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spYMonitorLocal

Signatrol Ltd, Tewkesbury, UK

Pre-Installation Considerations

Pc Requirements

- Operating System: Windows 7, Windows 8, Windows 8.1 and Windows 10
- RAM: 4GB Minimum DDR2 (8GB Recommended DDR3)
- HDD: 10GB Free (SSD drive recommended).
- Machine Hardware: Recommend fanless 24/7 operation. (example: Shuttle XS36V5)
- Processor: 1.6GHz Min Dual Core Minimum (>2.4GHz i5 Recommended)

Machines running the close to minimum specification may result to slow response of spYmonitor pages when the log data has more than a few hundred thousand records.

Operating System Considerations:

Ideally the PC should be only used for collecting data and hosting the spYmonitor pages, these pages can be access over the local area network using the machine name or ip address.

This pc can be setup and left to operate without a monitor, keyboard or mouse.

- spYmonitor Local should be installed on a user account which it will always be running under.
- The machine should be left to run 24/7, so data can be transferred real-time and alarm created real-time. If the machine is closed down, the base-station will store readings until the collector is ready to transfer the data.
- Ensure internet connectivity is present at all time for the email alarms and email reports can be sent. The system recorded all alarms, but emails which fail when being sent are not re-sent later.
- Ensure the machine **does not** enter any low power state or hibernate which would cause the collector to stop transfering data.
- Ensure tha machine does not reboot due to windows updates which would require a user login. Recommend manual updates set.

Windows Host File

The windows host file is located at the following path: "C:\Windows\System32\drivers\etc"

Generally we recommend disabling IPV6 networking on your network adaper, and changing your windows host file so 127:0:0:1 refers to localhost. Remark out the IPV6 address of ::1 using a preceding #. See below.

```
hosts - Notepad
                                                                                                     - D X
File Edit Format View Help
# Copyright (c) 1993-2009 Microsoft Corp.
  This is a sample HOSTS file used by Microsoft TCP/IP for Windows.
 This file contains the mappings of IP addresses to host names. Each entry should be kept on an individual line. The IP address should be placed in the first column followed by the corresponding host name. The IP address and the host name should be separated by at least one
  space.
  Additionally, comments (such as these) may be inserted on individual lines or following the machine name denoted by a '#' symbol.
#
  For example:
          102.54.94.97
                                     rhino.acme.com
                                                                           # source server
            38.25.63.10
                                                                           # x client host
                                     x.acme.com
  localhost name resolution is handled within DNS itself.
            127.0.0.1
                                     localhost
                                     localhost
            ::1
```

Ports:

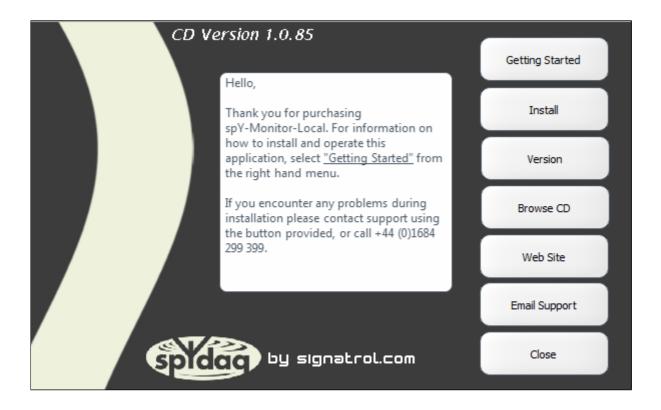
spYmonitor uses the following ports.

Apache: Port 80 mySQL: Port 3306

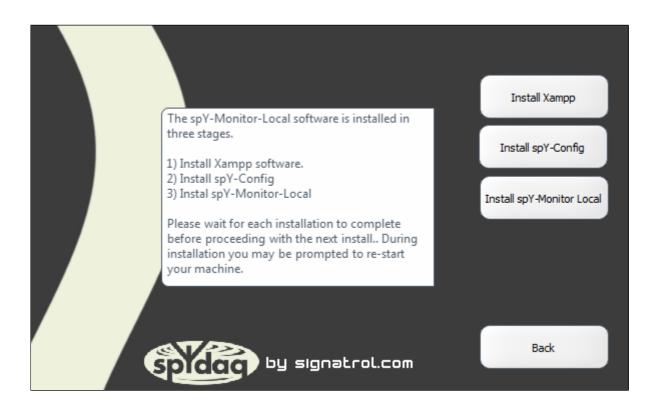
SMTP: Port 25 (default SMTP server).

