

The Speaker Verification (SV) HTTP Interface

OURCOMPANY provides APIs for Speaker Verification (SV).

Voiceprints are acquired and stored in the Voiceprints database.

Audio data is transmitted over the HTTPS protocol and checked against the stored voiceprints.

The speaker verification API supports HTTP POST requests to forward audio to the selected SV Engine, in chunked mode.

The HTTP POST Request

CURL COMMAND

POST Request Example

POST Response Example

Table: Verification HTTP Request Headers

The HTTP POST Request

The SV speech engine receives HTTP POST requests from the HTTPS Proxy to:

- Create (enrol) voice-prints
- Update voice-prints
- Verify voice-prints
- Verify a given segment against a given voice-print.

The SV engine provides an XML response to the client request. The response contains the operation results or the verification score.

In the HTTP POST request, the HTTP headers specify the verification parameters of the audio format.

The SV Engine cluster:

- Loads a configuration file in a XML format.
- Processes HTTP POST requests.
- Returns an XML response.

The third-party client must be able to:

- Do POST requests.
- Use HTTP chunked transfer encoding to send audio data to the Verification SV Engine.

The Verification API employs the headers as shown in `<?xml version="1.0"?>`

`<result>Total seconds for speaker: 69.29`

`Enrolled with success!`

`</result>`

Table: Verification HTTP Request Headers

POST Request Example

POST file.wav HTTP/1.1

Host: grYesNo.en-US

User-Agent: curl/7.43.0

Accept: */*

Transfer-Encoding: chunked

Content-Type: audio/x-pcm; rate=8000

Expect: 100-continue

Once the command is processed, a verification result in XML format is returned.

CURL COMMAND

Enroll Header Set to True

You send a specific request for a specific grammar, for example **grYesNo.en-US**, specific audio codec such as "linear PCM at 8Khz" and header to the specific HTTP Proxy running on `http://123.45.67.8/`, using the following curl command:

```
curl -vvv -s --data-binary @/tmp/audio_1.raw -H "Transfer-Encoding: chunked" -H  
"Content-Type: audio/x-pcm; rate=8000" -H "Speaker-Id: joe" -H "Enroll: true" -H  
"Gender: male" -H "Host: sv_backend1.en-US-  
"http://123.45.67.8/"
```

POST Response Example

This example refers to successful voice enrolment.

If aggregate recording duration exceeds 60 seconds for the first time, the user is enrolled, that is the voiceprint is created, and the response "Enrolled with success!" is returned.

```
<?xml version="1.0"?>
```

```
<result>Total seconds for speaker: 69.29
```

```
Enrolled with success!
```

```
</result>
```

Table: Verification HTTP Request Headers

HTTP Header Name	Header Value Definition
Host	Verification. This header includes the application name and it is used to route the request to the appropriate SV engine, for example sv_engine1.en-US
Enroll	The Enroll header possible values are: • false • true • update • delete The default value of this header is <false>.
Gender	The Gender header possible values are: • male • female The default value of this header is <male>
Speaker-Id	This Header contains the speaker id.
Content-Type	This header specifies the audio format. E.g (Content-Type: audio/x-pcm; rate= <8000 16000>)
Transfer-encoding	This tag must contain the type of transfer value. The possible values are: • Chunked E.g. (Transfer-encoding: Chunked)