

Oracle® Cloud

Using Oracle Cloud Infrastructure FastConnect Classic



E69495-20
April 2020



Oracle Cloud Using Oracle Cloud Infrastructure FastConnect Classic,

E69495-20

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Preface

This document describes how to get started and use FastConnect Classic, which provides a direct and deterministic path from your network to your Oracle Cloud services. As your data is not transported over the public Internet, this service provides consistent performance and controlled or reduced latency.

Topics

- [Audience](#)
- [Conventions](#)

Audience

This document is intended for administrators and users of FastConnect Classic.

Conventions

This table describes the text conventions used in this document.

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
<i>italic</i>	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
monospace	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

1

Getting Started with the Service

Use FastConnect Classic to access your Oracle Cloud services using a private data connection from your premises.

If you are using Oracle Cloud Infrastructure FastConnect, see [FastConnect Overview](#) in Oracle Cloud Infrastructure documentation. Oracle Cloud Infrastructure FastConnect provides an easy way to create a dedicated, private connection between your data center and Oracle Cloud Infrastructure.

Topics

- [About FastConnect Classic](#)
- [Peering Types](#)
- [Availability](#)
- [Connectivity Options for FastConnect Classic](#)
- [Before You Begin with FastConnect Classic](#)
- [How to Begin with FastConnect Classic Subscriptions](#)
- [Terminology](#)
- [Accessing FastConnect Classic Using the Web Console](#)
- [About FastConnect Classic Roles and Users](#)
- [Typical Workflow for Provisioning FastConnect Classic](#)

About FastConnect Classic

Use FastConnect Classic to access your Oracle Cloud services using a direct connection from your premises or colocation facilities. When you use this service, your network traffic is routed over a direct and deterministic path from your network to the Oracle Cloud services in the locations where you establish this connectivity, so your data is not transported over the public Internet. This service delivers consistent performance, provides dedicated bandwidth, and renders controlled or reduced latency.

Use FastConnect Classic to access your Oracle Cloud Infrastructure - Classic services. To access your Oracle Cloud Infrastructure services use Oracle Cloud Infrastructure FastConnect. See the [Oracle Cloud Infrastructure FastConnect guide](#).

Using FastConnect Classic to establish a connection from your premises to Oracle Cloud allows you to:

- Access your instances through an overlay-based direct connection. Transferring data over a direct connection provides better privacy.
- Transfer large volumes of data using high WAN bandwidth. Migrating your Internet traffic to a dedicated path improves the overall performance of your network and significantly reduces the time taken to complete data transfers.

You can establish a connection in one of the following ways:

- By using Direct Cross Connects. Previously called Standard Edition service model, you can provision cross connects to the Oracle edge routers if your data center is colocated with the Oracle data center at a FastConnect location or if you can connect to the Oracle data center using a private link. See [Connecting through Direct Cross Connects](#).
- By connecting through an Oracle FastConnect Partner. Previously called Partner Edition service model, you can connect through an Oracle FastConnect Partner such as an IP VPN or MPLS VPN network service provider or data center exchange provider. See [Connecting through an Oracle FastConnect Partner](#).

Features

- **Standard routing:** Leverages the Border Gateway Protocol (BGP) to manage the exchange of routes between Oracle Cloud and your DMZ or public-facing network.
- **Public and private peering:** Advertise public and private IP prefixes over the peering established with FastConnect Classic edge routers. See [Peering Types](#).
- **Dedicated bandwidth:** Access your Oracle Cloud services, as well as transfer large volumes of data between your private clouds and the Oracle Cloud, over a dedicated data connection. The entire assigned bandwidth is available exclusively for your use.

Peering Types

With FastConnect Classic, you can choose to use private peering, public peering, or both.

Comparison of Public Peering and Private Peering

The table below shows the differences between the two peering types.

Categories	Public Peering	Private Peering
Description	A peering with FastConnect Classic edge routers through which you can access Oracle Public resources using public IP prefixes.	A peering with FastConnect Classic edge routers through which you can extend your on-premise private networks to the Oracle Cloud. Private peering enables you to connect to Oracle Cloud resources from your on-premise private (RFC1918) networks.
You can advertise...	Only public IPv4 prefixes. These public IPv4 prefixes should be registered to your company or to your service provider in an Internet Routing Registry (IRR) or Regional Internet Registry (RIR). Work with your Internet service provider or with your RIR to obtain IPv4 address allocation.	Any valid IPv4 prefixes, including RFC 1918 IPv4 prefixes.

Categories	Public Peering	Private Peering
Network Address Translation (NAT)	<p>If you are connecting through Direct Cross Connects, you are responsible for NATing your private IP addresses and you can advertise only public IP addresses to Oracle.</p> <p>If you are connecting through Oracle FastConnect Partner, your partner service will either provide NAT and advertise public routable IPv4 prefixes or you'll need to provide your own NAT and advertise public routable IPv4 prefixes over the partner connection. If your partner provides NAT, your partner will translate your IP addresses to a public routable IPv4 prefix that will be advertised to Oracle.</p>	You can extend your remote datacenter resources that use a private (RFC1918) address without the need to use IPSec VPN or NAT.
Maximum number of IP Prefixes that you can advertise per peering	200 public IPv4 prefixes	2000 IPv4 prefixes

The BGP session is brought down or disabled if you cross the specified prefix-limit of advertising 200 IPv4 prefixes over public peering or 2000 private (RFC1918) IPv4 prefixes over private peering. When the BGP session is torn down, you can't access your Oracle Cloud services through FastConnect Classic.

To fix this issue, change the number of IP prefixes that you are advertising over the session. When the BGP session is torn down, Oracle checks after every one hour to identify if you have modified the number of advertised IP prefixes to match the prescribed limits. If you meet the prescribed limits, the connection is established.

Availability

When you provision FastConnect Classic at a particular location, you can only access the Oracle Cloud services that are provisioned at the same location. For example, to access an Oracle Cloud service that is provisioned at the Chicago data center, you'll provision FastConnect Classic at Chicago.

Also note that not all Oracle Cloud services are supported at each location. Contact your Oracle Sales representative for information about the Oracle Cloud services that you can access at a location, or visit <http://cloud.oracle.com/data-regions>. Additional steps may be required to provision access to certain Oracle Cloud SaaS services. For more information about services you can access over FastConnect Classic and the implications of accessing services over FastConnect Classic, contact your Oracle Sales representative.

Available Oracle FastConnect Partners and Peering Types

FastConnect Classic is offered through Oracle FastConnect Partners to suit the needs of every enterprise and provide an optimal solution for different use cases. Select a partner based on the availability in your location. Contact your Oracle Sales

representative to identify the solution that suits your requirement. For the most up-to-date listing of locations, where this service is available, see https://cloud.oracle.com/en_US/fastconnect/providers or contact your Oracle Sales representative.

You can also identify if you want to use public or private peering based on the availability of the peering type at your location and your business requirements. Contact your Oracle Sales representative to identify the solution that suits your requirement. For information about support for public and private peering type, see https://cloud.oracle.com/en_US/fastconnect/peering-types.

 **Note:**

Private peering enables you to connect to Oracle Cloud resources that are attached to IP networks from your on-premise private (RFC1918) networks. Private peering eliminates the need for IPsec VPN or Network Address Translation (NAT). Private peering is only available for Oracle Cloud services that support creating IP networks, such as Oracle Cloud Infrastructure Compute Classic and Oracle Java Cloud Service. To identify if the Oracle Cloud service you want to access over FastConnect Classic supports IP networks, see your service documentation.

Connectivity Options for FastConnect Classic

You can access your Oracle Cloud services over a direct connection through a network service provider if you are connecting from a remote location or through direct cross connects if your infrastructure is colocated with an Oracle data center.

Topics

- [Connecting through Direct Cross Connects](#)
- [Connecting through an Oracle FastConnect Partner](#)

You must provision FastConnect Classic at the location where your Oracle Cloud services, that you want to access over FastConnect Classic, are provisioned. Let's consider that you want to access Compute Classic over a private data connection and not through the public Internet. Your Compute Classic account is provisioned at the Chicago data center. As your Compute Classic account is provisioned at the Chicago data center, ensure that you provision FastConnect Classic at the same location. The location where FastConnect Classic is available is also referred to as FastConnect location in this document.

Oracle uses industry standard BGP protocol to establish peering with your network. You need to have a separate virtual circuit (using layer-2 or layer-3 Ethernet VLAN) and establish BGP peering over each virtual circuit. This helps you maintain logical separation between your public and private environments and separates the peering types.

