

Muximus Network Controller

User Manual

500813



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1. Safety Precautions

To ensure the best performance from the product, please read all instructions carefully before using the device. Save this manual for future reference.

- Follow basic safety precautions to reduce the risk of fire, electrical shock, and injury.
- Do not dismantle the housing or modify the module. It may result in electrical shock or burns.
- Do not open or remove the housing of the device as you may be exposed to dangerous voltage or other hazards.
- To prevent fire or shock hazard, do not expose the unit to rain, moisture and do not install this product near water. Keep the product away from liquids.
- Spillage into the housing may result in fire, electrical shock, or equipment damage. If an object or liquid falls or spills on the housing, unplug the module immediately.
- Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.
- Using supplies or parts not meeting the product specifications may cause damage, deterioration or malfunction.
- Refer all servicing to qualified service personnel.
- Install the device in a place with adequate ventilation to avoid damage caused by overheat.
- Unplug the power when left unused for a long period of time.
- Information on disposal of devices: do not burn or mix with general household waste, please treat them as normal electrical waste.

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2. Introduction

The MuxLab Muximus Network Controller (model: 500813) is a Linux-based PC that allows users to manage and control MuxLab AVoIP devices installed on a network switch. It also allows control of third-party devices by sending RS232, RS485, Relay, UDP, TCP, and HTTP commands.

The MuxLab network controller offers two different options to manage and control devices according to user needs.

One of the options is Muximus Pro, which offers comprehensive options for managing and configuring all MuxLab AVoIP devices. It also provides a complete control system with all the necessary tools to control any device by sending specific commands, as well as tools for creating more sophisticated control conditions, such as macros, events, and custom user interfaces.

The second option is MuxControl Lite, which offers comprehensive options for managing and configuring all MuxLab AVoIP devices in a simple way.

When installed on a local area network (LAN), the Muximus Network Controller will scan the LAN for connected MuxLab AV over IP products allowing the User to auto-discover, configure and control the connectivity of these products through an Ethernet Web interface.

3. Features

- Versatile Integration
- High-Quality Video
- Video Wall and Multiview Capabilities
- Low Bandwidth Requirements
- Global Distributed Installations
- Digital Signage Player Functionality
- Full integration with Dante Domian Manager
- Flexible Content Creation
- Powerful and Flexible Platform

4. Package Contents

- One (1) Muximus Network Controller
- One (1) 12VDC/2A Universal Power Supply including international plug connections for use around the world
- One (1) User manual (available via download)

Notes: Confirm that the product and accessories are all included. If not, please contact the supplier from which you purchased the unit.

5. Specifications

CPU	Intel Celeron J1800 Processor, @ 2.41GHz 4 cores
Memory	2GB DDR3
Display	Integrated Intel HD Graphics, 1x HDMI and 1x VGA
Keyboard and Mouse	USB keyboard and mouse (not required and not included)
Peripherals	three (3) USB 2.0 ports One (1) SS USB 3.0 port Two (2) Network gigabit interface One (1) VGA Video out port One (1) HDMI Video out port One (1) Audio in via 3.5mm port One (1) Audio out via 3.5mm port One (1) RS232 port
Operating System	Ubuntu 22.04 LTS
Temperature/Humidity	Operating: 0 °C to 50 °C, Storage: -20 °C to 80 °C Humidity: 10% to 90% (non-condensing)
Dimensions	5.24 x 5.00 x 1.38 inch (133 x 127 x 35 mm)
Weight	1.5lbs (0.7kg)
Accessories Included	External 12VDC @ 2A Power Adaptor
Regulatory	FCC, CE, RoHS, WEEE
Warranty	2 years
Order Information	500813 Muximus Network Controller (UPC: 627699008133)

6. Installation and Use

6.1 Product Overview

The external connections and connection indicators of the Muximus Network Controller are detailed in Figure 1 and Figure 2. Please familiarize yourself with them before installing the unit.

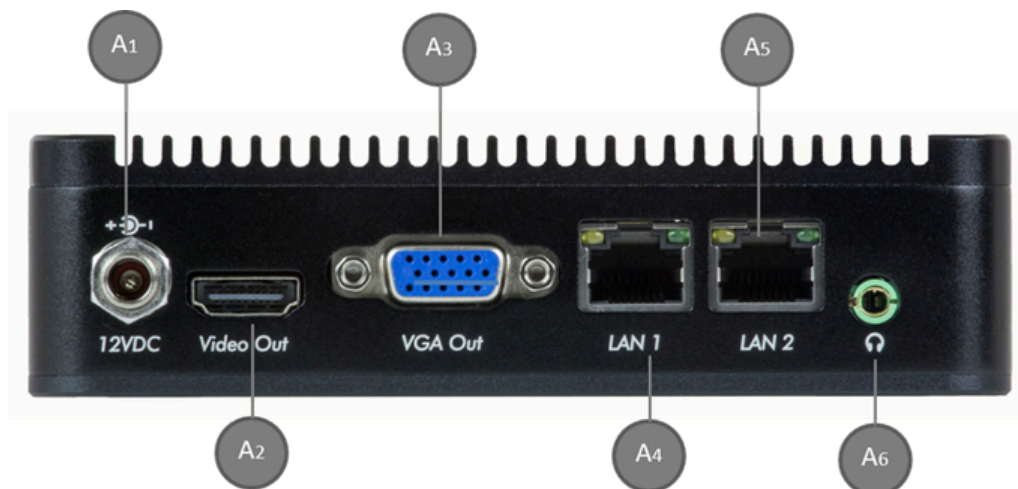


Figure 1: Rear Panel

- A1 = DC Power
- A2 = HDMI video out
- A3 = VGA video out
- A4 = RJ45 Ethernet LAN 1
- A5 = RJ45 Ethernet LAN 2
- A6 = Audio out

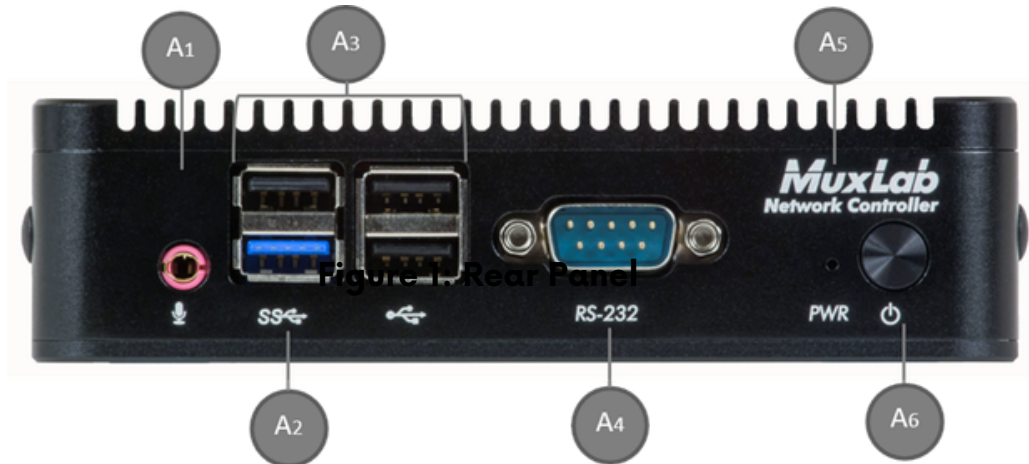


Figure 2: Front Panel

- A1 = Audio In
- A2 = SS USB
- A3 = 2.0 USB Ports
- A4 = RS232
- A5 = Power LED
- A6 = Power Button

6.2 Installation Procedure

Note that the examples below assume that the Ethernet Switch used does not support WiFi, and a Router with WiFi capability is required in order to communicate with smartphones and tablets for control purposes.

Setting the Ethernet Switch & Router to the same Subnet as MuxLab Devices:

The Muximus Network Controller comes with two Ethernet ports. LAN 1 is configured with a static IP address which is 192.168.168.51. LAN 1 port should be connected in to the same network switch where all the Muxlab equipment is connected. Note that LAN 2 port is configured as a DHCP client, and can be utilized for control purpose. The MuxLab AV over IP Transmitters and Receivers are set to support DHCP by default. When no DHCP server is available the AV over IP Transmitters and Receivers fallback to a static IP address of:

- 192.168.168.53 (for the 500817)
- 192.168.168.54 (for the 500816-IP)
- 192.168.168.55 (for the 500752, 500753, 500754, 500755, 500755-AMP and 500756 Transmitters)
- 192.168.168.56 (for the 500752, 500753, 500754, 500755, 500755-AMP and 500756 Receivers)
- 192.168.168.58 (for the 500758, 500759, 500770, 500771, 500773 and 500777 Transmitters)
- 192.168.168.59 (for the 500758, 500759, 500770, 500771 and 500777 Receivers)
- 192.168.168.62 (for both the 500762 and 500763 Transmitters)
- 192.168.168.63 (for the 500762 Receiver)
- 192.168.168.85 (for the 500768 Transmitter)
- 192.168.168.86 (for the 500768 Receiver)
- 192.168.168.32 (for the 500778 Transmitter)
- 192.168.168.33 (for the 500778 Receiver)
- Auto IP (for the 500760 and 500761 Transmitters and Receivers)
- 192.168.168.90 (for the 500800 Transmitters)
- 192.168.168.91 (for the 500800 Receivers)

These MuxLab products (Muximus Network Controller, and the AV over IP Transmitters, Receivers, and Transceivers) work in conjunction with a PoE (PSE) Ethernet Switch (MuxLab recommends the Cisco CBS350 and Netgear M4250 Series) and a Router of your choice with WiFi capability to be able to communicate with a smartphone or tablet. The use of a smartphone or tablet to manage the MuxLab devices with third party software applications is optional and is a common method of control; however MuxLab devices may also be managed via the Muximus Network Controller web interface.

In order for the DHCP server within the Ethernet Switch to support the MuxLab device subnet, set the static IP of the Ethernet Switch to **192.168.168.1** (recommended setting). Refer to the Ethernet Switch manual for instructions on how to accomplish this. The Router with WiFi capability, must also be placed on the same subnet as the MuxLab devices and it should be set with a Static IP address, we recommend using a Static IP address of **192.168.168.2**. Refer to your Router documentation on how to accomplish this.

Setting MuxLab Devices, Ethernet Switch and Router to an Existing Subnet:

If the MuxLab AV over IP devices are being installed in an existing environment that has a working subnet already configured that cannot be easily changed, then the subnet of the MuxLab devices, the Ethernet Switch (if a new Ethernet Switch is required), and the Router with Wifi (if a new Router is required) must be changed in order to match the existing subnet. For this case we will use **192.168.2.x** as an example subnet already in place and which must be supported. Note that this is only an example and may not necessarily reflect your actual subnet address.

If the Ethernet Switch does not already reside in the example subnet of 192.168.2.x, then set the static IP of the Ethernet Switch to a free static IP address (for the sake of this example we will use an IP address of **192.168.2.1**). Refer to the Ethernet Switch manual for instructions on how to accomplish this. MuxLab also has a guide specific to the Cisco CBS350 and Netgear M4250 Series, see documents which can be found on MuxLab's website under any of the AV over IP product pages (as a download under the Operation Manual sub-category).

If the Router with WiFi does not already reside in the example subnet of 192.168.2.x, then set the static IP of the Router to a free static IP address (for the sake of this example we will use an IP address of **192.168.2.2**). Refer to your Router documentation on how to accomplish this.

The MuxLab AV over IP Transmitters and Receivers are set by default to support DHCP, and will automatically be set to the subnet specified by the DHCP Server. These units need only be physically connected into the network as described in their respective Installation Guides and by using the 500813 Muximus Network Controller to discover them. But before the MNC can be used, the new MNC subnet must also be set.

To change the subnet of the Muximus Network Controller requires a two-step process:

Process 1: Configuring the IP address of the Muximus Network Controller

Process 2: Physically installing the Muximus Network Controller in the network

Note:

- An example subnet address of 192.168.2.x of the existing network on which the Muximus Network Controller will be installed is assumed for this example process.
- The Muximus Network Controller LAN 1 port comes with a static IP address of 192.168.168.51 and with DHCP disabled. This process explains how to change it to the example subnet of 192.168.2.x.

Process 1: Configuring the IP address of the Muximus Network Controller

Refer to Figure 1 and Figure 2.

1. On the back panel of the MNC:
 - a. Plug the supplied power adaptor into the DC power jack. Ensure that the other end of the power adaptor is plugged into a power socket.
 - b. Connect one end of an Ethernet cable to the LAN 1 Ethernet port. Ensure that the other end of the Ethernet cable is connected to a computer.

2. Set the computer to the same subnet as the Muximus Network Controller and open up an Internet browser (Edge, Chrome, Firefox, etc.) and type the following address in the address bar near the top of the screen:

<http://192.168.168.51>

3. Press **Enter** on the keyboard.

4. The Muximus Network Controller Web interface **Login Screen** will appear (Figure 3).

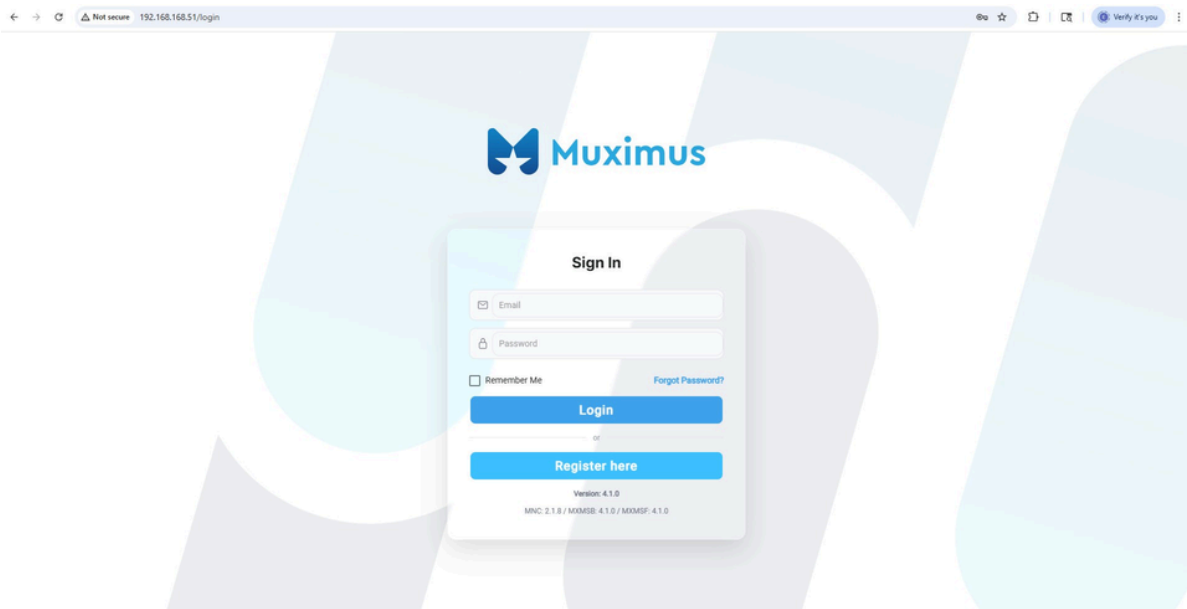


Figure 3

5. The first time the User uses the system, they must to create an administrator account and and set the controller's network configuration. Click on the **Register here** option.

Figure 4

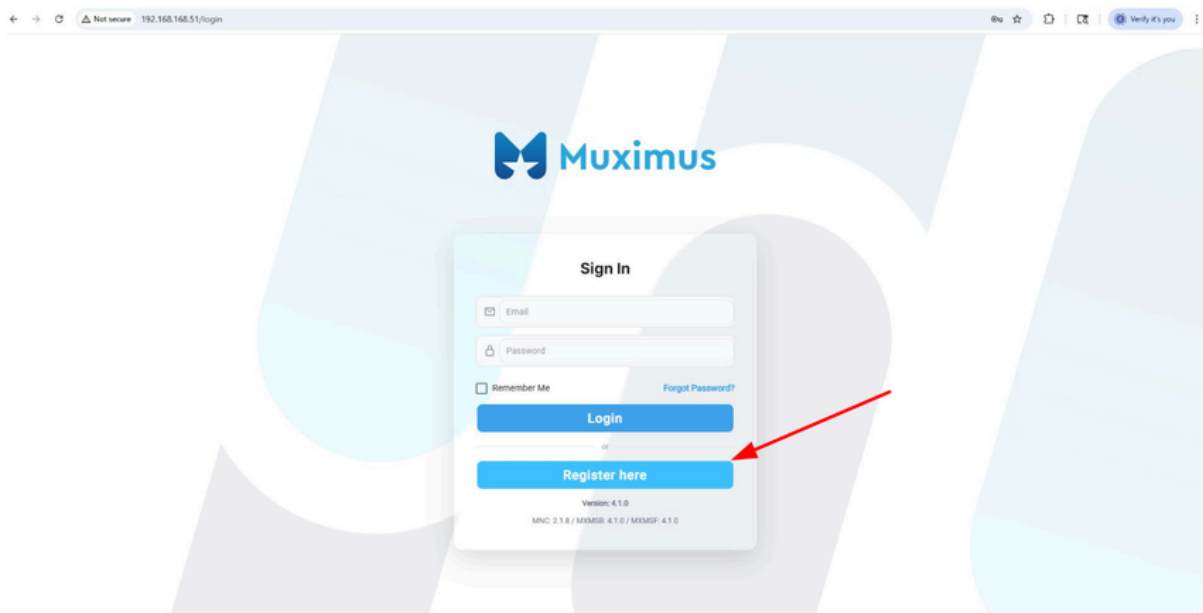


Figure 4

6. in order to create a new administrator account, please enter the required information (email, user name and password) and then click next. Figure 5

Figure 5

7. Next, the user must confirm the network configuration for the two LAN ports, either by selecting DHCP mode or by entering a specific IP address for each port. If you need to configure a static IP address, ensure the DHCP button is not selected. In the IP Address field, enter the IP address of the subnet where the Muximus network controller will be installed. Ensure that the Muximus network controller's static IP address does not conflict with the static IP address of the Ethernet switch and router, or with any other static IP address already assigned on the network. Then click Next. Figure 6

Figure 6

8. The system will then display the configurations made, and the user must verify and confirm that the information regarding the username and IP address configuration is correct. Then click Confirm. Figure 7

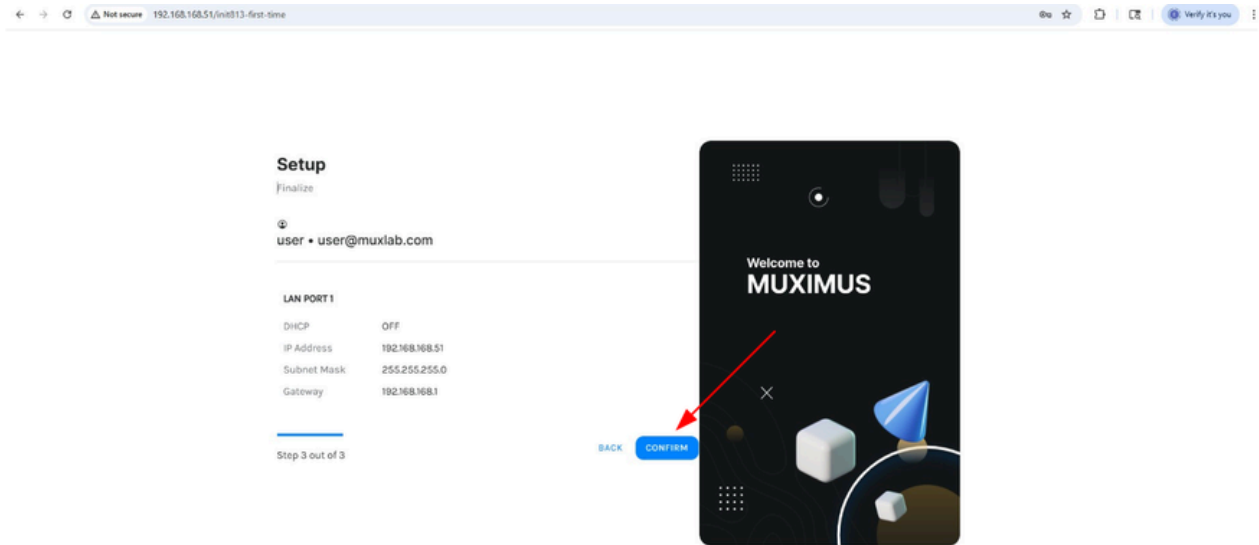


Figure 7

9. Now the user will be able to see a progress bar that indicates the progress of the system configuration. Figure 8

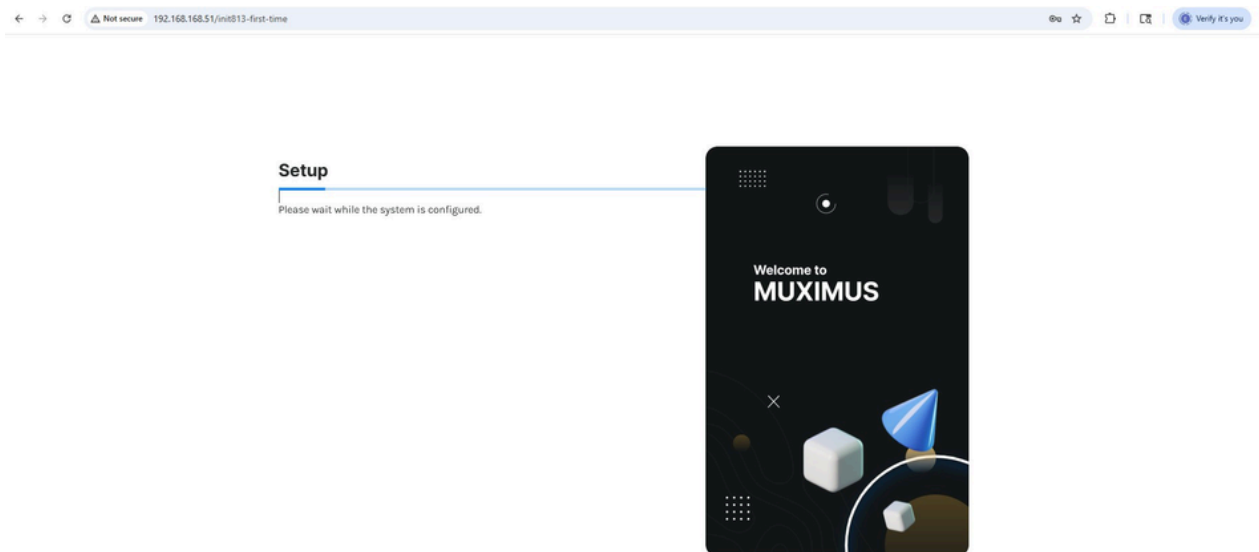


Figure 8

10. Once the configuration process is complete, the system will offer the user the option of using MuxControl Lite or Muximus Pro. Then click Choose Mode. Figure 9

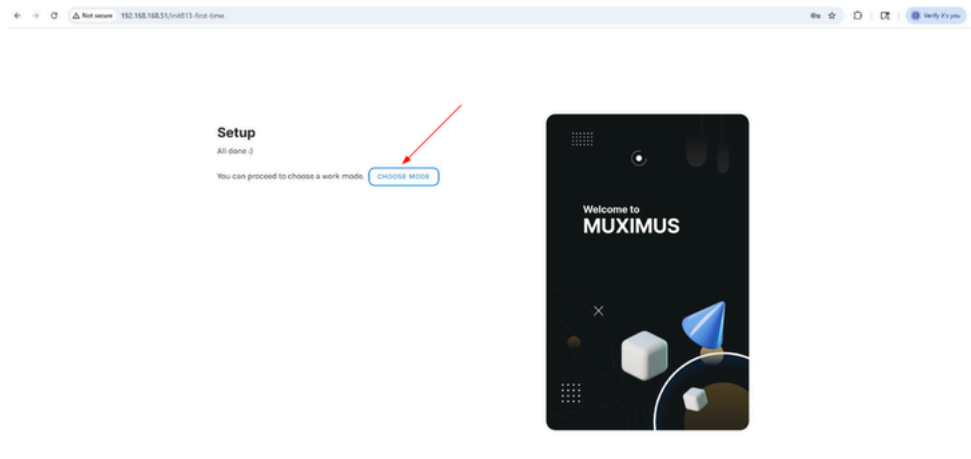


Figure 9

11. Now the User can select which control and configuration interface to use, either MuxControl Lite or Muximus Pro. Figure 10.



Figure 10

Note that in the Muximus Pro interface you can configure all Muxlab AVoIP devices, establish connections between them, create presets, create video walls, create multiviews create locations, create users and assign them specific roles, access MuxControl to control any device using IR, RS232, UDP, TCP or HTTP commands, create special control conditions such as macros, events and create custom user control interfaces, among others. This interface is ideal for users who require advanced configuration and control tools.

Conversely, the MuxControl Lite interface is ideal for users who don't need advanced control tools, as it only allows them to configure devices and create video walls. After these configurations, the system automatically generates a user control interface, saving the user time. This interface will be explained in section 8.

7. Muximus Pro Interface

After select Muximus Pro, the Muximus web interface will display eleven different tabs that will allow the User to manage and control the Muximus Controller and the different Muxlab AVoIP product families as well as third-party products. These options are: Dashboard, Device Manager, Presets & Routing, Locations, Users, MuxControl, Settings, Profile, Languages, Switch to Lite, and Logout. Figure 11

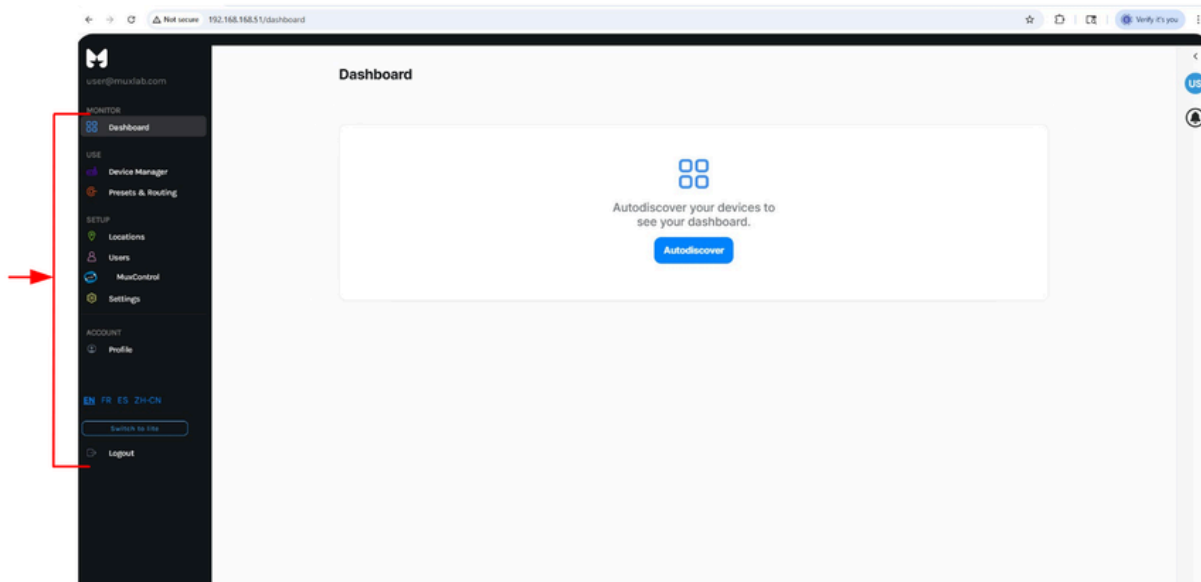


Figure 11

7.1 Dashboard

The Dashboard tab enables the users to find information about the status of the system, they will be able to see in a list all the devices connected to the network showing the name of each of them, the location to which they belong and the connection status (online or offline).

The first time you use the system, the "Auto-Discovery" option will appear, which allows the system to find all MuxLab AVoIP devices connected to the network. Click on "Autodiscover".

