LEO-D ePaper Display Solution

(電子紙顯示器)

LEO-D31/LEO-D51

Installation and User Guide

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i. Using This Documentation

This installation guide explains how to set-up and install the LEO-D ePaper Display Solution.

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

1 *LEO-D Application Installation - Overview*

The following task-list needs to be completed for a full LEO-D ePaper Display Solution installation.

- Confirm that you have received all the items you ordered,
- Attach power and data cable to Access Point,
- Connect Access Point to computer,
- Attach power cables to routers and position them around premises as required,
- Set up your system software and firmware,
- Register system hardware (Access points, routers and tags) with the LEO-D Device Manager Portal,
- Scan or manually enter tag barcodes/MAC addresses,
- Associate tags and products,
- Associate product descriptions with tags,
- Wake-up tags

2 *System Hardware Components and Features*

This section describes the components, indicators and connectors for the system.

2.1 *Shipping Inventory*

Inspect the shipping cartons for evidence of physical damage. If a shipping carton appears damaged, request that the carrier's agent be present when the carton is opened. Keep all contents and packing material for the agent's inspection.

The LEO-D ePaper Display Solution includes the following:

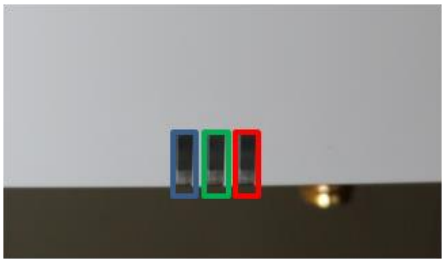
- Access Point(USM-D62)
- Router(USM-D64)
- Tag(s) – LEO-D31, LEO-D51 (actual mix and quantity supplied is subject to order)
- Detachable Antenna (one for Access Point and one each for every Router supplied) – Country/Region specific
- 5V Power Adaptors for Access Point, Router(s)
- CAT5E Ethernet Cable

2.2 *Access Point(USM-D62)*

The Access Point has a wired connection to the base station (computer) and communicates wirelessly with the Router(s) via the proprietary Platanus protocol.

The Access Point supports up to a total of 15 Routers and has an operating range from 0m to 100m; please refer to Section 2.6 ***System Hardware Deployment*** for guidance on the correct positioning of your Access Point.

2.2.1 Status Indicators and Assembly



LED status functions;

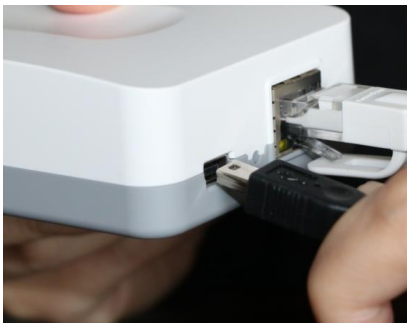
Red – Power-on self test error
Green – Power on indicator
Blue – Network Connection, shall stay on while power is connected

Access Point - Network Port

- GREEN network activity indicator—turns on when a cable connects the port to another Gigabit Ethernet port
- YELLOW activity indicator—Flashes to indicate network activity over that port

Attach included Antenna

Plug one end of the supplied Cat 5E cable into the Access Point, the other end should be plugged into your computer.



Connect the supplied AC power adaptor as shown.
Use only the adapter that came with your Access Point.

2.3 *Router(USM-D64)*

The Router(s) operate wirelessly, via the proprietary Platanus protocol, with the Access Point and ESL Tags.

Each Router supports up to a total of 1000 ESL Tags and has an operating range up to 100m; please refer to Section 2.6 ***System Hardware Deployment*** for guidance on the correct positioning of your Router.

2.3.1 Status Indicators and Assembly

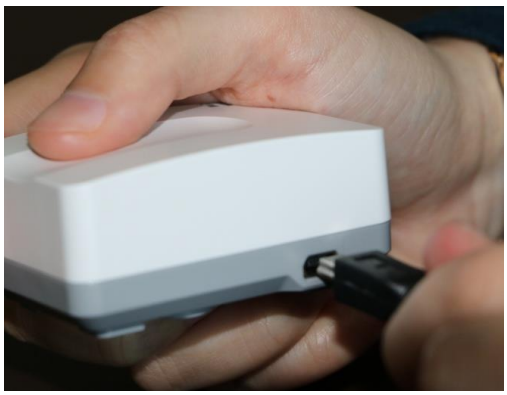
LED status functions;

GREEN – Power on indicator
RED – SRAM test
BLUE – Network Connection, shall stay on while connected with an ELSA-M Access Point. Shall flash slowly under the following conditions;

- When connecting to a network and under average RSSI qualification by Daemon
- When the Router reaches its maximum carrying capacity, e.g. connection with 1,000 tags
- When connected to network but the RSSI falls below -80dBm

Will flash quickly when the Router loses connection with the network, duration 30 minutes

Attach included Antenna



Connect the included AC power adaptor as shown.
Use only the adapter that came with your Router.

2.4 *Tag(s)*

LEO-D31 2.9” ePaper Display
Size (W x H x T): 92.6mm x 45mm x 10.3mm
Active display area (W x H): 66.9mm x 29.06mm

LEO-D51 5.65” ePaper Display
Size (W x H x T): 140.8mm x 114mm x 16.5mm
Active display area (W x H): 114.9mm x 85.8mm

2.5 *Preparing for Installation*

This section provides the information you need to prepare for the application installation.

2.5.1 Equipment Needed for Installation

The LEO-D Device Manager utilizes a Web-based Configuration Utility for optimum performance we recommend the following;

- *Desktop/Tower computer*
    - Windows OS (Windows 7, 8, 10 or Windows Server 2012)
    - Microsoft .NET Framework version 3.5 or later
    - CPU x86 64-bit 2.3GHz
    - 4GB Memory (minimum)
    - 2GB free Disk Space (minimum)
    - Dual Ethernet ports – one port for Internet access and one for ELSA-M Access Point

  OR

- *Notebook/Laptop computer*
    - Windows OS (Windows 7, 8, 10 or Windows Server 2012)
    - Microsoft .NET Framework version 3.5 or later
    - CPU x86 64-bit 2.3GHz
    - 4GB Memory (minimum)
    - 2GB free Disk Space (minimum)
    - wired and wireless (Wi-Fi) Ethernet – Wi-Fi for Internet access and wired port for ELSA-M Access Point
- Web browser – ELSA-M is currently only supported on Google Chrome 2.0 or later

2.6 *System Hardware Deployment*

2.6.1 Positioning your Access Point and Router(s)

The access point and routers together form the wireless network through which your wireless ESL tags will operate; correct placement is essential to ensure that you stay within the operating range of the access point and router(s). Keep in mind, however, that the number, thickness and location of walls, ceilings, or other objects that the wireless signals must pass through, may limit the range. Typical ranges vary depending on the types of materials and background RF (radio frequency) noise in your home or business. The key to maximizing wireless range is to follow these basic guidelines:

- Make sure that your devices are located within reach of an AC power outlet.
- Place your devices in an elevated location, recommends a minimum height of 2m to achieve the best reception.
- Keep the number of walls and ceilings between the access point and the router(s) to a minimum. Each wall or ceiling can reduce your devices range from 3-90 feet (1-30 meters.) Position your devices so that the number of walls or ceilings is minimized.
- Be aware of the direct line between network devices. A wall that is 1.5 feet thick (0.5 meters), at a 45-degree angle appears to be almost 3 feet (1 meter) thick. At a 2-degree angle it looks over 42 feet (14 meters) thick! Position devices so that the signal will travel straight through a wall or ceiling (instead of at an angle) for better reception.
- Building Materials make a difference. A solid metal door or aluminum studs may have a negative effect on range. Try to position the wired access point and wireless routers so that the signal passes through drywall or open doorways. Materials and objects such as glass, steel, metal, walls with insulation, water (fish tanks), mirrors, file cabinets, brick, and concrete will degrade your wireless signal.
- Keep your product away (at least 3-6 feet or 1-2 meters) from electrical devices or appliances that generate RF noise.

2.6.2 Distance Between Devices

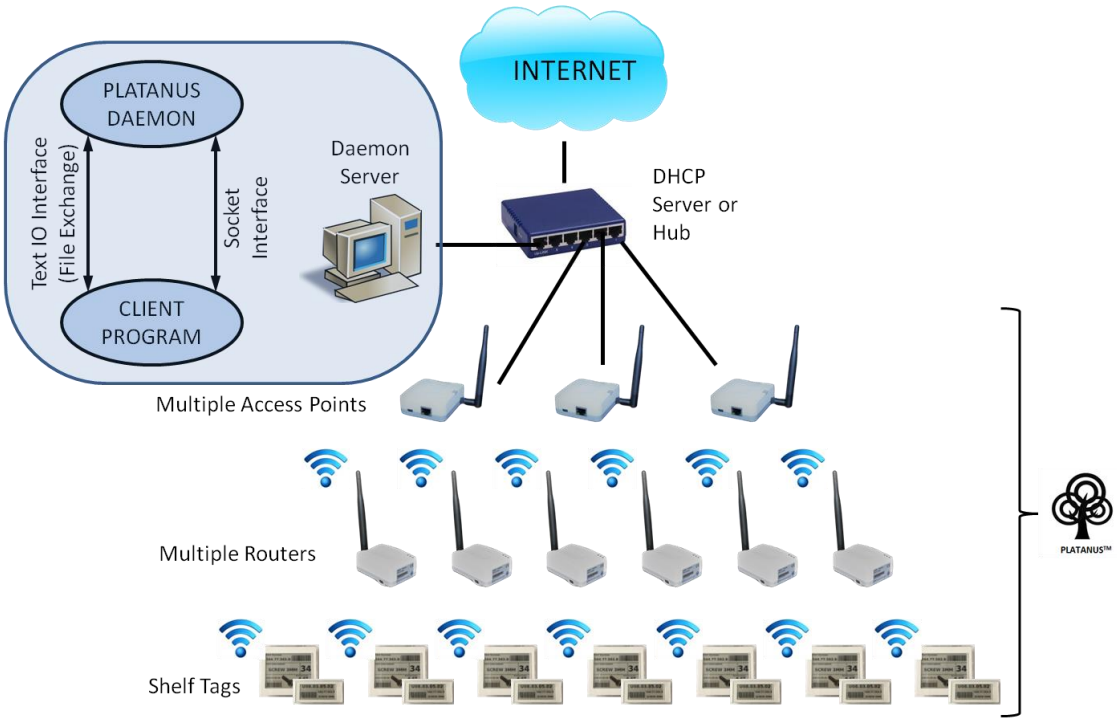
FROM	TO	TYPE OF CONNECTION	OPERATING RANGE	REMARKS
BASE STATION (COMPUTER)	ACCESS POINT	HARDWIRED CAT 5E CABLE		The ELSA-M System is shipped with a 2m long cable as standard but is not limited to this distance; actual distance between computer and access point is subject to customer installation requirements
ACCESS POINT	ROUTER	WIRELESS (Sub-GHz)	MAX 100m	Actual operating range is subject to adherence with positioning guidelines given in previous section

ROUTER	TAG	WIRELESS (Sub-GHz)	MAX 100m	Actual operating range is subject to adherence with positioning guidelines given in previous section

2.7 *Computer Configuration for LEO-D ePaper Display Soultion Installation*

It can be seen in the diagram below that the system architecture consists of several key components; a single or multiple Access Points, several Routers, multiple End Devices (LEO-D tags) and the Platanus Daemon program running on a desktop.

This LEO-D Device Manager installation is designed to use either a static IP address for a single Access Point or a dynamic IP address when multiple Access Points are installed.



Static or Dynamic IP Configuration

2.7.1 IP Address Configuration (Static IP)

Ensure that your Access Point is connected to your computer.

Your Access Point comes pre-configured with a default IP Address ***(192.168.2.1)*** and therefore prior to installing the ELSA-M firmware and software (reference Section 3.1) it is necessary to modify the IP Address of the Ethernet port on your computer that is cabled to the Access Point so that they can communicate with one another.

Ensure that your Access Point is connected to your computer.

