

VOICE

API Documentation

V1.00

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42 Telecom Ltd.

 **fortytwo**

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1. INTRODUCTION

Enhance how you communicate using Fortytwo Voice. With our Voice messaging solution, you can broadcast your message through a voice call directly to your customer's mobile or landline phone worldwide. Using Fortytwo Voice, it has never been easier to engage your audience. Enhance your customer experience with our Voice API. There are two simple options for you to choose from:

Text-To-Speech (TTS)

- Send a message using the Text-To-Speech (TTS) option which converts your written text into spoken voice in your language of choice (See `tts_lang`)
- A Text-to-Speech engine will read out any given text in 15 languages and in different genders

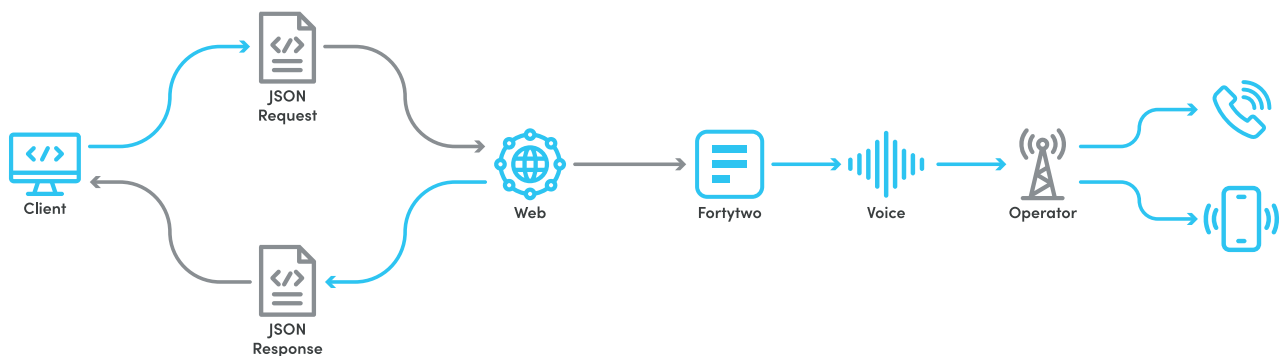
Audio File

- Send a pre-recorded audio file to your customer
- The file is played directly onto the client's handset or phone.
- The maximum file size is set up to 5mb.

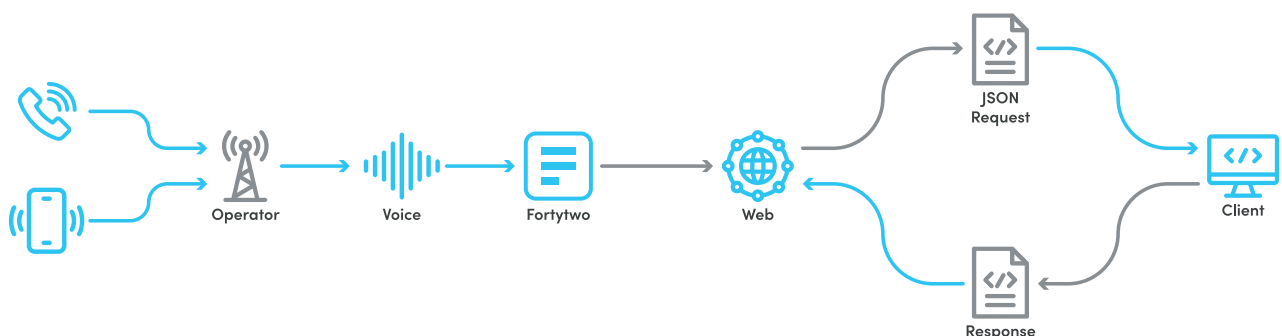
Other Features

- Allow end clients to input a keypress (0-9) during or after the call, and is mainly used for statistical purposes.
- Daily emails with usage reports
- Track campaigns through our Client Control Panel. We also offer the functionality to download CSV files with detailed information per call.

Send Voice Call



Receiving Voice Call



2. AUTHENTICATION

To make use of the REST API, you must supply an authorisation token in the HTTP header, with each request. The token is generated through the Client Control Panel (<https://controlpanel.fortytwo.com/>), in the tokens section, under the IM tab.

- Each token generated maps directly to your account, message route, sender IDs and IP restrictions. Each token can also have a custom name to make it easier for you to remember what each token is for.
- A set of IPs can be associated to a token, which restricts requests using that token to be sent exclusively from those IP's. If no IP's are specified, your token can be used from anywhere on the Internet.
- Your account can have multiple tokens.
- Tokens do not expire, and can be edited at any time.
- Make sure not to disclose any of your tokens to any unauthorised entity. If this happens, tokens can be invalidated (deleted) from the same user interface. Once a token is invalidated, it cannot be re-used again, instead a new one has to be generated.

2.1.HTTP Headers

Key	Value
Authorization	Token bcdd900c-79f3-4b8d-8bbc-6efXXXXXXXXXX
Content-Type	application/json; charset=utf-8

3. ENDPOINTS

3.1.Trigger Call

Trigger a phone call directly on a mobile phone or landline and play an audio message. Messages can be either TTS (Text-to-Speech) or Audio Clips that are hosted reachable via a publicly available URL. (e.g <http://example.com/clip.mp3>).

After the message is played, there is also an option to accept a response from the user via keypresses (0-9).

The data gathered via these phone calls including delivery statistics is sent to your own personal callback server and also available to export as CSV in our Client Control Panel.

3.1.1.Request

In order to initiate a call, a number of parameters should be passed in the body of the API request sent to the API. Eventually, all destinations provided in the requested are called. The request should be encoded in JSON.

