polaris

Telephony Administration Guide

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Telephony Administration Topics

This guide is for library staff who set up and administer Polaris Telephony. It covers the following topics.

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>Setting Up Inbound Telephony; setting no-call dates and dialing hours; voices; outbound telephony reports.

[Phone Attendant Overview](#)

>Phone Attendant overview; configuring the Phone Attendant.

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>Customizing SAPI voice messages for outbound and inbound telephony with the Polaris Language Editor; adjusting pronunciation.

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>Telephony Parameters Reference - List of Telephony parameters as they appear in Polaris Administration.

Setting Up Outbound Telephony for Phone Notification

If you have Polaris outbound telephony software and equipment, you can deliver overdue, request, canceled request, and serials claim notices by phone. (Bills, fine notices, and serials routing notices cannot be delivered by telephone.) You can specify which notices should be delivered by phone at the system, library, or branch level.

Polaris telephony software identifies notices due to be delivered by telephone in the notification queue, retrieves the appropriate patron telephone number, and dials the number. The system recognizes error tones, a live answer, and an answering machine. If the answer is live, the software plays the message and menu options. If an answering machine responds, the software does not play the menu options but leaves a message.

You set up general characteristics of phone notification at the telephony server level. Among other characteristics, you can specify dialing hours that are convenient for patrons, and set dates when patrons should not be called at all. Your system may use one telephony server or multiple servers (typical of a large consortium). If you use multiple telephony servers, the settings can be different for each server.

> **Note:**
> Polaris works in a VoIP (Voice over Internet Protocol) environment when you use a compatible POTS (Plain Old Telephone Service, that is, standard voice-grade telephone service) analog adapter. The analog adaptor is connected to the VoIP system (typically via TCP/IP) and provides standard POTS lines for the Polaris telephony server as required. You will typically need an analog adapter for each phone extension that the telephony server uses.

See also:

- [Setting Outbound Telephony Parameters](#)
- [Voices for Outbound Telephony](#)
- [Outbound Telephony Reports and Troubleshooting](#)

Setting Outbound Telephony Parameters

Do the following tasks to set up telephone notification:

- Install Polaris Phone Notification software on the telephony server(s). This option is part of the Polaris server installation. See the *Polaris Installation Guide* for details, or contact your Polaris Site Manager. During this installation, you decide whether to use human voice messages or computer-generated voice messages. See Voices for Outbound Telephony.
- Set up the telephony server(s) in Polaris Administration.
- Activate telephone notification as a delivery option, and specify the types of notices to deliver by telephone.
- Set the telephony server parameters. These specify whether long distance calls are allowed, ports for outgoing lines, and other characteristics of the system. See Set General Telephone Notification Parameters.
- Set the dates when patrons should not be called. See Add a No-Call Date.
- Set the dialing hours for the notification server to place calls. See Set Dialing Hours.
- If you will use computer-generated voices, select and adjust the voices. See Set SAPI Voice Parameters for Outbound Telephony.

Set General Telephone Notification Parameters

After you have set up the telephony server(s) in Polaris Administration, set the general telephony server parameters for each telephony server as follows:

1. In the Administration Explorer tree view, expand the telephony server and select **Telephony** under the server name.

   The telephony parameters appear in the details view with the General and Outbound tabs.
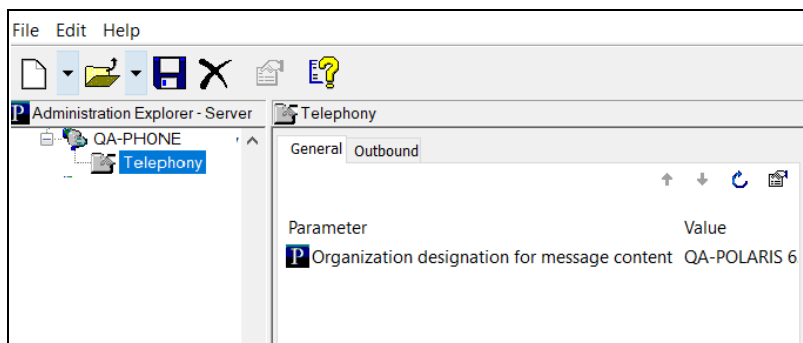
2. Select the **Outbound** tab in the details view.

   The Outbound parameters appear.
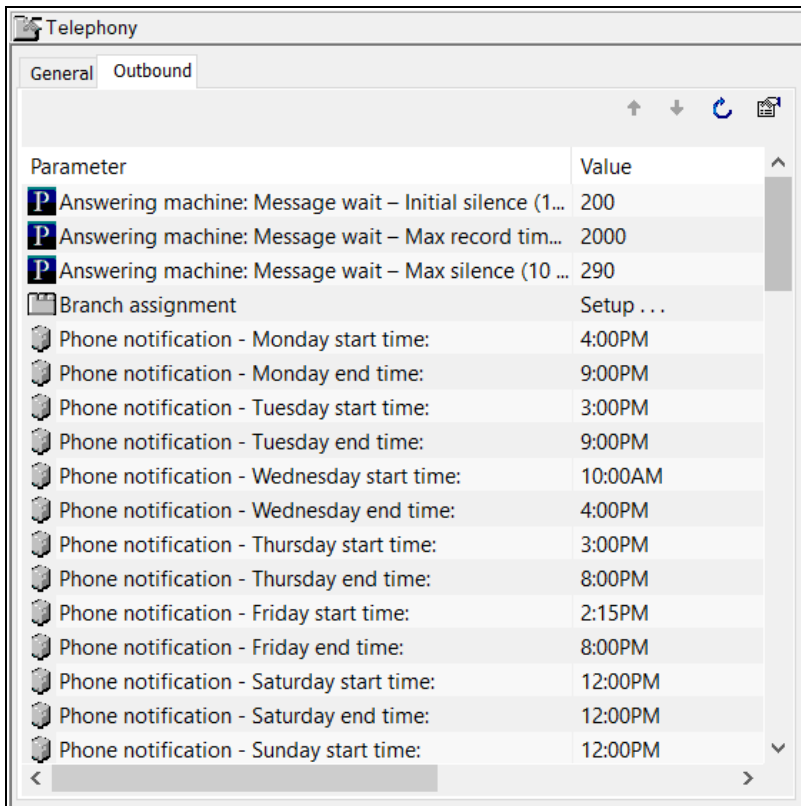
3. If you have multiple telephony servers, assign branches to this particular server by following these steps:

   a. Double-click **Branch assignment**.

      The Branch Assignment dialog opens, showing the current telephony server and the list of organizations that can be assigned to the server, with their current assignments (if any).
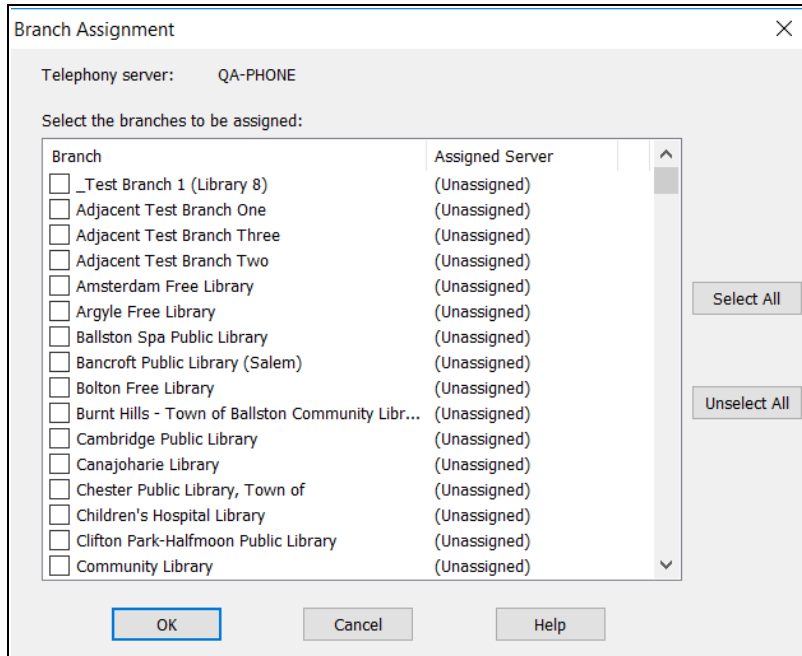
b. Select the branches that should be assigned to this server.

The list refers to the registered branches of the patrons in the notification queue. In systems with multiple telephony servers, you can assign specific branches to a particular server to minimize long distance calls.

> **Example:**
> A large library system has two telephony servers, one located in the western portion of the district and the other in the eastern portion. The library assigns the branches that serve the western patrons to the western server, so calls going out from that server will tend to be local rather than long distance calls.

The branches you have changed are marked with an asterisk * until you save the assignments.

c. Click **OK** to save your assignments.

> **Note:**
> If phone notification is chosen for overdue notices, hold request notices, hold cancellation notices, or serials claim

notices, but the reporting branch is not assigned to a telephony server, the notices are printed.

4. For **Phone notification - Allow long distance**, indicate whether the telephony server can dial toll-charged (long distance) calls:

   - Select **Yes** to allow long-distance calls.
   - Select **No** to prevent phone calls from being made to patrons whose phone numbers start with 1. Instead, a paper notice is printed automatically.

5. If you want phone notification to strip a local area code from the telephone number, set these parameters:

   - **Phone notification - local area code** - Identifies the area code local to the telephony server. Specify the three-digit area code with this parameter.
   - **Phone notification - Remove local area code before dialing** - Set to **Yes** to strip the specified area code from the phone number.

   When these two parameters are set, the following elements are removed from the start of the patron's telephone number before dialing: **[area code]**, **1[area code]**, and **1,[areacode]**.

   Note:
   If you have more than one local area code, you must remove the local area codes from the patron registration records in the database.

6. In the **Phone notification – Number of attempts** box, type how many times the telephony server should try to call a phone number that has been unsuccessful (busy signal or no answer).

7. In the **Phone notification – Minimum wait after attempt** box, type the number of minutes to wait after an unsuccessful call (busy signal or no answer) before dialing the same number again.

   Note:
   In setting **Phone notification – Minimum wait after attempt** and **Phone notification – Number of attempts**, consider your total volume of calls. If you have a low volume of calls, you set a short wait time, and set a large number of attempts, the same phone number might be called repeatedly in one day. If you have a large

> volume of calls, the attempts might be made over the course of two or three days even though the parameter settings are the same.

8. In the box for **Phone notification - Time required for voice call to be considered complete**, type the minimum number of seconds a call should run for the notice be considered delivered.

9. In the **Phone notification – Outside line call prefix** box, type the number (if any) needed to access a phone line before the phone number is dialed.

> **Note:**
> For the **Outside line call prefix** and **Outside line long distance call prefix**, an **L** tells the Dialogic® card to wait for a local dial tone before proceeding. A comma indicates a 2-second pause for the Dialogic card.

10. In the **Phone notification – Outside line long distance prefix** box, type the number (if any) needed to access a phone line for a long-distance call before the phone number is dialed. If your phone system does not use a separate outside line for long-distance calls, you do not need to set this parameter.

> **Note:**
> This prefix is specific to your library telephone system. It is not the same as the prefix to a telephone number that indicates a long-distance call (see step 3).

11. In the **Phone notification lines (array)** box, type which lines on the Dialogic board to use to make the calls.

> **Example:**
> Type **1,3,4** to use lines 1, 3, and 4.

> **Important:**
> If your system also includes inbound telephony, be sure you are not specifying a line used for incoming calls. Incoming lines are set in the Phone Attendant configuration utility. See [Set Phone Attendant Options for Specific Lines](#).

