Cisco Catalyst 8000V Edge Software Deployment Guide for Alibaba Cloud

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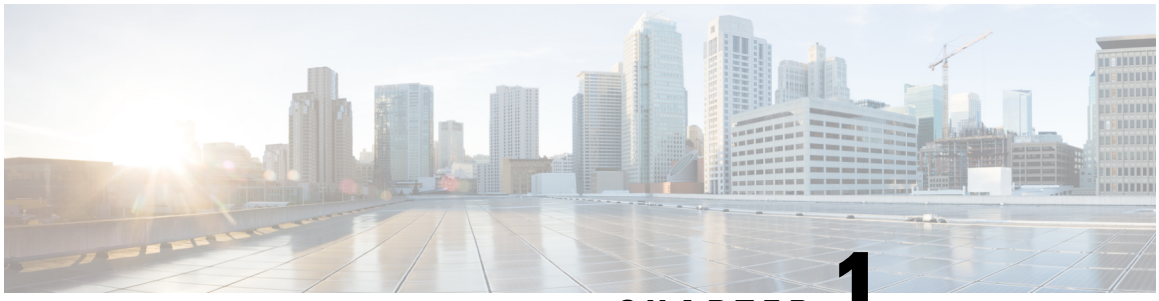


CHAPTER 1

Preface

This preface describes the audience, organization, and conventions of this document. It also provides information on how to obtain other documentation.

This preface includes the following sections:

- Audience and Scope, on page 1
- Feature Compatibility, on page 1
- Document Conventions, on page 2
- Communications, Services, and Additional Information, on page 3
- Documentation Feedback, on page 4
- Troubleshooting, on page 4

Audience and Scope

This document is designed for the person who is responsible for configuring your Cisco Enterprise router. This document is intended primarily for the following audiences:

- Customers with technical networking background and experience.
- System administrators familiar with the fundamentals of router-based internetworking but who might not be familiar with Cisco IOS software.
- System administrators who are responsible for installing and configuring internetworking equipment, and who are familiar with Cisco IOS software.

Feature Compatibility

For more information about the Cisco IOS XE software, including features available on your device as described in the configuration guides, see the respective router documentation set.

To verify support for specific features, use the Cisco Feature Navigator tool. This tool enables you to determine the Cisco IOS XE software images that support a specific software release, feature set, or a platform.

Document Conventions

This documentation uses the following conventions:

Convention	Description
^ or **Ctrl**	The ^ and **Ctrl** symbols represent the Control key. For example, the key combination **^D** or **Ctrl-D** means hold down the **Control** key while you press the **D** key. Keys are indicated in capital letters but are not case sensitive.
string	A string is a nonquoted set of characters shown in italics. For example, when setting an SNMP community string to public, do not use quotation marks around the string or the string will include the quotation marks.

The command syntax descriptions use the following conventions:

Convention	Description
bold	Bold text indicates commands and keywords that you enter exactly as shown.
italics	Italic text indicates arguments for which you supply values.
[x]	Square brackets enclose an optional element (keyword or argument).
|	A vertical line indicates a choice within an optional or required set of keywords or arguments.
[x | y]	Square brackets enclosing keywords or arguments separated by a vertical line indicate an optional choice.
{x | y}	Braces enclosing keywords or arguments separated by a vertical line indicate a required choice.

Nested sets of square brackets or braces indicate optional or required choices within optional or required elements. For example, see the following table.

Convention	Description
[x {y | z}]	Braces and a vertical line within square brackets indicate a required choice within an optional element.

Examples use the following conventions:

Convention	Description
`screen`	Examples of information displayed on the screen are set in Courier font.
`bold screen`	Examples of text that you must enter are set in Courier bold font.
< >	Angle brackets enclose text that is not printed to the screen, such as passwords.
!	An exclamation point at the beginning of a line indicates a comment line. Exclamation points are also displayed by the Cisco IOS XE software for certain processes.
[ ]	Square brackets enclose default responses to system prompts.

