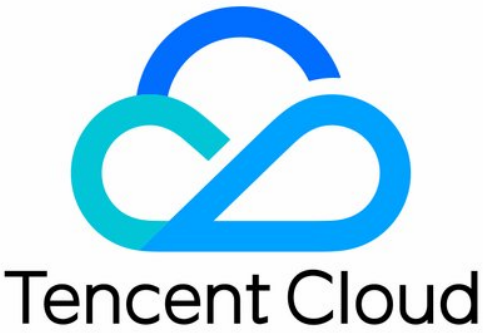
Auto Scaling

Best Practices

Product Documentation



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Best Practices
Setting a Fixed Outbound IP Address for Scaling Groups

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This document shows how to set a static IP address for outbound access of a cluster.

Scenarios

This solution is applicable when clusters in your scaling group have all the three requirements below:

- To receive requests from CLB
- To initiate outbound access
- To use a **static** public IP address for outbound access

See the following content for details.

Solution Overview

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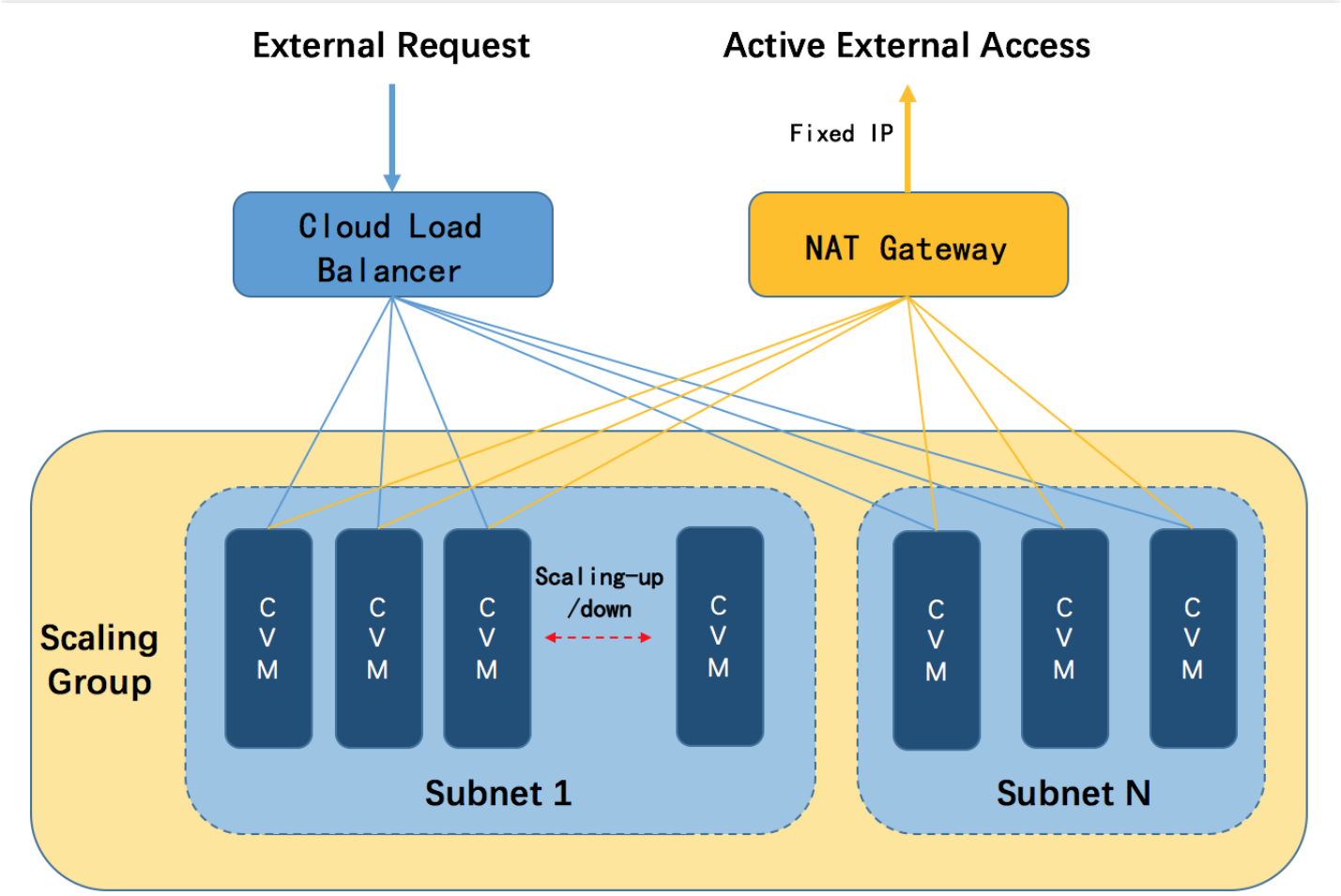

1. Receive and respond to external requests by using the CLB.
2. Add the CVM to the VPC subnet and direct the route table to the NAT Gateway so that all outbound access requests are delivered via the public IP address of the NAT Gateway.
3. The network attribute of the scaling group is set as this subnet, so that all CVMs created for scale-out will use the NAT Gateway for the outbound access.

