



DigiSign Plus CMS & 4K Digital Signage Player Plus User Manual

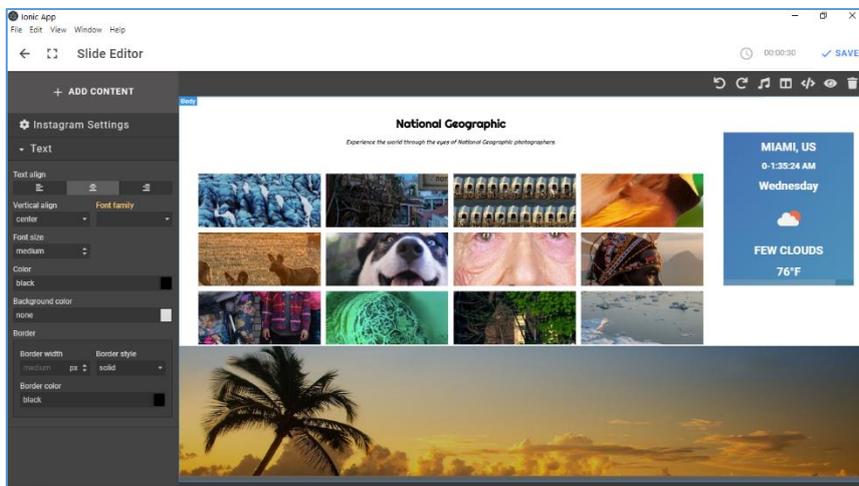


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1. Product Overview

The DigiSign Plus CMS (Content Management System) works with the 4K Digital Signage Player Plus (model 500789) and allows users to easily create, arrange, manage, and schedule Video, Images, Audio, and HTML content from a variety of sources, including content streaming via an H.264/H.265 codec over a local Ethernet network, the Internet, and internal memory. The system supports numerous widgets including RSS feeds, Instagram feeds, Text Tickers, Clocks, Stocks, Exchanges, Weather info, Maps, to name a few. The system supports Multiview layouts, including Picture-In-Picture (PIP) and the ability to create a schedule of up to 1 year or more of content in advance. The user can then publish the signage content and schedule to the 4K Digital Signage Players distributed throughout your network and displayed on the connected TVs.

The DigiSign Plus CMS makes this process quick and easy with a powerful and intuitive workflow, that allows even a novice to be up and running in no time. This manual takes you through the steps of creating and managing your signage content via the DigiSign Plus CMS software and the distributed 4K Digital Signage Players.

2. Using the DigiSign Plus CMS

This section describes the basic workflow to create, arrange, manage, schedule, and publish Digital Signage content.

The typical workflow consists of the following steps:

1. Apply for an API key (as needed)
2. Adding your First New User Account (as needed)
3. Login to DigiSign Plus CMS
4. Creating and Managing Signage Players and Player Groups
5. Creating and Arranging Slide Content
6. Creating and Managing Schedules and Publishing Content to Digital Signage Players

2.1 Apply for an API key

This operation is required once, for more details please refer to section 2.7.1

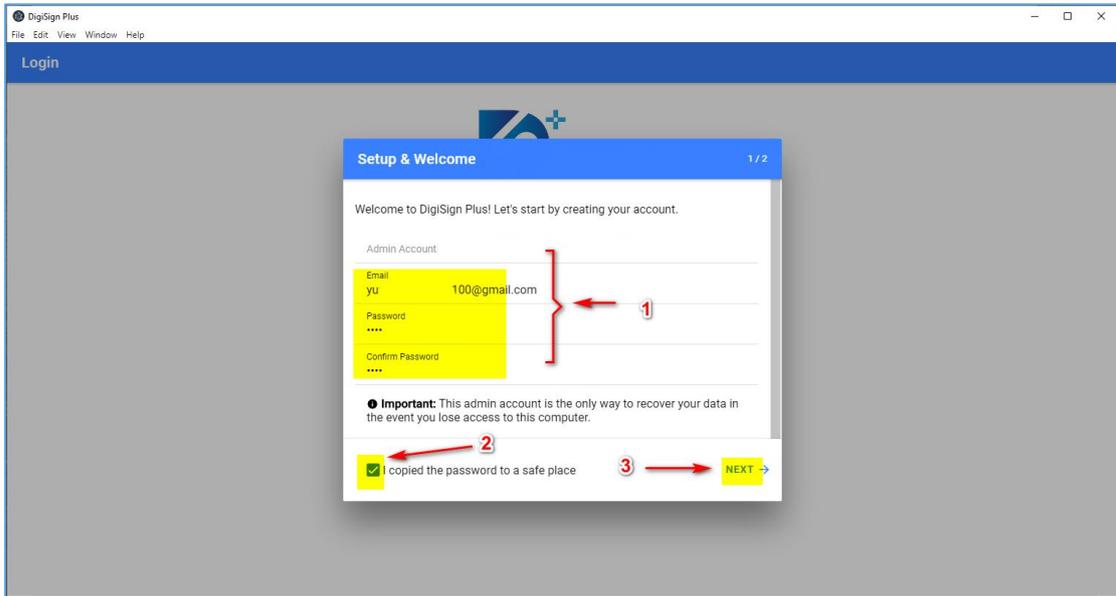
2.2 Adding your First New User Account

If this is the first time you are running DigiSign Plus CMS, a new user should be created, see figure below.

To create a new user, following these steps:

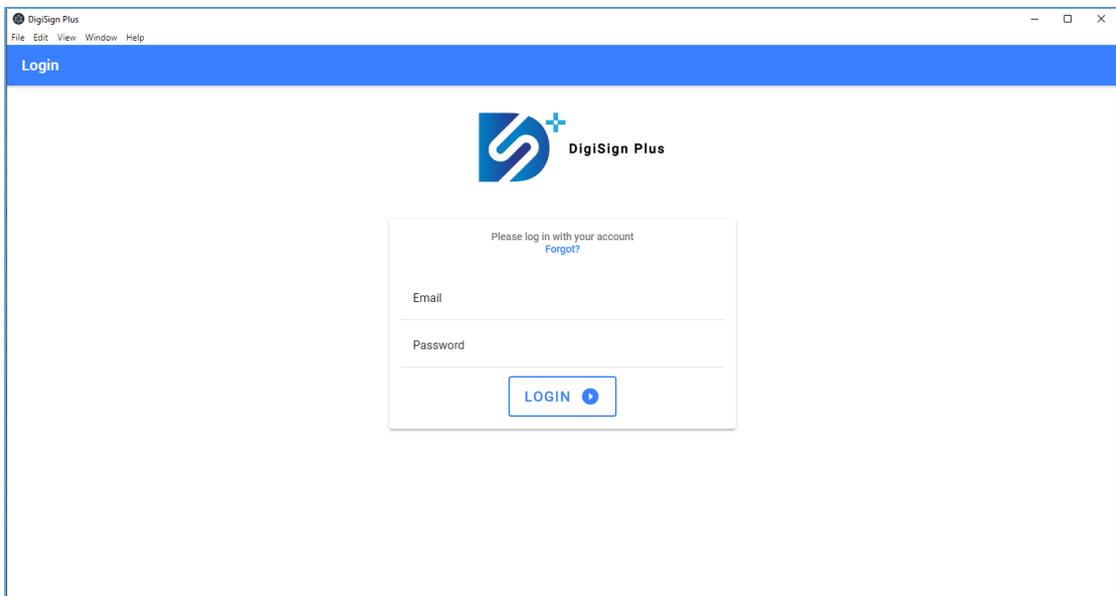
1. Enter your email address and password.
Then enter your password again.
2. Record your password in a safe place and then click on:
"I copied the password to a safe place"

3. Press the “NEXT” button, and then press the “DONE” button on the following page.



2.3 Login to DigiSign Plus CMS

Any user with an account can login by entering the user email address and password, and then clicking the “LOGIN” button, as shown in the figure below. If you forgot your password, press on “Forgot?” and follow the on screen instructions.



2.4 Creating and Managing Signage Players and Player Groups

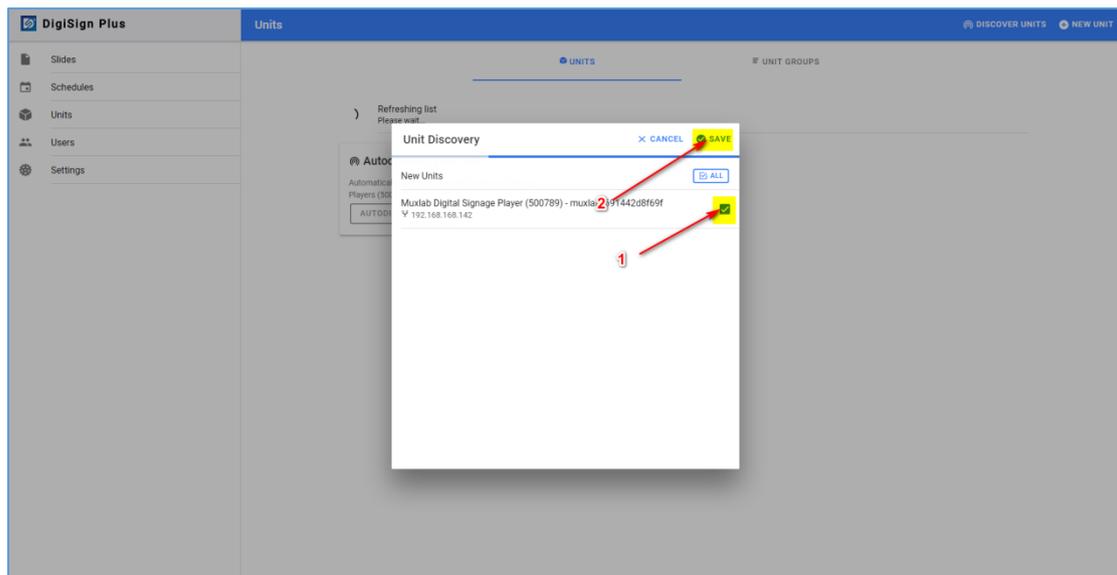
Once logged in, you may add one or more 500789 units either manually (IP address must be known), or by doing an autodiscovery.

Start by going to the “Units” page by pressing on the “Units” tab on the far left of the main screen. This page allows units to be created, configured, managed, grouped, and deleted.

2.4.1 Adding Signage Players via Autodiscovery

Select the “Units” tab near the top of the “Units” page, then press the “AUTODISCOVER” button to automatically discover any Digital Signage Players (model 500789) on the network. Once no further units have been discovered for about 30 seconds, you may select any of the discovered units and stop the process by pressing “SAVE”, see figure below. If you allow the system to continue the discovery process, it will stop automatically once no further units are discovered for a set amount of time. Again, select any of the discovered units and press the “SAVE” button to complete the process.

Then edit the unit and set the time zone, and then “Save” and “Synchronize” to end the process.



Note: For lite version of CMS, up to 2 units in total can be added.

2.4.2 Adding Signage Players Manually

Select the “Units” tab near the top of the “Units” page, then press on “NEW UNIT” at the top right of the screen to add a new unit manually.

Under the “GENERAL” tab enter the following required information:

- Unit Name: Name of the player (e.g. Lobby)
- DEVICE ID: This info is displayed on the TV connected to the unit.

Under the “NETWORK” tab enter the following required information:

- IP address: This info is displayed on the TV connected to the unit.

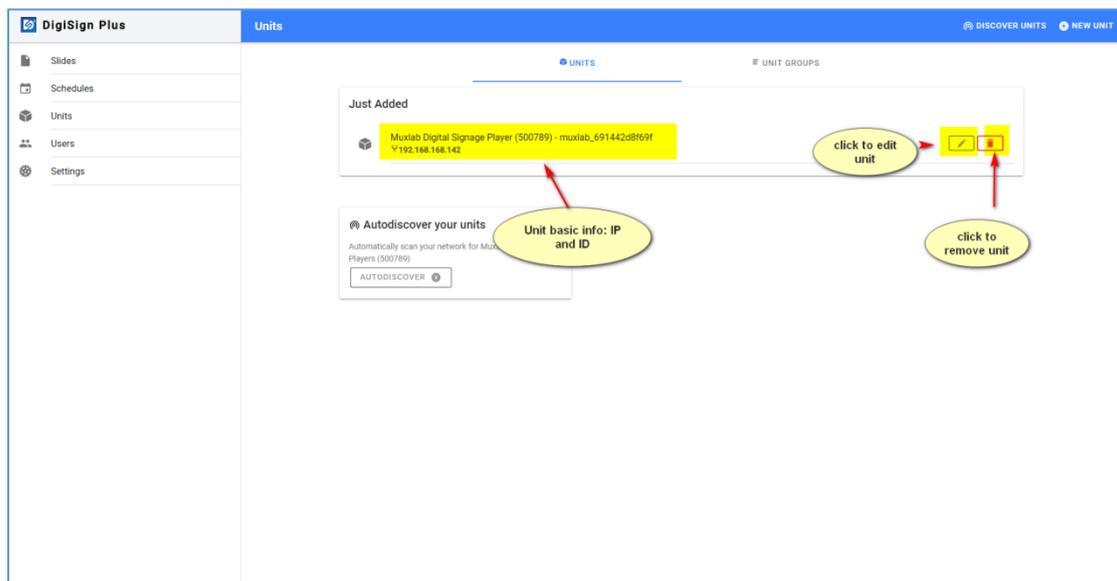
- Mask address
- Default gateway

Then press the “SAVE” button to complete the process.

Then edit the unit and set the time zone, and then “Save” and “Synchronize” to end the process.

2.4.3 Editing and Deleting a Signage Player

Units that have been added may be edited or deleted by pressing the “Edit” icon or “Delete” icon respectively under the Units subsection, see figure below.

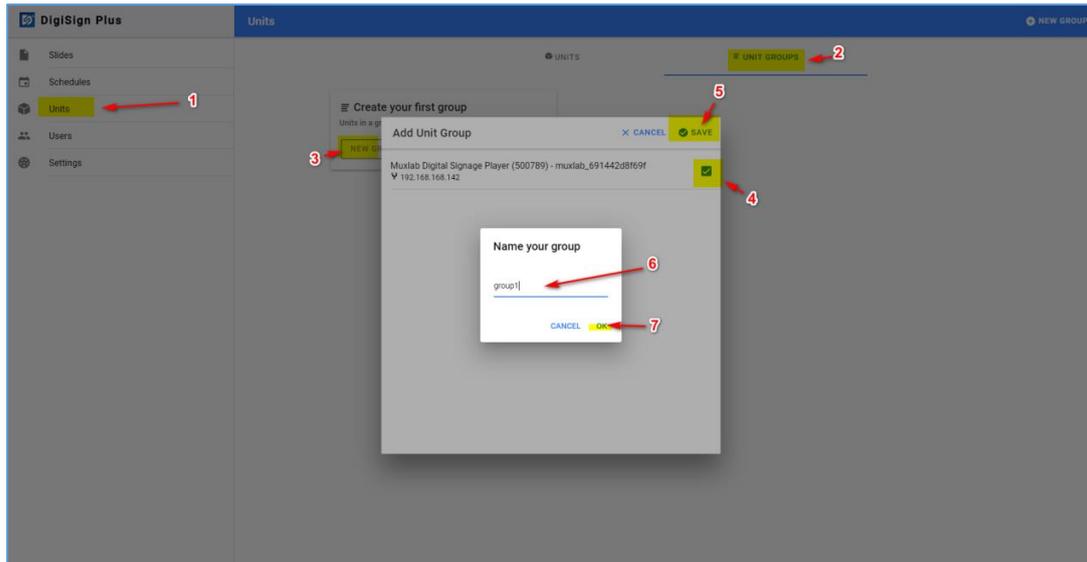


2.4.4 Creating Player Groups and Adding Players to the Group

You may create a Unit Group and add units to that group. Actions performed on a given group will affect each unit within the group. This is an efficient way of managing several units that need to be affected in an identical manner.

