



UNIVERSAL ROBOTS



myUR Monitoring

Installation Guide

Original instructions (en)

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1. Introduction

1.1. About this document

The purpose of this guide is to provide the essential information to start using myUR Monitoring.

1.2. What's in the box

The product is shipped in a box containing the following parts:

- USB flash drive with URCap loaded
- USB-to-Ethernet adapter
- Cable gland
- Quickstart "pullout"
- This installation guide

1.3. Business Contact Details

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<https://www.universal-robots.com>

2. Safety

myUR Monitoring does not include, or provide, safety related functions.

In this document, warnings and notices related to property can appear as described in the notice below:



NOTICE

This message type indicates a situation that, if not avoided, can result in damage to equipment and/or property.

2.1. Intended use



NOTICE

myUR Monitoring is not intended for use in critical infrastructure.

- Do not use myUR Monitoring to implement or maintain critical infrastructure.
- Do not use myUR Monitoring to monitor medical or life critical applications

myUR Monitoring is designed to perform the following operations:

- Monitoring a cloud-connected robot in real-time via the myUR portal. The monitored elements include, but are not limited to:
 - Statuses
 - Pop-up notifications
 - Program variables
 - Joint temperatures
- Receiving real-time robot status notifications via SMS and/or email.
- Viewing and downloading historical logs of statuses and notifications.

Use myUR Monitoring only within the range of its technical specifications. Any other use of the product is considered improper and unintended.

**WARNING**

- Only use myUR Monitoring in accordance with the intended use and specifications provided in this Installation Guide.
- myUR Monitoring is not designed or intended for use in hazardous locations or explosive environments.
- myUR Monitoring is not designed or intended for medical applications with contact or proximity to patients.
- myUR Monitoring is not designed or intended for use in any application requiring compliance with specific hygienic and/or sanitation standards, such as direct contact with food, beverage and/or pharmaceutical products.
- Any use or application deviating from the intended use, specifications, and certifications is prohibited as the result could be death, personal injury and/or property damage.

UNIVERSAL ROBOTS EXPRESSLY DISCLAIMS ANY EXPRESS OR IMPLIED WARRANTY OF FITNESS FOR ANY MISUSE.

3. Product description

myUR Monitoring is a web-based tool that monitors cloud-connected robots.

3.1. Components

The myUR Monitoring components consist the following:

- PolyScope software plug-in (URCap), loaded on the USB Flash Drive
- USB-to-Ethernet adapter
- Cable gland
- Access to myUR dashboard service
- Universal Robots e-Series robot or Universal Robots CB3 robot, consisting of the Teach Pendant and robot arm with the Control Box (purchased separately)

For more information on the components, access [myUR Monitoring](#).

3.2. Software requirements

- A myUR account
- A six-digit code (pairing pin) to connect the robot to MyUR
- A myUR Monitoring-compatible robot and Control Box, as described in the table below:

Control Box	Software (SW) version compatible with myUR Monitoring
e-Series	SW 5.4.3 and newer.
CB3	SW 3.12.1 and newer.

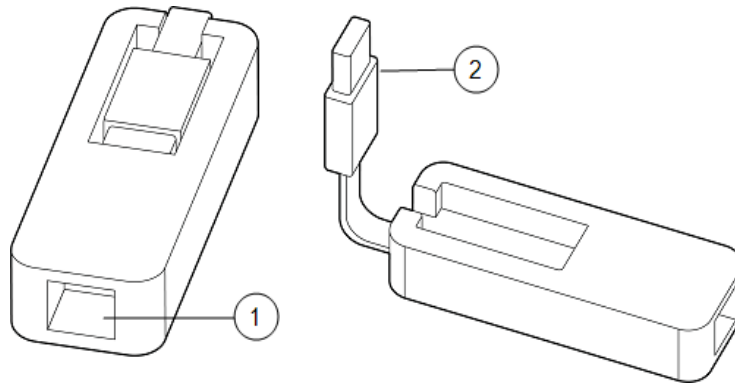
4. Installation

This chapter describes how to attach and install the myUR Monitoring components.

4.1. Required components

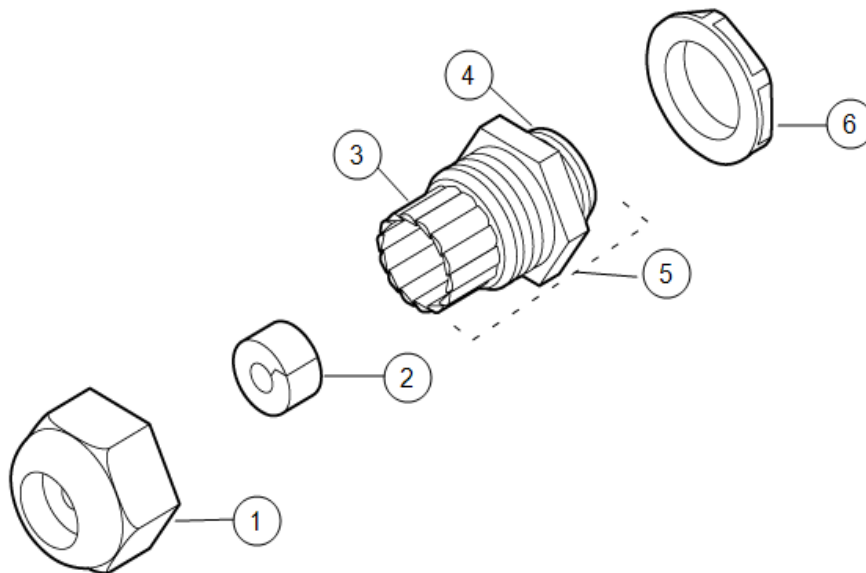
- USB-to-Ethernet adapter
- Cable gland

The following illustrations show the required components.