Caution Means *reader be careful*. In this situation, you might do something that could result in equipment damage or loss of data.

Note Means *reader take note*. Notes contain helpful suggestions or references to materials that may not be contained in this manual.

Communications, Services, and Additional Information

- To receive timely, relevant information from Cisco, sign up at Cisco Profile Manager.
- To get the business results you're looking for with the technologies that matter, visit Cisco Services.
- To submit a service request, visit Cisco Support.
- To discover and browse secure, validated enterprise-class apps, products, solutions and services, visit Cisco Marketplace.
- To obtain general networking, training, and certification titles, visit Cisco Press.
- To find warranty information for a specific product or product family, access Cisco Warranty Finder.

Cisco Bug Search Tool

Cisco Bug Search Tool (BST) is a web-based tool that acts as a gateway to the Cisco bug tracking system that maintains a comprehensive list of defects and vulnerabilities in Cisco products and software. BST provides you with detailed defect information about your products and software.

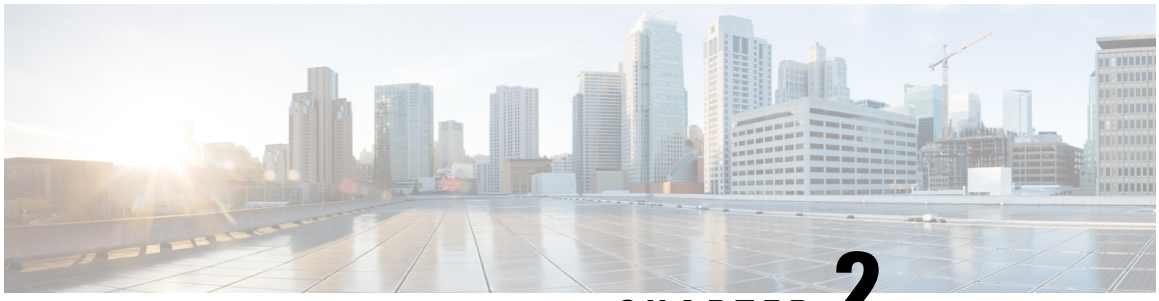
Documentation Feedback

To provide feedback about Cisco technical documentation, use the feedback form available in the right pane of every online document.

Troubleshooting

For the most up-to-date, detailed troubleshooting information, see the Cisco TAC website at https://www.cisco.com/en/US/support/index.html.

Go to **Products by Category** and choose your product from the list, or enter the name of your product. Look under **Troubleshoot and Alerts** to find information for the issue that you are experiencing.



CHAPTER 2

Overview

Cisco Catalyst 8000V Edge Software is a virtual router that offers routing, security, and network management functionalities as cloud services with multitenancy. As an end-user, you must boot this virtual router in the autonomous mode (with the Cisco IOS XE functionalities) or the controller mode (with the SD-WAN functionalities). You can then deploy this router on various clouds to enable and use the available solutions.

Starting from the Cisco IOS XE 17.5.1 release, you can deploy Cisco Catalyst 8000V in Alibaba Cloud. This deployment supports all the Cisco IOS XE features and enables an enterprise to deploy the same networking services in this cloud similar to the features available in on-prem networks. The IOS XE CLI and RESTful API functionalities also ensure Cisco Catalyst 8000Veasy deployment, monitoring, troubleshooting, and service orchestration.

Read on to know how to work with Cisco Catalyst 8000V running on Alibaba Cloud. This guide provides the deployment options, day 0 configuration, and some troubleshooting information for Cisco Catalyst 8000V running on Alibaba Cloud.

Note For Cisco SD-WAN-specific configurations and settings, you must boot the Cisco Catalyst 8000V device in the controller mode. For more information about Cisco Catalyst 8000V in the Alibaba Cloud in the controller mode, see https://www.cisco.com/c/en/us/td/docs/routers/sdwan/configuration/sdwan-xe-gs-book/cisco-sd-wan-overlay-network-bringup.html#deploy-8000v-on-alibaba-cloud.

