

XCI Command Center



User Guide
For
XCI's Command Center
(XCI-NC)

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1. Purpose

The purpose of this document is to guide the system's installer with the steps necessary to operate XCIs' Network Controller.

2. Theory of Operation

All XCIs' Network Controllers – herein after referred to as XCI-NC – are empowered with UPnP (Universal Plug & Play) stack through utilization of which all the devices on the network can seamlessly communicate with each other and other computers on the network. XCI-NC comes embedded with its own browser based Administrative Console and, as such, there is no need for any software installation besides the normal Java runtime and, optionally, Excel to look at the log files in a tabular form.

UPnP enables the devices on the network to automatically show up as resources on the “Network Neighborhood” or “My Network Places” on host computers just like a shared printer. For UPnP to work, the devices need to be able to advertise their presence on the network and, furthermore, be able to communicate their state changes to the host computers. In this respect, then, the main prerequisite for successful operations is a network enabled environment.

3. Installation

This section left intentionally blank

4. Configuration

4.1 Prerequisites

4.1.1 Host Computer Software

- i. Windows XP (for other versions of Windows, a separate guide is provided)
- ii. Internet Explorer 6 and above
- iii. Java 1.5 (JRE 1.5) – included in the setup disk
- iv. Microsoft Excel, for viewing logs

4.1.2 Network

- i. DHCP or Static IP enabled network
- ii. Ethernet topology

4.2 Host Computer Configuration

Configuration is comprised of two very easy steps:

- i. UPnP Configuration
- ii. Java Installation

4.2.1 UPnP Configuration

UPnP is normally disabled on all computers by default. In order to make sure and/or to configure UPnP, please follow the following steps (refer to Figure 4-1):

- i. Click on **My Network Places** (either on the Start Menu or Desktop)
- ii. On the left Navigation Pane
 - a. If you see “**Hide icons for networked UPnP devices**”, you are done. No further action is necessary
 - b. If you see “**Show icons for networked UPnP devices**”, click on it and let the system get configured. You are done.

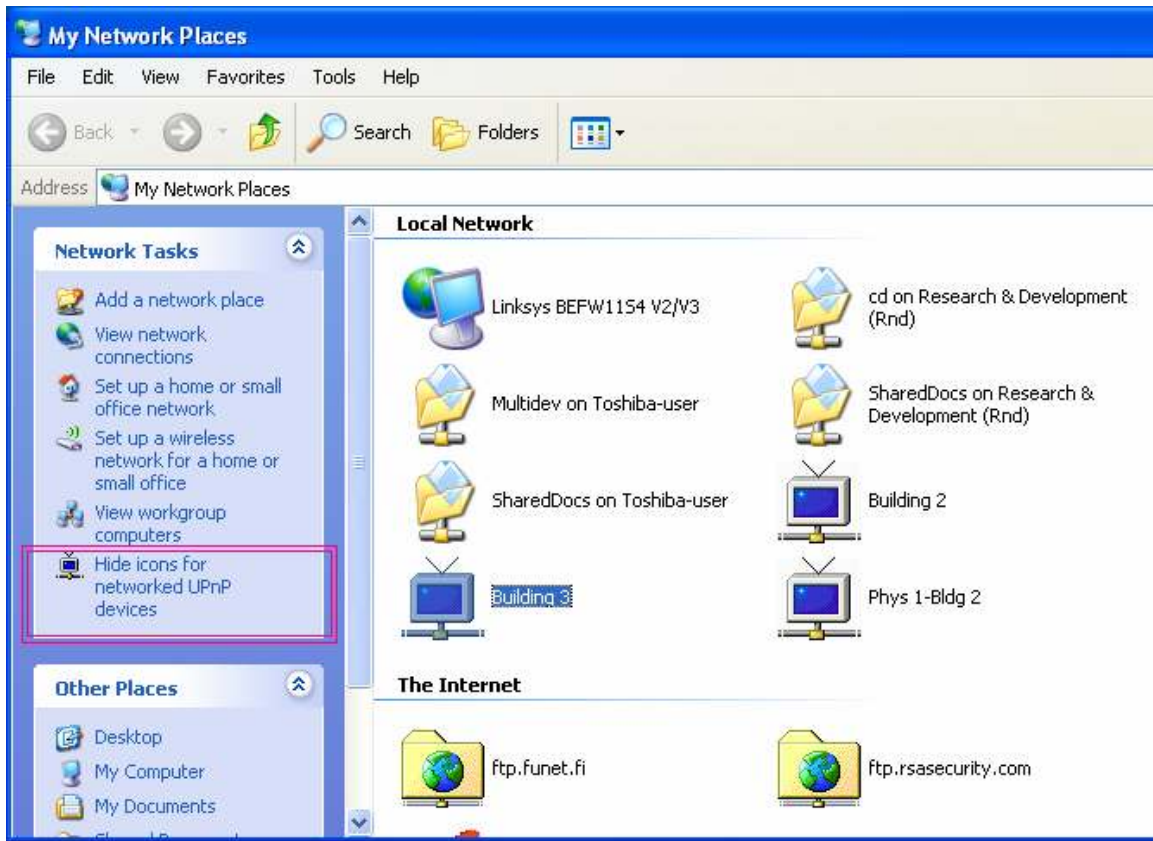


Figure 1 – UPnP Configuration

4.2.2 Java Installation

If you already have JRE 1.5v.6 installed, then no further action is necessary. Otherwise, click on the **jre-1_5_0_06-windows-i586-p.exe** on the installation CD to install JRE.

5. Using the Browser based Administrative Console

This section details the functionalities and the operations of the XCI-NC browser based Administrative Console.

In order to use the Administrative Console, you would have to know the device's URL. This said, however, since XCI-NC is UPnP enabled, as soon as you plug in the XCI-NC to the network and power, it shows up in the "My Network Places" on all the computers on the network. As such, all you have to do is to click on the icon of the device appearing in the "My Network Places" (refer to Figure 1)

Newly installed devices appear with names equal to their MAC-ADDRESS so that they could be easily identified per installation. These names can easily be changed to more meaningful names.

5.1 Initial Setup

When you start up the Administrative Console for the first time, and if your specific XCI-NC device is security aware, you will be presented with a user-id/password dialog box.

Please enter **admin** for both the user-id as well as the password. On the main screen (refer to Figure 2):

- i. Right mouse click on the **Network** icon on the left navigation pane
- ii. Click on the **Set Userid/Password** menu item

Enter the desired userid and password and keep it in a safe place.

Note: Login credentials may only be reset through Telnet or HyperTerminal sessions. Please consult the Installation and Configurations Guide.

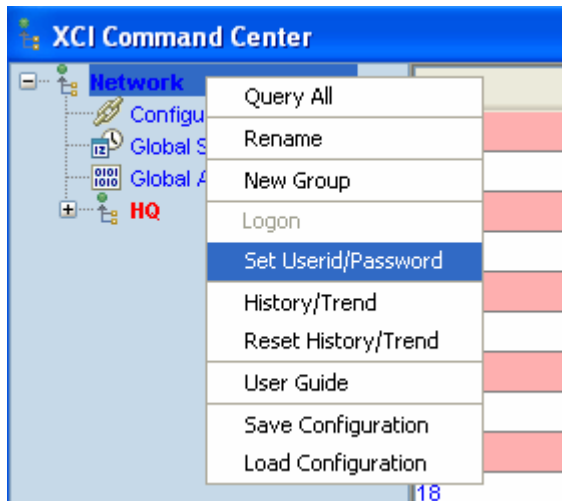


Figure 2 – Setting the User-id and Password

5.2 Administrative Console's Components

The XCI-NC's Administrative Console is very intuitive and is essentially comprised of two complementary panes (refer to Figure 3)

- i. The Navigation Pane is on the left
- ii. The View Pane is on the Right



Figure 3 – Navigation and View Panes

Clicking on the icons on the Navigation Pane brings up the associated View in the View Pane.

Right Mouse clicking on the icons on the Navigation Pane brings up a menu of actions appropriate only for that node on the tree.

5.2.1 Navigation Pane Components

The Navigation Pane is a tree view at the top most of which is the whole Network.

The Navigation Pane may expand, grow, and shrink based upon the number of other devices (i.e. thermostats) attached to an XCI-NC as well as user actions. There are only **8** distinct types of nodes that you may find on the Navigation Pane (refer to Figure 3):

5.2.1.1 Root Node

This is the top most icon in the Navigation Pane which, at least initially, is labeled **Network**. Clicking on the node brings up the [Overview View](#) which encapsulates all the pertinent information for all the devices on the network.

Right mouse clicking on the Root Node brings up the menu for operations that will be applied globally to all the XCI-NCs in the network and all the devices attached to those XCI-NCs (refer to Figure 4):

- i. **Query All** – allows the user to query all the settings for all the XCI-NCs and all the attached devices thereto
- ii. **Rename** – allows the user to rename the Root Node to a more meaningful name
- iii. **New Group** – allows the user to create a new logical group. Please refer to the [Logical Grouping section 6](#)
- iv. **Logon** – allows the user to log back into the whole network. This operation is useful when an XCI-NC, for one reason or another, has been removed from the network or deactivated
- v. **Set Userid/Password** - allows the user to set the Userid and Password for all the XCI-NCs on the network
- vi. **History/Trend** – allows the user to get the history of all the setting on the network. Please refer to [Trending section 7](#)
- vii. **Reset History/Trend** – allows the user to reset the accumulated history
- viii. **User Guide** – brings up the user guide (this manual). **Note:** you need Adobe Acrobat Reader to view the user guide.
- ix. **Save Configuration** – allows the user to save the entire current system configuration with all the schedules, groups, and alarms. This saved configuration can then be used by **Load Configuration** menu item (see x.) to update the system configuration based on the saved state
- x. **Load Configuration** – allows the user to load a previously saved system configuration (see ix.). Upon loading, the system shall reboot for the updates to take effect.

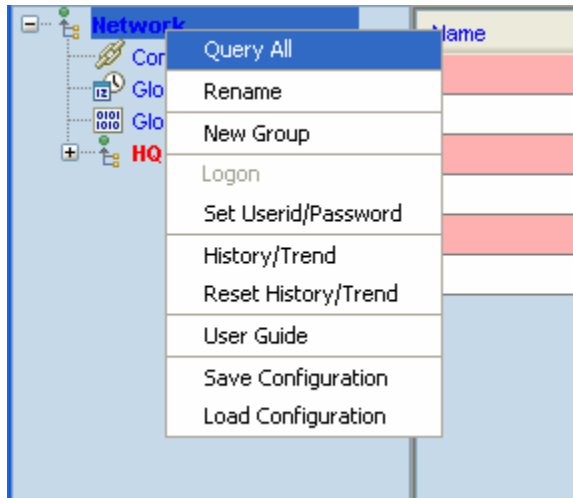


Figure 4 – Root Node Menu

5.2.1.2 System Configuration Node

Clicking on the System Configuration Node brings up the System Configuration View. Please refer to [System Configuration View](#) section.

There are no menus for this node.

5.2.1.3 Schedules Node

Clicking on the Schedules Node brings up the Schedules View through which the user may enter quite a sophisticated set of scheduling events. Please refer to the [Schedules View](#) section.

For maximum flexibility, the Schedules Node can appear in three places:

- 1) As a Global node right under the Root Node, in which case there is no menu defined and the schedules are defined globally (for all the devices on the network).
- 2) As a Group node right under any group
- 3) As an individual schedule under an Attached Device Node for which the following menu has been defined (refer to Figure 5):

The following menu has been defined for both the individual as well as the group alarms (refer to Figure 5):

- i. **Copy** – copies all the schedules, presented on the associated [Schedules View](#), into the clipboard
- ii. **Copy to All** – copies all the schedules, presented on the associated [Schedules View](#), into all the other nodes (such as thermostats) under the same Physical Device Node or Group Node. **Note:** this menu item is not enabled for Group schedules.
- iii. **Paste** – pastes the contents of the clipboard (schedules) to Attached Device pointed to by the mouse

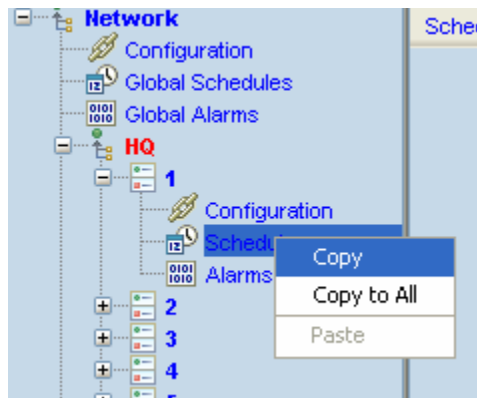


Figure 5 – Schedules Node Menu

5.2.1.4 Alarms Node

Clicking on the Alarms Node brings up the Alarms View through which the user may enter a sophisticated set of alarms/notification events. Please refer to the [Alarms View](#) section

For maximum flexibility, the Alarms Node can appear in three places:

- 1) As a Global node right under the Root Node, in which case there is no menu defined and the schedules are defined globally (for all the devices on the network).
- 2) As a Group node right under any group
- 3) As an individual schedule under an Attached Device Node.

