SHELLY CLOUD
INTEGRATION GUIDE

Total Control™

Total Control

Shelly Cloud Integration Guide

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Rev 1.4

Overview

URC's **Shelly Cloud** two-way module **provides control** and **feedback** to a variety of compatible Shelly devices, including lights, sensors, relays, and more. The module also provides **custom macro integration** and **advanced automation capabilities**.

To **learn more** about Shelly, please visit their website.

Requirements

- The Shelly device must be **fully configured and operational** prior to integrating with Total Control.
- Shelly recommends assigning a **static IP address** to all devices for optimum speed in communicating, Alternatively, a **DHCP/MAC Reservation** can be set within the system's local router.
- Assure that the .TCM3 module has been **downloaded and imported** onto the programming computer.

  For more information on how to import a two-way module, please refer to the Working with Two-way Modules document.
- The Shelly system must adhere to the **device limitations** of the **Accelerator software** which is a **maximum** of **255 devices**.

General Information

Module: Shelly Cloud

Developer: URC

File Type: *.tcm3

Communication: IP

Category: Aux / Lighting

Module Type: Core / Interface / Device

Multiple Core Support: No

Unified: Yes [Lighting only]

URC Compatibility: Flex 2 & Accelerator 3

Device Events: Yes

Two-way Module Commands: Yes

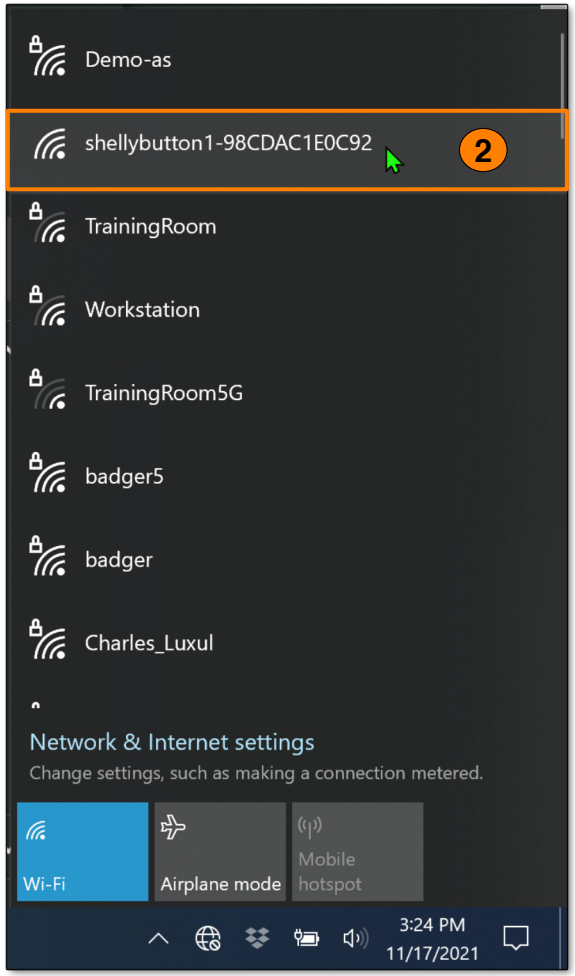
Configuring a Shelly Device

Setting up a Shelly device requires the user to connect to the device's wireless ad hoc network, then configure the device to a local wireless network.

1. Power on the Shelly device. This **enables it's wireless ad hoc network** by default.

   Due to the size of many Shelly devices, it is recommend to configure **one device** at a time to simplify the process.

2. Using a computer, **connect** to the Shelly access point using WiFi. The access point name is a **combination** of the **device model** and a **MAC address**.

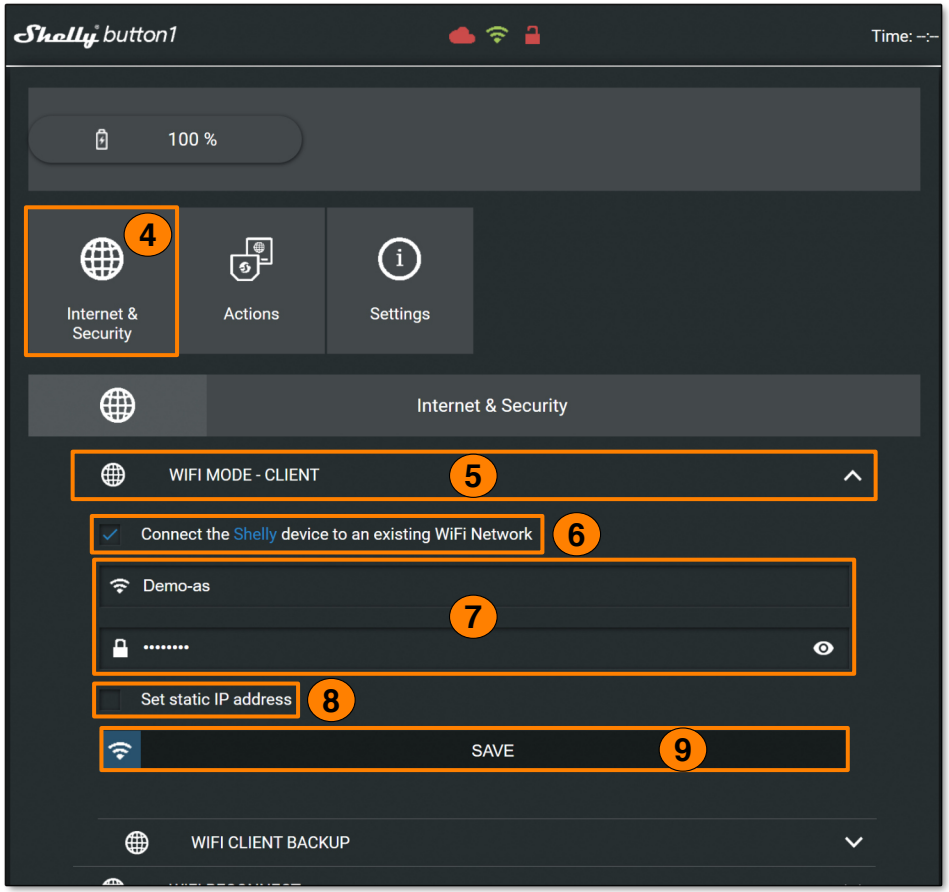


If the device's ad hoc network is **not visible**, try **factory defaulting** the device. Refer to the device's manual for the specific process to default it.

If your PC is using a **static IP address**, **VPN**, or **proxy**, it may need to be disabled if the PC is not connecting to the Shelly device.

Shelly devices communicate via WiFi. If a Shelly device is **battery powered**, it is normal for the device to **fall asleep** and **disconnect** from the network to save power. When the device wakes up, it **automatically reconnects** to the network.

3. Open an **internet browser** and enter the **Shelly device's default IP address** (**192.168.33.1**) to access the device's web user interface.
4. Select the **Internet & Security** tab.
5. Select **WiFi Mode - Client**.
6. Select the **checkbox** for connecting the Shelly device to an existing network.
7. Enter the WiFi network **name** and **password**. Shelly devices currently **only** connect to **2.4Ghz WiFi networks**.
8. Select the **checkbox** for setting a **static IP address** and enter the **desired IP address** for the device**.**
9. Select **Save**. The Shelly device then reboots and connects to the specified network. Access your network router to **confirm the device** is on the network and has a **static IP address**.



If the device is **not connecting** to the network, try **factory defaulting** it and start at Step 1 again. Ensure the **network information** is correct.

Adding & Configuring the Module

TCM files are found on the URC Dealer Portal. Once you have downloaded and imported the file, perform the following steps to add the module to a project:

This module can be added to any new or existing Total Control system.

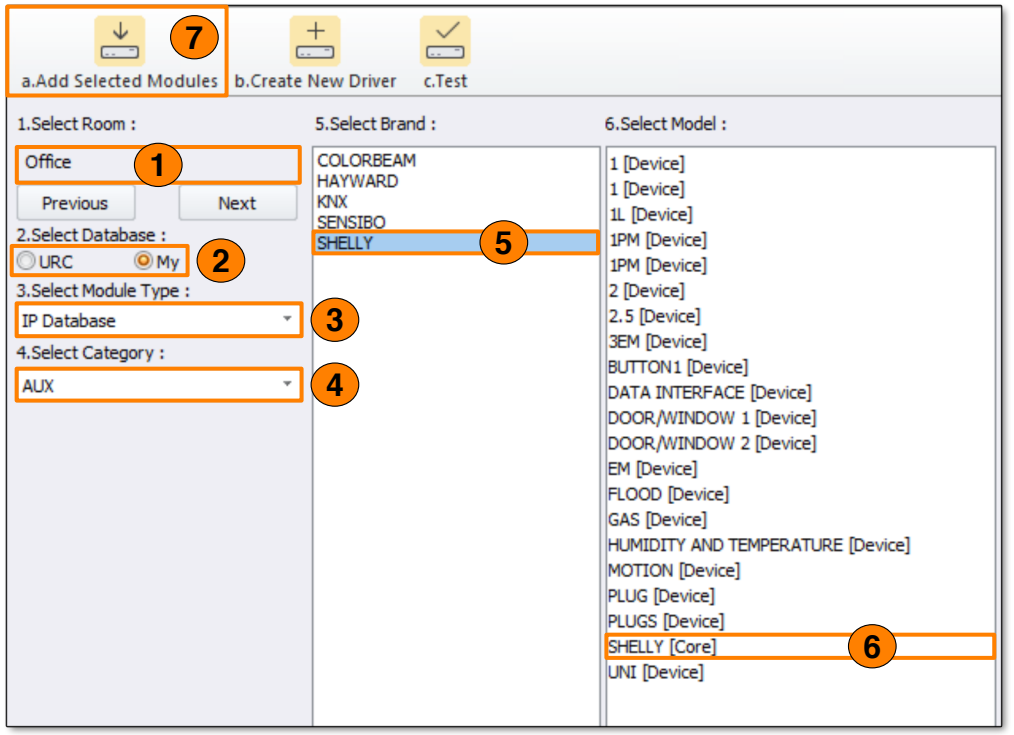
Adding the [Core]

The **[Core]** module contains all the system data that runs and operates the module. These work in conjunction with a **[Device]** module to provide simple/advanced control of supported devices. **[Core]** modules do not display on any interface.

