number of times the introduction prompt will be replayed while waiting for input from the callee. This retry count is applied once the call has been answered, either by a person or by voicemail.

Defining campaign messages

You use the Message Definition section to define the instructions, messages, and questions played to each callee during the campaign call. For each message or question, you can specify actions that the callee can perform by pressing various buttons on his or her phone.

Creating campaign messages

The Message Definition section displays all of the messages that you define for the campaign's callflow.



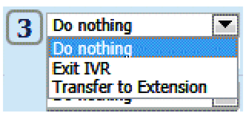
To create each message, follow the steps in "Creating an introduction prompt" on page 4-7.

Defining an action menu

By default, the following phone button actions are defined for the callee to use to respond during a campaign call. (You can change this behavior by changing the Yes/No default template included with the Survey Application, or creating a custom template. See “Creating and using action templates” on page 4-15.)

- **1:** Yes.
- **2:** No.
- **All other buttons:** No action defined.

To define an action menu option, select the action to perform when the button is pressed from the button’s drop-down list:



- **Do nothing**. Pressing the button has no effect.
- **Exit IVR**. Pressing the button terminates the campaign call.
- **Transfer to Extension**. Pressing the button transfers the callee to the extension that you specify.

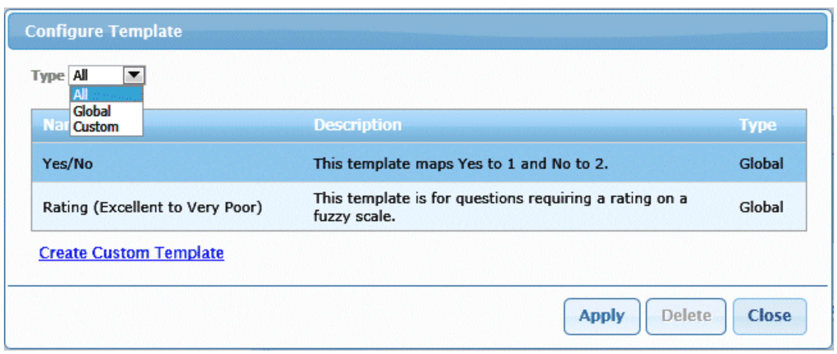
Creating and using action templates

An action template describes the actions assigned to phone buttons for all campaigns that use that template. You can create your own custom templates, or use one of the following two global templates included with the Survey Application:

- **Yes/No:** This template maps Yes to the 1-button and No to the 2-button.
- **Rating (Excellent to Very Poor):** This template is for questions requiring a rating on a fuzzy scale.

To apply a template

1. Click **Configure Template**.
2. Select **All** from the drop-down list to view all defined templates, or **Global** or **Custom** to focus the list.



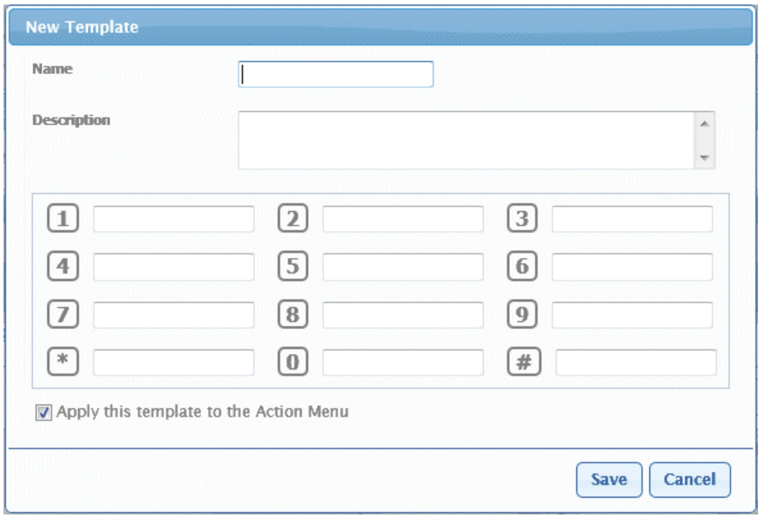
3. Select a template and click **Apply** to make it active.
4. Click **Close** when you are done.