POST

https://rest.fortytwo.com/1/voice/call

Request Body

Key	Type	Required	Description
destinations	DESTINATION_INFO[]	Y	No default value This defines the list of destinations which will be called. Maximum number of destination depends on the Routing Preference chosen. Voice: Allows up to 500 destinations Voice Plus: Only 1 destination
job_id	String	N	Default Value: Null. This is an optional custom identifier, which when provided will be included in all call backs.
voice_content	VOICE_CONTENT	Y	No default value. Includes several parameters which are used to initiate a job.
callback_url	String	N	Default Value: Use the value specified in Token. If provided, the system will send several log information in real time about each call through HTTP POST (i.e. ringing, hang up etc.) If there is no Callback URL specified, all job statistics have to be manually checked from the Client Control Panel.(i.e. http://example.com/callback)

```
{
  "destinations": [{
    . . .
  }],
  "voice_content": {
    . . .
  },
  "job_id": "my-custom-job-id",
  "callback_url": "http://example.com/callback"
}
```

Destination Info (DESTINATION_INFO)

Key	Type	Required	Description
custom_id	String	N	Default Value: Null This is a custom identifier used to distinguish each call within a job. In the same job, this field should be unique per destination.
number	String	Y	No default value. This is a mandatory field which defines the recipient of the call. <ul style="list-style-type: none"> • Must not have any plus signs or leading 0 • Must be supplied with a prefix (e.g 35699000000) • Minimum Length: 7 • Maximum Length: 20 • Only numeric characters

```
{
  "destinations": [{
    "custom_id": "test-destination-1",
    "number": "3568800000"
  }],
  "voice_content": {
    . . .
  },
  "job_id": "my-custom-job-id",
  "callback_url": "http://example.com/callback"
}
```

Voice Content (VOICE_CONTENT)

To determine whether a call is a Text-To-Speech or an audio file job, the appropriate parameters must be supplied

- For Text-To-Speech jobs use the parameter called "tts_text", "tts_voice" and "tts_lang"
- For audio file jobs use the parameter called "audio_file_url"

Key	Type	Required	Description
sender_id	String	Y	Default Value: Value specified in Token. This is the source number from where the call will show as originating from. <ul style="list-style-type: none"> • Minimum Length: 7 • Maximum Length: 20 • Must not have any plus signs or leading 0 • Must be only numeric
tts_text	String	C	No Default Value If text-to-speech functionality is to be used, this field is mandatory. This will determine the text that will be read during the call. <p>Be sure to use standard characters when passing the tts_text parameter for better legibility.</p> <ul style="list-style-type: none"> • Minimum Length: 10 • Maximum Length: 500 <p>NB. When using Audio jobs, this parameter must not be used</p>

Key	Type	Required	Description
tts_lang	String	C	<p>Default Value: Value specified in Token.If text-to-speech functionality is to be used, this field is mandatory.</p> <p>Determines the language that is spoken in the text-to-speech. Options</p> <ul style="list-style-type: none"> • da-DK (Danish) • nl-NL (Dutch) • en-AU (English Australian) • en-GB (English – British) • en-US (English – USA) • fr-FR (French) • fr-CA (French – Canadian) • de-DE (German) • it-IT (Italian) • pl-PL (Polish) • pt-PT (Portuguese) • ru-RU (Russian) • es-ES (Spanish) • es-US (Spanish – USA) • sv-SE (Swedish)
tts_voice	String	C	<p>Default Value: Value specified in Token.If text-to-speech functionality is to be used, this field is mandatory. This will determine the gender for text-to-speech's voice used in the call.</p> <ul style="list-style-type: none"> • man • woman <p>There are some voice limitations on certain languages with regards to voices (e.g ru-RU only supports female voice)</p>
audio_file_url	String	C	<p>No Default ValueThis is a mandatory field if Audio File functionality is to be used for a job. This parameter is used to determine the audio file to be played during the call. This Audio File URL must be publicly available on the internet.</p> <p>(i.e. http://example.com/audio_clip_001.mp3)</p> <p>Audio File Details</p> <p>File Formats: MP3 or WAV files (only HTTP requests with header content-type set to audio/mpeg & audio/x-wav are accepted).</p> <p>Duration: There is no actual duration length, however a bigger file might take more time to load during the call.</p> <p>Quality: There is no limitation on the bit rate of the file, since it will be transcoded automatically into an adequate bit rate for PSTN.</p> <p>When using Text-To-Speech jobs, this parameter must not be used</p>

Key	Type	Required	Description
hangup_ring_seconds	Integer	N	<p>Default Value: Use the value specified in tokenHangs up the call after X seconds (even if the call is ringing or currently in progress) from when the call was initiated. If this is parameter is not passed, then there will be no time out.</p> <p>The value must be in seconds (i.e. 50)</p> <p>This value in seconds, is not accurate due to the delay between the call and the carrier itself. In technical terms, if 20 seconds is supplied, it may be that this varies by a few seconds.</p> <p>Minimum : 20 seconds</p>
time_limit_seconds	Integer	N	<p>Default Value: Use the value specified in token (if set) Hang up the call after X seconds after the call was answered If this is parameter is not passed, then there will be no time out.</p> <p>The value must be in seconds (i.e. 50)</p> <p>This value in seconds is not accurate due to the delay between the call and the carrier itself. In technical terms, if 20 seconds is supplied, it may be that this varies by a few seconds.</p> <p>Minimum : 20 seconds</p>
ring_timeout_seconds	Integer	N	<p>Default Value: Use the value specified in Token (if set) Determines the number of seconds that a call should ring. If the call is not answered within this period, the call is cancelled. If this is parameter is not passed, then there will be no time out.</p> <p>The value must be in seconds (i.e. 50)</p> <p>This value in seconds is not accurate due to the delay between the call and the carrier itself. In technical terms, if 20 seconds is supplied, it may be that this varies by a few seconds.</p> <p>Minimum : 20 seconds</p>
enable_menu_response	Boolean	N	<p>Default Value: Use the value specified in token (set to "True" upon token creation)When this is set to "true", it will allow the user to press any digit (keypresses) between 0-9 during the call. This response will be then logged and immediately followed by a call hang up. This response can be viewed later on in the Client Control Panel or through real-time callbacks.</p> <p>If this is set to "False", any key-presses during the call are ignored.</p>


```

{
  "destinations": [{
    . . .
  }],
  "voice_content": {
    "tts_text": "This is a test message.",
    "time_limit_seconds": 600,
    "tts_lang": "en-GB",
    "sender_id": "35688000001",
    "tts_voice": "man"
  },
  "job_id": "my-custom-job-id",
  "callback_url": "http://example.com/callback"
}

