GenWatch3®
Core
Software Version 2.3

600-2.3.0-A.1
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Refer to the GenWatch3 Manual Overview for your full license. All license information contained on pages 4-7 (book 600-2.3.0-AA.1) are to be considered as contained herein.

Support

Customer satisfaction is our number one priority at Genesis. We are here to provide you with the best software possible, and we want to know when you have any questions, concerns, or problems with GenWatch3 so that we can make it a better product for everyone.

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
2.0.4	Updated to 2.0.4	JAW
2.0.4	Updated screenshots for new icons and updated login section to reflect new approach	JAW
2.0.4	Updated LaunchPad tools section	KIH
2.0.5	Proofreading/Editing	JWR
2.0.5	Release Revision	TDW
2.0.6	Updated screenshots	REB
2.0.6	Updated screenshots	CLB
2.0.6.6	Release Revision	KIH
2.1.0	Added IP Console Inhibit and Slot Disable Security privileges	REB
2.2	Document Reviewed	WRK
2.3	Revision Before Release	CWF

Table of Contents

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Goals

This document will inform and instruct users on the operation of the core Graphical User Interfaces (GUIs) and modules for GenWatch3.

Who Should Read This Manual?

This manual was written for an audience of Motorola trunked radio system administrators with novice to mid-level computer experience.

How This Manual Is Organized

This manual is organized into the following chapters:

- **Installation:** Provides a list of reference documents for hardware and software installation.
- **Overview:** Gives an overview of the GenWatch3 solution.
- **GenWatch3 Service:** Describes the function and role of the GenWatch3 service in the GenWatch3 solution.
- **GenWatch3 Module GUIs Overview:** Describes the common functions of each GenWatch3 module GUI.
- **GW_Alerts:** Describes the function and role of the GW_Alerts System Tray application.
- **GW_LaunchPad GUI:** Describes the function and role of the GW_LaunchPad GUI.
- **GenWatch3 License Manager:** Describes the function and role of the GenWatch3 License Manager.
- **GW_Security GUI:** Describes the function and role of the GW_Security GUI.
- **GW_SysLog GUI:** Describes the function and role of the GW_SysLog GUI.
- **GenWatch3 Notifications:** Describes the GenWatch3 GUI Notification window shown by GW_Alert

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 Installation

For installation instructions and minimum hardware requirements, see the Quick Start guides for your connection type. The following Quick Start guides are currently available:

- **GenWatch3 Installation and Quickstart Guide:** For installation of the GenWatch3 application.
- **GenWatch3 GW_RIM-II Quickstart Book:** For Motorola Type II 3600 control channel input.
- **GenWatch3 GW_ATIA Quickstart Book:** For Motorola SmartZone ATIA input.
- **GenWatch3 GW_RSP25 Quickstart Book:** For P25 control channel input.
- **GenWatch3 GW_AMNP Quickstart Book:** For AMNP input.

For hardware installation instructions, refer to the *Hardware Installation Guide*, located on your GenWatch3 CD and included in printed form with your hardware.

 The GenWatch3 machine must use an English-language version of Microsoft Windows using the English language set.

Chapter 2 Overview

This chapter contains the following sections:

- **Terms:** An introduction of basic terms used in this manual.
- **Welcome:** Welcomes you to the Genesis GenWatch3 product.
- **What is GenWatch3?:** Defines the GenWatch3 product.
- **GenWatch3 and Windows Security:** Describes the Microsoft Windows security needs of GenWatch3.

Terms

- **Packet:** This is a message sent from an OSP/OSW monitoring device to GenWatch3 or a message sent from GenWatch3 to an ISP/ISW capable device.
- **Module**: This is a part of the GenWatch3 solution. Each module performs a specific function within GenWatch3. For example, the GW_Group module organizes and shows real-time Push-to-Talk activity, while the GW_RSP25 module manages connections to P25 devices.
- **Windows Service**: A Windows service is an application that runs behind the scenes. Services automatically load when the computer boots up.
- **Port**: A data connection in a computer that allows local and/or remote access.

Welcome

Thank you for allowing Genesis to help you with your software needs. Genesis has combined our technology for decoding data streams (such as Motorola 3600 baud control channels, P25 control channels, ATIA *[Air Traffic Information Access]* feeds and other proprietary interfaces), the power of Microsoft .Net development, and our expertise in software design and implementation into a single, scalable application.

What is GenWatch3?

GenWatch3 is a dynamic data process solution. This means that GenWatch3 can accept and decode proprietary packet interfaces and encode, display, archive, relay, and respond to these packets. Because of its design, GenWatch3 modules can satisfy almost any data process need.

The GenWatch3 GUIs and modules are divided into the following categories:

- Core
- Input and/or output
- Process and/or display
- Reporting

The core modules are shown in Table 2.1 below. Each additional module is defined within its own respective GenWatch3 module book.

Core Applications and Modules

The following core GUIs and modules are those required for minimum GenWatch3 setup and functionality.

Module Name	Description	Document
GenWatch3 Service	Windows service that loads and runs all licensed GenWatch3 modules.	600-2.3.0-A.1 [this document]
GW_Alerts	Shows the status of GenWatch3 input connections. Shows notifications sent by GenWatch3, via Notification windows. Provides an entry point for GW_LaunchPad. This GUI is also where you log in to GenWatch3.	600-2.3.0-A.1 [this document]
GW_LaunchPad	Provides a single interface to load each module GUI and each tool provided by GenWatch3.	600-2.3.0-A.1 [this document]
GW_Security	Centralized security GUI/module for GenWatch3. The users, roles, and privileges defined in this module affect the display and function of each module's GUI within GenWatch3.	600-2.3.0-A.1 [this document]
GW_SysLog	Reports GenWatch3 service and module activity to one or more remote IP ports* via SysLog packets. These packets can be received and parsed by third-party SysLog client software.	600-2.3.0-A.1 [this document]

Table 2.1 – Core Applications and Modules

Input and/or Output Modules

The input and/or output modules accept input from and/or provide output to a specific data stream. The following input and/or output modules are currently available for this version of GenWatch3.