To create a custom template

1 Click **Configure Template**.

2 In the Configure Template screen, click **Create Custom Template**.

3 Enter a **Name** and **Description**, and then click a phone button to define each required action:



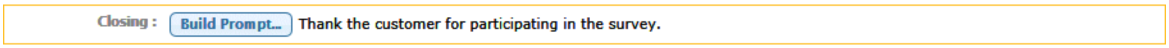
4 Select the **Apply this template to the Action Menu** checkbox to make this template active.

5 Click **Save** when you are done.

Creating a closing prompt

A closing prompt can thank the callee for participating, provide follow-up information, and so forth. For more about prompt options, see “About prompts” on page 4-1.

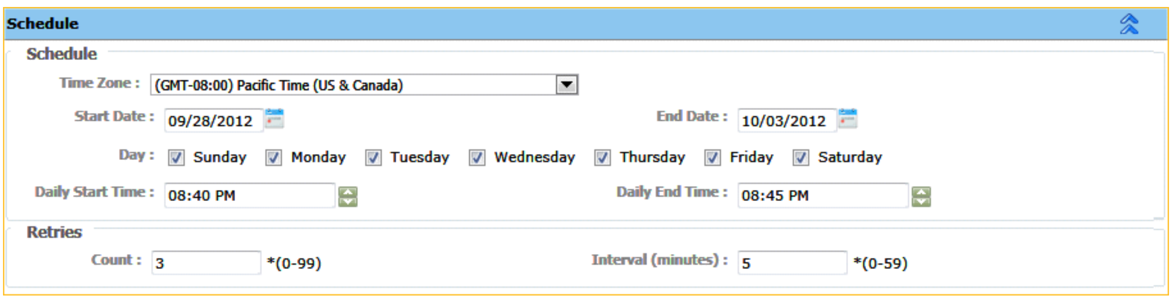
1 At the bottom of the Callflow Definition section, click **Build Prompt**.



2 Create the new prompt as described in “Creating an introduction prompt” on page 4-7-7.

Scheduling when the campaign will run

In the Schedule section, you schedule the days and times when the campaign will run automatically.



1 Select the **Time Zone** where the campaign will run from the drop-down list.

2 Specify the **Start Date** and **End Date** for the campaign. You can type directly into each text box, or click the calendar icon to select a date.

3 Select each **Day** of the week when the campaign will run.

4 Specify the **Daily Start Time** and **Daily End Time** when the campaign will run on each specified day. You can type directly into each text box, or double-click on the hour, minute, or AM/PM component and use the up or down arrows to change the value. (AM/PM update automatically as you scroll hours or minutes.)

5 In the Retries section, define how to handle a number that does not answer the initial call:

- **Count**. Enter the number of times to retry a number that does not answer.
- **Interval (minutes)**. Enter the number of minutes to wait between retries.

Placing a test call

The first thing you should do after creating a campaign is to place a test call to test the campaign. To do so, click **Make a Test Call** on the toolbar.

In the dialog that opens, enter a number to call. The first data line of the connector file (not the header line) is used for the test call.

If the test call fails, see “Troubleshooting call issues” on page 6-1.