On your computer open the ***Control Panel – Network and Internet – Network and Sharing Center***

Using your computer mouse, click on ***Ethernet***

Select ***Properties***

Select ***Internet Protocol Version 4 (TCP/IPv4),*** and select ***Properties***

Check ***Use the following IP address*** and enter information shown above. Select ***OK*** to apply new settings (All open windows can now be closed)

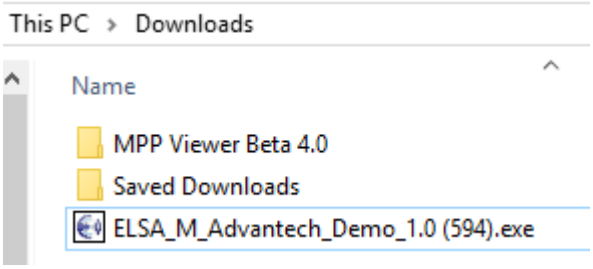
2.7.2 IP Address Configuration (Dynamic IP)

For installations that contain multiple Access Points an external TCP/IP Ethernet hub is required; setting up the IP address for each Access Point will require modification of the ELSA-M Daemon Integration file, please refer to **UG-ELSA-M001: ELSA-M Daemon Integration Guide** for further details.

3 *Web-based ELSA-M Installation*

3.1 *Software Installation*

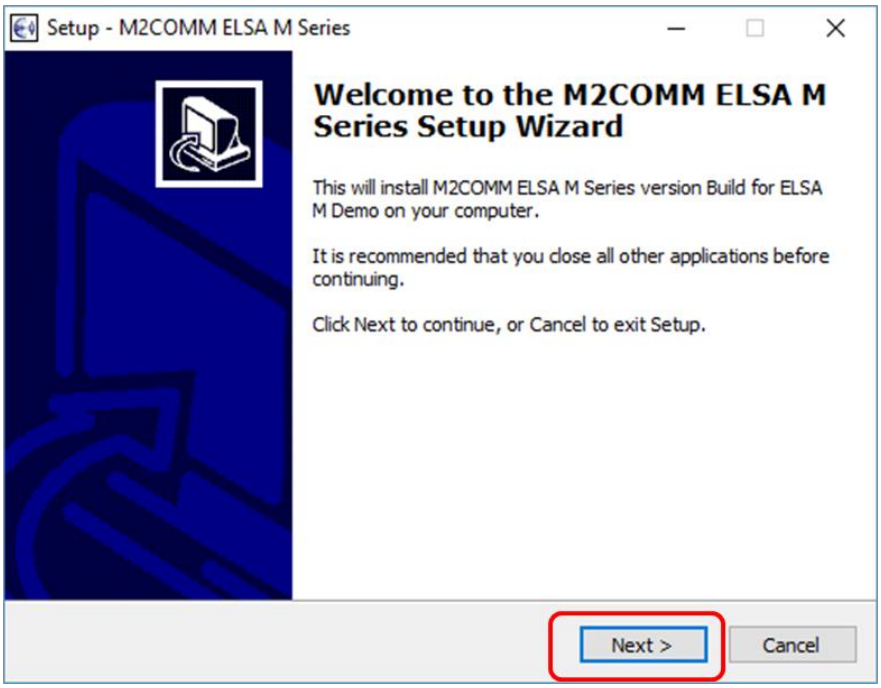
On your computer go to the Windows Downloads folder and locate the ELSA-M executable file, (Please note; filename shown is an example, actual build number 1.0 (594) maybe different).



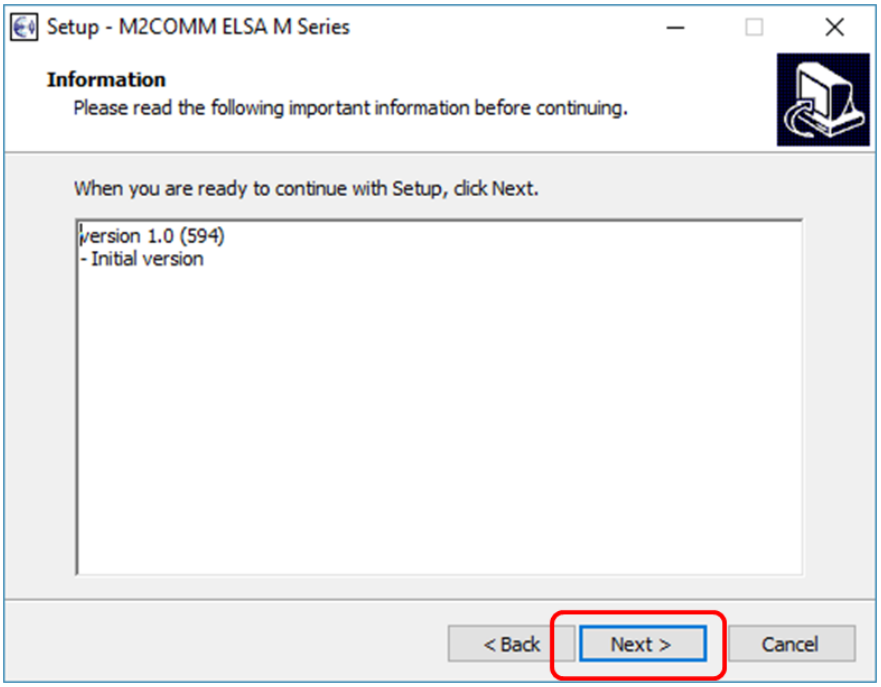
Double-click file to begin the installation.

You may be asked for permission to allow the program to make changes to your computer; you must agree to this to enable installation to start.

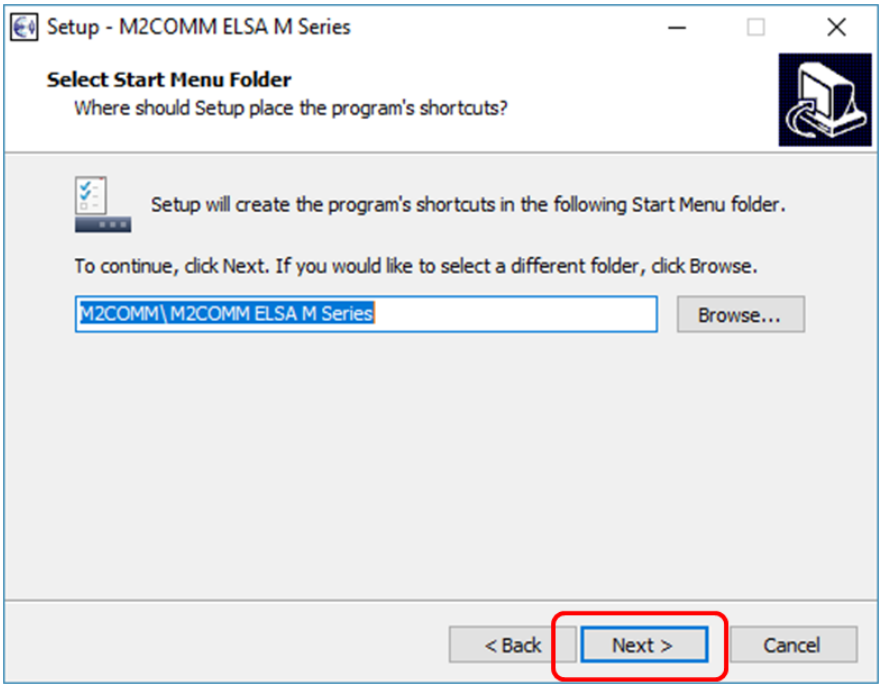
Follow the on-screen instructions and refer to this manual at anytime during installation for additional information.