Module Name	Description	Document
GW_RIMII	Sends data to and receives data from a Motorola 3600 control channel device (either a Motorola RIM-II and RF-Modem combination or an EF Johnson Topaz-capable radio). These devices send and receive data on the Motorola 3600 control channel. This allows GenWatch3 to monitor control channel activity and send commands to the radios on the trunked system.	600-2.3.0-C.1
GW_ATIA	Receives data from a Zone Controller ATIA Port or a GenGET v7.0+ Data Reader / Data Processor attached to the ATIA port of a SmartZone or Dimetra system.	600-2.3.0-D.1
GW_RSP25	Receives data from a P25 radio that is capable of delivering the Common Air Interface to a digital output. GW_RSP25 currently supports Millennium and Topaz 9600 band protocols.	600-2.3.0-EE.1
GW_AMNP	Receives data from an AMNP data source.	600-2.3.0-II.1
GW_Location	Receives GPS, telemetry, event and sensor information from a GPS solution. GW_Location currently supports ASTRO 25 outdoor locator protocol.	600-2.3.0-KK.1
GW_Connect	Receives SNMP data from hardware and software on your network.	600-2.3.0-MM.1

Table 2.2 – Input and/or Output Modules

Process and/or Display Modules

Process and/or display modules perform specific functions on the packets generated by the input modules (GenWatch3 input). Some of these modules provide user interfaces, which result in commands sent out to a data stream connected to the input and/or output modules (GenWatch3 output). In addition to the core modules, the following process and/or display modules can be licensed for this version of GenWatch3:

Module Name	Description	Document
GW_Alias	Accepts input packets, dynamically adds new resources as they appear on the data stream, appends alias information to input packets and passes each appended packet onto the other modules.	600-2.3.0-G.1
GW_Activity	Receives packets from the GW_Alias module and displays all activity received over the data stream in real time. This data includes system events such as Base Station Identifications, System Status, etc. This GUI also includes call activity such as dispatch/group and private calls. Each packet type can be excluded or included via the options at the top of the GUI.	600-2.3.0-E.1
GW_Affiliation	Receives packets from the GW_Alias module and shows real-time unit-to-group affiliations and unit-to-site registrations, where each group is represented by individual, customizable windows.	600-2.3.0-F.1
GW_Archiver	Receives packets from the GW_Alias module and archives information received over the data stream into the database. Can optionally archive everything from system status to call activity. This archived data feeds the GenWatch3 reports.	600-2.3.0-H.1
GW_Channel	Receives packets from the GW_Alias module and shows real-time channel usage as well as busies, rejects, and diagnostics received over the data stream.	600-2.3.0-I.1
GW_CloneWatch	Receives packets from the GW_Alias module and monitors predefined ranges of groups and radio IDs for usage outside predefined usage patterns. Also watches for overlapping calls and impossible drive distance usage (multi-site or location supplemented only) that could be cloned radio activity.	600-2.3.0-J.1

Table 2.3 – Process and/or Display Modules

Module Name	Description	Document
GW_GenSPOut	Receives packets from the GW_Alias module and converts these input packets into defined output packets. These packets are built, filtered, and sent based on interfaces and connection definitions created within GW_GenSPOut.	600-2.3.0-K.1
GW_GEnSAC	Receives packets from the GW_Alias module and converts these input packets into defined output packets. These packets are built, filtered, and sent to consoles.	600-2.3.0-Z.1
GW_Group	Receives packets from the GW_Alias module and shows real-time PTT/call activity, in individual, customizable group windows.	600-2.3.0-L.1
GW_Halcyon	Manages radio commands and their corresponding ACKs. Accepts GW_RCM and CADI connections (Motorola SIMSII and RPC), processes requests from the connections, and passes qualified system events to these connections. Works with GW_LoneWorker and GW_CloneWatch to allow these modules to issue radio commands.	600-2.3.0-T.1
GW_LoneWorker	Manages worker timed check-ins. Alerts a supervisor if necessary. (Alerting supported only on Motorola 3600 baud control channel.)	600-2.3.0-GG.1
GW_System Summary	Receives packets from the GW_Alias module and shows real-time graphical system usage for trunked radio systems.	600-2.3.0-N.1
GW_SysVista	Receives packets from the GW_Alias module and shows real-time graphical dash-board system usage statistics for trunked radio systems.	600-2.3.0-O.1
GW_Trigger	Monitors GenWatch3 packets for predefined patterns that result in external relay, email, SNMP, red/amber/green light or audio-visual alerts.	600-2.3.0-S.1
GW_Trio	Manages customer billing by compiling individual usage statistics into billing information.	600-2.3.0-NN.1

Table 2.3 – Process and/or Display Modules (continued)

Reporting Modules

Reporting modules display information recorded in the GenWatch3 database. The following reporting modules can be licensed for this version of GenWatch3:

Module Name	Description	Document
GW_Reports	Provides an interface to launch the canned reports offered in GenWatch3.	600-2.3.0-Y.1

Table 2.4 – Reporting Modules

Tools

The following applications are available in the Tools section of GW_LaunchPad. Tools provide supplemental setup or functionality within GenWatch3. See Chapter 6 of this book for more information on GW_LaunchPad tools. The following tools can be licensed for this version of GenWatch3:

Tool Name	Description	Document
GW_RCM	Loads the GW_RCM application. GW_RCM allows you to issue radio commands such as inhibit and call alert. This GW_RCM also provides a workflow for radio events such as emergency alarms, statuses, etc. (requires Motorola 3600 baud control channel and GW_Halcyon RCM capable license)	600-2.3.0-V.1
SkyView™	Loads the SkyView real-time graphical air traffic display. (Requires GenGET)	
EZSaveWin	Loads the EzSaveWin application. EzSaveWin allows you to backup and restore the Subscriber Access List and other parameters of a Motorola 6809 or MTC3600 based central controller. EzSaveWin also provides access to the Guardian prompt of such central controllers.	200-3.2.0-A.1

Table 2.5 – Tools

GenWatch3 and Windows Security

The GenWatch3 GUIs use the security context of the currently logged-in Windows user to access TCP/IP ports, read from files, write to files and many other functions. Some Windows installs may limit these functions.

For simple installs, the best way to ensure that your Windows user is allowed to perform these functions is to log into Windows using the Administrator user or a user with full administrative access to the machine. Simple installs include only machines that are not part of a domain.

For installs that include computers on a domain, you might need to set up some security options on the domain controller for your user and/or the GenWatch3 machine. When in doubt, check with your IT department, or contact GenWatch3 support.

The GenWatch3 Host installation includes a windows service named GenWatchService. The GenWatch3 service is designed to run under the built-in Windows account ***LOCAL SYSTEM***. If you choose to run GenWatch3 under another user, you must ensure that this Windows user has the following privileges:

- Read/write access to databases in SQL Server.
- Read/write access on this machine to the *Application Data* directory. By default this directory is *C:\Documents and Settings\All Users\Application Data\Genesis\GenWatch3* in XP and *C:\ProgramData\Genesis\GenWatch3* in Windows Vista/7.
- Authorization to open TCP/IP connections on this machine.
- If your install includes one or more client machines, authorization to create/receive TCP/IP connections from and to this machine.

Chapter 3 GenWatch3 Service

This chapter contains the following sections:

- **Windows Services**: Defines Windows services and gives an overview of their function.
- **GenWatch3 Service Overview:** Defines the GenWatch3 service.