To create a new unit group and assign units to the group, following these steps:

1. Click “Units” on the left of the main page.
2. Click the “UNIT GROUPS” tab near the top of the units page.
3. Click the “NEW GROUP” button.
4. Click on the units to be added to the new group.
5. Press the “SAVE” button.
6. Input the new group name.
7. Press the “OK” button to confirm.

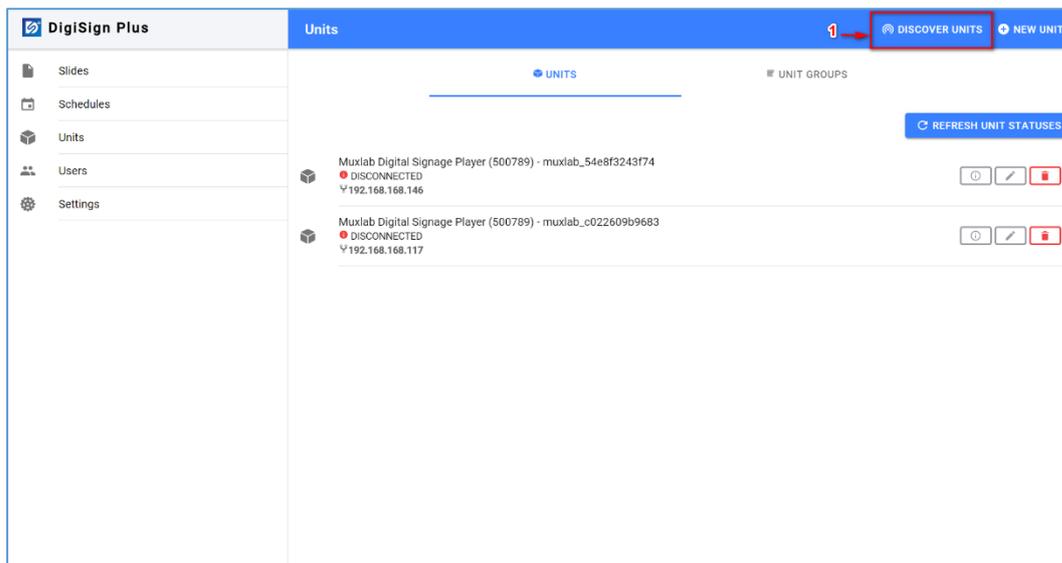


2.4.5 Signage Player Recovery (Unpairing)

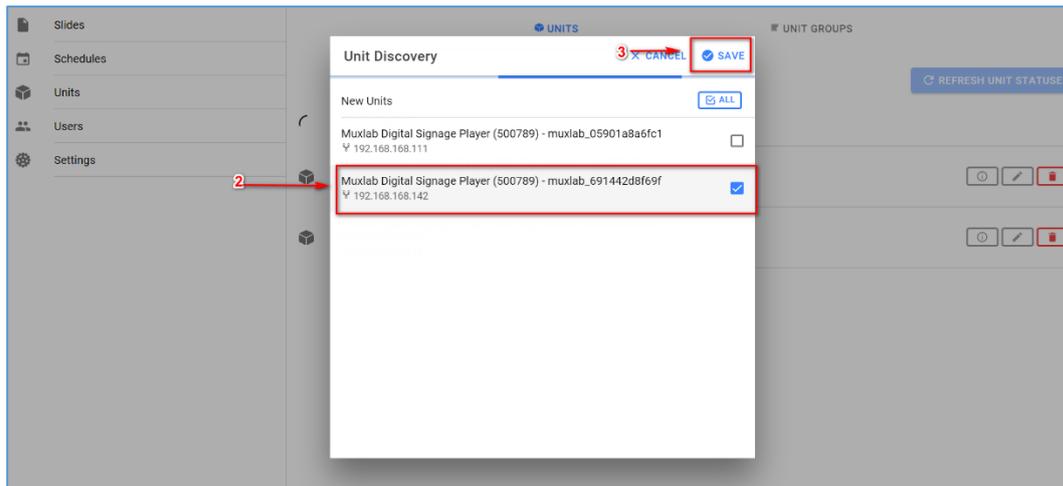
If during the discovery process a Signage Player is not paired correctly, or if a unit needs to be unpaired to be re-discovered and repaired, then follow the steps below.

Steps 1, 2 & 3 are to discover and pair one or more units.

1. Click “Units” on the left of the main page, and then click on the “DISCOVER UNITS” tab near the top of the units page.
2. Select the discovered unit(s).
3. Click “save”.

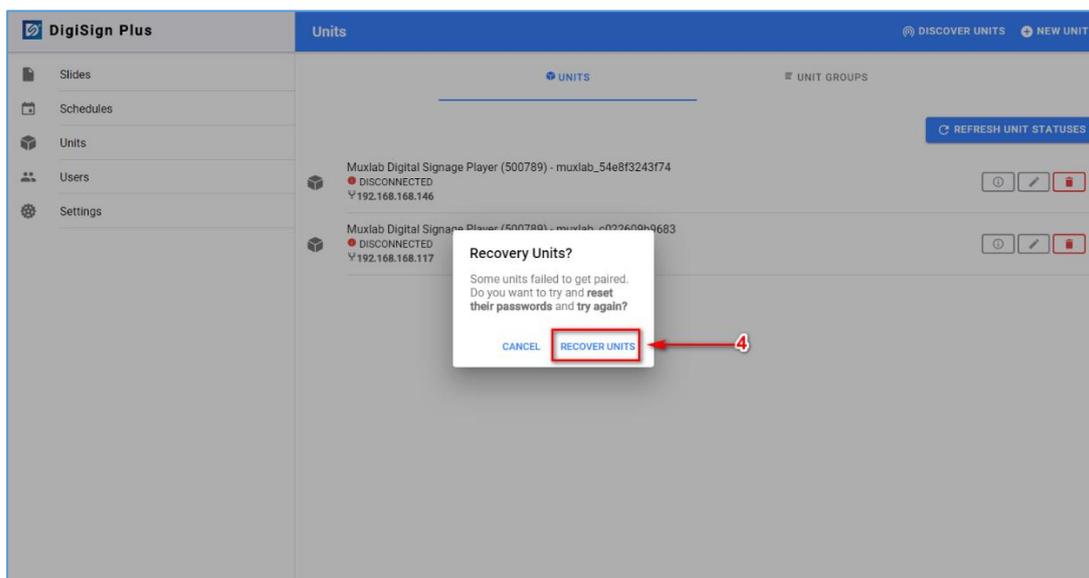


Note: For lite version of CMS, up to 2 units in total can be discovered.



If discovery fails or if you need to unpair a unit for any reason, then:

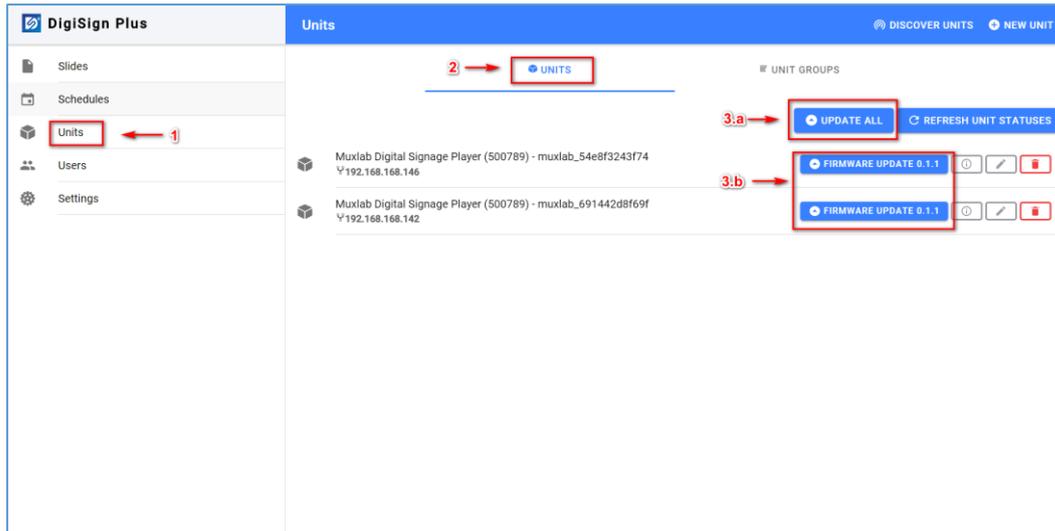
4. Click on “RECOVER UNITS” to recover the unit(s) in question, so that they may be discovered and paired again as needed.



2.4.6 Signage Player Firmware Update Process

To update the Firmware of one or more 4K Signage Player Plus units (500789), please follow the below steps:

1. Click “Units” on the left of the main page.
2. Click the “UNITS” tab near the top of the units page.
3. Select to update one specific unit or all units:
 - a. The user can update all units.
 - b. Or the user can update specified units.

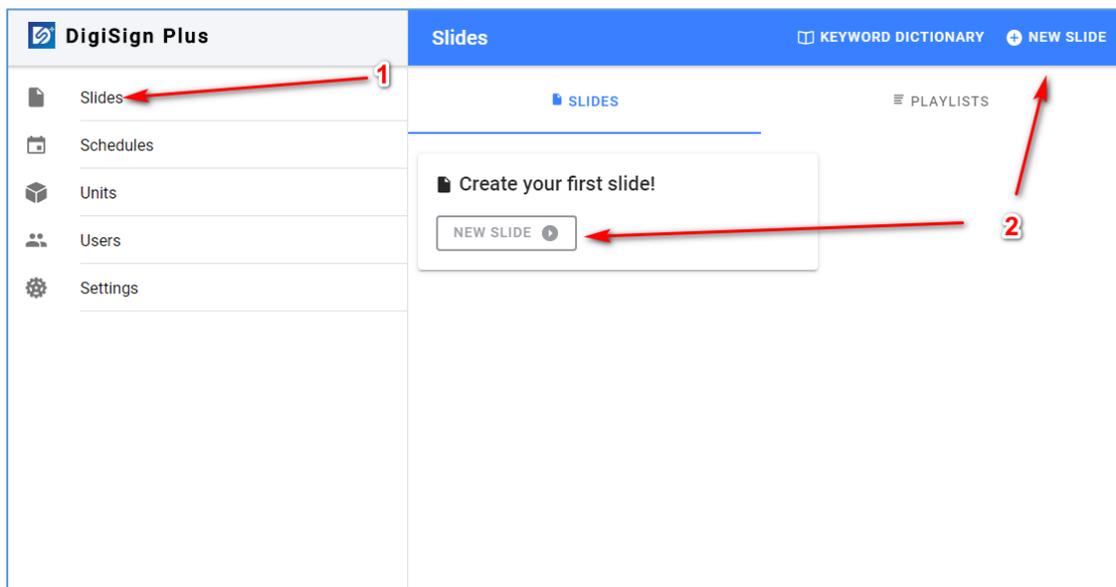


2.5 Creating and Arranging Slide Content

2.5.1 Adding and Configuring a Slide

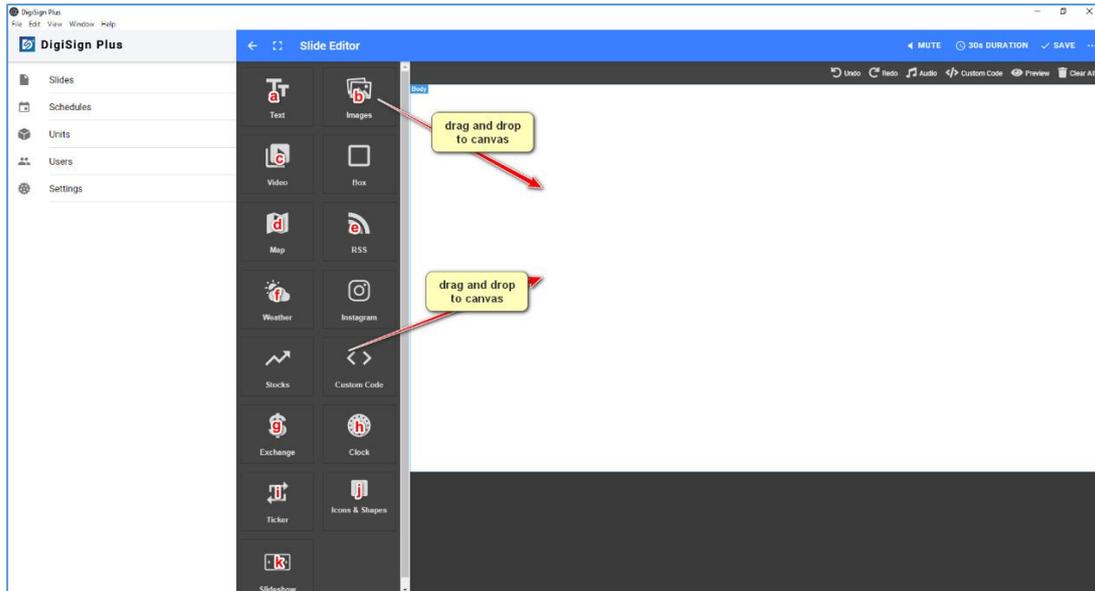
Follow these steps to add a slide:

1. Click “Slides” on the far left of the main page, and then click on “SLIDES” near the top of the “Slides” page.
2. Click “NEW SLIDE” to create a new project.

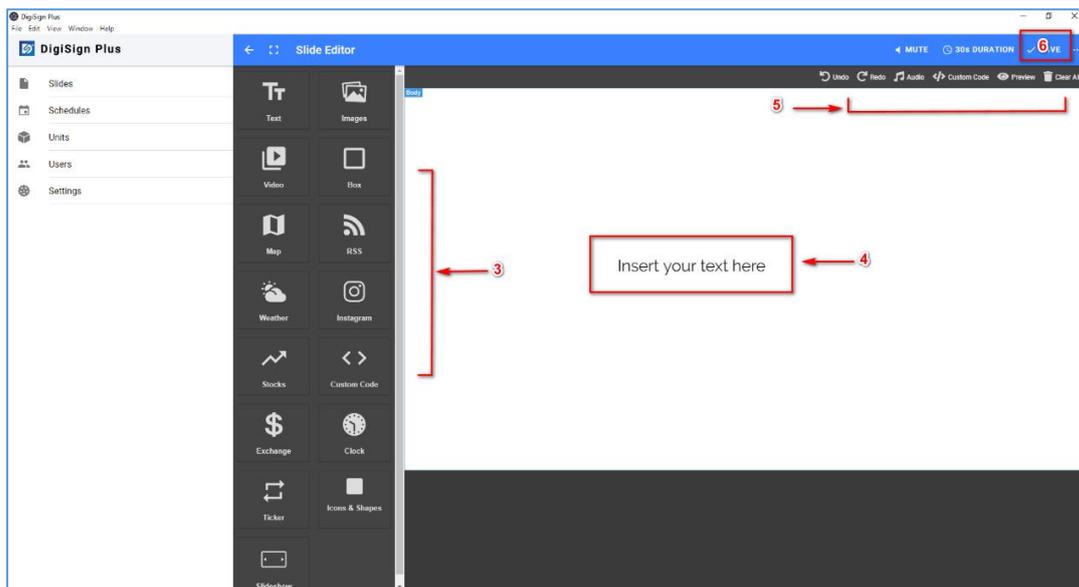


Follow these steps to edit and save a slide:

3. Drag and drop widget(s) on the far left to the working canvas on the right. Multiple widgets may be arranged on any given canvas and may even be overlapped.