```

3.1.2. Response

Voice Content (VOICE_CONTENT)

Key	Type	Required	Description
client_job_id	String	C	Passed only if "client_job_id" was passed in the request
api_job_id	String	Y	A unique identifier for this specific job
results	RESULTS	Y	See RESULTS
result_info	RESULT_INFO	Y	See RESULT_INFO

```

{
  "client_job_id": "my-custom-job-id",
  "api_job_id": "90ab3e3b-05fe-4712-8572-c86e5c07b76d",
  "results": {
    "35688000000": {
      "message_id": "148974769130300XXXXX",
      "custom_id": "test-destination-1"
    }
  },
  "result_info": {
    "status_code": 0,
    "description": "Job has been queued, Please check the progress via the HTTP Postbacks"
  }
}

```

Results (RESULTS)

Key	Type	Required	Description
message_id	String	Y	The message ID for this particular destination. This is used as an identifier for future reference
custom_id	String	C	If a custom_id was passed in the request, it will be passed back with this object

```
{
  "client_job_id": "my-custom-job-id",
  "api_job_id": "90ab3e3b-05fe-4712-8572-c86e5c07b76d",
  "results": {
    "3568800000": {
      "message_id": "148974769130300XXXXX",
      "custom_id": "test-destination-1"
    }
  },
  "result_info": {
    . . .
  }
}
```

Result Info (RESULT_INFO)

Key	Type	Required	Description
status_code	String	Y	If the status is 0, it means that the job was queued. If the status is anything except 0 (e.g -1), it signifies that there is some problem which will be further described in the "description" field below.
description	String	Y	A text that explains the "status_code" in a friendlier way so that it is human readable. It is also used for validation errors and generic errors.

```
{
  "client_job_id": "my-custom-job-id",
  "api_job_id": "90ab3e3b-05fe-4712-8572-c86e5c07b76d",
  "results": {
    . . .
  },
  "result_info": {
    "status_code": 0,
    "description": "Job has been queued, Please check the progress via the HTTP Postbacks"
  }
}
```

Status Code Details

The response received from the REST API will include an HTTP status, response code and a self-explanatory message. The following is a list of all possible messages returned in the response:

Response Message	Response Code	HTTP Status	Description
Service Unavailable	-	503	There is a generic problem within the system's architecture.
Server Error	-	500	There is a generic problem with the system.
Invalid JSON Body	-80	403	The request sent has some invalid syntax that is breaking the JSON encoding.
Cannot use both Audio File and TTS at the same time	-81	403	-
{param_name} is not allowed	-82	403	The parameter passed is not a valid parameter. Please read the Parameter section.
Invalid type for 'destinations'	-83	403	The destinations element in the request is not an array.
Missing object called 'number' in 'destinations'	-84	403	The "Destinations" element does not have any object with a field called "number".
The destination number should have at least have 7 and a maximum of 15 digits	-85	403	The destination phone number does meet the length specification.
There can only be X destination numbers	-86	403	According to the routing preference, each job has the maximum number of destinations that can be sent per job. This message is shown when this limit is exceeded.
There are no valid destination numbers in the 'destinations' parameter	-87	403	After the phone numbers were sanitized, there were no remaining valid numbers to proceed with.
The 'destinations' Object is missing	-88	403	There should be an element called "destinations" in the main JSON body. This must contain objects with phone number destinations.
Required 'tts_text' or 'audio_file_url' in the 'voice_content' object	-89	403	The "voice_content" must have at least "tts_text" or "audio_file_url" to determine whether the call is of type Text-To-Speech or Audio
Cannot use 'tts' properties in a call of type 'Audio' in the 'voice_content' object	-90	403	The "voice_content" element must only have parameters that are related to Audio (There is some TTS parameter in the request).
"Cannot use 'audio_file_url' in a call of type 'TTS' in the 'voice_content' object	-91	403	The "voice_content" element must only have parameters that are related to TTS (There is some Audio parameter in the request).
The 'sender_id' number {number} should at least have 7 digits and a maximum of 15 digits	-92	403	The sender phone number does not meet the required length specification.
Parameter 'enable_menu_response' has to be either 'true' or 'false'	-93	403	-
The 'tts_text' should at least have 7 characters and a maximum of 15	-95	403	-

Response Message	Response Code	HTTP Status	Description
The TTS voice selected is invalid. (e.g MAN or WOMAN)	-96	403	-
The TTS language selected is invalid	-97	403	-
The 'voice_content' Object is missing	-98	403	There should be an element called "voice_content" in the main JSON body. This must contain parameters that define a phone call.
The 'job_id' parameter should at least have 7 characters and a maximum of 15	-99	403	The JOB ID does not meet the length specification of a minimum of 7 and a maximum of 15
There was a problem with your job: {generic_error}	-101	403	An error occurred while trying to check for Funds or phone number Coverage.
Custom ID {custom_id} is not unique	-102	403	The custom_ids passed along with the destinations are not unique.
{parameter} should be bigger than 10	-103	403	The parameter should have a value bigger than 10 seconds (no maximum value)
{parameter} should be integer	-104	403	The parameter should be of type integer.
Server too busy	-105	403	Our system is currently too busy to handle your request. Please try again later.
"The Audio File supplied cannot be downloaded to our servers	-106	403	An error has occurred while handling audio management.
The Audio File format supplied is Invalid (must be MP3 or WAV). Also ensure that the URL has no spaces or invalid characters and also that the File is reachable via the internet.	-107	403	The URL of audio_file has invalid characters such as spaces or non-standard URL characters. The filename must only have "-" and "_" as non-alphanumeric characters
The Audio File format supplied is corrupted	-108	403	There was a problem reading the MP3 or WAV to gather the Meta Data
The Audio File supplied cannot be processed. Please contact customer support	-109	403	There was a problem while downloading the Audio File onto servers
There was some problems with the Audio File	-110	403	There was a problem while processing the Audio File (Downloading or processing the Meta Data)
The 'audio_file_url' must be valid (starting with http or https)	-111	403	The supplied URL for the audio file must start with HTTP or HTTPS and have at least 1 character (e.g http://example.com/hello.mp3)
Cannot establish service settings	-112	403	There is some problem in our VOIP system
Could not load the call details	-120	403	The message_id provided passed the validation but there were no records found for it
Could not verify the Call Message ID	-121	403	The message_id provided was not numeric and/or 20 characters long
Only 1 Destination allowed, when using a TEST Account	-122	403	While using a TEST account, the user can only send the request to only 1 number (his mobile number). To use the full functionality of the system one must be promoted to FULL Account

