

Alibaba Cloud Express Connect

FAQ

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Generic conventions

Table -1: Style conventions

Style	Description	Example
	This warning information indicates a situation that will cause major system changes, faults, physical injuries, and other adverse results.	 Danger: Resetting will result in the loss of user configuration data.
	This warning information indicates a situation that may cause major system changes, faults, physical injuries, and other adverse results.	 Warning: Restarting will cause business interruption. About 10 minutes are required to restore business.
	This indicates warning information, supplementary instructions, and other content that the user must understand.	 Note: Take the necessary precautions to save exported data containing sensitive information.
	This indicates supplemental instructions, best practices, tips, and other content that is good to know for the user.	 Note: You can use Ctrl + A to select all files.
>	Multi-level menu cascade.	Settings > Network > Set network type
Bold	It is used for buttons, menus, page names, and other UI elements.	Click OK .
Courier font	It is used for commands.	Run the <code>cd /d C:/windows</code> command to enter the Windows system folder.
<i>Italics</i>	It is used for parameters and variables.	<code>bae log list --instanceid Instance_ID</code>
[] or [a b]	It indicates that it is a optional value, and only one item can be selected.	<code>ipconfig [-all -t]</code>
{ } or {a b}	It indicates that it is a required value, and only one item can be selected.	<code>swich {stand / slave}</code>

Contents

Legal disclaimer.....	I
Generic conventions.....	I
1 VPC interconnection FAQs.....	1
2 Physical connection FAQs.....	2

1 VPC interconnection FAQs

1. Does the data transferred by Express Connect go through the Internet?

No. Data on Express Connect is transmitted only inside Alibaba Cloud data centers or over lease lines among the data centers and does not pass through the Internet. This avoids data leakage during transmission and provides better network quality than the Internet.

2. Does Express Connect support multi-tenant VPC intranet connection?

Yes. Express Connect supports establishing an intranet connection between VPCs under the same account or different accounts. For more information, see [Establish an intranet connection between VPCs under the same account](#).

3. Does Express Connect support cross-region VPC intranet connection?

Yes. Express Connect supports establishing an intranet connection between VPCs in the same region or different regions. You can create a router interface on the VRouter of each VPC respectively and build Express Connect through Alibaba Cloud's backbone transmission network to achieve secure, reliable, fast, and convenient communication between the VPCs.

4. If I use Express Connect for VPC intranet connection, what resources can the two sides access?

ECS instances on both sides can access the ECS instances, Server Load Balancer instances, and RDS instances of the other side.

- Server Load Balancer instances on one side cannot use ECS instances of the other side as backend servers.
- ECS instances of one side cannot access cloud product instances other than the ECS instances, Server Load Balancer instances, and RDS instances of the other side. More instances will be supported in the future.

5. Can I adjust the specification of a router interface in case of service spike?

Alibaba Cloud now supports upgrading or downgrading the specification of a router interface. You can change the specification of the initiator router interface at any time as needed and the change takes effect immediately.

6. Will Alibaba Cloud limit the transmission capacity of an Express Connect router interface?

Alibaba Cloud will limit the data transmission capacity according to the specification of the router interface purchased by you.

2 Physical connection FAQs

1. What is Physical Connection?

Physical Connection is the abstraction of the network line between an Alibaba Cloud access point and a local data center. You must use a leased line provided by a carrier to connect the local data center to the Alibaba Cloud access point to establish the physical connection.

After establishing the physical connection, you can create a VBR to connect your local data center to Alibaba Cloud to build a hybrid cloud environment, so that resources on Alibaba Cloud can access the local data center without passing through the Internet.

The intranet communication the physical connection does not pass through the public network. Therefore, compared with conventional public network connection, physical connection features higher security, reliability, and speed, as well as lower latency.

2. Does a physical connection enable a local data center connected to Alibaba Cloud to access different regions?

Yes. The local data center can access VPCs in all regions of Alibaba Cloud after the physical connection is established.

3. What types of physical connection does Alibaba Cloud support?

Alibaba Cloud devices support Ethernet optical interfaces and electrical interfaces. For optical interfaces, 10-km 10-GE single-mode LC optical modules are provided by default. Modules of other specifications are provided within two to four weeks. Interfaces of SDH 155M CPOS, V.35, and G.703 are not supported. For other modules, you have prepared by yourself and Alibaba Cloud will keep it for you.

