

Video on Demand

Service Overview

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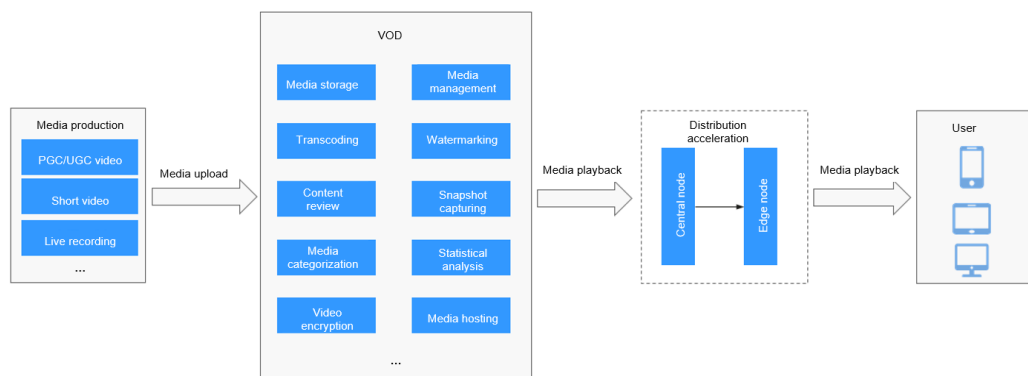
1 What Is VOD?

Video on Demand (VOD) is a one-stop media service that uploads, transcodes, and manages media files and distributes them to your users.

You do not need to care about the underlying infrastructure on which services depend. You only need to use Video on Demand (VOD) to quickly build a secure and scalable VOD platform.

VOD provides a web-based management console, APIs, and software development kits (SDKs), through which you can use and manage VOD resources.

VOD billing is usage-based.



Application Scenarios

Audio and video websites: Huawei Cloud VOD helps you quickly build a secure and reliable VOD application regardless of your video resource size.

Video replay: Live recordings stored in OBS buckets are hosted to VOD for replay. Functions such as media file management, media processing, and CDN distribution acceleration are also supported.

Online education: Teaching videos can be uploaded through the console or by calling APIs. Videos can be transcoded for quick publish. Edge nodes around the world ensure a smooth viewing experience for students. Hotlink protection and copyright protection prevent courseware and educational videos from being stolen.

2 Functions

VOD ingests media files and transcodes these files for playback on a wide range of devices. It is widely used for online education, web portals, social, and live replay.

Table 2-1 describes the functions of the VOD service.

Table 2-1 Functions

Category	Function	Description
Media upload	Formats	<ul style="list-style-type: none">Supported video formats: MP4, TS, MOV, MXF, FLV, MPG, WMV, AVI, F4V, M4V, HLS, and MPEGSupported audio formats: MP3, OGG, WAV, WMA, APE, FLAC, AAC, AC3, MMF, AMR, M4A, M4R, WV, and MP2
	Upload methods	<ul style="list-style-type: none">Media files can be uploaded through the console. Three upload modes are available: local upload, pull from URLs, and OBS hosting.APIs for file upload and server SDKs in Java, Python, Go, Node.js, .Net, PHP, and C++ languages are provided.
	Upload rules	<ul style="list-style-type: none">Each video file is split into multiple small files (20 MB by default) and uploaded to VOD.The timeout interval for uploading a small file is 60 minutes.
Media management	Category management	You can create categories and manage uploaded audio and video files by category.
	Thumbnail management	<ul style="list-style-type: none">The first frame of video can be taken automatically as your video thumbnail.You can also upload a thumbnail in JPG or PNG format from your local PC.You can take a snapshot and save it as your video thumbnail.

Category	Function	Description
	Subtitle management	You can upload SRT subtitle files in UTF-8.
	Video publish	After a video is published, a specific URL is generated. Your users can watch the video through the URL.
	CDN pre-loading	You can pre-load media files on your domain name to CDN nodes for a better playback experience.
Media processing	Transcoding	<ul style="list-style-type: none"> Supported input file formats: MP4, TS, MOV, FLV, MPG, MXF, WMV, ADTS, AVI, MKV, and MPEG Supported video codecs: H.264, H.265, MPEG-2, MPEG-4, MJPEG, WMV1/2/3, and ProRes 422 Supported input audio codecs: AAC, AC3, EAC3, HE-AAC, MP2, MP3, PCM (s16le, s16be, s24le, s24be, DVD), and WMA Supported output file formats: DASH, HLS, MP4, MP3, and ADTS Supported output codecs: H.264, H.265, HE_AAC, AAC, and MP3
	Video watermark	You can add watermarks in PNG, JPG, and JPEG formats to videos. The maximum size of a watermark is 100 MB.
	Audio extraction	You can extract audio from video files and save it as MP3 format.
	Snapshot capturing	<p>You can take snapshots from videos and save them as JPG files.</p> <ul style="list-style-type: none"> By interval: Take snapshots at regular intervals. The default interval is 12s. At fixed time: Take snapshots at specified time points.
	Packaging	<p>Packaging only changes media format without changing the resolution and bitrate. You can:</p> <ul style="list-style-type: none"> Package media files in FLV and HLS formats into MP4. Package media files in MP4, FLV, and MP3 formats into HLS.
	Content moderation	The system checks the compliance of uploaded media files.