Figure 12

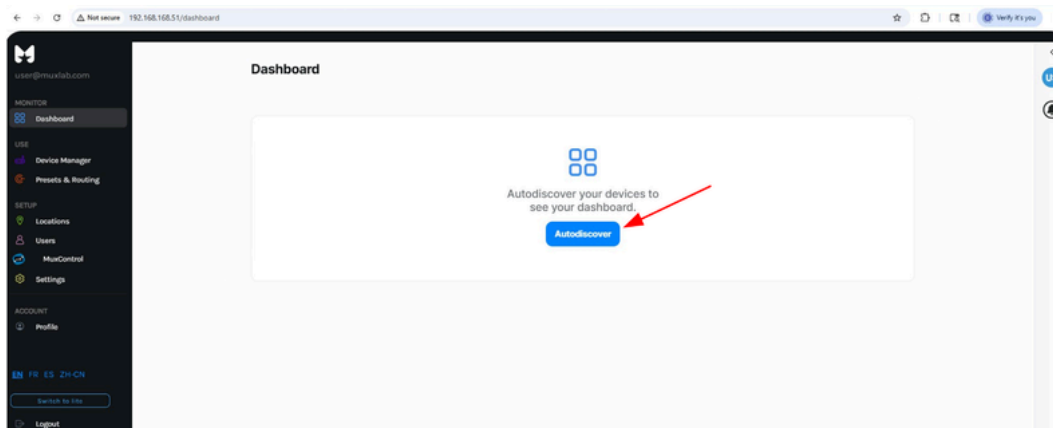


Figure 12

Clicking "Autodiscover" will open a pop-up window where the user must select the family or families of devices connected to the network. After clicking "Auto-Detect" again, the system will begin scanning the network and display the devices it finds. Figure 13

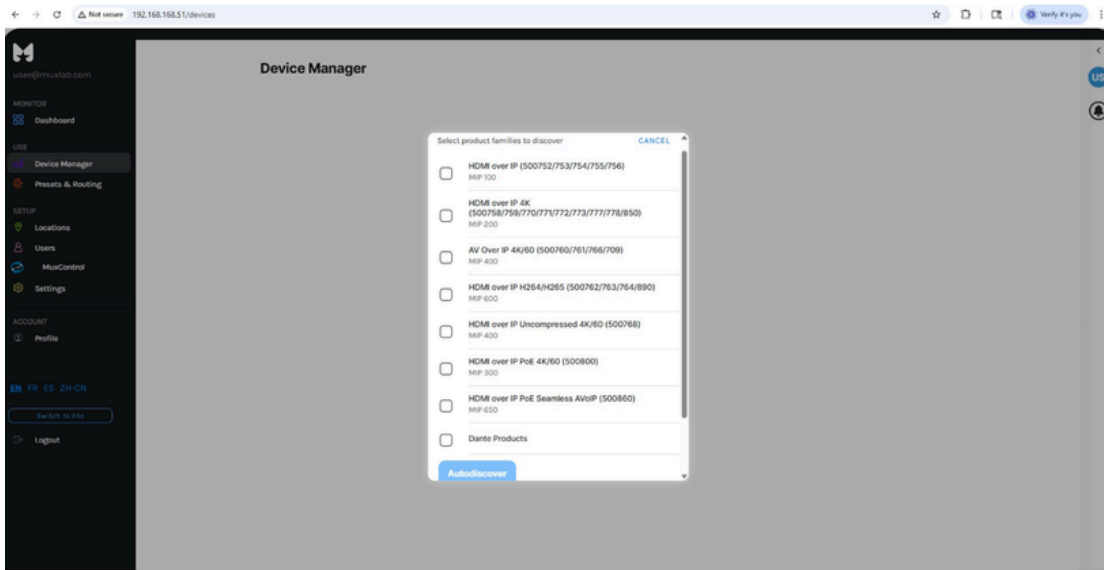


Figure 13

If this is not the first time you have used the system, the Dashboard will display a list of devices connected to the network, as well as their status (online or offline). Figure 14

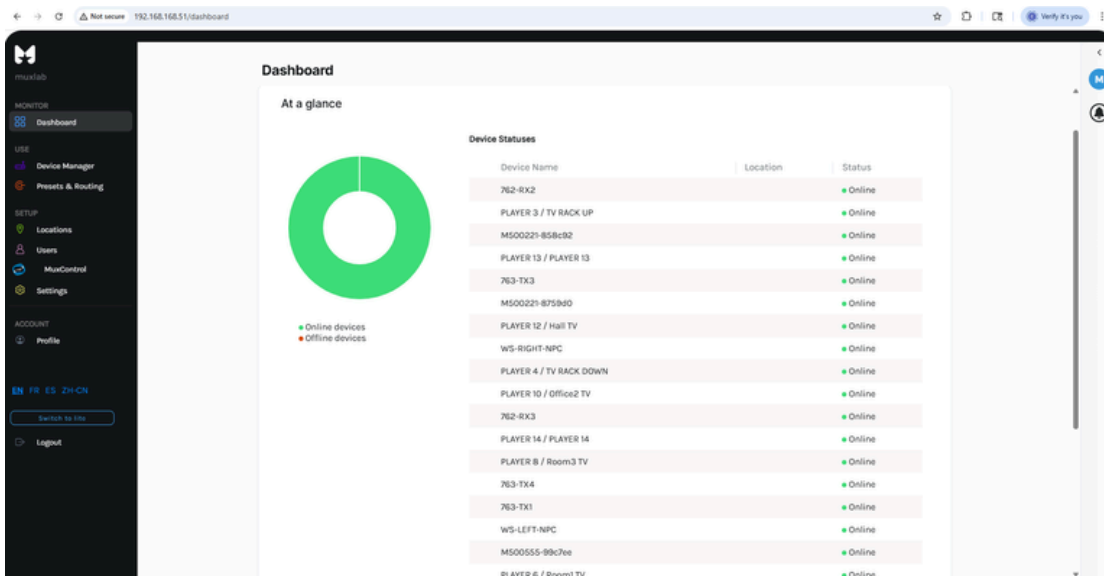


Figure 14

In the Dashboard and on all other pages, the notifications section is located on the right side of the screen. This section is a pop-up window that appears when you hover your mouse over the blue vertical bar on the right side of the screen. There you can see notifications sent by the system, such as device connection and disconnection alerts. Figure 15

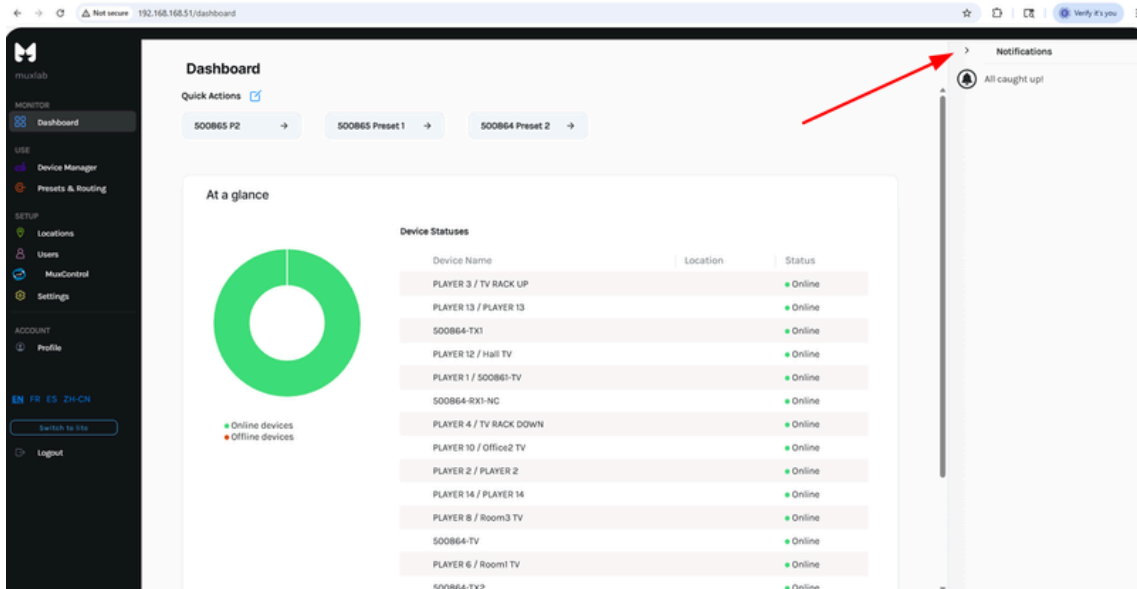


Figure 15

7.2 Device Manager

The Device Manager Tab provides the User with all the options to manage the MuxLab AVoIP and Dante devices connected to the network. The first time the user clicks on the "Device Manager" tab, the system will scan the network for all MuxLab transmitters, receivers, transceivers and all Dante devices if a Dante Domain Manager is configured. On this page we find 22 options to manage devices. Figure 16

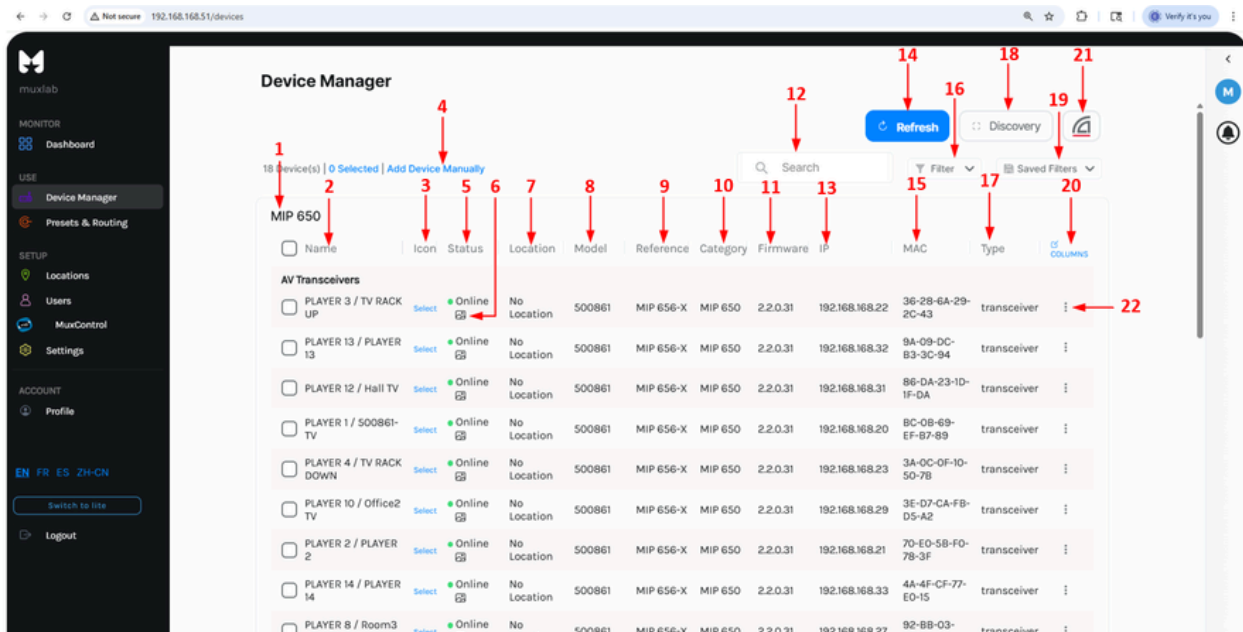


Figure 16

1. Displays the name of the family to which the listed devices belong.
2. Displays the name assigned to each device, the User can assign a name to each device as required.
3. Click the "Select" button to assign a specific icon to the device. After clicking, a pop-up window will appear in which there are some images that you can use or you can download images at will to use as icons, after selecting a specific image or downloading it, click on the Save button to finish the process. Figure 17

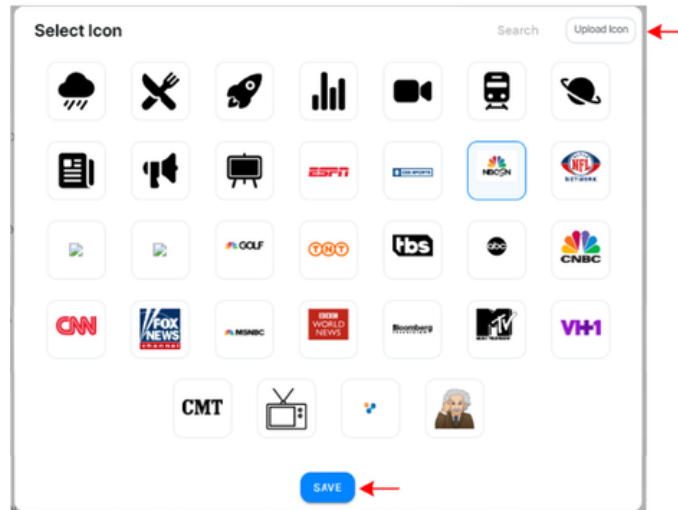


Figure 17

4. Click the "Add Device Manually" button to add a device to the system manually. A pop-up window will appear where you must enter all the information for the device you wish to add (name, IP address, gateway, and model). Once you have entered the information, click the "Save" button to complete the process. Figure 18

Figure 18

5. Shows device status; online (green button) or offline (red button).
6. Clicking this button will open a window showing a preview of the content being processed by the device.
7. Shows the location to which the device has been assigned.
8. Shows the device model.
9. Shows the device reference.
10. Shows the category to which the device belongs.
11. Shows the firmware version of the device.
12. Field to enter keywords to search for devices.
13. Shows IP address of the device.
14. Clicking this button the system will scan the network for all MuxLab transmitters, receivers, transceivers and all Dante devices if a Dante Domain Manager is configured.
15. Shows the MAC address of the device.
16. Clicking this button will display a pop-up window where the User can filter the device search by selecting the device type, category, status or model. Figure 19

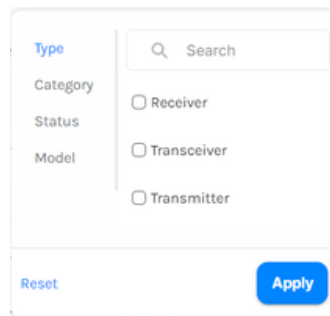


Figure 19

17. Shows the device type.
18. Clicking on this button will display a pop-up window where the User can select the category or categories of the devices they are using and search for them on the network. Figure 20

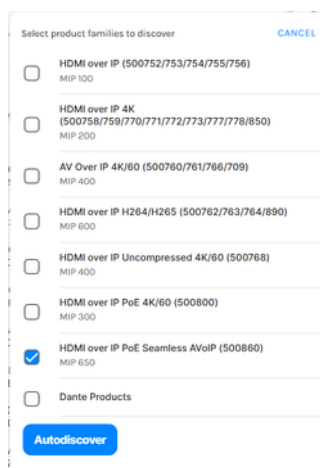
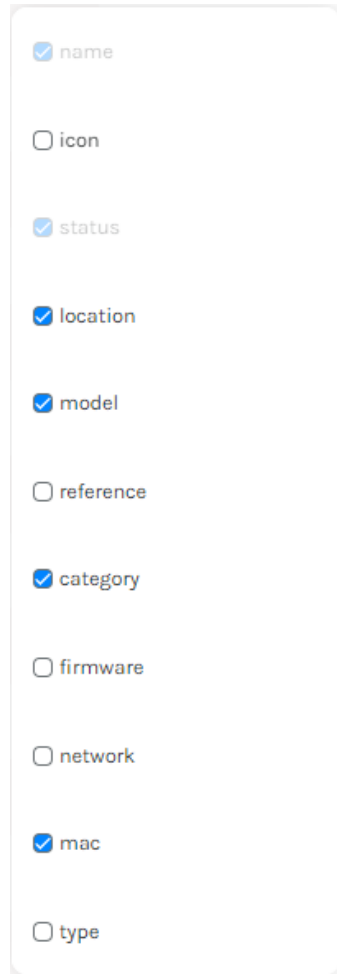


Figure 20

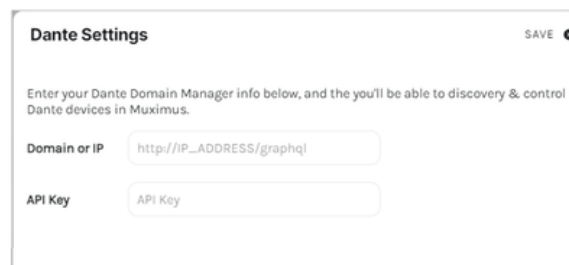
19. Clicking on this button the User will be able to save the filtering criteria by assigning a name to each of them.
20. Clicking this button will display a pop-up window where the user can select what information about the devices they want to appear on the page. Figure 21



- name
- icon
- status
- location
- model
- reference
- category
- firmware
- network
- mac
- type

Figure 21

21. Clicking this button will display a pop-up window where the User can enter their Dante Domain Manager information (Domain and API key) to discover and control Dante devices in Muximus. Figure 22



Dante Settings SAVE

Enter your Dante Domain Manager info below, and the you'll be able to discovery & control Dante devices in Muximus.

Domain or IP

API Key

Figure 22

- 22.** When you click on the three dots, a pop-up window will appear showing six different options (a. Device Settings, b. Firmware Update, c. Blink Led d. Reboot, e. Copy ID and f. Delete) Figure 23.

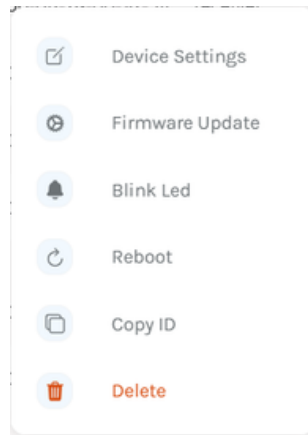


Figure 23

a.) Device Settings: This option allows the user to access all device setting options. The available setting options will vary depending on the device category. Among the device setting options we have: TX/RX, Info, Video (Encoder/Decoder), Audio, Preview, RS232 (Serial), IR/GPIO, Relay/USB, and Screen.

1. TX/RX: This option allows the User to define whether a Transceiver will be used as a Transmitter, Receiver, or both. The user can also assign a name to the transmitter and another to the receiver. This option is only available for the MIP650 category. Figure 24.

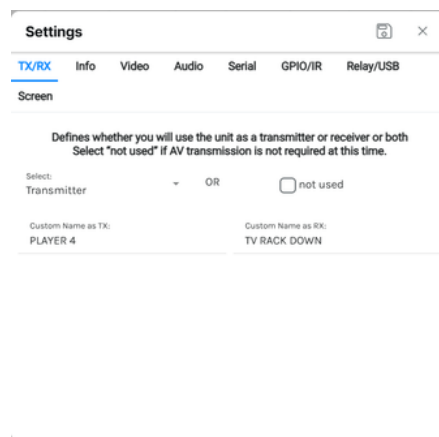


Figure 24

2. Info: This option displays important information about the device, such as the model and MAC address, among other data. It also allows you to change the IP address. Figure 25.

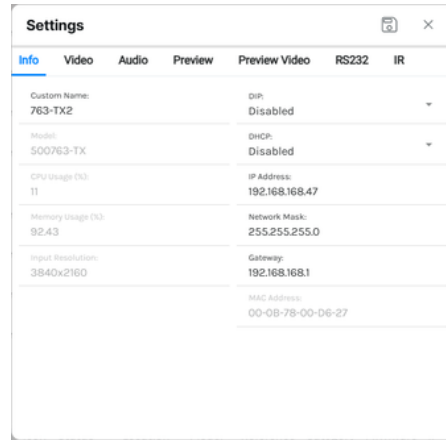


Figure 25

3. Video (Encoder/Decoder) : This option allows the User to configure all video settings, including resolution, frame rate, bitrate, and HDCP compatibility, among others. The available video configuration options vary depending on the device category. Figure 26.

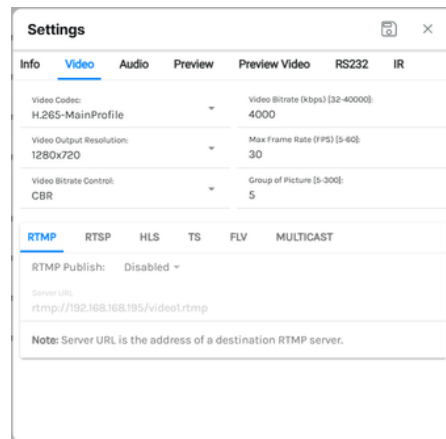


Figure 26

4. Audio : This option allows the User to configure all audio settings, including audio input, audio output, audio codec, and audio bitrate, among others. The available audio configuration options vary depending on the device category. Figure 27.

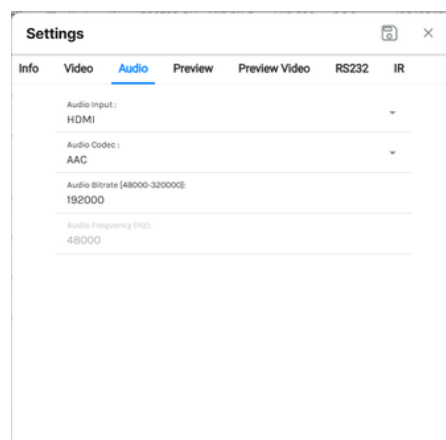


Figure 27

5. Preview: This option allows the User to view the content that the device is streaming or receiving, as the case may be. This option is only available in some categories. Figure 28.

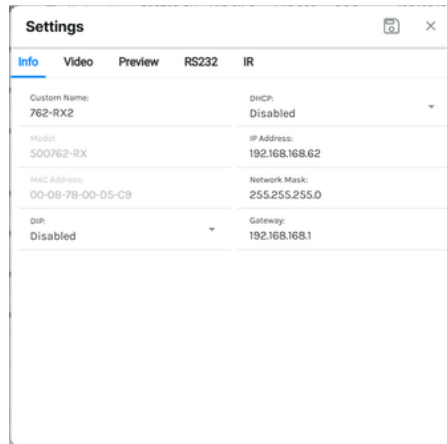


Figure 28

6. RS232 (Serial) : This option allows the user to configure the device's RS232 and/or RS485 port as needed. Figure 29.

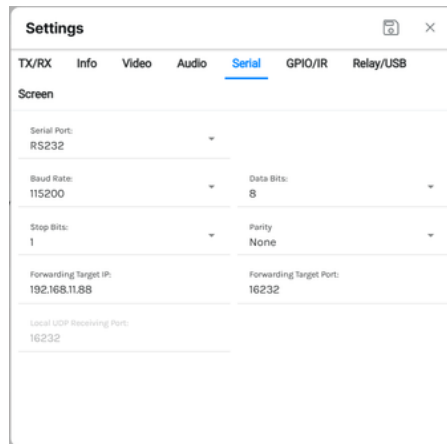


Figure 29

7. IR : This option allows the user to configure the device's IR and/or GPIO port as needed . Figure 30.

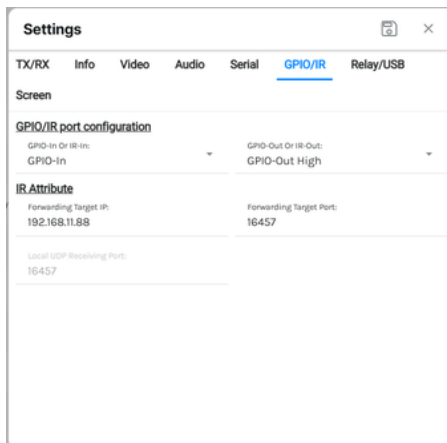


Figure 30

8. Relay/USB: This option allows the User to configure the device's Relay and/or USB port as needed. This option is only available for the MIP650 category. Figure 31.

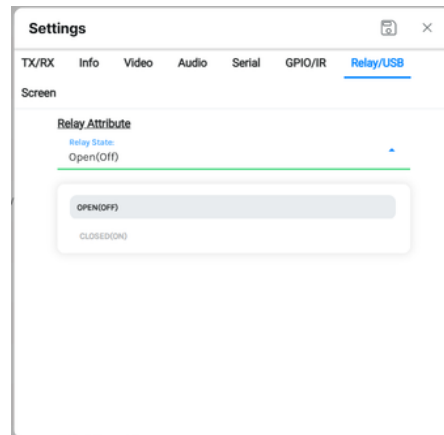


Figure 31

9. Screen : This option allows the user to define an image as an alternative video output when there is no HDMI signal or when the link between the transmitter and receiver is interrupted. This option is only available for the MIP650 category. Figure 32.

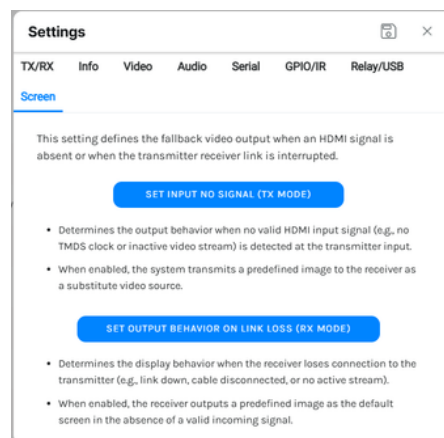


Figure 32

b.) Firmware Update: This option allows the user to update the firmware for MuxLab transmitters and receivers.

The User first selects the transmitter or receiver whose firmware needs to be updated and then clicks the UPDATE button to choose the firmware update file to be loaded onto the device in question. Once the file is selected, the firmware will be updated automatically. This option is only available for some categories.

Figure 33

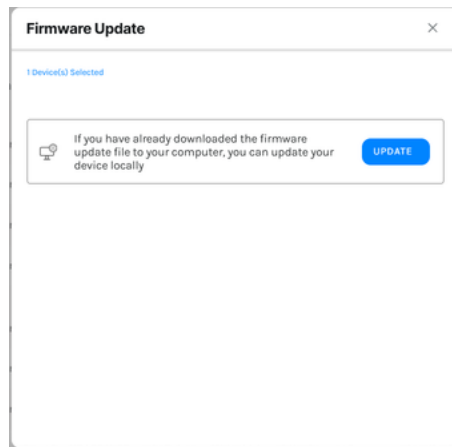


Figure 33

Note: Please note that the firmware upgrade option is not available for the MIP650.

c.) Blink Led: This option allows the user to identify the device by making an LED blink. This option is only available for some categories

d.) Reboot: This option allows the user to reboot the device.

e.) Copy ID: This option allows the user to copy the device ID. The device ID is used in the 500813 API to control the device from any control system.

f.) Delete: This option allows the user to delete the device.

7.3 Presets & Routing

The Presets & Routing Tab enables the user to:

- Establish connections between MuxLab Transmitters, Receivers and Transceivers,
- Make connections between Dante devices, if a Dante Domain Manager is configured.
- Create, edit or delete Presets for previous options.
- Create video walls.
- Create TV matrix

In the “Presets & Routing” Tab we have nine options. Figure 34

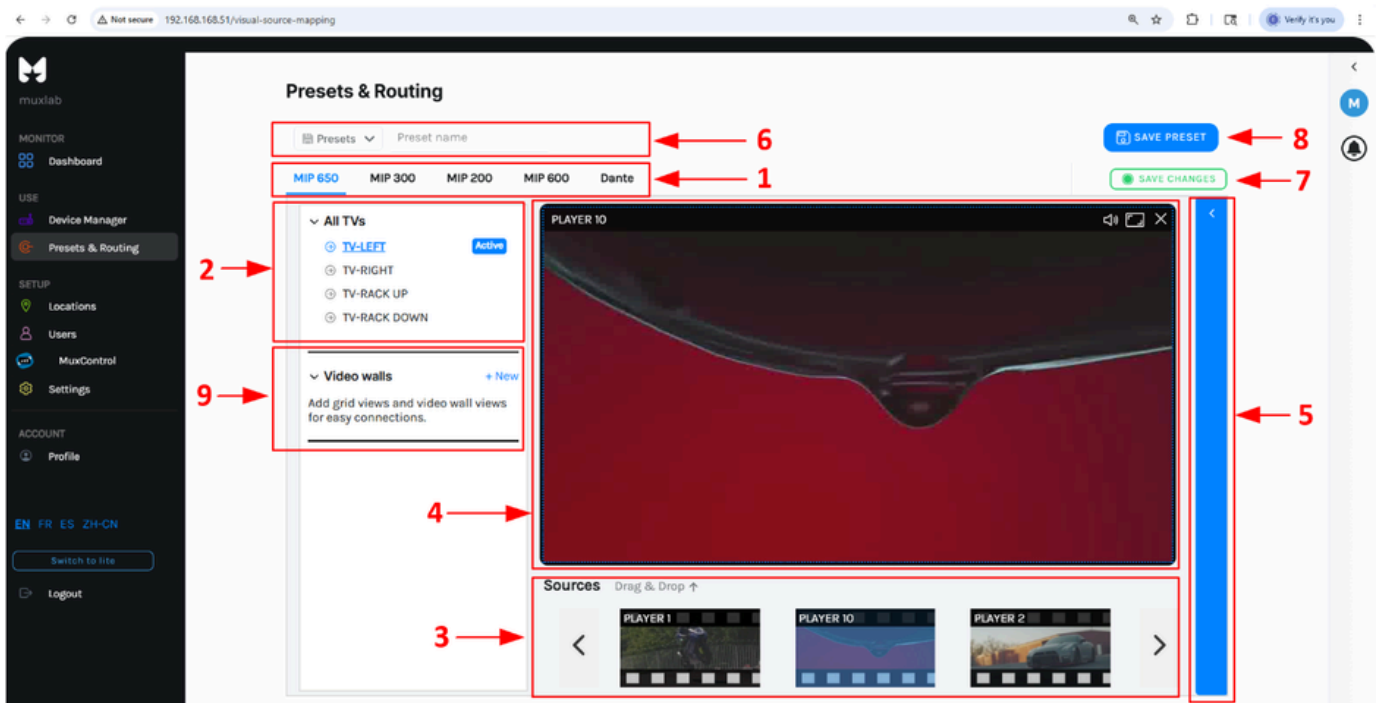


Figure 34

1. Here, the system will display a list of MuxLab product categories that have been connected to the network. The user must select a product category to begin establishing connections between devices within that category. They will also be able to create presets and, if the category allows it, multiviews and video walls.
2. **All TVs:** Here, the system will display a list of receivers (TV's) that belong to the previously selected category.
3. **Sources:** Here, the system will display a preview of all transmitters (video sources) belonging to the previously selected category. If the system has more than three transmitters (video sources), the User can use the arrows located on either side of the previews to navigate between all the transmitters.

4. This area represents the television that has been selected from the "All TVs".

The way to send content to televisions is:

- Select the TV you want to send the content to from the "All TVs" list.
- Select the content you want to send to the TV from the previews shown in the "Sources" section.
- Drag and drop the selected content into the area that represents the TV.

5. Hovering your mouse pointer over this blue line will open a window with 14 options that will allow you to manage the content sent to the televisions. These options are: Overlay, Replace, Custom, Absorb, No Grid, Single, 2X2, All Grid, Set Window, To Bottom, Push All, Clear Matrix, Scroll Text, and Background. Please note that not all options are available for all categories. Figure 35.

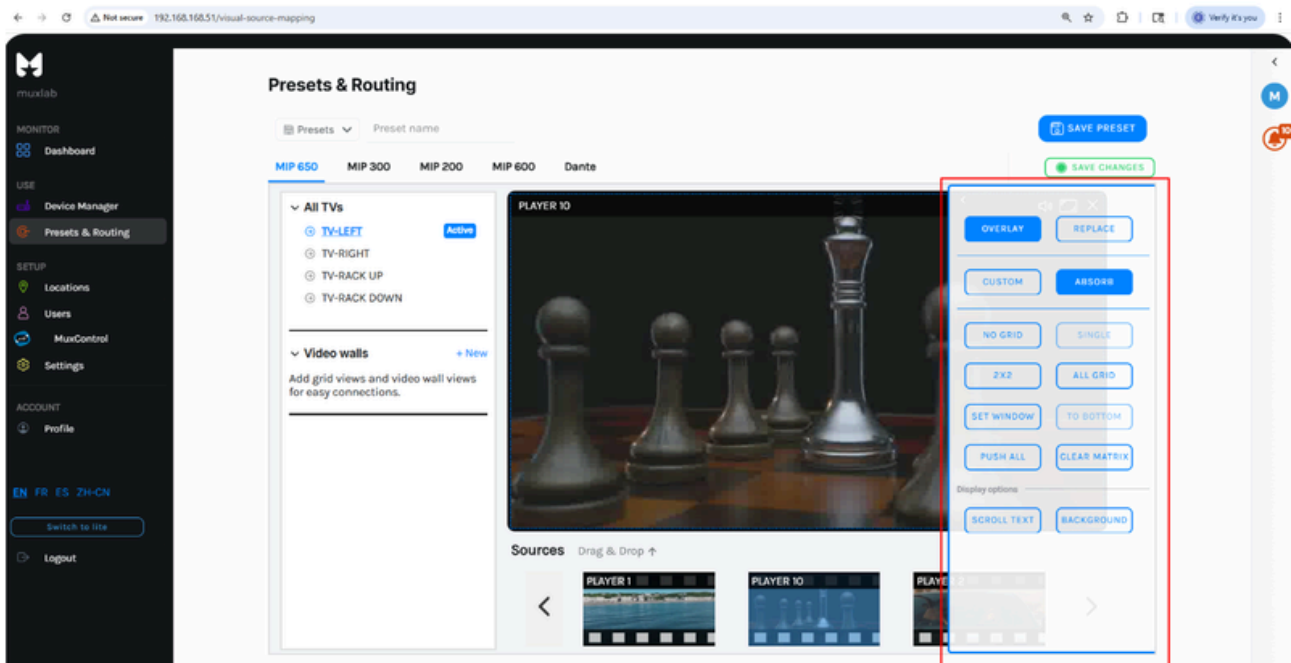


Figure 35

OVERLAY: By selecting this option and having also selected the "Custom" option, the user, by dragging and dropping content, will be able to overlap it and create multiple views. Please note that this option is only available for product categories that support multiviews.

REPLACE: By selecting this option and having also selected the "Custom" option, the user, by dragging and dropping content, will be able to replace one content with another. Please note that this option is only available for product categories that support multiviews.

CUSTOM: By selecting this option, the user will be able to create multi views with custom layouts. Please note that this option is only available for product categories that support multi-views.

ABSORB: By selecting this option, the system will display any content dragged to the TV in full screen. Please note that this option is only available for product categories that support multi-view.

NO GRID: Selecting this option will remove the grid previously created in the area representing the television. Please note that this option is only available for product categories that support multi-view.

SINGLE: By selecting this option, and if a video wall has been configured, the system will display a grid in which each square represents each of the televisions that are part of that video wall.

2X2: By selecting this option, the system will create a 2x2 grid in the area representing the television, allowing you to create a multi-view with four contents. Please note that this option is only available for product categories that support multi-view.