Windows Services

A service is an application that runs in the background. If a service is set to 'Automatic', the service will start when the machine is booted and, in most cases, will load by the time Windows presents its login screen. If it is not loaded in time, a simple error message will display.

Why is GenWatch3 a Service?

GenWatch3 is a service because GenWatch3 must be running at all times. If your PC is rebooted in the middle of the night, you do not want to wait until morning to start archiving or processing activity on your system. Because Windows services do not require user interaction to load, GenWatch3 runs as a service.

Administering Windows Vista/XP/2xxx Services

Services are administered via the Windows Computer Management screen. To access this screen:

1. Right-click on the **My Computer** icon on your desktop: This will result in a menu of options, including the **Manage…** option.
2. Click on the **Manage…** option in the menu: This will load the **Computer Management** screen.
3. Expand the **Services and Applications** node in the tree on the left of the screen.
4. Click on the **Services** node: This will show a list of all services registered on your PC in a list on the right of the screen.
5. Find the GenWatch3 service in the list (it is named ***GenWatchService***).

At this point you can right-click on the service to receive a list of service options. These options include:

- **Start** – Starts the service (Only available if the service is stopped)
- **Stop** – Stops the service (Only available if it is started)
- **Pause** - Pauses the service (Only available if it is started)
- **Resume** - Starts the service (Only available if it is paused)
- **Restart** – Stops the service, then starts the service (Only available if it is started)
- **Properties** – Displays the details about the selected service

GenWatch3 Service Overview

When the GenWatch3 service is started, it loads all of the GenWatch3 modules that are included in your GenWatch3 license. The service then starts all of these loaded modules. Once started, these modules begin to perform their specific tasks. These tasks may include anything from receiving and parsing a data stream to archiving the parsed data stream to an SQL database.

If the GenWatch3 service is stopped, it will unload all modules. The modules will not process data until the service is restarted.

GenWatch3 Service Diagnostics

The GenWatch3 service reports activity to the Windows Event Log. You can access the Windows event log by taking the following steps:

1. Right-click on the **My Computer** icon.
2. Select **Manage…**.
3. Expand the **Event Viewer** node under the **System Tools** node.
4. If you are using Windows Vista/7, expand the **Applications and Services Logs** node. Otherwise, skip to step 5.
5. Click on the **GenWatch** node under the **Event Viewer** node.

The list that appears on the right contains events reported by the GenWatch3 service. All GenWatch3 events contain "GW_" in the Source column, with the exception of GenWatchService, which can be found in the same area. Double-click on an entry to view that entry's details.

Figure 3.1 – Error and Information Event Log Entries

Module Health

Every 5 minutes, the GenWatch3 service logs module health information for each module in the module health log. The log files are stored in the following directory:

<Application Data>\Logs\GenWatchService

By default the **Application Data** directory is *C:\Documents and Settings\All Users\Application Data\Genesis\GenWatch3* in XP and *C:\ProgramData\Genesis\GenWatch3* in Windows Vista/7**.** The module health folders contain a log file for each day, with a maximum of 14 days of log history.

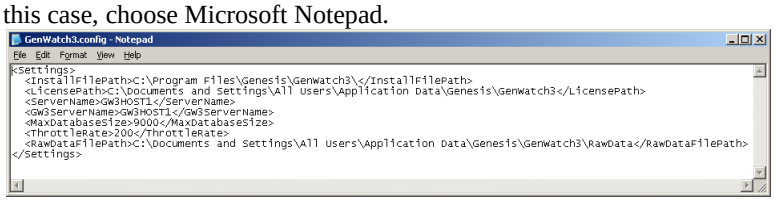
Database Size Notifications

The GenWatch3 service issues a notification to all connected GW_Alerts users when the database is reaching the maximum database size. The maximum database size is determined during GenWatch3 installation by the version of SQL installed on your machine.

- **Microsoft SQL Express installs (free version of SQL Server)**: The size cap is 3,500 megabytes (about 3.5 gigabytes).
- **Other SQL installs**: The size cap is 9,000 megabytes (about 9 gigabytes).

This setting is stored in the *GenWatch3.config* file in the *Application Data* folder on the GenWatch3 host machine. To increase/decrease this setting, take the following steps:

1. Browse to the *Application Data* folder. By default this folder is *C:\Documents and Settings\All Users\Application Data\Genesis\GenWatch3* in XP and *C:\ProgramData\Genesis\GenWatch3* in Windows Vista/7.
2. Double-click on the following file: *GenWatch3.config*. This may result in a dialog asking you to choose an application to use to open this file. In this case, choose Microsoft Notepad.



3. Change the value in the <MaxDatabaseSize></MaxDatabaseSize> tag to the desired value, in megabytes. For example, approximately 9 gigabytes is 9000.
4. Click File and Save to save your changes.

Microsoft SQL Express has a size limitation of about 3.5 gigabytes. If you increase the MaxDatabaseSize on a Microsoft SQL Express install of GenWatch3 to a value greater than 3.5 gigabytes, you will encounter severe issues.

Changing this setting may void your warranty. If you find it necessary to change this value, please contact GenWatch3 support.

Chapter 4 GenWatch3 Module GUIs Overview

This chapter contains the following sections:

- **What are Module GUIs?:** Describes the function of the GenWatch3 module GUIs.
- **Common Module GUI Buttons:** Defines each common module GUI button.
- **Module Connection Buttons, Display and Functions:** Defines each button display and function associated with the data stream between the module GUI and the module.
- **Database Incompatibility Warnings:** Describes the database incompatibility warnings issued by GenWatch3.
- **Module Help:** Describes the integrated help/manual GUIs that can be accessed from any GenWatch3 module GUI.

What are Module GUIs?

GenWatch3 provides a GUI for each of its modules. Each module GUI differs in its purpose and its interaction with its module. Some module GUIs simply provide a setup interface for the module, such as the GW_Archiver GUI. Some module GUIs show input packet traffic such as GW_Activity or statistics such as GW_SysVista GUI.

Although each GUI looks and behaves differently, all GUIs share some common functionality. This chapter describes these common functions.

Common Module GUI Buttons

Each module GUI contains three or four buttons in its upper-right corner. These buttons perform the following actions:

-  : Shows a window that describes the module GUI and contains contact information for The Genesis Group. This screen also provides a link to the manual or book related to this GUI.
-  : Minimizes the module GUI.
-  : Shows a size option menu to allow you to resize the module GUI. Few module GUIs provide this button.
-  : Closes the module GUI.

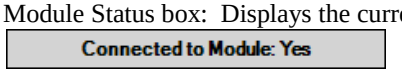
Module Connection Displays and Functions

Each module GUI must maintain a constant connection with its respective module. This connection is used to:

- Allow the module to pass data to the module GUI, such as:
  - Licensing information.
  - Real-time data.
  - Global GenWatch3 notifications, such as GW_Alias or GW_Security updates or GW_Trigger events.
- Notify the module when settings or options are changed in the module GUI.