Step 4: Add Other Devices

1. Select a **room** for the core to be added to.
2. Select **My Database**.
3. Select **IP Database**.
4. Select **Aux** category.
5. Select **Shelly** from the brand list.
6. Select **Shelly [Core]** from the model list.
7. Select **Add Selected Modules** to add it to the project.

For more information on two-way modules, what they are, where to find them, and how to import them, please review this guide.



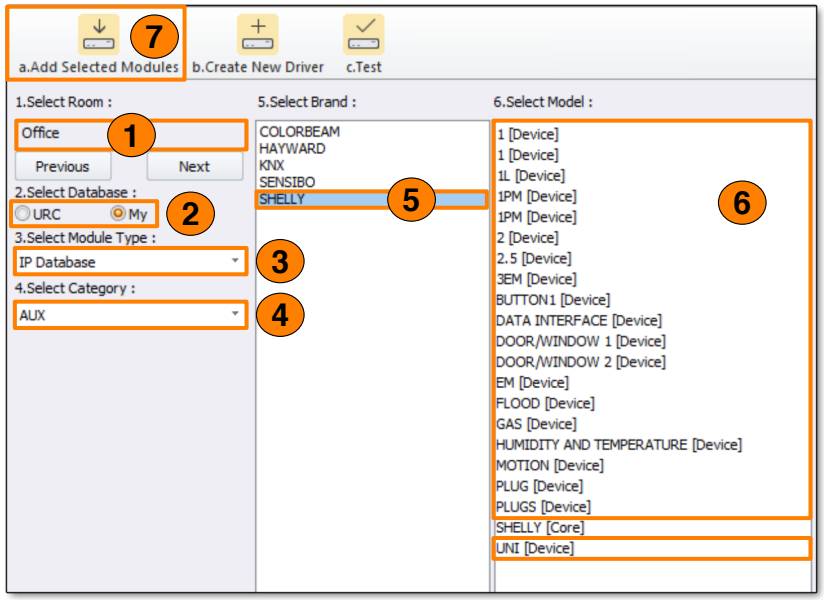
Choose which room in the system to place the module. This two-way device **requires a single (1) Core module** in the system. It is a best practice to place the Core module into a room labeled "**Core**". This room can be hidden later from the **Room Properties** menu.

Adding a [Device]
Individual Shelly devices are **integrated** by adding the corresponding **[Device]** listed in either the **Aux** or **Lighting** categories. To add a **[Device]**, perform the following:

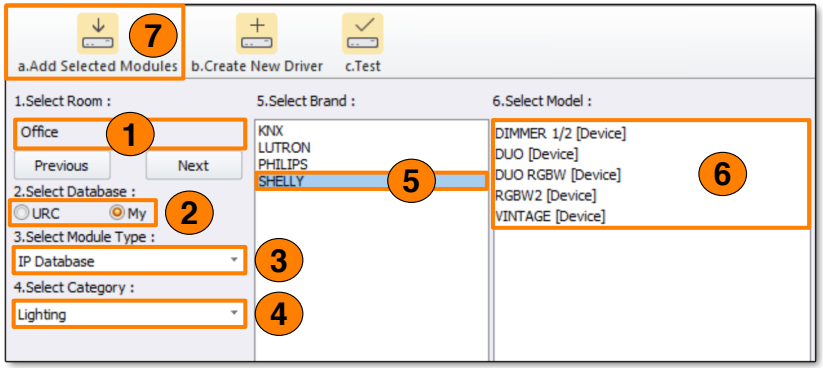
1. Select a **room** for the device to be added to.
2. Select **My Database**.
3. Select **IP Database**.
4. Select the **Aux** or **Lighting** category.
5. Select **Shelly** from the brand list.
6. Select the **applicable [Device]** from the model list.
7. Select **Add Selected Modules** to add it to the project.

Ensure devices are added to the room where the **physical device** is located.

While several devices are available, this guide uses **Motion** for an integration example. The steps are the same regardless of the **[Device]**.



Aux Category Shown



Lighting Category Shown

8. The **Unified Module - Room Selection** window pops up. This window is asking what rooms to provide access to the unified module.

   Only controllable devices such as **lights** appear in the **unified lighting module**. Sensors, relays, and other devices are displayed in the **Data Interface**. See page 21 for more details.

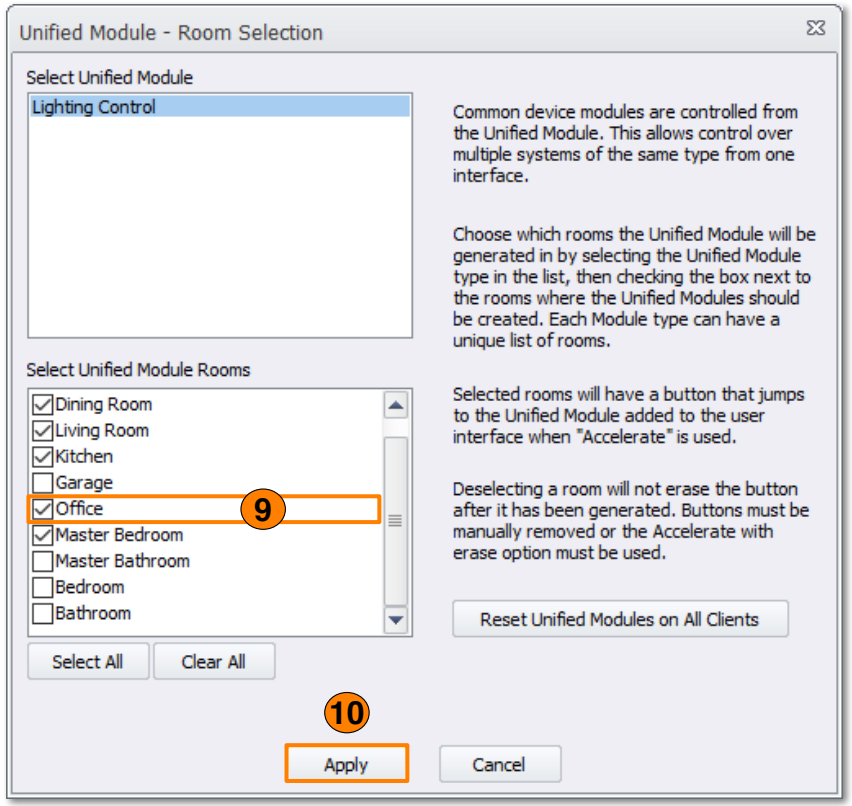
9. If adding a **lighting device**, select the rooms for **Lighting Control** to be displayed in.

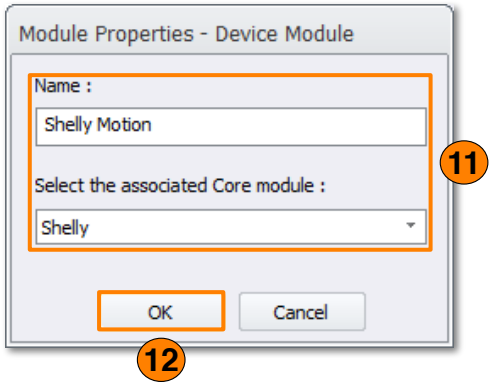
10. Select **Apply**.

11. The **Module Properties - Device Module** window pops up. This window allows for a **custom device name** to be entered and **links the [Core] to a [Device]**.

12. Select **OK** when finished.

    Repeat this process for **each Shelly device** in the system.

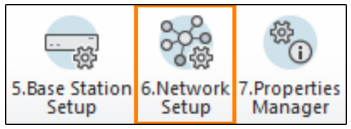




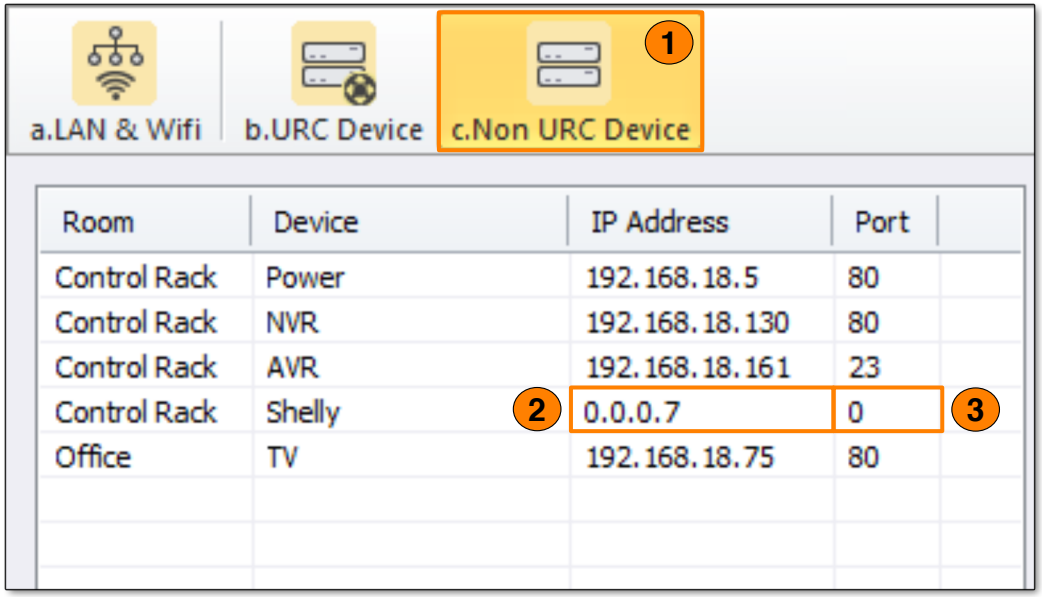
Room selections can be modified later in the **Step 7: Properties Manager**.

