Direct Connect

FAQ

Product Documentation

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What is Direct Connect?

Direct Connect provides a fast and secure connection from on-premises IDCs to Tencent Cloud. You can access Tencent Cloud computing resources in multiple regions and use the connection to implement flexible and reliable hybrid cloud deployments.

What does Direct Connect consist of?

Direct Connect consists of connection, dedicated tunnel, and direct connect gateway. For more information, see Product Overview.

How long does it take to apply for Tencent Cloud Direct Connect?

To apply for Tencent Cloud Direct Connect, complete the following tasks:

Establish a connection:

Leased line is really **time-consuming**. The construction period depends on the connection provider's capability and access conditions on both sides of Direct Connect. The normal **reference period** is as follows:

In the Chinese mainland: it takes 20 days to establish an intra-region connection and 30 days to establish an inter-region connection.

Outside the Chinese mainland: the period varies widely by region. For example, a connection in Hong Kong (China) takes 1 month while that in Europe and North America regions takes 1.5-2 months.

Apply for a connection by yourself: log in to the Direct Connect console and submit an application as instructed in Applying for Connection. You need to confirm with your connection provider for some parameter settings such as port type and bandwidth.

After your application is submitted, a Tencent Cloud Direct Connect delivery engineer will check with you the details of your needs and initiate the construction in three business days. Generally, resources including ports and components can be prepared in one week after construction is initiated. Then the connection provider can start the optic fiber access.

Apply for a connection through a partner: as Tencent Cloud's Direct Connect partners have been interconnected with Tencent Cloud over NNI, purchasing a connection from these partners can eliminate the need for connection construction in Tencent Cloud. This way allows you to easily create a dedicated tunnel to share the partner's connection. Therefore, we recommend you purchase the connection from a Tencent Cloud partner listed in Tencent Cloud Market.

Apply for a dedicated tunnel: submit an application in the Tencent Cloud console as instructed in Applying for a Tunnel. After your application is submitted, the tunnel will be created in 10 minutes (if you share a partner's connection, the tunnel will be created only after your application is approved by the partner).

Apply for a direct connect gateway and configure the route table: they are both created automatically and immediately after you submit the application.

Can Direct Connect be used across accounts?

Yes. The shared connection feature allows you to use a connection across accounts, but a new tunnel (including dedicated tunnels and Internet tunnels) no longer supports this feature since August 1, 2020 at 00:00:00.

If you want to use Direct Connect service, you can connect to Tencent Cloud by applying for a dedicated tunnel. For more information on access methods, contact your Tencent Cloud sales rep.

If you have used the shared connection and deleted one, the quota of the shared tunnel will be deducted. For example, assume that you applied for 3 shared tunnels to bind to a connection, you can bind up to 2 tunnels after you deleted the shared tunnel 1.

Can I modify the parameters of a submitted connection application?

Before the connection application you submitted is reviewed, you can modify the following parameters: carrier, access point, port type, and connection type. If you no longer need this application, you can request the engineer to reject it, and you can submit a new one.

Which carriers can access the Tencent Cloud Direct Connect access point?

Most Tencent Cloud Direct Connect access points are deployed in neutral IDCs and support access from any connection provider.

To view the supported Direct Connect access points, log in to the Direct Connect console, click **+New** to create a connection, and select a connection provider.

How can I locate a connection provider?

You can search the Tencent Cloud Market for a right provider or submit a ticket to obtain the recommended provider.

Can a connection access Tencent Cloud resources in multiple regions?

Yes. You can use a connection to access cross-region cloud resources in the following two ways:

Devices at Tencent Cloud Direct Connect access points support 802.1Q VLAN encapsulation. After the Trunk mode is enabled, a connection can support multiple VLANs, and you can use different VLANs to create different dedicated tunnels so as to access cloud VPC resources in multiple regions.

Add these VPCs to a CCN.

Why does the connection stuck in the Applying status?

After you submit an application for a connection, a Tencent Cloud Direct Connect delivery engineer will check with you the details and initiate the corresponding review and construction processes. If your project is urgent, you can contact

your delivery engineer or submit a ticket to get the latest progress.

When will the connection take effect after it is approved?

It will take effect in one month. However, if the payment is not made within one month, the connection environment may change, and the resources will be repossessed. If you still need a connection, reapply for approval.