FastConnect Classic is set up to ensure high availability. To achieve end-to-end redundancy from your network edge and to obtain the service level agreement (SLA) of 99.9%, Oracle recommends that you set up a primary and a secondary connection between your network edge routers and Oracle routers. You must also establish a redundant BGP peer. It is not mandated to set up two connections, but you forfeit the

SLA of 99.9% if you only have one connection and one BGP peer. See [Providing Redundancy to Ensure High Availability](#).

Connecting through Direct Cross Connects

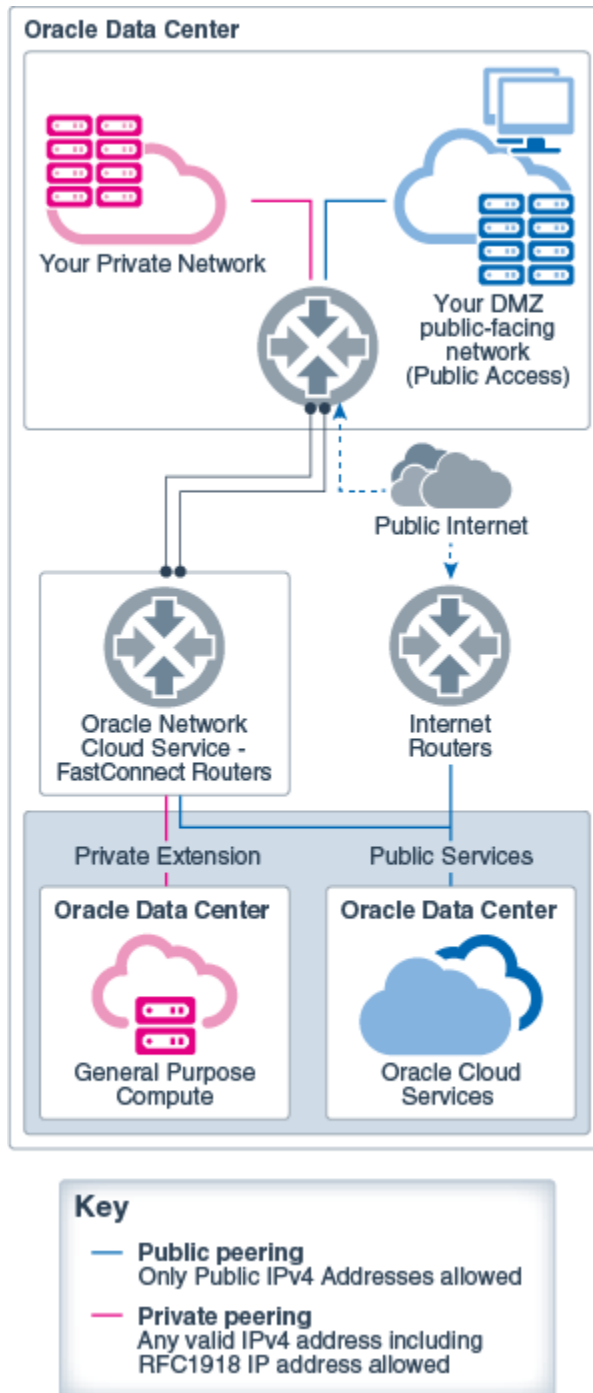
If your data center is colocated with the Oracle data center at a FastConnect location or if you can connect to the Oracle data center using a private link, provision cross connects to the Oracle edge routers. Data is transported over these cross connects.

A single physical connection is sufficient to establish multiple peering sessions between your network and Oracle Cloud. Traffic is routed to and from Oracle Cloud services using BGP. You will supply your own BGP peering to peer directly to Oracle Cloud services through FastConnect Classic.

You can connect in one of the following ways:

- If your data center is colocated with the Oracle data center, connect through direct cross connects between your network routers and FastConnect Classic edge routers. After creating cross connects in the user interface, you have to work with your data center provider to provision physical cross connects to the Oracle edge routers. Your data is transported over these cross connects.

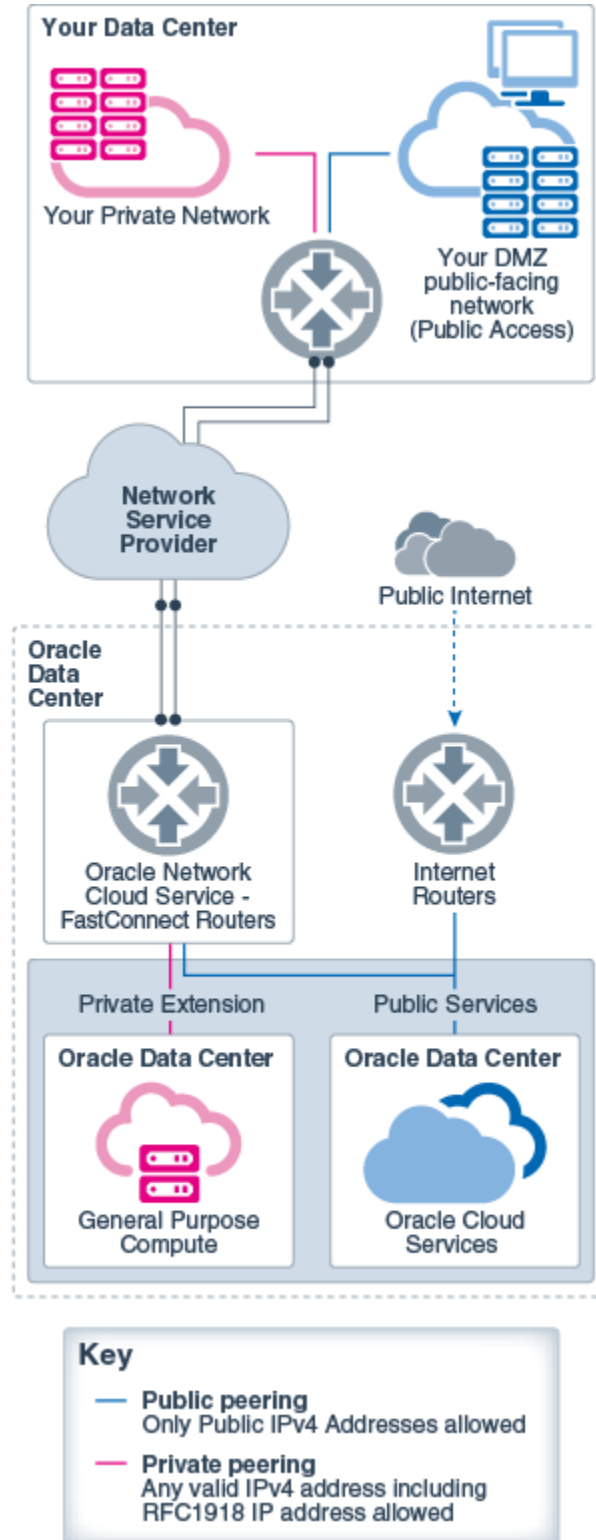
The following figure shows how data is exchanged between your network and Oracle Cloud when your data center is colocated with the Oracle data center that hosts the Oracle Cloud services that you want to access over FastConnect Classic.



- If your data center is not colocated with the Oracle data center, contact your network service provider to order a private link from your data center to the Oracle data center at the location where your Oracle Cloud services are provisioned.

Your data will be transported over the ordered Ethernet-WAN circuit to the Oracle data center, and then to Oracle Cloud. All other requirements and procedures to transfer data remain the same as in the case of connecting within a colocated data center.

The following figure shows how data is exchanged between your network and Oracle Cloud through a remote Oracle data center.



Oracle provides the required configuration information for your network to connect to FastConnect Classic. Your network administrator uses this information to configure your network routers. You need a valid public Autonomous System Number (ASN) to establish peering with the Oracle data center and valid public IP prefixes. If you

haven't registered a public ASN, you can use private ASNs or use the fixed ASN provided by Oracle. You can't use 64555 as ASN for private peering as it is reserved for internal routing on Oracle. Routers in your network use the Border Gateway Protocol to exchange routing information with the Oracle data center. This permits routes to be exchanged between your network and Oracle Cloud. After configuring your network routers and completing other post-provisioning tasks, you can transmit data over this connection.

Connecting through an Oracle FastConnect Partner

You can connect through an Oracle FastConnect Partner, such as an IP VPN or MPLS VPN network service provider or data center exchange provider.

Your traffic is isolated from other customers of this service with a layer-2 or layer-3 Ethernet VLAN, called a virtual circuit. After FastConnect Classic is provisioned, contact your Partner account manager to order the Partner's connectivity service for FastConnect.

