Cisco IOx Local Manager Pages and Options

This chapter provides detailed reference information about the pages and options that are available in Cisco IOx Local Manager.

Cisco IOx Local Manager Tabs

Cisco IOx Local Manager includes the following main tabs in its menu bar. You use these tabs to access the Cisco IOx Local Manager pages:

- **Applications** tab—Displays the Applications page, which lists the Cisco IOx apps that have been uploaded to the host system, displays general information about these apps, and provides options for managing and administering them.
- **Cartridges** tab—Displays the Cartridges page, which lists the Cisco cartridges that have been installed on the host system, displays general information about these cartridges, and provides options for installing, deleting, and obtaining additional information about them.
- **System Info** tab—Displays the System Info page, which provides hardware, software, network, and resource information that relates to the host system. This page also provides options for managing and obtaining host system log files and related information for troubleshooting.
- **System Setting** tab—Displays the System Settings page, which provides information about the range of NAT IP addresses that are reserved for app, and provides options for managing a Syslog server to which the host system sends logging information.
- **Middleware Service** tab—Displays the Middleware Service page, which lists the Cisco Data in Motion services that are available for apps, displays general information about these services, and provides options for starting, stopping, and uploading licenses for them.

- *App-ID* tab—When you click the **manage** option on the Applications tab for an app, a tab with the ID of that app is added to the menu bar. The *App-ID* tab displays the *App-ID* page, which provides access to pages for viewing information and performing other activities that relate to a specific app.

On Cisco IOx Local Manager pages:

- You can click any field title in a table that displays rows of information to toggle the information in that table in ascending or descending alphabetical order by that field.
- On most pages that display information in multiple areas, you can click an area title to expand or collapse the information in that area.

Applications Page

The Applications page lists the Cisco IOx apps that have been uploaded to the host system, displays general information about these apps, and provides options for managing and administering them.

To access the Applications page, choose **Applications** from the Cisco IOx Local Manager menu bar. Table 1: Applications Page Fields and Options, on page 2 describes the fields and options that are available on this page.

Table 1: Applications Page Fields and Options

Item	Description
Id field	Unique identifier of the application.
Name field	Name of the application.
Status field	Status of the app: • **DEPLOYED**—App is uploaded to the host system. System CPU and RAM resources are not committed to the app. An app with this status can be activated, upgraded, or deleted. • **ACTIVATED**—App is on the host system and ready to run. System CPU and RAM resources have been reserved for the app but are not yet in use. An app with this status can be started or deactivated. • **RUNNING**—App is operating on the host system. System CPU and RAM resources are in use for the app. An app with this status can be stopped. • **STOPPED**—App has been running on the host system but its operation has been stopped. System CPU and RAM resources remain reserved for the app. An app with this state can be started or deactivated.

Item	Description
Actions field	Provides options that you can click to execute operations for the app. Options that appear depend on the status of the app and can include: • **start**—Starts an app that has a status of ACTIVATED or STOPPED. See the Starting an App section. • **stop**—Stops an app that has a status of RUNNING. See the Stopping an Appsection. • **activate**—Activates an app that has a status of DEPOLYED. See the Activating an App section. • **deactivate**—Deactivates an app that has a status of ACTIVATED or STOPPED. See the Deactivating an Appsection. • **delete**—Removes from the host system an app that has the status DEPLOYED. See the Deleting an App section. • **manage**—Displays the App-ID page for the app. See the App-ID Page, on page 8section. • **upgrade**—Upgrades an app that has a status of DEPLOYED. See the Upgrading an App section.
Description field	Brief description of the app.
Version field	Version of the app.
Add/Deploy button	Uploads the app to the host system and puts the app in DEPLOYED state. See the Adding/Deploying an App section.
Refresh button	Click to update the page with current information.

Cartridges Page

The Cartridges page lists the Cisco cartridges that have been installed on the host system, displays general information about these cartridges, and provides options for installing, deleting, and obtaining additional information about them.

Cartridges are used by PAAS apps. The packages for these apps include only the app logic (such as Python or Java files), but not the Linux operating system files or the root file system that the app requires. Cartridges provide the root file system and Python or Java files that an app requires to run. See the Cartridge Management Workflowsfor additional information.

