Lexmark™

Optra Compute

User's Guide

Contents

Safety information

⚠️ **CAUTION—POTENTIAL INJURY:** To avoid the risk of fire or electrical shock, connect the power cord to an appropriately rated and properly grounded electrical outlet that is near the product and easily accessible.

⚠️ **CAUTION—POTENTIAL INJURY:** To avoid the risk of fire or electrical shock, use only the power cord provided with this product or the manufacturer's authorized replacement.

⚠️ **CAUTION—POTENTIAL INJURY:** To avoid the risk of fire or electrical shock, make sure that the power cord is completely seated in the appliance inlet.

⚠️ **CAUTION—SHOCK HAZARD:** To avoid the risk of electrical shock, do not place or use this product near water or wet locations.

⚠️ **CAUTION—SHOCK HAZARD:** To avoid the risk of electrical shock, do not make any electrical connections during a lightning storm.

⚠️ **CAUTION—POTENTIAL INJURY:** Do not cut, twist, bind, crush, or place heavy objects on the power cord. Do not subject the power cord to abrasion or stress. Do not pinch the power cord between objects such as furniture and walls. If any of these things happen, a risk of fire or electrical shock results. Inspect the power cord regularly for signs of such problems. Remove the power cord from the electrical outlet before inspecting it.

⚠️ **CAUTION—SHOCK HAZARD:** To avoid the risk of electrical shock when cleaning the exterior of the device, unplug the power cord from the electrical outlet and disconnect all cables before proceeding.

⚠️ **CAUTION—POTENTIAL INJURY:** The lithium battery in this product is not intended to be replaced. There is a danger of explosion if a lithium battery is incorrectly replaced. Do not recharge, disassemble, or incinerate a lithium battery. Discard used lithium batteries according to the manufacturer's instructions and local regulations.

This product is designed, tested, and approved to meet strict global safety standards with the use of specific manufacturer's components. The safety features of some parts may not always be obvious. The manufacturer is not responsible for the use of other replacement parts.

Refer service or repairs, other than those described in the user documentation, to a service representative.

SAVE THESE INSTRUCTIONS.

Overview

Lexmark^{TM} Optra Compute is part of the Optra Edge AI product portfolio, a suite of enterprise-class IoT edge devices that are managed by Lexmark. Each device maintains a connection to Lexmark's device management portal, Optra Portal. The portal hosts a set of interfaces where you can install a "skill" to groups of devices to perform certain functions.

For developers, these skills are packaged as containers in the Docker containerization platform. These containers are given access to a set of underlying hardware on the devices.

This document provides instructions on how to set up and use the device and how to use the portal.

Getting started

Learning about the device

Warning—Potential Damage: To avoid loss of data or device malfunction, do not touch the USB cable or the device in the areas shown while actively operating.
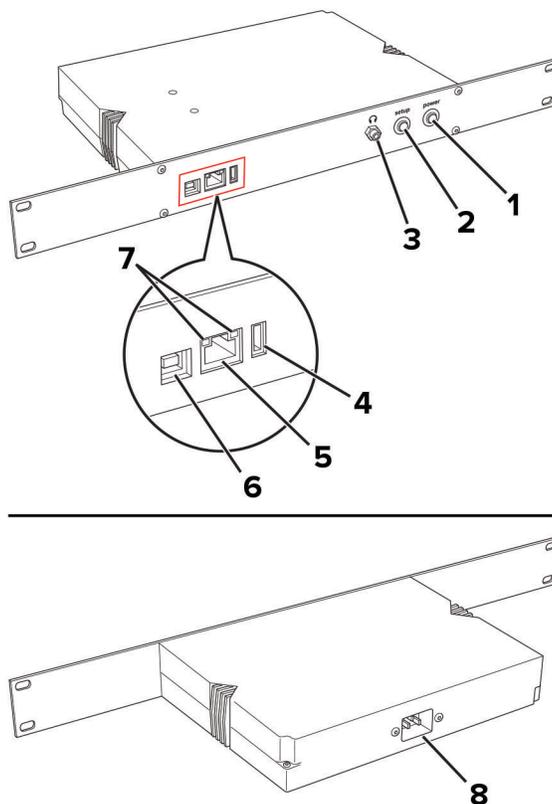
	Part	Function
1	Power button	Turn the device on or off.
2	Setup button	• Enroll the device in Optra Portal—Press and hold the button for 5 seconds. • Restart the device—Press and release the button. • Reset the device to its factory default settings—Press and hold the button for 10 seconds.
3	Headphones jack	Insert headphones or a speaker.
4	USB port	Attach a supported USB device, such as a flash drive or the MarkNet^TM network adapter (purchased separately).
5	Ethernet port	Connect the device to a network.