4. Position and size the widgets as needed on the canvas and enter any needed information.
5. Edit/configure slide:
 - a. Add/remove music
 - b. Mute/unmute music
 - c. Set duration of slide
 - d. Add/remove widget(s) from canvas
 - e. Add custom code
 - f. Preview slide
6. Save slide (make sure to save the slide before exiting)



Available widgets:

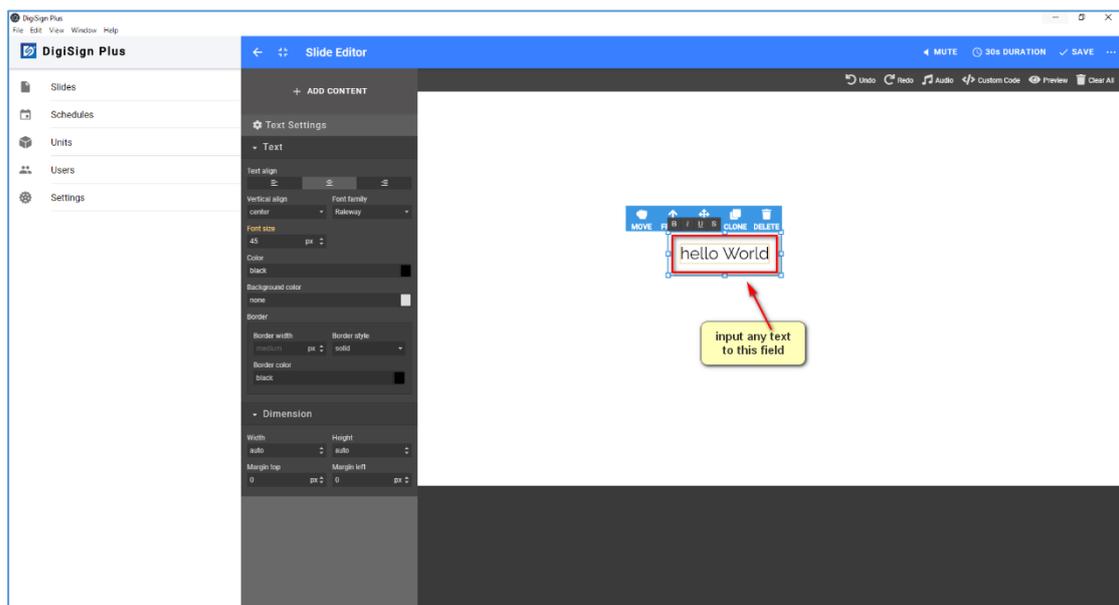
- a) Add a Text widget
- b) Add an image widget:
- c) Add a video widget
- d) Add a Map widget
- e) Add an RSS Feed widget
- f) Add a Weather widget
- g) Add an Exchange widget
- h) Add a Clock widget
- i) Add a Ticker widget
- j) Add an Icons & Shapes widget
- k) Add a Slideshow widget

Plus other widgets such as Box, Instagram, Stocks, and Custom Code.

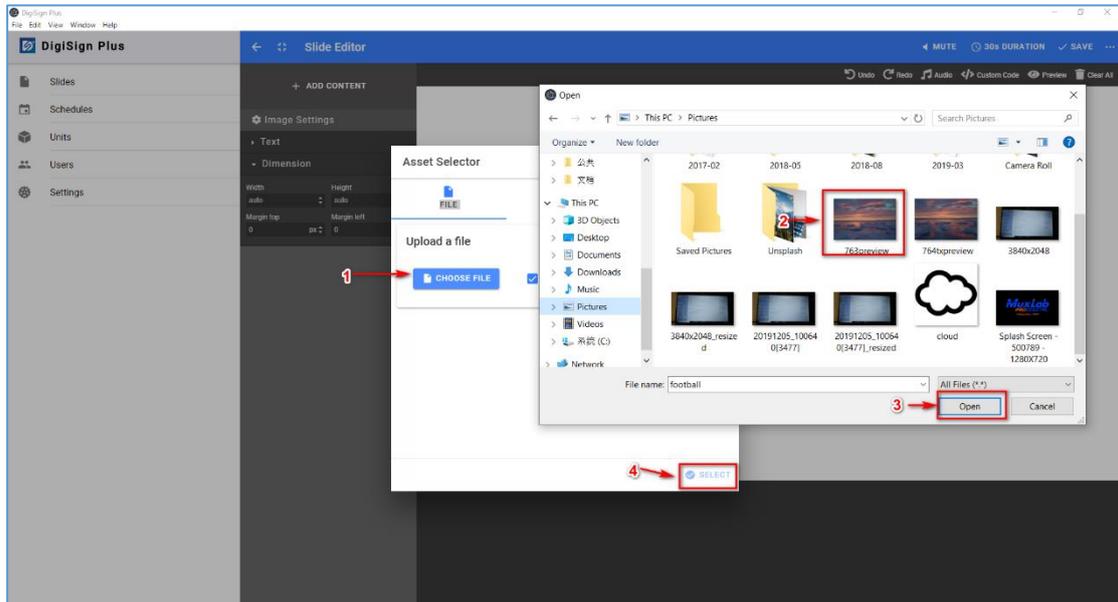
Note: Not all widgets above are available on DigiSign Plus Lite version.

Examples of how to edit/configure widgets on the canvas.

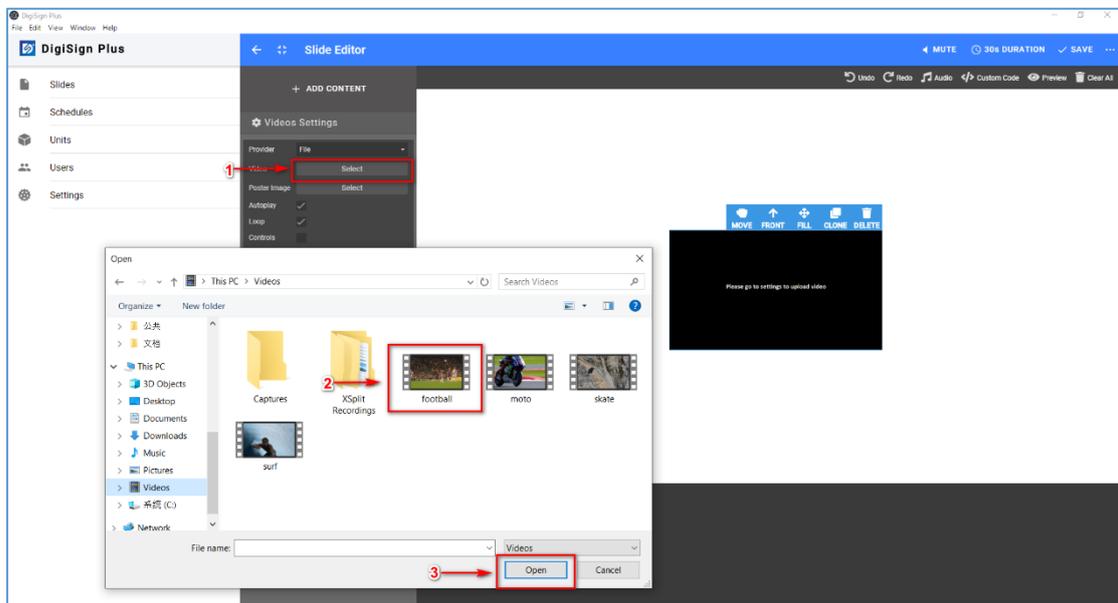
- a) Edit/Configure a Text widget by dragging the text widget to the canvas, then position and size it as needed, and enter the text to be displayed, as shown below. You may also select the font size & color, and the background color & transparency, etc.



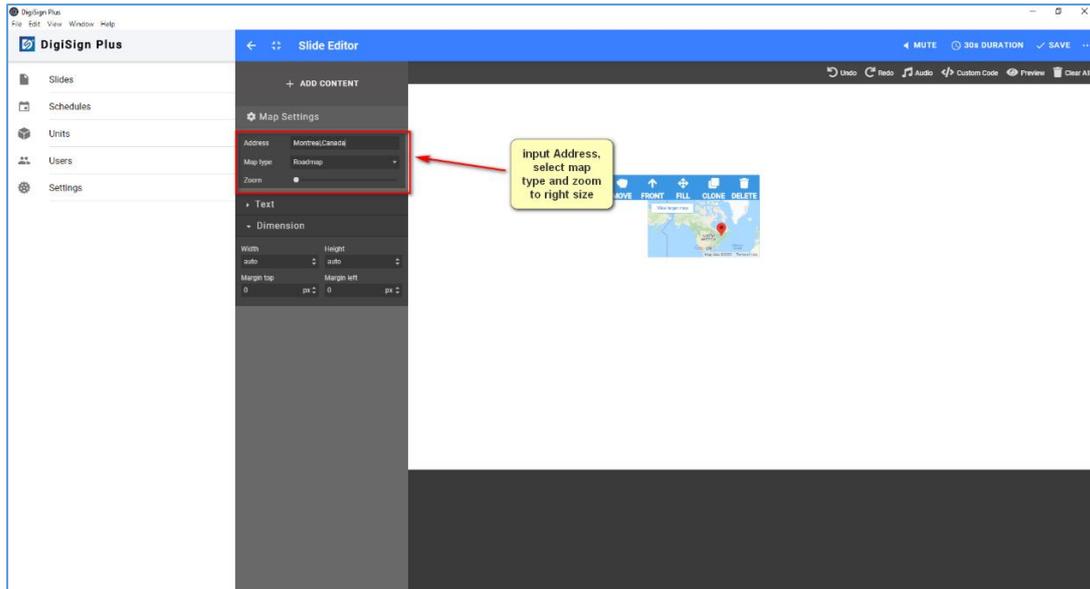
- b) Edit/Configure an image widget by dragging the image widget to the canvas, select the image file and then position and size it as needed.



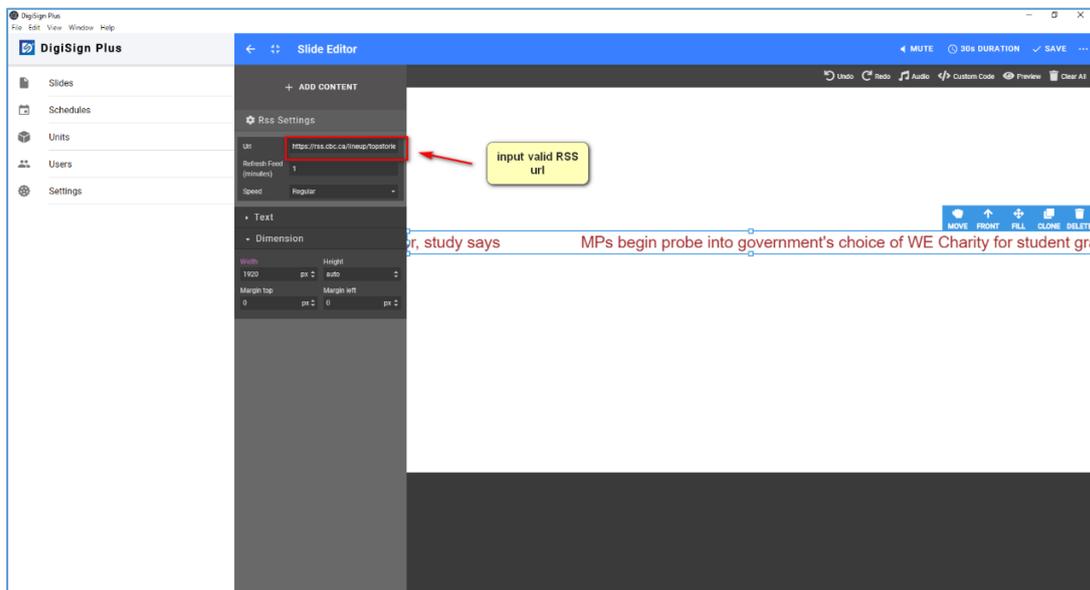
- c) Edit/Configure a video widget by dragging the video widget to the canvas, select the video file and then position and size it as needed.



- d) Edit/Configure a Map widget by dragging the map widget to the canvas, select the address and map type, and then position and size it as needed.

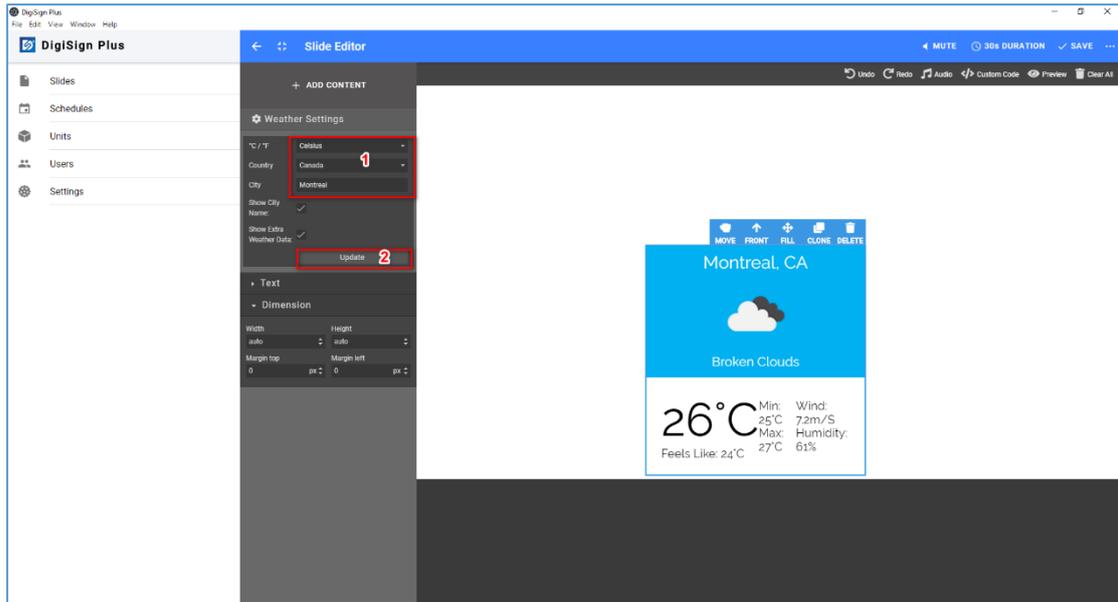


- e) Edit/Configure an RSS widget by dragging the RSS widget to the canvas, select the RSS URL, and then position and size it as needed. You may also select the font size & color, and the background color & transparency, etc.

