EIP

Drawer

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HUAWEI

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- EIP Binding and Unbinding
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1.2 Billing Mode

Description

There are yearly/monthly and pay-per-use billing modes. Each one has different advantages and disadvantages.

- **Yearly/Monthly**

  You pay in advance for a subscription term, and in exchange, you get a discounted rate. This mode is ideal when the resource use duration is predictable. Billing
- **Pay-per-Use**

Pay-per-use is a postpaid billing mode. You pay as you go and just pay for what you use. You can purchase or release an EIP at any time. **Billing**

- **Differences Between Yearly/Monthly and Pay-per-Use**

Figure 1-1 EIP billing overview

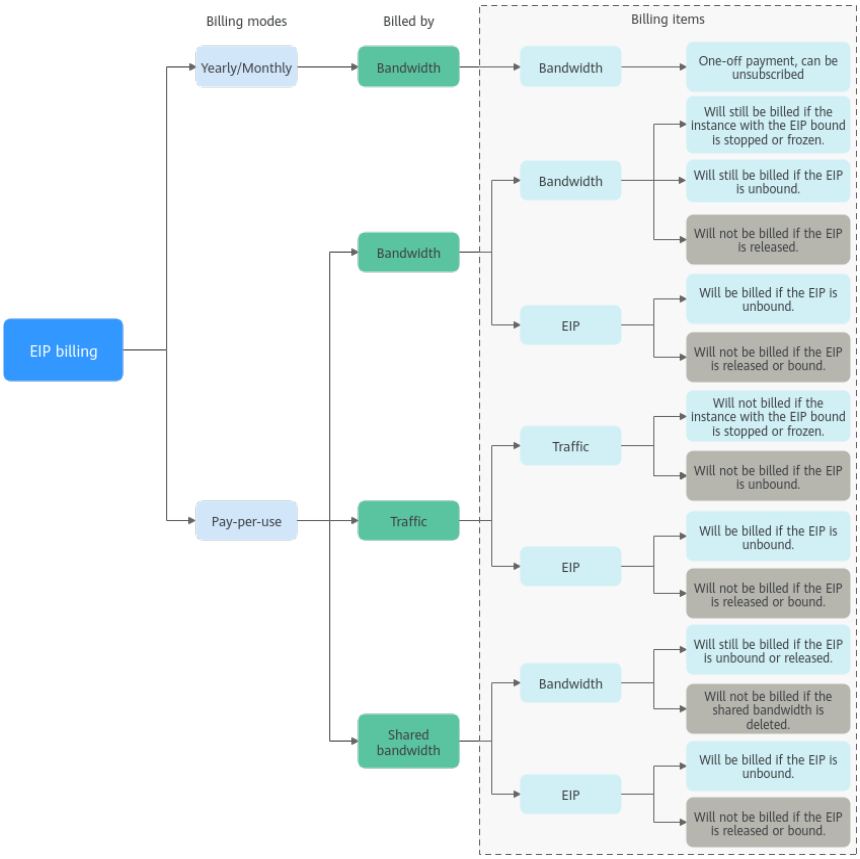


Table 1-1 Billing modes

Billing Mode	Yearly/ Monthly	Pay-per-use (billed by bandwidth)	Pay-per-use (billed by traffic)	Pay-per-use (added to a shared bandwidth)
Payment	Prepaid Billed by the subscription term you purchase.	Postpaid Billed based on your specified bandwidth size and usage duration. There is no limit on how much traffic you can use.	Postpaid Billed based on your EIP type and the total amount of traffic going out of the cloud.	Postpaid Billed by the shared bandwidth.

Billing Method	Billed by the subscription term you purchase.	Calculated by the second but billed every hour	Calculated by the second but billed every hour	Calculated by the second but billed every hour
Billed Items	Bandwidth	• Bandwidth • EIP	• Traffic • EIP	• Shared bandwidth • EIP
Billed Item Description	If you buy a yearly/monthly EIP, you only need to pay for the bandwidth included in the subscription. You are billed based on your specified bandwidth size and usage duration. There is no limit on how much traffic you can use.	• Bandwidth: You are billed based on your specified bandwidth size and usage duration. There is no limit on how much traffic you can use. After an EIP is purchased, you can change your specified bandwidth size. Although the total traffic is unlimited, your available bandwidth is limited to what was specified at the time of purchase. • EIP: If an EIP is not released, it will continue to be billed even if it is not bound to an instance.	• Traffic: You are billed based on your EIP type and the total amount of traffic going out of the cloud. The bandwidth size you set is only used to limit the maximum data transfer rate. To prevent high fees caused by traffic bursts, specify a proper bandwidth size when you buy an EIP. • EIP: If an EIP is not released, it will continue to be billed even if it is not bound to an instance.	If a pay-per-use EIP is added to a shared bandwidth: • Shared bandwidth: Only the shared bandwidth will be billed. There will be no additional bandwidth or traffic costs for EIPs added to the shared bandwidth. • EIP: If an EIP is not released, it will continue to be billed even if it is not bound to an instance.

Changing the Billing Mode	Yearly/Monthly can be changed to pay-per-use (by bandwidth).	Pay-per-use can be changed to yearly/monthly. The new billing mode takes effect immediately.	An EIP that is billed by traffic on a pay-per-use basis cannot be directly changed to be billed on a yearly/monthly basis. You need to change the EIP to be billed by bandwidth on a pay-per-use basis first, and then change the EIP to be billed on a yearly/monthly basis. The new billing mode takes effect immediately.	The billing mode cannot be changed.
Changing Specifications	Bandwidth can be increased or decreased.	Bandwidth can be increased or decreased.	Bandwidth can be increased or decreased. The bandwidth size you set is only used to limit the maximum data transfer rate.	Bandwidth can be increased or decreased.