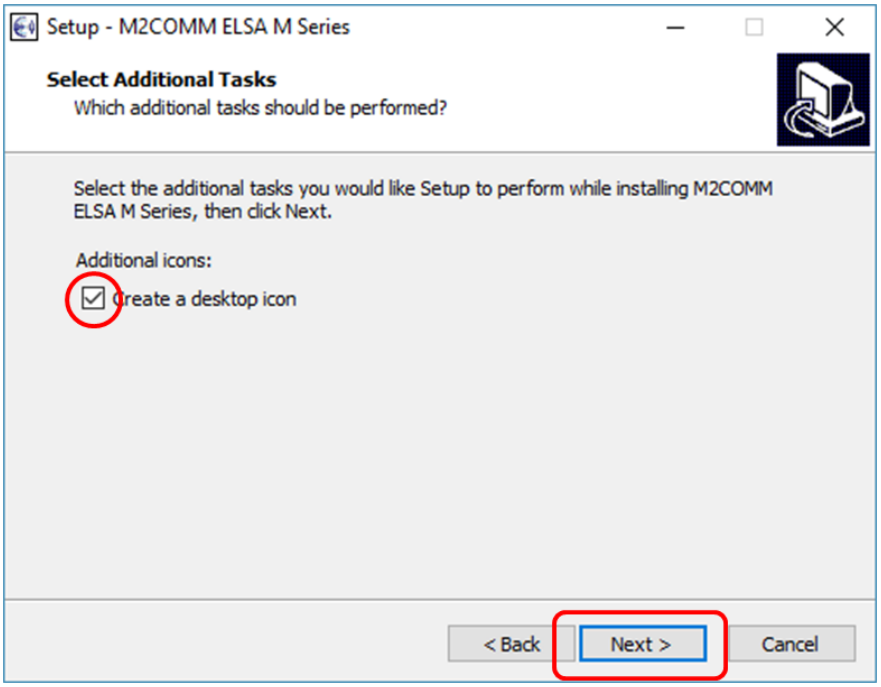
Click ***Next>*** to continue



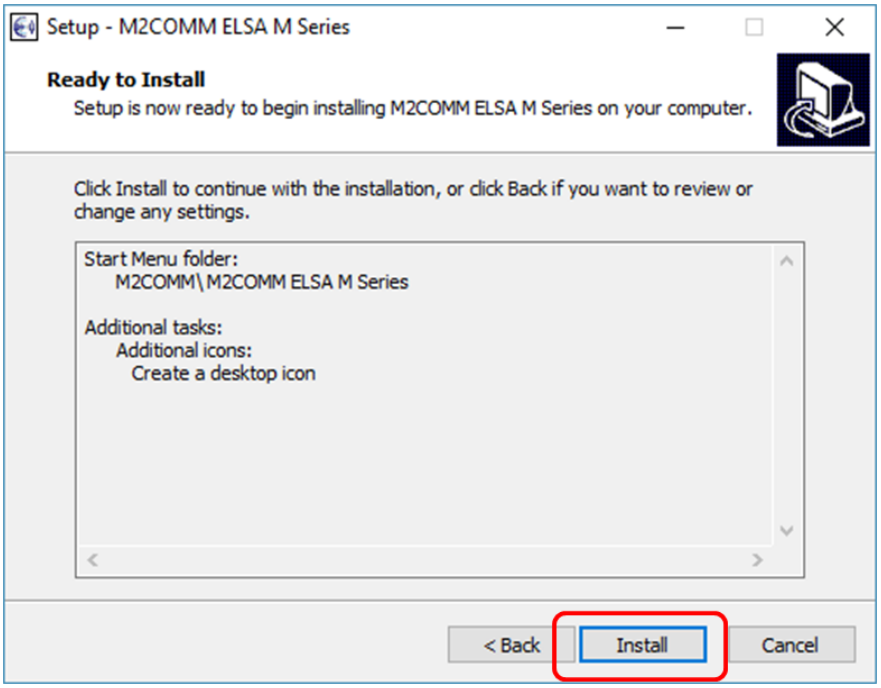
Click ***Next>*** to continue



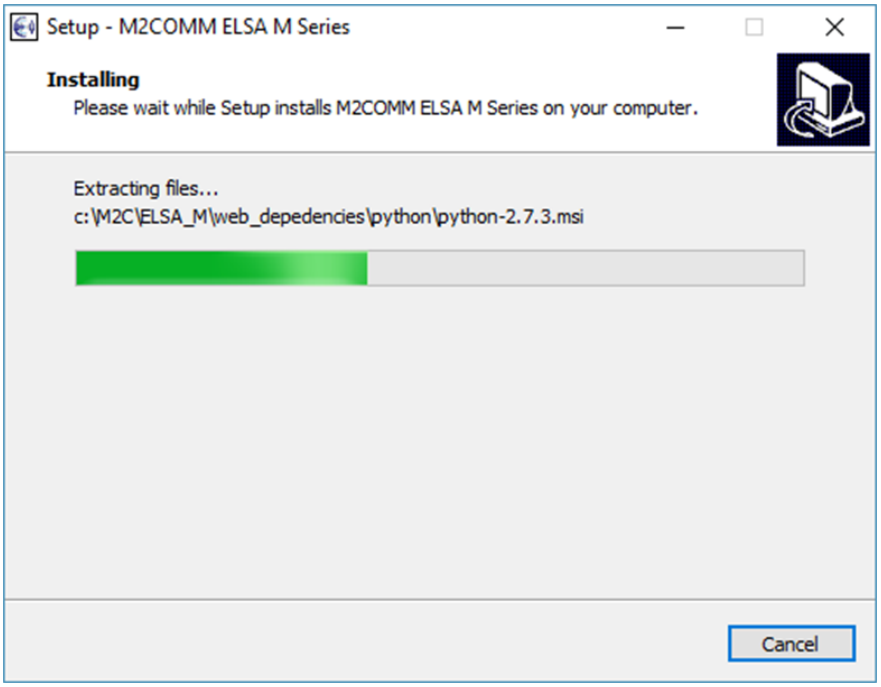
Click ***Next>*** to continue



Creation of a desktop icon is optional; Click ***Next>*** to continue



Click ***Install*** to continue



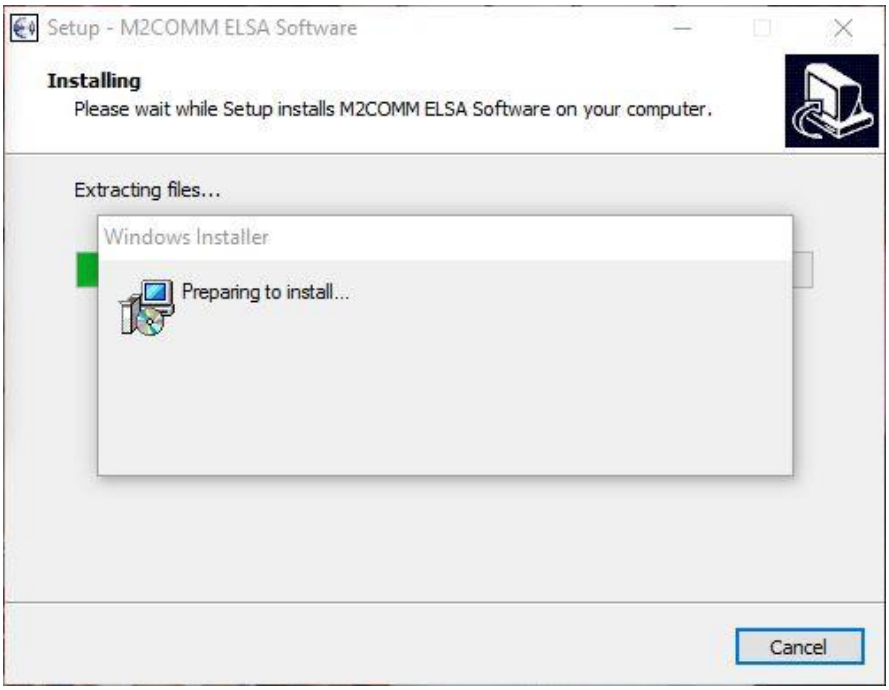
During this stage of the installation it is highly likely that your computer screen may change color (Blue) and that a new dialogue pop-up box will appear.

DON'T PANIC!

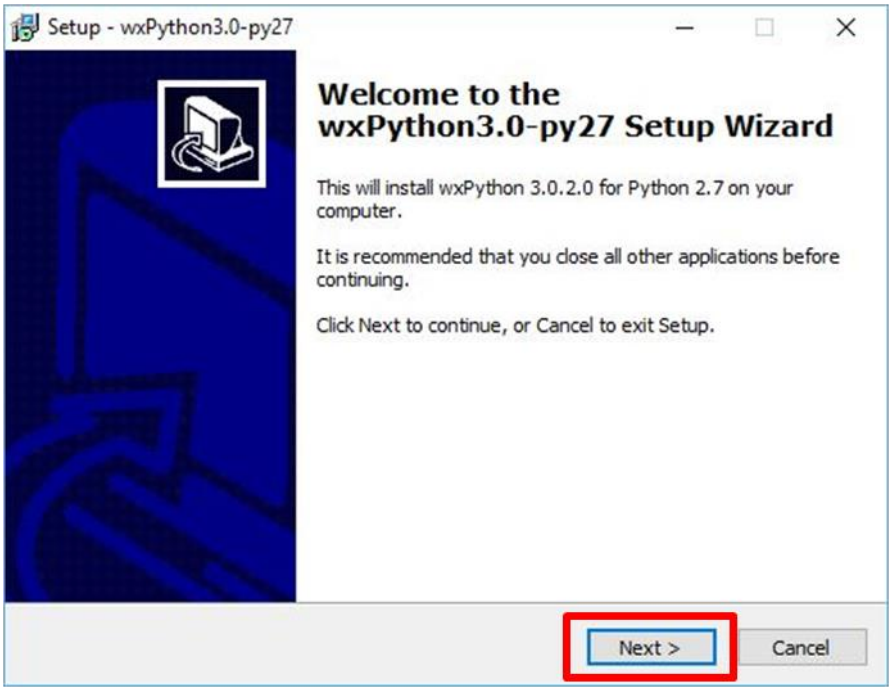
Whilst extracting the files required for the installation the ELSA-M program checks your computer to ensure that it has the core ***Python 2.7*** libraries and modules installed, if it does not find them it will automatically redirect you to the ***Python 2.7*** install page (That's the blue screen you maybe currently seeing).

This is a onetime check and install, you will not see this again unless you install the ELSA-M program on another computer.

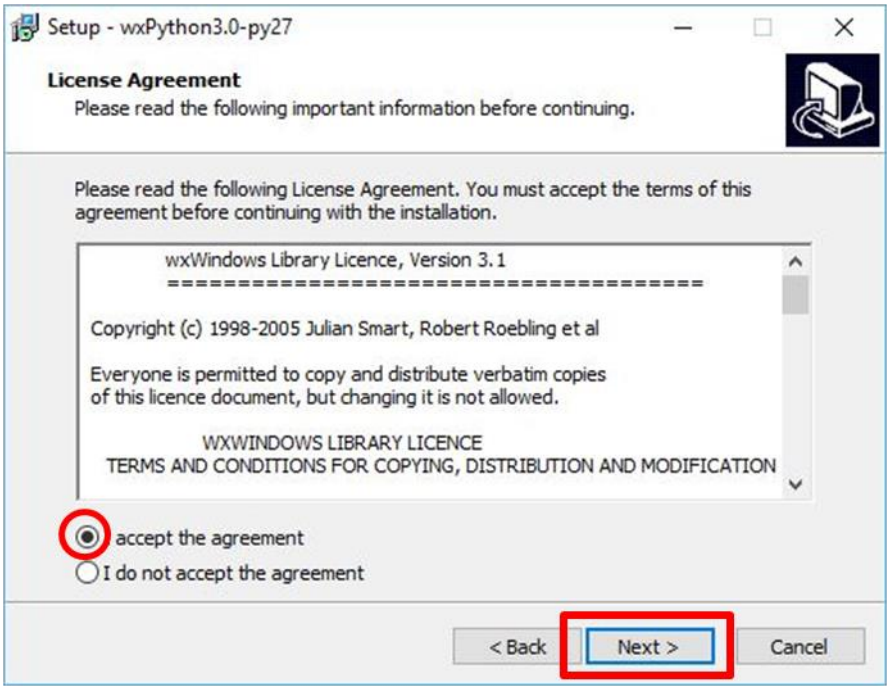
Please agree to the ***Python 2.7*** installation and allow it to run, upon completion the installation of your ELSA-M program will continue and you will see the next dialogue screen.



Nothing to do here please be patient.

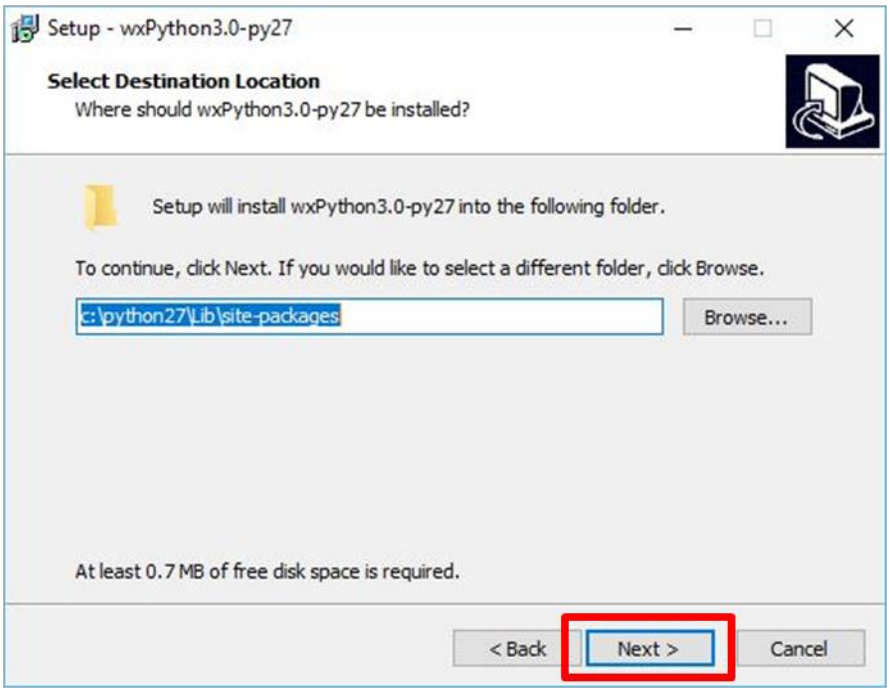


Click ***Next>*** to continue

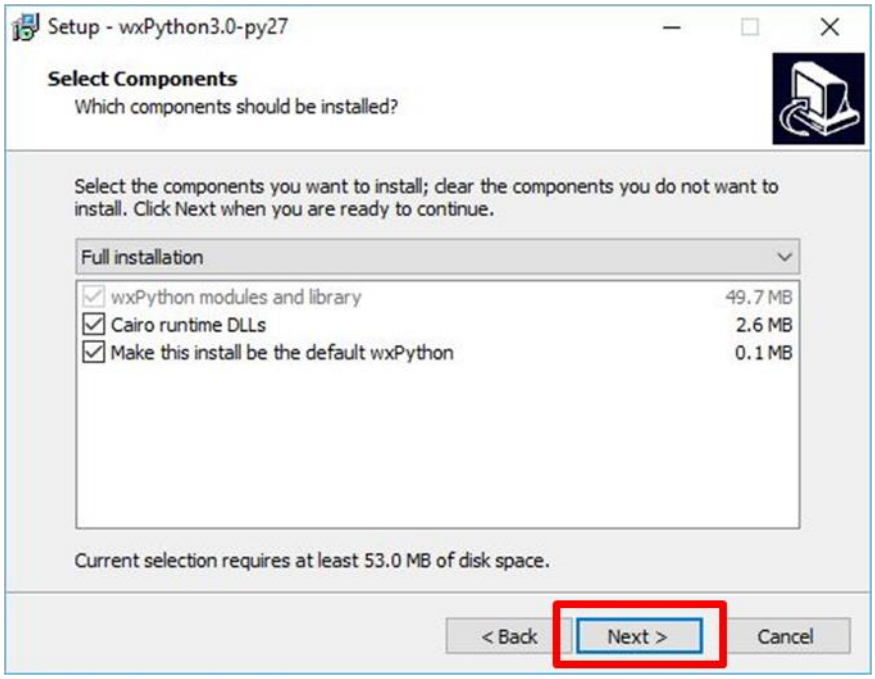


It is necessary for you to check ***I accept the agreement*** before the ***Next>*** button becomes active.