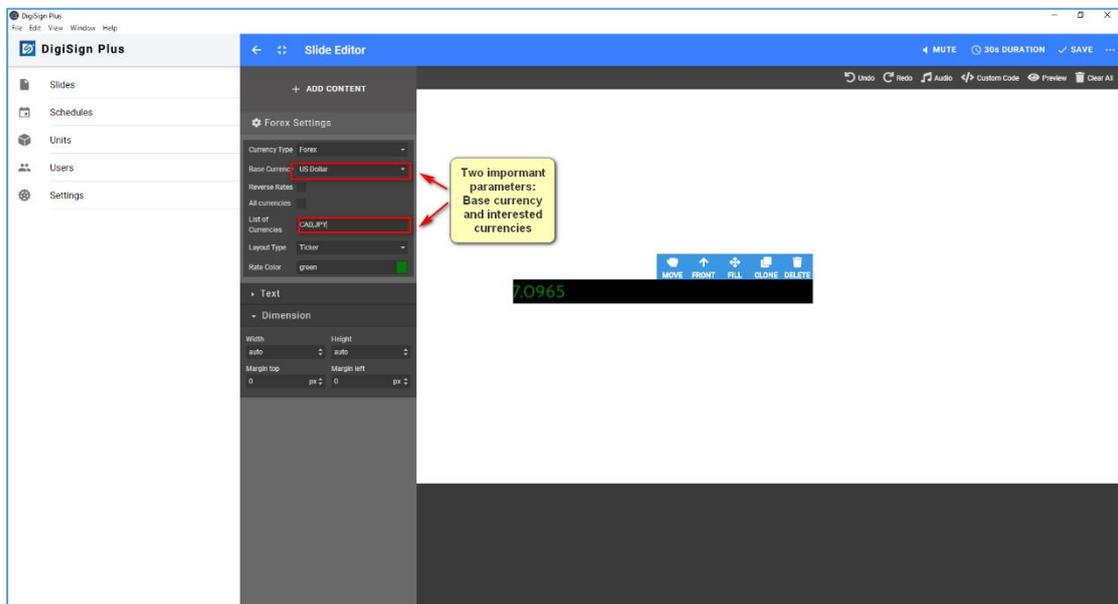


- f) Edit/Configure a Weather widget by dragging the Weather widget to the canvas, enter the country and city location information, and then position and size it as needed. You may also select the font size & color, and the background color & transparency, etc.

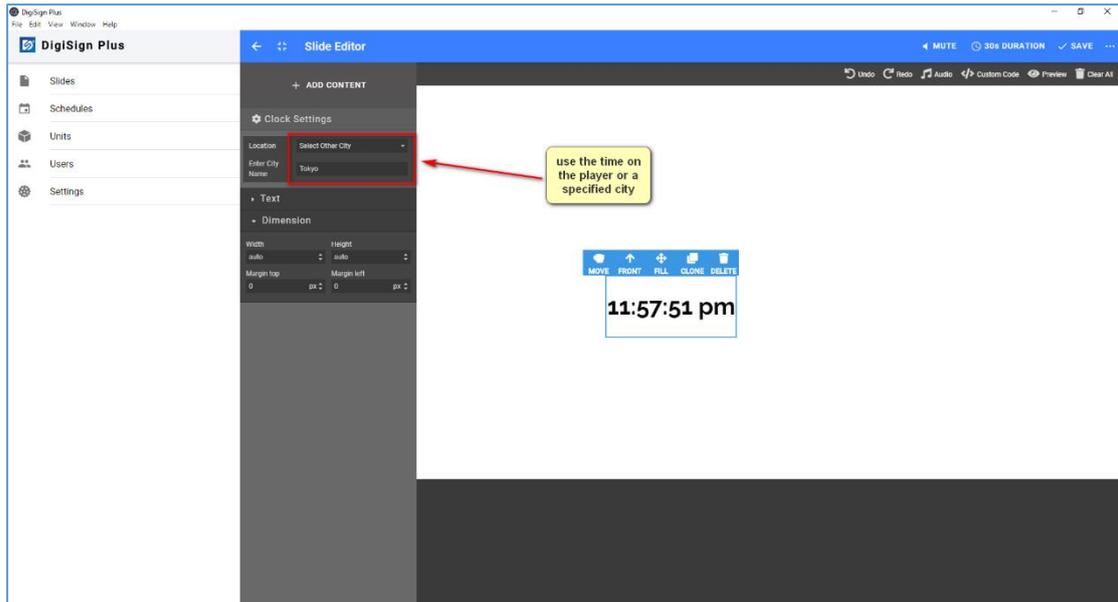
Note: For first time use, please signup on openweathermap.org and get an API key.



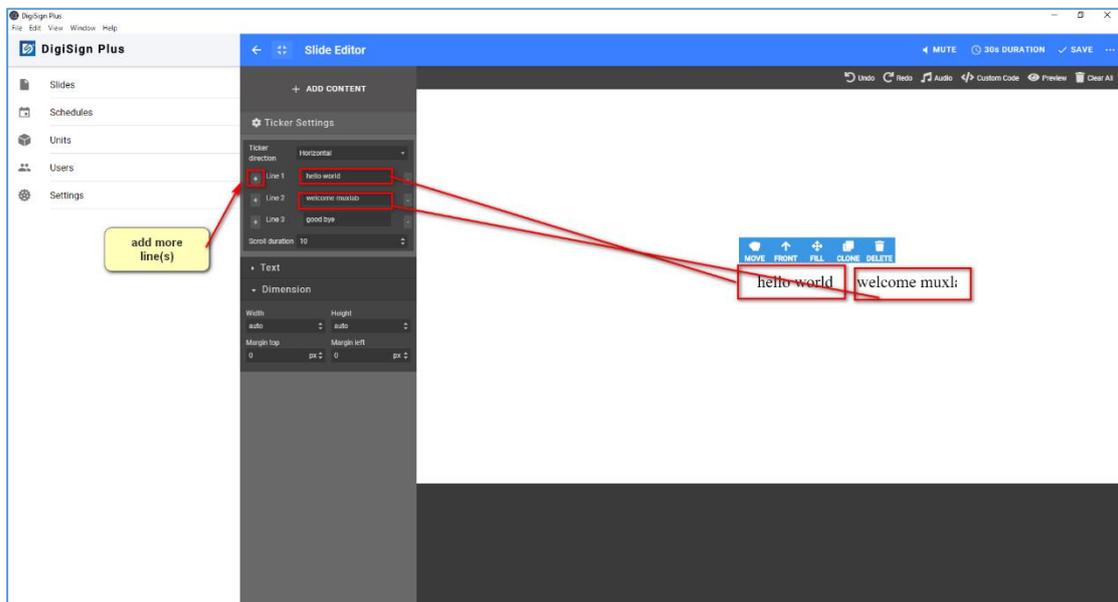
- g) Edit/Configure an Exchange widget by dragging the Exchange widget to the canvas, enter the currency information, and then position and size it as needed. You may also select the font size & color, and the background color & transparency, etc.



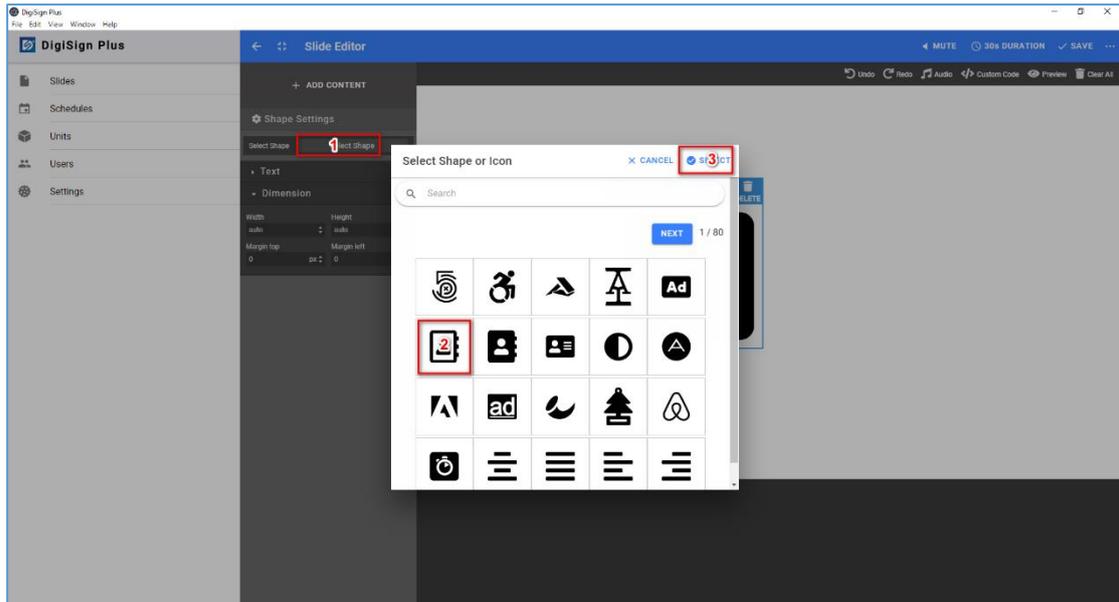
- h) Edit/Configure a Clock widget by dragging the Clock widget to the canvas, enter the time from the player or from a specific city, and then position and size it as needed. You may also select the font size & color, and the background color & transparency, etc.



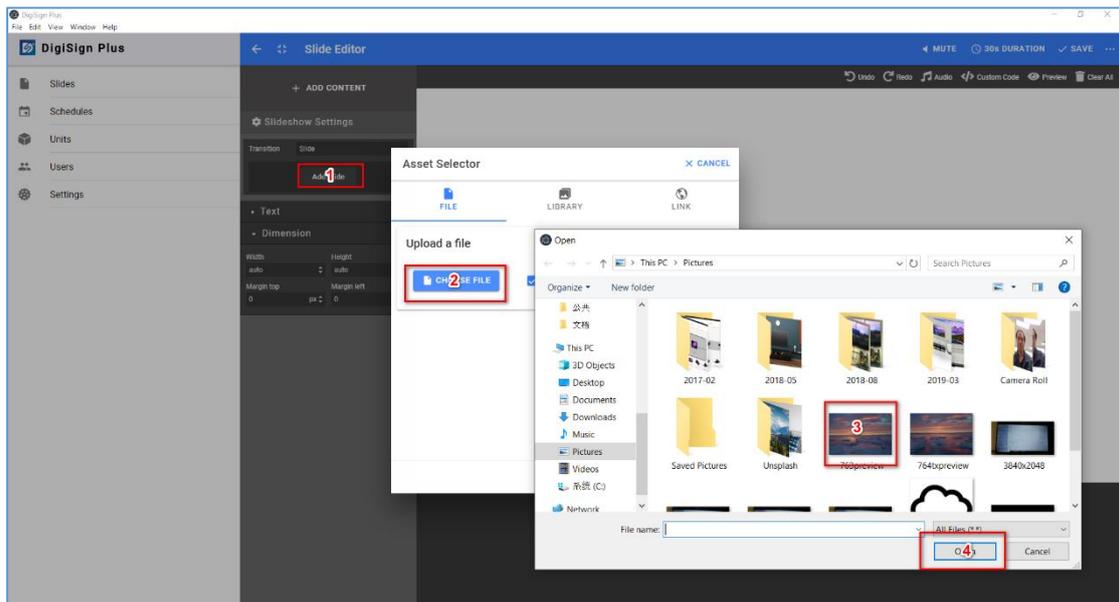
- i) Edit/Configure a Ticker widget by dragging the Ticker widget to the canvas, then position and size it as needed, and enter the text to be displayed, as shown below. You may also select the font size & color, and the background color & transparency, etc.



- j) Edit/Configure an Icons & Shapes widget by dragging the Icons & Shapes widget to the canvas, then position and size it as needed., and enter the text to be displayed, as shown below. You may also select the background color & transparency, etc.



- k) Edit/Configure a Slideshow widget by dragging the Slideshow widget to the canvas, then select your file(s) for the slideshow, position and size them as needed. You may select multiple slides for your slideshow.



Repeat steps above as needed since multiple widgets may be placed on the canvas.

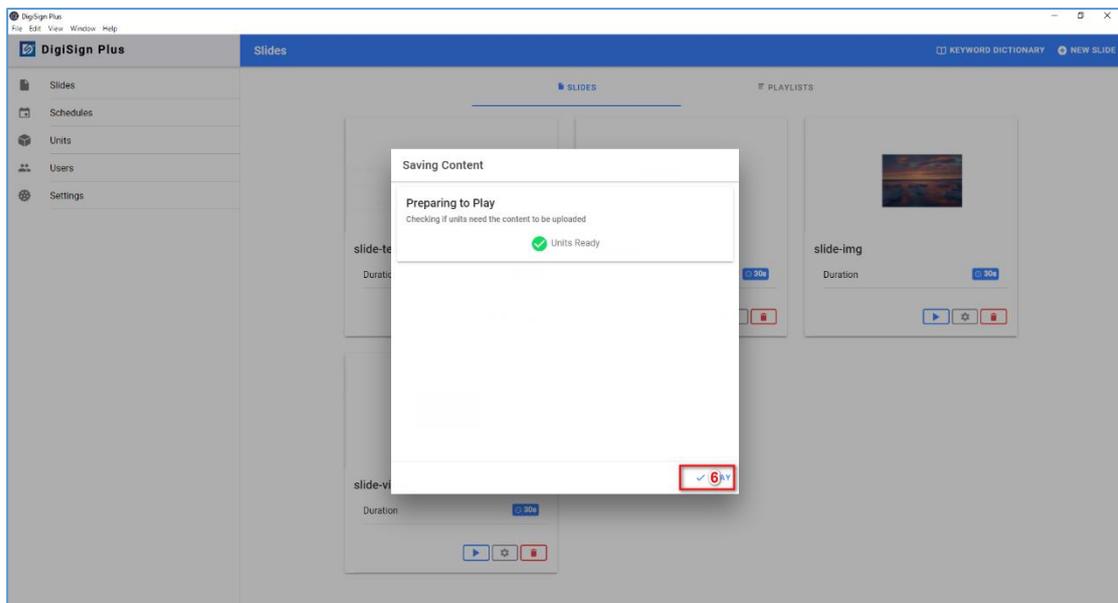
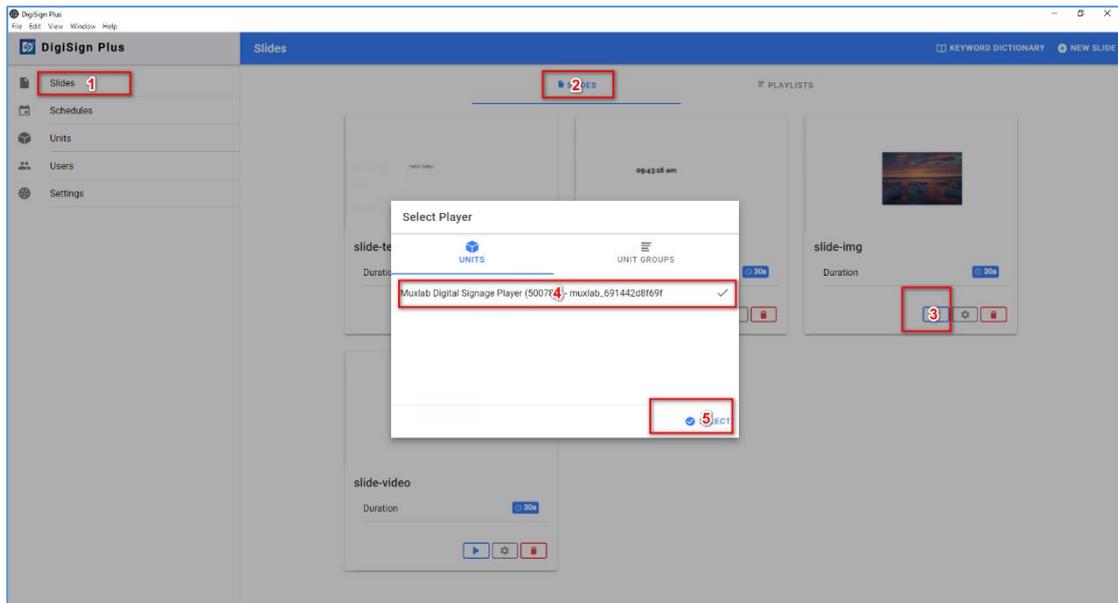
Important Note: Ensure that you “SAVE” your slide (on upper right) before exiting the slide editor.