ALL GRID: By selecting this option, the system will display a pop-up window in which the User can create a custom grid or choose a grid from those that are predefined.. Please note that this option is only available for product categories that support multi-view. Figure 36

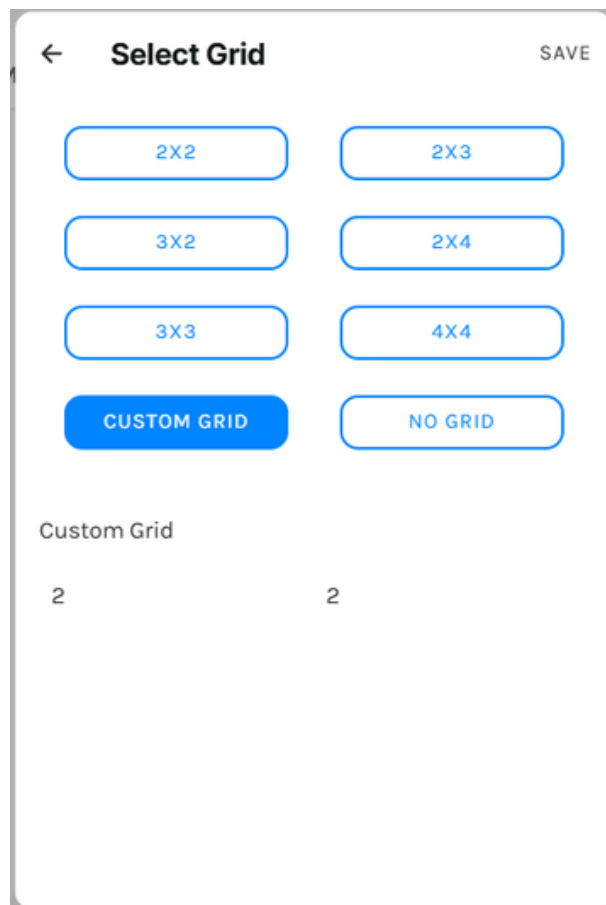


Figure 36

SET WINDOW: Selecting this option, the system will display a pop-up window where the user can create or resize a content window by entering the desired width and height in pixels, as well as the (X:Y) position where the window should begin. Note that this option is only available for product categories that support multi-views. Figure 37

The screenshot shows a mobile application interface for setting window parameters. At the top, there is a navigation bar with a back arrow on the left, the title 'Set window' in the center, and a 'SAVE' button on the right. Below the navigation bar is a dropdown menu labeled 'Modify'. The main content area is divided into two columns. The left column contains 'Width (px):' with the value '518' and 'Position X (px):' with the value '395'. The right column contains 'Height (px):' with the value '319' and 'Position Y (px):' with the value '424'.

Figure 37

TO BOTTOM: By selecting this option, if you have a multi-view with several overlapping windows, the top window will be sent to the bottom of all windows.. Please note that this option is only available for product categories that support multi-view.

PUSH ALL: By selecting this option, the system will send the content selected in the "Sources" preview section to all TVs in the "All TVs" section.

CLEAR MATRIX: Selecting this option will delete the content on the television.

SCROLL TEXT: Selecting this option will open a pop-up window where the user can edit text that will scroll across the TV screen. In this window, the User must type the text, define the font size and color, the position where it will appear, and the speed and direction of its movement. Please note that this option is only available for the MIP650 category. Figure 38

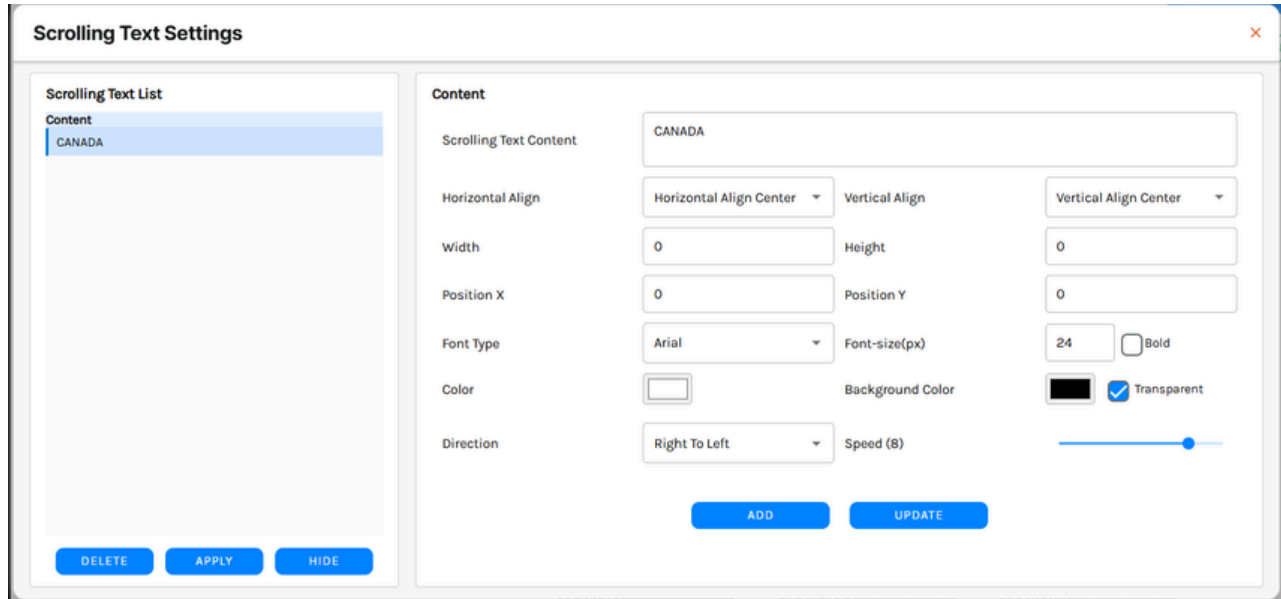


Figure 38

BACKGROUND: Selecting this option will open a pop-up window where the User can choose an image to use as the TV's background. The system supports PNG and JPG images. From this window, the User can also remove a TV background. Please note that this option is only available for the MIP650 model. Figure 39

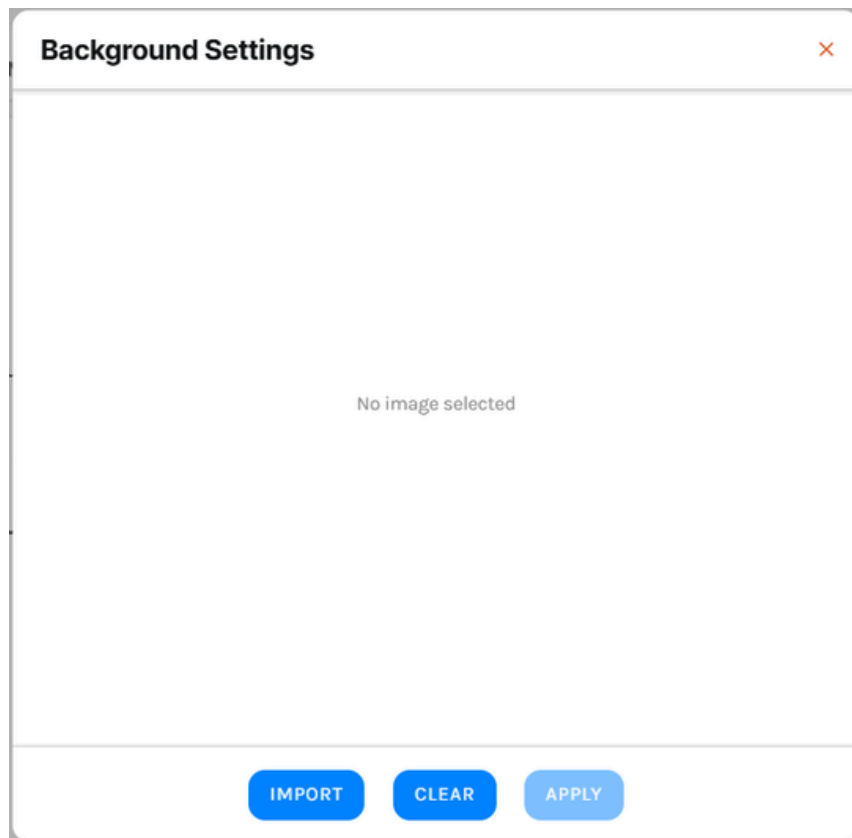


Figure 39

6. Clicking on the presets section will display a list of existing presets. Each preset offers options to recall it, copy its ID (in case the User needs to obtain it from a control system), and delete it. Note that only presets associated with the selected TV will be displayed. From here the User also has the option to create a new preset. Once the "New preset" option is selected, the User must assign it a name, establish the connections that the preset should contain, and then click on the "Save changes" and "Save preset" buttons. Figure 40.

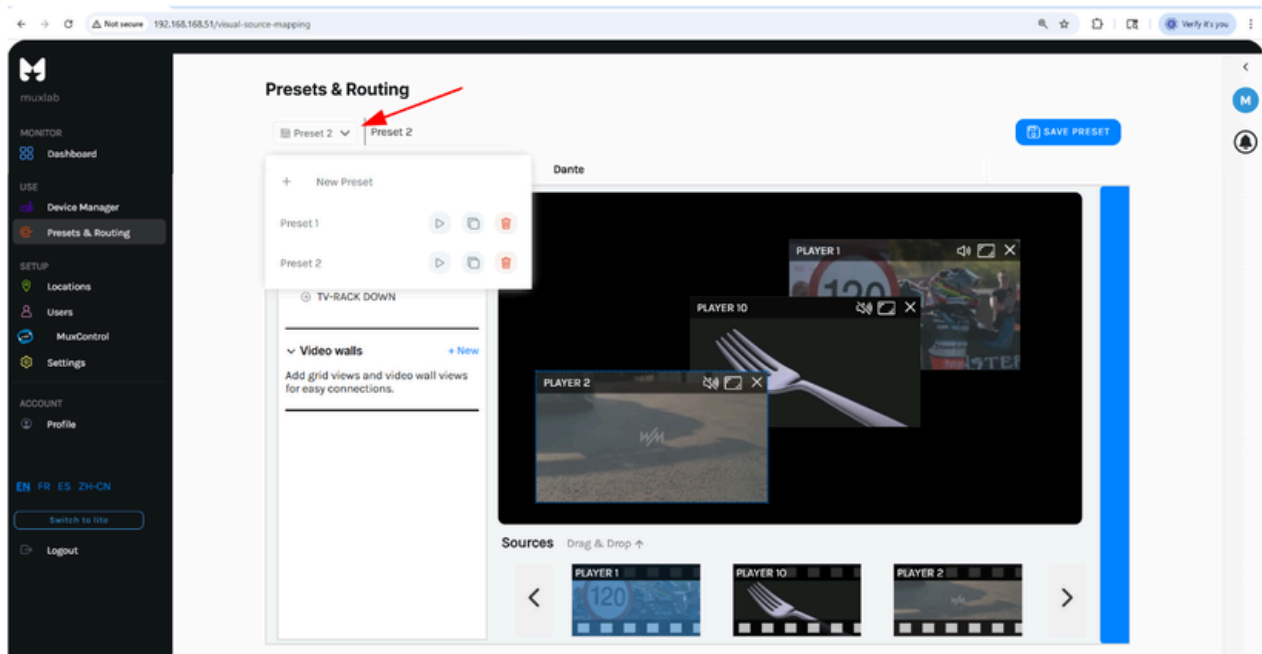


Figure 40

7. **Save Changes:** The system allows you to create combined presets, meaning they contain modifications made on multiple TVs. When the User needs to include a change or connection made on one TV in a combined preset, they must press the "SAVE CHANGES" button.

8. **Save Preset:** Once the user has finished making the changes they want to include in a preset, they should click Save Preset to save the changes.

9. **Video Walls:** Clicking on this section will open a pop-up window that gives the User the option to create video walls or grid views that will allow them to assign content to multiple TVs. Figure 41.

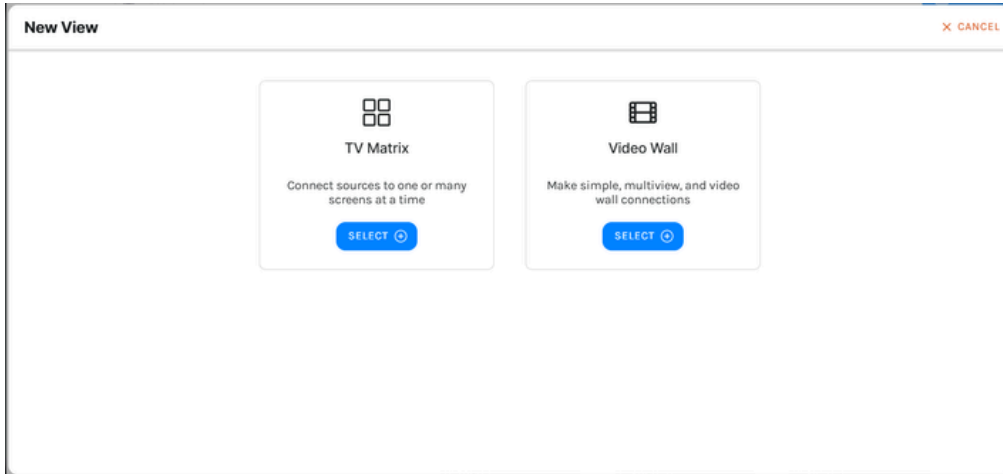


Figure 41

Video Wall: To begin creating a Video Wall, click the "Select" button. After clicking "Select," a pop-up window will appear with six configuration options that will allow you to define your video wall. Figure 42

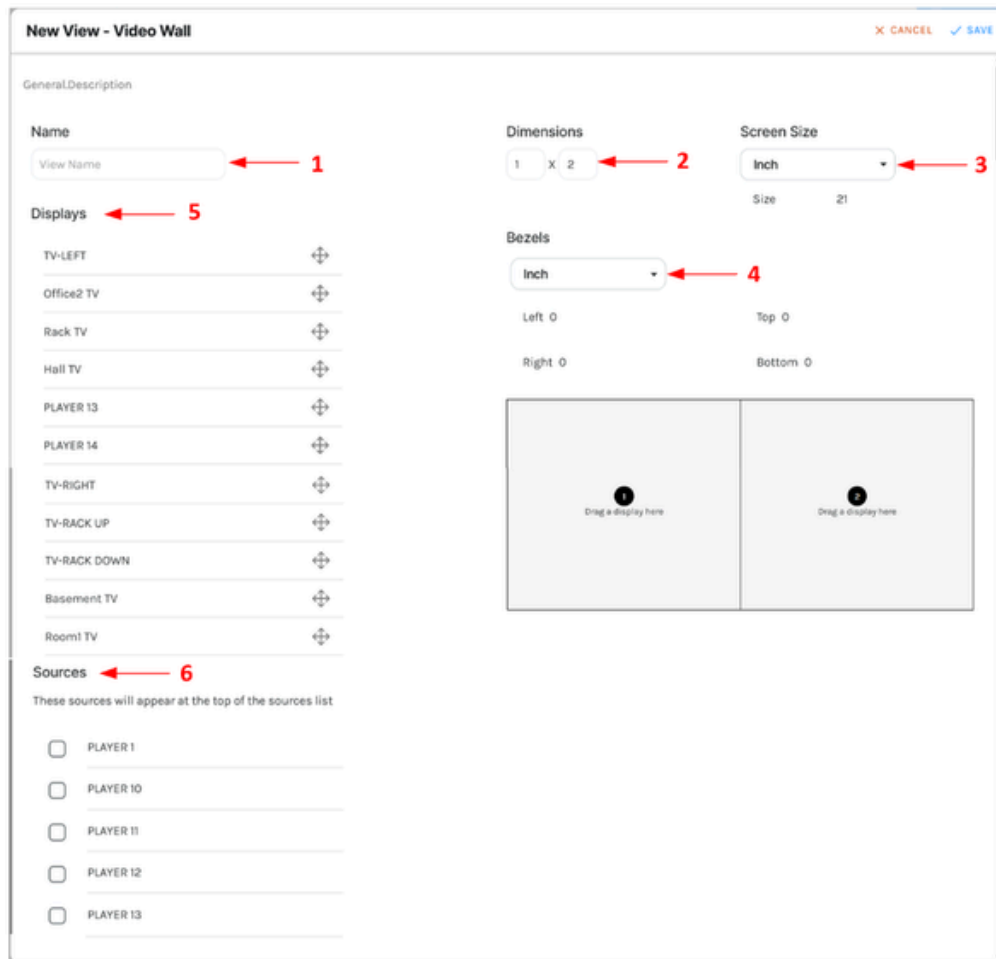


Figure 42

1. **Name:** Enter here the name you wish to assign to the Video Wall.
2. **Dimensions:** Enter here the number of rows and columns that the Video Wall will have.
3. **Screen Size:** Enter the dimensions of the televisions here, either in inches, centimeters or millimeters.
4. **Bezels:** Enter the dimensions of the TV bezels here, either in inches, centimeters, or millimeters.
5. **Displays:** From the list of displays, drag each of the corresponding televisions into the grid on the right.
6. **Sources:** From the list of sources, select the video sources you want to be available for the video wall.

Once the setup is complete, click "Save" to save the settings.

TV Matrix: To begin creating a TV Matrix, click the "Select" button. After clicking "Select," a pop-up window will appear with four configuration options that will allow you to define your View-Matrix. Figure 43

Figure 43

1. **Name:** Enter here the name you wish to assign to the View - Matrix.
2. **Dimensions:** Enter here the number of rows and columns that the View - Matrix will have.
3. **Displays:** From the list of displays, drag each of the corresponding televisions into the grid on the right.
4. **Sources:** From the list of sources, select the video sources you want to be available for the View - Matrix.

Once the setup is complete, click "Save" to save the settings.

7.4 Locations

The Locations Tab offers the User the possibility to create locations and assign devices to each location to manage large installations in a simple and orderly manner. The system will also give the option to create sub-locations within locations. To start creating a new location, click on the "New Location" button. Figure 44

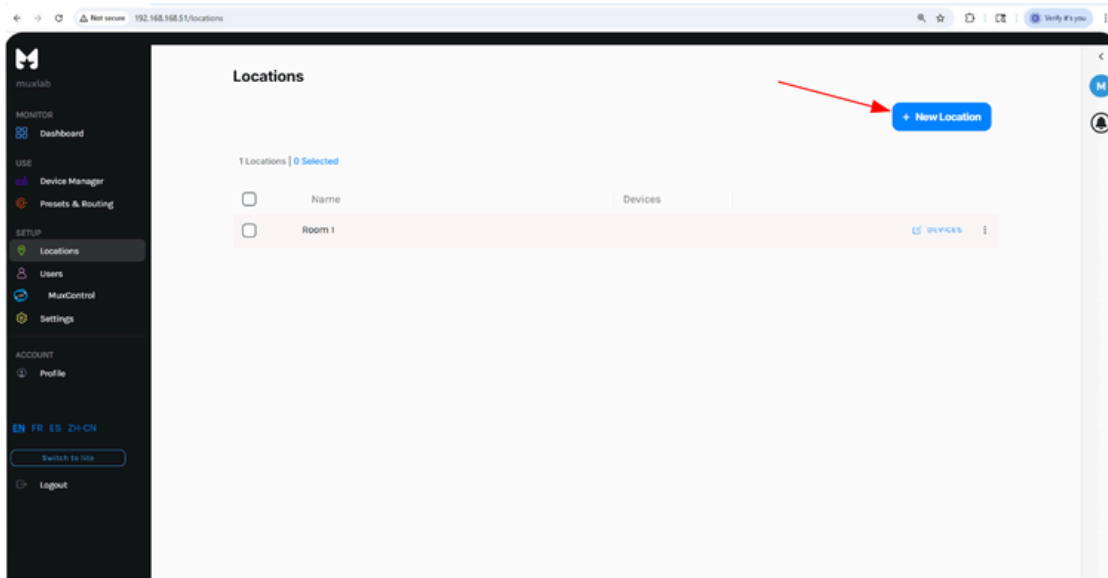


Figure 44

After clicking on the "New Location" button, a pop-up window will appear asking the user to give a name to the new location. Once the location is created, the user can assign the devices they want to belong to that location by clicking on the "DEVICES" button and selecting the devices from the list that will appear after clicking the button. Figure 45

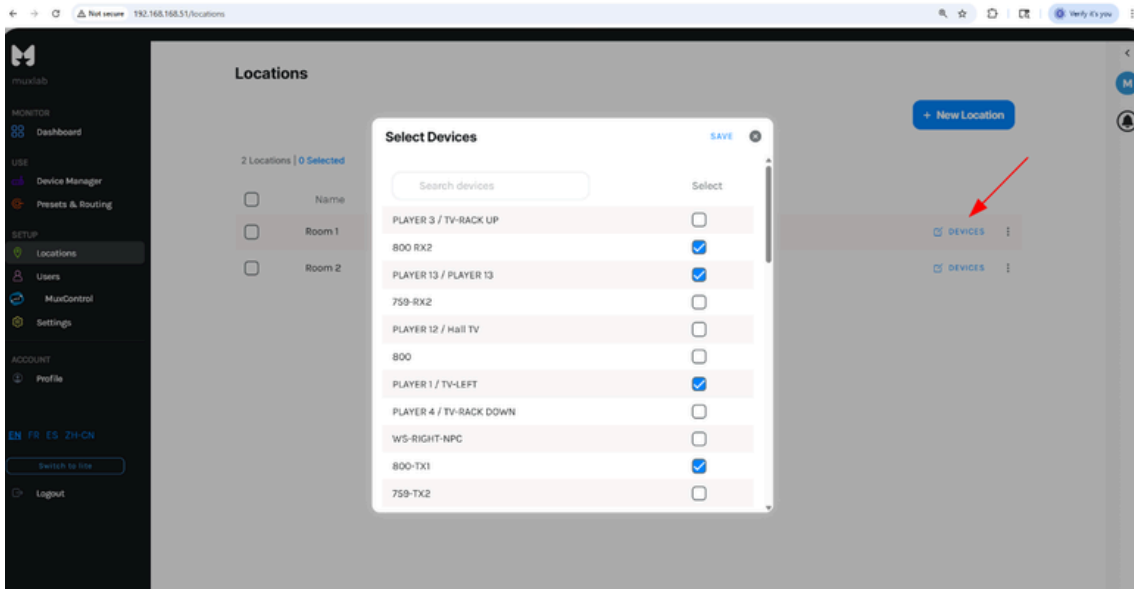


Figure 45

7.5 Users

The Users tab allows the User to manage the user accounts and the roles that will be assigned to each user account.

In this page we have two main options (Users and Roles). Figure 46

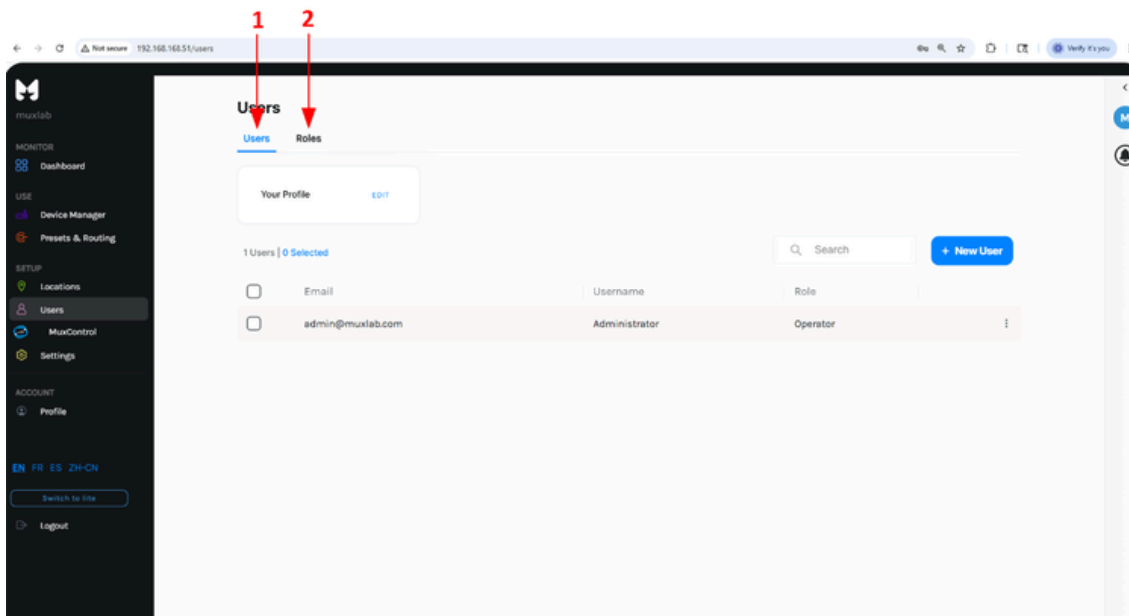


Figure 46

1. When you click on this option, the system will show you information about the user accounts already created, allowing you to edit or delete them, and will also give you the option to create new user accounts.

Here you will find seven different options.. Figure 47

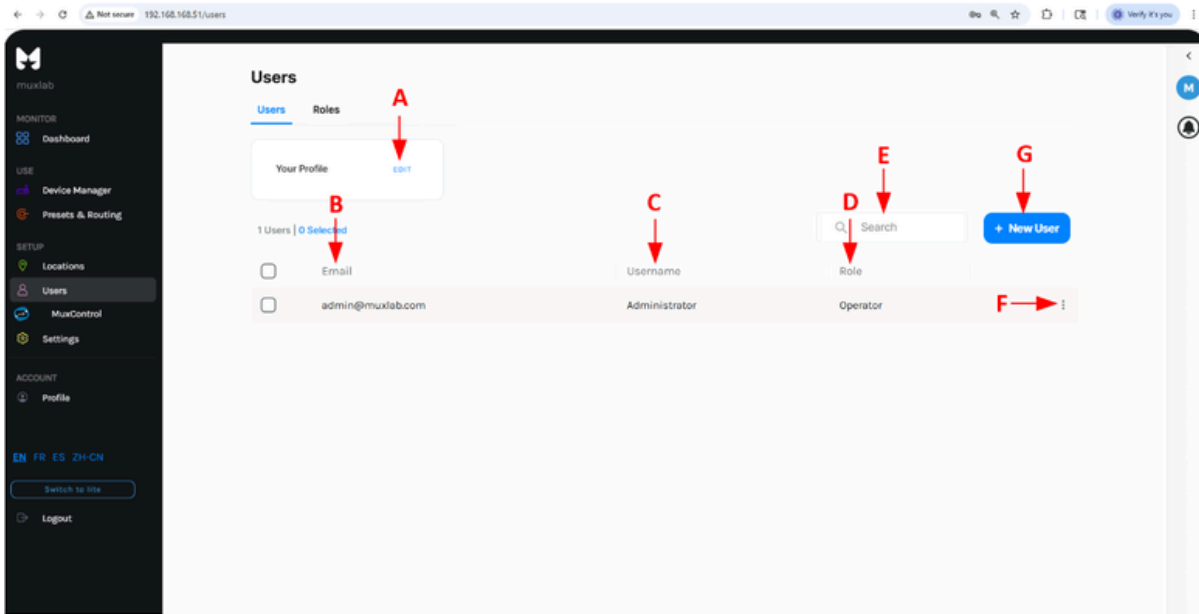



Figure 47

- A.) EDIT:** By clicking the "EDIT" button, the User will be able to edit the user profile with which logged in.
- B.) Email:** Shows the email with which each user account was created.
- C.) Username:** Displays the username for each user account.
- D.) Role:** Display the Role for each user account.
- E.) Search:** Field to enter keywords and filter user account searches.
- F.) **: Click this button if you want to edit or delete a specific user account.
- G.) New User:** Click the "New User" button if you need to create a new user account. After clicking the "New User" button, a new pop-up window will appear asking the user to: 1.) Enter the email address that will be linked to the new user account, 2.) Enter the name that will identify the new user account, 3.) Enter the password for the new user account, 4.) Select from the list the role that the new user account will perform, and 5.) Click the "SAVE" button to save the new user account information. Figure 48

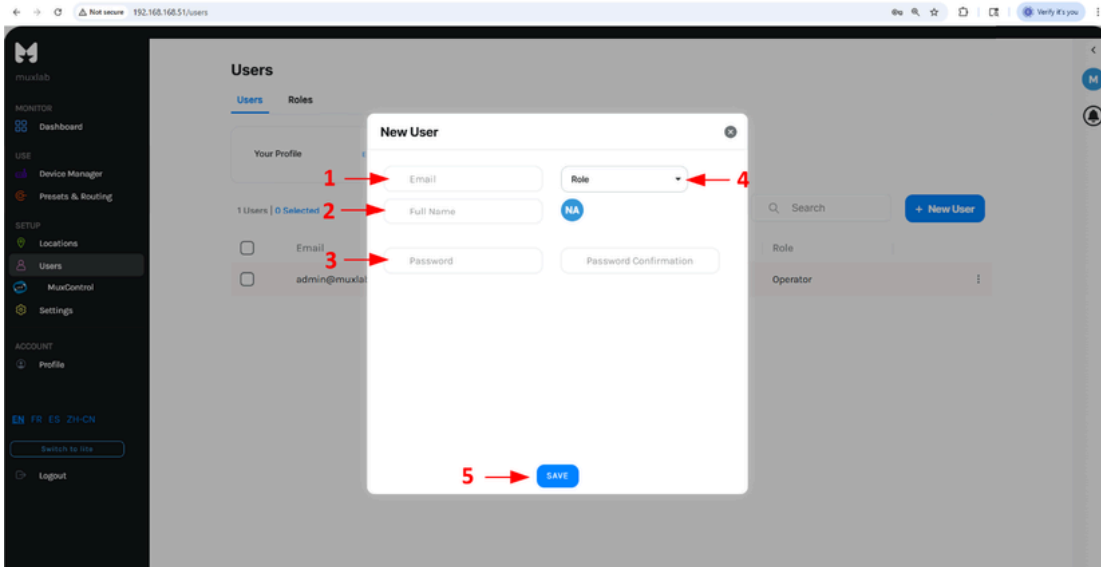


Figure 48

- When you click on this option, the system will show you information about the Roles already created, allowing you to edit or delete them, and will also give you the option to create new roles. Here you will find four different options. Figure 49

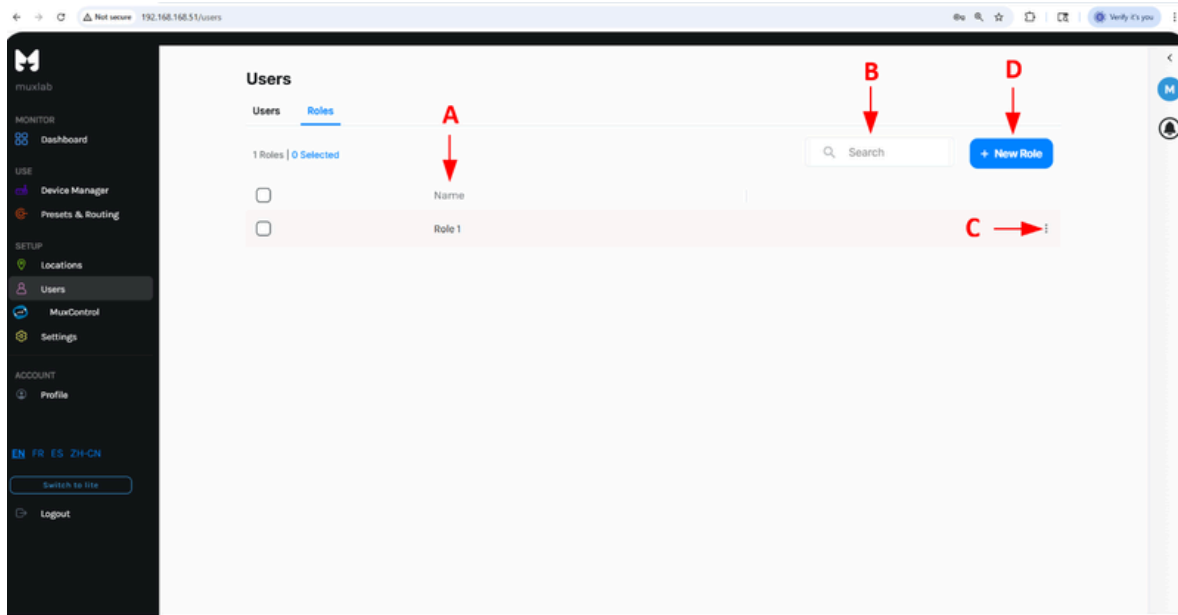


Figure 49

- A.)** Name: Displays the name given to each of the roles.
- B.)** Search: Field to enter keywords and filter role search.
- C.)** ⋮: Click this button if you want to edit or delete a role.