The Oracle Partner may provide several network configuration options for connectivity through FastConnect and will have prerequisites depending on the options. Contact your Partner account manager for the options available for your Partner connectivity service for FastConnect. Your network is configured based on your selection.

Some Oracle FastConnect Partners use their own Border Gateway Protocol (BGP) peering to connect your network to Oracle Cloud services through FastConnect Classic. In such scenarios, you can provide BGP peering information to your partner and you don't need to supply this information to Oracle. In other scenarios, you are required to provide the BGP information to Oracle and not to your partner.

Depending on whether you create a public or private virtual circuit, you can advertise only public IP addresses or private and public IP addresses. See [Peering Types](#). If you establish a private peering session, you can extend your remote datacenter resources that use a private (RFC1918) address without the need to use NAT.

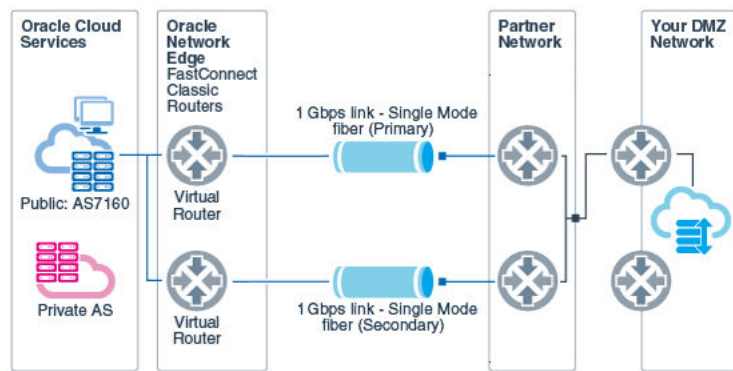
If you are establishing a public peering session, you can connect in one of the following ways:

- **Connect through Partner NAT:** The most common configuration which Oracle FastConnect Partner support is layer-3 integration with the Partner providing public BGP ASN and IP prefixes for peering. In this case, the Partner allocates a single permanent /32 address or a NAT pool prefix to you. Oracle then completes the network configuration based on the information provided by the Partner. The Partner translates your IP addresses for your traffic to their public routable IPv4 prefixes that are advertised over the Partner's service through FastConnect Classic to your Oracle Cloud services. If you plan to initiate connections from Oracle towards your network through your Partner, you must provide your Partner with the IP addresses of your servers (connection end point on your network), so that they can be advertised by the Partner to support bidirectional connectivity. You also need to whitelist the single, permanent /32 address that you receive from your Oracle FastConnect Partner and any other public IP addresses that you want to expose. See [Whitelisting IP Address](#).
- **Connect with Your own NAT through the Partner:** Some Oracle FastConnect Partners may provide the option for you to perform your own NAT, rather than having the Partner perform the NAT function. In such a scenario, the Partner will not translate your public IP addresses before advertising to Oracle. You are responsible to work with one of the registries to obtain public IP prefixes, and then

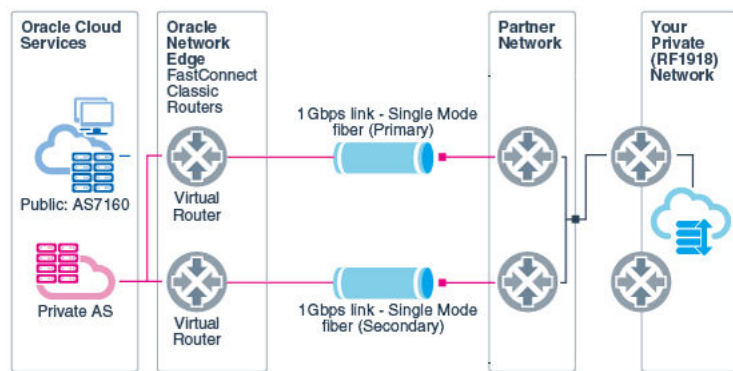
provide these to the Partner. It is also your responsibility to NAT all your private IP addresses, if any, to public routable IPv4 prefixes which are registered in the name of your company. You'll provide your public IP prefixes to Oracle as network configuration information at the time of provisioning the service. The Partner advertises your public IP prefixes through BGP to Oracle. The Partner provisions the service and provides configuration information to Oracle. Oracle then completes the network configuration based on the information provided. After the Partner and Oracle complete configuring their edge routers, traffic between your Oracle Cloud services and your partner network is routed through the Partner connectivity service for FastConnect Classic.

The following figure describes how data is exchanged between your network and Oracle Cloud when you use FastConnect Classic.

When you set up two links between your network and Oracle Cloud, a redundant connection is established to FastConnect edge router which ensures high availability. The links depicted in the diagram are identical. They are separated in the diagram to show logical isolation.



The following figure shows how private IP addresses are advertised over your connection.



You also need to whitelist with Oracle any public IP addresses that you want to expose.

After setting up this service and configuring your routers, data to your Oracle Cloud services is sent over the direct connection and not over the public Internet.

Before You Begin with FastConnect Classic

Before you begin using FastConnect Classic, ensure you are familiar with the following:

- Create and configure your account on Oracle Cloud.
- Understand the features of the service. See [About FastConnect Classic](#).
- Be familiar with the FastConnect Classic terminology. See [Terminology](#).
- Ensure that you are accessing Oracle Cloud services.
- Ensure that FastConnect Classic is available in the region where your Oracle Cloud services are provisioned. To find where your Oracle Cloud services are provisioned, contact your Oracle account team or look at the service details in the Infrastructure Classic Console. For the most up-to-date listing of locations, where FastConnect Classic is available, see <http://cloud.oracle.com/data-regions> or contact your Oracle Sales representative.

You can also contact your Oracle Sales representative to identify the solution that suits your requirement. Your Oracle sales representative provides the following information:

- Whether your infrastructure is colocated with the Oracle data center or if you can connect from a remote data center.
- The list of FastConnect Classic partners that are available in your region.
- Based on the information provided by your Oracle sales representative, identify the following:
 - The type of connection that you want to establish. If your infrastructure is colocated with the Oracle data center, connect using Direct Cross Connects. If Oracle FastConnect Partner partners are available in your region and you are an existing customer with the specified partner, then connect through an Oracle FastConnect Partner.
 - If you are connecting through an Oracle FastConnect Partner, select a partner based on the availability in your location.
 - The location where you'll provision FastConnect Classic. This is the location where your Oracle Cloud services are provisioned.
 - The type of peering: public or private peering depending on whether you want to advertise public and private IP prefixes. See [Peering Types](#).
 - The appropriate port speed that you can use.
 - * Port speed 1 Gbps is available for both connection types.
 - * Port speed 10 Gbps is available only when you want to establish a connection through Direct Cross Connects or only if you choose Equinix as your Oracle FastConnect Partner. Port speed of 10 Gbps is not available through other partners.

You can also consult with your Oracle sales representative to make these decisions.

- Complete the additional prerequisites that are specific to the selected connection type.
- Fulfill all the network requirements.

How to Begin with FastConnect Classic Subscriptions

To get started with FastConnect Classic, sign up for a free credit promotion, or purchase a subscription. You can then access the web console and create users and assign roles.

1. Sign up for a free credit promotion or purchase a subscription.
See Requesting and Managing Free Oracle Cloud Promotions or Buying an Oracle Cloud Subscription in *Getting Started with Oracle Cloud*
2. Access the FastConnect Classic service.
See [Accessing FastConnect Classic Using the Web Console](#).

To grant access to others:

- Learn about user accounts and roles. See [About FastConnect Classic Roles and Users](#).
- Create accounts for your users and assign them appropriate privileges and roles.
See Managing Users, User Accounts, and Roles in *Getting Started with Oracle Cloud*.

Terminology

The following table lists and describes the key terms used in this document.


Term	Definition
Autonomous System number (ASN)	An Autonomous system number or ASN is used in the Internet to identify either a single network or a group of networks managed and controlled by a common network administrative entity (which could be an Internet Service Provider, a business enterprise, an institute for example). An autonomous system is a routing domain that is managed by the network administrator of that domain. The autonomous system is assigned a globally unique number that is referred to as the Autonomous System Number (ASN). See http://www.iana.org/assignments/as-numbers/as-numbers.xhtml .
Border Gateway Protocol (BGP)	The protocol that's used to share routing information between two networks. See http://tools.ietf.org/html/rfc4271 .
Colocated data center	When your data center and Oracle data center share common facilities at a FastConnect location.
Cross Connects	In the colocation scenario, cross connects are physical cables which connect your existing network to Oracle at a FastConnect location.
FastConnect location	A specific Oracle data center where your Oracle Cloud services are provisioned and FastConnect Classic is available at this location. When you provision FastConnect Classic at a particular location you can only access the Oracle Cloud services that are provisioned at that location. For example, to access an Oracle Cloud service that is provisioned at the Chicago data center, you'll provision FastConnect Classic at Chicago.
Internet Routing Registry (IRR)	The IRR provides a mechanism for mapping an origin AS number to a list of networks or validating the contents of BGP announcement messages. See https://www.arin.net/resources/routing/ .
LC connector	A type of fiber optic connector. See http://www.thefoa.org/tech/connID.htm .

