Elastic IP

User Guide

Issue 01

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HUAWEI

Security Declaration

Vulnerability

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Contents

1 Elastic IP

1.1 EIP Overview

EIP

The Elastic IP (EIP) service enables your cloud resources to communicate with the Internet using static public IP addresses and scalable bandwidths. If a resource has an EIP bound, it can directly access the Internet. If a resource only has a private IP address, it cannot directly access the Internet. EIPs can be bound to or unbound from ECSs, BMSs, virtual IP addresses, NAT gateways, or load balancers.

Each EIP can be bound to only one cloud resource.

Figure 1-1 Connecting to the Internet using an EIP
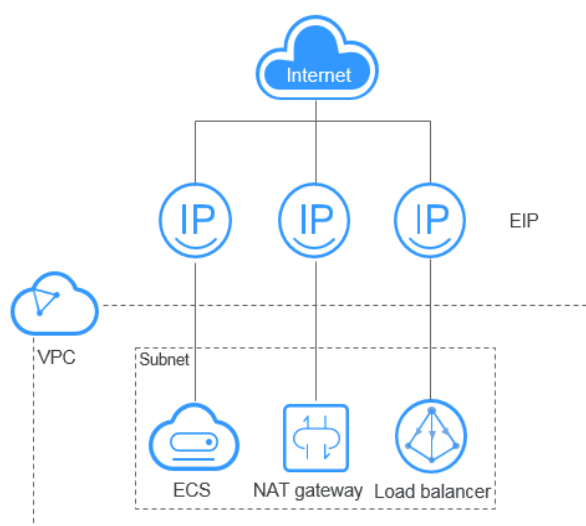
1.2 Assigning an EIP

Scenarios

Assign an EIP for a cloud resource you want to make it accessible over the Internet.

> ☐ **NOTE**
>
> If you want to assign an EIP that you have released or assign a specific EIP, you can use APIs. When assigning an EIP, set the value of **ip_address** to the IP address that you want to assign. For details, see **Elastic IP API Reference**.
>
> - If the EIP has been assigned to another user, you will fail to assign your required EIP.
>
> - The management console does not support assigning a specific EIP.

Procedure

1. Log in to the management console.

2. Click ⊚ in the upper left corner and select the desired region and project.

3. Click ☰ in the upper left corner and choose **Networking** > **Elastic IP**.

4. On the displayed page, click **Buy EIP**.

5. Set the parameters as prompted.

Table 1-1 Parameter descriptions

Parameter	Description	Example Value
Billing Mode	The following billing modes are available: - Yearly/Monthly - Pay-per-use	Pay-per-use
Region	Regions are geographic areas that are physically isolated from each other. The networks inside different regions are not connected to each other, so resources cannot be shared across different regions. For lower network latency and faster access to your resources, select the region nearest you. The region selected for the EIP is its geographical location.	-

Parameter	Description	Example Value
EIP Type	• **Dynamic BGP**: Dynamic BGP provides automatic failover and chooses the optimal path when a network connection fails.	Dynamic BGP
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 total 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 traffic.	Bandwidth
Bandwidth	The bandwidth size in Mbit/s.	100
DDoS Protection	Cloud Native Anti-DDoS Basic Cloud Native Anti-DDoS Basic provides up to 5 Gbit/s of DDoS mitigation capacity. If the attack to an EIP exceeds 5 Gbit/s, the EIP will be blocked.	-
EIP Name	The EIP name.	eip-test
Enterprise Project	The enterprise project that the EIP belongs to. An enterprise project facilitates project-level management and grouping of 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

Parameter	Description	Example Value
Advanced Settings	Click the drop-down arrow to configure parameters, including the bandwidth name and tag.	-
Bandwidth Name	The name of the bandwidth.	bandwidth
Tag	The EIP tags. Each tag contains a key and value pair. The tag key and value must meet the requirements listed in **Table 1-2**.	● Key: Ipv4_key1 ● Value: 3005eip
Monitoring	Used to monitor the EIP and 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.	-
Required Duration	The duration for which the purchased EIP will use. The duration must be specified if the **Billing Mode** is set to **Yearly/Monthly**.	1 month
Quantity	The number of EIPs you want to purchase. The quantity must be specified if the **Billing Mode** is set to **Pay-per-use**.	1
Quantity	The number of EIPs you want to assign.	1

Table 1-2 EIP tag requirements

Parameter	Requirement	Example Value
Key	- Cannot be left blank. - Must be unique for each EIP. - Can contain a maximum of 36 characters. - Can contain only the following character types: – Uppercase letters – Lowercase letters – Digits – Special characters, including hyphens (-) and underscores (_)	Ipv4_key1
Value	- Can contain a maximum of 43 characters. - Can contain only the following character types: – Uppercase letters – Lowercase letters – Digits – Special characters, including hyphens (-) and underscores (_)	3005eip

☐ NOTE

- If you are buying an EIP billed on a pay-per-use basis and you want to use a shared bandwidth, you can only select an existing shared bandwidth from the **Bandwidth Name** drop-down list. If there are no shared bandwidths to select, purchase a shared bandwidth first.
- A dedicated bandwidth cannot be changed to a shared bandwidth and vice versa. However, you can purchase a shared bandwidth for pay-per-use EIPs.
  - After an EIP is added to a shared bandwidth, the EIP will use the shared bandwidth.
  - After an EIP is removed from the shared bandwidth, the EIP will use the dedicated bandwidth.

6. Click **Next**.

7. Click **Submit**.

If you click **Buy Shared Bandwidth** when you buy an EIP, you also need to purchase the bandwidth.

1.3 Binding an EIP to an Instance

Scenarios

After EIPs are assigned, you can bind them to resources such as ECSs, BMSs, virtual IP addresses, NAT gateways, and load balancers to allow them to access the Internet.

Notes and Constraints

- An EIP can only be bound to an instance from its same region.
- An EIP can only be bound to an instance from its same account.
- An EIP cannot be bound to a frozen instance.

Procedure

Binding an EIP to an instance, such as an ECS, a BMS, or a virtual IP address

1. In the EIP list, locate the row that contains the EIP, and click **Bind**.
2. Select the instance.
3. Click **OK**.

   📖 **NOTE**

   To bind an instance to an EIP:
   - If the instance is an ECS:
     - The ECS must be in the running or stopped status.
     - The ECS must be in the same region as that of the EIP.
     - The ECS has no fixed public IP address or any other EIP.
   - If the instance is a virtual IP address:
     - The virtual IP address must be in the same region as that of the EIP.
     - The virtual IP address must be in the available or assigned status.
   - If the instance is a BMS:

     The BMS must be in the same region as that of the EIP.

