

Replication between the clocks is in the form of a star network. In other words, each clock connects to the other clocks in its list and creates a star configuration. This star network has to be achieved for replication to work at its optimum speed.

The employee status monitor allows you to monitor the replication traffic between clocks, and will inform the user visually if there is an intermittent loss of connectivity or no connectivity between the clocks at all.

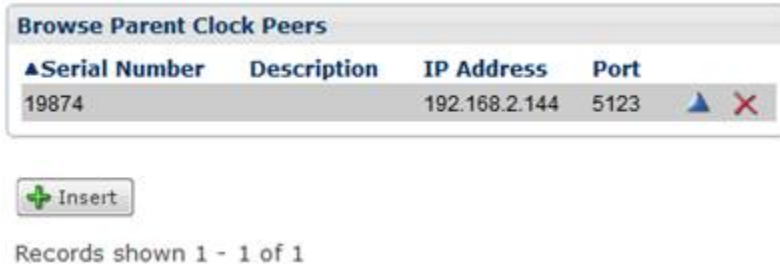
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To enable the Employee Status Monitor, the monitor must be added to the CS TimeClock's peer list as a device.

The Employee Status Monitor's specific information is as follows:

1. The serial number is always 99999.
2. The IP address of the Employee Status monitor is the PC's IP address, on which the Employee Status Monitor program is running.



Serial Number	Description	IP Address	Port	
19874		192.168.2.144	5123	▲ ✖

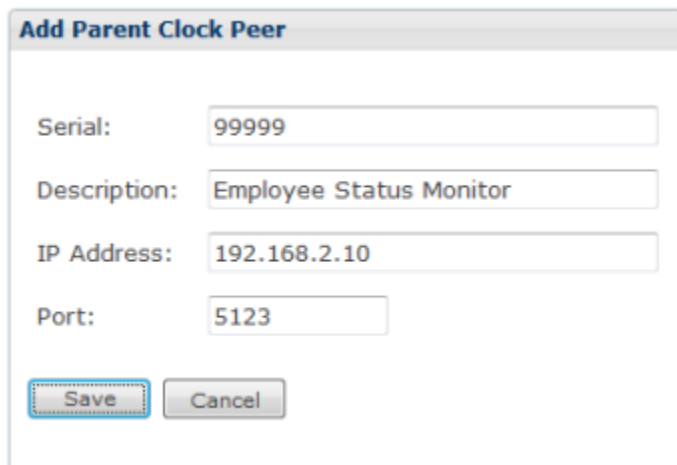
Records shown 1 - 1 of 1

Adding The Employee Status Monitor as a Peer Clock

In the clock web interface

If you are not using TNA software, please follow the procedure below.

1. To add another CS TimeClock Parent, click on "Insert". To change a peer's details, click on the blue triangle. To remove a peer, click on the red cross. The employee status monitor must be added to each CS TimeClock on your network as a peer clock.



Add Parent Clock Peer

Serial:

Description:

IP Address:

Port:

2. Enter the Serial number, IP Address and Port number for the other clock and click on "Save".
3. The port number has to be the same as the Pc Server Port specified in the clock's setup menu. This be default is port 5123. Replication using this pc server port number and **adds one**, to use to replicate clocking directions from one clock to another. So in this example the port being used by the clock will be port 5124.
4. Now Add the Employee Status Monitor as a peer device to all the clocks on your LAN or WAN.

5. The Employee Status Monitor is available from the CS TimeClock Developer Zone Support Utilities Section.
6. Copy the Employee Status Monitor onto the PC, which IP address you supplied for in the peer clock list. In this example the PC IP address was 192.168.2.10.
7. In this example I have two clocks. The peer lists are shown below for the front door clock:

Browse Parent Clock Peers					
▲Serial Number	Description	IP Address	Port		
25936	Front Door Clock	192.168.2.130	5123	▲	✗
27897	Back Door Clock	192.168.2.240	5123	▲	✗
99999	Employee Status Monitor	192.168.2.10	5123	▲	✗

8. and on the back door clock:

Browse Parent Clock Peers					
▲Serial Number	Description	IP Address	Port		
25936	Front Door Clock	192.168.2.130	5123	▲	✗
27897	Back Door Clock	192.168.2.240	5123	▲	✗
99999	Employee Status Monitor	192.168.2.10	5123	▲	✗