D.) New Role: Click the "New Role" button if you need to create a new Role. After clicking the "New Role" button, a new pop-up window will appear asking the user to: 1.) Enter the name of the new Role, 2.) Select the permissions the new role will have to manage locations, presets, devices, users, and settings, and 3.) Click the "SAVE" button to save the new Role information. Figure 50

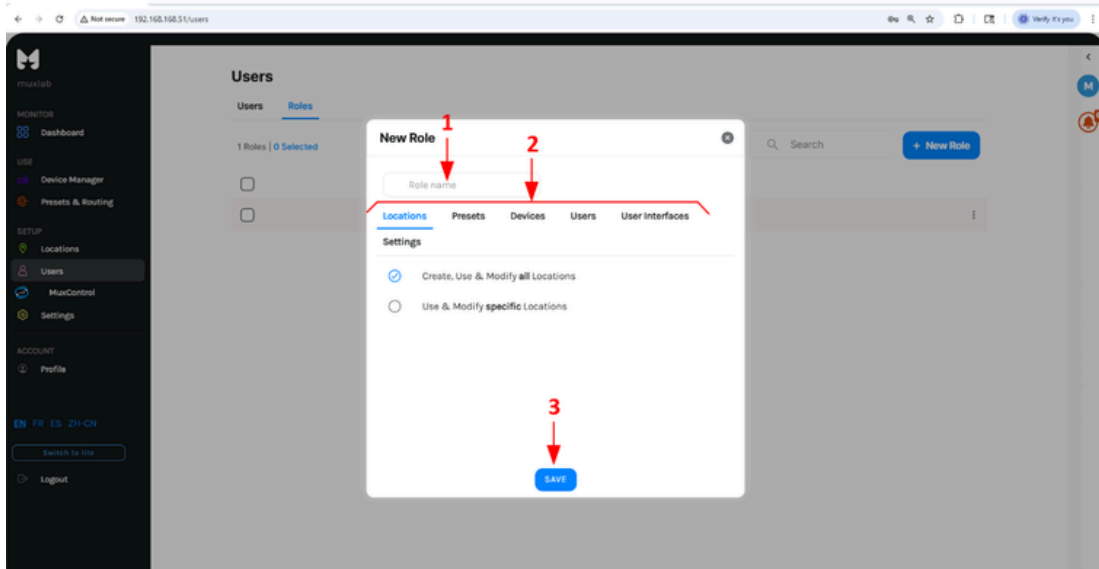


Figure 50

7.6 MuxControl

The MuxControl tab offers the User all the options to create and configure ports, create commands (RS232, IR, CEC, Relay) that can be sent through Muxlab transmitters, receivers, and transceivers, create HTTP, TCP and UDP commands to send directly from the Muxlab network controller, as well as create macros, events and user interfaces so that the User can control both Muxlab devices and third-party devices, such as TVs, set-top boxes, amplifiers, etc. In the MuxControl Tab we have seven options (Spaces, Ports & Endpoints, Commands, Flags, Events, Macros, and User Interfaces).

7.6.1 Spaces

The Spaces tab allows Users to create spaces and then assign commands, ports, and endpoints to each one for easy and organized management of large installations. The system also allows the creation of subspaces within existing spaces. By default, the system includes a space called Global, to which all commands, ports, and endpoints will be automatically assigned if the user does not create other spaces. To create a new space, click the "New Space" button. A pop-up window will appear where the User must enter the name for the space.. Figure 51

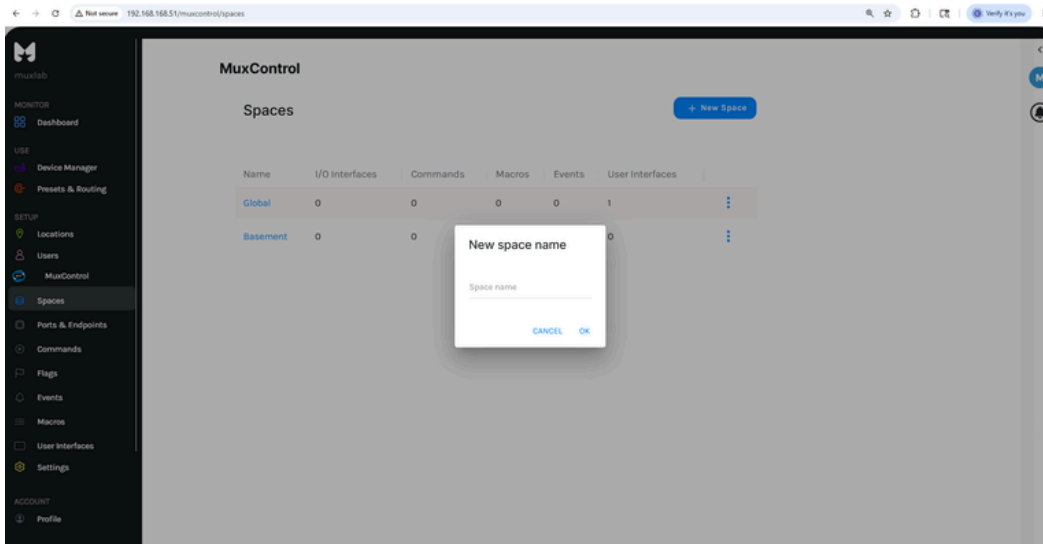


Figure 51

7.6.2 Ports & Endpoints

The Ports & Endpoints tab allows Users to create I/O Ports and IP Endpoints. It should be noted that the I/O Ports used by the system to control third-party devices are those possessed by the Transmitters, Receivers or Transceivers belonging to the different Muxlab AVoIP families; these ports can be RS232, RS485, IR or Relay and will be available depending on the AVoIP device.

To create a new I/O Ports, click the "New I/O Port" button. Figure 52

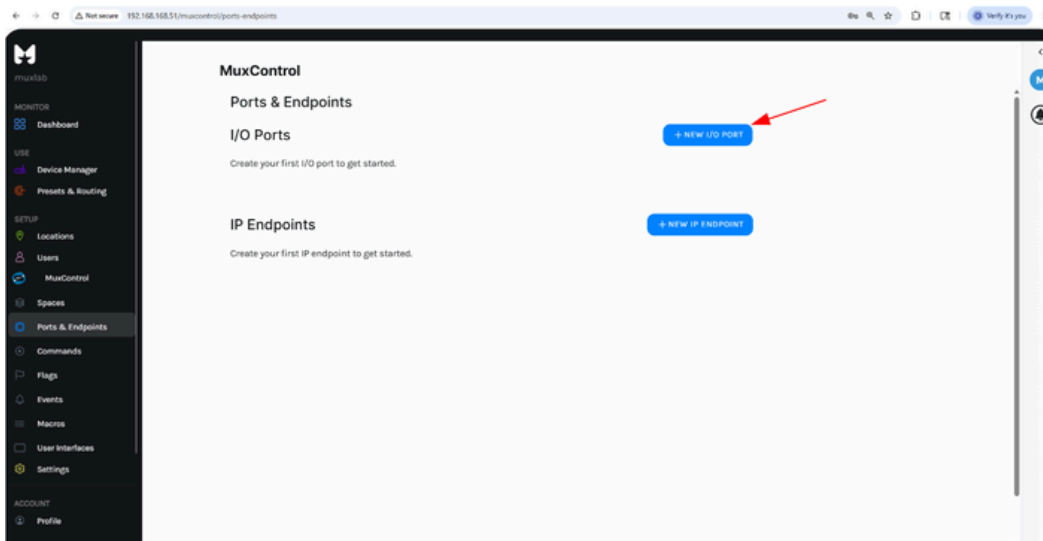


Figure 52

After clicking the "New I/O Port" button, a new page will appear where the user must assign a name to the new I/O port, assign it to a space if desired, select the device (transmitter, receiver or transceiver) from the list, select the port to use from the previously selected device and configure the selected port. Figure 53

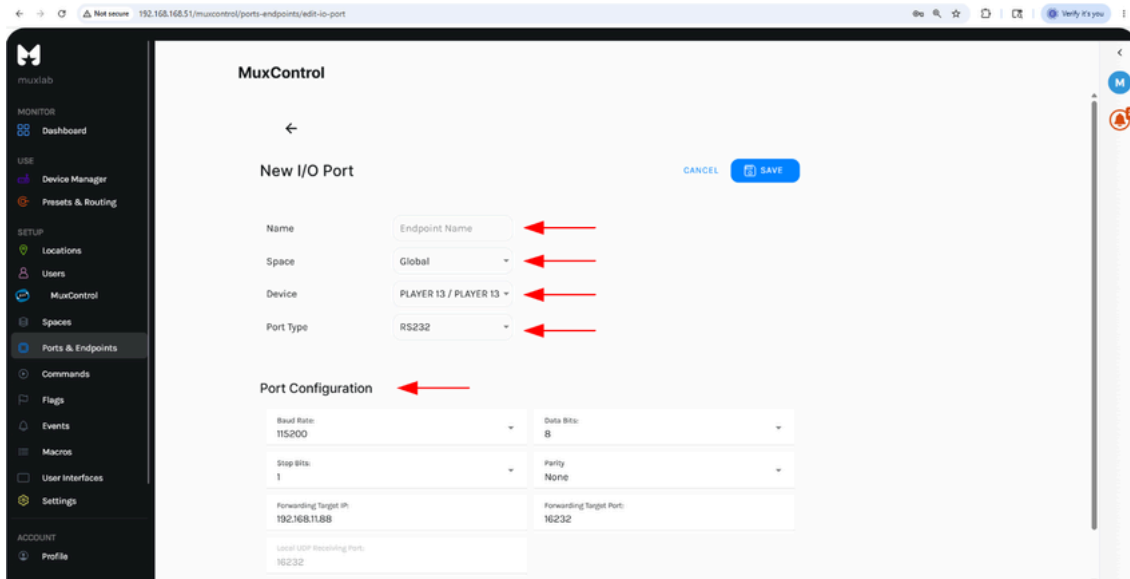


Figure 53

To create a new IP Endpoint, click the "New IP Endpoints" button. Figure 54

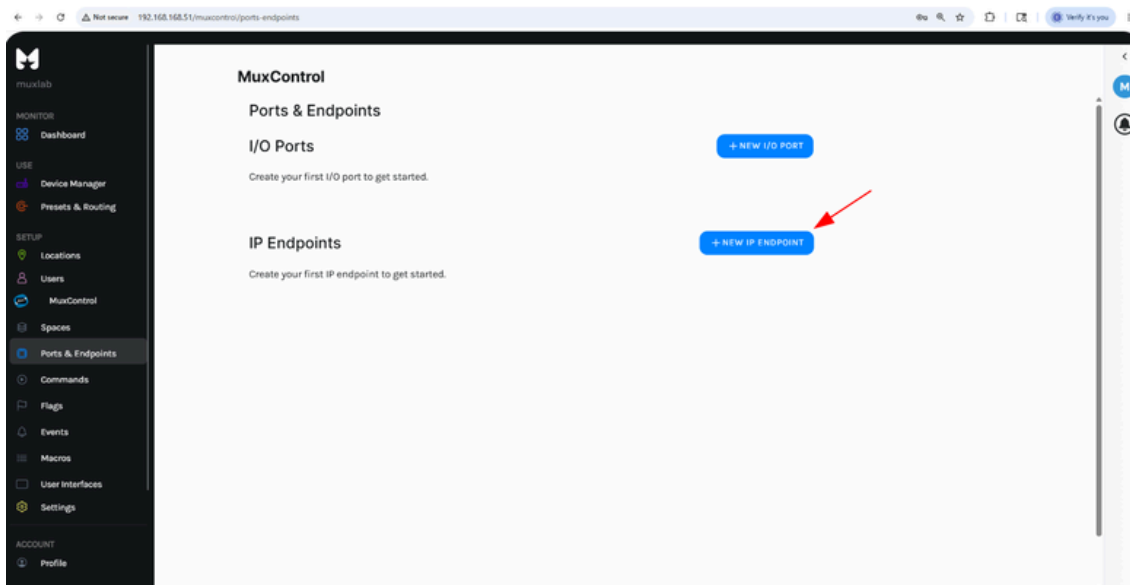


Figure 54

After clicking the "New IP Endpoint" button, a new page will appear where the user must assign a name to the new IP Endpoint, assign it to a space if desired, and enter the IP address of the new Endpoint. Figure 55

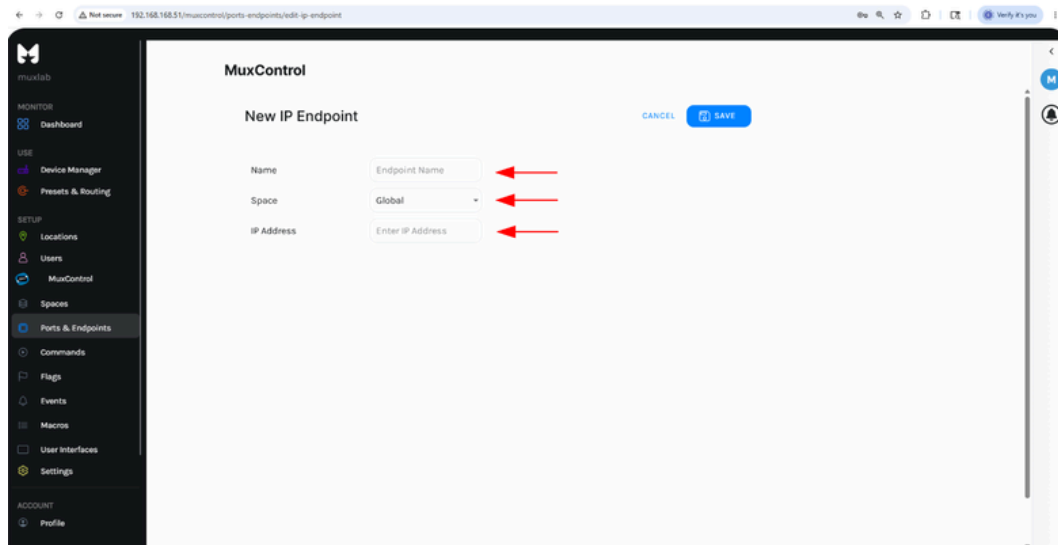


Figure 55

7.6.3 Commands

The Commands tab allows Users to create RS232, RS485, IR, TCP, UDP, and HTTP commands.

7.6.3.1 RS232 Commands

To create a new RS232 command, select the RS232 option from the commands list, and then click the "New RS232 Command" button. Figure 56

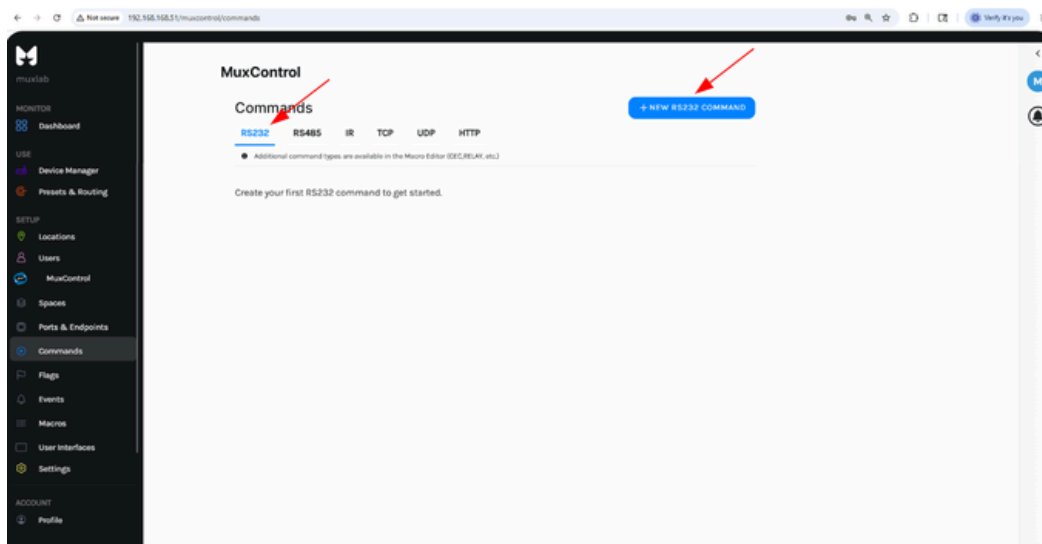


Figure 56

After clicking on the “New RS232 Command” button, a new page will appear where the user must: **1.)** Give a name to the new RS232 Command, **2.)** Assign it to a Space if desired, **3.)** Assign it to a Group if desired, **4.)** Enter the RS232 command in HEX or ASCII format, **5.)** Test the command if desired, and **6.)** Click on the “Save” button to save the command. Figure 57

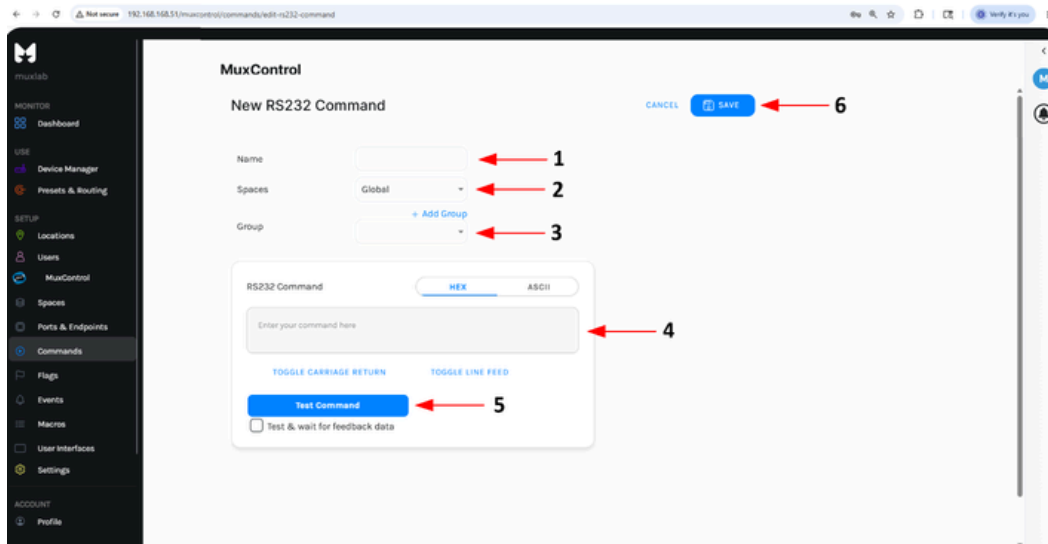


Figure 57

7.6.3.2 RS485 Commands

To create a new RS485 command, select the RS485 option from the commands list, and then click the "New RS485 Command" button. Figure 58

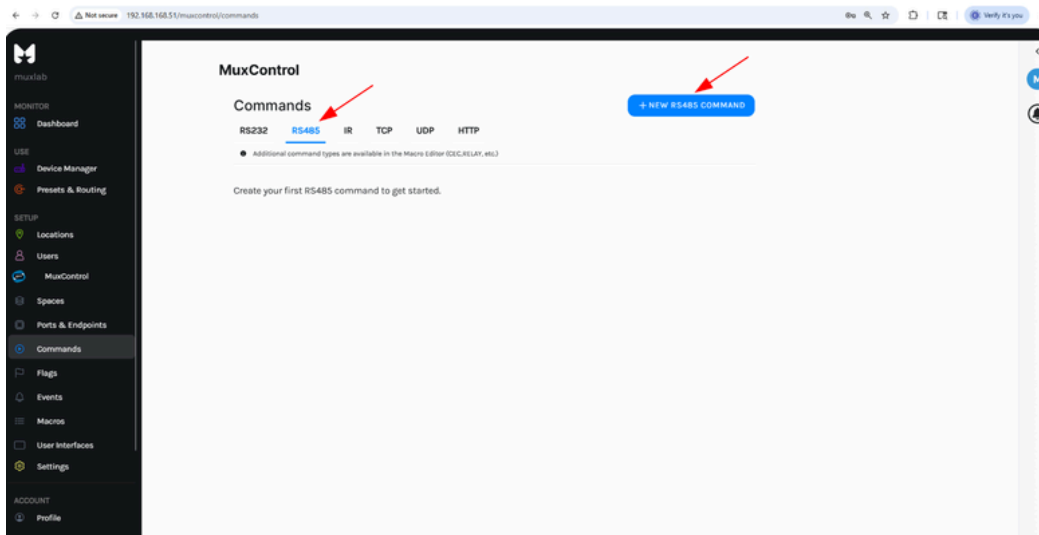


Figure 58

After clicking on the “New RS485 Command” button, a new page will appear where the user must: **1.)** Give a name to the new RS485 Command, **2.)** Assign it to a Space if desired, **3.)** Assign it to a Group if desired, **4.)** Enter the RS485 command in HEX or ASCII format, **5.)** Test the command if desired, and **6.)** Click on the “Save” button to save the command. Figure 59

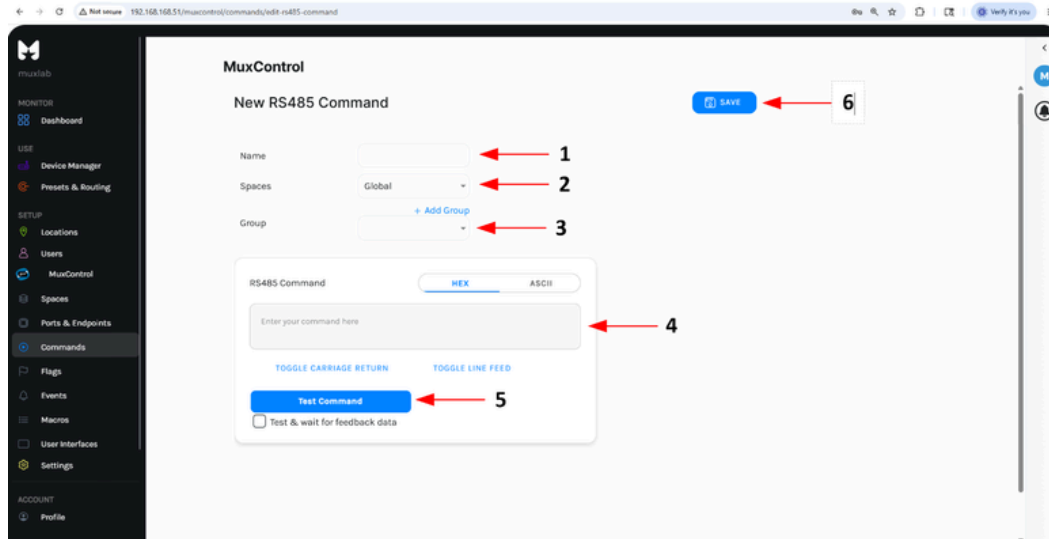


Figure 59

7.6.3.3 IR Commands

To create a new IR command, select the IR option from the commands list, and then click the "New IR Command" button. Figure 60

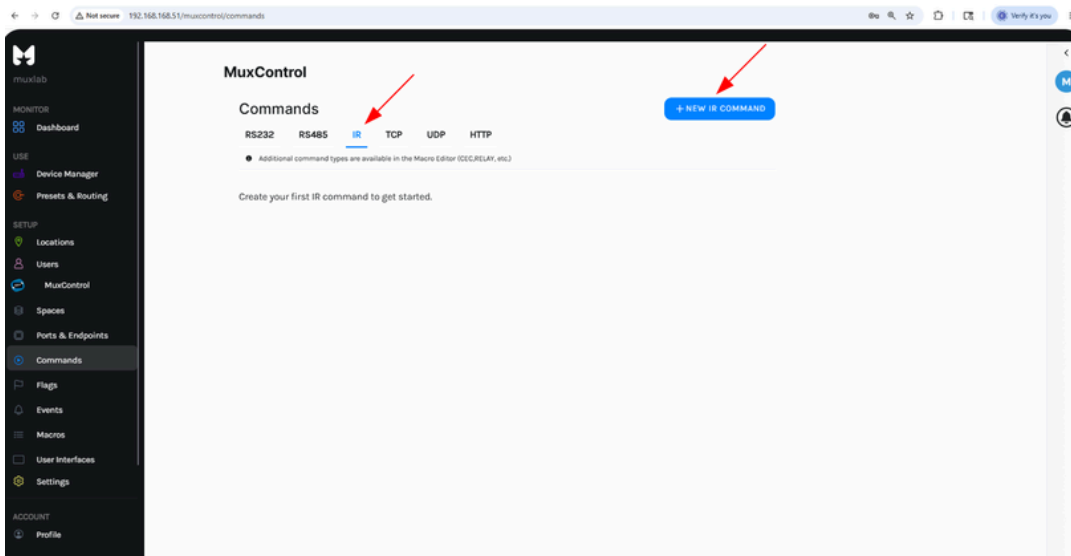


Figure 60

After clicking on the "New IR Command" button, a new page will appear where the user must: **1.)** Give a name to the new IR Command, **2.)** Assign it to a Space if desired, **3.)** Assign it to a Group if desired, **4.)** Enter the IR command in HEX format, **5.)** Test the command if desired, and **6.)** Click on the "Save" button to save the command. Figure 61

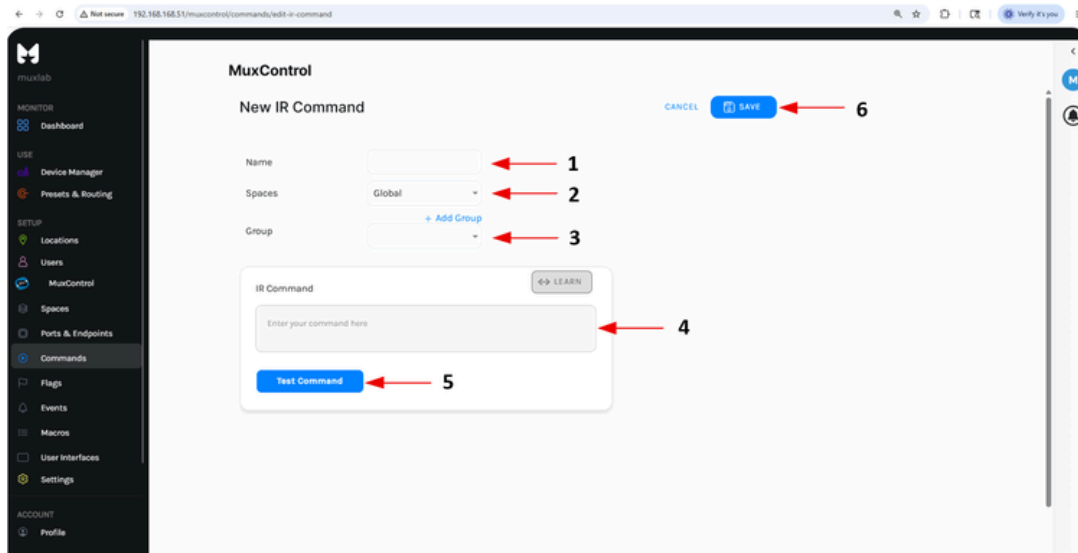


Figure 61

7.6.3.4 TCP Commands

To create a new TCP command, select TCP option from the commands list, and then click the "New TCP Command" button. Figure 62

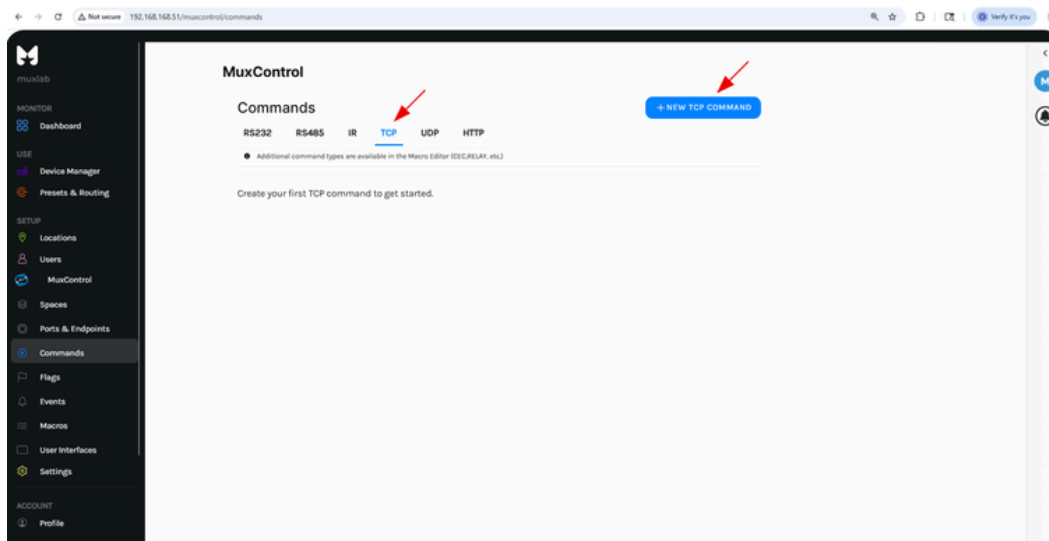


Figure 62

After clicking on the “New TCP Command” button, a new page will appear where the user must: **1.)** Give a name to the new TCP Command, **2.)** Assign it to a Space if desired, **3.)** Assign it to a Group if desired, **4.)** Enter the TCP Port, **5.)** Enable Telnet if necessary, **6.)** Enter the TCP command in HEX or ASCII format, **7.)** Test the command if desired, and **8.)** Click on the “Save” button to save the command. Figure 63

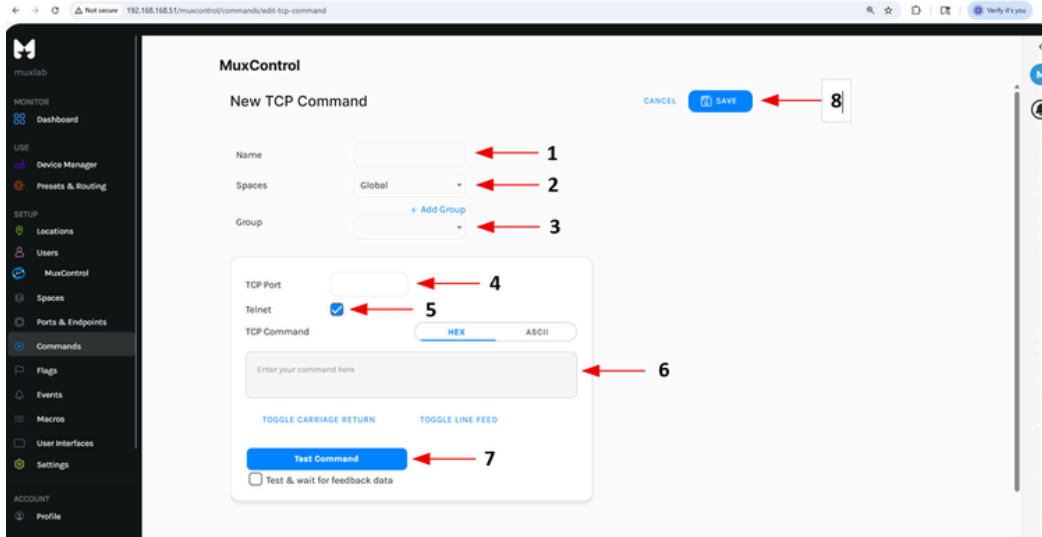


Figure 63

7.6.3.5 UDP Commands

To create a new UDP command, select UDP option from the commands list, and then click the "New UDP Command" button. Figure 64