Binding an EIP to a NAT gateway

If you want to bind a NAT gateway to an EIP, the NAT gateway must be in the same region as that of the EIP. After an EIP is bound to a NAT gateway, ECSs associated with this gateway can share the EIP to access the Internet or provide services accessible from the Internet.

You can bind an EIP to a NAT gateway by configuring SNAT and DNAT rules for the gateway. For details, see **Configuring SNAT Rules to Enable Servers to Access the Internet** and **Configure DNAT Rules to Enable Servers to Provide Services Accessible from the Internet**.

Binding an EIP to a load balancer

If you want to bind a load balancer to an EIP, the load balancer must be in the same region as that of the EIP. Then, the load balancer can receive requests over the Internet. For details, see **Binding or Unbinding an EIP**.

No Instance Available for EIP Binding

- There are no instances available when you want to bind an instance to an EIP.

  You have instances, but an EIP cannot be bound to any of them.

  – An EIP cannot be bound to an instance from a different region.

  – An EIP cannot be bound to an instance from a different account.

  – The instance is frozen and cannot have an EIP bound.

  There are no instances.

  Create an ECS, **create a BMS**, or **assign a virtual IP address**.

1.4 Unbinding an EIP from an Instance

Scenarios

Unbind an EIP from an instance, if:

- Your instance does not need to use an EIP.

  If you do not release the EIP after unbinding it, the EIP will be billed. For details, see **Releasing an EIP**.

- You want to bind the EIP to another instance.

The system preferentially assigns EIPs to you from the ones you released, if any. However, if any of these EIPs is already assigned to another user, it cannot be re-assigned to you.

Notes and Constraints

- An EIP cannot be unbound if its server is suspected of violations and the EIP is frozen by the national supervision department.

Unbinding a Single EIP

1. Log in to the management console.

2. Click ⊙ in the upper left corner and select the desired region and project.

3. Click ☰ in the upper left corner and choose **Networking** > **Elastic IP**.

4. On the displayed page, locate the row that contains the target EIP, and click **Unbind** in the **Operation** column.

   A confirmation dialog box is displayed.

5. Click **Yes** in the displayed dialog box.

   In the EIP list, the target EIP has no associated instance.

Unbinding Multiple EIPs at Once

1. Log in to the management console.

2. Click ⊙ in the upper left corner and select the desired region and project.

3. Click ☰ in the upper left corner and choose **Networking** > **Elastic IP**.

4. On the displayed page, select the EIPs to be unbound.

5. In the upper left corner of the EIP list, click **Unbind**.

   A confirmation dialog box is displayed.

6. Click **Yes** in the displayed dialog box.

   In the EIP list, the target EIPs have no associated instances.

📖 **NOTE**

If a pay-per-use EIP is unbound from an instance, the EIP will be billed to keep it allocated to your account unless it is released.

If an EIP billed by bandwidth is unbound from an instance, the bandwidth will continue to be billed.

If you have any questions about the billing, see **Why Am I Still Being Billed After My EIP Has Been Unbound or Released?**

1.5 Releasing an EIP

Scenarios

If an EIP is no longer required, you can unbind it from your instance and then release it.

Notes and Constraints

- Only EIPs that have no instances bound can be released. To release an EIP that has been bound to an instance, unbind it first. For details, see **Unbinding an EIP from an Instance**.

- The system preferentially assigns EIPs to you from the ones you released, if any. However, if any of these EIPs is already assigned to another user, it cannot be re-assigned to you.

  For details, see **How Do I Assign or Retrieve a Specific EIP?**

- EIPs billed on a yearly/monthly basis can only be unsubscribed.

- An EIP cannot be released if its server is suspected of violations and the EIP is frozen by the national supervision department.

Releasing a Single EIP

1. Log in to the management console.

2. Click ⊙ in the upper left corner and select the desired region and project.

3. Click ☰ in the upper left corner and choose **Networking** > **Elastic IP**.

4. In the EIP list, locate the row that contains the EIP and choose **More** > **Release** in the **Operation** column.

   A confirmation dialog box is displayed.

5. Click **Yes** in the displayed dialog box.

   You can find that the EIP is not in the EIP list.

Releasing Multiple EIPs at Once

1. Log in to the management console.

2. Click ⊙ in the upper left corner and select the desired region and project.

3. Click ☰ in the upper left corner and choose **Networking** > **Elastic IP**.

4. In the EIP list, select the EIPs to be released.

5. In the upper left corner of the list, choose **More** > **Release**.

   A confirmation dialog box is displayed.

6. Click **Yes** in the displayed dialog box.

   You can find that the EIPs are not in the EIP list.

1.6 Changing Dedicated Bandwidth Size of an EIP

Scenarios

No matter which billing mode is used, if your EIP is not added to a shared bandwidth, it uses a dedicated bandwidth. A dedicated bandwidth can control how much data can be transferred using a single EIP.

This section describes how to increase or decrease the bandwidth size. Changing bandwidth size does not change the EIPs.

Notes and Constraints

- If you renew a yearly/monthly EIP in its current validity period, its bandwidth cannot be modified in this period.

- You can modify the bandwidth of an yearly/monthly EIP only once within the current subscription period.

- If an EIP is frozen due to account arrears or for security reasons, its dedicated bandwidth cannot be modified.

Procedure

1. Log in to the management console.

2. Click ⊙ in the upper left corner and select the desired region and project.

3. Click ☰ in the upper left corner and choose **Networking** > **Elastic IP**.

4. Locate the row that contains the target EIP in the EIP list, and click **More** > **Modify Bandwidth** in the **Operation** column.

   – If it is a pay-per-use EIP, the **Modify Bandwidth** page is displayed.

   – If it is a yearly/monthly EIP, select either of the following method to increase or decrease the bandwidth and click **Continue**.

     ▪ Increase bandwidth

     ▪ Decrease bandwidth

5. Change the bandwidth size as prompted.

> You can also change the bandwidth name. If an EIP is billed on a pay-per-use basis, you can change its bandwidth billing option.

6. Click **Next**.
7. Click **Submit**.

1.7 Unbinding an EIP from an ECS and Releasing the EIP

Scenarios

If you no longer need an EIP, unbind it from the ECS and release the EIP to avoid wasting network resources.

Notes and Constraints

- Only EIPs with no instance bound can be released. If you want to release an EIP with an instance bound, you need to unbind EIP from the instance first.
- You cannot buy an EIP that has been released if it is currently in use by another user.
- If an EIP is frozen due to account arrears or security reasons, it cannot be bound or unbound.