	Part	Function
6	USB device port	Connect the device to a computer to access the Embedded Web Server (EWS) and manage on-device settings. If the only available connection is a Wi‑Fi network, then use the Embedded Web Server to configure Wi‑Fi connection. You can also use the Embedded Web Server to configure the Ethernet network settings.
7	Ethernet port indicator lights	Check the network connection status. **Notes:** • The light on the left indicates connection. • The light on the right indicates activity.
8	Power cord socket	Connect the device to a properly grounded electrical outlet.

Understanding the status of the power button and setup button indicator lights

Setup button light	Power button light	Device status
Blinking (1 second)	On	Starting
Alternating rapid blinking (0.5 seconds)		Missing serial number
Alternating very rapid blinking (30 milliseconds)		No network connection to hub
Alternating slow blinking (2 seconds)		Device Provisioning Service failed
Rapid blinking		Not enrolled
Rapid blinking	On	Enrolling
On	On	Enrolled
Off	Very rapid blinking	Restarting
Off	Slow blinking	Resetting to factory default settings
On	Blinking	Pulling firmware
On	Slow blinking	Updating firmware
Blinking		Failed to pull firmware
Slow blinking		Failed to update firmware

Setting up the device

1 Connect the power cord to the product, and then to the electrical outlet.

> ⚠️ **CAUTION—POTENTIAL INJURY:** To avoid the risk of fire or electrical shock, connect the power cord to an appropriately rated and properly grounded electrical outlet that is near the product and easily accessible.

> ⚠️ **CAUTION—POTENTIAL INJURY:** To avoid the risk of fire or electrical shock, make sure that the power cord is completely seated in the appliance inlet.
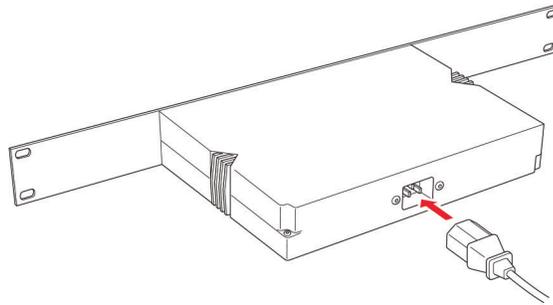
2 Insert headphones or a speaker into the headphone jack.
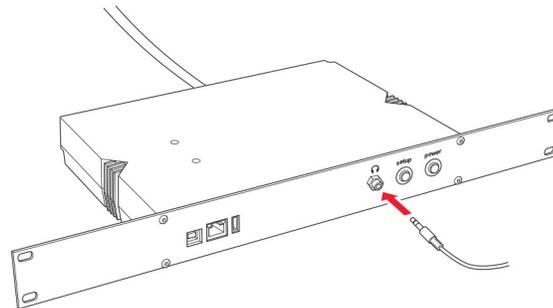
3 Connect the device to the local network.
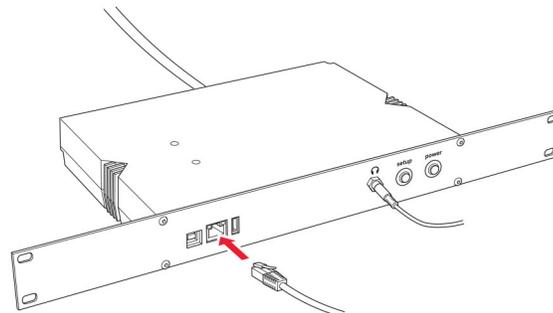
Note: If the only available connection is a Wi-Fi network, then purchase a MarkNet network adapter and insert it into the USB port.