Cartridges are not used by KVM, LXC, or Docker apps.

To access the Cartridges page, choose **Cartridges** from the Cisco IOx Local Manager menu bar. Table 2: Cartridges Page Fields and Options, on page 4 describes the fields and options that are available on this page.

Table 2: Cartridges Page Fields and Options

Item	Description
Id field	Unique identifier of the cartridge.
Name field	Name of the cartridge.
Actions field	Provides options that you can click to execute operations for the cartridge:
Description field	Brief description of the cartridge.
Version field	Version of the cartridge.
Install button	Installs the cartridge on the host system. See the Installing a Cartridge section.

System Info Page

The System Info page provides hardware, software, network, and resource information that relates to the host system and to the Cisco IOx infrastructure and framework. It also provides options for managing and obtaining host system log files and related information for troubleshooting. The information that this page displays is not specific to any particular app.

The Logs area and TechSupport Information area on the System Info page provide options that are useful for troubleshooting the Cisco IOx framework. For related information, see the "Host System Log File Workflows" section on page 3-21 , the "Tech Support Information Workflows" section on page 3-22 , and the Core Dump File Workflows. (For information about app-specific log files, see the "Downloading an App Log File" section on page 3-9 .)

To access the System Info page, choose **System Info** from the Cisco IOx Local Manager menu bar. Table 3: System Info Page Fields and Options, on page 4 describes the fields and options that are available on this page.

Table 3: System Info Page Fields and Options

Item	Description
Host Info area	
Information fields	Provides general information about the host system.
Refresh Stats button	Click to update the page with current information.
CPU & Processes area	
Information fields	Provides information about CPU and processes that are used on the host system.
Inspect button	Click to display a pop-up window that provide additional information about processes that are running on the host system.
Memory area	

Item	Description
Information fields	Provides information about memory use on the host system.
Storage area	
Information fields	Provides information about storage devices that host system is using.
Network Information area	
Information fields	Click a link in the Source_Linux_Bridge column to display a pop-up window that provides additional information about the corresponding network.
Serial Interfaces area	
Information fields	Provides information about serial interface devices that are available on the host system.
Interfaces area	
Information fields	Provides information about general interfaces that host system is using.
IP v4 Routing area	
Information fields	Provides IP v4 routing information that relates to the host system.
DNS and NTP Settings area	
Information fields	Provides domain information for any DNS and NTP servers that the host system is using.
Logs area	
Logging Management button	Click to configure the type and level of information that the host system captures in its host system log files. See Configuring Host System Log Files.
Log name field	Name of a host system log file.
Timestamp field	Host system date and time that the host system log file was last updated.
Log Size field	Size of the host system log file, in bytes.
download link	Click to download the corresponding host system log file. See Downloading Host System Log Files.
TechSupport Information area	
Tech Support snapshot file name field	Lists the names of snapshot files that you have generated. A file name has the format tech_support_*timestamp* , where *timestamp* is the host system date and time that the file was generated. See Generating a Snapshot File.

Item	Description
File Size field	Size of the snapshot file, in bytes.
Download field	Click **download** to download the corresponding snapshot file to the location of your choice. See Downloading a Snapshot File.
Delete field	Click the **Delete** icon (red X) to delete the corresponding snapshot file from the host system.
Generate snapshot file button	Click to generate a snapshot file. See the Generating a Snapshot File.
Refresh list button	Click to update the list of snapshot files with current information.
Core file name field	Lists the name of core dump files that the system generated.
File Size field	Size of the core dump file, in bytes.
Download field	Click **download** to download the corresponding core dump file to the location of your choice. See Downloading a Core Dump File.
Delete field	Click the Delete icon to delete the corresponding core dump file from the host system. See Deleting a Core Dump File.
Refresh list button	Click to update the list of core dump files with current information.

System Setting Page

The System Setting page provides options for managing internal Cisco IOx networks for apps, and for managing a Syslog server to which the host system sends logging information.

Internal Cisco IOx networks allow apps on host systems to communicate with other systems. The network named svcbr_0 is provided by, and cannot be deleted. Some host systems allow other networks to be added.