Category	Function	Description
Media acceleration and playback	Custom domain name	The configured VOD domain names can be used for media file distribution acceleration.
	Hotlink protection	You can configure referer validation and URL validation to protect your resources to be distributed.
Security management	Referer validation	You can configure referer blacklist and whitelist to control who can or cannot access your VOD resources and to prevent hotlinking.
	URL validation	You can configure the key to control who can or cannot access your VOD resources and to prevent hotlinking.
	HLS encryption	HLS videos can be encrypted using AES128 to prevent VOD resource leakage and link theft.
	HTTPS secure acceleration	<ul style="list-style-type: none"> • HTTPS secure acceleration is supported. • Forcible redirection to HTTPS and HTTP 2.0 is supported.
VOD console	Dashboard	<ul style="list-style-type: none"> • You can view data such as VOD resource usage. • You can change the CDN billing option.
	Media file management	<ul style="list-style-type: none"> • You can transcode, pre-load, categorize, export, and delete media files, and cancel transcoding. • You can extract audio from video files. • You can upload a thumbnail and subtitles for a video file. • You can view the audio and video playback addresses, subtitles, and thumbnail information.
	Video processing	<ul style="list-style-type: none"> • You can take snapshots from videos. • You can select a workflow to process media files.
	Content moderation	The system checks the compliance of uploaded media files.
	Audio and video upload	Audio and video files can be uploaded from your local PC or obtained from the URL.
	Statistical analysis	You can view resource usage on CDN and your origin server, and view most requested content.
	Global settings	You can configure transcoding templates, watermark templates, HLS encryption, notifications, and workflows.

Category	Function	Description
	Domain name management	You can add your own domain name, and configure the CNAME, HTTPS secure acceleration, and hotlink protection for the domain name.
	Audio and video hosting	You can authorize VOD to host media files in your OBS bucket and use transcoding and frame capture to process these files.
VOD APIs	Media upload	APIs for media file upload are available, including local upload, replicating files from OBS to VOD, OBS hosting, and pull from URLs.
	Media management	APIs for querying, publishing, canceling, deleting, and modifying media are available.
	CDN pre-loading	A media pre-load API is provided to prefetch media files by ID or URL.
	Media processing	APIs for video processing (transcoding, snapshot capturing, and HLS encryption), thumbnail setting, and media file moderation are available.
	Media category	APIs for creating, deleting, modifying, and querying categories are available.
	Statistical analysis	APIs for querying CDN statistics, VOD origin server statistics, and most requested content are available.
	Key query	The HLS encryption key can be queried.
VOD SDKs	Server SDK	Functions such as media upload, processing, management, pre-loading, and distribution are available.

3 Product Advantages

Ease of Use and Low O&M Costs

- Functions are available via VOD SDKs, APIs, and the VOD console.
- You pay only for what you use. There is no need to consider underlying facilities.

Superior Watching Experience

- VOD transcodes an input into multiple outputs with different resolutions for playback on a wide range of devices.
- Media categorization, custom thumbnail, and labeling enable users to find target resources by category or label.
- You can drag the time axis and see whether to drag to the target position from the preview image and play the content from the target position.

Fast Transcoding

VOD uses parallel transcoding to transcode a single input into multiple outputs with different resolutions.

Fast Content Distribution

Video resources are cached on CDN nodes. If users request the content, nearby CDN nodes directly serve the content, speeding up content distribution and improving user experience.

Rock-solid Reliability

- Hotlink protection prevents other websites from linking to your resources.
- Video encryption and playback authentication safeguard your video assets.

Multi-level Assurance

- Highly reliable Object Storage Service (OBS) ensures secure storage of your massive amounts of resources.
- Monitoring system and service system ensure 24/7 technical support.

4 Constraints

Before using VOD, you need to know the following constraints.

Resource Constraints

VOD has constraints on resources such as domain names and watermarks.

Table 4-1 Resource constraints

Item	Description	Constraint
Region	New users can use VOD only in CN North-Beijing4 , AP-Bangkok , and AP-Singapore .	-
Domain name	Maximum number of self-owned domain names that you can add on the VOD console. NOTE The system automatically checks all domain names under your name and deletes domain names that have been idle for a long time. For details, see Configuring Domain Names .	5
Pull from URLs	Maximum number of media files that can be pulled at a time	<ul style="list-style-type: none">• Console: 100• API: 16
URL pull rate	Global maximum rate for pulling audio/video files offline to VOD using the URLs of source audio/video files	1 Gbit/s
Watermarking	Maximum number of watermarks that can be added to a video file at a time	2
Categorization	Maximum number of subcategories can be added to each category	128
Labeling	Maximum number of labels that you can add to a media file	16

Item	Description	Constraint
Referer validation	Maximum number of domain names that can be added to a referer blacklist or whitelist	100
Media pre-loading	Maximum number of times that one subscriber can pre-load media files in a day	1,000

Function Constraints

Table 4-2 Function constraints

Item	Description
Domain name	If a domain name has not been used for more than half a year, an error will be reported when you delete the domain name. In this case, submit a service ticket .
Transcoding	To retain transcoded outputs of different templates, you need to submit a service ticket to apply for this function.
Subtitling	Currently, only single-subtitle files can be uploaded on the console. To upload a multi-subtitle file, see Subtitle Management . The supported formats of single-subtitle and multi-subtitle files are different.

