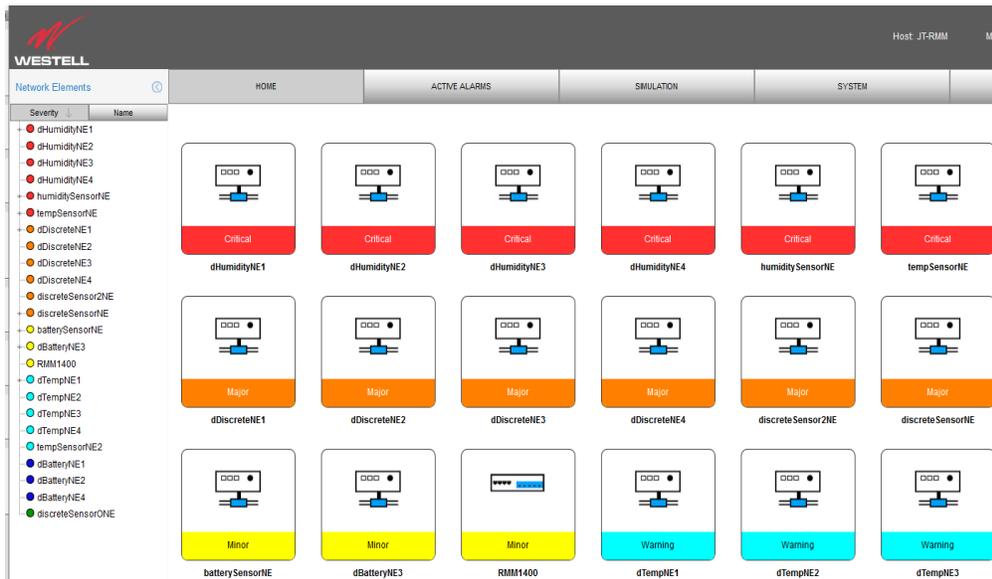




Kentrox Remotes RMX-3200, RMM-1400, RMM-700 and RMC-700

Remote Graphic User Interface (GUI) User Guide

GUI USER GUIDE



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Westell Technologies
750 North Commons Drive
Aurora, IL 60504 USA
Toll Free: (800) 377-8766
International: +1 (630) 375-4950
Fax: +1 (630) 375-4931



Part #030-101854 iArA
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Introduction

Westell is pleased to introduce the new Graphic User Interface for the Kentrox Remote Suite of Products (RMX-3200, RMM-1400, RMM-700 and RMC-700). Developed in concert with our ongoing assessments of customer needs, the Remote GUI allows users without extensive technical backgrounds to easily check alarms, events, and measurements from network elements almost instantly. Remote GUI functions include:

- Simulating and testing alarms on the Remote
- Viewing the status of all network elements managed by the Remote
- Viewing the status of alarms
- Viewing measurements from network elements managed by the Remote
- Viewing status points

Supported Web Browsers

The Kentrox Remote GUI supports use by these browsers: Internet Explorer 10 and greater, Firefox 31 and greater, Chrome 31 and greater, and Safari 7 and greater.

Accessing the Kentrox Remote GUI

1. If needed, from the Command Line Interface (CLI), enable the Remote access protocol (HTTPS only for Remotes RMM-700 and RMC-700, HTTP or HTTPS for Remotes RMX-3200 and RMM-1400).

```
config remote-access https enable
```

Important: When using the HTTPS protocol and accessing the web interface for the first time, an error page will display indicating that there is a problem with the web site's security certificate. Click **Continue to this web site** to accept the security certificate and continue with the acceptance options as prompted.

2. Configure the IP address from the Remote's CLI. Refer to your Remote's Configuration Guide's "Setting Up the Initial Remote (model) Configuration" section in the chapter titled "Getting Started."

3. Open a web browser, and enter your Remote's IP address in this format (using HTTP or HTTPS as needed):

```
https://10.40.57.233
```

4. The login window displays. Enter your user name and your password. The graphical user interface opens to the Home page, as shown in Figure 1.

The Kentrox Remote GUI automatically refreshes every five minutes, and uses the inactivity timeout period configured in the Remote CLI. A dialog informs the user when the inactivity timeout period ends, and the user is redirected to the login page after clicking OK.