- Notes and Limitations, on page 5
- Licensing, on page 6

Notes and Limitations

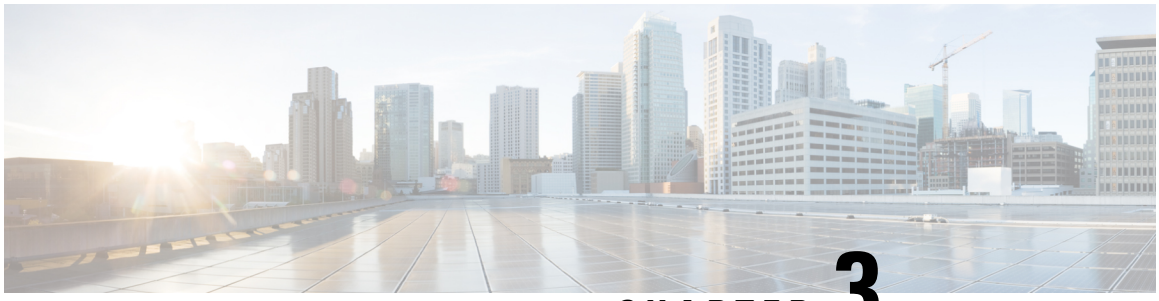
- To see the instance types that are currently supported for deploying Cisco Catalyst 8000V in Alibaba Cloud, see the Compatibility Matrix.
- Pay As You Go (PAYG) licensing and Cisco SD-WAN Cloud onRamp integration are not supported for this deployment.

Licensing

You can purchase a subscription-based license for Cisco Catalyst 8000V running on Alibaba Cloud. After you decide to purchase the Cisco Catalyst 8000V image from the Alibaba Marketplace, you must obtain a DNA license from Cisco.

For information on how to obtain and use Cisco Catalyst 8000V DNA licensing, see the Cisco DNA Software Routing Subscription Guide.

After you choose your plan and obtain the license, you can deploy the Cisco Catalyst 8000V instance.



CHAPTER 3

Deploying Cisco Catalyst 8000V on Alibaba Cloud

Procedure

Step 1 Log in to the Alibaba Marketplace through either Alibaba Global or Alibaba China.

Step 2 Search for the **Cisco Catalyst 8000V Edge Software - BYOL** image. Click the offer and get into the Elastic Compute Service (ECS) page.

Step 3 On the Instances page, click **Create Instance**.

Step 4 From the **Instance Details** tab, click **Connect**.

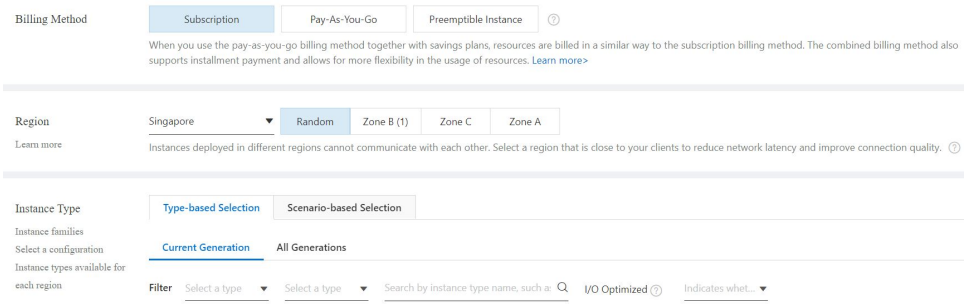
Step 5 On the Connection and Command pop-up window, provide the IP address and Password. Proceed to the Basic Configuration steps.

Step 6 Select the **Billing Method**.

Note
For this deployment, Pay-As-You-Go is not supported.