The following menu has been defined for both the individual as well as the group alarms (refer to Figure 6):

- i. **Copy** – copies all the alarms definitions, presented on the associated [Alarms View](#), into the clipboard
- ii. **Copy to All** – copies all the alarms, presented on the associated [Alarms View](#), into all the other nodes (such as thermostats) under the same Physical Device Node or Group Node. The exceptions are those alarms that have been defined at a global scope. **Note:** this menu item is not enabled for Group alarms.
- iii. **Paste** – pastes the contents of the clipboard (alarms) to Attached Device pointed to by the mouse

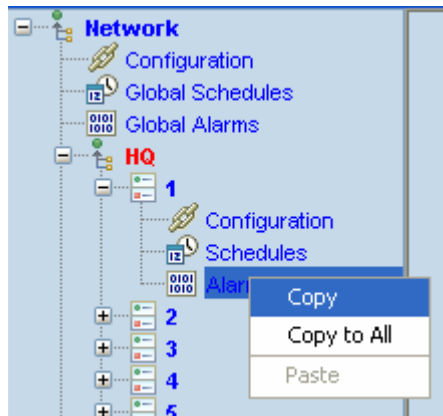


Figure 6 – Alarms Node Menu

5.2.1.5 Physical Device (XCI-NC) node

This node identifies the XCI-NC which is on the network. Note that each XCI-NC may have up to 32 other devices attached to it, in which case, there will be that number of Attached Device Nodes right under the XCI-NC node (see the next item below).

Clicking on Physical Device (XCI-NC) Node brings up the [Overview View](#) only for that XCI-NC.

The following menu is defined for Physical (refer to Figure 7)

- i. **Query All** – allows the user to query all the settings for all the Attached Devices to this specific Physical Device (XCI-NC)
- ii. **Rename** – allows the user to rename this specific XCI-NC to a more meaningful name
- iii. **Add Node** – allows the user to manually add a new Attached Device Node (such as thermostat or light)
- iv. **Discover** – instructs the XCI-NC to scan for all the Attached Devices and automatically add them to the hierarchy.
- v. **Manual Upgrade** – allows the user to manually upgrade the firmware using a file in the local file system.
- vi. **Automatic Upgrade to n.n** – is only available if the XCI-NC finds that there’s an update available. By clicking this menu item, the firmware will automatically be upgraded to the latest version without any other user intervention. Please note that the user shall be notified of any new program updates and will require a userid and password for the auto-update site.

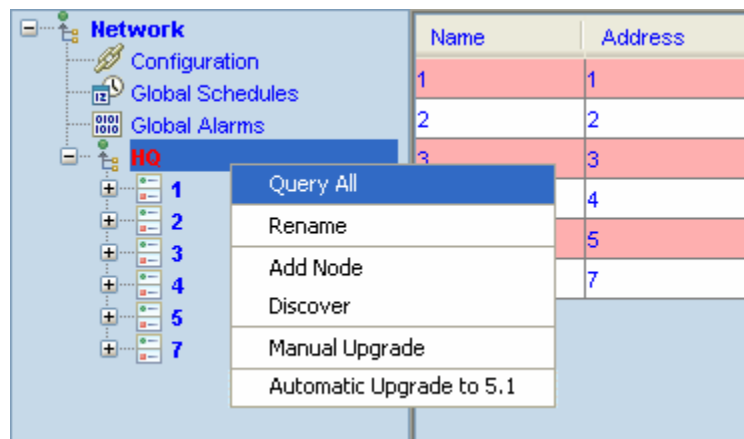


Figure 7 – Physical Device (XCI-NC) Node Menu

5.2.1.6 Attached Device Node (Thermostat Node)

This node is mapped to any thermostat which is attached to a XCI-NC. Clicking on this node brings up the [Attached Device View](#).

For maximum flexibility, this type of node can either be under a Physical Device Node or a Group Node (please refer to the [Logical Grouping](#) section for further information). Also, as children, this node has a Schedules Node as well as an Alarms node through the interactions with which schedules and alarms may be set at the individual device (such as thermostat) levels.

For this node, the following menu has been define (refer to Figure 8)

- i. **Query All** – allows the user to query all the settings for this specific node (such as thermostat)
- ii. **Rename** – allows the user to rename this specific node (such as thermostat) to a more meaningful name
- iii. **Remove Node** – allows the user to manually remove this node from the XCI-NC
- iv. **Copy** – copies all the settings, presented on the associated [Attached Device View](#), into the clipboard
- v. **Copy to All** – copies all the settings, presented on the associated [Attached Device View](#), into all the other nodes (such as thermostats) under the same Physical Device Node or Group Node
- vi. **Paste** – pastes the contents of the clipboard to Attached Device pointed to by the mouse

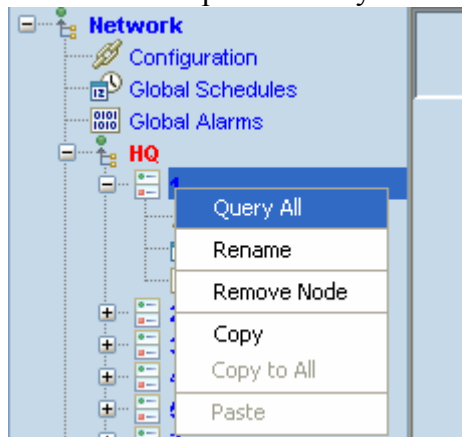


Figure 8 – Attached Device Node Menu

5.2.1.7 Attached Device Configuration Node

Clicking on this node brings up the Attached Device Configuration View on which the configuration parameters for an attached device (such as thermostat) can be set.

This node is only present under an Attached Device Node.

The following menu has been defined for this node (refer to Figure 9):

- i. **Copy** – copies all the settings, presented on the associated [Attached Device Configuration View](#), into the clipboard
- ii. **Copy to All** – copies all the settings, presented on the associated [Attached Device Configuration View](#), into all the other thermostats under the same Physical Device Node or Group Node
- iii. **Paste** – pastes the contents of the clipboard to Attached Device pointed to by the mouse

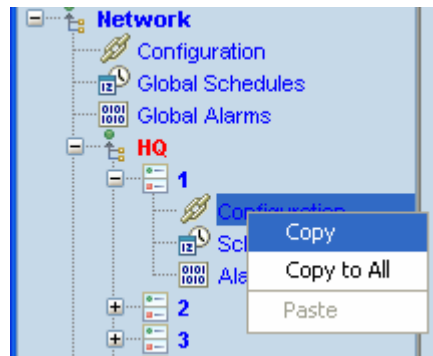


Figure 9 – Attached Device Configuration Node Menu

5.2.1.8 Group Node

Thermostats (Attached Physical Devices) can be logically grouped to form a meaningful category through drag and drop operations onto a Group Node. In this case, then, the attached devices do not need to be constrained by the physical connections imposed upon them. For further information please refer to [Logical Grouping](#) section.

Clicking on this node – just like the Root Node and Physical Device Node – brings up the Overview View which shows a tabulated view of all the pertinent settings for all the devices (such as thermostats) under that group.

The following menu has been defined for this node (refer to Figure 10):

- i. **Query All** – allows the user to query all the settings for all the Attached Devices (such as thermostats) under this group.
- ii. **Rename** – allows the user to rename this group to a more meaningful name
- iii. **Remove Group** – allows the user to manually remove this group from the Navigation Pane. All Attached Device Nodes would automatically move back to their originating Physical Device Node.

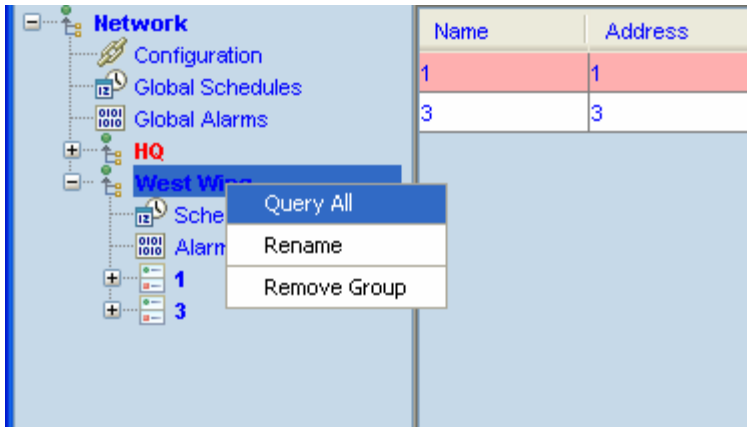


Figure 10 – Group Node Menu

5.2.2 Overview View

Overview view is the tabulation of all the pertinent and important information in one place. It's specifically designed to give the administrators an immediate access to most needed information while providing simple navigation features enable the user to jump to a node (i.e. thermostat) to perform necessary actions.

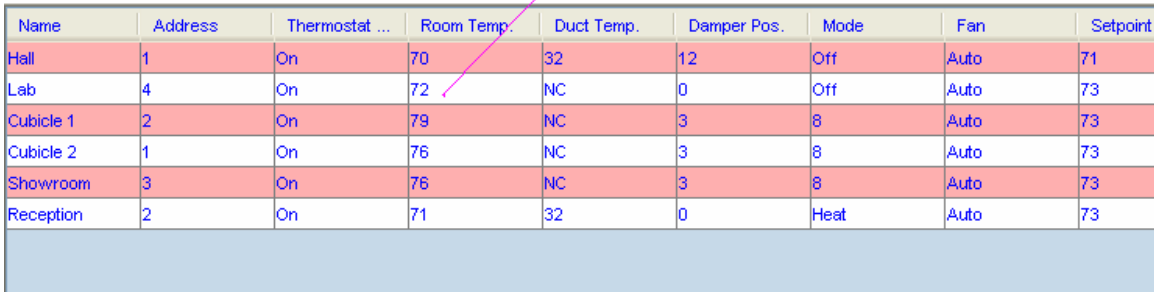
As described in section 5.2.1, Overview view is displayed when any of the following nodes are selected:

- i. **Root Node** – in this view, all the nodes (i.e. thermostats) in the network are captured regardless of their physical attachment to any XCI-NC.
- ii. **Physical Device (XCI-NC) Node** – in this view, only those nodes that are attached to the selected XCI-NC are presented.
- iii. **Group Node** – in this view, only those nodes that are attached to the selected Group Node are presented.

Overview view provides a very useful and intuitive navigation (refer to Figure 11) mechanism: when a specific row in the table is clicked:

- i. The thermostat (Attached Device Node) is selected in the Navigation Pane
- ii. The view is changed to [Attached Device View](#) where the user can immediately change the settings for that node.

Click on A Row



Name	Address	Thermostat ...	Room Temp.	Duct Temp.	Damper Pos.	Mode	Fan	Setpoint
Hall	1	On	70	32	12	Off	Auto	71
Lab	4	On	72	NC	0	Off	Auto	73
Cubicle 1	2	On	79	NC	3	8	Auto	73
Cubicle 2	1	On	76	NC	3	8	Auto	73
Showroom	3	On	76	NC	3	8	Auto	73
Reception	2	On	71	32	0	Heat	Auto	73

Figure 11 – Overview

Clicking on the table heading allows you to sort based on the values for the column.