Navigating the Kentrox Remote GUI

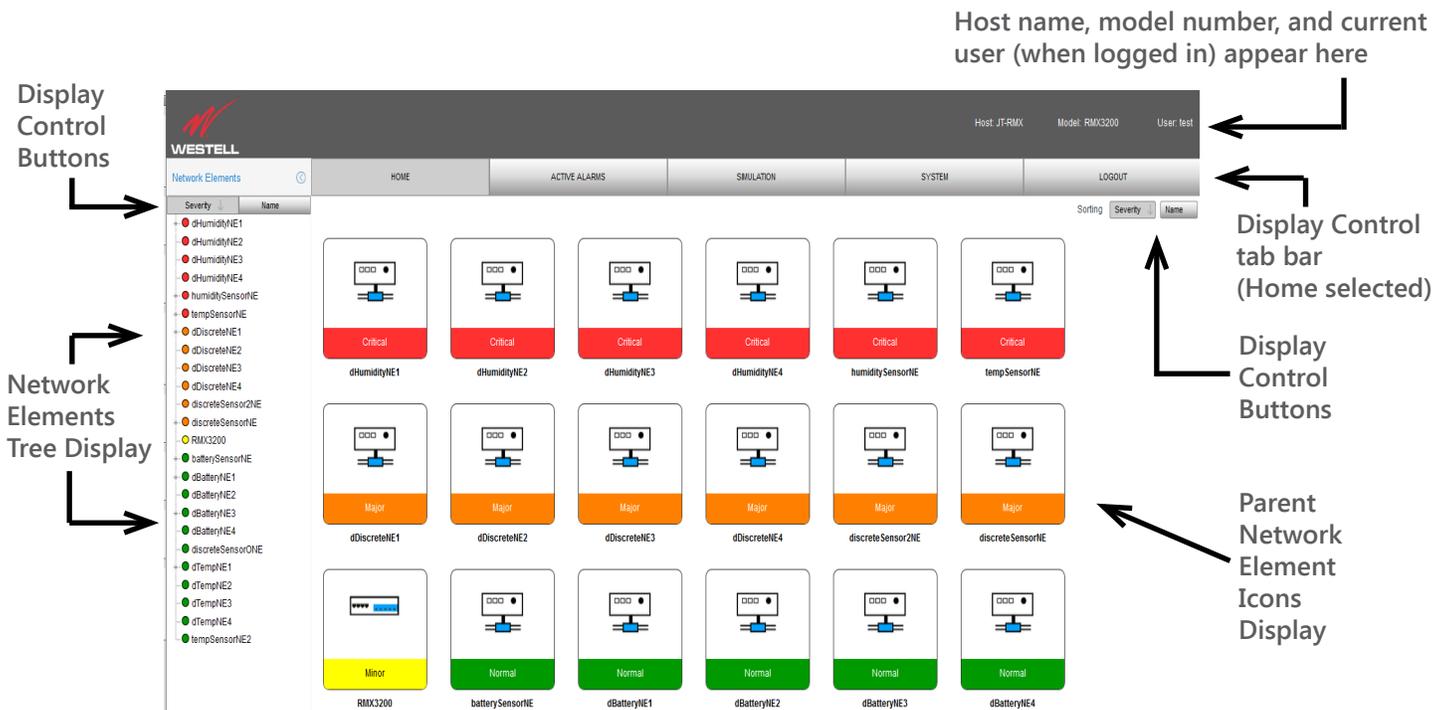


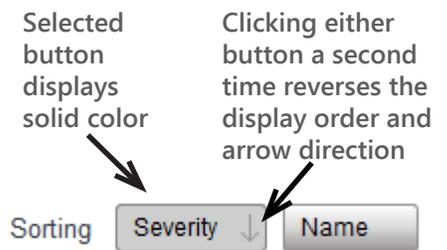
Figure 1: Default Home Page layout of the Remote GUI

The Kentrox Remote GUI is designed to bring the most severe alarms to the user’s attention immediately. The default home page presents network elements in order of alarm severity. Network elements experiencing critical alarms always appear on top of both the Network Element Tree on the left and the Parent Network Element Icons Display at lower right.

Color coding for alarm severities is shown below. The Display Control buttons above the Network Element Tree and in the upper right of the Parent Network Elements Icons Display let users re-sort NE icons by severity/reverse severity or alphanumerically/reverse alphanumerically by name.

