Release Notes for Cisco IOx Release 1.9.0 and 2.0

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These release notes provide information for Cisco IOx Releases 1.9.0 and 2.0.

Contents

Documentation Links

- DevNet

  https://developer.cisco.com/docs/iox/

- Cisco IOx Data Sheet

  https://www.cisco.com/c/en/us/products/collateral/cloud-systems-management/iox/datasheet-c78-7367
  67.html

- Cisco Fog Director

  https://www.cisco.com/c/en/us/support/cloud-systems-management/fog-director/tsd-products-support-
  series-home.html

- Cisco IOx Local Manager Reference Guide

  https://www.cisco.com/c/en/us/support/cloud-systems-management/iox/products-technical-reference-lis
  t.html

Edge Computing with Cisco IOx

Learn how to develop, deploy, and manage applications at the network edge with Cisco IOx:

https://learninglabs.cisco.com/tracks/Cisco-IOx

Overview

Cisco IOx provides uniform and consistent hosting capabilities for various types of apps across Cisco platforms. This platform brings together Cisco IOS, the industry-leading networking operating system, and Linux, the leading open source platform. Linux-based applications can run on Cisco devices in the Cisco IOx framework, so using this platform, you can bring custom applications and interfaces to the network.

With Cisco IOx, developers can create a wide variety of IoT apps, such as data aggregation system and control systems.

New Features in this Release

This release provides new features, including the following:

- Native Docker—Remote Targets. (Applies to release 2.0 only.)
- Cisco Fog Director—The Device Details tab now displays the Cisco IOx version that is running on a device, if the device provides this information.
- Cisco Local Manager
  - Support for the "exclusive" device profile, which assigns all resources on a host system to an app.
  - New Remote Docker Workflow feature, which includes the Remote Docker Workflow page. This feature provides access from your local PC to Docker apps on the host system so that you can develop, test, troubleshoot, and perform related activities. (Applies to release 2.0 only.)
  - The Cartridges/Layers tab and Cartridges/Layers page have been renamed to the Docker Layers tab and Docker Layers page, and the Docker Layers page has been updated.
  - The *App-ID* > Resources page has been updated. Updates include new options in the Network Configuration area, and the addition of the new Peripheral Configuration area, which replaces the Serial Access Configuration area and the USB Configuration area that were in previous releases.

Supported Platforms

Cisco IOx Release is supported on the following platforms:

- IR809 (supported for release 1.9.0)
- IR829 (supported for release 1.9.0)
- CGR 1000 Compute Module (supported for release 1.9.0)
- IOXVM (supported for release 1.9.0)
- IC3k (supported for release 2.0)

Note: If you have a new production IR809 or IR829, ensure you reboot the system after adding the basic IOx configurations.

Note: App life cycle management with an SSD hard disk is supported on the IR829 platform.

Image Information

Note: Before attempting a bundle image installation, stop the guest operating system by using following command on IOS:

guest-os 1 stop

Download the Cisco IOx images from the following DevNet page:

https://developer.cisco.com/docs/iox/#downloads

Note: IOx Fog Node images cannot be randomly loaded with any IOS images. Please do not make any changes without the guidance of a Cisco Technical Support representative.

Table 1 provides information about the available Cisco IOx images.

Table 1 Cisco IOx Images

Image	Description
cisco_iox_fogdirector-1.9.0.ova	Cisco IOx Fog Director software.
ioxclient_1.9.2.0_darwin_386.zip ioxclient_1.9.2.0_darwin_amd64.zip ioxclient_1.9.2.0_linux_386.tar.gz ioxclient_1.9.2.0_linux_amd64.tar.gz ioxclient_1.9.2.0_windows_386.zip ioxclient_1.9.2.0_windows_amd64.zip	IOxClient, which is a command line tool provided as part of the Cisco IOx SDK and which is meant primarily to assist with app development for Cisco IOx platforms. IOxClient is available for Linux 32/64 bit, MAC OS 32/64bit, and Microsoft Windows 32/64bit platforms.

Table 2 provides support information for Cisco Fog Director and CAF in the IOx releases.

Table 2 Cisco Fog Director and CAF Support Matrix

	CAF 1.9	CAF 1.8	CAF 1.7	CAF 1.6	CAF 1.5
Fog Director 1.9	Yes	Yes	Yes	No	No
Fog Director 1.8	No	Yes	Yes	Yes	No
Fog Director 1.7	No	No	Yes	Yes	No

Note: App files that should persist when the app container reboots should be uploaded to the /data directory for that app. You can use Cisco Local Manager, Cisco Fog Director, or an SSH connection to upload the files.

Limitations and Restrictions

- Upgrades of platform images must be performed from *n*-1' to *n* release only (*n* = the latest release).

- If CAF crashes abruptly, CAF comes back up with limited functionality. If app management services are down you can download the tech support logs and verify the reason from the CAF logs or in syslog files. An example for app management going down is a CAF abrupt crash.

  The workaround is to reboot the device. If the app management services are down after the device reboots, collect the tech support logs from the device before contacting the support team.

- App asking for multiple USB ports and devices is not supported. This restriction applies only to FD.

■ USB device hot swap-out and swap-in are not supported. You must plug in the USB device before installation the application on the IOx device.

Caveats

You can use the Bug Search Tool to find information about caveats, including a description of the problems and available workarounds. The Bug Search Tool lists both open and resolved caveats.

To use the Bug Search Tool:

1. Go to https://tools.cisco.com/bugsearch/.

2. Log in with your Cisco.com user ID and password.

3. Enter information in the Search For, Product, and Releases field as needed, then press **Enter**.

For more information about the Bug Search Tool, click **Help** on the main Bug Search Tool page.

Cisco Support

Use the following resources if you have any questions or require assistance with Cisco IOx:

■ Go to DevNet Developer Support:

https://developer.cisco.com/site/devnet/support/

■ Go to Cisco Support:

https://www.cisco.com/c/en/us/support/index.html

■ Email Cisco Support at tac@cisco.com.

■ Call Cisco Support at 1.408.526.7209 or 1.800.553.2447.

Obtaining Documentation and Submitting a Service Request

For information about obtaining documentation, using the Cisco Bug Search Tool (BST), submitting a service request, and gathering additional information, see *What's New in Cisco Product Documentation*.

To receive new and revised Cisco technical content directly to your desktop, you can subscribe to the What's New in Cisco Product Documentation RSS feed. The RSS feeds are a free service.