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IM6000
Hanwell EMS Remote Management Tool

User Guide

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Contents

1 Pre-Requisites

EMS Remote Management Tool must be installed on a Microsoft Windows PC or Server with a minimum Operating System requirement of:

- **Either:**

  Windows 7, either x86 or x64.

  Or:

  Windows Server 2008, either x86 or x64.

- The Host machine must have a DVD reader and at least one free USB Port.
- There must be HTTP (Port 80) access from the Host machine to the EMS Server.

2 Installation

The **EMS Remote Management Tools** are intended to be installed on machines remote from the EMS Server. As many instances as required may be installed without further licensing implications.

The **EMS Remote Management Tools** are installed from the main EMS Installer dialog as follows:

1. Run **Install.exe** from the installation media.
2. Select **Install EMS Remote Management Tools**.
3. Deselect **Install EMS Server Components**.
4. Select **Next**.
5. Follow the on-screen instructions.

3 Overview

The EMS Remote Management Tools are intended primarily for System Supervisors and Expert Users.

They provide an HTTP link to data in the EMS Database, allowing hardware devices at remote locations to be configured and associated with an existing EMS System.

Once a device has been added to EMS via the Web Interface, the Remote Management Tools can be used to perform Configuration tasks on that device such as Synchronising, Calibrating and Merging.

The tools currently provide the capability to perform the following tasks:

- **Synchronising USB Devices.**
- **Calibrating USB Devices.**
- **Merging USB Devices.**
- **CR3 Network Configuration.**
- **SR2 Network Configuration.**
- **SR2 Device Configuration.**
- **Current Clamp Configuration.**
- **Wood Watch Configuration.**
- **AE Device Configuration.**

4 Using the Remote Management Tools

4.1 Starting

1. Open the **EMS Remote Management Tools** by -

Either:

Clicking on the **Desktop Icon**. See Figure 1 below:

Figure 1

Or:

Selecting the **EMS Remote Management Tools** entry in the **Start** menu.

- The **EMS Connection** window is displayed. See Figure 2 below:

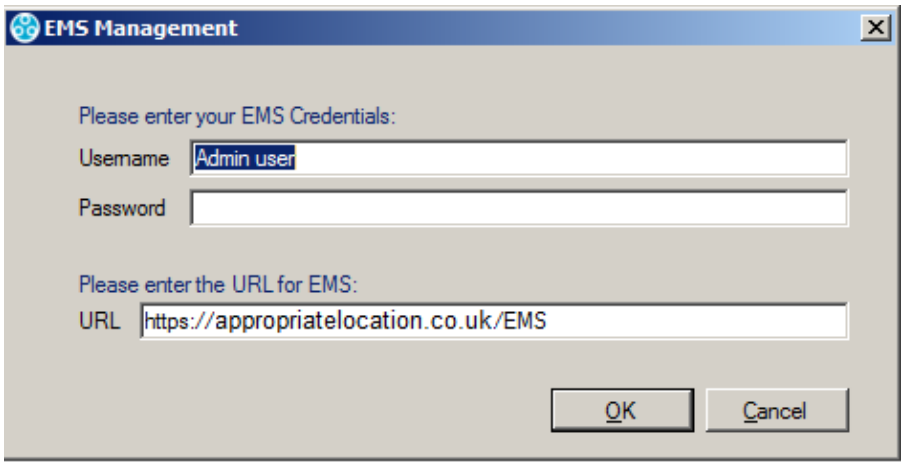


Figure 2

Note: 'EMS' at the end of the URL shown in Figure 2 above must be entered in uppercase.

2. **Enter**:

- A EMS Username and Password.
- The **URL** of the EMS System that you wish to communicate with.

If the user has been added to EMS as an Active Directory account, the username should be in the form: <domain>\<username>

The User will need to be either setup as a Calibration Technician, or have Edit View access, to be able to carry out USB based operations on Hanwell Pro sensors.

The URL should be in the form: ***http://<hostname>/EMS/***

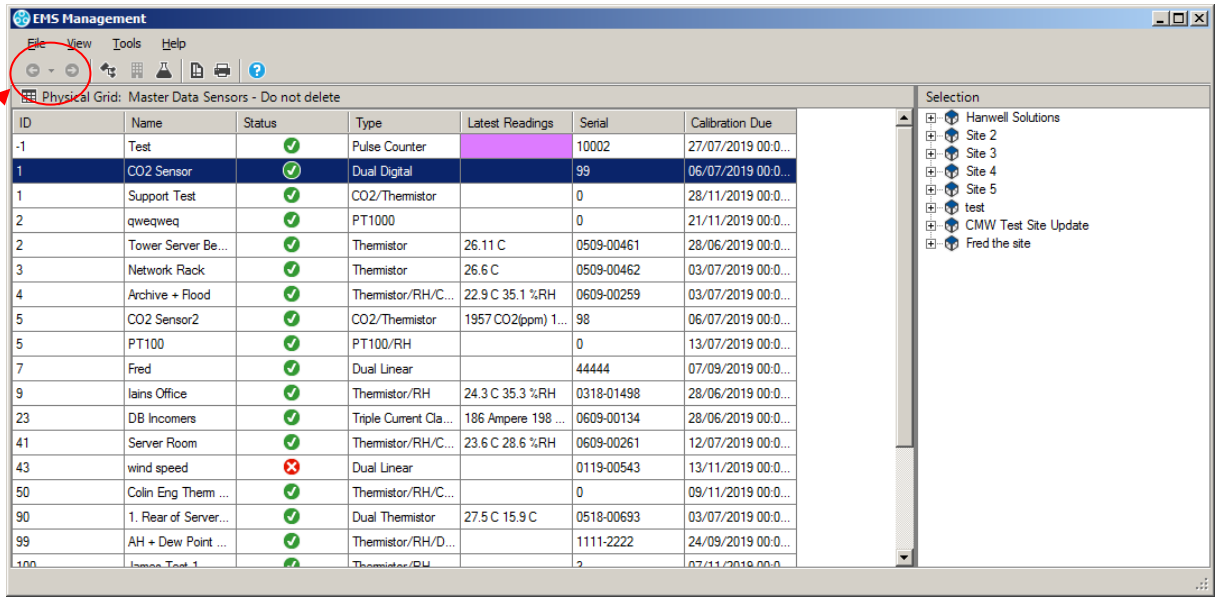
Replace *<hostname>* with the hostname or IP address used to reach your EMS Server. See Figure 2 above.