12. Set the **Phone notification: Max number of overdue notices** to the number of times a patron should be called regarding the same overdue items.

13. To include the patron's name in the notice greeting, set **Phone notification - Use patron name in greeting** to **Yes**.

14. To provide optional details in overdue notices, set the following parameters:
    - **Overdues: Allow patron to list overdue titles** - Set this parameter to **Yes** to provide a menu option for the patron to hear a list of the overdue titles.
    - **Overdues: Include material type when listing overdue titles** - If you provide patrons the menu option to hear specific titles, you can set this parameter to **Yes** to list each item's material type.
    - **Overdues: Include branch when listing overdue titles** - If you provide patrons the menu option to hear specific titles, you can set this parameter to **Yes** to list each item's assigned branch.
    - **Overdues: Maximum number of overdue titles to list** - If you provide patrons the menu option to hear specific titles, use this parameter to limit the number of titles the system will list.

15. To provide optional details in hold notices, set the following parameters:
    - **Holds: Allow patron to list held titles** - Set this parameter to **Yes** to provide a menu option for the patron to hear a list of the held titles ready to be picked up.
    - **Holds: Include material type when listing held titles** - If you provide patrons the menu option to hear specific titles, you can set this parameter to **Yes** to list each item's material type.
    - **Holds: Maximum number of held titles to list** - If you provide patrons the menu option to hear specific titles, use this parameter to limit the number of titles the system will list.

16. To provide optional details in cancelled hold notices, set the following parameters:
    - **Cancels: Allow patron to list canceled titles** - Set this parameter to **Yes** to provide a menu option for the patron to hear a list of the cancelled requests.
    - **Cancels: Include material type when listing canceled titles** - If you provide patrons the menu option to hear specific titles, you can set this parameter to **Yes** to list each item's material type.
    - **Cancels: Maximum number of canceled titles to list** - If you provide patrons the menu option to hear specific titles, use this parameter to limit the number of titles the system will list.

17. Click the **General** tab in the details view of the Explorer.

18. Double-click **Organization designation for message content**, and select the branch whose messages should be used for this server.

    Messages are branch-specific. Of the branches assigned to this server, only one branch's messages can be used for telephone notification. For more information about customizing telephony messages, see Customizing Telephony Messages.

19. Select **File** > **Save** to save your changes.

See also:

- Add a No-Call Date
- Set Dialing Hours
- Phone Notification - Answering Machine Settings (Outbound Tab)
- Voices for Outbound Telephony

Add a No-Call Date

Entries in the Dates Not to Call notification table define the specific dates the phone notification server does not call patrons, such as Christmas and New Year's Day.

To add a no-call date to the table:

> **Note:**
> These System Administration permissions are required to work with this table: **Access administration: Allow**, **Access tables: Allow**, **Modify notification dates not to call table: Allow**.

> **Tip:**
> Notification tables are displayed from the Administration Explorer only, at the system level. You cannot access this table from an organization workform.

1. In the Administration Explorer tree view, open the Notification Tables folder for the system, and select **Notification Dates Not to Call**.

   The Dates Not to Call table is displayed in the details view.

2. Click to display the Insert Notification Dates Not to Call dialog box.

3. In the **Organization** box, select the library for which the date applies.

4. Set **Date Not to Call** using one of the following methods:
   - Click the calendar icon to open the calendar control, and select the new date from the calendar.
   - Type the date using the same date format shown in the box.

5. Click **OK** on the dialog box.

   The Notification Dates Not to Call table appears with the new date. The status bar indicates that the modification is pending.

6. Select **File** > **Save** to save your changes.

   The status bar indicates that the record is saved.

Related Information

- Modify a table entry - Select the entry and click [al] .

- Delete a table entry - Select the entry and click [X] .

- Set times not to call - See [Set Dialing Hours](#).

Set Dialing Hours

You can set your calling times to avoid times when calls might annoy your patrons. You can also set dialing hours to times when someone at the library is available to answer questions from patrons after they receive their phone notification. Dialing hour settings also control whether calls are made on a particular day of the week. For example, if your library is closed on Sundays, you can prevent the notification server from making calls on Sundays. To limit the hours during which the notification server dials phone numbers.
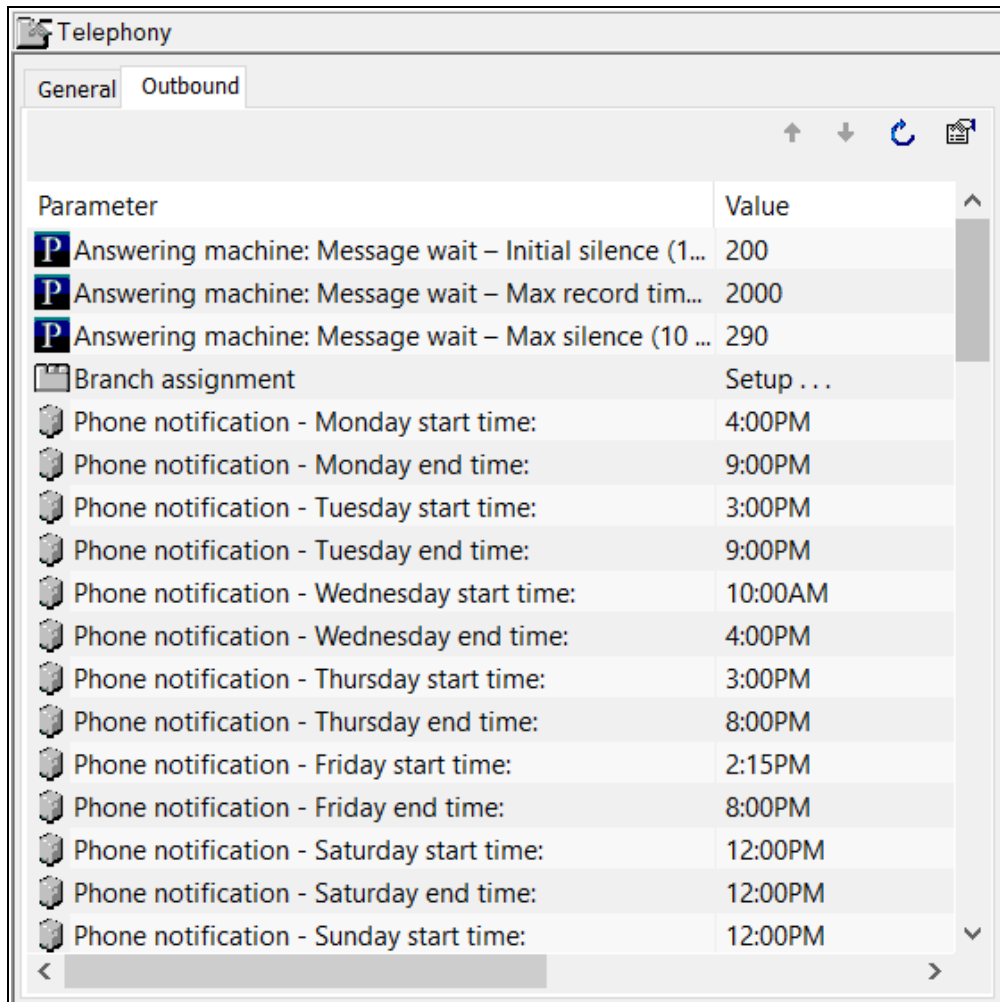
> **Note:**
> To prevent calls on specific dates, see Add a No-Call Date. If a **Date Not to Call** entry (from the Notification Dates Not to Call table) falls on a Monday, the start and end times for Monday are ignored for that specific do-not-call date.

1. In the Administration Explorer tree view, expand the telephony server and select **Telephony** under the server name.

2. Click the **Outbound** tab in the details view.

3. Double-click the start dialing time parameter for the day of the week you want to set.

> **Example:**
> To open the start dialing time parameter for Monday, double-click **Phone notification - Monday start time**. You can also open the parameter by selecting the parameter and pressing **ENTER**.

4. Use one of the following methods to set the time you want the notification server to begin calling patrons:
   - To type a new time, highlight the current time and type the new time using the format h:mm **AM** (morning) or h:mm **PM** (afternoon).

- To adjust the time in one-minute increments, click the up or down arrow on the right side of the box. You can also press the up and down arrow keys on your keyboard.

5. Double-click the stop dialing time parameter for the day of week you want to set.

> **Example:**
> To open the stop dialing time parameter for Monday, double-click **Phone notification - Monday end time**. You can also open the parameter by selecting the parameter and pressing **ENTER**.

6. Use one of the following options to set the time you want the notification server to stop calling patrons:
   - To type a new time, highlight the current time and type the new time using the format h**:**mm **AM** (morning) or h**:**mm **PM** (afternoon).
   - To adjust the time in one-minute increments, click the up or down arrow on the right side of the box. You can also press the up and down arrow keys on your keyboard.

> **Note:**
> To set a dialing parameter so that the notification server does not call anyone on a particular day of the week, set the end and start times for that day to exactly the same time. For example, to disable calls on Sundays, set **Phone notification - Sunday start time** to 12:00PM and set **Phone notification - Sunday end time** to 12:00PM.

7. Close the parameter by doing one of the following actions:
   - Press **ENTER**.
   - Highlight or open another parameter.
8. Repeat steps 2–6 for each day of the week.
9. Select **File** > **Save** to save your changes.

Voices for Outbound Telephony

You can choose to use human-voice .wav files for outbound telephony messages, or computer-generated SAPI (Speech Application Programming Interface) voice .wav files that derive their message text directly from the Polaris database.

Human Voice Messages

If you want to use human-voice messages, you can use the default set of .wav files that Polaris provides or you can record your own. When you install telephony software on the telephony server, you indicate your preference for using human voice files. The .wav files are stored in the following location on the telephony server:

C:\ProgramData\Polaris\[version]\[datalink]WaveFiles\Outbound\ [language folder]

where [**language folder**] is a number that corresponds to a specific language:

- English - 1033
- Spanish - 3082
- French - 3084

If you use multi-lingual notification, there is a set of .wav files for each licensed language in the appropriate language folder.

> **Note:**
> When you use human voice recordings for the static portions of your messages, the system still uses text-to-speech technology for message content that changes, such as specific title information or hold pickup locations.

If you record your own .wav files, name them exactly as they are named in the existing language folders and place them in the appropriate language folders, overwriting the default set. Polaris Telephony Voice Recorder, a utility for recording telephony .wav files, is available for conveniently recording .wav files.

> **Important:**
> Back up your custom .wav files in a safe location. Although they are not

overwritten if the telephony service is stopped and restarted, they are not protected if the server software must be reinstalled.

SAPI Voice Messages

When you use computer-generated SAPI voice messages, the system converts message text stored in the Polaris database to speech. You may prefer to use SAPI voice messages because you can customize the stored message text with the Polaris Language Editor. You do not need to record new .wav files to customize messages. For details, see Edit a SAPI Voice Message with Polaris Language Editor.

When you install telephony software on the telephony server, you do not select the human voice file option. Instead, the system creates the file structure described in Human Voice Messages, but no .wav files are included. When the service is run for the first time, or when the service is restarted, the message text in the Polaris database is converted to audible speech and stored in new .wav files, one .wav file per message. The .wav files are cached in the appropriate folders to reduce processing time for all calls after the first one. If you edit a message, you must delete the associated .wav file for the message before you restart the outbound telephony service. The .wav file is located in **C:\ProgramData\Polaris\[version]\[datalink]WaveFiles\Outbound\[language folder]**. The edited message is converted to a new .wav file when the service restarts.

