T-Server Reference Guide

TTreatmentType

12/14/2025

Contents

TTreatmentType

Syntax

```
typedef enum {
        TreatmentUnknown,
        TreatmentIVR,
        TreatmentMusic,
        TreatmentRingBack,
        TreatmentSilence,
        TreatmentBusy,
        TreatmentCollectDigits,
        TreatmentPlayAnnouncement,
        TreatmentPlayAnnouncementAndDigits,
        TreatmentVerifyDigits,
        TreatmentRecordUserAnnouncement,
        TreatmentDeleteUserAnnouncement,
        TreatmentCancelCall,
        TreatmentPlayApplication,
        TreatmentSetDefaultRoute,
        TreatmentTextToSpeech,
        TreatmentTextToSpeechAndDigits,
        TreatmentFastBusy,
        TreatmentRAN,
} TTreatmentType;
```

Attributes

- `TreatmentUnknown` — Reserved to catch improperly formatted requests.

- `TreatmentIVR` — Treatment type is IVR. Used to connect the call specified by `conn_id` to the IVR.
  The following table lists key-value pair(s) used in the attribute parameters for `TreatmentIVR`:

Key-Value Pairs for TreatmentIVR

Key	Value
LABEL	Routing target address if a connection to T-Server is lost.
DNIS	Value is used instead of existing DNIS if connection to T-Server is lost.

- `TreatmentMusic` — Treatment type is music. Music Treatment is used to connect the call specified by `conn_id` to the music source.
  The following table lists key-value pair(s) used in the attribute parameters for `TreatmentMusic`:

Key-Value Pairs for TreatmentMusic

Key	Value
MUSIC_DN	Specifies the directory number of the music source. The key is used only for network interface.

- TreatmentRingBack — Treatment type is ring back. Ring back treatment is used to connect the call specified by conn_id to a Ring Back Tone source.

- TreatmentSilence — Treatment type is silence. Silence treatment is used to connect the call specified by conn_id to a silence source.

- TreatmentBusy — Treatment type is busy. Busy Treatment is used to connect the call specified by conn_id to a busy tone source.

- TreatmentCollectDigits — Treatment type is collect digits. Collect digits is used to collect digits from the calling party.
    The following table lists key-value pair(s) used in the attribute parameters for TreatmentCollectDigits:

Key-Value Pairs for TreatmentCollectDigits

Key	Value
MAX_DIGITS	The maximum number of digits to be collected. Maximum number of digits that may be collected is 31. Note that the Maximum number of digits may be equal to 0. In this case, no time should be spent waiting for the calling party to input digits, and a response should be returned indicating that 0 digits have been collected.
ABORT_DIGITS	This sequence of up to two keys causes the digits collection operation to be aborted. If this sequence appears, the IVR considers this as a failed digits collection attempt.
IGNORE_DIGITS	This sequence of up to two keys is treated as though they have not been pressed.
BACKSPACE_DIGITS	This sequence of up to two keys causes the previous keystroke to be thrown away.
TERM_DIGITS	This sequence of up to two keys causes all the digits, not including the TERM_DIGITS, to be returned to the calling application as the collected digits.
RESET_DIGITS	This sequence of up to two keys causes all the previous keystrokes to be thrown away. The digits collection resumes.
CLEAR_FLAG	Clear flag indicates whether any input information should be cleared before digit collection starts. Not supported in GR-1129-CORE protocol implementation. Valid values are 1 and 2 of type KVTypeInt. See TClearFlag.
START_TIMEOUT	The number of seconds the IVR should wait for the calling party to begin the DTMF digits input.
DIGIT_TIMEOUT	The number of seconds the IVR should wait between the DTMF digits.

Key	Value
TOTAL_TIMEOUT	The total number of seconds the IVR should wait for the calling party to provide the requested DTMF input.

- TreatmentPlayAnnouncement — Treatment type is play announcement. Used to play an announcement block to the calling party. The entire announcement block can consist of a series of announcement elements pieced together. Each announcement element can be Interruptable or non-Interruptable. For more information on the use of key-value pairs with TreatmentPlayAnnouncement, see the example in the Comments section below.

> **Important**
>
> For TreatmentPlayAnnouncement, if the INTERRUPTABLE flag is missing, then the resulting behavior is device specific.