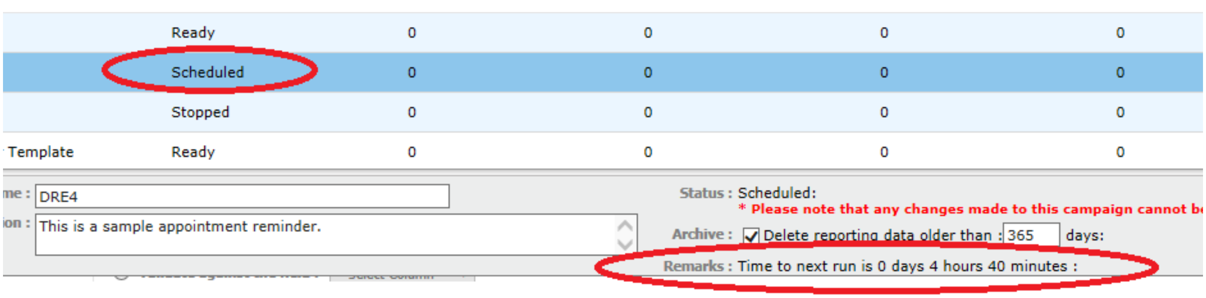
Launching the campaign

Click **Start** on the toolbar to schedule the campaign to run. Clicking **Start**:

- Reads the entries in the connector file.
- Renders the call flow prompts and messages.
- Adds each call to be made into a day/time bucket.

The status of the campaign is then changed to “Scheduled”. If any problem is detected, the status changes to “Invalid”, giving you the opportunity to resolve any issues.

For all Scheduled and Recurring campaigns, the **Remarks** field displays the “Time to next run” for the campaign. This information can help prevent scheduling errors, because you can verify immediately that the campaign will next run as expected.



Campaign progress

1. **At the scheduled start day and time, Voice Server starts making campaign calls** to the phone numbers in the connector file. One or more calls may be placed simultaneously, depending on the number of available outgoing Voice Server IVR ports you configured, as described in "Configuring the Survey Application" on page 2-5.
2. **If a call is answered by a person or voicemail**, the introduction prompt is played. Since Voice Server cannot distinguish whether a call is answered by a person or by voicemail, the call will be counted as "Successful" once it is answered by either.
   - **If the call offer menu is enabled**, the callflow stops and Voice Server waits for input from the callee. **If you specified a call offer menu retry count**, the introduction prompt will be replayed that number of times while waiting for callee input.
     - **If callee input is received**, the rest of the callflow messages and prompts begin.
     - **If no callee input is received**, the call ends. The call will be counted as "Successful" once it is answered, however "No Input" will be recorded in the reports for that call.
   - **If the call offer menu is not enabled**, the rest of the callflow messages and prompts begin.
3. **If one of the callflow prompts requests input from the caller**, that prompt will repeat until a response is received. If no response is received after 30 seconds (for example, if the call was answered by voicemail), the call ends. The call will be counted as "Successful" once it is answered, however "No Input" will be recorded in the reports for that call.
4. **If a call is not answered or there is a busy signal**, the call itself will be retried as many time as you specified in the Schedule section, as described on page 4-17. When all retries have been performed without connecting, the call will be counted as "Failed".
5. **When all numbers in the connector file have been called and all retries have been performed, the campaign ends**.

Campaign best practices

Note: The following information do not apply if you are using pre-recorded audio files as prompts.

If you are using text prompts or prompt variables—which are rendered into prompts by the TTS engine—when the first campaign call connects after Voice Server restarts (after upgrading software or restarting the Wave Server, for example), the callee will hear a 10 or more seconds of silence while the prompts are generated and licensing verified. During subsequent calls, prompts play without delay.