Click ***Next>*** to continue

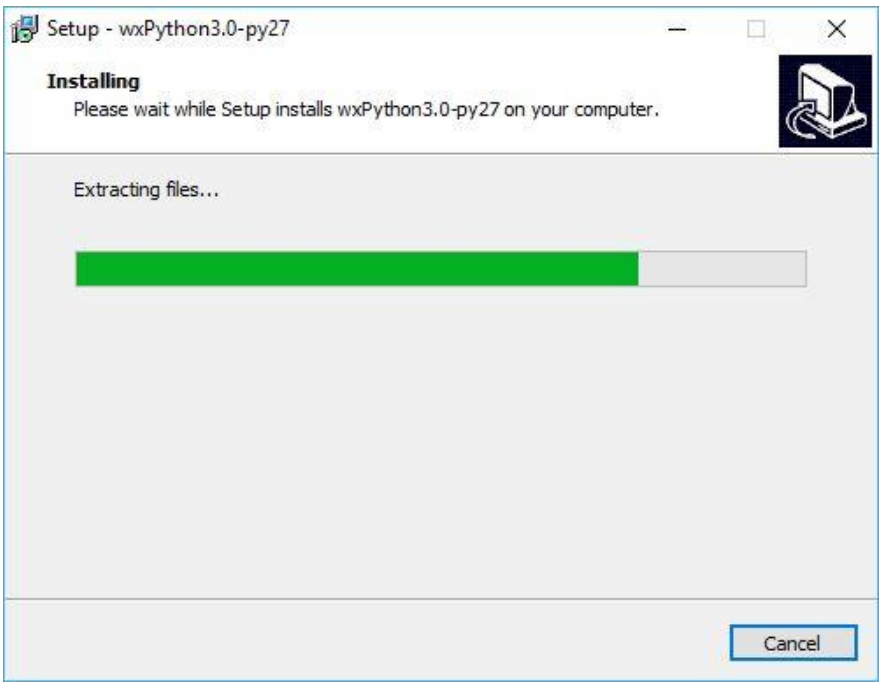


wxPython3.0-py27 is the additional software that works with the core ***Python2.7*** program. Please accept the default folder location for your Python installation, and then click ***Next>*** to continue

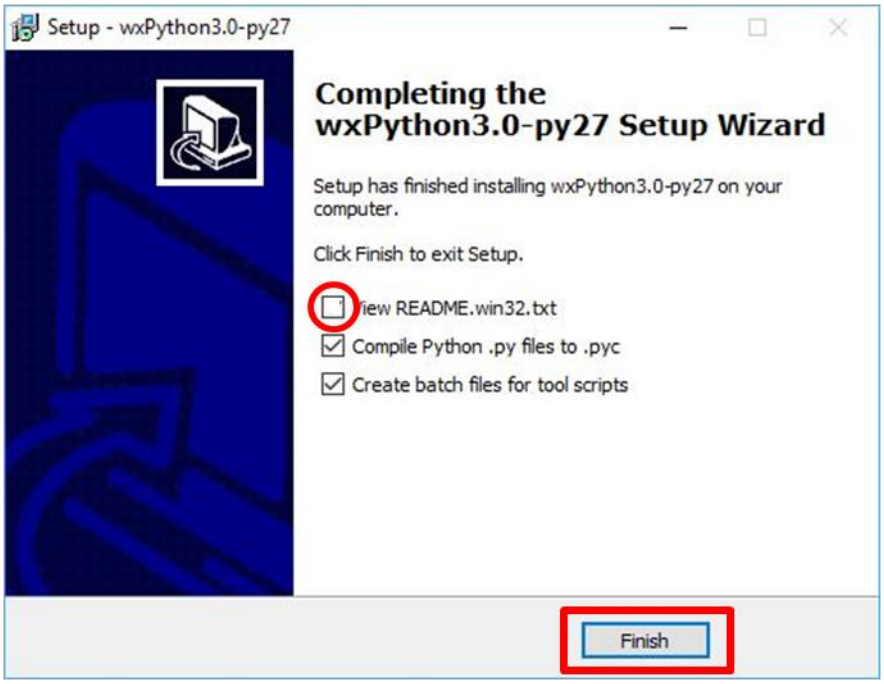


Please accept the dialogue box recommendations as shown above

Click ***Next>*** to continue



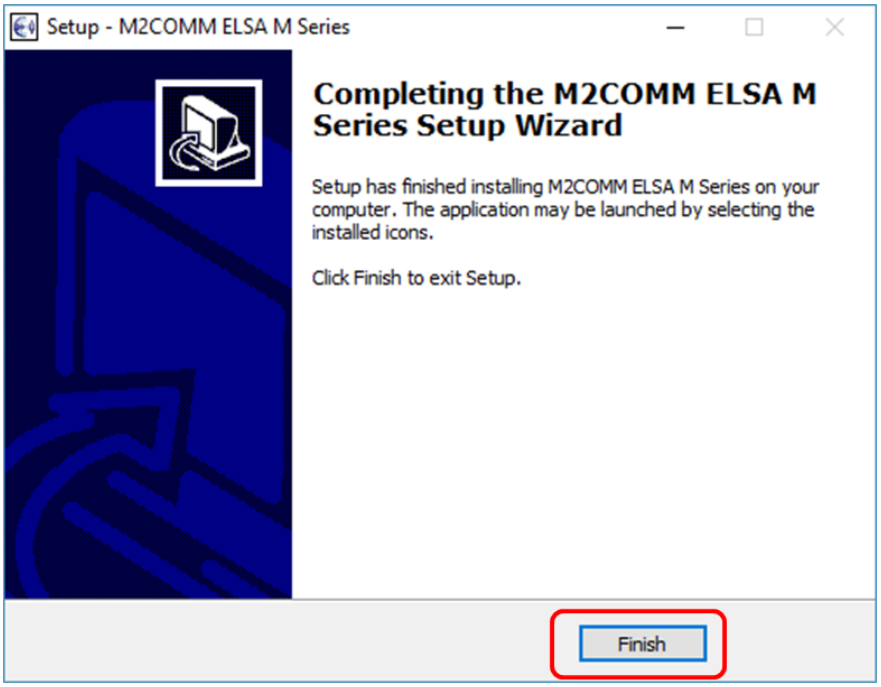
Almost done please be patient.



It is not necessary to view the ***README.win32.txt*** file, but we add the option here for IT and System Administrators who wish to review it. ***For most users this can be un-checked.***

Leave the other two boxes checked as these are required by the installation

Click ***Finish*** to exit Python set-up and continue to the final stage of ELSA-M installation



Click ***Finish*** to exit setup

The ELSA-M Demo Web Portal has now been installed on your computer and you should now be able to locate this icon (for launching the application) on your computer screen.

You are now ready to launch the ELSA-M Demo Web application.

4 *Setting Up the ELSA-M Web Portal*

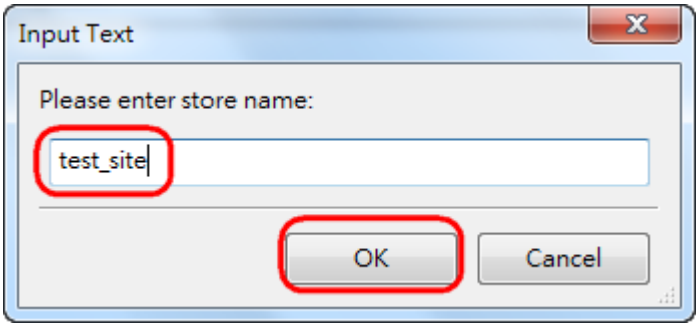
Ensure that your ELSA-M Access Point is connected to your computer that the Router(s) and tags are installed throughout your premises and are powered on.

NOTE: All tags must be “awake” prior to starting the ELSA-M web portal for the first time.

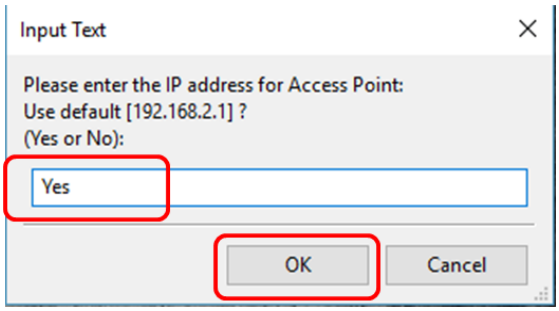
4.1 *ELSA-M Start-Up Tasks*

On your desktop double-click on the ELSA-M icon to launch the application service.

These next few tasks will only need to be performed the first time you access the ELSA-M Web Portal and are required to enable system device deployment.



Please type in the name of your business, store, premises, etc and click ***OK*** to continue.

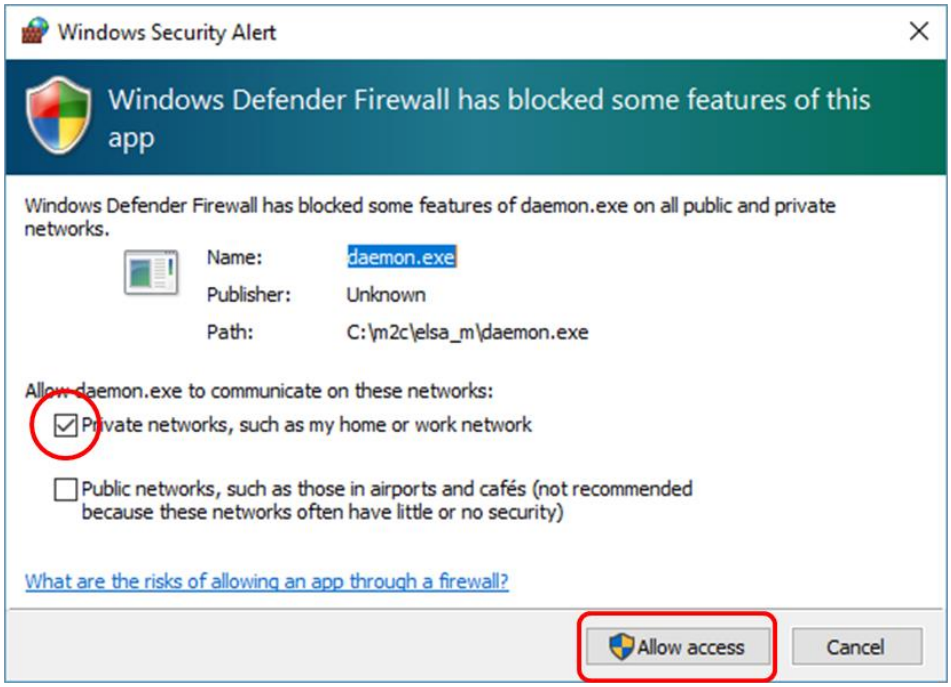


NOTE: Your computer has already been configured to work with the default setting for the Access Point (see ***Computer Configuration for System Installation*** *Section 2.7*).

Type ***Yes*** and click ***OK*** to continue

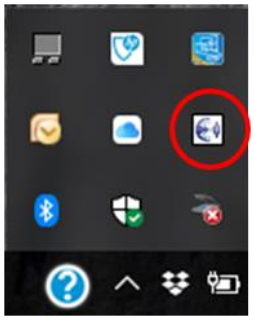
Note: If your computer IP has not been changed to match the default requirements or if you select ***No*** to the above then the installation will stop.

Before the Web Portal service begins you may receive a Windows Security Alert pop-up as shown below

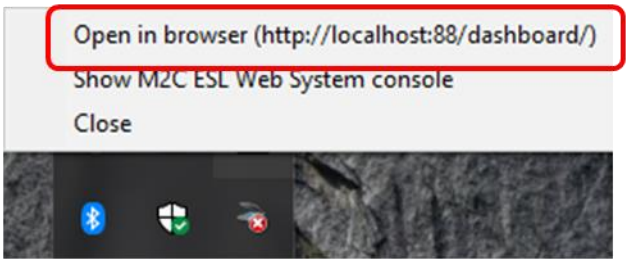


Please check the box for Private networks and then “Allow access”

On your computer desktop locate the hidden icons on your Windows task bar, (the up arrow in the bottom right corner of your screen)

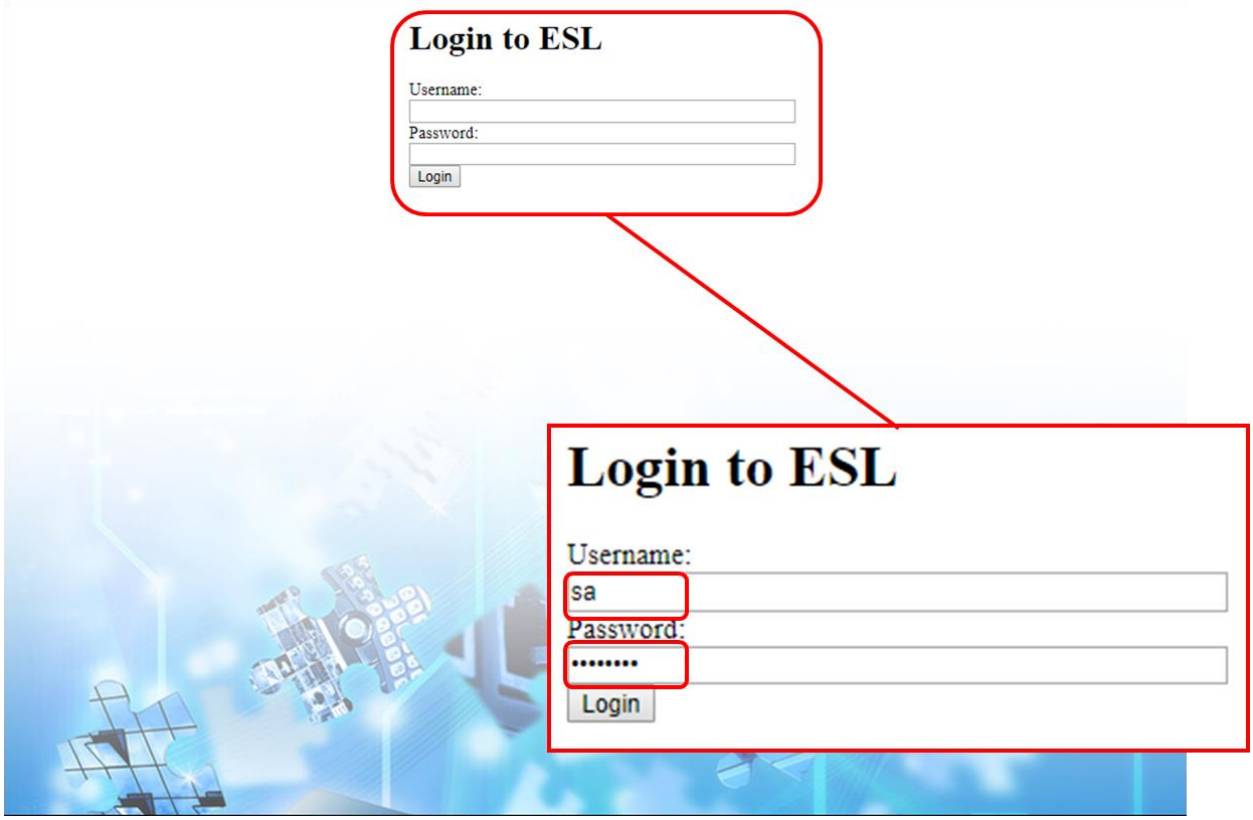


Locate the ***M2C ESL Web System*** icon



Using your mouse, right click the icon and select ***Open in browser (http://localhost:88/dashboard/),*** the ELSA-M web browser login page will now appear on your screen.

