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# **pyagi Documentation**

***Release 0.1***

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Reference:



An Asterisk AGI library for humans.

**class** `pyagi.pyagi.AGI`

An Asterisk AGI protocol wrapper.

An instance of this class handles command processing and communication between Asterisk and python.

**Attr int DEFAULT\_TIMEOUT** The default timeout (in ms) to use for methods that take a timeout argument.

**Attr int DEFAULT\_RECORD** The default allowed recording time (in ms) to use for methods that take a record time argument.

**answer()**

Answers channel if not already in answer state.

See: <http://www.voip-info.org/wiki/view/answer>

**Return type** int

**Returns** -1 on channel failure, or 0 if successful.

**appexec(application, options='')**

Executes application with given options.

See: <http://www.voip-info.org/wiki/view/exec>

**Return type** int

**Returns** Whatever the application returns, or -2 on failure to find application.

TODO: Rename this application to exec, to comply with AGI standard.

**asyncagi\_break()**

Interrupts expected flow of Async AGI commands and returns control to previous source (typically, the PBX dialplan).

**channel\_status(channel='')**

Returns the status of the specified channel. If no channel name is given then returns the status of the current channel.

See: <http://www.voip-info.org/wiki/view/channel+status>

**Return type** int

**Returns** 0 - Channel is down and available. 1 - Channel is down, but reserved. 2 - Channel is off hook. 3 - Digits (or equivalent) have been dialed. 4 - Line is ringing. 5 - Remote end is ringing. 6 - Line is up. 7 - Line is busy.

**control\_stream\_file** (*filename, escape\_digits='', skipms=3000, fwd='', rew='', pause=''*)

Send the given file, allowing playback to be controlled by the given digits, if any. Use double quotes for the digits if you wish none to be permitted.

See: <http://www.voip-info.org/wiki/view/control+stream+file>

**Return type** int

**Returns** 0 if playback completes without a digit being pressed, or the ASCII numerical value of the digit if one was pressed, or -1 on error or if the channel was disconnected.

**database\_del** (*family, key*)

Deletes an entry in the Asterisk database for a given family and key.

See: <http://www.voip-info.org/wiki/view/database+del>

**Return type** int

**Returns** 1 if successful, 0 otherwise.

**database\_deltree** (*family, key=''*)

Deletes a family or specific keytree within a family in the Asterisk database.

See: <http://www.voip-info.org/wiki/view/database+deltree>

**Return type** int

**Returns** 1 if successful, 0 otherwise.

**database\_get** (*family, key*)

Retrieves an entry in the Asterisk database for a given family and key.

See: <http://www.voip-info.org/wiki/view/database+get>

**Return type** str

**Returns** The database entry (if one exists), or an empty string.

**database\_put** (*family, key, value*)

Adds or updates an entry in the Asterisk database for a given family, key, and value.

See: <http://www.voip-info.org/wiki/view/database+put>

**Return type** int

**Returns** 1 if successful, 0 otherwise.

**get\_data** (*filename, timeout=2000, max\_digits=255*)

Stream the given file, and receive DTMF data.

See: <http://www.voip-info.org/wiki/view/get+data>

**Return type** str

**Returns** Digits received from the channel at the other end.

**get\_full\_variable** (*name, channel=None*)

Retrieve a channel variable. Understands complex variable names and builtin variables, unlike `get_variable`.



See: <http://www.voip-info.org/wiki/view/get+full+variable>

**Return type** str

**Returns** The variable, or an empty string if the variable doesn't exist.

**get\_option** (*filename*, *escape\_digits*=' ', *timeout*=0)

Behaves similar to STREAM FILE but used with a timeout option.

See: <http://www.voip-info.org/wiki/view/get+option>

**get\_result** (*stdin*=<open file '<stdin>', mode 'r'>)

Read the result of a command from Asterisk

**get\_variable** (*name*)

Get a channel variable.

See: <http://www.voip-info.org/wiki/view/get+variable>

**Return type** str

**Returns** The variable, or an empty string if the variable isn't set.

**gosub** ()

Cause the channel to execute the specified dialplan subroutine, returning to the dialplan with execution of a Return().

**hangup** (*channel*='')

Hangs up the specified channel. If no channel name is given, hangs up the current channel.

See: <http://www.voip-info.org/wiki/view/hangup>

**noop** ()

Does nothing.

See: <http://www.voip-info.org/wiki/view/noop>

**receive\_char** (*timeout*=2000)

Receives a character of text on a channel. Most channels do not support the reception of text.

See: <http://www.voip-info.org/wiki/view/receive+char>

**Return type** int

**Returns** The decimal value of the character if one is received, or 0 if the channel does not support text reception. Returns -1 only on error/hangup.

**receive\_text** ()

Receives a string of text on a channel. Most channels do not support the reception of text.

See: <http://www.voip-info.org/wiki/view/receive+text>

**Return type** str

**Returns** The string received, or an empty string on failure.

**record\_file** (*filename*, *format*='gsm', *escape\_digits*='#', *timeout*=20000, *offset*=0, *beep*='beep')

Record to a file until a given dtmf digit in the sequence is received.

See: <http://www.voip-info.org/wiki/view/record+file>

**Return type** int

**Returns** -1 on hangup or error.

**say\_alpha** (*characters*, *escape\_digits*='')

Say a given character string, returning early if any of the given DTMF digits are received on the channel.

See: <http://www.voip-info.org/wiki/view/say+alpha>

**Return type** int

**Returns** 0 if playback completes without a digit being pressed, or the ASCII numerical value of the digit if one was pressed. Returns -1 on error/hangup.

**say\_date** (*seconds*, *escape\_digits*='')

Say a given date, returning early if any of the given DTMF digits are received on the channel.