4 Turn on the device.
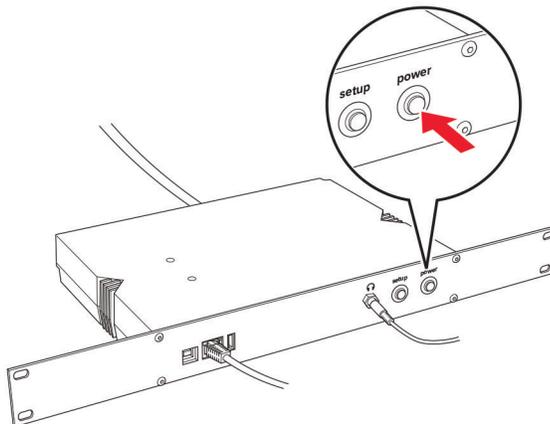
Note: The indicator lights in the Ethernet port blink, go off, and then come on again.

5 For Ethernet connection, wait for the indicator light on the right in the Ethernet port to blink rapidly.
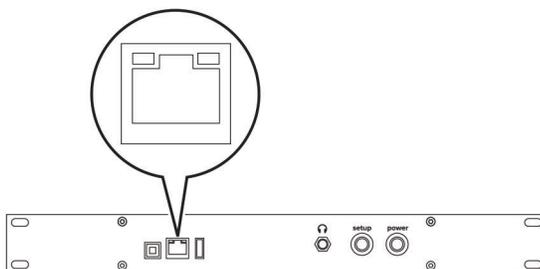
6 Depending on your network arrangement, you may need to configure the network before the device can connect to the portal.

a Connect the device to a computer through the USB device port to access the Embedded Web Server (EWS).

Note: We recommend using a computer running the Windows 10 operating system.

b Open a web browser, and then type **169.254.76.86** in the address field.

c Click **Password**, and then enter the device serial number.

Note: The 13-digit serial number can be found at the front of the device and begins with 8080.