Procedure

Unbinding a single EIP

1. Log in to the management console.

2. Click in the upper left corner and select the desired region and project.

3. Click in the upper left corner and choose **Networking** > **Elastic IP**.

4. On the displayed page, locate the row that contains the EIP, and click **Unbind**.

5. Click **Yes** in the displayed dialog box.

Releasing a single EIP

1. Log in to the management console.

2. Click in the upper left corner and select the desired region and project.

3. Click in the upper left corner and choose **Networking** > **Elastic IP**.

4. On the displayed page, locate the row that contains the target EIP, click **More** and then **Release** in the **Operation** column.

5. Click **Yes** in the displayed dialog box.

Unbinding multiple EIPs at once

1. Log in to the management console.

2. Click in the upper left corner and select the desired region and project.

3. Click ☰ in the upper left corner and choose **Networking** > **Elastic IP**.

4. On the displayed page, select the EIPs to be unbound.

5. Click the **Unbind** button located above the EIP list.

6. Click **Yes** in the displayed dialog box.

Releasing multiple EIPs at once

1. Log in to the management console.

2. Click ◉ in the upper left corner and select the desired region and project.

3. Click ☰ in the upper left corner and choose **Networking** > **Elastic IP**.

4. On the displayed page, select the EIPs to be released.

5. Click the **Release** button located above the EIP list.

6. Click **Yes** in the displayed dialog box.

1.8 Modifying an EIP Bandwidth

Scenarios

No matter which billing mode is used, if your EIP is not added to a shared bandwidth, it uses a dedicated bandwidth. A dedicated bandwidth can control how much data can be transferred using a single EIP.

This section describes how to increase or decrease the bandwidth size. Changing bandwidth size does not change the EIPs.

Procedure

1. Log in to the management console.

2. Click ◉ in the upper left corner and select the desired region and project.

3. Click ☰ in the upper left corner and choose **Networking** > **Elastic IP**.

4. Locate the row that contains the target EIP in the EIP list, click **More** in the **Operation** column, and select **Modify Bandwidth**.

5. Modify the bandwidth parameters as prompted.

6. Click **Next**.

7. Click **Submit**.

Helpful Links

- **How Do I Change the EIP Billing Option from Bandwidth to Traffic or from Traffic to Bandwidth?**

- **Can I Increase My Bandwidth Billed on Yearly/Monthly Basis and Then Decrease It?**

1.9 Exporting EIP Information

Scenarios

The information of all EIPs under your account can be exported in an Excel file to a local directory. The file records the ID, status, type, bandwidth name, and bandwidth size of EIPs.

Procedure

1. Log in to the management console.

2. Click ⊙ in the upper left corner and select the desired region and project.

3. Click ☰ in the upper left corner and choose **Networking** > **Elastic IP**.

4. On the displayed page, click 🗗 in the upper right corner of the EIP list.

   The system will automatically export all EIPs in the current region of your account to an Excel file and download the file to a local directory.

1.10 Managing EIP Tags

Scenarios

Tags can be added to EIPs to facilitate EIP identification and administration. You can add a tag to an EIP when assigning the EIP. Alternatively, you can add a tag to an assigned EIP on the EIP details page. A maximum of 10 tags can be added to each EIP.

A tag consists of a key and value pair. **Table 1-3** lists the tag key and value requirements.

Table 1-3 EIP tag requirements

Parameter	Requirement	Example Value

Key	• Cannot be left blank.
	• Must be unique for each EIP.
	• Can contain a maximum of 36 characters.
	• Can contain only the following character types:
	  – Uppercase letters
	  – Lowercase letters
	  – Digits
	  – Special characters, including hyphens (-) and underscores (_)
		Ipv4_key1

Parameter	Requirement	Example Value

Value	• Can contain a maximum of 43 characters.
	• Can contain only the following character types:
	  – Uppercase letters
	  – Lowercase letters
	  – Digits
	  – Special characters, including hyphens (-) and underscores (_)
		3005eip

Procedure

Searching for EIPs by tag key and value on the page showing the EIP list

1. Log in to the management console.

2. Click ⚲ in the upper left corner and select the desired region and project.

3. Click ☰ in the upper left corner and choose **Networking** > **Elastic IP**.

4. Click the search box above the EIP list.

5. Select the tag key and value of the EIP.

   You can add multiple tag keys and values to refine your search results. If you add more than one tag to search for EIPs, the system will display only the EIPs that contain all of the tags you specified.

6. Click **OK**.

   The system displays the EIPs you are looking for based on the entered tag keys and values.

Adding, deleting, editing, and viewing tags on the Tags tab of an EIP

1. Log in to the management console.

2. Click ⚲ in the upper left corner and select the desired region and project.

3. Click ☰ in the upper left corner and choose **Networking** > **Elastic IP**.

4. On the displayed page, locate the EIP whose tags you want to manage, and click the EIP name.

5. On the page showing EIP details, click the **Tags** tab and perform desired operations on tags.

   – View tags.

     On the **Tags** tab, you can view details about tags added to the current EIP, including the number of tags and the key and value of each tag.

   – Add a tag.

     Click **Add Tag** in the upper left corner. In the displayed **Add Tag** dialog box, enter the tag key and value, and click **OK**.

   – Edit a tag.

Locate the row that contains the tag you want to edit, and click **Edit** in the **Operation** column. Enter the new tag value, and click **OK**.

The tag key cannot be modified.

– Delete a tag.

Locate the row that contains the tag you want to delete, and click **Delete** in the **Operation** column. In the displayed dialog box, click **Yes**.

1.11 IPv6 EIP

1.11.1 IPv6 EIP Overview

Overview

Both IPv4 and IPv6 EIPs are available. You can assign an IPv6 EIP or map an existing IPv4 EIP to an IPv6 EIP.

After the IPv6 EIP function is enabled, you will obtain both an IPv4 EIP and its corresponding IPv6 EIP. External IPv6 addresses can access cloud resources through this IPv6 EIP.

Application Scenarios of IPv4/IPv6 Dual Stack

If your ECS supports IPv6, you can use the IPv4/IPv6 dual stack. **Table 1-4** shows the example application scenarios.

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

Application Scenario	Description	Requirement	IPv4 or IPv6 Subnet	ECS
Private IPv4 communication	Your applications on ECSs need to communicate with other systems (such as databases) through private networks using IPv4 addresses.	• IPv6 is not enabled for the VPC subnet. • No EIPs have been bound to the ECSs.	IPv4 CIDR Block	**Private IPv4 address**: used for private IPv4 communication.

