Edge Computing Machine

Product Introduction

Product Documentation

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Product Introduction

Overview

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ECM Overview

Tencent Cloud Edge Computing Machine (ECM) uses network edge nodes near users and terminals to provide nearby computing, network, and storage services. Unlike traditional IDCs deployed at the center of the network, ECM resources are deployed in IDCs closer to users and thus have unique strengths such as low network latency as well as high bandwidth, security, and stability.

Feature Overview

ECM has the following features:

Feature	Description
ECM module	It is the basic module for edge service management and composed of ECM instances. All instances in it use the same computing, network, and image configuration and provide the same service. By managing an ECM module, you can simplify scaling operations, which makes it easier for you to adjust the regional deployment of your business subsequently.
ECM instance	It is a computing instance. You can select an appropriate instance type in different computing scenarios and flexibly select configurations such as CPU, memory, and network based on your computing needs.
Network service	Public IP services from multiple ISPs such as China Telecom, China Unicom, and China Mobile are provided to implement regional low-latency and high-bandwidth network coverage for your business.
Custom image	You can use a custom image to create ECM instances through cloud-edge collaboration.
Tencent Cloud Observability Platform	It provides a wide variety of performance monitoring capabilities to help you manage key performance metrics and set alarm policies to automatically send alarm notifications and implement other automated operations.
Security group	It enables you to control and manage network traffic by protocol and port. You can

| | comprehensively improve the network security by reasonably configuring security groups. |

Strengths

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Wide Coverage and Nearby Service

ECM IDCs are widely distributed across regions in China and cover the networks of main ISPs such as China Mobile, China Unicom, and China Telecom. You can select a specific edge node based on your region, province, and city, create ECM modules and instances, and deploy the required services. With ECM, you can deliver a faster network experience for local users and provide more cost-effective computing and network resources for your business.

Secure and Reliable Cloud-Edge Collaboration

ECM is developed based on various mature and leading technical capabilities of Tencent Cloud. On one hand, it can provide on-demand basic and professional protection services for network and server security. On the other hand, it can collaborate with main Tencent Cloud services to make it easier for businesses to use relevant configurations and capabilities, giving full play to the collaboration strengths of cloud-edge computing. In addition, by combining the shared capabilities of Tencent Cloud, it allows you to manage and manipulate ECM modules and instances through the console and TencentCloud API as well as implement efficient OPS based on various monitoring metrics of CM.

Higher Elasticity, Flexibility, and Cost-Effectiveness

ECM is pay-as-you-go. You can flexibly adjust the module and instance scales based on the fluctuations in business requests and create and return modules and instances in several minutes. This avoids the resource waste caused by one-time large upfront investment and business fluctuation and greatly reduces the costs.
Compared with the BGP network, the non-BGP static network service provided by ECM has lower bandwidth costs and can bring more cost-effective resources to your business.

Use Cases

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Real-Time Communication

Scenario description

Real-Time communication businesses, such as interactive live streaming, require you to achieve a low network latency to ensure a smooth user experience. A long physical distance between your server and the IDC significantly increases the network latency and affects the user experience.