Installation

• Insert USB Pen Drive and run file "AutoRun.exe"



· Select "Install"



- spY-Monitor-Local is installed in three parts.
 - 1. Install Xampp software. (Apache Webserver with PHP and mySQL)
 - 2. install spY-Config (for transmitter and base-station configuration)
 - 3. Install spY-Monitor-Local applications. (for data collection and database management)

XAMPP

XAMPP is supplied by Signatrol based on the ApacheFriends XAMPP Version 1.8.1 with minor modifications, under a GPL licence (General Public Licence).

Do not download XAMPP from ApacheFriends, these versions may not be compatible with spYmonitor-Local.

The components installed with XAMPP 1.0.7 are:

- + Apache 2.4.3
- + MySQL 5.5.27 (Community Server)
- + PHP 5.3.29 (VC9 X86 32bit thread safe)
- + XAMPP Control Panel Version 3.1.0

Thanks to https://www.apachefriends.org



Setup Procedure

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Connect and install Base-Station

The first time the Base-Station is connected to the Web Server, windows will request a device driver.

Installing Driver

This driver is pre-installed during the spY-Config installation, the driver is signed by Signatrol Ltd and should automatically install within a few minutes.

spYmonitor-Collector

The spYmonitor-Collector is a program which resides within the windows tooltray . The application automatically runs when windows is restarted.

Note. The user must be logged into windows for this to occur.

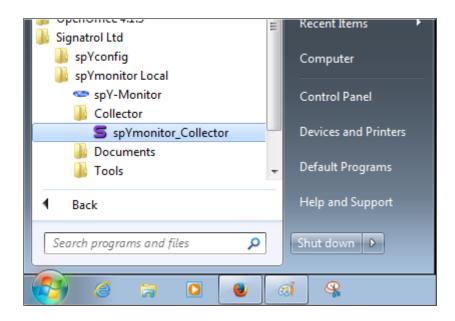


The purpose of the collector is to collect readings from the base-station and store them in the appropriate mysql database on the pc.

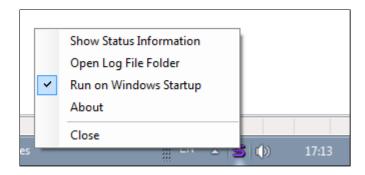
Generally the collector must be left running at all time, we recommend the pc is always running (24/7). All sleep and low power modes disabled.

Communication with the base-station is made via a USB connection.

When the administor is setting the machine up for the first time the collector must be first stopped before configuring the base-station and transmitter using spY-Config. Once configuration is complete the collector should restarted (Re-booting the machine with restart the collector) or by clicking the icon in the start menu, see image below.



Right clicking the collector will activate the popup menu, from here you can close the collector and select other options.



- Show Status Information
 - Display information on the currently connected base-station.
- Open Log File Folder
 - Factory debug file, not required by user, but maybe requested by the factory if there is an issue with the system.
- Run on Windows Startup
 - Indicates if the application autoruns on Windows startup (post user Login).
- About
 - Shows the version of the collector.
- Close
 - Close down the application.

Configure Base-Station and Transmitters

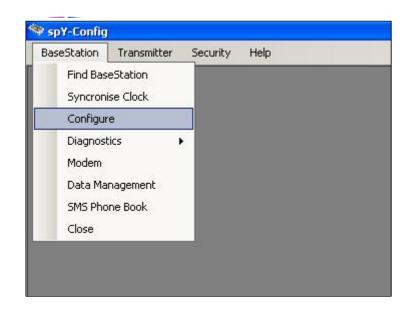
- Ensure the collector is closed (icon on not present in the windows tooltray)
- Open the spY-config software using the desktop link (see image below).



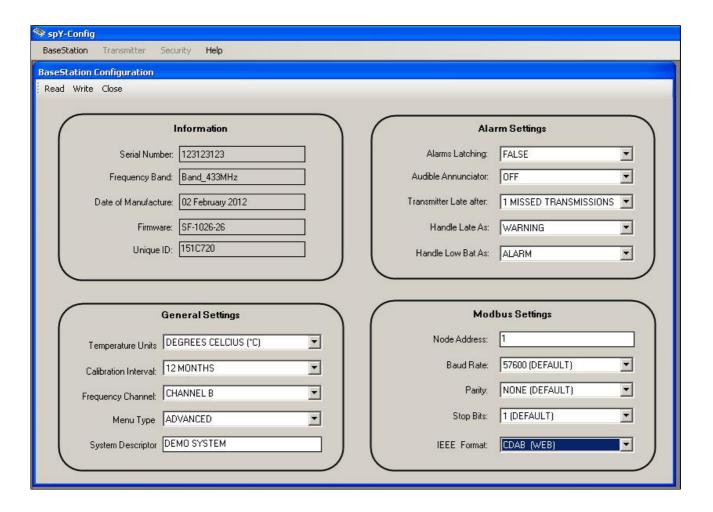
- When the user runs spY-config for the first time, they will be prompted to create and confirm a password. The password is used by the security built in to spY-config, by default the security is disabled.
- From spYconfig V1.0.22 and on, both the base-station and the transmitter (mk2 only) are configured by usb connection.
- Connect the Base-station to the USB and select the Base-station image.