5.2.3 System Configuration View

System Configuration View allows the users to manage global setting such as date/time and notification settings. This view is divided into two sections (refer to Figure 12)

- i. Date/Time configuration which is on the top
- ii. Notifications configuration which is at the bottom

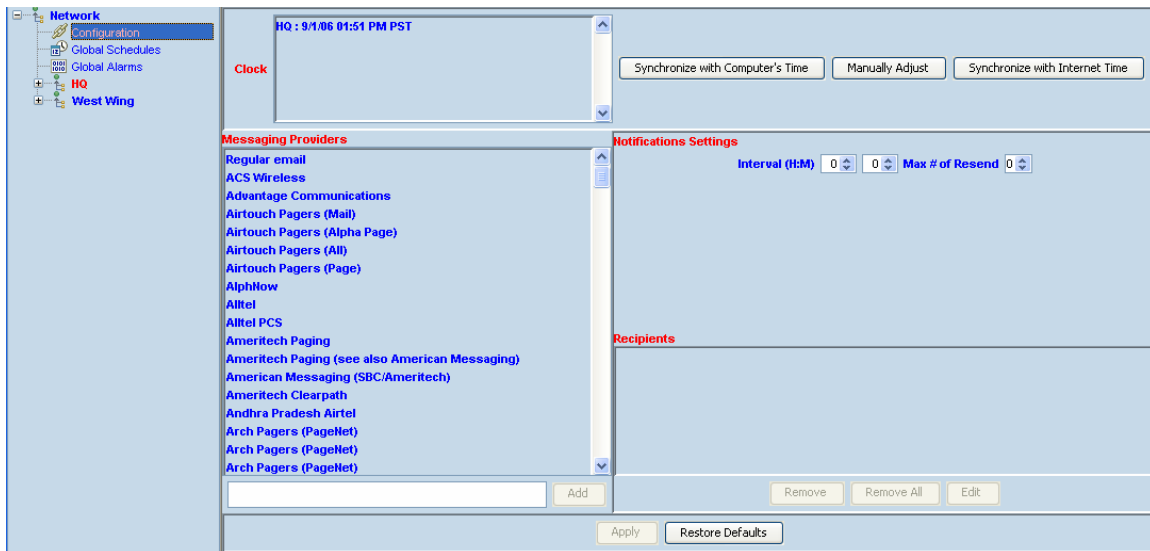


Figure 12 – System Configuration View

5.2.3.1 Synchronizing with Computer's Time

Clicking on this **Synchronize with Computer's Time** button, automatically adjusts the date/time of all the XCI-NCs on the network to that of the attached computer.

5.2.3.2 Manually Adjusting the Date and Time

You can adjust the date and time manually by following these steps (refer to Figure 13)

- i. Click on the **Manually Adjust** button; you will be presented with the Adjust Date/Time dialog
- ii. Choose the **Daylight Saving Mode** (top)
- iii. Enter the time
- iv. Choose the time zone
- v. Choose the month
- vi. Choose the day (you can click on the day buttons)
- vii. Choose the year
- viii. Click Ok

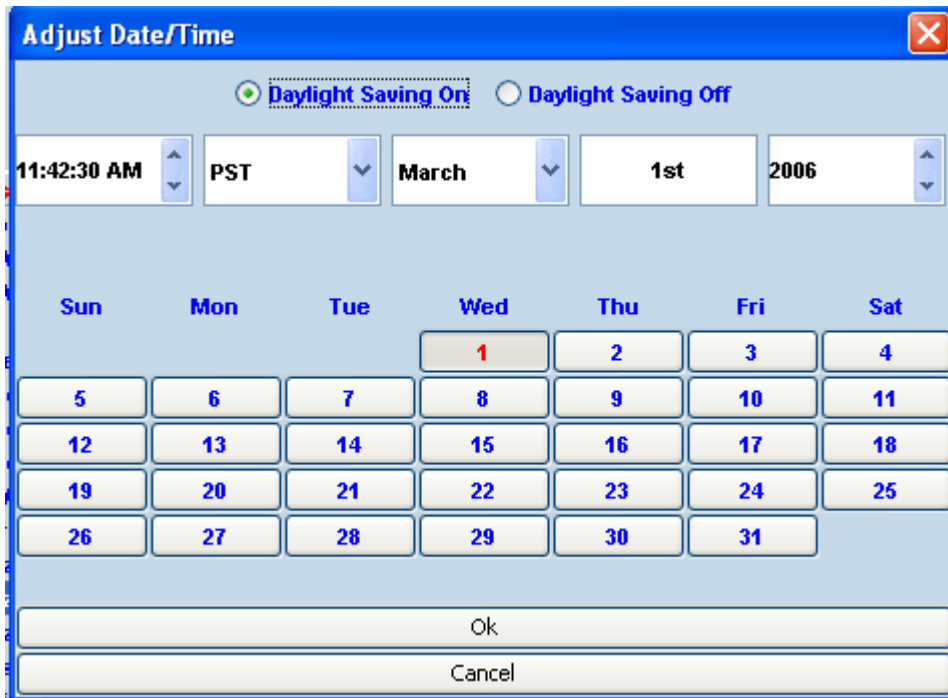


Figure 13 – Adjusting the Date and Time

5.2.3.3 Synchronizing with Internet Time

If the XCI-NC has access to the internet and if you would like to take advantage of Network Time Servers – to maintain the most accurate time then (refer to Figure 12) click on **Synchronize with Internet Time button**. A side effect of clicking this button is that each XCI-NC, on the network, will automatically update its time on a predefined interval and based on Time Servers which are allocated dynamically (based on their minimum supported query intervals).

5.2.3.4 Configuring the Notifications Engine

Before any alarms can be sent out, the Notifications Engine must be configured.

To configure the Notifications Engine (Figure 14):

- i. Choose a messaging service provider from the **Messaging Providers** list.
- ii. Enter the recipient's information based on the specific instructions given on the screen (Figure 14)
- iii. Click on the **Add** button
- iv. Repeat for all the recipients
- v. Enter the interval/duration for Notifications to be sent (refer to Figure 15)
- vi. Click on **Apply**

Note: Clicking on **Restore Defaults** button, removes all the recipients and disables the Notification Engine.

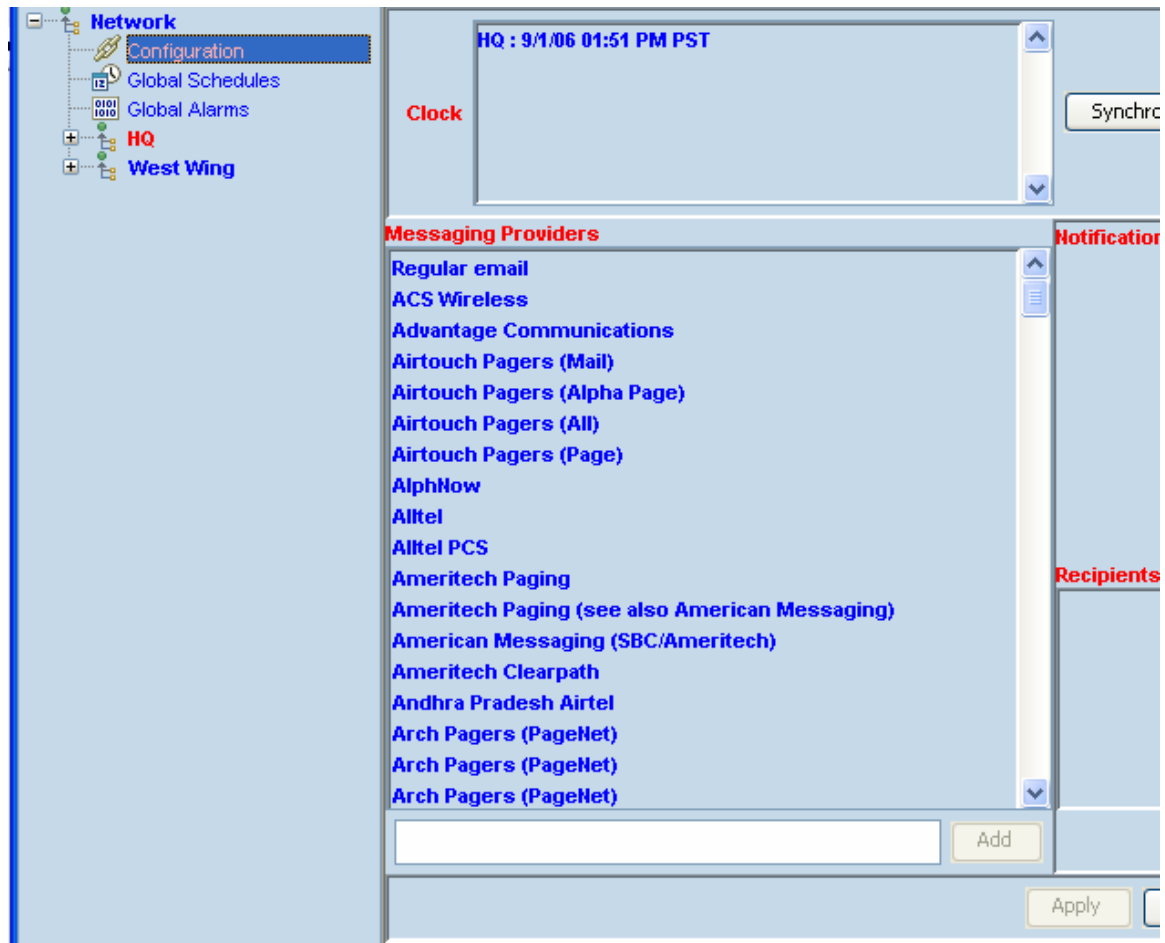


Figure 14 – Configuring the Notifications Engine

At any moment in time, you can modify the list of recipients (refer to Figure 15)

- To edit the information for a recipient, click on the recipient's name and then click on the **Edit** button
- To remove a recipient, click on the recipient's name and then click on the **Remove** button
- To remove all recipients, click on the **Remove All** button.

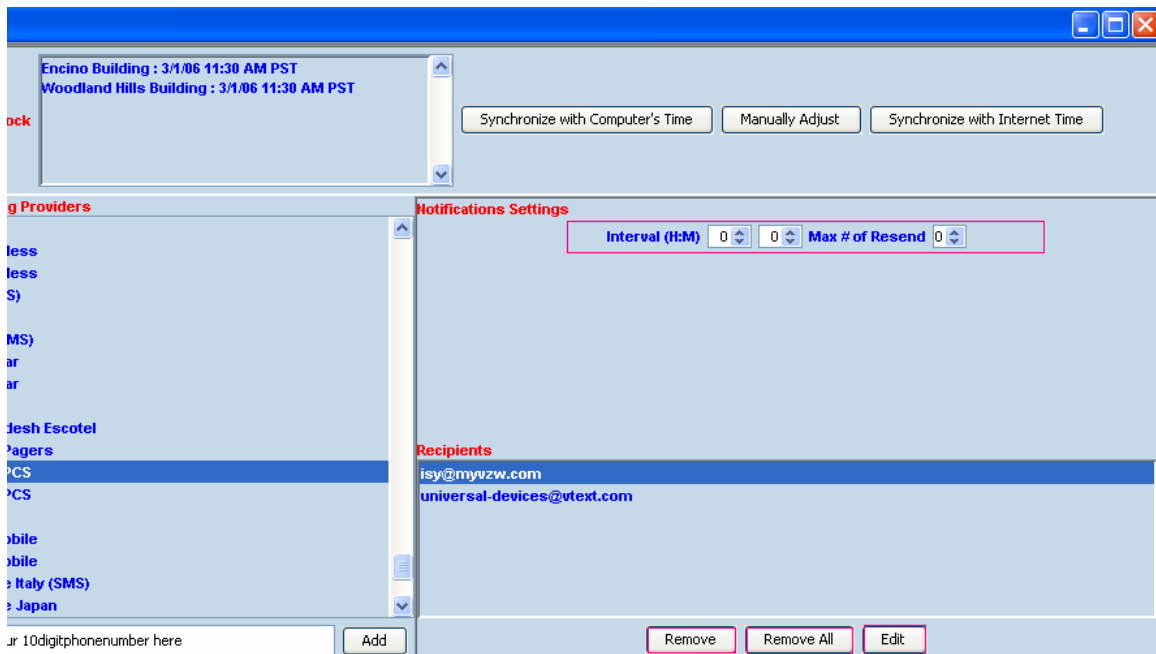


Figure 15 – Modifying the Notifications Settings

5.2.4 Schedules View

XCI-NC provides one of the most complete scheduling capabilities in the market while keeping scheduling related administrative functions to the minimum. The rich user interface enables the user to create complex schedules in a matter of seconds. As described before, Schedules View (refer to Figure 16) is activated either globally or per node (i.e. thermostat). At the node level, schedules may easily be copied and pasted to all other nodes within the same parent (i.e. Root Node, XCI-NC Node, or Group Node).