You select SAPI voices and adjust volume and rate with telephony parameters. See Set SAPI Voice Parameters for Outbound Telephony.

Set SAPI Voice Parameters for Outbound Telephony

If you choose to use computer-generated SAPI voices for outbound telephony messages, you can set the voice parameters.

To specify a voice and adjust speaking rate and volume:

1. In the Administration Explorer tree view, expand the telephony server and select **Telephony** under the server name.
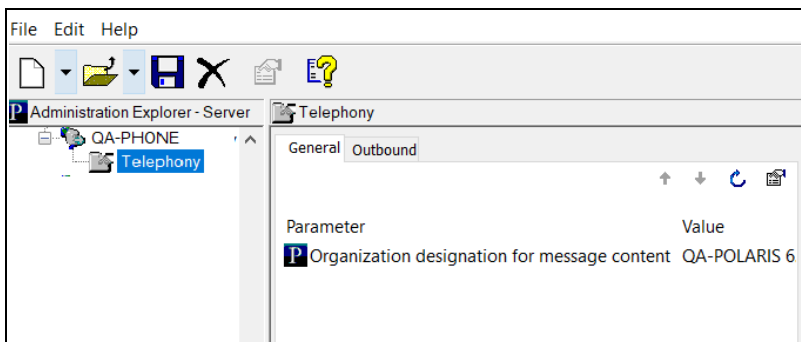
2. Click the **Outbound** tab in the details view. The Outbound parameters appear in a list.

3. Scroll down in the list to **SAPI settings**.
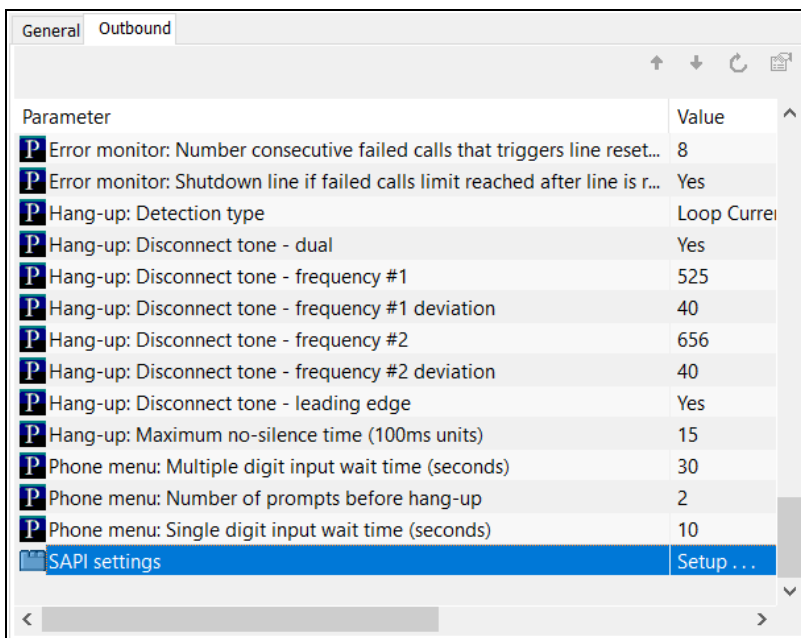
4. Double-click **SAPI settings**.

    The SAPI Settings dialog box opens.
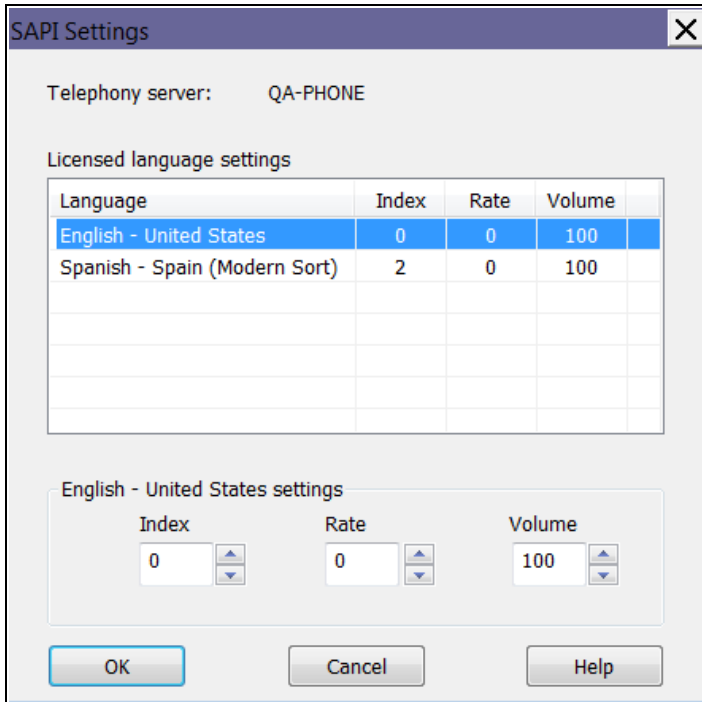
5. Select a language from the list of languages licensed for your server.

    The settings boxes at the bottom of the dialog box become available for use.

6. In the **Index** settings box, select a voice index number.

> **Tip:**
> If you have a license for Polaris Phone Attendant (inbound telephony), and inbound and outbound telephony are on the same server, you can use the inbound telephony utility **PhoneAttendantConfig.exe** to identify the voice by index number. To be sure you are viewing the indexes in the correct order, use the **Runas** command line option to run **PhoneAttendantConfig.exe** as **PolarisServices** (the account that telephony services run under). See Specify Language, Voice, Speech Rate, and Volume.

You are selecting a specific voice for your messages, represented by an index number. Innovative Interfaces supplies several AT&T SAPI voices, and you may add your own. The index number is server workstation-specific and depends on

the order in which the voices were installed, as well as any voices included with your operating system. You can select voices and test them on the system to determine if they are appropriate.

7. In the **Rate** settings box, set the rate of speech.

    The settings represent a relative rate. Negative values (**-1**) are somewhat slower than normal speech. Settings of **0** and higher set more rapid rates. The default value is **0**.

    > **Note:**
    > Each increment in the **Rate** box causes a noticeable change in the speech rate. You may want to change this setting only one increment at a time, and test before you make further changes.

8. In the **Volume** settings box, set speech volume.

    The default (**100**) represents an average volume.

9. Repeat steps 4-7 for each licensed language.

10. Click **OK**.

See also:

- [Editing Messages and Prompts](#)
- [Adjusting Pronunciation](#)

Outbound Telephony Reports and Troubleshooting

Polaris provides the following reports to help you troubleshoot problems. Select **Utilities, Reports and Notices, Notices** to access these reports:

- Telephony Delivery Failure Report - Lists failed telephone notices with their failure reasons. You can filter this report by date and patron's branch. It includes the patron's barcode, patron's branch, patron's name and telephone number, the failure reason, and the failure date.
- Telephony Summary Report - Summarizes the number of calls made for each notice with their statuses, including failure reasons, in a specified date range. The report is organized by patron branch.

> **Important:**
> Inspect this report regularly. In this report, **Unknown connection type** indicates that a busy signal was received. A sudden spike in the number of busy signals received may indicate telephony board problems.

Log File

A complete log file is generated when telephone notices are run. It is available on the telephony server at the following default location:

C:\ProgramData\Polaris\[version]\[datalink]\logs\PhoneNotification

The log file is generated in .csv format to facilitate importing the file into Excel or other tools where entries can be sorted.

The following fields are recorded:

> **Note:**
> Each time the service is started, a comment line describes the fields.

Field	Description
Date	YYYY-MM-DD
Time	HH:mm:ss.fff. 24 hour format
Type	EVENTLOG_INFORMATION_TYPE - 4
	EVENTLOG_ERROR_TYPE - 1
EventID	EVMSG_DEBUG - 101
	EVMSG_GENERAL - 100
State	SERVICE_INITIALIZING = 1
	SERVICE_TERMINATING = 2
	SERVICE_CMDPROCESSING = 3
	LINE_INITIALIZING = 4
	LINE_TERMINATING = 5
	QUEUEING = 6
	PREPARING = 7
	CONNECTING = 8
	DISCONNECTING = 9
	NOTIFYING = 10
	POSTING = 11
	WAITING = 12
Line #	Dialogic phone line number
Patron ID	Patron ID
Phone Number	Calling phone number
Comment	Details/Message. This field is wrapped with

Field	Description
	quotes.

Termination Types

The Polaris Phone Notification Service uses the Dialogic Call Progress Analysis (CPA) feature for identifying signals such as fax detection, dial tone, busy signals, voice, answering machine, and so forth. The Polaris Phone Notification service dials a patron's phone number and the Dialogic CPA feature analyzes the call. Termination types identified by CPA are reflected in the Phone Notification log as the **CPAResult**. They include the following codes:

CR_BUSY	7	/* Line busy */
CR_NOANS	8	/* No answer */
CR_NORB	9	/* No ringback */
CR_CNCT	10	/* Call connected */
CR_CEPT	11	/* Operator intercept */
CR_STOPD	12	/* Call analysis stopped */
CR_ NODIALTONE	17	/* No dialtone detected */
CR_FAXTONE	18	/* Fax tone detected */
CR_ERROR	0x100	/* Call analysis error */

CPAReason provides additional details for **CPAResult**, and is typically one of the following:

- **0** - No additional details
- **1 - CON_CAD** - Cadence Break
- **2 - CON_LPC** - Loop Drop

- **3 - CON_PVD** - Positive Voice
- **4 - CON_PAMD** - Positive Answering Machine

Consecutive Failed Calls

A number of consecutive failed calls may indicate a phone line problem. After five (default) consecutive failed phone calls, the service resets the Dialogic channel. If a phone call is successful after resetting the channel, the count restarts. However, if after resetting the channel another five consecutive calls fail, the specific phone line is shut down to prevent any further incorrect call statuses. An e-mail message is then sent to the address specified in the PAC profile **Email notification: Email address of sender**, using the e-mail server specified in the PAC profile **Email notification: Server running SMTP service**.

> **Note:**
> You can change the default setting of five calls using the registry key on the telephony server:
> Key: **HKEY_LOCAL_MACHINE System\CurrentControlSet\Services\Polaris Phone Notification\Parameters**
> String Value: **FailedCalls**

Setting Up Inbound Telephony

Your Polaris system may include the Polaris Phone Attendant for inbound telephony, which allows patrons to call specified telephone lines to hear library and account information, and renew items by telephone. This unit includes information about installing, configuring, and customizing the Polaris Phone Attendant.

> **Note:**
> The Polaris Phone Attendant is available by specific contract to your library. If your Polaris installation does not include the Phone Attendant, the features described in this unit are not available.

- Phone Attendant Overview
- Configuring the Phone Attendant

Phone Attendant Overview

Your library may offer patrons automated telephone services to access their account information and renew items. When a patron calls the designated telephone number and supplies the patron account number and an optional password, she can listen to library hours and any special announcements, and choose from the following activities:

- Hear an activity summary - Lists the total number of items out, the total number of items overdue, the total number of "open" hold and ILL requests, the total number of currently held items, the total current account charges, and the total current account credit.
- Hear a list of all items out - Lists all items out with due dates, and provides options to renew all the items or a specific item, either by selecting a title or entering an item barcode.
- Hear a list of overdue items - Lists only overdue items checked out to the patron.
- Hear a list of all requests - Lists all the patron's "open" hold and ILL requests, that is, all requests that are currently filled or may yet be filled, but not requests that are cancelled or unclaimed.
- Hear a list of items held - Lists all items currently held for the patron.
- Hear an account statement - Summarizes the patron account: total amount owed, total credits, total deposits.