1	Ethernet port	2	USB
---	---------------	---	-----

Figure 3.1: USB-to-Ethernet adapter in closed position and in deployed position



1	Sealing nut	2	Seal
3	Cone	4	Entry thread
5	Body	6	Lock nut

Figure 3.2: Cable gland separated into parts.

In the next section you are going to attach the cable gland to your LAN cable.

4.2. Attaching the cable gland to the LAN cable

Criteria for success

- The cable gland is correctly attached and sealed to your LAN cable and Control Box.

4.2.1. To attach the cable gland to the LAN cable

1. Separate the cable gland and identify the parts you are going to use, as show in [Figure 3.2](#)

Cable gland parts to use:

- Sealing nut
- Seal
- Body (cone and entry thread)

2. Insert your LAN cable into the sealing nut.
3. Clip the seal onto your LAN cable to the right of the sealing nut, as shown in [Figure 3.3](#) below.
4. Insert your LAN cable and the seal into the body and adjust the LAN cable length accordingly.
 - Insert the seal completely into the cone side of the body.
 - Make sure the inserted seal appears flush with the cone.
 - Tighten the sealing nut securely onto the body.

1	Sealing nut	2	Seal
3	Body (cone and entry thread)	4	LAN cable

[Figure 3.3:](#) Cable gland correctly attached to the LAN cable.

In the next section you are going to install the cable gland and LAN cable in the Control Box.

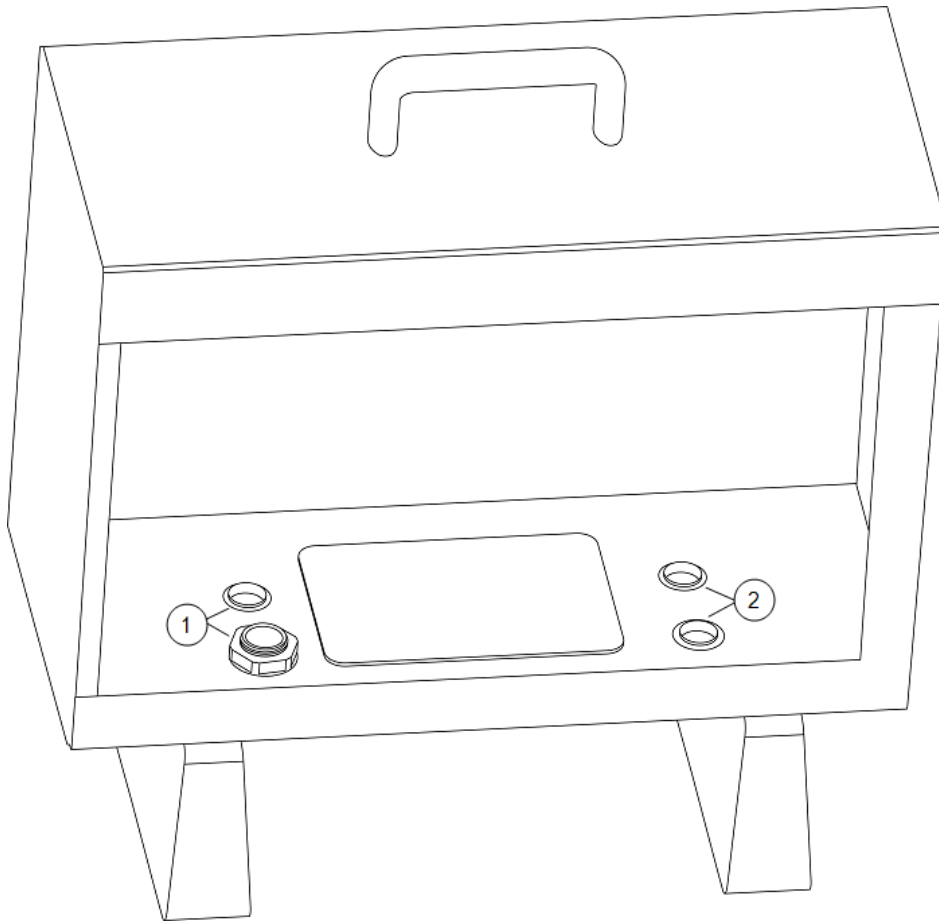
4.3. Installing the cable gland in the Control Box

Criteria for success

- Your LAN cable is locked in place with the cable gland inside the Control Box.

Before you install the cable gland

- Remove one of the caps at the base of the Control Box.



1	Removable caps	2	Removable caps
---	----------------	---	----------------

Figure 3.4: Removable caps at the base of the Control Box.

4.3.1. To install the cable gland in the Control Box

1. Insert the entry thread side of the body into the hole in the Control Box base.
2. Tighten the locknut securely onto the entry thread and adjust the LAN cable length as needed.

1	LAN cable	2	Locknut
3	Body with sealing nut attached		

Figure 3.5: LAN sealed on the outside and locked on the inside of the Control Box.

In the next section you are going to connect the USB-to-Ethernet adapter.