Response Message	Response Code	HTTP Status	Description
Only the personal mobile phone number {{personal_number}} can be used when using a TEST Account	-123	403	While using a TEST account, the user can only call his mobile number. To use the full functionality of the system one must be promoted to FULL Account
Could not load the Job details	-125	403	The API_JOB_ID provided passed the validation of 36 characters but no job was found
Could not verify the api_job_id	-126	403	The API_JOB_ID specified was not 36 characters long

3.1.3. Example

Text to Speech (TTS)

HTTP

```
POST /1/voice/call HTTP/1.1
Host: https://rest.fortytwo.com
Content-Type: application/json; charset=utf-8
Authorization: Token 93a89134-d109-4d60-a8aa-7bc93XXXXXX
{
  "destinations": [{
    "number": "3568800000"
  }],
  "voice_content": {
    "tts_text": "This is a test message.",
    "tts_lang": "en-GB",
    "tts_voice": "man",
    "sender_id": "3568800001"
  }
}
```

PHP

```
$curl = curl_init();

curl_setopt_array($curl, array(
    CURLOPT_URL => "https://rest.fortytwo.com/1/voice/call",
    CURLOPT_RETURNTRANSFER => true,
    CURLOPT_ENCODING => "",
    CURLOPT_MAXREDIRS => 10,
    CURLOPT_TIMEOUT => 30,
    CURLOPT_HTTP_VERSION => CURL_HTTP_VERSION_1_1,
    CURLOPT_CUSTOMREQUEST => "POST",
    CURLOPT_POSTFIELDS => "{\n  \"destinations\": [\n    {\n      \"number\": \"3568800000\"\n    }\n  ],\n  \"voice_content\": {\n    \"tts_text\": \"This is a test message.\",\n    \"tts_lang\": \"en-GB\",\n    \"tts_voice\": \"man\",\n    \"sender_id\": \"3568800001\"\n  }\n}",
    CURLOPT_HTTPHEADER => array(
        "Authorization: Token 93a89134-d109-4d60-a8aa-7bc93XXXXXX",
        "content-type: application/json; charset=utf-8"
    ),
));

$response = curl_exec($curl);
$error = curl_error($curl);

curl_close($curl);

if ($error) {
    echo "cURL Error #:" . $error;
} else {
    echo $response;
}
```

CURL

```
curl -X POST -H "Content-Type: application/json; charset=utf-8" -H "Authorization: Token 93a89134-d109-4d60-a8aa-7bc93XXXXXX" -d '{
  "destinations": [{
    "number": "3568800000"
  }
],
  "voice_content": {
    "tts_text": "This is a test message.",
    "tts_lang": "en-GB",
    "tts_voice": "man",
    "sender_id": "3568800001"
  }
}' "https://rest.fortytwo.com/1/voice/call"
```

CURL

```
import requests

url = "https://rest.fortytwo.com/1/voice/call"

payload = "{\n  \"destinations\": [{\n    \"number\": \"3568800000\"\n  }],\n  \"voice_content\": {\n    \"tts_text\": \"This is a test message.\",\n    \"tts_lang\": \"en-GB\",\n    \"tts_voice\": \"man\",\n    \"sender_id\": \"3568800001\"\n  }}\n}"

headers = {
  'content-type': "application/json; charset=utf-8",
  'Authorization': "Token 93a89134-d109-4d60-a8aa-7bc93XXXXXX"
}

response = requests.request("POST", url, data=payload, headers=headers)

print(response.text)
```

Audio Clip

HTTP

```
POST /1/voice/call HTTP/1.1
Host: rest.fortytwo.com
Content-Type: application/json; charset=utf-8
Authorization: Token 93a89134-d109-4d60-a8aa-7bc93aXXXXXX
{
  "destinations": [{
    "number": "3568800000"
  }],
  "voice_content": {
    "audio_file_url": "http://example.com/recording.mp3",
    "sender_id": "3568800001"
  }
}
```

PHP

```
$curl = curl_init();

curl_setopt_array($curl, array(
    CURLOPT_URL => "https://rest.fortytwo.com/1/voice/call",
    CURLOPT_RETURNTRANSFER => true,
    CURLOPT_ENCODING => "",
    CURLOPT_MAXREDIRS => 10,
    CURLOPT_TIMEOUT => 30,
    CURLOPT_HTTP_VERSION => CURL_HTTP_VERSION_1_1,
    CURLOPT_CUSTOMREQUEST => "POST",
    CURLOPT_POSTFIELDS => "{\n  \"destinations\": [\n    {\n      \"number\": \"3568800000\"\n    }],\n  \"voice_content\": {\n    \"audio_file_url\": \"http://example.com/recording.mp3\",\n    \"sender_id\": \"3568800001\"\n  }\n}",
    CURLOPT_HTTPHEADER => array(
        "authorization: Token 93a89134-d109-4d60-a8aa-7bc93aXXXXXX",
        "content-type: application/json; charset=utf-8"
    ),
));

$response = curl_exec($curl);

$err = curl_error($curl);
curl_close($curl);

if ($err) {
    echo "cURL Error #:" . $err;
} else {
    echo $response;
}
```

CURL

```
curl -X POST -H "Content-Type: application/json; charset=utf-8" -H "Authorization: Token 93a89134-d109-4d60-a8aa-7bc93aXXXXXX" -d '{
  "destinations": [{
    "number": "3568800000"
  }],
  "voice_content": {
    "audio_file_url": "http://example.com/recording.mp3",
    "sender_id": "3568800001"
  }
}' "https://rest.fortytwo.com/1/voice/call"
```


CURL

```
import requests

url = "https://rest.fortytwo.com/1/voice/call"

payload = "{\n  \"destinations\": [\n    {\n      \"number\": \"3568800000\"\n    },\n    {\n      \"number\": \"3568800001\"\n    }\n  ],\n  \"voice_content\": {\n    \"audio_file_url\": \"http://example.com/recording.mp3\",\n    \"sender_id\": \"3568800001\"\n  }\n}"

headers = {
    'content-type': "application/json; charset=utf-8",
    'authorization': "Token 93a89134-d109-4d60-a8aa-7bc93aXXXXXX"
}

response = requests.request("POST", url, data=payload, headers=headers)

print(response.text)
```

3.2. Get Call Details

Retrieve the data for a particular phone call. This will return data such as API Job ID, Message ID, Status, Timestamps, Error Codes etc.