Alarm Severity	NE Tree Icon	Parent NE Icon	Color
Critical	tempSensorNE	Critical	Red
Major	dDiscreteNE4	Major	Orange
Minor	batterySensorNE	Minor	Yellow
Warning	tempSensorNE2	Warning	Cyan
Informational	dHumidityNE3	Informational	Violet
Normal	TowerLightNE	Normal	Green

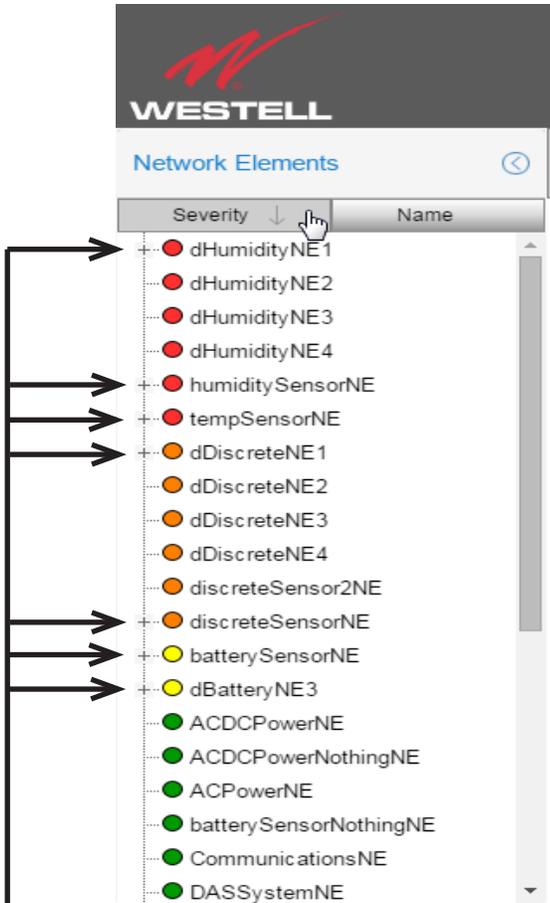
How Alarm Severities are shown by color



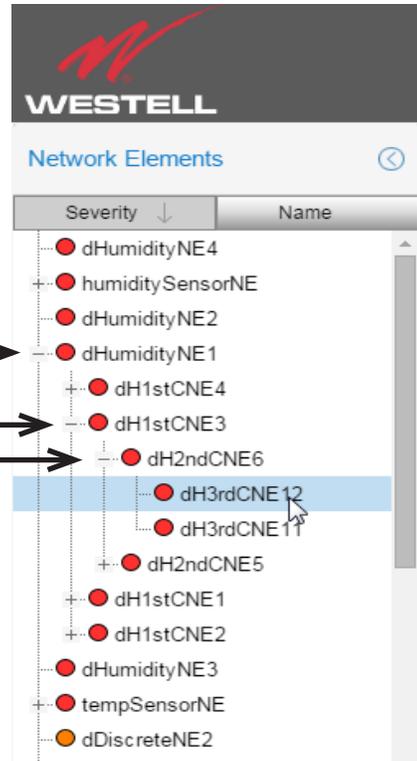
Display Control buttons let users re-sort the order in which NE parent icons appear, by alarm severity, reverse alarm severity, alphanumerically by NE name, or reverse alphanumerically by NE name.

The Network Element Tree

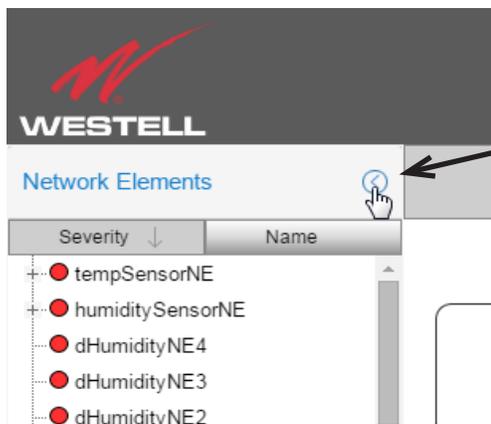
Icons in the Network Element Tree display include stand-alone NEs and parent NEs. Parent NEs have a plus sign to the left of the icon. In addition to sorting these by severity or alphanumerically, users can click the plus signs to reveal child and grandchild NEs. Users also can conceal the entire NE Tree display.