- The spY-config software will automatically connect to the BaseStation if connected. If it was not connected, a
 tree view will appear. Insert the USB connection and the serial number should appear on the tree. Double click
 to select.
- At this point the transmitters should be configured, if they have not already been so. Refer to the spYdaq Hardware Manual for information on configuring the transmitters.
- Select BaseStation>Configuration from the drop down menu, as shown below.



• The screen similar to the image below with appear. Make a note of the Unique ID (in this example it is "151C720"). This number will be required later when creating the project to collect the data.

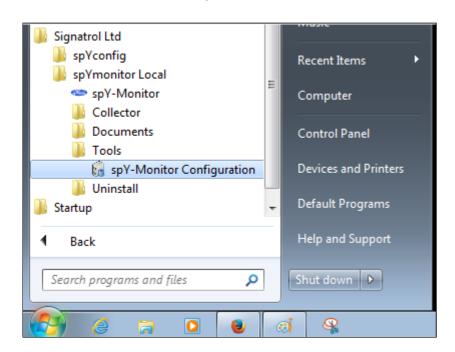


· You can now close spY-config.



Create Project

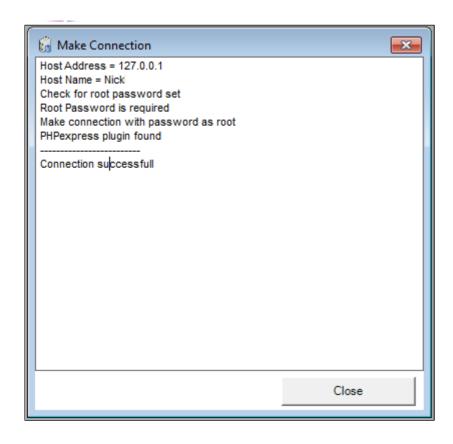
Open the spY-Monitor Configuration Tool via the Start Menu



The application will request the password. See Security for default password.

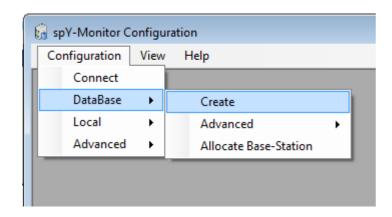


Having passed security, a connection to the local web server will be tested. Click "Close" when completed.



• If you are configuring the system for the first time, you will need to create a new Project (database). Select "Configuration>DataBase>Create" as shown below.

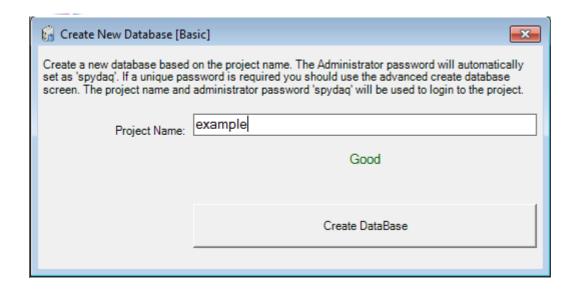
Note: Create will generate a project with a admin password of "spYdaq". If a custom password is required for the admin password is "Configuration>DataBase>Advanced>Create"



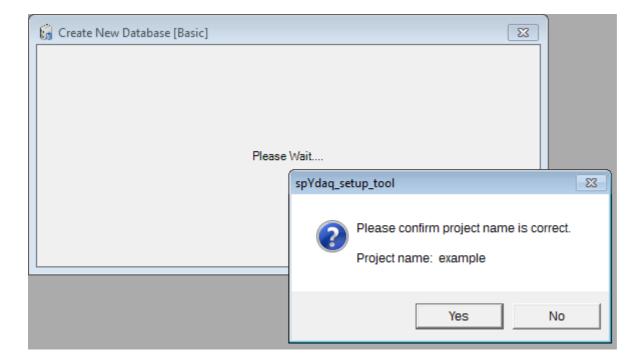
In the screen below, enter a Project Name, the name must be 5 or more characters but not more than 13 characters. Do not use special characters.

