ELSA-E Web Portal
User Manual
(Build 2.7.3)

V1.2

M2COMMUNICATION Inc.

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Revision Control

Ver.	Date	Description of Change	Approved
1.2	2021/07/01	First release	Derrick Wei

Table of Contents

Using This Documentation

This user's manual explains the operation and maintenance of the M2COMM ELSA-E web interface.

This document is written for technicians, system administrators, authorized service providers, and users who have limited computer experience.

Getting the Latest Software and Firmware

Firmware, drivers and other hardware-related software for the M2COMM ELSA-E System is updated periodically. You can obtain the latest version from M2COMM Support: **support@m2comm.co**

Acronyms used in this Manual

ESL – Electronic Shelf Label
ELSA – Electronic Labeling System Administration

1. ELSA-E Web Portal Users Guide

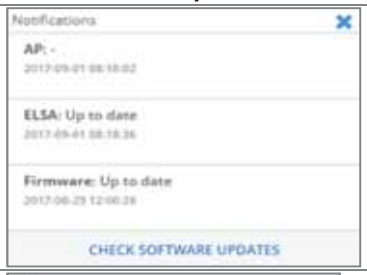
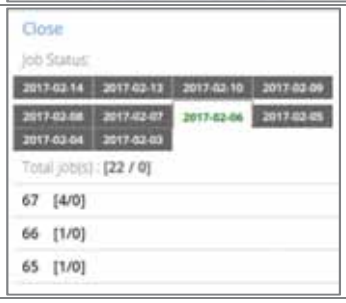
This section of the manual is dedicated to the layout and usage of the ELSA-E Web Portal; here we will walk you through the various pages of the application, supplying detailed information as to the use and function of each zone or icon as we go.

Note: Some areas within the ELSA-E Web Portal have limited access based upon the privileges granted to the user by the Super Admin; the default privileges are identified where applicable.

1.1 Dashboard

A. Overview (system)

This is the application Homepage and is the first page to appear when you login. The page provides a high level overview of the ESL system you have deployed throughout your premises and links to its management; in addition, there are also links available for the maintenance of your ELSA-E Web Portal.

Icon	Function	Details	Examples
	Notifications	Clicking on this icon will cause a new pop-up window to appear that supplies the status of the ELSA-E Web Portal, it is also where you can check if there are any software updates available.	
	Job Status	Every operation within the application that results in an action being carried out will produce a job status report showing if the operation was a Success or Failure. Reports are saved by date and cumulative job number.	

In the examples shown above you can see that on 6th February 2017 there were a total of 22 status reports; job number 67 successfully pushed data to 4 ESL tags [4/0], whereas job number 54 failed to push data to an ESL tag [1/1].

[a/b] : “a” represents job action tasks, while “b” represents job fail number.

From left-to-right, the above panels supply the status of your Access Point, Router(s) and Tags, this is useful for identifying if any of the hardware components of your system are offline for any reason and can aid you in finding their location within your deployment, for example, if a tag is offline you can interrogate the Router pane by clicking on the small ‘’+” symbol in the bottom left corner, this will open a dropdown list of all of your routers and the status of the tags associated with them. Similarly you can use the Access Point pane to identify faulty routers.

Overview (Database and ESL related)

This section shows (1) the number of products currently held in the ELSA-E Web Portal and (2) the number of tag profiles available (such as 1.6”, 2.2”, 2.9”, 4.2” and 7.5” in black/white/red. Each profile represents a unique ELSA tag, designated by “profile ID”).

B. Maintenance

Note: this is for Super Admin and Admin Only

Hardware Maintenance contains the debugging and reporting functions required by the M2COMM technical support team to assist in resolving customer issues.

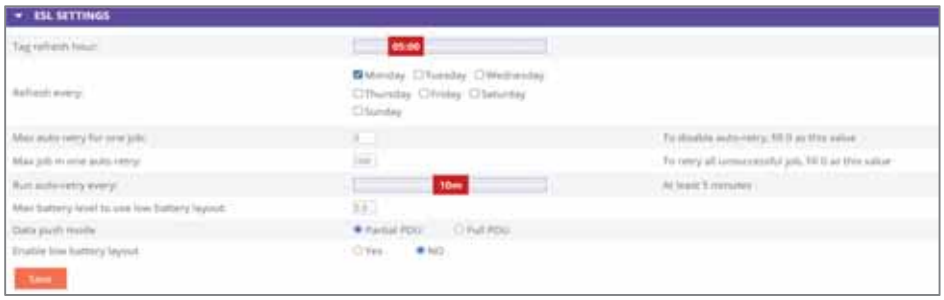
(a). System Commands

This is for the use by M2COMM FAE for service. Please contact M2COMM for details if you are intending to use the system command. Below are the short-cut of certain functions:

Icon	Function
	Show barcode on all tags
	Refresh all tag displays
	Shuts down all tags
	Syncs all devices in the ELSA-E network
	Compresses the SQLite3 database
	Removes all de-associated tags from the ELSA-E network
	Shuts down all de-associated tags in the ELSA-E network

(b). ESL Settings

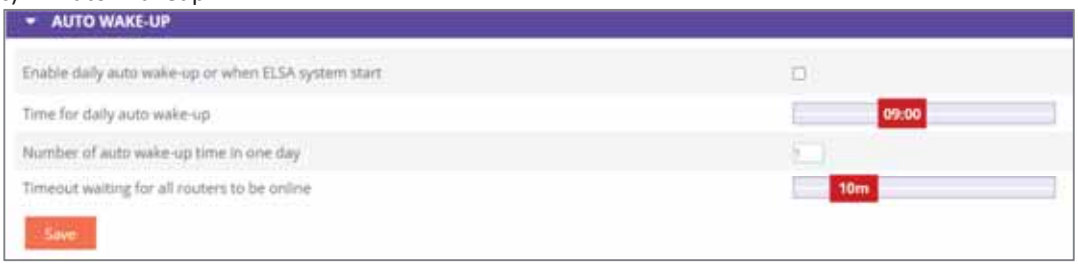
Configuration settings for the control of tag behavior in the ELSA-E network; also used by M2COMM FAE for debugging service. You can contact M2COMM for further details.



- **Tag refresh hour & Refresh every:** ELSA Web can ***weekly*** refresh the TAG to keep its best color contrast over the long time. Use “Tag refresh hour” to set up the hour for refresh, and “Refresh every” to set up the day of the week.
- **Max auto retry for one job & Run auto-retry every:** User can configure the maximum times and period of ELSA web retry for failed updates, if any.
- **Data push mode:** Users can configure the data push to be “Partial PDU” or “full PDU”. Partial PDU will yield the faster response if the refreshed display contents share common elements such as using the same template.
- **Enable low battery layout:** Users can choose to use “low battery layout” when battery level is lower than 2.50v. Note that when this function is enabled, the “low battery layout” is fixed to the Normal Layout when displayed. This means all other variants, i.e. Promo, will not be used. The default is OFF.

Please remember to click the “Save” button to store the configurations.

(c). Auto-Wakeup



- **Enable daily auto wake-up or when ELSA system starts:** Users can choose to automatically wake up the ELSA tag when ELSA web is started at the designated hour. The default is ON.
- **Time for daily auto wake-up:** Users can assign the time of the day, i.e. 9am, to automatically wake-up the ELSA tag on a DAILY basis.
- **Number of auto wake-up time in one day:** Users can assign the number of auto-wakeup attempts to be executed in one day. Each attempt will interval by 1 hour. For example, if this value is set as 3, when the system runs the initial auto wake-up and does not run successfully (for example, the computer is OFF at the designated time), there will be two additional attempts to restart the auto wakeup on the same day. That is, the ONE initial auto wakeup at 9am and TWO attempts for retry at 10am and 11am.
- **Timeout waiting for all routers to be online:** Since auto-wakeup is best executed after all routers are on-line, users can configure this "wait time", which default is 10min. For example, the initial auto-wake-up will start from 9:10am as shown.
- Auto-wake up will be *only* executed when the following conditions are ALL true:
  - Auto wake-up option is enabled;
  - Auto wake-up time point is matched;
  - Timeout for RT online is reached;
  - Number of finished daily auto wake-up is less than the number of auto wake-up allowed;
- Auto wake-up will be aborted during the device registration process, i.e. if installation wizard is initialized.

(d). Network Configuration

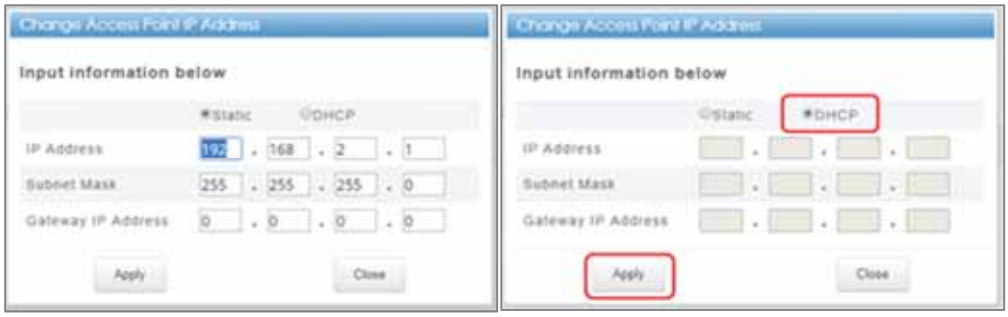
This is used for configuring the ELSA-E network parameters including Access Point Settings and Sub-Channel.

- Access Point Settings – change IP Address

From within the **Access Point Settings** dropdown, users can change their ELSA-E Access Point from a Fixed IP address to a Dynamic IP (DHCP) for use within a Wi-Fi enabled domain.

This new drop down window displays the current status of your ELSA-E Access Point, select the '**pencil**' to continue.

The ELSA-E Web Portal will check the connection details of your ELSA-E Access Point and will display the details, select the '**pencil**' to continue.



In the **Change Access Point IP Address** pop-up window, select **DHCP** and **Apply.**

Enter the authorization password (default is **1234**) and select **Ok**.
Close the **Change Access Point IP Address** pop-up window.

Select **<< Go back to dashboard**, until your ELSA-E Web Portal is displaying the **System Overview** page.

- Access Point Settings – Mode (seconds)

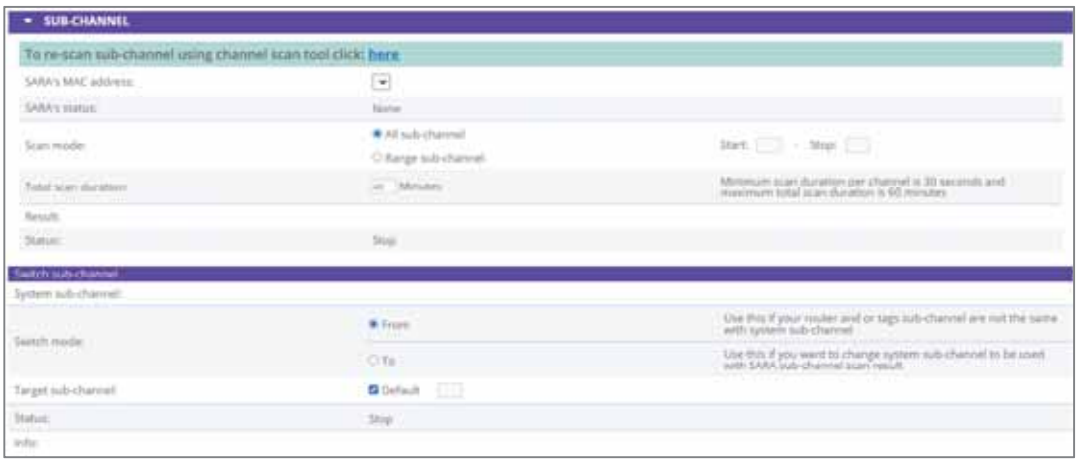
On the right side, there is a bar showing **Mode**.

Changing the refresh rate (“Mode”) can increase OR decrease the duration for your ELSA tags to respond to the refresh request. It may be handy to showcase the ELSA tag system in some cases.

To reach the balance between ELSA performance and power consumption, we set the default to be 60 seconds. You may change the setting from 0 to 60 seconds by dragging the bar and saving the value. **It will automatically revert back to default 60 seconds after one hour for power saving purposes.**

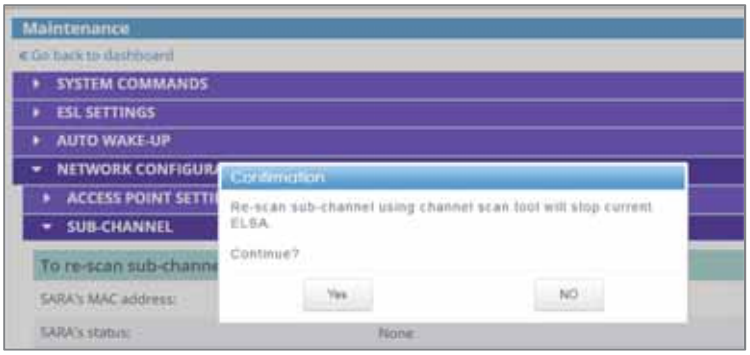
Note: The quicker response (i.e. lower “Mode” setting number) will yield lower battery life of the ELSA tags.