Please note, the **custom device name** in the **Project Tree** is the name displayed on the **module interfaces**.

Step 6: Network Setup



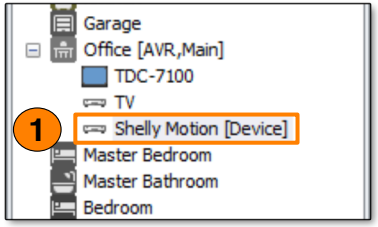
1. Select **Non URC Device**.
2. Enter a **dummy IP Address** for the **Shelly device**. This IP address must be **unique** for the module to function properly.
3. The **Port** can be left as is.

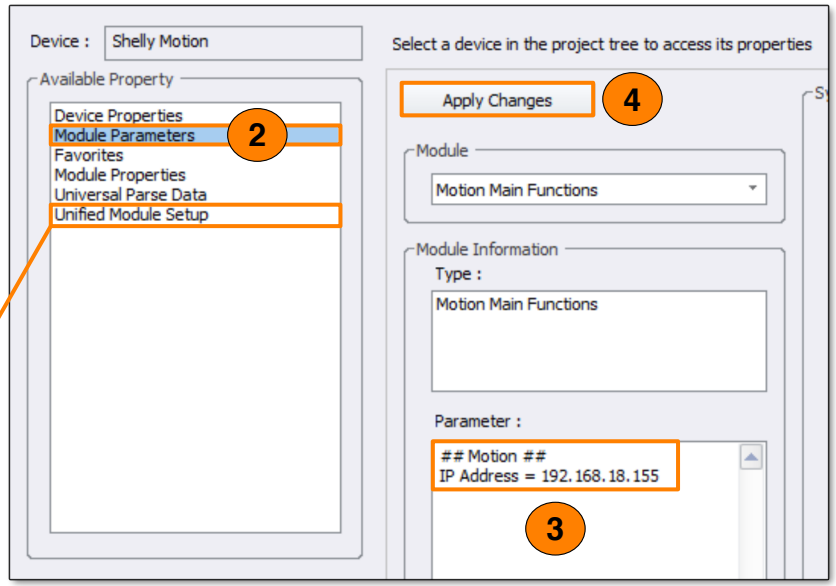


Step 7: Properties Manager

The **permanent IP address** must be entered in the **module parameters** for **each Shelly device** in the system.

1. Select the **[Device]** from the project tree.
2. Select **Module Parameters** from the available properties list.
3. Enter the permanent **IP Address** for the [Device].
4. Select **Apply Changes**.
5. Repeat these steps for **each [Device]** in the project.

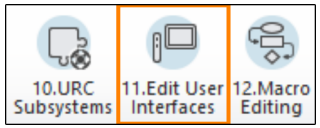




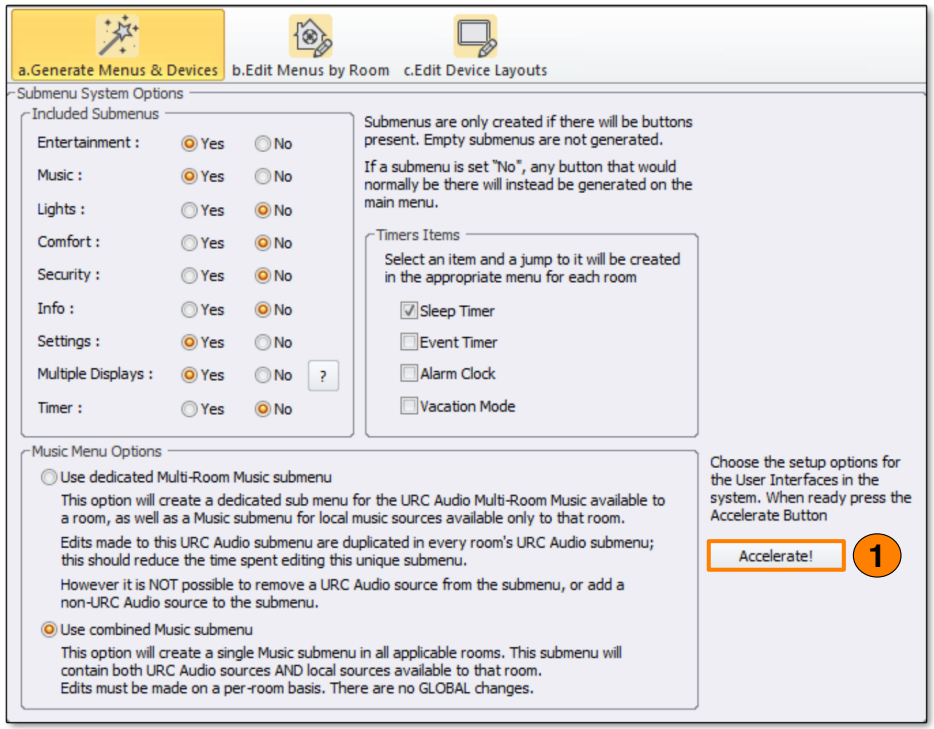
Unified Module Setup may be used to **modify room selections** for Unified modules.

Ensure that there are no additional **spaces**, **characters**, or **line carriages** when editing parameters.

Step 11: Edit User Interfaces



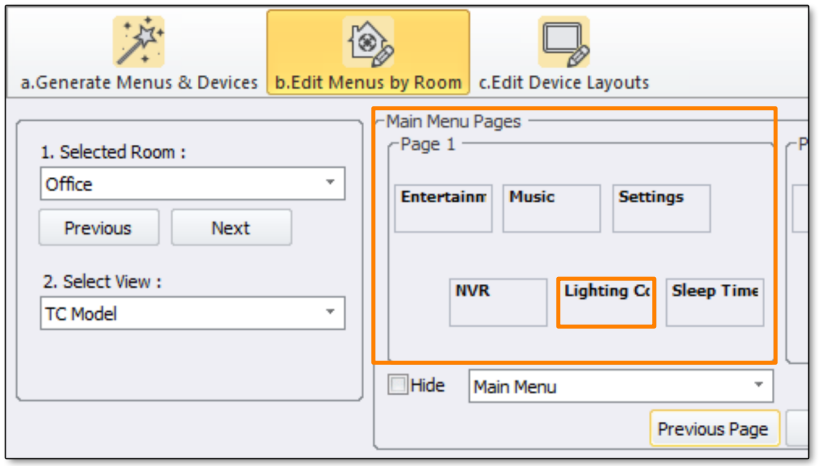
1. Select **Accelerate!**



By default, buttons to access the **Lighting Control** module are placed on the **Main Menu**.

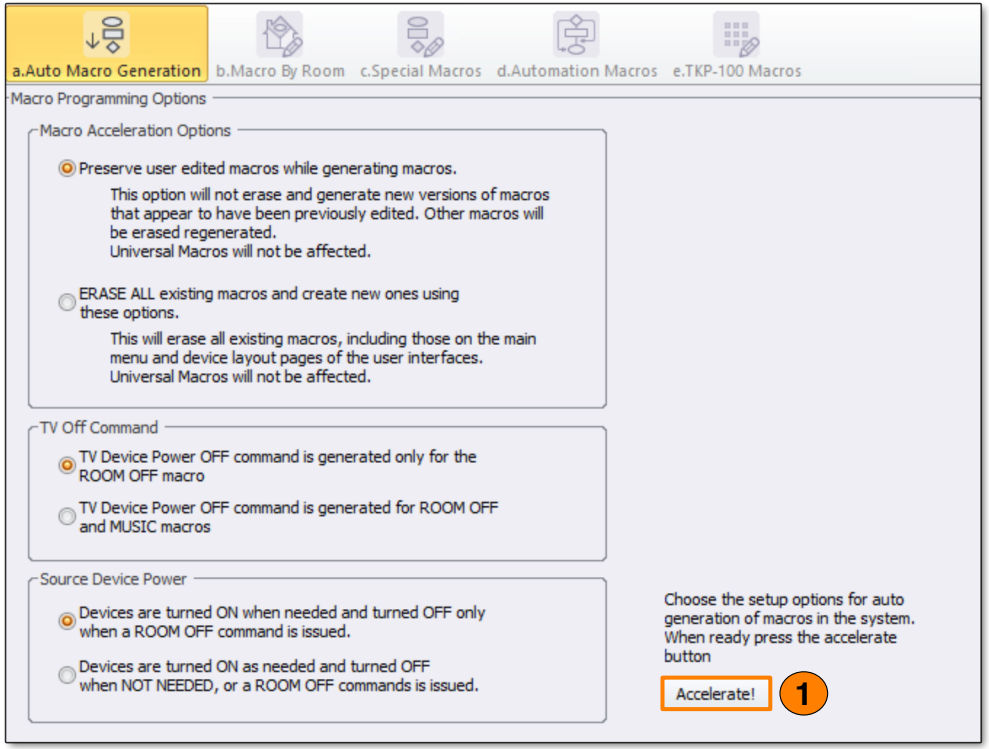
This button can be relocated to a different page or sub-menu by **dragging-n-dropping** it into the desired location.