This variable will be used as the "Project Name" during the login stage.

The Project Name variable is used for both Admin and User logins, and cannot be changed once created. Once you have entered the company name click "Create DataBase".



The application will ask you to confirm the Project Name entered is correct. Click "Yes" to continue.



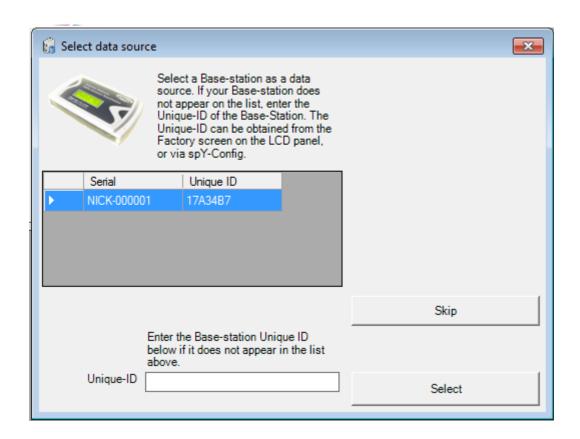
The application will now generate the structure of the database.

Once the data-base has been built, the system will ask you to allocate a base-station "Unique ID" as the data shource for the project.

If a Base-station has been connected to the same computer before, the base-station details maybe present on the list, and you only need to select the device by clicking the "Unique ID" Column.

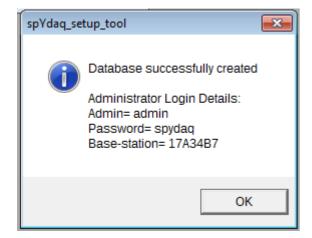
If you are unsure of the Unique ID, the serial number reference can be checked on the label on the base of the base-station enclosure.

If you have no base-station at this time, you and skip and add a data source later using , "Configuration>DataBase>Allocate Base-Station"



When everything is complete the windows will indicate the admin login details.

These details are used to login to the admin pages in your web browser (connect using localhost or 127.0.0.1).

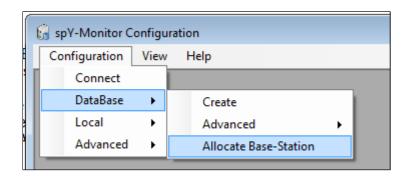


Allocate Hardware

If you did not Allocate a Base-Station when creating your data-base, you can manually add Base-Stations as shown below.

You can also disable base-stations as a active source when changing base-station.

Select "Configuration>DataBase>Allocate Base-Station" from the menu, as shown below.



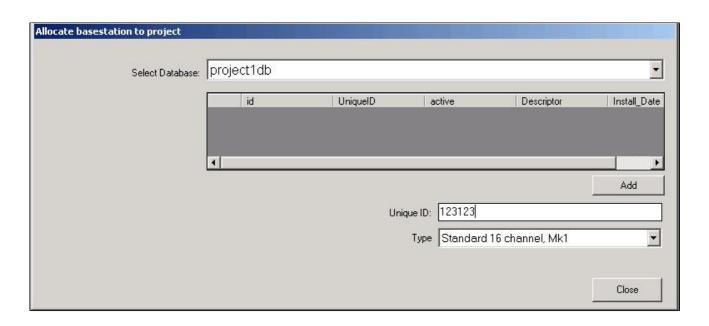
Select the name of the project from the drop down list at the top of the screen. The project name will have "db" added to the end, to indicate we are working directly with the database.

Once you have selected the correct database, enter the Unique ID (this was obtained earlier in the section "Configure BaseStation and Transmitters".

Once for have entered the Unique ID, click "Add", the data source is now setup.

Note:

It is possible to have more than 1 base-station allocation to a database, as long as no transmitter ID is used more than once. Otherwise data corruption may occur.

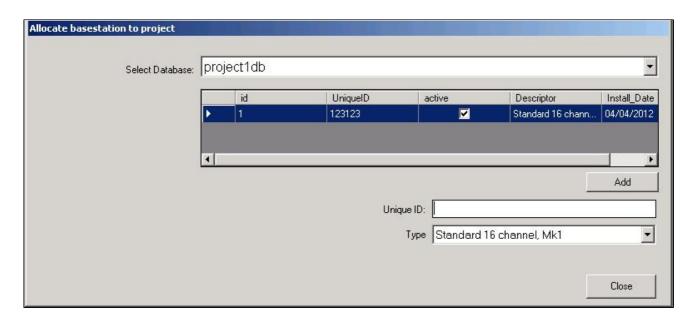


Once added, the database should appear in the window as shown below.

