

# Automatic Speech Recognition

## Getting Started

### Product Documentation



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# Getting Started

## Operation Guide

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### Logging in to the Console

Log in to the Tencent Cloud console. If you don't have an account yet, sign up first as instructed in [Signing Up](#).

### Activating Service

Log in to the [ASR console](#) and activate the service.

### Making a Purchase

ASR services are pay-as-you-go once activated. For more information, see [Billing Overview](#).

### Using ASR

To use the ASR service, you can choose one of the four options below.

Use Method	Target Users	Description	Documentation
Online feature call through <a href="#">API 3.0 Explorer</a>	Beginners developers <b>with a coding background</b>	This method allows making online calls, verifying signatures, generating SDK code, quickly searching for APIs, etc.	<a href="#">API Overview</a>
Call of APIs for development through coding	Developers <b>familiar with coding</b>	Tencent Cloud has developed an SDK that supports feature development by calling ASR APIs. The SDK currently supports multiple programming languages, including Python, Java, PHP, Go, Node.js, and .NET. <b>You can download the applicable SDK in the documentation of each service.</b>	<a href="#">Quick Server API Connection</a>
Integration through client SDK	Client developers <b>familiar with coding</b>	Tencent Cloud supports integrating ASR capabilities into clients through the developed SDKs for Android and iOS.	<a href="#">Real-Time Speech Recognition</a>

Note :

If you need to call APIs for feature development, familiarize yourself with HTTP requests and API calls in advance.

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## Viewing Calls

Log in to the [ASR console](#) to view the usage of each service provided by ASR.

# Quick Server API Connection

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## Overview

This document describes how to use API 3.0 Explorer to debug ASR APIs online and quickly integrate the Tencent Cloud SDK corresponding to the APIs into your local project.

## Directions

### Activate ASR service

Before calling ASR APIs, you should access the [ASR console](#) to complete identity verification. Then, read the **User agreement**, select **I have read and agree to the "User Agreement"**, and click **Activate now** to activate **APIs for real-time speech recognition**. If you need to activate the business license verification or VAT invoice verification feature, you can go to the service overview page to apply for activation, and the service can be used after approval.

After the service is successfully activated, API calls will be billed in the pay-as-you-go mode and settled daily. For billing details, see [Billing Overview](#).

### Debugging ASR APIs

After the ASR service is successfully activated, go to the ASR [API 3.0 Explorer](#) online API debugging page, select the API to be called, and enter the **input parameters**. You can view the specific descriptions of input parameters in the **Parameter Description** tab on the API 3.0 Explorer UI.

Note :

The platform will provide a temporary `Access Key` to the logged-in user for debugging.

After entering the **Input Parameters**, select the **Code Generation** tab, and you can see the automatically generated code in different programming languages (Java, Python, Node.js, PHP, Go, .NET, and C++), and some fields in the generated code are related to the entered content. If you need to adjust the input parameters, you can regenerate the

code after modifying the parameter values on the left.

Select the **Online Call** tab and click **Send Request** to make a real request for your debugging and reference.

## Integrating ASR SDK

Confirm that your local dependent environment meets the following requirements:

Programming Language	SDK Integration Requirements
Node.js	Node.js 10.0.0 or later
Python	Python 2.7 or 3.6–3.9
Java	JDK 7 or later
Go	Go 1.9 or later (or Go 1.14 if go.mod is used)
.NET	.NET Framework 4.5+ or .NET Core 2.1
PHP	PHP 5.6.0 or later
C++	Compiler for C++ 11 or later, i.e., GCC 4.8 or later (currently, only the Linux installation environment is supported, while Windows is not)
Ruby	Ruby 2.3 or later

Install the Tencent Cloud ASR SDK corresponding to the local dependent environment. The following takes Node.js as an example to describe the SDK installation and use methods. For SDKs in other languages, go to the [SDK Center](#).

### Installation through npm (recommended)

Installation through npm is the recommended way to use the SDK for Node.js. npm is a dependency manager for Node.js that supports the dependencies your project requires and installs them into your project. For more information, visit [npm's official website](#).