2.5.2 Playing a Slide Directly

To directly play a slide, here are the steps:

94-000954-B / SE-000954-B

1. Click “Slides” on the far left of the main page.
2. Click on “SLIDES” tab near the top of the “Slides” page.
3. Select a slide to be played by pressing on the slide “PLAY” icon.
4. Select the Unit or Unit Group.
5. Press “SELECT”.
6. Press “PLAY” on the following popup screen.

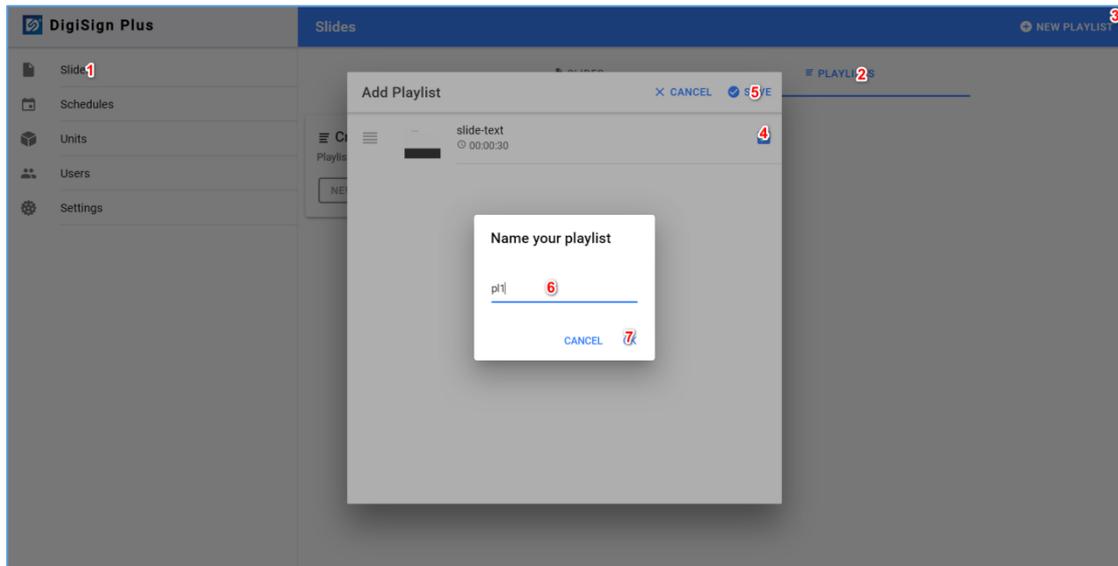


2.5.3 Creating a Playlist

To add a playlist, here are the steps:

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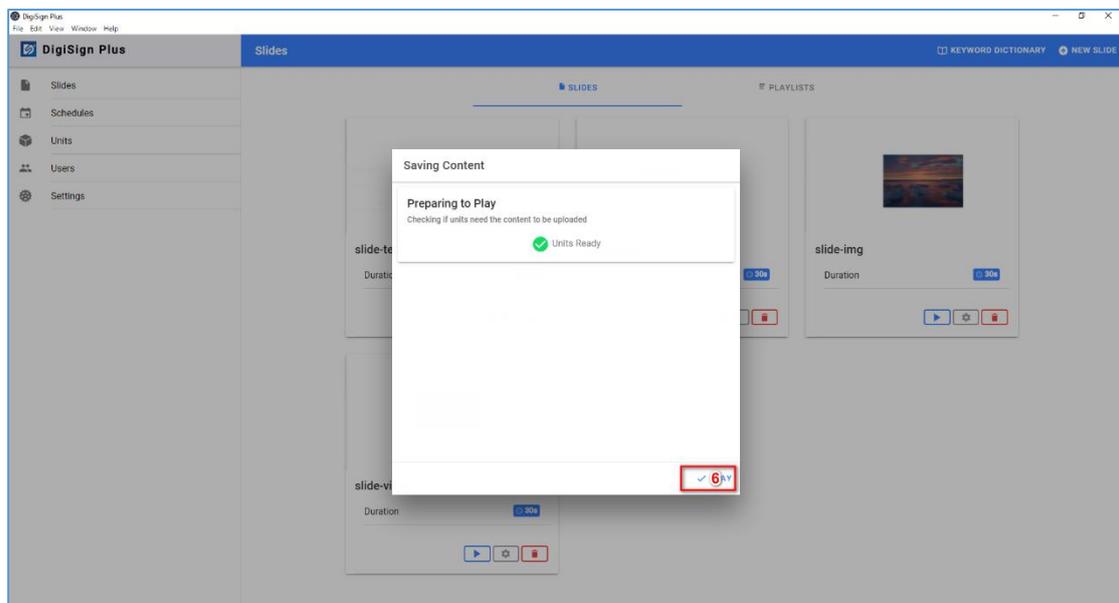
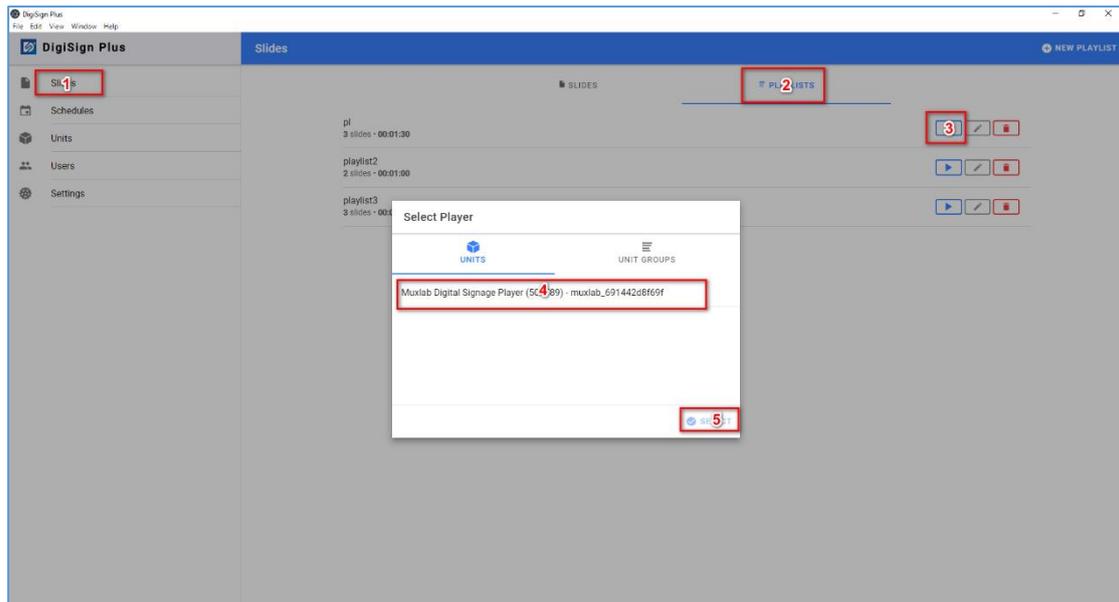
1. Click “Slides” on the far left of the main page.
2. Click on “PLAYLIST” tab near the top of the “Slides” page
3. Click on the “NEW PLAYLIST” button.
4. Check/select slide(s) for this playlist.
5. Save to confirm.
6. Input playlist name.
7. Press “OK” to confirm.



2.5.4 Playing a Playlist Directly

To directly play a playlist, here are the steps:

1. Click “Slides” on the far left of the main page.
2. Click on “PLAYLIST” tab near the top of the “Slides” page.
3. Select a playlist to be played by pressing on the playlist “PLAY” icon.
4. Select the Unit or Unit Group.
5. Press “SELECT”.
6. Press “PLAY” on the following popup screen.



2.6 Creating and Managing Schedules

A schedule can be configured for a particular Unit or a Unit Group.

Note:

If a unit belongs to a group, the schedule can only be configured on the group as a whole, and not on an individual unit within a group.

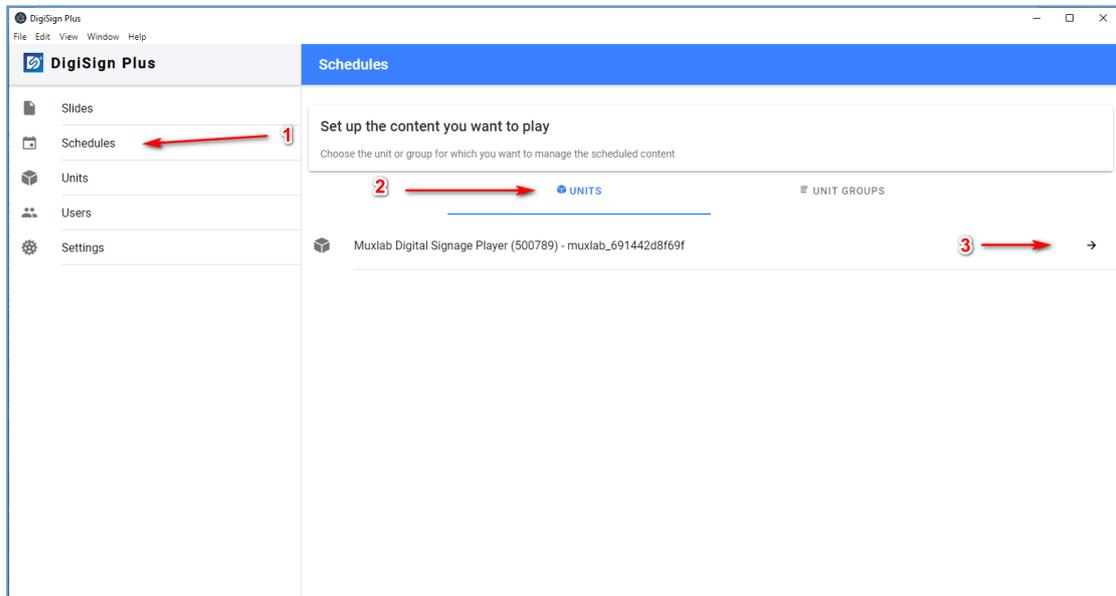
As of this DigiSign Plus release, each schedule created must be initially linked to a given Signage Player, or to a Group of Signage Players.

2.6.1 Creating a Schedule for a Player and Publishing

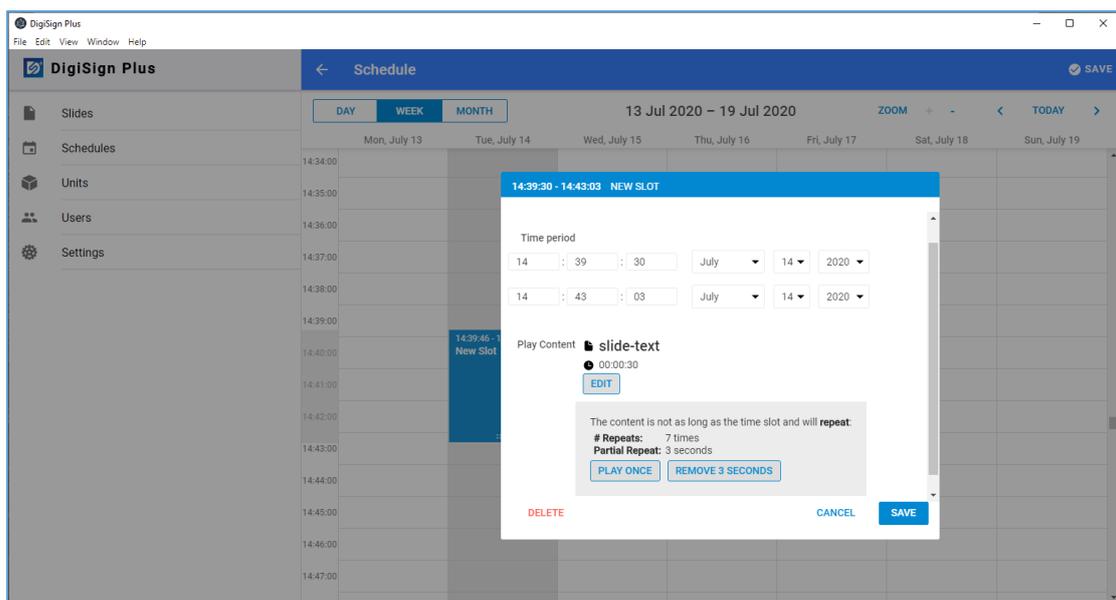
To create a schedule for a Unit, here are the steps:

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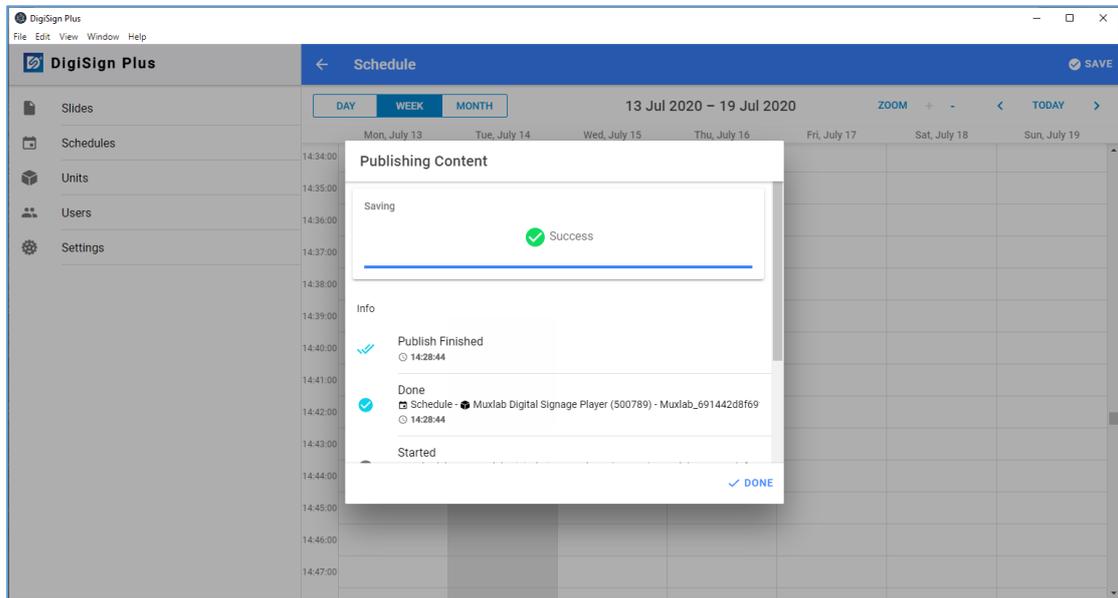
1. Click “Schedules” on the far left of the main page.
2. Select the “UNITS” tab near the top.
3. Select a given Unit by clicking on the icon on the far right.