API Constraints

VOD sets a limit on the number of API calls to prevent service interruption caused by repeated API calls in a short period of time.

Table 4-3 API request throttling

Category	API	API Calls for a Single Tenant Per Minute	API Calls for All Tenants Per Minute
Media upload	<ul style="list-style-type: none"> Uploading media files to VOD Obtaining upload authorization Confirming media upload Replicating media files in OBS to VOD 	1,500	12,000
	<ul style="list-style-type: none"> Pulling media files from URLs Verifying the upload 	100	1,000

Category	API	API Calls for a Single Tenant Per Minute	API Calls for All Tenants Per Minute
Media processing	<ul style="list-style-type: none"> Updating a video Media processing Canceling a media asset transcoding task Extracting audio Canceling an audio extraction task Creating a media asset review task Setting a thumbnail 	100	1,000
Media management	<ul style="list-style-type: none"> Deleting media files Publishing media files Canceling media publish Modifying file attributes 	100	1,000
	Querying file information	1,500	24,000
	<ul style="list-style-type: none"> Querying file details Querying media files 	1,500	12,000
Media pre-loading	<ul style="list-style-type: none"> CDN pre-loading Querying pre-loading results 	100	1,000
Media category	<ul style="list-style-type: none"> Creating a media category Modifying a media category Deleting a media category Querying media categories 	100	1,000
Key query	Key query	1,500	12,000

Category	API	API Calls for a Single Tenant Per Minute	API Calls for All Tenants Per Minute
Statistical analysis	<ul style="list-style-type: none"> • Querying CDN statistics • Querying origin server statistics • Querying the most requested content • Querying playback logs of a domain name • Querying daily playback statistics of a media asset 	100	1,000
Watermark template management	<ul style="list-style-type: none"> • Creating a watermark template • Modifying a watermark template • Querying watermark templates • Deleting a watermark template • Confirming watermark image upload 	100	1,000
Subtitle management	Managing subtitles	100	1,000
Transcoding template management	<ul style="list-style-type: none"> • Creating a custom transcoding template • Querying transcoding templates • Updating a transcoding template • Deleting a custom template 	100	1,000

Category	API	API Calls for a Single Tenant Per Minute	API Calls for All Tenants Per Minute
Transcoding template set management	<ul style="list-style-type: none"> • Creating a transcoding template group set • Modifying a transcoding template group set • Querying custom template group sets • Deleting a transcoding template group set 	100	1,000

5 Billing

VOD adopts postpayment for required resources.

NOTICE

- Only packages of CN North-Beijing1 and CN North-Beijing4 can be used in both regions. Packages of regions other than CN North-Beijing1 and CN North-Beijing4 can be used only in their respective region. Purchase a package based on the region of the account.

Billing Items

VOD billing consists of media management, media processing, and content distribution. For details, see the following table. Billing items are settled every hour. For pricing details, see [Product Pricing Details](#).

Table 5-1 Billing items

Category	Billing Item	Description	Payment Options
Media management	Storage space	You are charged for your actual storage usage, including the uploaded media files, thumbnails, and subtitles, as well as transcoded media files.	Postpayment for required resources
Media processing	Video transcoding	Billed based on the duration of the content you output	Postpayment for required resources
	Audio transcoding	Billed based on the duration of the content you output	Postpayment for required resources

Category	Billing Item	Description	Payment Options
	Audio extraction	Billed based on the duration of the content you extract	Postpayment for required resources
	Packaging	Billed based on the duration of the content you output	Postpayment for required resources
Content distribution	Downstream Traffic	Billed based on the downstream traffic generated during audio or video playback	Postpayment for required resources

Billing Modes

VOD supports postpayment for required resources. In each billing cycle, the system calculates the fee based on the actual usage of each resource multiplied by the unit price, and then deducts the fee from your account balance.

The billing mode of distribution acceleration is by traffic, that is, by the downlink traffic actually used every day. The settlement is performed once every hour. After the current billing cycle (hour) ends, the usage in an hour is usually billed four hours later (subject to the system).

Expiration and Overdue Payment

- **Arrears:** In pay-per-use mode, fees are deducted based on each billing item. If the account balance is insufficient, the system fails to deduct the fees of the previous billing cycle. As a result, your account is in arrears. A retention period will be granted. If you want to continue to use VOD, top up your account in the retention period. Huawei Cloud defines the retention period based on the customer tier. Go to the [Basic Information](#) page to view your customer tier. For details about how to handle service suspension due to arrears, see [Retention Period](#).
- **Service expiration:** Pay-per-use resources do not expire.