Note:

It is note possible to delete a base-station as a data source from the database. But it is possible to de-activate a data source.

When de-activated, any data presented to the base-station will be ignored.



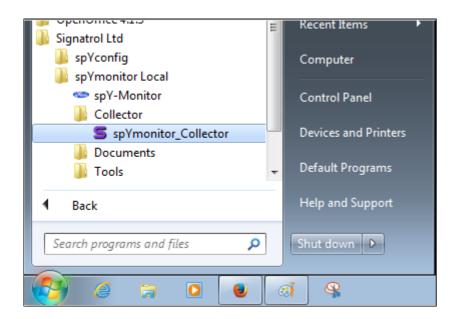
Select "Close" when finished.

Run Collector

To check if the collector is active , check for the [5] icon in the windows tool-tray.



• If is it not present, if can be run from the windows start menu. See image below



Note: If the collector is not running. No data will be transfer from the base-station. This may effect the operation of alarms and reports.

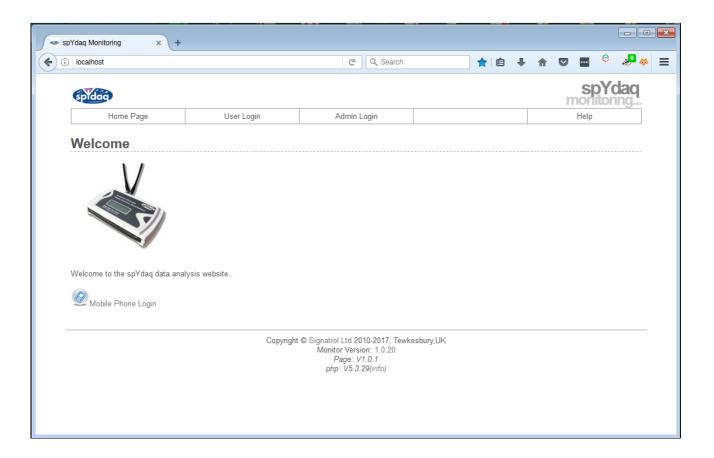
Login to WebServer as Administrator

Access to the spY-Monitor system is made using a web browser.

Locate and double click the "spYmonitor" icon on the desktop.



A web browser will open displaying the following screen. Click on "Admin Login",



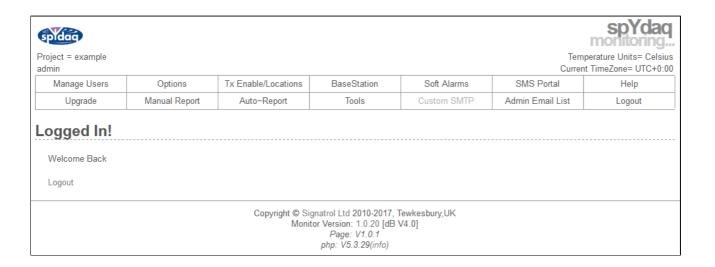
The "Admin Login" screen requires three parameters.

- 1. Project (this is the project name set when <u>creating the project</u> earlier)
- 2. Administrator should be always set to "admin".
- 3. Password (this is the admin password set when <u>creating the project</u> earlier)(this maybe be the default if you created a standard data-base).

Enter the three parameters, and then click "Login".

spidag				spYdaq monitoring
Home Page	User Login	Admin Login		Help
Admin Login				
Login required.				
Project: example 🔤				
Administator: admin				
Password:	•			
LoginReset				
	Copyright	© Signatrol Ltd 2010-2017, Tewl Monitor Version: 1.0.20 Page: V1.0.1 php: V5.3.29(info)	kesbury,UK	

Once you have successfully logged in, select "Manage Users".



Create new User

The "Manage User" screen allows the administrator to add and suspended users of the system.

Users only have access to the user screens which present data, they have no access to control users or settings which could change any data.

Initially any new project will have no users. The administrator needs to add each user which requires access to the data. Each user should have their own unique

login, that should not be shared between users. When setting up a new user, their username must be unique. The first and last names can be identical to other users.

Note:

The password can be changed by the administrator at any time, but is not visible to the administrator. If the password is forgotten, the administrator must create a new one.