Each module GUI contains:

- Module Status box: Displays the current connection status.



Default Module Ports

Each GenWatch3 module has a distinct port number that it uses to communicate with its module GUI. The table below shows each module's default port number:

Module	Default Port
GW_LaunchPad	**10300**
GW_Alerts	**10301**
GW_Activity	**10320**
GW_Archiver	**10321**
GW_RIMII	**10322**
GW_SysLog	**10323**
GW_Alias	**10324**
GW_Group	**10325**
GW_Channel	**10326**
GW_SystemSummary	**10327**
GW_Affiliation	**10328**
GW_CloneWatch	**10329**
GW_GenSPOut	**10330**
GW_Location	**10331**
GW_Security	**10332**
GW_SysVista	**10333**
GW_Trigger	**10338**
GW_Halcyon	**10339**
GW_ATIA	**10340**
GW_Reports	**10342**
GW_RSP25	**10343**
GW_GEnSAC	**10344**
GW_LoneWorker	**10346**
GW_AMNP	**10347**
-Reserved-	**10348**
GW_Connect	**10349**
GW_Trio	**10350**
-Reserved-	**10351**

Table 4.1 – GenWatch3 Module Default TCP/IP Ports

Changing a Module's Default Port

The default port for each module GUI is shown in the table above. You can change these ports if they conflict with another application attempting to use the same ports. To change the module GUI port, contact GenWatch3 support.

Changing a port may void your warranty. If you feel you need to change a module port, please contact GenWatch3 support.

Database Incompatibility Warnings

When a module GUI loads, it checks its version against the version of the GenWatch3 database used by the GenWatch3 host. If there is a difference between versions or either version could not be determined, the module GUI shows a warning similar to the warning shown in Figure 4.1.

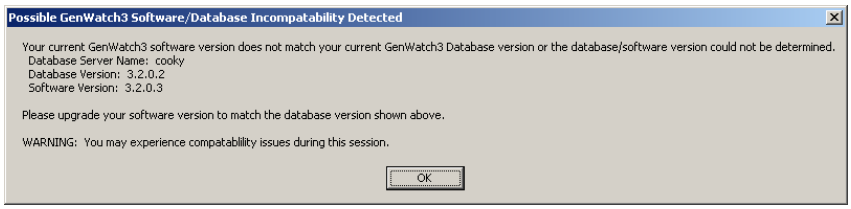


Figure 4.1 – Database Incompatibility Warning

This warning commonly results from a GenWatch3 client installation using a different version than the GenWatch3 host installation. If you see this warning, please contact your system administrator or Genesis support.

Module Help

GenWatch3 has an integrated help system in the event that you need help for any part of GenWatch3. Each module GUI has its own help manual that can be easily accessed from within the module's GUI. To show the help manual for a specific module GUI, load that module and press the **F1** key. This will display the help manual in the GenWatch3 Help Viewer as shown in Figure 4.2.

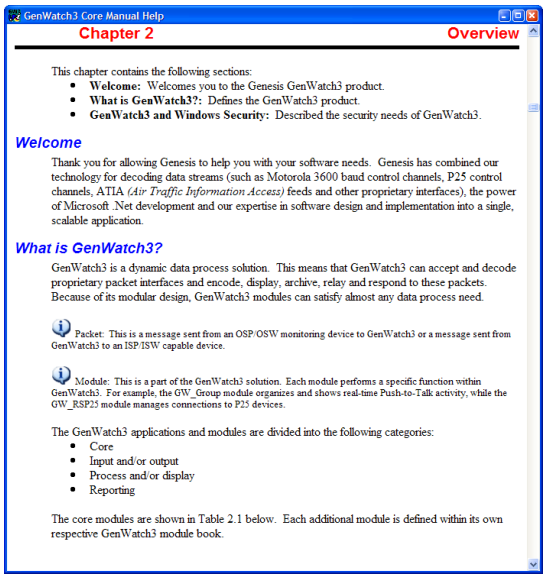


Figure 4.2 – GenWatch3 Help Viewer

In the Help Viewer, you can navigate throughout the manual. A Table of Contents appears near the start of the manual, allowing quick navigation to the pertinent portion of the manual.

When pressing **F1** in a module GUI, in many cases, GenWatch3 will automatically navigate within the manual to display the section which pertains to the part of the module GUI directly under the mouse cursor on the GUI. For example, in the GW_Activity module GUI, if you press **F1** while the mouse hovers over the Packet Types list in that GUI, the GenWatch3 Help Viewer will load the GW_Activity manual and automatically navigate to the Packet Types section of the manual.

Chapter 5 GW_Alerts

This chapter contains the following sections:

- **What is GW_Alerts?:** Describes the GW_Alerts application and its role in the GenWatch3 solution.
- **Logging into GW_Alerts:** Describes the GenWatch3 login screen as provided by GW_Alerts.
- **GW_Alerts Menu:** Describes the use of the GW_Alerts menu.
- **GW_Alerts Connection Icons:** Describes the types of icons shown by GW_Alerts and how to interpret and/or interact with them.
- **GW_Alerts Notification Windows:** Describes the Notification Window feature provided by GW_Alerts.

What is GW_Alerts?

GW_Alerts is a System Tray application. This means that this application does not display a GUI. Instead, it shows an icon in the Windows System Tray (the bottom-right area of your desktop next to the clock). GW_Alerts will show one of the following icons:

-  : This icon indicates that the GW_Alerts application is running and is currently connected to the GenWatch3 service.
-  : This icon indicates that the GW_Alerts application is running but is not currently connected to the GenWatch3 service.

If you do not see either of these icons, you may need to start GW_Alerts. To start GW_Alerts, take the following steps:

1. Click on the Windows Start button.
2. Click on All Programs (or Programs in some versions of Windows).
3. Click on Startup.
4. Click the GenWatch3 icon 

. This will load GW_Alerts and show the login screen.