- The following table lists key-value pair(s) used in the attribute parameters for TreatmentPlayAnnouncement:

Key-Value Pairs for TreatmentPlayAnnouncement

Key	Value
PROMPT	Contains a set of up to 10 elements. Each set is numbered in ranges from 1 to 10.

PROMPT.1
…
PROMPT.10
	Each element contains the number of entries describing an announcement element:
	
	• INTERRUPTABLE (Boolean 0/1)—indicates whether a caller can interrupt the announcement.
	• TEXT—ASCII text to pronounce using text-to-speech technology (if supported by the IVR equipment).
	
	One of the following three options (mutually exclusive):
	
	• ID integer—ID of a message to play
	• DIGITS—numbers to pronounce. First digit defines how the digits are to be pronounced:
	    • 0—one at a time
	    • 1—date
	    • 2—time
	    • 3—phone number
	    • 4—money
	• USER_ID—contains a user ID string,

Key	Value
	USER_ANN_ID, User Announcement ID (integer), is returned earlier after successful RecordUserAnnouncement() request.
LANGUAGE	Optional language indicator. Contains a string specifying a language in which the announcement should be made. The valid languages include: • English (US) • Spanish • Mandarin • Cantonese • Vietnamese • French • French (Canada) • German • Italian • Japanese • Korean • Russian

- TreatmentPlayAnnouncementAndDigits — Treatment type is play announcement and digits. It is used to play an announcement block and collect digits from the calling party. Typically, an announcement includes instructions asking the calling party to provide some information.
  Key-value pair(s) used in the attribute parameters for TreatmentPlayAnnouncementAndDigits: All of the PlayAnnouncement and CollectDigit parameters are recognized.

Important

For TreatmentPlayAnnouncementAndDigits, if the INTERRUPTABLE flag is missing, then the resulting behavior is device specific.

- TreatmentVerifyDigits — Treatment type is digits verification. It is used to prompt a calling party to enter digits that will be compared with a desired response.
  The following table lists key-value pair(s) used in the attribute parameters for TreatmentVerifyDigits:

Key-Value Pairs for TreatmentVerifyDigits

Key	Value
PROMPT	Contains the elements specifying the initial

Key	Value
	announcement block to be played.
REPROMPT	Contains the elements specifying the announcement block to be played after verification has failed and asking the caller to reenter the input.
SUCCESS	Contains the elements specifying the success announcement.

FAILURE	Contains the elements specifying the failure announcement. The general format for the preceding 4 blocks is the same as described in `PlayAnnouncement`, with additional limitations imposed by the current version of the `GR-1129-CORE` document. Each announcement block may contain only one announcement element. The announcement element must be of announcement ID type. Digit announcements or user announcements must not be used. This means that the only currently accessible format for these announcements is:
	
	`"PROMPT.1.ID"   = <integer announcement ID>`
	`"REPROMPT.1.ID" = <integer announcement ID>`
	`"FAILURE.1.ID"  = <integer announcement ID>`
	`"SUCCESS.1.ID"  = <integer announcement ID>`

TIMEOUT	Contains sublists specifying a no input timeout announcement.
LANGUAGE	Optional language indicator. Contains a string specifying a language in which the announcement should be made.
COMPARE_DIGITS	Contains the actual digits that should be compared against the caller input. Note that three `COMPARE_xxx` options are mutually exclusive and only one may be present at a time.
COMPARE_USER_ID	Contains the user ID string that should be used by the IVR to index into the local table for verification.
COMPARE_PLAN_ID	Contains the dialing plan index. Dialing plan is used to compare with the general format compliance.
NUM_ATTEMPTS	The number of attempts the calling party can make before failing the verification.
NUM_ATTEMPTS_TIMEOUT	Number of attempts where caller enters no input until timeout.
NUM_DIGITS	The number of digits to be collected. The maximum number of digits that may be collected is 31. Note that `NUM_DIGITS` may be equal to 0. In this case, no time should be spent waiting for the caller input digits, and a response should be returned indicating 0 digits collected.
ABORT_DIGITS	This sequence of up to two keys causes the digits collection operation to be aborted. If this sequence

