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Elastic IP Address
User Guide

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Document conventions

Style	Description	Example
Danger	A danger notice indicates a situation that will cause major system changes, faults, physical injuries, and other adverse results.	**Danger:** Resetting will result in the loss of user configuration data.
Warning	A warning notice indicates a situation that may cause major system changes, faults, physical injuries, and other adverse results.	**Warning:** Restarting will cause business interruption. About 10 minutes are required to restart an instance.
Notice	A caution notice indicates warning information, supplementary instructions, and other content that the user must understand.	**Notice:** If the weight is set to 0, the server no longer receives new requests.
Note	A note indicates supplemental instructions, best practices, tips, and other content.	**Note:** You can use Ctrl + A to select all files.
>	Closing angle brackets are used to indicate a multi-level menu cascade.	Click **Settings**> **Network**> **Set network type**.
Bold	Bold formatting is used for buttons , menus, page names, and other UI elements.	Click **OK**.
`Courier font`	Courier font is used for commands	Run the `cd /d C:/window` command to enter the Windows system folder.
Italic	Italic formatting is used for parameters and variables.	`bae log list --instanceid` *Instance_ID*
[] or [a|b]	This format is used for an optional value, where only one item can be selected.	`ipconfig [-all|-t]`
{} or {a|b}	This format is used for a required value, where only one item can be selected.	`switch {active|stand}`

Table of Contents

1.Overview

This topic describes the line types of Elastic IP Address (EIP). An EIP is a public IP address resource that you can purchase and hold as an independent resource.

Line types

EIP supports the line types of BGP (Multi-ISP) and BGP (Multi-ISP) Pro. The following table lists the differences between BGP (Multi-ISP) and BGP (Multi-ISP) Pro.

Item	BGP (Multi-ISP)	BGP (Multi-ISP) Pro
Advantages	BGP (Multi-ISP) provides high-quality and high-bandwidth BGP lines. • Up to 89 high-quality BGP lines are available worldwide. • Direct connections can be established in all regions of mainland China through lines of the following Internet Service Providers (ISPs): China Telecom, China Unicom, China Mobile, China Mobile Tietong, China Netcom, China Education and Research Network (CERNET), National Radio and Television Administration, Dr. Peng Telecom & Media Group, and Founder Broadband Network. • You can use BGP (Multi-ISP) with EIP bandwidth plans to obtain higher bandwidth (up to 100 Gbit/s).	BGP (Multi-ISP) Pro has all the advantages of BGP (Multi-ISP). Compared with BGP (Multi-ISP), when BGP (Multi-ISP) Pro provides services to clients in mainland China (excluding data centers), cross-border connections are established without using international ISP services. This reduces network latency.
Supported regions	All regions	China (Hong Kong)

Purchase EIPs

To purchase EIPs,go to the buy page.

2.Create an Elastic IP address

2.1. Apply for EIPs

An elastic IP address (EIP) is a public IP address that you can purchase and use as an independent resource. You can apply for new EIPs, released EIPs, or contiguous EIPs.

Operations

- Apply for new EIPs
- Recover a released EIP
- Apply for continuous EIPs

Apply for new EIPs

1. Log on to the Elastic IP Address console .
2. On the **Elastic IP Addresses** page, click **Create EIP**.
3. On the page that appears, set the following parameters, click **Buy Now**, and then complete the payment.

Parameter	Description
Billing Method	Select a billing method for the EIP. The subscription and pay-as-you-go billing methods are supported. ○ **Subscription**: A one-time fee is charged based on the specified maximum bandwidth value of the EIP. For more information, see Subscription. ○ **Pay-As-You-Go**: You are charged for the resources that you use. Pay-as-you-go EIPs are charged by data transfer or bandwidth. For more information, see Pay-as-you-go.
Subscription	
Region	Select a region where you want to create the EIP. You can associate the EIP with an Elastic Compute Service (ECS) instance, NAT gateway, Server Load Balancer (SLB) instance, high-availability virtual IP address (HAVIP), or secondary elastic network interface (ENI). Make sure that the EIP and the cloud resource are deployed in the same region.

Parameter	Description
Connection Type	Select a line type for the EIP. ◦ **BGP (Multi-ISP)**: Up to 89 high-quality BGP lines are available worldwide. Direct connections can be established across all regions in mainland China through lines of the following Internet service providers (ISPs): China Telecom, China Unicom, China Mobile, China Mobile Tietong, China Netcom, China Education and Research Network (CERNET), National Radio and Television Administration, Dr. Peng Telecom & Media Group, and Founder Broadband Network. ◦ **BGP (Multi-ISP) Pro**: BGP (Multi-ISP) Pro is provided to improve the efficiency of data transmission from regions outside mainland China to mainland China. Compared with BGP (Multi-ISP), when BGP (Multi-ISP) Pro provides services to clients in mainland China (excluding data centers), cross-border connections are established without using international ISP services. This reduces network latency. **Note** BGP (Multi-ISP) Pro is supported only in the China (Hong Kong) region.
Network Mode	Select a network type for the EIP. You can select only Public.
Bandwidth value	Specify a maximum bandwidth value for the EIP.
Name	Enter a name for the EIP. The name must be 2 to 128 characters in length, and can contain digits, periods (.), underscores (_), and hyphens (-). It must start with a letter.
Quantity	Specify the number of EIPs that you want to purchase.
Service Time	Specify the subscription duration of the EIP.
Pay-As-You-Go	
eip_region_no	Select a region where you want to create the EIP. You can associate an EIP with a cloud resource, such as an ECS instance, NAT gateway, SLB instance, HAVIP, or secondary ENI. Make sure that the EIP and the cloud resource are deployed in the same region.

Parameter	Description
ISP	Select a line type for the EIP. ◦ **BGP (Multi-ISP)**: Up to 89 high-quality BGP lines are available worldwide. Direct connections can be established across all regions in mainland China through lines of the following Internet service providers (ISPs): China Telecom, China Unicom, China Mobile, China Mobile Tietong, China Netcom, China Education and Research Network (CERNET), National Radio and Television Administration, Dr. Peng Telecom & Media Group, and Founder Broadband Network. ◦ **BGP (Multi-ISP) Pro**: BGP (Multi-ISP) Pro is provided to improve the efficiency of data transmission from regions outside mainland China to mainland China. Compared with BGP (Multi-ISP), when BGP (Multi-ISP) Pro provides services to clients in mainland China (excluding data centers), cross-border connections are established without using international ISP services. This reduces network latency. **Note** BGP (Multi-ISP) Pro is supported only in the China (Hong Kong) region.
Network Mode	Select a network type for the EIP. You can select only Public.
eip_flow_out	Select a metering method for the EIP. ◦ **By bandwidth**: Bills are generated on a daily basis based on the specified maximum bandwidth value of the EIP. ◦ **By traffic**: Bills are generated on an hourly basis based on the amount of traffic.
eip_bandwidth_max	Specify a maximum bandwidth value for the EIP.
Name	Enter a name for the EIP. The name must be 2 to 128 characters in length, and can contain digits, periods (.), underscores (_), and hyphens (-). It must start with a letter.
Billing Cycle	Select a billing cycle for the EIP. For pay-by-bandwidth EIPs that are billed on a daily basis, you can select only Day. For pay-by-data-transfer EIPs that are billed on an hourly basis, you can select only Hour.
Quantity	Specify the number of EIPs that you want to purchase.

Recover a released EIP

You can specify the IP address or EIP ID to recover an EIP that is released by your Alibaba Cloud account within the last seven days. If the released EIP is already assigned to another Alibaba Cloud account, locked due to security reasons, or not for sale, you cannot recover the EIP.

To recover a released EIP,submit a ticket.

- Recover an EIP that has been released for more than seven days.
- Recover the static public IP address of an Elastic Compute Service (ECS) instance.

- You can recover EIPs at most 20 times per month. To recover EIPs more than 20 times, request a quota increase.

1. Log on to the Elastic IP Address console .
2. In the top navigation bar, select the region where the EIP is deployed.
3. On the **Elastic IP Addresses** page, click the **Request Custom IP** tab.
4. In the **Request Custom IP** dialog box, set the following parameters and click **OK**.

Parameter	Description
EIP Type	Select **Request Specific EIP**. You can specify the IP address or ID of the EIP. By default, a recovered EIP is billed on a pay-by-data-transfer basis and the maximum bandwidth of the EIP is 5 Mbit/s.
Request Method	Select a request method: ○ **Request by IP Address**: Specify the IP address of the EIP or the static public IP address of the ECS instance. ○ **Request by EIP Instance ID**: Specify the ID of the EIP.
IP Address	Enter the IP address of the EIP that you want to recover.
Instance ID	Enter the ID of the EIP that you want to recover. **Note** You can recover only EIPs that you have used before.
Connection Type	Select a line type for the EIP: ○ **BGP (Multi-ISP)** ○ **BGP (Multi-ISP) Pro** **Note** BGP (Multi-ISP) Pro is supported only in the China (Hong Kong) region. For more information about the differences between BGP (Multi-ISP) and BGP (Multi-ISP) Pro, see Line types.