Term	Definition
Letter of Authorization (LOA)	Letter of authorization provides details that are required to set up cross connects between your network routers and Oracle routers.
Network Address Translation (NAT)	Network address translation (NAT) is a method of remapping one IP address space into another by modifying network address information in Internet Protocol (IP) datagram packet headers while they are in transit across a traffic routing device. See https://www.ietf.org/proceedings/43/I-D/draft-ietf-nat-terminology-01.txt .
Private peering	Peering established with FastConnect Classic edge routers, over which typically private (RFC1918) IP prefixes are advertised.
Public peering	Peering established with FastConnect Classic edge routers, over which public IP prefixes are advertised. Public IP prefixes that are registered with IRR or RIR are publicly routable over the Internet.
Remote data center	When your data center is not colocated with an Oracle data center.
Regional Internet Registry (RIR)	RIRs administer and register IP addresses and ASN numbers within a region. See https://www.arin.net/resources/routing/ .
Throughput	The number of gigabits of data that can be sent per second (Gbps) or megabits per second (Mbps) through FastConnect Classic.

Accessing FastConnect Classic Using the Web Console

You can provision and manage your FastConnect Classic connection through an easy-to-use graphical web console.

1. Sign in to your Cloud Account.
 - For Oracle Cloud, see Signing in to Your Cloud Account in *Getting Started with Oracle Cloud*.

The Infrastructure Classic Console is displayed.
2. Click  in the top left corner of the Dashboard.
3. Under **Services**, click **Compute Classic**.
The **Compute OPC** console is displayed.
4. (Optional) This step is relevant only if your domain spans multiple sites. To change the site, click the **Site** menu near the top of the page. FastConnect Classic is available only at a few sites.
5. Click the **Network** tab.
6. In the **Network** drop-down list, expand **FastConnect**.

Note:

For security, the web console automatically times out after 15 minutes of inactivity. To continue using the web console, log in again.

About FastConnect Classic Roles and Users

The following table summarizes the roles you can use to administer and use FastConnect Classic.

Role	Description
TenantAdminGroup (Identity Domain Administrator)	Users who are assigned this role can perform all the tasks in the Infrastructure Classic Console, including user and role management tasks. Note that Oracle assigns this role to all trial users.
<code>service-instance-name.Compute_Operations</code> (Service Administrator)	Users who are assigned this role can view, create, update, and delete FastConnect Classic resources. The identity domain administrator can create additional service administrators, as required, by assigning this role in Oracle Cloud Infrastructure Classic Console. For business continuity, consider creating at least two users with the <code>Compute_Operations</code> role. These users must be IT system administrators in your organization.
<code>service-instance-name.Compute_Monitor</code>	Users who are assigned this role can view FastConnect Classic resources. The identity domain administrator can create users with this role in Oracle Cloud Infrastructure Classic Console.

See Adding Users and Assigning Roles in *Getting Started with Oracle Cloud*.

Typical Workflow for Provisioning FastConnect Classic

The workflow to provision FastConnect Classic varies depending on the type of connection that you want to establish. You can establish a connection through Direct Cross Connects or through an Oracle FastConnect Partner.

Connecting through Direct Cross Connects

To provision a direct connection using FastConnect Classic, refer to the following typical task workflow. In this type of connection, you can establish a direct physical connection between your network edge routers and Oracle edge routers. Your network is either colocated with the Oracle data center or you can connect to the Oracle data center using a private circuit.

Task	Description	More Information
Obtain a trial or paid subscription to FastConnect Classic		How to Begin with FastConnect Classic Subscriptions
Learn and plan your connection		Before You Begin with FastConnect Classic

Task	Description	More Information
Create cross connects	To create a connection between your network routers and Oracle routers, create cross connects. If you want to set up a redundant connection, create primary and secondary cross connects.	Creating a Cross Connect
Forward letter of authorization (LoA)	To set up a physical connection between your network routers and the Oracle routers, forward the letter of authorization. <ul style="list-style-type: none"> If your data center is colocated with the Oracle data center, forward the LoA generated by Oracle to the datacenter provider. If your data center is not colocated with the Oracle data center where your Oracle Cloud services are provisioned, forward the LoA generated by Oracle to the Network carrier of your choice. Forward the letter of authorization for the primary and secondary cross connects.	Forwarding Letter of Authorization
Create virtual circuits	Virtual circuit is an isolated network path that runs over one or more physical network connections to provide a single, logical connection between the router on the edge of your network and the Oracle router.	Creating a Virtual Circuit
(Optional) Update the virtual circuit as per your requirement	If you want to modify the information that you had provided about your network while creating the virtual circuit, you can update the virtual circuit as per your requirement.	Updating a Virtual Circuit
Configure your network equipment	Manage your network routing policy to permit traffic to and from Oracle Cloud.	Configuring Your Network Routers
Whitelist IP addresses	Whitelist IP addresses to support bidirectional transport of data.	Whitelisting IP Address
Test your service	Test your connection before using it for the first time to ensure that the data packets are being sent over FastConnect Classic and not over the public Internet.	Testing Your Connection

Connecting through an Oracle FastConnect Partner

To provision a connection through an Oracle FastConnect Partner, refer to the following typical task workflow.

Task	Description	More Information
Obtain a trial or paid subscription to FastConnect Classic		How to Begin with FastConnect Classic Subscriptions
Learn and plan your connection		Before You Begin with FastConnect Classic

Task	Description	More Information
Create virtual circuits	Virtual circuit is an isolated network path that runs over one or more physical network connections to provide a single, logical connection between the router on the edge of your network and the Oracle router.	Creating a Virtual Circuit
Contact your Oracle FastConnect Partner	Contact your Oracle FastConnect Partner account manager to order the service that will help you connect to your network using FastConnect Classic.	Working with an Oracle FastConnect Partner
Update virtual circuit	If you want to modify the existing information or provide additional information that you have received from your Oracle FastConnect Partner, you can update the virtual circuit as per your requirement.	Updating a Virtual Circuit
Configure your network equipment	Manage your network routing policy to permit traffic to and from Oracle Cloud.	Configuring Your Network Routers
Whitelist IP addresses	Whitelist IP addresses to support bidirectional transport of data.	Whitelisting IP Address
Test your service	Test your connection before using it for the first time to ensure that the data packets are being sent over FastConnect Classic and not over the public Internet.	Testing Your Connection

2

Provisioning FastConnect Classic

To provision FastConnect Classic, work with your Oracle Sales representative and provide the required information.

If you are using Oracle Cloud Infrastructure FastConnect, see [FastConnect Requirements](#) in Oracle Cloud Infrastructure documentation.

Topics

- [Setting Up a Connection Using Direct Cross Connects](#)
- [Creating a Virtual Circuit](#)
- [Working with an Oracle FastConnect Partner](#)

Setting Up a Connection Using Direct Cross Connects

Cross Connect represents the physical cable that connects your existing network to Oracle in the FastConnect location. Complete the following tasks to set up connection using Direct Cross Connects. This topic is not relevant if you are setting up a connection through an Oracle FastConnect Partner.

Topics

- [Creating a Cross Connect](#)
- [Forwarding Letter of Authorization](#)

Prerequisites to Connect Using Direct Cross Connects

- You are responsible for provisioning the physical connectivity to the Oracle routers through a network service provider or carrier of your choice. Your network service provider must be capable of connecting to the Oracle routers over single-mode fiber. If your infrastructure is colocated with the Oracle data center, order cross connects from the data center provider.
- You need to provide one /30 or /31 IP subnet for every virtual circuit that you create. You can provide a public or private IP subnet. If you are providing a public IP subnet, these IP subnets should be owned by you and registered in an Internet Routing Registry (IRR) or Regional Internet Registry (RIR). Work with your Internet service provider or with your RIR to obtain IPv4 address allocation.
- You require a valid 2-byte or 4-byte Autonomous System Number (ASN) that is registered to you for establishing the peering session. Work with your Internet service provider or one of the registries to obtain an ASN.