FAQ

How Do I Change the EIP Billing Mode?

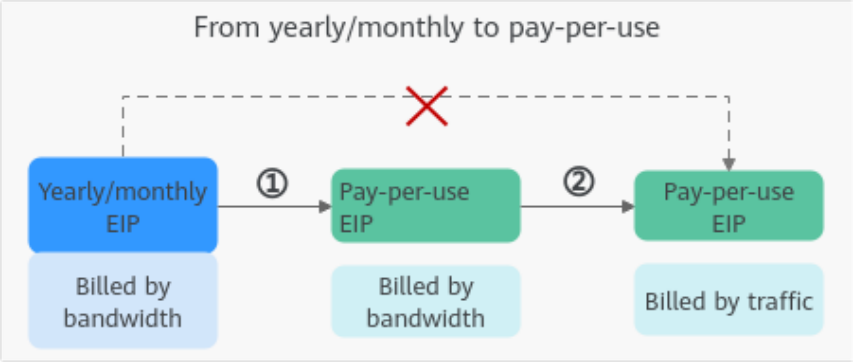
The EIP service has multiple billing modes you can choose from. You can change your EIP billing mode during the EIP usage period if necessary.

- For details about different billing change scenarios, see **Table 1-2**.
- For instructions about how to change the billing mode, see **Changing the EIP Billing Mode**.

NOTE

Changing the billing mode does not change the EIPs or interrupt their use.

Figure 1-2 EIP billing mode change



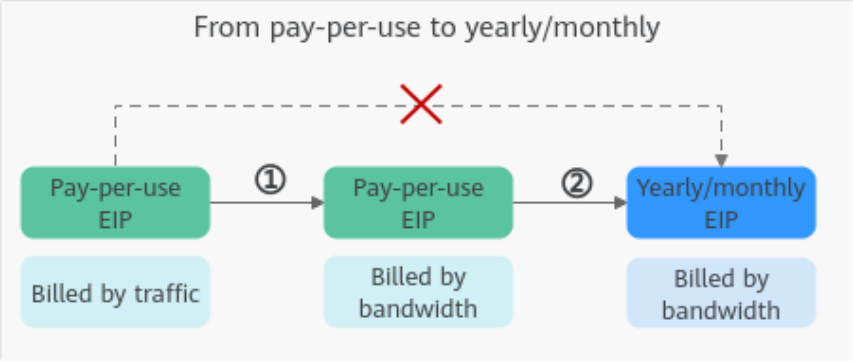


Table 1-2 Change description

Billing Mode Change	Change Scenario	Description
From yearly/monthly to pay-per-use	From yearly/monthly to pay-per-use (billed by bandwidth)	An EIP billed on a yearly/monthly basis can be directly changed to be billed on a pay-per-use basis (billed by bandwidth). • You can change a yearly/monthly EIP to be billed on a pay-per-use basis (billed by bandwidth) after the current subscription expires. For details, see **From Yearly/Monthly to Pay-Per-Use upon Expiration (Billed by Bandwidth)**. The new billing mode takes effect only after the yearly/monthly subscription expires. • You can change a yearly/monthly EIP to be billed on a pay-per-use basis (by bandwidth) immediately. For details, see **From Yearly/Monthly to Pay-Per-Use Immediately (Billed by Bandwidth)**. The new billing mode is applied immediately.

Billing Mode Change	Change Scenario	Description
	From yearly/monthly to pay-per-use (billed by traffic)	An EIP billed on a yearly/monthly basis cannot be directly changed to be billed on a pay-per-use basis (billed by traffic). To change this: 1. Change the EIP to be billed on a pay-per-use basis (by bandwidth). For details, see **From Yearly/Monthly to Pay-Per-Use**. 2. Change the EIP to be billed by traffic on a pay-per-use basis. For details, see **Pay-per-Use EIPs: Billing Change Between By Traffic and By Bandwidth**.
From pay-per-use to yearly/monthly	From pay-per-use (billed by bandwidth) to yearly/monthly	An EIP that is billed by bandwidth on a pay-per-use basis can be directly changed to be billed on a yearly/monthly basis. For details, see **From Pay-per-Use to Yearly/Monthly**. The new billing mode takes effect immediately.
	From pay-per-use (billed by traffic) to yearly/monthly	An EIP that is billed by traffic on a pay-per-use basis cannot be directly changed to be billed on a yearly/monthly basis. To change this: 1. Change the EIP to be billed by bandwidth on a pay-per-use basis. For details, see **Pay-per-Use EIPs: Billing Change Between By Traffic and By Bandwidth**. 2. Change the EIP to be billed on a yearly/monthly basis. For details, see **From Pay-per-Use to Yearly/Monthly**. The new billing mode takes effect immediately.
Pay-per-use EIPs: Billing change between by traffic and by bandwidth	From billing by traffic (pay-per-use) to billing by bandwidth (pay-per-use)	A pay-per-use EIP billed by traffic can be directly changed to be billed by bandwidth. For details, see **Pay-per-Use EIPs: Billing Change Between By Traffic and By Bandwidth**. The new billing mode is applied immediately.
	From billing by bandwidth (pay-per-use) to billing by traffic (pay-per-use)	A pay-per-use EIP billed by bandwidth can be directly changed to be billed by traffic. For details, see **Pay-per-Use EIPs: Billing Change Between By Traffic and By Bandwidth**. The new billing mode is applied immediately.

Why Am I Still Being Billed After My EIP Was Unbound or Released?

You have already paid for the yearly/monthly EIPs during their validity period. Unbinding an EIP or modifying its bandwidth does not affect the billing.