What is the bandwidth of the connection used for?

The bandwidth of a connection is for record only and irrelevant to speed limit. If your connection speed changes, you can contact your Tencent Cloud Direct Connect delivery engineer or submit a ticket to modify the bandwidth value in the console.

What is the carrier circuit ID of a connection?

It is the unique circuit identifier provided by the connection provider. Ensure its correctness, as it is required for your future troubleshooting of this line with the connection provider.

Can I change the address of a connection?

If you want to change the address of your local IDC, contact your connection provider.
If you want to access another Tencent Cloud access point, please consult your Tencent Cloud Direct Connect delivery engineer.

Can I deploy my CPE in a Tencent Cloud data center?

No, it's not.

Why does the dedicated tunnel stuck in the Configuring or Modifying status?

It takes several minutes to create or modify a dedicated tunnel. If the configuration is not completed in ten minutes, our engineer will fix it. You can also contact your Direct Connect delivery engineer to stay informed.

Notice on the shared connection deactivation

Yes. The shared connection feature allows you to use a connection across accounts, but a new tunnel (including dedicated tunnels and internet tunnels) no longer supports this feature since August 1, 2020 at 00:00:00.

If you want to use Direct Connect service, you can connect to Tencent Cloud by applying for a dedicated tunnel. For more information on access methods, contact your Tencent Cloud sales rep.

If you have used the shared connection and deleted one, the quota of the shared tunnel will be deducted. For example, assume that you applied for 3 shared tunnels to bind to a connection, you can bind up to 2 tunnels after you deleted the shared tunnel 1.

Is Direct Connect supported outside the Chinese mainland?

Yes. Direct Connect is available in all Tencent Cloud regions. The corresponding LOA will be issued by Tencent Cloud. In regions outside the Chinese mainland, Tencent Cloud provides one-stop connection delivery services. For more information, consult your Direct Connect delivery engineer.

What are the use limits of Direct Connect?

There are limits on resources and access of Direct Connect. For more information, please see Service Limits.

Is there any data transmission limit for Direct Connect?

No. You can transfer data in any size, and the highest speed is the selected connection bandwidth.

For more information, please see Service Limits.

How do I configure alarm policies for Direct Connect?

For more information, please see Configuring Alarm Policies.

What are differences between Direct Connect and IPSec VPN connections?

A VPN connection establishes an encrypted network connection between your IDC and VPCs based on the public network and IPsec protocol. You can purchase a VPN gateway and make it effective in just a few minutes. However, a VPN connection may be interrupted due to public network jitters or congestion. If your business does not require a high-quality network connection, the VPN connection is a cost-effective choice for rapid deployment.

Direct Connect provides a dedicated network connection solution that features high quality and reliability, although its construction takes a longer time. If your business requires high network quality and security, you can choose Direct Connect for deployment.

For more information, see Product Overview.

Can I continue using the shared connection?

Yes. But if you delete the shared connection, you cannot reapply after August 1, 2020 at 00:00:00.

Why should I choose legitimate private line service?

As required by the national laws, regulations and MITT Telecom Service Catalog (2015 Version), enterprises that provide private line services in China must have both permits of [A26 domestic communication facilities services] and [A14 Internet data transmission business] issued by MIIT, or obtained relevant approval document. These enterprises should offer data transmission services within the business scope, and in the applicable geographic regions as stipulated in the approval document.

Why is a legitimate line access is necessary for Tencent Cloud?

According to the relevant national laws and regulations as well as the Notice on Regulating the Internet Network Access Marketplace (MIIT [2017] No. 32), you should choose an eligible connection provider to complete the construction of private lines.

What are the consequences of using illegal private line service?

Using an illegal line may expose you to administrative penalty by the State regulatory authority and cause the line unavailability. In this case, Tencent Cloud accepts no responsibility.

Billing Issues

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How is Direct Connect billed?

Direct Connect fees include **Tencent Cloud billable items** and **non-Tencent Cloud billable items**, which can be divided into the following three parts.

For more information on billing, please see Billing and Pricing.

Non-Tencent Cloud billable items:

Leased-line fee: you should purchase a leased-line from a leased-line service provider. If you have any questions, please submit a ticket for assistance.