Apply for contiguous EIPs

You can apply for contiguous EIPs to facilitate network management. A contiguous EIP group consists of contiguous EIPs. Contiguous EIPs are similar to standard EIPs that are randomly allocated from the IP address pool of Alibaba Cloud. You can associate contiguous EIPs with Elastic Compute Service (ECS) instances, internal-facing Server Load Balancer (SLB) instances, or secondary elastic network interfaces (ENIs) deployed in a virtual private cloud (VPC). You can also associate contiguous EIPs with NAT gateways or high-availability virtual IP addresses (HAVIPs). After you associate contiguous EIPs with cloud resources, the cloud resources can use the contiguous EIPs for communication.

Before you apply for contiguous EIPs, take note of the following rules:

- Only Alibaba Cloud accounts that are included in the whitelist can apply for contiguous EIPs. To apply

for contiguous EIPs,submit a ticket.

> **Note** Alibaba Cloud provides a limited number of contiguous EIPs. After you submit a ticket, Alibaba Cloud reviews your application. After your application is approved, you can apply for contiguous EIPs.

- The following table describes the differences between contiguous EIPs and standard EIPs.

Item	Contiguous EIP	Standard EIP
Billing Method	Supports only the pay-as-you-go billing method.	Supports the subscription and pay-as-you-go billing methods.
Billing method switching	You cannot switch the billing method from pay-as-you-go to subscription.	You can switch the billing method from pay-as-you-go to subscription.
Billable item	In addition to the billable items of standard EIPs, you are charged a specification fee based on the number of contiguous EIPs. For more information about specification fees,submit a ticket.	No specification fee is charged.

1. Log on to the Elastic IP Address console .
2. In the left-side navigation pane, choose **Elastic IP Addresses > Elastic IP Addresses**.
3. In the top navigation bar, select the region where you want to apply for contiguous EIPs.
4. On the **Elastic IP Addresses** page, click **Request Custom IP**.
5. In the **Request Custom IP** dialog box, set the following parameters and click **OK**.

Parameter	Description
EIP Type	Select **Request Continuous EIP Group**.
Continuous EIP Group Mask	Select the subnet mask length of the contiguous EIP group, and select **I have read and understand that:**. Valid values: 24 to 28. The number of contiguous EIPs varies based on the selected mask length. ○ /28: allocates 16 contiguous EIPs by default. ○ /27: allocates 32 contiguous EIPs by default. ○ /26: allocates 64 contiguous EIPs by default. ○ /25: allocates 128 contiguous EIPs by default. ○ /24: allocates 256 contiguous EIPs by default. **Note** In some scenarios, the actual number of allocated IP addresses may be less than the expected number because one, three, or four IP addresses may be reserved.

Parameter	Description
Network Type	Select a network type for the contiguous EIPs. ○ **Public**: After contiguous EIPs are associated with cloud resources, the cloud resources can use the contiguous EIPs to communicate with the Internet. ○ **Hybrid Cloud**: The contiguous EIPs can be used to establish communication within a hybrid cloud. **Note** You can select Hybrid Cloud only when your Alibaba Cloud account is included in the whitelist. To select Hybrid Cloud, submit a ticket.
Billing Method	Select a billing method for the contiguous EIPs. ○ **Pay by Bandwidth**: Bills are generated on a daily basis. You are charged based on specified bandwidth value instead of actual resource usage. ○ **Pay by Traffic**: Bills are generated on an hourly basis based on the amount of data transferred over the Internet. **Note** Contiguous EIPs that are used within a hybrid cloud support only the pay-by-bandwidth billing method. Pay-by-data-transfer is not supported.
Bandwidth	Specify a bandwidth value for the contiguous EIPs. Valid values: 1 to 200. Unit: Mbit/s.

Related information

- AllocateEipAddress

2.2. Recover a released EIP

This topic describes how to recover a released elastic IP address (EIP). You can recover an EIP that belongs to your account within the first seven days after the EIP is released. To recover the EIP, you must specify the IP address or ID of the EIP. You are not allowed to recover EIPs that are allocated to other accounts, locked for security purposes, or expired.

Procedure

1. Log on to the Elastic IP Address console .
2. In the top navigation bar, select the region where the EIP is deployed.
3. On the **Elastic IP Addresses** page, click the **Request Custom IP** tab.
4. In the **Request Custom IP** dialog box, set the following parameters.

Parameter	Description

Parameter	Description
EIP Type	Select **Request Specific EIP**. You can specify the IP address or ID of the EIP. The system automatically checks the requested IP address or EIP ID. If the EIP that you request is expired, allocated to another account, or locked for security purposes, the request is denied. By default, a recovered EIP is billed on a pay-by-data-transfer basis and the bandwidth limit of the EIP is 5 Mbit/s. **Note** If you want to use the following features,submit a ticket: ○ Recover an EIP that is released for more than seven days. ○ Recover the static public IP address of an Elastic Compute Service (ECS) instance. ○ You can recover EIPs at most 20 times per month. To recover EIPs more than 20 times, request a quota increase.
Request Method	Select a request method: ○ **Request by IP Address**: Specify the IP address of the EIP or the static public IP address of the ECS instance. ○ **Request by EIP Instance ID**: Specify the ID of the EIP.
IP Address	Enter the IP address of the EIP that you want to recover. **Note** You can recover only EIPs that you have used before.
Instance ID	Enter the ID of the EIP that you want to recover. **Note** You can recover only EIPs that you have used before..
Connection Type	Select a line type for the EIP: ○ **BGP (Multi-ISP)** ○ **BGP (Multi-ISP) Pro** **Note** BGP (Multi-ISP) Pro is supported only in the China (Hong Kong) region. For more information about the differences between BGP (Multi-ISP) and BGP (Multi-ISP) Pro, see Line types.

5. Click **OK**.

2.3. Apply for continuous EIPs

This topic describes how to apply for a group of continuous elastic IP addresses (EIPs). Continuous EIPs can facilitate network management.

Prerequisites

You are in the whitelist that allows users to create continuous EIPs. To apply for continuous EIPs,submit a ticket.

> **Note** Alibaba Cloud provides limited number of continuous EIPs. You must be authorized by Alibaba Cloud before you can apply for continuous EIPs. You can apply for continuous EIPs after the permissions are granted.

Context

A continuous EIP group consists of continuous EIPs that are in sequential order. Continuous EIPs are similar to standard EIPs that are randomly allocated from the IP address pool of Alibaba Cloud. You can associate a continuous EIP with an Elastic Compute Service (ECS) instance, internal-facing Server Load Balancer (SLB) instance, or secondary elastic network interface (ENI) deployed in a virtual private cloud (VPC). You can also associate a continuous EIP with a NAT gateway or high-availability virtual IP address (HAVIP). After you associate a continuous EIP with a cloud resource, the cloud resource can use the continuous EIP for communication.

The following table describes the differences between continuous EIPs and standard EIPs.

Continuous EIP	Standard EIP
Supports only the pay-as-you-go billing method.	Supports the subscription and pay-as-you-go billing methods.
You cannot switch the billing method from pay-as-you-go to subscription.	You can switch the billing method from pay-as-you-go to subscription.
In addition to the billable items of standard EIPs, you are charged a specification fee based on the number of continuous EIPs. For more information about specification fees,submit a ticket.	No specification fee is charged.

Procedure

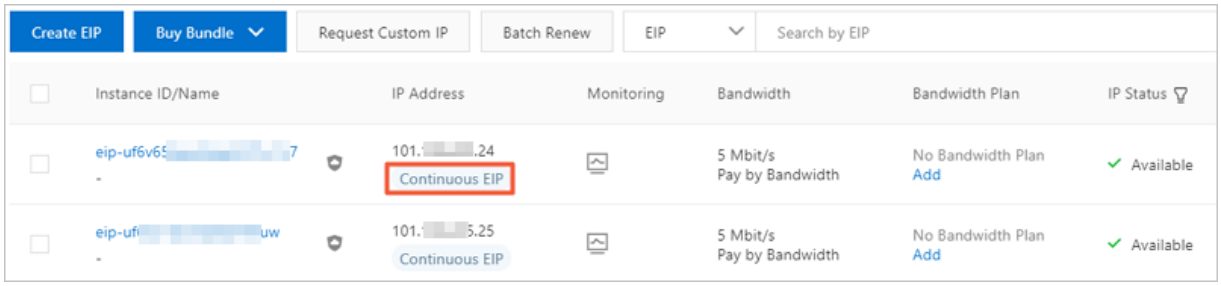
1. Log on to the Elastic IP Address console .
2. In the left-side navigation pane, choose **Elastic IP Addresses > Elastic IP Addresses**.
3. In the top navigation bar, select the region where you want to apply for continuous EIPs.
4. On the **Elastic IP Addresses** page, click **Request Custom IP**.
5. In the **Request Custom IP** dialog box, set the following parameters and click **OK**.