6 Security

6.1 Shared Responsibilities

Shared Responsibilities on Huawei Cloud

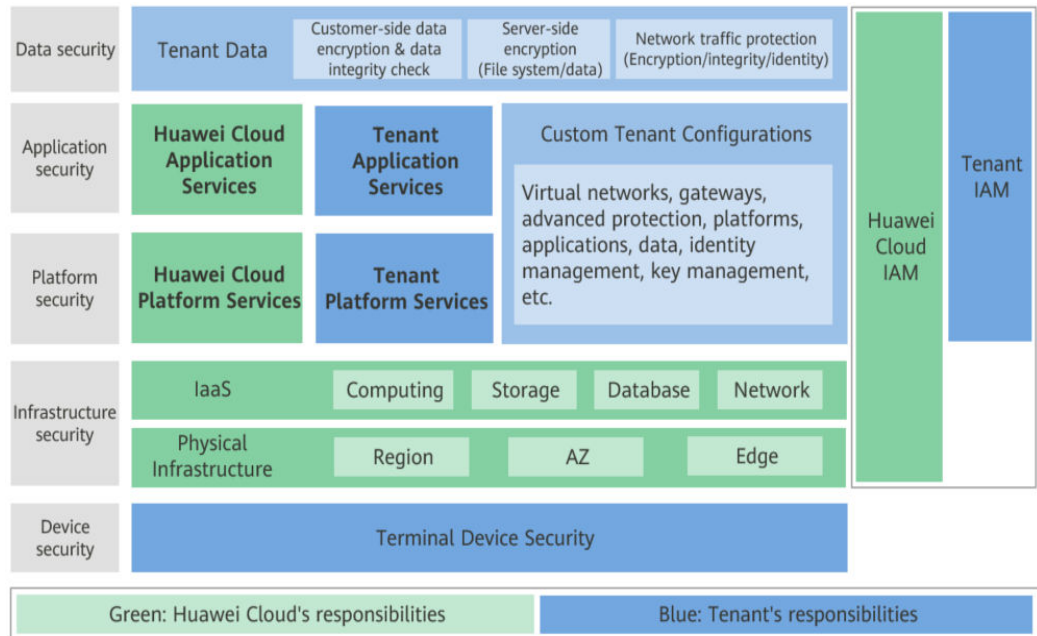
Huawei Cloud guarantees that its commitment to cyber security will never be outweighed by the consideration of commercial interests. To tackle emerging cloud security challenges and pervasive cloud security threats and attacks, Huawei Cloud builds a comprehensive cloud service security assurance system for different regions and industries based on Huawei's unique software and hardware advantages, laws, regulations, industry standards, and security ecosystem.

Figure 6-1 illustrates the responsibilities shared by Huawei Cloud and users.

- **Huawei Cloud:** ensures the security of cloud services and provides secure clouds. Huawei Cloud's security responsibilities include ensuring the security of our IaaS, PaaS, and SaaS services, as well as the physical environments of the Huawei Cloud data centers where our IaaS, PaaS, and SaaS services operate. Huawei Cloud is responsible for not only the security functions and performance of our infrastructure, cloud services, and technologies, but also for the overall cloud O&M security and, in the broader sense, the security compliance of our infrastructure and services.
- **Tenant:** uses the cloud securely. Tenants of Huawei Cloud are responsible for the secure and effective management of the internal security as well as the tenant-customized configurations of cloud services, including IaaS, PaaS, and SaaS. This includes but is not limited to operating systems of virtual networks, virtual machine (VM) hosts and guest VMs, virtual firewalls, API Gateway and advanced security services, all types of cloud services, tenant data, identity accounts, and key management.

Huawei Cloud Security White Paper introduces in detail the building ideas and measures of Huawei cloud security, including cloud security strategy, responsibility sharing model, compliance and privacy, security organization and personnel, infrastructure security, tenant service and tenant security, engineering security, O&M and operation security, and ecosystem security.

Figure 6-1 Huawei Cloud shared security responsibility model



Shared Responsibilities on Huawei Cloud Live

Live requires the participation and responsibility sharing of the following roles. The security responsibility boundary of each role is as follows:

- Huawei Cloud tenant**
 Responsible for **livestreaming management**, including the following security responsibilities:
 - Application and data security of the livestreaming platform and apps
 - Security of livestreaming activities
 - End user (streamers or viewers) security management, including security supervision of live video content
 - Response to regulators
- Huawei Cloud Live**
 The security responsibilities of **Live** are as follows:
 - Transmission network security, which is essential to the transmission and processing of video content
 - Tenant data security
 - Providing technologies, such as snapshot capturing and recording, to support tenants' video content monitoring
 - Response to regulators
- End user**
Streamers and viewers are responsible for the security of video production and video content.