Table 1-3 Possible causes that pay-per-use EIPs are billed

EIP Status	Billing Option	Possible Cause
EIP is unbound from an instance.	Pay-per-use EIP billed by traffic	• EIP will be billed if it is not released. If your EIP is no longer required, **release it** to stop the billing. • Traffic will not be billed.
	Pay-per-use EIP billed by bandwidth	• EIP will be billed if it is not released. If your EIP is no longer required, **release it** to stop the billing. • Bandwidth will continue to be billed. If you do not want to pay for the bandwidth, **change the EIP from billing by bandwidth to by traffic**.
	Pay-per-use EIP added to a shared bandwidth	• EIP will be billed if it is not released. If your EIP is no longer required, **release it** to stop the billing. • Shared bandwidth will continue to be billed. A shared bandwidth and an EIP are billed separately. Unbinding and releasing an EIP will not affect the billing of the shared bandwidth. If you do not need the shared bandwidth anymore, **delete it**.
EIP is released.	• Pay-per-use EIP billed by traffic • Pay-per-use EIP billed by bandwidth	The EIP, traffic, and bandwidth will stop being billed. If you find that you are still being billed, check whether your account has a shared bandwidth.
	Pay-per-use EIP added to a shared bandwidth	A shared bandwidth and an EIP are billed separately. Unbinding and releasing an EIP will not affect the billing of the shared bandwidth. If you do not need the shared bandwidth anymore, **delete it**.

Can I Buy a Specific EIP?

By default, EIPs are assigned randomly. If you have released EIPs before, the system preferentially assigns an EIP that you have previously released.

If you want to assign a specific EIP, there are certain APIs you can call. For details, see **Assigning an EIP**.

When Will I Be Billed for EIP Reservation Price?

- Yearly/monthly EIPs will not be billed for reservation price.
- Pay-per-use EIP:
  - will not be billed for the EIP reservation price if the EIP is bound to an instance.
  - will be billed for the EIP reservation price if the EIP is not bound to an instance and is not released.

Learn More

Pricing Details

1.3 Region

Description

Region

Regions are defined by their geographical location and network latency. Public services, such as Elastic Cloud Server (ECS), Elastic Volume Service (EVS), and Object Storage Service (OBS), are shared within the same region. For lower network latency and quick resource access, select the region nearest to your workloads.

The region you specify when purchasing an EIP is the home region of the EIP.

FAQ

Selecting a Region

When selecting a region, consider the following factors:

- Location

  For lower network latency and quick resource access, select the region nearest to your workloads or target users.

  For example, if your workload is in Beijing, you can select CN North-Beijing4.

  If your workload is in Asia Pacific (outside the Chinese mainland), you can select AP-Bangkok or AP-Singapore.

  Huawei Cloud provides services in many regions around the world. You can select a region and an AZ based on requirements. For more information, see **Global Products and Services**.
- Resource Pricing

  The resource prices may vary in different regions. For details, see **EIP Pricing Details**.

Is the Region Selected for Buying an EIP the Home Region of the EIP?

Yes.

You can visit **https://en.ipip.net/ip.html** to query the region of your EIPs.

- The region of an EIP identified using a third-party website may be different from the region that the EIP belongs to.
- If the region identified using another third-party website is different from the one identified using **https://en.ipip.net/ip.html**, use the region identified using **https://en.ipip.net/ip.html**.
- If the region identified using **https://en.ipip.net/ip.html** is different from the one you selected when purchasing the EIP, use the region you had selected during EIP purchase.
- If your service is adversely affected because the region of your EIP cannot be determined, **submit a service ticket**.

To know more about the region of EIPs, **submit a service ticket**.

Can an EIP Be Bound to a Cloud Resource in Another Region?

No. EIPs can only be bound to resources in the same region. For example, an EIP in CN East-Shanghai1 cannot be bound to a resource in CN North-Beijing4.

1.4 Assigning an EIP

Description

You need to assign an EIP first before you can use it.

Parameter Settings

Configure parameters as prompted.

Table 1-4 Parameter description

Category	Parameter	Description	Example Value
Basic Configuration	Billing Mode	The following options are available: • **Yearly/Monthly**: You pay upfront for the amount of time you expect to use the instance. You need to make sure you have a valid payment method configured first. • **Pay-per-use**: You can start using the EIP first and then pay as you go. You are billed based on the EIP usage duration (by bandwidth) or used traffic (by traffic).	Pay-per-use

Category	Parameter	Description	Example Value
Basic Configuration	Region	Regions are geographic areas isolated from each other. For low network latency and quick resource access, select the region nearest to where your services will be accessed. The region selected for the EIP is its geographical location. **NOTE** • The geographical location of an EIP purchased in CN North-Ulanqab1 or CN East-Qingdao is Beijing. • The geographical location of an EIP purchased in CN East2 is Shanghai.	CN-Hong Kong

Category	Parameter	Description	Example Value
Bandwidth Configuration	EIP Type	• **Dynamic BGP**: Dynamic BGP provides automatic failover and chooses the optimal path when a network connection fails. **NOTE** **Dynamic BGP** is suitable for communications in CN-Hong Kong or communications between CN-Hong Kong and regions outside the Chinese mainland. If **Dynamic BGP** is used to access the regions in the Chinese mainland, data is forwarded through international egress routes, which may result in high latency and packet loss. If you need lower latency and better stability to access to the regions in the Chinese mainland, you are advised to select **Premium BGP**. • **Static BGP**: Static BGP offers more routing control and protects against route flapping, but an optimal path cannot be selected in real time when a network connection fails. • **Premium BGP**: Premium BGP chooses the optimal path and ensures low-latency and high-quality networks. BGP is used to interconnect with lines of multiple mainstream carriers. Public network connections that feature low latency and high quality are directly established between the Chinese mainland and Hong Kong (China). (Premium BGP is available only in CN-Hong Kong.) • **EIP Pool**: This parameter is available only when you set **Billing Mode** to **Pay-per-use**. An EIP pool helps you manage a large number of EIPs and assigns EIPs with dynamic BGP routing, ensuring network stability and optimal user experience. For details about the EIP pool, see **EIP Pool Overview**. For details, see **What Are the Differences Between Static BGP and Dynamic BGP?**	Dynamic BGP