For Ethernet connection
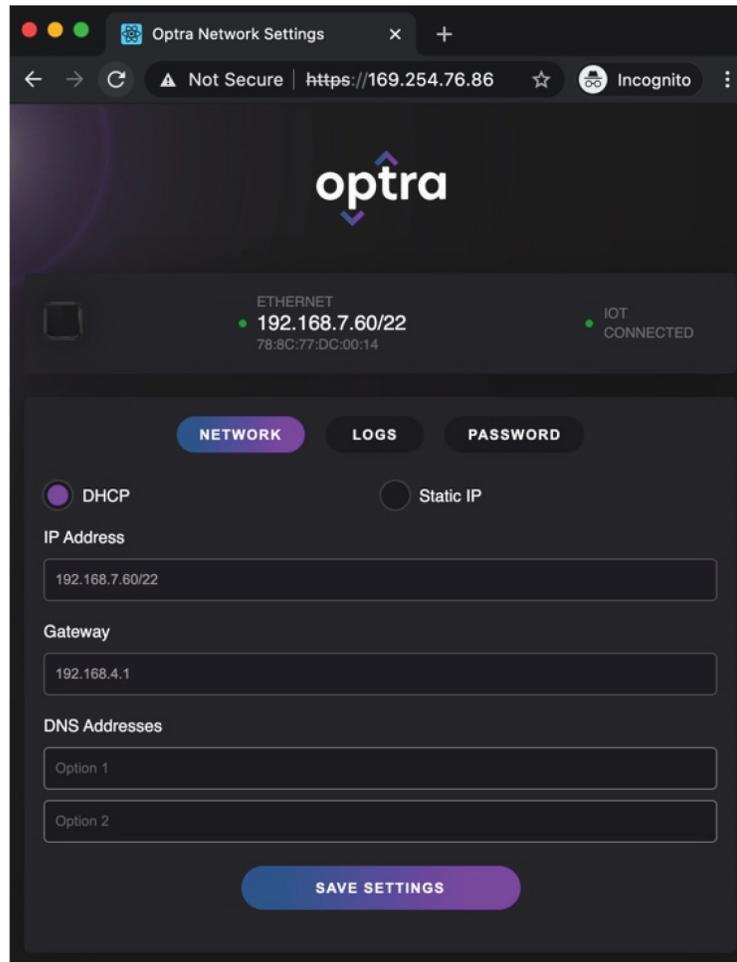
For Wi-Fi connection
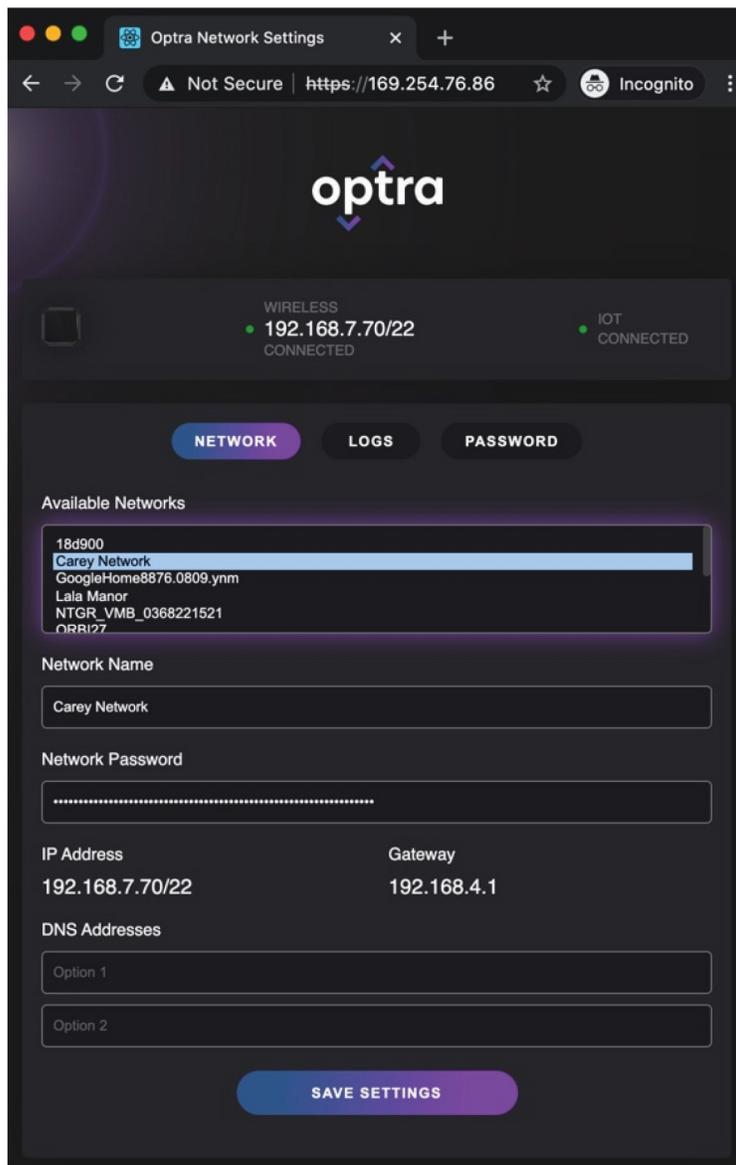
Note: The wireless settings appear only if the MarkNet network adapter is attached to the device.

Outbound network requirements

The device needs access to the following URLs and ports for proper operation.