Patrons choose options and provide information, such as a barcode, by pressing telephone keys. Patrons can quit the session at any time.

> **Note:**
> If your library system allows the use of the significant digits (the last unique portion) of a patron barcode, the patron can supply just this part of the barcode. If the unique part of the barcode begins with one or more zeroes, these do not need to be entered. The system supplies the complete barcode, including any leading zeros.

You can determine which specific telephone features to offer your patrons, and optionally require a password for patron access. Optional messages include an expiration warning for patron accounts due to expire in a specified period, and an additional announcement message that you can add or change at any time.

> Note:
> If the patron registration has already expired, the caller is advised and the call returns to the main menu.

The audio portion of the Polaris Phone Attendant consists of both computer-generated SAPI (Speech Application Programming Interface) voices that derive their message text from the Polaris database, and message variables that change, such as specific title information. You can edit the text of the SAPI messages, including the greeting message and all menu and response messages. You cannot edit the message variables.

> **Note:**
> Polaris currently supports English, Spanish, and French inbound telephony. If you have purchased the appropriate license, you can provide a menu choice for English, Spanish, or French and customize the Spanish or French natural-voice messages as well as the English versions. See Editing Messages and Prompts.

You configure the Polaris Phone Attendant with the configuration utility PhoneAttendantConfig.exe, which is placed in **C:\ProgramFiles\Polaris**version**\Bin** when you install Phone Attendant on the telephony server.

Blocks to Telephone Renewals

If you offer telephone renewals, the same blocking conditions apply to both telephone-initiated and PAC-initiated renewals. If any of the blocking conditions are in effect when a patron attempts to renew an item by telephone, the system plays a message and the renewal is not allowed. Item blocks as specified by the item's assigned branch also apply to telephone renewals.

> **Note**:
> On-the-fly item blocks and "verify patron data" blocks (for example, the block the system creates when a patron self-registers) do not apply to telephone renewals.

Phone Attendant Log File

A log file is generated when the Phone Attendant runs. It is available on the telephony server at the following location:

C:\ProgramData\Polaris\[version]\[datalink]\logs\PhoneAttendant

Statistical Transaction for Reporting

When the Phone Attendant receives a call, a **Phone Attendant: Call Received** statistical transaction is posted to the Polaris Transactions database if you have chosen to log this transaction. For more information about logging transactions and querying the Transactions database, see the Polaris Administration Guide, "Logging Transactions."

Configuring the Phone Attendant

Innovative Interfaces configures the Polaris Phone Attendant for you at installation. You will not need to change most of the settings described in this section unless your telephony hardware changes, or unless you wish to change the options you offer patrons by telephone. Each telephony server can have its own unique settings.

You use the configuration utility PhoneAttendantConfig.exe (located in **C:\Programs\Polaris\[version]\Bin** on the telephony server) to set up or change the Phone Attendant configuration. For your changes to be effective, you need sufficient network privileges to stop and start system services.

> **Important:**
> When you change the Phone Attendant configuration settings, you must stop and restart the service for your changes to take effect.

See also:

- [Configure Hardware Communications](#)
- [Configure Disconnect (Hang-Up) Criteria](#)
- [Specify Language, Voice, Speech Rate, and Volume](#)
- [Set Phone Attendant Options for Specific Lines](#)

Configure Hardware Communications

To designate the phone board, and specify how the Phone Attendant responds to a caller's key presses:

> **Note:**
> Innovative Interfaces® sets these communication options at installation, and you will probably not need to change them.

1. On the telephony server, open **PhoneAttendantConfig.exe** (in **C:\Programs\Polaris\[version]\Bin**).

2. Determine the number of phone boards in your system, and select the number in the **Dialogic phone board index** box.

   Typically, one board controls the phone lines. Some systems use two boards, one for outgoing lines and one for incoming lines. Others use two boards chained together, with lines designated as outgoing or incoming. In this case the configuration functions like one board, and you would select **1** in the phone board index box.

3. In the **Single digit input wait time** box, select the number of seconds the system should wait for a single key-press response from the patron before repeating a menu or prompt.

   The default value is 10 seconds. This means that when the Phone Attendant presents a menu or prompt to the user that requires a single key-press response, and the user does not press a key within 10 seconds, the Phone Attendant repeats the menu or prompt.

4. In the **Multiple digit input wait time** box, select the number of seconds the system should wait for a multiple key-press response (such as a barcode) from the patron before repeating a prompt.

   The default value is 30 seconds. This means that when the Phone Attendant presents a prompt to the user that requires a multiple key-press response, and the user does not press a key within 30 seconds, the Phone Attendant repeats the prompt.

5. In the **Number of prompts on no-input before hang-up** box, select the number of times the Phone Attendant should repeat a prompt when there is no responding key-press from the user.

The default value is **2**. This means that the Phone Attendant prompts the user once and waits the designated time for a response. If there is no response, the Phone Attendant repeats the prompt and waits the designated time for a response. If there is still no response, the Phone Attendant disconnects.

6. Click **Apply** to apply your changes and continue with the utility, or click **OK** to save your changes and quit working with the utility.

> **Note:**
> You must stop and restart the Phone Attendant service for your changes to take effect.

Configure Disconnect (Hang-Up) Criteria

To set the method by which the Phone Attendant determines that a caller has disconnected:

> **Important:**
> Innovative Interfaces sets the hang-up criteria on-site. Unless your hardware configuration changes, you will not need to change these values. This procedure is for your information.

1. If necessary, open the Phone Attendant configuration utility. See Configure Hardware Communications.
2. Click **Hang-up** to display the **Hang-up** tabbed page.
3. Select a detection method in the **Detection type** box:
   - **Disconnect tone** - This is the most precise method. The system determines that the caller has disconnected by a specific tone. If you are unsure which setting is appropriate, select **Disconnect tone** and use the default settings for **Dual tone**, **Leading edge**, **Frequency #1**, and **Frequency #2** in the Disconnect tone settings area of the page.

     > **Note:**
     > If the default Disconnect tone settings do not work satisfactorily, you can run the Dialogic program **PBExpert** from the Windows Start menu. The PBExpert wizard tests the system to determine the necessary values. Note the values and enter them in the Disconnect tone settings area of the configuration utility. You must have two lines to run PBExpert because the program "calls itself" to run the test.

   - **Max No Silence** - Use this setting if **Disconnect tone** does not work. The system hangs up after a specified period of detecting no silence (continuous noise). If you choose this option, also specify how long the system should "listen" to continuous noise in the **Maximum no silence time** box.

     > **Note:**
     > This option may cause repeated hang-ups on patrons calling

> from locations with a great deal of background noise.

- **Loop Current Drop** - (Default). This method detects an actual current drop when the caller hangs up.

4. Click **Apply** to apply your changes and continue working with the configuration utility, or click **OK** to save your changes and quit working with the utility.

> **Note:**
> You must stop and restart the Phone Attendant service for your changes to take effect.

Specify Language, Voice, Speech Rate, and Volume

To select a natural voice for Phone Attendant messages, and to set the speech rate and volume of the natural voice messages:

1. If necessary, open the Phone Attendant configuration utility. See [Configure Hardware Communications](#).

2. Click **Phone Voice** to display the Phone Voice tabbed page.

3. If you have purchased a multilingual license, select the language in the **Language** box.

4. To work with the selected language, select one of these options.

   - To add a new voice, click **Add New Phone Voice**.
   - To edit existing settings, click **View**.

   The Phone Voice Configuration dialog box opens.

5. Select the language for which you are setting up the voice.

   If this language will be the organization's default message language, select **Default**.

6. Select the organization in the **Organization ID** box that should use these settings.

   The default setting is **1**, which identifies the system organization.

   > **Note:**
   > You can view organization ID values in Polaris Administration. In the Administration Explorer, right-click an organization and select **Properties** from the context menu. Select the **About** tab on the Properties dialog box. **Polaris system ID number** identifies the organization ID.

7. Select a menu option for this language.

   The default setting is 1. The setting of 1 controls which language is used when the user presses 1 in accordance with the default instructions contained in the message **PA_LANGUAGE_MENU_OPTION**: "press 1 for English, press 2 for Spanish."

   > **Note:**
   > If you have selected **Español** in the **Language** box and leave the default **Menu Option** setting at **1**, the user will hear Spanish messages when 1 is

> pressed. You can edit **PA_LANGUAGE_MENU** to say "Press 1 for Spanish, press 2 for English." See [Editing Messages and Prompts](#).

8. Select a voice in the **Voice** box.

   You are selecting a specific voice for your messages, represented by an index number. Innovative Interfaces supplies several AT&T SAPI (Speech Application Programming Interface) voices, and you may add your own. The index number is server workstation-specific. The **Voice** box shows the index number and the name of the voice.

9. Set the rate of speech in the **Rate** box.

   The settings represent a relative rate. The default value (**-1**) is somewhat slower than normal speech. Settings of **0** and higher set more rapid rates.

   > **Note:**
   > Each increment in the **Rate** box causes a noticeable change in the speech rate. You may want to change this setting only one increment at a time, and test before you make further changes.

10. Set the speech volume in the **Volume** box.

    The default (**100**) represents an average volume.

11. Click **Apply** to apply your changes and continue working with the configuration utility, or click **OK** to save your changes and quit working with the utility.

    > **Note:**
    > You must stop and restart the Phone Attendant service for your changes to take effect.

Set Phone Attendant Options for Specific Lines

You can add a new line or edit the options for an existing line.To set the options available to patrons who call specific lines in your system:

> **Note:**
> The Phone Attendant offers patrons various options as menu choices. If you disable an option, the message file still offers the menu choice. When a caller selects the menu choice, the Phone Attendant states (by default) that the library has disabled the feature. If you want to change this message, you can edit the message file and remove the menu text.

1. If necessary, open the Phone Attendant configuration utility. See Configure Hardware Communications.
2. Click **Phone Lines** to display the Phone Lines tabbed page.
3. Add a new line, or edit the settings for an existing line:
   - To add a new line, click **Add New Phone Line**.
   - To edit an existing line, select the line in the **Line Number** box, and click **View**.

   The Phone Lines Configuration dialog box appears.
4. Select the phone line you are adding or editing in the **Line Number** box.

> **Important:**
> If your system uses outbound (notification) telephony, be sure you are not specifying a line used for outgoing calls. Outgoing lines are set in Polaris Administration. See Set General Telephone Notification Parameters.

5. Select an organization ID in the **Organization ID** box.

   This setting allows you to set up organization-specific options and messages for a specific phone line. The default is **1**, which identifies the library system organization.

> **Note:**
> You can view organization ID values in Polaris Administration. In the Administration Explorer, right-click an organization and select **Properties** from the context menu. Select the **About** tab on the Properties dialog box. **Polaris system ID number** identifies the organization ID.

6. Specify the log-in settings for this phone line:

   After the patron has entered the account barcode, the system transforms the password from the patron record into a number string and then matches the string to the patron's password input. If the patron presses 2, for example, the system accepts the keypress as representing 2, a, b, or c. Any special characters in the password, including # or *, are mapped to 0, so the patron must press 0 for these characters.

   - **Max Login Attempts** - Select the number of times a patron can attempt to log in before the Phone Attendant disconnects.
   - **Password Required** - Select this box if you want to require a patron account password to log in, in addition to the patron barcode (which is always required).
   - If you have checked **Password Required**, and want to allow alpha-numeric passwords, select **Support alpha-numeric passwords**.