Parameter	Description
EIP Type	Select **Request Continuous EIP Group**.

Parameter	Description
Continuous EIP Group Mask	Select the subnet mask length of the continuous EIP group, and select **I have read and understand that:**. Valid values: /28 to /24. The number of continuous EIPs varies based on the selected mask length. ○ /28: allocates 16 continuous EIPs by default. ○ /27: allocates 32 continuous EIPs by default. ○ /26: allocates 64 continuous EIPs by default. ○ /25: allocates 128 continuous EIPs by default. ○ /24: allocates 256 continuous EIPs by default. **Note** In some scenarios, the actual number of allocated IP addresses may be less than the expected number because one, three, or four IP addresses may be reserved.
Network Type	Select a network type for the continuous EIPs. ○ **Public**: After a continuous EIP is associated with a cloud resource, the cloud resource can use the continuous EIP to communicate with the Internet. ○ **Hybrid Cloud**: After a continuous EIP is associated with a cloud resource, the cloud resource can use the continuous EIP to establish communication within a hybrid cloud. **Note** You can specify the network type only when your account is included in the whitelist. To use this feature, contact your product manager from Alibaba Cloud.
Billing Method	Select a billing method for the continuous EIPs. ○ **Pay by Bandwidth**: Bills are generated on a daily basis. You are charged based on specified bandwidth limits instead of actual resource usage. ○ **Pay by Traffic**: Bills are generated on an hourly basis based on the amount of data transfer sent over the Internet. **Note** Continuous EIPs that are used within a hybrid cloud support only the pay-by-bandwidth billing method. Pay-by-data-transfer is not supported.
Bandwidth	Specify a bandwidth limit for the continuous EIPs. Valid values: 1 to 200. Unit: Mbit/s.

Result

After the application for continuous EIPs is approved, the continuous EIPs are labeled with **Continuous EIP**.



Related information

- AllocateEipSegmentAddress

2.4. Convert the static public IP address of an ECS instance in a VPC to an EIP

This topic describes how to convert the static public IP address of an Elastic Compute Service (ECS) instance in a virtual private cloud (VPC) to an elastic IP address (EIP). After the conversion, you can disassociate the EIP from the ECS instance. Then, you can associate the EIP with the ECS instance again or another ECS instance. EIPs allow you to manage public IP addresses in a flexible way.

Prerequisites

An ECS instance is created and assigned a static public IP address. For more information, see Create an instance by using the wizard.

Overview of public IP addresses

If an ECS instance requires access to the Internet, you must allocate a public IP address and Internet bandwidth for the ECS instance. Alibaba Cloud provides the following types of public IP addresses:

- Static public IP addresses

  When you create an ECS instance in a VPC, you can specify Assign Public IPv4 Address for the ECS instance. After the ECS instance is created, the system automatically assigns a static public IP address to the ECS instance. You cannot disassociate this public IP address from the ECS instance.

- EIPs

  An EIP is a public IP address that you can purchase and use as an independent resource. You can associate EIPs with ECS instances, internal-facing Server Load Balancer (SLB) instances, secondary elastic network interfaces (ENIs), NAT gateways, and high-availability virtual IP addresses (HAVIPs). The ECS instances, internal-facing SLB instances, and secondary ENIs must be deployed in VPCs. In addition, you can use EIP bandwidth plans and data transfer plans to reduce costs of Internet data transfer.

Both static public IP addresses and EIPs apply multi-line BGP network that Alibaba Cloud uses to provide high-quality Internet services. The main difference between a static public IP address and an EIP is whether the IP address can be disassociated from an ECS instance. You can disassociate an EIP from an ECS instance at any time. Then, you can associate the EIP with the ECS instance again based on your business requirements. However, you cannot disassociate a static public IP address from an ECS instance.

Limits

Before you convert the static public IP address of an ECS instance to an EIP, take note of the following limits:

- If the ECS instance is billed on a pay-as-you-go basis, make sure that your account does not have overdue payments.
- If the ECS instance is billed on a subscription basis, you cannot convert the static public IP address within 24 hours before the ECS instance expires.
- If the ECS instance is billed on a subscription basis, make sure that the Internet bandwidth is billed on a **pay-by-data-transfer** basis. If the Internet bandwidth is billed on a **pay-by-bandwidth** basis, you must modify the billing method of the Internet bandwidth before you can convert the static public IP address. For more information, see Overview of instance upgrade and downgrade.
- You can convert only the static public IP address of an ECS instance that is deployed in a VPC. In addition, the ECS instance must be in the Stopped or Running state. ECS instances in other states do not support the operation.
- You can convert the static public IP address of an ECS instance only to an EIP.
- You cannot convert the static public IP address of an ECS instance to an EIP if the ECS instance has a pending upgrade or downgrade task in the queue.

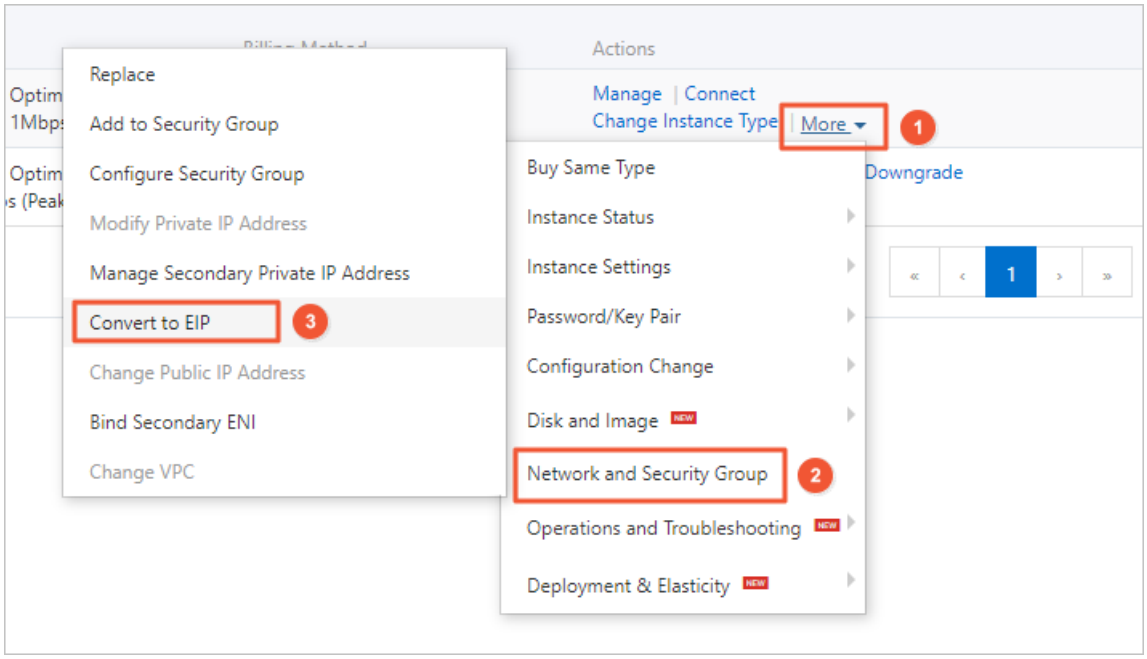
Considerations

Before you convert the static public IP address of an ECS instance to an EIP, take note of the following items:

- When you convert the static public IP address of an ECS instance in a VPC to an EIP, connections to the ECS instance from the Internet are not interrupted.
- After the static public IP address is converted to an EIP, the EIP cannot be converted back to the static public IP address.
- During the conversion, the public IP address is preserved. After the conversion, the public IP address becomes the IP address of the EIP.
- After the conversion, the billing method of the Internet bandwidth that the ECS instance uses is not changed. You are charged on a pay-bay-data-transfer basis.
- After the conversion, the unit price of Internet data transfer is not changed. The EIP is automatically associated with the ECS instance. You are not charged a configuration fee for the EIP. The billing of the EIP and the ECS instance are independent of each other. The system generates separate bills for the EIP and the ECS instance. For more information about EIP billing, see Billing overview. Go to **Billing Management**, click Usage Records, and export the bills of the **EIP**.