If needed, refer to the app documentation or developer for information network configuration that an app requires when it runs.

To access the System Setting page, choose **System Setting** from the Cisco IOx Local Manager menu bar.

Table 4: System Setting Page Fields and Options

Item	Description
Additional Networks area	Click to add an internal network on host systems that support adding internal networks. See Adding an Internal Network.
Add Network button	
Interface field	Name of the internal Cisco IOx bridge that provides connectivity for this internal network.
Description field	Brief description of the internal network.
Physical Interface field	Physical interface that the internal network uses for connectivity.

Item	Description
Logical Network field	Logical networks that provide bridge and NAT networking modes for the internal network. Click a logical network name to display a dialog box that provides detailed information about that logical network.
Vlan ID field	Identifier of the VLAN on which this internal network operates, if applicable.
IP Mode field	IP mode of the internal Cisco IOx bridge that provides connectivity for this internal network (**dhcp**, **static**, or **no_ip_address**).
IP Address field	IP address and subnet mask of the internal Cisco IOx bridge that provides connectivity for this internal network.
Actions field	Provides these options:
System Log area	
Hostname or IP address field	Host name or IP address of the configured Syslog server.
Port field	Port number on which the host communicates with the Syslog server.
Protocol field	Protocol that the host system uses to communicate with the Syslog server.
Level field	Level of logging information that the host system sends to the Syslog server.
Actions field	When a Syslog server is configured, provides these options:
Add button	Click to configure a Syslog server. The host system sends logging information to this server. See Adding a Syslog Server .

Middleware Service Page

The Middleware Service page lists the Cisco Data in Motion middleware service that is available for apps, displays general information about this service, and provides options for starting, stopping, and uploading licenses for it. This service runs on the host system.

To access the Middleware Service page, choose **Middleware Service** from the Cisco IOx Local Manager menu bar. Table 5: Middleware Service Page Fields and Options, on page 7 describes the fields and options that are available on this page.

Table 5: Middleware Service Page Fields and Options

Item	Description
Name field	Name of the Cisco Data in Motion service.

Item	Description
Status field	Status of the Cisco Data in Motion service: • **Running**—Service is running on the host system • **Stopped**—Service is not running on the host system
Actions field	Provides options that you can click to execute operations for the Cisco Data in Motion service. Options that appear depend on the status of the service as follows:
Description field	Description of the Cisco Data in Motion service.
Version field	Version of the Cisco Data in Motion service.
Require License field	Indicates whether a license is required for the Cisco Data in Motion service to operate on the host system.
Refresh button	Click to update the page with current information.

App-ID Page

The *App-ID* page, where *App-ID* is the ID of an app, includes the following tabs. These tabs provide access to pages for viewing information and performing other activities that relate to a specific app.

To access the *App-ID* page, choose the *App-ID* tab for the app from the Cisco IOx Local Manager menu bar.

If you do not see the tab for an app, choose the **Applications** tab, and then click the **manage** option for the app that you want.

To remove an App-ID tab from the menu bar by, hover your mouse over the tab and click its Close button .

App-ID Resources Page

The *App-ID* Resources page lets you assign a resource profile (host system CPU and memory resources) to an app, designate the network from which the app obtains its IP address, and activate or deactivate an app. This page also shows CPU and memory resources that are available on the host system.

If needed, refer to the app documentation or developer for information regarding resources that an app requires when it runs.

To access the *App-ID* Resources page, choose an *App-ID* tab from the Cisco IOx Local Manager menu bar, and then choose **Resources**. Table 6: App-ID Resources Page Fields and Options, on page 8 describes the fields and options that are available on this page.

