



GenWatch3[®]
GW_SysVista
Software Version 2.3.0
Module Book

GenWatch3[®]

600-2.3.0-O.1
4/8/2011

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Refer to the *Troubleshooting & Support* section of the GenWatch3 Manual Shell (Book 600-2.3.0-AA.1) for complete support and contact information.

Document History

Revision	Description	Author
2.0.2	Initial Release	JAW
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2.0.6.10	Updated System Usage section to describe slots	JAW
2.2.0	Revisions before release	KIH
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Table of Contents

<i>Trademarks</i>	4
<i>The Genesis Group Trademark Information</i>	4
<i>Copyright</i>	4
<i>Disclaimer</i>	4
<i>License</i>	4
<i>Support</i>	4
DOCUMENT HISTORY	5
TABLE OF CONTENTS	6
ABOUT THIS MANUAL	8
GOALS	8
WHO SHOULD READ THIS MANUAL?	8
HOW THIS MANUAL IS ORGANIZED	8
CHAPTER 1 OVERVIEW	10
GW_SYSVISTA TERMS	10
WHAT IS GW_SYSVISTA?	11
RESOURCE OPTIONS	12
CONNECTION OPTIONS	13
STATISTICS	15
<i>Usage Overview</i>	16
INTERVAL OPTIONS	17
GW_SYSVISTA ALERTS	18
VIEW OPTIONS	19
<i>Dashboard</i>	19
<i>Multi-view</i>	19
Multi-View Banner	20
Located at the top of the Multi-View screen is the <i>Banner</i>	20
Adding a Dial	21
Updating a Dial	22
Removing a Dial	22
Toggling a Dial to Number Only view	22
APPENDIX A	24
RADIO ACTIVITIES	24
RADIO DISCONNECTED ACTIVITY	24

Goals

This manual describes the role and function of the GW_SysVista module in the GenWatch3 solution.

Who Should Read This Manual?



This manual is written for the intended audience of novice to mid-level trunked radio system users and novice to mid-level PC users.

How This Manual Is Organized

This manual is organized as follows:

- **Overview:** Describes the GW_SysVista module and GW_SysVista GUI.

This manual contains the following images, used to indicate that a segment of text requires special attention:

-  **Additional Information:** Additional information is used to indicate shortcuts or tips.
-  **Warning:** Warnings are used to indicate possible problem areas, such as a risk of data loss or incorrect/unexpected functionality.

This chapter describes the GW_SysVista module and GW_SysVista GUI (graphical user interface).

This chapter contains the following sections:

- **GW_SysVista Terms:** Defines some crucial terms used in GW_SysVista.
- **What is GW_SysVista?:** Describes the purpose of GW_SysVista.
- **Resource Options:** Describes the trunking resources used in GW_SysVista.
- **Connection Options:** Describes the options for defining a connection activity.
- **Statistics:** Describes the statistics displayed in GW_SysVista.
- **Interval Options:** Describes the interval options available in GW_SysVista.
- **GW_SysVista Alert:** Describes the alert feature of GW_SysVista.
- **View Options:** Describes the view options available in GW_SysVista.

GW_SysVista Terms

The following terms are used in GW_SysVista. In order to understand the information shown in GW_SysVista, you must understand these terms:

- **Calls:** In general terms, this is a conversation. A call can be:
 - **Group-based:** All radios affiliated to the target group hear the conversation and can key-up and speak in the conversation.
 - **Private:** Radio to radio
 - **Telephone:** Either radio to telephone switch or telephone switch to group or telephone switch to radio.
- **PTTs:** Calls can contain multiple PTTs. PTTs occur in a call when something about the call changes. Changes can include:
 - Who is speaking in the call.
 - Sites added and removed as radios included in the Call roam between sites.
- **Radio Activity:** This is activity that originates from the radio. See the *Radio Activities* section of *Appendix A* for a list of radio activities.
- **Connections:** A connection occurs when a radio becomes known to GW_SysVista. This process is described in the *Connection Options* section below.

What is GW_SysVista?