Schedules are presented in a familiar and easy to read tabular format the first column of which is always the English description of the schedule and the last four columns of which are always:

- ii. **Active** – if this schedule is active or it can be simply removed
- iii. **On Hold** – if this schedule has been put on hold by a Hold schedule (refer to sections 5.2.4.6 & 5.2.4.7)
- iv. **Last Fired** – shows the date and time when this schedule was last run
- v. **Global** – identifies whether or not a is schedule at a global level (in which case, it cannot be overridden at the node levels)

Note: The last 4 columns are **not** editable



To Add a Schedule Click on Add

Figure 16 – Schedules View

To add a schedule, simply click on the **Add** button at the bottom of the Schedules View (refer to Figure 16). This action will bring up the Schedule Configuration Utility through the usage of which you can add different types of schedules as outline in the following subsections.

Note: You can add all the desired schedules before submitting it to the XCI-NC for execution. When you are done with creating all the desired schedules, click on the **Apply** button at the bottom of the Schedules View.

5.2.4.1 Adding a Schedule for a Specific Time

This type of schedule is run only **Once** at a specific date and time (refer to Figure 17). In order to create this type of schedule, on the Scheduler Configuration Utility:

- i. Click on the **Once** (at the top)
- ii. Choose the desired time
- iii. Choose the desired date
- iv. Click on **Ok**

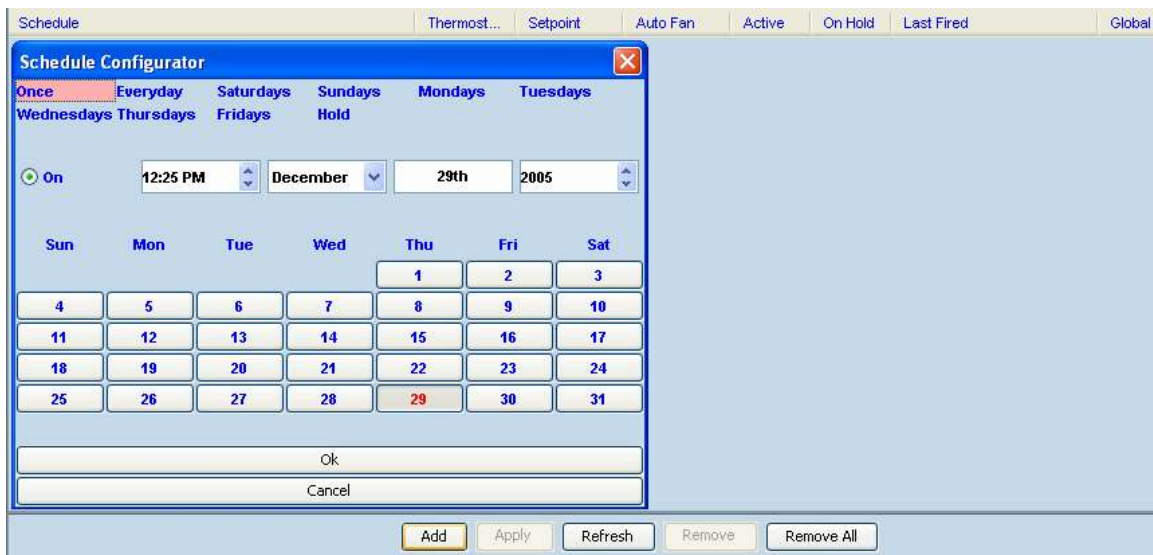


Figure 17 – Adding a Schedule for a Specific Time

5.2.4.2 Adding a Schedule for Everyday at a Given Time

This type of schedule is run **Everyday** at a specific time (refer to Figure 18). In order to create this type of schedule, on the Scheduler Configuration Utility:

- i. Click on the **Everyday** (at the top)
- ii. Click on the **Once** (in the middle)
- iii. Choose the desired time
- iv. Click on **Ok**

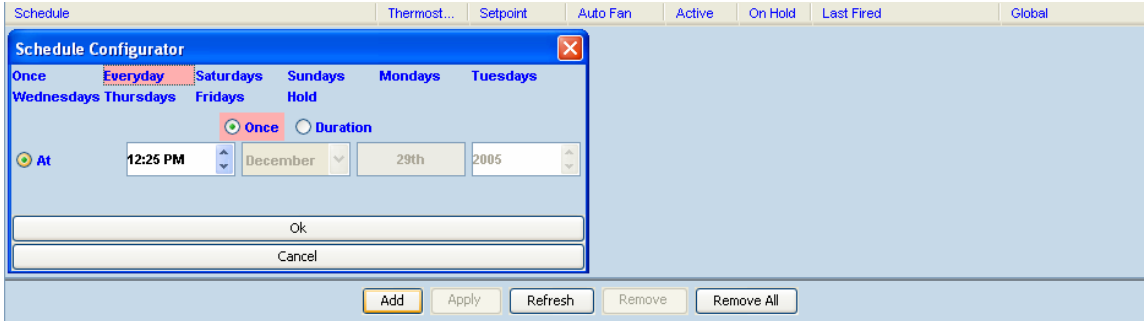


Figure 18 – Adding a Schedule for Everyday at a Given Time

5.2.4.3 Adding a Repeated Schedule for Everyday

This type of schedule is run **Everyday** at a specific time (refer to Figure 19) and **repeated** at the desired interval within the desired **duration** (less than 24 hours). In order to create this type of schedule, on the Scheduler Configuration Utility:

- i. Click on the **Everyday** (at the top)
- ii. Click on the **Duration** (in the middle)
- iii. Choose the **From** time
- iv. Choose the **To** Time
- v. Choose the desired **Repeat every** interval
- vi. Click on **Ok**

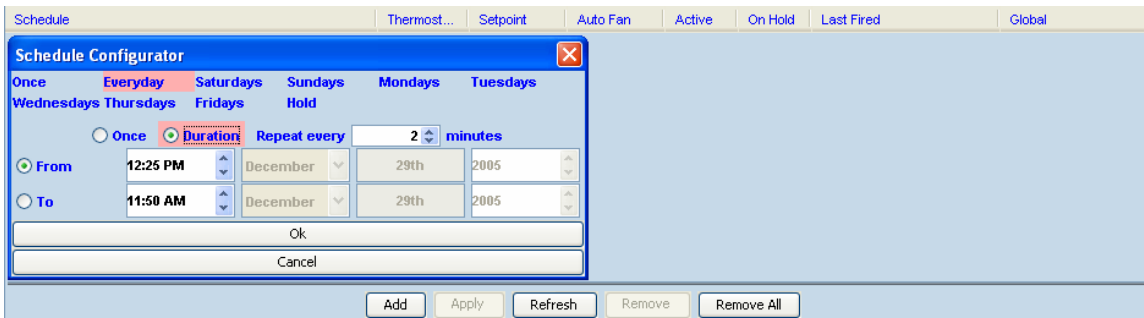


Figure 19 – Adding a Repeated Schedule for Everyday

5.2.4.4 Adding a Schedule for Certain Days of the Week

This type of schedule is run on **Certain Days of the Week** at a specific time (refer to Figure 20). In order to create this type of schedule, on the Scheduler Configuration Utility:

- i. Hold down the **Ctrl** key on the keyboard
- ii. Click on the desired **Days**(at the top)
- iii. Click on the **Once** (in the middle)
- iv. Choose the desired time
- v. Click on **Ok**



Hold the "Ctrl" Button the Keyboard; Click on the Desired Days with the Mouse

Figure 20 – Adding a Schedule for Certain Days of the Week

5.2.4.5 Adding a Repeated Schedule for Certain Days of the Week

This type of schedule is run on **Certain Day of the Week** at a specific time (refer to Figure 21) and **repeated** at the desired interval within the desired **duration** (less than 24 hours). In order to create this type of schedule, on the Scheduler Configuration Utility:

- i. Hold down the **Ctrl** key on the keyboard
- ii. Click on the desired **Days**(at the top)
- iii. Click on the **Duration** (in the middle)
- iv. Choose the **From** time
- v. Choose the **To** Time
- vi. Choose the desired **Repeat every** interval
- vii. Click on **Ok**

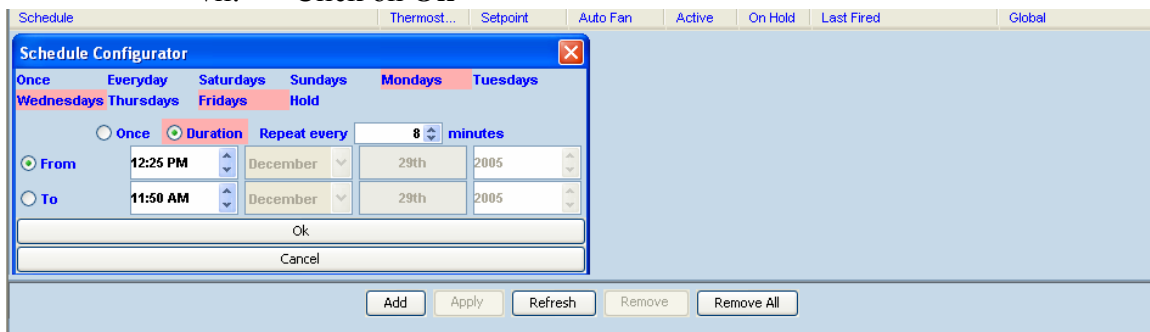


Figure 21 – Adding a Repeated Schedule for Certain Days of the Week

5.2.4.6 Holding Schedules on a Certain Date

Holding schedules is a powerful mechanism through which the schedules can be put on hold without the need for removing and adding schedules.

Note: A **Hold** schedule at the global level puts all the schedules for all the nodes in all the XCI-NCs in the network on hold.

In order to Hold Schedules on a Certain Date (refer to Figure 22), on the Scheduler Configuration Utility:

- i. Click on the **Hold** (at the top)
- ii. Click on the **Once** (in the middle)
- iii. Choose the **month, day, and year**
- iv. Click on **Ok**

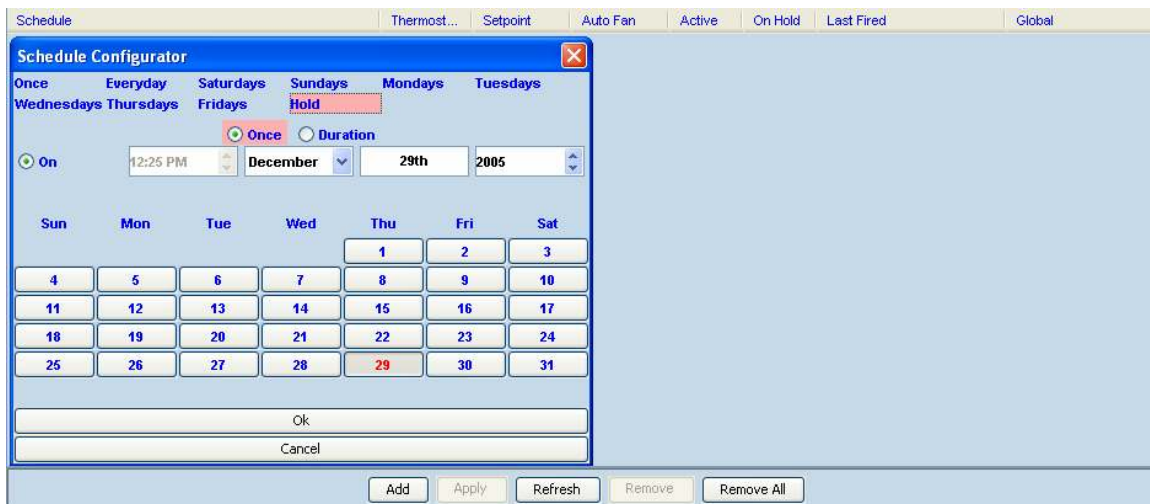


Figure 22 – Holding Schedules on a Certain Date

5.2.4.7 Holding Schedules within a Duration

Holding schedules is a powerful mechanism through which the schedules can be put on hold without the need for removing and adding schedules. Not only you can Hold schedules for a Certain Date, you can also Hold schedules within a Duration of time.

Note: A **Hold** schedule at the global level puts all the schedules for all the nodes in all the XCI-NCs in the network on hold.