Keep in mind, if the system is Accelerated with the **ERASE** option, this button **returns to its original position** on the Main Menu.



Step 12: Macro Editing

1. Select **Accelerate!**
2. Make additional programming changes as needed within the remaining steps. Once completed, save the project and **Download** to the system.

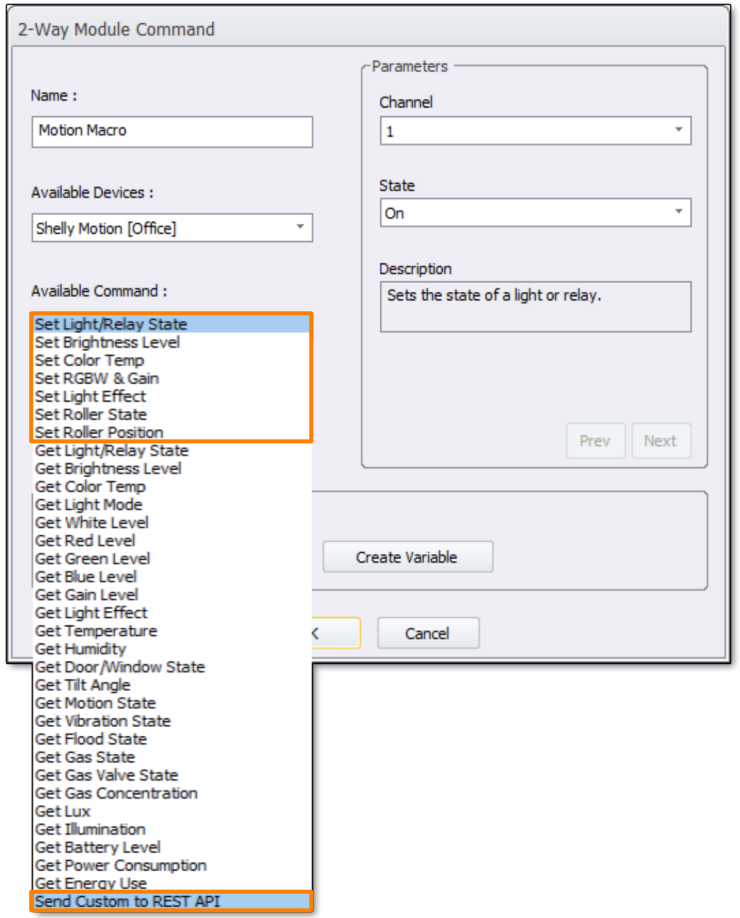


Two-way Module Commands

Two-way module commands are special one-way functions that are derived from the two-way module, and are the only way to send discrete commands to the Shelly system.

Before creating a macro, ensure the **correct device** has been selected from the **Available Devices list**.

- **Set Light/Relay State:** Sets the light or relay to a specified **state**. [On | Off]
- **Set Brightness Level:** Sets a device's **brightness** to a specified **level**. [0 - 100]
- **Set Color Temp:** Sets a device's **light** to a specified **temp**. [2700 - 6500]
- **Set RGBW & Gain:** Sets an RGBW device to a **specific color** and specifies it's **gain level**. [R, G, B, W, 0 - 100]
- **Set Light Effect:** Sets a **programmed light effect** for the device. [Off | Meteor Shower | Gradual Change | Flash]
- **Set Roller State:** Sets the roller to a specified **state**. [Open | Close | Stop]
- **Set Roller Position:** Sets the roller to a specified **position**. [0 - 100]
- **Send Custom to REST API:** Allows a custom **POST** request to be sent to a specified device.

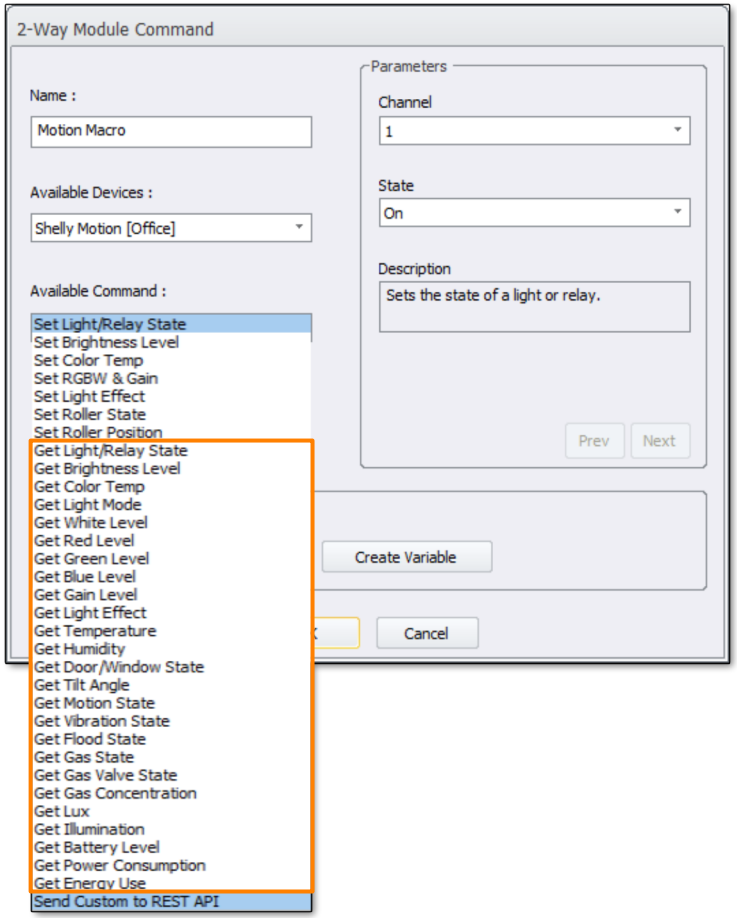


Two-way commands **only work with supported devices**. For example, a roller command will not function with a lighting device.

Query Commands

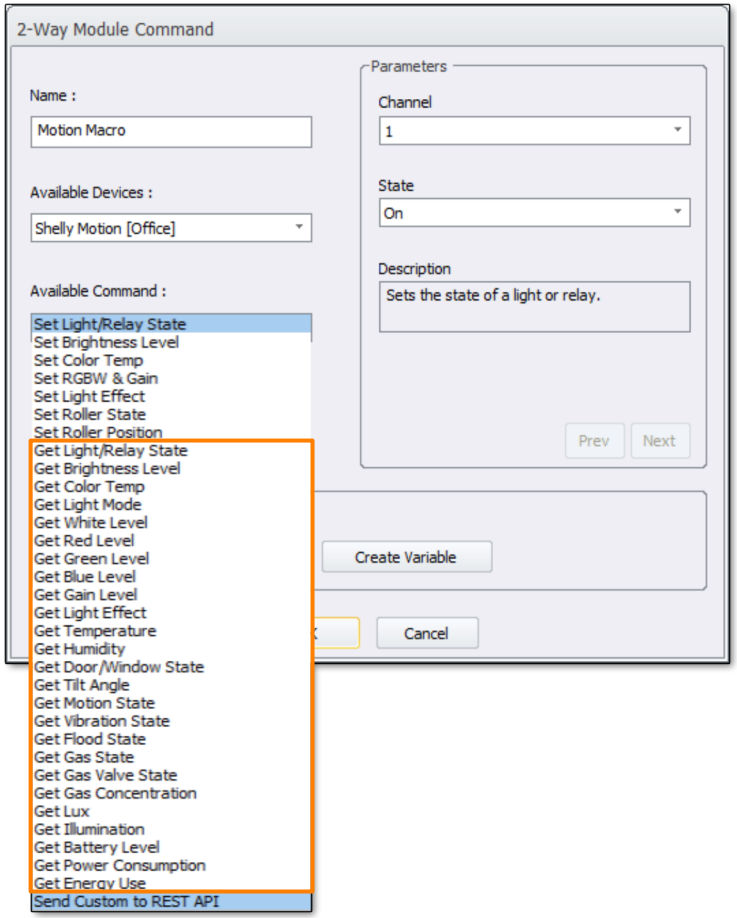
Query Commands allow the Total Control system to ask a device for information. The information can be saved as a variable and used in conjunction with conditional logic to create advanced reactive macros.

- **Get Light/Relay State:** Reads the **current state** of the light or relay. [0 - Off | 1 - On]
- **Get Brightness Level:** Reads the **current brightness level** of the device. [0 - 100]
- **Get Color Temp:** Reads the **current color temp** of the device. [2700 - 6500]
- **Get Light Mode:** Reads the **current light mode** of the device. [Color | White]
- **Get White Level:** Reads the **current white level** of the device. [0 - 255]
- **Get Red Level:** Reads the **current red level** of the device. [0 - 255]
- **Get Green Level:** Reads the **current green level** of the device. [0 - 255]
- **Get Blue Level:** Reads the **current blue level** of the device. [0 - 255]
- **Get Gain Level:** Reads the **current gain level** of the device. [0 - 100]
- **Get Light Effect:** Reads the **current light effect** of the device. [0 - Off | 1 - Meteor Shower | 2 - Gradual Change | 3 - Flash]
- **Get Temperature:** Reads the **current temperature** and displays it in either **Celsius** or **Fahrenheit**.
- **Get Humidity:** Reads the **current humidity**.
- **Get Door/Window State:** Reads the **current state** of the specified door or window. [Open | Close]



Query commands, variables, conditional logic, Device Events, and more are ONLY available within the **Total Control Experience**. If this option is not available, speak with a **URC Representative** for more details.