3. When you are sure that the fields have the correct information, click on **OK** to continue.

4.2 Selecting Sensors

The **EMS Remote Management Tool** window is displayed once the **Remote Management Tools** have loaded. See Figure 3 below:

Back and **Forward** Buttons



ID	Name	Status	Type	Latest Readings	Serial	Calibration Due
-1	Test		Pulse Counter		10002	27/07/2019 00:0...
1	CO2 Sensor		Dual Digital		99	06/07/2019 00:0...
1	Support Test		CO2/Thermistor		0	28/11/2019 00:0...
2	qweqweq		PT1000		0	21/11/2019 00:0...
2	Tower Server Be...		Thermistor	26.11 C	0509-00461	28/06/2019 00:0...
3	Network Rack		Thermistor	26.6 C	0509-00462	03/07/2019 00:0...
4	Archive + Flood		Thermistor/RH/C...	22.9 C 35.1 %RH	0609-00259	03/07/2019 00:0...
5	CO2 Sensor2		CO2/Thermistor	1957 CO2(ppm) 1...	98	06/07/2019 00:0...
5	PT100		PT100/RH		0	13/07/2019 00:0...
7	Fred		Dual Linear		44444	07/09/2019 00:0...
9	Iains Office		Thermistor/RH	24.3 C 35.3 %RH	0318-01498	28/06/2019 00:0...
23	DB Incomers		Triple Current Cla...	186 Ampere 198 ...	0609-00134	28/06/2019 00:0...
41	Server Room		Thermistor/RH/C...	23.6 C 28.6 %RH	0609-00261	12/07/2019 00:0...
43	wind speed		Dual Linear		0119-00543	13/11/2019 00:0...
50	Colin Eng Therm ...		Thermistor/RH/C...		0	09/11/2019 00:0...
90	1. Rear of Server...		Dual Thermistor	27.5 C 15.9 C	0518-00693	03/07/2019 00:0...
99	AH + Dew Point ...		Thermistor/RH/D...		1111-2222	24/09/2019 00:0...

Figure 3

- Sensors can be browsed by navigating **Sites** and **Groups**.

To switch the view mode between **Sites** and **Groups**

Either:

Select the corresponding **View** menu option.

Or:

Click the appropriate **Tool Bar** button.

- Sites and groups can be navigated by -

  Either:

  Using the tree view to the right of the screen.

  Or:

  Using the **Next Grid** and **Last Grid** options in the **View** menu

  Or:

  Using the **Back** and **Forward** tool buttons in the top left of the screen as shown in Figure 3 above.

- Sensors are selected by simply clicking on them.

5 Performing Tasks

5.1 Synchronising a Sensor Unit

The Synchronise process takes data from a connected USB device and updates its Serial Number and Calibration details in EMS, at the same time as setting the **Physical Transmit ID** of the device.

- Synchronising Sensors facilitates efficient communication between the Sensor and EMS.
- Even if the sensor is already running on EMS, it is strongly recommended to carry out Synchronisation to set a faster transmit rate for the Calibration run.

To Synchronise a Sensor:

1. Ensure that the Sensor is plugged into the PC/Network using the supplied USB cable.
2. Select the correct Sensor from the EMS Remote Management Tools **EMS Management** window. See Figure 3 above.
3. Making sure that **Management Tool** has been selected in the right-hand **Selection** menu, right click on the selected Sensor and select **Sync Selected Sensor** from the displayed menu. See Figure 4 below:

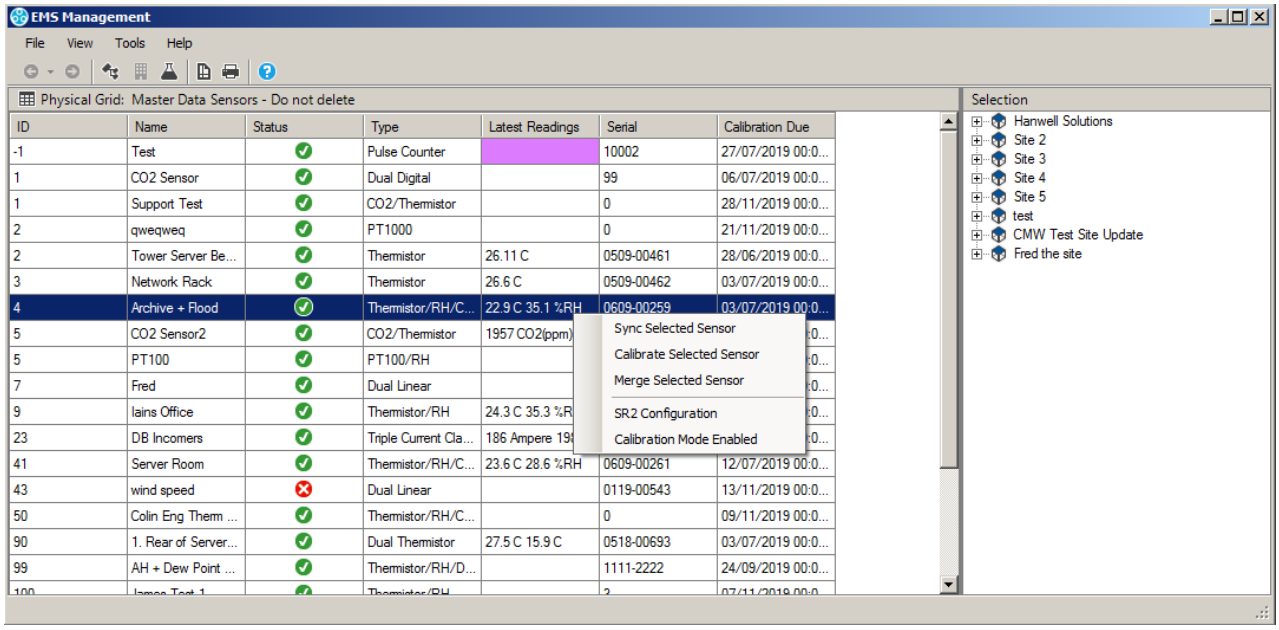


Figure 4

- The **EMS Synchronise USB Sensor Vx.x** window is displayed. See Figure 5.

