Tencent Cloud

Peering Connection

Product Introduction

Product Documentation

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Overview

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Introduction

A peering connection is a high-bandwidth and high-quality cloud resources interconnection service that enables communication between resources on Tencent Cloud. Peering connections can be used across multiple regions, multiple accounts, and multiple types of heterogeneous networks, which can easily implement complex cloud scenarios, such as 2-region-3-DC and one server shared by game players. Peering connections enable interconnection between VPCs and between VPCs and BM networks, allowing you to deploy different businesses.

Note：

Cross-region connectivity includes: cross-region connectivity between VPCs (cross-region peering connection) and cross-region Classiclink. To enable cross-region Classiclink, please submit a ticket.

SLA assurance is provided for peering connection services. If the services do not meet the SLA criteria, you can apply for compensation according to the SLA for peering connections.

When creating a cross-region peering connection, you must comply with the cross-region interconnection service agreement. If you violate the agreement, Tencent Cloud may restrict, suspend, or terminate your services under the agreement at any time as appropriate and retain the right to take legal action against you.

A VPC peering connection is a cross-VPC network interconnection service used for synchronizing office data. It enables interconnection between two VPCs as if they were on the same network. After routing policies are configured at both ends, interconnection is enabled between VPCs of the same user or different users in the same region or across regions. A peering connection does not depend on any separate hardware. Therefore, no single points of failure and bandwidth bottlenecks will occur in a peering connection.

Product advantages

Peering connections have the following advantages over transmission on Internet.

Higher quality

Using the same in-house internal network as Tencent Group's businesses, the peering connections are not affected by the quality of Internet. Therefore, the peering connections provide significantly better availability, latency, and packet loss rate.

Higher security

The peering connections are protected by Tencent Anti-DDoS Pro system, which is of high security.

The peering connections do not pass through wide area networks or ISP linkage. Therefore, they do not face the risk that packets are intercepted during transmission on Internet.

Lower cost

The peering connection services are classified into platinum, gold, and silver levels. You can deploy the services differently based on your business requirements, which can reduce your costs.

Platinum: suitable for businesses that are the most sensitive to the communication quality, such as payment and game acceleration.

Gold: suitable for businesses that require transmission of key business data, such as transmission of enterprise business data and ERP.

Silver: suitable for businesses that are cost-sensitive and jitter-insensitive and have high requirements for security, such as remote data backup.

Note：

The application scenarios of platinum, gold, and silver services are as follows:

Gold: applicable to all regions.

Platinum and silver: billed by monthly 95th percentile and applicable to some lines (Beijing, Shanghai, Guangzhou, Korea, and Hong Kong (China)). The services are currently in internal beta phase. If you need such services, please submit a ticket.

Features

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Non-transitive connectivity of peering connections

A peering connection enables connectivity between two VPCs, but the connectivity cannot be transited.
For example, as shown in the following figure, peering connections are created between VPC 1 and VPC 2, and between VPC 1 and VPC 3. However, due to the non-transitivity of peering connections, traffic cannot flow between VPC 2 and VPC 3.
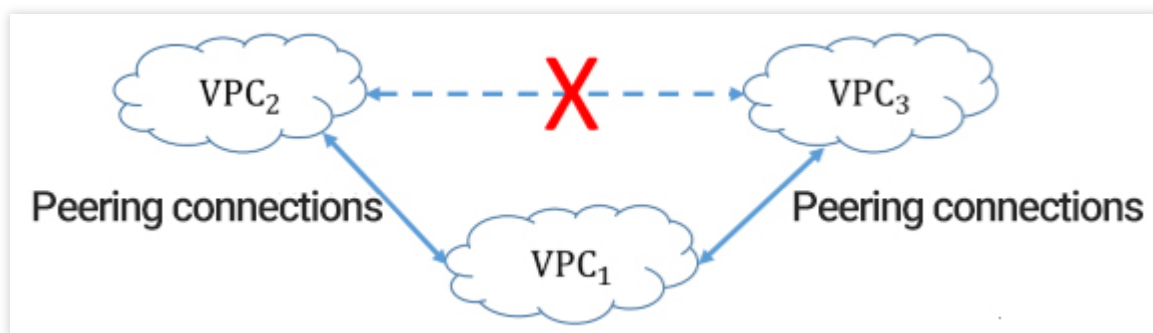
Note：
Even if a peering connection is created, both ends of the connection cannot communicate with each other if routes for sending and returning packets are not configured at both ends.