4.4. Connecting the USB-to-Ethernet adapter

Criteria for success

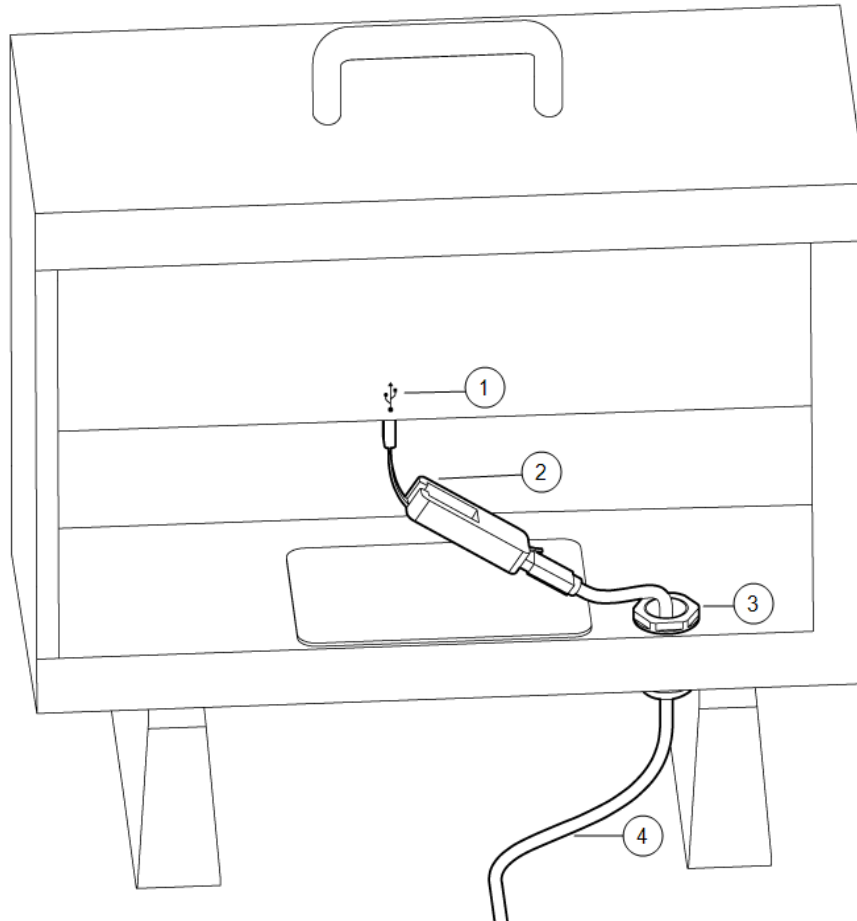
- The USB-to-Ethernet adapter is connected to the LAN cable and the Control Box USB port.

Before you connect the USB-to-Ethernet adapter

- Locate the USB port in your Control Box before inserting the USB-to-Ethernet adapter.
- Use a USB hub if the Control Box USB panel port is occupied.

4.4.1. To connect the USB-Ethernet adapter

1. Connect the LAN cable to the Ethernet port in the USB-to-Ethernet adapter.
2. Connect the USB-to-Ethernet adapter to the USB port in the Control Box.



1	USB port	2	USB-to-Ethernet adapter
3	Locknut	4	LAN Cable

Figure 3.6: *USB-to-Ethernet adapter connected to LAN cable locked into cable gland.*

In the next section you are going to pair and install the URCap.

4.5. Pairing and installing the URCap

This chapter describes how to install the myUR Monitoring URCap on the robot, and how to pair it to your dashboard on the myUR web portal.

4.5.1. Generating the pairing pin in MyUR

To generate the pairing pin:

1. On your computer, open myUR in a web browser and login to myur.universal-robots.com.
2. At the top of the MyUR page, click **Tools > Robot Dashboard** and access **Connect New Robot**.

Ensure your robot/s is/are added to your company.

- Access **Robots** and check if your robot is on the list.
- If necessary, press **Register New Robot** to add your robot to the list.

If you cannot register your robot, contact UR tech support or your distributor.

3. Find your robot in the list by searching for the the serial number, or the name given in myUR.
4. Verify your selection as the desired robot to pair and select **Confirm**.
5. Select the robot appearing on the dashboard to display the 6-digit pairing pin a pop-up.
6. If your robot is away from your computer, write down the pairing pin.

You need the pairing pin to pair your robot to MyUR.

4.5.2. Installing the URCap

This procedure has the following success criteria:

- Install software (the URCap) on the robot that connects to the cloud solution, using the provided USB flash drive.



NOTICE

Using myUR Monitoring with a corrupted USB flash drive can result in corrupted files, and/or viruses being downloaded to the robot.

- Always use the provided USB flash drive.

To install the myUR Monitoring URCap:

1. In the PolyScope Header, tap the Hamburger menu and access **Settings > System > URCaps**.
2. Tap the **+** button to select URCap.
3. Navigate to the desired file in the list and tap to open it.
4. Tap **Restart**. If correctly installed, the new URCap appears under Active URCaps.
5. Navigate to **Installation > URCaps > myUR**.
6. Tap **Install** to install cloud communication software.
7. For CB3 robots: reboot the robot, to establish connection.

4.5.3. Pairing the robot to MyUR

To pair the robot to MyUR:

1. In the PolyScope Header, tap **Installation** and select **URCaps > myUR**.
2. On the Pair myUR screen, enter the six-digit pairing pin and the myUR Connected screen displays as **Connected**
3. The robot status is displayed in myUR, in the web browser after a few seconds.