Step 7 Select the region from the **Region** drop-down list.

Step 8 From the **Instance Type** drop-down list, select one of the supported instance types. For information on the instance types, see the *Supported Instance Types* section in this guide.

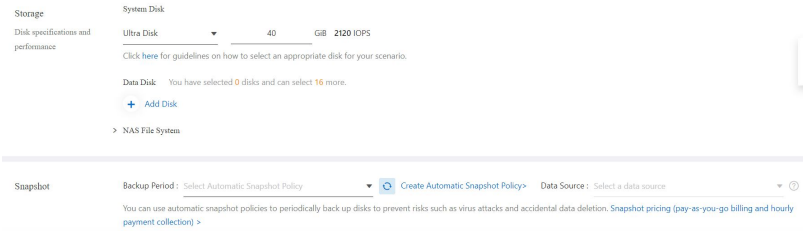


Step 9 Select the number of instances you want to create by using the **Quantity** field.

Step 10 If you did not select an image by searching, you can also use the **Marketplace Image** tab to search and select your image here. This step is optional.

Step 11 Provide your disk specifications in the **Storage** field.

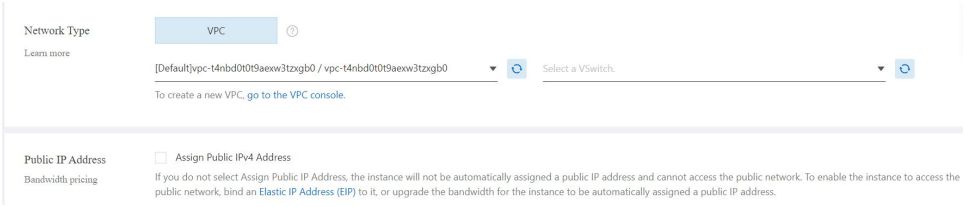
Step 12 If you want to create a snapshot to periodically create a backup for your disc, select a **Backup Period** from the **Snapshot** field. You can either choose the default value that creates a backup every day, or create your own backup rule by using the **Create Automatic Snapshot Policy** option in this field.



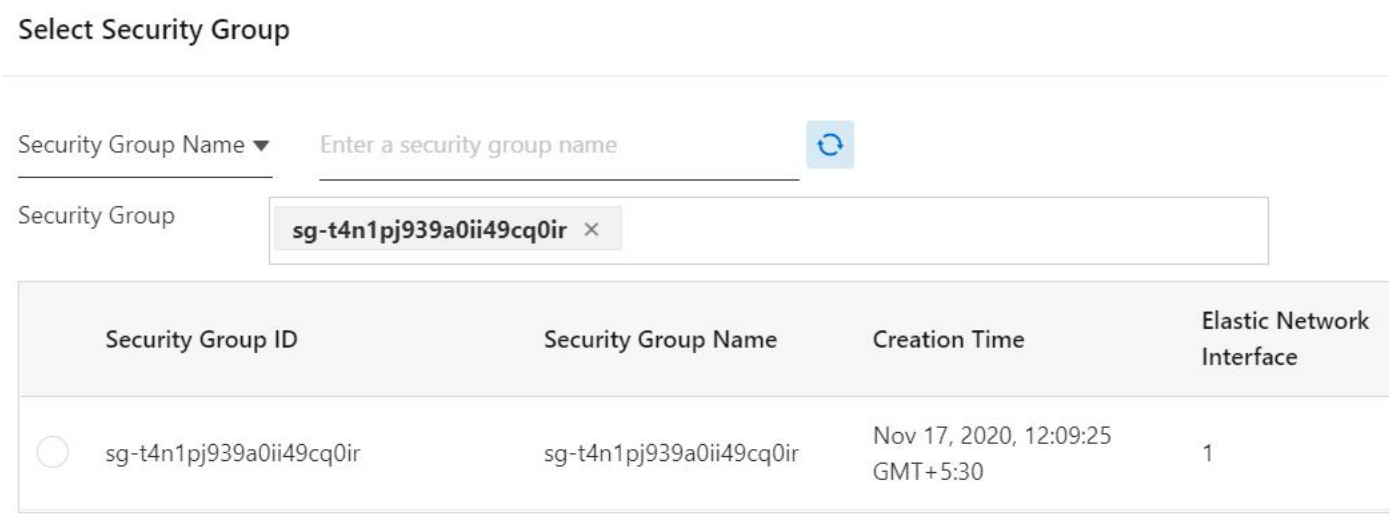
Step 13 Click **Next** to proceed to the **Networking** section.