- Sub-Channel (Channel scan tool)



This is where users can re-scan the available channel to replace the default channel that was set in the beginning of the installation process.

ELSA Web manages the radio frequencies of the wireless network. Users can investigate the available wireless channels or change accordingly to optimize the efficiency.



- In the current ELSA offer, SARA has been discontinued. Please skip the top part of the Sub-Channel settings.
- Users can configure the Starting channel and the Stopped channel for a certain period of time. This will help identify the channels with less interference.

ELSA uses the “sub-channel number” to designate the actual frequency band for simplicity. The mapping table can be found below:

Band	Channel	Sub-channel	Frequency (MHz)
Band 1	1	1	903
	2	13	906
	3	25	909
	4	49	915
	5	61	918
	6	73	921
	7	85	924
	8	97	927
	9	81	923
Band 2	1	11	865.5
	2	20	867.75

Each sub-channel increment represents 250KHz (or 0.25MHz) step for fine frequency adjustment if needed.

A detailed view on the frequency band (915MHz-ISM):

Channel	1		2		3		0		4		5		6		9		7		8	
Sub-channel	1	903.00	13	906.00	25	909.00	37	912.00	49	915.00	61	918.00	73	921.00	81	923.00	85	924.00	97	927.00
	2	903.25	14	906.25	26	909.25	38	912.25	50	915.25	62	918.25	74	921.25	82	923.25	86	924.25		
	3	903.50	15	906.50	27	909.50	39	912.50	51	915.50	63	918.50	75	921.50	83	923.50	87	924.50		
	4	903.75	16	906.75	28	909.75	40	912.75	52	915.75	64	918.75	76	921.75	84	923.75	88	924.75		
	5	904.00	17	907.00	29	910.00	41	913.00	53	916.00	65	919.00	77	922.00			89	925.00		
	6	904.25	18	907.25	30	910.25	42	913.25	54	916.25	66	919.25	78	922.25			90	925.25		
	7	904.50	19	907.50	31	910.50	43	913.50	55	916.50	67	919.50	79	922.50			91	925.50		
	8	904.75	20	907.75	32	910.75	44	913.75	56	916.75	68	919.75	80	922.75			92	925.75		
	9	905.00	21	908.00	33	911.00	45	914.00	57	917.00	69	920.00					93	926.00		
	10	905.25	22	908.25	34	911.25	46	914.25	58	917.25	70	920.25					94	926.25		
	11	905.50	23	908.50	35	911.50	47	914.50	59	917.50	71	920.50					95	926.50		
	12	905.75	24	908.75	36	911.75	48	914.75	60	917.75	72	920.75					96	926.75		

User can use “Switch sub-channel” to change the working frequency of ELSA network

- “System sub-channel” shows the current operation channel.
- “Switch mode” will provide the option for user to:
  - Bring the devices from other channel (From), or
  - Carry the ELSA network to another channel (To).
- Users will designate the “Target sub-channel” by the channel number as above.

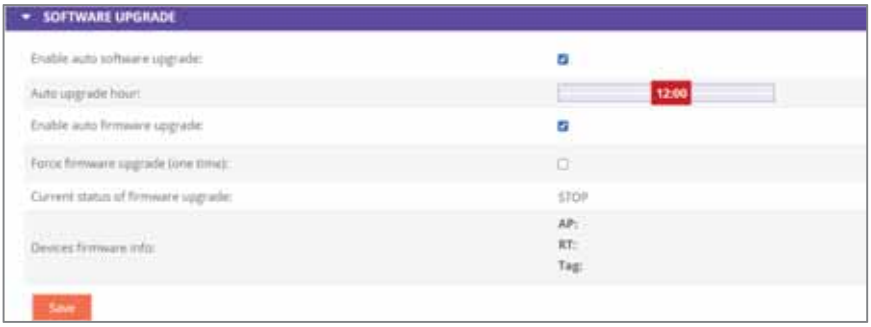
Note: Channel 33~41 are illegal to use (gap between ISM bands).

- “Status” indicates the status of switch channel progress, either START or STOP.
- “Info”: After switching channel function starts, it will show the progress of the channel switch.

Once the Target sub-channel is entered, the channel-switch will be initiated.

(e). Software Upgrade

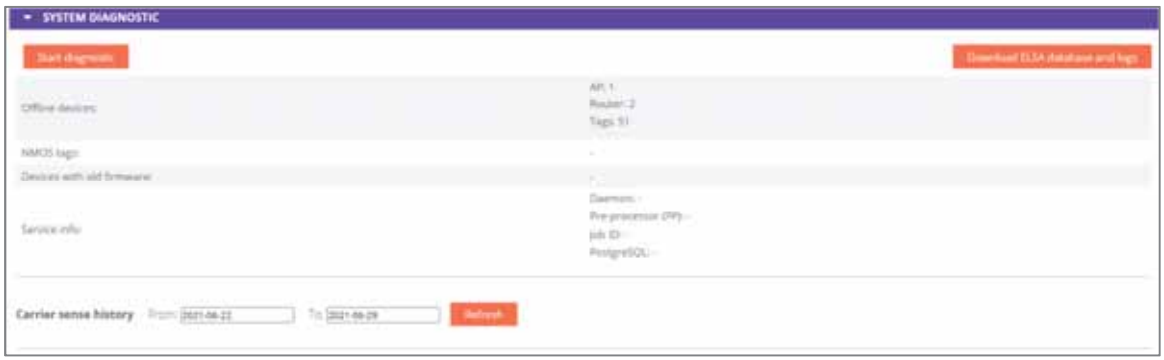
Allows users to enable and configure the software upgrade settings.



Firmware upgrade will consume a certain level of power; therefore the system will check the file weekly. The system will check the availability of firmware files **every Monday noon 12pm** which is corresponding to the Second item “Auto upgrade hour”. Here are more details about each function in the Software Upgrade.

- **Enable auto software upgrade:** Users can disable or enable the auto software upgrade. The default On/Off can be set during the Setup Wizard process.
- **Auto upgrade hour:** Users can appoint the specified time for automatic software upgrade. The default is 12pm local time.
- **Enable auto firmware upgrade:** Users can disable or enable the auto firmware upgrade. The default On/Off can be set during the Setup Wizard process.
- **Force firmware upgrade (one time):** Users can initiate the firmware upgrade based on the time set in “**Auto upgrade hour**”. After the upgrade is executed, the box is self-cleared. For example, if the user sets Auto upgrade hour at 12pm, and it is 11am. After the user clicks on this item, the Auto upgrade will be triggered at 12 pm the same day. But if the time is set at 12pm, but it is 3pm now, the auto firmware upgrade will be executed at 12pm the following day.
- **Devices firmware info:** It will show device (AP/RT/Tag) firmware version and the counts for reference.
  For example: *AP: 1001229D:1*

(f). System Diagnostic



This utility will enable users to check the ELSA system status. Including:

- Offline device counts including AP, Router, Tags.
- Device with out-of-date firmware
- Service Information: Including Daemon, PP version, Job ID, and PostgreSQL.

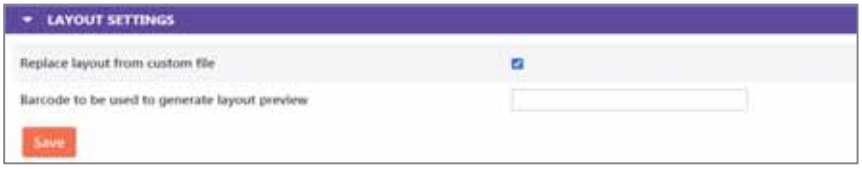
Moreover, users can download the ESL database and logs from the button on top right side.

Carrier Sense It is the feature to detect if there is any wireless interference in the specified radio channel. This utility will also enable users to check the carrier sense history for the possible interference in place during a certain period of time.

(g). System Environment

This is to export the current ELSA environment as the zip file, which allows users to move it to another computer. The ELSA web on this computer will be restored to default value for all the configurations.

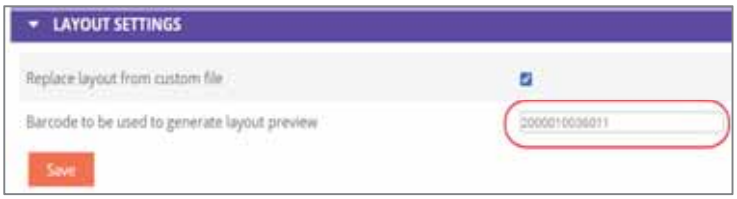
(h). Layout Settings



Users can choose to use the latest “custom” file to replace the standard template library. The default is “Enable”. After this function is enabled, next time when users import the new files, the system will replace to the new file.
Please note that the custom file can only be provided by M2COMM. Users are unable to prepare this file themselves. If there is such demand, please contact M2COMM technical support for more information.

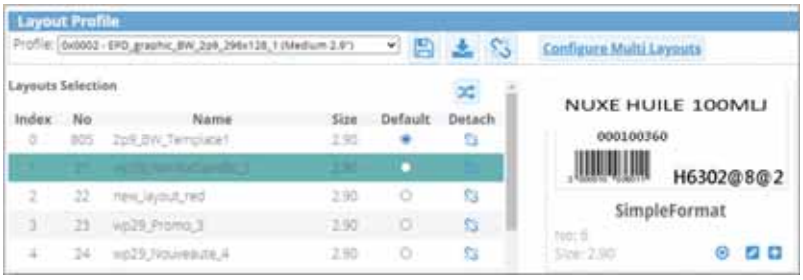
If users would like to preview a specific product in the “Layout page”, users can key in that specific product’s Barcode number in the column, and then check the preview from the Layout page. Normally this is used to validate different lengths of barcode showing on the display.

Example as shown below:
Step 1. Key in the specific barcode number here.



The barcode number can be found in “Inventory Page”.

Step 2. Show this specific barcode and product in “Layout page”.



(i). Battery Intervention

Given the ELSA tag is operated on batteries, battery replacement, i.e. intervention, is needed after a certain period of time. Battery Intervention Utility (BIU) is designed to systematically help the staff with the battery replacement process.

Users can choose the battery threshold to identify the targeted tags to be intervened. This level can range from 2.7V to 3.0V. The tag batteries ABOVE this level will be viewed as “good battery”.
After clicking the “Start Intervention”, the ELSA Web will mark all the “good battery” tags with overlaid black strips on tag display as in the image below.

“Good battery” tag display

Tag needs the battery change

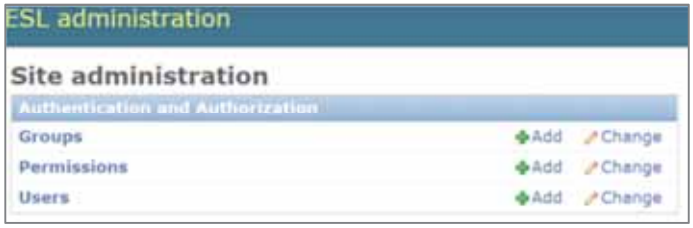
- It takes some time for the system to show the black strip. You can change the battery while the status shows "Change Battery".
- After you finish the intervention, please click the "Stop Intervention" button to exit the intervention utility.
- Please refer to the Application Note for how to execute the recommended battery intervention procedure with BIU.

C. Application Settings

This includes the environment settings for ELSA Web.

(a). General Settings

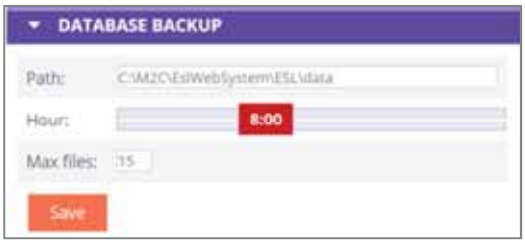
- **User administration:** Administrator to change the setting of each level of account. Please refer to chapter 3 for more details.



- **Thousands separator:** Users can choose the THOUSANDS separator to be "." or "," (default).
- **Validate product's barcode:** Users to validate the product barcode display compliant with the associated barcode standard. The default is "ENABLE".
- **Remove first leading zero of product barcode from handheld association:** Users can choose to remove the leading zeros of scanning barcode from scanner read back. The default is "DISABLE". (NOTE: In some cases there may be trailing zeros preceding the barcode readings from scanners to fill in the blank. Without removing these zeros, the barcode may not be correctly identified.)