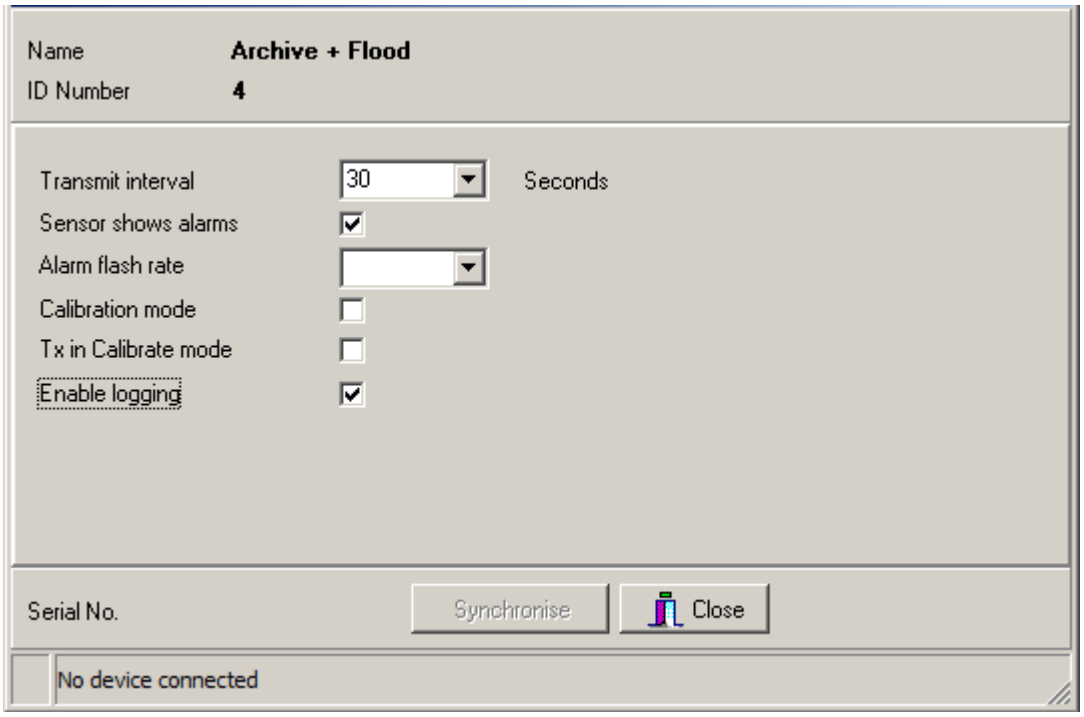


Figure 5

Note: The sensor selected must match the physical device or the program will not complete.

4. Make a note of the value in the **Transmit interval** field, so that the Unit can be reset after calibration.
5. Select the required TX interval from the **Transmit interval** drop-down list (60 seconds is recommended for Calibration).
   - The **EMS Synchronise USB Sensor Vx.x** window completes loading and all the fields are populated.
6. Click the **Synchronise** button and follow the instructions given until it reports that the Synchronisation is complete.
7. Close the window to finish and update the EMS database.
8. Repeat this procedure for all Sensors.

5.2 Calibrating Sensors

The Calibration process takes Sensor Calibration (CAL) Settings from the EMS database and loads them into a selected, USB connected, sensor.

To Calibrate a Sensor:

1. Ensure that the Sensor is plugged into the PC/Network using the supplied USB cable.
2. Select the correct Sensor from the EMS Remote Management Tools **EMS Management** window. See Figure 3 above.
3. Right-click on the selected Sensor's entry and select **Calibrate Selected Sensor** from the displayed drop-down menu.
    - The **EMS USB Sensor Calibration VX.X window** is displayed. See Figure 6 below:

Figure 6

Note: The Sensor's Serial/ID Number and Type must match, or the program will not complete.

4. Click on the **Send Calibration** button and follow the instructions given until it reports that the calibration is complete.
5. The Sensor's display should show the same value as displayed in EMS.
6. Repeat Steps 1 - 5 for all Units.

5.3 Merging Sensors

The **Merge** process allows the Sensor's internally logged data to be downloaded from a connected sensor and added to EMS.

To Merge a Sensor:

1. Ensure that the Sensor is plugged into the PC/Network using the supplied USB cable.
2. Select the correct Sensor from the **EMS Remote Management Tools** window. See **Error! Reference source not found.** above.
3. Right-click on the selected Sensor's entry and select **Merge Selected Sensor** from the displayed drop-down menu.

- A **Merge** window similar to that shown in Figure 7 below is displayed:

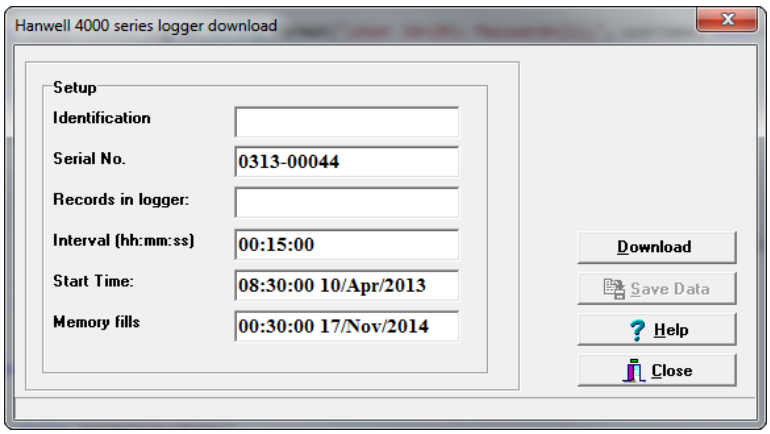


Figure 7

4. When the **Merge** window has completed loading, click on the **Download** button.

   - Once the download is complete, **Download Complete** will be displayed in the bottom left-hand corner of the window and the **Save Data** button will be enabled.

5. Click on **Save Data**.

6. Once the download is complete, close the window to finish and update the EMS database.

5.4 CR3NW and SR2 Network Configuration

Hanwell Control Receivers (CR3NW) and Smart Receivers (SR2) must be configured before use. This is normally done on the Network but, in some instances, it may be necessary to connect the CR3NW/SR2(s) directly to a laptop or desktop.

Before the CR3NW/SR2(s) can be configured, fixed IP Addresses should be assigned to each Unit by the Network Manager.

You should also know the **Subnet** and **Gateway** addresses.

The CR3NW/SR2 should be connected to the Network using a straight-through Network Lead (supplied).

1. Use the following Steps to assign an IP addresses or addresses to the CR3NW/SR2(s):

   Either:

   i. Access the **SR2 Network Configuration Tool** directly at:

   www.supportftp.Hanwell.com/Utilities/SRNetworkConfig.zip

   Note: The file **SRNetworkConfig.zip** contains the generic **Network Configuration Utility** applicable to both CR3 **AND** SR2 Network Receivers.

ii. Download, Unzip and Run the file.

Or:

i. Run the **EMS Remote Management Tool**.

ii. Select **Tools** from the **EMS Management** window's main toolbar.

iii. Click on **SR2 Network Configuration** in the displayed drop-down menu. See Figure 8 below:

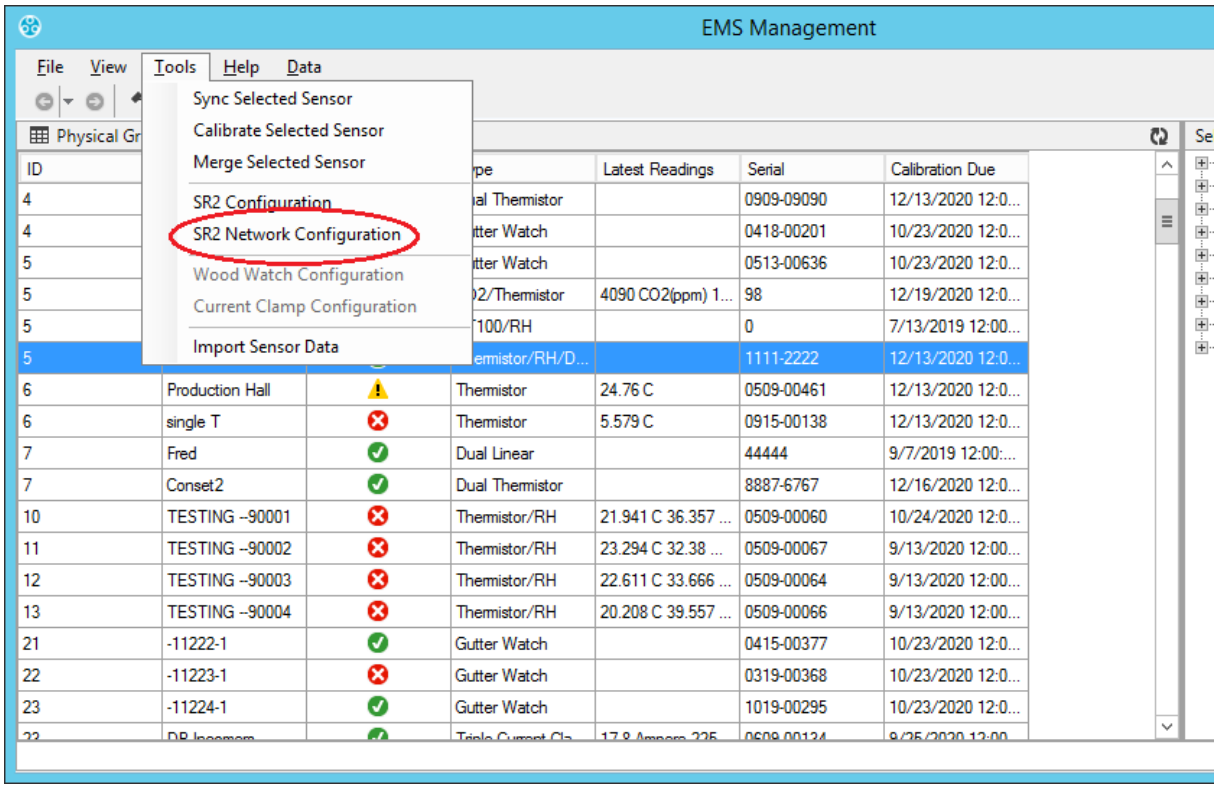


Figure 8

- The **SR2 NW Network - Configuration** utility's home page is displayed, with the **Network** tab selected. See Figure 9.

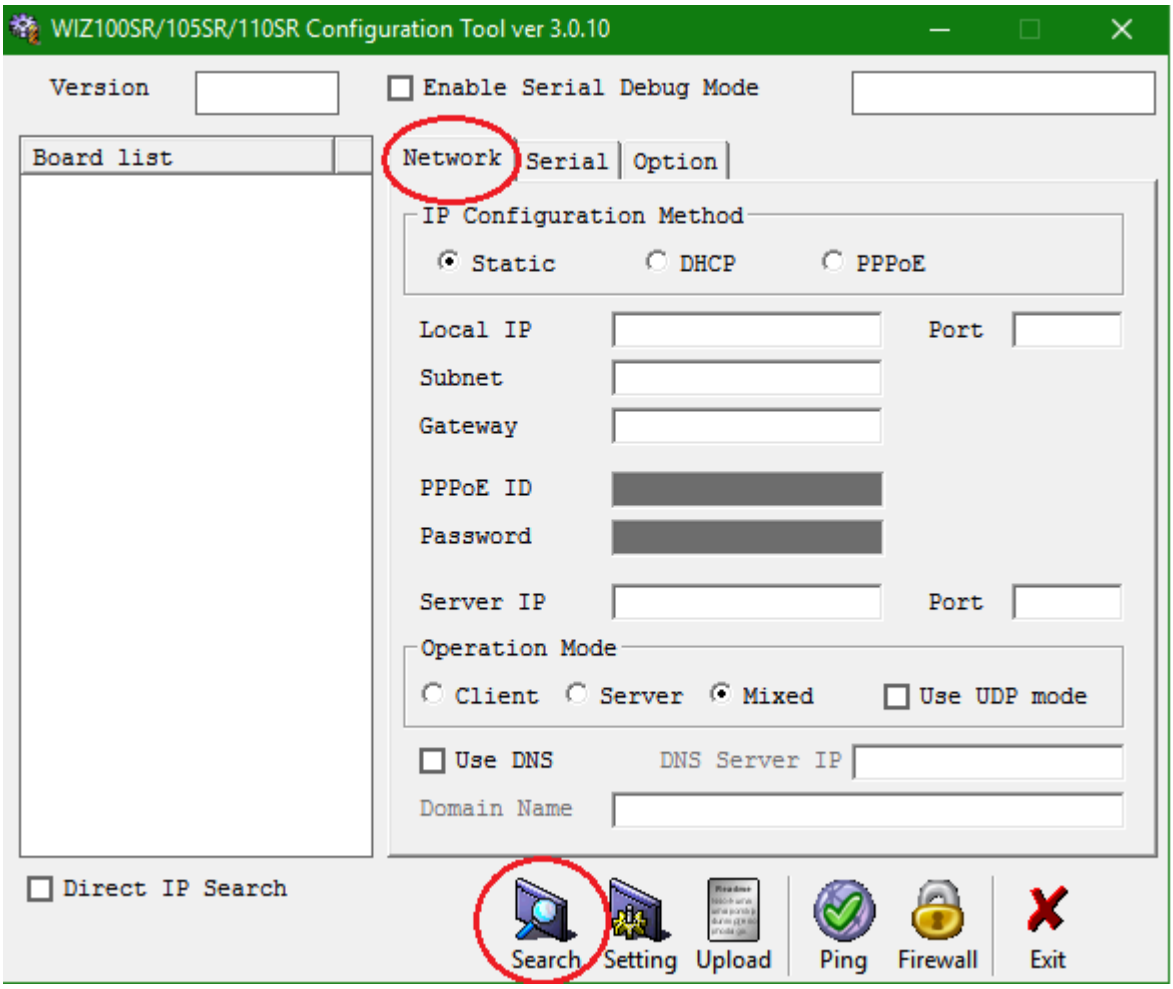


Figure 9

Note: The file **SRNetworkConfig.zip** contains the generic **Network Configuration Utility** applicable to both CR3 **AND** SR2 Network Receivers.

2. Click on **Search** on the lower toolbar (See Figure 9) to start searching the Network for connected CR3NW/SR2(s).

   - The program will search for any CR3NW/SR2(s) on the Network.
   - All CR3NW/SR2(s) found will be displayed in the **Board list** field. See Figure 10 below.
   - If no CR3NW/SR2(s) are found, you will need to ask your IT Department to check the Network.
   - The CR3NW/SR2(s) can be connected directly to a laptop using a crossover cable to confirm their operation.