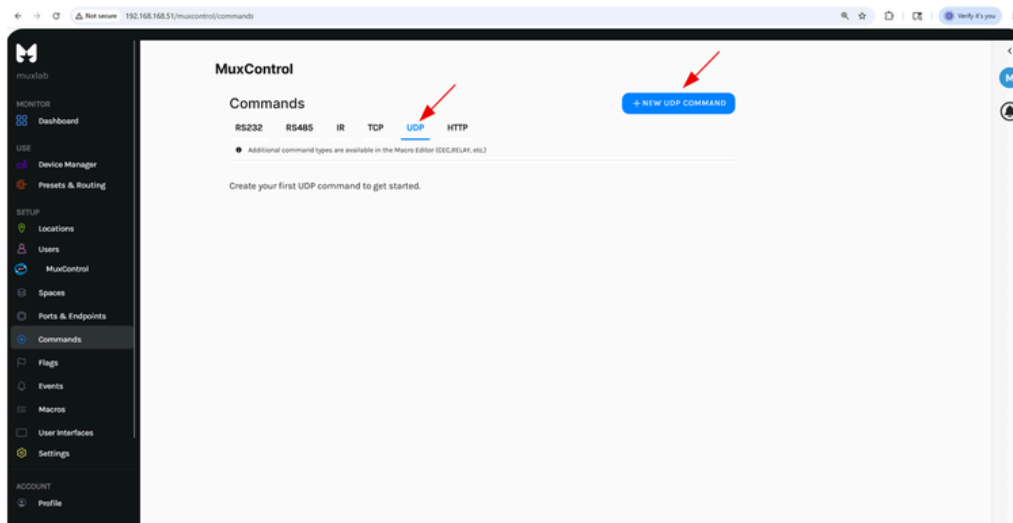


Figure 64

After clicking on the “New UDP Command” button, a new page will appear where the user must: **1.)** Give a name to the new UDP Command, **2.)** Assign it to a Space if desired, **3.)** Assign it to a Group if desired, **4.)** Enter the UDP Port, **5.)** Enter the UDP command in HEX or ASCII format, **6.)** Test the command if desired, and **7.)** Click on the “Save” button to save the command. Figure 65

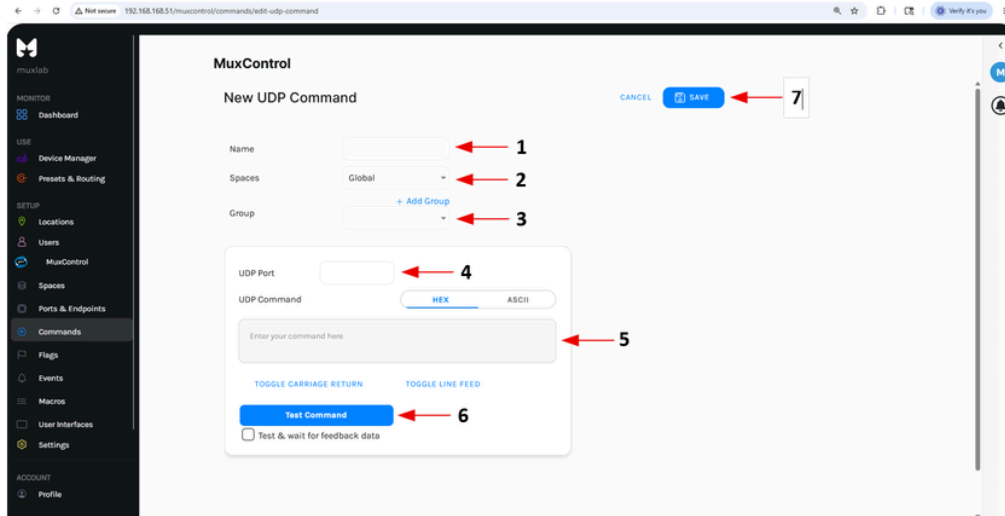


Figure 65

7.6.3.6 HTTP Commands

To create a new HTTP command, select HTTP option from the commands list, and then click the “New HTTP Command” button. Figure 66

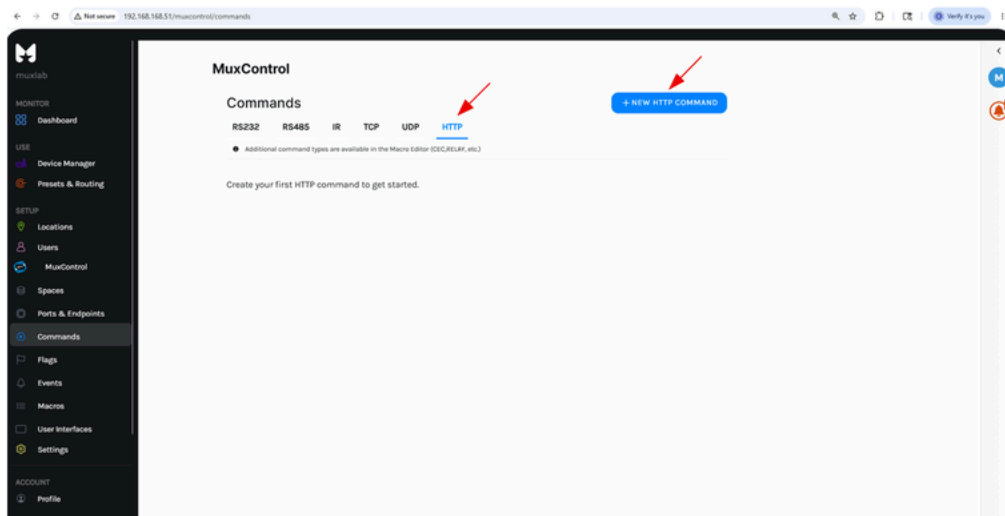


Figure 66

After clicking on the "New HTTP Command" button, a new page will appear where the user must: **1.)** Give a name to the new HTTP Command, **2.)** Assign it to a Space if desired, **3.)** Assign it to a Group if desired, **4.)** Enter the Method, Protocol, and Port of the HTTP command, **5.)** Enter the Path of the HTTP command, **6.)** Enter the Header and Body of the HTTP command, **7.)** Test the command if desired, and **8.)** Click on the "Save" button to save the command. Figure 67

The screenshot shows the 'New HTTP Command' form in the MuxControl interface. The form is titled 'New HTTP Command' and has a 'CANCEL' button and a 'SAVE' button at the top right. The form fields are:

- 1:** Name (text input)
- 2:** Spaces (dropdown menu, currently set to 'Global')
- 3:** Group (dropdown menu with '+ Add Group' button)
- 4:** Method (dropdown menu, currently set to 'GET'), Protocol (dropdown menu, currently set to 'HTTP'), and Port (text input, currently set to '80')
- 5:** Path (text input, currently set to '/index.html')
- 6:** Headers (text area)
- 6:** Body (text area)
- 7:** Test Command (button)
- 8:** SAVE (button)

Figure 67

7.6.4 Flags

The "Flags" tab allows users to create indicators that can be used to set conditions when creating macros. To create a new Flag click the "Add New Flag" button. Figure 68

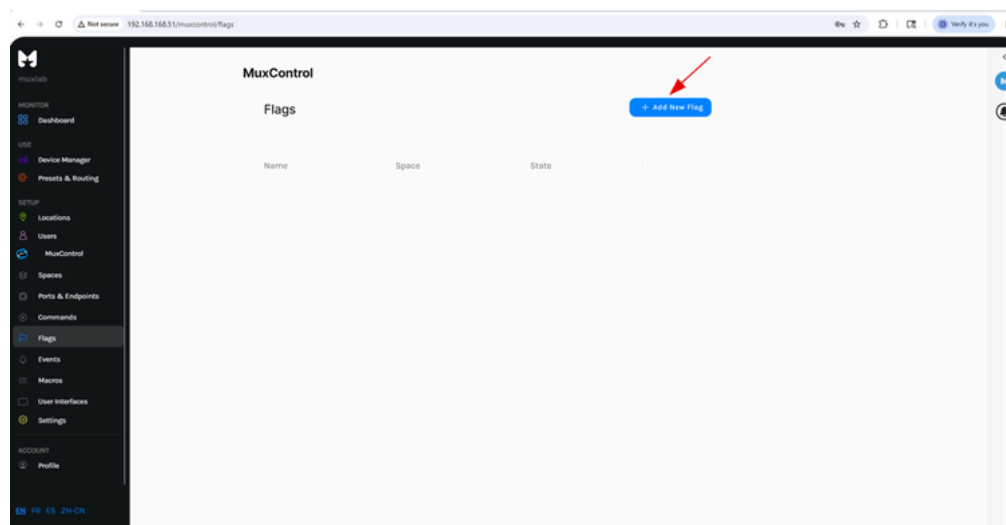


Figure 68

After clicking on the "Add New Flag" button, a new page will appear where the user must: **1.)** Give a name to the new Flag, **2.)** Assign it to a Space if desired, **3.)** Click on the "Add New Flag" button to save the Flag. Figure 69

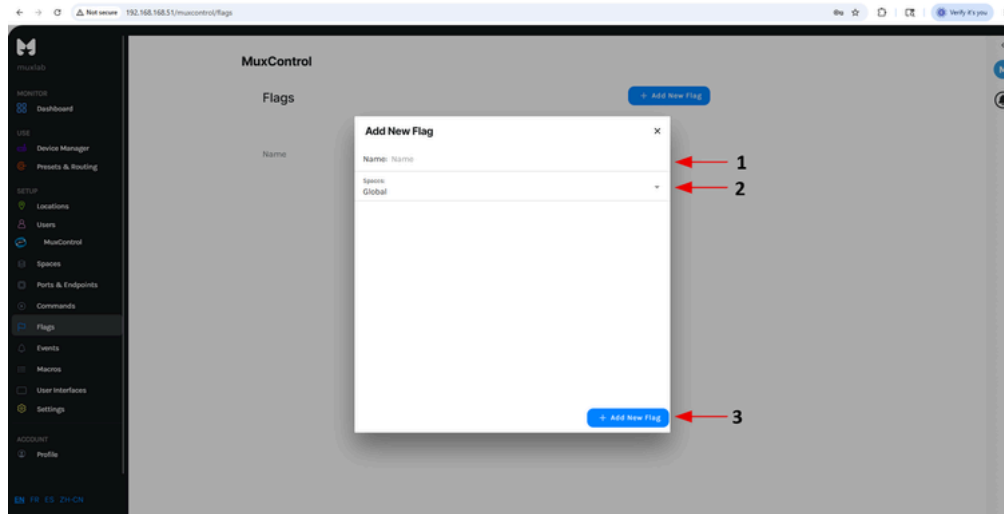


Figure 69

7.6.5 Events

The "Events" tab allows you to create events for a command or macro to run periodically, defining the repetition time in seconds, minutes, hours, days of the week, or every time the controller starts.

7.6.5.1 Boot Events

To create a new Boot event, select the Boot option from the Events list, and then click the "New Event" button. Figure 70

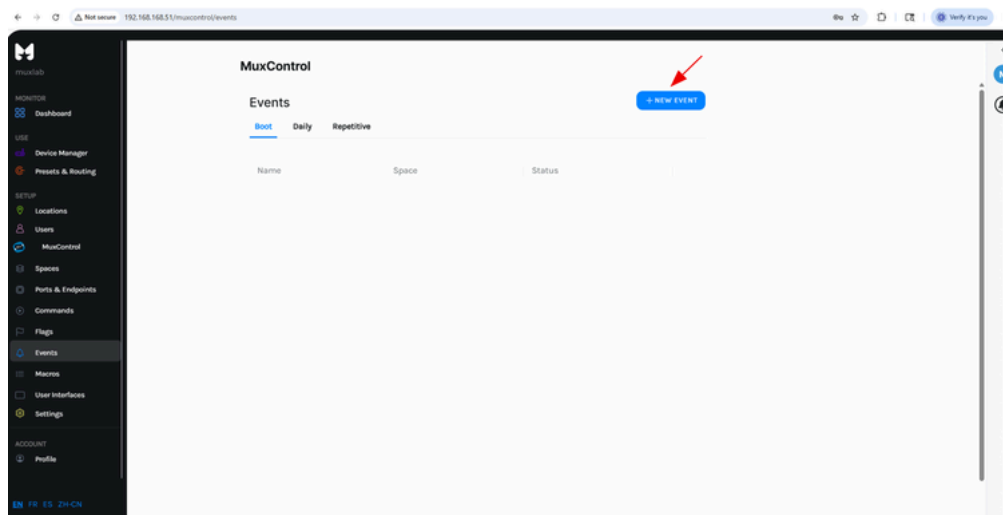


Figure 70

After clicking on the “New Event” button, a new page will appear where the user must: **1.)** Select On/Off to enable or disable the Boot event, **2.)** Give a name to the new Boot event, **3.)** Assign it to a Space if desired, **4.)** Select the command or macro you want to run when the controller boots, **5.)** Click on the “Save” button to save the event. Figure 71

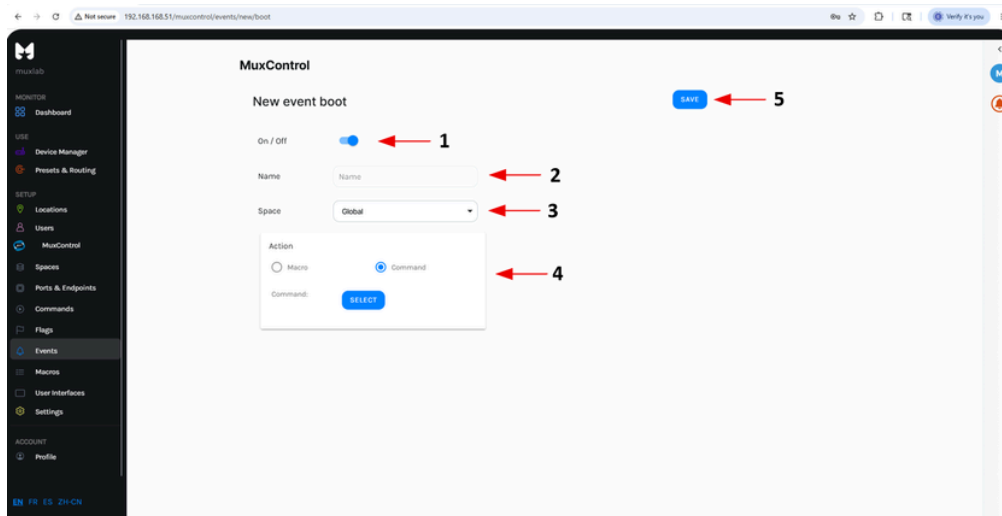


Figure 71

7.6.5.2 Daily Events

To create a new Daily event, select the Daily option from the Events list, and then click the “New Event” button. Figure 72

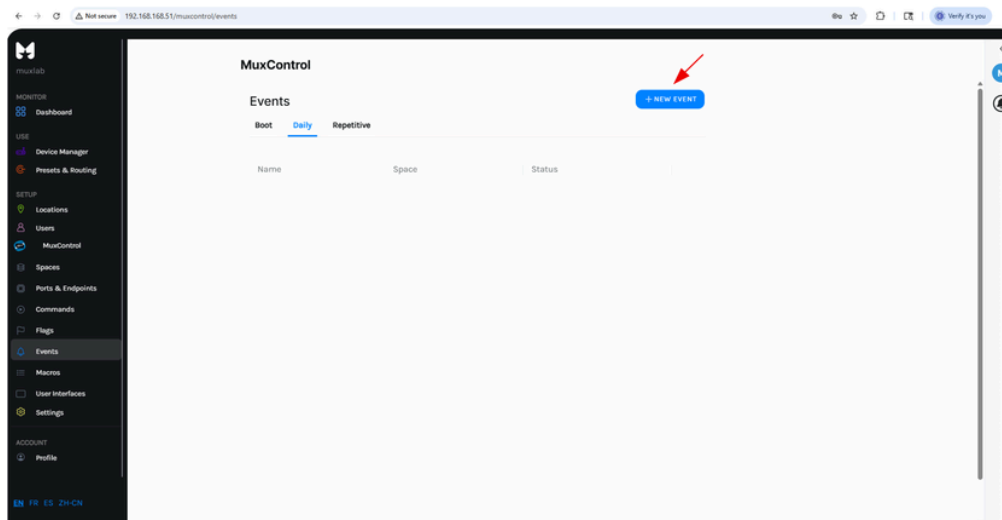


Figure 72

After clicking on the “New Event” button, a new page will appear where the user must: **1.)** Select On/Off to enable or disable the Daily event, **2.)** Give a name to the new Daily event, **3.)** Assign it to a Space if desired, **4.)** Select the day or days of the week and the time you want the event to repeat. **5.)** Select the command or macro that you want to run each time this event occurs, **6.)** Click on the “Save” button to save the event. Figure 73

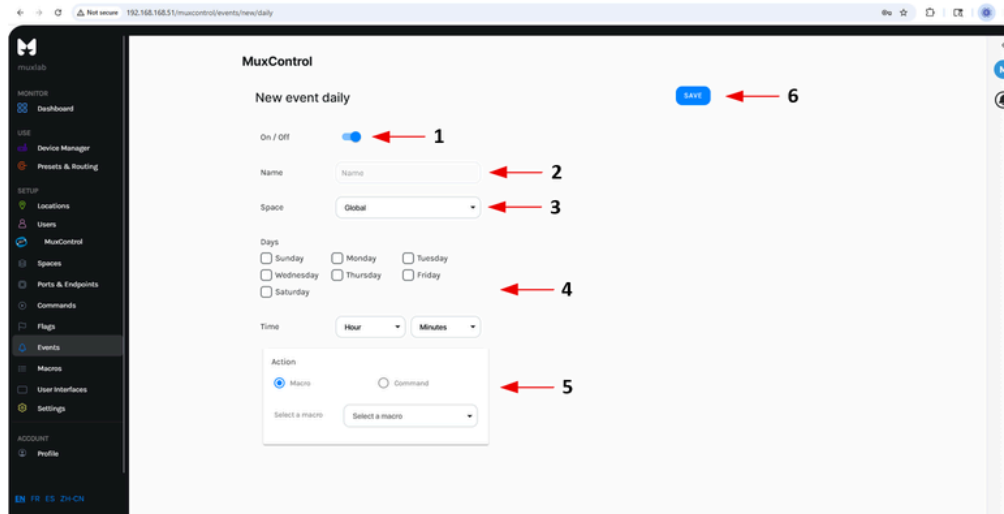


Figure 73

7.6.5.3 Repetitive Events

To create a new Repetitive event, select the Repetitive option from the Events list, and then click the "New Event" button. Figure 74

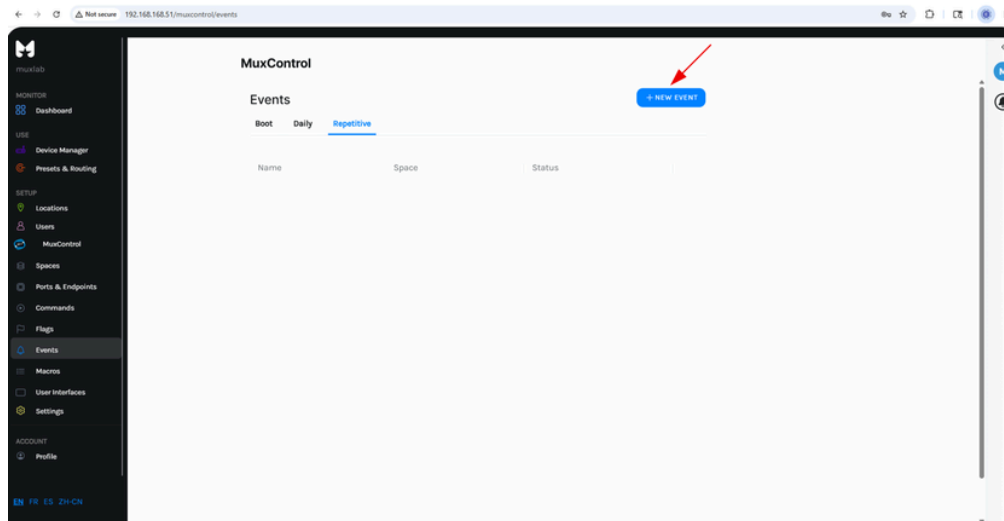


Figure 74

After clicking on the "New Event" button, a new page will appear where the user must: **1.)** Select On/Off to enable or disable the Repetitive event, **2.)** Give a name to the new Repetitive event, **3.)** Assign it to a Space if desired, **4.)** Select the number of seconds, minutes, or hours you want the event to repeat. **5.)** Select the command or macro that you want to run each time this event occurs., **6.)** Click on the "Save" button to save the event. Figure 75

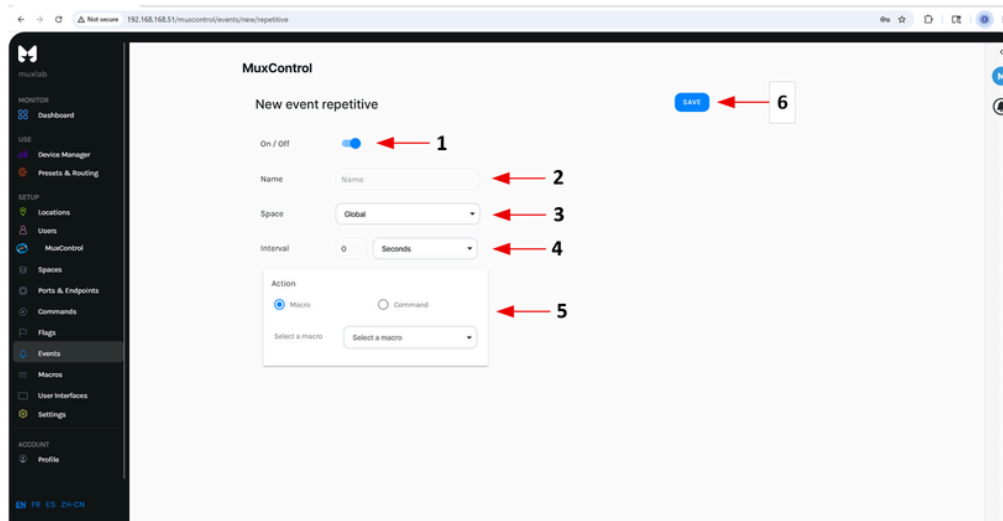


Figure 75

7.6.6 Macros

The "Macros" tab provides the User with all the necessary tools to create macros. Here, the User can include one or more commands in a macro, set delays between command executions, create command loops, set conditions, call presets, and much more.

To create a new Macro click the "New Macro" button. Figure 76

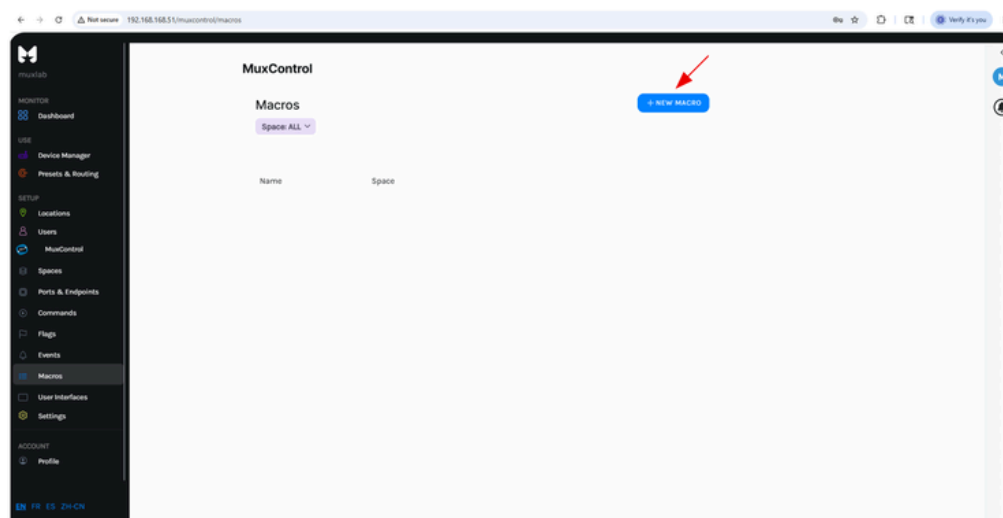


Figure 77

After clicking the "New macro" button, a new page will appear where the user will have five options that will allow them to create a macro. Figure 78

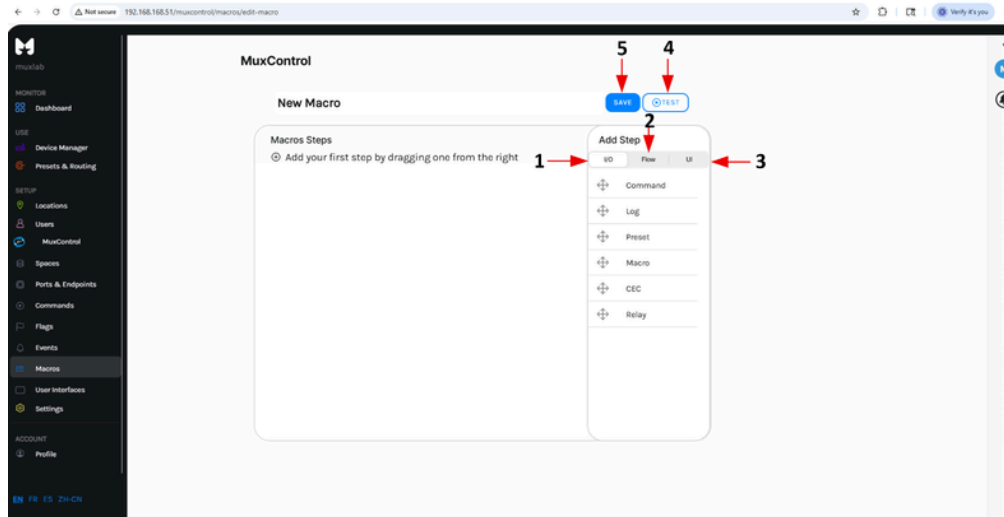


Figure 78

1. **I/O**: By selecting this option, the User will find a list of six options that can be used to create a Macro. These options are: Command, Log, Preset, Macro, CEC, and Relay.

Command: This option allows the User to add a Command to the macro from among those previously created in the "Commands" section; here RS232, IR, TCP, UDP or HTTP commands can be added as needed.

To add a Command to the macro, first drag and drop the Command option into the macro creation area. Figure 79

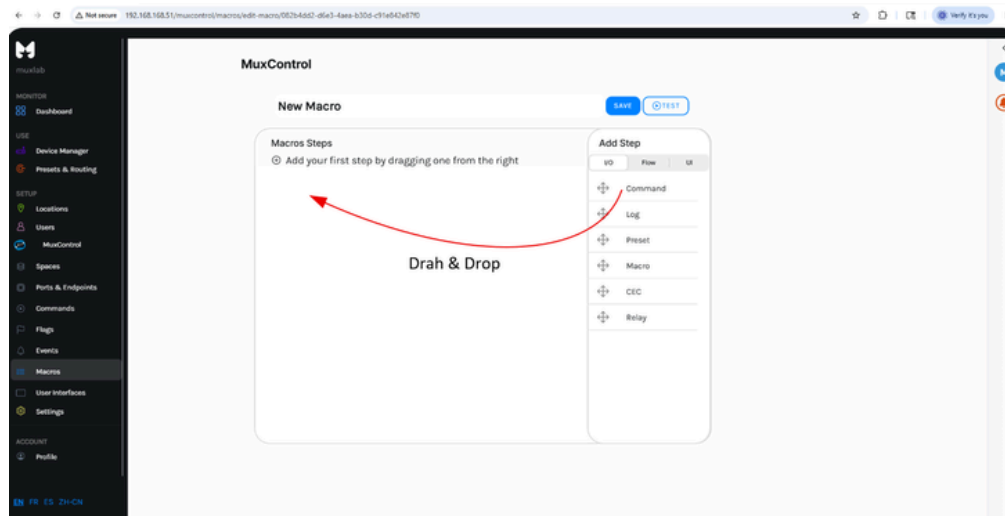


Figure 79

Next, after clicking "Select Command," the blue "Select" button will appear on the right side of the screen. Clicking it will display a list of all previously created commands, allowing you to select one. Figure 80

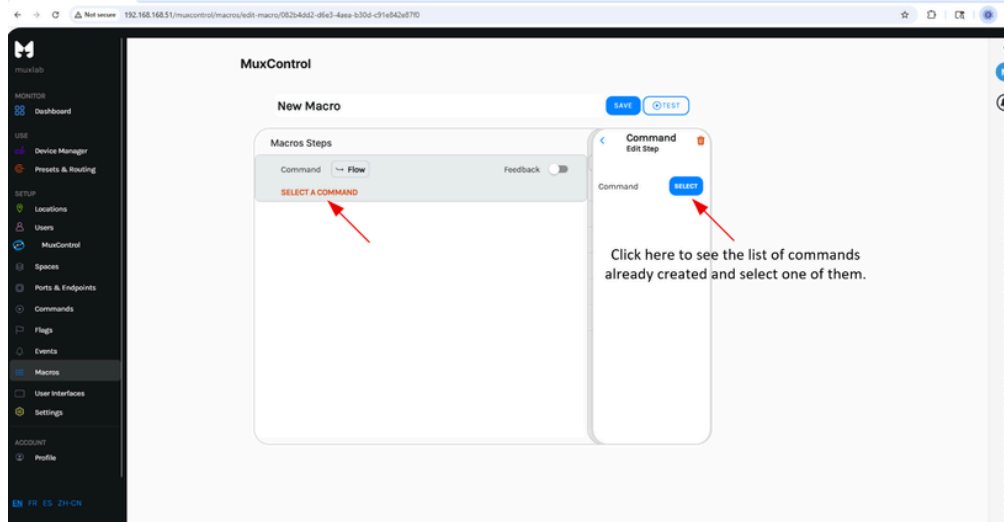


Figure 80

After selecting the command, the user must choose the Port or Endpoint to which it will be sent. To do this, click "Select an endpoint" and then the blue "Select" button. Clicking it will display a list of all previously created Endpoints, allowing you to select one. Figure 81

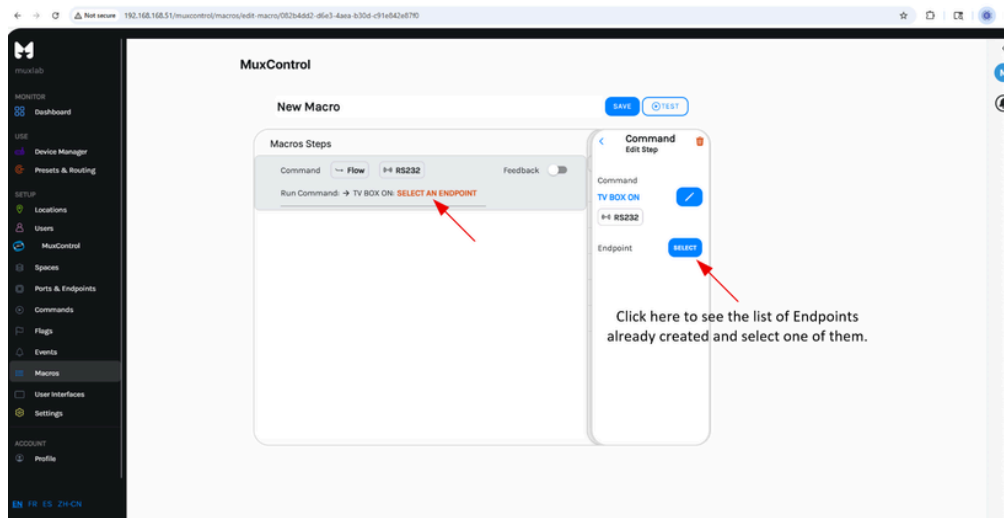


Figure 81

Additionally, for each command, the "Feedback" option can be enabled in case the User wishes to use the response sent by the device after sending the command as a condition for executing other actions.