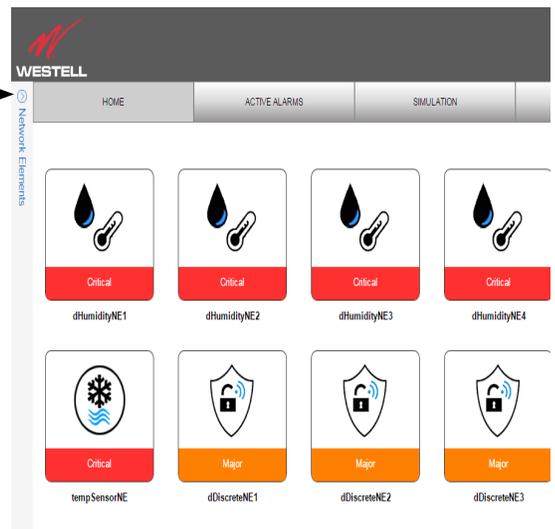
Parent network elements appear with a clickable + icon. Clicking the + icon reveals the child(ren) network element(s) within, as shown at right.



The icon next to parent network elements changes to a - sign when the user clicks to reveal child(ren) network element(s). In this example, network element dHumidityNE1 is open, displaying four child elements. One of those, dH1stCNE3, has been opened to reveal its two children.



To conceal the Network Elements Tree display, the user clicks the small arrow icon shown at left. The display will collapse into the left margin as shown at right. Clicking the same icon again will restore the tree display.



Viewing Alarms, Measurements, and NE Details

Viewing NE Details

The user can examine details about any network element from the Home Page by clicking on the NE icon or the NE name in the tree display. The network element highlights in both places, and panels with information about active alarms, measurements, and status points open at the bottom of the NE icons display. Buttons at upper right of the details display allow users to view details for all alarms, and to conceal the details display.

When the user clicks on a child NE in the tree display, that child NE's details appear, while the parent NE icon highlights.

User clicks on parent or child NE name in tree display or parent NE icon. Both appear highlighted.

Column headers

Details on the selected NE's Active Alarms, Measurements, and Status Points appear.

Buttons to view Active or All Alarms and to conceal details.

Column Header Display Controls

Column headers atop the Network Element details panels and the Active Alarms display allow users to adjust, re-sort, rearrange, and delete columns.

Downward-pointing arrow appears on right side of header when user hovers cursor over it.

When the pointer hovers over Columns, checkboxes appear letting user select/deselect columns to display.

Cursor changes to a pointer when the user hovers over the downward-pointing arrow, revealing controls to re-sort the column display or change the columns.

Column header display controls (continued)

Users can adjust column widths by hovering the cursor over the right side of a column header and then dragging the side of the column.

Minor Informational
 Warning Normal

Severity ↓	Message	Network Element	Sim Status
critical	Low Humidity: 16 RelHum	dH1stCNE1	
critical	Low Humidity: 16 RelHum	dH1stCNE2	
critical	Low Humidity: 16 RelHum	dH1stCNE3	

Cursor changes to width adjustment tool when the user hovers over the side of a column header. User then drags the tool right or left to change column width as desired. In the above example, the user is narrowing the Message column.

Users can rearrange columns by dragging the headers to the desired spot.

Minor Informational
 Warning Normal

Severity ↓	Message	Network Element
critical	Low Humidity: 16 RelHum	dH1stCNE2
critical	Low Humidity: 16 RelHum	dH1stCNE3
critical	Low Humidity: 16 RelHum	dH1stCNE4

The name of the column being moved appears initially with a red slashed circle icon and moves with the cursor, as shown above. Once the cursor moves halfway across the next column, that icon changes to a green checkmark as shown below, and the user can release the mouse button to rearrange the columns.

Minor Informational
 Warning Normal

Severity ↓	Message	Network Element
critical	Low Humidity: 16 RelHum	dH1stCNE1
critical	Low Humidity: 16 RelHum	dH1stCNE2
critical	Low Humidity: 16 RelHum	dH1stCNE3
critical	Low Humidity: 16 RelHum	dH1stCNE4
critical	Low Humidity: 16 RelHum	dH2ndCNE1
critical	Low Humidity: 16 RelHum	dH2ndCNE2

Users can re-sort contents of a column by clicking on the header. When the user clicks on the Severity column header displaying descending severity (arrow pointing down, as shown above), the contents reappear in order of ascending severity, as seen below. Another click toggles back to the prior view. Other columns will re-sort by name in alpha-numeric order or the reverse when the headers are clicked.

