



# **Application Programming Interface (API) Developer Guide**

iSpeech Developer Support  
<http://www.ispeech.org/developers>

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<http://www.ispeech.org/developers/>

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# Section 1

## Introduction

Welcome to the iSpeech Inc. Application Programming Interface (API) Developer Guide. This guide describes the available variables, commands, and interfaces that make up the iSpeech API.

The iSpeech API allows developers to implement Text-To-Speech (TTS) and Automated Voice Recognition (ASR) in any Internet-enabled application.

The API's are platform agnostic which means any device that can record or play audio connected to the Internet can use the iSpeech API.

## Minimum Requirements

Below are the minimum requirements needed to use the iSpeech API. The API can be use with and without a SDK.

### Internet connection

iSpeech services require a connection to the internet.

### HTTP Protocol

The iSpeech API follows the HTTP standard by using GET and POST. Some web browsers limit the length of GET requests to a few thousand characters.

### Request/Responses

Requests can be in URL encoded, JSON, or XML data formats. You can specify the output data format of responses. For TTS, binary data is usually returned if the request is successful. For speech recognition, URL encoded text, JSON, or XML can be returned by setting the output variable.

### API Key

An API key is a password that is required for access. To obtain an API key please visit: <http://www.ispeech.org/developers> and register for a developer account.

## Managing API Key Settings

## View/Edit Keys

Manage your API keys by using the iSpeech developer website: <http://www.ispeech.org/developers>. You can request additional features for your API keys on that website.

## API Features

### Text to Speech

You can play audio through iSpeech TTS in a variety of voices, formats, bitrates, frequencies, and playback speeds.

### Automated Speech Recognition

You can convert audio from a variety of languages and recognition models. We can create custom recognition models to improve recognition quality.

## Developer Support

### Sales

iSpeech sales can be contacted at the following phone number: +1-917-338-7723 from 10 AM to 6 PM Eastern Time, Monday to Friday. You can also email us at [sales@ispeech.org](mailto:sales@ispeech.org).

### Support / Troubleshooting

Please look for the answer to your problem in the iSpeech Developer Forum: <http://www.ispeech.org/forums/>

## Software Development Kits

iSpeech SDKs simplify the iSpeech API. You should use iSpeech SDKs if the option is available. Only mobile SDKs made by iSpeech allow you to use the iSpeech API for free.

### Availability

iPhone, Android, BlackBerry, .NET, Java (Server), Java applet (Client) [coming soon], PHP, Javascript/Flash [coming soon]

## API Access Pricing

<b>PLATFORMS</b>	<b>PRICE</b>
iPhone, Android, BlackBerry	Free using iSpeech SDK
.NET, Java, PHP	Between \$.05 and 0.00001 per word converted or recognized depending on quantity

# Section 2

## Text to Speech

The iSpeech Text-To-Speech API allows you to create high quality spoken audio in multiple formats. The iSpeech API doesn't use callbacks. It's synchronous and fast. This means you'll always receive audio data or an error message in the same HTTP request.

### Transaction Types and URL Formats

TRANSACTION TYPE	INPUT FORMAT	URL
HTTP GET/POST	URL Encoded	<a href="http://api.ispeech.org/api/rest">http://api.ispeech.org/api/rest</a>
HTTP GET/POST	XML	<a href="http://api.ispeech.org/api/xml">http://api.ispeech.org/api/xml</a>
HTTP GET/POST	JSON	<a href="http://api.ispeech.org/api/json">http://api.ispeech.org/api/json</a>

### Request Parameters

PARAMETER	DATA TYPE	EXAMPLE VALUE
Apikey	32 character hex number	abcdef1234567890abcdef1234567890
Action	String	convert, information
Text	String	Hello World
Voice (optional)	String	usenglishfemale
Format (optional)	String	mp3
Frequency (optional)	String	16000
Bitrate (optional)	String	64
Speed (optional)	Integer	-10 to 10
Startpadding (optional)	Integer (seconds)	5
Endpadding (optional)	Integer (seconds)	5

Example HTTP GET Request (Using every possible variable)

```
http://api.ispeech.org/api/rest?  
apikey=developerdemokeydeveloperdemokey&action=convert&text=something  
&voice=usenglishfemale&format=mp3&frequency=44100&bitrate=128&speed=1  
&startpadding=1&endpadding=1
```