3.2.1. Request

When a call is initiated, each destination will have a unique identifier called `message_id`. This is returned in the response when the Voice API is called. By supplying such `message_id` in this endpoint, the latest and all relevant information regarding that call is supplied.

GET

`https://rest.fortytwo.com/1/voice/call/status/{message_id}`

3.2.2. Response

JSON Response (OUTER_RESPONSE)

Key	Type	Required	Description
<code>api_job_id</code>	String	N	The Job ID generated by the API. This is the same ID that was returned in the response when the job was original initiated.
<code>client_job_id</code>	String	Y	The Job ID supplied by the client during the original request in Section 4.1 . If supplied, this field will be returned.
<code>data</code>	CALL_INFO	N	Contains information for the specific call alongside the job's details. See CALL_INFO

```
{
  "api_job_id": "56021e4d-7x91-42e9-be9c-5de682ad2c2b",
  "client_job_id": "123455",
  "data": [
    {
      . . .
    }
  ]
}
```

3.2.3. Example

HTTP

```
GET /1/voice/call/status/{message_id} HTTP/1.1
Host: https://rest.fortytwo.com
Content-Type: application/json; charset=utf-8
Authorization: Token 93a89134-d109-4d60-a8aa-7bc93aXXXXXX
```

PHP

```
$curl = curl_init();

curl_setopt_array($curl, array(
    CURLOPT_URL => "https://rest.fortytwo.com/1/voice/call/status/{message_id}",
    CURLOPT_RETURNTRANSFER => true,
    CURLOPT_ENCODING => "",
    CURLOPT_MAXREDIRS => 10,
    CURLOPT_TIMEOUT => 30,
    CURLOPT_HTTP_VERSION => CURL_HTTP_VERSION_1_1,
    CURLOPT_CUSTOMREQUEST => "GET",
    CURLOPT_HTTPHEADER => array(
        "authorization: Token 93a89134-d109-4d60-a8aa-7bc93aXXXXXX",
        "content-type: application/json; charset=utf-8"
    ),
));

$response = curl_exec($curl);
$error = curl_error($curl);

curl_close($curl);

if ($error) {
    echo "cURL Error #:" . $error;
} else {
    echo $response;
}
```

CURL

```
curl -X GET -H "Content-Type: application/json; charset=utf-8" -H "Authorization: Token 93a89134-d109-4d60-a8aa-7bc93aXXXXXX" "https://rest.fortytwo.com/1/voice/call/status/{message_id}"
```

PHYTHON

```
import requests

url = "https://rest.fortytwo.com/1/voice/call/status/{message_id}"

headers = {
    'content-type': "application/json; charset=utf-8",
    'authorization': "Token 93a89134-d109-4d60-a8aa-7bc93aXXXXXX"
}

response = requests.request("GET", url, headers=headers)

print(response.text)
```

3.3. Get Job Details

Retrieve the data for a particular Job (which includes a list of calls that were sent in a single API call). This will return an array of calls and display data such as API Job ID, Message ID, Status, Timestamps, Error Codes etc.

3.3.1. Request

When a job (API Call) is initiated, a field called `api_job_id` is returned in the response. This endpoint is used to retrieve all the relevant information about a job based on this identifier.

```
GET https://rest.fortytwo.com/1/voice/job/status/{api_job_id}
```

3.3.2. Response

JSON Response (OUTER_RESPONSE)

Key	Type	Required	Description
<code>api_job_id</code>	String	N	The Job ID generated by the API. This is the same ID that was returned in the response when the job was original initiated.
<code>client_job_id</code>	String	Y	The Job ID supplied by the client during the original request in Section 4.1 . If supplied, this field will be returned.
<code>data</code>	CALL_INFO	N	Contains information for the specific job alongside all its appertaining calls. See CALL_INFO

```
{
  "api_job_id": "56021e4d-7x91-42e9-be9c-5de682ad2c2b",
  "client_job_id": "123455",
  "data": [
    {
      . . .
    }
  ]
}
```

3.3.3. Example

HTTP

```
GET /1/voice/job/status/{api_job_id} HTTP/1.1
Host: https://rest.fortytwo.com
Content-Type: application/json; charset=utf-8
Authorization: Token 93a89134-d109-4d60-a8aa-7bc93aXXXXXX
```

PHP

```
$curl = curl_init();

curl_setopt_array($curl, array(
    CURLOPT_URL => "https://rest.fortytwo.com/1/voice/job/status/{api_job_id}",
    CURLOPT_RETURNTRANSFER => true,
    CURLOPT_ENCODING => "",
    CURLOPT_MAXREDIRS => 10,
    CURLOPT_TIMEOUT => 30,
    CURLOPT_HTTP_VERSION => CURL_HTTP_VERSION_1_1,
    CURLOPT_CUSTOMREQUEST => "GET",
    CURLOPT_HTTPHEADER => array(
        "authorization: Token 93a89134-d109-4d60-a8aa-7bc93aXXXXXX",
        "content-type: application/json; charset=utf-8"
    ),
));

$response = curl_exec($curl);
$error = curl_error($curl);

curl_close($curl);

if ($error) {
    echo "cURL Error #:" . $error;
} else {
    echo $response;
}
```

CURL

```
curl -X GET -H "Content-Type: application/json; charset=utf-8" -H "Authorization: Token 93a89134-d109-4d60-a8aa-7bc93aXXXXXX" "https://rest.fortytwo.com/1/voice/job/status/{api_job_id}"
```

PHYTHON

```
import requests

url = "https://rest.fortytwo.com//1/voice/job/status/{api_job_id}"

headers = {
    'content-type': "application/json; charset=utf-8",
    'authorization': "Token 93a89134-d109-4d60-a8aa-7bc93aXXXXXX"
}

response = requests.request("GET", url, headers=headers)

print(response.text)
```

4. CALLBACKS

Voice supports HTTP POST callbacks, meaning that you can have an endpoint on your own server which will receive callbacks whenever something happens. This is used to track phone calls and allow you to build custom statistics. This callback URL must be publicly available on the internet and have our IP whitelisted (if the system has a firewall).