Logging into GW_Alerts

The GenWatch3 Installer places a shortcut to GW_Alerts in the Startup folder of your Windows Start menu. This means that when Windows starts up (after reboot, power off, etc.), Windows loads GW_Alerts automatically. The first step to running GW_Alerts is logging in. After you (or Windows) load GW_Alerts, you will see the following screen:

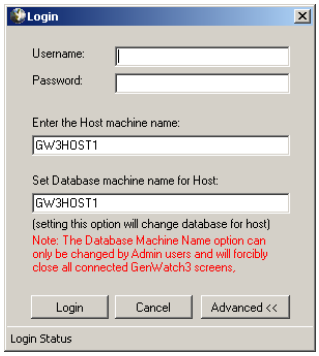


Figure 5.1 – GenWatch3 Login Screen

The *Login* screen contains the following options:

- **Username:** GenWatch3 user name you wish to log in with. This box will contain the user name that last logged in on this machine. If this is your first time logging in, use **Admin**
- **Password:** Password of the GenWatch3 user entered in **Username**.
- **Enter the Host machine name:** Name of the machine that is running the GenWatch3 service. This box will contain the host name that was last used on this machine.
- **Set the Database machine name for host*:** This machine hosts the GenWatch3 database. You will probably never have to change this value. By default, this box will contain the current database machine name of GenWatch3 host in the **Enter the Host machine name** box.
  * If you change this value while logging in as Admin, you are actually instructing the GenWatch3 service to use this value as a database server name. Do not provide a **Set the Database machine name for host** value unless you move the database to a different machine than you originally installed GenWatch3 on.
- **Cancel:** Click this button to cancel login and close GW_Alerts.
- **Login:** Click this button once you have entered or verified the **Username**, **Password**, and **Host machine name**.
- **Advanced:** Shows / Hides the **Enter the Host machine name** and the **Set the Database machine name for host** options.

GenWatch3 uses your login information provided in this login screen for GW_LaunchPad and all other GenWatch3 GUIs. In GW_LaunchPad, click the button to log in as a different user or to log into a different GenWatch3 host.

GW_Alerts Menu

The GW_Alerts menu appears when you right-click on the GW_Alerts icon. This menu contains the following options:

- **LaunchPad:** Loads the GW_LaunchPad application.
- **Modules:** Displays a list of shortcuts to licensed modules. Left-click to open a module directly.
- **Tools:** Displays list of shortcuts to RCM, EzSaveWin, and SkyView if these components are installed.
- **Exit:** Closes GW_Alerts.

If GW_Alerts is closed, you will not receive GenWatch3 Notifications. Also the connection icons will not show. Genesis recommends that you never close GW_Alerts.

GW_Alerts Connection Icons

The above section described the GW_Alerts icons that show the running and connected state of GW_Alerts. Additionally, GW_Alerts will show an icon in the System Tray for each active (enabled) connection in each GenWatch3 input module. For example, if your GW_RSP25 module has two active connections, GW_Alerts will show two connection icons.

Some GenWatch3 input module connections offer TCP/IP packet forwarding. For example, you can set up a GW_RIMII connection to connect to a RIM-II via COM port 1 and forward the RIM-II packets to TCP/IP port 10599. A client TCP/IP application can connect to port 10599, and therefore become a client to the GW_RIMII connection.

Connection icons show one of the following states:

- : Connection has a COM or TCP/IP connectivity issue.
- : Connection with a connected client has a COM or TCP/IP connectivity issue.
- : Connection has received packets within the last 5 seconds.
- : Connection with a connected client has received packets within the last 5 seconds.
- : Connection has not received packets within the last 5 seconds (blinks between red and white background)
- : Connection with a connected client has not received packets within the last 5 seconds (blinks between red and white background)

Hover (move the mouse) over a connection icon to see its connection type, name and status.

GW_Alerts Notification Windows

Notifications come in many forms. They can range from a Link Down notification from an input module, indicating that the data stream is down to an Unacknowledged Emergency Alarm, sent by GW_Halcyon indicating that an emergency alarm was not delivered to a dispatcher. No matter what the flavor, these notifications are displayed in the GenWatch3 Notification window via GW_Alerts.

See Chapter 10 of this book for more information on the GenWatch3 Notification window.

This chapter contains the following sections:

- **Viewing Real-time Module Status:** Describes how to view and understand the **Modules** list and the **Info** section.
- **Creating Module Notes:** Describes how to create and view module notes.
- **Loading Module GUIs:** Describes how to load the module GUI for a particular module.
- **Loading the GenWatch3 License Manager:** Describes how to load the *GenWatch3 License Viewer* window.
- **Creating Shortcuts to Useful Tools:** Describes how to create shortcuts within GW_LaunchPad to the applications that you use the most.
- **Setting Up a Temporary Filter for Real-Time Activity Modules:** Describes how to create a filter that will affect multiple GUIs for a limited time.

Figure 6.1 – GW_LaunchPad GUI

Viewing Real-time Module Status

GW_LaunchPad allows you to view module activities and statuses for the selected module icon. The *Module Info* section shows the following information for the selected module icon:

- **Module Name**: Shows the selected module's name.

1. **Status**: Shows the selected module's overall status. Module statuses include:
    - **File Not Found or Not a DLL**: GenWatch3 module file is missing or corrupt.
    - **Invalid DLL**: GenWatch3 module file does not satisfy the installed version of the module interface.
    - **Not Licensed**: GenWatch3 license does not include this module.
    - **Expired**: Evaluation/lease period has expired.
    - **Starting**: The GenWatch3 service is starting the module.
    - **Started**: The module is started (currently processing).
    - **Stopping**: The GenWatch3 service is stopping the module.
    - **Stopped**: The module is currently stopped (not processing).
2. **License Status**: Shows the selected module's license status. License statuses can be:
    - **Evaluation:** Module is being evaluated within its evaluation period.
    - **Activated:** License for this module has been purchased.
    - **Lease:** License for this module includes a fixed duration of runtime.
    - **Locked:** Evaluation has not been unlocked for this module.
    - **Expired:** Evaluation/lease period has expired for this module.

The Status and License Status values show the status at the time GW_LaunchPad was loaded. The following actions will query the current status of the modules.

- Closing and reloading GW_LaunchPad
- Switching users
- Clicking the **Refresh Modules** option in the Modules List Menu (described below)

Modules List Menu

To view the Modules menu, right-click on the Modules list. The Modules menu includes the following options:

- **Open Interface**: Opens the selected module's GUI.
- **Show Quick Launch**: Shows all module icons in the *Product Sheet* section of GW_LaunchPad.
- **Show Module Product Sheets**: Shows the product sheet of the selected module in the *Product Sheet* section of GW_LaunchPad.
- **Refresh Modules**: Refreshes the **Modules** list and the status of all modules.
- **Temporary Filter**: Opens a window to set up a temporary filter for real-time activity modules.

Creating Module Notes

GW_LaunchPad allows you to make PC-specific notes for each GenWatch3 module. PC specific means that each user that uses GW_LaunchPad on this machine will see these notes. These notes allow you to:

- Leave a module-related note for the next user.
- Provide yourself with additional information about the module.

To create module notes, take the following steps:

1. Select the module for which you wish to make notes.
2. Type the notes in the **Notes** section.

Loading Module GUIs

GW_LaunchPad provides a portal (central location) for launching the module GUIs. To launch a module GUI, take the following steps:

1. Find the icon of the module that you wish to launch in the **Modules** list.
2. Double-click on the module icon: This will load the module GUI for the module that you double-clicked.