 **Note:**

If you do not have a registered public ASN, you can use private ASNs or use the fixed ASN provided by Oracle for configuring the network. You cannot use 64555 as ASN for private peering as it is reserved for internal routing on Oracle.

- MD5 hash support is optional.
- If you are setting up a public peering session, you are responsible for NATing your private IP addresses and you can advertise only public IP addresses to Oracle over the public peering session.
- You are responsible for setting up the physical connectivity to the demarcation point provided in the letter of authorization.

Creating a Cross Connect

Create a cross connect to establish a physical connection between the routers in your network and Oracle routers. You should create only one cross connect for every router in your network.

Prerequisites

- To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See *Modifying User Roles in Managing and Monitoring Oracle Cloud*.

Procedure

1. Sign in to the FastConnect Classic console. If your domain spans multiple sites, select the appropriate site. To change the site, click the **Site** menu near the top of the page.
2. Click the **Network** tab.
3. In the **Network** drop-down list, expand **FastConnect**, and then click **Cross Connects**.
4. Click **Create Cross Connect**.
5. Select or enter the following information:
 - **Name:** Enter a name for the cross connect.
 - **Port speed:** Select the appropriate port speed based on your business requirement.
 - **Make this Cross Connect redundant from:** If you are creating a secondary cross connect, select the primary cross connect that you have created. This ensures that the primary and secondary cross connects are mapped to unique routers. If you don't specify a value while creating a secondary cross connect, both primary and secondary cross connects are mapped to the same router and redundancy is not achieved at the router level. If you are creating a primary cross connect, leave this field empty.

- **Your Circuit ID:** Enter the circuit ID, if you have assigned one for your network router. This helps you to identify the cross connect that maps to a router in your network. This is useful when you want to troubleshoot.
6. Click **Create**.
The **Confirm Create Cross Connect Details** page appears.
 7. Check if the details provided are correct, make a note of the next steps that you have to perform, and then click **Confirm**.

After creating a cross connect to the primary port, repeat this task to create a redundant cross connect to a redundant router in your network to achieve end-to-end redundancy from your network edge. After creating both the cross connects, you can forward the letter of authorization. See [Forwarding Letter of Authorization](#).

Forwarding Letter of Authorization

After creating a cross connect, you can view the letter of authorization which provides details that are required to set up a physical connection between your network routers and Oracle routers. You have to forward this letter to activate the cross connect by setting up the physical connection.

Prerequisites

Before forwarding the letter of authorization, ensure that you meet the following prerequisites.

- If your data center is not colocated with the Oracle data center where your Oracle Cloud services are provisioned, contact your network service provider to order a private line from your premises to the Oracle data center. Identify a network service provider or carrier that can deliver an Ethernet private line from your premises to the Oracle edge routers. The service provider must be capable of terminating the circuit using single-mode fiber with LC connectors. The ports on Oracle routers are 1000Base-LX (1 Gbps) and 10GBASE-LR (10 Gbps). It is your responsibility to work with any network service provider or carrier of your choice to get the point-to-point Ethernet private line provisioned to the demarcation point as specified in the letter of authorization. If the network carrier is located in a different demarcation point in the cage, you must work with the network carrier to get the connection established from their demarcation point to the Oracle demarcation point.

To achieve end-to-end redundancy from your network edge, you must order redundant circuits or lines from your network service provider along with separate cross connects to Oracle edge routers from redundant routers in your network.

- Ensure that the life cycle status of the cross connect is **Provisioned**.
- To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See [Modifying User Roles in *Managing and Monitoring Oracle Cloud*](#).

Procedure

1. Sign in to the FastConnect Classic console. If your domain spans multiple sites, select the appropriate site. To change the site, click the **Site** menu near the top of the page.

2. Click the **Network** tab.
3. In the **Network** drop-down list, expand **FastConnect**, and then click **Cross Connects**.
4. Go to the cross connect for which you want to retrieve the letter of authorization. From the ☰ menu, select **Letter of Authorization**.
5. Copy the contents of the letter of authorization and forward it to oracle_fastconnect_ww_grp@oracle.com to activate the cross connect. Additionally, forward the letter of authorization to the data center provider or network carrier of your choice.
 - If your data center is colocated with the Oracle data center, forward the letter of authorization to the data center provider.
 - If your data center is not colocated with the Oracle data center where your Oracle Cloud services are provisioned, forward the letter of authorization to the network carrier of your choice.

 **Note:**

The LOA is valid only for a limited period. If you don't establish a physical connection between your network routers and Oracle routers within this period, the LOA is revoked.

Oracle configures the routers. When the physical connection between your network routers and Oracle routers is set up and the configuration is complete, the **Physical Status** of the cross connect changes to **Up** and the **Life Cycle Status** is **Provisioned**. You can now create a virtual circuit. See [Creating a Virtual Circuit](#).

Creating a Virtual Circuit

A virtual circuit is a layer-2 or layer-3 Ethernet VLAN that isolates network traffic between customers. It is an isolated network path that runs over one or more physical network connections to provide a single, logical connection between the router on the edge of your network and the Oracle router. Each virtual circuit is made up of information shared between you and Oracle, as well as an Oracle FastConnect Partner (if you're connecting through an Oracle FastConnect Partner).

Prerequisites

- Ensure that you meet one of the following prerequisites based on whether you are setting up a public or private virtual circuit. See [Peering Types](#).
 - Public virtual circuit: You can advertise only public IPv4 prefixes over this connection. RFC 1918 addresses, if any, are dropped if they are advertised over the connection. Ensure that the public IPv4 prefixes that you want to advertise are registered to you in an Internet Routing Registry (IRR) or Regional Internet Registry (RIR). The BGP session is brought down or disabled if you cross the specified prefix-limit of advertising 200 IPv4 prefixes over public peering or 2000 private (RFC1918) IPv4 prefixes over private peering.
 - Private virtual circuit: You can advertise private IP addresses (RFC1918) and extend your remote data center resources that use private IP address without

the need to use IPsec VPN or Network Address Translation (NAT). Your IP address are not translated, but forwarded to Oracle as is. The BGP session is brought down or disabled if you cross the specified prefix-limit of advertising 2000 private (RFC1918) IPv4 prefixes over private peering.

You must create a private gateway to use private peering. A private gateway allows you to connect from your on-premises data center to instances on IP networks using their private IP addresses. While creating a private gateway, specify the names of the IP networks that you want to associate with this private gateway. See *Creating a Private Gateway in Using Oracle Cloud Infrastructure Compute Classic*.

Note down the name of your private gateway. You'll need to select this private gateway while setting up your connection.

- If you are not connecting through an Oracle FastConnect Partner and connecting through Direct Cross Connects, ensure that you have created the cross connects. See [Creating a Cross Connect](#).
- To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See *Modifying User Roles in Managing and Monitoring Oracle Cloud*.

Procedure

1. Sign in to the FastConnect Classic console. If your domain spans multiple sites, select the appropriate site. To change the site, click the **Site** menu near the top of the page.
2. Click the **Network** tab.
3. In the **Network** drop-down list, expand **FastConnect**, and then click **Virtual Circuits**.
4. Click **Create Virtual Circuit**.
5. Select or enter the following information.
 - **Name:** Enter a unique name for the virtual circuit.
 - **Connection Type:** Select **Direct Cross Connect** to establish a direct connection to an Oracle data center using cross connects. If you want to establish a connection through an Oracle FastConnect partner, select a partner based on their availability at the location from which you want to connect to FastConnect Classic.
 - **Circuit Type:** Select **Public** or **Private** based on whether you want to advertise public or private IP addresses over the connection. For example, select **Public** if you want to access Oracle Cloud services through FastConnect Classic by using public IP prefixes. Select **Private** when you want to extend your on-premise private networks to the Oracle Cloud. A private virtual circuit will enable you to connect to Oracle Cloud resources from your on-premise private (RFC1918) networks. When you use a private virtual circuit, it eliminates the need for IPsec VPN and Network Address Translation (NAT) to extend your private routing domain.
 - **Private Gateway:** If you select **Private**, you must select the private gateway that you have created. A private gateway allows you to connect from your on-premises data center to instances on IP networks using their private IP addresses.

- **Public IP Prefixes:** If you select **Public**, specify the public IPv4 prefixes (in CIDR notation) that you want to advertise over the connection. You can also specify reverse NAT IP addresses. These IPv4 prefixes must be registered to you in an IRR or RIR.
6. Different fields appear on the console depending on the **Connection Type** that you select. If any of the following fields do not appear in the console, it indicates that those fields are not relevant for the selected **Connection Type**. Select or enter the following information based on the fields that appear.