4. Set the schedule date and time and select slide(s), and press “SAVE”.
 - Locate start time on calendar.
 - Drag to form a time slot of a given duration.
 - Adjust start time and end time as needed.
 - Choose a slide or a playlist.
 - Press “SAVE”.



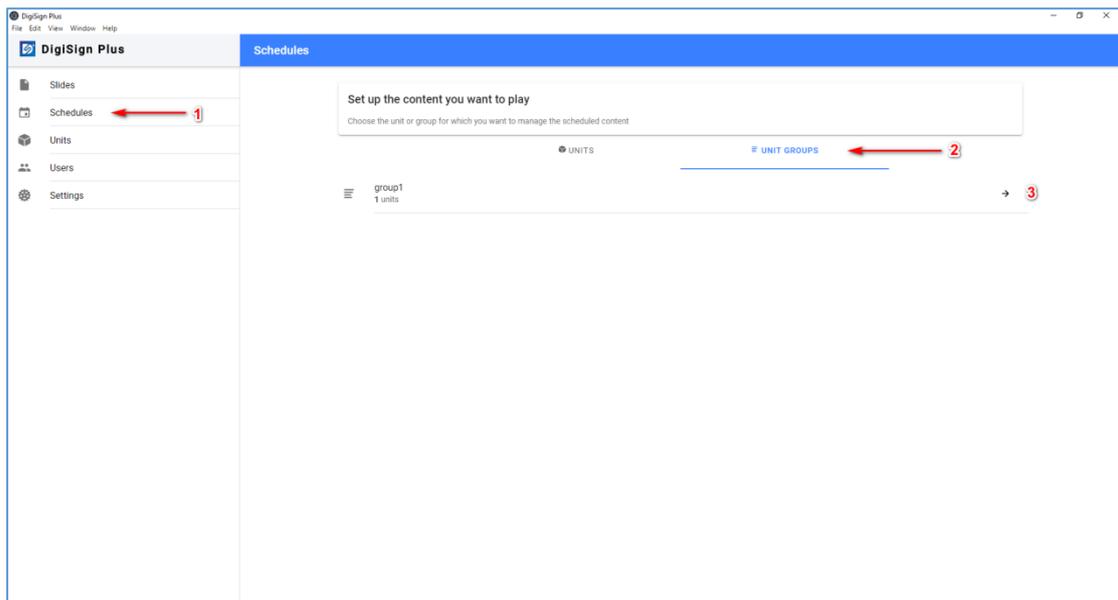
5. The schedule details and published confirmation message is shown.
6. Press “DONE” to complete the process.



2.6.2 Creating a Schedule for a Player Group and Publishing

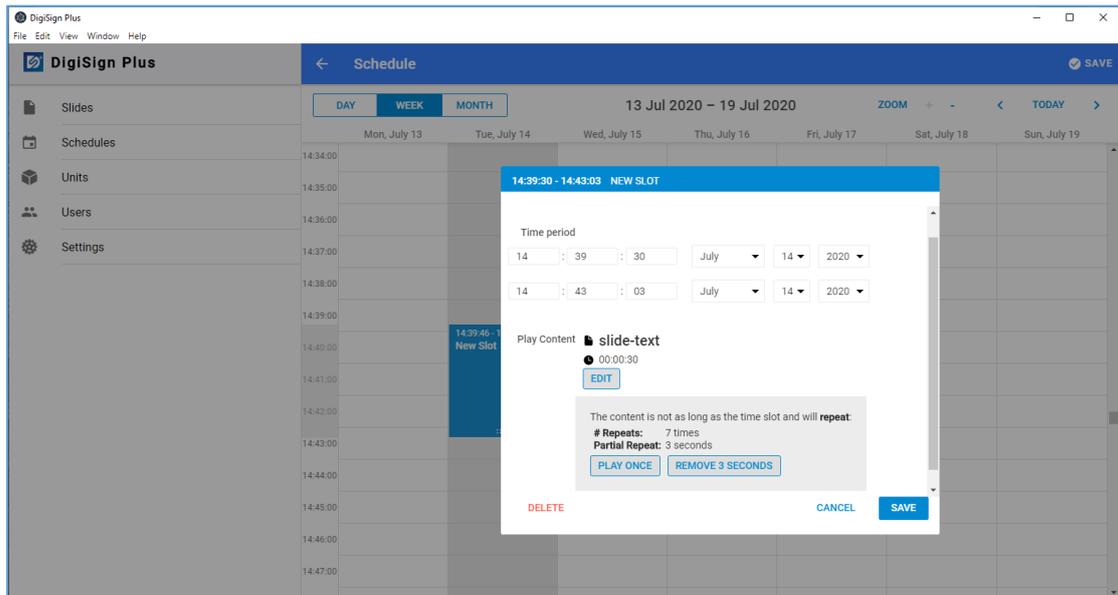
To create a schedule for a Unit Group, here are the steps

1. Click “Schedules” on the far left of the main page.
2. Select the “UNIT GROUPS” tab near the top.
3. Select a given Unit Group by clicking on the far-right icon.



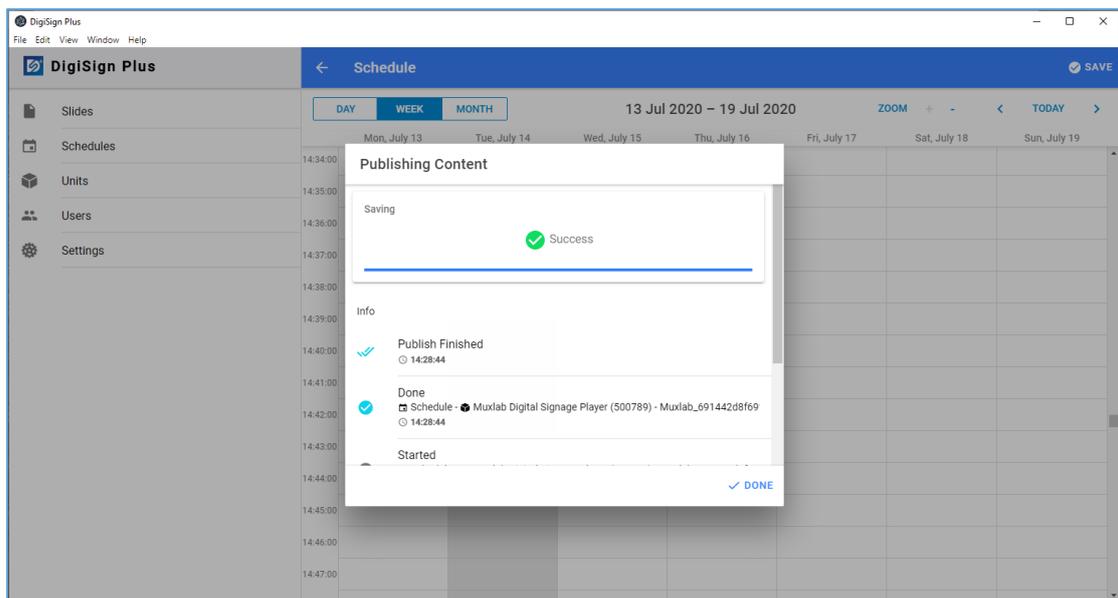
4. Set the schedule date and time and select slide(s), and press “SAVE”.

- Locate start time on calendar.
- Drag to form a time slot of a given duration.
- Adjust start time and end time as needed.
- Choose a slide or a playlist.
- Press “SAVE”.



5. The schedule details and published confirmation message is shown.

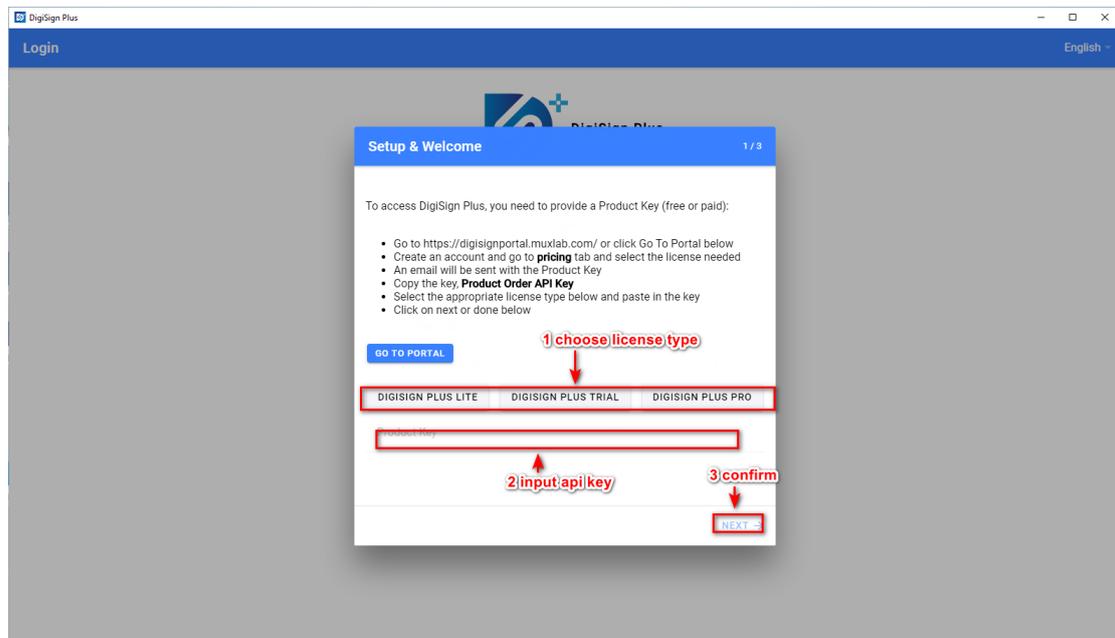
6. Press “DONE” to complete the process.



2.7 Managing Users

2.7.1 Import API key

There are 3 types of API keys: Lite, Trial and Pro. The Lite API key is free. The Trial API key provides the user with full access of the Pro version for 14 days at no charge in order to evaluate it. The Pro API Key is the full featured version. For more details, please access the subscription portal at: <https://digisignportal.muxlab.com/>



follow these steps to use your API key

1. choose the license type
2. input the API key
3. and confirm

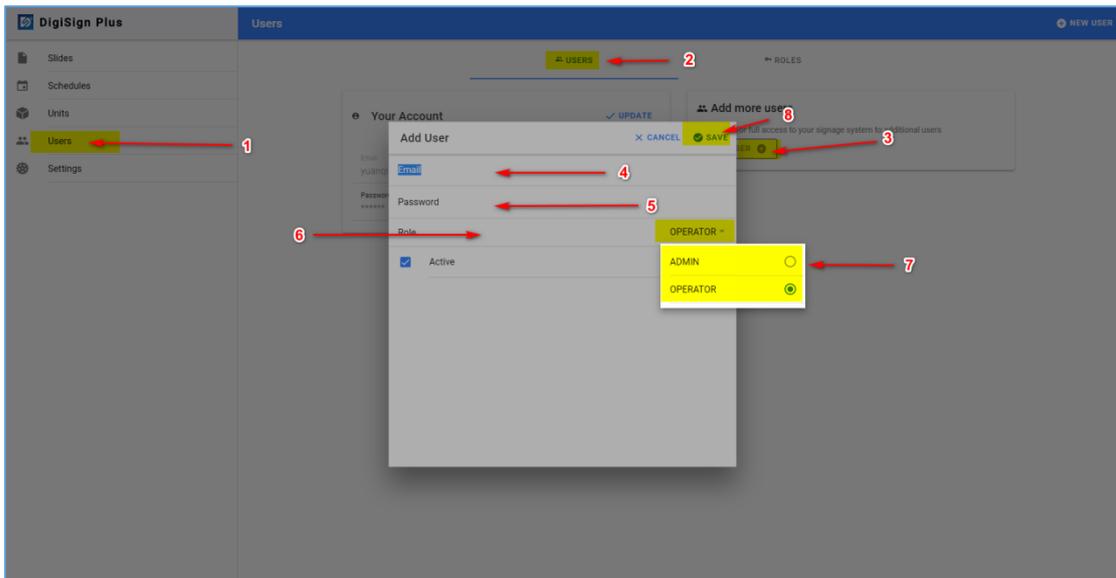
2.7.2 Add a New User

The DigiSign PlusCMS allows administrators to create additional user accounts with administrator or operator or custom role privileges. An operator has more restrictive privileges than an administrator, and custom role may be tailored to your needs depending on the DigiSign Plus package that you have.

For example, you may follow these steps to add an operator account:

1. Click “Users” on the far left of the main page.
2. Select the “USERS” tab near the top.
3. Click “NEW USER”.
4. Input the user email address.
5. Input the user password.
6. Click the “Role” drop-down selection.
7. Select “OPERATOR”.

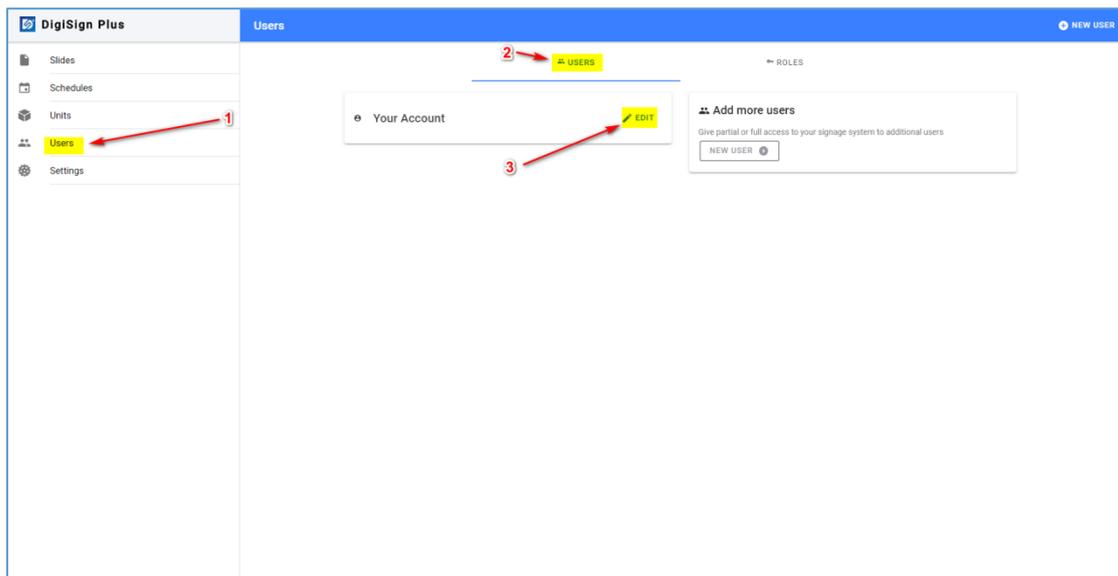
8. Click "SAVE".