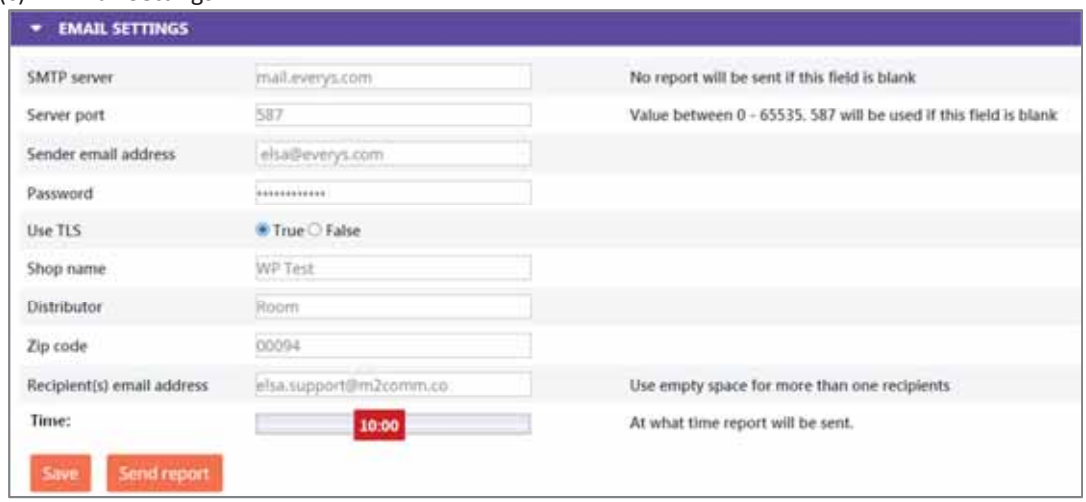
Please click "Save" to activate the setting.

(b). Database Backup



- Users can change the path of the database backup location.
- Users can set up the time for the daily database backup. As a default, ELSA Web will execute the daily backup at 8am daily.
- Users can set up the maximal backup files (each backup files represent one day)
- Users then click “Save” to save the setting.

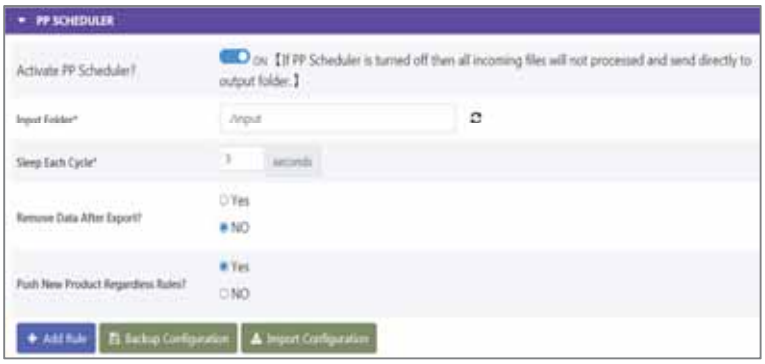
(c). Email Settings

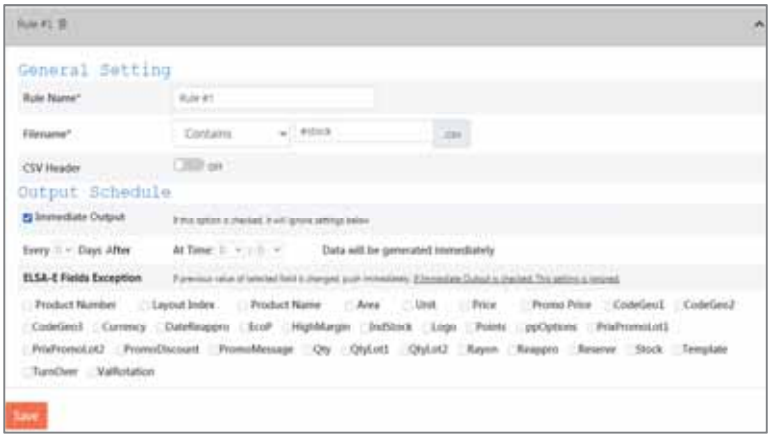


- With assigned “SMTP server”, “server port”, “Sender email address” and “Password”, ELSA web will report the daily notification via email to report the system status.
- For the detailed contents of the daily email report, please contact M2COMM technical service.
- ELSA Web also supports TLS (Transport Layer Security) modes.
- During the Installation, users shall specify the “Shop name” which will be used in daily email reports and/or ELSA CLOUD service as site identification. Users can manually change the “Shop name” here.
- Users shall assign the recipient email address to receive the daily email. If more than one recipient email addresses need to be specified, ***empty space*** shall be used to separate them, i.e a@a.com b@a.com .
- As default, daily email will be sent at 9am every day. Users can then change the setting here.
- User then clicks “Save” to save the setting.

(d). PP Scheduler

PP scheduler allows users to specify the tag update at the pre-defined schedules for the information to take effect. For example, headquarters can assign the database to be downloaded to the store at 12am at convenience; while the store will enable the tag display refreshed starting from 8am after the store is open before the staff is on duty.





Description

- PP Scheduler is defaulted to be OFF.
- User can set “Input CSV” to assign the path where the CSV is applied.
- Users can set “Sleep Each Cycle” to assign the duration for ELSA web to check the “Input folder” location.
- Users can select whether the input CSV file shall be removed after processing or kept as the backup, by setting “Remove Data After Export”. The default is “NO”.
- When there is a new product in the CSV, users can choose to update the new product immediately regardless of the effective PP Schedule rule.
- The defined rule will target on specified file, with specified scheduling

The following illustrates how to create the PP Scheduler rule:

General Setting

- “Add Rule”: Create a new rule
- Rule Name: this field specifies the rule name
- Filename: CSV file needs to be in specified format (specified below).
- Some CSV files may contain the “field name” at the first line (“header”) for easy-to-read. This header can be ignored by selecting the “CSV Header” option to be “on”. The default is off which means no such header exists in the incoming CSV.

Output Schedule

- User can choose to immediately output the tag update by ignoring the PP Scheduler rules. The default is “Immediate Output”
- If users choose to enable the PP Scheduler rule, “Every x days, at Time hh:mm” needs to be set to designate when the data update is applied.
- In certain use cases, if the data in certain fields of CSV is changed and needs the immediate push, the “ELSA-E Fields Exception” can be checked on the predefined fields, as specified, to exclude the PP rule.

This includes:

- Product Number
- Layout Index
- Product Name
- Area
- Unit
- Price
- Promo Price

Others may be specified in the custom file. For details, please contact M2COMM technical service.

- User then clicks “Save” to save the setting.
- Users can export the current setting by clicking “Backup Configuration”.
- Users can import the setting file from elsewhere by clicking “Import Configuration”.

(e). Regulated Pictogram

The regulated pictogram is a special use case by assigning the legally-compliant icon on the existing tag display to increase the clarity of the emphasized information.

For example, if the certain drug is influential to pregnant woman and drivers needing special attention for shoppers, regulated icon (on the box) may be overlaid on the tag display as followed:

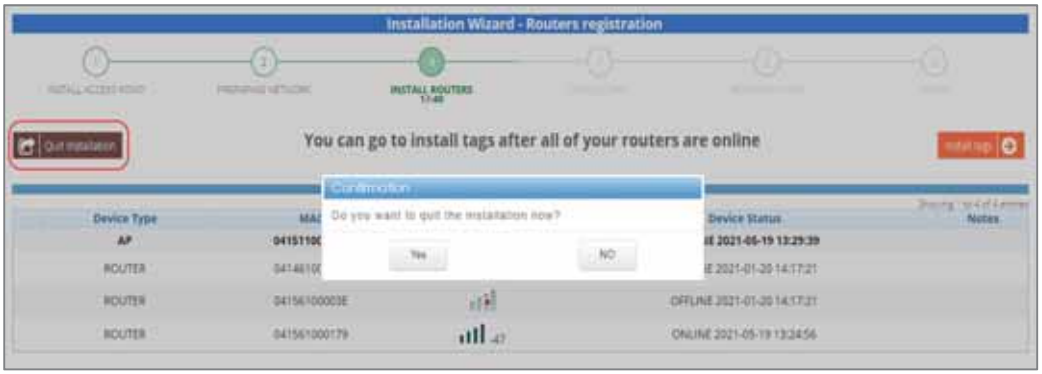
For how to set up the system and use this feature, please contact M2COMM technical service for more information.

D. Installation Wizard

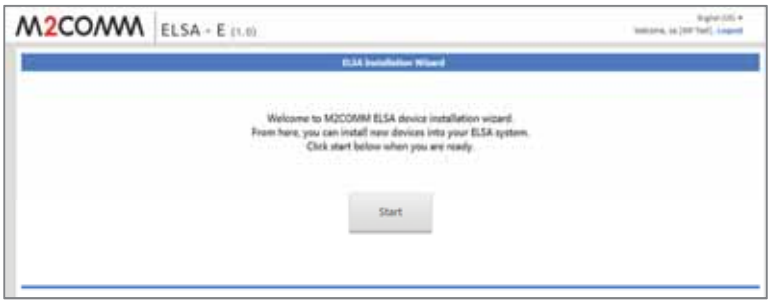
Shortcut to the device installation wizard.

It is used during the ELSA installation. It is required to walk through this wizard when more routers or tags need to be added to your system.

Note: If the users click this function accidentally, users have to click the "**Quit Installation**" on the left hand side to leave this process. Otherwise the web portal will always show this installation process.



(a). Starter Page



User can click "Start" to initiate the installation wizard, with the following steps:

- Install Access Point
- Preparing Network
- Install Routers
- Install Tags
- Power-on Tags
- Finish

When you enter the Installation Wizard, you will be directed to the INSTALL ROUTER step. You can add Router or Tag from here.

But if you need to go to **step 1 Install Access Point**, please go to **Maintenance page**, and go to title **Network Configuration**, and subtitle **Access Point Settings**.

And if you need to do **step 2 Preparing Network** and do channel scan, please go to **Maintenance page**, and go to title **Network Configuration**, and subtitle **Sub-Channel**.

You could refer to Section B , part (d). Network Configuration.

(b). Install Access Point

All registered AP will be listed on this page, and users can add or remove the registered AP from this step.

To register the new AP, user can use the static IP address, or let ELSA Web to search any available AP (i.e. DHCP) within the same network segment.

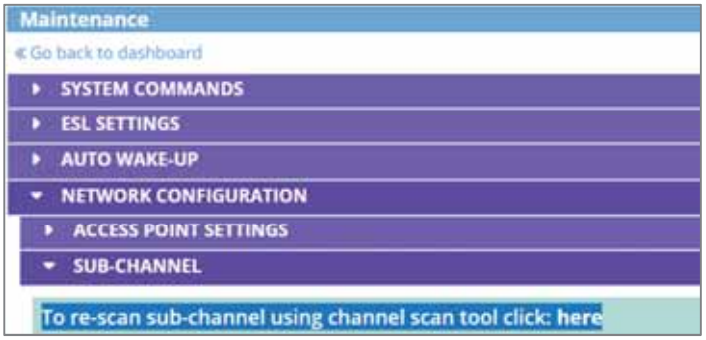
- The default IP address for AP is 192.168.1.1.
- "Search" is to allocate the reachable APs within the current network segment. Once it is found, ELSA web will show the corresponding information in the list below, with their connection status (such as whether the AP is already bound with daemons).
- Users can also select "Search by IP Address" if the AP IP is already known.

Users can select "Delete" to remove the registered AP, or users can modify registered AP's IP address by clicking the "Pencil" next to it.

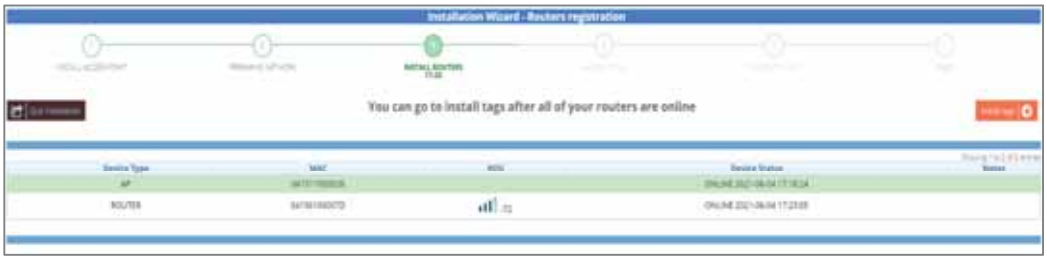
After finishing, users then click "Preparing Network" to enter the Router registration step.

Note: The step 2 "PREPARING NETWORK" is used to do the wireless channel scan. This function is only available in two conditions:

- The initial Access point, Router, and tags installation. Or,
- Go to **Maintenance page**, in **Network Configuration** title, **Sub-channel** part, and click "**here**" in the sentence: **To re-scan sub-channel using channel scan tool click: here.**



(c). Install Router



After the new router is powered on, it will automatically complete the registration process with the "Unlocked" AP. Then the RT status will change from "CONNECTING" to "ONLINE" at the event of successful registration.

If users wish to allocate RT with an assigned AP (i.e. best RSSI), the AP shall be configured as "Unlocked" first. And under all conditions, only one AP can be unlocked.

(d). Install Tag

ELSA Tags need to be registered into ELSA Web before it can be used. This is for IT logistics reasons that only the registered TAG can be used. During the installation phase, there are four ways to register the TAG MAC address into ELSA Web.