4.5.4. Uninstalling the myUR Monitoring URCap

To uninstall the myUR Monitoring URCap:

1. In the PolyScope Header, tap the Hamburger menu and access **Settings > System > URCaps**.
2. Under URCaps remove the already installed myUR URCap by highlighting it and tap -.
3. Tap **Restart**.

4.5.5. Updating the myUR Monitoring URCap



NOTICE

Uninstalling the myUR Monitoring URCap does not affect the robot configuration, installed programs and/or the stored data.

To update the myUR Monitoring URCap:

1. Access your myUR dashboard and download the latest URCap to a USB flash drive.
2. Insert the USB flash drive in the USB port on the robot.
3. In the PolyScope Header, tap the Hamburger menu and access **Settings > System > URCaps**.
4. Under URCaps remove the already installed myUR URCap by highlighting it and tap -.
5. Install the new URCap from the USB flash drive by tapping +.
6. Navigate to the new myUR URCap and open it.
7. Tap **Restart**.
If correctly installed, the new URCap appears under Active URCaps.
8. Navigate to **Installation > URCaps > MyUR** and tap **Install** to install cloud communication software.

5. Features

This chapter describes how to use myUR Monitoring.

5.1. Notifications

5.1.1. Enabling notifications in your MyUR profile

To enable notifications:

1. Log into myur.universal-robots.com and access the Profile section.
2. Enter the desired email address and mobile phone number to receive the notifications.
The phone number must include the correct country code.
3. Select the desired notification types for the current user.
The notification types are described in the table below.

Notification type	Description	Typical recipient role
Unscheduled system stops	Any unplanned system stops, that are not related to safety, such as: <ul style="list-style-type: none"> • Protective stops • Safeguard stops • E-stops • Faults • Violations • Run-time exceptions 	Operator and technician
Attention messages	Defined in the robot program as myUR Notifications.	Operator
Error messages	Defined in the robot program as myUR Notifications.	Technician

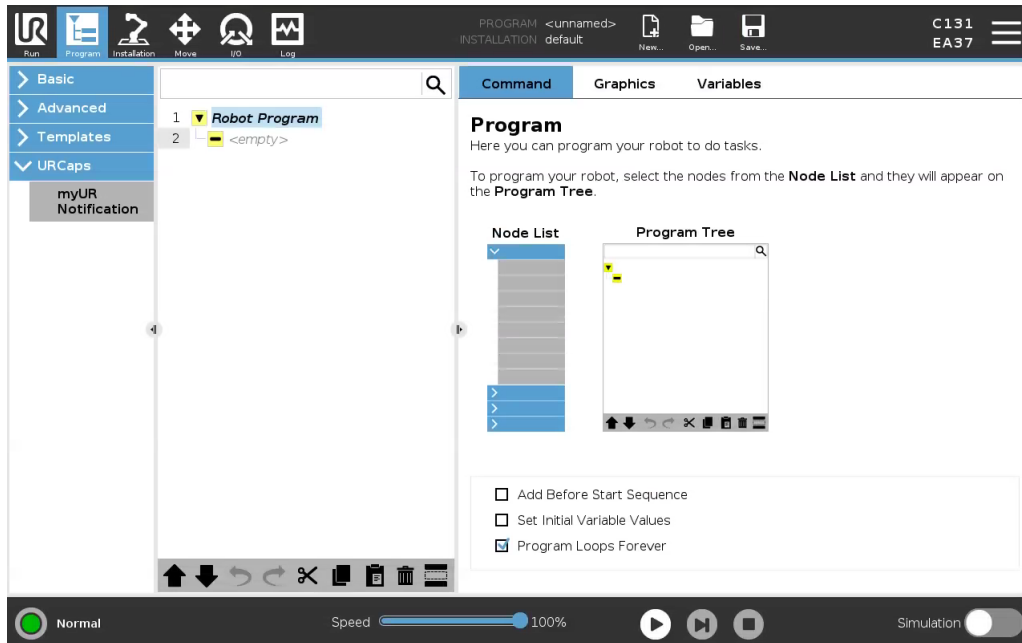
5.1.2. Creating customized notifications

You can create customized notifications by inserting **MyUR notification** nodes directly into the PolyScope program tree. When the program execution reaches the notification node, a message is generated and appears as one of the following:

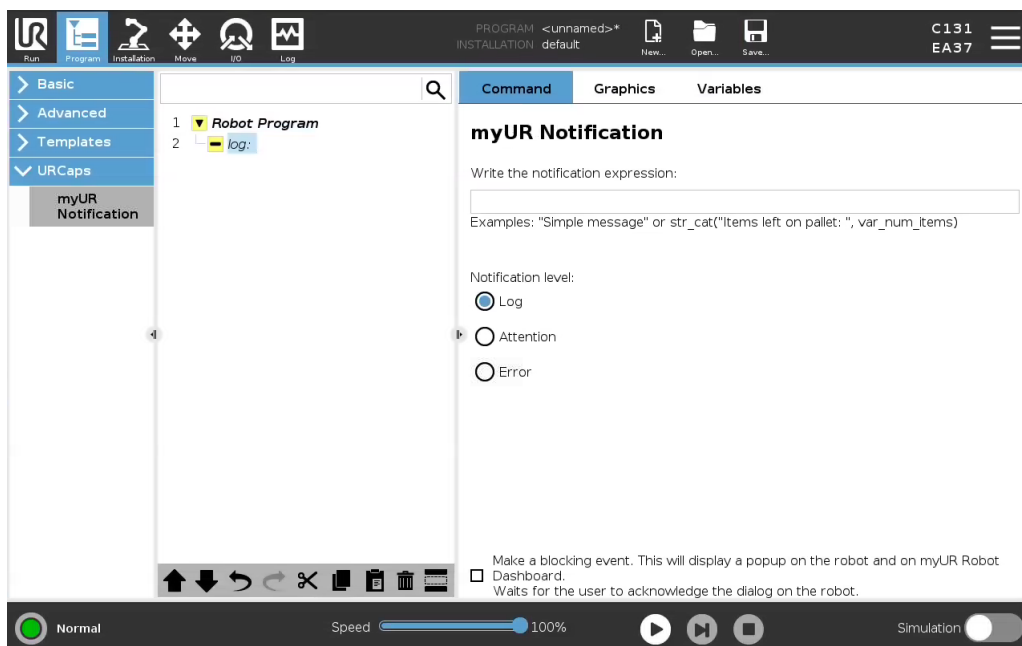
- A blocking pop-up on the dashboard
- A dashboard log entry
- A text message or email notification

To create customized notifications:

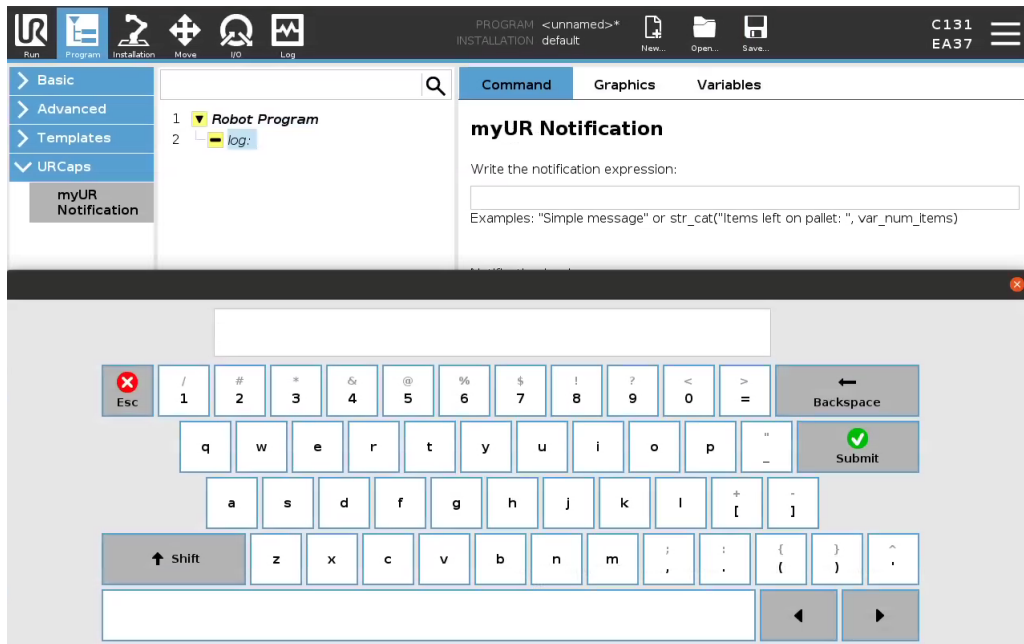
1. Navigate to **Program > URCaps > myUR Notification**.



2. Insert a notification program node at the desired location/s in your program tree.



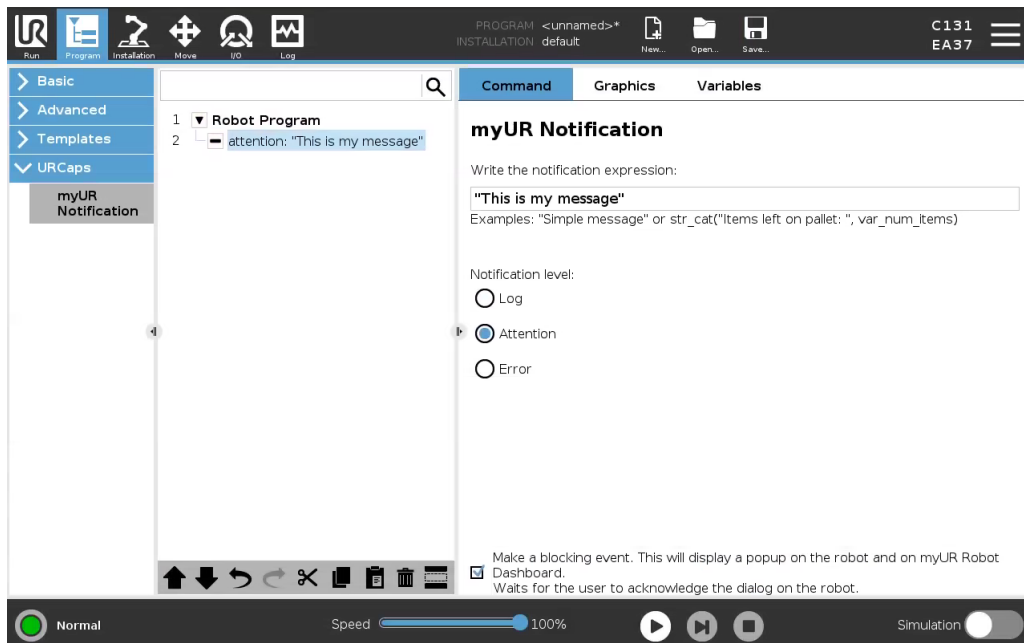
3. Type the notification message to be sent when this event occurs.
Your message is evaluated as an expression, so place text strings in quotation marks.
You can use function calls and variables to generate your message.



