GenWatch3®
GW_SysVista
Software Version 2.23.5
Module Book

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Refer to the *Troubleshooting & Support* section of the GenWatch3 Manual Shell (Book 600-2.23.5-AA.1) for complete support and contact information.

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2.15	Revisions Before Release	REB
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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 graphical user interface (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.

Chapter 1 Overview

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:
  - The radio 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).

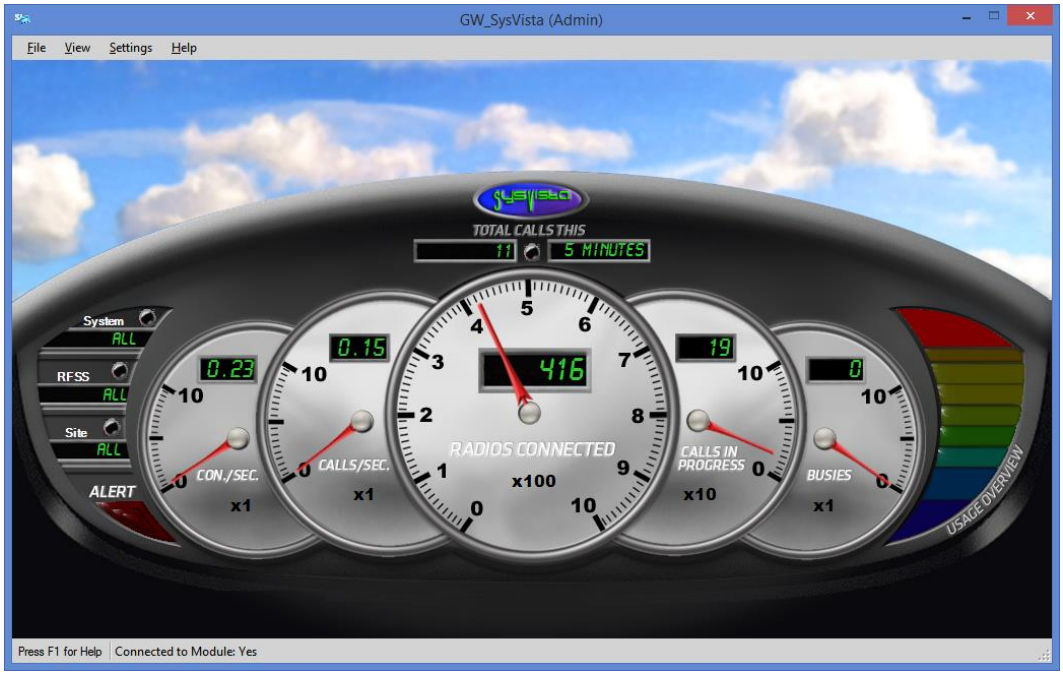

Figure 1.1 – GW_SysVista View Window

Resource Options

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

Behind the scenes, GW_SysVista gathers statistics specific to each of these resources. GW_SysVista then allows you to filter 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 RFSS.
- **RFSS**: Select **ALL** for all RFSSs under the selected system. Choose a specific RFSS to view statistics for the selected RFSS under the selected system and to allow selection for a specific site ID.
- **Sites**: Select **ALL** for all site IDs under the selected RFSS for the selected system. Choose a specific site ID to view statistics for the selected site ID under the selected RFSS. GW_SysVista ignores activity from console "sites" with a site ID of zero.

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.

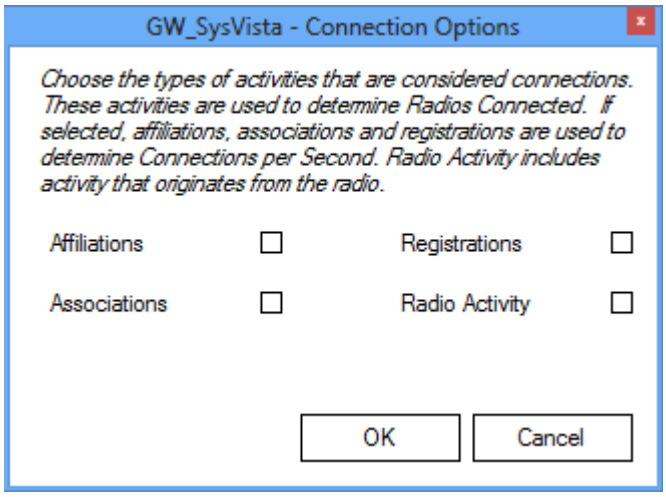

Figure 1.3 – Connection Options Window

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

- Affiliations
- Associations
- Registrations
- Radio Activity

Some systems issue Deaffiliations without issuing Deregistrations. In these systems if you choose to count Registrations/Deregistrations then you should also select Affiliations / Deaffiliations to avoid an inaccurate **Radios Connected** count.

