Conext™ Gateway

PN: 865-0329 https://solar.schneider-electric.com/product/conext-gateway/

Quick Start Guide

Introduction

The Conext Gateway is a multi-function communication device that provides an overall view of system performance for residential power monitoring systems. It also provides a communications gateway between a network of Xanbus™-enabled devices and Modbus devices. Operators can configure the Conext Gateway system and monitor performance with third party software packages and building management systems.

⚠⚠ DANGER

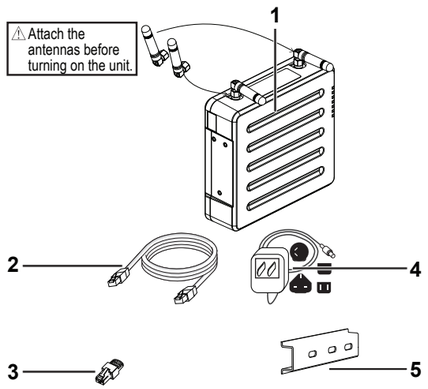
HAZARD OF ELECTRIC SHOCK, EXPLOSION, ARC FLASH, AND FIRE

- Connect only to Safety Extra Low Voltage (SELV) circuits and power sources.
- All wiring must be done by qualified personnel to ensure compliance with all applicable installation codes and regulations.
- For Indoor Use Only.
- Do not disassemble. No user serviceable parts inside.

Failure to follow these instructions will result in death or serious injury.

Other features of the Conext Gateway include: compatibility, a real-time clock, a non-volatile memory, firmware storage and upgrade capability, and cloud storage capability. For more information, see the Owner's Guide (go to https://solar.schneider-electric.com/product/conext-gateway/ > **Downloads**).

Material List



	Item
1	Conext Gateway unit
2	Ethernet cable (CAT5e)
3	Network terminator
4	AC/DC power adapter with interchangeable plugs
5	75 mm DIN rail
not shown	• 8GB Micro SD card • CAN terminator • 26-pin connector (see *26-Pin Connector Pinouts on page 2*)

NOTE: • Do not discard the packaging box. • The Wi-Fi password is printed on the unit. • Install the antennas before turning on the unit.

⚠⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, ARC FLASH, AND FIRE

This document is in addition to, and incorporates by reference, the relevant product manuals for Conext Gateway. Before reviewing this document, you must read the relevant product manuals. Unless specified, information on safety, specifications, installation and operation is as shown in the primary documentation received with the product. Ensure you are familiar with that information before proceeding.

Failure to follow these instructions will result in death or serious injury.

Exclusion for Documentation

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Conventions Used

A Section ❶ Step ⚠ Safety Direction Expand **A** Label

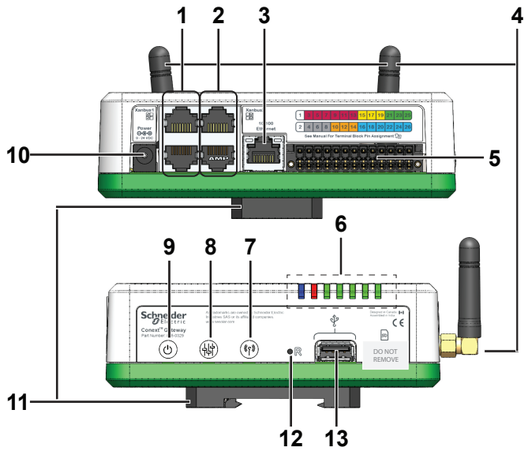
Contact Information

Schneider Electric Solar Inverters Inc.

3700 Gilmore Way Burnaby BC V5G 4M1 Canada

Contact your local Schneider Electric Sales Representative or visit the Schneider Electric website at:
http://solar.schneider-electric.com/

Physical Features



	Item
1	1st pair Xanbus ports
2	2nd pair Xanbus ports
3	Ethernet port
4	Antenna
5	26-pin port (see *26-Pin Connector Pinouts*)
6	LED indicators
7	Wi-Fi button
8	Settings button
9	Power button
10	Power port
11	DIN rail clip (detachable)
12	Reset pinhole button
13	USB port

LED Indicators

Icon	Color	LED	Description
	Green	Power	The Conext Gateway is powered on.
	Green	Memory	Device is logging data to internal memory when flashing.
	Green	Comm.	Device is actively transferring data with the cloud.
	Green	Xanbus	Device is actively transferring data with a Xanbus device/s.
	Green	Modbus	Device is actively transferring data with a Modbus device/s.
	Red	Event	Devices on the Power system have events to report.
	Blue	Wi-Fi	Wi-Fi connectivity is established.