Step 14 From the **Networking** page, choose the **Network Type**.

Step 15 From the **Public IP Address** field, select the **Assign Public IPv4 Address** checkbox. When you do so, the system automatically allocates an IP address.



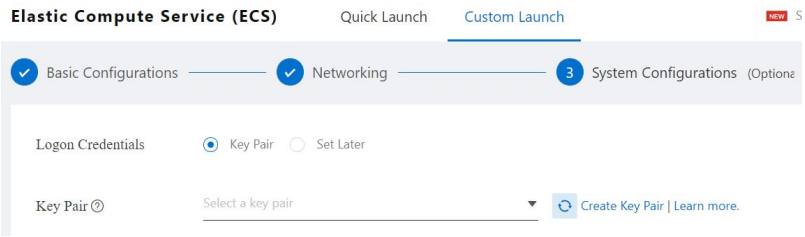
Step 16 From the **Security Group** field, click **Select Security Group**. The system displays a pop-up window. Select the appropriate Security Group from this window.



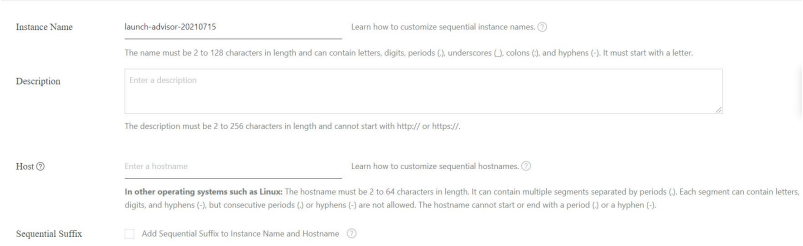
Step 17 From the **Elastic Network Interface** field, select the **Default ENI**.

Step 18 Click **Next** to proceed to System Configurations.

Step 19 On the **System Configuration** page, in the **Login Credentials** field, select the **Key Pair** option.



Step 20 In the **Instance Name** field, specify a name for your instance.



Step 21 (Optional) In the **User Data** field, specify the day0 configuration details.

Here is a sample day0 configuration for Cisco Catalyst 8000V:

```
#cloud-config
vinitparam:
otp : a1fbadd53b8548f09ae95ffa63580757
vbond : 173.39.145.83
uuid : C8K-3a351b20-66da-47bf-abdf-95c77e771931
org : vIPtela Inc Regression
Content-Type: multipart/mixed; boundary="==========3067523750048488884=="
MIME-Version: 1.0
--==========3067523750048488884==
Content-Type: text/cloud-config; charset="us-ascii"
MIME-Version: 1.0
Content-Transfer-Encoding: 7bit
Content-Disposition: attachment; filename="cloud-config"

#cloud-config
vinitparam:
otp : a1fbadd53b8548f09ae95ffa63580757
vbond : 173.39.145.83
uuid : C8K-3a351b20-66da-47bf-abdf-95c77e771931
org : vIPtela Inc Regression
rcc : true
ca-certs:
remove-defaults: false
trusted:
|
-----BEGIN CERTIFICATE-----
MIIE0DCCA7igAwIBAgIJALe4KhOqMgJfMA0GCSqGSIb3DQEBCwUAMIGgMQswCQYD
VQQGEwJVUzETMBEGA1UECBMKQ2FsaWZvcm5pYTERMA8GA1UEBxMIU2FuIEpvc2Ux
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```