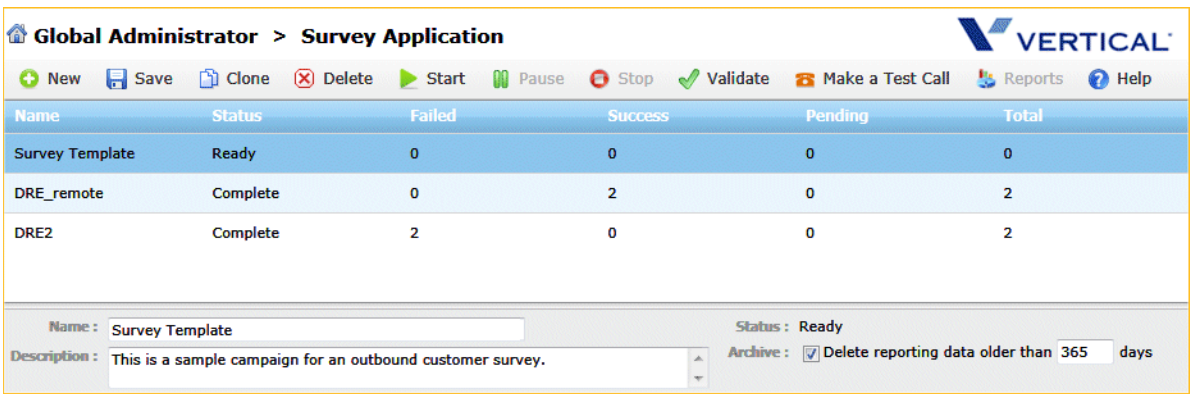
- ***Best practice is to test all paths in a test call before launching the campaign to ensure that the rendering has been completed for each prompt.***
- ***Best practice after a restart is to make a test call before launching any campaign***.
- This wait time is reduced from10 or more seconds to 1 second on a Wave Server with newer hardware—an Integrated Services Card 3 (ISC3) and a solid-state drive (SSD). If this issue is a real problem for you—for example you restart Voice Server often—consider running your campaigns on a Wave Server with upgraded hardware components.

Reporting on Campaign Results

CONTENTS

Viewing campaign status and statistics

Select a campaign to view its current status.



Each campaign will show one of the following statuses:

- **Invalid**. One or more configuration errors prevent the campaign from running.
- **Ready.** Campaign has not been scheduled.
- **Scheduled**. Campaign will run when the scheduled day and time occurs.
- **Running**. Campaign is currently running.
- **Paused**. Campaign is not running because **Pause** was pressed on the toolbar. Press **Start** to continue.
- **Stopped**. Campaign is not running because **Stop** was pressed on the toolbar.
- **Complete**. Campaign completed.

For the last time each campaign ran, the following call statistics are displayed:

- **Failed**. Number of calls that did not connect because they were not answered or were busy.
- **Success**. Number of calls that connected successfully or went to voice mail.
- **Pending**. Number of calls that failed and are currently in the retry list.
- **Total**. Total number of successful + failed + pending calls.

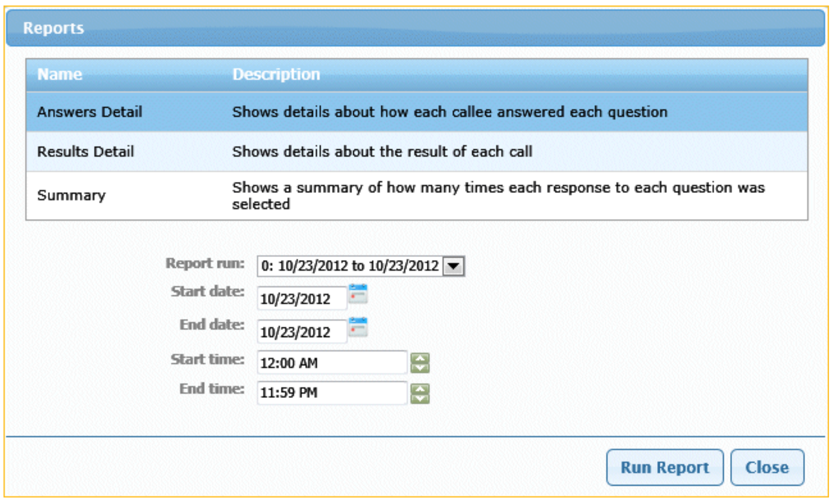
Reporting on campaign results

You can run the following reports on the results of a campaign:

- Answers Detail report. See page 5-5.
- Results Detail report. See page 5-6.
- Summary report. See page 5-7.