## Voices

### Standard Voices

Name	Alias
US English Female (default)	usenglishfemale
US English Male	usenglishfemale
UK English Female	ukenglishfemale
UK English Male	ukenglishmale
Australian English Female	auenglishfemale
US Spanish Female	usspanishfemale
US Spanish Male	usspanishmale
Chinese Female	chchinesefemale
Chinese Male	chchinesemale
Hong Kong Cantonese Female	hkchinesefemale
Taiwan Chinese Female	twchinesefemale
Japanese Female	jjjapanesefemale
Japanese Male	jjjapanesemale
Korean Female	krkoreanfemale
Korean Male	krkoreanmale
Canadian English Female	caenglishfemale
Hungarian Female	huhungarianfemale
Brazilian Portuguese Female	brportuguesefemale
European Portuguese Female	eurportuguesefemale

European Portuguese Male	eurportuguesemale
European Spanish Female	eurspanishfemale
European Spanish Male	eurspanishmale
European Catalan Female	eurcatalanfemale
European Czech Female	eurczechfemale
European Danish Female	eurdanishfemale
European Finnish Female	eurfinnishfemale
European French Female	eurfrenchfemale
European French Male	eurfrenchmale
European Norwegian Female	urnorwegianfemale
European Dutch Female	eurdutchfemale
European Dutch Male	eurdutchmale
European Polish Female	eurpolishfemale
European Italian Female	euritalianfemale
European Italian Male	euritalianmale
European Turkish Female	eurturkishfemale
European Turkish Male	eurturkishmale
European German Female	eurgermanfemale
European German Male	eurgermanmale
Russian Female	rurussianfemale
Russian Male	rurussianmale
Swedish Female	swwedishfemale
Canadian French Female	cafrenchfemale
Canadian French Male	cafrenchmale

```

HTTP GET Request (Setting voice to European French Female)

http://api.ispeech.org/api/rest?
apikey=developerdemokeydeveloperdemokey&action=convert&text=something
&format=mp3&voice=eurfrenchfemale

```

## Custom Voices

Custom Voices may be enabled for your account. They can be found in the developer portal -> api key properties -> custom voices. You can use them by setting voice to the custom alias.

Name	Alias
President Obama	obama
Custom Voice	customvoice1

## Voice List Retrieval

A current list of voices that are enabled for an API key can be retrieved in REST, JSON, and XML format by using the following service. HTTP GET and POST are supported. A REST client can be used to make these HTTP requests.

### HTTP GET Network Transaction to get XML voice list.

HTTP GET Request and XML Response
<code>http://api.ispeech.org/api/rest?apikey=developerdemokeydeveloperdemokey&amp;action=information&amp;output=xml</code>
<pre>&lt;?xml version='1.0'?&gt; &lt;data&gt;   &lt;result&gt;success&lt;/result&gt;   &lt;voice-1&gt;krkoreanfemale&lt;/voice-1&gt;   &lt;voice-locale-1-1&gt;ko-kr&lt;/voice-locale-1-1&gt;   &lt;voice-locale-1-2&gt;ko&lt;/voice-locale-1-2&gt;   &lt;voice-gender-1&gt;female&lt;/voice-gender-1&gt;   &lt;voice-description-1&gt;Korean Female Voice&lt;/voice-description-1&gt;   &lt;voice-2&gt;usenglishfemale&lt;/voice-2&gt;   &lt;voice-locale-2-1&gt;en-us&lt;/voice-locale-2-1&gt;   &lt;voice-locale-2-2&gt;en&lt;/voice-locale-2-2&gt;   &lt;voice-gender-2&gt;female&lt;/voice-gender-2&gt;   &lt;voice-description-2&gt;United States English Female Voice&lt;/voice- description-2&gt;   [... more voices ...] &lt;/data&gt;</pre>

### HTTP GET Network Transaction to get JSON voice list.

#### HTTP GET URL Encoded Request and JSON Response

```
http://api.ispeech.org/api/rest?apikey=developerdemokeydeveloperdemokey  
&action=information&output=json
```

```
{"voice-gender-48": "female", "voice-locale-22-1": "fr-ca", "voice-locale-8-1": "pt-br", "voice-description-2": "Finnish Female Voice", "voice-description-3": "Hong Kong Chinese Male Voice", "voice-58": "eurdanishfemale", "voice-description-1": "Korean Female Voice", "voice-description-6": "Chinese Female Voice", "voice-description-7": "United Kingdom English Female Voice", "voice-description-4", [...more voices...]}
```