Load the GenWatch3 License Manager

GW_LaunchPad provides an entry point into the GenWatch3 License Manager if you are running GW_LaunchPad from the GenWatch3 server machine. To load License Manager, click in the **View License** button. This will load GenWatch3 License Manager.

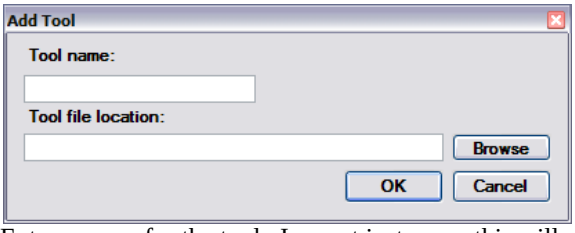
You can read more about GenWatch3 License Manager in Chapter 7 of this book.

Creating Shortcuts to Useful Tools

GW_LaunchPad provides a handy feature that allows you to easily link to other programs on your machine. For instance, if you commonly run Notepad or Excel, you can add them to GW_LaunchPad as "Tools" and then start them from within the GW_LaunchPad Tool window. The tool window is found below the list of Modules and will already contain the link to RCM if you purchased the Commander series of GenWatch3. To add a tool to GW_LaunchPad, perform the following steps:

1. Click the **Add Tool** button: This will 

open the *Add Tool* window.



2. Enter a name for the tool. In most instances, this will simply be the name of the program you are wanting to link to (Notepad, Excel, etc.).
3. Enter or browse to the location of the executable file for the program (.exe).

Below is a sample of what your *Tools* window might look like if you added Microsoft Notepad and Microsoft Calculator:

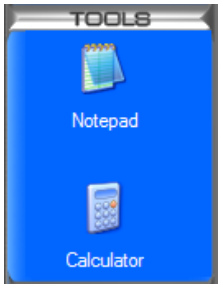


Figure 6.2 – Tools

Setting Up a Temporary Filter for Real-Time Activity Modules

GW_LaunchPad allows you to create a filter that will affect the GW_Activity, GW_Channel and GW_Group modules for a specified amount of time. This allows you to quickly narrow your focus down to a specific set of radio IDs or talkgroups without having to manually disable the filter later.

To create a temporary filter, perform the following steps:

1. Open the modules menu by right-clicking in the modules box. Select **Temporary Filter**; this will open the *Temporary Filter* window.
2. Check the **Enable Temporary Filter** box. This will allow you to edit the filter settings.
3. From the **Filter Type** drop-down box, choose the type of resource you'd like to filter on.
4. Specify a duration for the filter on the **Duration** control. Setting a duration of zero will cause the filter to last until manually disabled using this window.
5. Click the **Add** button to add resources to your filter list.
6. From the selector window, you can search your GW_Alias database for resources based on a variety of properties, or leave the fields blank to return all resources of that type. When satisfied with your criteria, click **Search** to see the list of resources that meet your criteria.
7. Select the resources you would like to be able to see on the real-time activity modules, then click **OK**. Activity from resources that are not selected will not be visible on GW_Activity, GW_Channel or GW_Group, but that activity will still be archived to your database.
8. Click the **OK** button on the *Temporary Filter* window. The filter will be activated and its timer started from the moment you press **OK**. A timer showing the remaining time will be displayed on LaunchPad.

To manually disable a temporary filter, perform the following steps:

1. Click the **Temporary Filter** button in the modules menu. This will open the *Temporary Filter* window.
2. Uncheck the **Enable Temporary Filter** box.
3. Click **OK**. The filter will be disabled.

Chapter 7 GenWatch3 License Manager

This chapter contains the following sections:

- **Do I Need to Activate My License?** Describes scenarios that would not require you to activate your GenWatch3 license.
- **What is the GenWatch3 License?** Describes the function and role of the GenWatch3 license.
- **Loading GenWatch3 License Viewer:** Describes how to load the *GenWatch3 License Viewer*.
- **License Details:** Describes the information shown in the *License Viewer*.
- **License Manager Options:** Describes the function of each option above the License Details.

Do I Need to Activate My License?

Some installs of GenWatch3 (such as the Commander Series) come pre-installed on a GenWatch3 machine (PC). These installs have an activated license. The activation steps defined in this chapter are not necessary for these installs.

If your GenWatch3 computer was not shipped to you from The Genesis Group or staged by a third party, you will need to go through the activate license process described below.

In short, if the *Activate Product(s)* window greets you when you load GW_Alerts, you need to activate your license.

What is the GenWatch3 License?

The GenWatch3 license allows you to customize your GenWatch3 installation by selecting from various GenWatch3 product packages. The GenWatch3 license also protects your software from piracy and illegal distribution. GenWatch3 licensing exists within the GenWatch3 Service, each module, and in some module GUIs. The *License Viewer* window shows all licensing information for GenWatch3, including each licensed module.

Loading GenWatch3 License Viewer

To load *GenWatch3 License Viewer*, take the following steps:

1. Load GenWatch3 GW_LaunchPad
2. Click on the VIEW LICENSE button: This will load *GenWatch3 License Viewer*.

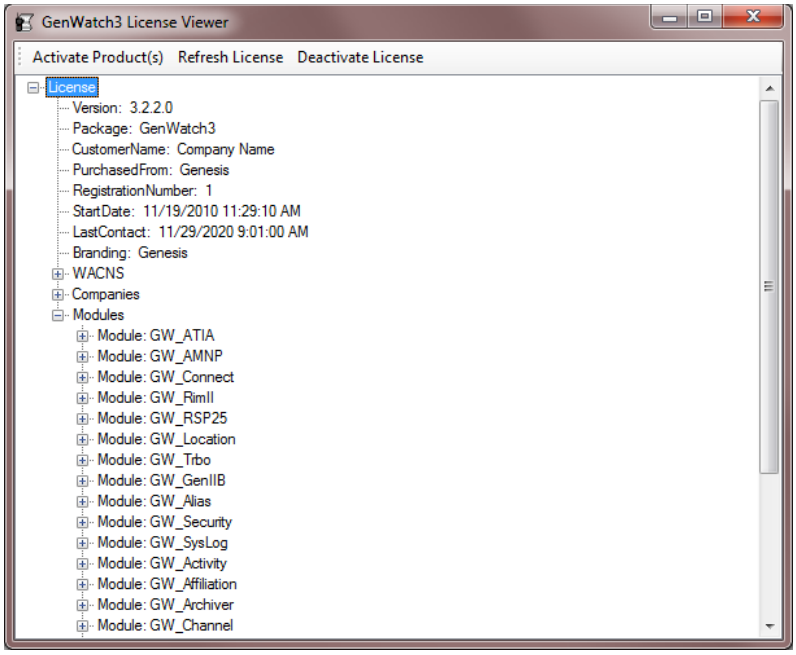


Figure 7.1 – GenWatch3 License Viewer

The GenWatch3 service (the behind-the-scenes application that runs the GenWatch3 modules) is licensed for a specific machine. If a GenWatch3 machine changes drastically, your license will become invalid, and you must contact GenWatch3 support to obtain a new GenWatch3 license. Changes such as replacing a hard drive or upgrading the operating system will invalidate the license.