- **Keyboard:** Users can enter the TAG MAC address through the manual input. This is suitable for a few devices to be registered without hassles.
- **2D scanner or barcode reader:** This is similar to Keyboard except using the barcode reader to replace the manual input.
  Note: The *out-of-factory* ELSA TAG shipment comes with the QR code printed on the box, containing all the correspondent MAC addresses inside. Users can use a 2D scanner to input the box contents in a batch task.
- **Mobile handheld scanner:** By using Android or CE handheld PDA, users can open the specific web page designed on the handheld device to do the scanning on both registering and associating the ELSA tags. The web URL is normally: **http://IPaddress:88/elsa/bc.**
- **Import tag database:** If users have the ELSA TAG MAC address list in the CSV format, i.e. from excel or other spreadsheet tools, they can choose to import the list into ELSA Web through this option. Of course if the association product list is also available, it can be imported at the same time.

(e). Power-on Tags

ELSA TAG comes with “deep sleep” mode for maximum storage time. After the tag is registered into the ELSA Web database as in the above step, users need to then “wake up” the tags so that they are active in the system. There are two ways to “wake-up” the tags:

- **Manual wake-up**: For only a few tags, users can simply click the hidden side button on the side of the tag with a needle-like object (i.e. bent paperclip). Once awakened, the ELSA tag will flash its display to become BARCODE showing its MAC address. This is usually the quickest to wake up the ELSA tags.
- **Auto-wakeup** (as shown in this step): In the Installation Wizard, once entering this stage, users only need to wait for the ELSA Web automatically waking up all the Tags in the radio coverage. This process usually takes 30 minutes to complete. When the Tags are awakened, its status on the above screenshot will turn into ON. This is good for batch processing. Once awakened, the ELSA tag will flash its display to become BARCODE showing its MAC address.

After 30 minutes, ELSA Web will prompt the following information indicating the status of all ELSA devices through the installation wizard. User then clicks the Yes to return to the dashboard. For the “unfinished” devices to be successfully available in the process, their information will be exported to a list that users can import the registration record for convenience of next installation.

The way to distinguish if the tags are registered successfully is to check its e-paper display.

E. Credit

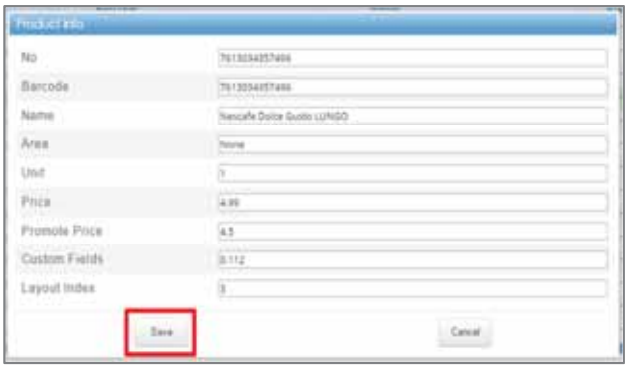
Our thanks to the people and organizations that have helped in creating the ELSA-E Web Portal.

1.2 Inventory Taskbar

Inventory Taskbar

A. New Product

Pop-up window for the manual creation of a new product in ELSA-E that is not currently listed within your Inventory/Stock list (***.csv*** file). It can be used in conjunction with the ***"Backup to file"*** icon below to add the new product to your inventory.



Refer to Section 2 - Creating an inventory list for details on how to generate a more extensive inventory list.

B. Delete

Option for deleting individual products from ELSA-E database. It can be used in conjunction with the ***"Backup to file"*** icon below to remove the product from your inventory.

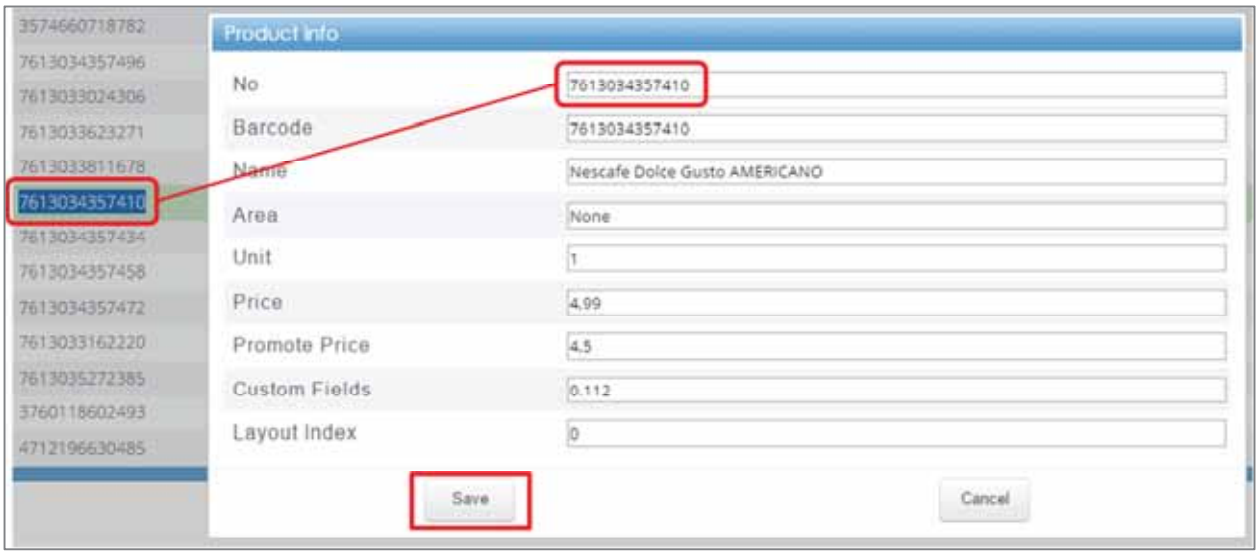
C. Import

Option to import a new or updated Inventory/Stock list (.csv file) as batch-processing.

D. Backup to File

Option for exporting the contents of your ELSA-E Inventory list. The file is created automatically and is saved to your computer's downloads folder with default filename ***Inventory.csv.***

In addition to the above functionality, double-clicking on an entry in the Inventory List will also open a window that allows a user to dynamically change the data displayed on the tag.

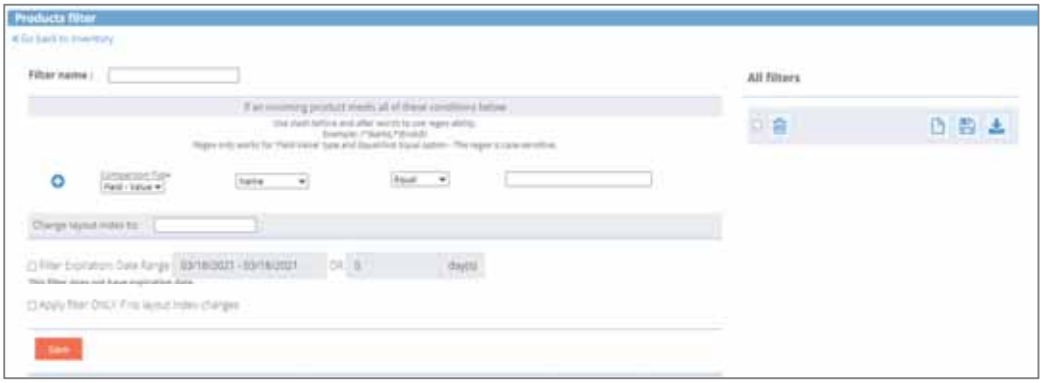


All fields in the pop-up window can be edited by clicking and typing, clicking on ***Save*** will *automatically* update the new data onto your ELSA tag.

Note: Product edits made in the Inventory page will **NOT** be reflected in your Inventory/stock.csv file.

E. Product Filter

This function provides the capability for users to apply different templates, in different kinds of scenarios. Users can create, save, delete, import or export the setting of the created filter, also their priority. Users can also create one or multiple comparison conditions, based on the target value of a single field, or difference value between two fields.



For example:

- Apply promo template when normal price drops down.
- Apply the template with promo message, based on keywords in the product name.
- Apply the specific template for a particular product brand, when the brand is in the product name.

Users can also create one or multiple comparison conditions, based on the target value of a single field, or difference value between two fields.

They can select the target layout index for tag update, if all the conditions were met.
The maximum index number should be the highest template index regardless of the tag profile.

Users can set alive duration for selected filters, either by date range or specific days.

ELSA system can enable the automatic layout change based on the updated information. For example, when the incoming price is 15% lower or promo mark designated, the ELSA tag can display the different layout style to draw customer attention, in addition to the price change. This is very useful in case of “dynamic merchandising” used by ERP information supplements, such as product rotation, high/low margin, etc.

Except for comparing the price number, this function also allows the user to compare the word strings among “product name, area, price, promote price, etc.”

The Product Filter function is used based on different database systems; so this may contain a certain level of complexity.
For more information on the Product Filter feature, please contact M2COMM technical support.

1.3 ESL Management Taskbar

A. Push

Sends a refresh command to individual ELSA tags that have been updated or edited from within the ESL Management page. Select the ELSA tag(s) you want to update and then click the ***Push*** icon, then the new information will be updated on the tag. Normally this button is used when users want to target certain specific tags.

B. Query

Sends a manual query ping to a selected hardware device (i.e. AP, RT, or Tag) to check its status. The selected item(s) will temporarily appear 'Offline' in the ESL Management page and in the Device Status (main menu sidebar, bottom left side). If no issues are discovered, the device will automatically revert to 'Online' status. The response time is typically less than 15 sec with good wireless connection and no other on-going tasks in the system.
On the bottom left side, the numbers stand for AP-RT-Tags.

Note: When the M2COMM web based application is running, Query function runs automatically in the background on a daily basis. Normally it will run one hour after the Auto Wakeup. For instance, when you set Daily Auto Wakeup at 9 am, the Daily Query will run at 10 am after Auto Wakeup is finished.

C. Reboot

Will cause all selected devices (except the Access Point) to restart. Select the device(s) you want to update and then click the ***Reboot*** icon.

Note: Users can check the RSSI (Wireless signal) value for the ESL tag. When the RSSI is bad (i.e. < -80dBm), it might stand for bad connection between ESL tags and Router. If so, users can reboot the ESL tags, so the ESL tags can connect to the alternative Router with better RSSI value for better wireless connection.

D. Battery Threshold

Used for monitoring the battery status of the ESL tags. A sliding control enables users to set alerts for any tags that fall below the lower bound. Tags that do fall below the lower bound will be highlighted on the ESL Management page.

E. Image Push

Enables user to send an image (bmp, jpeg, gif) to a selected ESL tag. Images will only display in the colors supported by the tag i.e. grayscale/red-scale for black/white/red tags.

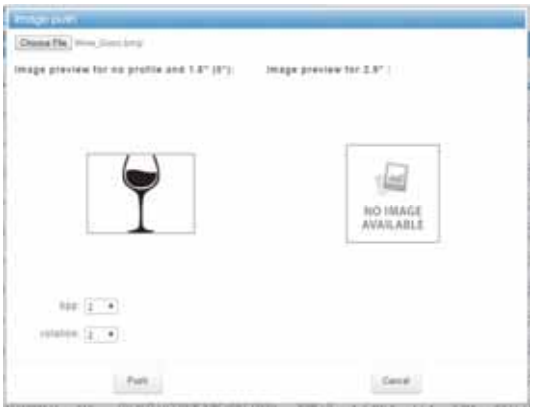


Image size is limited by the resolution of the ELSA tag. Please refer to the product datasheet for the resolution.

If a tag was registered but did **not** have a product associated with it, pushed images will continue being displayed until the tag is either product associated or a new image is pushed.

If a tag was registered **and** associated with a product, the pushed image will overwrite the product information on the ELSA tag. To revert to original database product information please use the ***Push*** *(as stated in above A)* function again.

F. Show Barcode

This function will cause the selected tag to display its unique MAC barcode. When deploying or swapping out pre-registered tags, this is convenient for product association in some cases. Select the tag(s) you want and then click the ***Show barcode*** icon.
For ES16 series, since the display area is limited, we encoded the MAC number to shorten the barcode size. So in the general scanner, it would display garbled code. You may contact M2COMM technical support to get the decoding tool for your scanner.

G. Shutdown

(Super Admin/Admin Only) Shuts down the selected tag(s). Select the item(s) you want and then click the ***Shutdown*** icon. ELSA Tag will keep the last displayed image. And after the tag shuts down, there will be a small red square shown on the corner of the display.

H. Delete

(Super Admin/Admin Only) Deletes selected hardware device. Select the item(s) you want and then click the ***Delete*** icon. Device will be de-registered from ELSA database; tag(s) will change to the blank display as factory default.

For security reasons, we design a "*white list*" algorithm in the system to prevent the unauthorized tags to be added or removed from the premise. This security measure will be placed in both the tag (Tree ID as "security key") as well as in the software database ("lock"), similar to the key-lock pairing. As a result, it is important to make sure that the Tree ID is removed successfully from the tag when the tag is deleted from the database. The unsuccessful removal of the tag Tree ID may lead to that the tags are not allowed to be accessed in another system. In summary the successful device deletion REQUIRES the target device to be online. It is highly suggested to QUERY the to-be-delete devices to confirm its status before proceeding.