     > **Note:**
     > Setting inbound telephony to recognize alpha-numeric passwords weakens password strength, because several letters or characters can map to the same number.

     When this option is set, the Phone Attendant plays a prompt after the patron enters the barcode. The default message is **Please enter your password using the number key appropriate to the letter. Press 0 for all special characters**. You can edit the message in Polaris Language Editor (WebAdmin). The Inbound Telephony string ID is **PA_MENU_ LOGIN_ALPHA_NUMERIC_PASSWORD**.

     > **Important:**
     > If you will require patron passwords for Phone Attendant log-in but do not allow alpha-numeric passwords, you must restrict patron passwords to numeric format only.

7. If you want the service to detect a registration that is due to expire, and warn the patron at log-in, do these steps:
   a. Select the **Expiration Warning Enabled** box.
   b. In the **Expiration Warning Days** box, select the number of days before expiration that triggers the warning.

> **Example:**
> The **Expiration Warning Days** value is set to **14**. The Phone Attendant delivers the expiration warning message to any patron who successfully logs in, and whose patron account is due to expire within the 14-day time period.

8. Specify how you want circulation transactions (renewals) to be logged for this line:
   a. Select or type the Polaris user ID in the **Trn User ID** box.
   b. Select or type the Polaris workstation ID in the **Trn Workstation ID** box.

> **Note:**
> You can view user and workstation ID values in Polaris Administration. Search for the user or workstation with the Find Tool, and right-click the user or workstation in the results list. Select **Properties** from the context menu. The **About** tab on the Properties dialog box displays the ID.

9. If you want this line to allow patrons to hear a list of items they have currently checked out, with options to renew, select **List Items Out Enabled**.

   When **List Items Out Enabled** is checked, patrons are offered the option of renewing all the items, or renewing single items by pressing a key as the title of the item is read. You can have the Phone Attendant include the author, material type, and the item's assigned branch for each item in the list by checking these options. If you do not check these options, the Phone Attendant simply lists the titles and renewal options.

> **Note:**
> The activity summary menu option is always available. When a patron selects this option, she hears the total number of items out, the total number of items overdue, the total number of "open" hold and ILL requests, the total number of currently held items, the total current account charges, and the total current account credit.

10. If you want this line to allow patrons to renew an item by entering the item's barcode, select **Renew Single Item Enabled**.

11. If you want this line to allow patrons to hear a list of current holds and ILL requests, select **List Requests Enabled**.

    Hold requests with a status of Inactive, Active/Pending, Shipped, or Not-supplied are included. ILL requests with a status of Inactive, Active, or Received are also

included. The list includes the title, request date, and request status for each request.

12. If you want this line to allow patrons to hear a list of currently overdue items, select **List Overdue Items Enabled**.

   If you select this option, you can have the Phone Attendant include the author, material type, and the item's assigned branch for each item in the list by checking these options. If you do not check these options, the Phone Attendant simply lists the titles of the overdue items with their due dates.

13. If you want this line to allow patrons to hear a list of requests currently available for pick-up, select **List Held Items Enabled**.

   The list includes the title, the pick-up branch, and the unclaimed date ("held until") for each item.

14. If you want this line to allow patrons to hear a detailed account statement, select **Account Statement Enabled**.

   The statement includes any outstanding amounts in the **Charges**, **Deposits**, and **Credits** fields of the patron account.

15. If you want this line to allow patrons to estimate fines on overdue items, select **Estimate Fines Enabled**.

   When the patron selects this option, the message includes the author, title, due date, and estimated amount for each item, and the total due. (If the patron does not have any overdue or claimed items, the option is not available.) If the patron has lost or claimed items and overdue items, an additional message states **Additional charges are due for lost or claimed items, please contact the library for more information.** If the patron has only lost or claimed items but no overdue items, only the **Additional charges message** is played. If the patron has only lost or claimed items but no overdue items, only the **Additional charges message** is played.

16. Type the path for this line's message .wav files in the **Wave Path** box, if different from the default location.

   The default location for the .wav files is **C:\ProgramData\Polaris\ [VersionNumber]\[DataLinkName]\WaveFiles\Inbound**

Customizing Telephony Messages

If you use computer-generated SAPI voice messages for outbound or inbound telephony, the system converts message text stored in the Polaris database to speech. You can customize the stored message text with the Polaris Language Editor, and the system automatically generates new .wav files for the customized messages. You can also adjust the pronunciation of individual words for each SAPI voice you use.

See also:

- [Editing Messages and Prompts](#)
- [Adjusting Pronunciation](#)

Editing Messages and Prompts

You can alter the text of the SAPI messages and prompts with Polaris Language Editor. (WebAdmin). This Web-based tool allows you to customize English and other licensed language strings in all the parts of Polaris that support multiple languages, including outbound and inbound telephony. See Edit a SAPI Voice Message with Polaris Language Editor.

The system then converts the edited telephony message text to speech, using the voice you specified when you configured outbound telephony or the Phone Attendant. (The portions of the messages and prompts that use specific circulation and request data in the database cannot be altered.)

See also:

- Set SAPI Voice Parameters for Outbound Telephony.
- Specify Language, Voice, Speech Rate, and Volume.

Text-to-Speech Conversion

The default messages contain the text of the natural speech messages and prompts. When the service is run for the first time, or when the service is restarted, the message text is converted to audible speech and stored in .wav files, one .wav file per message. Each message is identified by name in the Polaris Language Editor. For example, the greeting message for the Polaris Phone Attendant is called **PA_TEXT_GREETING**. The illustration shows a portion of the Language Editor with inbound telephony messages displayed.
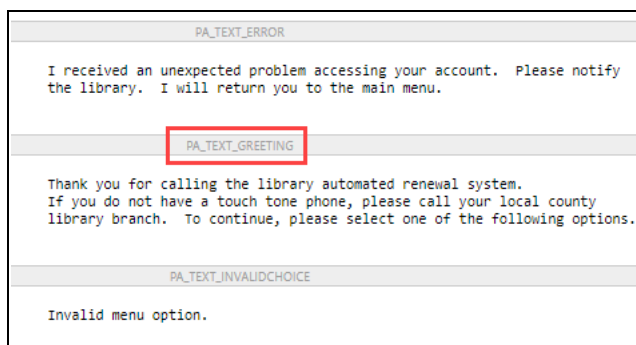
The converted .wav file for this message is named **1033_PA_TEXT_GREETING.wav.** The **1033** portion of the file name identifies the language of the file. Each supported language is identified by an identification code as follows:

- English - 1033
- Korean - 1042
- Polish - 1045
- Russian - 1049
- Farsi - 1065
- Vietnamese - 1066
- Hindi - 1081
- Hawaiian - 1141
- Chinese - 2052
- Spanish - 3082
- French - 3084 (outbound telephony only)
- Arabic - 12289
- Haitian Creole - 15372

When you edit a message, you must delete the associated .wav file for the message before you restart the outbound telephony or Phone Attendant service (see Edit a SAPI Voice Message with Polaris Language Editor).

The edited message is converted to a new .wav file when the service restarts.

> **Note:**
> For outbound telephony where there are multiple telephony servers, one organization's set of messages must be specified for use by each server. See Set General Telephone Notification Parameters.
> For inbound telephony, if each phone line is associated with a different organization, and each organization offers different options and custom messages such as announcements, each organization has its own messages and associated .wav files. The path and URL for each organization's files are specified in the configuration utility. See Set Phone Attendant Options for Specific Lines.

Phone Attendant (Inbound Telephony) Menu Options

The Phone Attendant offers patrons various options as menu choices. If you disable an option, the message file still offers the menu choice. When a caller selects the menu choice, the Phone Attendant states (by default) that the library has disabled the feature. If you want to change this message, you can edit the message file and remove the menu text. However, the menu option number always remains the same.

For example, if you choose to not offer patrons the ability to renew an item by typing a barcode number, and you do not edit the message associated with this menu option, the Phone Attendant responds, "I'm sorry, this option has been disabled" (**PA_TEXT_ OPTIONDISABLED**). If you prefer that patrons do not hear the menu choice for the disabled option, you can remove the text string **To renew a specific item, press 3** from the list of options (**PA_MENU_PATRONMAIN**).

The numbers for the other menu options do not change, so the menu offerings will skip the **press 3** option, going from the **press 2** option (list items out) to the **press 4** option (list of overdue items).

> **Important:**
> Do not edit the menu numbers.

Edit a SAPI Voice Message with Polaris Language Editor

The following steps summarize how to edit a SAPI voice message for inbound or outbound telephony. For more information about using the Language Editor, click the **Help** tab in the Language Editor.

> **Note:**
> You need the Polaris permission **WebAdmin access: Allow** to use the Language Editor.

1. Open your Web browser and navigate to the Language Editor site on your server.

   The Log On page opens.

2. Type your name, password, and domain name, and click **OK**.

   The Language Editor opens and the Edit page is displayed.

3. In the **Product** box, select **Inbound Telephony** or **Outbound Telephony** as appropriate.

4. Select the organization for which you are making the modification.

> **Note:**
> For outbound telephony where there are multiple telephony servers, one organization's set of messages must be specified for use by each server. See Set General Telephone Notification Parameters.

> For inbound telephony, if each phone line is associated with a different organization, and each organization offers different options and custom messages such as announcements, each organization has its own messages and associated .wav files. The path and URL for each organization's files are specified in the configuration utility. See Set Phone Attendant Options for Specific Lines.

5. Select languages to compare and edit in the **Language 1** and **Language 2** boxes.

   Only languages that are licensed are available for selection. Select two languages (for example, English and Spanish) to compare the equivalent message strings side-by-side. If you want to edit only one language, for example English, set both languages to **English - United States**.

6. (Optional) To limit the language strings that will be displayed, select one of the following options:

   - **Specific string ID** - Each language string is identified by a unique identification code. If you want to display a specific language string and you know the code, enter it here.
   - **String contains** - You can display language strings that contain specific text. Enter the text here.
   - **Only show customized language strings** - Check this box to limit the list to strings that have already been customized.

7. Click **Load Strings**.

   The strings are displayed in a table with the first language on the left and the equivalent string in the second language on the right. The string ID is displayed above each string for both languages. If you have set both languages to the same choice, the table shows only one language. Click **Previous Page** and **Next Page** to navigate through the results.

8. Click 🗒️ to edit a string.

   The custom box for the string opens.

9. Type your custom text in the Custom box, and click 🗹 to save your changes.

   (You can click 🗙 to restore the default value.)

   After you save your custom text, the string is labeled **Custom:** and the custom text

   is displayed in a different color. You can click 🗒️ to open the custom box again,

   or click 🗙 to restore the default value.

   > **Tip:**
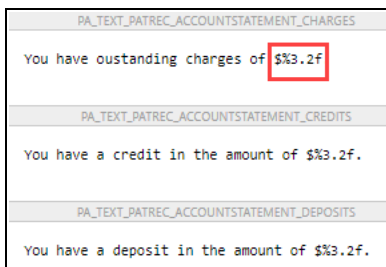   > You can edit the Phone Attendant's library hours and announcements as you would any other messages. The library hours message name is **PA_TEXT_LIBRARYHOURS**. The message name for announcements is **PA_TEXT_ANNOUNCEMENTS**.

   > **Important:**
   > Do not edit the name of the message or (for Phone Attendant) the menu option numbers. Also, do not edit circulation variables. You can identify

these by the **$%** signs that precede them. For example, in the message
PA_TEXT_PATREC_ACCOUNTSTATEMENT_CHARGES
You have outstanding charges of $%3.2f
the actual amount of charges is drawn directly from the patron record,
and is represented by the variable **$%3.2f**. You can edit any other text in
the message.