Directions

Step 1: create a VPC and subnet

1. Create a VPC

1. Log in to the VPC console and select **Virtual Private Cloud** in the left sidebar.
2. At the top of the **VPC** page, select a region, such as “North China (Beijing)”.
3. Click **+New**. In the **Create VPC** window that pops up, enter the names and CIDR blocks of the VPC and subnet, and choose the availability zone of the subnet.

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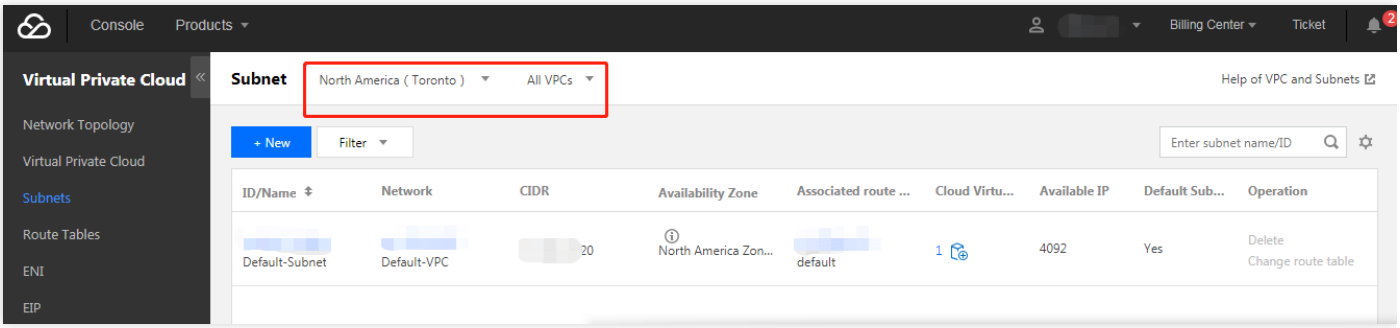
4. Click **OK** to create the VPC.

2. Create a subnet

1. In the VPC console, select **Subnet** in the left sidebar.
2. At the top of the **Subnet** page, select the region and VPC, as shown in the following figure:



3. Click **+New**. In the **Create a Subnet** window that pops up, enter the subnet name, CIDR block, availability zone, and associated route table.
4. Click **Create**. After completing creation, you can purchase CVMs and add them to this subnet.

Step 2: create a NAT Gateway

1. Create a NAT Gateway

1. In the VPC console, select **NAT Gateway** in the left sidebar.
2. On the **NAT Gateway** page, click **+New**.
3. In the **Create NAT Gateway** window that pops up, input or confirm the following parameters in sequence:
   - Gateway name
   - Gateway type (which can be modified after creation)
   - VPC of the NAT gateway (the VPC created in Step 1).
   - Assign an EIP for the NAT Gateway. (This IP address is the static IP address for your CVM's outbound access.)
4. After completing the configuration, click **Create**.
   After the NAT Gateway is created, you need to configure the routing policy on the route table page in the VPC console to redirect the subnet traffic to the NAT Gateway.

2. Set the route table (key step)

1. In the VPC console, select **Route Tables** in the left sidebar.
2. On the **Route table** page, select the**ID/Name** of the route table associated with the subnet that needs to access the Internet. The details page of the route table will be displayed.