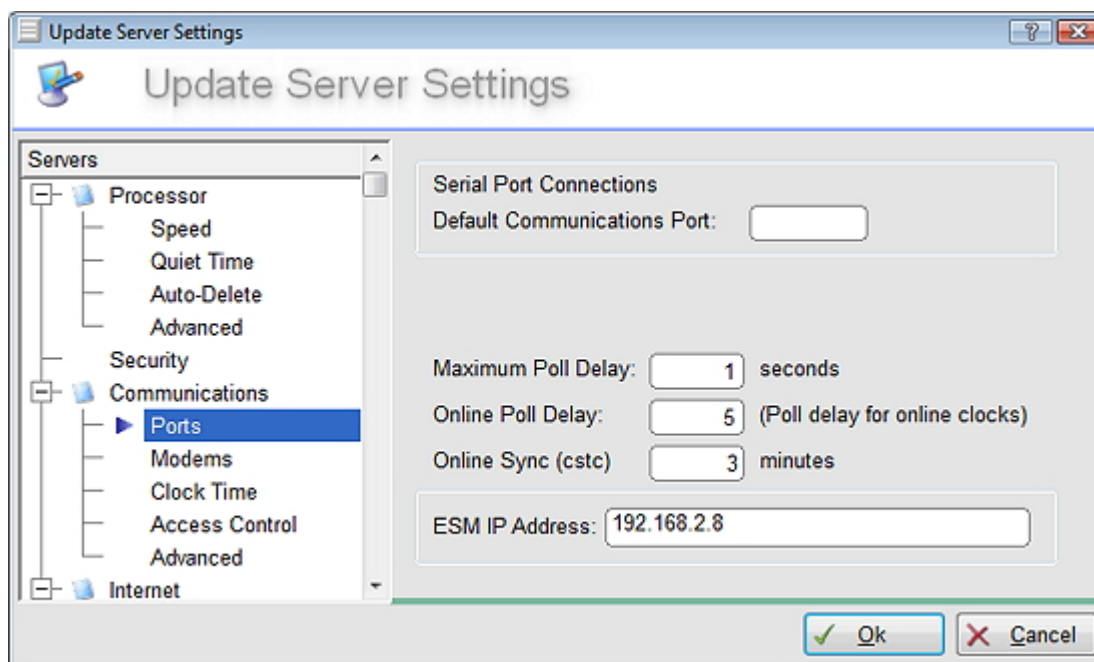
9. Run the employee Status Monitor

In TNA

If you are using TNA software, you need to add the ESM as a device into TNA.

From TNA version 6.03 you can simply add the IP address of the pc from which you will be running ESM into the Server Settings:

1. Open the Configuration Module.
2. Click on Setup, Server Options. The *Update Server Settings* window will open.
3. Click on Communications, Ports and enter the IP address in the **ESM IP Address** field.



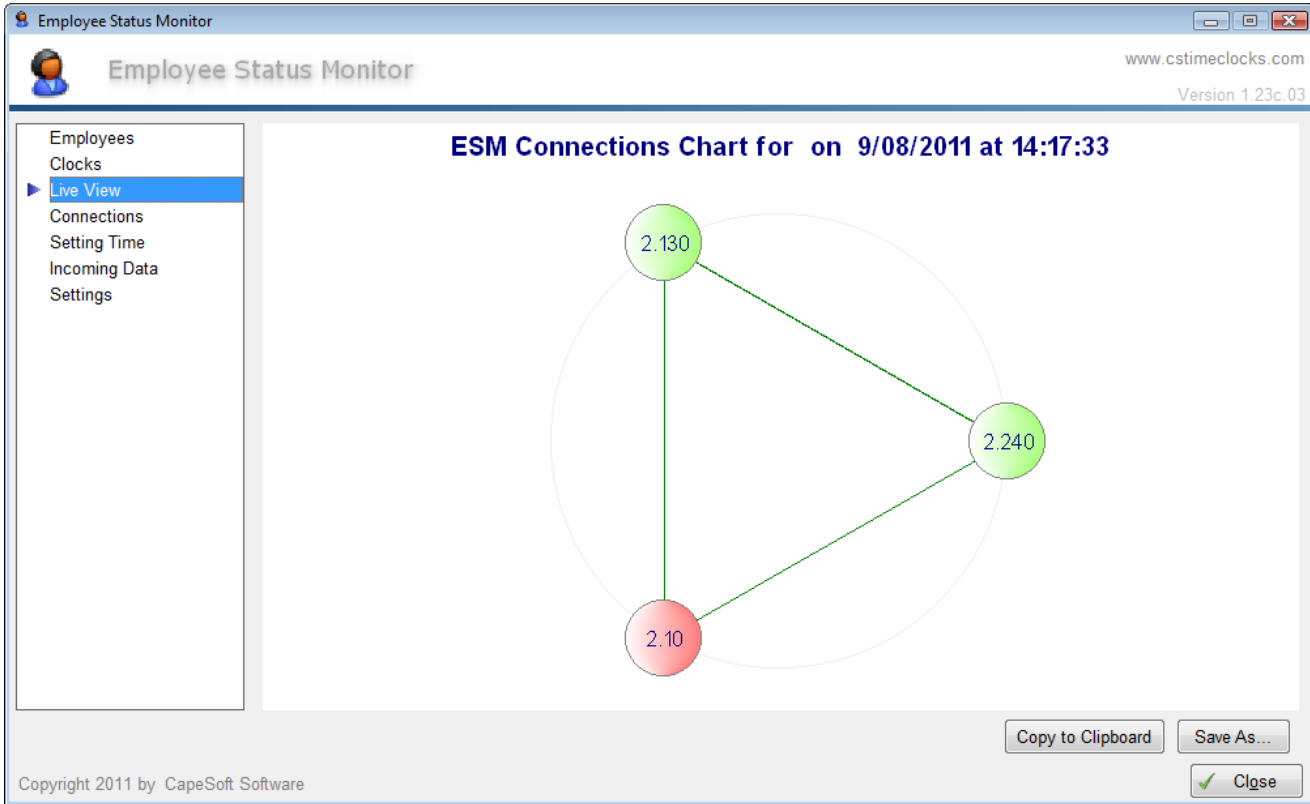
4. Click on Ok to save.