See: <http://www.voip-info.org/wiki/view/say+date>

**Return type** int

**Returns** 0 if playback completes without a digit being pressed, or the ASCII numerical value of the digit if one was pressed or -1 on error/hangup.

**say\_datetime** (*seconds*, *escape\_digits*='', *format*='', *zone*='')

Say a given time, returning early if any of the given DTMF digits are received on the channel.

See: <http://www.voip-info.org/wiki/view/say+datetime>

**Return type** int

**Returns** 0 if playback completes without a digit being pressed, or the ASCII numerical value of the digit if one was pressed or -1 on error/hangup.

**say\_digits** (*digits*, *escape\_digits*='')

Say a given digit string, returning early if any of the given DTMF digits are received on the channel.

See: <http://www.voip-info.org/wiki/view/say+digits>

**Return type** int

**Returns** 0 if playback completes without a digit being pressed, or the ASCII numerical value of the digit if one was pressed or -1 on error/hangup.

**say\_number** (*number*, *escape\_digits*='')

Say a given number, returning early if any of the given DTMF digits are received on the channel.

See: <http://www.voip-info.org/wiki/view/say+number>

**Return type** int

**Returns** 0 if playback completes without a digit being pressed, or the ASCII numerical value of the digit if one was pressed or -1 on error/hangup.

**say\_phonetic** (*characters*, *escape\_digits*='')

Say a given character string with phonetics, returning early if any of the given DTMF digits are received on the channel.

See: <http://www.voip-info.org/wiki/view/say+phonetic>

**Return type** int

**Returns** 0 if playback completes without a digit pressed, the ASCII numerical value of the digit if one was pressed, or -1 on error/hangup.

**say\_time** (*seconds*, *escape\_digits*='')

Say a given time, returning early if any of the given DTMF digits are received on the channel.

See: <http://www.voip-info.org/wiki/view/say+time>

**Return type** int

**Returns** 0 if playback completes without a digit being pressed, or the ASCII numerical value of the digit if one was pressed or -1 on error/hangup.

**send\_command** (*command*, *\*args*)

Send a command to Asterisk

**send\_image** (*filename*)

Sends the given image on a channel. Most channels do not support the transmission of images.

See: <http://www.voip-info.org/wiki/view/send+image>

**Return type** int

**Returns** 0 if image is sent, or if the channel does not support image transmission. Returns -1 only on error/hangup.

Image names should not include extensions.

**send\_text** (*text*='')

Sends the given text on a channel. Most channels do not support the transmission of text.

See: <http://www.voip-info.org/wiki/view/send+text>

**Return type** int

**Returns** 0 if text is sent, or if the channel does not support text transmission. Returns -1 only on error/hangup.

**set\_autohangup** (*secs*)

Cause the channel to automatically hangup at time seconds in the future. Of course it can be hungup before then as well. Setting to 0 will cause the autohangup feature to be disabled on this channel.

See: <http://www.voip-info.org/wiki/view/set+autohangup>

**set\_callerid** (*number*)

Changes the callerid of the current channel.

See: <http://www.voip-info.org/wiki/view/set+callerid>

**set\_context** (*context*)

Sets the context for continuation upon exiting the application.

See: <http://www.voip-info.org/wiki/view/set+context>

**set\_extension** (*extension*)

Changes the extension for continuation upon exiting the application.

See: <http://www.voip-info.org/wiki/view/set+extension>

**set\_music** ()

Enables/disables the music on hold generator. If class is not specified, then the 'default' music on hold class will be used.

See: <http://www.voip-info.org/wiki/view/set+music>

**set\_priority** (*priority*)

Changes the priority for continuation upon exiting the application. The priority must be a valid priority or label.

See: <http://www.voip-info.org/wiki/view/set+priority>

**set\_variable** (*name*, *value*)

Sets a variable to the current channel.

See: <http://www.voip-info.org/wiki/view/set+variable>

**speech\_activate\_grammar()**

Activates the specified grammar on the speech object.

**speech\_create()**

Create a speech object to be used by the other Speech AGI commands.

**speech\_deactivate\_grammar()**

Deactivates the specified grammar on the speech object.

**speech\_destroy()**

Destroy the speech object created by 'SPEECH CREATE'.

**speech\_load\_grammar()**

Loads the specified grammar as the specified name.

**speech\_recognize()**

Plays back given prompt while listening for speech and dtmf.

**speech\_set()**

Set an engine-specific setting.

**speech\_unload\_grammar()**

Unloads the specified grammar.

**stream\_file(filename, escape\_digits=' ', sample\_offset=0)**

Send the given file, allowing playback to be interrupted by the given digits, if any.

See: <http://www.voip-info.org/wiki/view/stream+file>

**Return type** int

**Returns** 0 if playback completes without a digit being pressed, or the ASCII numerical value of the digit if one was pressed, or -1 on error or if the channel was disconnected.

**tdd\_mode(mode='off')**

Enable/disable TDD transmission/reception on a channel.

See: <http://www.voip-info.org/wiki/view/tdd+mode>

**Return type** int

**Returns** 1 if successful, or 0 if channel is not TDD-capable.

**verbose(message, level=1)**

Sends message to the console via verbose message system. level is the verbose level (1-4).

See: <http://www.voip-info.org/wiki/view/verbose>

**wait\_for\_digit(timeout=2000)**

Waits up to timeout milliseconds for channel to receive a DTMF digit.

See: <http://www.voip-info.org/wiki/view/wait+for+digit>

**Return type** chr

**Returns** -1 on channel failure, 0 if no digit is received in the timeout, or the numerical value of the ASCII of the digit if one is received. Use -1 for the timeout value if you desire the call to block indefinitely.

## CHAPTER 2

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### Indices and tables

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