4. Select a classification for the notification. You can choose to subscribe to notifications of attention and error types, as described in the table.

Notification class	Function	Example
Log	Logs an event in the log on the dashboard.	You can track production efficiency.
Attention	Logs an event and sends it as a text or an email.	You can notify operators of actions related to work cells.
Error	Logs an event and sends it as a text or an email.	You can notify integrators of any unknown error or advanced error.

5. Select **Show pop-up** if this event requires action/confirmation from an operator before program execution can continue. If selected, a notification becomes a blocking event that activates a pop-up on the monitoring dashboard and on PolyScope.



5.1.3. Displaying program variables

You can display a program variable on the myUR dashboard by adding the prefix: **myur_** to the variable name. Example variable name: **myur_counter**.

The robot dashboard supports all UR Script compatible variables. Compatible variables can include, but are not limited to:

- Numbers
- String
- Lists

To display a robot program variable:

1. On your computer, open the myUR dashboard.
2. On your robot, run your program and verify the variable name starts with the prefix: **myur_**
3. On the myUR dashboard, click **Edit** and access the dropdown menus.
4. Select your variable and click **Save**.

To view all program variables:

1. On your computer, open the myUR dashboard.
2. On your robot, run your program and verify all variable names start with the prefix: **myur_**
3. On the myUR dashboard, select the desired robot to open the detailed view.

5.2. Remote support log file generation

You can improve troubleshooting by remotely generating and downloading support log files from a connected robot.

Criteria for success

- Your support log file is generated and downloaded on your PC.

Before you generate the support log file

- Verify the compatibility of the PolyScope and URCap:
 - The PolyScope minimum for e-Series is version 5.8
 - The PolyScope minimum for CB3 is version 3.13
 - The URCap minimum version is 1.7
- The selected robot must be connected via the myUR Monitoring URCap, for the Robot log file option to be available.

5.2.1. To generate a new support log file

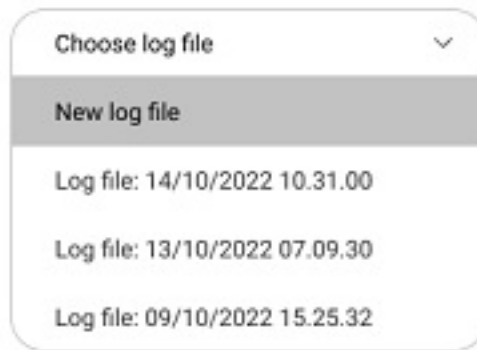
1. Log into myur.universal-robots.com.
2. Click **Robots**.
3. In the list, locate the robot that requires a support log file.
4. In the desired robot card, click **Robot log file**.

- When the Robot log file message box appears, select **New log file** in the dropdown.

ROBOT LOG FILE

This robot is connected to myUR Monitoring and you are able to download the robot log file.

Please choose which log file you want to download.



- Click **Generate log file** to start the file generation process.
- Once the log file generation is complete, click **Download**.

GENERATION COMPLETED

The log file is now ready to download to your download folder.



The new support log file is stored in your download folder.

5.2.2. To download a previously generated support log file

- Make sure your PC is still logged into myUR.
- Click **Robots**.
- In the list, locate the robot card for the robot that requires a support log file download.
- In the desired robot card, select **Robot log file**.
- When the Robot log file message box appears, select an existing log file in the dropdown.
- Click **Download**.

**NOTICE**

You can download a previously generated support log file even if the desired robot is not connected via myUR URCap.

6. Cyber security for myUR Monitoring

This chapter contains cyber security guidelines specific to the myUR Monitoring set-up and applications.

6.1. Implementing cyber security

**CAUTION**

Connecting a UR robot to a network can introduce cyber security risks, which shall be mitigated by qualified, competent personnel. Universal Robots is not responsible for myUR Monitoring cyber security measures and/or providing the specific cyber security measures.

**CAUTION**

Only competent, qualified personnel shall be responsible for determining the need for specific myUR Monitoring cyber security measures and for providing the required cyber security measures.

For general cyber security information, refer to the Cyber Security chapter in the [Universal Robots e-Series Robot User Manual](#).

The recommended guidelines for cyber security, specific to myUR Monitoring, are listed below:

- **Secure setup:** Implement e-Series recommendations:
www.universal-robots.com/articles/ur/robot-care-maintenance/secure-setup-of-ur-cobots/.
- **Implement network segmentation:** Segment network into separate subnets, as follows:
 - A trusted factory network
 - A myUR Monitoring network with internet connection
 - A corporate network
- **Allow only authorized personnel to operate the robot.**
- **Change the robot administrative password:** See the Hamburger menu chapter in the [Universal Robots e-Series Robot User Manual](#).