- **AT&T NetBond Service Key:** This field appears only if you have selected AT&T NetBond as the **Connection Type**. Enter the service key that you have received from AT&T.

If you haven't ordered AT&T NetBond for Oracle FastConnect from AT&T NetBond, you can order it after creating the virtual circuit. Once you receive the service key from AT&T, you can update the virtual circuit to specify the key.

- Enter the following information to map the link that you have created to a router in Oracle Cloud. If you have created primary and secondary links to ensure high availability, specify the following information for both the links. When you set up two links between your network and Oracle Cloud, a redundant connection is established to FastConnect edge router which ensures high availability.
 - **Your Router Interface IP:** Enter the IP address of your network edge router for this VLAN in CIDR format.
 - **Oracle Router Interface IP:** Enter the IP address of the Oracle router for this VLAN in CIDR format.
 - **VLAN:** The VLAN ID that you want to use for this virtual circuit. Enter an integer between 100 and 4000. The VLAN ID must be unique.
 - **Cross Connect:** Select a cross connect that you have created.
- Enter the following information for your BGP session:
 - **Your BGP ASN:** The public or private ASN for your network. If you use a public ASN, ensure that the ASN is registered to you. You can work with your Internet service provider or one of the registries to obtain an ASN.

 **Note:**

If you do not have a registered public ASN, you can use private ASNs or use the fixed ASN provided by Oracle for configuring the network.

- **BGP MD5 Password:** Enter the BGP MD5 password.

7. Click **Create**.

The virtual circuit is created.

If you are connecting through Direct Cross Connects, configure your network edge routers and complete other post-provisioning tasks. See [Completing Post-Provisioning Tasks](#).

If you are connecting through an Oracle FastConnect Partner, contact the Oracle FastConnect Partner account manager to order the connecting service. See [Working with an Oracle FastConnect Partner](#).

Working with an Oracle FastConnect Partner

This topic provides information about connecting through an Oracle FastConnect Partner. This section is not relevant if you are connecting through Direct Cross Connects. After creating a virtual circuit, contact your Oracle FastConnect Partner account manager to order the service that'll help you connect to your network using FastConnect Classic.

Prerequisites

Before you begin with this task, ensure that you complete the following:

- Create a virtual circuit. See [Creating a Virtual Circuit](#). When you create a virtual circuit, a FastConnect ID is created to uniquely identify the virtual circuit that you have created. Note down the FastConnect ID as you have to provide this information to your Oracle FastConnect Partner account manager while ordering the service.
- You must be an existing customer of the partner IP VPN, MPLS, or data center exchange service which connects to FastConnect Classic. If you are not an existing customer of the partner service, contact your Oracle FastConnect Partner account team to order the service. See the following table for details.
- You will need network equipment as required by the partner's service requirements to meet any prerequisites.
- You are responsible to provision any infrastructure or equipment as required by the Oracle FastConnect Partner for connectivity through their service to FastConnect Classic.
- Either your Oracle FastConnect Partner provides NAT and advertises public routable IPv4 prefixes or you'll need to provide your own NAT and advertise public routable IPv4 prefixes over the Oracle FastConnect Partner connection. If your Oracle FastConnect Partner provides NAT, they'll translate your IP addresses to a public routable IPv4 prefix that will be advertised to Oracle.

If you are providing your own NAT with an Oracle FastConnect Partner such as Verizon, you are also responsible for the following:

- NATing all your private IP addresses, if any, to your public IP prefixes.
- Advertising public IPv4 prefixes, which are registered to your organization from a route registry, through your partner's connectivity service.
- Only if you select public peering, you are responsible for providing the IP addresses of your servers (connection end points on your network) to your Oracle FastConnect Partner if you want to initiate connections from Oracle towards your network. Your Oracle FastConnect Partner advertises the provided IP addresses to support bidirectional connectivity.
- If you have configured for reverse NAT rule, to send data to your premises from Oracle Cloud, you are also responsible for providing Oracle with the public IP addresses of your servers (connection end points on your network). Oracle uses the information you have provided to complete configuring the network. If you have configured for reverse NAT rule, Oracle checks with your Oracle FastConnect

Partner to verify that your RIR has been validated prior to completing the network configurations.

Contacting your Oracle FastConnect Partner

Contact your Oracle FastConnect Partner account manager to order the service that'll connect your network to FastConnect Classic.

Partner	Prerequisite	Contact your partner to order...
AT&T NetBond for Cloud	You must be an existing customer of AT&T NetBond for Cloud and have an AT&T MPLS VPN in service. If you are not an existing customer of AT&T NetBond for Cloud, contact your AT&T NetBond account team to order the service.	AT&T NetBond for Oracle FastConnect
British Telecom (BT)	You must be an existing customer of BT IP Connect Global - MPLS IP VPN and have an active MPLS VPN in service. If you are not an existing customer of BT IP Connect Global - MPLS IP VPN, contact your BT Global Services account team to order the service.	BT Cloud Connect for Oracle FastConnect
Digital Realty	You must be an existing customer of Digital Realty to route traffic between your network and Oracle Cloud through Digital Realty Service Exchange. If you are not an existing customer of Digital Realty, you can contact the Digital Realty account manager to order the service.	Digital Realty Service Exchange
Equinix	You must be collocated in Equinix IBX Data Centers or you can connect remotely to Equinix IBX Data Centers through a network service provider. You must be an Equinix Cloud Exchange customer.	—
Megaport	You must be an existing customer of Megaport to route traffic between your network and Oracle Cloud through Megaport VXC for FastConnect. If you are not an existing customer of Megaport, you can contact the Megaport account manager to order the service.	Megaport VXC for Oracle FastConnect

Partner	Prerequisite	Contact your partner to order...
NTT Communications	You must be an existing customer of NTT Communications Arcstar Universal One (MPLS IP VPN service) and have an active NTT Multi-Cloud Connect port. If you are not an existing customer of NTT Communications services, contact your NTT Communications account team to order the service.	NTT Communications Multi-Cloud Connect
Orange Business Services	You must be an existing customer of Orange Business Services, otherwise contact the Orange Business Services account team to order the service.	Orange Business Services' Business VPN Galerie
Tata Communications	You must be an existing customer of Tata Communications, otherwise contact the Tata Communications account team to order the service.	Tata Communications' IZO Private Connect


Partner	Prerequisite	Contact your partner to order...
Verizon	You must be an existing customer of Verizon Private IP (PIP) services and have an active PIP port. If you are not an existing customer of Verizon Private IP services, contact your Verizon account team to order the service.	Verizon SCI Connectivity for Oracle FastConnect Select only one of the following as the SCI - Partner Service Description based on your network requirements. <ul style="list-style-type: none"> • Oracle FastConnect Public Cloud: Specify this option if you want all traffic between your network and Oracle to be source NATed by Verizon to a single /32 IP address or a long range NAT pool IP prefix. This is the default selection. • Oracle FastConnect Public Cloud with customer provided NAT: Specify this option if you will source NAT all your traffic to public IP addresses before forwarding it to Verizon. • Oracle FastConnect Public Cloud Private peering: Specify this option if you want to advertise RFC 1918 IP addresses.



Note:


After you order the service from Verizon, you'll receive network configuration from Veri

Partner	Prerequisite	Contact your partner to order...
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For information about the connection speeds supported by your Oracle FastConnect Partner, contact your Oracle FastConnect Partner account manager.

The virtual circuit that you had created is listed on the Virtual Circuits page. To identify the next steps that you have to perform:

- Go to the virtual circuit that you had created. From the  menu, select **Summary**. The Virtual Circuit Summary page appears. Complete the steps specified under the **What's Next?** section.

Complete the post-provisioning tasks. See [Completing Post-Provisioning Tasks](#). Your Oracle FastConnect Partner and Oracle configure their network to route the traffic through the service that you have ordered. When the configuration is complete, the **Life Cycle Status** changes to **Provisioned** and the **Virtual Circuit Status** changes to **Up**.

3

Completing Post-Provisioning Tasks

After provisioning the service, complete all the post-provisioning tasks before using the service for the first time.

If you are using Oracle Cloud Infrastructure FastConnect, choose one of the following topics that suits your situation.