Solution

Basic ECM resources are built across regions and can provide cloud computing and network services near users and terminals. Through nearby application and service deployment, the network latency between users and business servers can be greatly reduced. For example, as two-way data transfer in interactive live streaming between anchors and viewers is sensitive to latency, if you deploy the relevant business in ECM, the network latency can be remarkably lowered to deliver a smoother user experience for both anchors and viewers.
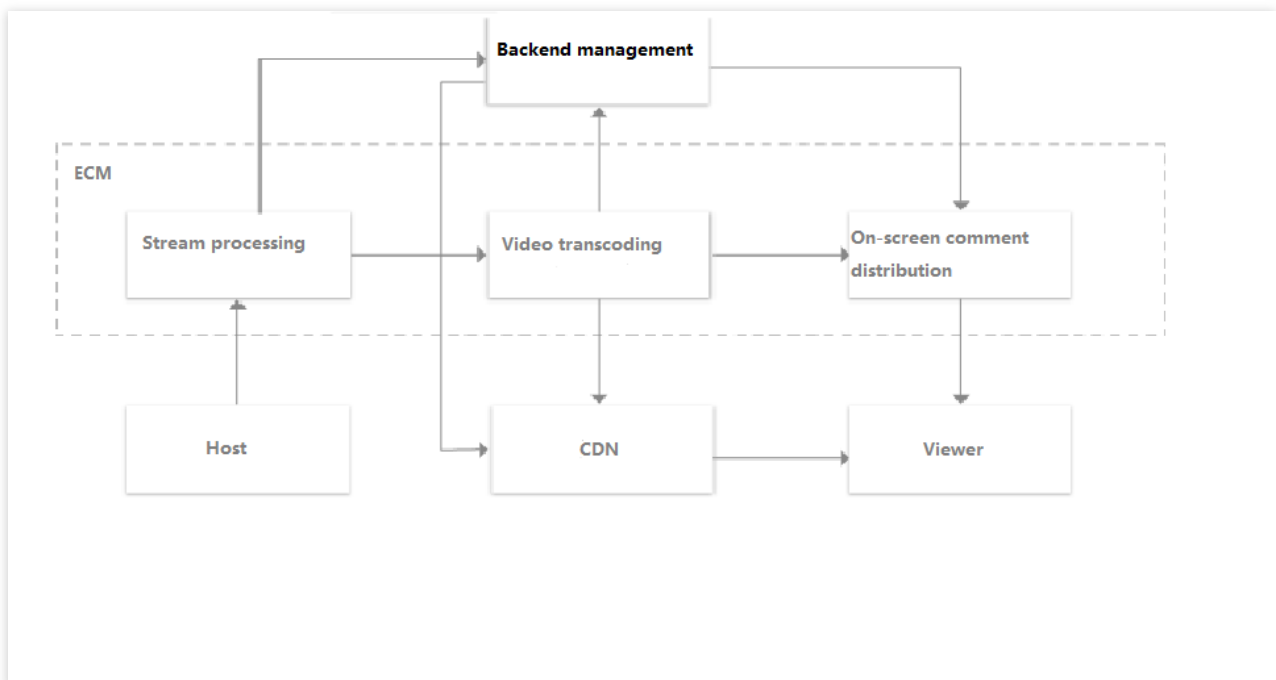
Cloud Game

Scenario description

A cloud game is a game running on cloud-based servers. It needs to push the rendered game images to devices and send the operation instructions from devices to cloud servers for processing. To implement such real-time interaction requirements, a low network latency must be guaranteed, and services should be provided as close to users as possible.

Solution

By deploying the cloud game service in ECM, you can make your business provide services near users, which shortens the network transfer distance, significantly reduces the network latency, and eventually implements faster two-way data transfer for smoother cloud gaming.
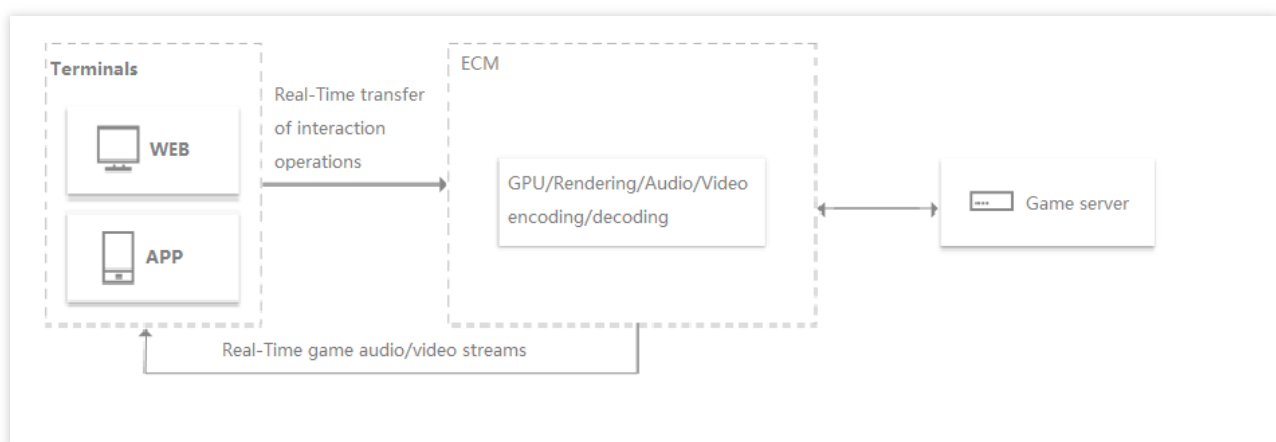
Instance Types

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ECM provides various instance types with different computing, memory, and storage capabilities. For now, ECM supports Standard S5, Standard S4 and Standard SN3ne.