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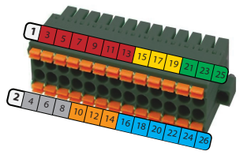
26-Pin Connector Pinouts

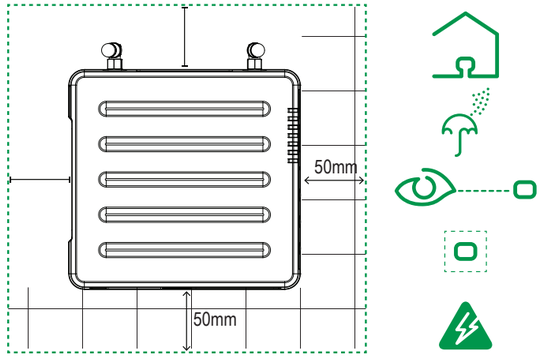


PIN	Description of bottom row
2	9–24VDC power input
4	GND
6	12VDC digital input 1
8	12VDC digital input 2
10	ISO1 CAN GND
12	ISO1 CAN L
14	ISO1 CAN H
16	ISO2 RS485 GND
18	ISO2 RS485 1A
20	ISO2 RS485 1B
22	ISO2 RS485 GND
24	ISO2 RS485 2A
26	ISO2 RS485 2B

PIN	Description of top row
1	GND
3	0–10VDC analog input 1
5	0–10VDC analog input 2
7	GND
9	4–20mA input 1
11	4–20mA input 2
13	GND
15	Relay 1 NO
17	Relay 1 COM
19	Relay 1 NC
21	Relay 2 NO
23	Relay 2 COM
25	Relay 2 NC

NOTE: Pin wire size 16–24 AWG

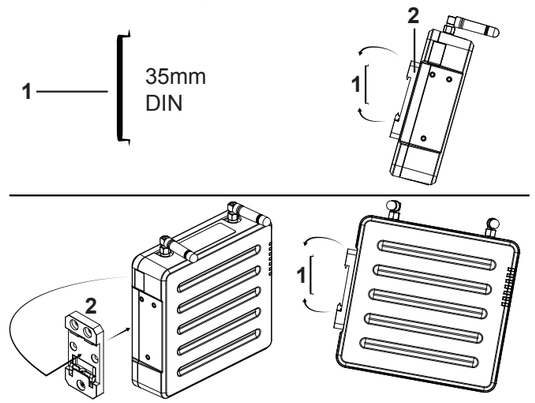
Choosing a Location



- You should not run cables through conduits that can be exposed to lightning strikes. The following are recommended maximum cable lengths in a Conext Gateway system:
  - 131 feet (40 m) Total Xanbus network
  - 328 feet (100 m) Router to Conext Gateway
  - 164 feet (50 m) Modbus Master (RS 485) to Conext Gateway
- Choose a clean, dry, easily accessible location indoors.
- If you mount the Conext Gateway on a wall, the recommended height is at eye-level so that you can clearly see the LED indicators and have easy access to the data and communication ports.
- All of the ports on the Conext Gateway are accessible from the sides of the device when mounted on a wall or DIN rail. Clearance of at least 2 inches (50 mm) around the device is needed to allow for the bending radius of cables that connect to the Conext Gateway.

Mounting the Conext Gateway

1. Use a standard 35-mm “top hat” DIN rail (EN50022).
2. You may choose to move the mounting clip to the side as shown.
3. Attach the Conext Gateway to the DIN rail. Hook the bottom catch of the clip onto the rail, pull up a little to retract the bottom catch and hook the top catch of the clip onto the rail.
4. Connect the wiring and cables.



	Item
1	DIN rail (EN50022)
2	Mounting clip (detachable) By default, it is pre-installed on the unit's back panel.