To enable and configure the feedback option: **1.)** Enable the option, **2.)** Enter the expected feedback from the device being controlled in this box, **3.)** Add the command(s) you want to be executed if the device's response matches the expected response, **4.)** Add the command(s) you want to be executed if the device's response does not match the expected response. Figure 82

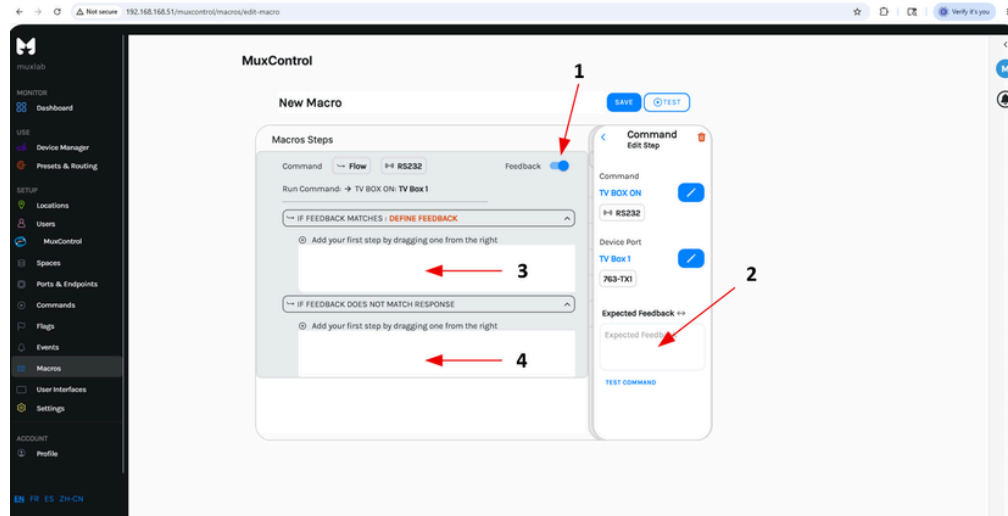


Figure 82

Log: This option allows the User to add a Log to the macro; these logs can be used by the User in case of system failure to know whether or not a specific command of the macro is being executed.. To add a Log to the macro, first drag and drop the Log option into the macro creation area. Figure 83

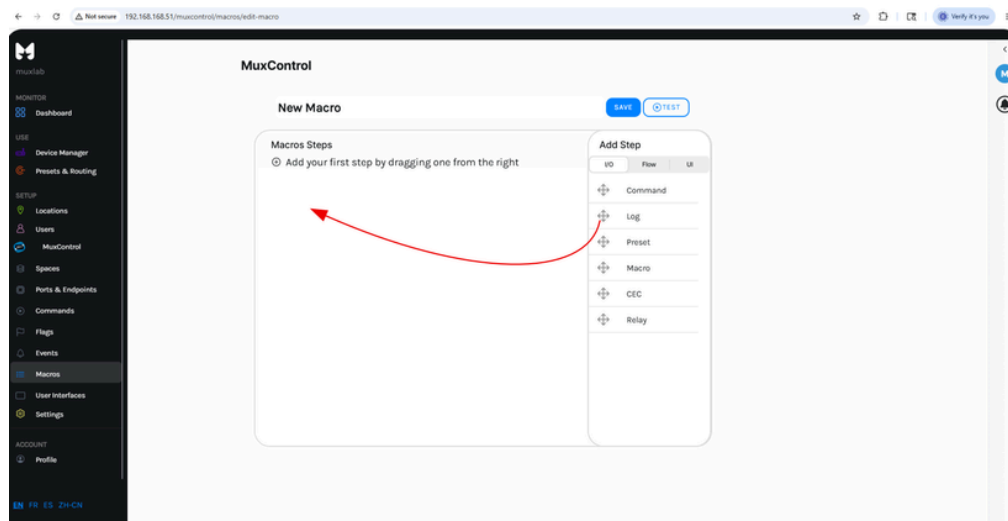


Figure 83

Next, after clicking on "Log", a field will appear on the right side of the screen in which the User can write the log message. Figure 84

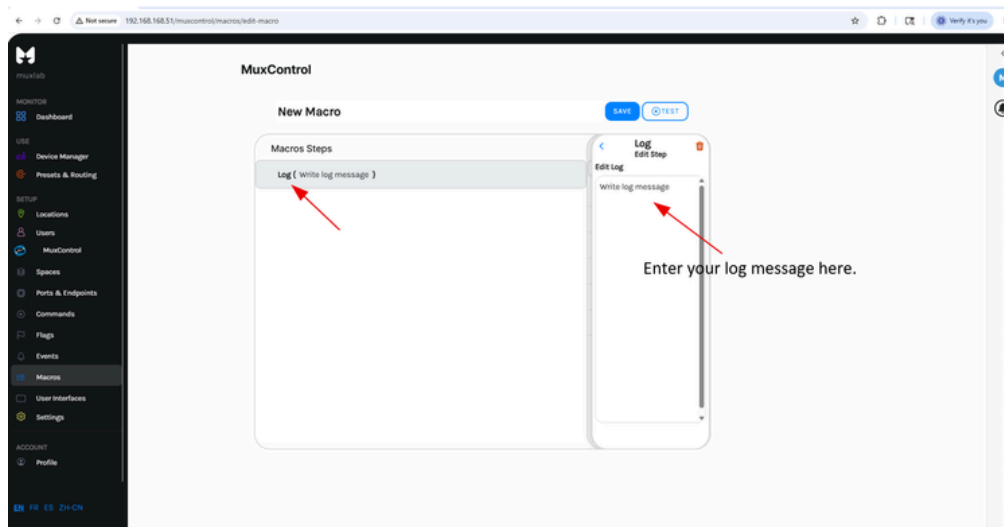


Figure 84

Preset: This option allows the User to add a Preset to the macro from among those previously created in the "Presets & Routing" section. To add a Preset to the macro, first drag and drop the Preset option into the macro creation area. Figure 85

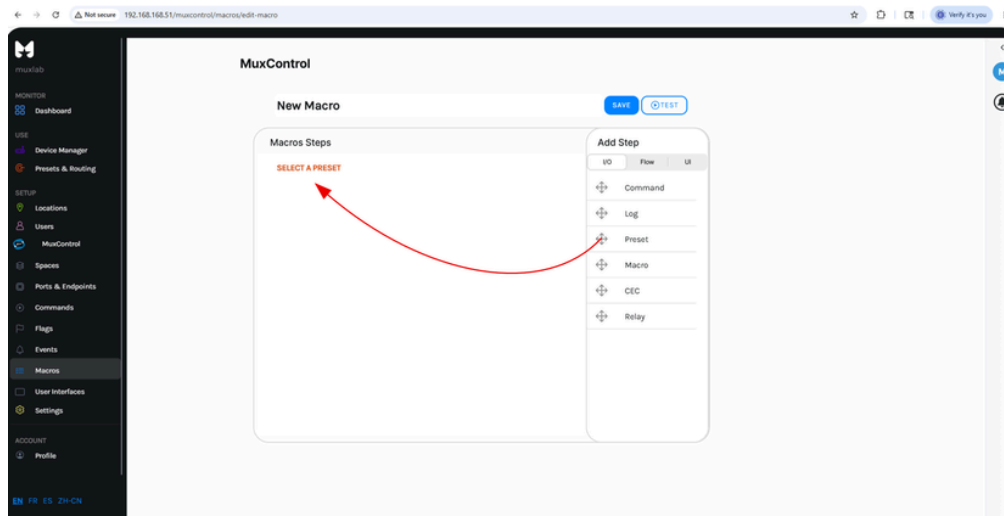


Figure 85

Next, after clicking "Select a Preset," the blue "Select" button will appear on the right side of the screen. Clicking it will display a list of all previously created Presets, allowing you to select one. Figure 86

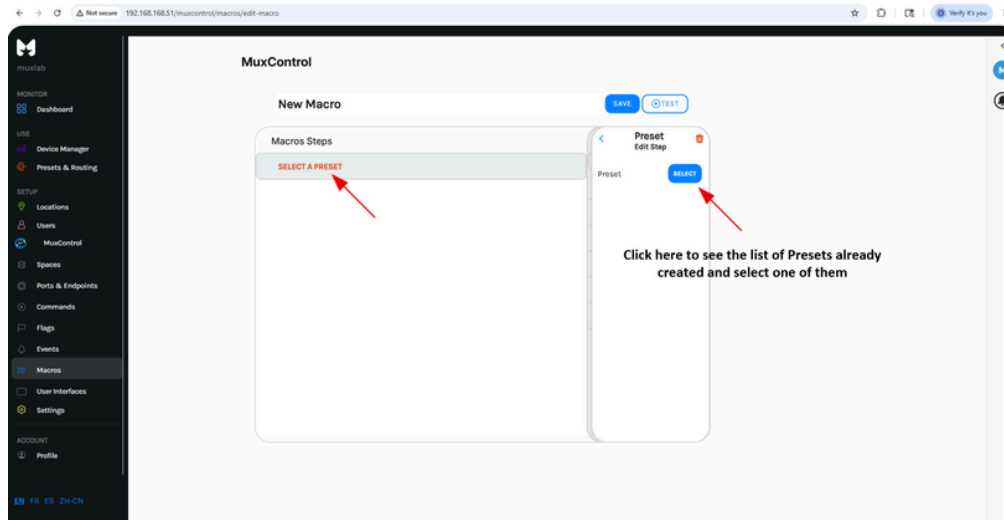


Figure 86

Macro: This option allows the User to add a previously created macro to the macro being created. To add a previously created macro to the macro, first drag and drop the "Macro" option into the macro creation area. Figure 87

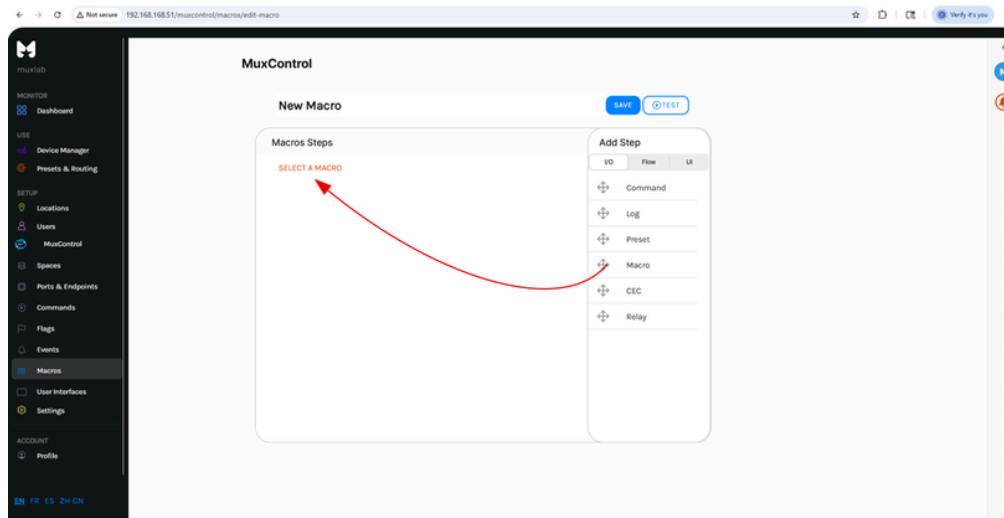


Figure 87

Next, after clicking "Select a Macro" the blue "Select" button will appear on the right side of the screen. Clicking it will display a list of all previously created Macros, allowing you to select one. Figure 88

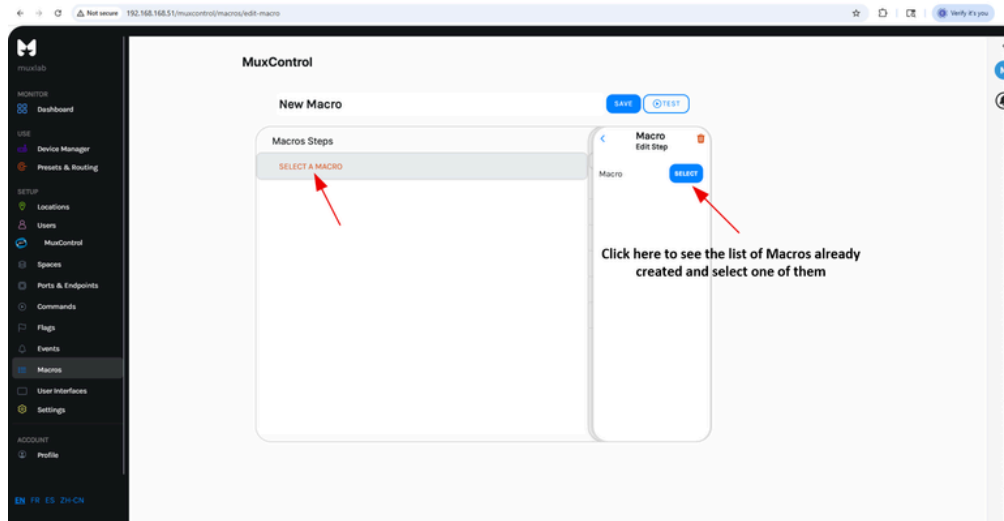


Figure 88

CEC: This option allows the User to add a CEC command to the macro. To add a CEC command, first drag and drop the "CEC" option into the macro creation area. Figure 89

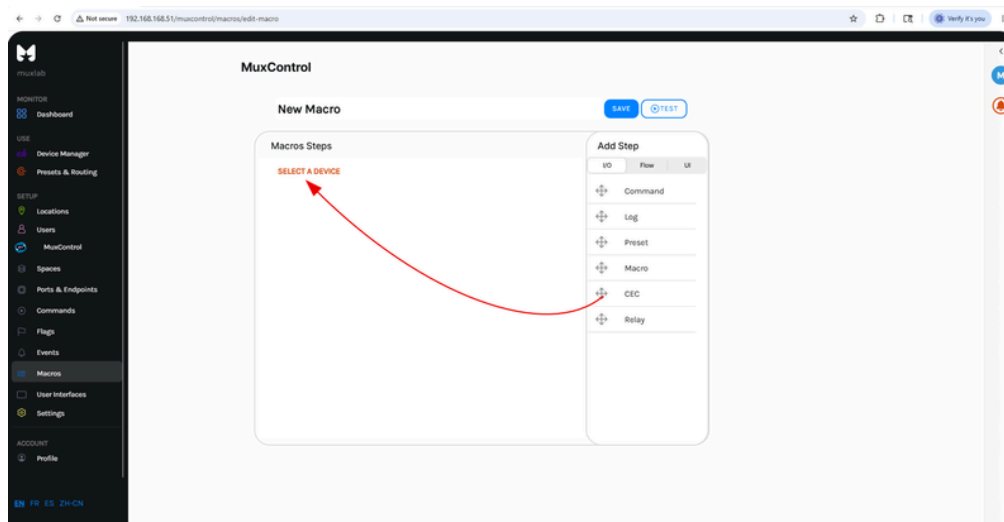


Figure 89

Next, after clicking "Select a device," the "Command" and "Select a device" options will appear on the right side of the screen. In the "Command" option, the User must select the type of CEC command they wish to send (Stand By, Power On, Volume Up, Volume Down, or Mute), and in the "Select a device" option, the User must select the device to which the previously selected command will be sent. Figure 90

Note: Please note that some MuxLab AVoIP devices cannot send CEC commands.

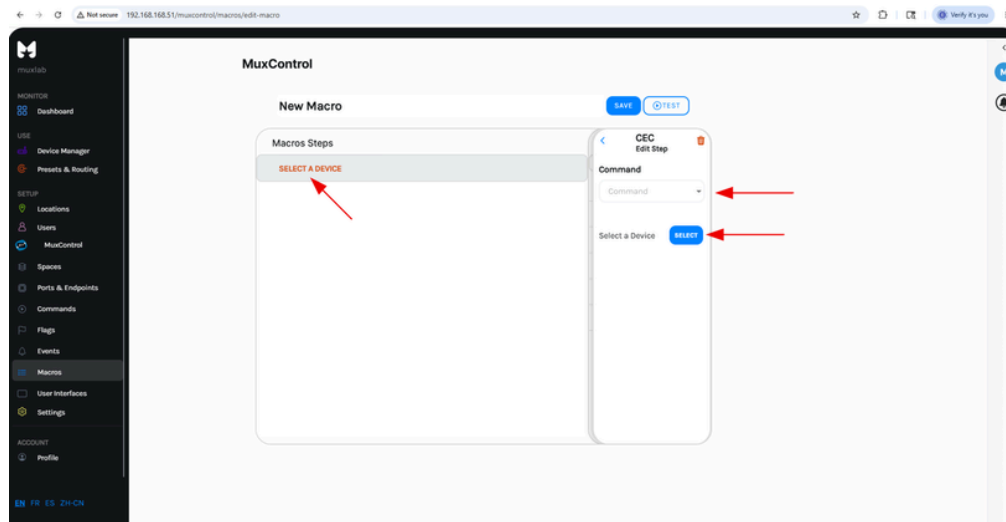


Figure 90

Relay: This option allows the User to add a Relay command to the macro. To add a Relay command, first drag and drop the "Relay" option into the macro creation area. Figure 91

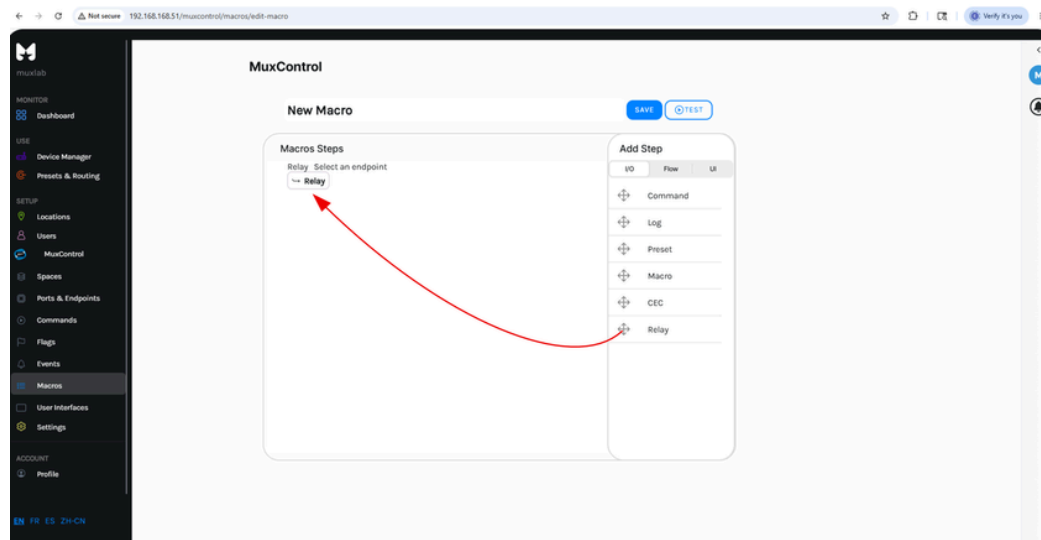


Figure 91

Next, after clicking "Relay" the blue "Select" button will appear on the right side of the screen. Clicking it will display a list of all previously created endpoints, allowing you to select one to which the Relay command will be sent. Figure 92

Note: Please note that some MuxLab AVoIP devices cannot send Relay commands.

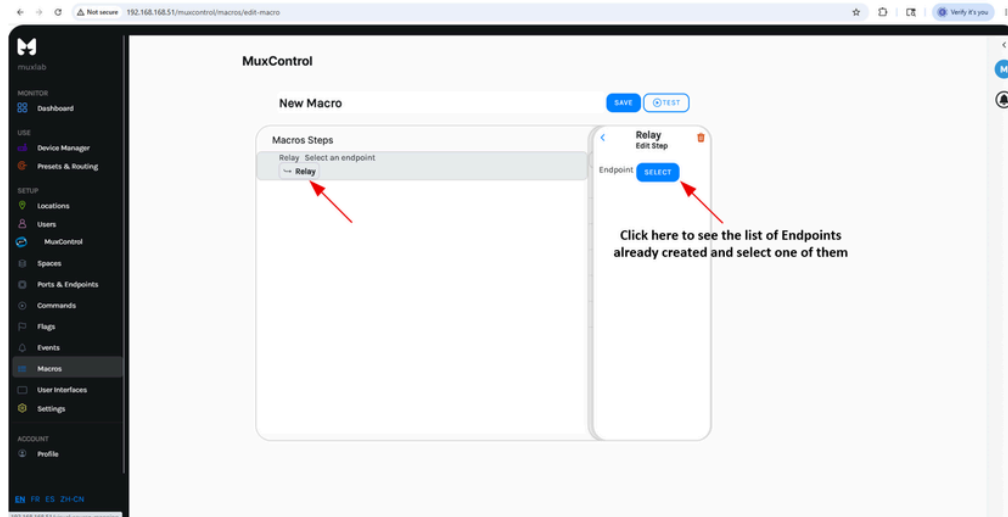


Figure 92

After selecting the Endpoint to which the Relay command will be sent, the User must set the Relay status (Open or Close). Figure 93

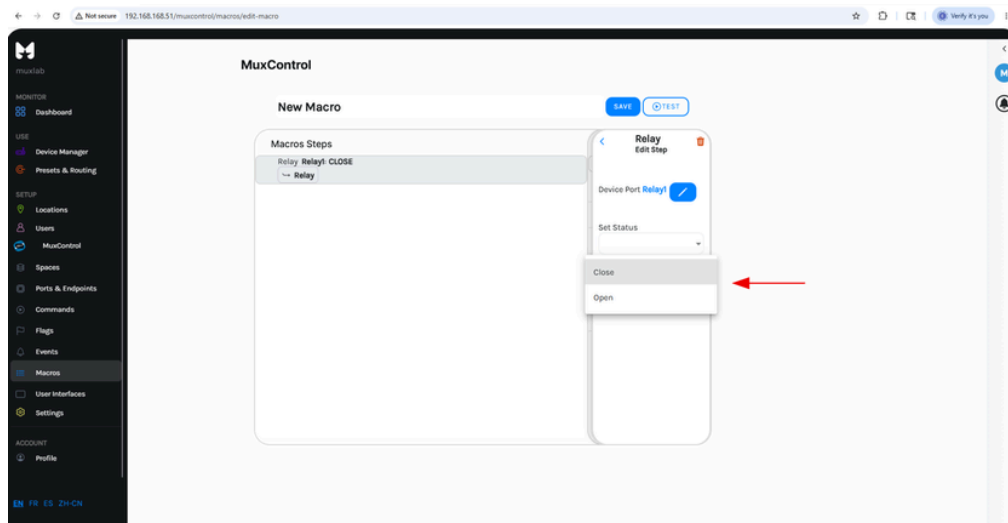


Figure 93

- Flow:** By selecting this option, the User will find a list of seven condition options that can be used to create a Macro. These options are: Delay, Loop, Voltage Sensor, Manage Event, Flag, Comment, and Stop Macro.

Delay: This option allows the User to add a Delay to the macro. The User can add a defined Delay between sending commands or define a Delay for the macro to start running. To add a Delay, first drag and drop the "Delay" option into the macro creation area. Figure 94

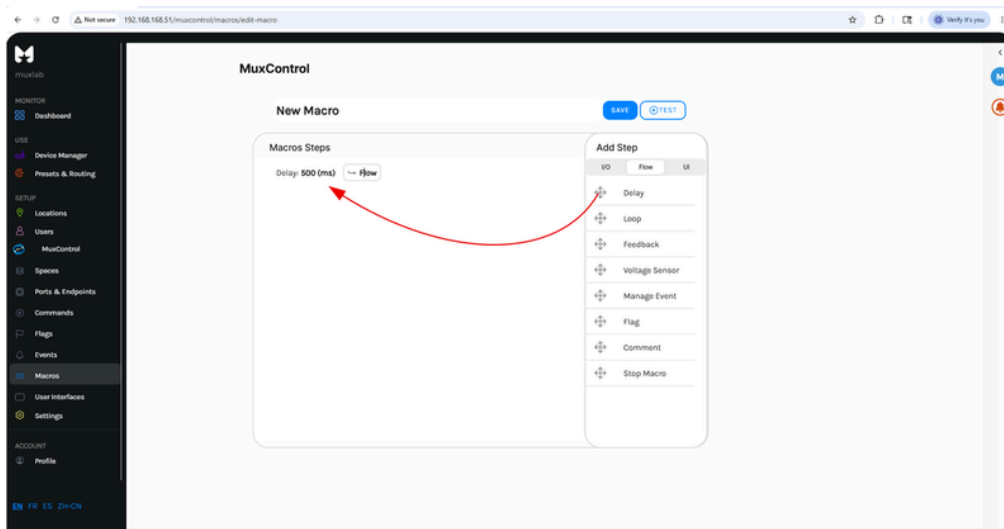


Figure 94

Next, after clicking on "Flow", a field will appear on the right side of the screen where the User must enter the delay time in milliseconds. Figure 95

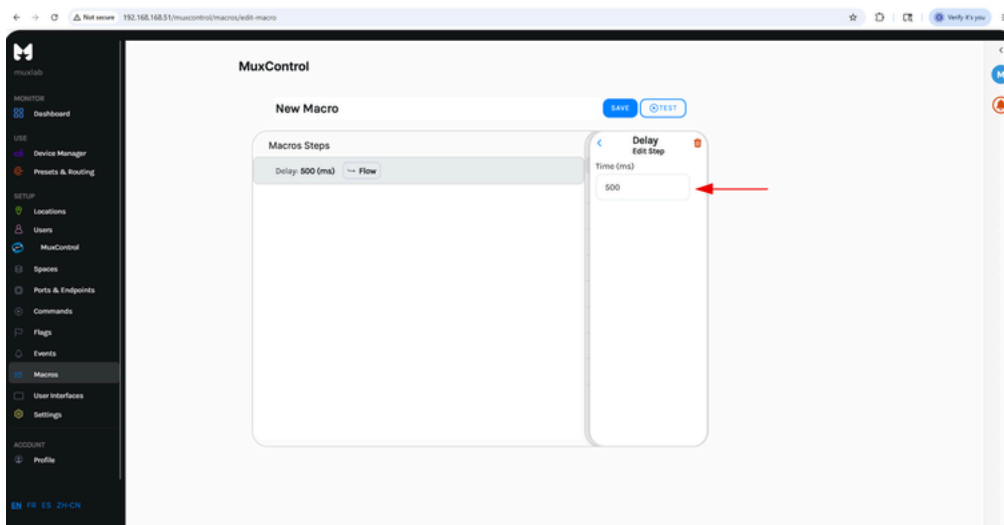


Figure 95

Loop: This option allows the User to add a Loop to the macro. Within the loop, the User can specify whether to repeat a command, a macro, an event, or a combination of these, and can also define a delay, in milliseconds, between repetitions.. To add a Loop, first drag and drop the "Loop" option into the macro creation area. Figure 96

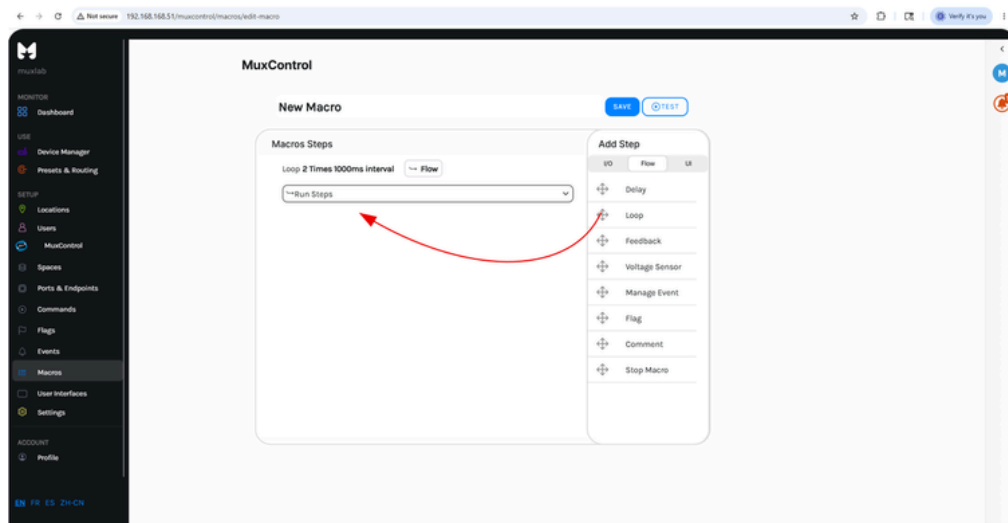


Figure 96

Next, after clicking on "Flow", two fields will appear on the right side of the screen where the User must enter the number of times they want the loop to repeat and the time interval between each repetition. Figure 97

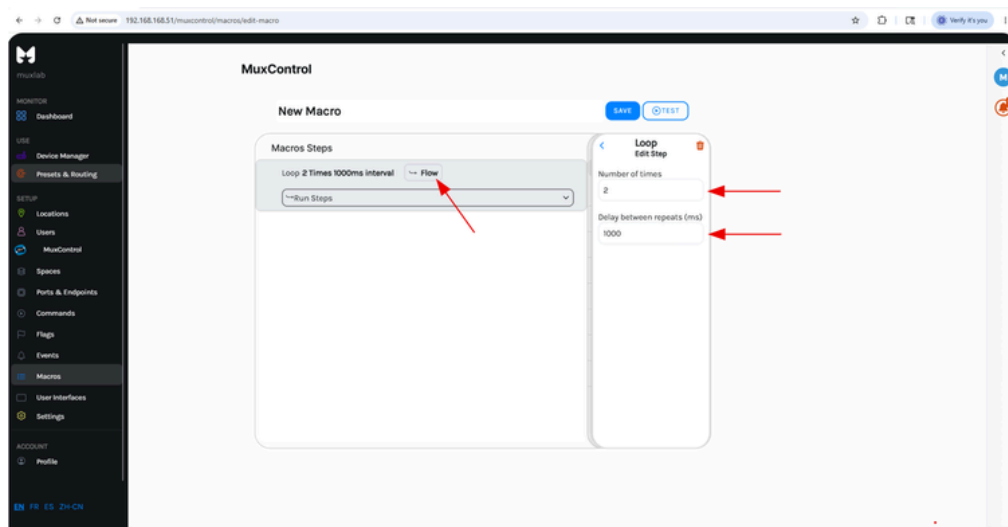


Figure 97

Manage Event: This option allows the User to add a Manage Event to the macro. By selecting "Manage Event," the User can activate, deactivate, or change the state of a specific event. To add a Manage Event, first drag and drop the "Manage Event" option into the macro creation area. Figure 98

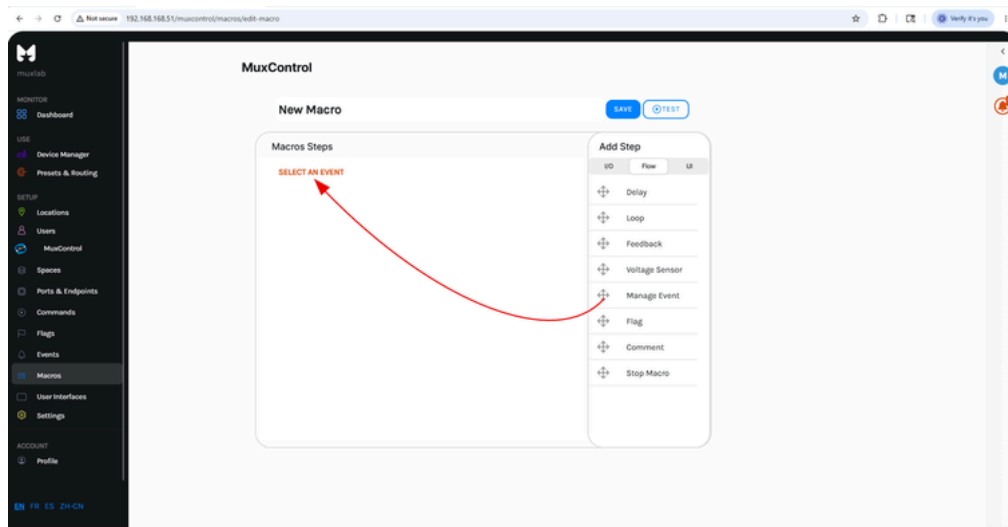


Figure 98

Next, after clicking "Select An Event" the blue "Select" button will appear on the right side of the screen. Clicking it will display a list of all previously created Events, allowing you to select one of them to be managed. Figure 99