4.2 *ELSA-M Web Portal Login*



ELSA-M has three user profiles available for granting or restricting access to areas of the application.

Super Admin
Default Username: ***sa***
Default Password: ***passw0rd***

We recommend that the username and password be changed as soon as possible after logging into the system, for details on how to change username and password refer to ***Changing Your Password*** (APPENDIX-B) of this manual

Admin
Default Username: ***admin***
Default Password: ***admin***

We recommend that the username and password be changed as soon as possible after logging into the system, for details on how to change username and password refer to ***Changing Your Password*** (APPENDIX-B) of this manual

User
Users have limited access to the system, with some areas being completely off-limits.

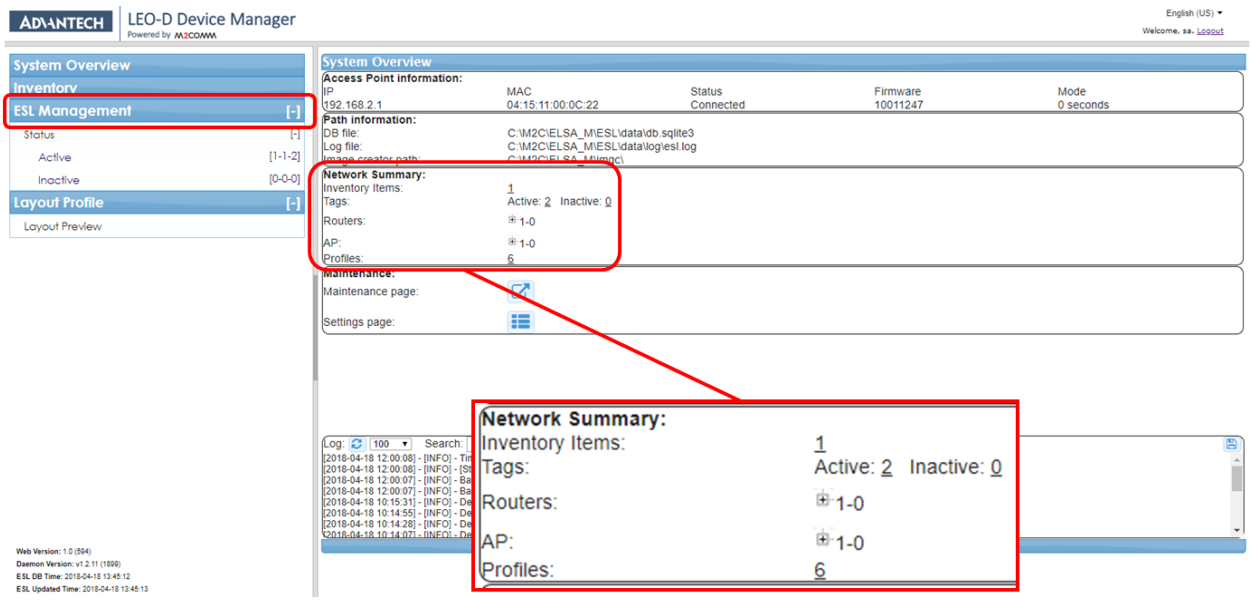
Usernames and passwords are set by ***Super Admin*** and cannot be changed by User

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

		Super Admin	Admin	User
Maintenance	System Commands	✓	✓	✗
	User account creation and/or password change	✓	✗	✗
	Database Backup	✓	✓	✗
	Tag Behavior	✓	✓	✗
	Email Settings	✓	✓	✗
Inventory	New Product	✓	✓	✓
	Delete	✓	✓	✓
	Import	✓	✓	✓
	Back-up to file	✓	✓	✓
ESL Management	Push	✓	✓	✓
	Query	✓	✓	✓
	Reboot	✓	✓	✗
	Battery Threshold	✓	✓	✗
	Image Push	✓	✓	✗
	Show Barcode	✓	✓	✓
	Delete	✓	✓	✗
	Disassociate	✓	✓	✓
	Import Association	✓	✓	✓
	Sync Database	✓	✓	✓
	Barcode Association	✓	✓	✓
Layout	Export Layout Profile	✓	✓	✗
	Import Layout Profile	✓	✓	✗
	Remove Profile	✓	✓	✗
	Generate Layout Preview	✓	✓	✗
	New Layout	✓	✓	✗
	Remove Selected Layout	✓	✓	✗
	Remove All Layouts	✓	✓	✗

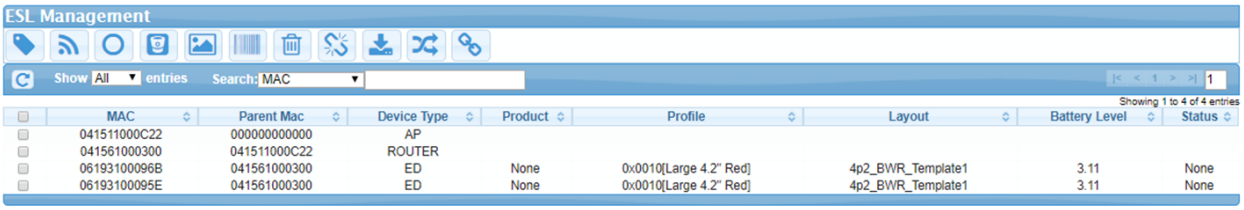
It’s recommended that the first time you login into the system that you use the pre-installed Super Admin profile.

The web portal will open in your browser; default page is System Overview as shown below;



The ELSA-M Access Point, Router(s) and Tags will auto-connect with the web portal and are shown under Network Summary. For detailed information of the hardware select the ESL Management tab.

To indicate that your tags have successfully connected to the ELSA-M web portal the display will change



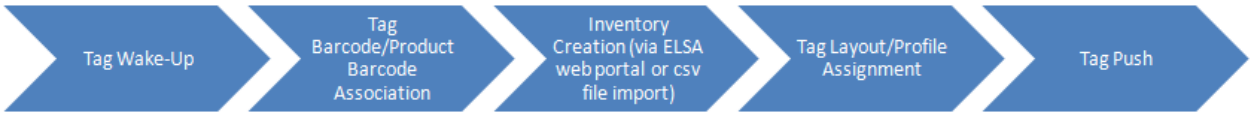
MAC	Parent Mac	Device Type	Product	Profile	Layout	Battery Level	Status
041511000C22	000000000000	AP					
041561000300	041511000C22	ROUTER					
06193100096B	041561000300	ED	None	0x0010[Large 4.2" Red]	4p2_BWR_Template1	3.11	None
06193100095E	041561000300	ED	None	0x0010[Large 4.2" Red]	4p2_BWR_Template1	3.11	None

For the purposes of this guide we have created an ELSA-M system that comprises;

1x AP (Access Point)
1x Router
2x ED (End Devices or Tags)

At this time no product has been associated with the tags, this will be covered in the next section.

5 *Manage ELSA-M Tag Product Display*



5.1 *Tag/Product Association*

Before we can load any information to your ESL tags each one needs to have its MAC address individually associated with the product barcode of the item you want to display on the tag.

At this stage it is assumed that your ESL tags have been deployed throughout your premises (placed with products).

5.1.1 Tag/Product Association with 3rd party cabled 2D Imager

The tag/product association process using a 3rd party cabled 2D imager is the same as for the SARA scanner above

5.1.2 Tag/Product Association with 3rd party wireless 2D Imager

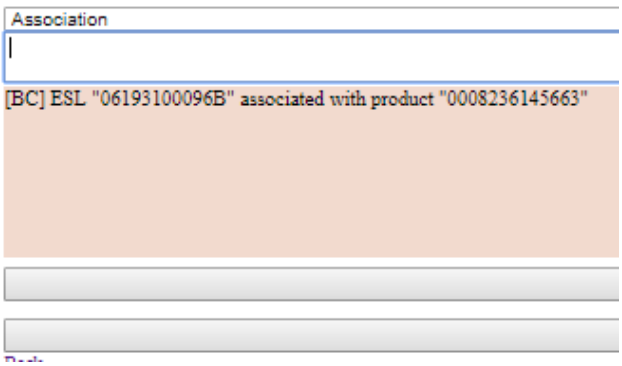
The web enabled 3rd party wireless 2D imager has to be associated with the ELSA-M Web Portal before you can begin.

Type the following URL into the screen of your 2D imager

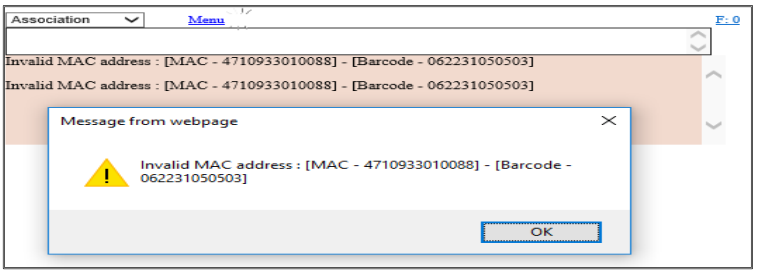
http://<My computer name>:88/iw/sc to pair your 2D imager with the ELSA-M Web Portal

On the imager select ***Association***

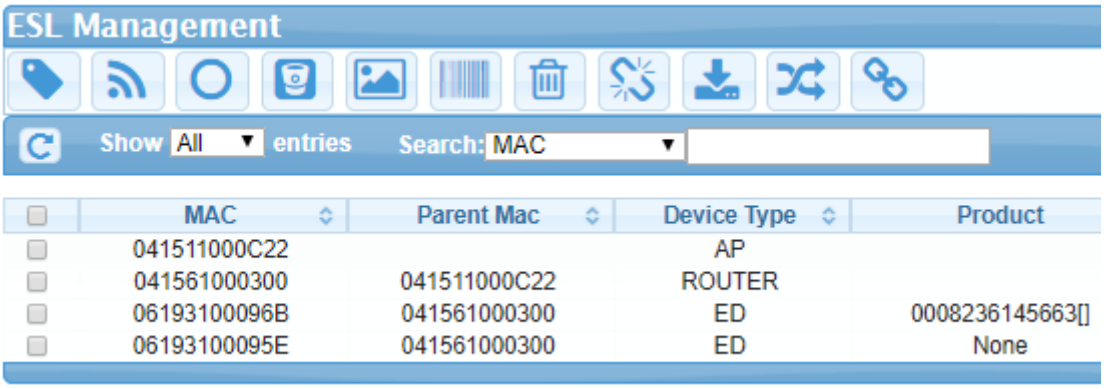
First scan the barcode on your ESL tag and then scan the barcode of the product you wish to associate with this tag. The 2D imager will automatically submit the data to the ELSA-M web portal and will notify you upon completion.



It is important that this sequence be followed, if not, an error message will appear on the screen of your 2D imager.



