



Getting Started With Cisco Crosswork Data Gateway

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Basic Concepts

When Crosswork Cloud and Cisco Crosswork Data Gateway are deployed together, Crosswork Cloud acts as the **controller application** for the Cisco Crosswork Data Gateway instance. The number of Cisco Crosswork Data Gateway instances you need depends on the number of devices being supported, the amount of data being processed and your network architecture.

Cisco Crosswork Data Gateway makes extensive use of certain concepts. It is helpful to be familiar with them before you get started.

Cisco Crosswork Data Gateway Components

Cisco Crosswork Data Gateway has the following five main components or services:

- [Controller Gateway, on page 1](#)
- [Image Manager, on page 2](#)
- [Vitals Monitor, on page 2](#)
- [Route Manager, on page 2](#)
- [Docker IPv6nat, on page 2](#)

Controller Gateway

Controller Gateway is the component responsible for all the interaction between a Cisco Crosswork Data Gateway instance and its controller application. It manages the session creation with the controller application and makes sure all the payloads and responses are signed and verified for integrity. Components such as Image Manager, Vitals Monitor, and Route manager interact via Controller Gateway with the controller application to exchange the details those components need.



Note When the Controller Gateway stops, any alerts are not updated in `cdg-alerts.log`. However, when it starts, it sends an alert that it has started. This is because all the alerts go through the Controller Gateway and if it is down, the controller application won't receive the alerts. To access log files, see [Run show-tech](#).

Image Manager

The Image Manager starts up when Cisco Crosswork Data Gateway VM boots. It downloads the functional images from the repository as instructed by the controller application and brings up the services.

It has the following responsibilities:

- Periodically pull boot-config file from the controller application via Controller Gateway.
- Based on the boot-config and local images metadata cache, determine if the functional images and docker-compose file need to be downloaded.
- Send appropriate alerts to the controller application, if there are issues while processing the boot-config.
- Stop and remove any services that are no longer called for in the latest boot-config.
- Cleanup the local images metadata cache to keep it synchronized with the latest boot-config received from the controller application.
- Downloads collectors environment and other files that facilitate establishment of connection between collectors and Crosswork.



Note Functional images are downloaded only when there is a change in boot-config response.

Vitals Monitor

The Vitals Monitor monitors the start and stop status of the container services running on the Cisco Crosswork Data Gateway VM. It sends alerts to the controller when container services start or stop.

For more information, see [Monitor Cisco Crosswork Data Gateway Health](#).

Route Manager

Route Manager configures static routes. It is utilized by downloaded functional images to create static routes to direct traffic to devices on different networks based on routes. Appropriate alerts are sent to the controller application if there is any failure in processing routes configuration.

Docker IPv6nat

`docker-ipv6nat` is a special process that programs ipv6 routes for docker containers.

Use the Interactive Console

Cisco Crosswork Data Gateway launches an interactive console upon successful login. The interactive console displays the Main Menu as shown in the following figure:



Note The Main Menu shown here corresponds to **dg-admin** user. It is different for **dg-oper** user as the operator does not have same privileges as the administrator. See [Supported User Roles](#).

```
Cisco Crosswork
Main Menu - Please Choose an Option:

1  Export Enrollment Package
2  Show System Settings
3  Change Current System Settings
4  Vitals
5  Troubleshooting
p  Change Passphrase
l  Logout

<  K  >
```

The Main Menu presents the following options:

1. Export Enrollment Package
2. Show System Settings
3. Change Current System Settings
4. Vitals
5. Troubleshooting
- p. Change Passphrase
- l. Logout