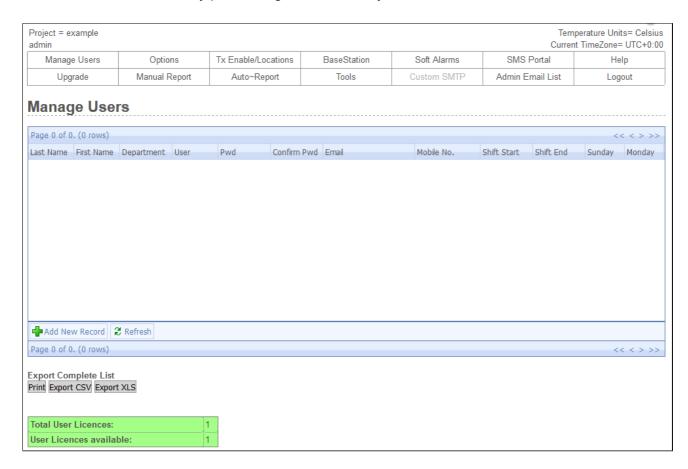
The suspended field has the effect of disabling that user, it also acts as security from invalid access. If the user attempts to login with the correct username, but

an incorrect password for >4 times. The user will be automatically suspended. The user should then contact the administrator to remove the suspension.

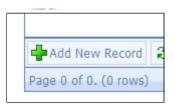
By default all new projects have only 1 user licence.

Only 1 user can login to the system, a new user can be added by "Suspending" the current user, this is useful when a user is away for a period of time.

Licences can be increase by purchasing licences from your authorised distributor.



Click "Add New Record".

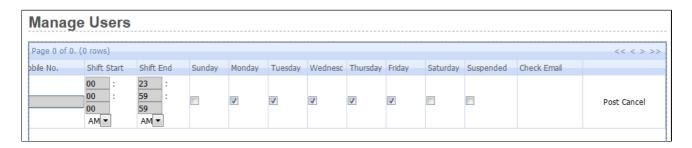


Enter the users surname, first name, username, password (twice) and email address. (email address is required for alarms and reports).

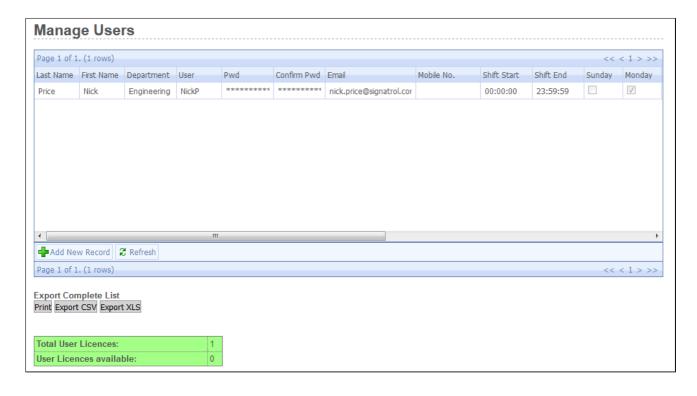


Scroll alone the row and complete by filling in the shift start and shift end and the days of the week for user is available for alarms messages.

Once the required fields are complete click the "Post" button at the end of the row.



Once added, the user will be displayed as shown below. You will also notice the User Licences available has been reduced by 1.



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TX Enable/Locations

Select "Tx Enable/Locations" at the top of the screen and you will be presented with a table of information similar to the image below.

The administrator can enable and disable transmitters and edit the Location string for each transmitter on the system.

Enable/Disable Transmitter.

Enabling or disabling a transmitter does not infact disable or enable any of the hardware. The disable and enable determines which transmitters are presented to the user.

If also determines which transmitters are checked for alarms (when a alarm is configured), and which are present on the automatic reports.

Note: If a transmitter is enabled and no data is received for 1 hour past the present time, a Late Alarm will be generated. When this Late Alarm triggers it will send emails to

the address on the admin email list. The system will install with all 16 transmitters enabled, so please disable transmitter which are not going to be used.

Location String.

The location string will be used to identify the transmitter in the user screens.

For example, instead of calling a transmitter Device Address 0, the user screen will also display Room1,Lab1 or Oven1.

Treat Universal Channel as

The fourth column "Treat Universal Channel as" is used when non celsius temperature units are required, because the universal channel is unit-less the system

needs to know if the universal is a temperature input of some kind, and if so apply scaling for Fahrenheit or Kelvin. If the system is set to celsius, this option can be ignored.