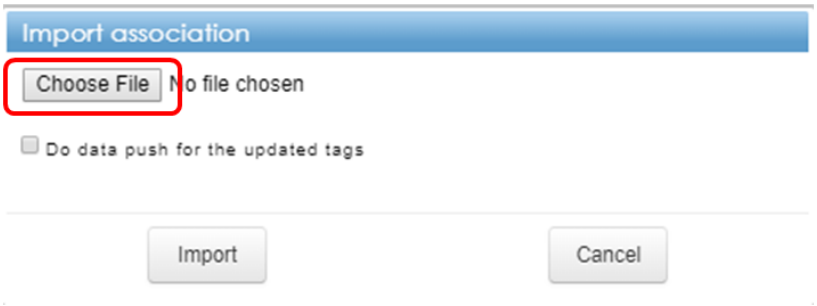
The successful associations will also be shown within the ESL Management page of the web portal (if the new product data is not shown then please refresh the browser window).



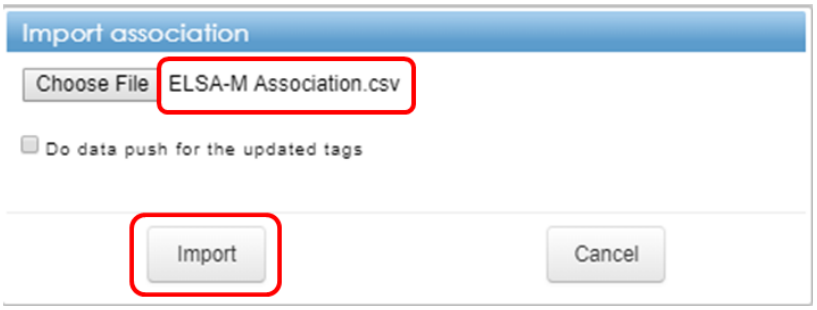
5.1.3 Tag/Product Association Import

Tag/Product association can also be carried out by importing a suitable file from your computer's hard drive or other source.

To access the Import Association function, select the ESL Management/ icon.



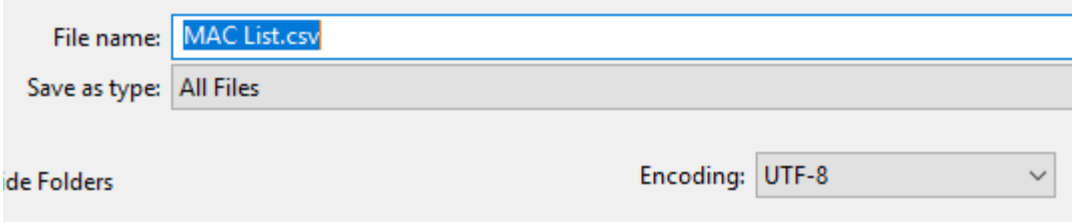
Select ***Choose File*** and use the pop-up File Manager to navigate to the location of your Tag/Product association file; select the file and click ***Open***



Choose ***Import*** to continue

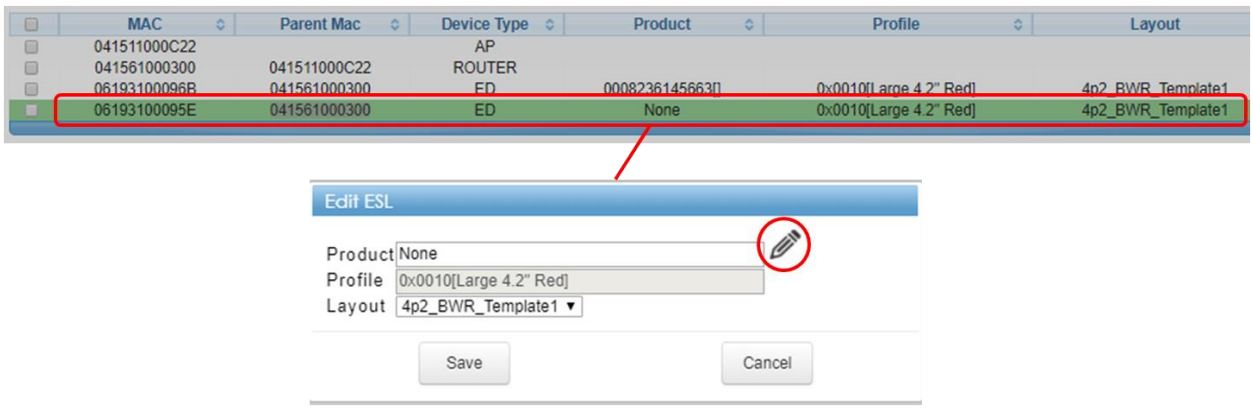
NOTE: The imported Tag/Product association file must be in a ***.csv*** file format and should contain the following information;

A ***.csv*** file can be created using a text editor application such as Windows **Notepad** and using the ***Save As*** option;

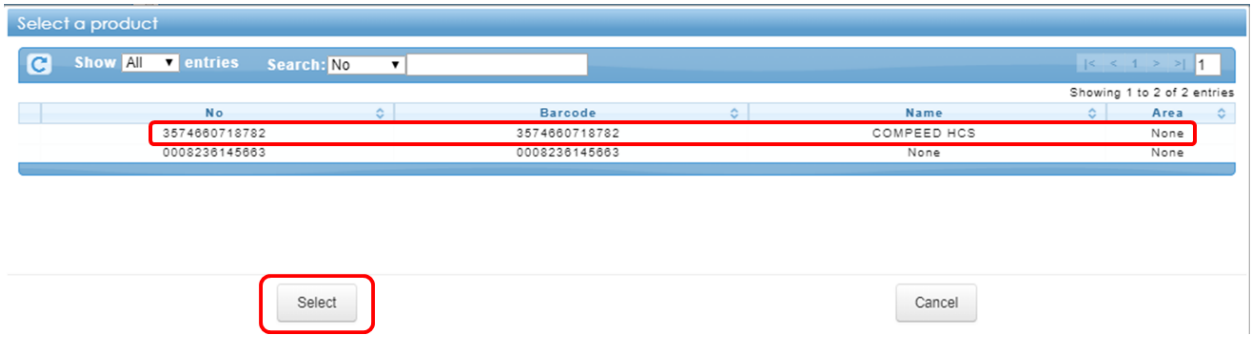


5.1.4 Tag/Product Association Manual Input

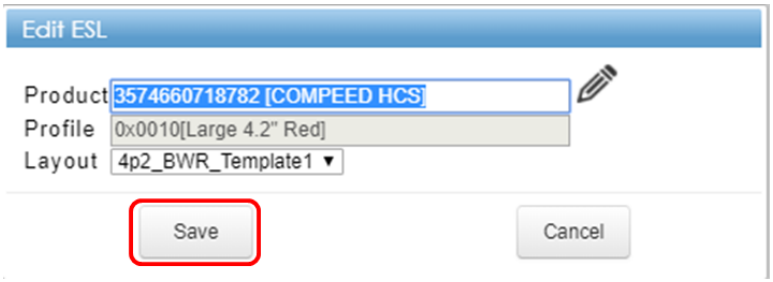
If you have already imported or created an Inventory for the ELSA-M system then manual association of a tag with a product can be accomplished from within the ESL Management page by double-clicking on an entry in the ESL list will open a window that allows the user to dynamically change the product displayed 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***



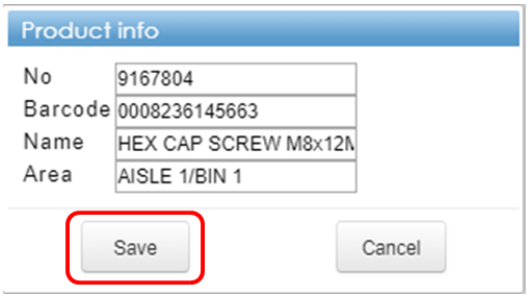
Select ***Save*** to return to the ESL Management page, selecting Save will automatically push the new information to your ESL tag.

6 *Creating an inventory list*

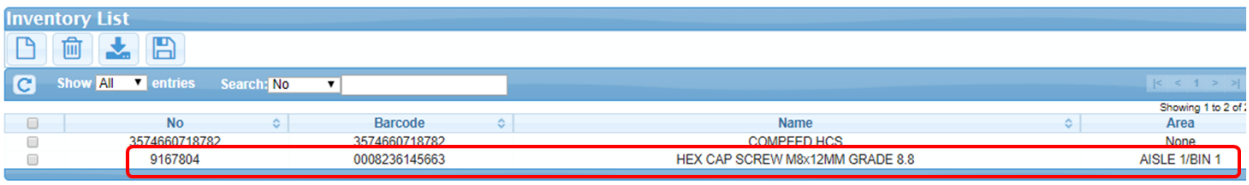
A simple inventory list can be created from within the ELSA-M web portal via the Inventory/New Product icon.

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

Example



ELSA-M web portal display



Alternatively a more complex list can be created by using a Windows based application and importing the list into ELSA-M, this is detailed below.

Disclaimer: Products used in this manual are examples ONLY and are not in any way representative of actual users' inventory.

If you do not already 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

	A	B	C	D	E	F
1	Default Setting	Product Part Number	Product Barcode	Index Number from the ELSA Layout Profile	Description of Product	Area/Location
2						
3	M	9167804	0008236145663	3	HEX CAP SCREW M8x12MM GRADE 8.8	AISLE 1/BIN 1
4	M	9167270	0008236145670	3	HEX CAP SCREW M8x16MM GRADE 8.8	AISLE 1/BIN 2
5	M	9167820	0008236145687	3	HEX CAP SCREW M8x20MM GRADE 8.8	AISLE 1/BIN 3
6	M	9167838	0008236145694	3	HEX CAP SCREW M8x25MM GRADE 8.8	AISLE 1/BIN 4
7	M	9167282	0008236145700	3	HEX CAP SCREW M8x30MM GRADE 8.8	AISLE 1/BIN 5
8						

Notes on column headings;

A) This is a default setting, M should be entered against all products
B) Product/Stock part number
C) Product barcode
D) The layout format in which you want your ESL tag to display product information
E) Description of product that you want to see displayed on your ESL tag
F) Warehouse or storage facility location

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

Select ***Save As***, ***Other Formats***, when the pop-up window appears give your file a name (for this exercise we used ELSA-M Inventory) and then select on the ***Save as type*** and then select ***CSV (Comma delimited)***, now click on ***Save***

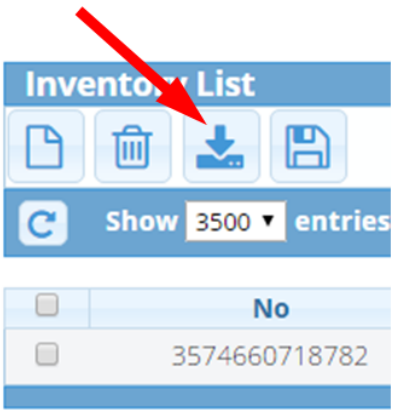
You should accept each of the pop-ups that appear and your new .csv file will be created

```
M,9167804,0008236145663,3,HEX CAP SCREW M8x12MM GRADE 8.8,AISLE 1/BIN 1
M,9167270,0008236145670,3,HEX CAP SCREW M8x16MM GRADE 8.8,AISLE 1/BIN 2
M,9167820,0008236145687,3,HEX CAP SCREW M8x20MM GRADE 8.8,AISLE 1/BIN 3
M,9167838,0008236145694,3,HEX CAP SCREW M8x25MM GRADE 8.8,AISLE 1/BIN 4
M,9167282,0008236145700,3,HEX CAP SCREW M8x30MM GRADE 8.8,AISLE 1/BIN 5
```

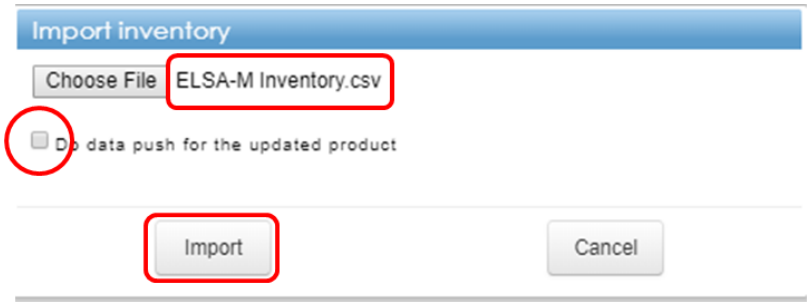
6.1 *Enabling ESL tag display*

Open the ELSA-M Web Portal and select ***Inventory*** from the left side menu

When the ***Inventory List*** page opens, select ***Import***

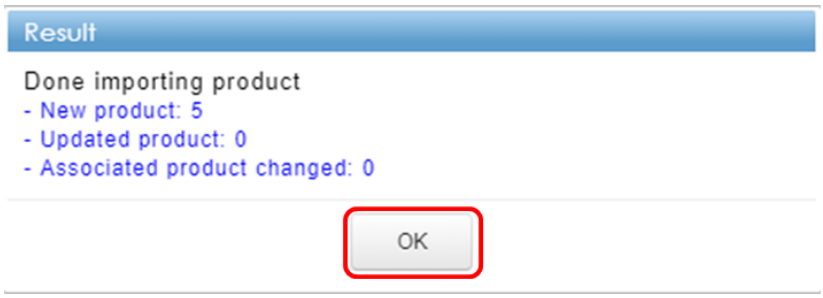


A new window will open asking you to choose the file you want to import, click ***Choose File*** and navigate to the ***.csv*** file created in ***Section 6*** above, select the file and click ***Open***