- **Get Tilt Angle:** Reads the **current tilt angle** of the device. [0 - 180]
- **Get Motion State:** Reads the **current motion state** of the device. [0 - Off | 1 - On]
- **Get Vibration State:** Reads the **current vibration state** of the device. [0 - Off | 1 - On]
- **Get Flood State:** Reads the **current flood state** of the device. [True | False]
- **Get Gas State:** Reads the **current gas state** of the device.
  [None | Mild | Heavy | Test | Unknown]
- **Get Gas Valve State:** Reads the **current gas valve state** of the device.
  [Not Connected | Closed | Opened | Failure | Closing | Opening | Checking | Unknown]
- **Get Gas Concentration:** Reads the **current gas concentration (ppm)** of the device. [0 - 65535]
- **Get Lux:** Reads the **current lumens** of the device. [0 - 100000]
- **Get Illumination:** Reads the **current illumination level** of the device.
  [Bright | Twilight | Dark]
- **Get Battery Level:** Reads the **current battery level** of the device. [0 - 100]
- **Get Power Consumption:** Reads and displays the **current power use** in watts.
- **Get Energy Use:** Reads and displays the **current power use per minute** in watts.
- **Send Custom to REST API**: Allows a custom **GET** request to be sent to a specified device.

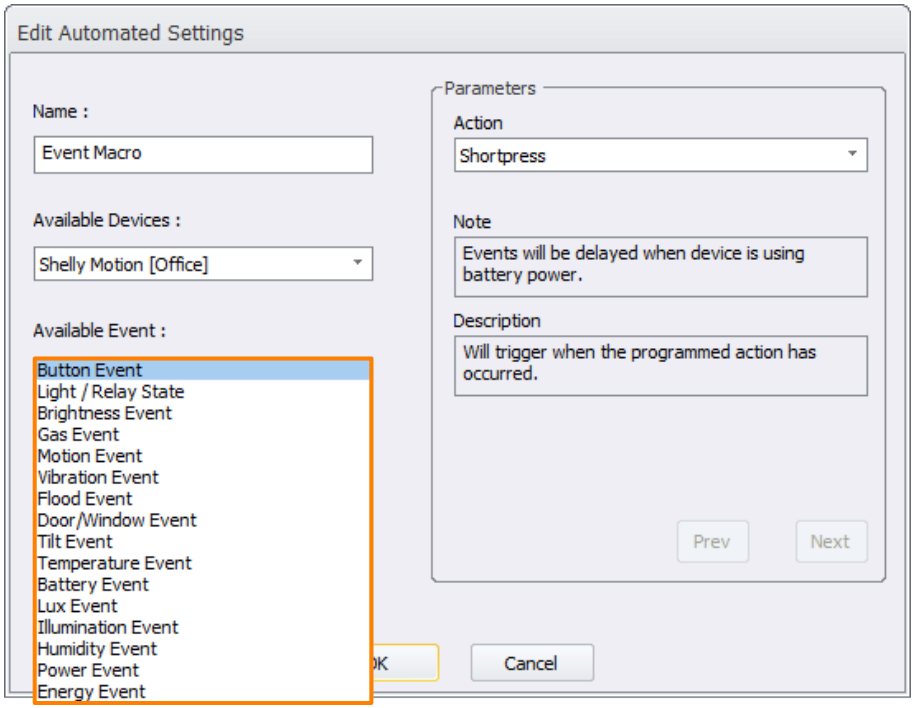


Query commands, variables, conditional logic, Device Events, and more are ONLY available within the **Total Control Experience**. If this option is not available, speak with a **URC Representative** for more details.

Device Events

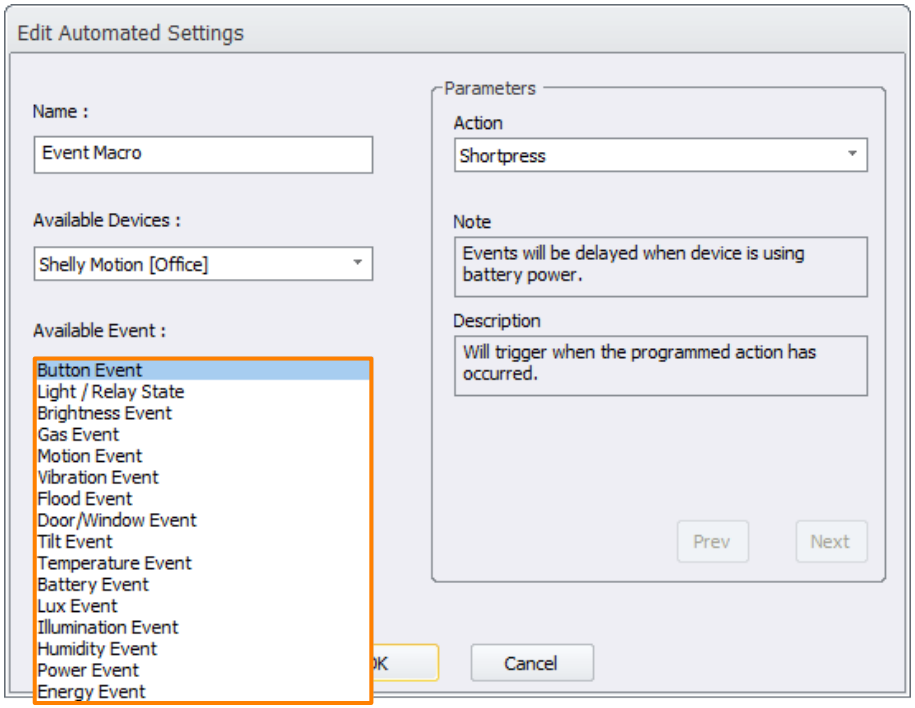
The Shelly module has the ability to trigger custom macros based on device status changes.

- **Button Event:** Triggers the macro when the **button is pressed**. [Short-press | Long-press | Double-press | Triple-press]
- **Light/Relay State:** Triggers the macro when the specified **light** or **relay state changes**. [1, 2, 3, 4 | On, Off]
- **Brightness Event:** Triggers the macro when the brightness level **falls below**, **raises above**, or **becomes equal to** a **specified value**.
- **Gas Event:** Triggers the macro when a **specified gas state** is reached. [None | Mild | Heavy | Test | Unknown]
- **Motion Event:** Triggers the macro based on a **specified motion state**. [On | Off]
- **Vibration Event:** Triggers the macro based on a **specified vibration state**. [On | Off]
- **Flood Event:** Triggers the macro based on the **current flood state**. [Detected | Off]
- **Door/Window Event:** Triggers the macro based on the **current door** or **window state**. [Open | Close]
- **Tilt Event:** Triggers the macro when the device tilt angle **falls below**, **raises above**, or **becomes equal to** a **specified value**.



There may be **slight latency** when triggering an event if the Shelly device is **battery powered**. Setting a **static IP address** during setup may **reduce latency**.

- **Temperature Event:** Triggers the macro when the temperature **falls below**, **raises above**, or **becomes equal to** a **specified value**.
- **Battery Event:** Triggers the macro when the battery level **falls below**, **raises above**, or **becomes equal to** a **specified value**.
- **Lux Event:** Triggers the macro when lumens **falls below**, **raises above**, or **becomes equal to** a **specified value**.
- **Illumination Event:** Triggers the macro when a device's **illumination** changes to a **specified level**. [Bright | Twilight | Dark]
- **Humidity Event:** Triggers the macro when the humidity **falls below**, **raises above**, or **becomes equal to** a **specified value**.
- **Power Event:** Triggers the macro when the power level **falls below**, **raises above**, or **becomes equal to** a **specified value**.
- **Energy Event:** Triggers the macro when power consumption **falls below**, **raises above**, or **becomes equal to** a **specified value**.



Training Resources

For additional information on using macros in automation, and macro theory, refer to the following Self-Paced Tutorials linked below:

- Making the Most of Two-Way Modules
- Macro Theory
- Using Macros in Automation

There may be **slight latency** when triggering an event if the Shelly device is **battery powered**. Setting a **static IP address** during setup may **reduce latency**.

Using the Module

This section of the document explains how to operate the lighting unified module. Disregard this section if no lighting devices were added to the project.

Launching the Module

1. Navigate to the room where the **Lighting Control** button is located and select it.

2. Select a room from the available list.

3. The UI displays controls for all available lights..

Lighting Control

Below are descriptions of the available buttons on the **Lighting Control** window:

A. Color Picker: Select this button to display the color section page. This page allows the user to change the color of the selected lights. This only displays if supported by the lighting device.

B. On/Off Toggle: Select this button to toggle the selected lights **On** or **Off**.

C. Brightness Slider: Adjust the slider to left or right to adjust the light's brightness level. This only displays if supported by the lighting device.

D. Rooms Menu: Click on this button to return to the Rooms Menu.

E. Options Menu: When selected, provides the following options:

- **Add/Remove:** Allows the end-user to add/remove additional lights to the current Room. These lights must already be programmed within the supported subsystem.
- **Reorder:** Allows the end-user to rearrange the Lighting Control list within the current Room.

F. Back: Select to return to the Lighting Control - Rooms Menu.

Lighting Control - Assigning a Default Room
A **Default Room** can be assigned to make accessing specific areas more convenient. When a Default Room has been assigned, the **Lighting Control window displays the devices in the specified Room when launched**.