In order to Hold Schedules for within a Duration of time (refer to Figure 23), on the Scheduler Configuration Utility:

- v. Click on the **Hold** (at the top)
- vi. Click on the **Duration** (in the middle)
- vii. Choose **From** and enter the desired date and time for the **start** of the hold
- viii. Choose **To** and enter the desired date and time for the **end** of the hold
- ix. Click on **Ok**

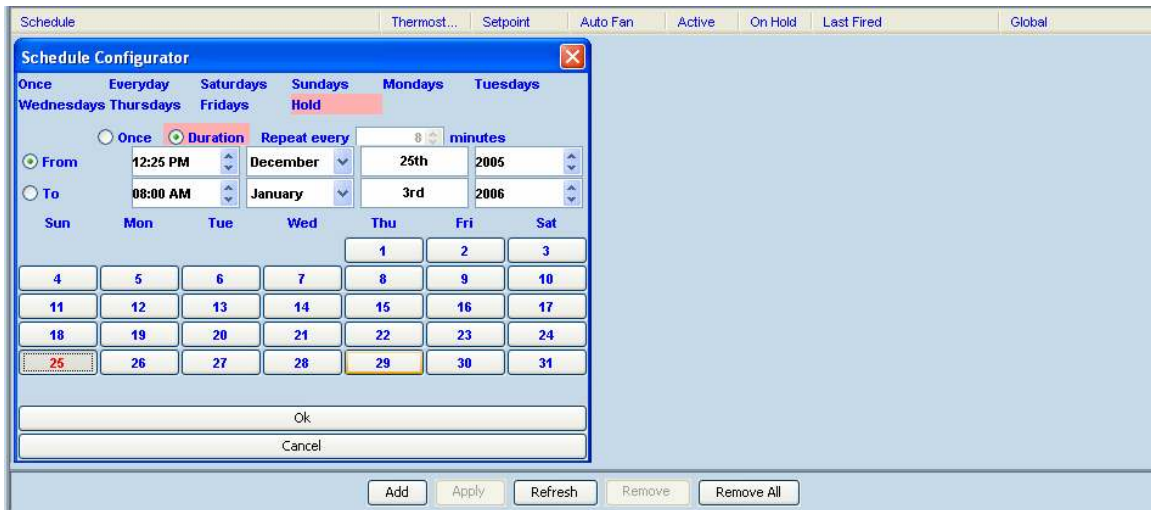


Figure 23 – Holding Schedules within a Duration

5.2.4.8 Removing a Schedule

Some schedules – such as those created for a Specific Time – become inactive once executed. Or, there might be the necessity for removing a schedule that does not perform well. In these cases, all one has to do is click on the row containing the schedule and then clicking on the **Remove** button (refer to Figure 24).

Schedule	Thermost...	Setpoint	Auto Fan	Active	On Hold	Last Fired	Global
Once on Thu 12/29/2005 02:25:00 PM	Off	60	Manual	<input type="checkbox"/>	<input type="checkbox"/>	Never	<input type="checkbox"/>
Sat from 01:57 PM to 11:50 AM	Off	60	Manual	<input type="checkbox"/>	<input type="checkbox"/>	Never	<input type="checkbox"/>
Everyday at 01:57 AM	Off	60	Manual	<input type="checkbox"/>	<input type="checkbox"/>	Never	<input type="checkbox"/>
Sun,Tue,Wed from 07:57 AM to 11:50 AM	Off	60	Manual	<input type="checkbox"/>	<input type="checkbox"/>	Never	<input type="checkbox"/>
Hold on 12/29/2006	Off	60	Manual	<input type="checkbox"/>	<input type="checkbox"/>	Never	<input type="checkbox"/>

Add Apply Refresh **Remove** Remove All

Select a Row Then Click on Remove

Figure 24 – Removing a Schedule

5.2.4.9 Removing All Schedules

To remove all schedules, click on the **Remove All** button (refer to Figure 25).

Schedule	Thermost...	Setpoint	Auto Fan	Active	On Hold	Last Fired	Global
Once on Thu 12/29/2005 02:25:00 PM	Off	60	Manual	<input type="checkbox"/>	<input type="checkbox"/>	Never	<input type="checkbox"/>
Sat from 01:57 PM to 11:50 AM	Off	60	Manual	<input type="checkbox"/>	<input type="checkbox"/>	Never	<input type="checkbox"/>
Everyday at 01:57 AM	Off	60	Manual	<input type="checkbox"/>	<input type="checkbox"/>	Never	<input type="checkbox"/>
Sun,Tue,Wed from 07:57 AM to 11:50 AM	Off	60	Manual	<input type="checkbox"/>	<input type="checkbox"/>	Never	<input type="checkbox"/>
Hold on 12/29/2006	Off	60	Manual	<input type="checkbox"/>	<input type="checkbox"/>	Never	<input type="checkbox"/>

Add Apply Refresh Remove **Remove All**

To Remove All Schedules Click on Remove All

Figure 25 – Removing All Schedules

5.2.4.10 Changing a Schedule

At any given moment in time, you can change a specific schedule. In order to do so (refer to Figure 26):

- i. Click on the **first column** of the row containing the schedule
- ii. Use the Schedule Configuration Utility and make necessary changes as described in sections 5.2.4.1 through 5.2.4.7.
- iii. Click on the **Apply** button

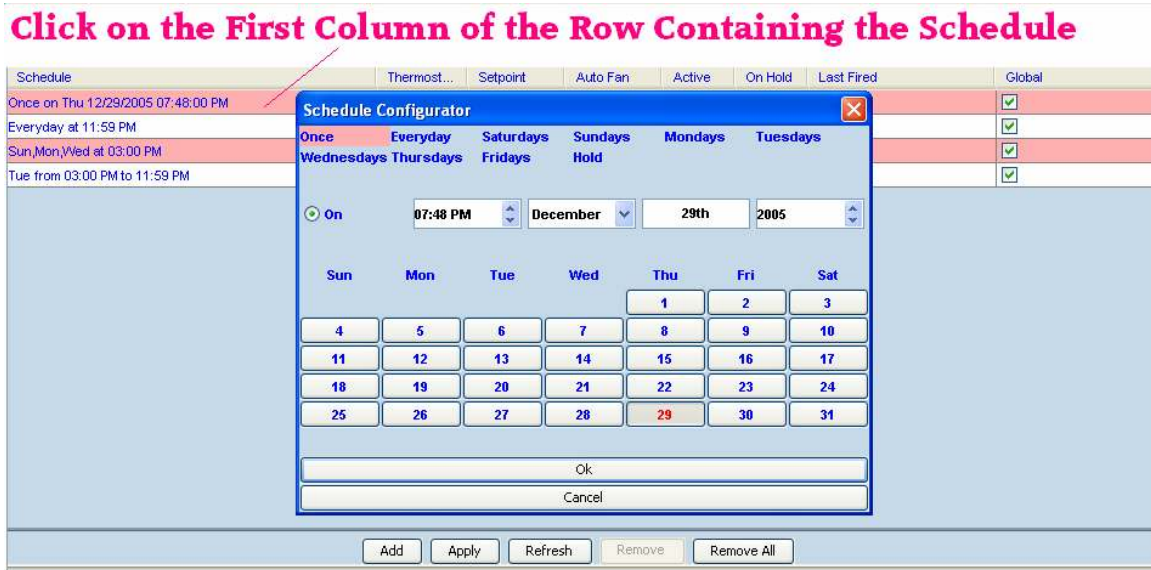


Figure 26 – Changing a Schedule

5.2.5 Alarms View

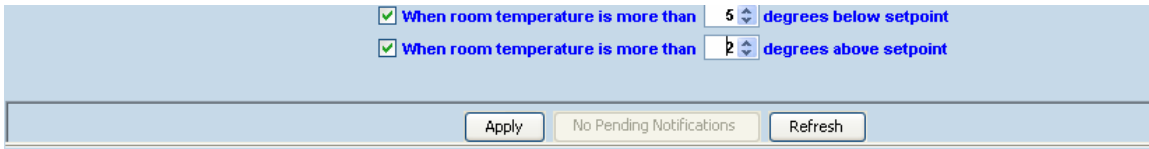
Alarms View allows for the configuration of alarms based on certain events in the network. Just like the Schedules, Alarms may be applied either globally (on all the nodes on all the XCI-NCs) or locally on a specific node (i.e. thermostat).

Note: Alarms view is customized based on the type of the device and requirements as set forth by specific customers. As such, the types of alarms supported depend on the type of XCI-NC you are using.

5.2.5.1 Setting an Alarm

To set an alarm (refer to figure 27):

- i. Choose the characteristics of the desired event
- ii. Click on the **Apply** button



When room temperature is more than 5 degrees below setpoint
When room temperature is more than 2 degrees above setpoint

Apply No Pending Notifications Refresh

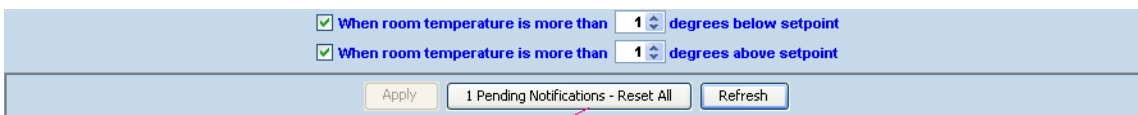
Figure 27 – Alarms View

5.2.5.2 Resetting Notifications

There might be cases where a number of alarms are queued to be sent in some given interval as specified in the [System Configuration](#). In these cases, you have the option of resetting all such pending alarms so that you will not be bombarded with emails or messages.

In order to achieve this objective (refer to Figure 28):

- i. Go to the Alarms View at any node
- ii. Click on Reset All



When room temperature is more than 1 degrees below setpoint
When room temperature is more than 1 degrees above setpoint

Apply 1 Pending Notifications - Reset All Refresh

Click on Reset All

Figure 28 – Resetting Notifications

5.2.6 Physical (XCI-NC) Device View

As already outlined in the Overview View section, Physical Device View is essentially an [Overview View](#) of all the thermostats attached to a specific XCI-NC unit. As such, all the functionalities and capabilities of an Overview View also apply to this view.

5.2.7 Attached Device View

Each XCI-NC unit may be connected to a limited number of thermostats, as such, this view is where you can change the settings for each one of those devices individually. Of course, as mentioned earlier, you have the option of applying a setting globally to all the nodes belonging to the same parent node (i.e. Physical Device or Group Node). On this view, you may (refer to Figure 29):

- i. Adjust certain settings by changing the values and then clicking on the **Apply** button (at the bottom)
- ii. Restore defaults to all the settings by clicking on the **Restore Defaults** button (at the bottom)
- iii. In case of concern, refresh the values by clicking on the **Refresh** button (at the bottom)

Note: Attached Device view is customized based on the type of the device and requirements as set forth by specific customers. As such, the user interface for this view is very much dependent on the specific XCI-NC unit you are using.

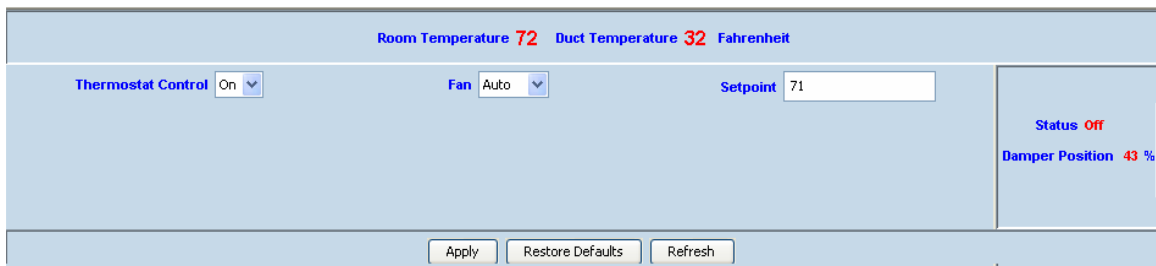


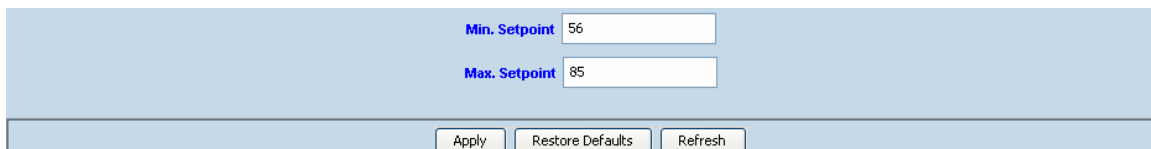
Figure 29 – Attached Device View

5.2.8 Attached Device Configuration View

In certain cases, each individual XCI-NC attached device (i.e. thermostat) might have some specific configuration parameters. This view allows the user to adjust those parameters and apply them either locally or globally to all the nodes of the same Parent (i.e. Physical Device Node or Group Node). On this view, you may (refer to Figure 30):

- iv. Adjust certain settings by changing the values and then clicking on the **Apply** button (at the bottom)
- v. Restore defaults to all the settings by clicking on the **Restore Defaults** button (at the bottom)
- vi. In case of concern, refresh the values by clicking on the **Refresh** button (at the bottom)

Note: Attached Device Configuration view is customized based on the type of the device and requirements as set forth by specific customers. As such, the user interface for this view is very much dependent on the specific XCI-NC unit you are using.