Application Scenario	Description	Requirement	IPv4 or IPv6 Subnet	ECS
Public IPv4 communication	Your applications on ECSs need to communicate with other systems (such as databases) through public IPv4 addresses.	● IPv6 is not enabled for the VPC subnet. ● EIPs have been bound to the ECSs.	IPv4 CIDR Block	● **Private IPv4 address**: used for private IPv4 communication. ● **Public IPv4 address**: used for public IPv4 communication.

Application Scenario	Description	Requirement	IPv4 or IPv6 Subnet	ECS

Private IPv6 communication	Your applications on ECSs need to communicate with other systems (such as databases) through private IPv6 addresses.	• IPv6 has been enabled for the VPC subnet.
		• The network has been configured for the ECSs as follows:
		  – **Flavor**: Any ECS flavor that supports the IPv6 network. For details about the ECS flavor that support the IPv6 network, see section "x86 ECS Specifications and Types" in the **Elastic Cloud Server User Guide**.
		  – **VPC and Subnet**: IPv6-enabled subnet and VPC.
		  – **Self-assigned IPv6 address**: Selected.
		  – **Shared Bandwidth**: Selected **Do not configure**.
			• IPv4 CIDR Block
			• IPv6 CIDR block
				• **Private IPv4 address + IPv4 EIP**: Bind an IPv4 EIP to the instance to allow public IPv4 communication.
				• **Private IPv4 address**: Do not bind any IPv4 EIP to the instance and use only the private IPv4 address to allow private IPv4 communication.
				• **IPv6 address**: Do not configure shared bandwidth for the IPv6 address to allow private IPv6 communication.

Application Scenario	Description	Requirement	IPv4 or IPv6 Subnet	ECS
Public IPv6 communication	An IPv6 network is required for the ECS to access the IPv6 service on the Internet.	- IPv6 has been enabled for the VPC subnet. - The network has been configured for the ECSs as follows: **VPC and Subnet**: IPv6-enabled subnet and VPC. **Self-assigned IPv6 address**: Selected. **Shared Bandwidth**: Selected a shared bandwidth. NOTE For details, see **Setting Up an IPv6 Network**.	- IPv4 CIDR Block - IPv6 CIDR block	**Private IPv4 address + IPv4 EIP**: Bind an IPv4 EIP to the instance to allow public IPv4 communication. **Private IPv4 address**: Do not bind any IPv4 EIP to the instance and use only the private IPv4 address to allow private IPv4 communication. **IPv6 address + shared bandwidth**: Allow both private IPv6 communication and public IPv6 communication.

For details, see **IPv4 and IPv6 Dual-Stack Network**.

Application Scenarios of IPv6 EIP

If you want an ECS to provide IPv6 services but the ECS does not support IPv6 networks or you do not want to build an IPv6 network, you can use IPv6 EIP to

quickly address your requirements. For details about application scenarios and
resource planning, see **Table 1-5**.

Table 1-5 Application scenarios and resource planning of an IPv6 EIP network
(with IPv6 EIP enabled)

Application Scenario	Description	Requirement	IPv4 or IPv6 Subnet	ECS
Public IPv6 communication	You want to allow an ECS to provide IPv6 services for clients on the Internet without setting up an IPv6 network.	- An EIP has been bound to the ECS. - IPv6 EIP has been enabled.	IPv4 CIDR Block	**Private IPv4 address**: used for private IPv4 communication. **IPv4 EIP (with IPv6 EIP enabled)**: used for public network communication through IPv4 and IPv6 addresses.

1.11.2 Assigning or Releasing an IPv6 EIP

Scenarios

If you want an ECS to provide IPv6 services but the ECS does not support IPv6
networks or you do not want to build an IPv6 network, you can use an IPv6 EIP to
quickly address your requirements.

Enabling IPv6 EIP

- Method 1:

  Apply for an EIP with **IPv6 EIP** enabled by referring to section **Assigning an
  EIP**.

  After the IPv6 EIP is enabled, you will obtain both an IPv4 EIP and an IPv6 EIP.
  External IPv6 addresses can access cloud resources through this IPv6 EIP.

- Method 2:

  If you want an IPv6 EIP in addition to an existing IPv4 EIP, locate the row that
  contains the target IPv4 EIP, click **More** in the **Operation** column, and select
  Enable IPv6 EIP. Then, a corresponding IPv6 EIP will be assigned.

  After the IPv6 EIP is enabled, you will obtain both an IPv4 EIP and an IPv6 EIP.
  External IPv6 addresses can access cloud resources through this IPv6 EIP.

  📖 **NOTE**

  There is no adverse impact on the cloud resources bound with existing IPv4 EIPs.

Configuring Security Groups

After IPv6 EIP is enabled, add inbound and outbound security group rules to allow packets to and from the IP address range **198.19.0.0/16**. **Table 1-6** shows the security group rules. IPv6 EIP uses NAT64 to convert the source IP address in the inbound direction to an IPv4 address in the IP address range 198.19.0.0/16. The source port can be a random one, the destination IP address is the private IPv4 address of your local server, and the destination port remains unchanged.

For details, see **Virtual Private Cloud User Guide**.

Table 1-6 Security group rules

Direction	Protocol	Source or Destination
Inbound	All	Source: 198.19.0.0/16
Outbound	All	Destination: 198.19.0.0/16

Disabling IPv6 EIP

If you do not need the IPv6 EIP, locate the row that contains its corresponding IPv4 EIP, click **More** in the **Operation** column, and select **Disable IPv6 EIP**. Then, the IPv6 EIP will be released. You will only have the IPv4 EIP.

2 EIP Billing

2.1 Changing EIP Billing Mode

Scenarios

The EIP service provides multiple billing modes for you to select. You can change your EIP billing mode during the EIP usage period if necessary.

> ⬚ **NOTE**
>
> Changing the billing mode does not change EIPs or interrupt their use.

Table 2-1 describes the details of changing EIP billing modes.

Table 2-1 EIP billing mode change description

Change	Description

From yearly/monthly to pay-per-use	● An EIP billed on a yearly/monthly basis can be directly changed to be billed by bandwidth on a pay-per-use basis upon expiration.
	● An EIP billed on a yearly/monthly basis cannot be directly changed to be billed by traffic on a pay-per-use basis. To change this:
	  1. Change the EIP to be billed by bandwidth on a pay-per-use basis.
	  2. Change the EIP to be billed by traffic on a pay-per-use basis.
	The new billing mode takes effect only after the yearly/monthly subscription expires.