GW_SysVista is a real-time, interactive statistical reporting interface. The GW_SysVista module receives packets from each GenWatch3 input connection. GW_SysVista then compiles these packets into statistics. The GW_SysVista GUI (figure 1.1) displays these statistics for the selected time period and resource(s).

By design, the GW_SysVista View window shows you easy-to-read, high-level information about your system(s). The large analog dials and straight-forward options make GW_SysVista easy to read and understand. GW_SysVista is *the* dashboard for your trunked radio system(s).

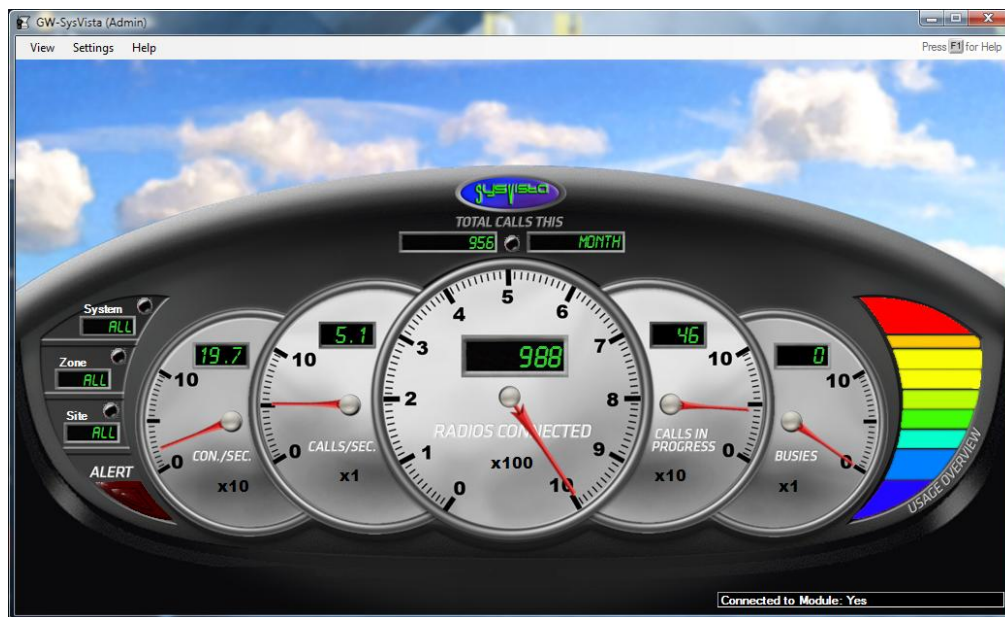


Figure 1.1 – GW_SysVista View Window

Resource Options

Resources are the systems, zones and sites monitored by GenWatch3. All systems have a system ID and at least one site, but not all systems have a zone (such as single-site systems). For these systems, the zone acts as a place-holder to give them the same organization as multi-site systems.

Behind the scenes, GW_SysVista gathers statistics specific to each of these resources. GW_SysVista then allows you to *drill down* on your statistics, by choosing a resource:

- **Systems:** Select 'All' for all systems. Choose a specific system ID to view statistics for the selected system ID and to allow selection for a specific zone.
- **Zone:** Select 'All' for all zones under the selected system. Choose a specific zone to view statistics for the selected zone under the selected system and to allow selection for a specific site ID.
- **Sites:** Select 'All' for all site IDs under the selected zone for the selected system. Choose a specific site ID to view statistics for the selected site ID under the selected zone. GW_SysVista ignores activity from "console" sites with a site ID of "0".



Drill Down: This refers to eliminating some data in order to view specific data. It is also known as a filter.

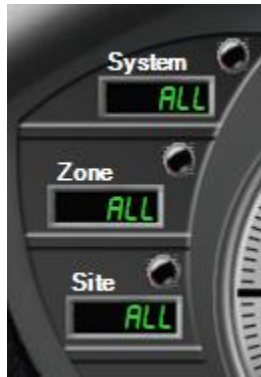


Figure 1.2 – Dashboard Resource Selection

Connection Options

A connection occurs when a radio becomes known to GW_SysVista. A connection is the result of one of the following activities:

- Affiliations
- Associations
- Registrations
- Radio Activity (See the *Radio Activities* section of *Appendix A* for a list of radio activities)

Connections are used to determine the **Radios Connected** and **Connections per Second** statistics. The **Connections per Second** statistic does not include radio activity.