PA_TEXT_PATREC_ACCOUNTSTATEMENT_CHARGES

You have oustanding charges of $%3.2f

PA_TEXT_PATREC_ACCOUNTSTATEMENT_CREDITS

You have a credit in the amount of $%3.2f.

PA_TEXT_PATREC_ACCOUNTSTATEMENT_DEPOSITS

You have a deposit in the amount of $%3.2f.

10. Click **Log Off** to end the current session.

11. Stop telephony services.

12. Open the appropriate .wav file folder, which contains the converted text messages.

    The default location for outbound telephony is:

    **C:\ProgramData\Polaris\[version]\[datalink]\WaveFiles\Outbound\
    [language folder]\Cache**

    The default location for inbound telephony is:

    **C:\ProgramData\Polaris\[version]\[datalink]\WaveFiles\Inbound\
    [language folder]\Cache**

    where **[version]** is your Polaris version number, **[datalink]** is your network database
    location if any, and **[language folder]** is a number that corresponds a specific
    language. See [Text-to-Speech Conversion](#).

13. In the **Cache** folder, delete the .wav files for the messages you edited. Do not
    delete the folder itself; delete only the appropriate .wav files.

    Note (Inbound telephony):
    If you edited many messages, you can delete all the files in the
    appropriate .wav folder. However, performance may slow somewhat
    when the first calls come in, as the text messages are converted to new
    .wav files the first time they are used. That is, a new .wav file is created
    when the first caller attempts to access the message. If you would like to

avoid long pauses for the first callers, call the inbound telephony service and invoke the new messages before patrons use the service.

14. Restart the phone service.

Note (Outbound telephony):
The .wav files are regenerated when the service is restarted.

Related Information

- Record your own .wav files - Instead of using the .wav files created when text is converted to speech, you can record and manage your own .wav files using the Polaris Telephony Voice Recorder. See the Voice Recorder help file for more information.
- Adjusting pronunciation - You can change the way SAPI voices pronounce specific words. See Adjusting Pronunciation.

Adjusting Pronunciation

Polaris telephony includes the TTS (Text-to-Speech) Lexicon Editor that you can use to modify the pronunciation of certain words (for example, branch or place names) when the message text is converted to SAPI voice messages. You select sounds for a word from a standard list of English phonemes (speech sounds), and the pronunciation is stored in the SAPI Lexicon, a database for the words and their pronunciations. You can test the pronunciation as you work in the Lexicon Editor.

> **Tip:**
> For words that are part of standard messages, you may find that editing the word with the Polaris Language Editor is a simpler way to adjust pronunciation. Find the word and spell it in a way that most closely resembles how you want it to be pronounced. See Edit a SAPI Voice Message with Polaris Language Editor.

The TTS Lexicon Editor is included in the Polaris telephony server installation. However, because each user log-on has its own Lexicon database, and because the workstation needs a sound card to test pronunciation adjustments, you cannot use Remote Desktop to connect to the telephony server and work with the Lexicon Editor there. You must log on locally to a workstation with a sound card and speakers to test the pronunciation, then use Remote Desktop to connect to the telephony server and copy your changes. For the most accurate test, the workstation should have available the SAPI voice actually used in the message. To make this process more convenient, you can now select the TTS Lexicon Editor as part of the staff client installation, then install the appropriate AT&T SAPI voice on the workstation.

See: Install and Use the TTS Lexicon Editor

Install and Use the TTS Lexicon Editor

To modify how a word is pronounced when outbound or inbound telephone messages are converted to SAPI speech:

> **Note:**
> You will need Remote Desktop to connect to the telephony server from the local workstation.

1. During the installation of the Polaris staff client (Polaris ILS) on the local workstation, select **Text-to-Speech Lexicon Editor** under Polaris ILS.
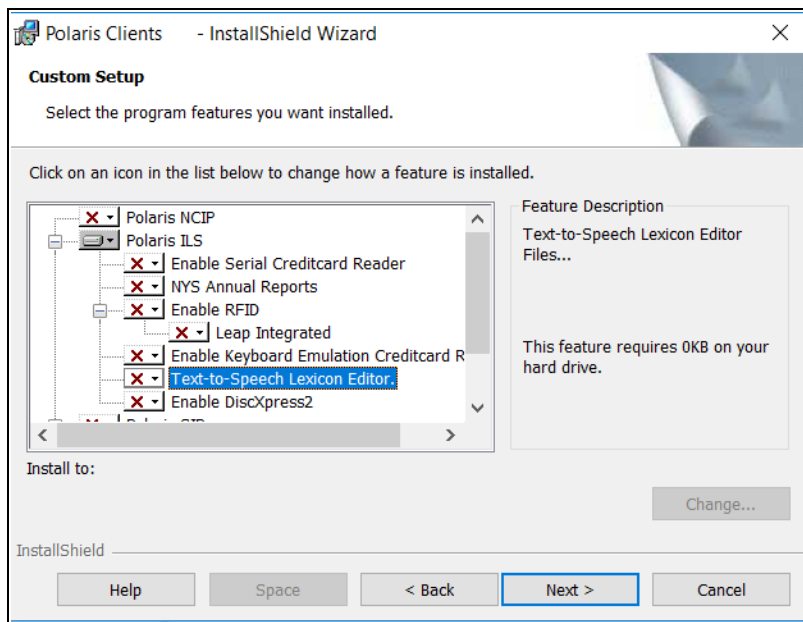
2. Install the AT&T voice client your service uses (for example, AT&T NV4.2 Mike16) on the local workstation by following these steps:

   a. Using Remote Desktop, connect to the telephony server.

   b. Copy the AT&T Voices zip file from the **PolarisSupport** server folder to the local workstation.

   c. Open the zip file on the local workstation and double-click the set-up icon for the client version of the AT&T voice your service uses.

   The first installation window opens.

d. Click **Next**.

The License Agreement window opens.

e. Click **Yes** on the License Agreement window.

The Destination Directory window opens.

f. Select the destination on the local workstation for the voice client, and click **Next**.

The Ready to Install window opens.

g. Click **Install**.

The Voice Setup window opens.

h. Select the voice you will edit from the list of those installed on your telephony server, and type the name of your telephony server in the **Server** box.

> **Note:**
> The Port box displays **7000** by default. This is the correct setting.

i. Click **Save**, then **Exit**.

The Voice Setup Window opens.

j. Confirm the voice and telephony settings, then click **Exit**.

The Information window opens.

k. Click **Next**.

The installation begins.

l. Click **Finish**.

> **Important:**
> If there is a firewall, be sure that port 7000 on the telephony server is open.

3. Open the TTS Lexicon Editor, **TTSLexiconEditor.exe**, on the local workstation.

The default location is
 C:\Program Files\Polaris\[verion]\Bin\TTSLexiconEditor.exe

The Lexicon Editor is displayed. The **Voice** box displays the voice you installed for testing, your telephony server name, and port 7000.
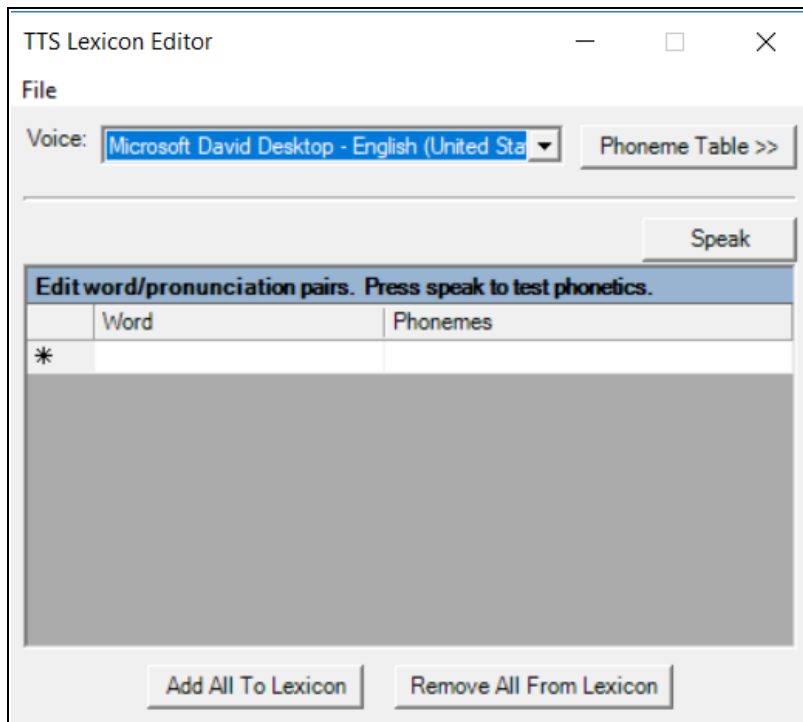
4. Click **Phoneme Table**.

The Phoneme Table opens next to the Lexicon Editor.

Phoneme Table (English)		
Symbol	**Example**	∠
ax	ago	
ey	ate	
b	big	
ay	bite	
uh	book	
ae	cat	
ch	chin	
ah	cut	
k	cut	
d	dig	
ao	dog	
aa	father	
iy	feel	
ih	fill	
f	fork	
aw	foul	
er	fur	
ow	go	
g	gut	

Each phoneme represents an English sound.

5. In the **Word** column, type the word for which you want to modify the pronunciation.

   The Lexicon is case-sensitive. Type the word exactly as it appears in the message text.

   > **Example:**
   > If the message text contains the branch name **Syracuse**, but you enter **syracuse** in the lexicon, your custom pronunciation for **Syracuse** is not applied when the message text is converted to speech.

6. In the **Phonemes** column of the Lexicon Editor, type the series of phonemes you need to build the pronunciation of the word.

Refer to the Phoneme table for the letter combinations that indicate specific phonemes. Separate syllables with a hyphen (**-**) or space. You can place a primary or secondary stress on a syllable by beginning the syllable with **1** or **2**.

> **Example:**
> To specify pronunciation for the word **Syracuse**, you might type these characters in the Phonemes column of the lexicon editor:
> **1 s ae r - ax - k y uw s**

> **Note:**
> The Lexicon can store multiple pronunciations for the same word. To clear all the pronunciations for words in the table, click **Remove All From Lexicon**.

7. To test the pronunciation, select the word in the Words column, and click **Speak**.
8. Modify the phonemes for the word, if necessary, and test it again.
9. Repeat steps 4-8 for each word you want to modify.
10. Select **File**, **Save**, and save the Lexicon .xml file to the local workstation.
11. Use Remote Desktop to connect to the telephony server and log on as **Polarisexec**.
12. Copy the saved Lexicon .xml file from your local workstation to your telephony server.
13. Be sure the service Polaris Phone Notification is running under the user **polarisexec**.
14. Open **TTSLexiconEditor.exe** on the server.
15. Select **File, Open,** and browse to and open the file you copied from the local workstation.
16. Click **Add All To Lexicon** to add the modified pronunciations to the Lexicon database for the **polarisexec** user on the server.
17. Close the TTS Lexicon Editor.
18. Stop the Polaris Phone Notification service.
19. Restart the service AT&T Labs Natural Voices Text to Speech 4.2.
20. Clear the Polaris .wav file cache.
21. Start the Polaris Phone Notification service.

Telephony Parameters Reference

These parameters are available on the **Telephony** parameters page for each telephony server on the Administration Explorer. For more information about setting up telephony, see Setting Up Outbound Telephony for Phone Notification.