Category	Parameter	Description	Example Value
Bandwidth Configuration	EIP Pool	Select your purchased EIP pool. This parameter is available only when **Billing Mode** is set to **Pay-per-use** and **EIP Type** set to **EIP Pool**.	eipPool-test
Bandwidth Configuration	Billed By	This parameter is available only when you set **Billing Mode** to **Pay-per-use**. • **Bandwidth**: You specify a maximum bandwidth and pay for the amount of time you use the bandwidth. This is suitable for scenarios with heavy or stable traffic. • **Traffic**: You specify a maximum bandwidth and pay for the outbound traffic you use. This is suitable for scenarios with light or sharply fluctuating traffic. • **Shared Bandwidth**: The bandwidth can be shared by multiple EIPs. This is suitable for scenarios with staggered peak hours.	Bandwidth
Bandwidth Configuration	Bandwidth (Mbit/s)	Bandwidth size in Mbit/s.	100
Bandwidth Configuration	Bandwidth Name	The name of the bandwidth. The name: • Can contain 1 to 64 characters. • Can contain letters, digits, underscores (_), hyphens (-), and periods (.).	bandwidth

Category	Parameter	Description	Example Value
DDoS Protection	DDoS Protection	Cloud Native Anti-DDoS Basic Cloud Native Anti-DDoS Basic provides up to a certain amount (for example, less than 5 Gbit/s) of DDoS mitigation capacity for free. The actual thresholds are displayed on the console. If the attack to an EIP exceeds the threshold, the EIP will be blocked.	-
EIP Details	EIP Name (Optional)	The name of the EIP. The name: • Can contain 1 to 64 characters. • Can contain letters, digits, underscores (_), hyphens (-), and periods (.).	eip-test
EIP Details	Enterprise Project	Enterprise project that the EIP belongs to. An enterprise project makes it easy to manage projects and group cloud resources and users. The name of the default project is **default**. For details about creating and managing enterprise projects, see the **Enterprise Management User Guide**.	default
EIP Details	Tag	Tags help you quickly identify, organize, and search for your EIPs. **NOTE** If your organization has configured tag policies for EIPs, you need to add tags to EIPs based on the policies. If a tag does not comply with the tag policies, EIP assignment may fail. Contact the administrator to learn more about tag policies.	• Key: Ipv4_key1 • Value: 3005eip
Monitoring	Monitoring	Basic monitoring is enabled by default. You can use the management console or APIs provided by Cloud Eye to query the metrics and alarms generated for the EIP and bandwidth.	-
Purchase Details	Required Duration	The duration for which the EIP will be used. The duration must be specified if the **Billing Mode** is set to **Yearly/Monthly**.	1 month

Category	Parameter	Description	Example Value
Purchase Details	Auto-renew	Whether to select **Auto-renew**. You can select it if the **Billing Mode** is set to **Yearly/Monthly**. The auto-renewal period is determined by the required duration. • Monthly subscription: The subscription is renewed every month. • Yearly subscription: The subscription is renewed each year.	-
Purchase Details	Quantity	The number of EIPs you want to assign. You can set **Quantity** only when **Billing Mode** is set to **Pay-per-use**.	1

FAQ

Can I Buy a Specific EIP?

By default, EIPs are assigned randomly. If you have released EIPs, the system preferentially assigns EIPs that you have released within the last 24 hours.

If you want to assign a specific EIP, you can call the API. For details, see **Assigning an EIP**.

1.5 EIP Type

Description

- **Dynamic BGP**

  Dynamic BGP provides automatic failover and chooses the best path based on the real-time network conditions and preset policies. The BGP public network egress supports switchover across domains within seconds, providing your users with high-speed and secure networks.

  This option works well for workloads that require higher network stability and connectivity, such as financial transactions, online games, large-scale enterprise applications, and livestreaming services.

- **Static BGP**

  Static BGP is a more cost-effective option that allows resources to access the Internet over a single carrier network. Static routes are configured manually and must be reconfigured manually anytime the network topology or link status changes.

This is a more cost-effective option that is a great fit for workloads that are running in relatively stable networks and have disaster recovery setups.

- **Premium BGP**

  BGP is used to interconnect with lines of multiple mainstream carriers. Public network connections that feature low latency and high quality are directly established between Chinese mainland and Hong Kong (China). Premium BGP chooses the optimal path for access from the abroad and allows users in the Chinese mainland to access cross-border applications faster.

  NOTE

  Premium BGP is now available only in the CN-Hong Kong region.

- **EIP Pool**

  Parameter **EIP Pool** is available only when **Billing Mode** is set to **Pay-per-use**. An EIP pool helps you manage a large number of EIPs and assigns EIPs with dynamic BGP routing, ensuring network stability and excellent user experience. For details, see **EIP Pool Overview**.

FAQ

What Are the Differences Between Static BGP, Dynamic BGP, and Premium BGP?

The differences among static BGP, dynamic BGP, and premium BGP are as follows:

Table 1-5 Differences among static BGP, dynamic BGP, and premium BGP

Item	Static BGP	Dynamic BGP	Premium BGP
Definition	Static routes are configured manually and must be reconfigured manually anytime the network topology or link status changes.	Dynamic BGP provides automatic failover and chooses the best path based on the real-time network conditions and preset policies.	Premium BGP chooses the optimal path and ensures low-latency and high-quality networks. BGP is used to interconnect with lines of multiple mainstream carriers. Public network connections that feature low latency and high quality are directly established between Chinese mainland and Hong Kong (China).