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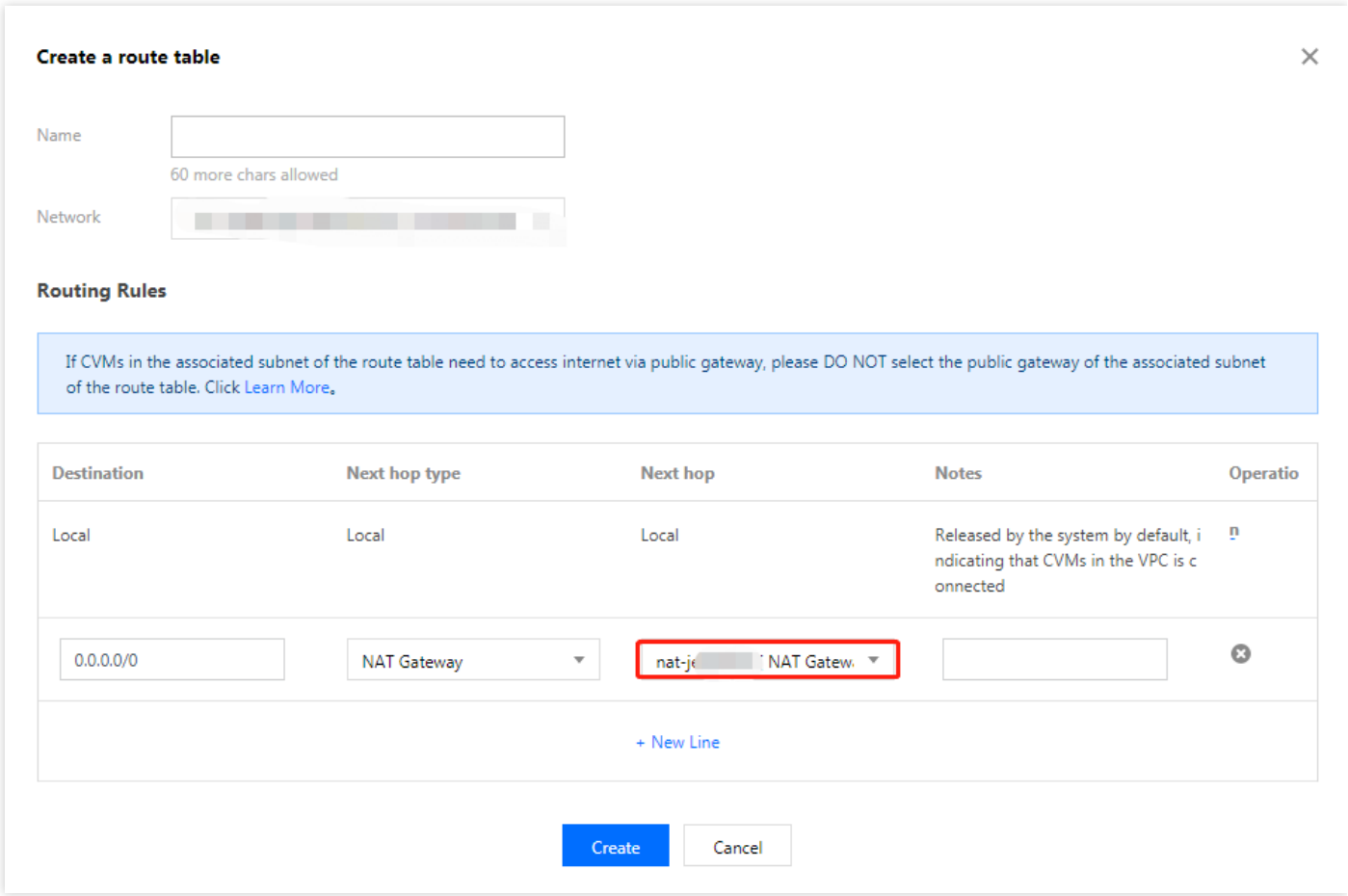
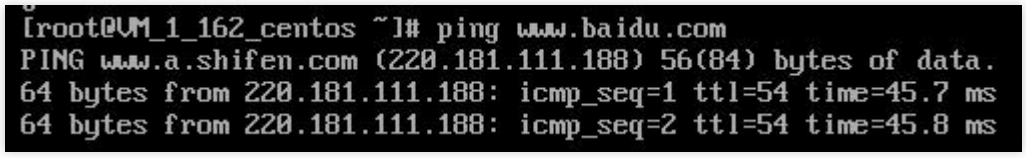
3. Click **+ New routing policies**. In the **Add a route** window that pops up, complete the configuration, as shown in the following figure:



- **Destination**: in this case, you can enter `0.0.0.0/0`.
- **Next hop type**: select **NAT Gateway** and select the NAT Gateway created in Step 1.

4. Click **Create**. Now, your CVM in this subnet which does not have a public IP address can also access internet through the static IP of the NAT Gateway.
   Even if you purchase a CVM without any public IP addresses and with a bandwidth of zero, you still can enjoy active external access, as shown in the following figure:



Note :

The scaling group needs to identify this subnet and ensure that all the CVMs are created on this subnet.