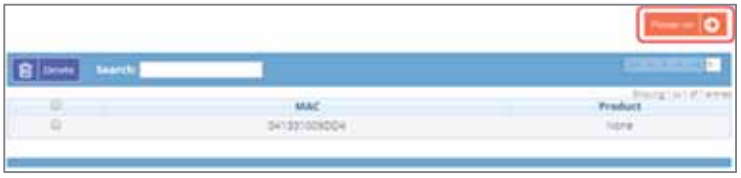
If successfully deleted, the tags will show a blank screen instead of barcode or existing product information.

Note: If the system detects that the *to-be-delete* device is NOT online, a warning message (as shown below) will pop up stating *"You are going to remove the device from the network forcibly. Are you going to continue?"*

If you choose to proceed ("delete the device forcibly"), the tag will be removed from the current software database or the dashboard, but the security key in the tag won't be removed.
For such devices, there are two ways to delete the security keys and make it available for future reuse.

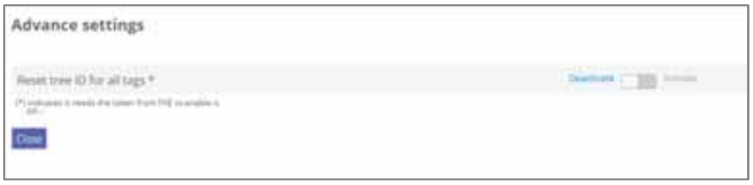
(a). Register this device in the current ELSA system and then delete it again while it is confirmed ONLINE. The tags will show a blank screen if successful.
(b). If (a) is not accessible, it is required to get a specially issued token for the tag Tree ID erasure. To get the token, please send the Access Point MAC to run this erasure to support@m2comm.co to request the token.

In the tag registration page of the installation wizard, please key in the MAC address of the targeted tag(s).



Then, on the "**POWER ON**" procedure, please choose "**Auto power-on**".

After triggering the Auto power-on, please press **CTRL+D** to activate the advanced settings page.



To start the reset process, please slide the “Deactivate” to “Activate” to trigger a pop-up window to enter the Token.

After the token is accepted, it will be automatically flipped to “Activate”. Then users can close this window.

The security keys in these targeted tags are then erased and tags will now be added to the new installation and a confirmation report will be displayed on screen. Select “Finish installation” to complete the normal process.

NOTE: The time taken to complete the Tree ID-removal process and re-registration is dependent upon how many tags are processed but can be up to 30 minutes as a guideline.

I. De-associate

Removes the association between selected tag and its product. Select the tag(s) you want and then click the ***De-associate*** icon. De-associate function is normally used when the users want to remove the ESL tags from the shelves for future use, thus set the ESL tags to show no products (barcode only) on the screen.

Please note, if the users would like to re-associate with another product, the simplest way is to re-associate the ESL TAGS with other products. It is unnecessary to de-associate the ESL tag and product, and then re-associate it.

The following two options can be used for re-association process:

(a). Use the scanner to scan the barcode printed on the paper label affixed to the tag (usually on the bottom) and then the product.

(b). Under ESL Management, select the tag and click “Show barcode on ESL”. This will make the designated tag display its barcode on the screen. It is the same as the affixed label, making it easier to scan. Then the user follows the association procedure.

J. Wake-up Mode

Change wake-up mode: This function is performed by selecting the Access Point, changing the wake-up status of the AP affects all the hardware devices connected to it. ‘Start’ will force any registered ESL Tags to wake-up, and ‘Stop’ will halt the wake-up process.

Generally the wake-up mode will remain for 30 minutes and then it will turn off automatically if not manually. In general 6,500 tags can be awakened during 30 minutes under normal usage.

K. *Import Association*

Allows the user to import an existing tag/product association file (.csv format). This is useful if you are transferring your ELSA-E application from another system or if you have performed an offsite tag to product association.

L. *Export ESL*

Creates a snapshot of selected data for your current tag installation. Export.csv file will be created and saved to your computer's downloads folder. Export ESL is useful as a back-up tool or if you are planning to move the ELSA-E application to an alternate system or site.

M. *PostgreSQL*

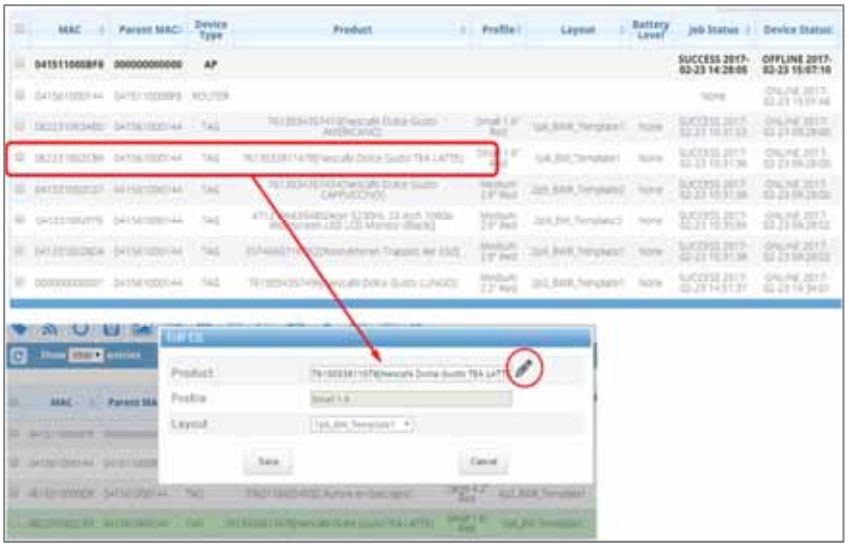
This function is disabled in a standard ELSA-E installation. In a custom install it is enabled to allow M2COMM to work with customers in building an inventory/stock list 'bridge' between their existing system and the ELSA-E Web Portal. Contact M2COMM for customization assistance if you wish to enable this feature.

N. *Register New Tags*

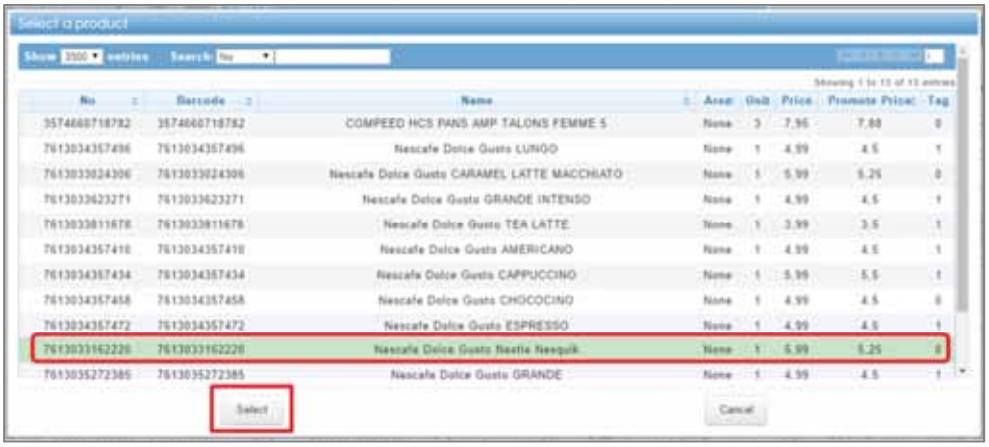
You can add new tags from the shortcut to the tag registration page of the Device Installation wizard.

O. *Managing the ESL List*

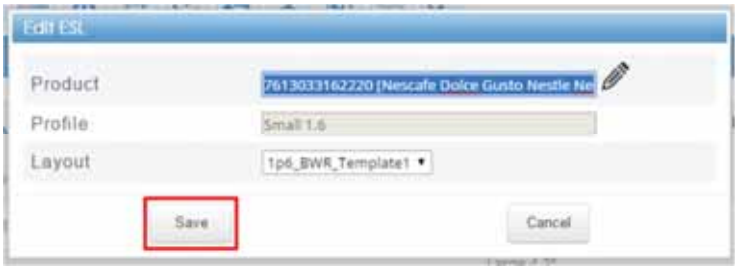
Double-clicking on an entry in the ESL list will open a window that allows the user to dynamically change the product associated with and displayed on the tag.



Select the “pencil” to open the products list.



Click once on the product you want to display on your tag; then click ***Select.***



Select ***Save*** to return to the ESL Management page, selecting Save will *automatically* push the new information to your ELSA tag.

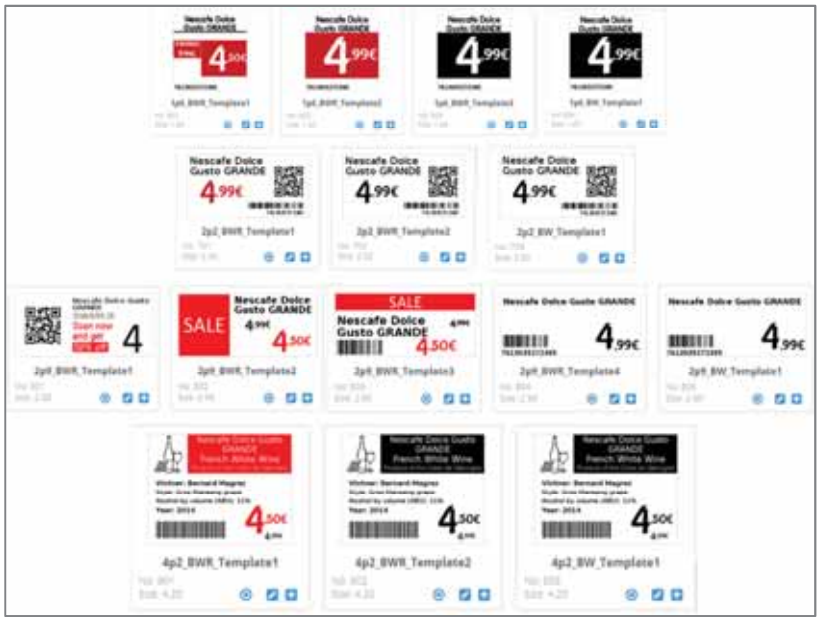
Note: Product edits made in the ESL management page will **NOT** be reflected in your Inventory/stock.csv file.

1.4 Layout Taskbar

NOTE: Layout functionality requires Super Admin or Admin privileges.

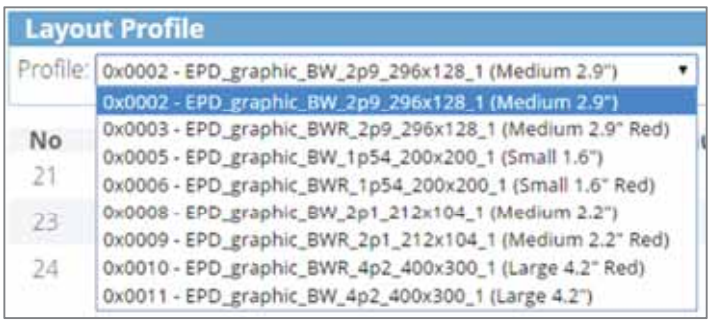
A. Layout Profile for ELSA Tags

ELSA-E comes pre-installed with a selection of default display layouts, i.e. template, associated with Layout Profiles that are used on the specified ELSA tags.



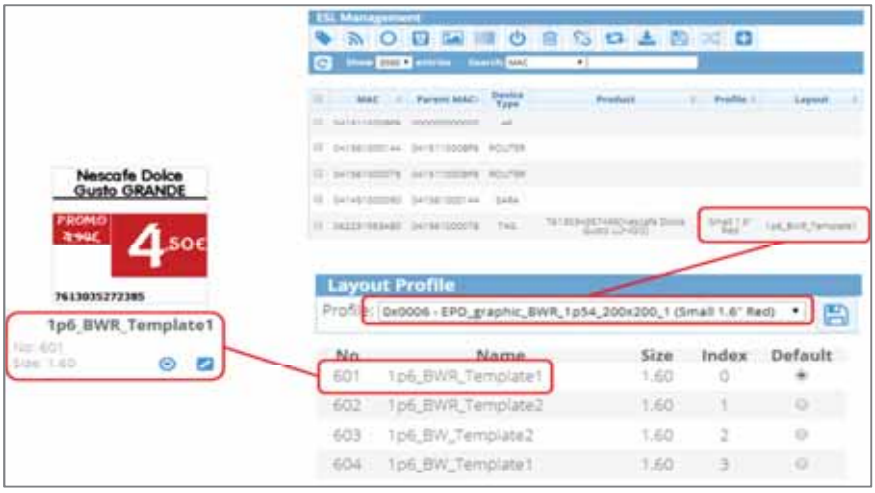
If a user wishes to create their own display layouts, M2COMM provides a downloadable reference guide, please refer to ***ELSA-E Image Creator Users Guide (UG-ELSA-E002).***

A layout profile corresponds to the display characteristics (i.e. display area and color) of the ELSA tags which can be accessed via the pull-down menu. When you installed the ELSA web portal, all of the accessible tag profiles should have been all installed. Please note that if there is no correspondent tag layout profile, you are not allowed to use the tags. If you cannot find the correspondent profile, please contact M2COMM technical support.