4. What is the maximum bandwidth of a physical connection?

Alibaba Cloud supports physical connection bandwidth of up to 10 Gbps.

5. Does physical connection support dynamic routing?

Physical connection supports using the BGP dynamic routing protocol to forward data between the local data center and the VPC.

6. Is disaster tolerance of multiple physical connections supported?

ECMP achieved by up to four physical connections are supported.

7. Does Alibaba Cloud provide server hosting service?

Alibaba data centers do not support server hosting. You can use server hosting service provided by a partner of Alibaba.

8. Can I use a physical connection to connect multiple VPCs?

Yes. The new VPC reuses the existing VBR. You only need to create a new router interface for connecting the new VPC to the VBR.

9. How many VPCs can a physical connection connect at most?

Each VRouter instance supports six router interfaces by default. When Layer-3 router interfaces are used for interconnection, a maximum of five VPCs can be connected at the same time.

10. Can I extend my local VLAN to a VPC through physical connection?

No. Alibaba now only supports Layer-3 interconnection.

11. If a physical connection is connected to multiple VPCs, are the networks of the VPCs over the physical connection isolated from one another?

You can isolate network data by dividing VLANs on the physical connection. For more information, see [Create a router interface](#).

12. Does physical connection support NAT?

Physical Connection does not support configuring NAT now. If you must use NAT in special scenarios, you need to configure NAT in your local data center.

13. What is the relation between zones and access points?

Both zones and access points belong to a region. Any access point in a region can use all zones in this region.

If an access point and a VPC are in different regions, you can use a cross-region Express Connect to connect them.

14. What are limits on carriers of Alibaba Cloud access points?

For more information about access points, open a ticket.

Region	Access point	Supported carrier
Beijing	Changping A	China Telecom
	Daxing B	China Unicom

Region	Access point	Supported carrier
Shanghai	Baoshan A	China Telecom
	Baoshan B	China Unicom
	Pudong A	China Telecom
	Pudong B	China Telecom
Shenzhen	Hualong A	China Telecom

15. My cloud server is in zone A, which access point should I use to connect to zone A?

Both zones and access points are in a region and there is no strict corresponding relationship between them. Access points are deployed at Alibaba POPs in a region. A POP and a zone can be at the same geographic location in some regions.

16. How is physical connection access charged?

The fee for physical connection access includes two parts: leased line fee and router interface fee. For more information, see [Billing](#).

17. How can I achieve Express Connect connection with a VPC outside China?

To establish cross-border Express Connect, you must submit a **commitment letter**. You can contact your customer manager to obtain the commitment letter.

18. What is the process of physical connection access?

Apply for a leased line > pay for the initial installation fee and obtain the access point location > negotiate with the carrier and sign a contract > the carrier assigns engineers to connect the two sides > configure the VBR > create router interfaces > configure routes > test the connectivity from hosts on the two sides (Generally, if the ping test is successful, the connection is normal) > the physical connection is successfully established.

19. What factors need to be considered before establishing a physical connection to VPC?

- Whether only one physical connection is required, or multiple physical connections are required to achieve load balancing or highly reliable redundancy.
- Bandwidth. Generally, the bandwidth is 10 Mbps, 100 Mbps, 1 Gbps, or 10 Gbps. The carrier will provide detailed specifications.
- Interface type of physical connection. Interface type of physical connection. Available interfaces include optical interfaces and electrical interfaces. Generally, we recommend that you use electrical interfaces (RJ45 interface). If you use optical interfaces, the compatibility (of

distance, device brand, and so on) between the optical modules on the two sides needs to be considered.

- Demands for Alibaba Cloud's other public cloud services and the expected VPC scale (when a VPC is created, the CIDR Block of the VPC can be determined based on the expected VPC scale).

20. How do I plan IP addresses for physical connection access?

IP addresses at the two ends of the physical connection cannot conflict with each other and must be private IP addresses. If the customer side is using a public IP address, open a ticket to configure a private IP address.