To run a report

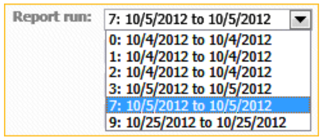
1 In the Survey Application, select the campaign to report on and then click **Reports** on the toolbar. The Reports dialog opens:



2 Click on one of the reports to select it.

3 Specify the time period to report on using the following fields:

- **Report run**. The drop-down list contains an entry for each time that the campaign ran. Select the run to report on from the list:



- **Start Date** and **End Date**. Specify the start and end dates to report on. You can type directly into each text box, or click the calendar icon to select a date.
- **Daily Start Time** and **Daily End Time**. Specify the start and end time to report on. You can type directly into each text box, or double-click on the hour, minute, or AM/PM component and use the up or down arrows to change the value. (AM/PM update automatically as you scroll hours or minutes.)

These Date and Time fields can be used to narrow results within a Report run. For example, a run could cover multiple days. If you wish to see the results for only a certain portion of the run, use these fields to narrow down the results.

4 Click **Run Report**. The report opens in a separate browser window.

Answers Detail report

The Answers Detail report shows details about how each callee answered each campaign question.

dre Remote
Campaign Answers Detail Report

Description: This is a sample campaign for an outbound customer survey.
Date Range: 03/24/2014 - 03/24/2014
Time Range: 12:00 AM - 11:59 PM

Phone Number	Directions and Question #1	Question #2	Question #3	Question #4
4345551202	Yes	Yes	Yes	No
4342841209	Yes	No	Yes	No
4348981205				

Schedule: 3/24/2014 through 3/24/2014 between 5:25 AM and 5:30 PM every Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, Saturday
Run Start: 3/24/2014 12:21 PM
Retries: 0
Input File: C:\Program Files\CMS\VoiceServer\Applications\Customer Survey\Data\dreRemote.csv

Powered By vertical

Results Detail report

The Results Detail report shows details about the result of each call.

dre Remote
Campaign Results Detail Report

Description: This is a sample campaign for an outbound customer survey.
Date Range: 03/24/2014 - 03/24/2014
Time Range: 12:00 AM - 11:59 PM