## HTTP GET Network Transaction to get URL Encoded voice list.

#### HTTP GET URL Encoded Request and URL Encoded Response

```
http://api.ispeech.org/api/rest?apikey=developerdemokeydeveloperdemokey  
&action=information&output=rest
```

```
result=success&voice-1=krkoreanfemale2&voice-locale-1-1=ko-kr&voice-gender-1=female&voice-description-1=Korean+Female+Voice&voice-2=eurfinnishfemale&voice-locale-2-1=fi-fi&voice-gender-2=female&voice-description-2=Finnish+Female+Voice&voice-3=chchinesemale1&voice-locale-3-1=zh&voice-locale-3-2=zh-hk[...more voices...]
```

## Speed

Most voices support speed controls.

Speed	Value (integer)
Fastest	10
Faster	Speed > 0
Normal (default)	0
Slower	Speed < 0
Slowest	-10

#### HTTP GET Request (Setting speed to 5)

```
http://api.ispeech.org/api/rest?apikey=developerdemokeydeveloperdemokey&action=convert&text=something  
&voice=usenglishfemale&format=mp3&speed=5
```

## Bitrates

Note: Bitrates can only be selected for MP3s.

Valid values are 16, 24, 32, 48 (default), 56, 64, 80, 96, 112, 128, 144, 160, 192, 224, 256, or 320.

Bitrates are listed in kbps (kilobits per second).

HTTP GET Request (Setting bitrate to 16 kilobits per second)
<pre>http://api.ispeech.org/api/rest? apikey=developerdemokeydeveloperdemokey&amp;action=convert&amp;text=something &amp;voice=usenglishfemale&amp;format=mp3&amp;bitrate=16</pre>

## Formats

Name	File extension
Audio Interchange File Format	aiff
MPEG Layer 3 (default)	mp3
Ogg	ogg
Windows Media Audio	wma
Free Lossless Audio Codec	flac
Wave PCM	wav

Example HTTP GET Request (Setting format to wav)
<pre>http://api.ispeech.org/api/rest? apikey=developerdemokeydeveloperdemokey&amp;action=convert&amp;text=something &amp;voice=usenglishfemale&amp;format=wav</pre>

## Frequencies

Possible values: 16000, 22050, 24000, 32000, 44100, 48000 Hertz

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<http://www.ispeech.org/developers/>

Example HTTP GET Request (Setting frequency to 16000 Hz)

```
http://api.ispeech.org/api/rest?  
apikey=developerdemokeydeveloperdemokey&action=convert&text=something  
&voice=usenglishfemale&frequency=16000
```

## Padding

Padding adds silence to a section of the audio file.

### Start Padding

Example HTTP GET Request (Setting start padding to 3 seconds)

```
http://api.ispeech.org/api/rest?  
apikey=developerdemokeydeveloperdemokey&action=convert&text=something&voice=  
usenglishfemale&startpadding=3
```

Adds a period of silence to the beginning of the audio file..

### End Padding

#### Example

```
http://api.ispeech.org/api/rest?  
apikey=developerdemokeydeveloperdemokey&action=convert&text=something&voice=  
usenglishfemale&endpadding=3
```

Adds a period of silence to the end of the audio file.

## Example Transactions

### Summary

The following examples are packet captures from TCP connections that used the HTTP protocol. You can compare your network traffic to these in order to debug code. Wireshark can be used to analyze network connections. A REST client can be used to make these HTTP requests.

## HTTP POST URL encoded request for Text to Speech

HTTP POST Request and Reply
<pre>POST /api/rest HTTP/1.1 Content-Length: 71 Content-Type: text/plain; charset=UTF-8 Host: api.ispeech.org Connection: Keep-Alive  apikey=developerdemokeydeveloperdemokey&amp;action=convert&amp;text=hello+world</pre>
<pre>HTTP/1.0 200 OK Connection: close Server: iSpeech Cloud/1.2 Accept-Ranges: none X-Time-Length: 3853 X-Content-Hash: e969ef3dd0dc0e9c417f31f7ffbd10ed Content-Length: 23760 Content-Type: audio/mpeg Cache-Control: no-cache, no-store, must-revalidate, max-age=0, proxy- revalidate, no-transform Pragma: no-cache  [mp3 binary audio data]</pre>