The screenshot shows a light blue background with two input fields. The first field is labeled "Min. Setpoint" in blue text and contains the value "56". The second field is labeled "Max. Setpoint" in blue text and contains the value "85". Below these fields is a horizontal line, and underneath that line are three buttons: "Apply", "Restore Defaults", and "Refresh", each in a light gray box with a thin border.

Figure 30 – Attached Device Configuration View

5.2.9 Group View

As already outlined in the Overview View section, Group View is essentially an [Overview View](#) of all the nodes (i.e. thermostats) grouped under a [Group Node](#). As such, all the functionalities and capabilities of an Overview View also apply to this view.

6. Logical Grouping

Logical Grouping is one of the most important features of XCI-NC through the utilization of which you can not only support an unlimited number of nodes (i.e. thermostats) but also you will not be bound by the physical connections of each node to a specific XCI-NC. As the environment changes, so do the characteristic and the topology of the nodes (i.e. thermostats) on the network.

Using Logical Grouping, you can logically group nodes at different times without the need to physically change the location or the connections of nodes. For instance, initially, you may want to group the nodes per building floors. However – and after some trending analysis – you realize that the nodes in the West wing exhibit the same characteristics (i.e. in the summer afternoons, the thermostats are mostly on) and, as such, and for administrative purposes, you would like to change the grouping based on the building's wings.

By logically grouping nodes, you may perform administrative tasks – such as applying schedules or settings – to a group of nodes with in the same parent group node and therefore cut down the activities to a few mouse clicks.

6.1 Creating a Logical Group

Creating and managing logical groups are quite simple and are entirely done through drag and drop operations on the nodes in the Navigation Pane. In order to achieve this objective:

- i. Create a group by right mouse clicking on the Root Node (refer to Figure 31)
- ii. Rename the group by right mouse clicking on the newly created group (refer to Figure 32)
- iii. Drag and drop the desired nodes to and from either a Physical Device Node (XCI-NC) or from another Group Node (refer to Figure 33). As you note, the Group View is populated with the information for every node which has been dropped therein.

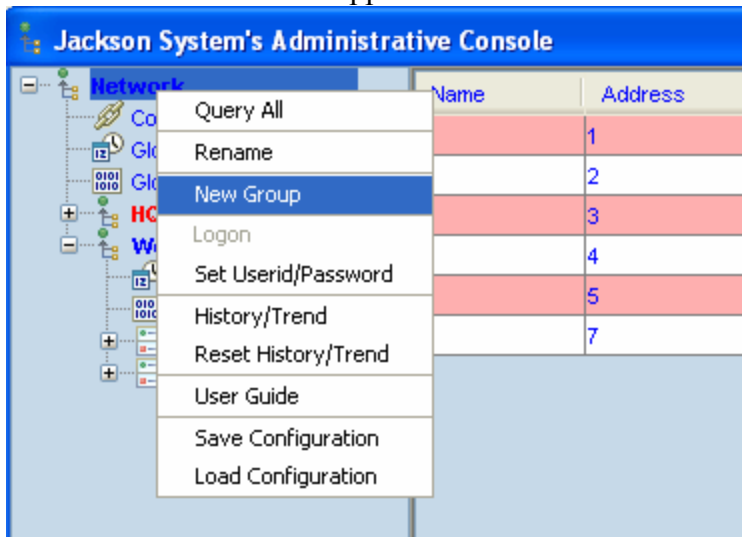


Figure 31 – Creating a Logical Group

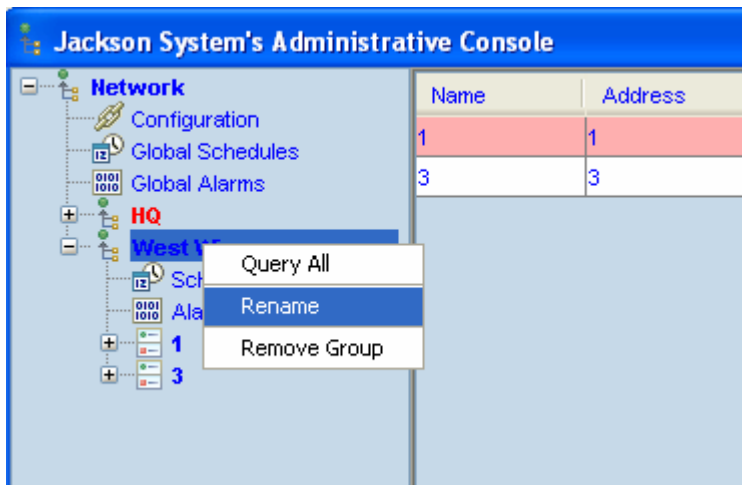


Figure 32 – Renaming a Group

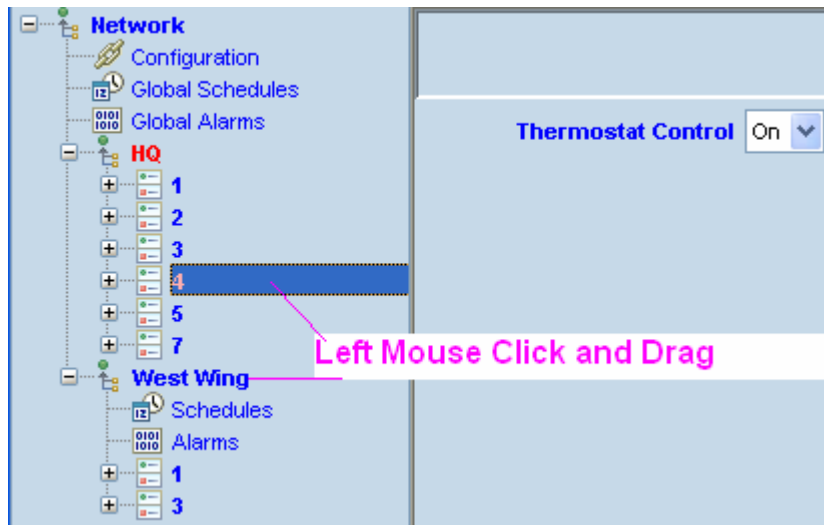


Figure 33 – Dragging and Dropping Nodes into a Group

6.2 Moving a Node

Simply drag the desired node (i.e. thermostat) to the destination node which could be either another Group Node or a Physical Device (XCI-NC) node. The Group View is updated with information as the drag and drop operations are completed.

6.3 Removing a Node from a Group

To remove a node, under a group, simply left mouse click on the desired node and choose **Remove from Group** on the displayed menu (refer to Figure 34)

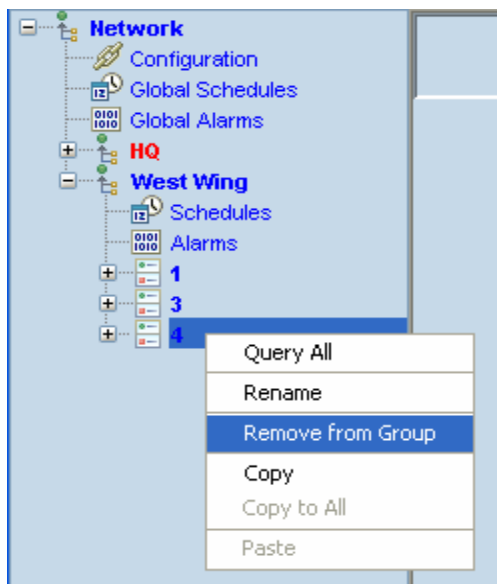


Figure 34 – Removing a node from a Group

7. Trending

7.1 Viewing the History/Trend

XCI-NC has a very simple to use and powerful trending analysis tool. To view trends, right mouse click on the Root Node and then select the **History/Trend** menu item (see Figure 35) which would bring up the Trending dialog (see Figure 36).

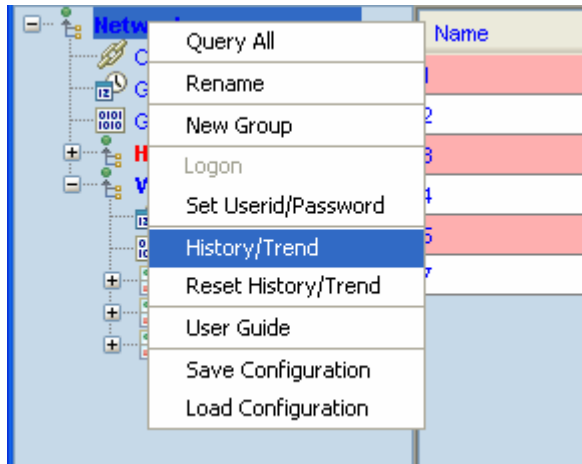


Figure 35 – Viewing the History/Trend

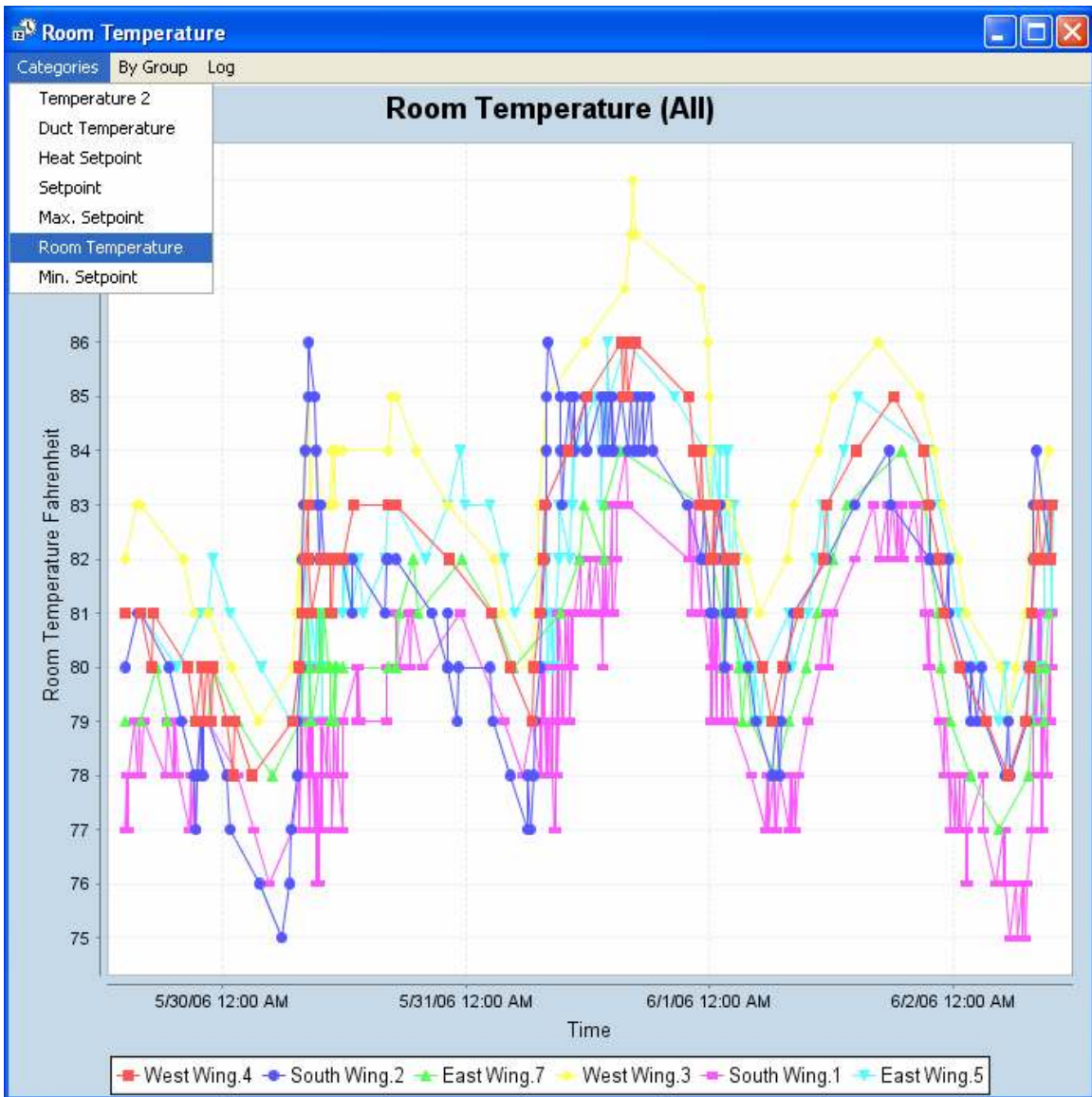


Figure 36 – Trending Dialog

You may choose to display any category from the list presented in the Categories menu (on the top left). Every time a category is selected, a new Trending Dialog is displayed and, as such, categories could be easily compared for trending analysis.