Fiber-to-the-building fee: most Tencent Cloud Direct Connect access points are deployed in data centers of neutral IDC ISPs. You should negotiate such fee with your IDC ISP.

Note:

Generally, partners of Tencent Cloud Direct Connect have been connected to Tencent Cloud through network-to-network interface (NNI). If you decide to purchase a connection from a Tencent Cloud partner, no relevant construction will be required in Tencent Cloud, and you can deploy a hybrid cloud more quickly. For more information on Tencent Cloud Direct Connect partners, please go to the Cloud Market.

Tencent Cloud billable items:

Connection:

Resource occupation fee for the dedicated access port is billed at monthly pay-as-you-go. The billing started in July 2019. The fee incurred in the current month will be deducted from your account in the following month.

Dedicated tunnel:

If the Direct Connect access point and Direct Connect gateway are deployed in the same region, dedicated tunnels will be free of charge before May 1, 2020. After then, a free tier of 10 Gbps will be provided, and if you require higher bandwidth, please contact your Tencent Cloud rep.

Note:

 If you use CCN to migrate your business to cloud services, as the dedicated tunnel and Direct Connect access point are deployed in the same region, cross-region access fee will be charged in CCN bills.

If the Direct Connect access point and Direct Connect gateway are deployed in different regions, cross-region communication fee will be charged for dedicated tunnels.

Do I need to pay immediately after submitting an application for a connection?

No. You can pay after a Direct Connect delivery engineer confirms your purchase with you.

Function Issues

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Does Direct Connect support 802.1Q VLAN encapsulation?

Yes.

How do I use the connection of a connection provider?

Note:

In the answer, an exclusive dedicated tunnel is taken as an example. The method also applies to a shared dedicated tunnel.

The connection provider should first build a network-to-network interface (NNI) connection with the Direct Connect access point. To do this, the connection provider needs to apply for a connection in the Tencent Cloud Direct Connect console. Tencent Cloud delivery engineers will assist in the line access and NNI connection. The connection provider will obtain a connection ID in the `dc-*******` format under its Tencent Cloud account.

Then, you can use the connection in the following method:

Shared connection:

1. Obtain information such as the Tencent Cloud account ID of the connection provider, the connection ID (`dc-*******`), a unique VLAN ID, and an interconnection IP address from the connection provider.

2. Go to the Exclusive virtual interface page of the Direct Connect console and click **+ New** to create a dedicated tunnel. On the **Basic configuration** tab, select **Shared connections** for **Connections**, and enter the account ID of the connection provider and the ID of the connection. On the **Advanced configuration** tab, enter the VLAN ID, complete the other configurations, and click **Submit**.

3. Request the connection provider to go to the Exclusive virtual interface page of the Direct Connect console and click **Accept** on the right of the dedicated tunnel that you apply for.

4. Wait until the tunnel is created, which takes several minutes.

How do I choose a connection port type?

You need to confirm with your connection provider. The fiber optic port component supports long- and short-distance transmission. Make sure that you have selected the correct port type before submitting the connection application in the Tencent Cloud console.

Note:

When you use a 100 Gbps port for the connection, enable or disable the Forward Error Correction (FEC) mode based on the specifications of your device:

If you use a 100 Gbps optical module that supports a transmission distance of 40 km (QSFP-100G-ER4L-WDM1300, 40 KM), the FEC mode is enabled for the device port on Tencent Cloud by default. In this case, you must enable the FEC mode on your device.

If you use a 100 Gbps optical module that supports a transmission distance of 10 km (QSFP-100G-LR4-WDM1300, 10 KM), the FEC mode is disabled for the device port on Tencent Cloud by default because the module that you use does not support the FEC mode. In this case, we recommend you disable the FEC mode on your device.

How do I obtain technical support from Tencent Cloud Direct Connect engineers?

Log in to the Tencent Cloud Direct Connect console and click **+ New**. Then, enter the required information and submit the application. A Tencent Cloud Direct Connect delivery engineer will contact you within three business days and help you with the Direct Connect service.

How do I obtain the addresses of Direct Connect access points?

Log in to the Tencent Cloud Direct Connect console and click **+ New**. Then, enter the required information and submit the application. A Tencent Cloud Direct Connect delivery engineer will contact you within three business days and help you with the Direct Connect service.