For multisite systems, a deaffiliation will not remove a connected radio. Multisite systems include SmartZone, P25 and Dimetra.

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

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

Ignore Consoles

Option to not consider Consoles in connected radios statistics.

Ignore Conventional Sites

Option to not consider Conventional Sites in connected radios statistics. This only applies to ATIA data.

Some Digital Conventional Calls have an ID of zero. GW_SysVista will treat these as a single conventional radio.

These settings do not affect the list of sites available on the Dashboard view or the Dial Options window.

Statistics

GW_SysVista tracks the following statistics:

- **Total Calls**: Total number of ***Calls*** (for multisite input) or ***PTTs*** (for single-site input) initiated (started) on all selected resources within the selected time period. For multisite systems, a call might initiate on multiple sites. For this reason, the sum of **Total Calls** for each site in a RFSS may be greater than the **Total Calls** for the site's RFSS 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 Second* (Calls/Sec.)**: Indicates how many ***Calls*** (for multisite 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 and the system's Radio ID Timeout Minutes setting in GW_Alias. See the GW_Alias module book for more information on this setting.
- **Calls in Progress****: Shows how many ***Calls*** (for multisite 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 hundredth (0.01) where rounding away from zero is always used when the thousandth digit is a 5. For example, a value of 2.345 would be shown as 2.35. A value such as 1.234 would be shown as 1.23.

**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 rightmost 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 voice slots 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 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 host machine is restarted. If you restart the GenWatch3 host 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 3/21/2023 3:34 PM, then the statistics will only include 1/1/2023 12:00 AM to 3/21/2023 3:34 PM. When the current year changes, the values will clear.
- **Month**: Current Month*. If the current date/time is 3/21/2023 3:34 PM, then the statistics will only include 3/1/2023 12:00 AM to 3/21/2023 3:34 PM. When the current month changes, the values will clear.
- **Day**: Current Day*. If the current date/time is 3/21/2023 3:34 PM, then the statistics will only include 3/21/2023 12:00 AM to 3/21/2023 3:34 PM. When the current day changes, the values will clear.
- **Hour**: Current Hour*. If the current date/time is 3/21/2023 3:34 PM, then the statistics will only include 3/21/2023 3:00 PM to 3/21/2023 3:34 PM. When the hour changes, the values will clear.
- **30 Minutes**: Current 30 minutes*. If the current date/time is 3/21/2023 3:29 PM, then the statistics will only include 3/21/2023 3:00 PM to 3/21/2023 3:29 PM. If the current date/time is 3/21/2023 3:43 PM, then the statistics will only include 3/21/2023 3:30 PM to 3/21/2023 3:43 PM. When the minute changes to 30 or 00, the values will clear.
- **15 Minutes**: Current 15 minutes*. If the current date/time is 3/21/2023 3:29 PM, then the statistics will only include 3/21/2023 3:15 PM to 3/21/2023 3:29 PM. When the minute changes to 15, 30, 45 or 00, the values will clear.
- **5 Minutes**: Current 5 minutes*. If the current date/time is 3/21/2023 3:29 PM, then the statistics will only include 3/21/2023 3:25 PM to 3/21/2023 3:29 PM. When the minute changes to 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55 or 00, the values will clear.

* The current minute, hour, day, month, or year refers to the current system time of the GenWatch3 host machine.

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 windows 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.