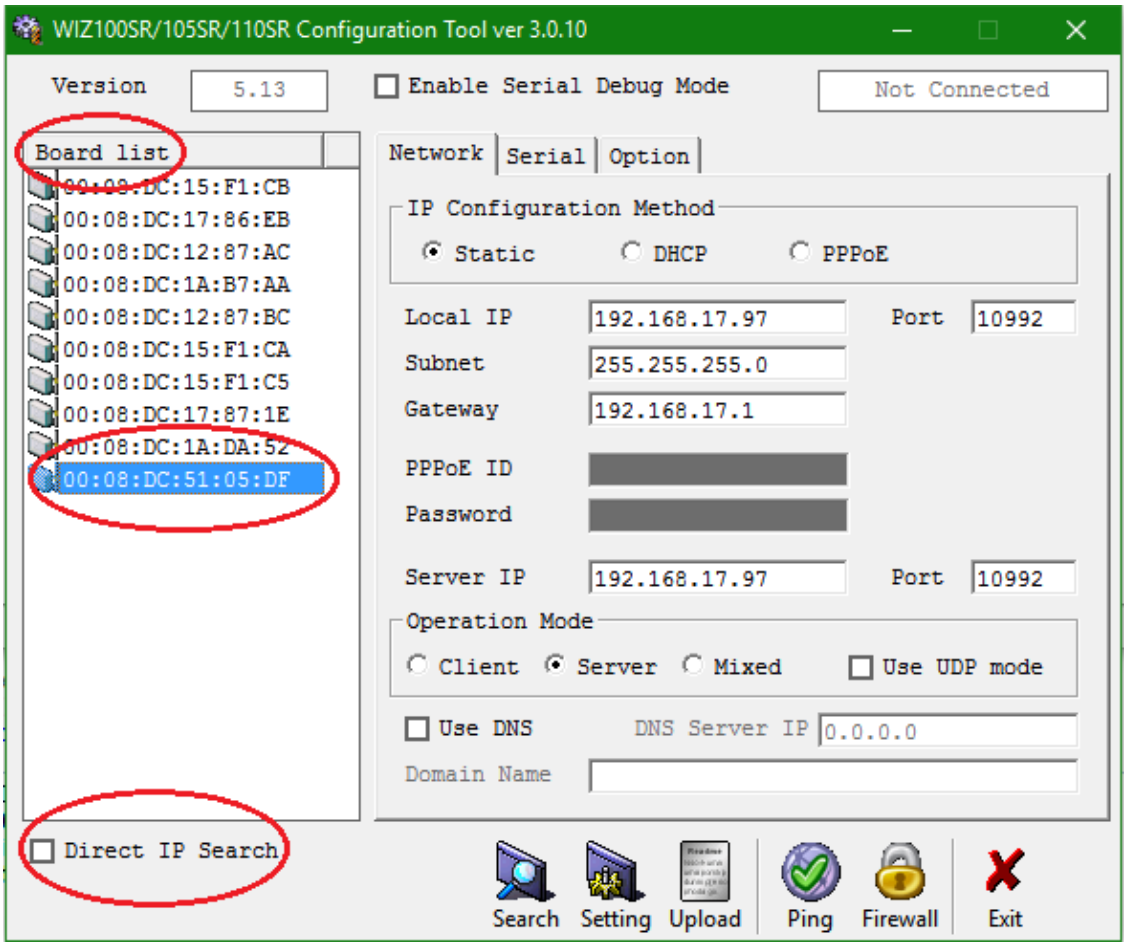


Figure 10

3. Click once on a Unit in the **Board List** to select it. See Figure 10 above.

4. Enter the **Network Configuration** details as specified by your Network Manager and or as found in the **EMS Pre-requisites** document (**Document Number: GD5209**).
   These details consist of the following:

   - **Local IP**
   - **Subnet**
   - **Gateway**
   - **Server IP** (should be set to match the Local IP address)
   - **Port**

   The **Port** details can be found in the **EMS Pre-Requisites** document (**Document Number: GD5977**); Hanwell Solutions recommend using the Default Port **10992** for all CR3NW/SR2s.

5. Enter additional **Configuration** details as follows:

   i. Set the **Operation Mode** to **Server**. See Figure 11 below.

   ii. Confirm that the following options **ARE NOT TICKED/CHECKED** in the Network Configuration Utility's window:

   - **Enable Serial Debug Mode**
   - **Enable DHCP Mode**
   - **Use UDP Mode**

   WARNING: SELECTING ANY OF THESE OPTIONS AND THEN CLICKING ON THE SETTINGS ICON WILL DISABLE THE CONTROL DEVICE AND REQUIRE ITS RETURN TO THE MANUFACTURER FOR RESETTING.

   See Figure 11 below:

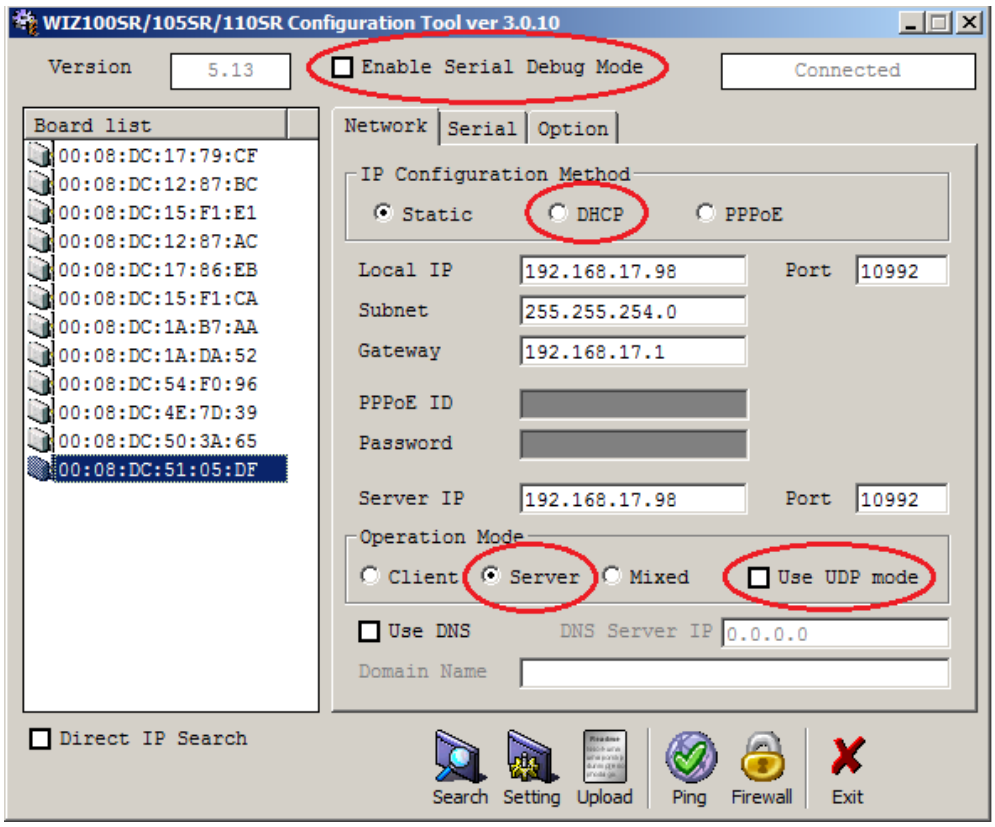


Figure 11

6. Click on the **Serial** tab.

7. Select the following values from the highlighted fields' drop-down lists on the **Serial** tab:

Smart Receiver Setting	
Speed	115200
Parity	None
Data Bit	8
Stop Bit	1
Flow Ctrl	CTS / RTS