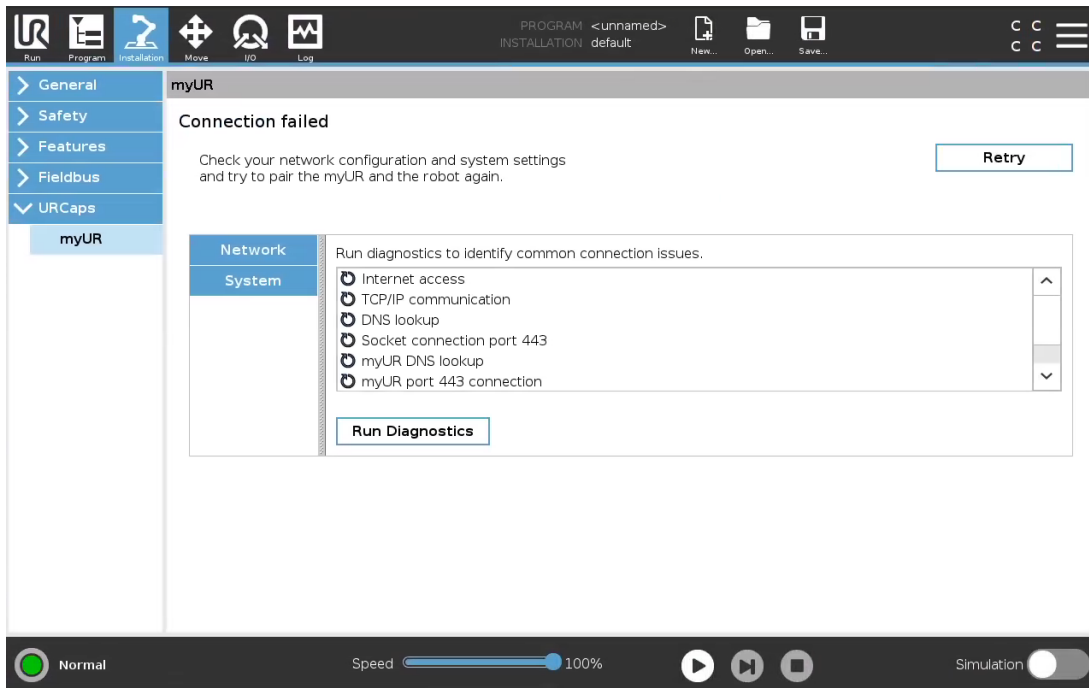
6.2. Building a firewall

7. Troubleshooting

This chapter shows how to troubleshoot the network.

7.1. Launching troubleshooting

If the connection from the robot via the myUR URCap fails, the URCap displays troubleshooting.



To launch troubleshooting

1. On the myUR screen, tap **Run Diagnostics**, to start the troubleshooting.
2. If some network checks are red, do a check for failing networks.
See [7.2 Checking for failing networks below](#)
3. If all network checks are green, do a check of the system settings.
See [7.3 Checking the system settings on page 20](#)

7.2. Checking for failing networks

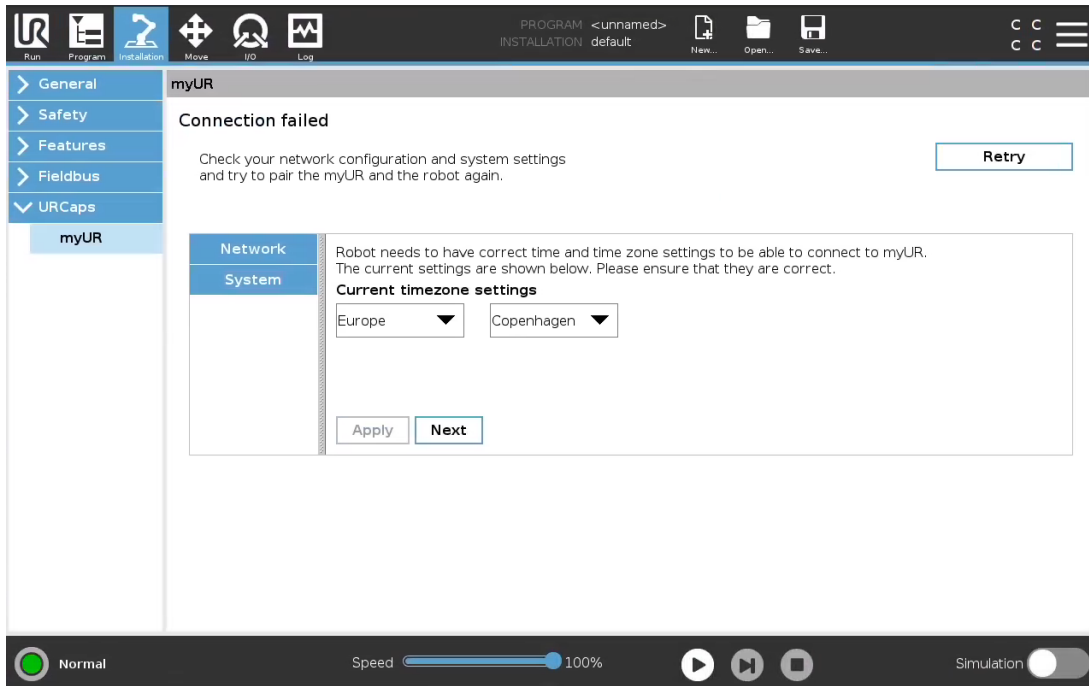
Verify the elements listed in the table to diagnose failures in your network.