Item	Static BGP	Dynamic BGP	Premium BGP
Assurance	When changes occur on a network that uses static BGP, the manual configuration takes some time and high availability cannot be guaranteed. If you select static BGP, your application system must have disaster recovery setups in place.	When a fault occurs on a carrier's link, dynamic BGP will quickly select another path to take over services, ensuring service availability. Currently, carriers in China that support dynamic BGP routing include China Telecom, China Mobile, China Unicom, China Education and Research Network (CERNET), National Radio and Television Administration, and Dr. Peng Group.	Premium BGP provides the same assurance as that of dynamic BGP. In addition, premium BGP ensures higher network quality and lower latency. Currently, mainstream carriers in Hong Kong (China) are supported.
Advantages	This is a more cost-effective option that allows resources to access the Internet over a single carrier network. The routes can be manually configured.	The BGP public network egress supports switchover across domains within seconds, providing your users with high-speed and secure networks.	• Premium BGP chooses the optimal path for access from the abroad. • Premium BGP allows users in the Chinese mainland to access cross-border applications faster.
Service availability	99%	99.95%	99.95%
Billing	Their price from least to most expensive: static BGP, dynamic BGP, and premium BGP. For details, see **EIP Pricing Details**.		

NOTE

For more information about service availability, see **Huawei Cloud Service Level Agreement**.

1.6 EIP Pool

Description

An EIP pool helps you manage a large number of EIPs and assigns EIPs with dynamic BGP routing, ensuring network stability and excellent user experience.

If there is no EIP pool available when you buy an EIP, click **Manage EIP Pool** to buy an EIP pool first. For details, see **Purchasing an EIP Pool**.

FAQ

Usage Constraints

- The EIP quota of an EIP pool must be an integer multiple of 50.
- An EIP pool cannot be unsubscribed after your purchase. If you do not renew it before it expires, the EIP pool will be released.
- If your EIP is allocated from an EIP pool, you only need to pay for the bandwidth associated with the EIP.
- The billing mode of an EIP from an EIP pool cannot be changed to yearly/monthly.
- Currently, the quota of EIPs in an EIP pool can only be increased after you purchase the EIP pool.

1.7 Billed By

Description

Parameter **Billed By** is available only when **Billing Mode** is set to **Pay-per-use**.

- **Bandwidth**

  You specify a maximum bandwidth and pay for the time you use the bandwidth. This is suitable for scenarios with heavy or stable traffic.

- **Traffic**

  You specify a maximum bandwidth and pay for the outbound traffic you use. This is suitable for scenarios with light or sharply fluctuating traffic.

- **Shared Bandwidth**

  The bandwidth can be allocated to multiple EIPs and can be shared among the EIPs. This is suitable for scenarios with staggered peak hours. For details, see **Shared Bandwidth Overview**.

Table 1-6 Pay-per-use EIP billing

Billed By	Billed Item	Billed Item Description	Impact of EIP Operations on Billed Items
Bandwidth	• Bandwidth • EIP	If a pay-per-use EIP is billed by bandwidth, there are two billed items: • Bandwidth: You are billed based on your specified bandwidth size and usage duration. There is no limit on how much traffic you can use. After an EIP is purchased, you can change your specified bandwidth size. Although the total traffic is unlimited, your available bandwidth is limited to what was specified at the time of purchase. • EIP: If an EIP is not released, it will continue to be billed even if it is not bound to an instance.	After an EIP is purchased: • If the EIP is not bound to any instance, both the EIP and its bandwidth will be billed. • If the EIP is bound to an instance, only the bandwidth will be billed. The bandwidth will be billed regardless of if the instance bound to the EIP is running or not. • **After the EIP is unbound from an instance, the bandwidth will continue to be billed. Unless it is released, the EIP will still be billed.** • If the EIP is released, both the EIP and bandwidth will not be billed.

Billed By	Billed Item	Billed Item Description	Impact of EIP Operations on Billed Items
Traffic	• Traffic • EIP	If a pay-per-use EIP is billed by traffic, there are two billed items: • Traffic: You are billed based on your EIP type and the total amount of traffic going out of the cloud. The bandwidth size you set is only used to limit the maximum data transfer rate. To prevent high fees caused by traffic bursts, specify a proper bandwidth size when you buy an EIP. • EIP reservation price: If an EIP is not released, it will continue to be billed even if it is not bound to an instance.	After an EIP is purchased: • If the EIP is not bound to an instance, you will be billed for the EIP itself, but not for traffic. • If the EIP is bound to an instance, only the used traffic will be billed. If the instance bound to the EIP stops running and there is no traffic generated, there will be no traffic price. Also, the EIP will not be billed. • **After the EIP is unbound from an instance, the traffic will not be billed but the EIP will still be billed.** • If the EIP is released, the EIP will not be billed.

Billed By	Billed Item	Billed Item Description	Impact of EIP Operations on Billed Items
Shared bandwidth	• Shared bandwidth • EIP	If a pay-per-use EIP is added to a shared bandwidth: • Shared bandwidth: Only the shared bandwidth will be billed. There will be no additional bandwidth or traffic costs for EIPs added to the shared bandwidth. For details, see **Table 1-7**. • EIP reservation price: If an EIP is not released, it will continue to be billed even if it is not bound to an instance.	After an EIP is purchased, you will be billed for: • Shared bandwidth – **No operations on the EIP will affect the billing of a shared bandwidth. For example, if you have released the EIP but have not deleted the shared bandwidth, the shared bandwidth will still be billed.** – After a shared bandwidth is deleted, it will no longer be billed. • EIP – If the EIP is not bound to an instance, the EIP will still be billed. – **If the EIP is unbound from an instance, the EIP will be billed to keep it allocated to your account until it is released.** – If the EIP is released or bound to an instance, the EIP will not be billed.