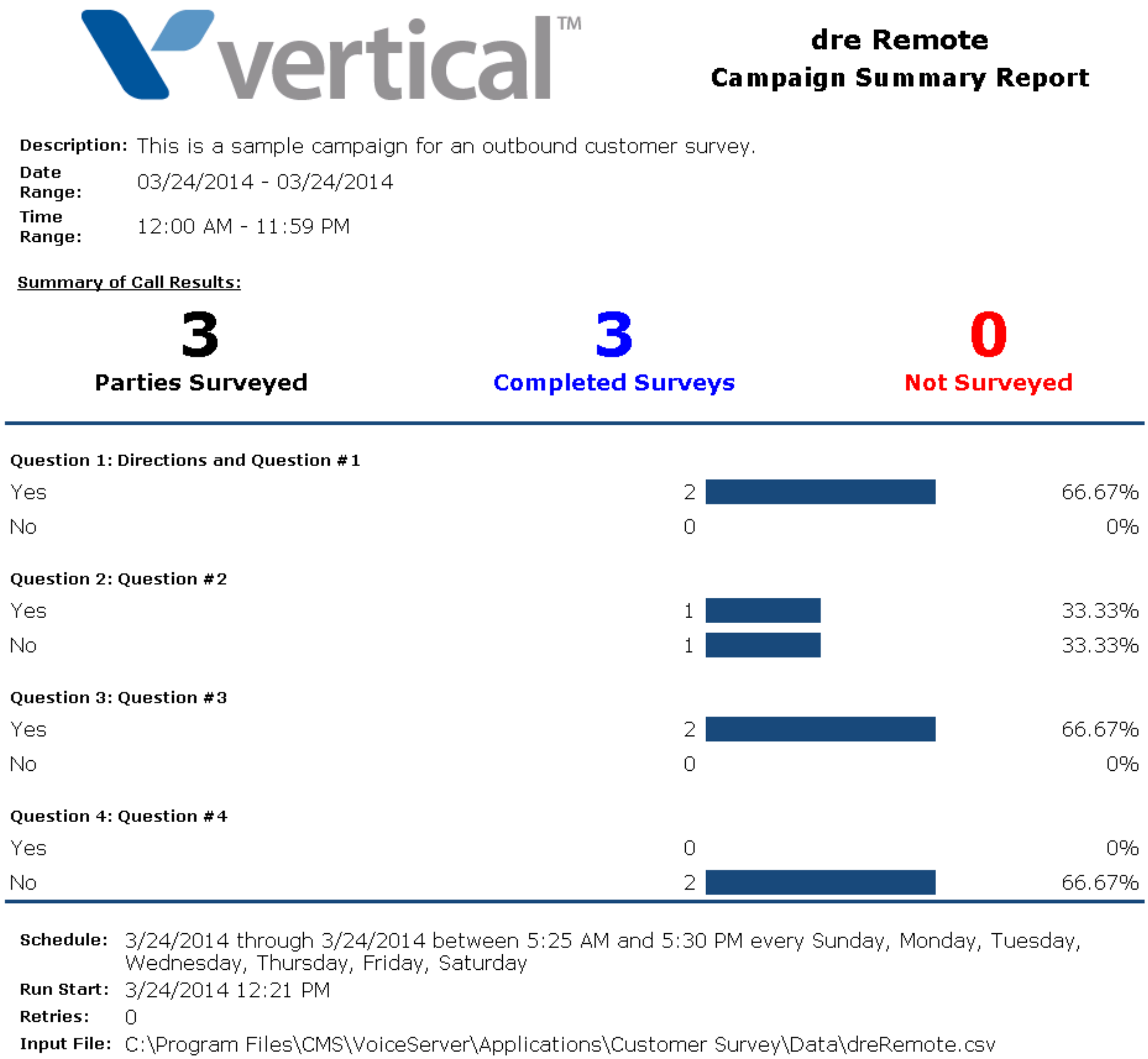
Phone Number	First Name	Last Name	Address	Result	Attempts
4345551202	Bob	Roberts	3940 Freedom Cir Santa Clara	Success	Complete
4342841209	Jeff	Jefferson	Mountain View	Success	Complete
4348981205	Sue	Smith	Mountain View	Success	No input/No input

Schedule: 3/24/2014 through 3/24/2014 between 5:25 AM and 5:30 PM every Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, Saturday
Run Start: 3/24/2014 12:21 PM
Retries: 0
Input File: C:\Program Files\CMS\VoiceServer\Applications\Customer Survey\Data\dreRemote.csv

Powered By vertical

Summary report

The Summary report summarizes how many times each response to each question was selected by callees.



dre Remote
Campaign Summary Report

Description: This is a sample campaign for an outbound customer survey.
Date Range: 03/24/2014 - 03/24/2014
Time Range: 12:00 AM - 11:59 PM

Summary of Call Results:

3	3	0
Parties Surveyed	Completed Surveys	Not Surveyed

Question 1: Directions and Question #1		
Yes	2	66.67%
No	0	0%
Question 2: Question #2		
Yes	1	33.33%
No	1	33.33%
Question 3: Question #3		
Yes	2	66.67%
No	0	0%
Question 4: Question #4		
Yes	0	0%
No	2	66.67%

Schedule: 3/24/2014 through 3/24/2014 between 5:25 AM and 5:30 PM every Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, Saturday
Run Start: 3/24/2014 12:21 PM
Retries: 0
Input File: C:\Program Files\CMS\VoiceServer\Applications\Customer Survey\Data\dreRemote.csv

The count fields at the top of the report indicate the following:

- **Invalid phone number**. Number of connector file entries where the phone number field was blank, for example, if you selected “Home” from the Phone Number drop-down list when you created the campaign, but the connector file entry only has a “Work” phone number.
- **No input**. Number of calls where no callee input was received in either of the following cases:
  - The call offer menu was enabled and there was no response to the introduction prompt.
  - One of the callflow prompts requested callee input and none was received.
- **Failure to pickup call within 30 seconds**. Number of calls that were never successful. If a call failed one or more times, but was answered on a subsequent retry attempt, the failure will *not* be included here in the **Failure to pickup call within 30 seconds** count.