Table 6: App-ID Resources Page Fields and Options

Item	Description
Resources title	Click to expand or collapse this page.
Resource Profile area	

Item	Description
Profile drop-down list	Provides options for designating the *resource profile* for an app. A resource profile designates the amount of host system CPU and memory (RAM) resources that the app requires to run, as follows. • **default**—Assigns CPU and memory resources based on the requirement that is specified in the metadata for the app. • **c1.tiny**, **c1.small**, **c1.medium**, **c1.large**, or **c1.xlarge**—Assigns the CPU and memory resources that the options display. These values are based on the host system hardware. • **Custom**—Lets you enter your own CPU and RAM values in the CPU and Memory field See the Activating an App section for more information.
CPU field	Number of CPU units that the app requires on the host system. If you choose **Custom** from the **Profile** drop-down list, enter a value in this field. If you choose another option, the system enters a value in this field for you.
Memory field	Amount of RAM, in MB, that the app requires on the host system. If you choose **Custom** from the **Profile** drop-down list, enter a value in this field. If you choose another option, the system enters a value in this field for you.
Disk field	Amount of disk space, in MB, that the app requires on the host system. If you choose **Custom** from the **Profile** drop-down list, enter a value in this field. If you choose another option, the system enters a value in this field for you.
Vcpu field	Appears only for VM-based apps. Enter the number of virtual CPUs that the app requires on the system. If you choose **Custom** from the **Profile** drop-down list, enter a value in this field. If you choose another option, the system enters a value in this field for you.
Avail. CPU field	Number of available CPU units on the host system. The system does not allow you to activate an app if the value in the **CPU** field exceeds this available CPU value.
Avail. Memory field	Amount of available RAM, in MB, on the host system. The system does not allow you to activate an app if the value in the **Memory** field exceeds this available memory value.
Max VCPU/App field	Appears only for VM-based apps. Number of virtual CPUs that are available on the host system.
Network Configuration area	

Item	Description
Network Name drop-down list	Designates the network from which the app obtains its IP address or addresses: • **iox-bridge0**—App obtains its IP address from a DCHP pool that is configured in Cisco IOS • **ioxnat0**—App obtains its IP address from an internal network address translator
Port Mapping link	Click to configure mapping of external ports to internal ports for an app. See Step 8 of the Activating an App section.
Serial Access Configuration area Appears only if the app metadata requests that a serial port on the host system be assigned for use by the app.	
Port_description radio button	Identifies one or more serial ports on the host system that the app metadata requests for use by the app. *Port_description* is a description of the port usage that comes from the app metadata. Click the radio button for each port that you want to assign for use by the app.
Activate / **Deactivate** toggle button	Click to activate or deactivate an app. See Activating an App and Deactivating an App.

App-ID App-info Page

The *App-ID* App-info page displays system, resource, and network information that relates to an app. It also provides information that you can use to access an app via a console. Much of the information on this page comes from the app metadata.

To access the *App-ID* App-info page, choose an *App-ID* tab from the Cisco IOx Local Manager menu bar, and then choose **App-info**. Table 7: App-ID App-info Page Fields and Options, on page 10 describes the fields and options that are available on this page. Some of the fields on this page appear only when an app is in a specific state or has a specific configuration.

Table 7: App-ID App-info Page Fields and Options

Item	Description
Application Information area	
ID field	ID of the app
State field	Current state of the app (for example, DEPLOYED).
Name field	Name of the app.

Item	Description
Cartridge Required field	For PAAS applications, the name of each cartridge that the app requires. See Cartridge Management Workflows.
Version field	Version of the app.
Author field	Author of the app (for example, the company that provided the app).
Author link field	Link to an external page for the author (for example, the website of the author).
Application Type field	Type of the app (PAAS or MV).
Description field	Brief description of the app.
Toolkit service field	Not used.
App Access area	
Console Access	For an app that has a status of RUNNING, displays the command that you can use to access the app via a console. See Accessing an App via a Console .
Requested Resource area	
CPU field	Number of CPU units that the app consumes on the host system.
Memory field	RAM, in MB, that the app consumes on the host system.
Profile field	Resource profile that you assigned to the app. See Activating an App .
Disk field	Disk space, in MB, that the app consumes on the host system.
Vcpu field	Number of virtual CPUs that are available on the host system for a VM-based app.
Network Information area	