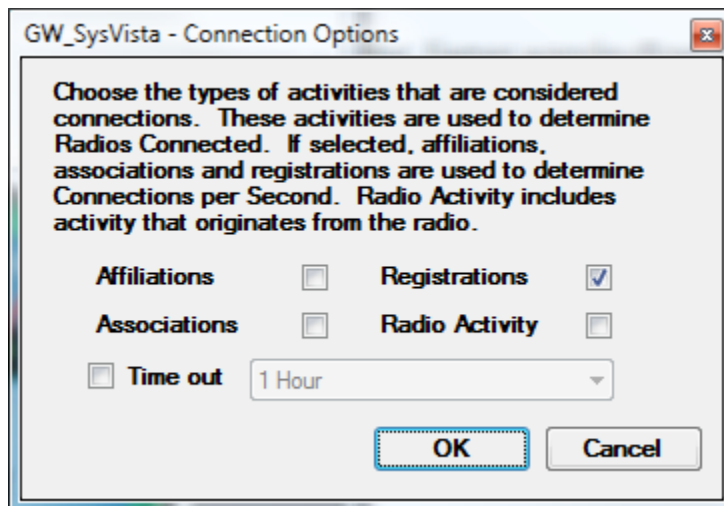


Figure 1.3 – Connection Options Window

A radio is counted in the **Radios Connected** value if its most recent activity is one of the following and its corresponding option is checked in the *Connection Options* window.

- Affiliation
- Association
- Registration
- Radio Activity

A radio is **not** counted in the **Radios Connected** value if its most recent activity is one of the following and its corresponding option is checked in the *Connection Options* window.

- Deaffiliation
- Disassociation
- Deregistration

A radio is **not** counted in the **Radios Connected** value if its most recent activity is older than the specified **Time Out** period and the **Time Out** option is checked. The recommended time out period is 12 hours.

Time Out Period options include:

- 1 Hour
- 2 Hours
- 4 Hours
- 8 Hours
- 12 Hours
- 24 Hours
- 48 Hours
- 1 Week
- 2 Weeks
- 3 Weeks
- 4 Weeks

These options are saved to your GenWatch3 user profile and are restored when you open the GW_SysVista GUI.

Statistics

GW_SysVista tracks the following statistics:

- **Total Calls:** Total number of *Calls* (for multi-site input) or *PTTs* (for single-site input) initiated (started) on all selected resources within the selected time period. For multi-site systems, a call might initiate on multiple sites. For this reason, the sum of **Total Calls** for each site in a zone may be greater than the **Total Calls** for the sites' zone or system. In the Dashboard view this statistic does not provide an analog dial.
- ***Connections per Second (Con./Sec. or Connections/Sec.):** Shows how many connections per second have been received among all selected resources within the selected time period. This is based on your connection options.
- ***Calls per sec. (Calls/Sec.):** Indicates how many *Calls* (for multi-site input) or *PTTs* (for single-site input) per second have been active among all selected resources within the selected time period.
- ****Radios Connected:** Shows how many radios are known to be connected within all selected resources. This is based on your connection options.
- ****Calls in Progress:** Shows how many *Calls* (for multi-site input) or *PTTs* (for single-site input) are known to be in progress among all selected resources.
- ****Busies:** Shows how many busies are known to be in progress among all selected resources.



* - GW_SysVista shows these values as decimal numbers, rounded to the nearest 0.1. Values between 0.05 and 0.1 are rounded to 0.1. All values less than 0.05 are shown as 0.

** - This value does not consider the selected time period.

Each analog dial (gray dial with red needle) contains a multiplier value (x1, x10, x100, etc.). The multiplier value indicates which multiple of 10 the analog dial represents. This multiplier does not apply to the digital value (green number in the black box) within the analog dial.