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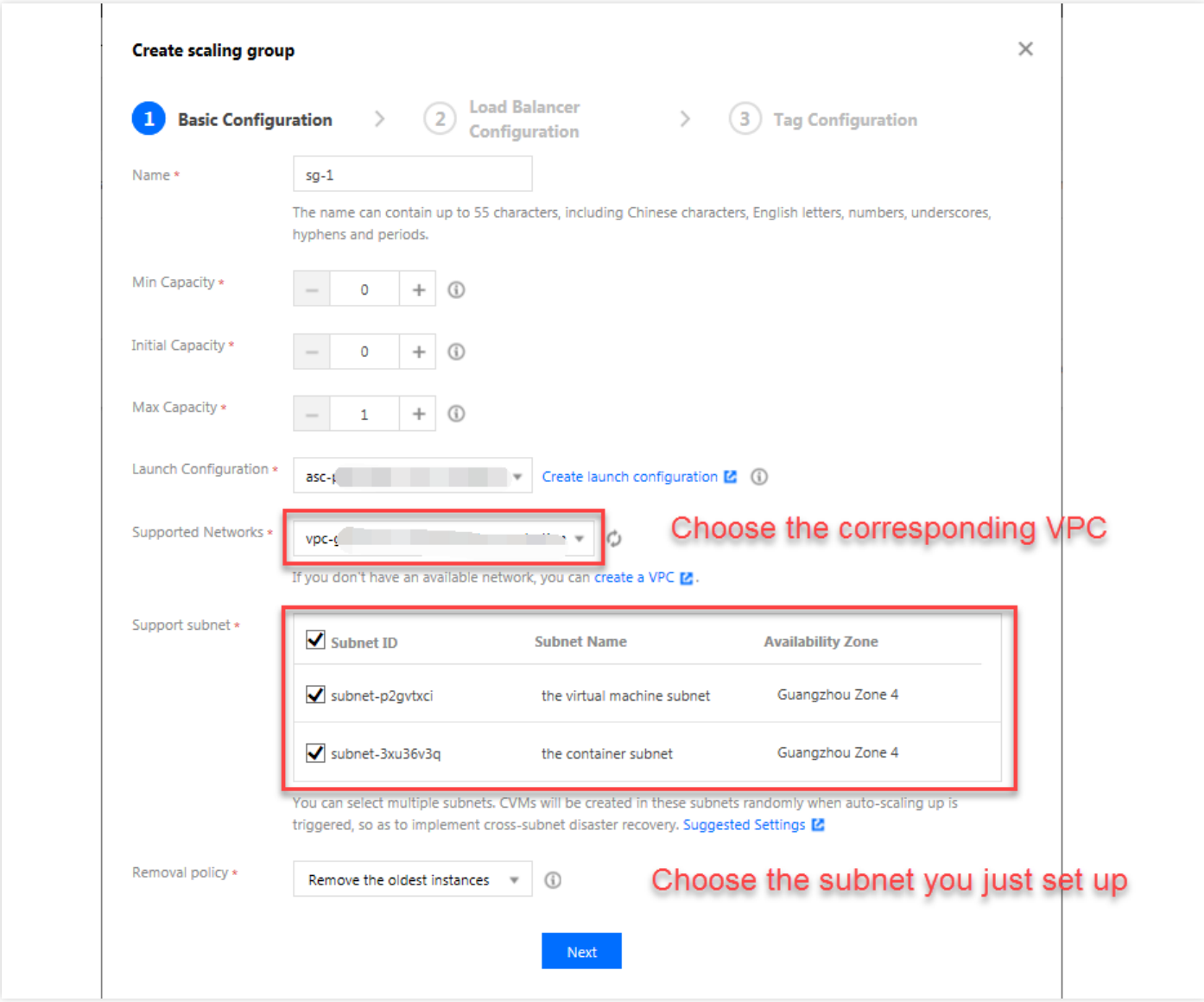
Step 3: set up the scaling group

This step aims to direct the subnet information to the scaling group so that the newly created CVMs of the scaling group can be deployed in this subnet. **In this way, the newly created CVMs will use the NAT Gateway IP as the static IP to access internet.**

1. Log in to the Auto Scaling console and click **Scaling group** in the left sidebar.
2. On the **Scaling group** page, click **Create**.
3. On the **Create scaling group** page that pops up, enter the scaling group name, the created launch configuration, max capacity, min capacity, initial capacity, and other information.
   In **Supported Networks** and **Support subnet**, select the VPC and subnet you just set up, as shown in the following figure:



Click **Next** to complete the configuration.