- [FastConnect: With an Oracle Provider](#)
- [FastConnect: With a Third-Party Provider](#)
- [FastConnect: Colocation with Oracle](#)

Topics

- [Configuring Your Network Routers](#)
- [Whitelisting IP Address](#)
- [Testing Your Connection](#)

Configuring Your Network Routers

After creating a virtual circuit, configure your network edge routers. If you are connecting through an Oracle FastConnect Partner, ensure that you have contacted your Oracle FastConnect Partner account manager to order the service that'll connect your network to FastConnect Classic.

- If applicable, configure Border Gateway Protocol routing on your network edge routers using the information you receive from Oracle or your Oracle FastConnect Partner. For more information about BGP routing, see the **Virtual Circuit Summary** page.
- If applicable, manage your routing policy to prefer AS7160 for traffic to the network addresses pertaining to your Oracle service. Autonomous System Number for Oracle is AS7160. Oracle may change the ASN for specific locations, so refer to the **Virtual Circuit Summary** page for the correct ASN.
- Accept the IPv4 prefixes that are advertised by Oracle over the BGP peer with your routers. When the session is established between your routers and Oracle routers, you will be able to see the IPv4 prefixes advertised by Oracle.
- If you have set up a redundant connection, configure the redundant connection in active or standby failover configuration. Configure your network router to pass traffic through only one connection at a time. The secondary connection is used only if the connection through the primary link or router fails.
- Complete any additional configurations within your network, which you may require, to manage the traffic flow through FastConnect Classic.

You can now access your Oracle Cloud services using FastConnect Classic.

Whitelisting IP Address

Whitelist with Oracle any public IP addresses that you want to expose. You can advertise public or private IP addresses over the connection based on whether you establish a public or private peering session. Whitelisting is required for some Oracle Cloud services or services that support instances. You can add your own Internet Protocol (IP) whitelist and blacklist rules, and activate the firewall for Oracle Cloud services.

Perform the following tasks depending on the type of connection and NATing provided by the selected connection type.

- If you are connecting using Direct Cross Connects, whitelist any IP addresses that you want to advertise over the connection.
- If you are connecting through an Oracle FastConnect Partner, complete the following:
 - If your Oracle FastConnect Partner is NATing your IP addresses, whitelist the single, permanent /32 address or NAT pool prefix allocated to you by the partner. For more information, contact your FastConnect partner account manager.
 - If you are source NATing your IP addresses, whitelist the public IP addresses that you will be advertising to Oracle. This includes the IP prefixes you'll use to NAT your private IP addresses.
 - Whitelist any IP addresses you want your FastConnect partner to advertise to Oracle so that you can initiate connections from Oracle towards your network.
- Ensure that you update the relevant Oracle Cloud service firewalls to permit traffic from the IP addresses that will be the source IP for the traffic.

To whitelist the IP addresses, follow the procedure that you use to whitelist an IP address for your Oracle Cloud services. See *Managing Internet Protocol Whitelist and Blacklist Rules* in *Managing and Monitoring Oracle Cloud*.



Note:

If the **Firewall** tile is not visible in Infrastructure Classic Console, file a service request with My Oracle Support and specify the IP address that you want to whitelist.

Before using the connection for the first time, you must verify that data packets are being routed correctly. See [Testing Your Connection](#).

Testing Your Connection

Test your connection before using it for the first time. If you are connecting through Oracle FastConnect Partner, work with your partner service account manager to identify a suitable procedure to test the connection.

Run the following checks before using the connection:

- Verify that you are accessing your Oracle Cloud services through FastConnect Classic and not through the public Internet.
- If you have set up redundant connections, test the failover procedures prior to enabling production traffic over the service. See [Providing Redundancy to Ensure High Availability](#).
 - Verify that you can access Oracle Cloud services through FastConnect Classic even when a connection fails. If you have configured redundant connections from your network edge to FastConnect Classic and only one of your connections fails, establish and test the appropriate configurations on your routers to ensure that you don't lose connectivity.
 - Verify connectivity to Oracle Cloud services even when both connections fail. Even if both connections to FastConnect Classic fail, you can reconfigure your routers to route traffic related to your Oracle Cloud services through the public Internet. This ensures that you won't lose access to Oracle Cloud services as you can still access the services through the public Internet.

Establish and test your configurations and procedures for uninterrupted access to your Oracle Cloud services over the public Internet.

4

Managing the Service

After provisioning the service, you can monitor the service, add additional peering sessions, and modify the components of the service.

If you are using Oracle Cloud Infrastructure FastConnect, choose one of the following topics that suits your situation.

- [FastConnect: With an Oracle Provider](#)
- [FastConnect: With a Third-Party Provider](#)
- [FastConnect: Colocation with Oracle](#)

After provisioning the service, you can check on the day-to-day operation of your service, monitor performance, and review important notifications. See [Performing Service-Specific Tasks](#) in *Getting Started with Oracle Cloud*.

Topics

- [Adding New Peering Sessions](#)
- [Providing Redundancy to Ensure High Availability](#)
- [Modifying the Port Speed](#)
- [Troubleshooting](#)
- [Workflow to Terminate the Service](#)
- [Managing Cross Connects](#)
- [Managing Virtual Circuits](#)

Adding New Peering Sessions

After setting up FastConnect Classic, you can create additional public or private peering sessions based on your requirement. For every additional peering session, create a virtual circuit.

To create an additional peering session, complete the following tasks:

1. Decide if you want to create an additional private or public peering session.

When you establish a private peering session with FastConnect Classic edge routers, you can extend your on-premise private networks to the Oracle Cloud. See [Peering Types](#).

2. If you want to create an additional private peering session, you must create a private gateway.
 - a. While creating a private gateway, specify the names of the IP networks that you want to associate with this private gateway. You can access instances on the IP networks associated with the private gateway over the private peering with FastConnect Classic. See [Creating a Private Gateway](#) in *Using Oracle Cloud Infrastructure Compute Classic*.

- b. Note down the name of your private gateway. You'll need to provide this name when you set up your connection.
 - c. (Optional.) Create ACLs that are applied to the traffic that passes through this gateway. See [Managing ACLs](#) in *Using Oracle Cloud Infrastructure Compute Classic*.
3. Create a virtual circuit for every additional peering session. You can create a new virtual circuit on existing cross connects that you are already using.

Providing Redundancy to Ensure High Availability

When you set up FastConnect Classic, configure your routers to prefer traffic over the FastConnect Classic path. Should this path become unavailable, configure your routers to send and receive traffic over the public Internet till the peering issue is resolved.

Ensure the following while setting up the redundant connection:

- Set up a redundant connection to the Oracle edge routers, so that even if one of your connections fails, you won't lose connectivity.
- Configure the redundant connection in active or standby failover configuration so that traffic flows through only one link at a time. The secondary link is used only if the connection through the primary link or router fails.
- Configure your routers so that even if both connections to FastConnect Classic fail, you can still access your Oracle Cloud services through the public Internet. The default configuration is to prefer the routes received over FastConnect Classic. If FastConnect Classic is not available, then set rules to route traffic related to your Oracle Cloud services over the public Internet, until the peering issue is resolved.
- Complete any additional configurations within your network, which you may require, to manage the traffic flow across FastConnect Classic.

To achieve end-to-end redundancy from your network edge and to obtain the service level agreement (SLA) of 99.9%, Oracle recommends that you set up a primary and a secondary link between your network edge routers and Oracle routers. You must also establish two redundant BGP peers. It is not mandated to set up two links, but you forfeit the SLA of 99.9% if you only have one link and one BGP peer.

If you are connecting through Oracle FastConnect Partner, you'll need to work with the partner to leverage the redundant connections through the partner connectivity service. Oracle and your Oracle FastConnect Partner are connected to provide redundancy. Your Oracle FastConnect Partner is required to connect to FastConnect Classic with two links to protect against failure of a single peering.

If applicable, update the virtual circuit to map the primary and secondary virtual circuits. You are required to work with your provider to validate the routing configurations between your network and Oracle through the partner connectivity service for FastConnect Classic.

If you are connecting through Direct Cross Connects, create two cross connects: primary and secondary. While creating the virtual circuit, map both the cross connects.

Modifying the Port Speed

You cannot modify the port speed of an existing FastConnect Classic connection. If you want to modify the speed of your connection:

1. Provision a new connection with the modified port speed. See [Provisioning FastConnect Classic](#).
2. Terminate the existing connection if you no longer want to use it. See [Workflow to Terminate the Service](#).

Troubleshooting

If you run into any issues before the service is provisioned and activated:

- Contact your Oracle sales representative for assistance with provisioning FastConnect Classic.
- Contact your partner account manager for assistance with ordering and provisioning the partner service that connects to FastConnect Classic.
- Login to the partner's portal, if available, to file a support ticket and to refer to the troubleshooting information available in the documentation provided by the partner. For example, you can login to Equinix Cloud Exchange Portal, and then refer to the troubleshooting information available in the Equinix documents to troubleshoot any issues that you face in connecting through an Equinix IBX data center.