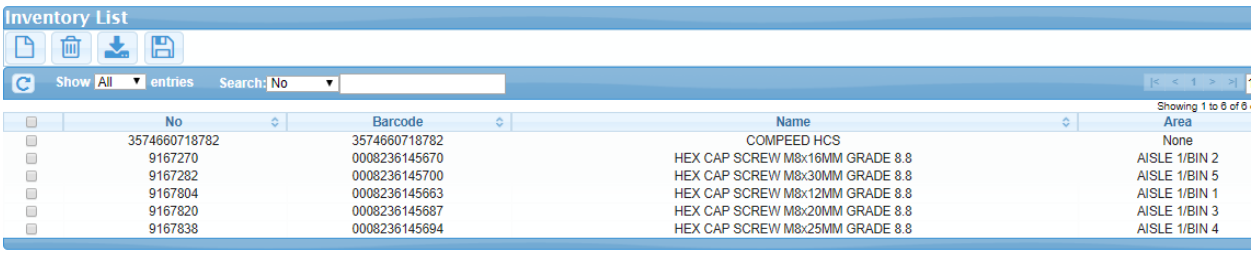


You have the option here of selecting whether or not the data should be pushed directly to your tags, check the box if you want to push, leave unchecked if you want to push data later.

Click ***Import***, the ELSA-M 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 ESL tags (if previously selected); this may take several minutes.



Your ESL tags should now be displaying your product information.

6.2 *ESL Tag Layout Profiles*

The ELSA-M application uses ***Layout Profiles*** to control the product information that appears on your ESL tag and the way it is displayed.

A standard ELSA-M installation comes with several default layouts suitable for each ESL tag size (2.9inch and 4.2inch), custom layouts can be created by the user.

7 *National regulatory warning*

NCC 標示在使用手冊:
低功率電波輻射性電機管理辦法
第十二條
經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。
第十四條
低功率射頻電機之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。
前項合法通信，指依電信法規定作業之無線電通信。
低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

Federal Communications Commission Statement :
This device complies with FCC Rules Part 15. Operation is subject to the following two conditions:
• This device may not cause harmful interference.
• This device must accept any interference received, including interference that may cause undesired operation.
This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to Part 15 of the Federal Communications Commission (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 causes 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 doing 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.

FCC Caution
Any changes or modifications not expressly approved by the party responsible for compliance could void the user‘s authority to operate the equipment.
The antenna(s) used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Radiation Exposure Statement:
This equipment must be installed and operated in accordance with provided instructions and the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter

APPENDIX A – ELSA-M Icons

Icon	Function	Reference
	System Overview	
	Maintenance contains the debugging and reporting functions required by the technical support team to assist in resolving customer issues.	Refer to Figure 1 below
	Not available in this release	
	System Overview - Maintenance	
	Show barcode on all tags	
	Refresh all tag displays	
	Shuts down all tags	
	Syncs all devices within the ELSA-M network	
	Compresses the SQLite3 database	
	Inventory	
	Pop-up window for the manual creation of a new product in ELSA-M that is not currently listed within your Inventory/Stock list (***.csv*** file). Can be used in conjunction with the ***Backup to file*** icon below to add the new product to your inventory	Refer to Section 6
	Option for deleting individual products from ELSA-M. Can be used in conjunction with the ***Backup to file*** icon below to remove the product from your inventory	
	Option to import a new or updated Inventory/Stock list (.csv file)	Refer to Section 6.1
	Option for exporting the contents of your ELSA-E Inventory list, file is created automatically and is saved to your computers downloads folder with default filename ***Inventory.csv***	
	ESL Management	
	Sends a refresh command to individual ESL tags that have been updated or edited from within the ESL Management page, select the tag(s) you want to update and then click the ***Push*** icon.	

	Sends a manual query ping to a selected hardware device to check its status, the selected item will temporarily appear 'Inactive' in the ESL Management page and in the Device Status (main menu side bar). If no issues are discovered then device will automatically revert to 'Active' status, please refresh your web page when the Device Status shows "Inactive [0-0-0]" ***Note: When using the web based application this check runs automatically in the background on a daily basis.***	
	Will cause all selected devices (except the Access Point) to restart, select the item(s) you want to update and then click the ***Reboot*** icon. If you change the battery or batteries in any of your tags then you need to reboot the tag to clear the low battery warning, tag will return to its original display state. Locate and click on the affected tag, then select the Reboot icon.	
	Used for monitoring the battery status of the ESL tags, a sliding control enables user to set alerts for any tags that fall below the lower band. Tags that do fall below the lower band will be highlighted on the ESL Management page	
	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 tag (1.6inch 200x200, 2.2inch 212x104, 2.9inch 296x128, 4.2inch 400x300). If 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 tag was registered **and** associated with a product; pushed image will overwrite the product information on the tag, to revert to original database product information use the ***Push*** function.	

	This function will cause the selected tag to display its unique barcode, when deploying or swapping out pre-registered tags this is useful for product association, select the tag(s) you want and then click the ***Show barcode*** icon.	
	Deletes selected hardware device, select the item(s) you want and then click the ***Delete*** icon. Device will be de-registered; tag(s) will change to barcode display.	
	Removes the association between selected tag and its product, select the tag(s) you want and then click the ***Disassociate*** icon. After disassociation the tag display will show the device barcode, the tag can then be removed from the product shelf and returned to storage for later use.	To re-associate the tag, please follow the procedure detailed in Section 5.1
	Allows 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.	Refer to Section 5.1.2
	Syncs the ELSA-M database	
	Only use with a web enabled 3rd party scanner or imager (QR codes are not supported).	Refer to Section 5.1.2
Layout Profile		
	Creates a back-up folder containing the required files to recreate your tag display layout design, folder is saved in your computers 'downloads' page	
	Import custom designed tag display layout profiles; three files in .JSON format are required	
	Deletes a layout profile (ESL tag type) from application	
Layout Profile – Layout Preview		
	Creates a visual representation in the ELSA-M Web Portal page of all your tag display layouts	
	Opens dialogue window for creating new tag display layouts	
	Deletes the selected layout	
	Deletes all current tag display layouts from the ELSA-M Web Portal	