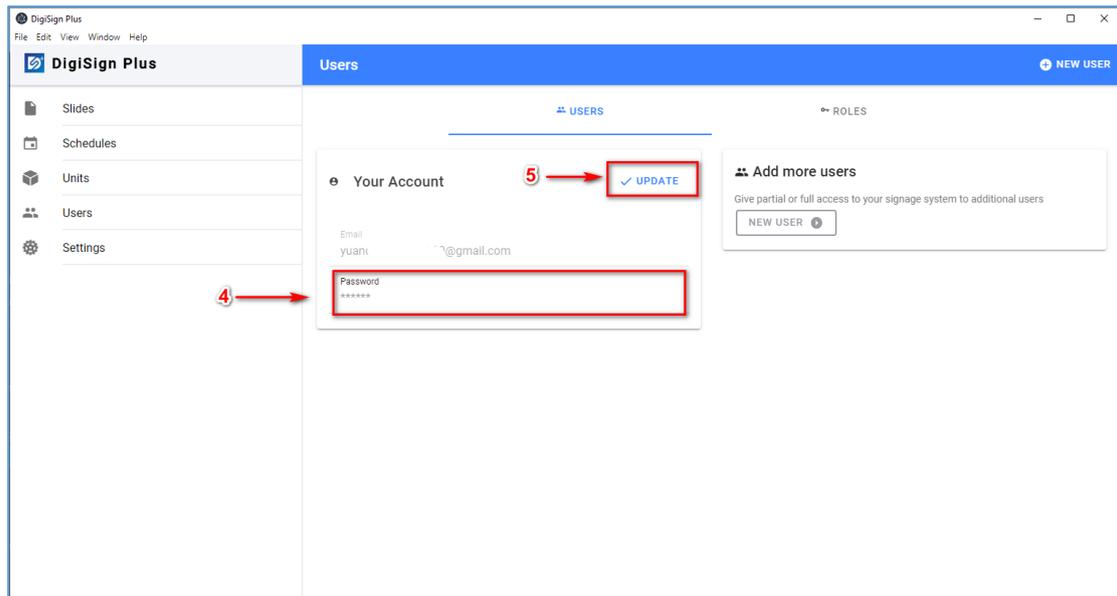


2.7.3 Edit a User Account

Follow these steps to edit a user account:

1. Click "Users" on the far left of the main page.
2. Select the "USERS" tab near the top.
3. Select a user account and click "EDIT".
4. Input the necessary changes, such as a new password.
5. Press "UPDATE" to save the changes.



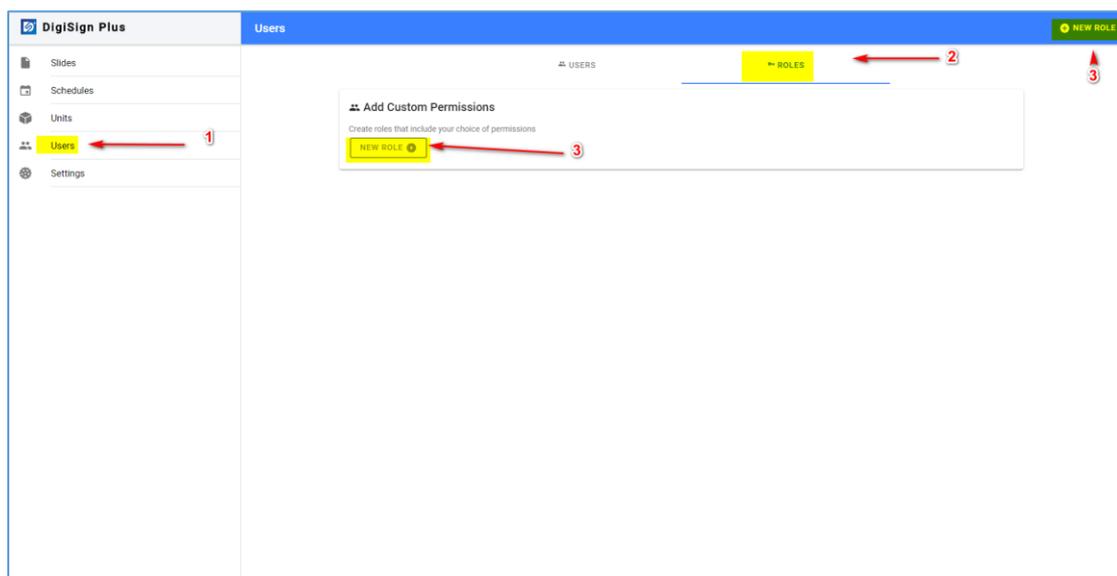


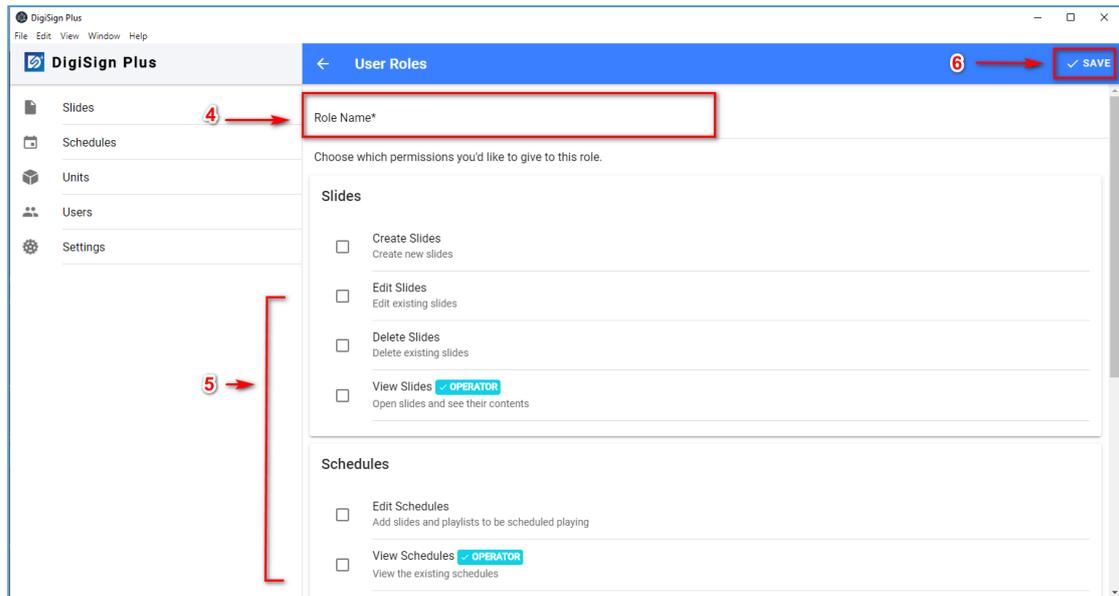
2.7.4 Add a New User Role

DigiSign Plus supports two standard roles, including administrator and operator, but additional custom role(s) may be created depending on the DigiSign Plus package that you have.

Steps for adding a new role:

1. Click "Users" on the far left of the main page.
2. Select the "ROLES" tab near the top.
3. Click on "NEW ROLE".
4. Input the role name.
5. Check/select permission(s) as needed.
6. Click "SAVE" to confirm.

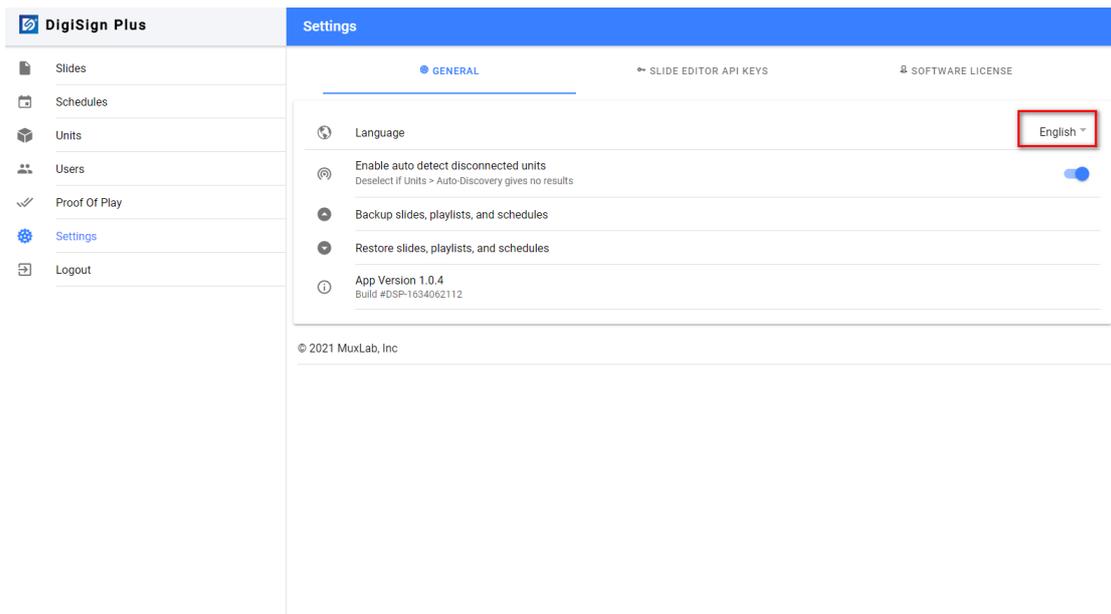




2.8 Settings

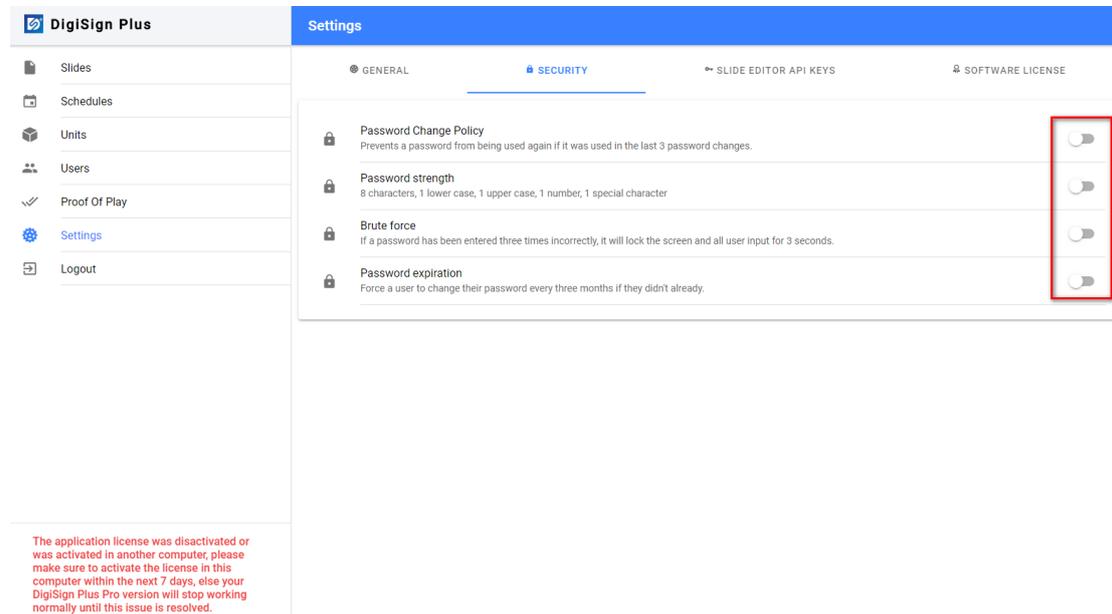
2.8.1 General

The user can select the DigiSign Plus language. Simply go to the “Settings” page, click “general” and click on “Language”, and then select the language from the list provided. New languages will be added as new releases are made available. In addition to the language setting, there is a backup/restore feature.



2.8.2 Security

User password rules can be configured.



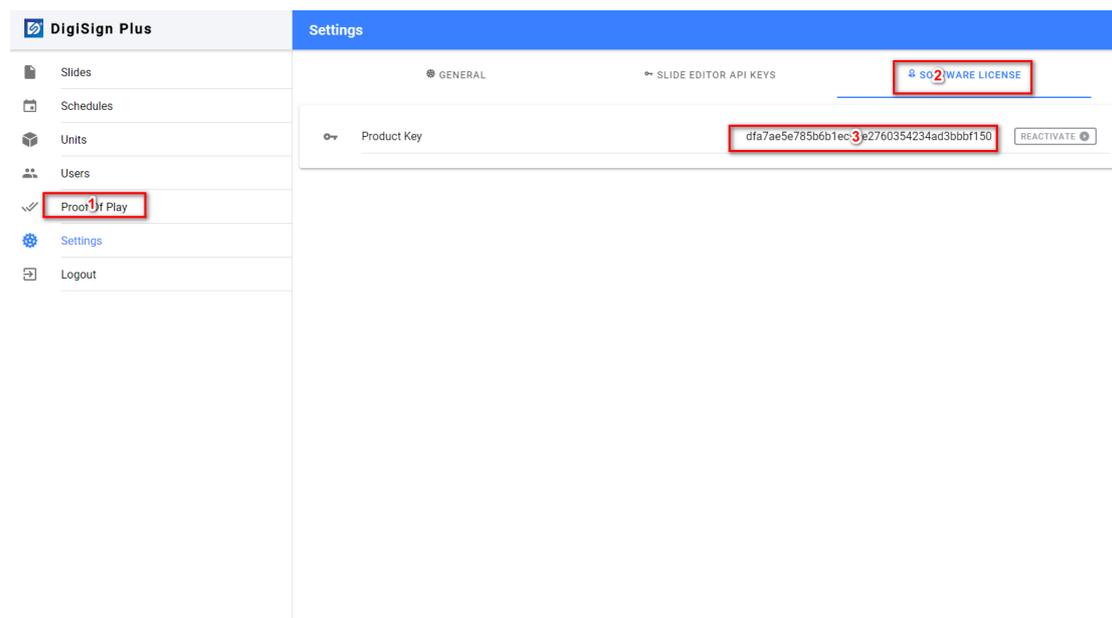
The screenshot shows the 'Settings' page for 'DigiSign Plus', specifically the 'SECURITY' tab. The left sidebar contains navigation options: Slides, Schedules, Units, Users, Proof Of Play, Settings (selected), and Logout. The main content area has four tabs: GENERAL, SECURITY, SLIDE EDITOR API KEYS, and SOFTWARE LICENSE. Under the SECURITY tab, there are four settings, each with a toggle switch on the right, all of which are currently turned off and highlighted with a red box:

- Password Change Policy**: Prevents a password from being used again if it was used in the last 3 password changes.
- Password strength**: 8 characters, 1 lower case, 1 upper case, 1 number, 1 special character.
- Brute force**: If a password has been entered three times incorrectly, it will lock the screen and all user input for 3 seconds.
- Password expiration**: Force a user to change their password every three months if they didn't already.

At the bottom left of the page, there is a red warning message: "The application license was deactivated or was activated in another computer, please make sure to activate the license in this computer within the next 7 days, else your DigiSign Plus Pro version will stop working normally until this issue is resolved."

2.8.3 Software license

The DigiSign Plus CMS version can be upgraded from Trial or Lite to Pro. But currently the Pro version cannot be easily downgraded to Lite. This will be supported in a future release, but in the meantime you may contact MuxLab support for assistance.