License Details

The License Details tree shows detailed information regarding your activated GenWatch3 license. The major sections include:

- **Version:** Licensed GenWatch3 version.
- **Package:** GenWatch3 package purchased.
- **CustomerName:** Customer this license is registered to.
- **PurchasedFrom:** Company you purchased this license through.
- **RegistrationNumber:** Generally the purchase order for this license.
- **Branding:** Branding option. This is usually Genesis.
- **StartDate:** The date/time this license was issued.
- **LastContact:** Last modification made to this license.
- **WACNS:** The topmost tier of the licensed infrastructure. This infrastructure will contain, at least, one licensed system.
- **Modules:** Contains an entry for each licensed module. Each module contains a **Restrictions** section, with an entry for each of its specific license features.

License Manager Options

Activate Product(s)

This option opens the *Activate Product(s)* window (see Figure 7.2). This window is used to evaluate the GenWatch3 product or to activate GenWatch3 after you have purchased a license.

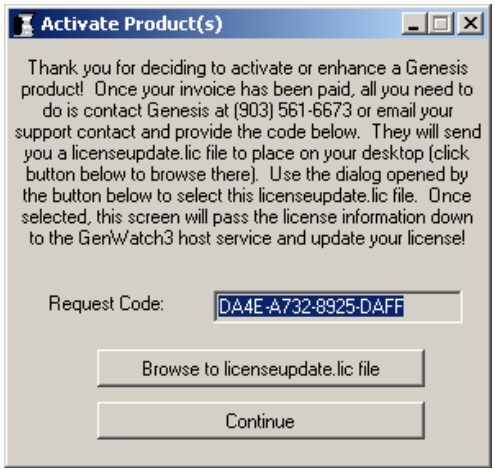


Figure 7.2 – Activate Product(s) window

The *Activate Product(s)* window contains the following options:

- **Browse to licenseupdate.lic file:** Click this button to show the Open file dialog box. This dialog box allows you to browse your local and network machine for the GenWatch3 license file.
- **Continue:** Click this button to close the *Activate Product(s)* window. This button is only available if your GenWatch3 installation is licensed.
- **X:** Click this button to close the *Activate Product(s)* window. If your GenWatch3 is not licensed, this will also close GW_Alerts.

If your GenWatch3 installation was not licensed by your vendor, GenWatch3 shows the *Activate Product(s)* window when you run GW_Alerts. This is our way of telling you that your GenWatch3 installation is not licensed.

To activate your purchased GenWatch3 license, take the following steps:

1. Select the ENTIRE code in the Request Code box.
2. Right-click on the selected code: This will show an edit pop-up menu with options including **Copy**.
3. Choose **Copy** from the edit pop-up menu.
4. Open your email application and create a new email to Support@GenesisWorld.com
5. Right-click in the body of the email: This will show an edit pop-up menu with options including **Paste**.
6. Choose **Paste** from the edit pop-up menu: This will paste your Request Code into the email exactly as it was on the *Activate Product(s)* window.
7. Also include in the email your company name and your contact information.
8. Send the email.
9. Contact GenWatch3 support (see the Support section of this manual): The support person will assist you with the rest of the activation process.

The end result of this license request is a license file, usually named licenseupdate.lic). Use the **Browse to licenseupdate.lic file** button (described above) to select the license file and click **OK**. This will send the file to the GenWatch3 service and update the GenWatch3 license.

Updating the GenWatch3 license results in a GenWatch3 Notification window (described in Chapter 10), warning you and all other administrator-level GenWatch3 clients that a GenWatch3 user has updated the license. If you are activating the initial license for GenWatch3, this will also enable the **Continue** button.

Refresh License

This option queries the GenWatch3 service for the current license. The *GenWatch3 License Viewer* shows the results of the query.

 If no email is available at the installation site, the person performing the install will need to run GW_LaunchPad, get the activation code, physically go to a location that does have access to email, request the activation file from Genesis, copy the activation file provided by Genesis to some form of removable media (CD, Disk, Flash drive, etc.), bring the file back to the installation site, and place it in the GenWatch3 installation directory.

Deactivate License

If you need to move your GenWatch3 host to a difference machine, you will need to deactivate the license on the current host. The **Deactivate License** button results in a *GenWatch3 Unlock Code* window. You must contact GenWatch3 support in order to receive an unlock code.

Once you enter the unlock code, you will receive a dialog box showing the deactivation confirmation code. This code is provided to GenWatch3 support to confirm that the license has been deactivated.

 The Deactivate License option is only available to the Admin user.

Chapter 8 GW_Security Module GUI

This chapter contains the following sections:

- **What is GW_Security?** Describes the role of security within GenWatch3.
- **Privileges:** Describes the function of privileges.
- **Roles:** Describes the function of roles and how to maintain them.
- **Users:** Describes the function of users and how to maintain them.
- **Activity History:** Describes how to view the user activity history view.
- **Current Users:** Describes how to view the list of current users.

What is GW_Security?

In GenWatch3, security refers to the different functions and data filters that you can allow or disallow on a per-module-per-user basis. GenWatch3 applies these security options to each user when they log into GW_LaunchPad. They are carried over to each GUI or tool that this user launches within GW_LaunchPad. The security properties within GW_Security are made up of three entities:

- **Privileges**: Predefined allowances for actions and view rights within the GenWatch3 module GUIs. Privileges exist on a per-module basis.
- **Roles**: Used to describe and house a group of privileges.
- **Users**: Used to define the people that use the GenWatch3 module GUIs. Users are assigned a role and a list of groups which they can view (Unconditional access to all groups is a role privilege granted on a module-by-module basis privilege).