6.2 Identity Authentication and Access Control

Identity Authentication

You can access VOD through the VOD console, APIs, and SDKs. Regardless of the access method, requests are sent through REST APIs provided by VOD.

VOD APIs can be accessed only after requests are authenticated. You can use either of the following authentication methods to call APIs:

- Token authentication: Requests are authenticated using tokens.
- AK/SK authentication: Requests are encrypted using AK/SK pairs. AK/SK authentication is recommended because it is more secure than token authentication.

For details about authentication and authorization, see [Authentication](#).

Access Control

VOD supports access control based on IAM permissions and URL validation.

Table 6-1 VOD access control

Method	Description	Details
IAM permission control for VOD	IAM permissions define which actions on your cloud resources are allowed or denied. After creating an IAM user, the administrator needs to add it to a user group and grant the permissions required by VOD to the user group. Then, all users in this group automatically inherit the granted permissions.	VOD Permissions Management
URL validation	To prevent your data on VOD from being stolen, VOD provides referer validation, URL validation, and IP address blacklist/whitelist authentication to identify and filter out malicious visitors. Only authorized visitors can use VOD.	Configuring Hotlink Protection

6.3 Data Protection

VOD takes different measures to keep data stored in VOD secure and reliable.

Table 6-2 VOD data protection methods and features

Measure	Description	Details
Transmission encryption (HTTPS)	VOD supports HTTP and HTTPS, but HTTPS is recommended to enhance the security of data transmission.	HTTPS Configuration Methods
Sensitive data encryption and protection	Your sensitive data such as URL validation keys is stored using secure encryption algorithms.	-
HLS encryption	Media streams can be encrypted using the standard HLS protocol to prevent malicious paid users from downloading and distributing the media streams.	HLS Encryption
Video watermarking	You can configure a watermark template and add a specific watermark image to an uploaded video during transcoding to prevent video theft.	Watermark Settings

6.4 Resilience

VOD provides a three-level reliability architecture. It ensures data durability and reliability through technical solutions such as cross-region/AZ data DR, intelligent scheduling at edge nodes, and microservice scale-out.

Reliability Level	Measure
Level 1 Service reliability	Microservice scale-out
Level 2 Data center reliability	Multi-AZ
Level 3 Region reliability	Multi-region

6.5 Security Risk Monitoring

VOD allows querying the details of media file playback records for better playback monitoring of your account. You can query logs to obtain information such as the access status, client IP address, and traffic of monitored domain names. For details, see [Log Management](#).

The VOD console also provides trend charts of the traffic, peak bandwidth, and hit rate of monitored domain names, so that you can analyze data such as resource usage. For details, see [Distribution Statistics](#).

6.6 Certificates

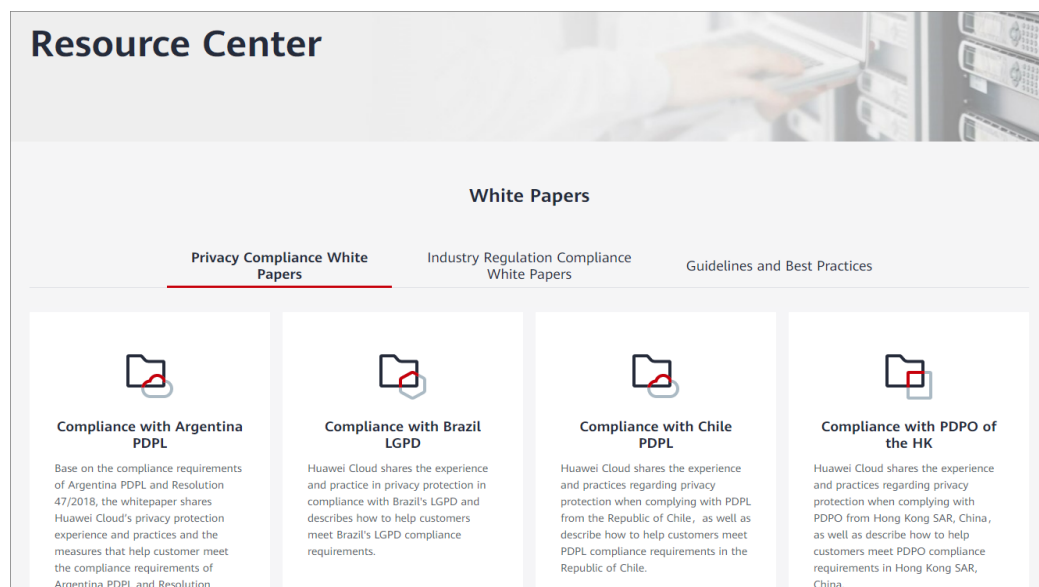
Compliance Certificates

Huawei Cloud services and platforms have obtained security compliance certificates of multiple authoritative organizations (such as ISO, SOC, and PCI) in and outside China. You can [apply for and download](#) compliance certificates.

Resource Center

Huawei Cloud also provides the following resources to help you meet compliance requirements. For details, see [Resource Center](#).