Active Alarms

Search:

Critical Minor Informational
 Major Warning Normal

Name	Severity ↑	Message
dBatteryNE1__batteryAlarm	informational	Battery offline
dBatteryNE2__batteryAlarm	informational	Battery offline
dBatteryNE3__batteryAlarm	informational	Battery offline
dBatteryNE4__batteryAlarm	informational	Battery offline
dTemp1stCompNE1__tempAlarm	warning	Temperature too much signal

The Active Alarms Display

The Active Alarms display, shown below, appears when the user clicks the Active Alarms tab on the Display Control Tab Bar. This initial default view includes all alarms except for "Normal" severity.

The screenshot shows the Westell GUI interface. At the top, there's a navigation bar with 'HOME', 'ACTIVE ALARMS', 'SIMULATION', 'SYSTEM', and 'LOGOUT'. Below this is a 'Network Elements' sidebar with a list of elements like dHumidityNE1, humiditySensorNE, etc. The main area is titled 'Active Alarms' and contains a search field and several checkboxes for filtering by severity: Critical, Minor, Informational, Major, Warning, and Normal. Below the search and filters is a table of active alarms.

Name ↑	Severity ↓	Message	Network Element	Sim Status
dHumidity1stCompNE1_humidityAlarm	critical	Low Humidity: 28 RelHum	dH1stCNE1	
dHumidity1stCompNE2_humidityAlarm	critical	Low Humidity: 28 RelHum	dH1stCNE2	
dHumidity1stCompNE3_humidityAlarm	critical	Low Humidity: 28 RelHum	dH1stCNE3	
dHumidity1stCompNE4_humidityAlarm	critical	Low Humidity: 28 RelHum	dH1stCNE4	
dHumidity2ndCompNE1_humidityAlarm	critical	Low Humidity: 28 RelHum	dH2ndCNE1	
dHumidity2ndCompNE2_humidityAlarm	critical	Low Humidity: 28 RelHum	dH2ndCNE2	
dHumidity2ndCompNE3_humidityAlarm	critical	Low Humidity: 28 RelHum	dH2ndCNE3	
dHumidity2ndCompNE4_humidityAlarm	critical	Low Humidity: 28 RelHum	dH2ndCNE4	
dHumidity2ndCompNE5_humidityAlarm	critical	Low Humidity: 28 RelHum	dH2ndCNE5	
dHumidity2ndCompNE6_humidityAlarm	critical	Low Humidity: 28 RelHum	dH2ndCNE6	
dHumidity2ndCompNE7_humidityAlarm	critical	Low Humidity: 28 RelHum	dH2ndCNE7	
dHumidity2ndCompNE8_humidityAlarm	critical	Low Humidity: 28 RelHum	dH2ndCNE8	
dHumidity3rdCompNE10_humidityAlarm	critical	Low Humidity: 28 RelHum	dH3rdCNE10	
dHumidity3rdCompNE11_humidityAlarm	critical	Low Humidity: 28 RelHum	dH3rdCNE11	
dHumidity3rdCompNE12_humidityAlarm	critical	Low Humidity: 28 RelHum	dH3rdCNE12	
dHumidity3rdCompNE13_humidityAlarm	critical	Low Humidity: 28 RelHum	dH3rdCNE13	
dHumidity3rdCompNE14_humidityAlarm	critical	Low Humidity: 28 RelHum	dH3rdCNE14	
dHumidity3rdCompNE15_humidityAlarm	critical	Low Humidity: 28 RelHum	dH3rdCNE15	
dHumidity3rdCompNE16_humidityAlarm	critical	Low Humidity: 28 RelHum	dH3rdCNE16	
dHumidity3rdCompNE1_humidityAlarm	critical	Low Humidity: 28 RelHum	dH3rdCNE1	

Search field and filtering checkboxes

The Search feature allows users to search for alarms using words or characters that appear in the alarm name. Below, a search for the word "door" has yielded six major alarms involving door intrusions.

To return to the full Active Alarms display, the user needs to delete the contents of the Search field.

This screenshot shows the same Westell GUI, but with the search field containing the word 'door'. The table of active alarms is now filtered to show only six entries, all with a 'major' severity level.