## HTTP POST JSON request for Text to Speech

HTTP POST, JSON Request and Reply
<pre>POST /api/json HTTP/1.1 Content-Length: 11 Content-Type: application/json; charset=UTF-8 Host: api.ispeech.org Connection: Keep-Alive  {"apikey":"developerdemokeydeveloperdemokey","action":"convert","text":"hello world","voice":"usenglishfemale"}</pre>
<pre>Connection: close Server: iSpeech Cloud/1.2 Accept-Ranges: none X-Time-Length: 3853 X-Content-Hash: e969ef3dd0dc0e9c417f31f7ffbd10ed Content-Length: 23760 Content-Type: audio/mpeg Cache-Control: no-cache, no-store, must-revalidate, max-age=0, proxy- revalidate, no-transform Pragma: no-cache  [mp3 audio binary data]</pre>

## HTTP POST XML request for Text to Speech

HTTP POST, XML Request and Reply
<pre>POST /api/xml HTTP/1.1 Content-Length: 150 Content-Type: application/xml; charset=UTF-8 Host: api.ispeech.org Connection: Keep-Alive  &lt;data&gt; &lt;apikey&gt;developerdemokeydeveloperdemokey&lt;/apikey&gt; &lt;action&gt;convert&lt;/action&gt; &lt;text&gt;hello world&lt;/text&gt; &lt;voice&gt;usenglishfemale&lt;/voice&gt; &lt;/data&gt;</pre>
<pre>HTTP/1.0 200 OK Connection: close Server: iSpeech Cloud/1.2 Accept-Ranges: none X-Time-Length: 3853 X-Content-Hash: 4affe15913fccd851ebf08a7e2650955 Content-Length: 23760 Content-Type: audio/mpeg Cache-Control: no-cache, no-store, must-revalidate, max-age=0, proxy- revalidate, no-transform Pragma: no-cache  [mp3 audio binary data]</pre>

## Example of a network transaction with an error

Responses with text errors instead of audio data return "HTTP/1.0 202 Accepted".

HTTP GET, URL Encoded Request and Reply (misspelled variable)
<pre>GET /api/rest?apikey=developerdemokeydeveloperdemokey&amp;action=convert&amp; text=something&amp;voice=usenglishfemale HTTP/1.1 Host: api.ispeech.org Connection: keep-alive User-Agent: Mozilla/5.0 (Windows NT 6.1; WOW64) AppleWebKit/535.2 (KHTML, like Gecko) Chrome/15.0.874.58 Safari/535.2 Accept: text/html,application/xhtml+xml,application/xml;q=0.9,*/*;q=0.8 Accept-Encoding: gzip,deflate, sdch Accept-Language: en-US,en;q=0.8 Accept-Charset: ISO-8859-1,utf-8;q=0.7,*;q=0.3</pre>

```

HTTP/1.0 202 Accepted
Server: iSpeech Cloud/1.2
Connection: close
Content-Length: 41
Content-Type: text/plain
Cache-Control: no-cache, no-store, must-revalidate, max-age=0,
proxy-revalidate, no-transform
Pragma: no-cache

result=error&code=8&message=Invalid+voice

```

## Error codes for Text-to-Speech and General Errors

Code	Summary
1	Invalid API key
2	Could not convert text
3	Not enough credits
4	No action specified
5	Invalid text
6	Too many words
7	Invalid text entry
8	Invalid voice
12	Invalid file format
13	Invalid speed
14	Invalid dictionary
15	Invalid bitrate
16	Invalid frequency
30	Option not enabled for your account. Please contact iSpeech sales at +1 (917) 338-7723 or at sales@ispeech.org to modify your license.
100	This evaluation account has exceeded its trial period. Please contact iSpeech sales at +1 (917) 338-7723 or at sales@ispeech.org to upgrade your license.
101	Your key has been disabled. Please contact iSpeech sales at +1 (917) 338-7723 or at sales@ispeech.org to modify your license.
997	No api access

998	Unsupported output type
999	Invalid request
1000	Invalid Request Method POST Required

# Section 3

## Automated Speech Recognition

### Transaction Types and URL Formats

There are currently three transaction types available for use with the iSpeech API. All transactions must be posted to the appropriate URL:

TRANSACTION TYPE	INPUT TYPE	URL FORMAT
HTTP GET/POST	URL Encoded	<a href="http://api.ispeech.org/api/rest">http://api.ispeech.org/api/rest</a>
HTTP GET/POST	XML	<a href="http://api.ispeech.org/api/xml">http://api.ispeech.org/api/xml</a>
HTTP GET/POST	JSON	<a href="http://api.ispeech.org/api/json">http://api.ispeech.org/api/json</a>

### Request Parameters

PARAMETER	VALUE	EXAMPLE
Apikey	32 character hex integer	abcdef1234567890abcdef1234567890
Language	String	en-US
Action	String	recognize, information
Content-Type	String	audio/x-wav, audio/amr, audio/speex
Audio	String (base64, remove \r\n)	UkIGRgAKAQBsl/j2+sa0dR [...]
Output	String	xml, json, rest

# Languages

## Standard Languages

<b>Name</b>	<b>Alias</b>	<b>Support</b>
English (United States)	en-US	freeform & command list
English (Canada)	en-CA	freeform & command list
English (United Kingdom)	en-GB	freeform & command list
English (Australia)	en-AU	command list
Spanish (Spain)	es-ES	freeform & command list
Spanish (Mexico)	es-MX	command list
Italian (Italy)	it-IT	freeform & command list
French (France)	fr-FR	freeform & command list
French (Canada)	fr-CA	command list
Polish (Poland)	pl-PL	freeform & command list
Portuguese (Portugal)	pt-PT	freeform & command list
Catalan (Catalan)	ca-ES	command list
Chinese (Taiwan)	zh-TW	command list
Danish (Denmark)	da-DK	command list
German (Germany)	fr-FR	command list
Finnish (Finland)	it-IT	command list
Japanese (Japan)	ja-JP	command list
Korean (Korea)	ko-KR	command list
Dutch (Netherlands)	nl-NL	command list
Norwegian (Norway)	nb-NO	command list
Portuguese (Brazil)	pt-BR	command list
Russian (Russia)	ru-RU	command list
Swedish (Sweden)	sv-SE	command list

Chinese (People's Republic of China)	zh-CN	command list
Chinese (Hong Kong S.A.R.)	zh-HK	command list

## Custom Languages

Contact [sales@ispeech.org](mailto:sales@ispeech.org) for details.

## Speech Recognition Models

Statistical speech recognition models are used to influence the result by probability. Models with fewer word choices are faster and more accurate than the freeform models. For example, in the food model the words, "7 up" would be recognized as, "7up". Another example is with a food model would recognize the audio from "ice cream" as "ice cream" instead of "i scream".

## Standard Models

<b>Name</b>	<b>Value</b>	<b>Use Case</b>
SMS	1	Text Messages
Voice mail (coming soon)	2	Voice Mail
<b>Dictation</b>	<b>3</b>	<b>Normal speech</b>
Message (coming soon)	4	Email
Instant Message (coming soon)	5	Instant Message
Transcript (coming soon)	6	
Memo (coming soon)	7	Memorandum

## Custom Models

Call iSpeech sales and support to inquire about custom speech recognition models.

## Example Transactions for Freeform Speech

### Format of Examples

The following examples are packet captures from TCP connections that used the HTTP protocol. You can compare your network traffic to these in order to debug code. Wireshark can be used to analyze network connections.

## HTTP REST transaction for Speech Recognition

HTTP REST Request and Response
<pre>POST /api/rest HTTP/1.1 Content-Length: 34875 Content-Type: text/plain; charset=UTF-8 Host: api.ispeech.org Connection: Keep-Alive  apikey=developerdemokeydeveloperdemokey&amp;action=recognize&amp;freeform=1&amp;content- type=audio/x-wav&amp;output=rest&amp;audio=[base64 encoded something.wav without \r \n characters]</pre>
<pre>HTTP/1.0 200 OK Connection: close Content-Length: 59 Content-Type: text/plain Cache-Control: no-cache, no-store, must-revalidate, max-age=0, proxy- revalidate, no-transform Pragma: no-cache  text=something&amp;confidence=0.0216270890086889&amp;result=success</pre>