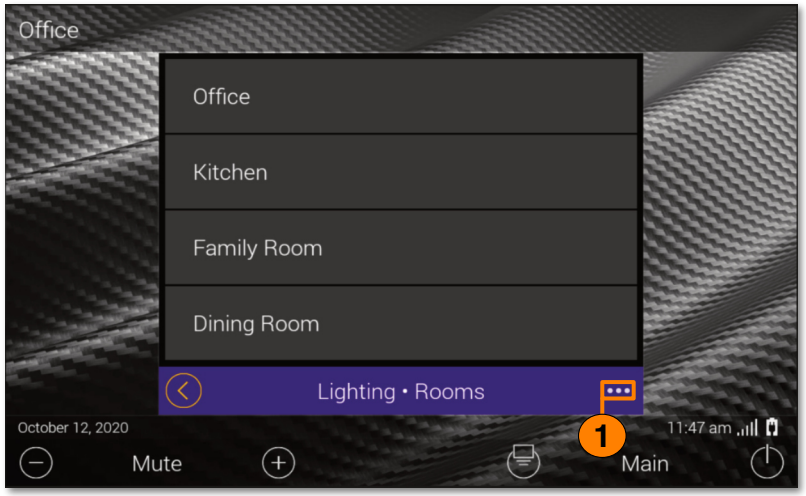
Perform the following from within the **Lighting Control - Rooms Menu** to **assign a Default Room**:

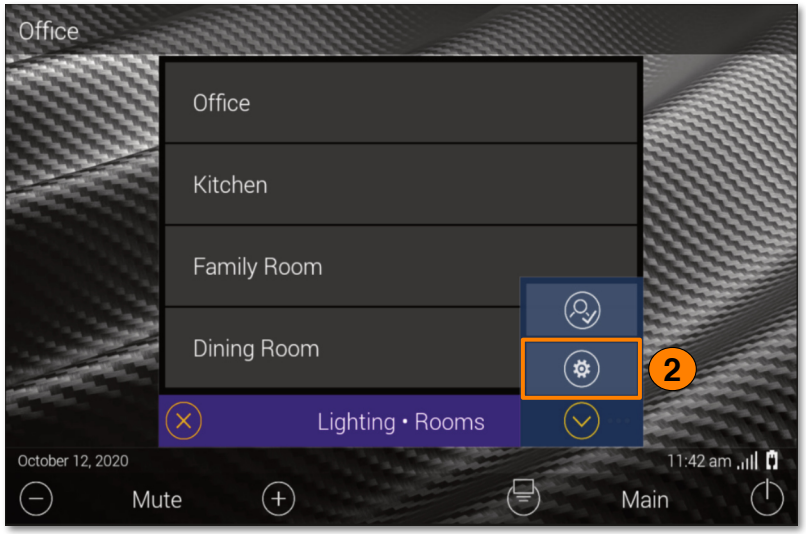
1. Select the **Options Menu**.

   There are two (2) available selections:

   - **Authentication:** Select to complete the authentication process of an integrated subsystem. Not all subsystems require authentication. Refer to the subsystem's Parameters & Reactions document for more details.
   - **Default Room Selection:** Click on this option to display the **Default Room to Display Menu**.

2. Select the **Default Room Selection** button.

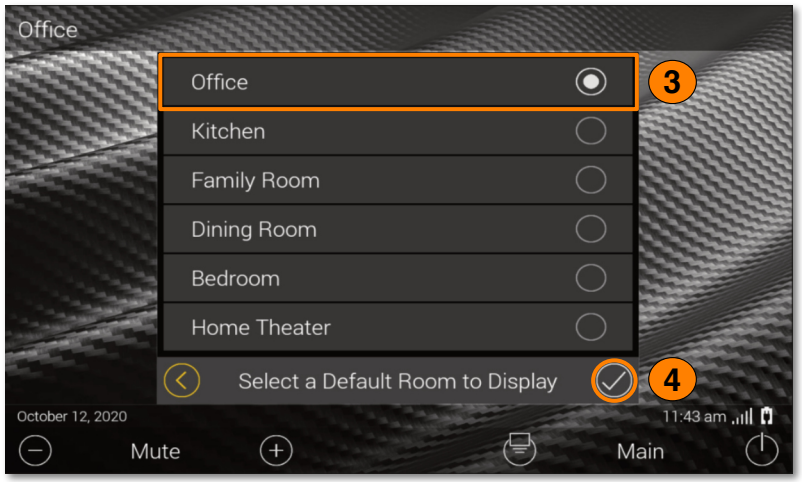




3. View the **Rooms List** and **select which room to assign** as the default (i.e. Office).

4. Select the **Check Mark to confirm**.

5. When the **module is relaunched**, the end-user is **taken directly** to the **Lighting Control page of the assigned room**.

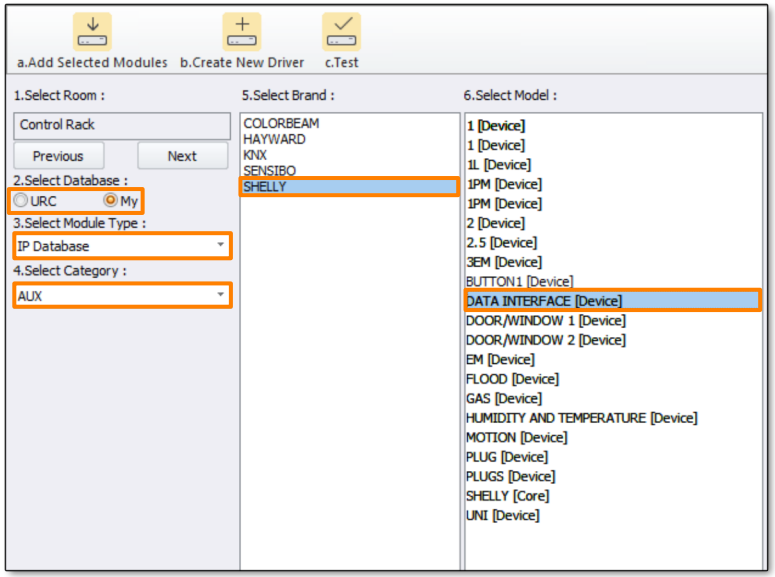


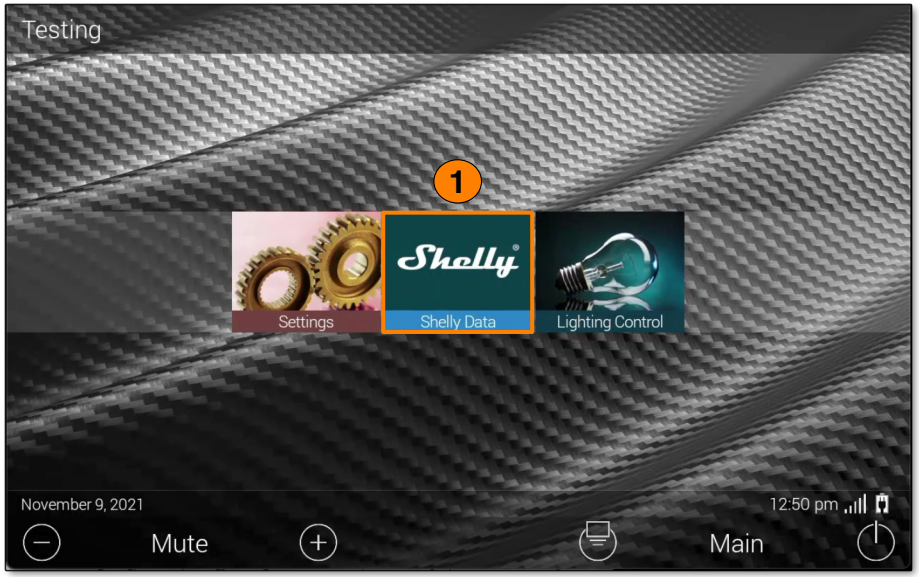
Shelly Data Interface

A device information menu has been included with the Shelly module to assist with device integration. Under **Aux**, there is a device labeled **Data Interface**. When added to a room, this device provides access to a **Shelly Data** interface button. Selecting the **interface button** opens a **device list**, and selecting a **device** from that list **displays** its **network information**, **update history**, **battery power**, and more.

Accessing the Interface

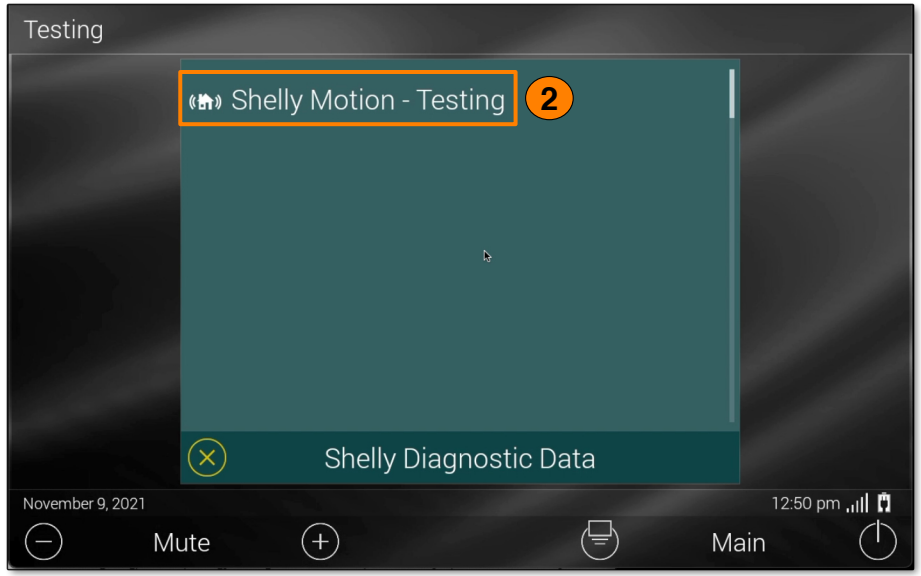
1. Navigate to the room where the **Shelly Data** button is located and **select it**.