Table 1-7 Shared bandwidth billing

Billing Mode	Billed By	Billed Item	Billed Item Description
Yearly/ Monthly	Bandwidth	Bandwidth	If you buy a yearly/monthly shared bandwidth, you are billed based on your specified bandwidth size and usage duration. There is no limit on how much traffic you can use.

Billing Mode	Billed By	Billed Item	Billed Item Description
Pay-per-use	Bandwidth	Bandwidth	You are billed based on your specified bandwidth size and usage duration. There is no limit on how much traffic you can use. After a shared bandwidth is purchased, you can change your specified bandwidth size. Although the total traffic is unlimited, your available bandwidth is limited to what was specified at the time of purchase.

FAQ

How Many EIPs Can Share the Same Bandwidth?

A shared bandwidth can be used by a maximum of 20 EIPs. If you need more than 20 EIPs added to the same shared bandwidth, you can **submit a service ticket** to request a larger quota.

Can a Bandwidth Be Used by Multiple Accounts?

A bandwidth cannot be shared between different accounts. Each account can use and manage only its own EIP bandwidths.

What Bandwidth Types Are Available?

There are dedicated bandwidths and shared bandwidths. A dedicated bandwidth can only be used by one EIP, but a shared bandwidth can be used by multiple EIPs.

What Is the Relationship Between Bandwidth and the Upload/Download Rate?

The bandwidth is measured in bit/s, but the download rate is measured in byte/s.

1 byte = 8 bits, that is, download rate = bandwidth/8

Due to various issues such as computer performance, network device quality, resource usage, and network peak hours, if the bandwidth is 1 Mbit/s, the actual upload or download rate is generally lower than 125 kByte/s (1 Mbit/s = 1,000 Kbit/s, upload or download rate = 1,000/8 = 125 kByte/s).

1.8 Bandwidth (Mbit/s)

Description

Parameter **Bandwidth (Mbit/s)** is available only when **Billed By** is set to **Bandwidth** or **Traffic**.

You can select or specify a maximum bandwidth size on the console. A bandwidth can be from 1 Mbit/s to 2,000 Mbit/s.

Currently, you are only billed for the outbound bandwidth you use.

The maximum inbound bandwidth depends on the size of the outbound bandwidth you purchased.

- If your purchased bandwidth is less than or equal to 10 Mbit/s, the inbound bandwidth will be 10 Mbit/s, and the outbound bandwidth will be the same as the purchased bandwidth.
- If your purchased bandwidth is greater than 10 Mbit/s, both the outbound and inbound bandwidths will be the same as the purchased bandwidth.

The preceding bandwidth limit is not applicable in regions **CN North-Beijing1** and **CN East-Shanghai2**.

FAQ

How Do I Change My Bandwidth Within the Bandwidth Range Provided by the Console?

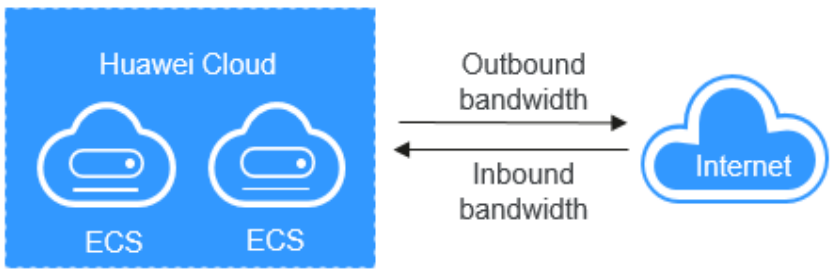
- If you want to change a dedicated bandwidth, refer to **Modifying an EIP Bandwidth**.
- If you want to change a shared bandwidth size, refer to **Modifying a Shared Bandwidth**.

What Are Inbound Bandwidths and Outbound Bandwidths?

Inbound bandwidth is the bandwidth consumed when data is transferred from the Internet to Huawei Cloud. For example, when resources are downloaded from the Internet to ECSs, that consumes inbound bandwidth.

Outbound bandwidth is the bandwidth consumed when data is transferred from Huawei Cloud to the Internet. For example, when ECSs provide services accessible from the Internet and external users download resources from the ECSs, that consumes outbound bandwidth.

Figure 1-3 Inbound bandwidth and outbound bandwidth



Huawei Cloud only bills for the outbound bandwidth.