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Enabling Services Upon CVM Start-up

Last updated : 2020-08-06 16:36:33

Overview

This document describes how to enable services at startup for auto scale-out CVMs by modifying the `/etc/rc.d/rc.local` file. Manual intervention is not expected throughout the scale-out process where auto scaling is used. Therefore, we recommend that you set the service to be started upon starting of the CVM to be automatically added. Such services include:

- **httpd** service
- **mysqld** service
- **php-fpm** service
- **tomcat** service
- Other services

Directions

Setting the services to be launched at startup

> ⚠ **Note :**
>
> This document uses the scale-out CentOS CVMs as an example.

1. Log in to a Linux instance using the standard login method (recommended).
2. Run the following command to open the `rc.local` file.

```
vim /etc/rc.d/rc.local
```

3. Press **i** to enter the edit mode, and then press ↓ to go to the end of the file.
4. Append the following content to the file to set services to be automatically started. This example shows how to set the httpd, mysqld, and php-fpm services to be automatically started. Note that the required services vary by website, set them as needed.

```
service httpd start
service mysqld start
service php-fpm start
```

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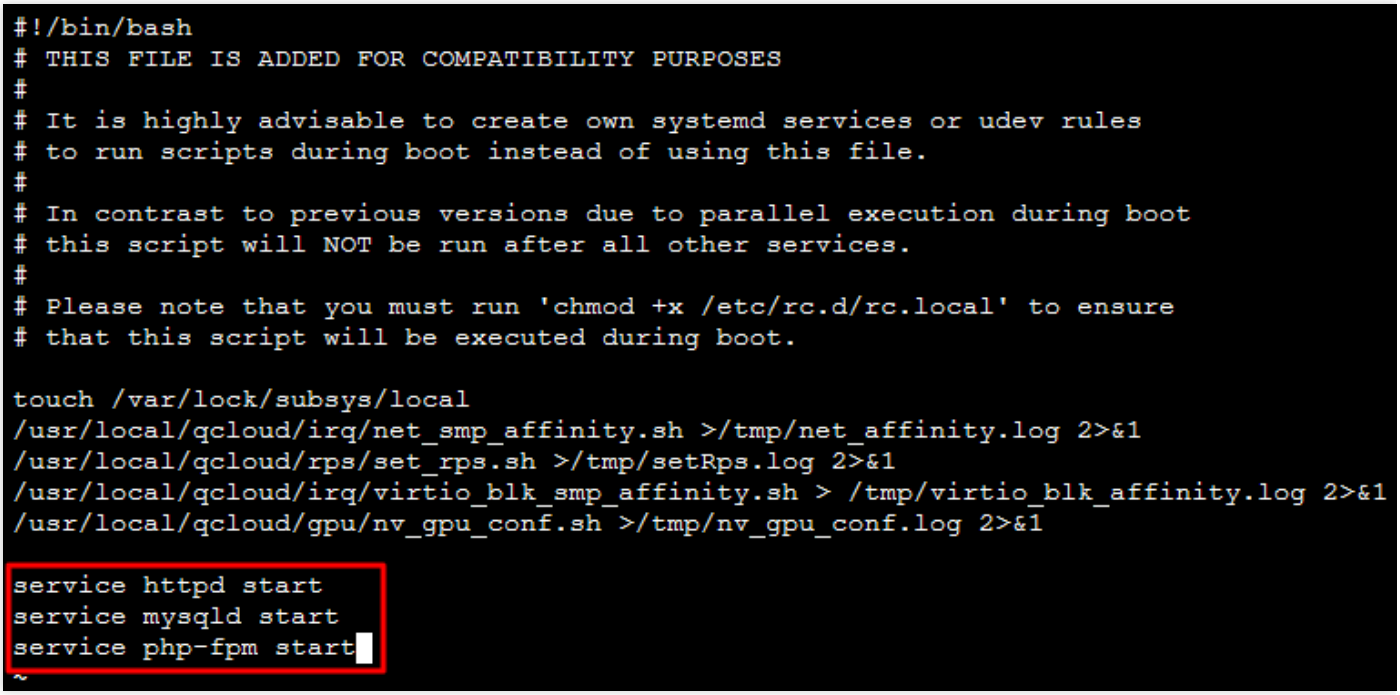
The result should be as follows:



5. Press **:wq** to save and exit. Then, the website can be automatically accessed after the instance is restarted.

(Optional) Verifying the configuration

Restart the server (with the `reboot` command, or through the console). After the server is restarted, refresh the page on the website without logging in to the server to check whether a response is returned. If yes, the configuration was successful.

Creating images

You can create an image based on the instance and use this image when creating the launch configuration. For more information, see

- Creating Custom Images
- Creating a Launch Configuration

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