Requirement	URL	Port
Azure IoT Hub	optra-release.azure-devices.net	443
Azure Device Provisioning Service	global.azure-devices-provisioning.net	443
Microsoft Container Registry	mcr.microsoft.com	443
Azure Container Registry	optrarelease.azurecr.io	443

Requirement	URL	Port
Download Azure Container Registry image deltas from blob storage	*.blob.core.windows.net	443
Download firmware on update	bucket.optra.com	443
Application log upload service for remote diagnostics	logsene-journald-receiver.sematext.com	443

Using Optra Portal

Enrolling the device in Optra Portal

1 Open a web browser, and then go to **https://portal.optra.com**.

2 Create an account or log in.

3 Click the **DEVICES** tab, and then click **ENROLL DEVICE**.
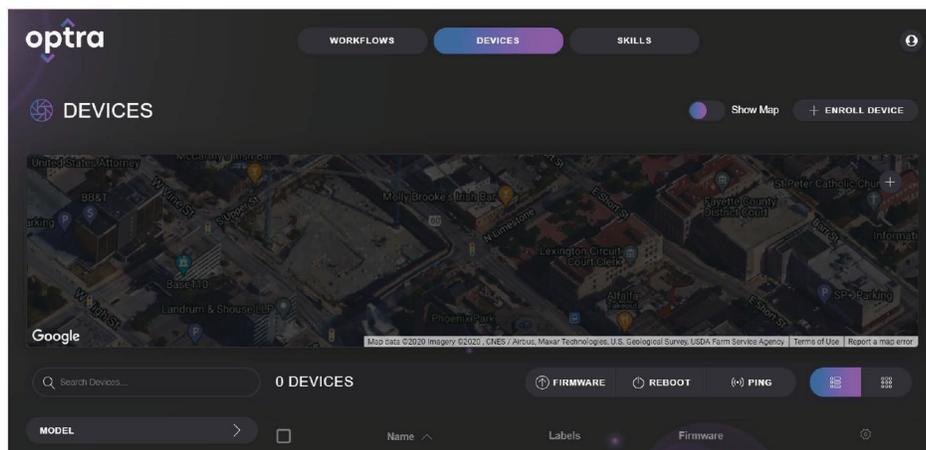
4 Enter the device serial number.

Note: The 13-digit serial number can be found at the front of the device and begins with 8080.
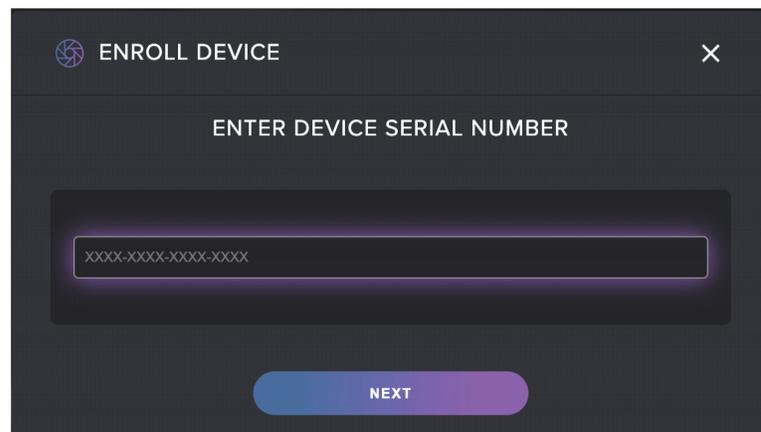
5 On the device, press and hold the setup button for five seconds or until the button light changes.

Notes:

- Do not press and hold the button for more than 10 seconds to avoid resetting the device.
- While the device is being enrolled, the setup button blinks rapidly and the power button light remains solid.
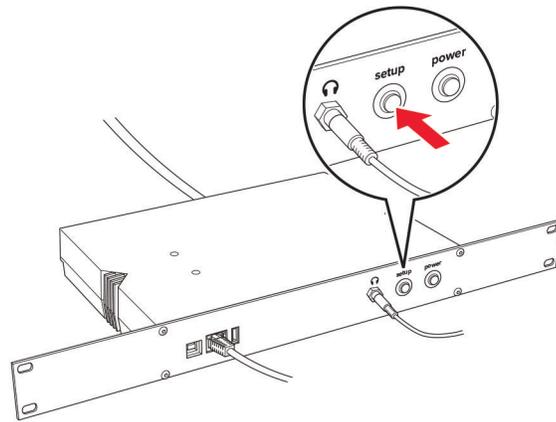
6 Assign a name to the device, and then type the location so that the device appears on the map.