Figure 6-2 Resource Center



7 Personal Data

Personal Data Use Scenario	You can upload audio/video files by yourself or use OBS to host and manage them.	End users use VOD to play the audio/video files.	VOD statistics
Collected Personal Data	Uploaded audio/video files, subtitles, and images	Distributed audio/video files, subtitles, and images	IP addresses of user devices
Data Source and Collection Method	Manual submission	Manual submission	IP addresses of user devices are logged when end users use VOD.
Purpose and Security Measure	Used to upload and manage audio/video files. Audio/video files will be encrypted before transmission.	Used to play audio/video files.	IP addresses are used for user identification and VOD statistical analysis. IP addresses are anonymized before being logged.
Retention Period and Policy	You can delete or modify the data. The data is deleted immediately upon deregistration.	You can determine the retention period and policy.	Data is stored in log files for three months.
Destruction Method	Deleted by the system without rewriting.	Deleted by the system without rewriting.	The system automatically deletes expired logs.
Export Method	No export is involved.	No export is involved.	You can download logs.

Export Guide	No export is involved.	No export is involved.	For details, see Queries playback logs of a domain name .
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8 Related Services

Before using the event notifications, permissions management, and media hosting functions, you need to enable the dependent services. See [Table 8-1](#).

Table 8-1 Related services

Interactive Function	Service Name	Reference
Selecting an SMN topic when configuring event notifications on the VOD console	Simple Message Notification (SMN)	Creating a Topic Adding a Subscription Configuring Topic Policies
Managing users and user groups using IAM	Identity and Access Management (IAM)	Create User Groups and Assign Permissions Create IAM Users and Log In
Authorizing VOD to host media files in OBS buckets	Object Storage Service (OBS)	Creating a Bucket Uploading an Object

9 Concepts

H.264

H.264 or MPEG-4 Part 10, a video compression standard developed by the ITU-T Video Coding Experts Group (VCEG) and ISO/IEC JTC1 Moving Picture Experts Group (MPEG).

H.265

H.265 is a video compression standard, designed as a successor to H.264. Based on the video coding standard H.264, H.265 keeps some of the original technologies, while improves some relevant techniques. H.265 adopts the advanced techniques to improve the bit-stream, promote the coding quality, and better the relationship between time delay and algorithm complexity, to achieve best possible optimization. H.264 can transmit SD (resolution lower than 1280 x 720) digital images at a rate lower than 1 Mbit/s, whereas H.265 can transmit standard HD (resolution of 1280 x 720) audio and video at a rate of 1 Mbit/s to 2 Mbit/s.

Low-Bitrate HD

Based on the human visual system model and Huawei's transcoding technology, Live analyzes each scenario, action, content, and texture in a video to deliver lower bitrate while keeping the bandwidth costs down but without compromising the video quality.

Weak Network

The QoS of a weak network is not stable.

95th Percentile Bandwidth

A billing option. Within a calendar month, the bandwidth is measured and recorded every 5 minutes on each valid day. At the end of the month, the records are sorted from the highest to the lowest, and the top 5% of the recorded bandwidth values are thrown away. Then the highest bandwidth value in the remaining records is the billable bandwidth of the month.

Upscaling

Low-resolution videos are transcoded to high-resolution ones.

Standard Transcoding

Process of compressing the bitrate, adjusting the resolution, converting the packaging format, and adding watermarks based on standard video encoding and decoding technologies

One-in Multiple-out

It is a transcoding method. That is, a video file is transcoded into video files of multiple resolutions and bitrates to meet the playback requirements of different devices and different network speeds.

Image Enhancement

The combination of the traditional super-resolution algorithm and AI-powered image enhancement algorithm converts 2K videos to 4K videos, repairs damaged images, and improves the image quality of existing videos.

Offline Transcoding

A video file is transcoded to one or more video files with different bitrates to meet different network bandwidth and device requirements. Different from real-time transcoding, offline transcoding is started only after a complete video file is obtained.

Container

Video and audio streams that have been encoded and compressed are stored in a file according to certain format specifications. Common protocols include MP4, FLV, and HLS.

Frame Rate

A measurement unit of the number of frames displayed in a video per unit time. The measurement unit is frames per second (FPS).

10 Permissions Management

If you need to assign different permissions to different employees in your enterprise to access your VOD resources, IAM is a good choice for fine-grained permissions management. IAM provides identity authentication, permissions management, and access control, helping you secure access to your Huawei Cloud resources.

With IAM, you can use your Huawei Cloud account to create IAM users, and assign permissions to the users to control their access to specific resources. For example, some software developers in your enterprise need to use VOD but are not allowed to delete VOD resources or perform any high-risk operations. To this end, you can create IAM users for the software developers and assign them only the permissions for using VOD.

If your Huawei Cloud account does not require individual IAM users for permissions management, skip this section.

IAM can be used free of charge. You pay only for the resources in your account. For more information about IAM, see [IAM Service Overview](#).