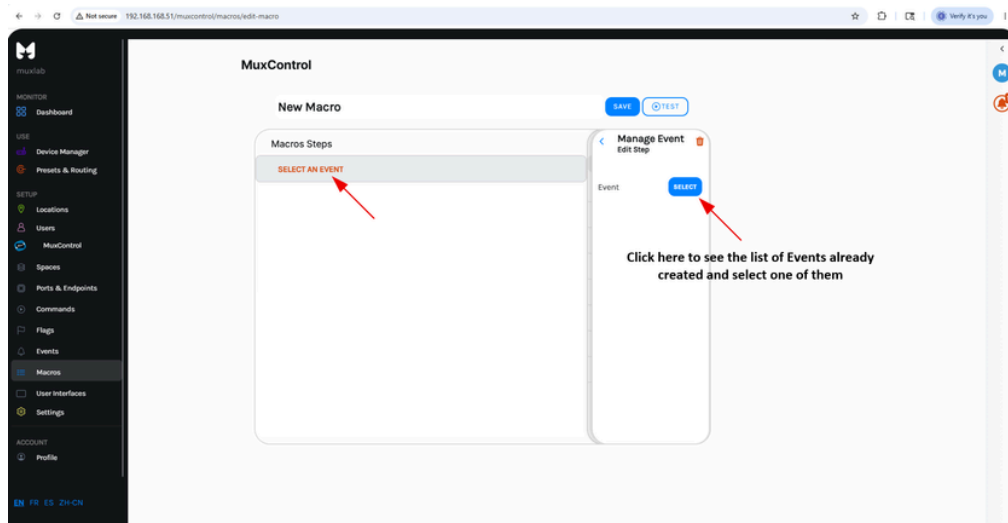


Figure 99

After selecting the event, the system will give the client the option to define the event status (Toggle, On, or Off). Figure 100

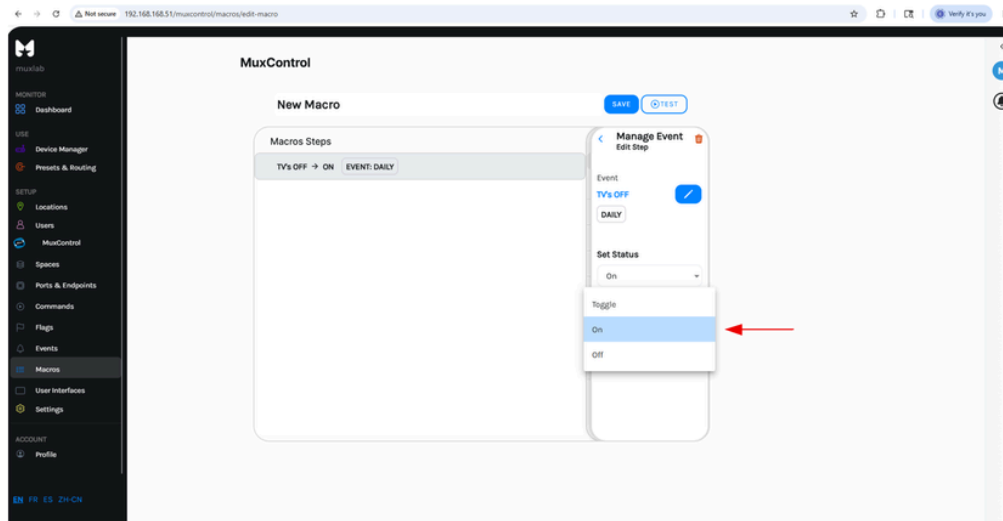


Figure 100

Flag: This option allows the User to add a Flag to the macro. The Flags allows Users to create indicators that can be used to set conditions. To add a Flag, first drag and drop the "Flag" option into the macro creation area. Figure 101

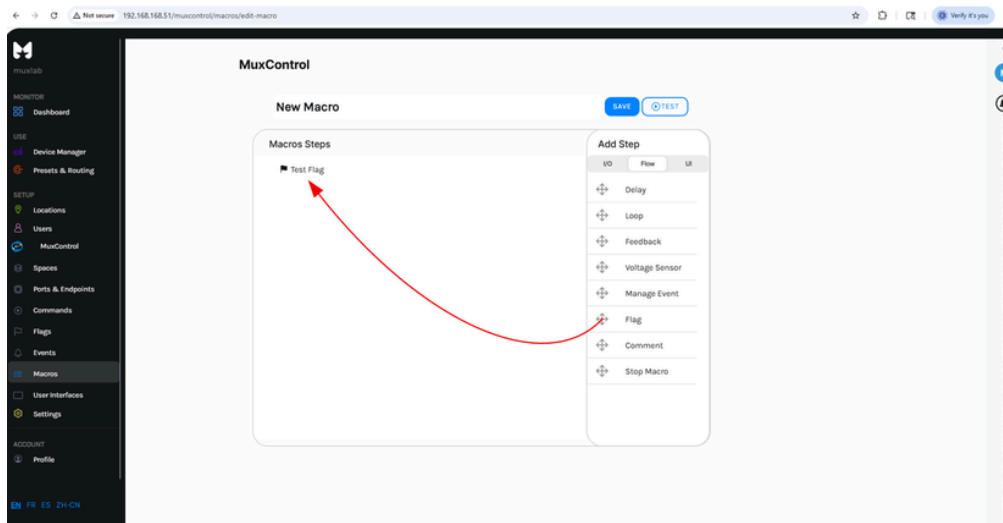


Figure 101

Next, after clicking "Test Flag" the blue "Select" button will appear on the right side of the screen. Clicking it will display a list of all previously created Flags, allowing you to select one of them to be managed. Figure 102

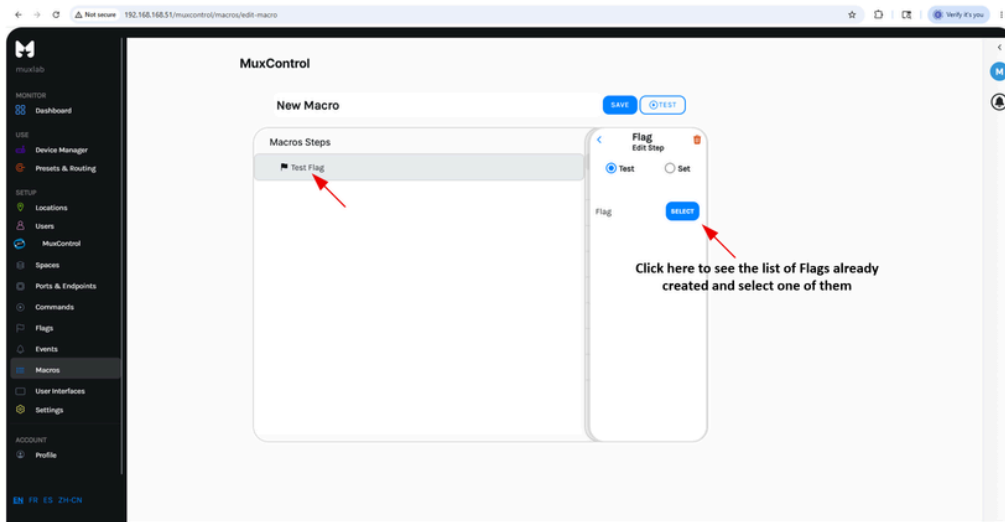


Figure 102

After selecting the Flag, the system will give the User the option to Set or Test it. If the User chooses to Set it, they will have the option to Unset, Set, or Toggle it. Figure 103

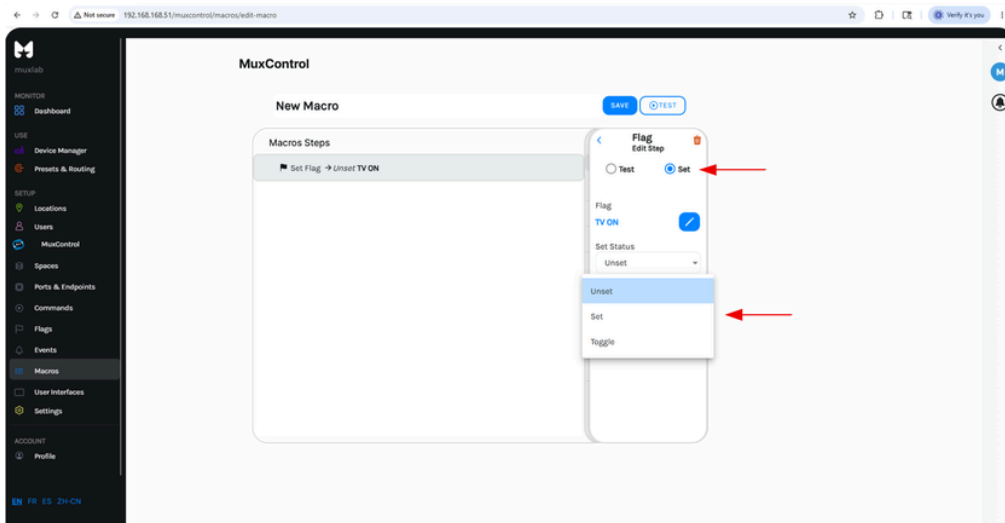


Figure 103

If the User decides to test it, the system will display a field where they can add the command(s) they want to send if the flag is Set, and a field where they can add the command(s) they want to send if the flag is Unset. Figure 104

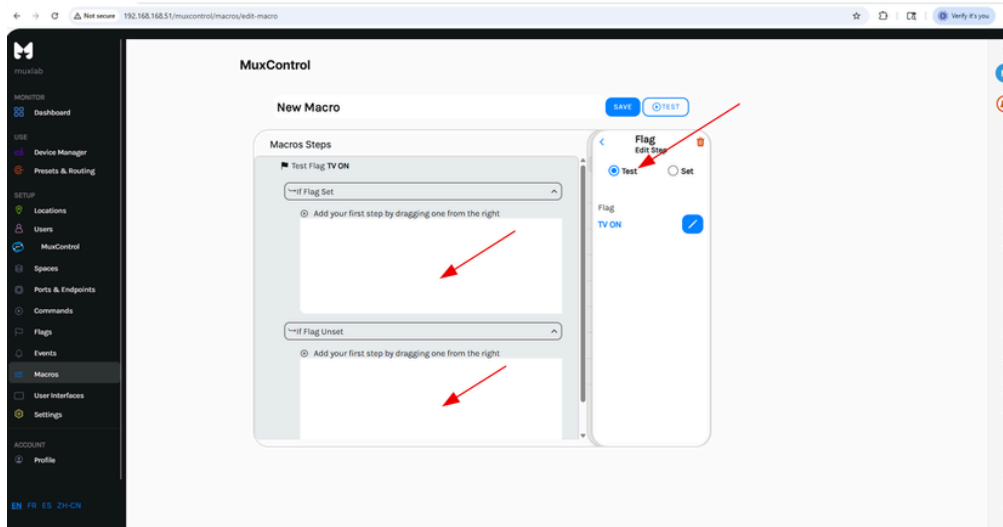


Figure 104

Comment: This option allows the User to add a Comment to the macro. The Comments allow Users to identify or provide a specific description within the macro. To add a Comment, first drag and drop the "Comment" option into the macro creation area. Figure 105

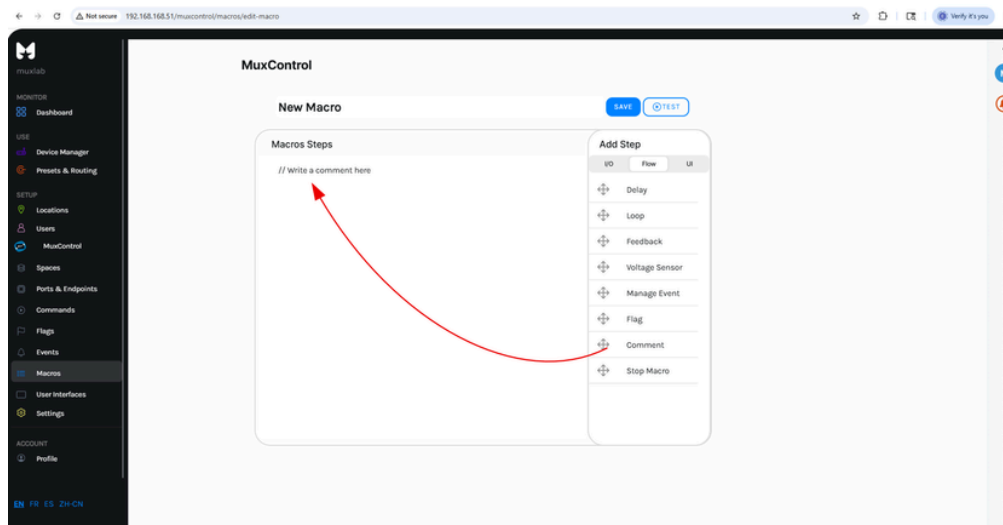


Figure 105

Next, after clicking "Write a Comment Here" will appear a field on the right side of the screen where the User must write the comment. Figure 106

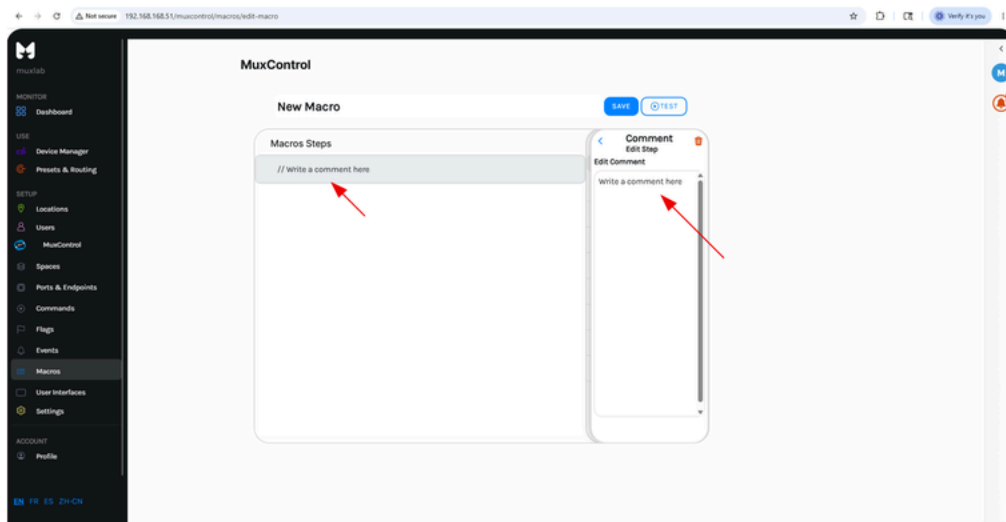


Figure 106

Stop Macro: This option allows the User to stop a macro. To add a Stop Macro option drag and drop the "Stop Macro" option into the macro creation area. Figure 107

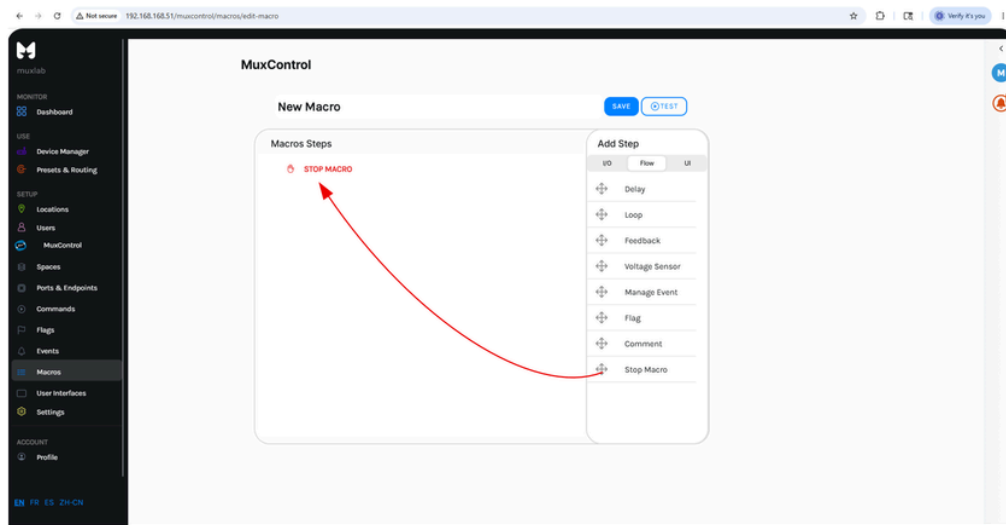


Figure 107

- UI:** By selecting this option, the User will find a list of two user interface options that can be used to create a macro. These options are: Go to UI Page, and Set Widget State.

Go to UI Page: This option allows the User to call a specific page from a previously created user interface. To call a page, first drag and drop the "Go to UI Page" option into the macro creation area. Figure 108

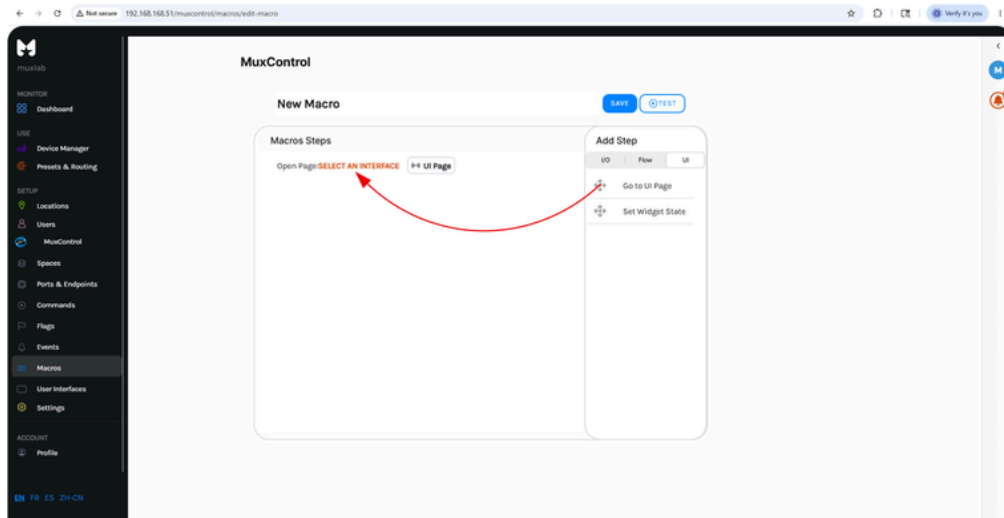


Figure 108

Next, after clicking on "Select an Interface", the User must define, in the options that appear on the right side of the screen, the user who created the interface, the interface in which they want to call a specific page and select, from the list of names, the name of the page. Figure 109

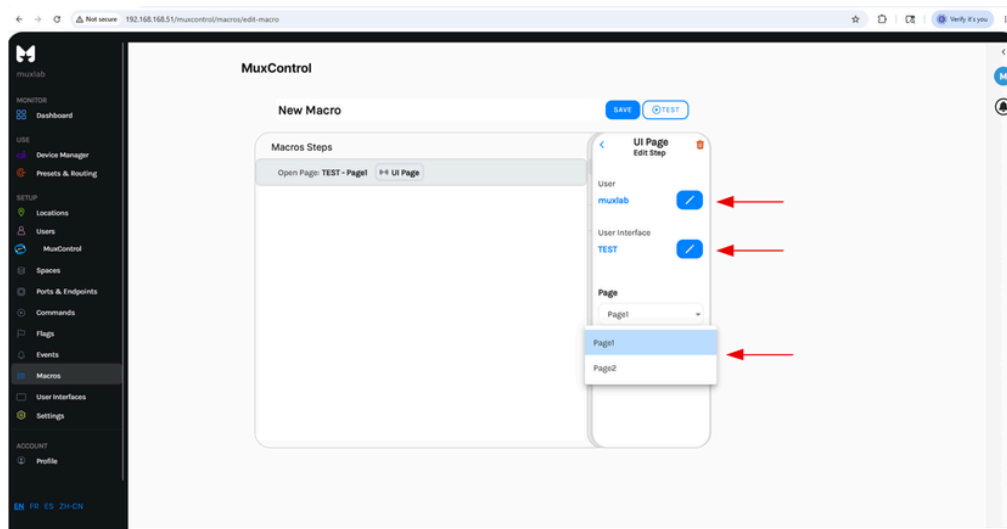


Figure 109

Set Widget State: This option allows the User to set the state of a widget. To set the state of a widget, first drag and drop the "Set Widget State" option into the macro creation area. Figure 110

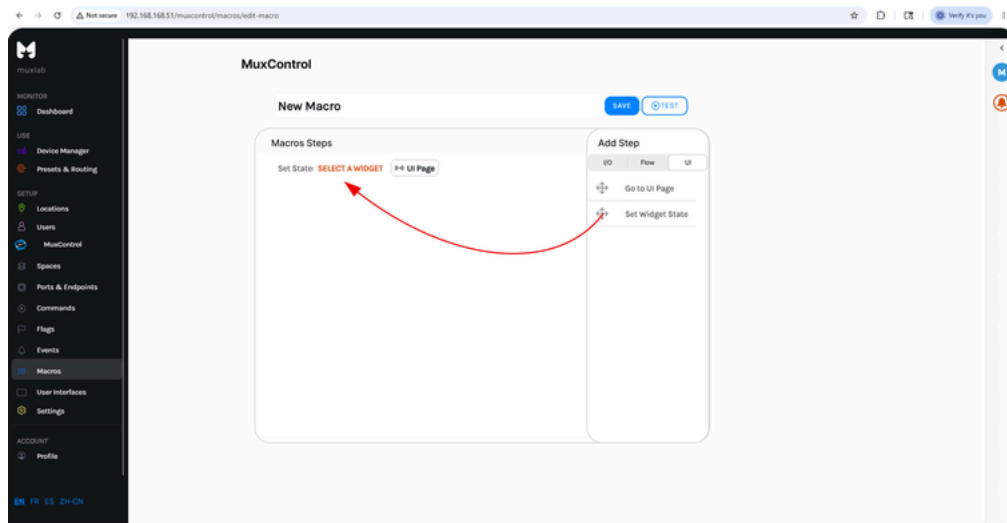


Figure 110

Next, after clicking on "Select a widget", the User must define, in the options that appear on the right side of the screen, the user interface in which the widget is located, the widget whose state we want to change and the state.. Figure 111

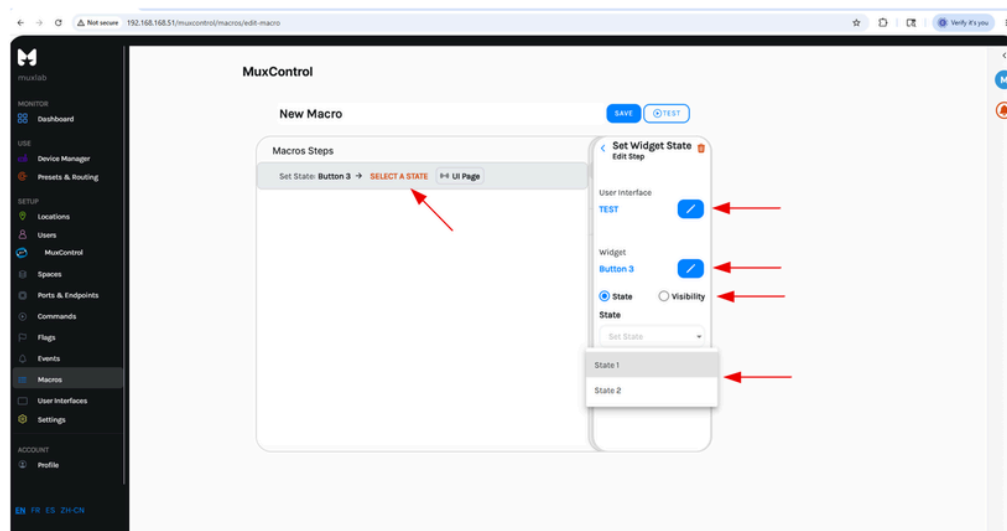


Figure 111

7.6.7 User Interfaces

The "User Interface" tab provides the User with all the necessary tools to create user interfaces that will allow them to control not only MuxLab AVoIP devices, but also any third-party device. Users can access these interfaces through the MuxControl app, available for iOS and Android. They can also be accessed on Windows operating systems via a URL.

The User Interfaces tab has three main options: User Interfaces, Settings, and How does It Work. Figure 112

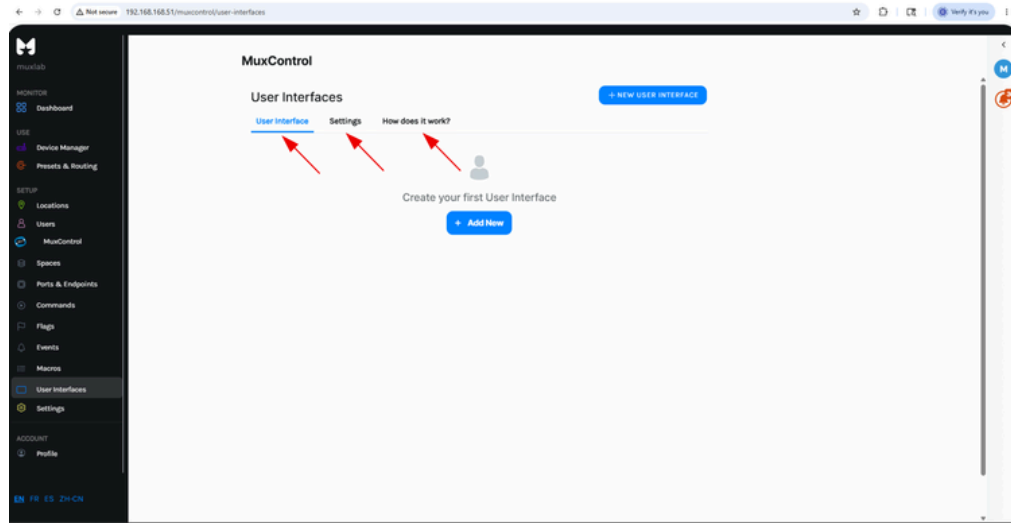


Figure 112

7.6.7.1 User Interfaces

By selecting this option, the User will be able to create a new user interface, view the list of user interfaces already created, or edit a user interface that has already been created. To begin creating a new user interface, click the "New User Interface" button. Figure 113

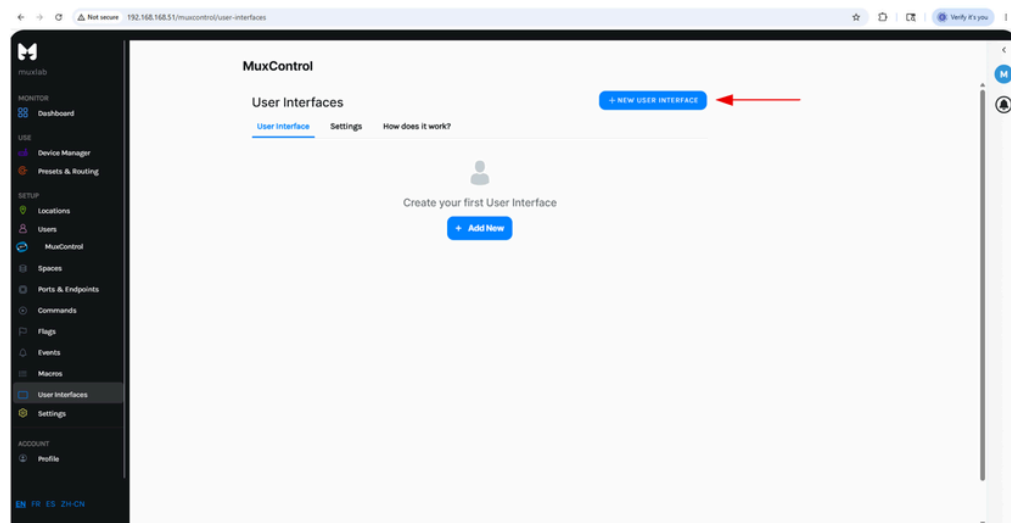


Figure 113

After clicking the "New user interface" button, a new page will appear where the user will have seven options that will allow them to create a user interface.. Figure 114

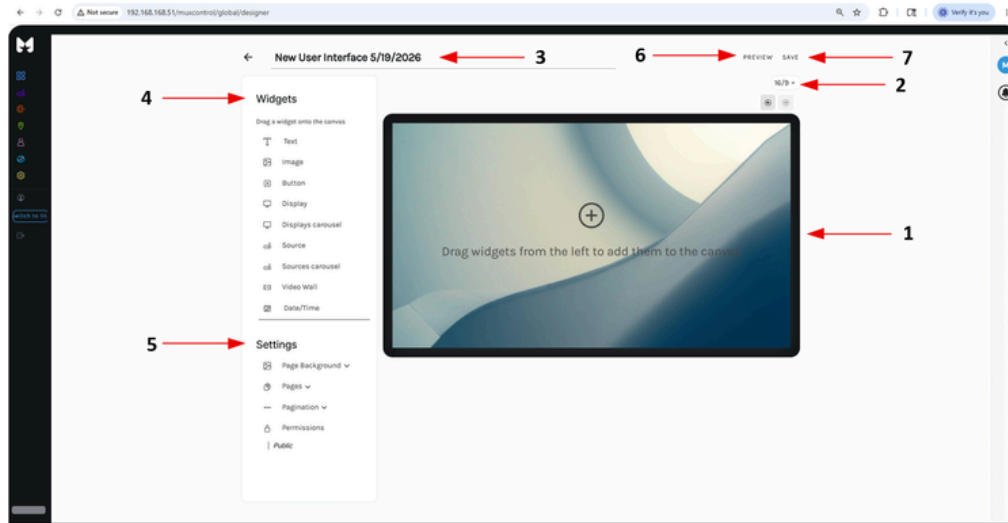


Figure 114

1. This area represents the tablet on which we will design the user interface.
2. By clicking on this icon, the user will be able to select, from a list, the aspect ratio with which to create the user interface.
3. Here the User must assign a name to the user interface.
4. Here the system displays the list of available widgets that can be added to user interfaces; these widgets are: Text, Image, Button, Screen, Screen Carousel, Font, Font Carousel, Video Wall, and Date/Time.
The way to add any of the widgets to the user interface is through the drag and drop function. Figure 115

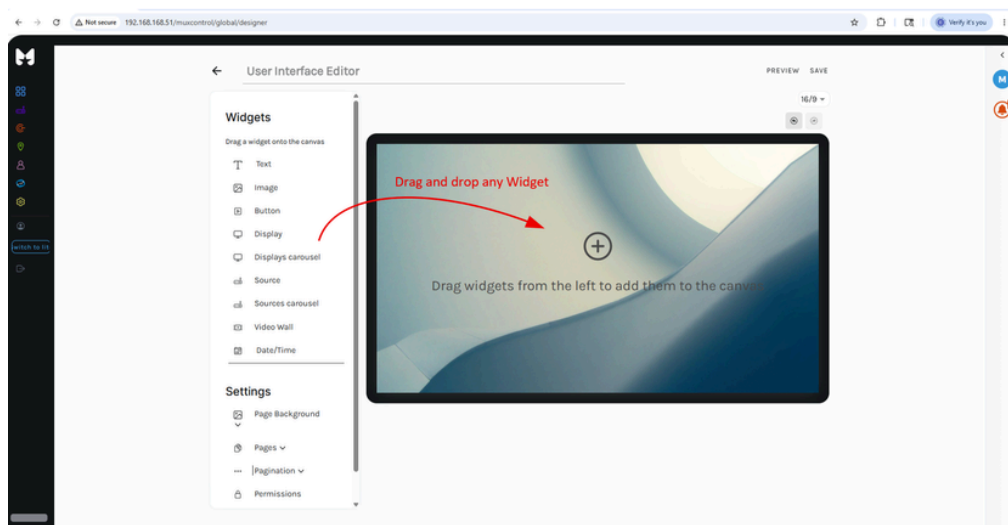


Figure 115

Text: This widget allows the User to add text to the interface. Once the User drags and drops the Text widget, all editing options, such as size, color, and font type, will appear on the left side of the screen. Figure 116