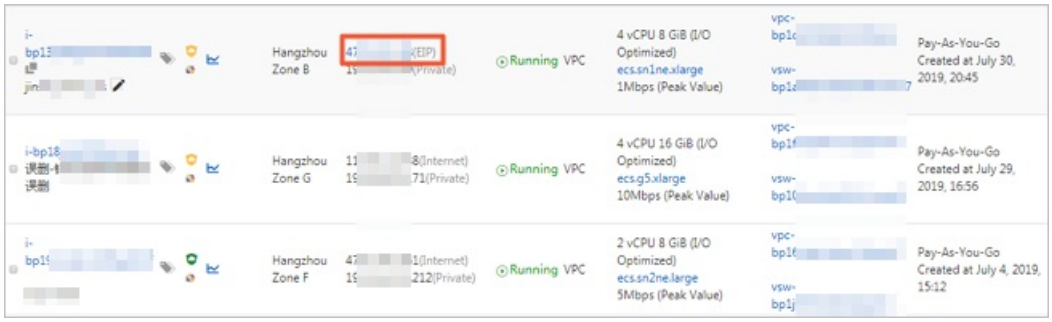
Procedure

1. Log on to the ECS console.
2. In the left-side navigation pane, choose **Instances & Images > Instances**.
3. In the top navigation bar, select the region where the ECS instance is deployed.
4. On the **Instances** page, find the ECS instance that you want to manage and choose **More > Network and Security Group > Convert to EIP** in the **Actions** column.



5. In the message that appears, click **OK**.
6. Refresh the ECS instance list.

   After the conversion, the IP address is labeled as **EIP**.



Related information

- ConvertNatPublicIpToEip

2.5. Convert the public IP address of a classic network-type instance to an Elastic IP address

When you manually release a classic network-type ECS instance, you can convert its public IP address to an Elastic IP address (EIP). An EIP can be bound to a VPC-type ECS instance for various scenarios such as network migration, elastic binding, and flexible bandwidth adjustment. You can convert the public IP address of a classic network-type instance to an EIP only when you manually release the instance.

Prerequisites

Before you convert the public IP address of a classic network-type ECS instance to an EIP, make sure the following requirements are met:

- The instance has been assigned a public IP address.
- The zone to which the instance belongs cannot be Hangzhou Zone C.
- If the instance is a pay-as-you-go instance, it is in the **Stopped** state and your account has no overdue payments.
- If the instance is a subscription instance, it is in the **Expired** or **To Be Released** state.
- If the instance is a subscription instance, the billing method of the Internet bandwidth is **Pay-By-Traffic**. You can change the **Pay-By-Bandwidth** billing method of the Internet bandwidth by upgrading or downgrading the instance. For more information, see Overview of instance upgrade and downgrade.
- If the type of the instance has been changed, wait until the change takes effect before proceeding.
- You have created snapshots for the instance to prevent data loss caused by incorrect operations. For more information, see Create a snapshot.

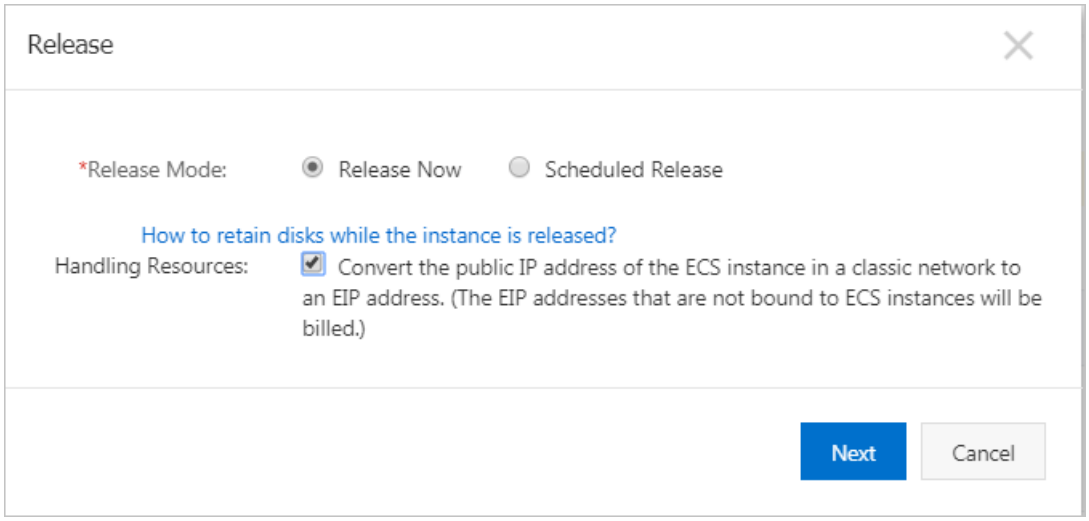
Context

After the public IP address of a classic network-type instance is converted to an EIP,

- The billing method for the Internet bandwidth of the EIP is Pay-By-Traffic.
- The Internet bandwidth of the EIP is the same as that of the original ECS instance. You can change the Internet bandwidth of the EIP as needed in the VPC console. If the Internet bandwidth of the classic network-type instance is 0 Mbit/s before conversion, the Internet bandwidth of the converted EIP is automatically upgraded to 1 Mbit/s.
- The EIP cannot be bound to a classic network-type ECS instance.
- A classic network-type ECS instance has a public network interface controller (NIC). If the public IP address of the ECS instance is converted to an EIP, the public NIC and MAC address of the instance will not be retained.

Procedure

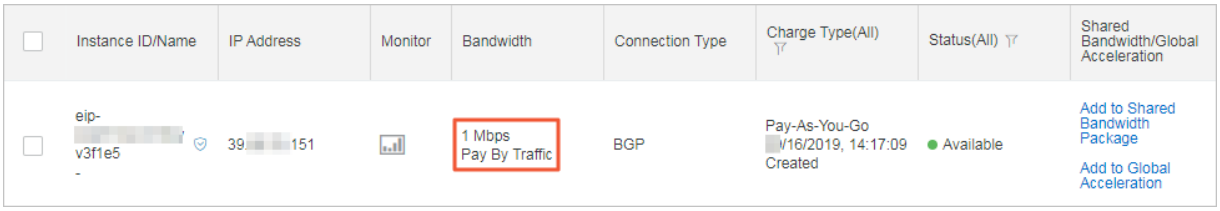
1. Log on to the ECS console.
2. In the left-side navigation pane, choose **Instances & Images > Instances**.
3. In the top navigation bar, select a region.
4. Find the classic network-type instance and select a release method.
   - To release a subscription instance, click **Release** in the **Actions** column corresponding to the instance.
   - To release a pay-as-you-go instance, choose **More > Instance Status > Release** from the **Actions** column.
5. Select **Release Now**, select **Convert the public IP address of the ECS instance in a classic network to an EIP address. (The EIP addresses that are not bound to ECS instances will be billed.)**, and then click **Next**.



6. Click **OK**.

Result

After the public IP address of a classic network-type ECS instance is converted to an EIP, the instance is released. You can view the converted EIP in the VPC console.



What's next

You can bind this EIP to another ECS instance. For more information, see Associate an EIP with an ECS instance.

3.Bind an EIP to a cloud instance

3.1. Associate an EIP with an ECS instance

This topic describes how to associate an elastic IP address (EIP) with an Elastic Compute Service (ECS) instance that is deployed in a virtual private cloud (VPC). ECS instances can communicate with the Internet after they are associated with EIPs.

Prerequisites

An ECS instance is created. For more information, see Create an instance by using the wizard.

Procedure

1. Log on to the Elastic IP Address console .
2. In the top navigation bar, select the region where the EIP is deployed.
3. On the **Elastic IP Addresses** page, find the EIP that you want to manage, and click **Bind Resource** in the **Actions** column.
4. In the **Bind Elastic IP Address to Resources** dialog box, set the following parameters and click **OK**.

Parameter	Description
Instance Type	Select **ECS Instance**.
Binding mode	Select the mode in which you want to associate the EIP. Only the NAT mode is supported. In NAT mode: ○ The EIP is associated with the ECS instance in NAT mode. The private IP address and public IP address of the ECS instance are both available. ○ The EIP is not displayed in the operating system. You must call the DescribeInstances operation to query the public IP address with which the ECS instance is associated. For more information, see DescribeInstances. ○ The EIP does not support NAT application layer gateway (ALG) protocols such as H.323, Session Initiation Protocol (SIP), Domain Name System (DNS), Real Time Streaming Protocol (RTSP), or Trivial File Transfer Protocol (TFTP).
Select an instance to bind	Select the ECS instance to be associated with the EIP. The ECS instance that you select must meet the following requirements: ○ The ECS instance is deployed in a VPC. ○ The ECS instance is in the Running or Stopped state. ○ Each ECS instance can be associated with only one EIP. ○ The ECS instance and EIP belong to the same region. ○ The ECS instance is not associated with a public IP address or another EIP.