Multiple Telephony Server Settings

Organization designation for message content (General tab)

For systems with multiple telephony servers. Specifies the branch whose outbound telephony messages should be used for this server.

Branch assignment (Outbound tab)

For systems with multiple telephony servers. Assigns a set of branches to this server. The list refers to the registered branches of the patrons in the notification queue. You can assign specific branches to a particular server to minimize long distance calls.

See also: Set General Telephone Notification Parameters

Phone Notification Start and End Times (Outbound Tab)

These parameters control the times patrons can be called on each day of the week by specifying a start time and end time for each day. However, the calling times may be overridden by Date Not to Call entries in the Notification Dates Not to Call table. For example, if a Date Not to Call entry falls on a Monday, the Monday start time is ignored for that specific date. To block calls to patrons on a specific day of the week every week, set the start and end times for that day to the same time. Valid values are: 12:00AM-11:59PM

- Add a No-Call Date
- Set Dialing Hours

Cancelled Request Notices (Outbound Tab)

These parameters control the contents of telephone cancelled request notices.

Cancels: Allow patron to list canceled titles

Provides a menu option for patrons to hear the specific titles of the cancelled requests. The default is No.

Cancels: Conclusion voice file available

Provides a generic conclusion message. The default English message is: **If you would still like these items, please place a new hold request**. The default is No.

Cancels: Intro count voice file available

Includes the number of cancelled requests in the introductory message. For example, the default English voice file message for multiple cancelled requests is: **Our records indicate that you have [number] hold requests that are now canceled**. If you set this parameter to Yes, set Cancels: Intro voice file available to No. The default is No.

Cancels: Include material type when listing canceled titles

When Cancels: Allow patron to list canceled titles is set to Yes, includes the material type of each item. The default is No.

Cancels: Intro voice file available

Provides a generic introduction message. The default English message is: **Our records indicate that you have hold requests that have been cancelled**. If you set this parameter to Yes, set Cancels: Intro count voice file available to No. The default is Yes.

Cancels: Maximum number of canceled titles to list

When Cancels: Allow patron to list canceled titles is set to Yes, limits the number of specific items in the list. The default is 5.

Holds Pickup Notices (Outbound Tab)

These parameters control the contents of telephone holds pickup notices.

Holds: Allow patron to list held titles

Provides a menu option for patrons to hear the titles of the specific items that are being held for pickup. The default is No.

Holds: Conclusion voice file available

Provides a generic conclusion message. The default English message is: **Please pick up these items as soon as possible**. the default is No.

Holds: Intro count voice file available

Includes the number of holds ready for pickup in the introductory message. For example, the default English voice file message for multiple pickup items is Our records indicate that you have [number] items being held for you. If you set this parameter to Yes, set Holds: Intro voice file available to No. The default is No.

Holds: Include material type when listing held titles

When Holds: Allow patron to list held titles is set to Yes, includes the material type of each held item. The default is No.

Holds: Intro voice file available

Provides a generic introduction message. The default English message is: **Our records indicate that you have items being held for you**.

If you set this parameter to Yes, set Holds: Intro count voice file available to No. The default is Yes.

Holds: Maximum number of held titles to list

When Holds: Allow patron to list held titles is set to Yes, limits the number of specific held items in the list. The default is 5.

Holds: Pickup library voice file available

Includes the pickup libraries for held items in the holds pickup notice. The default English message is: **These items can be picked up at the following locations** [pickup branch or branches]. The default is No.

Overdue Notices (Outbound Tab)

These parameters control the contents of telephone overdue notices.

Overdues: Allow patron to list overdue titles

Provides a menu option for patrons to hear the specific titles that are overdue. The default is No.

Overdues: Conclusion voice file available

Provides a generic conclusion message. The default English message is: **Please return these items as soon as possible**. The default is No.

Overdues: Intro count voice file available

Includes the number of overdue items in the introductory message. For example, the default English voice file message for multiple overdue items is: **Our records indicate that you have [number] overdue items**. If you set this parameter to Yes, set Overdues: Intro voice file available to No. The default is No.

Overdues: Fees voice file available

Includes the amount owed in the overdue notice. The default English message is: **You have accrued fines in the amount of [amount]**. The default is No.

Overdues: Include branch when listing overdue titles

When Overdues: Allow patron to list overdue titles is set to Yes, includes the assigned branch of each overdue item. The default is No.

Overdues: Include material type when listing overdue titles

When Overdues: Allow patron to list overdue titles is set to Yes, includes the material type of each overdue item. The default is No.

Overdues: Intro voice file available

Provides a generic introduction message. The default English message is Our records indicate that you have overdue items. If you set this parameter to Yes, set Overdues: Intro count voice file available to No. The default is Yes.

**Overdues: Maximum number of overdue titles to list
(System)**

When Overdues: Allow patron to list overdue titles is set to Yes, limits the number of specific overdue items in the list. The default is 5.

Phone Notification - General Settings (Outbound Tab)

These settings control general aspects of phone notification, such as local and long distance calling.

Phone notification - allow long distance

Indicates that the notification system can dial toll-charged (long distance) numbers. The system recognizes long-distance calls as those numbers that are prefixed with 1. If you set this parameter to No, the notification system does not dial long distance phone numbers, and a paper notice is produced for the patron automatically. The default is Yes.

> **Important:**
> The telephone number in the patron record must begin with 1 to be recognized as a long distance call.

Phone notification - local area code

Identifies the area code local to the telephony server. If you specify a three-digit area code with this parameter and set Phone notification - Remove local area code before dialing to Yes, the following are removed from the start of the patron's telephone number before dialing: **[area code]**, **1[area code]**, and **1,[areacode]**. The default is Null (empty).

Phone notification – minimum wait after attempt

Identifies how long to wait (in minutes) after a busy or no-answer call before attempting to dial the same number again. The actual time period before attempting the next call may be longer, depending on how long it takes to cycle through the other entries in the notification queue. The default is 30 minutes with valid values 1 or greater.

Phone notification – number of attempts

Identifies the number of times to redial a phone number that is busy or does not answer. The notification server continues to dial a voice phone for the number of times you specify and waits for the period of time specified in the Phone notification - Minimum wait after attempt parameter between each redial. When

the notification server has attempted the number of times specified by this setting without success, it does not call the same number for the same notice again. The default is 10 (attempts) with valid values of 1 or greater.

Phone notification - outside line call prefix

Identifies the number required to access an outside line before the phone number can be dialed. Leave this parameter empty if accessing an outside line is not required. An L tells the Dialogic card to wait for a local dial tone before proceeding. A comma indicates a 2-second pause for the Dialogic card. The default is Null (empty) with valid values: Null (empty), comma (,), L, 0 - 9

Phone notification - outside line long distance prefix

Identifies the number required to access an outside line for a long distance call before the phone number can be dialed. Leave this parameter empty if accessing an outside line is not required. An L tells the Dialogic card to wait for a local dial tone before proceeding. A comma indicates a 2-second pause for the Dialogic card. The default is Null (empty) with valid values: Null (empty), comma (,), L, 0 - 9

Phone notification - Remove local area code before dialing

When set to Yes, if a three-digit local area code has been specified with the parameter Phone notification - local area code, the following are removed from the start of the patron's telephone number before dialing: [area code], 1[area code], and 1,[areacode]. When set to No, the entire telephone number is dialed. The default value is No.

Phone notification - Time required for voice call to be considered complete

Specifies how many seconds a telephone notice call must last to consider the notice as delivered. The default is 7.

Phone notification - Use patron name in greeting

Specifies whether telephone notices include the patron's name in the greeting. The default is No.

Phone notification lines (array)

Identifies the voice ports that have phone lines connected. List the voice ports, separated by commas. Valid values: comma (,) and integers greater than 1

> **Example:**
> **1, 3, 5, 6, 7, 8**.

Phone notification: Max number of overdue notices

> Specifies how many times a patron should be called as long as the item remains overdue. Setting this parameter to zero (0) means that the patron is not called for overdue items. Setting this parameter to one (1) or greater sets the number of phone calls to make. The default is 1 with valid values: 0 (no calls); 1 or greater

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Phone Notification - Answering Machine Settings (Outbound Tab)

When a notification phone call is placed, your Dialogic hardware determines if the call is picked up by a person or an answering machine. If it detects an answering machine, the Polaris Phone Notification service must determine when to leave the message. Since there is no standard for a "beep" sound, and cell phone voice mail systems complicate the process by switching systems during the call, the Phone Notification service must "listen to" the phone call for a short period of time. During the listening process, the Phone Notification service uses termination rules determined by these parameters. They dictate when to stop listening to silence—that is, to stop when a specific amount of silence has been detected or when the maximum listening time has been reached. The logic is that when 2 seconds of silence (the default period) have been elapsed, the answering machine or voice mail system must be waiting for the Phone Notification message.

Answering machine: Message wait – Initial silence (10 ms units)

> This parameter sets the minimum initial length of silent time the system waits for a sound to determine that an answering machine is waiting for a message. The default is 200 (2 seconds), and the valid range is 100-3000.

Answering machine: Message wait – Max silence (10 ms units)

> After a sound has occurred, this parameter sets the maximum length of silent time the system uses to determine that an answering machine is waiting for a message. The default is 290 (2.9 seconds) and the valid range is 100-3000.

> **Note:**
> The default setting of 2.9 seconds was chosen because it proved be the most effective on a wide test set of mobile phones. If you receive complaints about message failure on mobile phones, try a slightly lower value (2.0 - 2.5 seconds). Unfortunately, you may find that the new setting

helps some mobile phone users but does not work for others who had no problems in the past.

Answering machine: Message wait – Max record time (10 ms units)

This parameter sets the maximum length of time the system spends on processing (listening to silence) to determine when to leave the message.The default is 2000 (20 seconds) and the valid range is 500-4500.

Phone Notification - Call Analysis, Error, Hang-Up (Outbound Tab)

These settings control technical aspects of phone notification, such as answer and hang-up recognition.

Call Analysis: Answer deglitcher (10 ms units)

The maximum silence period allowed between words in a salutation. The salutation is the patron's response upon answering the call, such as "Hello." The default is 1 and valid values are 1 - 100. To enter -1, use the spin control.

Call Analysis: Hello edge

The point at which a successful connect signal will be returned to the application. A rising edge will return a connect immediately. A falling edge will return a connect after the end of the salutation. The default is Falling.

**Call Analysis: High glitch
(10 ms units)**

The maximum non-silence period to ignore. Used to help eliminate spurious non-silence intervals. The default is 19.

Call Analysis: Intercept mode flag

This parameter enables or disables Special Information Tone (SIT) Frequency Detection, Positive Voice Detection (PVD), and/or Positive Answering Machine Detection (PAMD). The default is 8.

Values:

- 2 - Disable SIT frequency detection, PAMD, and PVD

- 3 - Enable SIT frequency detection

- 4 - Enable PVD

- 6 - Enable PVD and SIT frequency detection

- 7 - Enable PAMD and PVD

- 8 - Enable PAMD, PVD, and SIT frequency detection

Call Analysis: Low glitch
(10 ms units)

The maximum silence period to ignore. Used to help eliminate spurious silence intervals. The default is 15.

Call Analysis: No answer
(10 ms units)

The length of time to wait after the first ringback before deciding that the call is not answered. The default is 4500 and the maximum is 9000 (1 minute 30 seconds).

Call Analysis: PAMD speed value

When Call Analysis: Intercept mode flag is set to enable Positive Answering Machine Detection (PAMD), this parameter balances PAMD speed versus accuracy.