Change	Description
From pay-per-use 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. - 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: - Change the EIP to be billed by bandwidth on a pay-per-use basis. - Change the EIP to be billed on a yearly/monthly basis. The new billing mode takes effect immediately.
- From billing by traffic (pay-per-use) to billing by bandwidth (pay-per-use) - From billing by bandwidth (pay-per-use) to billing by traffic (pay-per-use)	- An EIP billed by traffic on a pay-per-use basis can be directly changed to be billed by bandwidth on a pay-per-use basis. - An EIP billed by bandwidth on a pay-per-use basis can be directly changed to be billed by traffic on a pay-per-use basis. The new billing mode takes effect immediately.

The operation guides are as follows:

- **From Yearly/Monthly to Pay-Per-Use upon Expiration (Billed by Bandwidth)**
- **From Pay-per-Use (Billed by Bandwidth) to Yearly/Monthly**
- **Pay-per-Use EIPs: From Billing By Traffic to By Bandwidth**

From Yearly/Monthly to Pay-Per-Use upon Expiration (Billed by Bandwidth)

1. Log in to the management console.
2. In the upper right corner of the page, choose > **Renewal**.
3. In the resource list, search for the EIP whose billing mode needs to be changed.
4. Locate the row that contains the EIP and choose **More** > **Change to Pay-per-Use After Expiration** in the **Operation** column.
5. Confirm the information and click **Change to Pay-per-Use**.

   After the operation is complete, the yearly/monthly EIP is changed to be billed by bandwidth on a pay-per-use basis.

From Pay-per-Use (Billed by Bandwidth) to Yearly/Monthly

1. Log in to the management console.
2. Click in the upper left corner and select the desired region and project.

3. Click ☰ in the upper left corner and choose **Networking** > **Elastic IP**.

4. In the EIP list, change the billing mode of a single EIP or multiple EIPs from pay-per-use (billed by bandwidth) to yearly/monthly.

    –   Single EIP:

        Locate the row that contains the EIP and click **Change Billing Mode** in the **Operation** column.

    –   Multiple EIPs:

        Select EIPs and click **Change Billing Mode** in the upper left corner of the EIP list.

5. In the displayed dialog box, confirm the information and click **Yes**.

6. On the **Change Subscriptions** page, set parameters such as **Renewal Duration**.

7. Click **Pay**.

Pay-per-Use EIPs: From Billing By Traffic to By Bandwidth

1. Log in to the management console.

2. Click ⊙ in the upper left corner and select the desired region and project.

3. Click ☰ in the upper left corner and choose **Networking** > **Elastic IP**.

4. In the EIP list, locate the row that contains the EIP, click **More** in the **Operation** column, and click **Modify Bandwidth**.

5. On the **Modify Bandwidth** page, change the billing option as prompted.

    You can also change the bandwidth name and size.

6. Click **Next**.

7. On the displayed page, confirm the configurations and click **Submit**.

2.2 Renewing a Yearly/Monthly EIP

Scenarios

You can renew a yearly/monthly EIP to extend its expiration date.

If your yearly/monthly resource is expired and is not renewed, the resource enters the grace period. If you do not renew the monthly/yearly resource within the grace period, the resource enters a retention period after the grace period has expired. You cannot perform any operations on yearly/monthly resources that are in the grace or retention period. For example, you cannot change your bandwidth if it is in the grace period or retention period.

This section describes how to renew an EIP. Renewing EIPs does not change EIPs.

Procedure

1. Log in to the management console.

2. Click ⊙ in the upper left corner and select the desired region and project.

3. Click ☰ in the upper left corner and choose **Networking** > **Elastic IP**.

4. In the EIP list, renew a single EIP or multiple EIPs.

   – Renewing a single EIP:

   Locate the row that contains the EIP, and choose **More** > **Renew** in the **Operation** column.

   – Renewing multiple EIPs at once:

   i. Select the EIPs in the EIP list and click **Renew** in the upper left corner of the list.

   ii. In the displayed dialog box, confirm the information and click **Yes**.

5. On the **Renew** page, set the following parameters:

   – **Renewal Duration**: Select a renewal period as required.

   – **Renewal Date**: The new renewal date may result in slightly different subscription lengths for different resources.

6. Click **Pay**.

3 Shared Bandwidth

3.1 Shared Bandwidth Overview

A shared bandwidth can be shared by multiple EIPs and controls the data transfer rate on these EIPs in a centralized manner. All ECSs, BMSs, and load balancers that have EIPs bound in the same region can share a bandwidth.

> **NOTE**
>
> - A shared bandwidth cannot control how much data can be transferred using a single EIP. Data transfer rate on EIPs cannot be customized.

When you host a large number of applications on the cloud, if each EIP uses a bandwidth, a lot of bandwidths are required, which significantly increases bandwidth costs. If all EIPs share the same bandwidth, you can lower bandwidth costs and easily perform system O&M.

- Lowered Bandwidth Costs

  Region-level bandwidth sharing and multiplexing reduce bandwidth usage and O&M costs.

- Flexible Operations

  You can add pay-per-use EIPs (except for **5_gray** EIPs of dedicated load balancers) to or remove them from a shared bandwidth regardless of the type of instances that they are bound to.

- Flexible Billing Modes

  The yearly/monthly and pay-per-use billing modes are provided.

You can use a shared bandwidth in either of the following ways:

- Assign a shared bandwidth and add your pay-per-use EIPs to the bandwidth.

  - **Assigning a Shared Bandwidth**

  - **Adding EIPs to a Shared Bandwidth**

- Assign a shared bandwidth, set **Billed By** to **Shared Bandwidth** and select the shared bandwidth when you assign EIPs.

  - **Assigning a Shared Bandwidth**

– **Assigning an EIP**

Notes and Constraints

- If a yearly/monthly shared bandwidth is deleted upon expiration, EIPs sharing the bandwidth will be removed from the bandwidth and be billed based on the mode before they are added to the shared bandwidth.

- A shared bandwidth can only be used by resources from its same account.

◌ **NOTE**

- A dedicated bandwidth cannot be changed to a shared bandwidth and vice versa. However, you can purchase a shared bandwidth for pay-per-use EIPs.
  - Add an EIP to a shared bandwidth and then the EIP will use the shared bandwidth.
  - Remove the EIP from the shared bandwidth and then the EIP will use the dedicated bandwidth.
- If you want to submit a service ticket, refer to **Submitting a Service Ticket**.