Name ↑	Severity ↓	Message
dDiscreteNE1_Door_Intrusion_mod	major	Door Opened
dDiscreteNE2_Door_Intrusion_mod	major	Door Opened
dDiscreteNE3_Door_Intrusion_mod	major	Door Opened
dDiscreteNE4_Door_Intrusion_mod	major	Door Opened
discreteSensor2NE_Door_Intrusion_mod	major	Door Opened
discreteSensorNE_Door_Intrusion_mod	major	Door Opened

The Filtering Checkboxes allow users to filter the Active Alarms display by severity. For example, a user could check Critical and Major, and only alarms of Critical and Major severity would display. The Normal checkbox lets users view alarms in the Normal state, which are not normally displayed.

The display updates any time a box is checked or unchecked. When all checkboxes are deselected, all active alarms are displayed again.

Simulations and Tests

The Remote GUI Simulation page lets users simulate any alarm and test the Remote. Simulations let users view how any alarm appears without triggering any actual alarms. The test feature allows users to test a Remote during installation or maintenance, for example, without generating actual alarms at a network operations center (NOC).

To access the Simulation page, click the Simulation tab on the Display Controls Tab Bar.

Simulation Tab - Points to the 'SIMULATION' tab in the top navigation bar.

Checkboxes to select alarms - Points to the checkboxes in the left column of the 'Simulation Alarms' table.

Simulation Controls - Points to the 'Simulation Control' section containing 'Simulation Mode' (Disabled, Normal, Non-Normal) and 'Duration (Minutes)'.

Test Controls - Points to the 'Test Mode' section containing 'Enable' and 'Disable' radio buttons, and 'Timeout (Minutes)'.

To conduct a simulation:

1. Select one or more alarms to simulate by clicking checkboxes in the left column of the Simulation Alarms display.
2. In the Simulation Controls, select either Normal (to simulate Normal severity) or Non-Normal (to simulate a different severity).
3. Set the desired duration (maximum is 60 minutes).
4. Click Apply. A confirmation window appears showing the selected simulation settings. Click Yes to start the simulation or No to reset the settings.

During the simulation, messages appear in the Sim Status column of the alarm display stating the simulation mode and time remaining. The user can update these messages by clicking the Refresh button. When the simulation ends, the messages no longer appear.

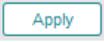
Refresh button - Points to the circular arrow icon above the 'Sim Status' list.

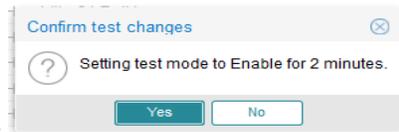
Simulation Status Messages - Points to the list of messages in the 'Sim Status' column.

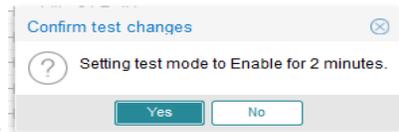
User clicks Sim Status header twice to bring simulated alarms to top of the display.

Using the Test Feature

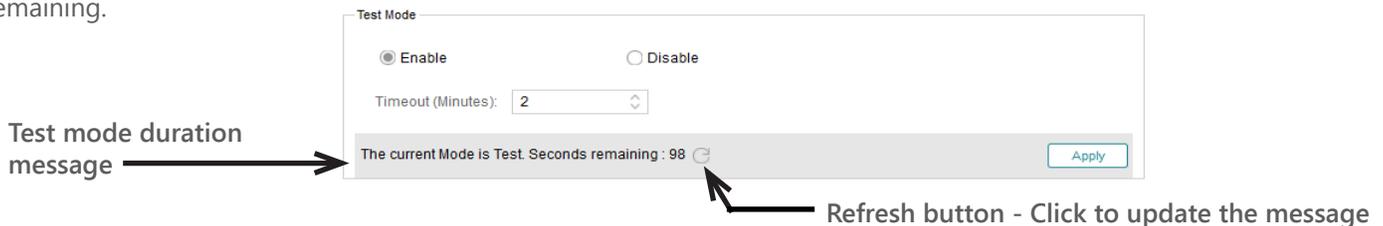
The Remote GUI test feature marks alarms occurring during physical site tests so NOC operators are informed that no reaction is needed. The test controls all appear at the bottom right of the Simulation page shown on Page 8. To test the Remote:

1. Click the Enable button, set the desired Timeout (test) duration in minutes, and click .



2. A confirmation message appears: . Click Yes to start the test. Click No or the close button to not start the test (to reset the test duration, for example).

