

# siteVIEW v2.1

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## *Release Notes*

*Date: June 2014*

## Contents

Release Overview .....	3
Installing siteVIEW .....	3
New Installation .....	3
Upgrading an Existing Installation .....	3
Ping Devices .....	4
Adding Ping Devices .....	4
Using Ping Devices .....	5
Understanding Ping Transactions .....	5
Generating Ping Transactions .....	5
Monitoring Ping Devices Transactions .....	6
Reviewing Ping Device Transactions .....	6
TASC IP Devices .....	7
Adding TASC IP Devices .....	7
Using TASC IP Devices .....	8
Understanding IP Device Transactions .....	8
Generating IP Device Transactions .....	8
Monitoring TASC IP Device Transactions .....	9
Reviewing IP Device Transactions .....	9
Managing TASC Serial, CPR Serial and IP Devices .....	10
Selecting TASC Serial, CPR Serial and IP Devices .....	10
Differences between TASC Serial, CPR Serial and IP Devices .....	11
Migrating TASC Serial or CPR Serial Devices to IP Devices .....	12
Adjusting siteRSM IP Settings .....	12
Creating the IP Device .....	16
Migrating siteVIEW-specific Data .....	17
Testing and Finalizing Migration .....	19
Communication State Icon Meanings .....	20
Additional siteVIEW Enhancements .....	22

## RELEASE OVERVIEW

siteVIEW v2.1.0 provides software enhancements, amended configuration settings and operational recommendations to ensure robust IP-based connections with siteRSM devices.

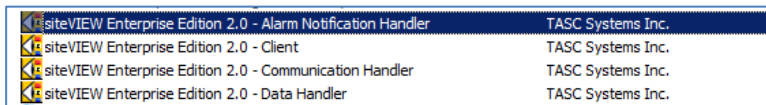
## INSTALLING siteVIEW

### ***New Installation***

Use the siteVIEW v2.1 User Manual, specifically “Chapter 3: Software Configuration” to install and configure this new version of siteVIEW v2.1.

### ***Upgrading an Existing Installation***

To install the new version, first uninstall the following siteVIEW components from Control Panel's Programs and Features:



siteVIEW Enterprise Edition 2.0 - Alarm Notification Handler	TASC Systems Inc.
siteVIEW Enterprise Edition 2.0 - Client	TASC Systems Inc.
siteVIEW Enterprise Edition 2.0 - Communication Handler	TASC Systems Inc.
siteVIEW Enterprise Edition 2.0 - Data Handler	TASC Systems Inc.

#### *siteVIEW Software Components*

The uninstall process will retain the configuration information associated with your application – this database of information will be utilized by the new release of siteVIEW v2.0.

Once these components are uninstalled, use the siteVIEW v2.0 User Manual, specifically “Chapter 3.1: Installing the System” (Steps 1 through 4) to install this new version of siteVIEW v2.0.

## PING DEVICES

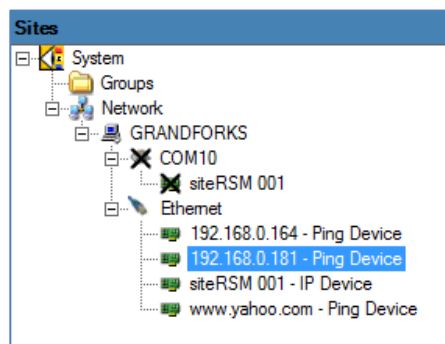
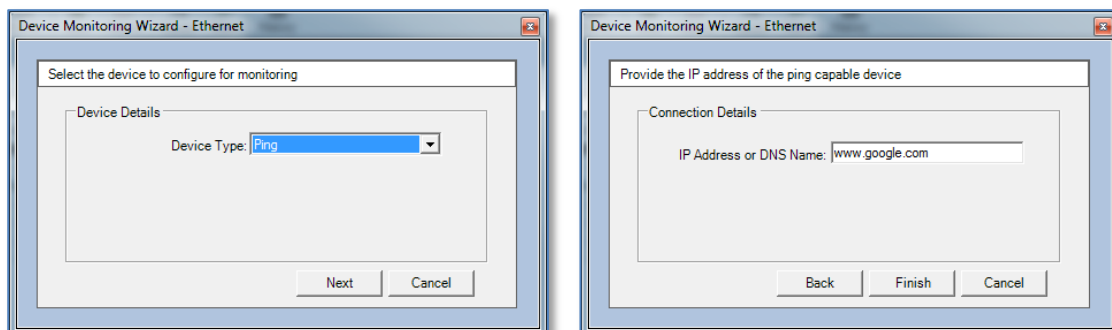
Ping devices are a new device type, introduced in siteVIEW v2.1. Ping devices work in a similar manner as the widely used [Ping networking utility](#) which is used to test the reachability of a host on an Internet Protocol (IP) network. siteVIEW Ping devices can be used to determine whether an IP device is available or “up and running”.

### Adding Ping Devices

Before adding Ping device, an Ethernet communication port must be added. Ping devices cannot be added to Serial communication ports.

To add a Ping device, use the Edit – Add Device function or right-click on the Ethernet communication port and select Add Device. The resulting Device Monitoring Wizard is used to define the Ping device's properties:

- For the Device Details section, select Ping as the Device Type, then select Next
- For the Device Identification section, enter a user-friendly name describing the Ping device in the Name field. Optionally, add additional long-form information within the Description field, then select Next.
- For the Connection Details, enter an IP (IPv4) address or a DNS name for the device. siteVIEW will automatically resolve a DNS name to the IPv4 address of the device. Then press Finish to add the Ping device.