3.2 Assigning a Shared Bandwidth

Scenarios

When you host a large number of applications on the cloud, if each EIP uses dedicated bandwidth, a lot of bandwidths are required, which incurs high costs. If all EIPs share the same bandwidth, your network operation costs will be lowered and your system O&M as well as resource statistics will be simplified.

Assign a shared bandwidth for use with EIPs.

Procedure

1. Log in to the management console.

2. Click ☰ in the upper left corner and choose **Networking** > **Elastic IP**.

3. In the navigation pane on the left, choose **Elastic IP and Bandwidth** > **Shared Bandwidths**.

4. In the upper right corner, click **Buy Shared Bandwidth**. On the displayed page, configure parameters as prompted.

Table 3-1 Parameter descriptions

Parameter	Description	Example Value
Billing Mode	A shared bandwidth can be billed on a yearly/monthly or pay-per-use basis. ● **Yearly/Monthly**: You pay for the bandwidth by year or month before using it. No other charges apply during the validity period of the bandwidth. ● **Pay-per-use**: You pay for the bandwidth based on the amount of time you use the bandwidth.	Yearly/Monthly
Region	Regions are geographic areas that are physically isolated from each other. The networks inside different regions are not connected to each other, so resources cannot be shared across different regions. For lower network latency and faster access to your resources, select the region nearest you.	N/A
Bandwidth Type	Select a type of the shared bandwidth based on your EIP type. ● **Standard**: Dynamic BGP and premium BGP EIPs can be added to a shared bandwidth of this type. **NOTE** In the CN-Hong Kong region, only dynamic BGP EIPs can be added to standard shared bandwidths.	Standard
Billed By	The billing method for the shared bandwidth. You can specify a shared bandwidth to be billed by bandwidth.	Bandwidth
Bandwidth	The bandwidth size in Mbit/s.	10
Enterprise Project	The enterprise project that the EIP belongs to. An enterprise project facilitates project-level management and grouping of cloud resources and users. The name of the default project is **default**.	default
Name	The name of the shared bandwidth.	Bandwidth-001
Required Duration	The duration for which the purchased EIP will use. The duration must be specified if the **Billing Mode** is set to **Yearly/Monthly**.	2 months

5. Click **Create Now**.

3.3 Adding EIPs to a Shared Bandwidth

Scenarios

Add EIPs to a shared bandwidth and the EIPs can then share that bandwidth. You can add multiple EIPs to a shared bandwidth at the same time.

Notes and Constraints

- The type of EIPs must be the same as that of the shared bandwidth the EIPs to be added to.

- Currently, yearly/monthly EIPs cannot be added to a shared bandwidth.

- If it is a standard shared bandwidth, you can add dynamic BGP EIPs and IPv6 NICs to it. If it is a premium shared bandwidth, you can add premium BGP EIPs and IPv6 NICs to it.

Procedure

1. Log in to the management console.

2. Click ☰ in the upper left corner and choose **Networking** > **Elastic IP**.

3. In the navigation pane on the left, choose **Elastic IP and Bandwidth** > **Shared Bandwidths**.

4. In the shared bandwidth list, locate the row that contains the shared bandwidth that you want to add EIPs to. In the **Operation** column, choose **Add Public IP Address**, and select the EIPs to be added.

   📖 NOTE

   - After an EIP is added to a shared bandwidth, the dedicated bandwidth used by the EIP will become invalid and the EIP will start to use the shared bandwidth. The EIP's dedicated bandwidth will be deleted and will no longer be billed.

5. Click **OK**.

Helpful Links

What Are the Differences Between a Dedicated Bandwidth and a Shared Bandwidth? Can a Dedicated Bandwidth Be Changed to a Shared Bandwidth or the Other Way Around?

3.4 Removing EIPs from a Shared Bandwidth

Scenarios

Remove EIPs that are no longer required from a shared bandwidth if needed.

Procedure

1. Log in to the management console.

2. Click ☰ in the upper left corner and choose **Networking** > **Elastic IP**.

3. In the navigation pane on the left, choose **Elastic IP and Bandwidth** > **Shared Bandwidths**.

4. In the shared bandwidth list, locate the row that contains the bandwidth from which EIPs are to be removed, choose **More** > **Remove Public IP Address** in the **Operation** column, and select the EIPs to be removed in the displayed dialog box.

5. Set the EIP bandwidth after the EIP is removed.

6. Click **OK**.

3.5 Modifying a Shared Bandwidth

Scenarios

You can modify the name and size of a shared bandwidth as required.

- If a shared bandwidth is billed on a pay-per-use basis, the modification will take effect immediately. For details, see **Modifying a Shared Bandwidth (Pay-per-Use)**.

- If a shared bandwidth is billed on a yearly/monthly basis:
  - **You can increase the bandwidth.** The increased bandwidth size will take effect immediately and the price difference will be billed accordingly.
  - **You can decrease the bandwidth.** The decreased bandwidth size will take effect in the first billing cycle after a successful renewal.

If you want to change the billing mode of a shared bandwidth, see **How Do I Change My EIP Billing Mode from Pay-per-Use to Yearly/Monthly?**

Modifying a Shared Bandwidth (Pay-per-Use)

1. Log in to the management console.

2. Click ☰ in the upper left corner and choose **Networking** > **Elastic IP**.

3. In the navigation pane on the left, choose **Elastic IP and Bandwidth** > **Shared Bandwidths**.

4. In the shared bandwidth list, locate the row that contains the shared bandwidth you want to modify, click **Modify Bandwidth** in the **Operation** column, and modify the bandwidth settings.

5. Click **Next**.

6. Click **Submit**.

   The modification takes effect immediately.

Increasing a Shared Bandwidth (Yearly/Monthly)

1. Log in to the management console.

2. Click ☰ in the upper left corner and choose **Networking** > **Elastic IP**.

3. In the navigation pane on the left, choose **Elastic IP and Bandwidth** > **Shared Bandwidths**.

4. In the shared bandwidth list, locate the row that contains the target shared bandwidth, and click **Modify Bandwidth** in the **Operation** column.

5. Select **Increase bandwidth** and click **Continue**.

6. In the **New Configuration** area on the **Modify Bandwidth** page, change the bandwidth name and size.

7. Click **Next**.

8. Confirm the information and click **Pay Now**.

   After you complete the payment, the increased bandwidth will take effect immediately.