The example below shows how the relationship between display layouts, profiles, inventory and ESL management is arranged.

As an example, the “layout profile”, linked to the 1.6 inch Black/White/Red tag, has four default display templates as shown below. They would be shown in: ESL management page and the Layout page.

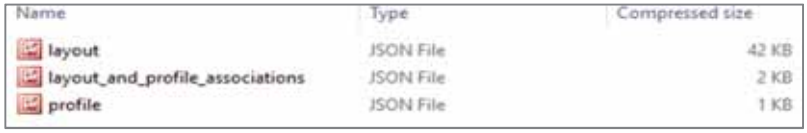


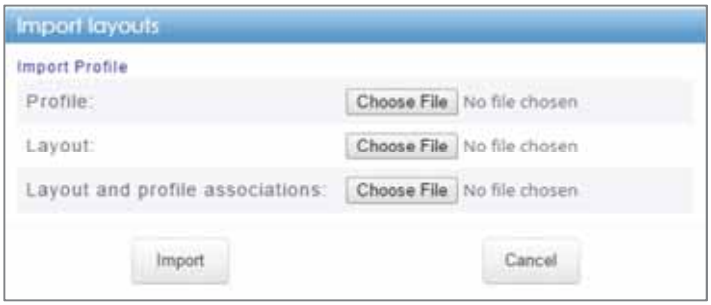
B. *Export Layout Profiles*

Creates a back-up folder containing the required files to recreate your tag display layout design. The folder is saved in your computer's 'Downloads' page.

C. *Import Layout Profiles*

Import custom designed tag display layout profiles; three files in .JSON format are required for valid imports: "Layout", "Profile", "Layout and profile association."





D. *Detach Layout*

Detach layouts from all profiles: Removes links between tag display layouts and all the tag profiles (ESL tag type).

To detach a selected layout from a specific profile, users can use the "Detach" button in the layout selection as shown. This will delete a layout profile (linked to ELSA tag type) from the database.

E. Generate Layout Preview

Creates a visual representation of all the available Layouts in the ELSA Web. By default, after creating or modifying the layout, it will be automatically previewed in the layout panel list when saving it.

If you would like to check the layout for a specific product, please refer to **B. (h) Layout Settings** for more information.

F. Managing the Layout

At each layout preview, there are operations available (from left to right)

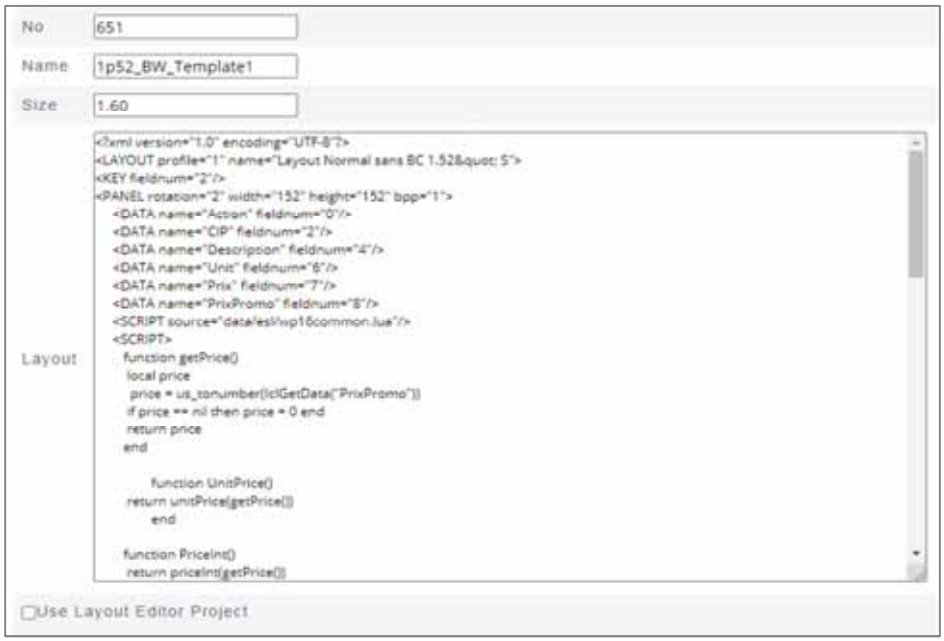
- Delete the selected layout
- Modify the existing layout
- Associate with the selected profile.

Note: After the layout is created and shown in the Layout Page, please do ***remember to associate with the selected profile, so this layout is visible to be selected.***

G. New Layout

Opens dialogue window for creating new layouts. This is recommended for users who are familiar with the XML and using the existing layout file to modify. The following are the typical composite of the edited layout file.

Please note that in the New Layout window, the “No.”, “Name”, and “Size” are entered by the users. The naming of “No.” and “Name” should not be saved in duplicate. Otherwise it will influence the assignment of layouts.



Example of XML of ELSA layout file

Following is the XML of the default ELSA 1.6” BWR layout template:

```
<?xml version="1.0" encoding="UTF-8"?>
<LAYOUT profile="1" name="Layout Normal sans BC 1.6&amp;quot; S">
	<KEY fieldnum="2"/>
	<PANEL rotation="2" width="200" height="200" bpp="2">
		<DATA name="Action" fieldnum="0"/>
		<DATA name="CIP" fieldnum="2"/>
		<DATA name="Description" fieldnum="4"/>
		<DATA name="Unit" fieldnum="6"/>
		<DATA name="Prix" fieldnum="7"/>
		<DATA name="PrixPromo" fieldnum="8"/>
		<SCRIPT source="data/esl/m2commCommon_m.lua" />

		<REGION left="2" top="2" width="197" height="40" name="Product Name">
			<FONT name="Corporate Rounded" height="40-10"/>
			<TEXT mode="xor" halign="center" valign="center" linegap="-4" multiline="1" wordwrap="1" bold="1">%Name%</TEXT>
		</REGION>

		<REGION left="0" top="43" right="200" height="3" invert="1" />

		<REGION left="0" top="67" right="75" bottom="113" fg="2"    invert="1" name="PromoDiscount">
			<FONT name="Bubblegum Sans Regular" height="20-8"/>
			<TEXT mode="xor" halign="center" valign="center" lineweight="72" multiline="1">%promoPercentOrPrice%</TEXT>
		</REGION>

		<REGION left="76" top="67" right="165" bottom="162" fg="2"    invert="1" tmargin="2" bmargin="2" lmargin="2" name="Price">
			<FONT name="Bubblegum Sans Regular" height="90-2-18"/>
			<TEXT halign="center" valign="center">%PriceInt(promo)%</TEXT>
		</REGION>

		<REGION left="115" top="67" right="200" bottom="162" adjust="1" fg="2"    invert="1" bmargin="2" rmargin="1" name="Price Frac">
			<FONT name="Bubblegum Sans Regular" height="50-2-18"/>
			<TEXT halign="left" valign="center">,%PriceFrac(promo)%€</TEXT>
		</REGION>

		<REGION left="2" top="182" right="124" bottom="198" name="CIP">
			<FONT name="DejaVu Sans Condensed" height="16-8"/>
			<TEXT halign="left" valign="center" bold="1">%CIP%</TEXT>
		</REGION>
	</PANEL>
</LAYOUT>
```

When creating the brand new layout, it is also suggested to use M2COMM Layout Editor, which provides the Graphic User Interface (GUI) for easier editing. You can import the created Layout Project from the Layout Editor. For more details about Layout Editor, please refer to the document ***UG-ELSA-AT001-EN_Layout Editor User Manual v1.1***.

H. Delete All Layouts

Deletes all existing display layouts from the ELSA-E Web Portal.

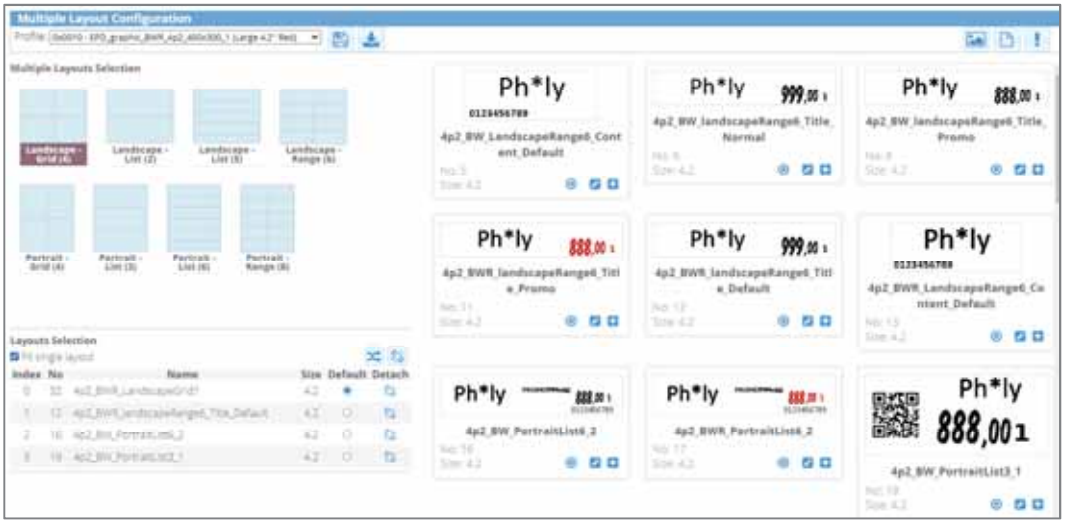
I. Creating the Multiple Layout

Multiple Layout is a unique feature provided by ELSA Web that users can choose to display multiple product info onto one ELSA tag, given the display area is allowed. After clicking the “Configure Multiple Layout”, on the Layout Taskbar, the user will be directed to the Multiple Layout Configuration page to generate the multiple layout templates. This is very useful to either optimize the cost structure or promotion display.


Based on different tag sizes, there will be various ways to display the layouts to fit different scenarios. The above pictures show some examples displaying ES42-R, ES29-R, and ES16-R.

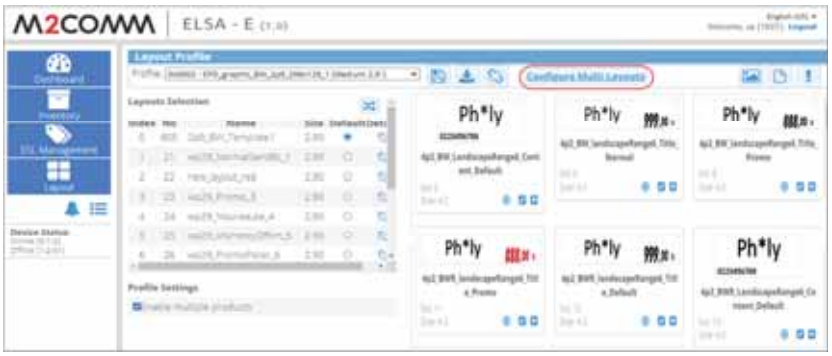
There are different *styles* supported for each ELSA tag profiles:

- 1.6”: List(2)
- 2.2”: Column(2)
- 2.9” : Column(2), Column(3), List(2)
- 4.2”: landscape-grid(4), landscape-list(2), landscape-list(5), landscape-range(6), portrait-grid(4); portrait-list(3); portrait-list(6); portrait-range(8);

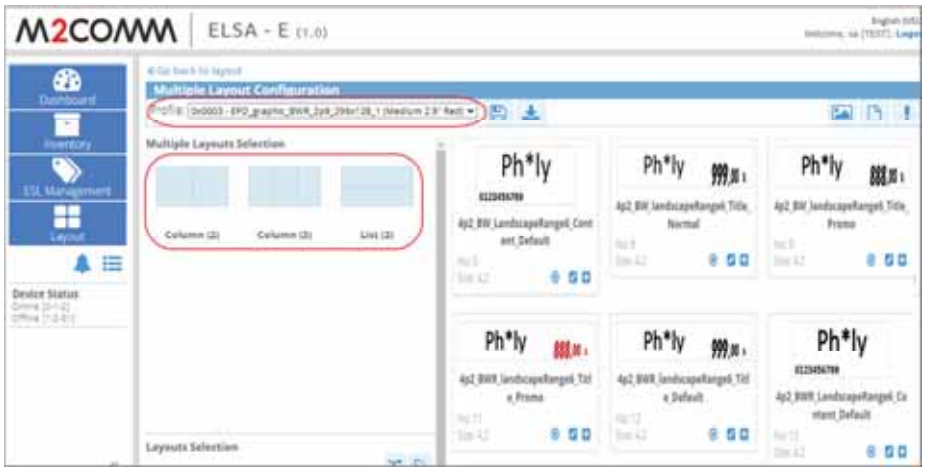


How to create the multiple layout:

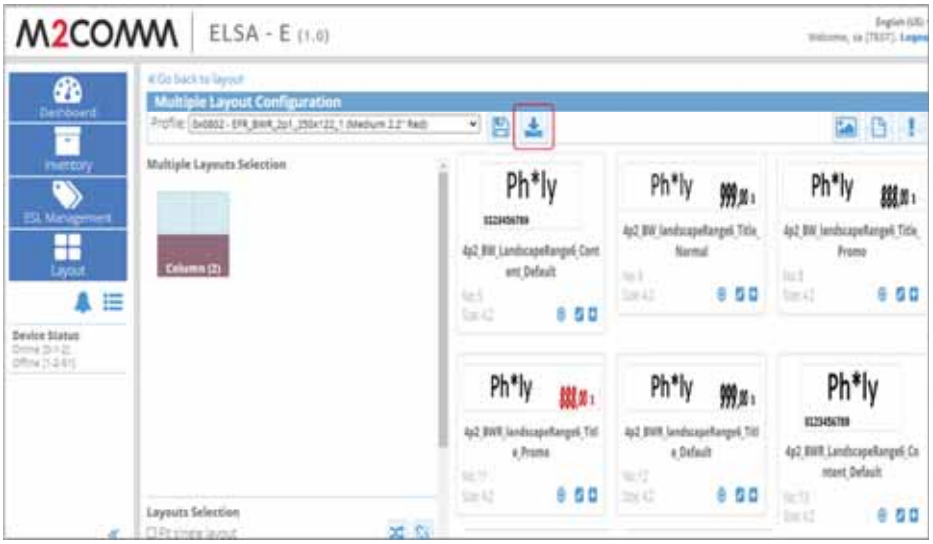
(a). Go to the “Layout” page, and press the button, “Configure Multi Layouts”.