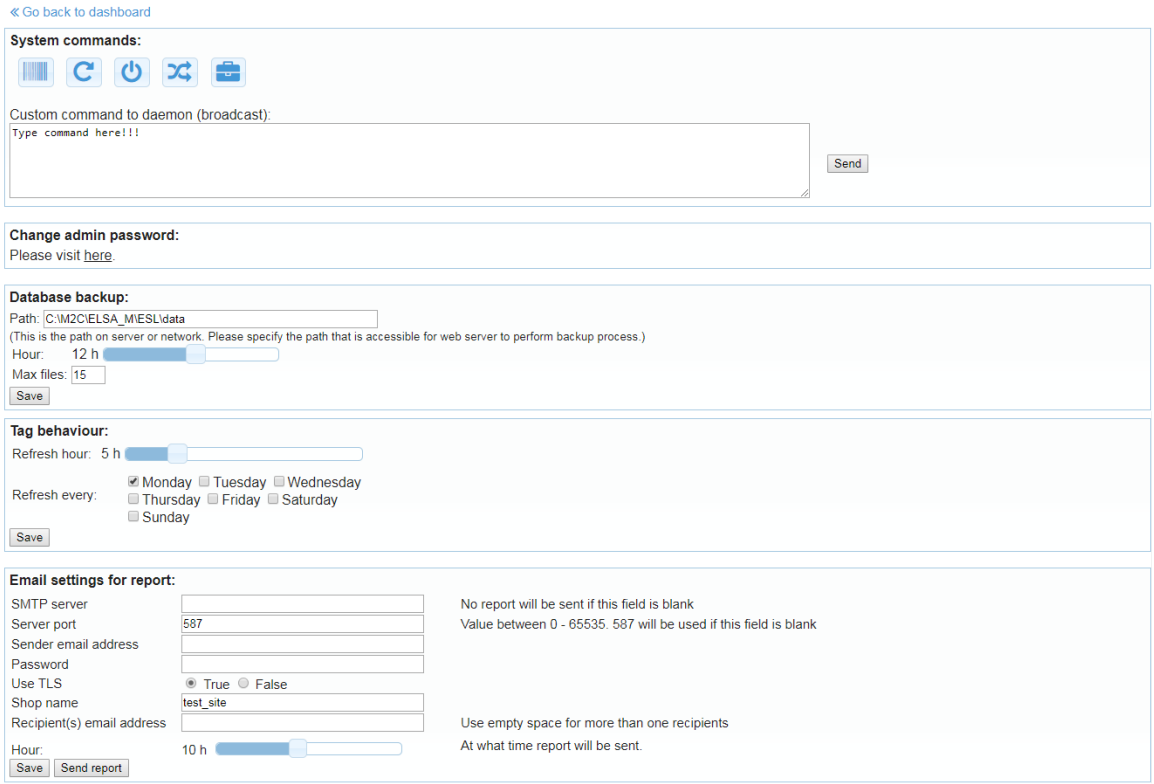


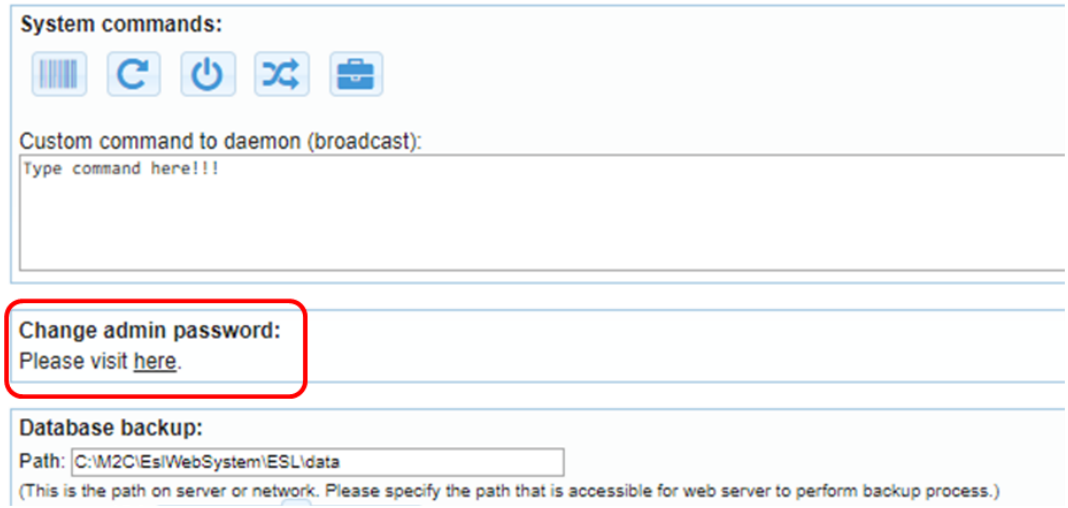
Figure 1: System Maintenance

APPENDIX B - Changing User Password and Account Creation

Super Admin Only

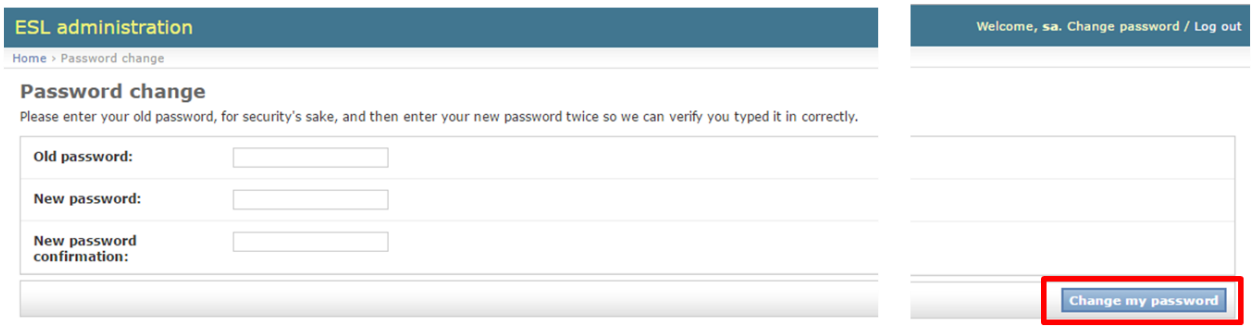
CHANGING A USER PASSWORD

From the ELSA-M Web Portal System Overview select ***Maintenance***

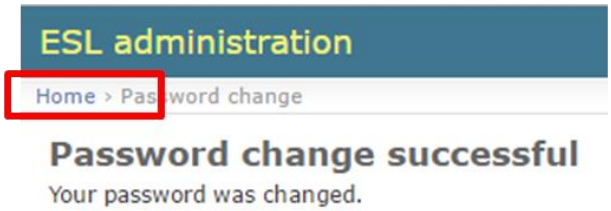


In the top right of your screen select

Follow the on-screen instructions

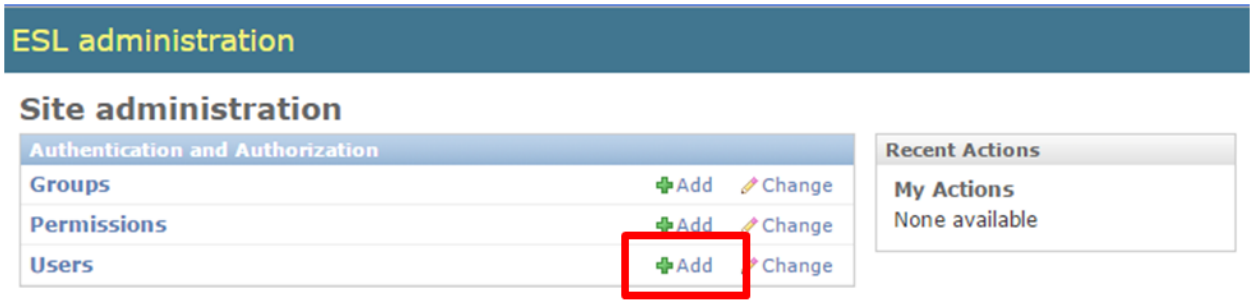


When finished select ***Change my password***



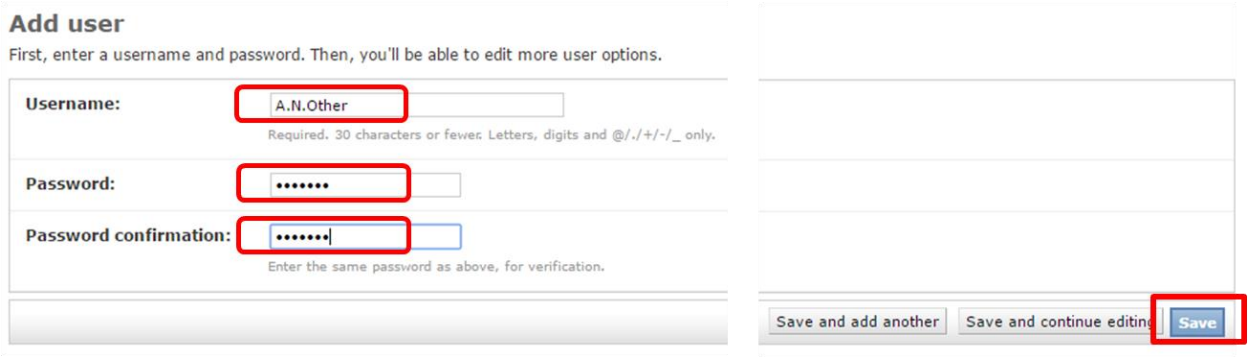
Select ***Home*** to return to ESL administration, Site administration page

ACCOUNT CREATION

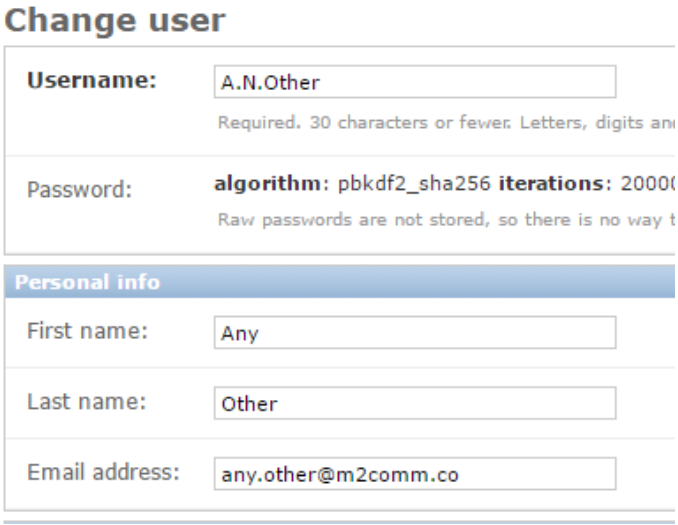


Against ***Users*** select ***+Add***

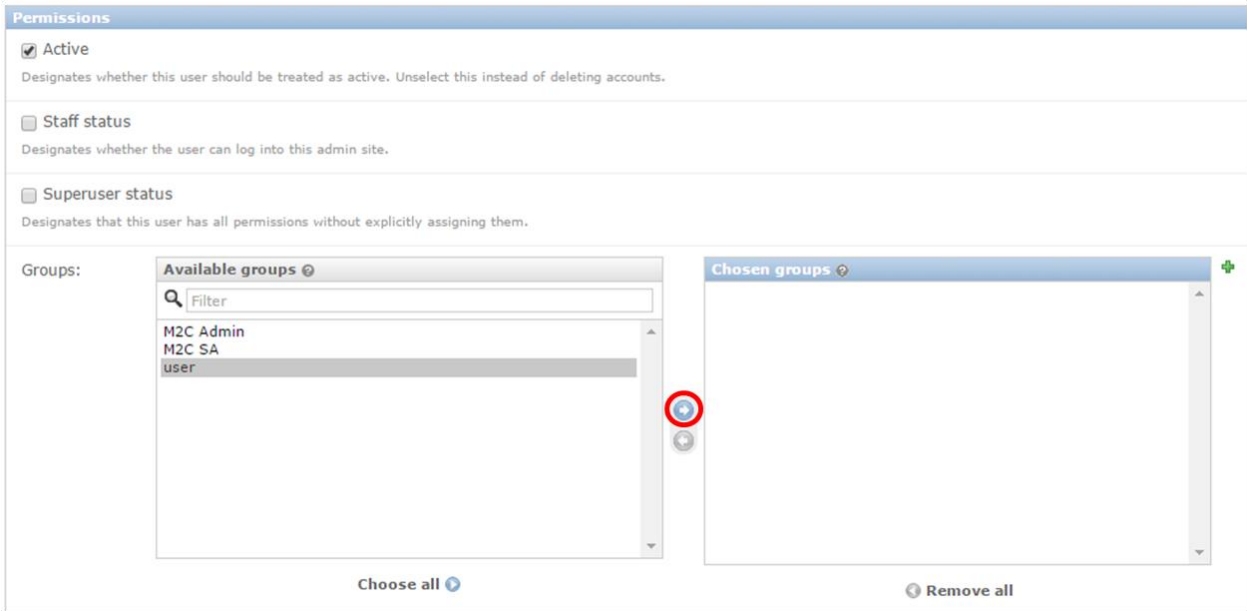
Follow the on-screen instructions to add new user(s) and when finished select ***Save***



You now have the option of adding some personal details about the new user(s) you have created; this is not an essential task but is a useful method for associating a username to a person.

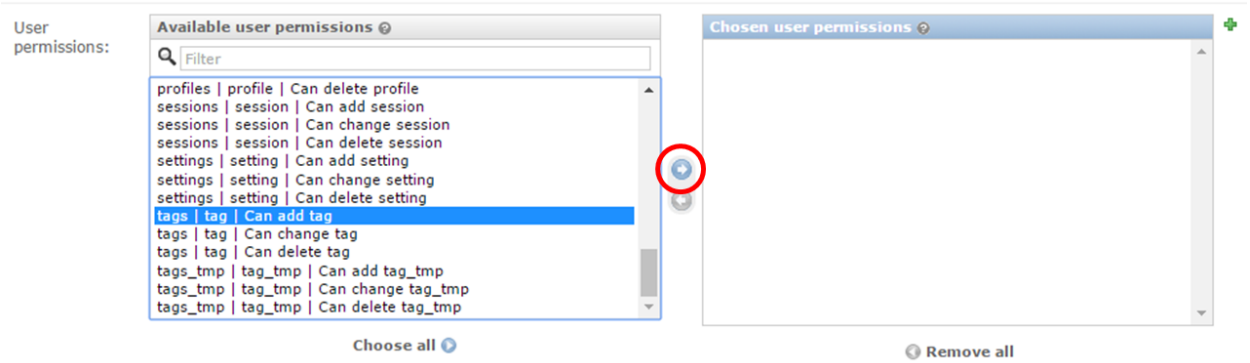


You will also be asked to define the status of the new user(s) and the privileges/permissions they have for the system

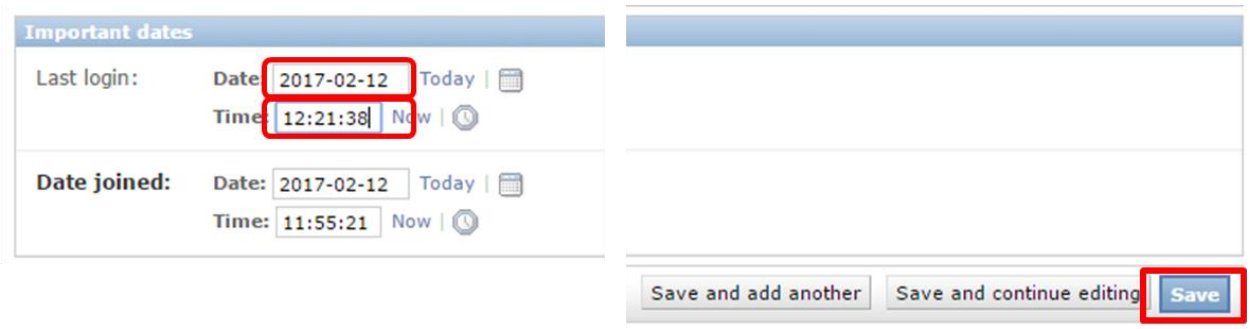


Select the profile you wish to give the new user(s) and click on the right arrow to apply; this will assign all the default privileges for the chosen profile to the new user(s), for details on the default privileges please refer to Section 4.2

If you want to assign additional privileges to the new user(s) you can select these from the supplied list, after each selection click on the right arrow to apply them.

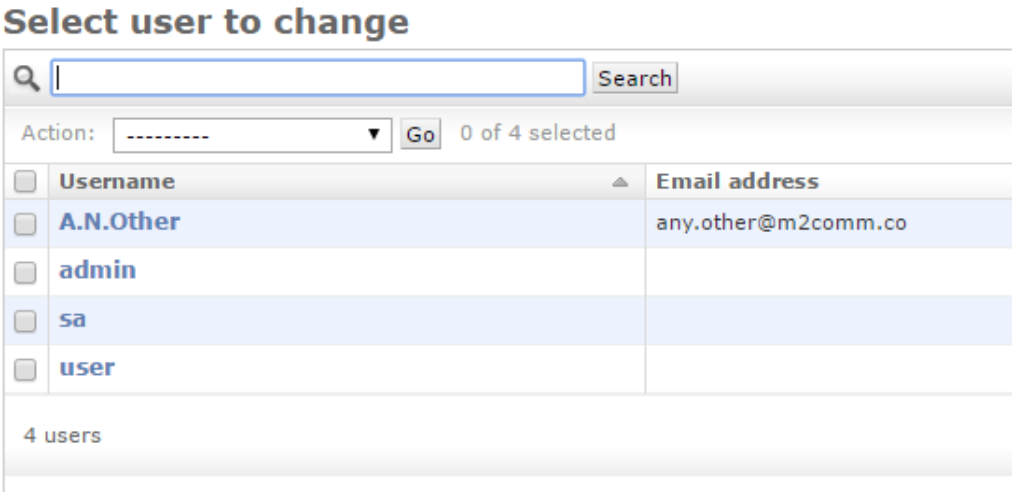


To complete the process it is necessary to add the details of when the new user(s) account was created



When finished click ***Save***

If you want or need to change any of the user(s) accounts you can do that here



If not then select ***View site*** from the top right hand side of your screen to return to the ELSA-E dashboard.