VOD Permissions

By default, new IAM users do not have permissions assigned. You need to add a user to one or more groups, and attach permissions policies or roles to these groups. Users inherit permissions from the groups to which they are added and can perform specified operations on cloud services based on the permissions.

VOD is a project-level service deployed in different physical regions. To assign permissions to a user group, specify the scope as region-specific projects and select projects for the permissions to take effect. If **All projects** is selected, the permissions will take effect for the user group in all region-specific projects. When accessing VOD, the users need to switch to a region where they have been authorized to use VOD.

You can grant users permissions by using roles and policies.

- **Roles:** A type of coarse-grained authorization mechanism that defines permissions related to user responsibilities. This mechanism provides only a limited number of service-level roles for authorization. If one role has a dependency role required for accessing VOD, assign both roles to the users.

However, roles are not an ideal choice for fine-grained authorization and secure access control.

- **Policies:** A type of fine-grained authorization mechanism that defines permissions required to perform operations on specific cloud resources under certain conditions. This mechanism allows for more flexible policy-based authorization, meeting requirements for secure access control. For example, you can grant VOD users only the permissions for managing a certain type of cloud resources.

Table 10-1 lists all the system-defined roles and policies supported by VOD.

Table 10-1 System-defined roles supported by VOD

Role Name	Description	Type	Dependency
VOD Administrator	Administrator permissions on all media files in your Huawei Cloud account	System-defined role	None
VOD Operator	Operation permissions (except media review, global settings, and domain name management) on all media files in your account	System-defined role	None
VOD Guest	Read-only permissions on all media files in your account	System-defined role	None
VOD Group Administrator	Operation permissions except global settings and domain name management for media files created by users in the group to which you belong. This role isolates media files.	System-defined role	None
VOD Group Operator	Operation permissions (except media review, media deletion, global settings, and domain name management) for media files created by users in the group to which you belong. This role isolates media files.	System-defined role	None
VOD Group Guest	Read-only permissions for media files created by all users in the group to which you belong. This role isolates media files.	System-defined role	None
VOD FullAccess	Has all permissions on VOD.	System-defined policy	None
VOD ReadOnlyAccess	Has the read-only permission on VOD.	System-defined policy	None

Role Name	Description	Type	Dependency
VOD CommonOperations	Has basic operation permissions on the VOD service (except global configuration, domain name management, permission management, review setting, and audio and video hosting).	System-defined policy	None

Table 10-2 lists the common operations supported by each system-defined policy of VOD. Select the policies as required.

Table 10-2 Common operations supported by each system-defined policy

Operation	VOD FullAccess	VOD ReadOnlyAccess	VOD CommonOperations
Creating a domain name	√	x	x
Modifying a domain name	√	x	x
Deleting a domain name	√	x	x
Viewing the domain name list	√	√	x
Enabling a domain name	√	x	x
Disabling a domain name	√	x	x
Modifying the HTTPS acceleration configuration of a domain name	√	x	x
Querying the HTTPS acceleration configuration of a domain name	√	√	x
Modifying the URL validation configuration of a domain name	√	x	x

Operation	VOD FullAccess	VOD ReadOnlyAccess	VOD CommonOperations
Querying the URL validation configuration of a domain name	√	√	x
Modifying the referer validation configuration of a domain name	√	x	x
Querying the referer validation configuration of a domain name	√	√	x
Querying media files	√	√	√
Querying file information	√	√	√
Modifying file attributes	√	x	√
Querying file details	√	√	√
Uploading media files	√	x	√
Updating a video	√	x	√
Deleting media files	√	x	√
Publishing media files	√	x	√
Canceling media file publish	√	x	√
Creating a URL pull task	√	x	√
Querying a URL pull task	√	√	√
Deleting a URL pull task	√	x	√
Canceling a URL pull task	√	x	√

Operation	VOD FullAccess	VOD ReadOnlyAccess	VOD CommonOperations
Resuming a URL pull task	√	x	√
Creating a pre-loading task	√	x	√
Querying a pre-loading task	√	√	√
Creating a media file processing task	√	x	√
Canceling a media file processing task	√	x	√
Creating an audio extraction task	√	x	√
Canceling an audio extraction task	√	x	√
Reviewing media files	√	x	√
Blocking media files	√	x	√
Querying information about blocked media files	√	√	√
Creating a custom template group	√	x	x
Querying custom template groups	√	√	x
Modifying a custom template group	√	x	x
Deleting a custom template group	√	x	x
Creating a watermark template	√	x	x

Operation	VOD FullAccess	VOD ReadOnlyAccess	VOD CommonOperations
Querying watermark templates	√	x	x
Modifying a watermark template	√	x	x
Deleting a watermark template	√	x	x
Creating a media category	√	x	x
Modifying a media category	√	x	x
Deleting a media category	√	x	x
Querying media categories	√	√	x
Configuring event notifications	√	x	x
Querying event notifications	√	√	x
Creating a workflow template	√	x	x
Modifying a workflow template	√	x	x
Deleting a workflow template	√	x	x
Querying workflow templates	√	√	x
Viewing a workflow template	√	√	x
Creating a review template	√	x	x