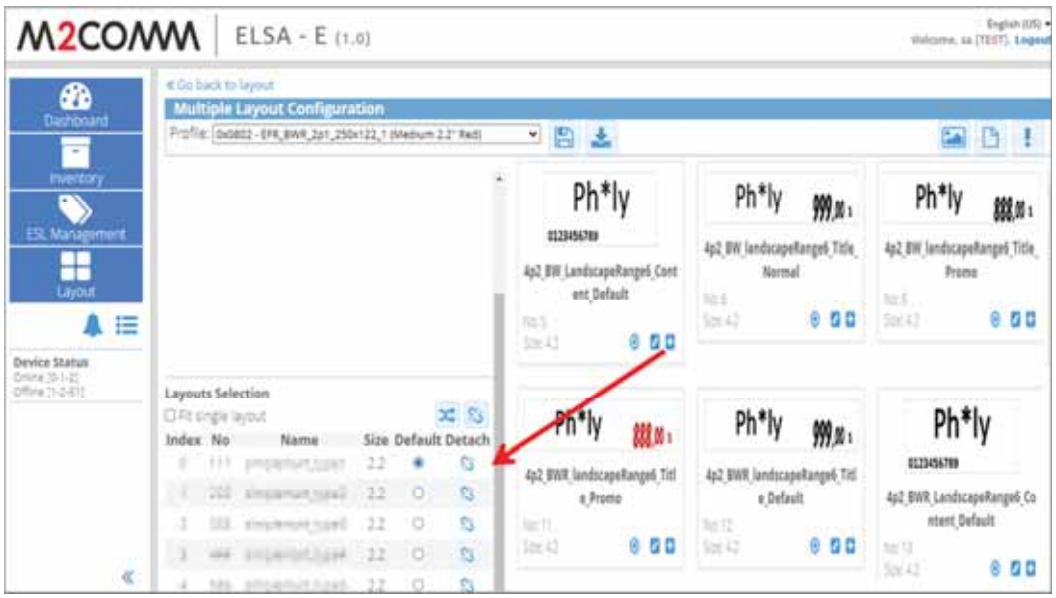
(b). Select the target ED profile and pick the desired template for multiple product placements.



(c). Import or Create the corresponding layout for multiple products.



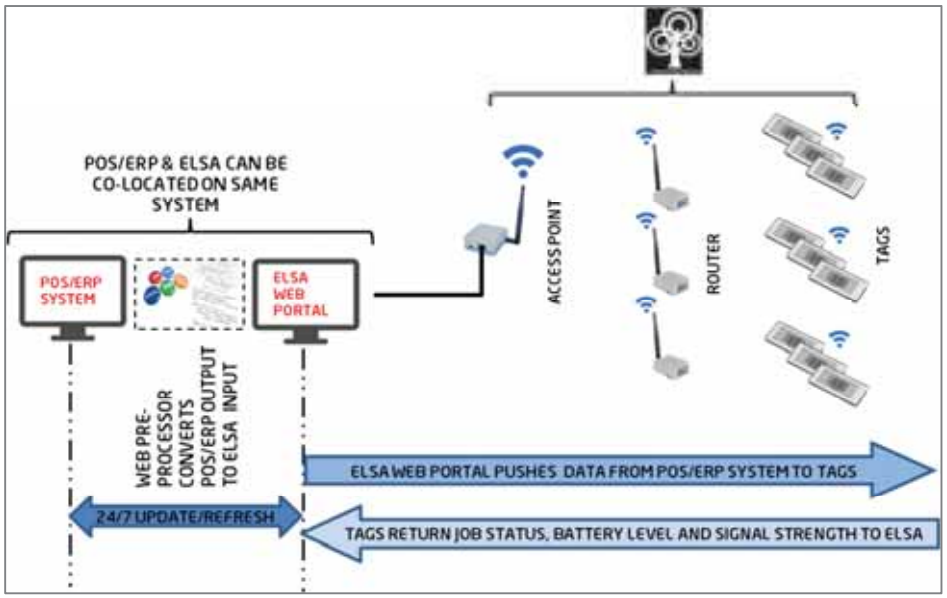
(d). Press the “attach” icon to bind the layout with the selected profile.



(e). Go to the ESL Management page, and choose the tag which applies for the multiple product functions. Double click, and choose “Multi products”. Then choose the corresponding products and layout.

For more information on multiple layout creation and the use, please contact M2COMM technical support for details.

2. Create an Inventory List Automatically



A simple inventory list can be created from within the ELSA-E web portal via the Inventory Taskbar/New Product; alternatively a more complex list can be created by using a Windows based application and importing the list into ELSA-E.

Except for the functions in the ELSA-E web portal, ELSA provides a more flexible way to allow synchronization with 3rd party inventory systems, i.e. POS, ERP, MES, etc., databases types Oracle, SAP, Microsoft, etc., but may require the user to modify the output from their system.

Here we introduce two methods for database file input.

2.1 Create the list in Excel for Basic Synchronization

If you do not have one it is now time to create an electronic version of your inventory, this is most easily done by using Microsoft Excel (or a similar product), and a short example is given below.

Action	*Special Field*	Barcode	Layout Index	Product Name	*Special Field*	Unit	Price	Promotion Price	Weight / Vol / Packaging
M		7613034357496	1	Nescafe Dolce Gusto LUNGO		1	4.99	4.5	112
M		7613033623271	0	Nescafe Dolce Gusto GRANDE INTENSO		1	4.99	4.5	112
M		7613034357410	0	Nescafe Dolce Gusto AMERICANO		1	4.99	4.5	112
M		7613034357434	0	Nescafe Dolce Gusto CAPPUCCINO		1	4.99	4.5	112
M		7613033024306	0	Nescafe Dolce Gusto CARAMEL LATTE MACCHIATO		1	4.99	4.5	112
M		7613034357472	0	Nescafe Dolce Gusto ESPRESSO		1	4.99	4.5	112
M		7613033811678	0	Nescafe Dolce Gusto TEA LATTE		1	4.99	4.5	112
M		7613034357458	0	Nescafe Dolce Gusto CHOCOCINO		1	4.99	4.5	112

This declaration applies to an inventory such as:

M ,, 7613034357496,1, Nescafe Dolce Gusto LUNGO ,, 1,4.99,4.5,0.112

The example inventory list shown above is bundled with your ELSA-E Web Portal software and can be found at the following location **C:\M2C\EslWebSystem\ESL\data\esl\ELSA Inventory.xlsx**

Explanation on column headings:

- **Action:** This is a default setting, M should be entered against all products. "M" to add or modify, "R" to remove. You should set default as M in this column.
- **Custom Field:** This field can be configured for specific installations. By default, it should be present, but without a value.
- **Barcode:** Product barcode, normally the International Article Number (i.e. EAN code, etc).
- **Layout index**: The index of the layout in which to present product information. The values of the layout indexes are available in the layout management page of the ELSA web.
- **Product name:** Description of product that you want to see displayed on your ESL tag.
- **Special field**: this field can be configured for specific installations. By default it must be present but without value..
- Unit: defines the type of unit in which the weight / volume of the product is defined. In the example above we consider the value "1" as a weight in grams. The configuration of this field can be changed in the layout files.
- Price, current default is €'s but this can be changed to the currency in use for your region by modifying this in the layout xml file.
- **Promotional price**: The price of the promotional product as it will be displayed on the label. If this is not applicable, the field must remain present but without a value.
- **Weight / Volume / Packaging**: the weight, volume, or number of items contained in a batch of product. In the example above, we therefore have 112g per product. The configuration of this field can be changed in the layout files.

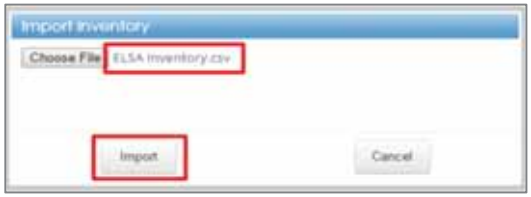
When you have a complete inventory list, it needs to be saved as a *.csv* file.

Select ***Save As***, ***Other Formats***, when the pop-up window appears give your file a name (for this exercise we used ELSA Inventory) and then select on the ***Save as type*** and then select ***CSV (Comma delimited)***, now click on ***Save.***
You should accept each of the pop-ups that appear and your new .csv file will be created.

```
M,,7613034357496,1,Nescafe Dolce Gusto LUNGO,,1,4.99,4.5,0.112
M,,7613033623271,0,Nescafe Dolce Gusto GRANDE INTENSO,,1,4.99,4.5,0.112
M,,7613034357410,0,Nescafe Dolce Gusto AMERICANO,,1,4.99,4.5,0.112
M,,7613034357434,0,Nescafe Dolce Gusto CAPPUCCINO,,1,4.99,4.5,0.112
M,,7613033024306,0,Nescafe Dolce Gusto CARAMEL LATTE MACCHIATO,,1,4.99,4.5,0.112
M,,7613034357472,0,Nescafe Dolce Gusto ESPRESSO,,1,4.99,4.5,0.112
M,,7613033811678,0,Nescafe Dolce Gusto TEA LATTE,,1,4.99,4.5,0.112
M,,7613034357458,0,Nescafe Dolce Gusto CHOCOCINO,,1,4.99,4.5,0.112
```

After creating the csv file, open the ELSA-E Web Portal and select ***Inventory*** from the left side menu. When the ***Inventory List*** page opens, please select ***Import.***

A new window will open asking you to choose the file you want to import, click ***Choose File*** and navigate to the ***.csv*** file created in ***Section 2*** above, select the file and click ***Open.***



Click ***Import***, the ELSA-E Web Portal will display a report informing you of how many products have been imported.

Click ***OK***; the ***Inventory List*** page will now show all your products and will simultaneously "push" the information to your ELSA tags; this may take a couple of minutes.

Your ELSA tags should now be displaying your product information and pricing.

2.2 Automatic Synchronization

The ELSA web can automatically import inventories. To do this, we drop the csv file(s) in a specific folder and we will create a MAKER FILE to signify that the writing of the file is finished and that it can be imported. The tag must have the same name as the csv file with a ".done" extension. As this file is only a marker, it may be empty content.

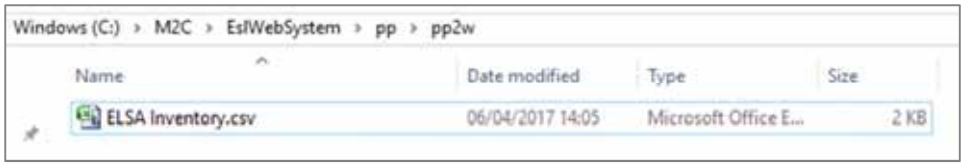
Note that the name of the inventory must not contain any period (".") other than the period than that of the extensions ".csv" and ".csv.done".

The following process assumes that the user has a compatible .csv file. Here we have used the filename ***ELSA Inventory.csv*** as an example.

Place a copy of the ***ELSA Inventory.csv*** file on the users' server or computer with ELSA-E software in the following folder location:

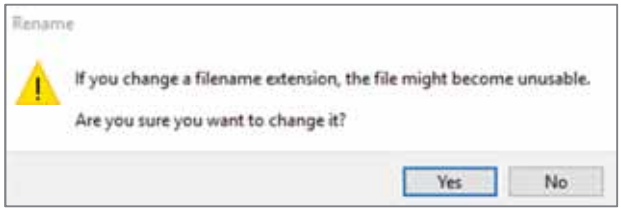
C:\M2C\EslWebSystem\pp\pp2w

Note: The ELSA-E Web-preprocessor, by default, is configured to poll this location at 1 second intervals to check for any inventory updates.