Currently, siteVIEW does not support IPv6 addressing.

## ***Using Ping Devices***

Ping devices can only be polled using a siteVIEW DeviceStatus command. The DeviceStatus command is interpreted by the siteVIEW Communication Service as request to send ping message.

siteVIEW Ping devices are “stateless” devices and therefore are never “offline”. Ping devices either respond to a Device Status command, which indicates that the device is available, or they do not respond, which indicates that the device is unavailable. Unavailability can be alarmed using siteVIEW’s “Non-Responsive” alarm trigger.

## **Understanding Ping Transactions**

Each DeviceStatus poll initiates a ping message transaction. The ping transaction sends a single ICMP packet to the Ping device (host) and listens for a response.

If a response is received, the Communication Service will signal that the DeviceStatus command has completed successfully. The Ping device will also show that it is ready for another transaction.

If the device does not respond after 500ms, the Communication Service will try again three times (every ~3 seconds). If after the initial attempt and the three retries, the device still hasn’t responded, the Communication Service will signal that the device has timed out and is not responding. This “No Response” event can be used with the siteVIEW alarm system to indicate that the device is not available on the network. On the Sites network tree, the Ping device will also show an “X”, indicating a failed transaction, but will be ready for another transaction.

## **Generating Ping Transactions**

The DeviceStatus command can be sent in two ways:

1. By pressing the Refresh button which sends out an immediate DeviceStatus command. This method is useful to quickly verify the device’s availability as required.
  - If the Ethernet communication port is selected in the Sites network tree when the Refresh button is pressed, all Ping devices underneath the Ethernet communication port will be sent a DeviceStatus command.
  - If a specific Ping device is selected in the Sites network tree when the Refresh button is pressed, only the selected Ping device will be sent a DeviceStatus command.
2. The more typical use for Ping devices is to set up a DeviceStatus poll using siteVIEW’s Polling Configuration utility. In this way, DeviceStatus commands can be sent to a Ping device(s) periodically and if the device doesn’t respond, a siteVIEW alarm can be triggered.

Though the Polling Configuration utility allows for non-DeviceStatus commands to be sent to Ping devices, non-DeviceStatus commands are ignored by the siteVIEW Communication Service.

### Monitoring Ping Devices Transactions

The combination of a repetitive Device Status poll and a Non-Responsive alarm will provide functional monitoring of the device – allowing notifications if the device becomes unavailable.

Within the Alarm Configuration utility, select the Ping device, but for I/O select “None” – this creates a Non-Responsive alarm for the device.

Server <span>GRANDFORKS</span> COM Site <span>Ethernet</span> Device <span>192.168.0.181 - I</span> I/O <span>-- All --</span>								
ID	Server	COM Site	Device	I/O	Type	Number	Severity	Condition
1	GRANDFORKS	Ethernet	192.168.0....	--	--	--	Minor	Non-Responsive

### Reviewing Ping Device Transactions

siteVIEW logs all activity with Ping devices.

- siteVIEW History – To view historical communication and alarm information associated with a Ping device, select the History button to initiate a Log View session.

The Communication link shows all communication transactions, filterable by device type and other criteria.

The Alarm link shows all alarm occurrences, filterable by device type and other criteria.

- Device Communication Log – each device keeps a detailed log of transaction communication. This detailed text file is found in the CommSvc folder and is called `TransmitReceive<device name>.log`. The `<device name>` is the IP or DNS name of the device – for example: `TransmitReceive192.168.0.100.log`. To differentiate between TASC IP devices, remember that Ping devices do not reference a port number.

## TASC IP DEVICES

Starting in siteVIEW v2.1, TASC devices can be connected via an IP connection.

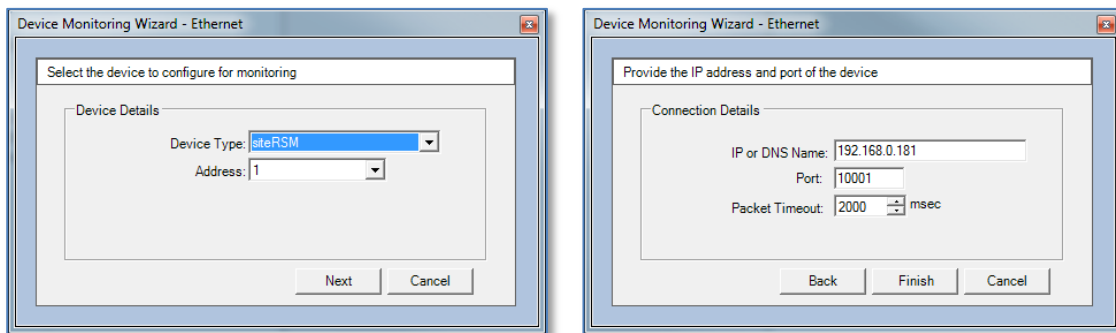
This new device interface can be utilized in the following scenarios:

- siteRSM platforms that are connected directly to an IP network via the siteRSM's Ethernet port. This is the primary use model for the IP connection method. The benefit of this type of connection is that the Lantronix CPR serial to IP adapter technology is no longer required – thereby allowing a simplified configuration and direct interface.