Operation	VOD FullAccess	VOD ReadOnlyAccess	VOD CommonOperations
Querying review templates	√	x	x
Modifying a review template	√	x	x
Deleting a review template	√	x	x
Querying buckets	√	√	x
Authorizing access to a bucket	√	x	x
Querying incremental hosting tasks	√	√	x
Modifying an incremental hosting task	√	x	x
Creating an incremental hosting task	√	x	x
Deleting an incremental hosting task	√	x	x
Creating an inventory hosting task	√	x	x
Querying inventory hosting tasks	√	√	x
Querying details about an inventory hosting task	√	√	x
Querying users	√	√	x
Updating roles associated with a user	√	x	x
Querying roles	√	√	x
Querying role details	√	√	x

Operation	VOD FullAccess	VOD ReadOnlyAccess	VOD CommonOperations
Creating a role	√	x	x
Modifying a role	√	x	x
Deleting roles	√	x	x
Updating users associated with a role	√	x	x
Updating the permission template associated with a role	√	x	x
Querying the permission template list	√	√	x
Creating a permission template	√	x	x
Modifying a permission template	√	x	x
Deleting a permission template	√	x	x

Helpful Links

- [IAM Service Overview](#)
- [Creating a User and Granting VOD Permissions](#)

Content of the VOD FullAccess Policy

```
{
  "Version": "1.1",
  "Statement": [
    {
      "Effect": "Allow",
      "Action": [
        "vod:*"
      ]
    }
  ]
}
```

Content of the VOD ReadOnlyAccess Policy

```
{
  "Version": "1.1",
  "Statement": [
    {
      "Effect": "Allow",
      "Action": [
        "vod:*get*",
        "vod:*list*"
      ]
    }
  ]
}
```

Content of the VOD CommonOperations Policy

```
{
  "Version": "1.1",
  "Statement": [
    {
      "Effect": "Allow",
      "Action": [
        "vod:asset:*"
      ]
    }
  ]
}
```

11 Region and AZ

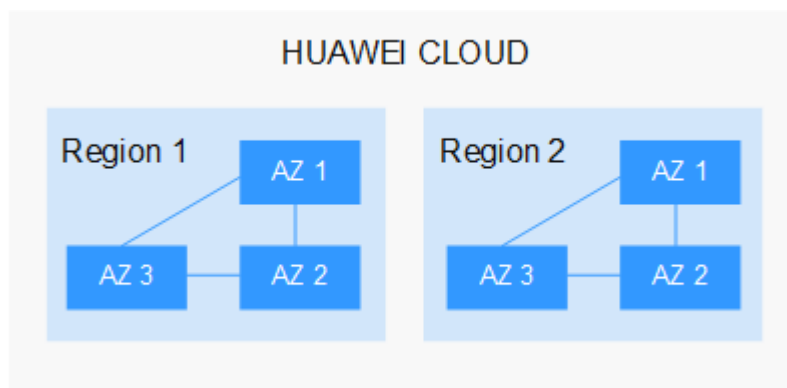
Concepts

A region and availability zone (AZ) identify the location of a data center. You can create resources in a specific region and AZ.

- Regions are divided from the dimensions of geographical location and network latency. Public services, such as Elastic Cloud Server (ECS), Elastic Volume Service (EVS), Object Storage Service (OBS), Virtual Private Cloud (VPC), Elastic IP (EIP), and Image Management Service (IMS), are shared within the same region. Regions are classified as universal regions and dedicated regions. A universal region provides universal cloud services for common tenants. A dedicated region provides services of the same type only or for specific tenants.
- An AZ contains one or multiple physical data centers. Each AZ has independent cooling, fire extinguishing, moisture-proof, and electricity facilities. Within an AZ, computing, network, storage, and other resources are logically divided into multiple clusters. AZs within a region are interconnected using high-speed optical fibers to allow you to build cross-AZ high-availability systems.

Figure 11-1 shows the relationship between regions and AZs.

Figure 11-1 Regions and AZs



Huawei Cloud provides services in many regions around the world. You can select a region and AZ as needed. For more information, see [Huawei Cloud Global Regions](#).

How Do I Select a Region?

When selecting a region, consider the following factors:

- Location
You are advised to select a region close to you or your target users. This reduces the network latency and improves the access speed. Regions within the Chinese mainland provide the same infrastructure, BGP network quality, as well as resource operations and configurations. Therefore, if your target users are in the Chinese mainland, you do not need to consider the network latency differences when selecting a region.
- Resource price
Resource prices may vary in different regions. For details, see [Product Pricing Details](#).

How Do I Select an AZ?

When determining whether to deploy resources in the same AZ, consider your application's requirements on disaster recovery (DR) and network latency.

- For high DR capability, deploy resources in different AZs in the same region.
- For low network latency, deploy resources in the same AZ.

Regions and Endpoints

Before using an API to call resources, specify its region and endpoint. For more details, see [Regions and Endpoints](#).