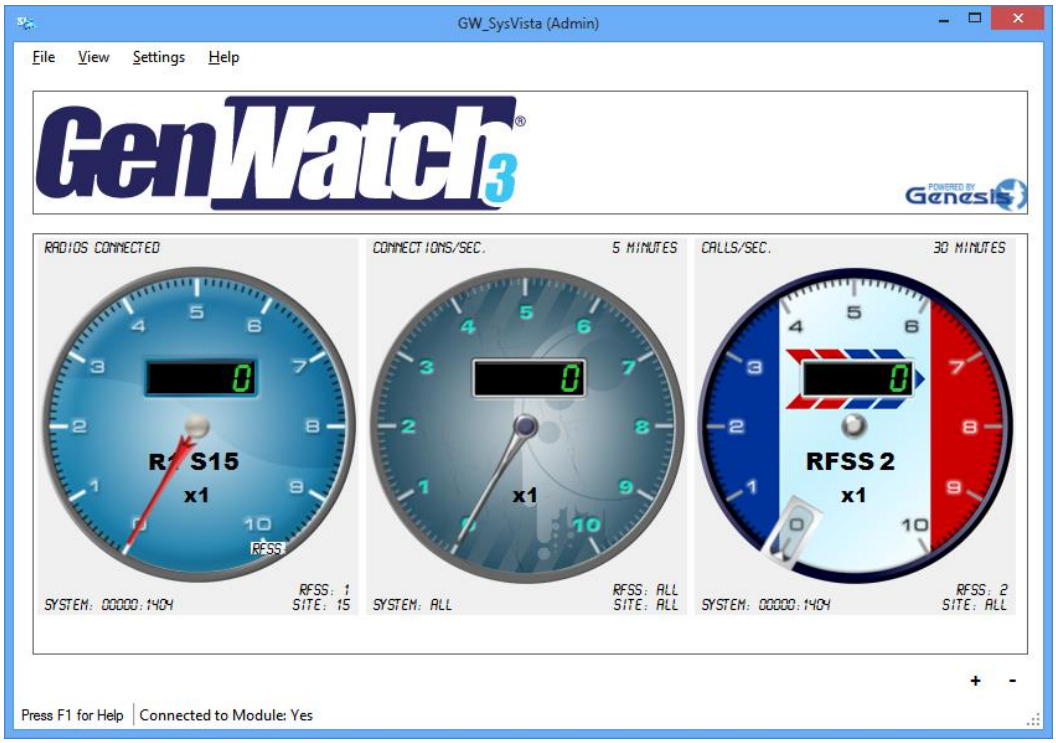

Figure 1.8 – *Multi-View* Window

Multi-View Banner

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

Figure 1.9 – Multi-View Banner

This banner can be hidden by unchecking 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 with 96 DPI.
2. Save the image as *Banner.jpg***.**
3. Place the new file in the *C:\Program Data \Genesis\GenWatch3\Images\SysVista* folder

Adding a Dial

To add a dial:

1. Click the **Add** button.
2. Select a **System**: For all systems, select **All**.
3. Select a **RFSS**: For all RFSSs, select **All** (you must select a system before you can select a RFSS).
4. Select a **Site**: For all sites, select **All** (you must select a RFSS 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 (50 characters maximum).
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.

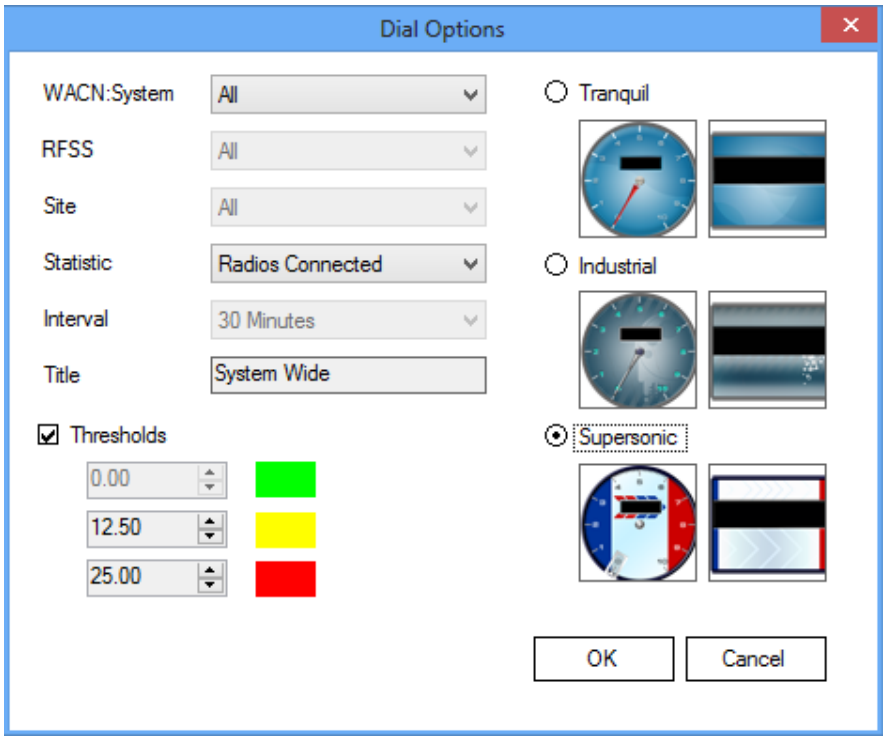

Figure 1.10 – Multi-View Dial Options Window

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: GW_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.