Values:

- 1 - Full (quickest)
- 2 - Quick
- 3 - Accurate (most accurate)
- Default: 3

Call Analysis: Start delay (10 ms units)

The delay after dialing has been completed before starting cadence detection, frequency detection and positive voice detection. The default is 25.

Call Analysis: Use enhanced call progress qualification templates

Specifies the use of Dialogic's qualification template parameters that improve voice (particularly cell phone) and answering machine detection. If modifications are made in the registry, the modifications override the template values; however, settings are reset to the defaults each time the Dialogic service is restarted. The default is No.

Error monitor: Number consecutive failed calls that triggers line reset/shutdown

Number of consecutive failed calls that triggers a line reset or shutdown. After the specified number of consecutive failed phone calls, the service resets the Dialogic telephone board channel. If a phone call is successful after resetting the channel, the count restarts. However, if after resetting the channel the specified number of consecutive calls fail again, and Error monitor: Shut down line if failed calls limit reached after line is reset is set to Yes (default), the specific phone line is shut down. An e-mail message is then sent to the address specified in the PAC profile Email notification: Email address of sender, using the e-mail server specified in the PAC profile Email notification: Server running SMTP service. The default is 8.

Error monitor: Shut down line if failed calls limit reached after line is reset

Shut down the phone line if the consecutive failed calls limit is reached after the line has been reset. The default is Yes.

Hang-up: Detection type

Determines what mechanism the software will use to detect when the patron has hung up the phone. Loop Current Drop generally detects a voltage change when the line is disconnected. Disconnect Tone (default) listens for a specific tone produced by the phone system to indicate that the patron has hung up; this is the most precise method. Max no silence detects a potential hang-up by listening for a period of time where there is continuous sound. If you set this parameter to Max no silence, you can also set a custom period of time with the parameter Hang-up: Maximum no-silence time.

Hang-up: Disconnect tone - dual

When hang-up detection is set to Disconnect Tone, this value is used to build the tone. When this parameter is set to Yes, both frequency #1 and #2 need to be configured. The default is Yes.

Hang-up: Disconnect tone - Frequency #1

When hang-up detection is set to **Disconnect Tone**, this setting specifies the 1st frequency (Hz) in the tone. The default is 525 (Hz).

Hang-up: Disconnect tone - Frequency #1 deviation

When hang-up detection is set to Disconnect Tone, this setting specifies the allowable deviation for the 1st frequency. The default is 40 (Hz).

Hang-up: Disconnect tone - Frequency #2

When hang-up detection is set to Disconnect Tone, this setting specifies the 2nd frequency (Hz) in the tone. The default is 656 (Hz).

Hang-up: Disconnect tone - Frequency #2 deviation

When hang-up detection is set to **Disconnect Tone**, this setting specifies the allowable deviation for the 2nd frequency. The default is 40 (Hx).

Hang-up: Disconnect tone - Leading edge

When hang-up detection is set to **Disconnect Tone**, this setting specifies whether tone detection notification will occur on the leading or trailing edge of the tone. The default is Yes (leading edge).

Hang-up: Maximum no-silence time (100 ms units)

When hang-up detection is set to Max no silence, this setting specifies the length of continuous noise time that will trigger the hang-up event. The default is 15.

Phone Menu Settings (Outbound Tab)

These parameters control what happens to the phone call in response to patron input (or lack of patron input).

Phone menu: Multiple digit input wait time (seconds)

Specifies the number of seconds the system should wait for a patron to press multiple phone digits (such as barcode) before repeating a prompt. The default is 30.

Phone menu: Number of prompts before hang-up

Specifies the number of timed-out or invalid prompts that will trigger a hang-up. For example, if the setting is **2**, the service prompts the user once and waits the designated time for a response. If there is no response, the service repeats the prompt and waits the designated time for a response. If there is still no response, the call is disconnected. The default is 2.

Phone menu: Single digit input wait time (seconds)

Specifies the number of seconds the system should wait for a patron to press a single phone digit before repeating a message or prompt. The default is 10.

SAPI (Computer-Generated Voice) Settings (Outbound Tab)

These settings control aspects of SAPI (Speech Application Programming Interface) voice messages. These are the computer-generated voices that phone notification uses if you do not specify human voice files. For details, see Voices for Outbound Telephony.

Glossary

006 field

Fixed-length Data Elements - Additional Material Characteristics: This field contains 18 character positions (00-17) that provide for coding information about special aspects of the item being cataloged that cannot be coded in field 008 (Fixed-Length Data Elements). It is used in cases when an item has multiple characteristics. It is also used to record the coded serial aspects of nontextual continuing resources. The field has a tree structure, whereby the code given in 006/00 (Form of material) determines the data elements defined for subsequent character positions. Except for code s (Serial/Integrating resource), the codes in field 006/00 correspond to those in Leader/06 (Type of record). For each occurrence of field 006, the codes defined for character positions 01-17 will be the same as those defined in the corresponding field 008, character positions 18-34. Configurations of field 006 are given in the following order: books, computer files/electronic resources, maps, music, continuing resources, visual materials, and mixed materials.

007 field

Physical Description, Fixed Field - This field contains special information about the physical characteristics in a coded form. The information may represent the whole item or parts of an item such as accompanying material. The data elements in field 007 are positionally defined and the number of character positions in field 007 depends upon the code contained in 007/00. Character position 00 contains a code that identifies the category of material. The fill character (|) is not allowed in this position. The fill character may be used in any other character position when the cataloging agency makes no attempt to code the position. The categories of material for which field 007 is applicable in bibliographic records are presented in the following order in the field description: map, electronic resource, globe, tactile material, projected graphic, microform, non-projected graphic, motion picture, kit, notated music, remote-sensing image, sound recording, text, videorecording, and unspecified.

008 field

Fixed-length Data Elements - General Information This field contains 40 character positions (00-39) that provide coded information about the record as a whole and about special bibliographic aspects of the item being cataloged. These coded data elements are potentially useful for retrieval and data management purposes. The data elements are positionally defined. Character positions that are not defined contain a blank (#). All defined character positions must contain a defined code; for some field 008 positions, this may be the fill character (|). The fill character may be used (in certain character positions) when a cataloging organization makes no attempt to code the character position. The fill character is not allowed in field 008 positions 00-05 (Date entered on file). Its use is discouraged in positions 07-10 (Date 1), 15-17 (Place of publication, production, or execution), and the 008 position defined for Form of item (either position 23 or 29 depending upon the 008 configuration). Character positions 00-17 and 35-39 are defined the same across all types of material, with special consideration for position 06. The definition of character positions 18-34 was done independently for each type of material, although certain data elements are defined the same in the specifications for more than one type of material. When similar data elements are defined for inclusion in field 008 for different types of material, they occupy the same field 008 character positions.

A

added entry

A secondary entry to the main entry in a MARC record.

approval plan

An arrangement with a publisher or vendor to send materials automatically. With an approval plan, it is not necessary for the library to order each title individually, and titles that are not considered appropriate may be returned by the library. An approval plan with a vendor is usually an agreement that the library will receive current imprints selected for the library on the basis of a detailed profile.

ASN (Advanced Shipping Notice)

An advance shipping notice or advance ship notice (ASN) is an electronic notification of pending shipments that is provided by a supplier after an EDI order is received and processed. If the supplier has the capability to produce ASNs (X12

transaction set 856), the Polaris EDIAgent utility retrieves the shipment inform-
ation, and loads the data into Polaris. This enables users to receive materials in
Polaris by scanning the tracking barcode on the outside of the carton.

B

blanket plan

A blanket plan (also called a blanket order) is most commonly used for ordering
all materials or a specific subset of materials that are published by an organ-
ization. In contrast with approval plans, blanket plans do not generally allow
return privileges with simple deductions from the invoice. With blanket plans,
quality is less important than comprehensiveness of coverage. Blanket plans
can be as narrow as a specific publisher's series or as broad as a request to
send all material of a particular type or on a particular subject.

blind reference

1) An authority link (see or see also - 4xx and 5xx respectively) which points to
an authority heading that does not exist in the database. 2) An authority heading
(1xx) to which no bibliographic records are linked.

C

cataloging source

A code stored in tag 040 $a that tells who created the record. These codes are
governed by the MARC code list for libraries.

chronology

The date(s) used by the publisher on a serially-issued bibliographic unit to help
identify or indicate when it was published. The chronology may reflect the dates
of coverage, publication, or printing.

content designators

Tags, indicators, and subfield codes in a MARC record.

D

delimiter

A separate character used in conjunction with a subfield code and introduces each subfield in a variable field.

deposit account

A deposit account is an account with a vendor that allows customers to pay all or a portion of the estimated annual billing in advance. Depending on the amount prepaid, the typical discount is from 1.5% to 4.5% more than with a regular plan, where invoices are paid after the receipt of titles.

diacritical mark

Any of various marks, such as a macron or cedilla, added to a letter or symbol to indicate its pronunciation or to distinguish it in some way.

E

enumeration

The designation reflecting the alphabetic or numeric scheme used by the publisher on an item or assigned when the holdings statement is created to identify the individual bibliographic or physical parts and to show the relationship of each unit to the unit as a whole.

express registration

Entering patron information during the check-out process as a service to new, unregistered patrons.

F

first available copy requests

Hold requests for specific issues of a serial title (such as the May 2015 issue of Horticulture Magazine) or specific parts of a multi-part title (such as the first season of a television series on DVD).

form subdivision

A division of a subject heading which brings out the form of the work. For example, in the headings: Internet (Computer network) - Periodicals Library technicians - Bibliography

free days

A value applied at normal and bulk check-in, renewal, and offline that allows you to omit a specified number of days from the overdue fine calculation.

G

geographic qualifier

The name of a larger geographic entity added to a local place name. For example, in the headings: Cambridge (Mass.) Toledo (Spain)

geographic subdivision

A subdivision which limits a topical subject heading to a specific geographic location. For example, in the headings: Women - Peru Libraries - New York (State)

M

monographic series

A group of monographs with a collective title in addition to their individual titles. The individual titles may or may not be numbered. The collective title is generally found on the title page or the cover of each monograph.

N

non-integrated serial

A non-integrated serial is an item that is linked to a bibliographic record with a MARC bibliographic level entry of S , but is not linked to a Serial Issue Record created through the Polaris Serials Module.

R

RTF

Requests-To-Fill or RTF processing sends hold requests to designated libraries in a specified order. A library chooses to fill or deny the request. The request is routed until it is filled, it expires, or every library denies it.

RTF routing cycle

The request-to-fill (RTF) routing cycle includes a primary and a secondary cycle defined by the Holds Routing Tables. You can enter a number of branches as responder branches, beginning with the requestor (your) branch. The cycle tries to fill a hold at the same branch first, and then tries to fill the hold at the next branch listed in the primary routing table. After a preset amount of time, the branches in the secondary table try to fill the hold, each in turn.

S

SICI

The colloquial name for Serial Item and Contribution Identifier. The SICI is the SISAC bar code. The SICI incorporates the ISSN and is used on scholarly, technical, medical and other subscription based serials.

SISAC

Serials Industry Systems Advisory Committee. This committee was instrumental in creating the supporting documentation for the NISO z39.56 standard.

standing order

An order placed with a vendor or the publisher directly for all publications in a series, all volumes in a set, or all publications of a single publisher.

T

trapped

An item is said to be trapped for a hold when an item that fills a request is scanned at circulation and the system links the item to a specific request, either automatically or by displaying a message that prompts you for a decision.

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