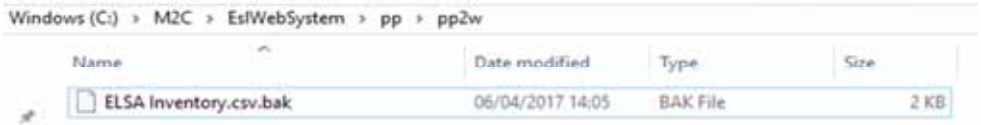


We now have to create a duplicate file under a modified name so that the ELSA-E Web-preprocessor will use it as confirmation that you want to update your ELSA-E web portal inventory.

Please create a duplicate of the ***ELSA Inventory.csv*** file and rename the file to **ELSA Inventory.csv.done**. A warning message will pop up. Please select **Yes** to continue.



The ELSA-E Web-preprocessor will now compare the contents of each file against the entries currently held in the ELSA-E web portal for changes and will generate a new back-up file (.bak) when this check has been completed.



You will notice that the original ***ELSA Inventory.csv*** file and its duplicate have both disappeared. This is to ensure that no changes can be made to the files from within ELSA-E.

The ELSA-E Web-preprocessor will generate a report of the actions and/or changes that have taken place; this report can viewed on the ELSA-E web portal dashboard page and will look something like this:

```
[2017-04-06 14:25:18] - [INFO] - [Web-preprocessor] Delete ELSA Inventory.csv.done
[2017-04-06 14:25:18] - [INFO] - [Web-preprocessor] 14 products
[2017-04-06 14:25:18] - [INFO] - [Web-preprocessor] 1 tag(s) pushed
[2017-04-06 14:25:18] - [INFO] - [Web-preprocessor] 0 tag(s) disassociated
[2017-04-06 14:25:18] - [INFO] - [Web-preprocessor] 13 unchanged products
[2017-04-06 14:25:18] - [INFO] - [Web-preprocessor] 0 duplicated products
[2017-04-06 14:25:18] - [INFO] - [Web-preprocessor] 0 deleted products
[2017-04-06 14:25:18] - [INFO] - [Web-preprocessor] 2 updated products
[2017-04-06 14:25:18] - [INFO] - [Web-preprocessor] 0 new products
[2017-04-06 14:25:18] - [INFO] - [Web-preprocessor] 0 unknown action
[2017-04-06 14:25:18] - [INFO] - [Web-preprocessor] Synced with 15 rows in ELSA Inventory.csv
[2017-04-06 14:25:18] - [INFO] - [Web-preprocessor] Process file ELSA Inventory.csv ... 2017-04-06 14:25:18.250000
```

Changes to the ELSA-E web portals inventory will be automatically pushed to your ELSA tags for display.

M2COMM can assist you in the creation of this script automation file, please contact our support team at ***support@m2comm.co.***

2.3 Advanced Data Exchange Usage

This section describes the data exchange model with the ELSA system, when interfacing with backend applications. This exchange is handled by M2COMM Pre-Processor technology.

A. Input File Format

As stated, product information must be filed in a flat file (inventory) using the CSV extension, the separator of which is a comma (","). The decimal separator for prices must therefore be a period (“.”). If a product name contains one or more commas (","), the entire name should be enclosed in quotation marks (" ") to avoid misinterpretation. The nature of the data is then declared in the layout management files.

Here is the data exchange model as **CSV column definition**.
Please note that this is a reference column definition, and if the users’ database matches this column definition, some extra functions can be adopted in the system.

Field index	Field name	Description
0	Action	"M" to add or modify, "R" to remove
1		*Not used*
2	CIP	barcode
3	Index	Layout index
4	Description	Product name
5		*Not used*
6	Unit	Defines the unit in which the product is quantified: 1 : weight 2 : volume 3 : by the unit
7	Prix	Product price
8	PrixPromo	Promotional price.
9	Qty	The weight (in grams), the volume (in liter), or the amount of items contained in the product.
10	IndStock	Defines the way the stock will be displayed : 1 : "On the shelves/back office" 2 : on the shelves only 3 : back office only any other value : "On the shelves/back office"
11	Points	Fidelity points won when buying the product
12	Stock	Total stock
13	Rayon	Stock on the shelves
14	Reserve	stock in the back office
15	Reappro	An order is in progress
16	EcoP	Ecological fee (applicable on electrical product for instance)
17	DateReappro	Next product delivery date
18	PromoDiscount	Discount rate (if applicable)
19	PromoMessage	Promotional message to be displayed
20	QtyLot1	For a promotion by threshold, the amount of product in the first threshold
21	QtyLot2	For a promotion by threshold, the amount of product in the second threshold
22	PrixPromoLot1	For a promotion by threshold, the unit price of a product in the first threshold
23	PrixPromoLot2	For a promotion by threshold, the unit price of a product in the second threshold
24	CodeGeo1	Geographical code 1
25	CodeGeo2	Geographical code 2
26	CodeGeo3	Geographical code 3
27	HighMargin	High margin indicator 1 : high margin Any other values : low margin

28	TurnOver	Product turn over indicator: 1 : high turn-over 2 : low tur- over Other values : average turn over
29	Currency	*Not used*
30	ValRotation	Product turn over (average sales per month)
31	DateFin	Promotion end date
32	ppOptions	Product highlight indicator 0 : no highlight Higher than 0 : highlight
33	Template	*Not used*

B. Example of Using Layout Index

As stated above, the "layout index" field designates the index of the layout in which information relating to the product will be presented. Each label format can have a set of layouts that can be viewed and / or modified on the ELSA web layout management page.

Layout Index	Description
0	Normal with barcode
1	Normal without barcode
2	Promotion with message
3	Promotion without message
4	Product highlight with a message
5	x bought y offered
6	Promotion by threshold
7	Out of stock
8	Rotation
9	Product unknown
10	Barcode
11	Low battery (*automatically assigned by the web system*)
12	Regulation Picto

C. Additional Notes

(a). "Promotion without message"

The processing is applied for "Promotion without message" layout:

- If immediate reduction voucher (discount of an integer on the reference price, for example -2 €), the system displays the value of the reduction voucher.
- If the reduction rate is a multiple of 5% (e.g. -20%), the system displays the reduction rate.
- If the reduction rate is not a multiple of 5% but is
  - Greater than 20%: the system displays the message “low price” with a dedicated pictogram.
  - Greater than 15%: the system displays the “shock price” message with a dedicated pictogram.
  - Greater than 10%: the system displays the message "crazy price" with a dedicated pictogram.

The thresholds, pictograms, and messages used are of course configurable.

-25% discount

“crazy price!”

(b). "Promotion by lot"

ERP may sometimes transmit product prices for different batches; the layout shown is limited to the display of two or three batches. They are used for displaying prices for the product numbers more than one, and the reference price is displayed as the unit item.

- For 2 batches: batch price for 2 in a set

- For 3 lots: batch price for 2 or 3 in a set.

For 2 batches

For 3 lots

(c). "Out of stock product"

The estimated next delivery date will be automatically displayed if it is entered in the ERP.

With delivery date

Without delivery date

(d). "Regulatory picto"

This layout is automatically assigned from a list of products on which the pictograms are applicable, when the layout is "normal" (index 1 or 0).

“not good for pregnant women and driving”

3. Passwords and Accounts

3.1 User Privilege Settings

The following table shows the default privileges of each of the three user profiles.

		Super Admin	Admin	User
Hardware Maintenance	System commands	✔	✔	×
	ESL settings	✔	✔	×
	Network configuration	✔	Limited	×
	Firmware upgrade	✔	✔	×
Application Settings	General settings (User account creation and password change)	✔	×	×
	Database backup	✔	✔	×
	Email settings	✔	✔	×
Device Installation		✔	✔	✔
Inventory	New Product	✔	✔	✔
	Delete	✔	✔	✔
	Import	✔	✔	✔
	Back-up to file	✔	✔	✔
ESL Management	Push	✔	✔	✔
	Query	✔	✔	✔
	Reboot	✔	✔	×
	Battery Threshold	✔	✔	×
	Image Push	✔	✔	×
	Show Barcode	✔	✔	✔
	Shutdown	✔	✔	×
	Delete	✔	✔	×
	Disassociate	✔	✔	✔
	Change Wake-Up Mode	✔	✔	✔
	Import Association	✔	✔	✔
	Export ESL	✔	✔	✔
	Barcode Association	✔	✔	✔
Layout	Export Layout Profile	✔	✔	×
	Import Layout Profile	✔	✔	×
	Disassociate Layouts	✔	✔	×
	Remove Profile	✔	✔	×
	Generate Layout Preview	✔	✔	×
	New Layout	✔	✔	×
	Delete All Layouts	✔	✔	×

3.2 Changing User Password and Account Creation (Super Admin Only)

From the ELSA-E Web Portal Dashboard select Maintenance, Application Settings.

Select GENERAL SETTINGS and "User administration", you can enter the Site administration page. In this page, you can change the user privilege and the user grouping.
If you would like to get back to the main dashboard, please click the "View site" button on the top right side.

A. Changing a User Password

In the top right of your screen, please select: Change password.

Follow the on-screen instructions to change the password. After finishing, please select Change my password.

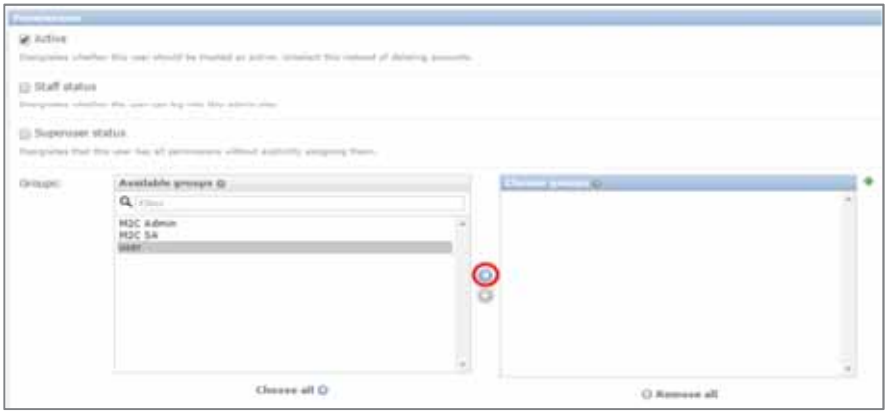
Select ***Home*** to return to the Site administration page.

B. Account Creation

Under ***Users*** select "***+Add"*** *to add new users.*
Then follow the on-screen instruction to enter information. When finished, please select ***Save.***

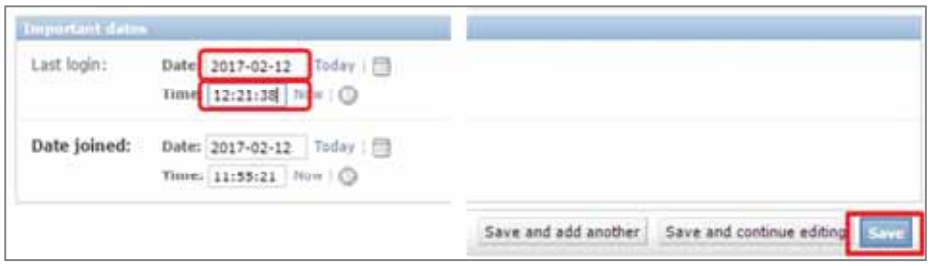
You have the option of adding personal details about the new user(s) you have created; this is a useful memo of associating a username to a person.

In the following dialog screen, you will also be asked to define the "Staff status" of the new user(s) and the privileges/permissions assigned for the system.



In the following dialog screen, select the profile you wish to give the new user(s) and click on the right arrow to apply; this will assign all the default privileges for the chosen profile to the new user(s).

At last it is mandatory to add the date details of when the new user(s) account was created.



When finished, please click ***Save*** *to conclude the setup.*

If you want or need to change any of the user(s) accounts, you can access from the following task menu:

Battery Caution:

The elements of the **instructional safeguard** shall be as follows:

- element 1a: not available
- element 2: "Do not ingest battery, Chemical Burn Hazard" or equivalent wording
- element 3: the following or equivalent text
  [The remote control supplied with] This product contains a coin / button cell battery. If the coin / button cell battery is swallowed, it can cause severe internal burns in just 2 hours and can lead to death.
- element 4: the following or equivalent text
  Keep new and used batteries away from children
  If the battery compartment does not close securely, stop using the product and keep it away from children.
  If you think batteries might have been swallowed or placed inside any part of the body, seek immediate medical attention.

FCC Statement:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and
(2) This device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.
This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.
If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
—Reorient or relocate the receiving antenna.
—Increase the separation between the equipment and receiver.
—Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
—Consult the dealer or an experienced radio/TV technician for help.
Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 cm between the radiator and a human body.

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