Connecting the Conext Gateway to the Xanbus Network

- Connect the Conext Gateway to the Xanbus network using daisy chain confguration.
- Xanbus components can be arranged in any order.
- Use a network terminator at both ends of the network. Do not connect two end devices together to form a closed loop configuration. See illustration in the next column.
- Do not interconnect two separate Xanbus networks, meaning, do not daisy chain one Xanbus network with another. Use only one pair of Xanbus ports for the daisy chain. If you only have one Xanbus network use *Xanbus 1*. If you have two separate Xanbus networks connect the second network to *Xanbus 2*. See *Figure 1* for *Xanbus 1* pair of ports - one top and one bottom.

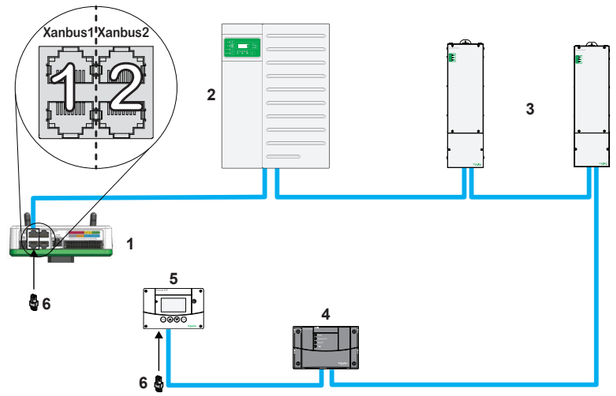
NOTICE

EQUIPMENT DAMAGE

- Do not connect a Xanbus cable plug into the Ethernet port on the Conext Gateway.
- Connect only to Xanbus ports and use the network terminators to each end device in the daisy chain.

Failure to follow these instructions can result in equipment damage.

Figure 1 Sample Xanbus network



NOTE: This Xanbus 1 network is for illustration purpose only.

1	Conext Gateway unit	4	Conext AGS (automatic generator start)
2	Conext XW Pro	5	Conext SCP (system control panel)
3	MPPT 80 600	6	Network terminators

Connecting the Conext Gateway to the Internet

Before connecting a computer and router to the Conext Gateway, make sure it meets the following prerequisites.

- Microsoft® Windows® 7 or later, Mac OS® X 10.4.8. or later
- Internet Explorer® 11.476 or later, Google Chrome™ 78.x or later, Safari® 5.x or later
- JavaScript and cookies must be enabled in your web browser.
- Router - the network router must be able to supply DHCP addresses automatically to connected devices. If your network router does not support automatic DHCP, refer to your network router’s user guide or contact your system administrator.

NOTICE

EQUIPMENT DAMAGE

- For a complete list of prerequisites, see the Owner's Guide.
- Do not connect an Ethernet cable from the Conext Gateway to the MODEM port on the network router.
- Do not connect an Ethernet cable plug into a Xanbus port on the Conext Gateway.

Failure to follow these instructions can result in equipment damage.

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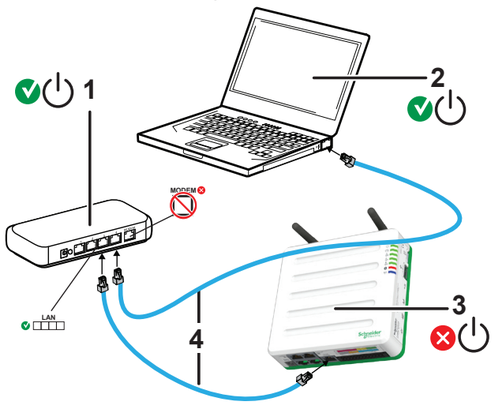
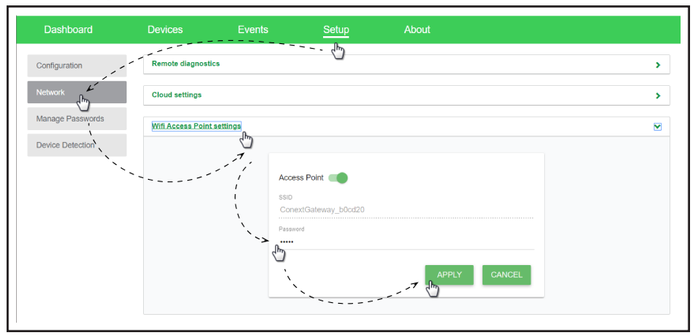
1. Make sure the computer and network router are turned on and the Conext Gateway is not turned on. Make sure the network router selected has DHCP enabled.
2. Connect an Ethernet cable between the computer's network port and a LAN port on the router.
3. Connect an Ethernet cable between a LAN port on the router and the Ethernet port on the Conext Gateway.