## HTTP JSON transaction for Speech Recognition

HTTP JSON Request and REST Reply
<pre>POST /api/json HTTP/1.1 Content-Length: 34897 Content-Type: text/plain; charset=UTF-8 Host: api.ispeech.org Connection: Keep-Alive  {"apikey":"developerdemokeydeveloperdemokey","action":"recognize", "freeform":"1","content-type":"audio/x- wav", "output":"rest", "audio":"[base64 encoded something.wav without \r\n characters]"}</pre>

```
HTTP/1.0 200 OK
Connection: close
Content-Length: 59
Content-Type: application/json
Cache-Control: no-cache, no-store, must-revalidate, max-age=0, proxy-
revalidate, no-transform
Pragma: no-cache

text=something&confidence=0.0134419081732631&result=success
```

## HTTP XML network transaction for Speech Recognition

### HTTP XML Request and Reply

```
POST /api/xml HTTP/1.1
Content-Length: 34953
Content-Type: text/plain; charset=UTF-8
Host: api.ispeech.org
Connection: Keep-Alive
User-Agent: Apache-HttpClient/4.0.1 (java 1.5)
Expect: 100-Continue

<data>
<apikey>developerdemokeydeveloperdemokey</apikey>
<action>recognize</action>
<freeform>1</freeform>
<content-type>audio/x-wav</content-type>
<output>xml</output>
<audio>[base64 encoded something.wav without \r\n characters]</audio>
</data>
```

```
HTTP/1.0 200 OK
Connection: close
Content-Length: 140
Content-Type: text/xml
Cache-Control: no-cache, no-store, must-revalidate, max-age=0, proxy-
revalidate, no-transform
Pragma: no-cache

<?xml version="1.0" encoding="UTF-8"?>
<data>
<text>something</text>
<confidence>0.0216270890086889</confidence>
<result>success</result>
</data>
```

## Command Lists

### About

Command lists are used to limit the possible values returned during speech recognition. For example, if the command list contains only “yes” and “no”, the result will be either “yes” or “no”.

## Example Transactions for Command Lists

### Formatting of Examples

The following examples are packet captures of TCP connections that use the HTTP protocol. You can compare your network traffic with these to debug code. Wireshark can be used to analyze network connections. A REST client can be used to make these HTTP requests.

### HTTP XML network transaction to detect commands from a list.

HTTP XML Request and Response
<pre>POST /api/xml HTTP/1.1 Content-Length: 80941 Content-Type: text/xml; charset=UTF-8 Host: api.ispeech.org Expect: 100-Continue  &lt;data&gt; &lt;apikey&gt;developerdemokeydeveloperdemokey&lt;/apikey&gt; &lt;action&gt;recognize&lt;/action&gt; &lt;output&gt;xml&lt;/output&gt; &lt;alias&gt;command1 YESNOMAYBE&lt;/alias&gt; &lt;YESNOMAYBE&gt;yes no maybe&lt;/YESNOMAYBE&gt; &lt;command1&gt;say %YESNOMAYBE%&lt;/command1&gt; &lt;content-type&gt;audio/x-wav&lt;/content-type&gt; &lt;audio&gt;[base64 encoded say_yes.wav without \r\n characters]&lt;/audio&gt; &lt;/data&gt;</pre>
<pre>HTTP/1.0 200 OK Connection: close Content-Length: 137 Content-Type: text/xml Cache-Control: no-cache, no-store, must-revalidate, max-age=0, proxy- revalidate, no-transform Pragma: no-cache  &lt;?xml version="1.0" encoding="UTF-8"?&gt; &lt;data&gt; &lt;text&gt;say yes&lt;/text&gt; &lt;confidence&gt;0.726751327514648&lt;/confidence&gt; &lt;result&gt;success&lt;/result&gt; &lt;/data&gt;</pre>

If a user speaks "say yes", or "say maybe", or "say no" it will be successfully recognized.

## HTTP REST network transaction to detect commands from a list.

HTTP REST Request and Response
<pre>POST /api/rest/ HTTP/1.1 Content-Length: 72682 Content-Type: text/plain; charset=UTF-8 Host: api.ispeech.org Expect: 100-Continue  apikey=developerdemokeydeveloperdemokey&amp;action=recognize&amp;content- type=audio%2Fwav&amp;output=rest&amp;alias=command1 NAMES &amp;NAMES=john mary anna&amp;command1=call%20%25NAMES%25&amp;audio=[base64 encoded wav without \r\n characters]</pre>
<pre>HTTP/1.0 200 OK Connection: close Content-Length: 58 Content-Type: text/plain Cache-Control: no-cache, no-store, must-revalidate, max-age=0, proxy- revalidate, no-transform Pragma: no-cache  text=call+mary&amp;confidence=0.672464966773987&amp;result=success</pre>

If a user speaks "call john" or "call anna" or "call mary" it will be successfully recognized.