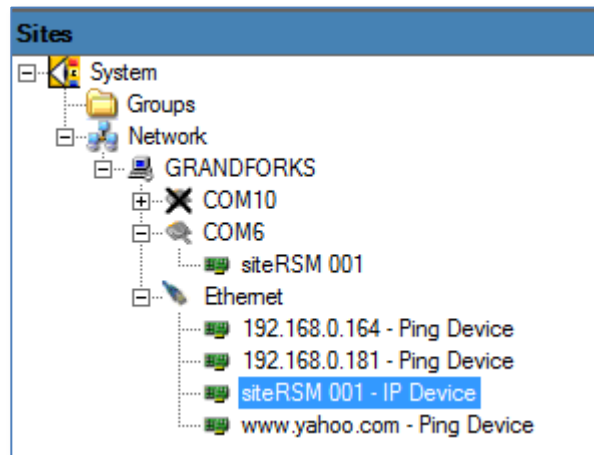
### Adding TASC IP Devices

To connect to a TASC device via an IP, an Ethernet communication port must be added. Use the Edit – Add Device function or right-click on the Ethernet communication port and select Add Device. The resulting Device Monitoring Wizard is used to define the TASC IP device's properties:

- For the Device Details section, select the type of TASC device and address then select Next
- For the Device Identification section, enter a user-friendly name describing the TASC device in the Name field. Optionally, add additional long-form information within the Description field, then select Next.
- For the Connection Details, enter an IP (IPv4) address or a DNS name for the device. siteVIEW will automatically resolve a DNS name to the IPv4 address of the device. Specify the port number, typically for siteRSM devices this will be 10001. Specify the Packet Timeout (time between retries), then press Finish to add the device.



IPv6 interfaces are not supported.



## Using TASC IP Devices

TASC IP devices operate almost the same as conventional serial or CPR devices, with the only difference being the underlying physical communication interface.

### Understanding IP Device Transactions

For TASC devices, siteVIEW supports a set of TASC protocol commands. These commands allow siteVIEW to request either status or configuration information from the device. The siteVIEW Communication Service sends each command as a transaction to the device.

If a response to a transaction is received, siteVIEW will interpret and process the results automatically.

If the device does not respond within the Interbyte timeout specified, the Communication Service will try again as per the number of Retries configured for the device. If after the initial attempt and the three retries, the device still hasn't responded, the Communication Service will signal that the device has timed out and is not responding. This "No Response" event can be used with the siteVIEW alarm system to indicate that the device is not available on the network. On the Sites network tree, the device will also show an "X", indicating a failed transaction.

### Generating IP Device Transactions

siteVIEW communicates with IP devices, as with serial or CPR device, in the following three ways:

1. Through manual refresh button presses. Each refresh button press consists of multiple commands, which are processed sequentially as individual transactions. There are three types of refreshes:
  - Status refresh: commands to request the current status of the device and associated I/O.
  - Configuration refresh: commands to request the current configuration of the device.
  - Full: commands to request both status and configuration of the device.



2. Through scheduled polled commands. Use the siteVIEW Polling Configuration editor to set up one or more commands to send to the device.
3. Through events received from the device based on digital input change of state, analog input threshold crossings or temperature threshold crossings.

### Monitoring TASC IP Device Transactions

The combination of a repetitive Device Status poll and a Non-Responsive alarm will provide functional monitoring of the device – allowing notifications if the device becomes unavailable.

Within the Alarm Configuration utility, select the IP device, but for I/O select “None” – this creates a Non-Responsive alarm for the device.

Server <b>GRANDFORKS</b>		COM Site <b>Ethernet</b>		Device <b>192.168.0.181 - I</b>		I/O <b>-- All --</b>		
ID	Server	COM Site	Device	I/O	Type	Number	Severity	Condition
1	GRANDFORKS	Ethernet	192.168.0....	--	--	--	Minor	Non-Responsive

### Reviewing IP Device Transactions

siteVIEW logs all activity with IP devices.

- siteVIEW History – To view historical communication and alarm information associated with a IP device, select the History button to initiate a Log View session.

The Communication link shows all communication transactions, filterable by device type and other criteria.

The Alarm link shows all alarm occurrences, filterable by device type and other criteria.

- Device Communication Log – each device keeps a detailed log of transaction communication. This detailed text file is found in the CommSvc folder and is called `TransmitReceive<device name>.log`. The `<device name>` is the IP or DNS name of the device, followed by an underscore and then followed by the port number – for example: `TransmitReceive192.168.0.200_10001.log`. To differentiate between TASC Ping devices, remember that Ping devices do not reference a port number.

## MANAGING TASC SERIAL, CPR SERIAL AND IP DEVICES

During normal operations TASC serial, CPR-based serial and IP devices, work identically. Each device processes transactions in order received. If multiple commands are sent – for example, as the result of a Refresh operation – these commands are queued and transacted sequentially.

### Selecting TASC Serial, CPR Serial and IP Devices

Since there are many ways to connect siteVIEW to TASC devices, here are some guidelines to build a robust monitoring network:

- Use the siteRSM's "primary" transmission port as the main connection
  - Only one port on the siteRSM can be configured to send threshold events - by default, the IP port on the siteRSM is defined as the primary port. Use the primary port as the main connection because it can respond to refresh and poll requests, and send threshold events in real-time.
  - While the siteRSM's serial port may be configured as the primary transmission port, generally, it is purposed for local configuration via the SCCU software. In the case where the serial port is configured as the primary port, use a siteVIEW serial device to monitor the siteRSM.
- Use only one siteVIEW device per siteRSM connection
  - It is not possible to connect to a siteRSM IP port using multiple active siteVIEW devices simultaneously since the siteRSM's IP port accepts only one connection at a time. Use either an IP device or a CPR serial device connection – not both.