Does Direct Connect support the active-active or active-standby mode for connections?

Yes. The supported modes vary based on the following conditions:

Traditional dedicated tunnels:

Border Gateway Protocol (BGP) routing:

Active-active mode: Regardless of whether the connections are connected to the same Direct Connect access point, traffic sent from the cloud to the local IDC will be balanced in active-active mode, as long as the local IDC distributes the equal-cost multi-path (ECMP) routes to the same direct connect gateway.

Active-standby mode: Regardless of whether the connections are connected to the same Direct Connect access point, users need to configure AS paths of different lengths for the standby connections on their customer-premises equipment (CPE) so that traffic can be balanced in active-standby mode.

Static routing:

Active-active mode: Regardless of whether the connections are connected to the same Direct Connect access point, traffic sent from the cloud to the local IDC will be balanced in active-active mode as long as the ECMP route is configured on the dedicated tunnel of connections.

Active-standby mode: Only connections to different Direct Connect access points can be configured in active-standby mode. This mode is not available to connections to the same Direct Connect access point.

Cloud Connect Network (CCN) dedicated tunnel (the active-standby and active-active features will be launched soon): The active-standby and active-active relationships are defined by route priorities in CCN. You only need to set route priorities in CCN and configure health check to trigger route switching.

Where is the interconnection IP address configured?

The interconnection IP address is configured on both sides of the connection: the device of the Direct Connect access point and the CPE of users.

How do I use one VLAN connection to access multiple Tencent Cloud VPCs?

Add these VPCs to a CCN instance.

How does Tencent Cloud isolate tenants to ensure data security?

Tencent Cloud applies MPLS_VPN to the private network, with the Direct Connect access point serving as the provider edge (PE) of MPLS. The virtual routing and forwarding (VRF) technology is used in the VPC to isolate connections to cloud services and protect user data.

How is switchover between redundant connections triggered?

For static routing, configure bidirectional forwarding detection (BFD) to achieve route convergence.
For BGP routing, switchover is triggered by the BGP convergence mechanism or a BFD configuration. Contact your Direct Connect delivery engineer to configure BFD for you.
IP SLA cannot be configured. This is because the device at the access point manages a large number of connections. IP SLA will downgrade the performance of the device, which may negatively affect all users of the access point.

Does Tencent Cloud support the link aggregation control protocol (LACP)?

No, this protocol is not supported.

Why does the connection performance test result fall short of expectations?

Double check the connection bandwidth you purchased.
Ping the interconnection IP address to check for packet loss and troubleshoot with Tencent Cloud after-sales team in case of serious packet loss. For a self-built connection, you also need to report the problem to the ISP.
Check whether your local router uses the full-duplex mode.
Use iperf or other tools to start multiple processes from both clients and CVMs for the traffic stress test. Troubleshoot application problems based on the test results.
If needed, contact Tencent Cloud after-sales team for assistance.

What should I do if the connection to Tencent Cloud is interrupted?

Confirm whether the connection is interrupted:
Unable to ping the interconnection IP address or receive the MAC address of the CVM instance. Tencent Cloud after-sales team receives an alarm indicating the connection exception.
The connection is interrupted:
For a Tencent Cloud connection, report the failure to Tencent Cloud after-sales team as soon as possible. Generally, the after-sales team will report the connection failure to the ISP immediately after receiving the alarm.
For a self-built connection, report the failure to the ISP. Contact the Tencent Cloud after-sales team for assistance if needed.

What can I do if a specific IP range of the connection fails to be pinged?

Check whether the IP range is new, and configure routes for the new IP range in the VPC.

Confirm that the cloud route table is configured with different IP ranges pointing to the direct connect gateway, and that the client server has a route pointing to the connection.

Check the security features. For example, check whether the CVM instance has associated with security groups or network ACLs, and the client server has configured iptables.

If no problem is found, provide the after-sales team with troubleshooting information for subsequent operations.

What information do I need to provide the customer service for troubleshooting?

To request troubleshooting, provide the following information:

A description of the problem and whether the problem can be reproduced.

The source IP address and the destination IP address.

The location of the connection.

The ID of the direct connect gateway.

Screenshots of ping and traceroute commands.

The iptables and NAT information.

The access topology.