The screenshot shows the 'Settings' page for 'DigiSign Plus', specifically the 'SOFTWARE LICENSE' tab. The left sidebar contains navigation options: Slides, Schedules, Units, Users, Proof Of Play (highlighted with a red box), Settings, and Logout. The main content area has three tabs: GENERAL, SLIDE EDITOR API KEYS, and SOFTWARE LICENSE (selected). Under the SOFTWARE LICENSE tab, there is a 'Product Key' field containing the value 'dfa7ae5e785b6b1ec3e2760354234ad3bbb150', which is highlighted with a red box. To the right of the product key is a 'REACTIVATE' button.

2.9 Proof of play (Not supported in Lite version)

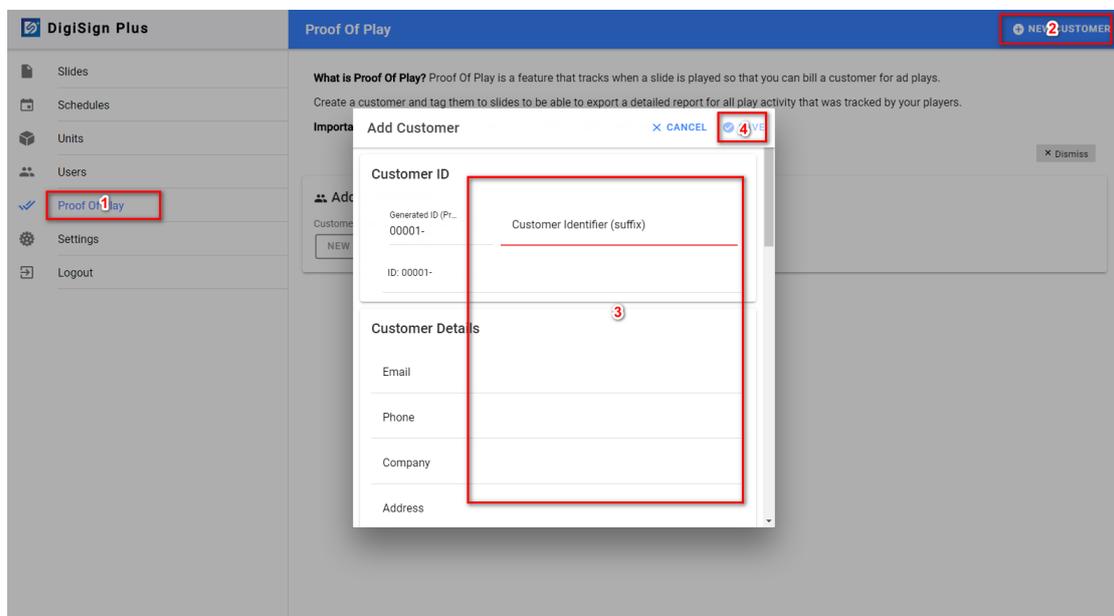
Proof Of Play is a feature that tracks when a slide is played so that you can bill a customer for a specific AD played which belongs to the given customer. This allows your customers to include their ADs within your signage system.

Create a customer and tag them to their customer slides, in order to be able to export a detailed report for all played activity tracked by your players for the given slides.

2.9.1 New customer

Follow these steps to create new customer/tag to track their slides.

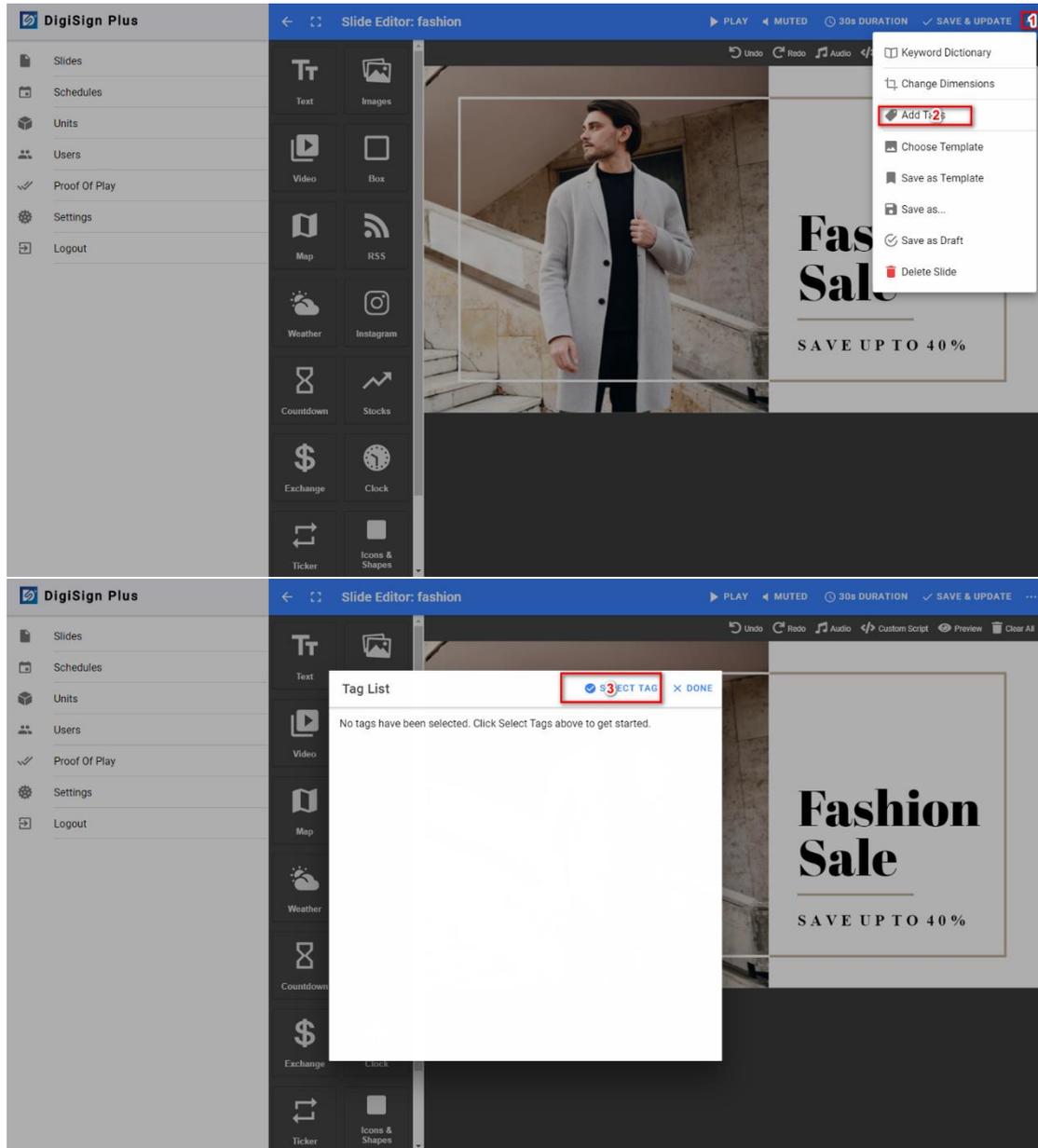
1. Click “proof of play”
2. Click “new customer”
3. Input necessary info to create a customer ID/key
4. And click “save” to confirm

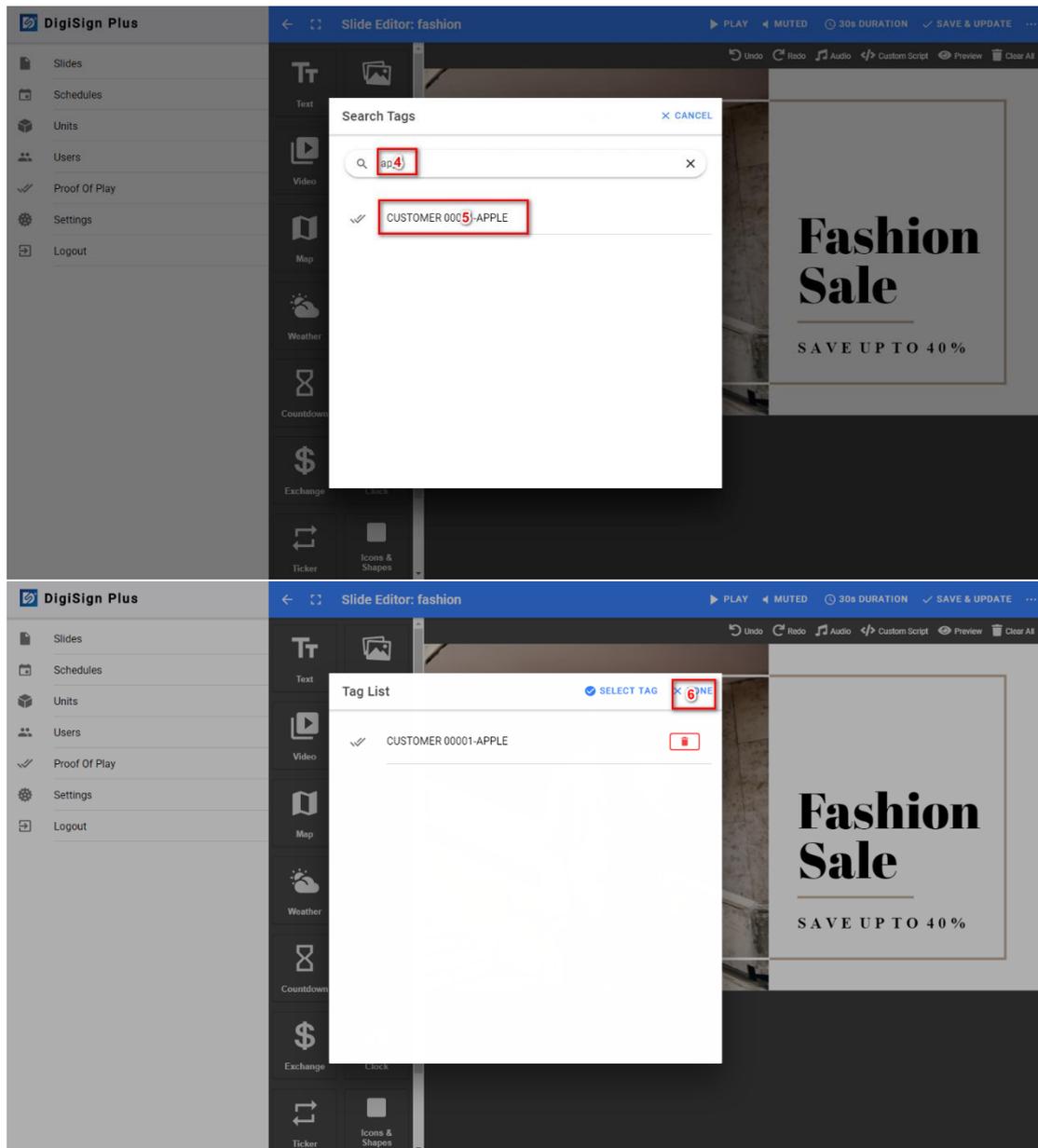


2.9.2 Add a tag to a slide

Follow these steps to add a tag to a specified slide for a given customer.

1. Open a slide and click on the extension menu
2. Click “Add Tags”
3. Click “Select Tag”
4. Input the customer ID/key for the tag
5. Select a tag from the list
6. Click “Done” to confirm

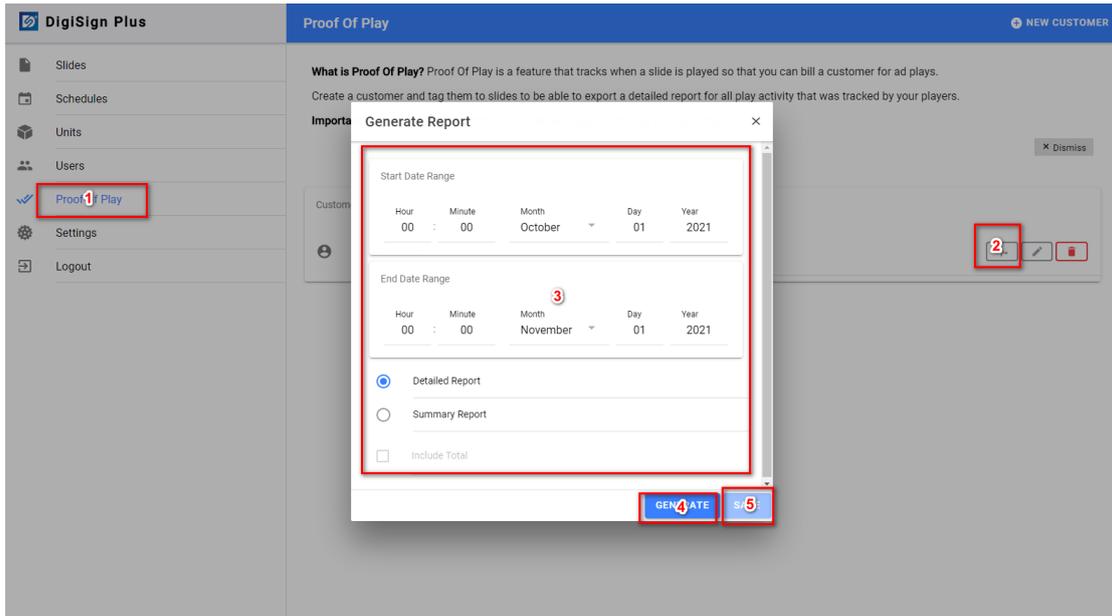




2.9.3 Generate a report

Follow the steps below to generate a report for a specified customer/tag

1. Click “proof of play”
2. Click the icon for a tag
3. Input your period of interest and report type (summary or detailed)
4. Click “generate” to create a report
5. Then click “save” to save generated report to a specified destination



3. Troubleshooting

The following table describes some of the symptoms, possible solutions regarding the DigiSign Plus CMS.

symptom	Probable cause	Possible solution
No video output from Signage Player	<ul style="list-style-type: none"> No valid schedule loaded Playlist/slide not added to the schedule If live stream being used, streaming server may be down No default slide configured Unsupported stream format 	<p>Setup and publish a valid schedule to Player</p> <p>Ensure a playlist/slide is added to the schedule</p> <p>Ensure stream is valid</p> <p>Config a default slide to avoid a blank screen</p> <p>Currently supports YouTube/vimeo, and HLS</p>
Output screen is blank	<ul style="list-style-type: none"> The Player may not be connected to the network 	<p>Connect the Player to the Ethernet network</p>
Unable to add or find a Signage Player	<ul style="list-style-type: none"> Signage Player is in a different subnet Bonjour protocol may not be 	<p>Validate the IP address of the Signage Player</p> <p>Ensure that the Bonjour protocol is installed.</p>

	installed	
Not able to publish a schedule to a Signage Player	<ul style="list-style-type: none"> • Schedule period conflict • Start of schedule occurs too soon after publishing • Schedule start and end time (duration) is less than 30 seconds • Signage Player not ready 	<p>Ensure schedule does not have overlapping schedules</p> <p>Ensure the start of the schedule occurs at least 5 minutes in advance of publishing</p> <p>Ensure slide/playlist has minimum of 30 seconds duration</p> <p>Ensure that the player is powered up and ready</p>
Login fail	Wrong user/password	Recall username / password from window credentials manager, or do a recovery

4. Appendix – API

An API (Application Program Interface) is available for the 500789 4K Digital Signage Player Plus. The document is available on the 500789 webpage of the MuxLab Website.



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