**For existing siteVIEW networks, it is possible to migrate from CPR devices to IP devices. In this case, it is important to remove, or at minimum, disable, the CPR device when adding the IP device for the siteRSM.**

- A Ping device can be added to a siteRSM connection to monitor availability
  - A Ping device may be added to a siteRSM, even if an IP device or CPR device previously exists. A Ping device works independently to a IP device or CPR device to monitor the availability of the siteRSM.
- A Ping devices can be added to non-siteRSM connections
  - A Ping device may be added to monitor non-siteRSM devices within a network. For example, it may be useful to monitor the availability of a critical device(s) within the network.

### ***Differences between TASC Serial, CPR Serial and IP Devices***

However, during failed communications and communication interruption recovery, there are subtle differences related to the differences between the underlying physical communication methods:

	<b>Serial Port</b>	<b>CPR Port</b>	<b>Ethernet Port</b>
Connection interrupted failures – for example, if a cable is unplugged	If the cable is disconnected, current and all queued transactions will be attempted, but will fail (with retries) as timed out (no response).	Initial transactions will fail due to time out (with retries).  When the connection is confirmed as failed (as determined by the CPR Manager's TCP Keep Alive settings), the transaction being processed will fail with a communication error.  All subsequent queued transactions remain queued.	Initial transactions will fail due to time out (with retries).  In 30 seconds, when the connection is confirmed as failed, the transaction being processed will fail with a communication error.  All subsequent queued transactions remain queued.
Recovery from connection interruptions	If the cable is reconnected, all subsequent commands will be transacted normally.	siteVIEW continuously checks the connection and upon recovery, all queued events are processed.	siteVIEW continuously checks the connection and upon recovery, all queued events are processed.

It is important to note that during connection interruptions, all events from the TASC device may be lost, therefore the connection should be validated frequently.



**To ensure that serial, CPR serial and IP devices are connected, use a repetitive Device Status poll (every x minutes) in combination with a Non-Responsive alarm. Using this mechanism will allow notification of any connection failures and limit any loss of events being sent from the device.**

## ***Migrating TASC Serial or CPR Serial Devices to IP Devices***

To take advantage of a direct IP connection, it may be desirable to convert existing TASC serial or CRP serial devices to an IP device. While the process of adding an IP device will automatically upload fundamental information directly from the siteRSM, including basic I/O configuration, siteVIEW-specific information, which is stored in the siteVIEW database, must be also considered to fully convert the device to IP. siteVIEW-specific database information includes panel designs, formulas, alarms, poll schedules and mapping.

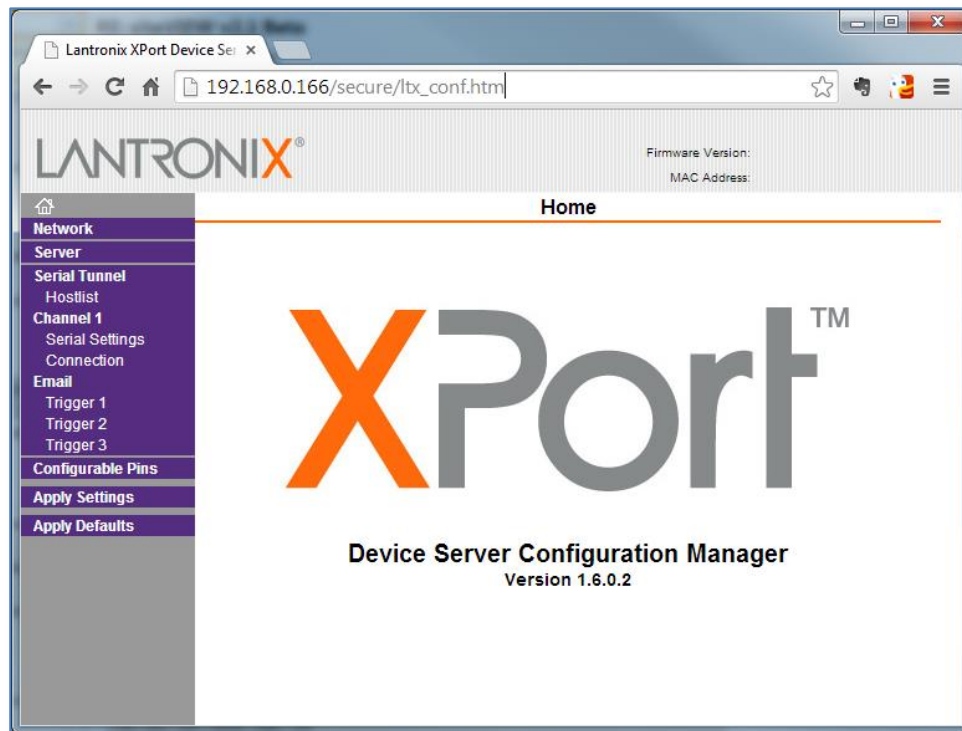
### **Adjusting siteRSM IP Settings**

#### **Check to See if the siteRSM Requires Adjusting**

Older siteRSMs must be prepared for siteVIEW IP connections. To identify if the siteRSM's configuration must be prepared for siteVIEW IP connections, using an Internet browser, navigate to the IP address of the siteRSM (user=admin, password=<nothing/empty>).

If you are unable to login (Error=401 Authorization Failed), then no configuration changes are required, the siteRSM is ready for use with siteVIEW.