Related information

- AssociateEipAddress

3.2. Associate EIPs with secondary ENIs in multi-EIP to ENI mode (new applications are not accepted)

If you have already obtained the permissions to use the multi-EIP to ENI mode, you can associate elastic IP addresses (EIPs) with a secondary elastic network interface (ENI) in multi-EIP to ENI mode. After EIPs are associated with a secondary ENI in multi-EIP to ENI mode, the private IP address of the ENI and the EIPs are both available. You can view the EIPs in the ENI information of the operating system.

> **Notice** Alibaba Cloud no longer accepts new applications for using the multi-EIP to ENI mode. If you have already been authorized to use this feature, you can associate EIPs with a secondary ENI in multi-EIP to ENI mode.

Prerequisites

- A secondary ENI is created and deployed in a virtual private cloud (VPC). The secondary ENI and the EIPs that you want to associate are deployed in the same region. For more information, see Create an ENI.
- The secondary ENI is not associated with an Elastic Compute Service (ECS) instance.

  If the secondary ENI is associated with an ECS instance, you must disassociate the secondary ENI from the ECS instance before you can associate EIPs with the secondary ENI in multi-EIP to ENI mode. For more information, see Unbind an ENI.

Background information

EIPs function as Network Address Translation (NAT) IP addresses. In NAT mode, public IP addresses are assigned to gateways instead of the network interface controllers (NICs) of ECS instances. In the operating system, only private IP addresses of NICs are displayed. Public IP addresses are not displayed. Administrators must manually maintain the mapping between NICs or servers and public IP addresses. In addition, EIPs that are associated with resources in NAT mode do not support the H.323, Session Initiation Protocol (SIP), Domain Name System (DNS), or Real Time Streaming Protocol (RTSP) protocol.

To resolve this issue, you can associate EIPs with a secondary ENI in **multi-EIP to ENI mode**. This way, the EIPs are displayed in the ENI information of the operating system. After you associate EIPs with a secondary ENI in multi-EIP to ENI mode:

- The private network features of the secondary ENI are still available.
- The EIPs are displayed in the ENI information of the operating system. After you configure static IP addresses in the operating system, you can run the **ifconfig** or **ipconfig** command to query the public IP addresses of the ENI.
- EIPs support all IP protocols, including FTP, H.323, SIP, DNS, RTSP, and TFTP.
- A secondary ENI can be associated with at most 10 EIPs.

Procedure

1. Log on to the Elastic IP Address console .

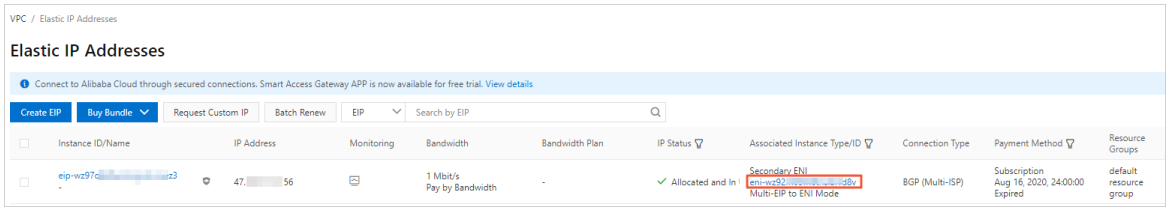
2. In the top navigation bar, select the region where the EIP is deployed.

   > **Note** The multi-EIP to ENI mode is supported in the following regions: China (Shenzhen), China (Shanghai), China (Beijing), China (Zhangjiakou), China (Chengdu), Singapore (Singapore), Germany (Frankfurt), India (Mumbai), US (Virginia), and UK (London).

3. On the **Elastic IP Addresses** page, find the EIP that you want to associate and click **Bind Resources** in the **Actions** column.
4. In the **Bind Elastic IP Address to Resources** dialog box, set the following parameters and click **OK**.

Parameter	Description
Instance Type	Select **Secondary ENI**.
Mode	Select **Multi-EIP to ENI Mode**.
Select an instance to bind	Select the secondary ENI to be associated with the EIP.

5. To associate more EIPs with the secondary ENI, repeat the preceding steps.
6. Return to the Elastic IP Addresses page and click the ID of the associated ENI.



7. On the **Network Interfaces** page, click **Bind to Instance** to associate the ENI with an ECS instance.

   > **Note**
   >
   > - After you associate EIPs with a secondary ENI in multi-EIP to ENI mode, you can associate the secondary ENI with an ECS instance. Make sure that the ECS instance belongs to one of the following instance families: ecs.c5-618, ecs.d1ne, ecs.db11-se1ne, ecs.ebma1, ecs.ebmc4, ecs.ebmg4, ecs.ebmg5, ecs.ebmg5ne, ecs.ebmgn5i, ecs.ebmgn5t, ecs.ebmhfg4, ecs.ebmhfg5, ecs.ebmi2, ecs.ebmi3, ecs.ebmr4, ecs.ebmr5, ecs.elmd1ne, ecs.elmdb, ecs.f1, ecs.f2, ecs.g5-618, ecs.gn3, ecs.gn5d, ecs.gn5i, ecs.gn5t, ecs.gn6p, ecs.gn6v, ecs.i2, ecs.r1, ecs.re4, ecs.re4e, ecs.sccg5, ecs.sccgn6, ecs.scch5, ecs.x1.i2, ecs.x1.i5, ecs.x1.i6, ecs.x1.i8, ecs.g5, ecs.c5, ecs.r5, ecs.t5, ecs.sn2ne, ecs.se1ne, and ecs.sn1ne. For more information, see Instance families.
   > - After you associate EIPs with the secondary ENI in the multi-EIP to ENI mode, you must enable Dynamic Host Configuration Protocol (DHCP) for the ECS instance. Otherwise, the multi-EIP to ENI mode does not take effect.

8. You can call the DescribeEipGatewayInfo operation to query the gateway and subnet mask of an EIP. For more information, see DescribeEipGatewayInfo.

9. Log on to the ECS instance and configure the EIPs for the ECS instance. For more information, see Configure EIPs for an ECS instance that runs Windows and Configure EIPs for an ECS instance that runs Linux.

   > **Notice** The preceding topics describe how to configure secondary private IP addresses for ECS instances. You can follow the same procedure to configure EIPs for ECS instances. However, you must specify the gateways and subnet masks of EIPs instead of the gateways and subnet masks of secondary private IP addresses.

   After you configure EIPs for the ECS instances, you can run the **ifconfig** or **ipconfig** command to query the EIPs.

3.3. Associate an EIP with a NAT gateway

This topic describes how to associate an elastic IP address (EIP) with a NAT gateway. After you associate an EIP with a NAT gateway, you can create DNAT and SNAT entries for the EIP.

Prerequisites

A NAT gateway is created. For more information, see Create NAT gateways **Create a NAT gateway** in **Quick Start** of the

Procedure

1. Log on to the Elastic IP Address console .
2. In the top navigation bar, select the region where the EIP is deployed.
3. On the **Elastic IP Addresses** page, find the EIP that you want to manage and click **Bind Resource** in the **Actions** column.
4. In the **Bind Elastic IP Address to Resources** dialog box, set the following parameters and click **OK**.

Parameter	Description
Instance Type	Select **NAT Gateway**.
Select an instance to bind	Select the NAT gateway to be associated with the EIP. Make sure that the following requirements are met: ○ You had not purchased a NAT bandwidth plan before January 26, 2018 with the Alibaba Cloud account to which the NAT gateway belongs. If you did, associate the NAT bandwidth plan with the NAT gateway. ○ The NAT gateway and EIP must be deployed in the same region. ○ You can associate a NAT gateway with at most 20 EIPs, among which at most 10 pay-by-data-transfer EIPs can be associated. If you want to associate more EIPs, submit a ticket to request a quota increase. For more information, see Manage quotas.