Usage Overview

GW_SysVista shows the following value in graphical format (graphical bar on the right-most side of the GW_SysVista GUI):

- **Usage Overview:** This bar is an estimate of your total system usage. System usage is calculated using the following formula:
 - *Unit Time / (Voice Slots x Period Time)* where:
 - **Unit Time** = Total unit airtime among the selected resource in the selected time period.
 - **Voice Slots** = Total voice slots among the selected resources. Each Channel in GW_Alias has a **Channel Type** option. This option determines the channel's slots.
 - **Period Time** = Total time that has elapsed in the selected time period since the GenWatch3 service started.



Figure 1.4 – Usage Overview

Each segment in the **Usage Overview** bar represents about 10% system usage. When the system reaches 10% usage, the bottom bar will light up. When the system reaches 90% usage all bars will light up.



The **Usage Overview** determines the number of channels for a site by referencing the GW_Alias database. If you feel your usage is too high or too low, please check the channels under the site or sites you are monitoring. Verify the following:

- The channels exist in GW_Alias.
- Each voice channel is marked as **Voice Channel** in the **Channel Options** section of GW_Alias.
- Each voice channel's correct **Channel Type** is selected in the **Channel Options** section of GW_Alias.



The values in GW_SysVista are cleared each time the GenWatch3 service is stopped and each time the GenWatch3 service machine is restarted. If you restart the GenWatch3 service machine, the statistical values will need to rebuild over time to show entire daily, monthly, etc. values.

Interval Options

An interval is the amount of time GW_SysVista includes when showing the following values:

- Total Calls
- Con./Sec.
- Calls/Sec.

GW_SysVista will show statistics for the selected time period. GW_SysVista allows you to view system statistics for the following time periods:

- **Year:** Current Year. If the current date/time is 3/21/2010 3:34 PM, then the statistics will only include 1/1/2010 12:00 AM to 3/21/2010 3:34 PM. When the year on your system time changes, the values will clear.
- **Month:** Current Month. GW_SysVista will only show statistics for the current month. If the current date/time is 3/21/2010 3:34 PM, then the statistics will only include 3/1/2010 12:00 AM to 3/21/2010 3:34 PM. When the month on your system time changes, the values will clear.
- **Day:** Current Day. If the current date/time is 3/21/2010 3:34 PM, then the statistics will only include 3/21/2010 12:00 AM to 3/21/2010 3:34 PM. When the day on your system time changes, the values will clear.
- **Hour:** Current Hour. If the current date/time is 3/21/2010 3:34 PM, then the statistics will only include 3/21/2010 3:00 PM to 3/21/2010 3:34 PM. When the hour on your system time changes, the values will clear.
- **30 Minutes:** Current 30 minutes. If the current date/time is 3/21/2010 3:29 PM, then the statistics will only include 3/21/2010 3:00 PM to 3/21/2010 3:29 PM. If the current date/time is 3/21/2010 3:43 PM, then the statistics will only include 3/21/2010 3:30 PM to 3/21/2010 3:43 PM. When the minute on your system time changes to 30 or 00, the values will clear.
- **15 Minutes:** Current 15 minutes. If the current date/time is 3/21/2010 3:29 PM, then the statistics will only include 3/21/2010 3:15 PM to 3/21/2010 3:29 PM. When the minute on your system time changes to 15, 30, 45 or 00, the values will clear.
- **5 Minutes:** Current 5 minutes. If the current date/time is 3/21/2010 3:29 PM, then the statistics will only include 3/21/2010 3:25 PM to 3/21/2010 3:29 PM. When the minute on your system time changes to 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55 or 00, the values will clear.



Figure 1.5 – Dashboard Interval Selection

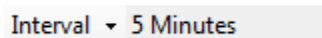


Figure 1.6 – Multi-View Interval Selection

GW_SysVista Alerts

GW_SysVista activates (lights up) its Alert light when it receives an interface board related diagnostic within its selected resources. Click on the Alert light to acknowledge (deactivate) this alert. Deactivating the Alert light will notify all other active GW_SysVista screens that the alert was acknowledged.