Tool tips provide the means of finding the exact value of a category at a given moment in time (see Figure 37)

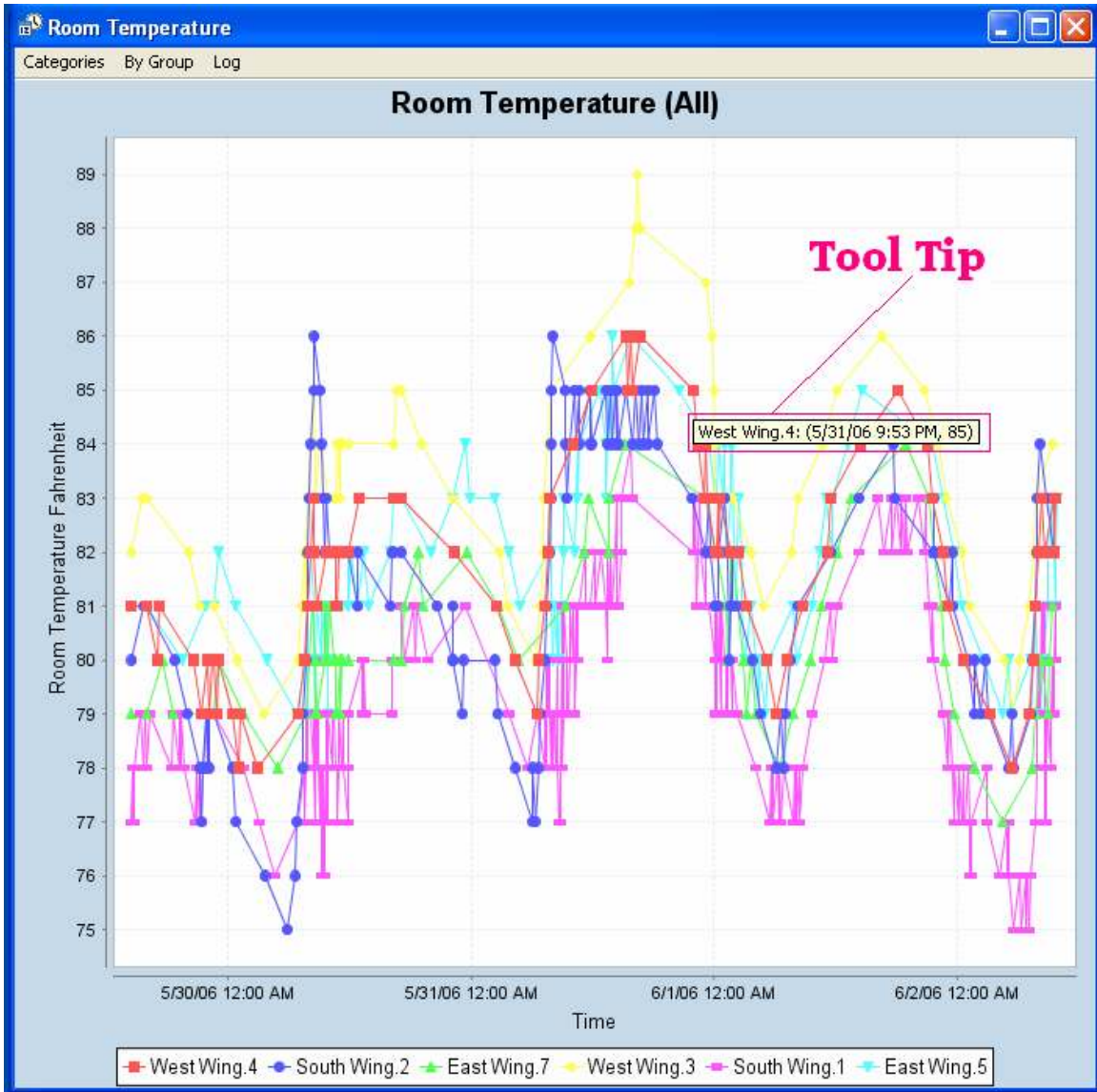


Figure 37 – Trending Tool Tips

7.1.1 Viewing by Group

You may view the history of an individual thermostat, group of thermostats, or in one chart. When first displayed, the default is to show all the thermostats in the network. To view by Group, click on the “By Group” menu on the top, and select the desired viewing method (see Figure 38)

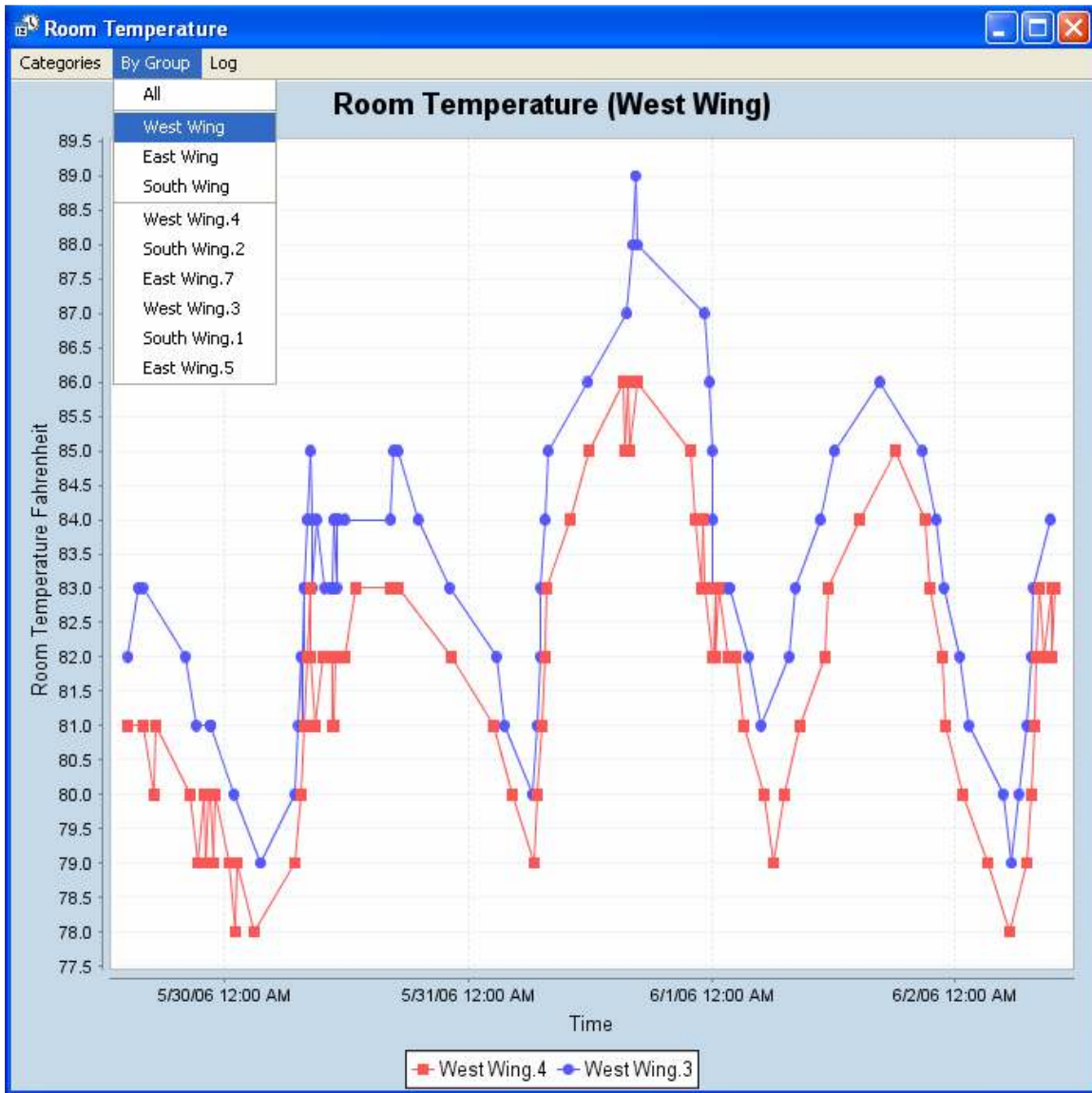


Figure 38 - Viewing by Group

7.1.2 Zooming In & Out

To zoom in, while holding down the **Left** mouse button, drag the mouse around the desired region.

To zoom out, while holding down the **Left** mouse button, move the mouse in the upward direction within the chart.

7.1.3 Printing the Chart

To print the chart, **Right** mouse click on the chart and from the pop up menu choose the **Print** menu item (see Figure 39).

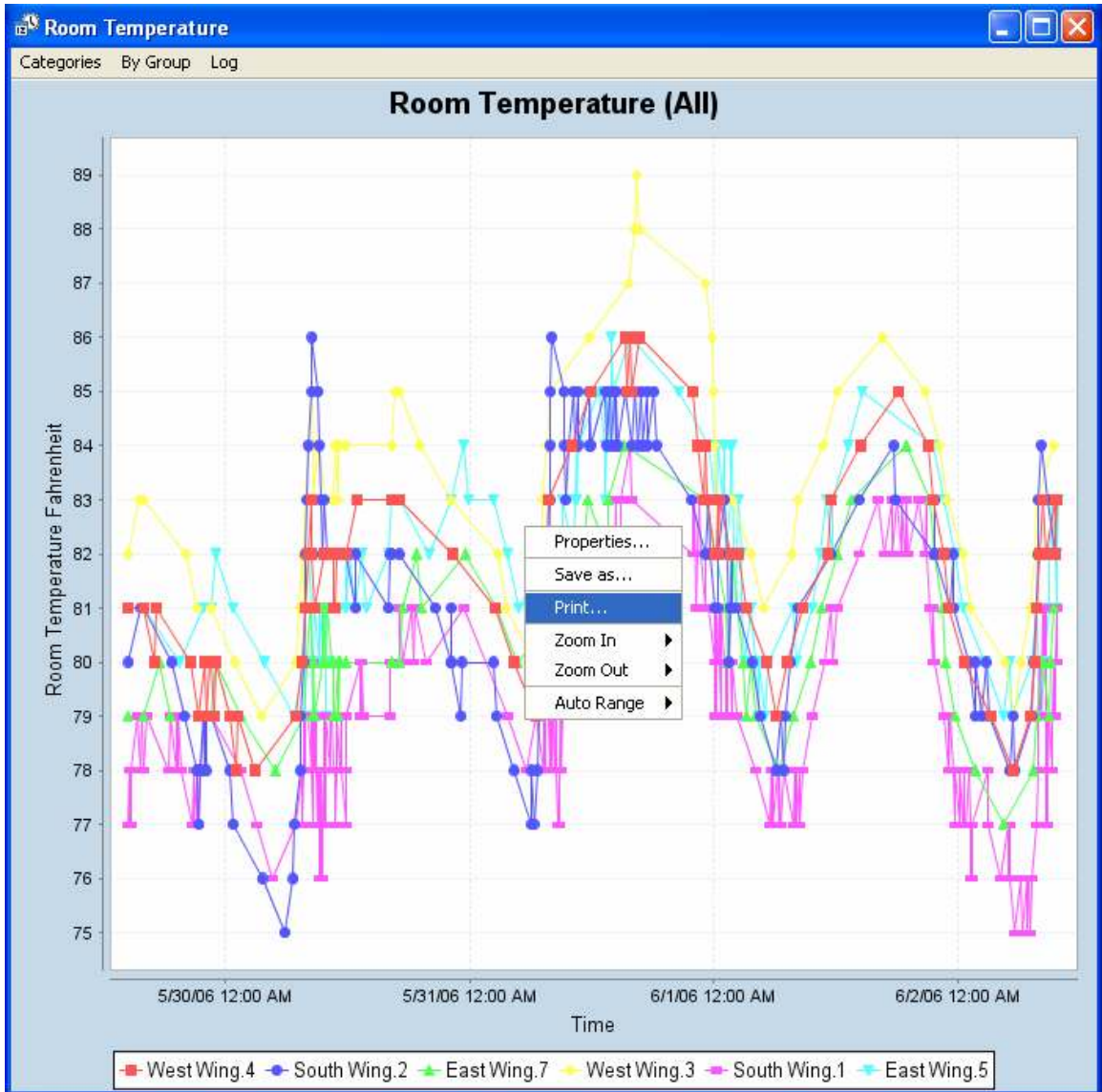


Figure 39 – Printing the Chart

7.1.4 Saving the Chart

To save the chart, **Right** mouse click on the chart and from the pop up menu choose the **Save as** menu item (see Figure 40).