Key	Value
	appears, the IVR considers this as a failed digits collection attempt.
IGNORE_DIGITS	This sequence of up to two keys is treated as though they have not been pressed.
BACKSPACE_DIGITS	This sequence of up to two keys causes the previous keystroke to be thrown away.
TERM_DIGITS	This sequence of up to two keys causes all the digits, not including TERM_DIGITS, to be returned to the calling application as collected digits.
RESET_DIGITS	This sequence of up to two keys causes all previous keystrokes to be thrown away. The digits collection resumes.
CLEAR_FLAG	Clear flag indicates whether any input information should be cleared before digit collection starts. Not supported in GR-1129-CORE protocol implementation. Valid values are 1 and 2 of KVTypeInt type. See TClearFlag.
START_TIMEOUT	The number of seconds the IVR should wait for the caller to begin the DTMF digits dialing.
DIGIT_TIMEOUT	The number of seconds the IVR should wait between the DTMF digits.
TOTAL_TIMEOUT	The total number of seconds the IVR should wait for the caller to provide the requested DTMF input.

- TreatmentRecordUserAnnouncement — Treatment type is record user announcement. It is used to create a user-specific announcement. Treatment device returns an announcement ID for a newly created announcement, which the application may use later to trigger playback of the user-specific announcement.
    The following table lists key-value pair(s) used in the attribute parameters for TreatmentRecordUserAnnouncement:

Key-Value Pairs for TreatmentRecordUserAnnouncement

Key	Value
PROMPT	Contains elements specifying an initial announcement block to be played. The general format for the elements is the same as described in PlayAnnouncement, with additional limitations imposed by the current version of the GR-1129-CORE document. Each announcement block may contain up to 10 announcement elements. In addition, the announcement element must be of announcement ID type. Digit announcements or user announcements must not be used.
USER_ID	User ID string specifies the user for which the announcement will be recorded.
ABORT_DIGITS	The sequence of up to two keys that may be entered by the calling party to abort the recording

Key	Value
	process. The IVR considers this as a failed recording attempt.
`TERM_DIGITS`	The sequence of up to two keys that may be entered by the calling party to indicate that recording of the message is finished.
`RESET_DIGITS`	The sequence of up to two keys that may be entered by the caller to restart recording the message. Any message recorded up to the point of these keystrokes will be thrown away.
`START_TIMEOUT`	The number of seconds the IVR should wait for the caller to begin recording the message.
`TOTAL_TIMEOUT`	The total number of seconds the IVR should wait for the caller to finish recording the message.

- `TreatmentDeleteUserAnnouncement` — Treatment type is delete user announcement. It is used to remove the user-specific announcement from an IVR.
    The following table lists key-value pair(s) used in the attribute parameters for `TreatmentDeleteUserAnnouncement`:

Key-Value Pairs for TreatmentDeleteUserAnnouncement

Key	Value
`USER_ID`	User ID string specifies the user for which the announcement will be deleted.
`USER_ANN_ID`	User Announcement ID (integer) as returned in the EventTreatmentEnd event after the successful RecordUserAnnouncement request.

- `TreatmentCancelCall` — Treatment type is cancel. It is used to terminate processing asynchronously for a given call in progress (that is, the call should be disconnected). This message should not be used for the normal ending of a conversation between T-Server and IVR. EventReleased is expected to be sent in response to the request to cancel. If partial or full input is collected prior to receiving this treatment, then the appropriate EventTreatmentApplied and EventTreatmentEnd events containing the input data may be sent just before EventReleased.
    The following table lists key-value pair(s) used in the attribute parameters for `TreatmentCancelCall`:

Key-Value Pairs for TreatmentCancelCall

Key	Value
`REPORT`	If set to 1, T-Server waits for a response from the IVR that a request was or was not processed. If set to 0 or not specified, then T-Server does not wait for a confirmation from the IVR and follows a call scenario.

- `TreatmentPlayApplication` — Treatment type is play application. It is used to execute an application or a script on the IVR device. It is possible to pass parameters to the application and to get some return values. The standards do not limit what can be exchanged in parameters; they only specify a way these parameters should be encoded.

