

Overview

This chapter includes information about Cisco 8200 Series Secure Routers and describes the autonomous mode and controller mode. It contains the following sections:

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Cisco 8200 Series Secure Routers

Cisco 8200 Series Secure Routers deliver secure networking simplified. Powered by the all-new secure networking processor and the unified Cisco secure networking platform, the Cisco 8200 Series Secure Routers deliver robust, platform-level security, advanced performance engineering thorough routing and SD-WAN, and on-premises, infrastructure-as-code, or cloud management flexibility that enables businesses to seamlessly scale and grow. Each class of secure routers is designed to deliver risk reduction, enhanced reliability, and future readiness.

Cisco 8200 Series Secure Routers are engineered for large branch locations and provide scalable, high-throughput connectivity with embedded platform-level security. With hardware-native assurance, post-quantum cryptography, and unified infrastructure as code, the Cisco 8200 Series enables large branches to support bandwidth-intensive applications and evolving threat landscapes with confidence.

This document is a summary of software functionality that is specific to the Cisco 8200 Series Secure Routers. You can access the Cisco IOS XE and Cisco IOS XE SD-WAN functionality through Autonomous and Controller execution modes, respectively. The Autonomous mode is the default mode for the device and includes the Cisco IOS XE functionality. To access Cisco IOS XE SD-WAN functionality switch to the Controller mode. You can use the existing Plug and Play workflow to determine the mode of the device.

You can use the universalk9 image to deploy both Cisco IOS XE SD-WAN and Cisco IOS XE on Cisco IOS XE platforms. The Cisco IOS XE 17.18.1 helps in seamless upgrades of both the SD-WAN and non-SDWAN features and deployments.

Switch between controller and autonomous modes using Cisco CLI

Use the **controller-mode** command in Privileged EXEC mode to switch between controller and autonomous modes.

The **controller-mode disable** command switches the device to autonomous mode.

```
Device# controller-mode disable
```

The **controller-mode enable** command switches the device to controller mode.

```
Device# controller-mode enable
```

Note When the device mode is switched from autonomous to controller, the startup configuration and the information in NVRAM (certificates), are erased. This action is same as the **write erase**.

When the device mode is switched from controller to autonomous, all Yang-based configuration is preserved and can be reused if you switch back to controller mode. If you want to switch the mode from controller to autonomous, ensue that the configuration on the device is set to auto-boot.

Switch between controller and autonomous modes using bootstrap configuration files

To switch modes, use the **controller-mode enable** command to switch from autonomous to controller mode and **controller-mode disable** command to switch from controller mode to autonomous mode. After the device boots up, the configuration present in the configuration file is applied.

After the device boots up in controller mode, the configuration present in the configuration file is applied.

For more information on how to use a single universalk9 image to deploy Cisco IOS XE SD-WAN and Cisco IOS XE functionality on all the supported devices, see the Install and Deploy Cisco IOS XE and Cisco IOS XE SD-WAN Functionality on Edge Platforms guide.

The Cisco 8200 Series Secure Routers models are:

- C8231-G2
- C8235-G2
- C8231-E-G2
- C8235-E-G2

Supported modules and features on Cisco 8200 Series Secure Routers

The table provides the supported modules and features on Cisco 8200 Series Secure Routers.

Table 1: Supported Modules and Features on Cisco 8200 Series Secure Routers

Features	C8231-G2	C8235-G2	C8231-E-G2	C8235-E-G2
Service Plane Applications (UTD, AppQoE, and TcpOpt)	Yes	Yes	Yes	Yes
LTE PIM	No	Yes	Yes	Yes

Features	C8231-G2	C8235-G2	C8231-E-G2	C8235-E-G2
NIM	No	No	Yes	Yes
CPU Core	8 Cores	8 Cores	8 Cores	8 Cores
CPU Memory	8G	16G	8G	16G
Backplane Support	No	No	10G	10G

Licensing for Cisco 8000 Series Secure Routers

Cisco 8000 Series Secure Routers support platform-based licensing, a way of grouping licenses and devices based on platform-classes. A platform class is a hierarchical categorization based on the product family and place in the network. In this platform-based licensing model, Essentials and Advantage licenses are available. License portability is supported across devices within the same platform class and usage of the same license across different modes is also possible.

For more information, see Cisco 8000 Series Secure Routers Licensing.