1. Run the following installation command:

```
npm install tencentcloud-sdk-nodejs --save
```

2. Import the corresponding module code in your code. For more information, see the sample code.
3. The above import method downloads the SDKs of all Tencent Cloud products to your local system. You can replace `tencentcloud-sdk-nodejs` with a specific product SDK name such as `tencentcloud-sdk-nodejs-cvm/cbs/vpc` to import the SDK of the specific product. In the code, you can change `require("tencentcloud-sdk-nodejs")` to `require("tencentcloud-sdk-nodejs-cvm/cbs/vpc")` and keep the rest unchanged, which can greatly save the storage space. For more information, see the sample.

### Installation through source package

1. Go to the [GitHub code hosting page](#) or [quick download address](#) to download the source code package.
2. Decompress the source package to an appropriate location in your project.
3. Import the applicable module code in your code. For more information, see the sample code.

### Demo

After the SDK installation is completed, you can import the code automatically generated by API 3.0 Explorer into your project. Taking Node.js as an example, a simple demo is as follows:

```
const tencentcloud = require("tencentcloud-sdk-nodejs")
// Import the client models of the corresponding product module
const CvmClient = tencentcloud.cvm.v20170312.Client
const clientConfig = {
  // Tencent Cloud authentication information
  credential: {
    secretId: "secretId",
    secretKey: "secretKey",
  },
  // Product region
  region: "ap-shanghai",
  // Optional instance configuration
  profile: {
    signMethod: "HmacSHA256", // Signature algorithm
    httpProfile: {
      reqMethod: "POST", // Request method
      reqTimeout: 30, // Request timeout period in seconds, which is 60s by default
    },
  },
}
// Instantiate the client object of the requested product (with CVM as an example)
const client = new CvmClient(clientConfig)
// Call the API you want to access through the client object; you need to pass in
```



```
the request object and the response callback function
client.DescribeZones().then(
  (data) => {
    console.log(data)
  },
  (err) => {
    console.error("error", err)
  }
)
```

In projects that support typescript, use the following method to call:

```
import * as tencentcloud from "tencentcloud-sdk-nodejs"
// Import the client models of the corresponding product module
const CvmClient = tencentcloud.cvm.v20170312.Client
const clientConfig = {
  // Tencent Cloud authentication information
  credential: {
    secretId: "secretId",
    secretKey: "secretKey",
  },
  // Product region
  region: "ap-shanghai",
  // Optional instance configuration
  profile: {
    signMethod: "HmacSHA256", // Signature algorithm
    httpProfile: {
      reqMethod: "POST", // Request method
      reqTimeout: 30, // Request timeout period in seconds, which is 60s by default
    },
  },
}
// Instantiate the client object of the requested product (with CVM as an example)
const client = new CvmClient(clientConfig)
// Call the API you want to access through the client object; you need to pass in
the request object and the response callback function
client.DescribeZones().then(
  (data) => {
    console.log(data)
  },
  (err) => {
    console.error("error", err)
  }
)
```

The input parameters for instantiating `Client` support the `clientConfig` data structure. For more information, see [ClientConfig](#).

# FAQs

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## How do I connect to ASR?

ASR currently supports connection via API and SDK (recommended). For more information, see [Quick Server API Access](#) and [Real-Time Speech Recognition](#).

## How do I update a file over 5 MB in size to the ASR console to try ASR out?

You can try ASR out by using an audio URL in the feature trial section in the [ASR console](#). **We recommend you upload the audio file to a URL and keep the audio length below five hours.**

## Which ASR service should I choose in different scenarios?

- Real-time speech recognition is applicable to scenarios with requirements for real-timeness, such as voice input method, voice robot, and meeting recording.

## Are far-field and offline speech recognition features supported?

Real-time speech recognition doesn't support far-field and offline speech recognition features.

## Does ASR support recognizing speeches in Chinese-English mix and dialects?

- Real-time speech recognition supports Mandarin, English, Cantonese, Korean, Japanese, Thai, and Shanghainese.

Note :

If you want to recognize other dialects such as Sichuan, Nanjing, or Nanchang dialect, [Submit a ticket](#).

## How long can an ASR input audio be?

- In real-time speech recognition, each audio segment of a data packet in the audio stream is 200 ms in length.

## What should I do if HTTP requests to ASR APIs return an authentication failure?

You can check whether your parameters are uploaded correctly against the parameter table. For quick connection, we recommend you use the SDK provided at our official website.

## Do ASR APIs have restrictions on the sample rate of audio files?

APIs don't restrict the sample rate of audio files, but if the sample rate is non-compliant, the recognition effect will be compromised.