The following table lists key-value pair(s) used in the attribute parameters for `TreatmentPlayApplication`:

Key-Value Pairs for TreatmentPlayApplication

Key	Value
APP_ID	Application ID (integer) specifies the application to be run.

> ## Important
>
> All application-specific parameters have an integer ID number. Though an integer, it is represented as a string in a key field of KVList, but is converted to or from an integer type by T-Server. Actual values of these parameters are application specific. The type of KVList entries can be as follows:
>
> - Integer—passed as an integer to the IVR.
> - String—passed as digits to the IVR (digits only, no characters).
> - Binary—passed as a string to IVR.
>
> Return parameters from the application are passed in the `Extensions` attribute in `EventTreatmentEnd`. Integer IDs are used as the keys; the values are application specific; and the type conversion is as follows:
>
> - Integer—passed as a KVList integer.
> - Boolean—passed as a KVList boolean.
> - Digits—passed as a KVList string.
> - String—passed as a KVList string.
> - Real—not supported.

- `TreatmentSetDefaultRoute` — Treatment type is `SetDefaultRoute`. Sets default routing destination that is specified in the parameter dn in the call to `TApplyTreatment()`. The default routing destination is common for every object controllable by the IVR. The IVR can forward calls to that destination when there is no response from Genesys Interaction Router (IR) within the specified timeout defined in the IVR or when the connection to T-Server is lost.

- `TreatmentTextToSpeech` — Treatment type is text to speech. It is essentially the same as `TreatmentPlayAnnouncement`, where all announcement elements are of type TEXT. TextToSpeech, however, is a less flexible option because it does not allow recorded announcements with text-to-speech synthesis to be intermixed in a single block; on less sophisticated equipment, it may be the only option available.
  The following table lists key-value pair(s) used in the attribute parameters for `TreatmentTextToSpeech`:

Key-Value Pairs for TreatmentTextToSpeech

Key	Value
PROMPT	Contains a number of sublists (from 1 to 10); each

Key	Value
	sublist is named with a number from 1 to 10.
PROMPT.1 … PROMPT.10	Each sublist contains entries describing an announcement element. The entries are: • INTERRUPTABLE (Boolean 0/1)—indicates whether caller can interrupt the announcement. • TEXT— ASCII text to pronounce using text-to-speech technology.
LANGUAGE	Optional language indicator. Contains a string specifying a language in which the announcement should be made.

> **Important**
>
> For TreatmentTextToSpeech, if the INTERRUPTABLE flag is missing, then the resulting behavior is device specific.

- TreatmentTextToSpeechAndDigits — Treatment type that requires generating speech from the text, then collecting digits. Typically the speech request would include instructions asking the caller to provide some input.
  Key-value pair(s) used in the attribute parameters for TreatmentTextToSpeechAndDigits: All of the TextToSpeech and CollectDigit parameters are recognized.

- TreatmentFastBusy — Treatment type is FastBusy. It is used to connect the call specified by conn_id to a fast busy tone source.
  Key-value pair(s) used in the attribute parameters for TreatmentFastBusy: none.

- TreatmentRAN — Treatment type is RAN. It is used to connect the call specified by conn_id to the RAN source.
  One key-value pair is used in the attribute parameters for TreatmentRAN:

Key-Value Pairs for TreatmentRAN

Key	Value
RAN	The directory number of RAN source.

Comments

The following example shows how to use the key-value pairs for TreatmentPlayAnnouncement.

In this example, the KVList parameter requests T-Server to play three announcements in sequence. The first, an announcement with ID 123, should be played; the second, an amount of money ($10 US), should be pronounced; and, finally, a user-defined announcement (with ID 456 and user ID 1234) should be played. Only the first announcement is non-interruptable.

```
"PROMPT.1.INTERRUPTABLE"=0
"PROMPT.1.ID"=123
"PROMPT.2.INTERRUPTABLE"=1
"PROMPT.2.DIGITS"="31000"
"PROMPT.3.INTERRUPTABLE"=1
"PROMPT.3.USER_ID"="1234"
"PROMPT.3.USER_ANN_ID"=456
```

> **Important**
>
> In this example, a dot (.) means child. That is, a KVPair "INTERRUPTABLE"=0 belongs to KVList 1, which in turn belongs to KVList PROMPT.