Delivery Reports and any other relevant intermediary status are signalled back to the client using an HTTP callback. The URL invoked is obtained from the "callback_url" field in the original message request.

An HTTP POST request is sent to the specified callback_url in the following scenarios:

- When a call is ringing
- When a call failed
- When client has no sufficient funds to perform the call
- When there is no coverage for destination
- When the call was delivered

4.1. Whitelist callback server

You may need to configure your firewall to whitelist traffic from these IP addresses:

IPv4: **80.252.167.60**

Note that these IPs can change in the future.

4.2. Response HTTP Status Code

The HTTP Callback on your server should return the correct HTTP Headers containing 200 OK. If the client's server is unreachable or does not return a 200 OK, the callback is queued to be retried again. After three failed attempts, with an interval of 5 minutes between them, the callback is discarded.

4.3. Call Callbacks

JSON Response (OUTER_RESPONSE)

Key	Type	Required	Description
pi_job_id	String	Y	The Job ID generated by the API. This is the same ID that was returned in the response when the job was original initiated.
client_job_id	String	N	The Job ID supplied by the client during the original request in Section 4.1 . If supplied, this field will be returned.
data	CALL_INFO	Y	This contains the information about the call. See CALL_INFO

```
{
  "api_job_id": "56021e4d-7391-42e9-bx9c-5de682ad2c2b",
  "client_job_id": "123455",
  "data": [
    {
      . . .
    }
  ]
}
```

4.4. Server Example

Examples for Servers that accept HTTP POST Callbacks

PHP

```
$postRawData = file_get_contents("php://input");
$json = json_decode($postRawData, true);
var_dump($json);
```

5. REFERENCES

5.1. HTTP Status Codes

When responding, the REST API will make use of the appropriate and relevant HTTP status code to describe the nature of the result.

The response codes are mapped as follows:

Code	Description
200	All OK.
400	Bad Request – The request is invalid and was not understood by the API.
401	Unauthorized – Header “Authorization” missing, invalid, or revoked; and / or, your host IP is not in the authorized IPs list.
403	The request contains invalid or illegal values.
404	Not Found – The endpoint on which the request was sent to, does not exist, or does not implement the API requested.
405	Method Not Allowed – If the endpoint received a request using an HTTP method (ex. GET instead of POST) that is not allowed by that endpoint.
413	Request entity was too large.
415	Unsupported Media Type – If the request was in a content-type not supported by the endpoint (e.g. text/plain instead of application/json).
429	Too many requests (Throttling).
500	Internal Server Error.

5.2. Response Call Object

Call Object in Responses (CALL_INFO)

Key	Type	Required	Description														
ype	String	N	This will always be set to "voice"														
job_type	Enum	N	The type of call used. <table border="1"> <thead> <tr> <th>Enum</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>TTS</td> <td>Text to speech</td> </tr> <tr> <td>AUDIO</td> <td>Audio file</td> </tr> </tbody> </table>	Enum	Description	TTS	Text to speech	AUDIO	Audio file								
Enum	Description																
TTS	Text to speech																
AUDIO	Audio file																
timestamp	Timestamp	N	The timestamp when the callback was actually sent, measured in the number of seconds since the Unix Epoch (January 1 1970 00:00:00 GMT)														
micro_timestamp	Date	N	The timestamp (in microseconds) when the callback was actually sent, measured in the number of seconds since the Unix Epoch (January 1 1970 00:00:00 GMT)														
message_id	String	N	The message ID for this message.														
status	Enum	N	Enumeration indicating the message's state at the moment of the callback generation. <table border="1"> <thead> <tr> <th>Enum</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>ACCEPTD</td> <td>Call has been accepted by our system and is waiting to be processed.</td> </tr> <tr> <td>DELIVRD</td> <td>Call is delivered to destination. (The call was successful and the duration was more than 0 seconds)</td> </tr> <tr> <td>UNDELIV</td> <td>Call undelivered. (The call was not delivered due to several errors – check the "Error Code" for more information)</td> </tr> <tr> <td>REJECTD</td> <td>Call rejected. (the call was not processed due to lack of funds, no Coverage or not enough Bandwidth etc)</td> </tr> <tr> <td>UNKNOWN</td> <td>Call is in an invalid unknown state. (This call might have actually worked but the system might not be aware of the outcome)</td> </tr> <tr> <td>RINGING</td> <td>Call is actually ringing on the handset. This means that we are attempting to deliver the call.</td> </tr> </tbody> </table>	Enum	Description	ACCEPTD	Call has been accepted by our system and is waiting to be processed.	DELIVRD	Call is delivered to destination. (The call was successful and the duration was more than 0 seconds)	UNDELIV	Call undelivered. (The call was not delivered due to several errors – check the "Error Code" for more information)	REJECTD	Call rejected. (the call was not processed due to lack of funds, no Coverage or not enough Bandwidth etc)	UNKNOWN	Call is in an invalid unknown state. (This call might have actually worked but the system might not be aware of the outcome)	RINGING	Call is actually ringing on the handset. This means that we are attempting to deliver the call.
Enum	Description																
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UNKNOWN	Call is in an invalid unknown state. (This call might have actually worked but the system might not be aware of the outcome)																
RINGING	Call is actually ringing on the handset. This means that we are attempting to deliver the call.																
ring_date	String	N	Returns the timestamp of when call started ringing. If call is still not ringing, false is returned.														
answer_date	String	N	Returns the timestamp of when the call was answered. If call is not yet answered, false is returned.														
hang_date	String	N	Returns the timestamp of when the call was hanged. If the call wasn't hanged yet, false is returned.														
to	String	Y	The destination of the call.														