Element	Must pass	Fundamental check	Advanced check
Internet access	no	<ul style="list-style-type: none"> Internet access is available through the Ethernet cable connected to the robot without USBto-Ethernet adapter. 	Bash command: ping 8.8.8.8
USB-to-Ethernet adapter detected	yes	<ul style="list-style-type: none"> USB-to-Ethernet adapter is correctly mounted 	Bash command: ifconfig usb_remote0

Element	Must pass	Fundamental check	Advanced check
USB-to-Ethernet adapter internet access	yes	<ul style="list-style-type: none"> Internet access is available through the USB-to-Ethernet 	Bash command: <code>ifconfig usb_remote0</code>
TCP/IP communication	no	<ul style="list-style-type: none"> Network is open for traffic on port 443. The network firewall on your local network does not block the traffic. The network is connected. 	Bash command: <code>telnet 8.8.8.8 443</code>
DNS lookup	no	<ul style="list-style-type: none"> The DNS address is set correct in the network settings tab. The network firewall on your local network does not block the traffic. The network is connected. <p>If any of these checks are not passed, you can:</p> <ul style="list-style-type: none"> Set the network settings tab for the USB to Ethernet adapter to be DHCP and test again. Change the DHCP to Static Address with Preferred DNS server: 8.8.8.8 and Alternative DNS server: 8.8.4.4 and test again. 	Bash command: <code>ping www.google.com</code>
Socket connection port 443	yes	<ul style="list-style-type: none"> Your network is open for traffic on port 443 	Bash command: <code>telnet www.google.com 443</code>
myUR DNS lookup	yes	<ul style="list-style-type: none"> Your network configuration can access myUR Your network is connected the internet. 	Bash command: <code>host my-ur-fleet-prod-api.azurewebsites.net</code>
myUR port 443 connection	yes	<ul style="list-style-type: none"> Your network configuration can access myUR Your network is open for traffic on port 443. Your network is connected to the internet. 	Bash command: <code>telnet my-ur-fleet-prod-api.azurewebsites.net 443</code>
Azure DNS lookup	yes	<ul style="list-style-type: none"> The hosts are not block the hosts: <code>ur-connected-cobots-hub-paid.azure-devices.net</code> 	Bash command: <code>host ur-fleet-prod-hub.azure-devices.net</code>
Azure port 443 connection	yes	<ul style="list-style-type: none"> Your network is open for traffic on port 443. Hosts are not blocked: <code>ur-connected-cobots-hub-paid.azure-devices.net</code> 	Bash command: <code>telnet ur-fleet-prod-hub.azure-devices.net 443</code>
Compatibility with installed URCaps	yes	<ul style="list-style-type: none"> Installed, or previously installed URCaps are compatible with myUR Monitoring URCap 	

7.3. Checking the system settings

If all the network checks pass, and the connection still fails, verify the time zone settings.



To verify time zone settings

1. Tap System and follow the instructions to correctly set the time zone.

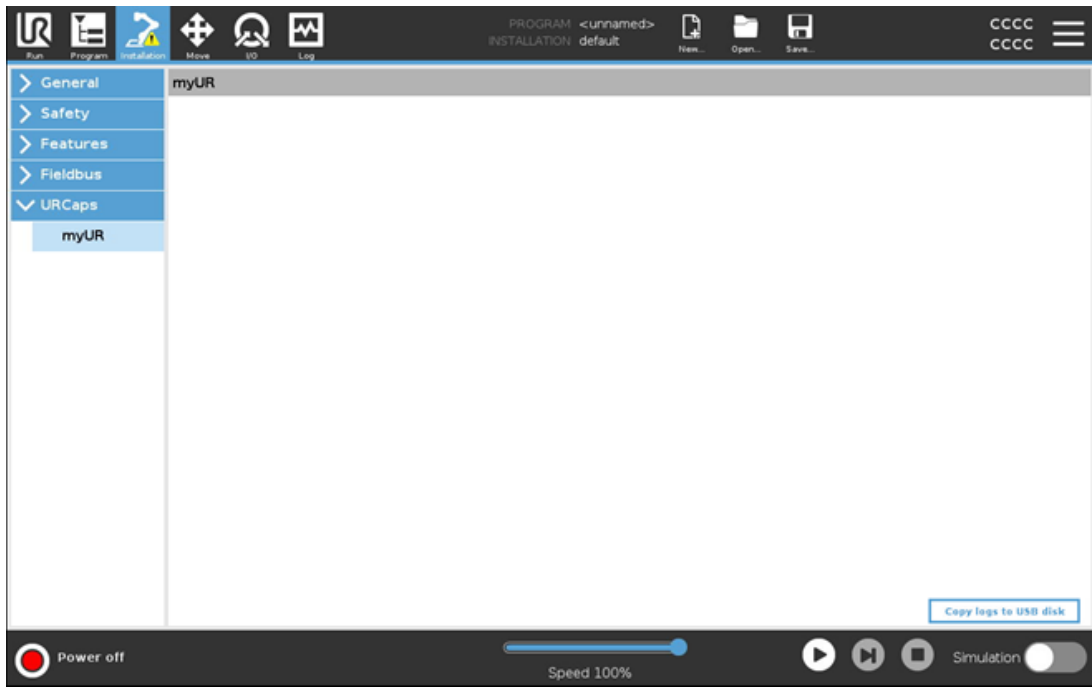
7.4. Download log files to USB

For further troubleshooting, myUR URCap provides the option to copy log files, created by the URCap itself to USB.

This is only enabled if there is a USB inserted into either Control box or Teach pendant.

- Press Copy logs to USB disk on Teach pendant in myUR.

Send an email to myur_monitoring@universal-robots.com with a description of the problem and attach the copied log files.



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Document Version: 10.8.158