- See Figure 12 below:

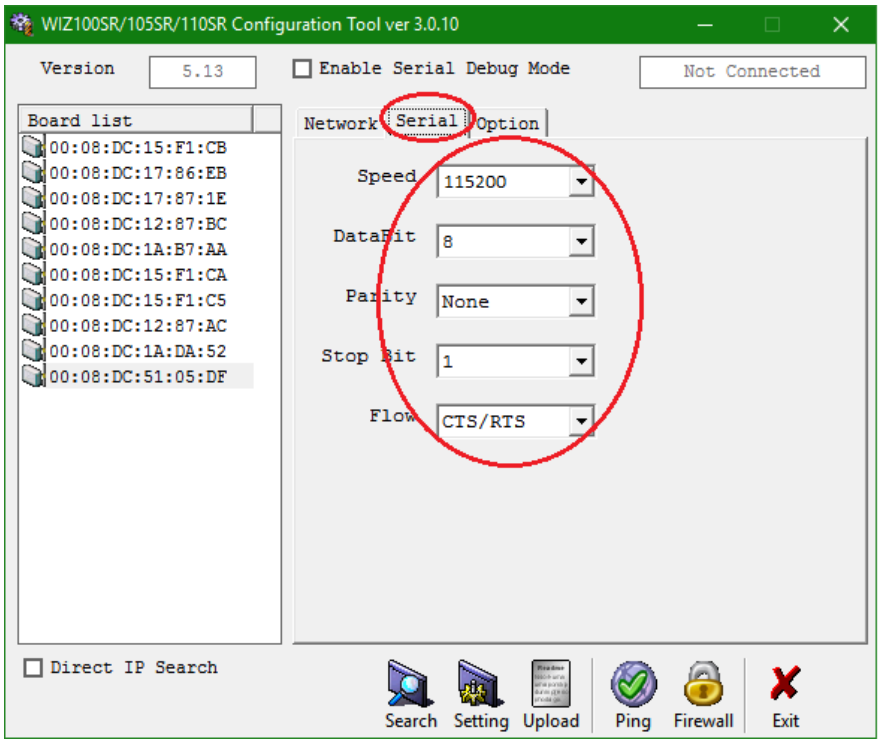


Figure 12

8. Enter the following values into the highlighted fields on the **Option** tab. See Table 1.

Smart Receiver Setting	
Inactivity Time	10
Time	5
Size	255
Char	00

Table 1

- See Figure 13 below:

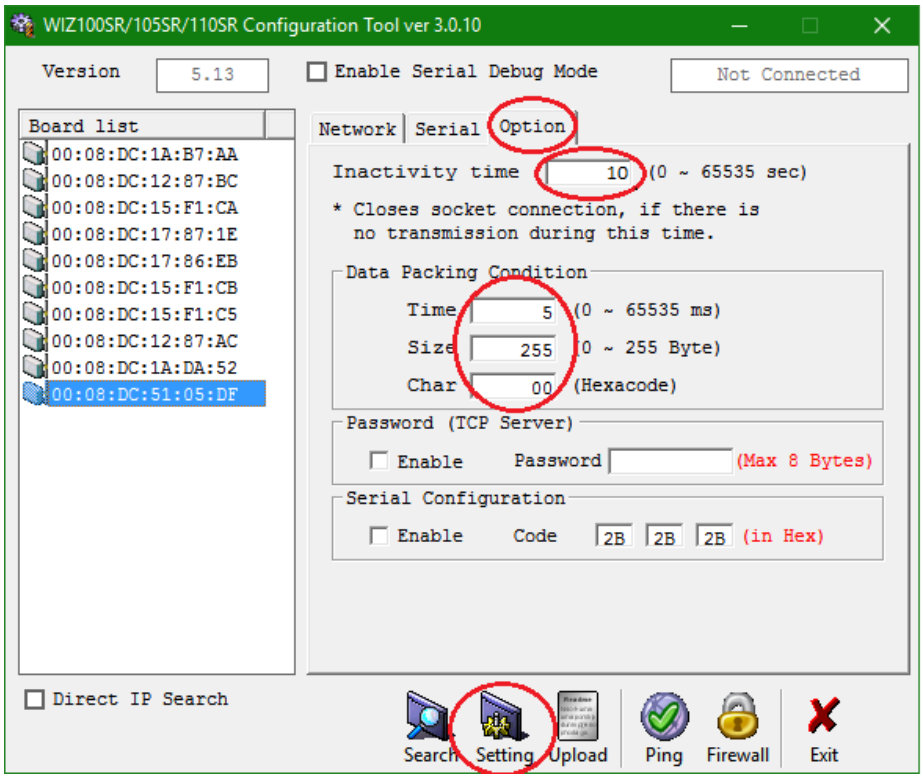


Figure 13

9. Once all the changes have been made, click on the **Setting** icon to save the configuration settings. See Figure 13 above.

    - The following **Status** windows are displayed. See Figure 14 and Figure 15.

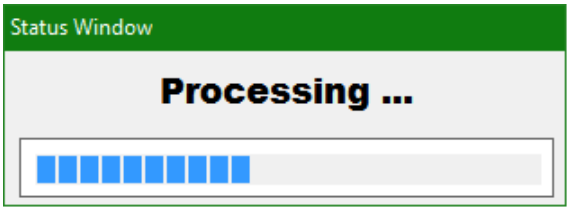


Figure 14

Figure 15

10. Click on **Close** on the **Complete setting** window.

    - Repeat Steps 3 to 10 for any additional SR2s on the Network.

5.5 SR2 Device Configuration using the Remote Management Tools

To configure an SR2 follow the instructions below.

- For additional information, refer to the Section **Configuring the Smart Receiver on a Network** in the Online EMS User Manual:

  http://www.help.emsprocloud.com/index.html?configuring-the-smart-receiver.html

1. Ensure that a Sensor using the required SR2 is plugged into the PC/Network using the supplied USB cable.
2. Select the correct Sensor from the **EMS Remote Management Tools** window. See Figure 3 above.
3. Right-click on the selected Sensor's entry and select **Setup SR2** from the displayed drop-down menu.

   - A window similar to that shown in Figure 16 below is displayed, from where the System Administrator can initialise and debug SR2 operation.