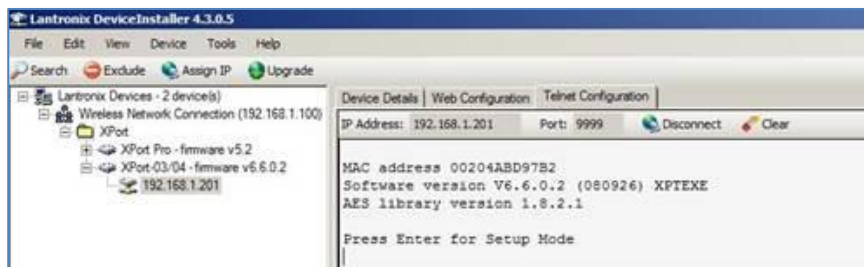
However, if you see a screen like the one below, indicating the siteRSM's IP interface is using an XPort Device Server, then additional steps must be taken to prepare the siteRSM for operation with siteVIEW's IP interface.



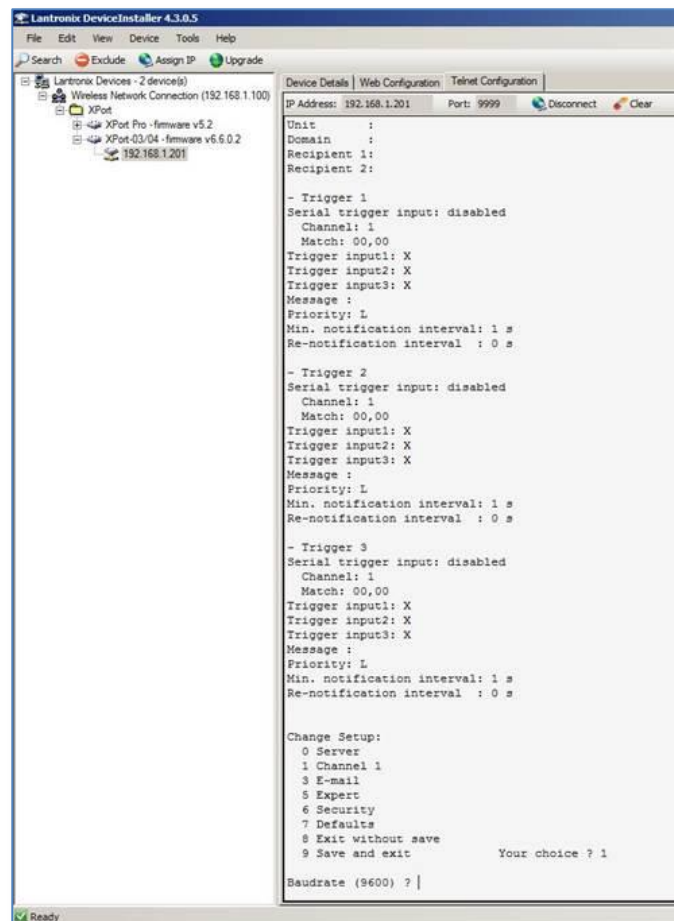
## Adjust Serial Packing Settings

For siteRSMs that require adjustments, use a Telnet session to adjust the Serial Packing Control, so that siteVIEW messages will be sent as one packet, not multiple. To do this:

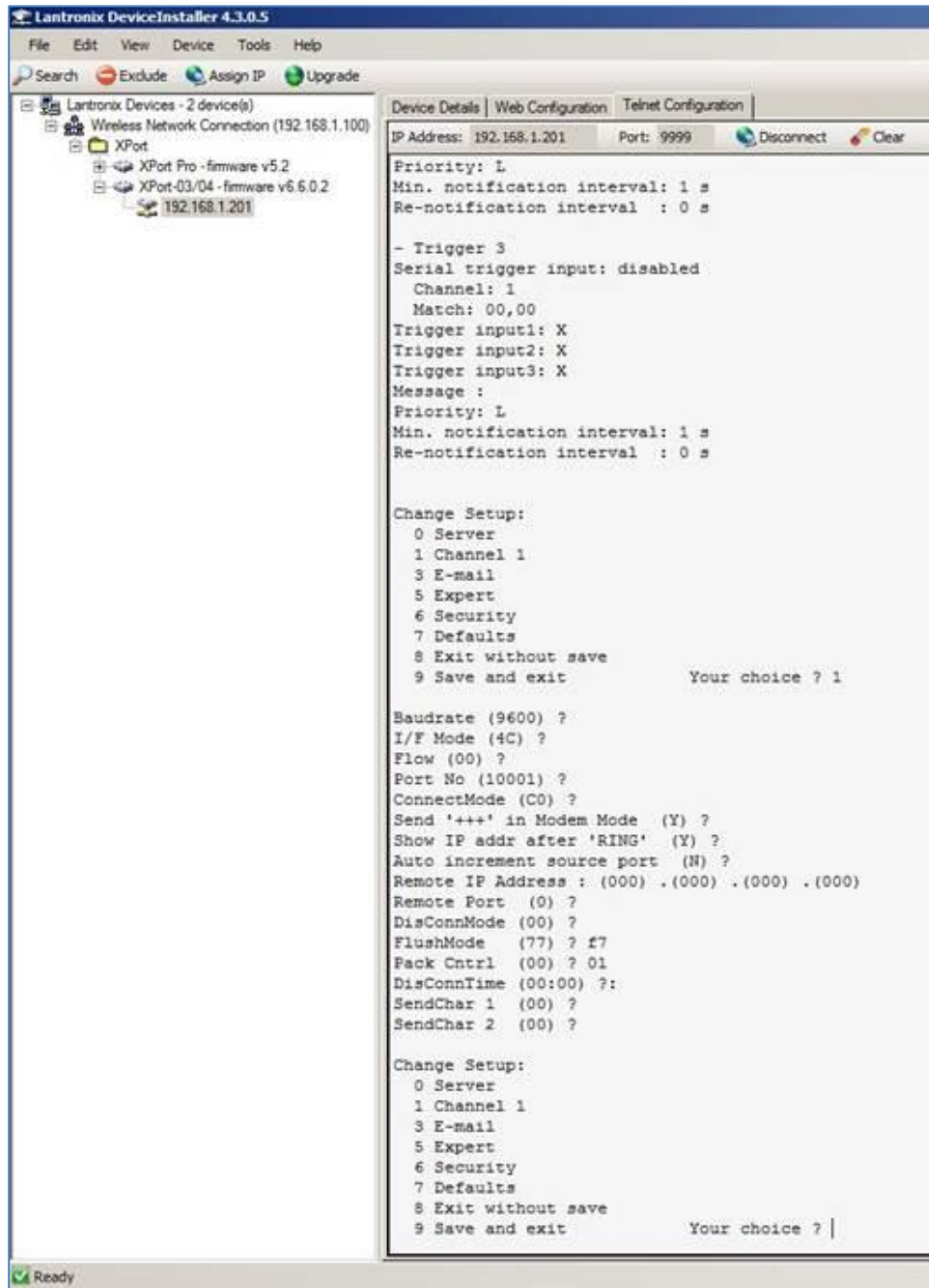
1. Run the [Lantronix Device Installer software](#) and then allow the Device Installer software to locate the siteRSM's adapter (IP address)
2. Select the siteRSM adapter and then select the Telnet Configuration tab and press Connect