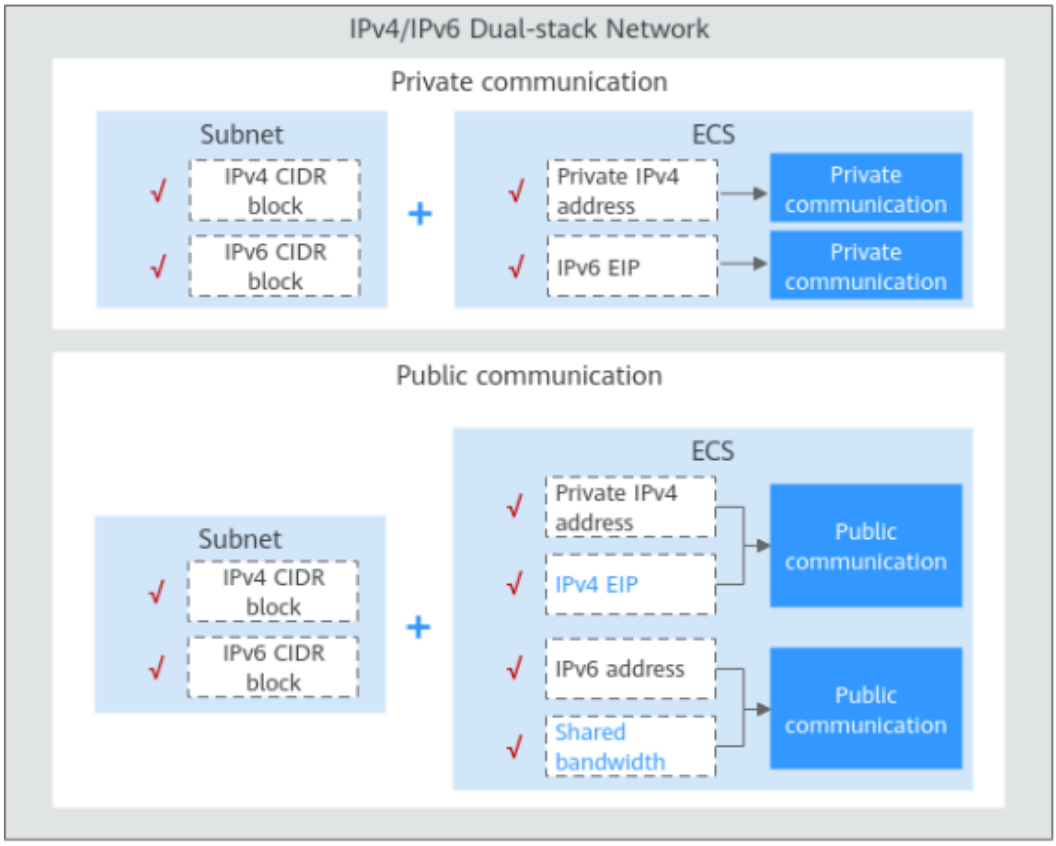
1.9 IPv6 EIP

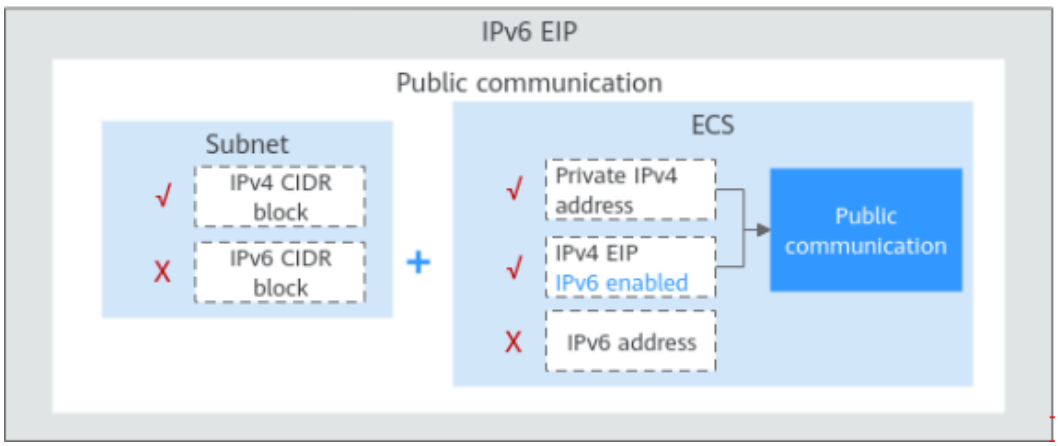
Description

Enabling IPv6 EIPs allows you to obtain both IPv4 and IPv6 EIPs.

EIPs support both IPv4 and IPv6. You can assign new IPv6 EIPs or convert existing IPv4 EIPs into IPv6 EIPs. For details, see **IPv6 EIP**.

Figure 1-4 Application scenarios of IPv4/IPv6 dual stack





1.10 Cloud Native Anti-DDoS Basic

Description

Cloud Native Anti-DDoS Basic (Anti-DDoS) monitors the service traffic from the Internet to EIPs to detect malicious traffic in real time. It then scrubs traffic based on user-configured defense policies without interrupting services. It also generates monitoring reports that provide visibility into network security.

- Anti-DDoS helps you defend against the following attacks:
  - Web server attacks

    SYN flood, HTTP flood, Challenge Collapsar (CC), and low-rate attacks
  - Game attacks

    User Datagram Protocol (UDP) flood, SYN flood, TCP-based, and fragmentation attacks
  - HTTPS server attacks

    SSL DoS and DDoS attacks
- Anti-DDoS also:
  - Monitors the security status of a single EIP and produces a monitoring report, covering the current protection status, protection settings, and the traffic and anomalies within the last 24 hours.
  - Provides attack statistics reports on all protected EIPs, covering the traffic scrubbing frequency, scrubbed traffic amount, top 10 attacked EIPs, and number of blocked attacks.
- You can configure an Anti-DDoS defense policy in either of the following ways:
  - Use the default protection policy.

    The default protection policy is an initial policy and takes effect for all newly purchased EIPs. The default traffic scrubbing threshold is 120 Mbit/s and can be modified.
  - Manually set a protection policy.

    You can manually set protection policies for your EIPs in batches or one by one. The default protection policy will no longer be used for EIPs for which protection policies have been manually configured.

FAQ

How Is Anti-DDoS Traffic Scrubbing Triggered?

Anti-DDoS scrubs traffic any time it detects that the incoming traffic to an IP address exceeds a specific threshold.

- If the service traffic reaches this threshold, Anti-DDoS intercepts only the malicious traffic.
- If the service traffic does not reach the threshold, Anti-DDoS will not intercept the traffic, regardless of whether it is malicious or not.

1.11 Cloud Native Anti-DDoS Advanced

Description

Cloud Native Anti-DDoS Advanced (CNAD Advanced) provides extra DDoS protection for cloud services on Huawei Cloud such as Elastic Cloud Server (ECS), Elastic Load Balance (ELB), Web Application Firewall (WAF), and Elastic IP (EIP). CNAD Advanced defends against the DDoS attacks targeting the IP addresses on Huawei Cloud and it provides more robust protection for cloud services. With just a few clicks on the console, you can enjoy always-on DDoS mitigation on Huawei Cloud.