To change parameters click on "Edit" at the end of the row, when you have finished editing, select Post at the end of the row.

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Project = example admin

Temperature Units= Celsius Current TimeZone= UTC+0:00

Manage Users	Options	Tx Enable/Locations	BaseStation	Soft Alarms	SMS Portal	Help
Upgrade	Manual Report	Auto~Report	Tools	Custom SMTP	Admin Email List	Logout

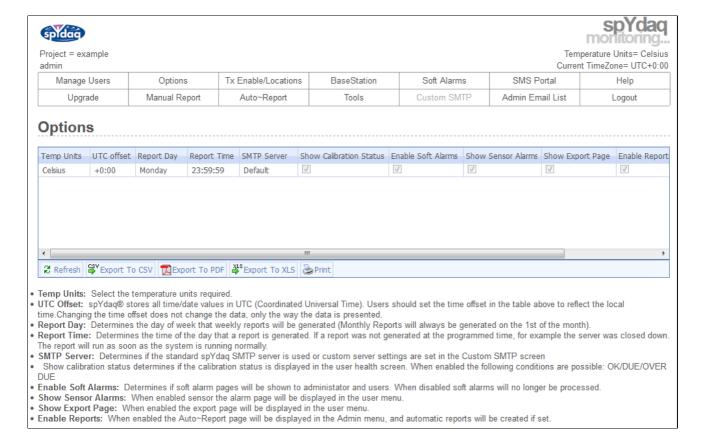
Transmitter Enable/Locations

Device Address	Enable Transmitter	Location	Treat Universal Channel as	
0	✓	Room 0	Temperature	Edit
1	✓	Room 1	Temperature	Edit
2	✓	Room 2	Temperature	Edit
3	✓	Room 3	Temperature	Edit
4	✓	Room 4	Temperature	Edit
5	✓	Room 5	Temperature	Edit
6	✓	Room 6	Temperature	Edit
7	✓	Room 7	Temperature	Edit
8	✓	Room 8	Temperature	Edit
9	▽	Room 9	Temperature	Edit
10	✓	Room 10	Temperature	Edit
11	▽	Room 11	Temperature	Edit
12	√	Room 12	Temperature	Edit
13	✓	Room 13	Temperature	Edit
14	✓	Room 14	Temperature	Edit
15	√	Room 15	Temperature	Edit

Confgure Options

Select "Options" at the top of the screen and a window similar to the image below with appear.

Click on "Edit" at the end of the table Row and change the following parameters.



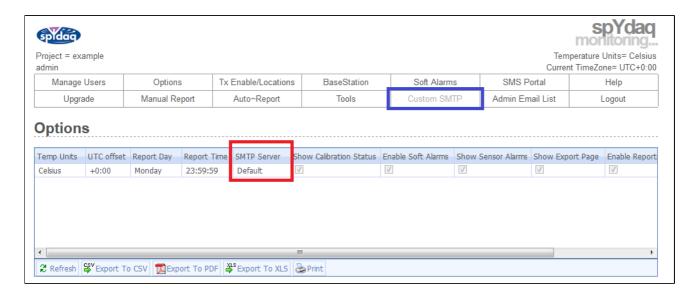
SMTP Servers

By default the spYdaq system will send emails using Signatrol Ltd spYdaq Webserver. But for some customers this server may not be appropriate due to there

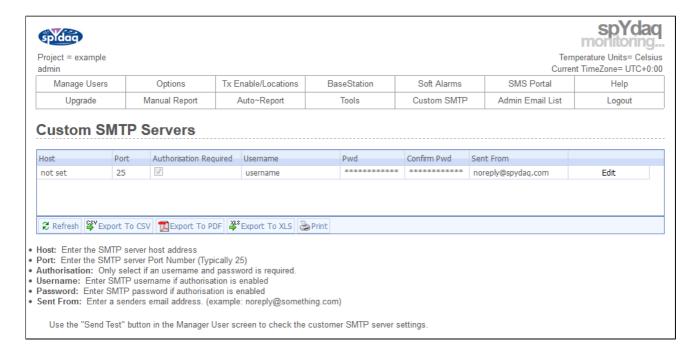
companies security policy. In this case the SMTP Server can be set to custom. When set to custom the "Custom SMTP" windows will be enabled.

Below "Red Box" displays where to change SMTP from "Default" to "Custom".

Below "Blue Box" displays location of "Custom SMTP" configuration Screen.



Below shows the Custom SMTP settings when SMTP set to Custom only.