Key	Type	Required	Description
from	String	Y	This is the number from where the call will show as originating from.
actual_duration	Integer	N	The actual duration of the call in seconds. If the call was unsuccessful for some reason the actual duration will be 0.
billed_duration	Integer	N	The billed duration of the call in seconds (the actual duration rounded every 60 seconds). Example: If the call took 15 seconds, the billed duration would be 60. If the call was unsuccessful for some reason the actual duration will be 0.
client_message_id	String	C	This field maps to the custom_id if it was supplied when the job was initiated. If this field was not provided, an empty string is returned.
error_code	Integer	Y	This field contains an the "hangup cause" code which refers to the technical term of how the call ended. Refer to section "Call Error Codes" for more information
error_description	String	Y	This field contains the "hangup cause" label. Refer to section "Call Error Codes" for more information
keypress	String	C	This field contains any digits inputted during the call. This value is only returned when the "enable_menu_response" was set and the user actually inputted a number during the call.

```
{
  "api_job_id": "56021e4d-7391-42e9-bx9c-5de682ad2c2b",
  "client_job_id": "123455",
  "data": [
    {
      "type": "voice",
      "message_id": "145714237521680000249",
      "status": "UNDELIV",
      "timestamp": 1457423776,
      "micro_timestamp": 1457423776683,
      "to": "35655555555",
      "from": "35655555551",
      "client_message_id": "111",
      "job_type": "TTS",
      "ring_date": 1457423756,
      "answer_date": false,
      "hang_date": 1457423766,
      "actual_duration": 0,
      "billed_duration": 0,
      "error_code": 4017,
      "error_description": "USER_BUSY"
    }
  ]
}
```

5.3.Call Error Codes

Code	Label	Description
0	NORMAL_CLEARING	The call was successful and was picked up by the destination number. This indicates that the call is being cleared because one of the users involved in the call has requested that the call be cleared.
3000	UNSPECIFIED	There was no specific error.
3001	SERVER_TOO_BUSY	The system cannot process any more traffic at the moment, thus the job is rejected.
3002	NO_COVERAGE	There was no coverage for the particular call destination, thus the call was not initiated. Ensure that the destination number is valid (incl the country prefix). Please contact our Customer Support for a more detailed overview
3003	NO_FUNDS	There were not enough funds for the particular call, thus the call was not initiated.
3004	PAYMENT_ERROR	There was a problem processing the call charge
3005	FAILED_AUDIO_DOWNLOAD	This happens when the audio file cannot be downloaded due to an invalid or unreachable audio file URL.
4000	UNSPECIFIED	No other cause codes applicable. This is usually given by the router when none of the other codes apply. This cause usually occurs in the same type of situations as cause 1, cause 88, and cause 100.
4001	UNALLOCATED_NUMBER	This cause indicates that the called party cannot be reached because, although the called party number is in a valid format, it is not currently allocated (assigned).
4002	NO_ROUTE_TRANSIT_NET	This cause indicates that the equipment sending this cause has received a request to route the call through a particular transit network, which it does not recognize. The equipment sending this cause does not recognize the transit network either because the transit network does not exist or because that particular transit network, while it does exist, does not serve the equipment which is sending this cause.
4003	NO_ROUTE_DESTINATION	This cause indicates that the called party cannot be reached because the network through which the call has been routed does not serve the destination desired. This cause is supported on a network dependent basis.
4006	CHANNEL_UNACCEPTABLE	This cause indicates that the channel most recently identified is not acceptable to the sending entity for use in this call.
4007	CALL_AWARDED_DELIVERED	This cause indicates that the user has been awarded the incoming call, and that the incoming call is being connected to a channel already established to that user for similar calls (e.g. packet-mode x.25 virtual calls).
4017	USER_BUSY	This cause is used to indicate that the called party is unable to accept another call because the user busy condition has been encountered. This cause value may be generated by the called user or by the network. In the case of user determined user busy it is noted that the user equipment is compatible with the call.
4018	NO_USER_RESPONSE	This cause is used when a called party does not respond to a call establishment message with either an alerting or connect indication within the prescribed period of time allocated.

Code	Label	Description
4019	NO_ANSWER	This cause is used when the called party has been alerted but does not respond with a connect indication within a prescribed period of time. Note – This cause is not necessarily generated by Q.931 procedures but may be generated by internal network timers.
4020	SUBSCRIBER_ABSENT	This cause value is used when a mobile station has logged off, radio contact is not obtained with a mobile station or if a personal telecommunication user is temporarily not addressable at any user-network interface. Sofia SIP will normally raise USER_NOT_REGISTERED in such situations.
4021	CALL_REJECTED	This cause indicates that the equipment sending this cause does not wish to accept this call, although it could have accepted the call because the equipment sending this cause is neither busy nor incompatible. The network may also generate this cause, indicating that the call was cleared due to a supplementary service constraint. The diagnostic field may contain additional information about the supplementary service and reason for rejection.
4022	NUMBER_CHANGED	This cause is returned to a calling party when the called party number indicated by the calling party is no longer assigned, The new called party number may optionally be included in the diagnostic field. If a network does not support this cause, cause no: 1, unallocated (unassigned) number shall be used.
4023	REDIRECTION_TO_NEW_DESTINATION	This cause is used by a general ISUP protocol mechanism that can be invoked by an exchange that decides that the call should be set-up to a different called number. Such an exchange can invoke a redirection mechanism, by use of this cause value, to request a preceding exchange involved in the call to route the call to the new number.
4025	EXCHANGE_ROUTING_ERROR	This cause indicates that the destination indicated by the user cannot be reached, because an intermediate exchange has released the call due to reaching a limit in executing the hop counter procedure. This cause is generated by an intermediate node, which when decrementing the hop counter value, gives the result 0.
4027	DESTINATION_OUT_OF_ORDER	This cause indicates that the destination indicated by the user cannot be reached because the interface to the destination is not functioning correctly. The term “not functioning correctly” indicates that a signal message was unable to be delivered to the remote party; e.g. a physical layer or data link layer failure at the remote party, or user equipment off-line.
4028	INVALID_NUMBER_FORMAT	This cause indicates that the called party cannot be reached because the called party number is not in a valid format or is not complete.
4029	FACILITY_REJECTED	This cause is returned when a supplementary service requested by the user cannot be provide by the network.
4030	RESPONSE_TO_STATUS_ENQUIRY	This cause is included in the STATUS message when the reason for generating the STATUS message was the prior receipt of a STATUS INQUIRY.
4031	NORMAL_UNSPECIFIED	This cause is used to report a normal event only when no other cause in the normal class applies.
4034	NORMAL_CIRCUIT_CONGESTION	This cause indicates that there is no appropriate circuit/channel presently available to handle the call.