Using ESM

The employee monitor opened with the following screen:

IP	Serial	Last Date	Last Time	Clock Time	Offset From PC	Others	Others Alive
192.168.2.10	-1017880				0	-1	
192.168.2.130	27912	9/08/2011	14:11:24	12:12:12	7,180	3	3
192.168.2.240	27897	9/08/2011	14:11:24	14:11:52	0	2	2

The red highlight bar means that there is no connection to this device. In this case it is the employee status monitor, which probably means the PC firewall is blocking the program or port. Clock 192.168.2.130 has three alive connections, where as clocks 192.168.2.140 has two alive connections. This means that 192.168.2.130 can see itself and the other two devices, but 192.168.2.240 can only see two of the three devices. The live view gives you a more diagrammatical interpretation:



Again the red connections above show us which device cannot see which device. A more tabular form of this view is shown below:

192.168.2.10	
IP	Connection ID
192.168.2.10	
192.168.2.130	
192.168.2.240	

Above, clock 192.168.2.10 cannot connect to the other two devices. Because this is the Employee Status Monitor, it is probably blocked by the firewall of the PC.

The screenshot shows the 'Employee Status Monitor' application window. The title bar includes the text 'Employee Status Monitor' and standard window controls. The main interface has a header with a logo, the title 'Employee Status Monitor', the website 'www.cstimeclocks.com', and the version 'Version 1.23c.03'. A left-hand menu lists options: Employees, Clocks, Live View, Connections (highlighted), Setting Time, Incoming Data, and Settings. The main area is divided into three sections:

- Clock:** A list of IP addresses: 192.168.2.10 (highlighted in red), 192.168.2.130 (highlighted in green), and 192.168.2.240 (highlighted in green).
- 192.168.2.130:** A table showing connections from this clock to other devices.

IP	Connection ID
192.168.2.10	6
192.168.2.130	1
192.168.2.240	5

At the bottom left, it says 'Copyright 2011 by CapeSoft Software'. At the bottom right, there is a 'Close' button with a green checkmark icon.

Clock 192.168.2.130 above, can connect to all three devices. So this is a perfect result for this device.

Employee Status Monitor

www.cstimeclocks.com

Version 1.23c.03

Employees
Clocks
Live View
▶ Connections
Setting Time
Incoming Data
Settings

Clock
192.168.2.10
192.168.2.130
192.168.2.240

192.168.2.240

IP	Connection ID
192.168.2.10	3
192.168.2.130	2

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Close

Clock 192.168.2.140 above is not able to see itself. This means the serial number was incorrectly entered for this device.

Employee Status Monitor

www.cstimeclocks.com

Version 1.23c.03

Employees
Clocks
Live View
▶ Connections
Setting Time
Incoming Data
Settings

Clock
192.168.2.10
192.168.2.130
192.168.2.240

192.168.2.240

IP	Connection ID
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Close

Above, Clock 192.168.2.240 is not connected to ESM and cannot see the other devices. It is more than likely that this clock is either not on the network, or the replication port or clock IP is being blocked by the firewall and or proxy server.

When a clock has an active connection to ESM, the connection status is displayed as green. For every 60 consecutive seconds when the connection is not re-established, the connection highlight bar color change until it is displayed as a red highlight bar. Which means no connection can be established.

192.168.2.240 GREEN = Connection established within the last 60 seconds

192.168.2.240 YELLOW = No connection established within the last 60 seconds

192.168.2.240 ORANGE = No connection established within the last 120 seconds

192.168.2.240 PINK = No connection established within the last 180 seconds

192.168.2.240 RED = No connection established within the last 240 seconds

IMPORTANT:

The color coding above represents the connection to and from the clocks to ESM. It is a good measure to verify connectivity, but does **not confirm that the clocks are connection to each other**. This must be verified by the list or live view shown earlier in the document.

ESM is just a monitoring tool. Although you see it on the replication lists above, it does not replicate employee directions to the clocks.

[Download](#) a document on interpreting the information in the ESM commslog.

Permalink: <http://tinyurl.com/3h3taup>