Intra-region and cross-region peering connections

VPCs support both intra-region and cross-region peering connections. Due to differences in physical distance and underlying implementation architecture, there are some differences between the two types of connections, as shown in the following table:

Comparison item	Intra-region peering connection	Cross-region peering connection
Underlying architecture	Local private network within a single region based on Tencent Cloud	Cross-region internal MPLS network based on Tencent Cloud
Bandwidth	Maximum bandwidth for interconnection with public cloud: 5 Gbps Maximum bandwidth for interconnection with BM	Maximum bandwidth: 1 Gbps, with the following options available for the bandwidth cap (MB/sec): 10, 20, 50, 100, 200, 500, and 1000 For peering connections between Beijing, Shanghai, Guangzhou, Korea, and Hong Kong (China), you can apply for

	network: 1 Gbps	[higher bandwidth](#). If you require data connectivity between Mainland China and other regions, consult your business manager.
Billing	Free of charge	Daily billing based on the regions where the two ends of the peering connection are located and the actual network bandwidth used. For more information, see [Price overview](#).
Availability	Intra-region service quality level: gold; guaranteed availability: ≥ 99.50%	Linkage availability: Platinum: 99.95% Gold: 99.50% Silver: 99.00% For more information, see [SLA](#).
Cross-account connection	Supported	Supported
Access permission	The CVMs at either end of a peering connection can access all the resources at the peer end, including CVMs, databases, and CLBs.	The CVMs at either end of a peering connection can access all the resources at the peer end, including CVMs, databases, and CLBs.
Function limits	The VPC IP ranges to which the two ends of a peering connection belong cannot overlap. Peering connections are independent of each other.	The VPC IP ranges to which the two ends of a peering connection belong cannot overlap. **If multiple peer VPCs are connected to the same VPC, the IP ranges to which these peer VPCs belong cannot overlap.**
Application scenario	Connect applications in different VPCs within the same region	Typical application scenario: **cross-region disaster recovery** VPCs in different regions can communicate with each other over cross-region peering connections, which helps rapidly deploy a 2-region-3-DC solution for disaster recovery and meet the requirement for financial-level network disaster recovery with high bandwidth and reliability.

Use Limits

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Connection limitations

Note the following when you use a peering connection:

To enable real communication between both ends of a peering connection, you must configure routing rules in the route tables of both the sending and receiving ends.

The fee for a cross-region peering connection is paid by the requester of the connection.

If the acceptor does not accept a peering connection request, the request will automatically expire after 7 days.

Do not accept peering connection requests from unknown accounts because they may pose risks to your network.

The VPC CIDR blocks on both ends of a peering connection cannot overlap. Otherwise, an error will occur when the connection is connected.

For a cross-region peering connection, the CIDR blocks of multiple peer networks of one VPC cannot overlap. Otherwise, an error will occur.

Either end of a peering connection can interrupt the connection. Then, traffic between the two VPCs is disconnected immediately.

There is no bandwidth cap for an intra-region peering connection, and a bandwidth cap must be set for a cross-region peering connection.

Resource limitations

Resource	Limitation	Description
Bandwidth cap for a cross-region peering connection	1 Gbps	The bandwidth cap for an intra-region peering connection is 5 Gbps. If you need higher bandwidth, please submit a ticket.
Max number of peering connections supported by each VPC	10	-

For more information, see other service limitations on a VPC.

Relevant Products

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For information on related products, see the following table.

Product name	Relationship with peering connections
CVM	The CVMs at either end of a peering connection can access all the resources at the peer end, including CVMs, databases, and CLBs.
CLB	CVMs at either end of a peering connection can access all resources of at the peer end, including CVMs, databases, and CLBs.
VPC	A peering connection enables communication between two VPCs.
Route table	A peer connection enables communication only after route tables are correctly configured at both ends.
Classiclink	A peering connection enables communication between two VPCs, while Classiclink enables communication between a basic network and a VPC.
Cloud Monitoring	You can log in to the Cloud Monitoring console to set alarm policies.