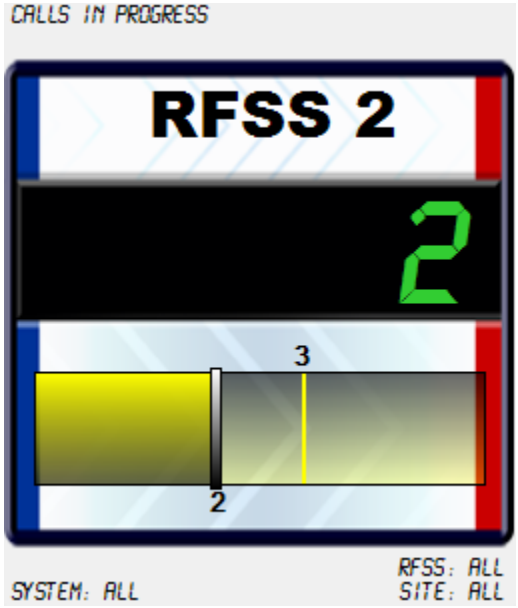

Figure 1.11 – Multi-View Dial in Number Only view

Chapter 2 Key Performance Indicators (KPIs)

This chapter describes GW_SysVista's Key Performance Indicators (KPIs) feature.

This chapter contains the following sections:

- **What are KPIs?:** Provides a high-level overview of KPIs.
- **KPI Storage and Availability**: Describes where KPIs are stored and how KPI data is accessed.
- **KPI Table Definitions**: Provides a detailed description of each KPI table and its columns.
- **KPI View Definitions**: Provides a detailed description of each KPI table's view and its columns.
- **KPI Options:** Describes the available KPI feature options and how to set them.

What are KPIs?

KPIs are statistical values, at each resource level, that are aggregated and stored on a specified interval. An example of a KPI is "Radios Currently Connected to Site 1 under RFSS 1 under System A4A".

KPI Storage and Availability

KPIs are stored in the following tables within the GenWatch3 database:

- **KPISysVistaSystems**: KPIs aggregated to the system level.
- **KPISysVistaZones**: KPIs aggregated to the RFSS level.
- **KPISysVistaSites**: KPIs aggregated to the site level.

These tables are accessible via the following views in the GenWatch3 database:

- **Kpi.SysVista.Systems**: Access to the KPISysVistaSystems table.
- **Kpi.SysVista.Zones**: Access to the KPISysVistaZones table.
- **Kpi.SysVista.Sites**: Access to the KPISysVistaSites table.

KPI Table Definitions

KpiSysVistaSystems

GenWatch3 will store GW_SysVista system KPIs in the following table structure. Each row in this table will represent the current set of GW_SysVista KPIs for a system, qualified by WACN. Columns include:

- **WACNId:** System's WACN
- **SystemId**: System Id
- **RadiosConnected**: Radios currently connected to this system. These include radios that have issued affiliations, registrations, associations and other radio-based or acknowledged activity (PTTs, Statuses, Dynamic Regrouping Ack, etc.) within the number of minutes set in GW_Alias for the system's Radio ID Timeout Minutes.
- **GroupCallsInProgress**: Group calls currently in progress on this system.
- **InterconnectCallsInProgress**: Interconnect calls currently in progress on this system.
- **PrivateCallsInProgress**: Private calls currently in progress on this system.
- **EmergencyCallsInProgress**: Emergency calls currently in progress on this system. NOTE: this value is a sub-category of group calls and is included in the *GroupCallsInProgress* value.
- **GroupVoicePathsInUse**: Voice paths (slots) currently in use for group calls on this system.
- **InterconnectVoicePathsInUse**: Voice paths (slots) currently in use for interconnect calls on this system.
- **PrivateVoicePathsInUse**: Voice paths (slots) currently in use for private calls on this system.
- **EmergencyVoicePathsInUse**: Voice paths (slots) currently in use for emergency group calls on this system. NOTE: this value is a sub-category of group calls and is included in the *GroupVoicePathsInUse* value.
- **AvailableVoicePaths:** Number of voice paths (slots) not in use on this system. This value is *TotalVoicePaths - GroupVoicePathsInUse - InterconnectVoicePathsInUse - PrivateVoicePathsInUse*.
- **TotalVoicePaths**: All voice paths (slots) on this system. NOTE: This value is derived from channel-level settings in the GenWatch3 Alias database.
- **BusiesInQueue**: Busies currently in queue on this system.
- **ConnectionsPerSecond**: Connections per second on this system, within the current 5-minute interval. This is based on all radio-based activity types. These include affiliations, registrations, associations and other radio-based or acknowledged activity (PTTs, Statuses, Dynamic Regrouping Ack, etc.)
- **CallsPerSecond**: Start of Calls received per second on this system within the current 5-minute interval.
- **DT:** Date and Time these statistics were written.