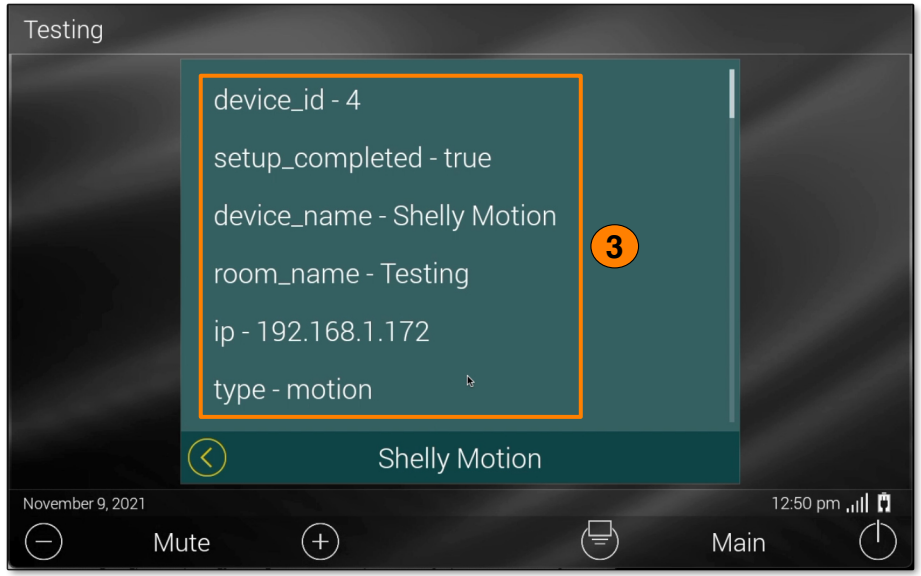




2. Select a **device** from the available list.

3. A new window appears and displays **device information**.





If a device has **low battery power**, or is **offline**, a **battery icon** is displayed next to the device on the device list.

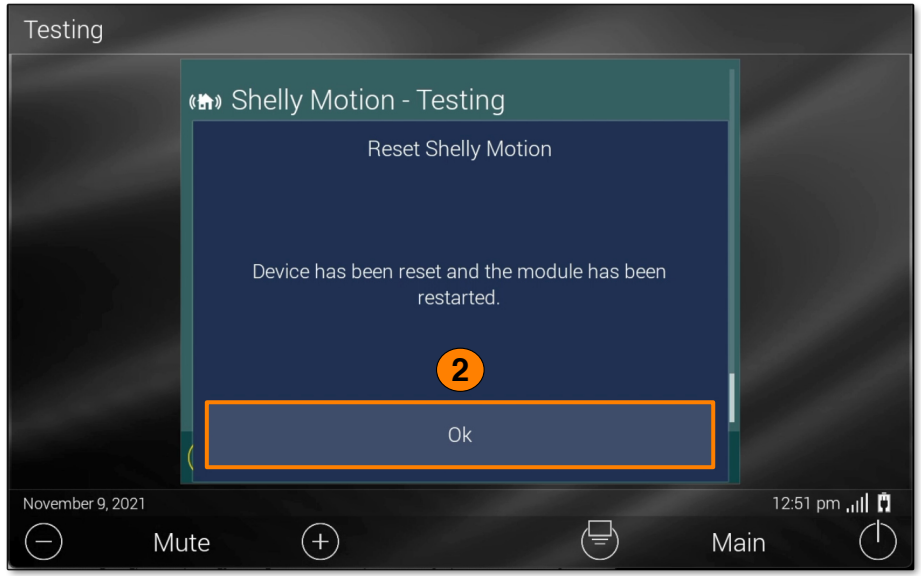
If a device has **not completed** the **setup process**, an **exclamation icon** is displayed next to the device on the device list.

Device Reset

There is a feature on the interface that allows for a **specific device's information to be reset**. This is useful in situations when a device **malfunctions** or **needs to be replaced**. To reset the device, perform the following:

1. After selecting a device from the list, press-n-hold the **Back** button for five (**5**) seconds.

2. A window appears to declare the device has been reset. Select **OK** to return to the device list.

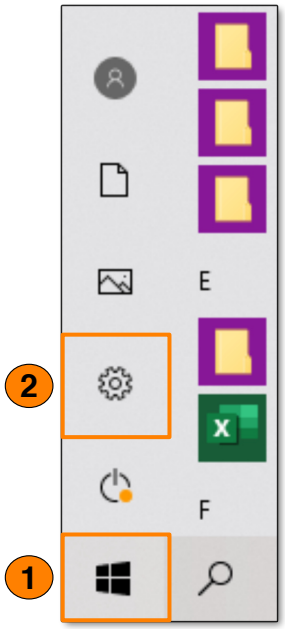


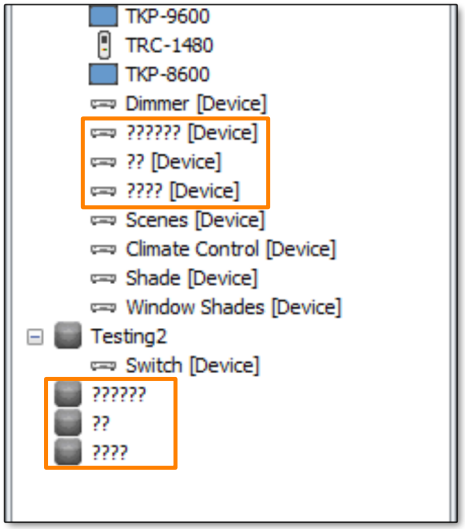
Unicode Troubleshooting

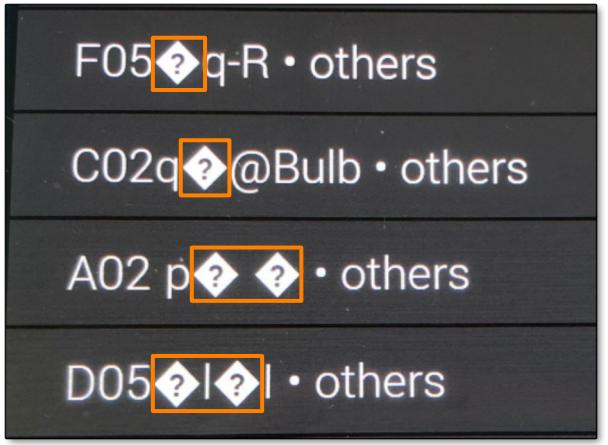
As devices and software modules become more complex there is a greater chance of compatibility issues. Due to regional character support, it is possible to encounter a situation where text is not displayed correctly for both Accelerator software and user interfaces.

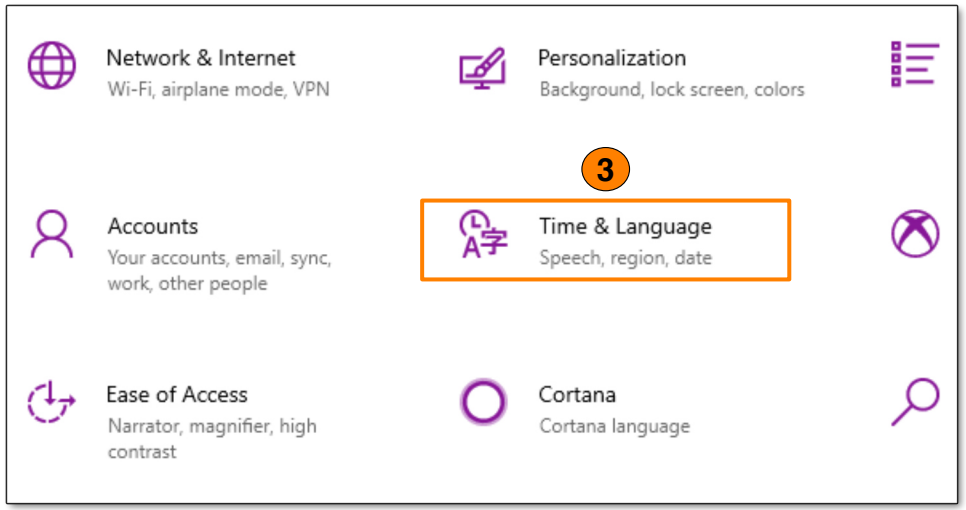
To solve this issue, Worldwide Language Support **must be enabled** on the **PC used for programming**. Perform the following:

1. Select the **Start Menu** icon.
2. Select the **Settings** icon. This opens a new window.

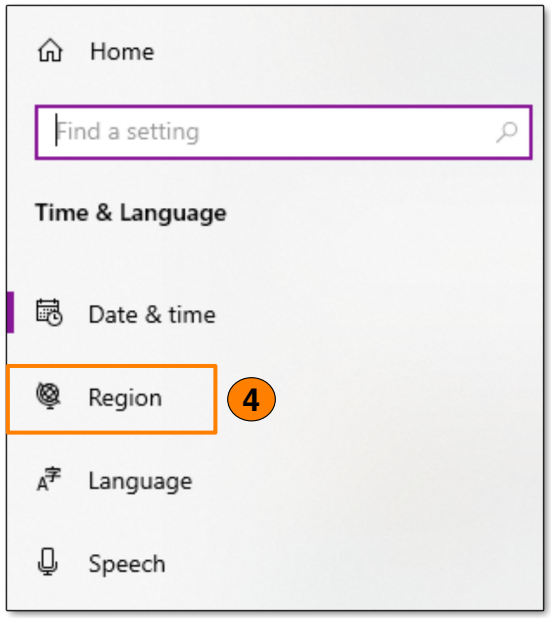








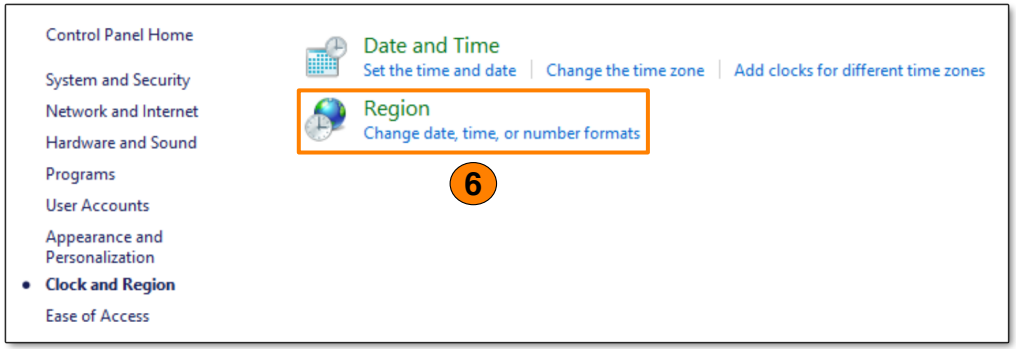
3. On the Settings menu, select **Time & Language**. This opens a new window.
4. Select **Region** from the options on the left.

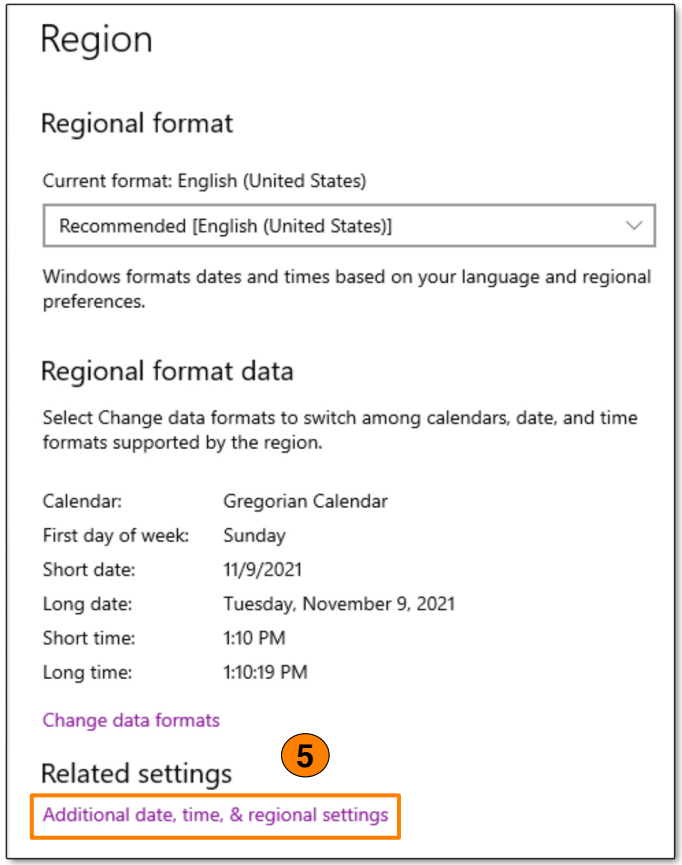


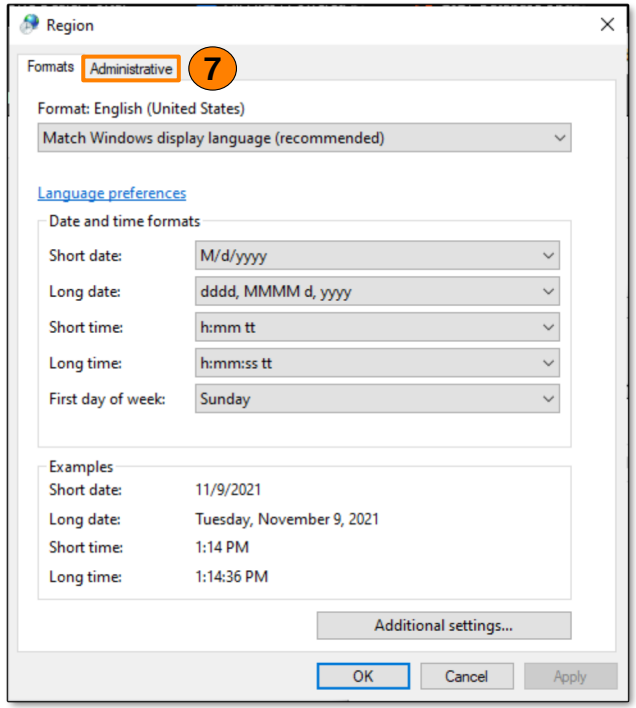
5. Under **Related settings**, select the **Additional date, time, & regional settings** link. This opens a new window.

6. Under **Region**, select the **Change date, time, or number formats** link. This opens a new window.

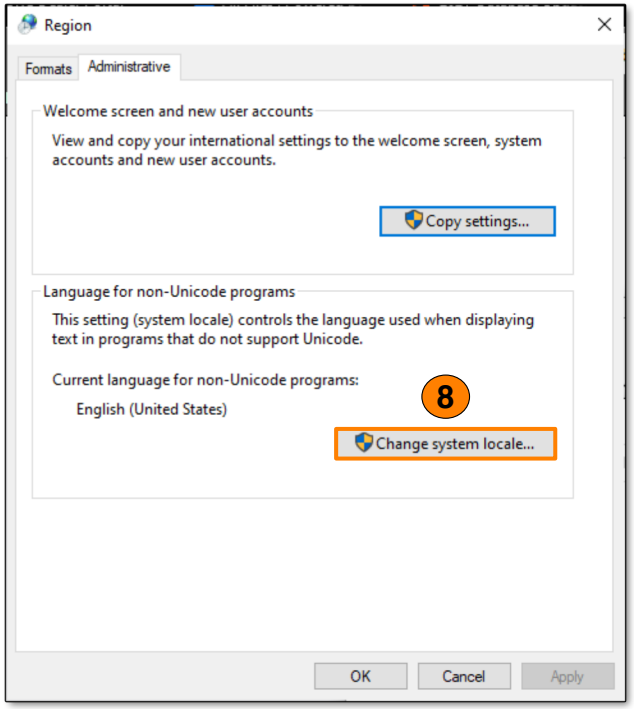
7. Select the **Administrative** tab.

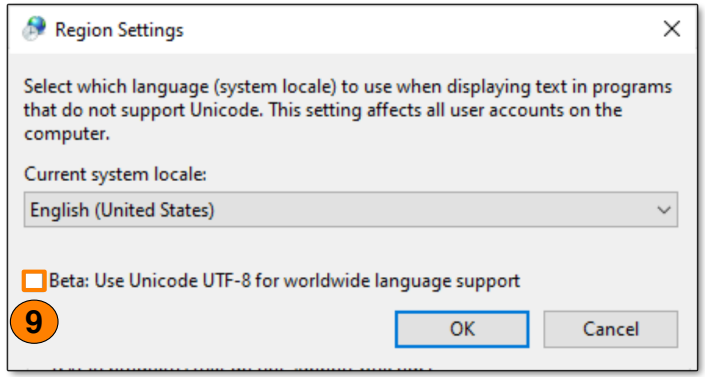


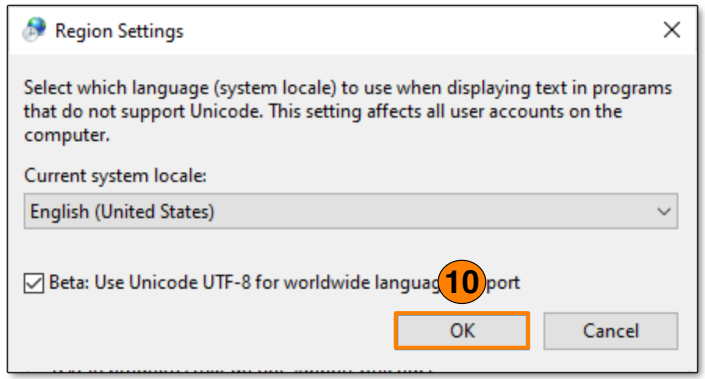


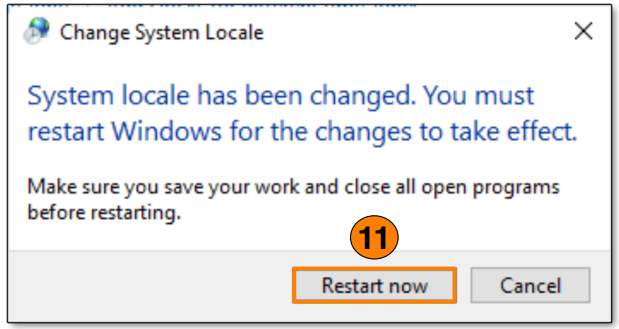


8. Select the **Change system locale…** button. This opens a new window.
9. Select the **empty checkbox** to enable Unicode UTF-8 Worldwide Language Support.
10. Select **OK**.
11. The PC prompts for a restart. Save any necessary work and restart the PC to complete this process.









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