Figure 1.7 – GW_SysVista Alert Light (active)

These diagnostic alerts can then be investigated via other GenWatch3 modules, such as GW_Reports if you are archiving or GW_Channel if you have GW_Channel open when the alert occurs.

View Options

GW_SysVista offers two statistical views:

Dashboard

This view shows all statistics (described in the Statistics section above) for the selected resource(s). The only options on this view are the interval and the resources.

Multi-view

This view shows up to 20 customized dials. Each dial shows a statistic on the selected resource for the selected interval. You can add or remove dials at any time. The settings in this view are saved in your GenWatch3 user's profile.



Figure 1.8 – Multi-View Window

Multi-View Banner

Located at the top of the Multi-View screen is the *Banner*.

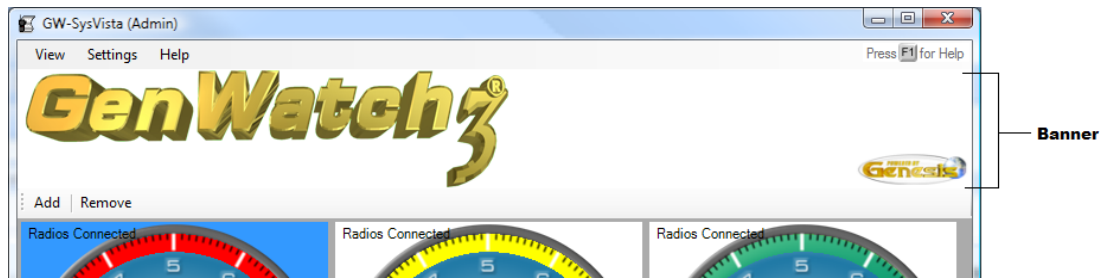


Figure 1.9 – Multi-View Banner

This banner can be hidden by un-checking the **Multi-View Banner** option located under **View** in the menu bar at the top. The picture for the banner can be changed with the following steps:

1. Create a jpeg graphic that is between 200 x 100 pixels and 2,000 x 1,000 pixels.
2. Save the image as *Banner.jpg*.
3. Place the new file in the
[*Program Data*]\Genesis\GenWatch3\Images\SysVista folder

For Windows Vista/7 [Program Data] will be *C:\Program Data*
For XP [Program Data] will be *C:\Documents and Settings\All Users\Application Data*

Adding a Dial

To add a dial:

1. Click the **Add** button.
2. Select a **System**: For all Systems, select All.
3. Select a **Zone**: For all Zones, select All (you must select a System before you can select a Zone).
4. Select a **Site**: For all Sites, select All (you must select a Zone before you can select a Site).
5. Select a **Statistic**.
6. Select an **Interval**. Some statistics are not interval based and this option will be disabled for those.
7. Enter a **Title** for the dial (Must be 50 characters or less).
8. Checking the **Thresholds** option will put a colored ring around the edge of the dial. This ring represents a percent of the thresholds specified until the red threshold is met or exceeded. When the value of the dial meets or exceeds the specified threshold, this ring will turn the respective color.
9. Select a background for the dial. The background selection does not affect dial functionality.