	Item
1	router/modem
2	laptop
3	Conext Gateway unit
4	Ethernet cables

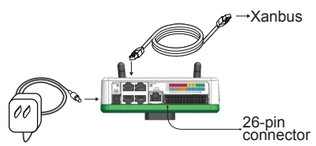
7. Change the Conext Gateway SSID and network password:
   a. Go to **Setup** > **Network** > **Wifi Access Point Settings**
   b. (Optional) Replace the current Wi-Fi network name under the **SSID** field with an appropriate name. You are limited to 64 alphanumeric characters including symbols.
   c. Replace the current password under the **Password** field with 10 or more alphanumeric characters including symbols.
   d. Click **Apply** to save the new password and/or SSID.



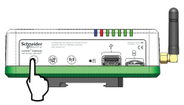
Turning the Conext Gateway On (or Off)

Before turning on the Conext Gateway, you must connect it to a power source - either:

- by using the **(A)** AC/DC adapter,
- by connecting it to a **(B)** Xanbus network, or
- by connecting a **(C)** 26-pin connector to the 26-pin terminal block.



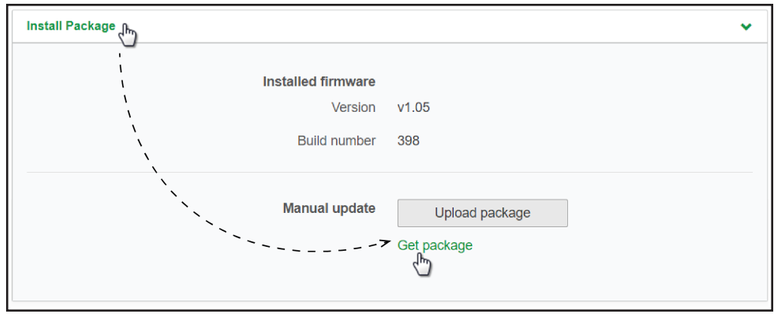
NOTE: In the 26-pin connector, pin 1 connects to a 9-24VDC source and pin 2 connects to GND. See *26-Pin Connector Pinouts*.



1. Select a power source **(A)**, **(B)**, or **(C)**.
2. Connect **(A)**, **(B)**, or **(C)**'s connector to Conext Gateway's Power port for **(A)**, Xanbus port for **(B)**, or terminal block for **(C)**, respectively.
3. Connect **(A)**'s power plug to an AC wall outlet or **(B)**'s other Xanbus cable connector to a Xanbus port on a Xanbus device. Alternatively, connect **(C)**'s pins 1 & 2 to an energy-limited DC source (9–24VDC).
4. Observe the LED indicators and wait for the Power LED to light up steadily. The Conext Gateway is now turned on.
5. Proceed to *Logging in to the Conext Gateway Web Application*.
6. Press the Power button to shut down the unit and turn it off.

Installing Upgrades Remotely

1. From the Conext Gateway Web Application home page, go to **Setup** > **Configuration** > **Install Package**.



2. Download the firmware package.
   a. Click **Get package**. This will take you to the Conext Gateway product webpage.
   b. From the product webpage, go to **DOWNLOADS** > **Firmware**.
   c. Search for the latest firmware package from the list and click it to begin downloading.
   d. Save the `.epkg` file to a local directory.
3. Go back to the Conext Gateway Web Application.
4. Click **Upload package** .
5. Search and select the firmware package (`.epkg` file) you saved in a local directory from the Conext Gateway product webpage.
6. Click **Open** from the Windows dialog. The upgrade begins automatically.
7. As the firmware package is transferred to the Conext Gateway, progress is indicated in percentage, and a message screen indicates when the file transfer has been completed successfully.
8. When prompted, reboot the Conext Gateway.