Related information

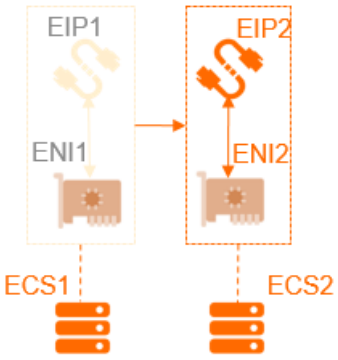
- AssociateEipAddress

3.4. Bind an EIP to a secondary ENI

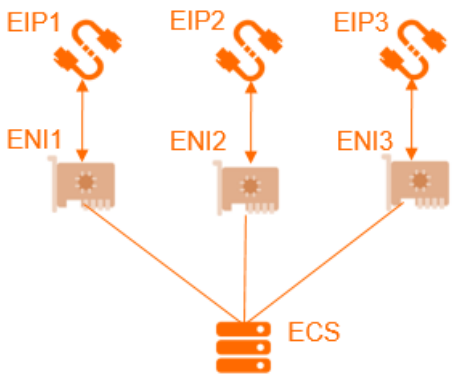
3.4.1. Overview

You can associate elastic IP addresses (EIPs) with elastic network interfaces (ENIs). You can associate EIPs with ENIs and associate the ENIs with an Elastic Compute Service (ECS) instance. This way, the ECS instance can use multiple EIPs. You can use EIPs to improve the service availability, flexibility, and scalability.

Each ENI is assigned a private IP address. After you associate an EIP with an ENI, both the private IP address and the EIP are available for the ENI. You can change the private IP address and public IP address of an ECS instance by replacing the secondary ENI that is associated with the ECS instance. When you replace the secondary ENI of an ECS instance, the reliability and availability of your service are not affected.



You can associate multiple ENIs with an ECS instance. Make sure that an EIP is associated with each ENI. This way, the ECS instance can use multiple EIPs. The ECS instance can use the EIPs to provide Internet-facing services. You can configure security group rules for the ECS instance to control access from the Internet.



Association modes

You can associate an EIP with an ENI in one of the following two modes:

- NAT mode
- Cut-through mode

> **Note** The cut-through mode is supported in the following regions: China (Hangzhou), China (Shanghai), China (Qingdao), China (Beijing), China (Zhangjiakou), China (Hohhot), China (Shenzhen), China (Chengdu), Singapore (Singapore), Indonesia (Jakarta), Germany (Frankfurt), UK (London), and US (Virginia).

The following table describes the differences between these modes.

Item	NAT mode	Cut-through mode
Whether the EIP is displayed in the ENI information of the operating system	No	Yes **Note** You can run the **ifconfig** or **ipconfig** command to query the public IP address of the ENI.
Types of ENIs that can be associated with EIPs	Primary and secondary ENIs	Secondary ENIs
Number of EIPs that can be associated with a primary ENI	1	N/A
Number of EIPs that can be associated with a secondary ENI	Depends on the number of private IP addresses of the secondary ENI **Note** Each EIP is mapped to a private IP address of a secondary ENI. If a secondary ENI is assigned 10 private IP addresses, you can associate at most 10 EIPs with the secondary ENI.	1 **Note** You can associate an EIP with only the primary private IP address of a secondary ENI in cut-through mode.
Whether private network features of a secondary ENI are available after an EIP is associated with the secondary ENI	Yes	No
Supported protocols	EIPs deployed as NAT application layer gateways (ALGs) do not support protocols such as H.323, Session Initiation Protocol (SIP), Domain Name System (DNS), Real Time Streaming Protocol (RTSP), and Trivial File Transfer Protocol (TFTP).	EIPs support all IP protocols, including FTP, H.323, SIP, DNS, RTSP, and TFTP.

FAQ

Am I charged an instance fee for an EIP after I associate the EIP with a secondary ENI?

Yes.

You are not charged an instance fee for an EIP only when you associate the EIP with an ECS instance. You are charged instance fees if you associate EIPs with other types of resources.

Do I need to configure an ECS instance after I attach an ENI that is associated with an EIP to an ECS instance?

- If you want the ECS instance to provide Internet-facing services, such as web services, you do not need to configure routes for the ECS instance or the virtual private cloud (VPC) where the ECS instance is deployed. The ECS instance uses the EIP to provide services.
- If you want the ECS instance to access the Internet, you must configure the default route of the ECS instance or create specific routes for the ECS instance. By default, packets are transmitted from the primary ENI. You can modify route priorities to allow packets to access the Internet through the secondary ENI. You can also create specific routes to forward packets to the Internet through multiple ENIs or a random ENI to implement load balancing.

3.4.2. Associate an EIP with a secondary ENI in NAT mode

This topic describes how to associate an elastic IP address (EIP) with a secondary elastic network interface (ENI) in NAT mode. After you associate an EIP with a secondary ENI, the private IP address and public IP address that are assigned to the secondary ENI are available. In this case, the EIP is not displayed on the secondary ENI.

Prerequisites

Before you associate an EIP with a secondary ENI in NAT mode, make sure that the following requirements are met:

- A secondary ENI that is deployed in a virtual private cloud (VPC) is created. The secondary ENI and the EIP belong to the same region. For more information, see Create an ENI.
- The secondary ENI is not associated with an Elastic Compute Service (ECS) instance. If the secondary ENI is associated with an ECS instance, disassociate the secondary ENI from the ECS instance first. Then, associate the EIP with the secondary ENI in NAT mode and associate the secondary ENI with the ECS instance. For more information, see the Unbind an ENI.

Procedure

1. Log on to the Elastic IP Address console .
2. In the top navigation bar, select the region where the EIP is deployed.
3. On the **Elastic IP Addresses** page, find the EIP and click **Bind Resource** in the **Actions** column.
4. In the **Bind Elastic IP Address to Resources** dialog box, set the following parameters and click **OK**.

Parameter	Description
Instance Type	Select the type of instance. In this example, **Secondary ENI** is selected.

Parameter	Description
Binding mode	Select **Normal**. In NAT mode: ○ The number of EIPs that can be associated with a secondary ENI is based on the number of private IP addresses that are assigned to the secondary ENI. ○ When an EIP is associated with a secondary ENI in NAT mode, both the private IP address and public IP address that are assigned to the secondary ENI are available. ○ The EIP is not displayed in the operating system. To query the EIP, call the DescribeEipAddresses operation. For more information, see DescribeEipAddresses. ○ The EIP does not support NAT application layer gateway (ALG) protocols such as H.323, Session Initiation Protocol (SIP), Domain Name System (DNS), Real Time Streaming Protocol (RTSP), or Trivial File Transfer Protocol (TFTP).
Select an instance to bind	Select the secondary ENI with which you want to associate the EIP. Make sure that the following requirements are met: ○ The secondary ENI is deployed in a VPC. ○ The secondary ENI and the EIP belong to the same region.

3.4.3. Associate an EIP with a secondary ENI in cut-through mode

This topic describes how to associate an elastic IP address (EIP) with a secondary elastic network interface (ENI) in cut-through mode. After the association, the EIP replaces the private IP address of the secondary ENI. The secondary ENI functions as a public network interface controller (NIC). In this case, the EIP is displayed in the ENI information of the operating system.

Prerequisites

Before you associate an EIP with a secondary ENI in cut-through mode, make sure that the following requirements are met:

- A secondary ENI is created and deployed in a virtual private cloud (VPC). The secondary ENI and EIP are deployed in the same region. For more information, see Create an ENI.
- The secondary ENI is not associated with an Elastic Compute Service (ECS) instance.

  If the secondary ENI is associated with an ECS instance, you must disassociate it from the ECS instance before you can associate an EIP with the secondary ENI in cut-through mode. For more information, see the Unbind an ENI.

Context

EIPs function as Network Address Translation (NAT) IP addresses. In NAT mode, public IP addresses are assigned to gateway devices instead of the NICs of ECS instances. In the operating system, only private IP addresses of NICs are displayed. Public IP addresses are not displayed. Administrators must manually maintain the mapping between NICs or servers and public IP addresses. In addition, EIPs that are associated with resources in NAT mode do not support the H.323, SIP, DNS, or RTSP protocol.

To use an EIP that supports these protocols, you can associate the EIP with a secondary ENI in **cut-through mode**. In cut-through mode:

- The EIP that is associated with a secondary ENI replaces the private IP address of the secondary ENI. The secondary ENI functions as a public NIC. The private network features of the secondary ENI are not available.
- The EIP is displayed in the ENI information of the operating system. You can run the **ifconfig** or **ipconfig** command to query the public IP address of the secondary ENI.
- EIPs that are associated with resources in cut-through mode support all IP protocols, such as FTP, H.323, SIP, DNS, RTSP, and TFTP.
- Each secondary ENI can be associated with only one EIP.