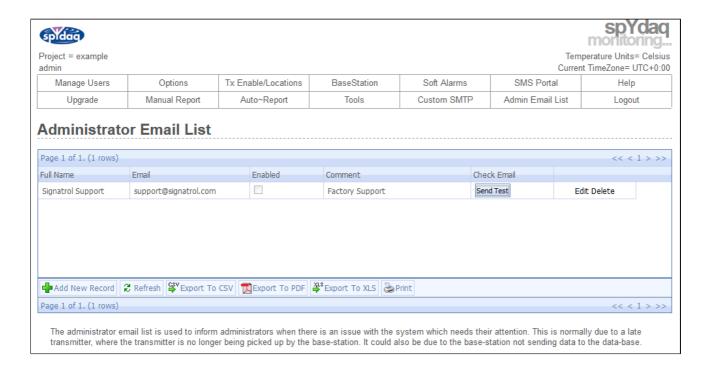
Reference: SIG-1265-01-02

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Late Alarm/Admin Email List

Transmitters which are enabled on the "Tx Enable/Locations" windows are checked every 10 seconds for new data arrival. If no data is received for 60minutes from

a transmitter a late alarm is raised and an email sent to all email addresses on the "Administrator Email List". This email is repeated every 12hours after the initial late alarm was raised.



LogOut Administrator

Administator Only Screen

Select "Logout"

spidag						spYdaq monitoring
Project = example admin						perature Units= Celsius nt TimeZone= UTC+0:00
Manage Users	Options	Tx Enable/Locations	BaseStation	Soft Alarms	SMS Portal	Help
Upgrade	Manual Report	Auto~Report	Tools	Custom SMTP	Admin Email List	Logout

You are "Logged Out"

pldag			spYdaq monitoring
Home Page	User Login	Admin Login	Help
ogged Out!			
You are now logged out!			

Reference: SIG-1265-01-02

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Security

Default Administrator Name

Description Administrator

Administrator name for Admin section of website admin

Default Passwords

Description Password

Entry in to spY-Monitor Configuration Tool

spydaq

Default mySQL root

spydaq

password

End User IT security

It is the duty of the end user to carry out there own security risk assement on the web server hardware and software plateform.

The server is delivered with no virus protection and only the standard windows firewall.

We recommend the Web Server is protected by a premium antivirus + antispyware software. (Example <u>ESET EndPoint Security for Small Business</u>)

Trademarks

spYdaq® is a registered trademark of Signatrol Ltd. (www.signatrol.com)

Windows® is a registered trademark of Microsoft Corporation in the United States and other countries.

XAMPP 1.8.1 is a distribution of Apache2.4.3, MySQL5.5.27, PHP 5.3.29 and other scripts supplied by ApacheFriends (http://www.apachefriends.org) under a GPL licence (General Public Licence).

Xampp must be installed by the end user prior to installing spY-Monitor.

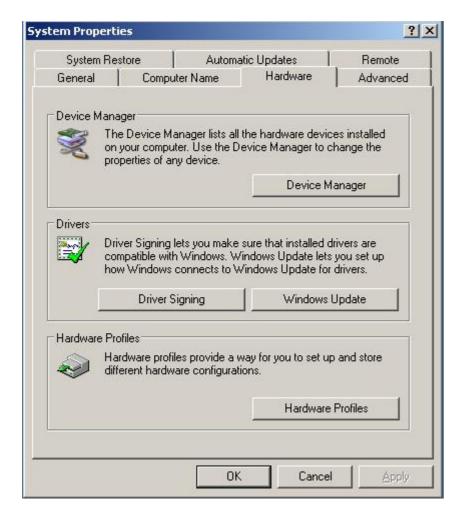
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Trouble Shooting

Check Driver is installed correctly.

If you are unsure of the status of the USB driver for the BaseStation, go to Control Panel and select System (or press the Windows Key and Pause together).

The "System Properties" window will appear. Select the "Hardware" Tab and click on "Device Manager".



In "Device Manager" expand the "Universal Serial Bus controllers" branch, and ensure that the "BaseStation" is located within.

If there is an exclimation mark or question mark against the Icon, the driver might be corrupted. In this case, right click on the BaseStation

and select the "Uninstall" option. Then re-install as per the instructions above.

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If there are no "BaseStation" devices listed, ensure the device is correctly connected to the USB port. If it is correctly connected, ensure

there are no "Unknown" devices listed on the system. If there is a "Unknown" device, right click it and select "Uninstall". Then remove the

BaseStation USB cable and then re-insert, this should prompt windows to try and load the driver again.