Decreasing a Shared Bandwidth (Yearly/Monthly)

1. Log in to the management console.

2. Click ☰ in the upper left corner and choose **Networking** > **Elastic IP**.

3. In the navigation pane on the left, choose **Elastic IP and Bandwidth** > **Shared Bandwidths**.

4. In the shared bandwidth list, locate the row that contains the target shared bandwidth, and click **Modify Bandwidth** in the **Operation** column.

5. Select **Decrease bandwidth** and click **Continue**.

6. In the **New Configuration** area on the **Modify Bandwidth** page, change the bandwidth name and size.

7. Click **Next**.

8. Confirm the information and click **Pay Now**.

   After you complete the payment, the decreased bandwidth will take effect in the first billing cycle after the current subscription ends.

3.6 Deleting a Shared Bandwidth

Scenarios

Delete a shared bandwidth when it is no longer required.

Notes and Constraints

- A yearly/monthly shared bandwidth cannot be directly deleted. It can only be unsubscribed.

- If you want to delete a shared bandwidth with EIPs added, you have to remove the EIPs from the shared bandwidth first.

Prerequisites

Before deleting a shared bandwidth, remove all the EIPs associated with it. For details, see **Removing EIPs from a Shared Bandwidth**.

Procedure

1. Log in to the management console.

2. Click ☰ in the upper left corner and choose **Networking** > **Elastic IP**.

3. In the navigation pane on the left, choose **Elastic IP and Bandwidth** > **Shared Bandwidths**.

4. In the shared bandwidth list, locate the row that contains the pay-per-use shared bandwidth you want to delete, click **More** in the **Operation** column, and then click **Delete**.

5. In the displayed dialog box, click **OK**.

4 Monitoring

4.1 Supported Metrics

Description

This section describes the namespace, list, and measurement dimensions of metrics of EIPs and bandwidths that you can check on Cloud Eye. You can use APIs or the Cloud Eye console to query the metrics of the monitored metrics and generated alarms.

Namespace

Namespace of EIPs and bandwidths: SYS.VPC

Monitoring Metrics

Table 4-1 Metrics of EIPs and bandwidths

ID	Name	Description	Value Range	Monitored Object	Monitoring Interval (Raw Data)
upstream _bandwid th	Outbo und Band width	Network rate of outbound traffic (Previously called "Upstream Bandwidth") Unit: bit/s	≥ 0 bit/s	Bandwidth or EIP	1 minute

ID	Name	Description	Value Range	Monitored Object	Monitoring Interval (Raw Data)
downstream_bandwidth	Inbound Bandwidth	Network rate of inbound traffic (Previously called "Downstream Bandwidth") Unit: bit/s	≥ 0 bit/s	Bandwidth or EIP	1 minute
upstream_bandwidth_usage	Outbound Bandwidth Usage	Usage of outbound bandwidth in the unit of percent. Outbound bandwidth usage = Outbound bandwidth/ Purchased bandwidth	0% to 100%	Bandwidth or EIP	1 minute
up_stream	Outbound Traffic	Network traffic going out of the cloud platform (Previously called "Upstream Traffic") Unit: byte	≥ 0 bytes	Bandwidth or EIP	1 minute
down_stream	Inbound Traffic	Network traffic going into the cloud platform (Previously called "Downstream Traffic") Unit: byte	≥ 0 bytes	Bandwidth or EIP	1 minute

☐ NOTE

If a bandwidth is increased or decreased, there is a delay of 5 to 10 minutes for the monitoring metrics to update for the new bandwidth.

Dimensions

Key	Value
publicip_id	EIP ID
bandwidth_id	Bandwidth ID

If a monitored object has multiple dimensions, all dimensions are mandatory when you use APIs to query the metrics.

- Query a monitoring metric:

  dim.0=bandwidth_id,530cd6b0-86d7-4818-837f-935f6a27414d&dim.1=publicip_id,3773b058-5b4f-4366-9035-9bbd9964714a

- Query monitoring metrics in batches:

  "dimensions": [

  {

  "name": "bandwidth_id",

  "value": "530cd6b0-86d7-4818-837f-935f6a27414d"

  }

  {

  "name": "publicip_id",

  "value": "3773b058-5b4f-4366-9035-9bbd9964714a"

  }

  ],

4.2 Viewing Metrics

Scenarios

You can view the bandwidth and EIP usage.

You can view the inbound bandwidth, outbound bandwidth, inbound bandwidth usage, outbound bandwidth usage, inbound traffic, and outbound traffic in a specified period.

Procedure (Cloud Eye Console)

1. Log in to the management console.

2. Click ⊙ in the upper left corner and select the desired region and project.

3. In the upper left corner of the page, click ☰ to open the service list and choose **Management & Deployment** > **Cloud Eye**.

4. Click **Cloud Service Monitoring** on the left of the page, and choose **Elastic IP and Bandwidth**.

5. Locate the row that contains the target bandwidth or EIP and click **View Metric** in the **Operation** column to check the bandwidth or EIP monitoring information.

4.3 Creating an Alarm Rule

Scenarios

You can configure alarm rules to customize the monitored objects and notification policies. You can learn your resource statuses at any time.

Procedure

1. Log in to the management console.

2. Click ⊙ in the upper left corner and select the desired region and project.

3. In the upper left corner of the page, click ☰ to open the service list and choose **Management & Deployment** > **Cloud Eye**.

4. In the left navigation pane on the left, choose **Alarm Management** > **Alarm Rules**.

5. On the **Alarm Rules** page, click **Create Alarm Rule** and set required parameters, or modify an existing alarm rule.

6. After the parameters are set, click **Create**.

   After the alarm rule is created, the system automatically notifies you if an alarm is triggered for the VPC service.

   📖 NOTE

   For more information about alarm rules, see **Cloud Eye User Guide**.

4.4 Exporting Monitoring Data

Scenarios

If you want to analyze the bandwidth or traffic usage of EIPs to locate faults, you can export EIP monitoring data.

Procedure

1. Log in to the management console.

2. Click ⊙ in the upper left corner and select the desired region and project.

3. Hover on the upper left corner to display **Service List** and choose **Management & Deployment** > **Cloud Eye**.

4. In the navigation pane on the left, choose **Cloud Service Monitoring** > **Elastic IP and Bandwidth**.

5. On the **Cloud Service Monitoring** page, click **Export Data**.

6. Configure the time range, period, resource type, dimension, monitored object, and metric.

7. Click **Export**.

    📖 **NOTE**

    You can export data for multiple metrics at a time to a CSV file.

    ● The first row in the exported CSV file displays the username, region, service, instance name, instance ID, metric name, metric data, time, and timestamp. You can view historical monitoring data.