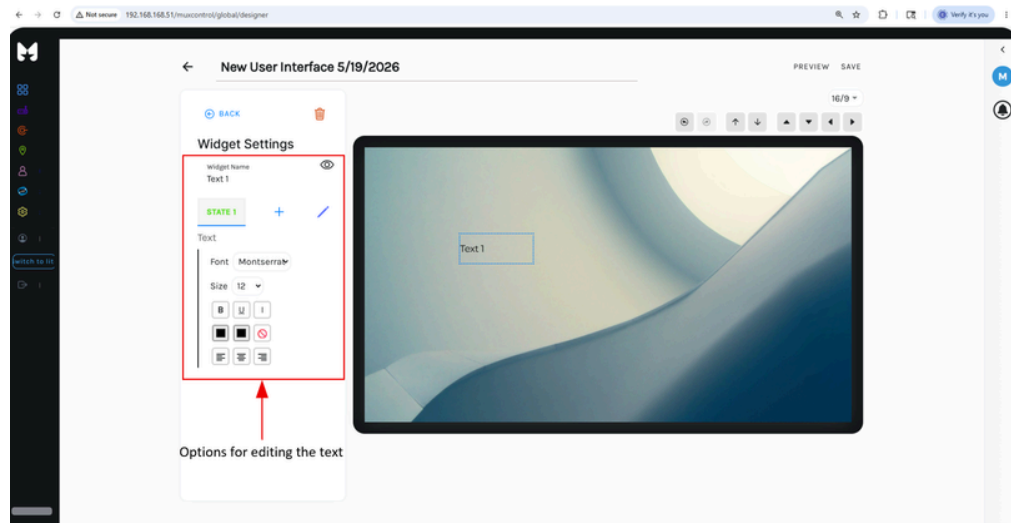


Figure 116

Image: This widget allows the User to add images to the interface. Once the User drags and drops the image widget, the system will display a pop-up window where the User must select the desired image file. Figure 117

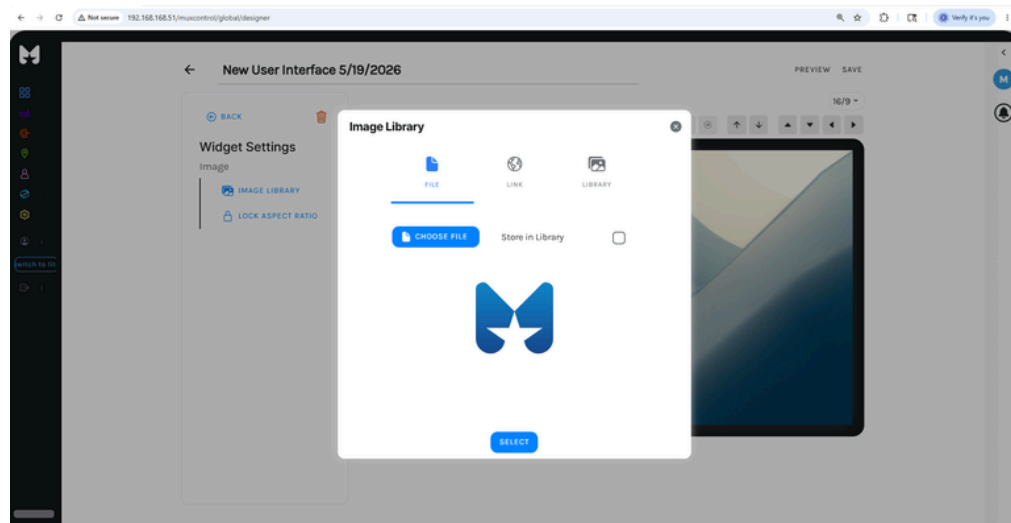


Figure 117

Button: This widget allows the User to add buttons to the interface. Once the User drags and drops the Button widget, all the button's configuration options, such as state, action, icon, etc., will appear on the left side of the screen. Figure 118

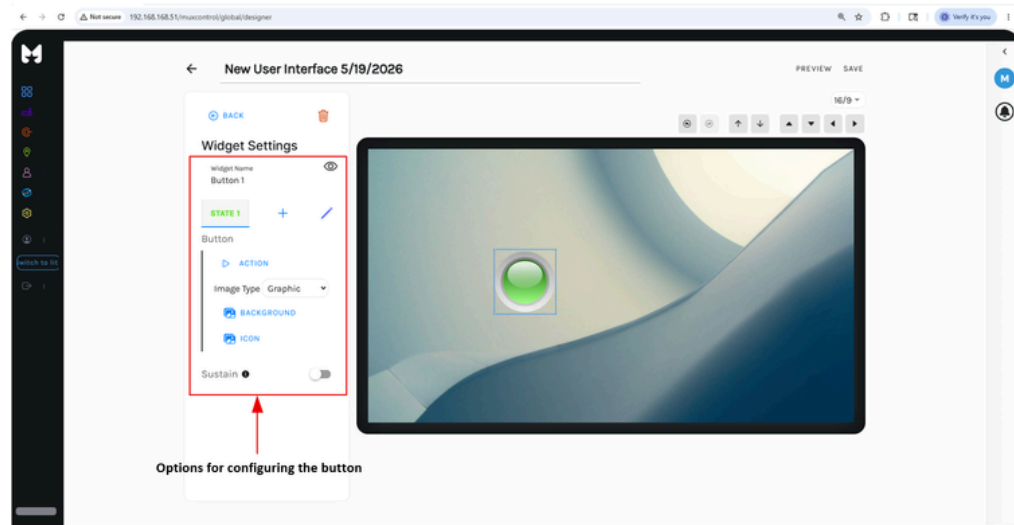


Figure 118

Display: This widget allows the User to add Receivers from any MuxLab AVoIP family to the interface. Once the User drags and drops the Display widget, the system will display a pop-up window where they must select the desired Receiver. Figure 119

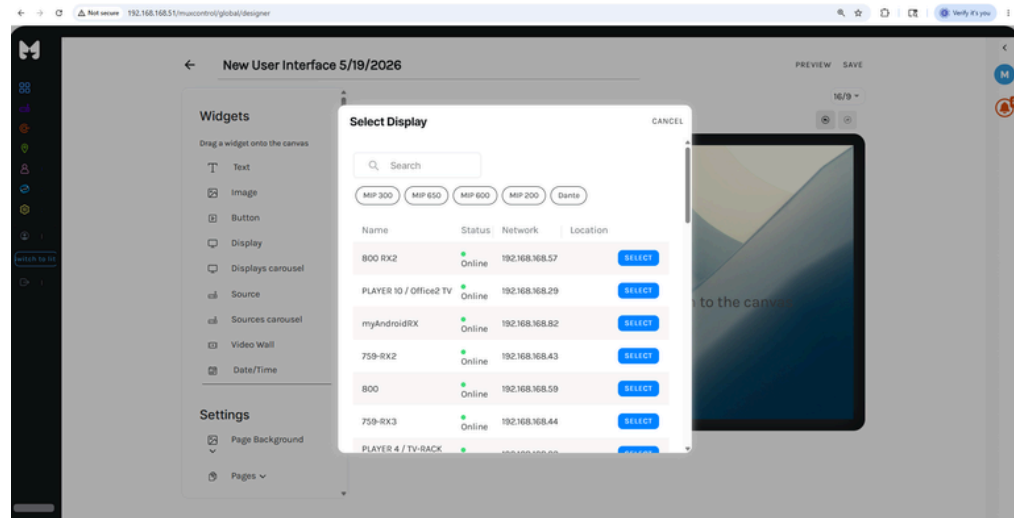


Figure 119

Display: This widget allows the User to add Receivers from any MuxLab AVoIP family to the interface. Once the User drags and drops the Display widget, the system will display a pop-up window where they must select the desired Receiver. Figure 119

Display Carousel: This widget allows the User to add Receivers, in a carousel arrangement, from any MuxLab AVoIP family to the interface. Once the User drags and drops the Display Carousel widget, the system will display a pop-up window where they must select the desired Receivers.

Source: This widget allows the User to add Transmitters from any MuxLab AVoIP family to the interface. Once the User drags and drops the Source widget, the system will display a pop-up window where they must select the desired Transmitter. Figure 120

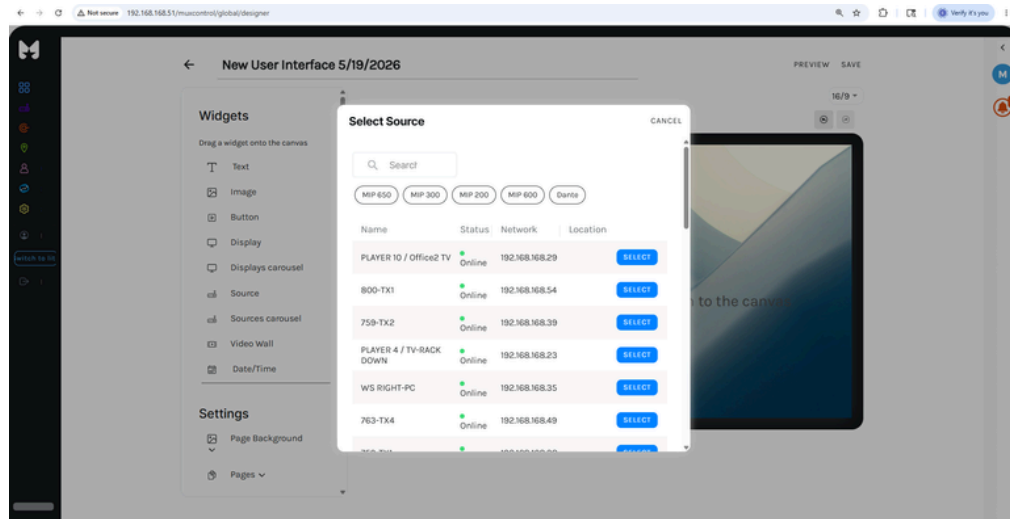


Figure 120

Sources Carousel: This widget allows the User to add Transmitters, in a carousel arrangement, from any MuxLab AVoIP family to the interface. Once the User drags and drops the Sources Carousel widget, the system will display a pop-up window where they must select the desired Transmitters. Figure 121

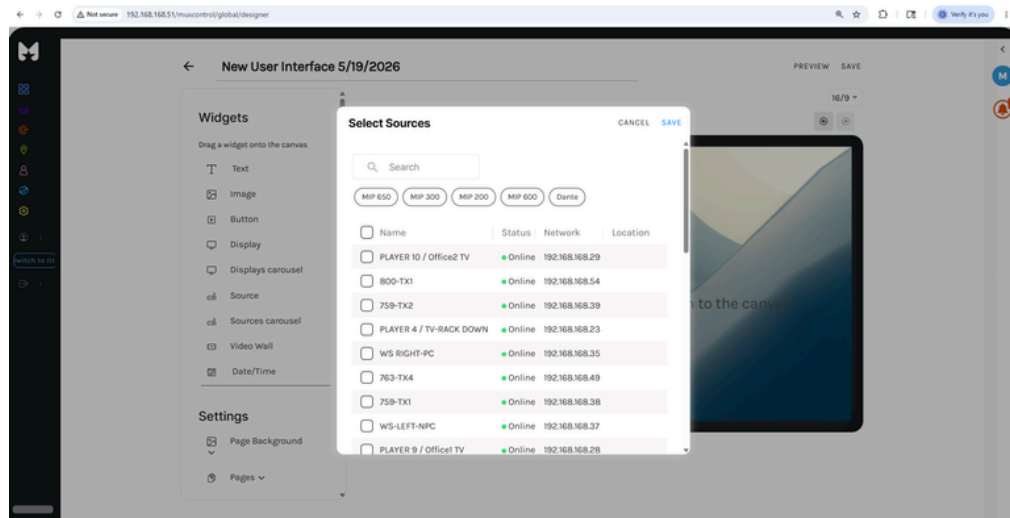


Figure 121

Video Wall: This widget allows the User to add Video Walls, previously configured in the "Presets and Routing" tab, to the interface. Once the User drags and drops the Video wall widget, the system will display a pop-up window where the User must select the desired Video Wall. Figure 122

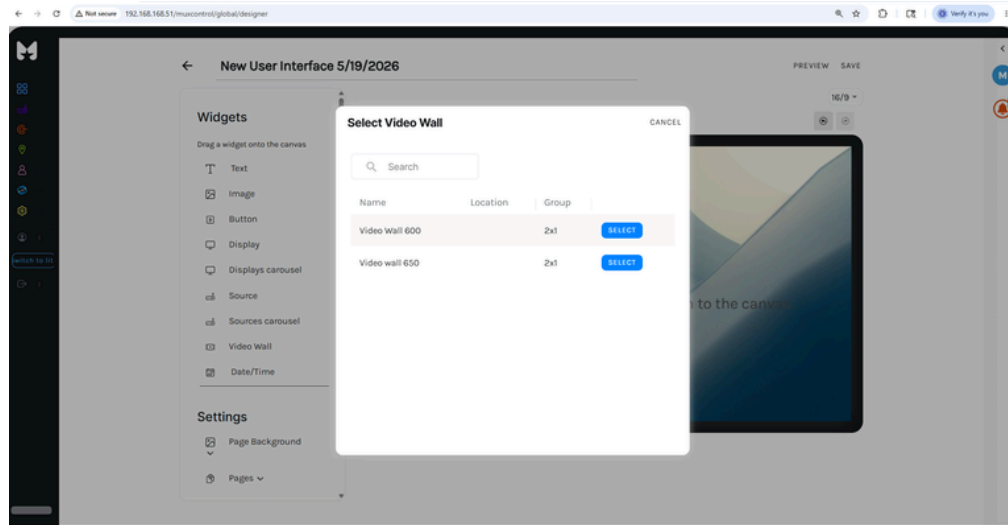


Figure 122

Date/Time: This widget allows the user to add the date and time to the interface.

- Here the system displays the list of available settings that can be applied to user interfaces; these settings are: Page Background, Pages, Pagination, and Permissions.

Page Background: This setting allows the User to change the background of a page, either by using an image from a specific file or by selecting a single background color from a color table. Figure 123

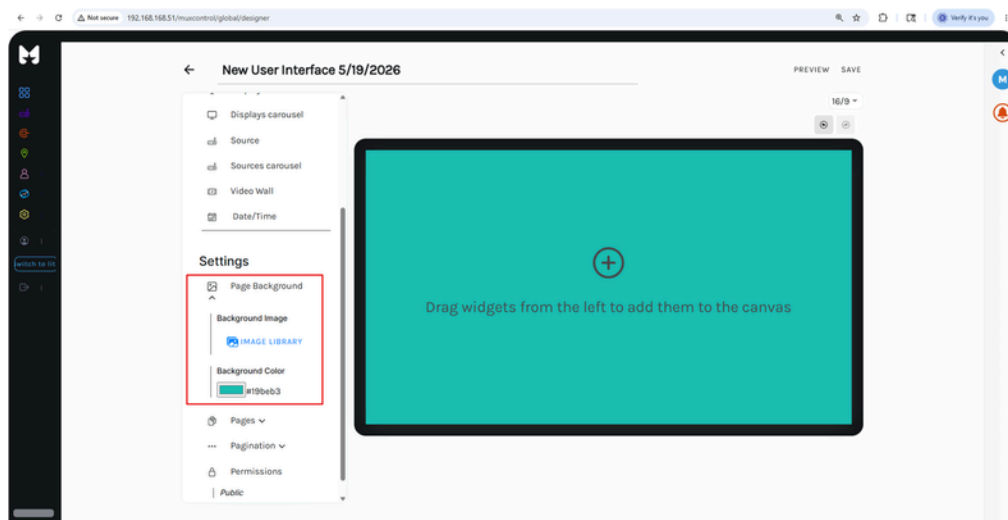


Figure 123

Pages: This setting allows the User to create or delete pages. Figure 124

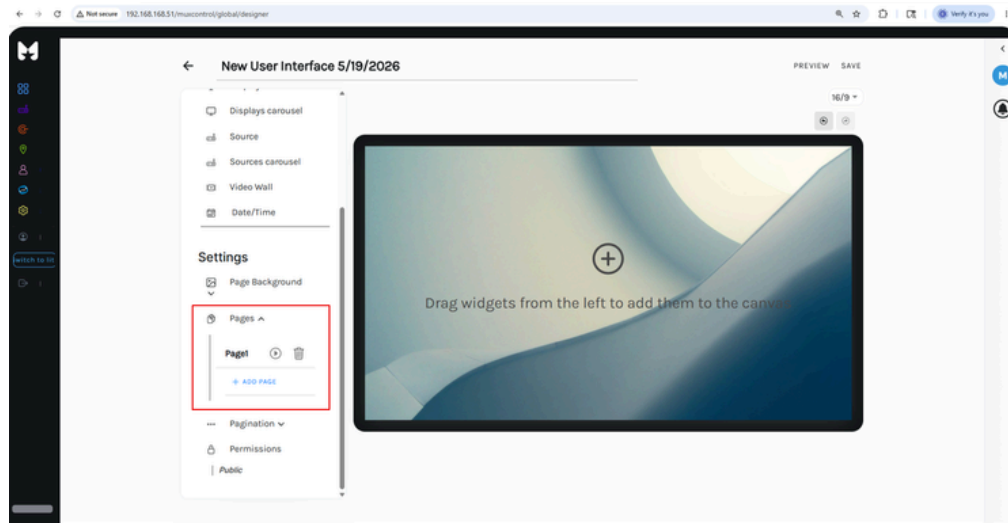


Figure 124

Pagination: This setting allows the User to hide or show pagination, as well as define which side of the screen it will be displayed on or change the background color. Figure 125

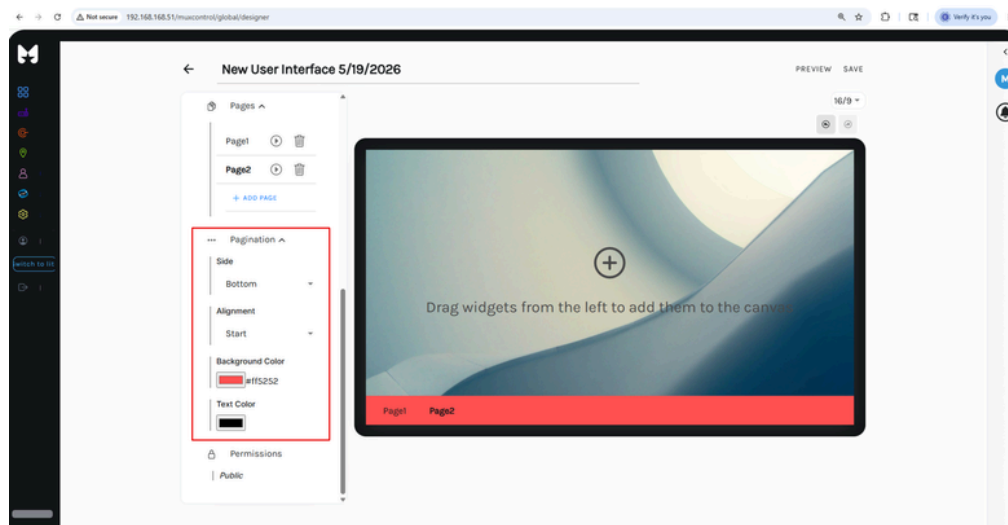


Figure 125

Permissions: This setting allows the User to select which users will have access to the interface being created. Additionally, selecting this option displays a URL that allows the user interface to be opened from any browser. Figure 126

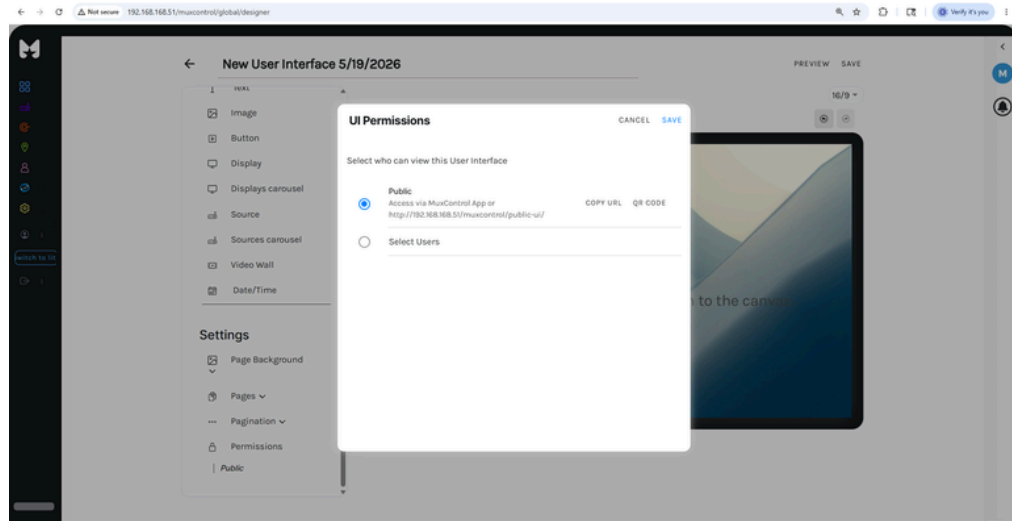


Figure 126

6. By selecting the Preview option, the system will display a preview of the interface being worked on, allowing the User to see the final result of the design and test the functionality of the interface.
7. Once the User has finished creating the user interface and verified that it works correctly, they should click "Save" to save all the changes made.

7.6.7.2 Settings

In this option, the User can configure the page where the created user interfaces will be displayed. Here, the background can be changed by selecting an image or a color. Figure 127

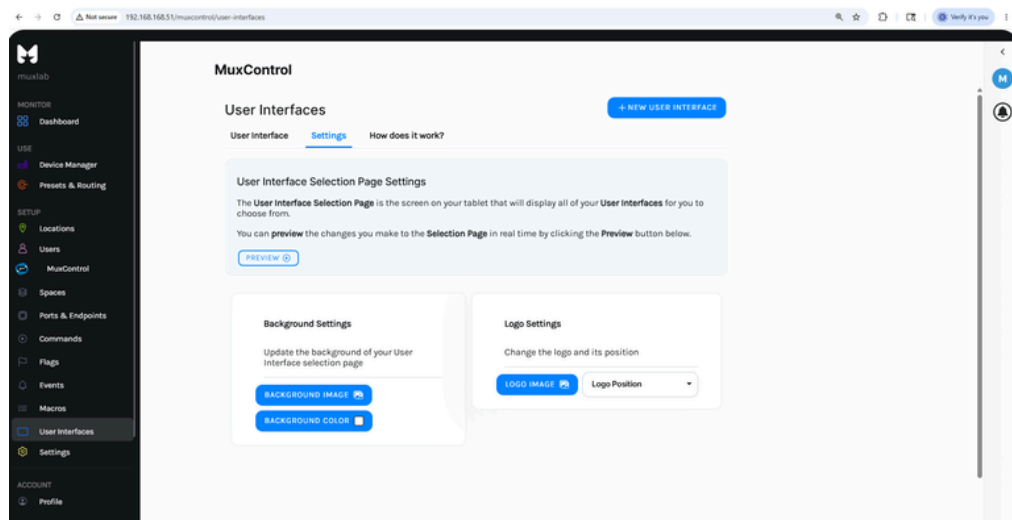


Figure 127

7.6.7.3 How does it work?

In this option, the User will find a quick guide on how to create and use user interfaces. Figure 128

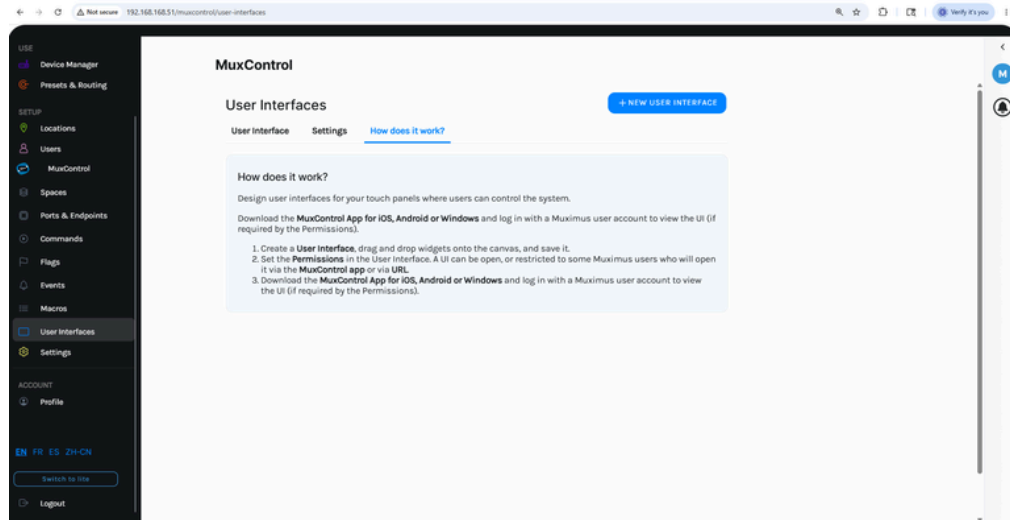


Figure 128

7.7 Settings

The Settings tab provides the user with all the necessary options to make any necessary modifications to the Muximus controller configuration.

In this page we have six main options (Network, Date & Time, Backup & Restore, Logs, Software Update, and SMTP). Figure 129

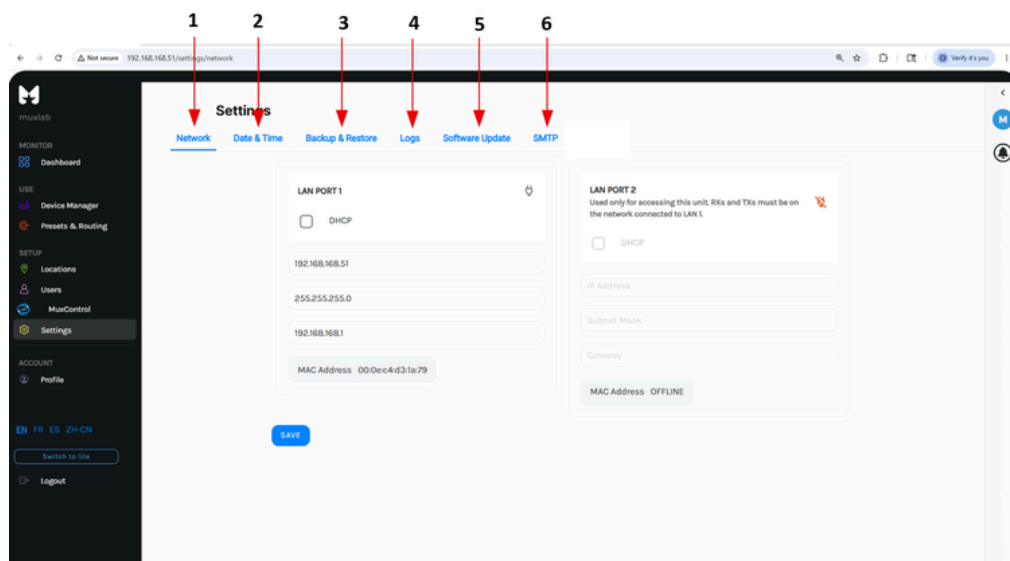


Figure 129

- 1. Network:** On this page the User can configure the network ports of the Muximus controller. The User can assign a fixed IP address to each port or can enable the DHCP option to have the router assign an IP address to them. Figure 130

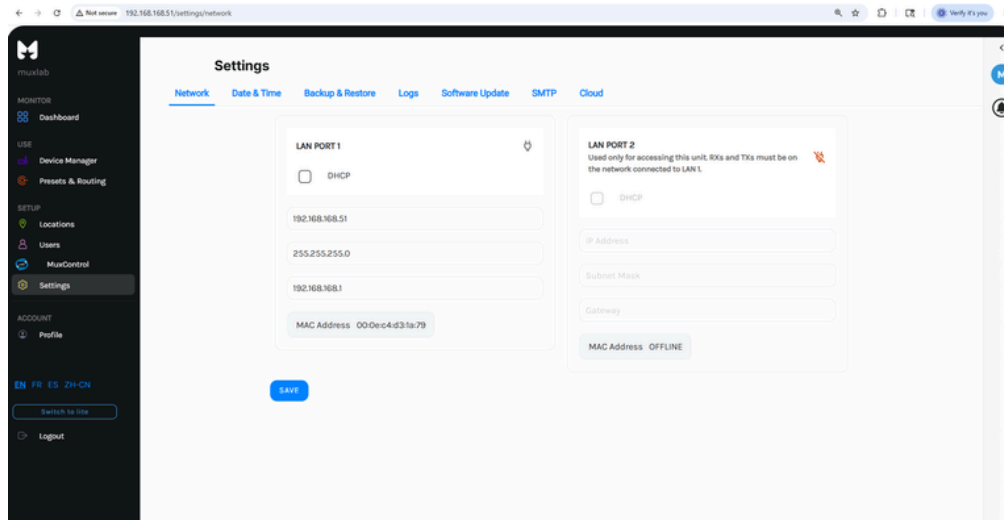


Figure 130

- 2. Data & Time:** On this page the User can set the date and time of the Muximus controller. Setting the correct date and time can avoid network problems and provide clearer logs. Figure 131

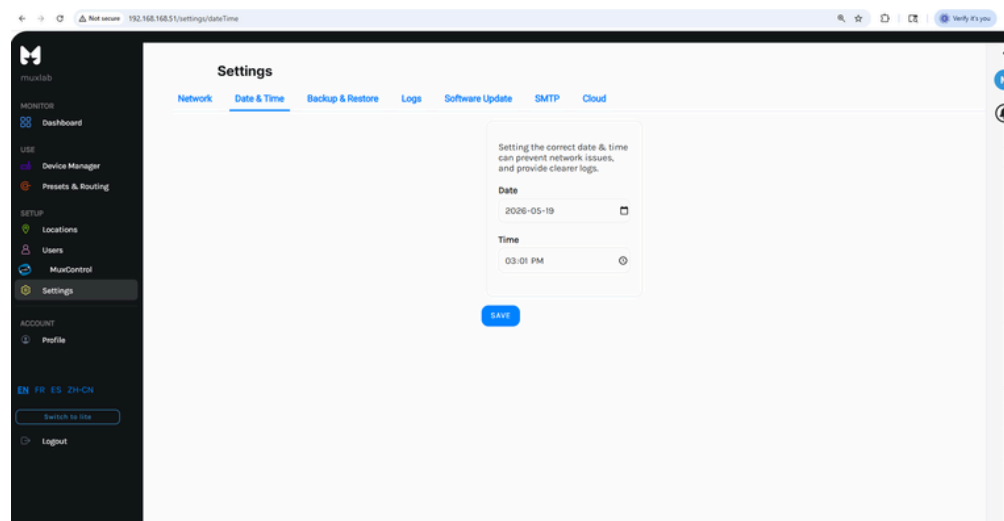


Figure 130

- 3. Backup & Restore:** On this page the User will be able to: **A.)** Create a backup of the unit data that you can use to restore the unit data at any time, or duplicate your configuration to another unit, **B.)** Restore the unit data from a previous backup, and **C.)** Reset the device to factory settings, including network settings. Figure 131

7.9 Switch to Lite

The "Switch to Lite" tab allows the User to access the MuxControl Lite interface. This interface is ideal for users who don't need advanced control tools, as it only allows them to configure Muxlab AVoIP devices and create video walls. After these configurations, the system will automatically generate a control interface where the user can send content to the different TVs or video walls in the system.

7.10 Logout

This option allows the user to log out, which requires them to re-enter the credentials of some of the previously created users in order to log back into the system.

Figure 132

8. Application Diagram