NOTE: The current calls/second and connections/second will be taken from GW_SysVista's 5-minute interval values. Every 5 minutes, this interval is reset and will show 0 for a few seconds, until the next call or connection is received. Example: If the first call is received 3 seconds into the new interval, we will show 0.333 calls/second.

KpiSysVistaZones

Genesis will store existing GW_SysVista RFSS KPIs in the following table structure. Each row in this table will represent the current set of GW_SysVista KPIs for a RFSS, qualified by WACN and System. Columns include:

- **WACNId:** System's WACN
- **SystemId**: RFSS's System
- **ZoneId**: RFSS Id
- **RadiosConnected**: Radios currently connected to this RFSS. These include radios that have issued affiliations, registrations, associations and other radio-based or acknowledged activity (PTTs, Statuses, Dynamic Regrouping Ack, etc.) within the number of minutes set in GW_Alias for the system's Radio ID Timeout Minutes.
- **GroupCallsInProgress**: Group calls currently in progress on this RFSS.
- **InterconnectCallsInProgress**: Interconnect calls currently in progress on this RFSS.
- **PrivateCallsInProgress**: Private calls currently in progress on this RFSS.
- **EmergencyCallsInProgress**: Emergency calls currently in progress on this RFSS. NOTE: this value is a sub-category of group calls and is included in the *GroupCallsInProgress* value.
- **GroupVoicePathsInUse**: Voice paths (slots) currently in use for group calls on this RFSS.
- **InterconnectVoicePathsInUse**: Voice paths (slots) currently in use for interconnect calls on this RFSS.
- **PrivateVoicePathsInUse**: Voice paths (slots) currently in use for private calls on this RFSS.
- **EmergencyVoicePathsInUse**: Voice paths (slots) currently in use for emergency group calls on this RFSS. NOTE: this value is a sub-category of group calls and is included in the *GroupVoicePathsInUse* value.
- **AvailableVoicePaths:** Number of voice paths (slots) not in use on this RFSS. This value is *TotalVoicePaths - GroupVoicePathsInUse - InterconnectVoicePathsInUse - PrivateVoicePathsInUse*.
- **TotalVoicePaths**: All voice paths (slots) on this RFSS. NOTE: This value is derived from channel-level settings in the GenWatch3 Alias database.
- **BusiesInQueue**: Busies currently in queue on this RFSS.
- **ConnectionsPerSecond**: Connections per second on this RFSS, within the current 5-minute interval. This is based on all radio-based activity types. These include affiliations, registrations, associations and other radio-based or acknowledged activity (PTTs, Statuses, Dynamic Regrouping Ack, etc.)

- **CallsPerSecond**: Start of Calls received per second on this RFSS within the current 5-minute interval.
- **DT:** Date and Time these statistics were written.