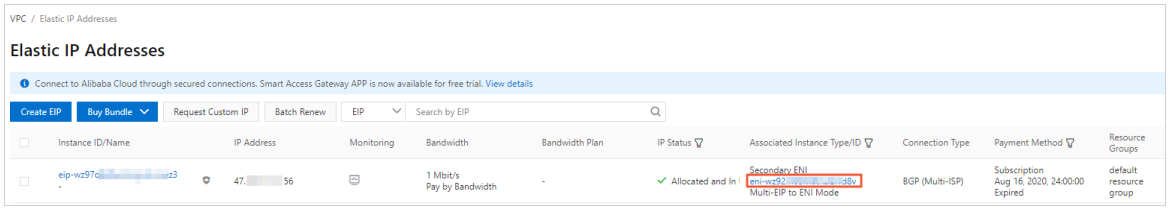
> **Notice** If you associate a subscription EIP with a secondary ENI in cut-through mode, and the secondary ENI is associated with an ECS instance, the private network features are no longer available after the EIP is released. To recover the private network features of the secondary ENI, you must disassociate it from the ECS instance, and associate an EIP with the secondary ENI in cut-through mode.

Procedure

1. Log on to the Elastic IP Address console .
2. In the upper-left corner, select the region where your EIP is created.
3. On the **Elastic IP Addresses** page, find the EIP that you want to associate and click **Bind Elastic IP Address to Resources** in the **Actions** column.
4. In the **Bind Elastic IP Address to Resources** dialog box, set the following parameters and click **OK**.

Parameter	Description
Instance Type	The type of the instance. Select **Secondary ENI**.
Mode	Select **Cut-Through Mode**.
Select an instance to bind	Select the secondary ENI with which you want to associate the EIP. **Notice** Make sure that the selected secondary ENI is not associated with an ECS instance.

5. Return to the Elastic IP Addresses page and click the associated ENI.



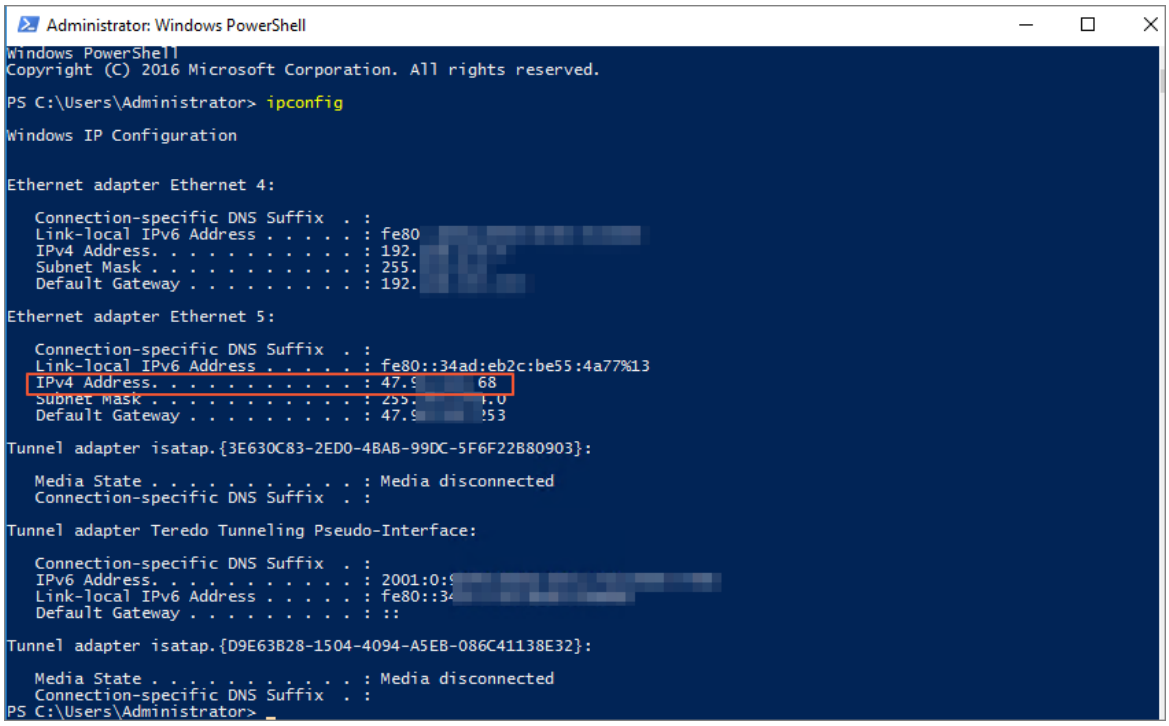
6. On the **Network Interfaces** page, click **Bind** in the **Actions** column to associate the ENI with an ECS instance.

   > **Note**
   > - The number of ENIs that can be associated with an ECS instance varies based on the type of EIP. For more information, see the Instance families.
   > - After you associate the secondary ENI with an ECS instance, you must enable Dynamic Host Configuration Protocol (DHCP) and restart the ENI for the cut-through mode to take effect.
   > - After the cut-through mode takes effect, the ECS instance automatically generates a route that uses the secondary ENI as the outbound interface. The priority of this route is lower than the priority of the route of the primary ENI. You can modify the priorities of the routes based on your business requirements.

7. Log on to the ECS instance by using the associated EIP and run the `ipconfig` command to view the network configuration of the ECS instance.

   > **Note** Make sure that the security group rules of the ECS instance allow remote access.

   As shown in the following figure, the IPv4 address of the ECS instance is replaced by the EIP.



3.5. Associate an EIP with an SLB instance

This topic describes how to associate an elastic IP address (EIP) with a Server Load Balancer (SLB) instance. After you associate an EIP with an SLB instance, the SLB instance can forward requests from the Internet.

Prerequisites

An SLB instance is created. For more information, see Create a CLB instance.

Procedure

1. Log on to the Elastic IP Address console .
2. In the top navigation bar, select the region where the EIP is deployed.
3. On the **Elastic IP Addresses** page, find the EIP that you want to manage and click **Bind Resource** in the **Actions** column.
4. In the **Bind Elastic IP Address to Resources** dialog box, set the following parameters and click **OK**.

Parameter	Description
Instance Type	Select **SLB Instance**.
Select an instance to bind	Select the SLB instance to be associated with the EIP. Make sure that the following requirements are met: ○ The SLB instance is deployed in a virtual private cloud (VPC). ○ The SLB instance and EIP belong to the same region. ○ Each SLB instance can be associated with only one EIP. **Note** If you associate the EIP with an internal-facing SLB instance and the SLB instance has traffic of private network workloads, transient connections may occur. We recommend that you perform the association during off-peak hours or switch the workloads to another SLB instance.

Related information

- AssociateEipAddress

4.Disassociate an EIP from a cloud resource

This topic describes how to disassociate an elastic IP address (EIP) from a cloud resource when Internet access is no longer needed. An EIP that is disassociated from a cloud resource still incurs retention costs.

Procedure

1.
2. In the top navigation bar, select the region where the EIP is deployed.
3. On the **Elastic IP Addresses** page, find the EIP that you want to disassociate, and click **Unbind** in the **Actions** column.
4. In the message that appears, click **OK**.

Related information

- UnassociateEipAddress

5.Manage subscription EIPs

5.1. Resize the maximum bandwidth

This topic describes how to resize the maximum bandwidth for subscription elastic IP addresses (EIPs). After you change the maximum bandwidth value for an EIP, the new value immediately takes effect.

Procedure

1. Log on to the Elastic IP Address console .
2. In the top navigation bar, select the region where the EIP is deployed.
3. On the **Elastic IP Addresses** page, find the EIP that you want to manage and choose > **Modify Configuration** in the **Actions** column.
4. On the **Upgrade/Downgrade** page, specify a new bandwidth value, click **Buy Now**, and then complete the payment and click .

Related information

- ModifyEipAddressAttribute

5.2. Renew a subscription EIP

This topic describes how to renew a subscription elastic IP address (EIP).

Context

An subscription EIP will be retained for seven days after the expiration date. If you do not renew the EIP within seven days, the EIP is automatically released.

Procedure

1.
2. In the top navigation bar, select the region where the EIP is deployed.
3. On the **Elastic IP Addresses** page, find the EIP that you want to renew, and choose > **Renewal** in the **Actions** column.
4. On the **Renew** page, specify the renewal period, select the Elastic IP Terms of Service check box, click **Buy Now** and complete the payment.

6.Manage pay-as-you-go EIPs

6.1. Upgrade and downgrade a pay-as-you-go EIP

This topic describes how to upgrade and downgrade the bandwidth limit of a pay-as-you-go elastic IP address (EIP).

Procedure

1. Log on to the Elastic IP Address console .
2. In the top navigation bar, select the region where the EIP is deployed.
3. On the **Elastic IP Addresses** page, find the EIP that you want to manage and choose > **Modify Configuration** in the **Actions** column.
4. In the **eip_bandwidth_max** section, specify a new bandwidth limit and click **Buy Now**.

6.2. Associate an EIP with an EIP bandwidth plan

EIP bandwidth plans support bandwidth sharing and transferring on a regional scale. After you purchase an EIP bandwidth plan, you can associate elastic IP addresses (EIPs) in the same region with the EIP bandwidth plan. This way, the EIPs share the bandwidth of the EIP bandwidth plan. This saves costs of Internet bandwidth.

