Alibaba Cloud
Elastic IP Address

Product Introduction

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Generic conventions

Table -1: Style conventions

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

Style	Description	Example
{} or {a|b}	**It indicates that it is a required value, and only one item can be selected.**	`swich` *{stand | slave}*

Contents

1 What are Elastic IP Addresses

An Elastic IP Address (EIP) is a public IP address resource that you can purchase and use independently. You can associate an EIP with an ECS instance of the VPC network, a private SLB instance of the VPC network, an ENI of the VPC network, and a NAT Gateway, or a HAVIP.

An EIP is also a type of NAT IP address that is located in the public network gateway of Alibaba Cloud, and is mapped to the associated cloud instance through NAT. After a cloud instance is associated with an EIP, the cloud instance can communicate over the Internet through the EIP.

The differences between an EIP and an ECS public IP address

The following table lists the differences between an EIP and an ECS public IP address.

Item	EIP	ECS public IP address
Supported networks	VPC	VPC and classic network
Can the IP address be independently used?	Yes	No
Can the IP address be associated with and disassociated from an ECS instance at any time?	Yes	No
Can the IP address be read on the NIC of an ECS instance?	The IP address can be read on the NIC in the Cut-Through Mode or Multi-EIP to ENI Mode.	Classic Network: Yes VPC: No

Benefits

EIP has the following advantages:

· Purchase and use independently

You can purchase an EIP as an independent resource instead of purchasing it together with other computing or storage resources.

· Flexible association

When you need an instance to access the Internet, you can associate an EIP with the instance as needed. You can also disassociate and release the EIP at any time.

· Configurable network capabilities

You can adjust the bandwidth value of an EIP as needed. The bandwidth change takes effect immediately.

2 Limits

Before you use Elastic IP Addresses (EIPs), note the following limits.

General limits

The general limits of EIPs are as follows:

· Up to 20 EIPs can be created under one account. If you need more EIPs, open a ticket.

· You can associate an EIP with a cloud resource only when the EIP is available.

· The association of an EIP takes effect immediately.

· An EIP can be associated with only one resource at a time.

· An EIP that is locked because of security reasons cannot be associated with or disassociated from any cloud resource.

· The maximum peak bandwidth available for Pay-As-You-Go EIPs that are billed based on traffic is 200 Mbit/s. If you need a larger peak bandwidth, you can use either of the following two ways.

    - (Recommended) Add the EIP to an Internet Shared Bandwidth instance. For more information, see Add EIPs to an Internet Shared Bandwidth instance.

    - Open a ticket.

Limits on associating ECS instances

Note the following limits before you associate an EIP with an ECS instance:

· The network type of the ECS instance must be VPC.

· The ECS instance and the EIP must belong to the same region.

· The ECS instance must be in the Running or Stopped state.

· The ECS instance cannot have a public IP address or be associated with any EIP.

· One ECS instance can be associated with only one EIP.

Limits on associating NAT Gateways

Note the following limits before you associate an EIP with a NAT Gateway:

· No bandwidth package was purchased under the account to which the NAT Gateway belongs before January 26, 2018.

· The NAT Gateway and the EIP must belong to the same region.

- Up to 20 EIPs can be associated with a NAT Gateway. To increase the quota, open a ticket.

Limits on associating SLB instances

Note the following limits before you associate an EIP with a Server Load Balancer (SLB) instance:

- The network type of the SLB instance must be VPC.
- The SLB instance and the EIP must belong to the same region.
- Each SLB instance can be associated with only one EIP at a time.

Limits on associating HaVips

Note the following limits before you associate an EIP with a High-Availability Virtual IP Address (HaVip):

- The HaVip and the EIP must belong to the same region.
- The HaVip must be in the Available or Allocated state.
- An HaVip can be associated with only one EIP.

Limits on associating secondary ENIs

Note the following limits before you associate an EIP with a secondary Elastic Network Interface (ENI):

- The network type of the secondary ENI must be VPC.
- The secondary ENI and the EIP must belong to the same region.
- You can associate an EIP with an ENI in three modes: NAT mode, cut-through mode, and multi-EIP to ENI mode.

  - In the NAT mode, the number of EIPs with which a secondary ENI can be associated depends on the number of private IP addresses of the secondary ENI.
  - In the cut-through mode, a secondary ENI can only be associated with one EIP.
  - In the multi-EIP to ENI mode, a secondary ENI can be associated with ten EIPs. To increase the quota, open a ticket.