## HTTP POST JSON request to detect commands from a list.

HTTP POST JSON Request and REST Response
<pre>POST /api/json/ HTTP/1.1 Content-Length: 22788 Content-Type: text/plain; charset=UTF-8 Host: api.ispeech.org Expect: 100-Continue  {"apikey":"developerdemokeydeveloperdemokey","action":"recognize", "alias":"command1 YESNOMAYBE","YESNOMAYBE":"yes no  maybe","command1":"say %YESNOMAYBE%","content-type":"audio/x- wav","output":"rest","audio":"[base64 encoded say_yes.wav without \r\n characters]}"</pre>

```
HTTP/1.0 200 OK
Connection: close
Content-Length: 56
Content-Type: application/json
Cache-Control: no-cache, no-store, must-revalidate, max-age=0, proxy-
revalidate, no-transform
Pragma: no-cache

text=say+yes&confidence=0.726751327514648&result=success
```

If a user speaks "say yes", or "say maybe", or "say no" it will be successfully recognized.

## Advanced Example, HTTP POST XML request to detect multiple audio commands from multiple lists.

HTTP XML Request and Response
<pre>POST /api/xml HTTP/1.1 Content-Length: 91393 Content-Type: text/xml; charset=UTF-8 Host: api.ispeech.org Connection: Keep-Alive Expect: 100-Continue  &lt;data&gt; &lt;apikey&gt;developerdemokeydeveloperdemokey&lt;/apikey&gt; &lt;action&gt;recognize&lt;/action&gt; &lt;content-type&gt;audio/x-wav&lt;/content-type&gt; &lt;output&gt;xml&lt;/output&gt; &lt;alias&gt;command1 command2 MONITORACTIONS COLORLIST  DYNAMITEACTIONS OBJECTLIST&lt;/alias&gt; &lt;MONITORACTIONS&gt;on off reset&lt;/MONITORACTIONS&gt; &lt;COLORLIST&gt;blue green red yellow purple orange black white cyan&lt;/COLORLIST&gt; &lt;DYNAMITEACTIONS&gt;explode fizzle out&lt;/DYNAMITEACTIONS&gt; &lt;OBJECTLIST&gt;monitor %MONITORACTIONS% color %COLORLIST% dynamite %DYNAMITEACTIONS%&lt;/OBJECTLIST&gt; &lt;command1&gt;set %OBJECTLIST%&lt;/command1&gt; &lt;command2&gt;quit menu&lt;/command2&gt; &lt;audio&gt;[base64 encoded set_dynamite_explode.wav without \r\n characters]&lt;/audio&gt; &lt;/data&gt;</pre>
<pre>HTTP/1.0 200 OK Connection: close Content-Length: 150 Content-Type: text/xml Cache-Control: no-cache, no-store, must-revalidate, max-age=0, proxy-revalidate, no-transform Pragma: no-cache  &lt;?xml version="1.0" encoding="UTF-8"?&gt;&lt;data&gt;&lt;text&gt;set dynamite explode&lt;/ text&gt;&lt;confidence&gt;0.589247465133667&lt;/confidence&gt; &lt;result&gt;success&lt;/result&gt;&lt;/data&gt;</pre>

If a user speaks "set monitor on", or "set monitor off", or "set dynamite explode", etc. it will be successfully recognized.

## Error Codes for Speech Recognition and General Errors

<b>Code</b>	<b>Summary</b>
1	Invalid API key
3	Not enough credits
4	No action specified
12	Invalid file format
14	Invalid dictionary
17	Invalid alias list
18	Alias missing
19	Invalid content type
20	Alias list too complex
21	Could not recognize
30	Option not enabled for your account. Please contact iSpeech sales at +1 (917) 338-7723 or at sales@ispeech.org to modify your license.
100	This evaluation account has exceeded its trial period. Please contact iSpeech sales at +1 (917) 338-7723 or at sales@ispeech.org to upgrade your license.
101	Your key has been disabled. Please contact iSpeech sales at +1 (917) 338-7723 or at sales@ispeech.org to modify your license.
997	No api access
998	Unsupported output type
999	Invalid request
1000	Invalid Request Method POST Required