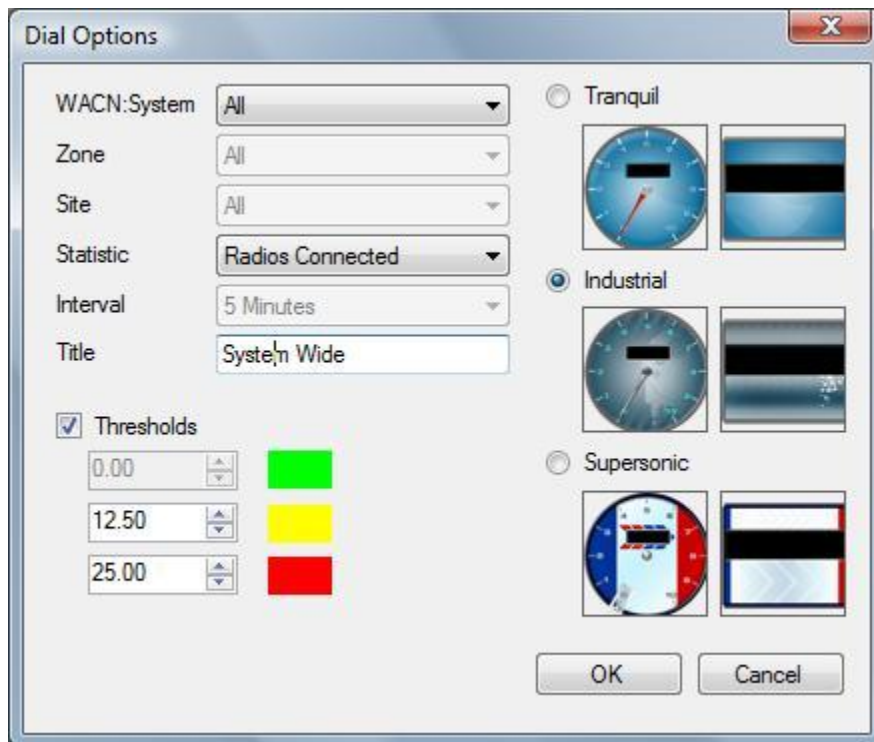


Figure 1.10 – Multi-View Dial Options Window

Updating a Dial

To update a dial:

1. Select a dial by clicking on it: GW_SysVista shows the dial outlined in blue.
2. Right-click the dial.
3. Select the **Properties...** option from the menu that appears.
4. Follow the steps from the *Adding a Dial* instructions above.

Removing a Dial

To remove a dial:

1. Select a dial by clicking on it: GW_SysVista shows the dial outlined in blue.
2. Click the **Remove** button.

Toggling a Dial to Number Only view

To toggle Number Only view:

1. Select a dial by clicking on it: SysVista shows the dial outlined in blue.
2. Right-click the dial.
3. Select the **Number Only** option from the menu that appears.
4. To go back to Dial view repeat steps 1-3.

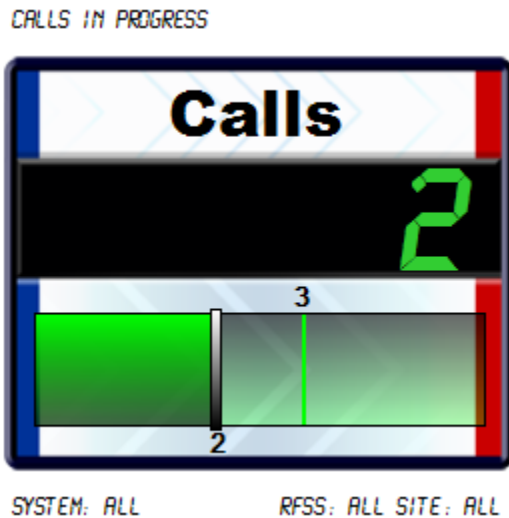


Figure 1.11 – Multi-View Dial in Number Only view

Radio Activities

This section shows each packet activity that is considered radio activity by the logic in GW_SysVista. If your connection definition includes **Radio Activity**, GW_SysVista will consider radios connected via these activities in the **Radios Connected** statistic. These activities do not affect the **Connections per Second** statistic.

Activity
Busy
ChangeMe Request
Channel Assignment
Dynamic Regrouping ACK
Emergency Alarm
Message
Status
RM/RT Command ACK

Radio Disconnected Activity

This section shows each activity that is considered a radio disconnection by the logic in GW_SysVista. These packets will result in GW_SysVista removing a radio from one or more connected radios lists. These radio disconnected activities may differ from other GenWatch3 modules.

Activity	List(s) Affected
Deaffiliation	Affiliations
Deregistration	Registrations
Disassociation	Associations
Selective Inhibit ACK	Affiliations, Registrations and Associations