```
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--================3067523750048488884==
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MIME-Version: 1.0
Content-Transfer-Encoding: 7bit
Content-Disposition: attachment;
filename="config-C8K-3a351b20-66da-47bf-abdf-95c77e771931.txt"

#cloud-boothook
system
ztp-status            success
pseudo-confirm-commit 300
personality           vedge
device-model          vedge-C8000V
chassis-number        C8K-3a351b20-66da-47bf-abdf-95c77e771931
host-name             cedge1
system-ip             1.1.1.5
overlay-id            1
site-id               175
no port-offset
control-session-pps   300
admin-tech-on-failure
sp-organization-name  "vIPtela Inc Regression"
organization-name     "vIPtela Inc Regression"
vbond 173.39.145.83 port 12346

sdwan
interface GigabitEthernet1
tunnel-interface
encapsulation ipsec weight 1
color default
allow-service all
hostname cedge1
username admin privilege 15 secret Login_999!

interface GigabitEthernet1
no shutdown
arp timeout 1200
ip address dhcp client-id GigabitEthernet1
no ip redirects
ip dhcp client default-router distance 1
ip mtu    1500
load-interval 30
```

```
mtu           1500
negotiation auto
exit
interface Tunnel1
no shutdown
ip unnumbered GigabitEthernet1
no ip redirects
ipv6 unnumbered GigabitEthernet1
no ipv6 redirects
tunnel source GigabitEthernet1
tunnel mode sdwan
exit
line vty 0 4
login authentication default
transport input ssh
!
line vty 5 80
transport input ssh
!
----------------3067523750048488884==--
```

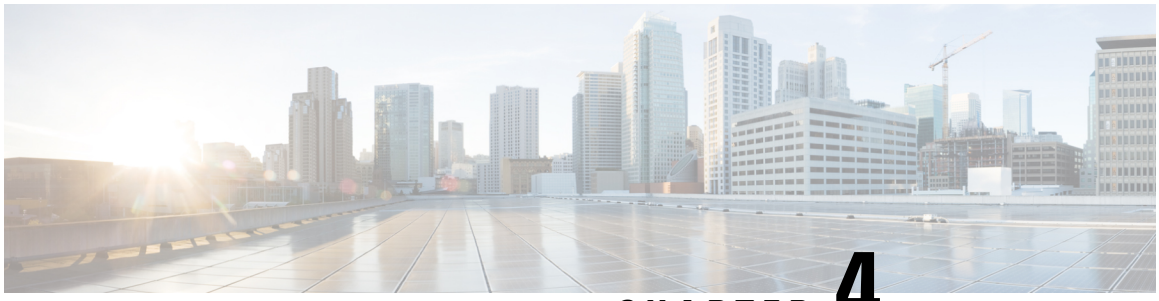
Step 22 Click **Preview**. Preview all the settings and configurations for the instance that you are creating. If your settings are fine, accept the terms of service by clicking the **ECS Terms of Service** checkbox.

Step 23 Click **Create Order**.

After the instance is created, the system displays a pop-up window that has a Created message along with the instance ID.

What to do next

- To manage your instance, click **Console** in the dashboard.
- To create more instances, click **Back**.



CHAPTER 4

Troubleshooting Deployment Issues

If you experience any errors when you deploy the Cisco Catalyst 8000V instance and want to perfrom some basic troubleshooting steps:

1. Check the status of your instance and the available IP public address.
2. Go to the console and access the console log.
3. Check the snapshot of the bootlog.
4. Navigate to the file in the `/tmp/bootstrap` folder to access the logs and check for errors, if any.

For generic issues related to Cisco Catalyst 8000V, see the Troubleshooting Guide for Cisco Catalyst 8000V Edge Software.