Logging in to the Conext Gateway Web Application

1. If you have connected the Conext Gateway via Wi-Fi Access Point, go to the IP address https://192.168.100.1 to access the web user interface.
2. If you have connected the Conext Gateway via Ethernet or Wi-Fi Station, use the following steps:
   a. Insert a blank USB drive into the Conext Gateway USB port. Ensure there are no firmware upgrade files on this USB drive.
   b. After the Conext Gateway beeps twice, remove the USB drive.
   c. Insert the USB drive into your laptop USB port.
   d. Copy the HTML file to your laptop.
   e. Remove the USB drive from your laptop.
   f. Open the HTML file and click the link to the IP address of the Conext Gateway.
3. Bookmark this address. **Important**: The web address is a locally and privately assigned (LAN) device address that is also protected by a firewall.
4. Select your User Name. Select **Admin**.

   NOTE: A maximum of two Admin users can be logged in to one Gateway at the same time. For more information, see *Conext Gateway Owner's Guide (document number 975-0806-01-xx)*.
5. Enter your Password. The initial password is **Admin123**.
6. **Important:** When prompted, change the initial password immediately to protect the device from unauthorized users and to enable changes to device settings.

   NOTE: To perform adminstrative functions such as a firmware update, set User Name to **Admin**. Settings are disabled until the initial password is changed.

Using the Conext Gateway Web App via Wi-Fi Access Point (AP)

NOTE: This procedure is not about connecting to a local area network (LAN) via Wi-Fi.

In order to establish a user interface with Conext Gateway, a direct Wi-Fi connection is necessary. The following are the pre-requisites:

- Laptop with Microsoft® Windows® 7 or later, Mac OS® X 10.4.8. or later
- Wi-Fi setting for the laptop is enabled
- Web browser such as Google Chrome™ 78.x or later, Microsoft® Windows® Internet Explorer® 11.476 or later, Safari® 5.x or later
- JavaScript and cookies must be enabled in your web browser.

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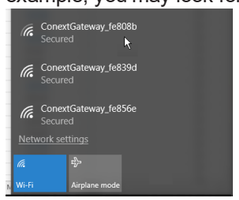
1. Make sure the laptop and Conext Gateway are turned on.
2. Enable Wi-Fi on the laptop, if not already.
3. Open Wi-Fi Settings, then look for and connect to the Conext Gateway SSID. For example, you may look for something similar to **ConextGateway_fe808b** below.



4. Enter the **Password** when prompted.
   NOTE: The password is printed on a label on the back panel of the Conext Gateway unit.
5. Proceed to *Logging in to the Conext Gateway Web Application*.

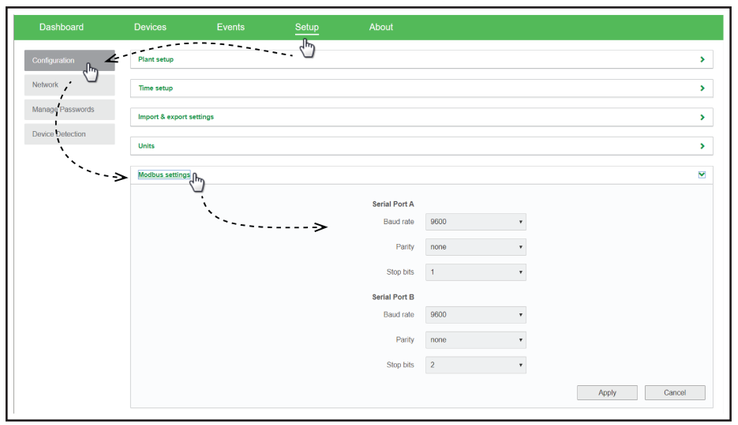
1	Laptop	2	Conext Gateway unit. Wi-Fi password label is on the back panel.