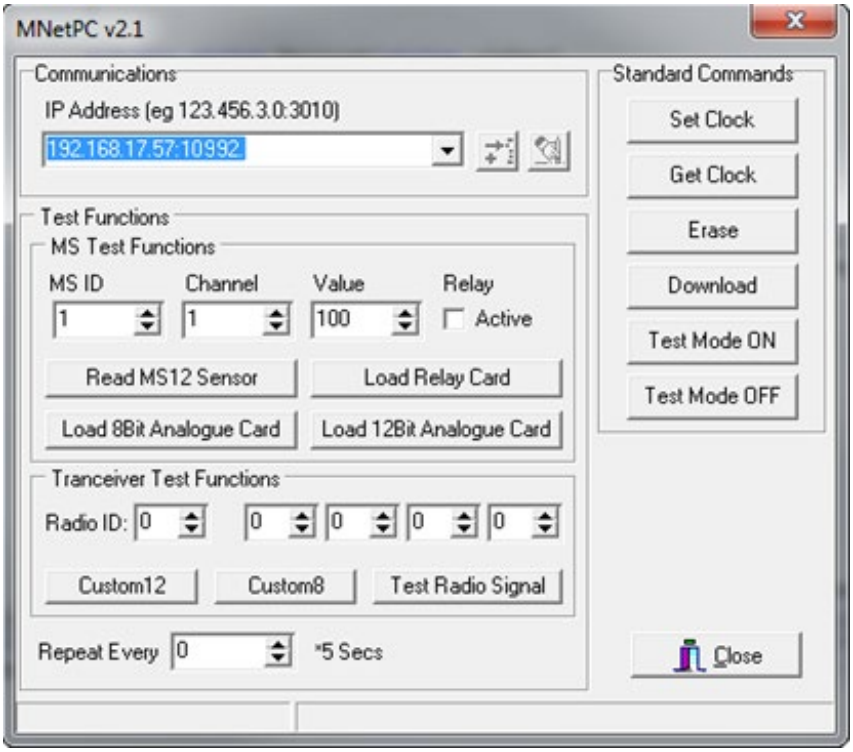


Figure 16

5.5.1 SR2 Clock & Erasing Memory

The Smart Receiver has an on-board clock used for time/date stamping data.

- In EMS most date time values, including data values are stored as Greenwich Mean Time, (GMT). Setting the clock using the Remote Management Tools will automatically set the SR2 clock to GMT.
- Ideally, you should set the clock so that the time is in synch with EMS Server time: if it is out of synch you may get false **Elapsed Time** alarms.
- Use the **IP Address** drop-down, (see Figure 16 above), to select the required SR2 by IP address; then click **Set Clock** to set the SR2 clock.
- The SR2 time can be checked by clicking **Get Clock**, to display the SR2's current date time in the status bar; note the SR2 time will be displayed as Greenwich Mean Time, (GMT).
- On Initial installation, an SR2 should have its memory erased. Click **Erase** to erase the selected SR2's memory.
- Repeat the Steps in this section, as required, for all SR2s in the **IP Address** drop-down.

Note: The available SR2's IP addresses will only be displayed if using the EMS Remote Management Tool. If using the **SR2 Network Configuration Tool**, you will need to manually enter each SR2 Unit's IP address in the correct format.

5.6 Current Clamp Configuration Using the Remote Management Tools

To configure a Current Clamp Device, ensure that the device is plugged in using a USB cable then select **Current Clamp Configuration** from the **Tools** menu and you should see a window similar to the one shown in Figure 17 below.

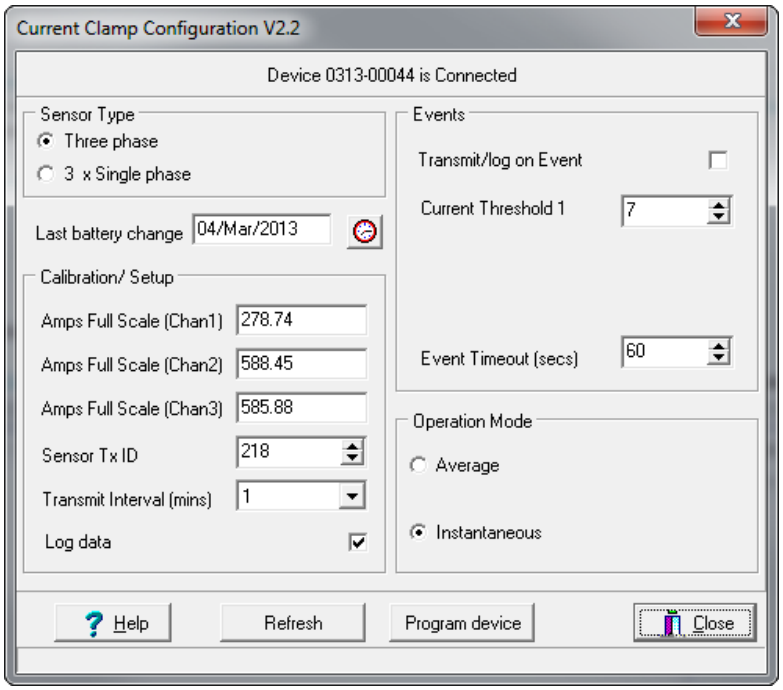


Figure 17

See Document: **IM6015 4000 Series Current Clamp Devices Instruction Manual** for further details.

5.7 Importing RadioLog 8 and Hanlog32 Sensor Data

RadioLog 8 and Hanlog32 files can be imported into an existing EMS System using the **EMS Remote Management Tools**.

Note: This feature is turned off by the application of a W901 Compliant Licence.

5.7.1 Restrictions

- Files can only be imported to the Hanwell Pro Radio or Hanwell Pro Logger families of sensors on the EMS System.
- The Sensor that data is being imported from must be added to EMS before the data import.
- Both the Physical Sensor that the data originated from and the EMS Sensor that the Data is to be imported into, must be the same type, with the same number of channels; for example, you cannot import data from a PT100 sensor to a Thermistor sensor.

5.7.2 Importing Data

1. From the **EMS Management** window, displayed when the Remote Management Tools have loaded, select the required **Site** and **Grid** from the right-hand **Selection** tree. See Figure 18 below:

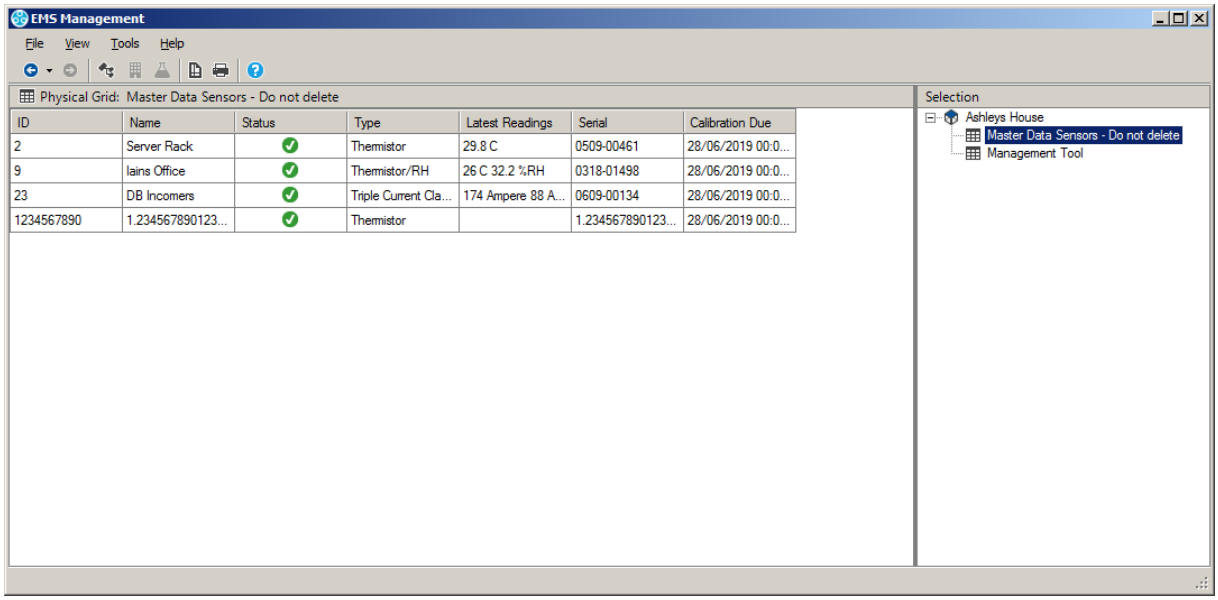


Figure 18

2. In the table of Grid sensors on the left-hand side of the **EMS Management** window, click on the Sensor you wish to import data into.

3. **Either**:

   i. Left click on required Sensor's entry to highlight its entry.

   ii. Right click on the highlighted entry to display a drop-down menu.

   iii. Click on **Import Sensor Data** from the displayed drop-down menu. See Figure 19.

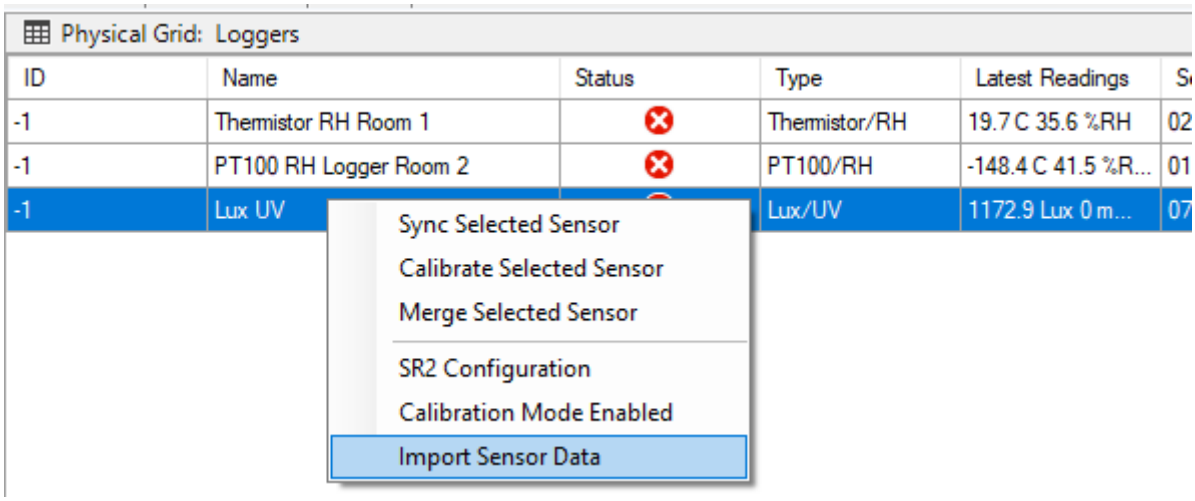


Figure 19

Or:

i. Click on the Sensor's entry to highlight it.

ii. Select **Import Sensor Data** from the **Tools** menu. See Figure 20 below:

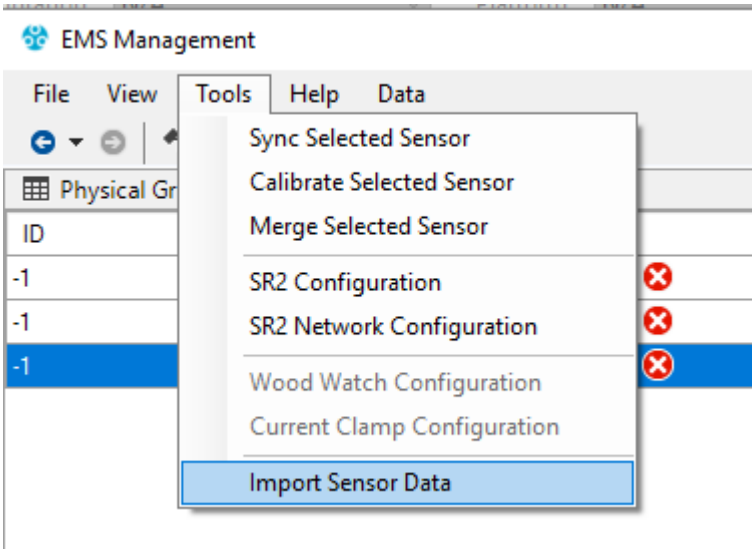


Figure 20

- An **Open** file dialog will display, allowing you to select the required RadioLog 8 or Hanlog32 file for import.

4. Select the required RadioLog8 or Hanlog file to import data from.
5. Click on **Open**.

- The System will perform file checking before importing data.
  Warning messages in the following formats may be displayed during this process:
  - If the file and EMS sensor types do not match, an error message will be displayed and the import will be abandoned.
  - If the Serial Number does not match, the User will receive a warning but may continue.
  - For Radio transmitters; if the **Radio Transmitter ID** and **EMS PID** do not match, the User will receive a warning but may continue.
- When the data import starts, a **Progress** window is displayed showing the progress of the import via a progress bar, along with an estimate of the remaining import time.
  Once imported, the **Progress** window dialog will close.
  - As an example, a RadioLog file with half a million records will take about 3 minutes to import.

  Note: The time taken to import the data is dependent on number of records, the Network, the PC the Remote Management Tool is installed on and the EMS Server's performance.

6 Contact Hanwell Solutions

UK Customers:

Ellab Monitoring Solutions Limited

Pendle House

Jubilee Road

Letchworth

Hertfordshire

SG6 1SP

Tel: 01462 688070

Email: sales.hanwell@ellab.com

Web: www.hanwell.com

For Technical Support:

Tel: 01462 688 078

Email: support.hanwell@ellab.com

EU & Overseas Customers:

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Document History

Document Number: IM6000

Issue No.	Issue Date	Changes	By
1	11 July 2018	First Issue.	IR
2	15 October 2018	Formatting Changes and Corrections.	IR
3	30 January 2019	Addition of information on Importing RadioLog 8 and Hanlog32 Sensor Data.	IR
4	4 February 2020	Rebranding of manual to include Ellab.	IR
5	18 February 2020	• Addition of Warning relating to Network Configuration Utility. • Addition of references to CR3NW.	IR
6	14 January 2021	Add Active Directory integration	CRB
7	29 September 2021	• Amendments to Contact Details to reflect change to Ellab Monitoring Solutions • Document History moved to end of document	IR


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