Code	Label	Description
4038	NETWORK_OUT_OF_ORDER	This cause indicates that the network is not functioning correctly and that the condition is likely to last a relatively long period of time e.g. immediately re-attempting the call is not likely to be successful.
4041	NORMAL_TEMPORARY_FAILURE	This cause indicates that the network is not functioning correctly and that the condition is not likely to last a long period of time; e.g. the user may wish to try another call attempt almost immediately.
4042	SWITCH_CONGESTION	This cause indicates that the switching equipment generating this cause is experiencing a period of high traffic.
4043	ACCESS_INFO_DISCARDED	This cause indicates that the network could not deliver access information to the remote user as requested, i.e. user-to-user information, low layer compatibility, high layer compatibility or sub-address as indicated in the diagnostic. It is noted that the particular type of access information discarded is optionally included in the diagnostic.
4044	REQUESTED_CHAN_UNAVAIL	This cause is returned when the other side of the interface cannot provide the circuit or channel indicated by the requesting entity.
4050	FACILITY_NOT_SUBSCRIBED	This cause indicates that the user has requested a supplementary service, which is available, but the user is not authorized to use.
4052	OUTGOING_CALL_BARRED	This cause indicates that although the calling party is a member of the CUG for the outgoing CUG call, outgoing calls are not allowed for this member of the CUG.
4054	INCOMING_CALL_BARRED	This cause indicates that although the called party is a member of the CUG for the incoming CUG call, incoming calls are not allowed to this member of the CUG.
4057	BEARERCAPABILITY_NOTAUTH	This cause indicates that the user has requested a bearer capability that is implemented by the equipment which generated this cause but the user is not authorized to use.
4058	BEARERCAPABILITY_NOTAVAIL	This cause indicates that the user has requested a bearer capability which is implemented by the equipment which generated this cause but which is not available at this time.
4063	SERVICE_UNAVAILABLE	This cause is used to report a service or option not available event only when no other cause in the service or option not available class applies.
4065	BEARERCAPABILITY_NOTIMPL	This cause indicates that the equipment sending this cause does not support the bearer capability requested.
4066	CHAN_NOT_IMPLEMENTED	This cause indicates that the equipment sending this cause does not support the channel type requested
4069	FACILITY_NOT_IMPLEMENTED	This cause indicates that the equipment sending this cause does not support the requested supplementary services.
4079	SERVICE_NOT_IMPLEMENTED	This cause is used to report a service or option not implemented event only when no other cause in the service or option not implemented class applies.
4081	INVALID_CALL_REFERENCE	This cause indicates that the equipment sending this cause has received a message with a call reference which is not currently in use on the user-network interface.
4088	INCOMPATIBLE_DESTINATION	This cause indicates that the equipment sending this cause has received a request to establish a call which has low layer compatibility, high layer compatibility or other compatibility attributes (e.g. data rate) which cannot be accommodated.

Code	Label	Description
4095	INVALID_MSG_UNSPECIFIED	This cause is used to report an invalid message event only when no other cause in the invalid message class applies.
4096	MANDATORY_IE_MISSING	This cause indicates that the equipment sending this cause has received a message which is missing an information element which must be present in the message before that message can be processed.
4097	MESSAGE_TYPE_NONEXIST	This cause indicates that the equipment sending this cause has received a message with a message type it does not recognize either because this is a message not defined or defined but not implemented by the equipment sending this cause.
4098	WRONG_MESSAGE	This cause indicates that the equipment sending this cause has received a message such that the procedures do not indicate that this is a permissible message to receive while in the call state, or a STATUS message was received indicating an incompatible call state.
4099	IE_NONEXIST	This cause indicates that the equipment sending this cause has received a message which includes information element(s)/parameter(s) not recognized because the information element(s)/parameter name(s) are not defined or are defined but not implemented by the equipment sending the cause. This cause indicates that the information element(s)/parameter(s) were discarded. However, the information element is not required to be present in the message in order for the equipment sending the cause to process the message.
4100	INVALID_IE_CONTENTS	This cause indicates that the equipment sending this cause has received an information element which it has implemented; however, one or more fields in the I.E. are coded in such a way which has not been implemented by the equipment sending this cause.
4101	WRONG_CALL_STATE	This cause indicates that a message has been received which is incompatible with the call state.
4102	RECOVERY_ON_TIMER_EXPIRE	This cause indicates that a procedure has been initiated by the expiration of a timer in association with error handling procedures. This is often associated with NAT problems. Ensure that "NAT Mapping Enable" is turned on in your ATA. If it is not NAT related it can sometimes be provider related, make sure to ensure another outbound provider does not solve the problem.
4103	MANDATORY_IE_LENGTH_ERROR	This cause indicates that the equipment sending this cause has received a message which includes parameters not recognized because the parameters are not defined or are defined but not implemented by the equipment sending this cause. The cause indicates that the parameter(s) were ignored. In addition, if the equipment sending this cause is an intermediate point, then this cause indicates that the parameter(s) were passed unchanged.
4111	PROTOCOL_ERROR	This cause is used to report a protocol error event only when no other cause in the protocol error class applies.
4127	INTERWORKING	This cause indicates that an interworking call (usually a call to SW56 service) has ended.
4128	ORIGINATOR_CANCEL	The system interrupted the call likely due to timeouts set by the request.
4602	ALLOTTED_TIMEOUT	This cause means that the server canceled the call because the destination channel took too long to answer.

THANK YOU

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