Specification Items

PPS

The maximum number of data packets that the instance can process per second for both sending and receiving, without differentiating private or public network traffic.

Queues

The maximum number of queues for packet sending and receiving respectively supported by each ENI. For example, if the number is 2, it means two packet sending queues and two package receiving queues.

Private network bandwidth

It is the maximum data volume in bits that can be transferred by the instance per second over the private network.

Instance Types

Standard S5

Standard S5 is the latest generation of standard instances.

It supports up to 25 Gbps of private network bandwidth to meet your high demand of private network transfer.

Item	vCPU	Memory (GB)	PPS (In + Out)	Connections		Private network bandwidth (In + Out in Gbps)	Clock rate (GHz)
S5.LARGE8	4	8	500K	250K	2	4	2.5
S5.LARGE16	4	16	500K	250K	2	4	2.5
S5.2XLARGE16	8	16	800K	250K	4	4	2.5
S5.2XLARGE32	8	32	800K	250K	4	4	2.5

S5.4XLARGE32	16	32	1.5M	300K	8	8	2.5
S5.4XLARGE64	16	64	1.5M	300K	8	8	2.5
S5.6XLARGE48	24	38	2M	400K	12	10	2.5
S5.8XLARGE64	32	64	2.5M	600K	16	15	2.5
S5.8XLARGE128	32	128	2.5M	600K	16	15	2.5
S5.16XLARGE128	64	128	5M	1.2M	16	25	2.5

Standard S4

Standard S4 instances use Xeon®Skylake and DDR4 memory. It provides up to 2.4M pps over the private network.

Item	vCPU	Memory (GB)	PPS (In + Out)	Private network bandwidth (In + Out in Gbps)	Queues	Clock rate (GHz)
S4.LARGE8	4	8	300K	1.5	2	2.5
S4.LARGE16	4	16	300K	1.5	2	2.5
S4.LARGE32	4	32	300K	1.5	2	2.5
S4.2XLARGE16	8	16	600K	1.5	4	2.5
S4.2XLARGE32	8	32	600K	1.5	4	2.5
S4.2XLARGE64	8	64	600K	1.5	4	2.5
S4.4XLARGE32	16	32	1.21M	3	8	2.5
S4.4XLARGE64	16	64	1.21M	3	8	2.5
S4.6XLARGE48	24	48	1.8M	4	12	2.5
S4.6XLARGE64	24	64	1.8M	4	12	2.5
S4.8XLARGE64	32	64	2.4M	5	16	2.5

Standard SN3ne

Item	vCPU	Memory (GB)	PPS (In + Out)	Private network bandwidth (In + Out in Gbps)	Queues	Clock rate (GHz)

SN3ne.LARGE8	4	8	300K	1.5	2	2.5
SN3ne.LARGE16	4	16	300K	1.5	2	2.5
SN3ne.LARGE32	4	32	300K	1.5	2	2.5
SN3ne.2XLARGE16	8	16	600K	1.5	4	2.5
SN3ne.2XLARGE32	8	32	600K	1.5	4	2.5
SN3ne.2XLARGE64	8	64	600K	1.5	4	2.5
SN3ne.4XLARGE32	16	32	1.21M	3	8	2.5
SN3ne.4XLARGE64	16	64	1.21M	3	8	2.5
SN3ne.6XLARGE48	24	48	1.8M	4	12	2.5
SN3ne.6XLARGE64	24	64	1.8M	4	12	2.5
SN3ne.8XLARGE64	32	64	2.4M	5	16	2.5