KpiSysVistaSites

Genesis will store existing GW_SysVista site KPIs in the following table structure. Each row in this table will represent the current set of GW_SysVista KPIs for a site, qualified by WACN, System, RFSS. Columns include:

- **WACNId:** System's WACN
- **SystemId**: RFSS's System
- **ZoneId**: Site's RFSS
- **SiteId**: Site Id
- **RadiosConnected**: Radios currently connected to this site. These include radios that have issued affiliations, registrations, associations and other radio-based or acknowledged activity (PTTs, Statuses, Dynamic Regrouping Ack, etc.) within the number of minutes set in GW_Alias for the system's Radio ID Timeout Minutes.
- **GroupCallsInProgress**: Group calls currently in progress on this site.
- **InterconnectCallsInProgress**: Interconnect calls currently in progress on this site.
- **PrivateCallsInProgress**: Private calls currently in progress on this site.
- **EmergencyCallsInProgress**: Emergency calls currently in progress on this site. NOTE: this value is a sub-category of group calls and is included in the *GroupCallsInProgress* value.
- **GroupVoicePathsInUse**: Voice paths (slots) currently in use for group calls on this site.
- **InterconnectVoicePathsInUse**: Voice paths (slots) currently in use for interconnect calls on this site.
- **PrivateVoicePathsInUse**: Voice paths (slots) currently in use for private calls on this site.
- **EmergencyVoicePathsInUse**: Voice paths (slots) currently in use for emergency group calls on this site. NOTE: this value is a sub-category of group calls and is included in the *GroupVoicePathsInUse* value.
- **AvailableVoicePaths:** Number of voice paths (slots) not in use on this site. This value is *TotalVoicePaths - GroupVoicePathsInUse - InterconnectVoicePathsInUse - PrivateVoicePathsInUse*.
- **TotalVoicePaths**: All voice paths (slots) on this site. NOTE: This value is derived from channel-level settings in the GenWatch3 Alias database.
- **BusiesInQueue**: Busies currently in queue on this site.
- **ConnectionsPerSecond**: Connections per second on this site, within the current 5-minute interval. This is based on all radio-based activity types. These include affiliations, registrations, associations and other radio-based or acknowledged activity (PTTs, Statuses, Dynamic Regrouping Ack, etc.)
- **CallsPerSecond**: Start of Calls received per second one this site within the current 5-minute interval.

- **DT:** Date and Time these statistics were written.

For ATIA, sites in the range of 1000-1999 are considered Vortex consoles

- *TotalVoicePaths* is the sum of *GroupVoicePathsInUse*, *PrivateVoicePathsInUse* and *InterconnectVoicePathsInUse*.
- *AvailableVoicePaths* is always 0.
- These voice paths are not aggregated that the RFSS or System level.

KPI View Definitions

KPI data is available via the following views:

Kpi.SysVista.Systems

Values aggregated at the System level within GW_SysVista: Each row is qualified by WACN:

- [KpiSysVistaZones].WacnId
- [KpiSysVistaZones].SystemId
- [KpiSysVistaZones].ZoneId
- [KpiSysVistaZones].RadiosConnected
- [KpiSysVistaZones].GroupCallsInProgress
- [KpiSysVistaZones].InterconnectCallsInProgress
- [KpiSysVistaZones].PrivateCallsInProgress
- [KpiSysVistaZones].EmergencyCallsInProgress
- [KpiSysVistaZones].GroupVoicePathsInUse
- [KpiSysVistaZones].InterconnectVoicePathsInUse
- [KpiSysVistaZones].PrivateVoicePathsInUse
- [KpiSysVistaZones].EmergencyVoicePathsInUse
- [KpiSysVistaZones].TotalVoicePaths
- GroupVoicePathUtilization = [KpiSysVistaZones].GroupVoicePathsInUse / [KpiSysVistaZones].TotalVoicePaths
- InterconnectVoicePathUtilization = [KpiSysVistaZones].InterconnectVoicePathsInUse / [KpiSysVistaZones].TotalVoicePaths
- PrivateVoicePathUtilization = [KpiSysVistaZones].PrivateVoicePathsInUse / [KpiSysVistaZones].TotalVoicePaths
- EmergencyVoicePathUtilization = [KpiSysVistaZones].EmergencyVoicePathsInUse / [KpiSysVistaZones].TotalVoicePaths
- [KpiSysVistaZones].BusiesInQueue
- [KpiSysVistaZones].ConnectionsPerSecond
- [KpiSysVistaZones].CallsPerSecond
- [KpiSysVistaZones].DT

Kpi.SysVista.Zones

Values aggregated at the RFSS level within GW_SysVista: Each row is qualified by WACN and System:

- [KpiSysVistaZones].WacnId
- [KpiSysVistaZones].SystemId
- [KpiSysVistaZones].ZoneId
- [KpiSysVistaZones].RadiosConnected
- [KpiSysVistaZones].GroupCallsInProgress
- [KpiSysVistaZones].InterconnectCallsInProgress
- [KpiSysVistaZones].PrivateCallsInProgress
- [KpiSysVistaZones].EmergencyCallsInProgress
- [KpiSysVistaZones].GroupVoicePathsInUse
- [KpiSysVistaZones].InterconnectVoicePathsInUse
- [KpiSysVistaZones].PrivateVoicePathsInUse
- [KpiSysVistaZones].EmergencyVoicePathsInUse
- [KpiSysVistaZones].TotalVoicePaths
- GroupVoicePathUtilization = [KpiSysVistaZones].GroupVoicePathsInUse / [KpiSysVistaZones].TotalVoicePaths
- InterconnectVoicePathUtilization = [KpiSysVistaZones].InterconnectVoicePathsInUse / [KpiSysVistaZones].TotalVoicePaths
- PrivateVoicePathUtilization = [KpiSysVistaZones].PrivateVoicePathsInUse / [KpiSysVistaZones].TotalVoicePaths
- EmergencyVoicePathUtilization = [KpiSysVistaZones].EmergencyVoicePathsInUse / [KpiSysVistaZones].TotalVoicePaths
- [KpiSysVistaZones].BusiesInQueue
- [KpiSysVistaZones].ConnectionsPerSecond
- [KpiSysVistaZones].CallsPerSecond
- [KpiSysVistaZones].DT

Kpi.SysVista.Sites

Values aggregated at the Site level from the **KpiSysVistaSites** table. Each row is qualified by WACN, System, and RFSS.

- [KpiSysVistaSites].WacnId
- [KpiSysVistaSites].SystemId
- [KpiSysVistaSites].ZoneId
- [KpiSysVistaSites].SiteId
- [KpiSysVistaSites].RadiosConnected
- [KpiSysVistaSites].GroupCallsInProgress
- [KpiSysVistaSites].InterconnectCallsInProgress
- [KpiSysVistaSites].PrivateCallsInProgress
- [KpiSysVistaSites].EmergencyCallsInProgress
- [KpiSysVistaSites].GroupVoicePathsInUse
- [KpiSysVistaSites].InterconnectVoicePathsInUse
- [KpiSysVistaSites].PrivateVoicePathsInUse
- [KpiSysVistaSites].EmergencyVoicePathsInUse
- [KpiSysVistaSites].TotalVoicePaths
- GroupVoicePathUtilization = [KpiSysVistaSites].GroupVoicePathsInUse / [KpiSysVistaSites].TotalVoicePaths
- InterconnectVoicePathUtilization = [KpiSysVistaSites].InterconnectVoicePathsInUse / [KpiSysVistaSites].TotalVoicePaths
- PrivateVoicePathUtilization = [KpiSysVistaSites].PrivateVoicePathsInUse / [KpiSysVistaSites].TotalVoicePaths
- EmergencyVoicePathUtilization = [KpiSysVistaSites].EmergencyVoicePathsInUse / [KpiSysVistaSites].TotalVoicePaths
- [KpiSysVistaSites].BusiesInQueue
- [KpiSysVistaSites].ConnectionsPerSecond
- [KpiSysVistaSites].CallsPerSecond
- [KpiSysVistaSites].DT

KPI Options

Option Definitions

The KPIs feature provides the following options (defaults shown in **bold**):

- **KpiEnabled**: Write KPI values out to KpiSysVistaSites table
  - **1= Enabled**
  - 0 = Disabled
- **KpiInterval**: Number of seconds between each time KPIs are calculated and written to the database. Default is **5**.
- **KpiConnectionDefinitionOption**: Actions to consider for a radio connection. Bitmask field. Value is sum of all applicable options. (Affects Radios Connected and Connections Per Second KPIs)
  - **0 = None**
  - **1 = Associations**
  - **2 = Affiliations**
  - **4 = Registrations**
  - **8 = RadioActivity**

Setting KPI Options

KPI options are stored in the *ModuleSettings* table of the GenWatch3 database under the Module Id of the GW_SysVista module (see the *Modules* table) and a Parent of 0. If a setting is not present, the KPIs feature uses the default shown above.

Once you change a KPI feature setting, you must restart the GenWatch3 service for the change to take effect.

Example KPI setting in the ModuleSettings table for KpiInterval:

ModuleSettings				
ID	**ModuleId**	**Parent**	**FieldName**	**FieldValue**
14289	23	0	KpiInterval	10

Appendix A

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