Prerequisites

- Make sure that an EIP is purchased and the following requirements are met:
  - The EIP is billed on a pay-as-you-go basis.
  - The EIP and the EIP bandwidth plan are purchased in the same region.
  - The line type of the EIP and the line type of the EIP bandwidth plan are the same.

  For more information, see Apply for EIPs.
- An EIP bandwidth plan is purchased. For more information, see Purchase an EIP bandwidth plan.

Context

EIP bandwidth plans are billed on a pay-by-data-transfer basis. For more information, see Billing.

After you associate EIPs with an EIP bandwidth plan:

- Elastic Compute Service (ECS) instances, Server Load Balancer (SLB) instances, and NAT gateways that are associated with the EIPs share the bandwidth of the EIP bandwidth plan.
- The predefined bandwidth limits of the EIPs become invalid. The bandwidth limits of the EIPs are the same as the bandwidth limit of the EIP bandwidth plan.
- The predefined billing methods of the EIPs become invalid. The EIPs function as public IP addresses. Data transfer is not charged for the EIPs.
- Configuration fees of EIPs are not determined by whether the EIPs are associated with an EIP

bandwidth plan.

- You are not charged a configuration fee for an EIP if you associate the EIP with an ECS instance in a virtual private cloud (VPC).
- You are charged a configuration fee for an EIP if you associate the EIP with a NAT gateway, SLB instance, secondary elastic network interface (ENI), or high-availability virtual IP address (HAVIP).

> **Note**
>
> - After you associate an EIP with a NAT gateway, when you associate the EIP with an EIP bandwidth plan, your service may be temporarily interrupted. Proceed with caution.
> - You can associate at most 100 EIPs with each EIP bandwidth plan. To associate more EIPs, request a quota increase. For more information, see Manage resource quotas.

Procedure

1. Log on to the Elastic IP Address console .
2. In the top navigation bar, select the region where the EIP is deployed.
3. On the **Elastic IP Addresses** page, find the EIP that you want to manage and choose > **Add to Shared Bandwidth Package** in the **Actions** column.
4. In the dialog box that appears, select an EIP bandwidth plan and click **OK**.

Related information

- AddCommonBandwidthPackageIp

6.3. Disassociate an EIP from an EIP bandwidth plan

This topic describes how to disassociate an elastic IP address (EIP) from an EIP bandwidth plan. After you disassociate the EIP, the bandwidth limit and the billing method of the EIP are restored to the predefined settings.

Procedure

1. Log on to the Elastic IP Address console .
2. In the top navigation bar, select the region where the EIP is deployed.
3. On the **Elastic IP Addresses** page, find the EIP that you want to disassociate and choose > **Remove from Internet Shared Bandwidth** in the **Actions** column.
4. In the message that appears, click **OK**.

Related information

- RemoveCommonBandwidthPackageIp

6.4. Release an EIP

This topic describes how to release an elastic IP address (EIP) that you no longer need. After you release an EIP, you are no longer charged for the EIP.

Context

Take note of the following limits before you release an EIP:

- You can release only pay-as-you-go EIPs. You cannot release subscription EIPs.
- You cannot release EIPs that are locked due to security issues.

After you release an EIP, you are no longer charged for the EIP. However, you may still receive bills.

- Bills for pay-by-data-transfer EIPs are generated on an hourly basis. The bill for data transfer within the current hour is generated the next hour.

  For example, if you release an EIP at 10:30, you will receive a bill at 11:00. The bill contains fees that are charged from 10:00 to 11:00.

- Bills for pay-by-bandwidth EIPs are generated on a daily basis. Bills are generated at 00:00 every day and contain fees that are charged during the last day.

  For example, if you release an EIP on January 1, 2019, you will receive a bill at 00:00 (UTC+8), January 2, 2019. The bill contains fees that are charged during January 1, 2019.

Prerequisites

Before you release an EIP, make sure that the following requirements are met:

- The EIP is not associated with an EIP bandwidth plan. For more information, see Disassociate an EIP from an EIP bandwidth plan.
- The EIP is not associated with a cloud resource. For more information, see Disassociate an EIP from a cloud resource.

Release an EIP

1. Log on to the Elastic IP Address console .
2. In the top navigation bar, select the region where the EIP is deployed.
3. On the **Elastic IP Addresses** page, find the EIP that you want to manage and choose > **Release** in the **Actions** column.
4. In the **Release Elastic IP** dialog box, click **OK**.

   If you release a continuous EIP, all continuous EIPs in the continuous EIP group are released. Select **I have read and understood the preceding information, and want to release the continuous EIP group and all EIPs in it** and click **OK**.

Enable deletion protection

You can enable deletion protection to prevent EIPs from being released due to human errors.

1. Log on to the Elastic IP Address console .
2. In the top navigation bar, select the region where the EIP is deployed.
3. Use one of the following methods to enable deletion protection:

   After you enable deletion protection for an EIP, you cannot release the EIP.

   - Method 1

a. On the **Elastic IP Addresses** page, find the EIP that you want to manage and click its ID.
b. On the **Instance Information** tab, click **Enable Deletion Protection**.

- Method 2

  On the **Elastic IP Addresses** page, select one or more EIPs and choose **More > Enable Deletion Protection**.

Disable deletion protection

If the EIP that you want to release has deletion protection enabled, you must disable deletion protection before you can release the EIP.

1. Log on to the Elastic IP Address console .
2. In the top navigation bar, select the region where the EIP is deployed.
3. Use one of the following methods to disable deletion protection:
   - Method 1
     a. On the **Elastic IP Addresses** page, find the EIP that you want to manage and click its ID.
     b. On the **Instance Information** tab, click **Disable Deletion Protection**.
   - Method 2

     On the **Elastic IP Addresses** page, find the EIP that you want to manage, move the pointer over , and then click **Disable Deletion Protection** in the tooltip that appears.

   - Method 3

     On the **Elastic IP Addresses** page, select one or more EIPs and choose **More > Disable Deletion Protection**.

Related information

- ReleaseEipAddress
- ReleaseEipSegmentAddress

7.View bills

This topic describes how to view the bills of an elastic IP address (EIP).

Procedure

1. Log on to the Elastic IP Address console .
2. In the top navigation bar, select the region where the EIP is deployed.
3. On the **Elastic IP Addresses** page, find the EIP that you want to manage and choose > **View Bills** in the **Actions** column.
4. You can view the detailed bills of the EIP on the **Bills** page.

8.Manage quotas

You can log on to the Virtual Private Cloud (VPC) console to query quota usage of elastic IP addresses (EIPs). If the quota of a resource does not meet your business requirements, you can request a quota increase. You can also increase API quotas in the VPC console. This allows you to call more EIP operations within a specific time period.

Manage quotas

1. Use one of the following methods to open the **Quota Management** page.
   - Method 1
     a. Log on to the VPC console.
     b. In the left-side navigation pane, click **Quota Management**.
   - Method 2
     a. Log on to the EIP page.
     b. At the bottom of the **Elastic IP Addresses** page, choose **Increase EIP Quota > Quantity Quota**.
2. On the **Quota Management** page, click the **Elastic IP Address (EIP)** tab to view the quota usage of EIPs.
3. To increase quotas, click **Submit Application** in the **Actions** column.
4. In the **Apply** dialog box, set the following parameters and submit the application.
   - **Requested Value**: Enter the requested value.
   - **Reason**: Enter detailed reasons for the application, including the scenarios and necessity.
   - **Email**: Enter the email address of the applicant.
5. Click **OK**.

   The system automatically reviews the application, and determines whether to approve the application. If your application is rejected, its state changes to **Rejected**. If your application is approved, its state changes to **Approved** and new quotas immediately take effect.

Manage API quotas

1. Log on to the Elastic IP Address console .
2. In the top navigation bar, select the region where you want to manage API quotas.
3. At the bottom of the **Elastic IP Addresses** page, choose **Increase EIP Quota > API Quota**.
4. On the **API Rate Limits** page, find the name of the API that you want to manage and click **Apply** in the **Actions** column.
5. In the **Apply for API Rate Limit** dialog box, set the following parameters.
   - **Applied Quotas**: Enter the requested value. The value indicates the maximum times that you can call the API operation every 60 seconds.
   - **Reason for Application**: Enter detailed reasons for the application, including the scenarios and necessity.
   - **Notify Result**:
     - **Yes**: After your application is processed, you are notified by SMS or email.

- **No**: You will not receive a notification.

6. Click **OK**.
7. Click **Application Records** in the **Actions** column to view the status of your application.