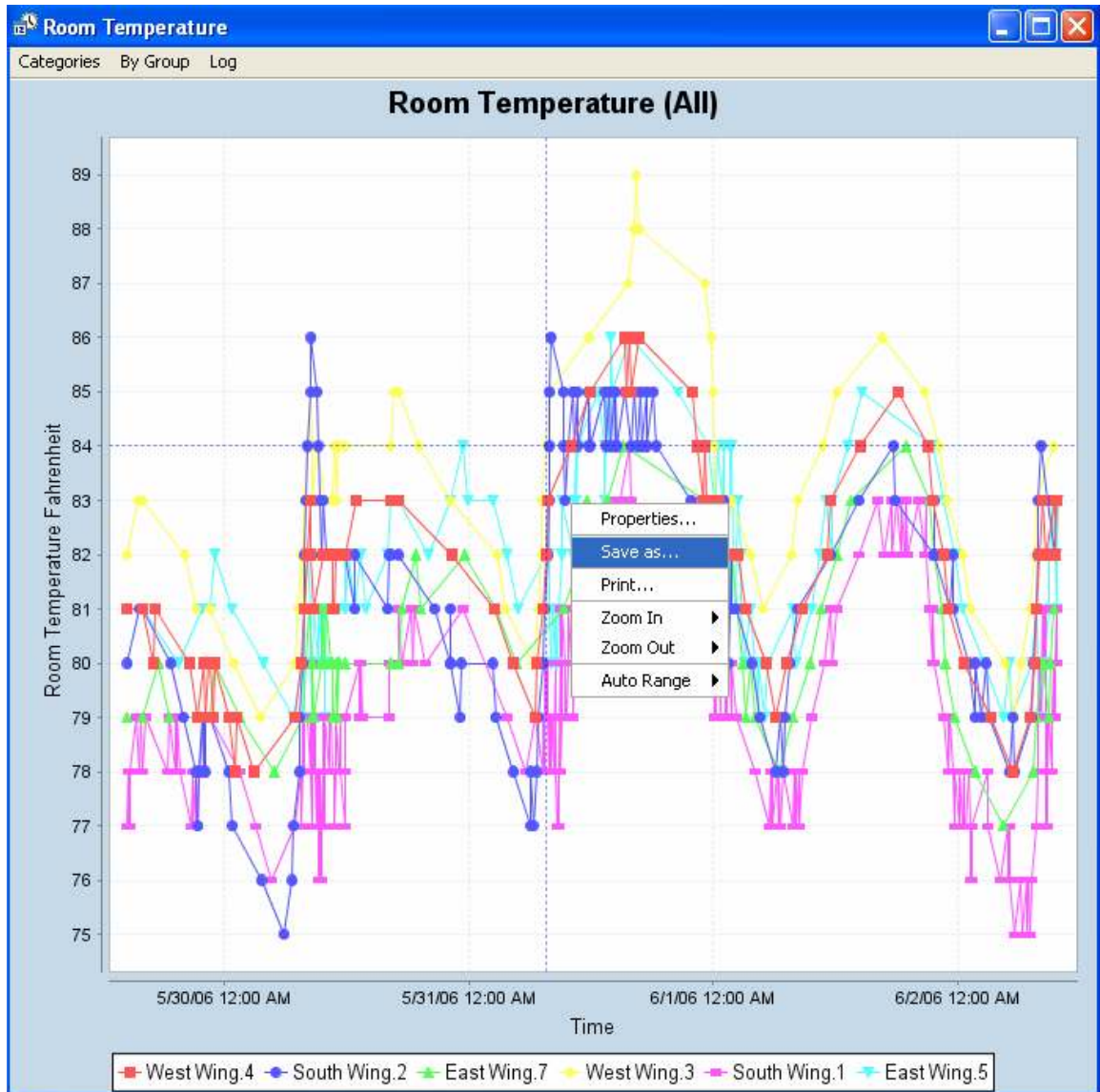


Figure 40 – Saving the Chart

7.1.5 Viewing the Log

From the Log menu, choose Show Log menu item which would bring up Excel (or a regular text file if Excel is not installed on the host computer) with a comprehensive log of all activities since the XCI-NC was rebooted or the last reset (see Figure 41)

	A	B	C	D	E	F
1	Control	Value	Node	Time	User	Log Type
2	System	System	Woodland Hills Building.	5/17/06 0:01	Driver	-7029
3	Thermostat Control	On	Woodland Hills Building.	5/17/06 0:01	Driver	Log
4	Thermostat Mode	Auto	Woodland Hills Building.	5/17/06 0:01	Driver	Log
5	Fan Speed	Low	Woodland Hills Building.	5/17/06 0:01	Driver	Log
6	Fan	Auto	Woodland Hills Building.	5/17/06 0:01	Driver	Log
7	Temperature Scale	Fahrenheit	Woodland Hills Building.	5/17/06 0:01	Driver	Log
8	Energy Conservation	Common	Woodland Hills Building.	5/17/06 0:01	Driver	Log
9	Setpoint		86 Woodland Hills Building.	5/17/06 0:01	Driver	Log
10	Heat Setpoint		50 Woodland Hills Building.	5/17/06 0:01	Driver	Log
11	Min. Setpoint		86 Woodland Hills Building.	5/17/06 0:01	Driver	Log
12	Max. Setpoint		88 Woodland Hills Building.	5/17/06 0:01	Driver	Log
13	Room Temperature		77 Woodland Hills Building.	5/17/06 0:01	Driver	Log
14	Temperature 2	NC	Woodland Hills Building.	5/17/06 0:01	Driver	Log
15	Duct Temperature	NC	Woodland Hills Building.	5/17/06 0:01	Driver	Log
16	Damper Position	N/A	Woodland Hills Building.	5/17/06 0:01	Driver	Log
17	Status	Off	Woodland Hills Building.	5/17/06 0:01	Driver	Log
18	Thermostat Control	On	Woodland Hills Building.	5/17/06 0:01	Driver	Log

Figure 41 – Viewing the Log in Excel

7.2 Resetting the History/Trend

To reset the trends/logs, right mouse click on the Root Node and then select the **Reset History/Trend** menu item (see Figure 42)

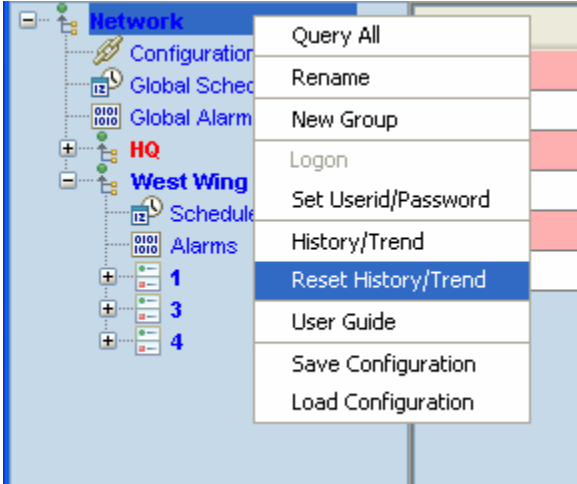


Figure 42 – Resetting the History/Trend

8. Upgrading the Firmware

8.1 Manually Upgrading the Firmware

In order to manually upgrade the firmware, you will need to have the firmware file stored locally on the computer from which you are attempting the upgrade. **Right** mouse click on the Physical Device Node (XCI-NC) and then choose the **Manual Upgrade** menu item (see Figure 43). When prompted with the File Chooser dialog, select the desired firmware file. Upon the successful completion of firmware upgrade, the Administrative Console is shut down. You will have to restart it manually.

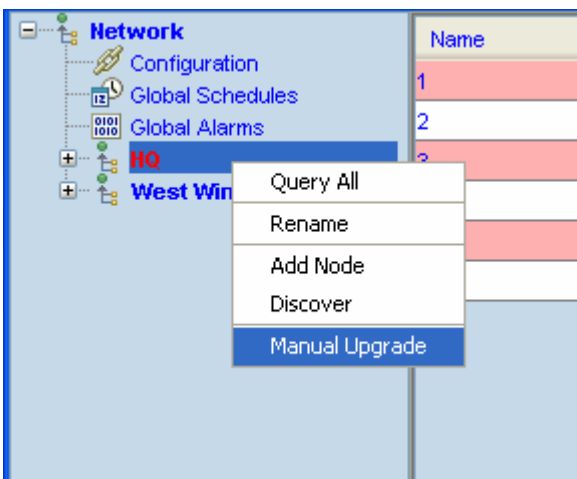


Figure 43 - Manually Upgrading the Firmware

8.2 Automatically Upgrading the Firmware

Every time the Administrative Console is started, the system checks of any new updates for the currently running firmware and, if one is found, it's communicated within 30 seconds (see Figure 44).

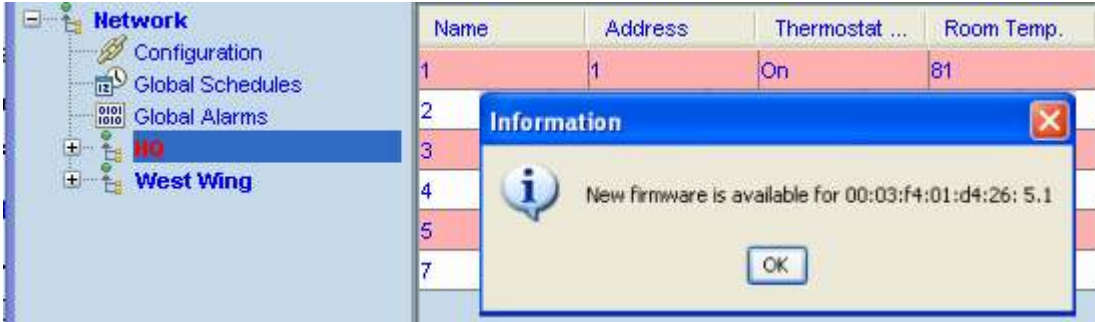


Figure 44 – Automatic Notification of New/Updated Firmware

To upgrade to the latest firmware version automatically, **Right** mouse click on the Physical Device Node (XCI-NC) and then choose the **Automatic Upgrade to vv** where **vv** denotes the latest version number (see Figure 45). You will need an Auto-Update userid and password to retrieve the latest firmware.

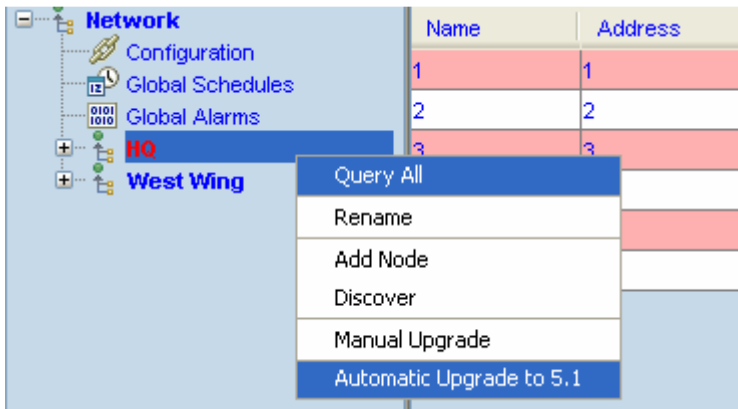


Figure 45 – Automatically Upgrading the Firmware