To report an incident after the service is provisioned and activated:

- Raise a service request with My Oracle Support for any support that you require for your FastConnect Classic services. You may be asked to provide your customer support identifier (CSI ID) and FastConnect ID, so keep that information handy. You receive FastConnect ID from Oracle when your service is provisioned. Additionally, provide the service key that was generated when you ordered AT&T NetBond for Oracle FastConnect if you are raising a service request for an issue with AT&T NetBond for Cloud.
 1. Go to <https://support.oracle.com>.
 2. In the **Sign In** pane, select **Cloud Support** as the portal, and then click **Sign In**.
 3. On the Dashboard page, click **Create Service Request**.
 4. In the Create Service Request wizard, do the following:
 - a. In the **Service Type** field, select **Oracle Cloud Infrastructure FastConnect Classic**.
 - b. In the **Problem Type** field, select **Issues with account or provisioning of your FastConnect service** or **Issues with FastConnect network link**, and then select the appropriate problem subtype.
 5. Follow the prompts in the wizard to complete the service request.
- Contact the Oracle FastConnect Partner's support help desk, and then follow the process specified by the help desk to report incidents or for further assistance with network configurations.

Workflow to Terminate the Service

You can terminate the service when you no longer require it.

To terminate FastConnect Classic:

1. Delete the virtual circuit. See [Deleting a Virtual Circuit](#).
2. If you are connecting through Direct Cross Connects, delete the cross connects. See [Deleting a Cross Connect](#).
3. If you are connecting through Oracle FastConnect Partner, contact your Oracle FastConnect Partner account manager to delete the partner service that connects to FastConnect Classic.

Managing Cross Connects

Topics

- [Listing Cross Connects](#)
- [Updating a Cross Connect](#)
- [Deleting a Cross Connect](#)

Listing Cross Connects

After you've created a cross connect, you can see a list of cross connects in your account.

Prerequisites

- To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See *Modifying User Roles in Managing and Monitoring Oracle Cloud*.

Procedure

1. Sign in to the FastConnect Classic console. If your domain spans multiple sites, select the appropriate site. To change the site, click the **Site** menu near the top of the page.
2. Click the **Network** tab.
3. In the **Network** drop-down list, expand **FastConnect**, and then click **Cross Connects**.

A list of cross connects is displayed.


Updating a Cross Connect

After you've created a cross connect, you can modify the circuit ID specified in the cross connect.

Prerequisites

- To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See *Modifying User Roles in Managing and Monitoring Oracle Cloud*.

Procedure

1. Sign in to the FastConnect Classic console. If your domain spans multiple sites, select the appropriate site. To change the site, click the **Site** menu near the top of the page.
2. Click the **Network** tab.
3. In the **Network** drop-down list, expand **FastConnect**, and then click **Cross Connects**.
4. Go to the cross connect that you want to modify. From the  menu, select **Update**.
5. Update the information as required:
 - **Your Circuit ID:** Enter the circuit ID, if you have assigned one for your network router. This helps you to identify the cross connect that maps to a router in your network. This is useful when you want to troubleshoot.
6. Click **Update**. The cross connect is updated.


Deleting a Cross Connect

If you don't need a cross connect any more, you can delete it.

Prerequisites

- To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See *Modifying User Roles in Managing and Monitoring Oracle Cloud*.

Procedure

1. Sign in to the FastConnect Classic console. If your domain spans multiple sites, select the appropriate site. To change the site, click the **Site** menu near the top of the page.
2. Click the **Network** tab.
3. In the **Network** drop-down list, expand **FastConnect**, and then click **Cross Connects**.
4. Go to the cross connect that you want to delete. From the  menu, select **Delete**.

Managing Virtual Circuits

Topics

- [Listing Virtual Circuits](#)
- [Updating a Virtual Circuit](#)
- [Deleting a Virtual Circuit](#)

Listing Virtual Circuits

After you've created a virtual circuit, you can see a list of virtual circuits in your account.

Prerequisites

- To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See *Modifying User Roles in Managing and Monitoring Oracle Cloud*.

Procedure

1. Sign in to the FastConnect Classic console. If your domain spans multiple sites, select the appropriate site. To change the site, click the **Site** menu near the top of the page.
2. Click the **Network** tab.
3. In the **Network** drop-down list, expand **FastConnect**, and then click **Virtual Circuits**.

A list of virtual circuits is displayed.

Updating a Virtual Circuit


After you've created a virtual circuit and the virtual circuit is provisioned, you can modify the parameters of the virtual circuit.

Prerequisites

- To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See *Modifying User Roles in Managing and Monitoring Oracle Cloud*.

Procedure

1. Sign in to the FastConnect Classic console. If your domain spans multiple sites, select the appropriate site. To change the site, click the **Site** menu near the top of the page.
2. Click the **Network** tab.

3. In the **Network** drop-down list, expand **FastConnect**, and then click **Virtual Circuits**.
4. Go to the virtual circuit that you want to modify. From the  menu, select **Update**.
5. Update the information as required. Different fields appear on the console depending on the **Connection Type** that you have selected. If any of the following fields do not appear in the console, it indicates that those fields are not relevant for the selected **Connection Type**. Select or enter the following information based on the fields that appear.

- **Public IP prefixes:** This field appears only if you have selected the **Circuit Type** as **Public**. You can add or remove public IP prefixes. If you add a new prefix, Oracle first verifies your company's ownership before advertising it across the connection. These IPv4 prefixes must be registered to you in an IRR or RIR. If you remove a prefix, Oracle stops advertising the prefix within a few minutes of your editing the virtual circuit.
- **AT&T NetBond Service Key:** This field appears only if you have selected AT&T Netbond as the **Connection Type**. Enter the service key that you have received from AT&T.

When you order AT&T NetBond for Oracle FastConnect, AT&T generates a service key. Enter the value of this key.

- Enter the following information to map the link that you have created to a router in Oracle Cloud. If you have created primary and secondary links to ensure high availability, specify the following information for both the links. When you set up two links between your network and Oracle Cloud, a redundant connection is established to FastConnect edge router which ensures high availability.
 - **Your Router Interface IP:** Enter the IP address of your network edge router for this VLAN in CIDR format.
 - **Oracle Router Interface IP:** Enter the IP address of the Oracle router for this VLAN in CIDR format.
 - **VLAN:** The VLAN ID that you want to use for this virtual circuit. Enter an integer between 100 and 4000. The VLAN ID must be unique.
 - **Cross Connect:** Select a cross connect that you have created.
- Enter the following information for your BGP session:
 - **Your BGP ASN:** The public or private ASN for your network. If you use a public ASN, ensure that the ASN is registered to you. You can work with your Internet service provider or one of the registries to obtain an ASN.

 **Note:**

If you do not have a registered public ASN, you can use private ASNs or use the fixed ASN provided by Oracle for configuring the network.

- **BGP MD5 Password:** Enter the BGP MD5 password.
- Only if you have selected Verizon as your Oracle FastConnect Partner, enter the following information that you have received from Verizon. After you order

Verizon SCI Connectivity for Oracle FastConnect and the service is provisioned, you'll can see the network configuration information on the Verizon SCI portal. Provide the following information that's available on the Verizon SCI portal.

- **Verizon BGPAS Number:** Enter the Verizon BGP ASN.
- **Primary Verizon IPAddress:** Enter the Verizon IP Address of Primary Router.
- **Secondary Verizon IPAddress:** Enter the Verizon IP Address of Secondary Router.
- **Primary Verizon VLANID:** Enter the Verizon VLAN ID of Primary Router.
- **Secondary Verizon VLANID:** Enter the Verizon VLAN ID of Secondary Router.
- **Cloud Service Name:** Enter `Oracle FastConnect`.

6. Click **Update**. The virtual circuit is updated.


Deleting a Virtual Circuit

If you don't need a virtual circuit any more, you can delete it.

Prerequisites

- To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See *Modifying User Roles in Managing and Monitoring Oracle Cloud*.

Procedure

1. Sign in to the FastConnect Classic console. If your domain spans multiple sites, select the appropriate site. To change the site, click the **Site** menu near the top of the page.
2. Click the **Network** tab.
3. In the **Network** drop-down list, expand **FastConnect**, and then click **Virtual Circuits**.
4. Go to the virtual circuit that you want to delete. From the  menu, select **Delete**.