    ● To convert the time using a Unix timestamp to the time of the target time zone, perform the following steps:

        a. Use Excel to open a .csv file.

        b. Use the following formula to convert the time:

           Target time = [Unix timestamp/1000 + (Target time zone) x 3600]/86400 + 70 x 365 + 19

        c. Set cell format to **Date**.

5 Permissions Management

5.1 Creating a User and Granting EIP Permissions

Currently, the EIP service permissions are included in the VPC permissions. **Permissions Management**.

This section describes how to use IAM to implement fine-grained permissions control for your VPC resources. With IAM, you can:

- Create IAM users for personnel based on your enterprise's organizational structure. Each IAM user has their own identity credentials for accessing VPC resources.
- Grant users only the permissions required to perform a given task based on their job responsibilities.
- Entrust a cloud account or cloud service to perform efficient O&M on your VPC resources.

If your cloud account meets your permissions requirements, you can skip this section.

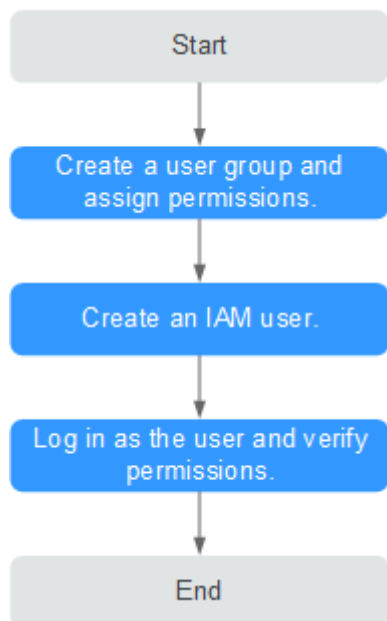**Figure 5-1** shows the process flow for granting permissions.

Prerequisites

Before granting permissions to user groups, learn about **EIP Permissions** for EIP.

To grant permissions for other services, learn about all **system-defined permissions** supported by IAM.

Process Flow

Figure 5-1 Process for granting EIP permissions

1. On the IAM console, (**EIP ReadOnlyAccess** as an example).

2. **Create an IAM user and add it to the created user group**.

3. and verify permissions.

   In the authorized region, perform the following operations:

   – Choose **Service List** > **Elastic IP**. Then click **Buy EIP** on the EIP console. If a message appears indicating that you have insufficient permissions to perform the operation, the **EIP ReadOnlyAccess** policy is in effect.

   – Choose another service from **Service List**. If a message appears indicating that you have insufficient permissions to access the service, the **EIP ReadOnlyAccess** policy is in effect.

Example Custom Policies

- Example 1: Grant permissions to assign and view EIPs

```
{
    "Version": "1.1",
    "Statement": [
        {
            "Effect": "Allow",
            "Action": [
                "
                    vpc:publicIps:create,
                    vpc:publicIps:list
                "
            ]
        }
    ]
}
```

- Example 2: Grant permission to deny EIP deletion.

A policy with only "Deny" permissions must be used together with other policies. If the permissions granted to an IAM user contain both "Allow" and "Deny", the "Deny" permissions take precedence over the "Allow" permissions.

Assume that you want to grant the permissions of the **EIP FullAccess** policy to a user but want to prevent them from releasing EIPs. You can create a custom policy for denying EIP release, and attach both policies to the user. As an explicit deny in any policy overrides any allows, the user can perform all operations on EIPs except releasing them. Example policy denying EIP release:

```
{
    "Version": "1.1",
    "Statement": [
        {
          "Effect": "Deny",
            "Action": [
                "vpc:publicIps:delete"
            ]
        }
    ]
}
```

- Example 3: Create a custom policy containing multiple actions.

  A custom policy can contain the actions of one or multiple services that are of the same type (global or project-level). Example policy containing multiple actions:

```
{
    "Version": "1.1",
    "Statement": [
        {
            "Effect": "Allow",
            "Action": [
                "vpc:publicIps:update",
                "vpc:publicIps:create"
            ]
        },
        {
            "Effect": "Deny",
            "Action": [
                "vpc:publicIps:delete"
            ]
        }
    ]
}
```

5.2 EIP Custom Policies

Custom policies can be created as a supplement to the system policies of EIP. For the actions supported for custom policies, see **Permissions Policies and Supported Actions**.

You can create custom policies in either of the following ways:

- Visual editor: Select cloud services, actions, resources, and request conditions. This does not require knowledge of policy syntax.
- JSON: Edit JSON policies from scratch or based on an existing policy.

  For details, see **Creating a Custom Policy**. The following section contains examples of common EIP custom policies.

Example Custom Policies

- Example 1: Grant permissions to assign and view EIPs

```
{
    "Version": "1.1",
    "Statement": [
        {
            "Effect": "Allow",
            "Action": [
                "
                    vpc:publicIps:create,
                    vpc:publicIps:list
                "
            ]
        }
    ]
}
```

- Example 2: Grant permission to deny EIP deletion.

  A policy with only "Deny" permissions must be used together with other policies. If the permissions granted to an IAM user contain both "Allow" and "Deny", the "Deny" permissions take precedence over the "Allow" permissions.

  Assume that you want to grant the permissions of the **EIP FullAccess** policy to a user but want to prevent them from releasing EIPs. You can create a custom policy for denying EIP release, and attach both policies to the user. As an explicit deny in any policy overrides any allows, the user can perform all operations on EIPs except releasing them. Example policy denying EIP release:

```
{
    "Version": "1.1",
    "Statement": [
        {
            "Effect": "Deny",
            "Action": [
                "vpc:publicIps:delete"
            ]
        }
    ]
}
```

- Example 3: Create a custom policy containing multiple actions.

  A custom policy can contain the actions of one or multiple services that are of the same type (global or project-level). Example policy containing multiple actions:

```
{
    "Version": "1.1",
    "Statement": [
        {
            "Effect": "Allow",
            "Action": [
                "vpc:publicIps:update",
                "vpc:publicIps:create"
            ]
        },
        {
            "Effect": "Deny",
            "Action": [
                "vpc:publicIps:delete"
            ]
        }
    ]
}
```

A Change History

Released On	Description
2023-12-01	This issue is the third official release. Updated the following content: Added content about DDoS protection in **Assigning an EIP**. Added EIP type and required duration in **Assigning a Shared Bandwidth**.
2023-03-31	This issue is the third official release. Added the following sections: **Unbinding an EIP from an ECS and Releasing the EIP** **Unbinding an EIP from an ECS and Releasing the EIP**
2022-08-30	This issue is the first official release.