7 Click **SAVE**.

Adding workflows and deploying skills

1 From Optra Portal, click the **WORKFLOWS** tab, and then click **NEW WORKFLOW**.
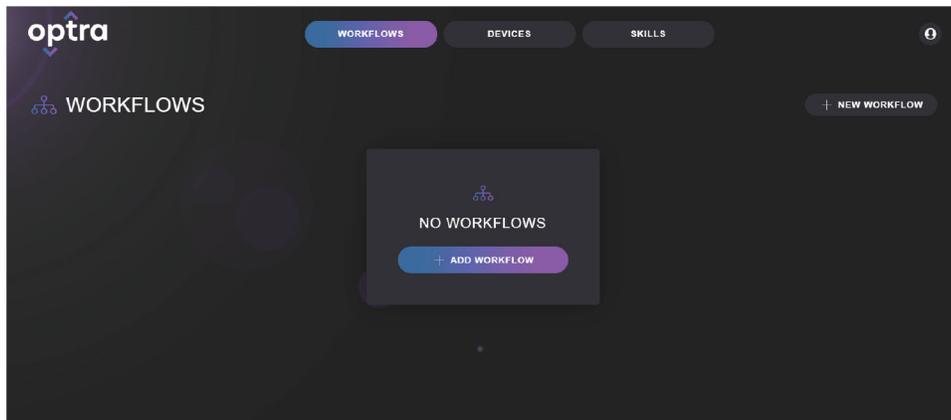
2 Type a workflow name, and then click **SAVE**.
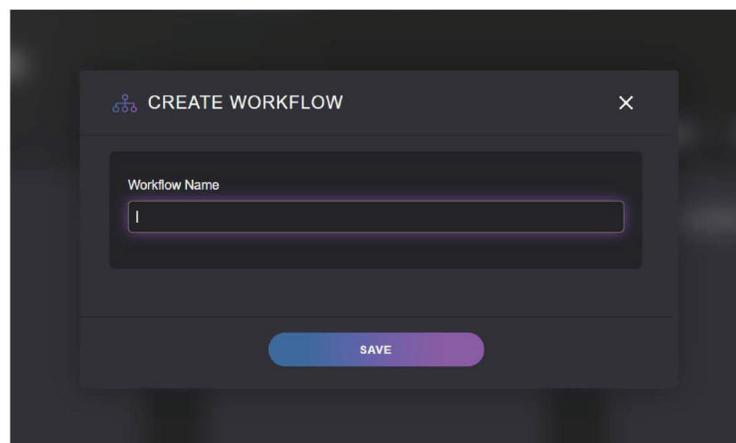
3 Add a device, skill, and action to the workflow.
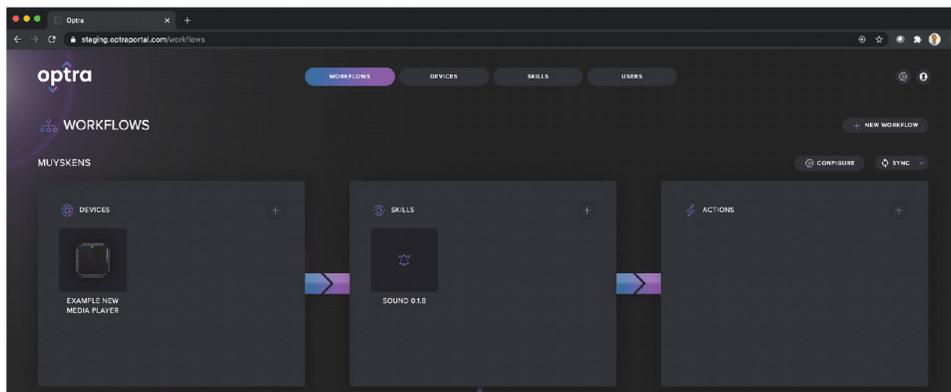
> **Note:** You can also upload a skill configuration.