21. What is the VLAN ID of the VBR?

- When the VLAN ID is 0, it indicates that physical switch ports of the VBR use the Layer-3 router interface mode instead of the VLAN mode. In the layer-3 router interface mode, each leased line corresponds to a VBR, which means that a leased line can only be connected to VPCs under the same account.
- When the VLAN ID is [1, 2999], it indicates that physical switch ports of the VBR use VLAN-based layer-3 subinterfaces. In the layer-3 subinterface mode, each VLAN ID corresponds to a VBR, which means that a leased line can be connected to VPCs under different accounts.

Assume a company includes multiple departments or subsidiaries. Each of the departments or subsidiaries has an independent Alibaba Cloud account and each account includes a VPC. When applying for a leased line, the company needs to plan VLAN IDs for each department or subsidiary. When creating a VBR, the company uses VLAN IDs to identify departments or subsidiaries.

22. What do the Alibaba Cloud-side IP address and customer-side IP address in a VBR mean?

The Alibaba Cloud-side IP address is the IP address used as the gateway to connect to the local data center. The customer-side IP address is the IP address used as the gateway to connect to VPC. You must plan an IP address for each side of the leased line to connect the local data center to the VPC. The two IP addresses must be in the same CIDR block.

23. How do I arrange for on-site leased line construction by the carrier?

If you have paid for the leased line, log on to the Express Connect console and click **Physical Connection > Leased Line** in the left-side navigation pane. You can see the ID of the applied leased line. Now click **View** on the right side to view information about leased line construction. Inform your carrier of the port information and ask the carrier to connect the leased line.

After completing investigation, the carrier will provide you a file containing names of personnel dispatched to the data center of the access point and related information, time of on-site construction, leased line ID and so on. At this time, you need to open a ticket to inform Alibaba Cloud aftersales personnel of information about leased line laying by construction personnel of the carrier.

24. How to verify that the leased line access is completed?

After the construction is completed, after sales personnel of Alibaba Cloud changes the leased line status to **Awaiting Confirmation**. Log on to the Express Connect console, click **Physical Connection > Leased Line** in the left-side navigation pane, and click **Confirm**. If the leased line status changes to **Normal**, the leased line access is completed. Then you need to create a VBR and configure routes to achieve leased line communication. For more information, see [Connect a local data center to a VPC through a physical connection](#).

25. How does the local data center access the OSS intranet domain name in the VPC?

The OSS intranet domain name belongs to 100.64.0.0/10, which is a CIDR block reserved by Alibaba Cloud. Therefore, a route pointing to 100.64.0.0/10 cannot be directly added to the VBR. If you have related demands, split 100.64.0.0/10 into smaller subnets, for example, 100.64.0.0/11 and 100.96.0.0/11. Add them to the route table of the VBR, and set the next hop direction to VPC.

26. I submitted a leased line application some time ago. Why is the status still “Application in progress”?

After you submit the leased line application, the leased line status changes to **Application in Progress**. Then, the personnel of Alibaba Cloud will contact you within two workdays to verify your application. After your application is approved, the leased line status changes to **Approved**.

27. The communication line to Alibaba Cloud is disconnected, what should I do?

Test whether the client-side IP address can successfully ping the Alibaba Cloud-side IP address on the gateway device of the local data center. If the ping test fails, report the fault to the carrier. A physical switch port on the Alibaba Cloud side connects the VPC to the local data center. If the port is blocked, the leased line of the carrier is interrupted. In this case, report the fault to the carrier.

28. What should I do if the bandwidth does not meet the expectation?

If the router interface speed is lower than 1 Gbps, use tools such as iperf to test the bandwidth. If the bandwidth cannot exceed 10 Mbps, it is possible that ports at one end of the leased line

run in half duplex mode after negotiation. You can request the carrier to change the port mode to adaptive mode.

If the router interface speed exceeds 1 Gbps, the speed of each data stream is limited to a certain degree (130 Mbps or 250 Mbps) because the data streams use different loading mode.

29. What should I do if an error is returned when I add or delete a route entry on the VBR?

Because the hardware of the VBR is slow in processing, before you add or delete a route entry, wait until the processing of the last route is completed.

30. What can I do if a token error is returned when I add a route entry?

This error is caused by cookie timeout of your browser. Log out of your account and log on again.