  Note: You can change this interval. To do so, launch Voice Server in the Global Administrator Management Console. On the Outbound IVR tab, change **Dial out Max Time**. This setting is the maximum amount of time in seconds that Voice Server will dial an outbound call before the call will time out if not picked up.

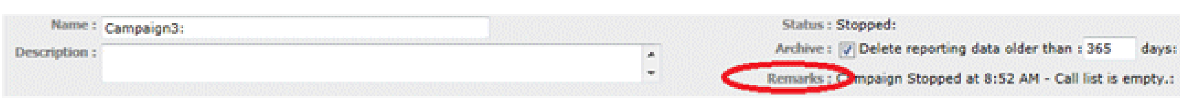
Troubleshooting Tips

CONTENTS

Troubleshooting call issues

***Issue:* A test call or campaign call fails**

- Make sure that you have specified some Outbound IVR ports via Resource Management, as described in step on page 2-6, and that Voice Server was restarted after that change was made.
- If a test call to an external number fails, try making a test call to a local extension. If the test call to the extension works, launch Outbound Routing and verify that the settings for the System Ports access profile used by Voice Server calls are correct.
- Check the “Remarks” field:



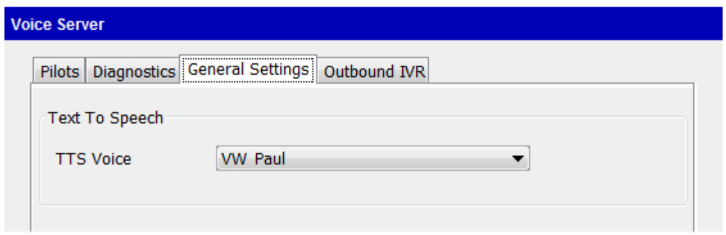
- Verify that the connector file meets all of the requirements described in “Editing the sample connector file” on page 4-4. If the file is incorrectly formatted in any way (for example, the number of fields is incorrect) no call will be made.
- Check the logs. See “Viewing log files” on page 6-3.
- Restart Voice Server. See “Restarting Voice Server” on page 6-4.

Issue: **A test call connects but no prompt is heard**

The first TTS prompt that is generated after Voice Server restarts or you change the TTS voice used for prompts will take longer to render, as the voice must be loaded and licenses checked. Stay on the line, but if you still hear nothing after a minute, or if the call hangs up on you, try restarting Voice Server, as described in “Restarting Voice Server” on page 6-4.

Troubleshooting TTS voice issues

A TTS voice is used for text prompts or prompt variables. You select the voice to use via the General Settings tab in Voice Server, as described on page 2-7:



Issue: **When prompts play, the voice sounds robotic.**

The default voice shipped with the Wave Server is “Microsoft Sam” which does not have a natural sound. For better-sounding prompts, you can:

- Use one of the licensed NeoSpeech voices. See “Installing NeoSpeech TTS licensed voices” on page 2-3.
- Record your own prompts, as described in “Using pre-recorded audio files” on page 4-2.
- Purchase and install another Microsoft voice. Once installed, the voice will appear in the **TTS Voice** drop-down list on the General Settings tab in Voice Server.

Issue: **After selecting a Neospeech TTS licensed voice, when a prompt plays a message indicates that the voice is not licensed.**

Verify that the Voice Server 3.0 (with NeoSpeech TTS) license is installed and activated on the Wave Server. Then, restart Voice Server as described on page 6-4 and place a test call to retry the licensing check on the first call. The first call after a restart may take longer to be played, so don’t hang up to avoid interrupting the loading process.