4 On the upper-right corner of the screen, click **SYNC** to deploy and run the workflow on your device.

Note: You can also copy and delete a workflow. To delete a workflow, click **CONFIGURE** > **Delete**.

Troubleshooting

Cannot connect to the portal

Try one or more of the following:

Check if the network connection is working

Make sure that the cable connections are secure

Check if you are using a supported browser

Use the latest version of Apple Safari, Google Chrome™, or Mozilla Firefox.

Make sure that the user credentials are correct

Make sure that the account e-mail address is associated with your Optra Portal organization

For more information, contact your administrator or the person who created the organization account.

View the device logs for relevant debug information

On the DEVICES tab, select the device name, and in the CONFIGURE DEVICE page, click **VIEW LOGS**.

Contact customer support at optra.help@lexmark.com

Cannot enroll the device

Try one or more of the following:

Make sure that the device is turned on

Make sure that the cable connections are secure

Check if the network connection is working

Wait for the indicator lights to blink rapidly before proceeding to enroll the device

Check if you are using a supported browser

Use the latest version of Apple Safari, Google Chrome, or Mozilla Firefox.

Make sure that the user credentials are correct

Make sure to enter the correct device serial number

Make sure that the device is not already enrolled by another user

If you reset a previously enrolled device and reconnect it to the network, then the device automatically reenrolls itself and connects to the original user account. To make it available for a different user, remove the device from the original account in the portal.

Make sure that the device is in the Enrolling state

Press and hold the setup button for five seconds after starting the device.

Contact customer support at optra.help@lexmark.com

Cannot deploy a skill

Try one or more of the following:

Make sure that the cable connections are secure

Check if the network connection is working

Make sure that the device is online and responding to network requests

On the DEVICES tab, select the check box beside the device name, and then click **PING**. Then select the device name, and in the CONFIGURE DEVICE page, click **VIEW LOGS**.

Make sure to add at least one device and one skill to the workflow

Make sure that the workflow is synced

On the WORKFLOWS tab, click **SYNC**.

Make sure that the device storage is not full

On the DEVICES tab, view the disk usage level of the device under the Disk column.

Make sure that all required skill configuration information is provided, and that the skill is enabled

View the device logs for relevant debug information

On the DEVICES tab, select the device name, and in the CONFIGURE DEVICE page, click **View Logs**.

Contact customer support at optra.help@lexmark.com

Notices

Product information

Product name:

Optra Compute

Machine type:

8080

Model(s):

001

Edition notice

February 2021

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For information on Lexmark's privacy policy governing the use of this product, go to **www.lexmark.com/privacy**.

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Federal Communications Commission (FCC) compliance information statement

This product has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

The FCC Class A limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

The manufacturer is not responsible for any radio or television interference caused by using other than recommended cables or by unauthorized changes or modifications to this equipment. Unauthorized changes or modifications could void the user's authority to operate this equipment.

Note: To assure compliance with FCC regulations on electromagnetic interference for a Class A computing device, use a properly shielded and grounded cable such as Lexmark part number 1021231 for parallel attach or 1021294 for USB attach. Use of a substitute cable not properly shielded and grounded may result in a violation of FCC regulations.

Any questions regarding this compliance information statement should be directed to:

Director of Lexmark Technology & Services
Lexmark International, Inc.
740 West New Circle Road
Lexington, KY 40550
Telephone: (859) 232–2000
E-mail: regulatory@lexmark.com

Innovation, Science and Economic Development Canada compliance statement

This Class A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Standard ICES-003.

Avis de conformité aux normes de l'Innovation, Sciences et Développement économique Canada

Cet appareil numérique de classe A est conforme aux exigences de la norme canadienne relative aux équipements pouvant causer des interférences NMB-003.

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