Connecting and Configuring Modbus Devices

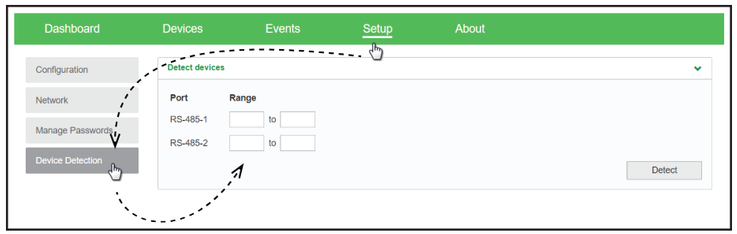
NOTE: For Modbus map information, contact Schneider Electric.

Connect Modbus wires to pins 16, 18, and 20 (see *26-Pin Connector Pinouts*), and then complete the following steps in the Conext Gateway web application:

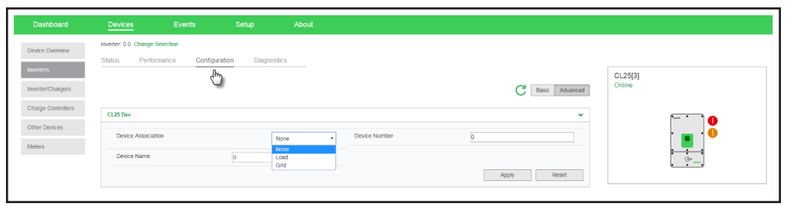
1. Go to **Setup** > **Configuration** > **Modbus Settings**.
2. Complete the **Serial Port** setup and then click **Apply**.



3. Go to **Home** > **Setup** > **Device Detection**.
4. Under **Range**, enter a Modbus address range and then click **Detect**.



5. Go to **Devices** and then select a device.
6. Go to **Configuration** and configure the device. Repeat steps 5 and 6 for each device.



FCC Compliance

This device complies with 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.

Electrical Specifications

NOTE: Specifications subject to change without prior notice.

NOTICE

EQUIPMENT DAMAGE

Do not power the unit without first installing the supplied antennas.

Failure to follow these instructions can result in equipment damage.

Power Consumption	2 W average / 10 W peak
AC/DC adapter (supplied)	Input: 100-240 V AC, 50-60 Hz, 0.48 A, Output: 12 V DC, 1.6 A, 5.5 mm outer, 2.1 mm center-positive jack. **NOTE**: Required when used with the Conext SW.
Xanbus	When connected to Conext XW Pro/XW+ or MPPT 80 600 providing network power
9–24V on 26-pin connector	9–24 V DC, 1 A max input only through pins 1 and 2 Accepts 16–24 AWG pin wire size.
Operation Frequency	2412–2472 MHz (Europe) 2414–2462 MHz (N. America)
Max. radio frequency power transmitted	17.06 dBm (E.I.R.P., Declaration for EU)

Physical Specifications

Weight (device only)	337 g (0.74 lb)
IP rating / Mounting Location	IP 20, NEMA 1, Indoor only
Status Display	7 x LEDs
Temperature	Operating: -4 to 122 °F (-20 to 50 °C) Storage: -40 to 185 °F (-40 to 85 °C) Maximum case temperature: 140 °F (60 °C)
Humidity	Operating: < 95%, non-condensing Storage: < 95%

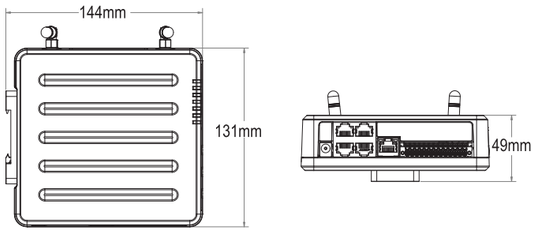
Regulatory

EMC immunity	EN61000-6-1 EN 55035 EN 301 489-1, -17
EMC emissions	EN61000-6-3 EN 55032 EN 301 489-1, -17 FCC part 15B ICES-003
Substances / environmental	RoHS
FCC ID	Contains 2AODL-CONEXTGTWY
IC ID	Contains 24209-CONEXTGTWY
Model number	865-0329

Features

Programmable dry contact relay	Screw 3-terminal, 16-24 AWG, NC-Com-NO, Form: Class 2, 24 V DC, 4 A max SELV input only
Web-base user interface	Internet Browser
Remote firmware upgrades	Yes (Conext Gateway and connected Xanbus devices)
Custom Data logger	Yes (requires Micro-SD card)

Dimensions



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