CNAD Advanced has the following features:

- Transparent access

  You can directly protect EIPs on Huawei Cloud without modifying domain name resolution or configuring origin server protection.
- Unlimited protection

  Huawei Cloud helps you defend against DDoS attacks based on the network and resource capabilities in the current region. The capabilities offered grow as Huawei Cloud network capabilities grow.
- Joint protection

  Enabling joint protection will automatically engage AAD for DDoS mitigation.
- IPv4/IPv6 protection

  CNAD Advanced can protect both IPv4 and IPv6 EIPs.
- Traffic scrubbing

  CNAD Advanced scrubs traffic when detecting that the incoming traffic of an IP address exceeds a certain threshold.
- IP address blacklists or whitelists

  You can configure an IP address blacklist or whitelist to block or allow access from specified IP addresses.
- Protocol-based blocking

  With CNAD Advanced, you can block traffic based on its protocol in one click. For example, if there is no User Datagram Protocol (UDP) traffic, you are advised to disable UDP for CNAD Advanced.

CNAD comes in standard, basic, advanced, and platinum editions. For details, see **CNAD Specifications**.

FAQ

How Does CNAD Basic Count the Number of Protection Times?

Any time malicious traffic reaches 5 Gbit/s, that is counted as one attack (one protection time). The number of attacks will be counted in the following methods:

- Discontinuous attacks within half an hour are not counted.

- If a server suffers from continuous DDoS attacks, every half an hour is counted as one attack.
- The timer starts any time there is an attack.

1.12 Enterprise Project

Description

When purchasing an EIP, you can add the EIP to an existing enterprise project, which them lets you manage the EIP through the enterprise project.

You can add EIPs to or remove them from an enterprise project, and add user groups or users to an enterprise project to manage EIPs by enterprise project. For details, see **Enterprise Management User Guide**.

FAQ

What Are the Differences Between IAM and Enterprise Projects?

- IAM projects

  IAM projects group and physically isolate resources within a given same region.

  Resources cannot be transferred between IAM projects. They can only be deleted and then created or purchased again.
- Enterprise projects

  Enterprise projects group, manage, and logically isolate resources of an enterprise across regions.

  An enterprise project can include resources in multiple regions, and resources can be added to or removed from enterprise projects.

  You cannot create IAM projects after enabling Enterprise Management.

How Many Enterprise Projects Can I Create?

By default, you can create up to 100 enterprise projects.

If you need more enterprise projects to manage resources, create a member account and create enterprise projects under the member account.

If this still cannot meet your requirements, apply for a larger quota.

1.13 DHCP Lease Time

Description

DHCP Lease Time refers to the time period for which each client can use an IP address automatically assigned by the DHCP server. After the time period expires, a new IP address will be assigned to the client.

- **Limited**: Set the DHCP lease time. The unit can be day or hour.

- **Unlimited**: The DHCP lease time does not expire.

FAQ

Is a New DHCP Lease Time Applied Immediately After Being Changed?

If the time period is changed, the new time period is automatically applied after half of the existing time period has passed.

If you want the new time period to be applied immediately, restart the ECS or log in to the ECS to run the Windows or Linux commands.

For details, see **How Do I Make the Changed DHCP Lease Time of a Subnet Take Effect Immediately?**

1.14 Tag

Description

- Tag

  You can add tags to EIPs to help you identify and manage EIPs.

  You can add a tag to an EIP when you buy the EIP. You can also add a tag to an existing EIP on the EIP details page. A maximum of 10 tags can be added to each EIP.

  You can quickly search for and filter specific cloud resources based on the tags added to them. For example, you can define a set of tags for cloud resources in an account to track the owner and usage of each cloud resource, making resource management easier.

- **Tag Naming Rules**
  - Each tag consists of a key-value pair.
  - A maximum of 10 tags can be added to each EIP.
  - For each resource, a tag key must be unique and can have only one tag value.

Table 1-8 Tag naming rules

Parameter	Rule	Example
Tag key	• Cannot be left blank. • Must be unique for an EIP. • Can contain a maximum of 36 characters. • Cannot contain the following characters: =*<>\,|/ • Cannot start or end with a space.	Organization

Parameter	Rule	Example
Tag value	• Can contain a maximum of 43 characters. • Cannot contain the following characters: =*<>\,|/ • Cannot start or end with a space.	Apache

1.15 Monitoring

Description

- **Monitoring**

  Monitoring is enabled by default when you purchase an EIP. This helps you monitor your network traffic at one-minute granularity, bandwidth fluctuations, and inbound/outbound bandwidth rates, for free. For details about EIP metrics, see **Monitoring Metrics**.

  You can view EIP metrics on the Cloud Eye console. For details, see **Viewing Metrics**.

- **Custom Alarm Rules**

  You can create EIP alarm rules to customize monitored objects and notification policies to learn about EIP bandwidth traffic fluctuation at any time. For details, see **Creating an Alarm Rule**.

1.16 Required Duration

Description

Parameter **Required Duration** is available only when **Billing Mode** is set to **Yearly/Monthly**.

Monthly: The minimum subscription unit is one month and the maximum subscription unit is nine months.

Yearly: The minimum subscription unit is one year and the maximum subscription unit is five years.

If **Auto-renew** is enabled, the system auto-renews for 1 month every time for monthly subscription, and for 1 year every time for yearly subscription.

1.17 Quantity

Description

Parameter **Quantity** is available only when **Billing Mode** is set to **Pay-per-use**.

A maximum of 20 EIPs are allowed per purchase. If the number of EIPs cannot meet your requirements, you can purchase EIPs multiple times.

If the number of EIPs you want to purchase exceeds the quota limit, you can apply for a higher quota. For details, see **How Do I Apply for a Higher Quota?**