3. Press Enter to enter the configuration menu, then select the "1 – Channel 1" option.



4. Press Enter (no change) until you get to FlushMode. The default is 77, which means that Packing is disabled. Enter f7 and Enter, to enable Packing. The default for Pack Cntrl is 00, which means 12ms Packing Interval. Enter 01 and Enter, which means 52ms Packing Interval. Press Enter (no change) for the rest of the settings, until you return to the menu.



5. Press 9 and Enter to Save and exit.

```
Change Setup:
 0 Server
 1 Channel 1
 3 E-mail
 5 Expert
 6 Security
 7 Defaults
 8 Exit without save
 9 Save and exit          Your choice ? 1

Baudrate (9600) ?
I/F Mode (4C) ?
Flow (00) ?
Port No (10001) ?
ConnectMode (C0) ?
Send '+++' in Modem Mode (Y) ?
Show IP addr after 'RING' (Y) ?
Auto increment source port (N) ?
Remote IP Address : (000) .(000) .(000) .(000)
Remote Port (0) ?
DisConnMode (00) ?
FlushMode (77) ? f7
Pack Cntrl (00) ? 01
DisConnTime (00:00) ? :
SendChar 1 (00) ?
SendChar 2 (00) ?

Change Setup:
 0 Server
 1 Channel 1
 3 E-mail
 5 Expert
 6 Security
 7 Defaults
 8 Exit without save
 9 Save and exit          Your choice ? 9

Parameters stored ...
|
```

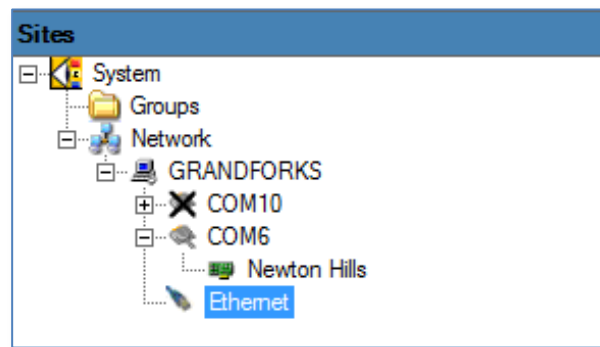
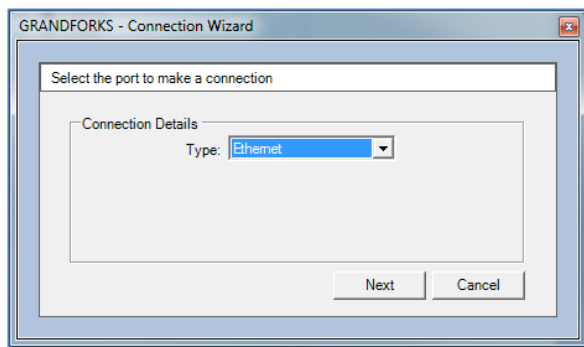


While the Device Installer offers a web interface option to adjust these settings, TASC recommends using the Telnet interface, as cached settings may result in unexpected behavior using the web interface.