3. The Test Mode controls will display a message with the test mode and time remaining. This message is always displayed when the Remote is in test mode. The user can click the Refresh button next to the message to update the time remaining.



4. At this point, the user can let the test proceed, change the test duration, or halt the test in process.

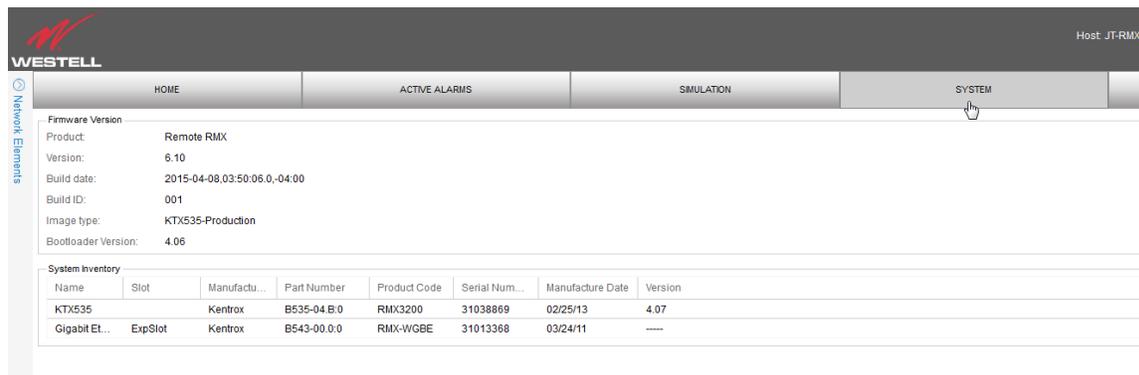
To change the timeout duration, the user adjusts the number of minutes and clicks Apply. The new duration will display in the message.

To halt the test in progress, the user clicks the Disable button and Apply. A confirmation message will appear, and the user clicks Yes to halt the test. The message will display that "The current Mode is Normal."

5. When the test expires, the Simulation Page will return to the initial view the next time the user refreshes or when the Remote automatically refreshes the view (which occurs every five minutes). The message "The current Mode is Normal" will appear again.

Viewing the System Information

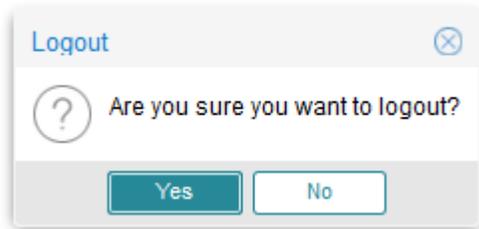
To view system information via the Kentrox Remote GUI, the user clicks the System tab on the Display Control tab bar. The read-only system information appears as shown below. Users can adjust column widths as needed.



Name	Slot	Manufactu...	Part Number	Product Code	Serial Num...	Manufacture Date	Version
KTX535		Kentrox	B535-04 B.0	RMX3200	31038869	02/25/13	4.07
Gigabit Et...	ExpSlot	Kentrox	B543-00.0.0	RMX-WGBE	31013368	03/24/11	----

Logging Out

To log out of the Remote GUI, the user clicks the Logout tab on the Display Control tab bar. A confirmation message



appears:

Click Yes to log out. The Remote GUI login page will display.

Click No or the close button to return to the previous display.

Customer Assistance

All customers, partners, and resellers who have a valid Westell Support and Services Agreement have complete access to the technical support resources.

Before you call or email

Before you contact Westell for assistance, please have the following information available:

- The versions of hardware and software you are currently running
- The error number and exact wording of any messages that appeared on your screen.
- What happened and what you were doing when the problem occurred.
- How you tried to solve the problem.

Email Technical Support

Email support is available. You may send email at any time during the day; however, responses will be provided only during normal business hours, in accordance with your Service and Support Agreement.

To contact Technical Support, send email to support@westell.com.

Telephone Technical Support

Phone number **800-377-8766, option 2**

Normal business hours: 8 a.m. to 6 p.m. Eastern time.

After-Hours Support is available to customers with a valid 24x7 Support and Services Agreement. Call the above number, option 2, and follow the prompts for after-hours service.