Alibaba Cloud NAT Gateway

Quick Start

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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 Tutorial overview

This tutorial provides a step-by-step guide on how to configure SNAT and DNAT so that ECS instances without a public IP can communicate with the Internet.

Before you begin, make sure that you have created an ECS instance of the VPC network. Before you begin, make sure that you have created an ECS instance of the VPC network. An ECS instance without any public IP is used in this example.

2 Create a NAT gateway

You must create a NAT Gateway before configuring SNAT and DNAT entries.

Prerequisites

A VPC is already created. For more information *Create a VPC and a VSwitch*.

Procedure

1. Log on to the *VPC console*.
2. In the left-side navigation pane, click NAT Gateways.
3. Click Create NAT Gateway.
4. Configure the NAT Gateway according to the following information and complete the payment.

Configuration	Description
Region	Select the region of the NAT Gateway. Make sure the regions of the NAT Gateway and VPC are the same.
VPC ID	Select the VPC for which the NAT Gateway is created. After the gateway is created, you cannot change the VPC. If you cannot find the expected VPC in the VPC list, troubleshoot as follows: · Check whether the VPC already has a NAT gateway configured. A VPC can be configured with only one NAT gateway. · Check whether a custom route entry, whose destination CIDR block is 0.0.0.0/0, already exists in the VPC. If so, delete this custom route entry.
Specifications	Select a specification for the NAT Gateway. The specification affects the maximum number of connections and the number of new connections allowed per second for the SNAT proxy service, but does not affect data throughput. Note: The specification has no impact on the number of connections and throughput of the DNAT function. For more information, see *Specifications of NAT Gateway*.

Configuration	Description
Billing Cycle	Display the billing cycle for NAT Gateway.

3 Bind an EIP

Before configuring DNAT or SNAT entries, you must bind an EIP to a NAT Gateway.

Prerequisites

- If you have purchased a NAT bandwidth package before January 26, 2018, you are not allowed to bind an EIP to NAT Gateway. Open a ticket to use EIP.
- You have already created an EIP. For more information, see *Create an EIP*.
- Use the *new VPC console*.

Procedure

1. Log on to the *VPC console*.
2. In the left-side navigation pane, click NAT Gateways.
3. Select the region of the NAT Gateway.
4. Click More > Bind Elastic IP Address .
5. In the displayed dialog box, complete these configurations:
   a) Public IP: Select the EIP to bind.

      Note:
      Up to 10 EIPs can be bound to a NAT Gateway and the bandwidth of an EIP cannot exceed 200 Mbps. Open a ticket to apply for more quota.

   b) Optional: VSwitches: An SNAT rule using the selected VSwitch and EIP is automatically added if you select a VSwitch. Then, the ECS instances in the specified VSwitch can access the Internet using the EIP.
6. Repeat the previous steps to bind more EIPs.

4 Add a DNAT entry

You can use the DNAT function to map a public IP to a private IP of an ECS instance in the VPC network. Then, the ECS instance with the specified public IP can provide public services.

Prerequisites

You have created a NAT Gateway and an EIP.

> Note:
> If your account has purchased a bandwidth package before January 26, 2018, the public IP is the IP of the bandwidth package.

Procedure

1. Log on to the *VPC console*.
2. In the left-side navigation pane, click NAT Gateways.
3. Select the region of the NAT Gateway.
4. Click the ID of the target NAT Gateway.
5. In the left-side navigation pane, click DNAT Table, and then click Create DNAT Entry.
6. Configure the DNAT entry according to the following information.

Configuration	Description
Public IP	Select a public IP. Note: The IP that is already being used in an SNAT entry cannot be selected.
Private IP	Select the private IP of the ECS instance to access the Internet. You can specify the private IP in the following ways : · Manually Input: Enter the private IP that you want to map. It must be within the private IP range of the VPC. · Auto Fill: Select an ECS instance in the VPC from the list. The private IP of the selected ECS instance is automatically entered in the field.

Configuration	Description
Port Settings	DNAT supports IP mapping and port mapping. Select a mapping method: · All Ports: Select this option to configure IP mapping. Using this method, the ECS instance with the specified private IP can receive any Internet requests using any protocol on any port. This is the same as binding an EIP to the ECS instance. · Specific Port: Select this option to configure port mapping. Using this method, NAT Gateway forwards the request from the specified protocol and port to the target ECs instance on the specified port. You must specify the public port, private port, and IP protocol when the port mapping is selected.

5 Create an SNAT entry

The SNAT function provides the Internet proxy service for ECS instances without public IPs in VPC. Therefore, the ECS instances can access the Internet.

Prerequisites

You have created a NAT Gateway and the NAT Gateway is bound to an EIP.

> Note:
> If your account has purchased a bandwidth package before January 26, 2018, make sure there is an available public IP in the bandwidth package.

Procedure

1. Log on to the *VPC console*.
2. In the left-side navigation pane, click NAT Gateways.
3. Select the region of the NAT Gateway.
4. Click the instance ID of the target NAT Gateway.
5. In the left-side navigation pane, click SNAT Table, and then click Create SNAT Entry.
6. Configure the SNAT entry according to the following information.

Configuration	Description
VSwitch	Select the VSwitch where the ECS instances that require the Internet access are located. All ECS instances in the specified VSwitch can use the specified public IP to access the Internet. Note: If an ECS instance has already configured a public IP (such as an EIP), the pre-configured public IP is used to access the Internet instead of using the SNAT proxy service.
VSwitch CIDR block	Display the CIDR block of the selected VSwitch.

Configuration	Description
Internet IP Address	Select public IP that is used to access the Internet.  Note: The IP that is already being used in a DNAT entry cannot be selected.