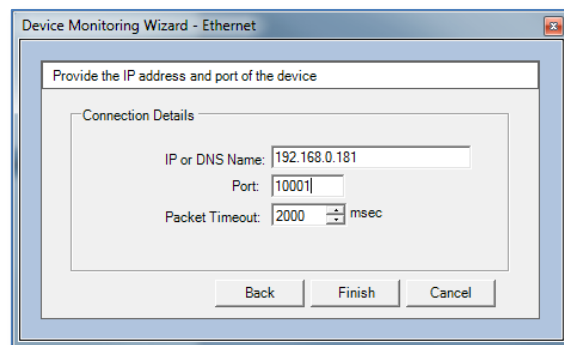
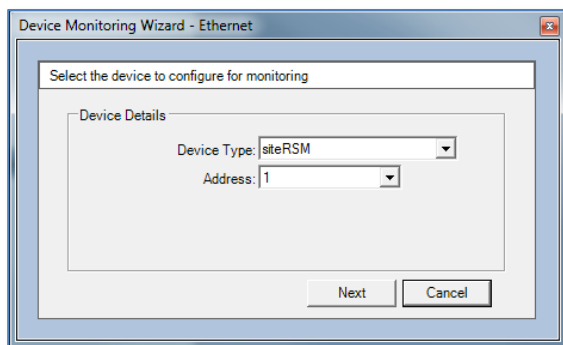
### Creating the IP Device

The following steps are recommended to convert an existing TASC Serial or CPR Serial device to an IP device:

1. Ensure that the CPR Serial device is disabled. Since the IP connection on a siteRSM allows one connection at a time, disabling the CPR Serial will ensure that the IP device is given precedence to the connection.
2. Create an Ethernet communication port. This port represents the Ethernet adapter for siteVIEW's communication service and will serve as the connection to all IP devices.



3. Create a siteRSM device under the Ethernet communication port. Use the IP address for the siteRSM – if you previously had a CPR serial port, use the IP address which was used within the CPR Manager software for the CPR serial port. The port address by default is 10001. Packet Timeout is the amount of time to wait before retrying a communication message – the default is 2000msec (2 seconds).



As part of the creation process, siteVIEW will automatically interrogate the siteRSM and upload all information related to the device's hardware configuration and current status – this includes:

- Amount of digital inputs, digital outputs, analog inputs and temperature inputs, and which points are enabled/disabled.
- Current I/O configuration including:
  - Digital inputs – off state, hold times, local outputs and output action

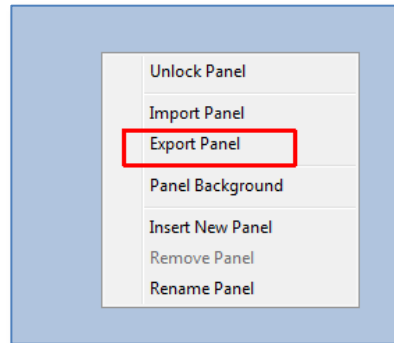


- Analog inputs – ranges, sensor types, offsets, qualifiers, thresholds, local outputs and hold times
- Temperature inputs – units, qualifiers, thresholds, local outputs and hold times
- Outputs – off states

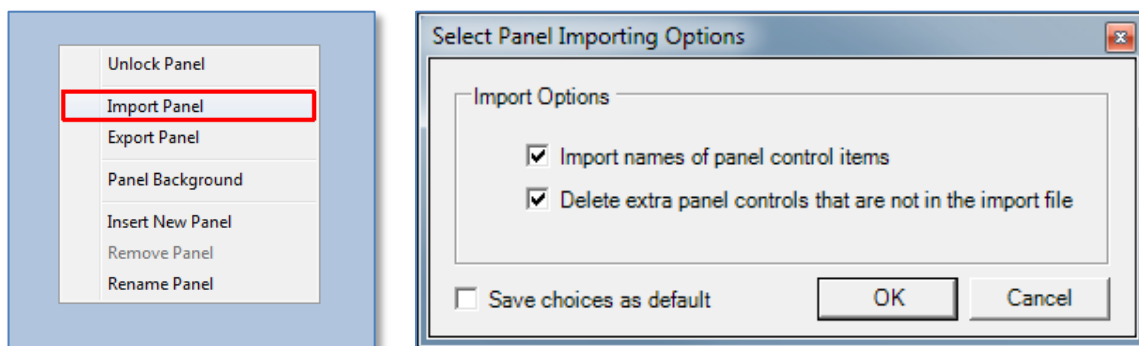
### Migrating siteVIEW-specific Data

#### **Panel Information**

4. Export the panel design from the existing CPR serial (or TASC serial) device. The panel design includes the background image and I/O control user interface settings. To export, right-click anywhere on the Panel View screen for the CPR serial (or TASC serial) device and select “Export Panel”, then select a location to store the resulting .PNL file.

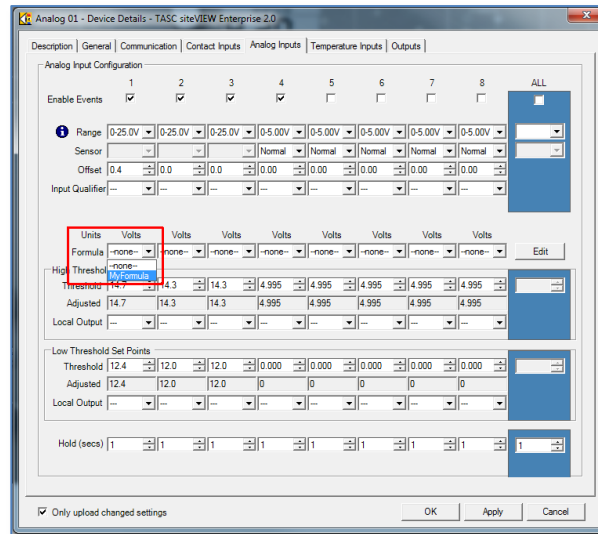


5. Import the panel design to the new IP device. To import, right-click anywhere on the Panel View screen for the IP device and select “Import Panel”, then select the previously saved .PNL file. During the import process, an Importing Options dialog will be presented. To ensure that the panel mimics the information previously assigned, enable both the “Import names of panel control items” (which ensures any names previously attached to your panel are imported) and “Delete extra panel controls that are not in the import file” (which will delete any controls that were not in the previous panel).