Item	Description
interface-name field	Name of the network interfaces that the app uses for network access. Click an interface name to display a dialog box that shows the following information: • interface-name—Name of the network interface that the app uses for network access. • TCP—If the app metadata requests that TCP ports be open on the host system, displays the TCP port number or numbers that the app requests be open for its use. If **info** appears in this field, click **info** to display a dialog box that provides port mapping information for this network interface. • UDP—If the app metadata requests that UDP ports be open on the host system, displays the TCP port number or numbers that the app requests be open for its use. If **info** appears in this field, click **info** to display a dialog box that provides port mapping information for this network interface. • mac_address—MAC address of the network interface that the app uses for network access. • network_name—Name of the network on which the app is activated. • ipv4—PV4 address that is assigned to the internal interface of the app.
Device Information area	
Sl.No field	Row number in this area number for the corresponding information.
usage field	Description of the USB or serial device that the app uses on the host system.
device-id field	Unique ID used by the host system to identify the USB or serial device that the app uses.
type field	Indicates the type of device (**serial** or **usbport**).
label field	ID used by the app to identify the USB or serial device that the app uses on the host system.
Resource Usage area	
CPU field	Percentage of total CPU units on the host system that the app is currently consuming.
Memory field	Memory, in KB, that the app is currently consuming on the host system.
Disk field	Disk space, in MB, that the app is currently consuming on the host system.
Network field	Data, in bytes, that the app has received from and transferred to the host system.
Refresh button	Click to update the page with current information.

App-ID App-Config Page

The *App-ID* App-Config page from lets you update the configuration file for an app.

An app configuration file is a text file named package_config.ini, which is stored in the /data directory in the app container for the app. When an app starts, it obtains configuration parameters from this file, if the file exists. The contents and use of this file by its app are defined by the app developer.

To access the *App-ID* App-Config page, choose an *App-ID* tab from the Cisco IOx Local Manager menu bar, and then choose **App-Config**. The following table describes the fields and options that are available on this page.

Table 8: App-ID App-Config Page Fields and Options

Item	Description
Text field	Lets you enter configuration information for the app. See Updating an App Configuration file.
Save button	Click to save the updates that you made in the **Text** field.

App-ID App-DataDir Page

The *App-ID* App-DataDir page lets you see the contents of the /data directory in an app container, upload files to the /data directory or subdirectory, download files to your local system, and delete files or subdirectories from the /data directory. The files can be configuration files or other files that the app needs when it runs. log files, and other files that are created while app is running.

To access this page, the app must be in the ACTIVATED, RUNNING, or STOPPED state. This page is not available for use when an app is in the DEPLOYED state.

To access the *App-ID* App-DataDir page, choose an *App-ID* tab from the Cisco IOx Local Manager menu bar, and then choose **App-DataDir**. The following table describes the fields and options that are available on this page.

Table 9: App-ID App-DataDir Page Fields and Options

Item	Description
Current Location	Location in the app container /data directory of a folder that you clicked in the Name field.
Name field	Displays the files and subdirectories in the app container /data directory. In this field, you can take the following actions: • If you are viewing a subdirectory, click **../** to display the contents of the directory that is one level up from the directory that you are viewing. • Click the **Home** button to the contents of the top level of the /data directory. • Click a subdirectory name to see its contents. • Click a file name to download the file to your local PC. See Downloading a File from an App Data Directory.

Item	Description
Type field	Indicates the type of the corresponding item: • **file**—Item is a file in the /data directory or a subdirectory • **dir**—Item is a subdirectory in the /data directory
Size field	Size of a file, in bytes. For directories, the size displays as 0.
Actions field	Provides the **delete** option for deleting a file or directory. See Deleting a File or Directory from an App Data Directory.
Upload button	Uploads a file to the app container. See the Syslog Server Workflows.
Home button	Click to display in the Name field the contents of the top level of the /data directory.

App-ID Logs Page

The *App-ID* Logs page provides information about the app log files that the app creates in the /data/logs directory in the app container for the app, and lets you download these log files.

To access the *App-ID* Logs page, choose an *App-ID* tab from the Cisco IOx Local Manager menu bar, and then choose **Logs**. Table 10: App-ID Logs Page Fields and Options, on page 14 describes the fields and options that are available on this page.

Table 10: App-ID Logs Page Fields and Options

Item	Description
Log name field	Name of the log file.
Timestamp field	Host system date and time that the log file was last updated.
Log Size field	Size of the log file, in bytes.
download button	Lets you download a log file. See Downloading an App Log File.