Troubleshooting reporting issues

***Issue:* The Report icon on the toolbar is greyed out.**

The Report icon is only enabled after a campaign has run successfully. If you run a campaign and remain in the Survey Application you need to refresh your browser to see the new results.

***Issue:* After clicking the Reports icon and selecting a report run, the report contains no data.**

There is a known time zone problem in this version. If the Wave Server where the campaign was launched is in one time zone and the PC where you are viewing the results of that campaign is in another zone, the report data is not displayed correctly.

As a workaround, temporarily reset the time zone on the PC where you are viewing report results to match that of the Wave Server where the campaign was launched.

Viewing log files

The CampaignClient and CampaignServer log files are written to the following location on the Wave Server:

```
C:\Program Files\InstantOffice\Logs\CampaignManager
```

- **CampaignClient.log** shows if call data is invalid, or if an exception occurred.
- **CampaignServer.log** shows the scheduling of the calls in the campaign.

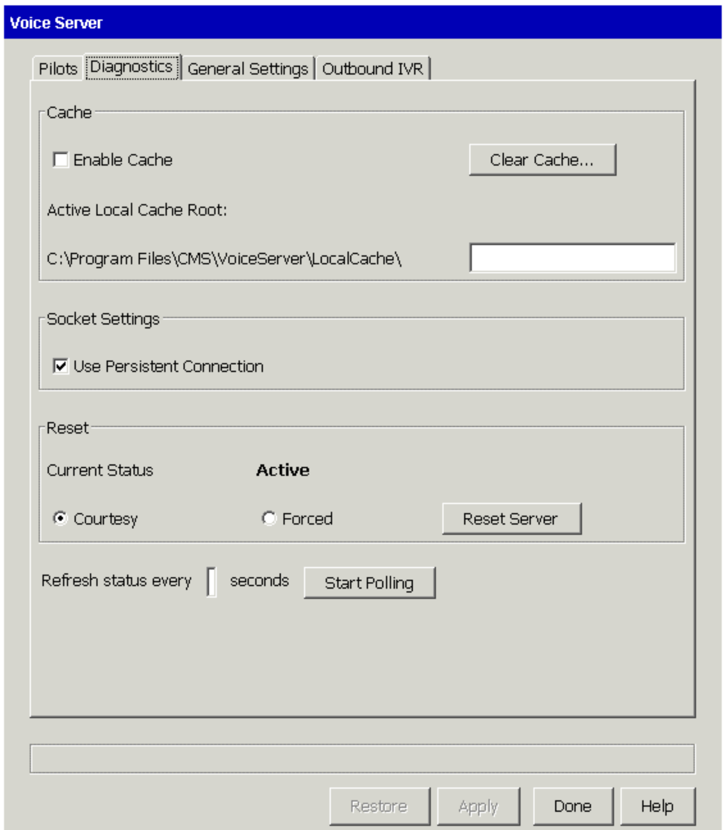
In addition to the log files listed above, the following additional files may be helpful when troubleshooting Survey Application problems. You should collect these files covering the time period when the problem occurred when reporting a problem to your Wave technical support representative.

- **iovstrace.log:** The VS trace log shows individual call progress to the ports.
- **trace.log, trace.fmt, error.log:** When viewed via the Trace Console, these files shows call routing through the Wave Server once calls are delivered by Voice Server. Errors seen here can include call routing problems, for example faulty outbound routing settings for the System Ports access profile used by Voice Server.
- **CampaignClient00.svclog, CampaignServer00.svclog:** These logs contain Windows Communication Foundation (WCF) failure data to help identify problems between the server and the client.

Restarting Voice Server

Resetting the Voice Server may be necessary if unexpected problems occur. Avoid restarting Voice Server while a campaign is in progress.

1 In Voice Server, click the Diagnostics tab.



2 Click **Reset Server.**

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