## Update Formulas

- If the previous TASC serial or CPR serial device used formulas, adjust the properties of the analog inputs to use the formula. Open up the Device Properties and select the Analog Inputs tab, and then use the Formula drop down list to select the appropriate formula.

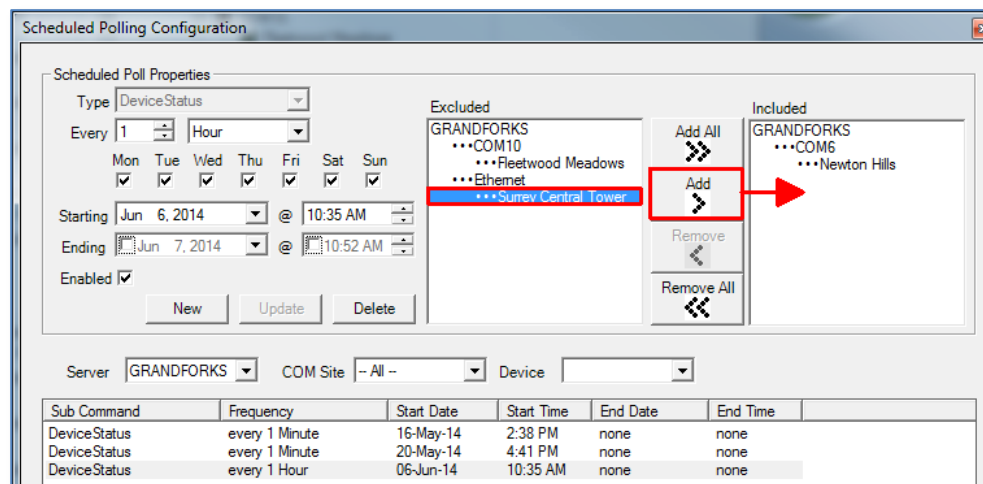


## Create Alarms

- Create the alarms for the IP device using the Alarm Configuration form. At this time, alarms cannot be modified or exported/imported for a new device - it is necessary to re-create the alarms.

## Adjust Scheduled Polls

- Adjust the scheduled polls for the IP device using the Schedule Polling Configuration form. Select the polls that you would like to add the IP device to and then use the "Add" button to include the IP device to the list of devices support for the selected poll.















### Create Site Mappings








9. Create the site mappings for the IP device using the Site Mappings Configuration form. At this time, site mappings cannot be modified or exported/imported for a new device - it is necessary to re-create the site mappings

### Testing and Finalizing Migration

10. Confirm operation of the IP device. Use the IP device during normal operations to verify that the device is operating properly before deleting the previous CPR serial or TASC serial devices.
11. Delete the CPR serial or TASC serial devices. Once the migrated IP device has been validated, delete the obsolete CPR serial or TASC serial device. This is an optional step and can be carried out at any time as long as the device remains disabled.

## COMMUNICATION STATE ICON MEANINGS

State Image	Description of State
	Communication Service online
	Communication Service offline <i>Check to see if communication service is running or connected to siteVIEW Data Handler</i>
	Communication (Serial) Port enabled and available
	Communication (Serial) Port disabled or unavailable <i>If port is disabled, it must be enabled to communicate. Check to see if cable unplugged or, in the case of a CPR port, whether the IP Address is available</i>
	Device enabled and available
	Device disabled or unavailable <i>If device is disabled, it must be enabled to communicate. If previous communication to device was lost (e.g., no response), or other communication error - check to see if device is operational or if there is a connection (e.g., cabling) issue</i>
	Modem connected
	Modem disconnected or unavailable <i>Check modem status.</i>
	Modem pool available
	Modem pool unavailable
	Alarm is active
	siteVIEW Network <i>Top most node on siteVIEW network. All communication services nodes and children will be connected here.</i>

State Image	Description of State
	Group Folder <i>Group folder allows organization of devices</i>
	siteVIEW system <i>Top most node within a siteVIEW system – includes groupings and network.</i>
	Shortcut to an enabled and available Device <i>A shortcut to a device within a group folder</i>
	Shortcut to a disabled or unavailable Device <i>If device is disabled, it must be enabled to communicate. If previous communication to device was lost (e.g., no response), or other communication error - check to see if device is operational or if there is a connection (e.g., cabling) issue</i>
	Ethernet Port enabled and available
	Ethernet Port disabled or unavailable <i>If port is disabled, it must be enabled to communicate. Check to see if cable unplugged or, in the case of a CPR port, whether the IP Address is available</i>
	Device Updates Waiting <i>siteVIEW has sensed a difference between the siteVIEW representation of the device and the actual device contents. siteVIEW recommends a status and/or configuration refresh to ensure that the siteVIEW device representation is synchronized with the actual device.</i>

## ADDITIONAL SITEVIEW ENHANCEMENTS

siteVIEW v2.1.0 has made several other incremental enhancements including:

- Previously, after modifying the properties of a device, the cursor location within the network tree may have changed – siteVIEW now returns back to the selected node.
- Previously, if the COM port user-given name did not match the COM port's machine-defined name, the COM port may not open properly – siteVIEW now ensures that the port is opened using the machine-defined name.
- Previously, "Ceased and Cleared" could spuriously show in the alarm panel window – siteVIEW now prevents these unnecessary status indicators to show within the alarm panel window.
- Previously, if a formula was selected for an analog point, which had no panel control, an exception message could result. siteVIEW properly manages adding formulas to analog points which do not have any attached panel control.