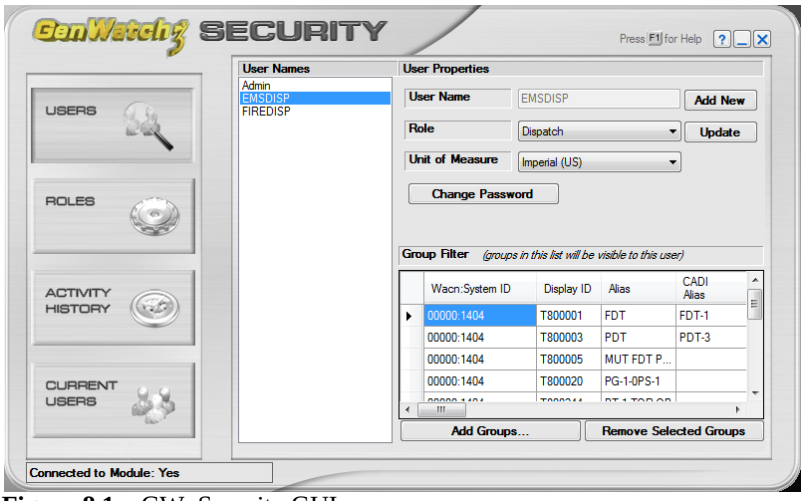


Figure 8.1 – GW_Security GUI

Privileges

Privileges are pre-defined module-level allowances for actions and view rights within a GenWatch3 GUI. Each module contains a set of pre-defined privileges. Privileges are assigned to roles; therefore, a user who is assigned a role inherits that role's privileges.

Privileges List

The table below shows each module and its pre-defined privileges:

Module	Privilege	Description
GW_Activity	Access	Allows the user to access this module's GUI.
	DisableThrottle	Allows the user to remove the packet throttle (some data stream packets are throttled to 1 distinct packet per second).
	ViewAllGroups	Ignores any user-level group filters and allows the user to view all packet activity, including system status and diagnostic packets that do not reference a group or a radio ID.
GW_Affiliation	Access	Allows the user to access this module's GUI.
	ViewAllGroups	Ignores any user-level group filters and allows the user to view all packet activity, including system status and diagnostic packets that do not reference a group or a radio ID.
GW_Alias	Access	Allows the user to access this module's module GUI.
	Delete	Allows the user to delete existing resources.
	Edit	Allows the user to edit and update existing resources.
	Import	Allows the user to import and add resources.
	Resynchronize	Allows the user to request the module to resynchronize its alias list with the alias database.
	ViewAllGroups	Used to grant administrative access to all IDs/groups for users selected in GW_Trigger.

Table 8.1 – Module Privileges

Module	Privilege	Description
GW_AMNP	Access	Allows the user to access this module's GUI.
	Edit	Allows the user to add, edit, and delete AMNP connections/properties.
	SetupFilters	Allows the user to edit the filter settings for each connection.
GW_Archiver	Access	Allows the user to access this module's GUI.
	Edit	Allows the user to edit and update archive options.
GW_ATIA	Access	Allows the user to access this module's GUI.
	Edit	Allows the user to add, edit, and delete ATIA connections/properties.
	SetupFilters	Allows the user to edit the filter settings for each connection.
GW_Channel	Access	Allows the user to access this module's GUI.
	ViewAllGroups	Ignores any user-level group filters and allows the user to view all packet activity, including system status and diagnostic packets that do not reference a group or a radio ID.
GW_CloneWatch	Access	Allows the user to access this module's GUI.
GW_Connect	Access	Allows the user to access this module's GUI
	Edit	Allows the user to add, edit, and delete connections
	Setup Filters	Allows the user to edit the filter settings for each connection
GW_GEnSAC	Access	Allows the user to access this module's GUI.
	ViewAllGroups	Allows the user to access this module's GUI. Ignores any user-level group filters and allows the user to select any existing group when setting up GEnSAC connections.

Table 8.1 – Module Privileges (cont.)

Module	Privilege	Description
GW_GenSPOut	Access	Allows the user to access this module's GUI.
	Edit	Allows the user to add, edit, update, and delete all settings.
GW_Group	Access	Allows the user to access this module's GUI.
	ViewAllGroups	Ignores user-level group filters and allows the user to view all packet activity, including system status and diagnostic packets that do not reference a group or radio ID.
GW_Halcyon	Access	Allows the user to access this module's GUI.
	Call Alert	Allows user to issue Call Alerts.
	ChangeMe	Allows the user to monitor Change Me events.
	Database Snapshot	Allows the user to issue Database Snapshots.
	Dynamic Regrouping	Allows the user to issue Dynamic Regroupings (Regroup, Failsoft Assignment and selector lock).
	Emergency Alarm	Allows the user to monitor Emergency Alarm events.
	Failsoft Assignment	Allows the user to issue commands that include Failsoft Assignment.
	IP Console Inhibit	Allows the user to issue IP Console Inhibits.
	Radio Check	Allows the user to issue Radio Checks (Request Radio Affiliations).
	RMRT	Allows the user to issue Remote Monitor / Radio Traces.
	Selective Inhibit	Allows the user to issue Selective Inhibits.
	Selector Lock or Unlock	Allows the user to issue commands that include Selector Locks.
	Slot Disable	Allows user to issue Slot Disables.
	Status Message	Allows the user to monitor Status and Message events.
	Storm Plans	Allows the user to issue Storm Plan commands.
	Unattended Emergency Alarm	Allows the user to receive Emergency Alarm events that fail to be delivered to a connected RCM or CADI user.

Table 8.1 – Module Privileges (cont.)

Module	Privilege	Description
	ViewAllGroups	Ignores any user-level group filters and allows the user to view all events and issue commands to any radio ID and any group.
GW_Location	Access	Allows the user to access this module's GUI.
	Edit	Allows the user to add, update and delete connections.
GW_LoneWorker	Access	Allows the user to access this module's GUI.
	ViewAllGroups	Ignores any user-level group filters and allows the user to view all packet activity, including system status and diagnostic packets that do not reference a group or a radio ID.
GW_RIMII	Access	Allows the user to access this module's GUI.
	Edit	Allows the user to add, edit, and delete RIM-II connections/properties.
	SetupFilters	Allows the user to edit the filter settings for each connection.
GW_Security	Access	Allows the user to access this module's GUI.
	ChangePassword	Allows the user to change passwords. If combined with ManageUsers, then the user can change the password of any user. Otherwise, the logged-in user can only change his/her password.
	ManageRoles	Allows the user to add, update, and delete roles. If not given, then the user has view-only access to the role assigned to him/her.
	ManageUsers	Allows the user to add, update, and delete users. If not given then the user has view-only access to his/her user properties.
	ViewCurrentUsers	Allows the user to view the list of currently logged-on users.
	ViewUserActivity	Allows the user to see other users' activity. If not given, the user can only see his/her own activity.

Table 8.1 – Module Privileges (cont.)

Module	Privilege	Description
GW_SysLog	Access	Allows the user to access this module's GUI.
	Edit	Allows the user to add, update, and delete SysLog connections.
GW_SystemSummary	Access	Allows the user to access this module's GUI.
GW_Trbo	Access	Allows the user to access this module's GUI.
	Edit	Allows the user to add, edit, and delete TRBO connections/properties.
	SetupFilters	Allows the user to edit the filter settings for each connection.
	ViewAllGroups	Ignores any user-level group filters and allows the user to view all events and issue commands to any radio ID and any group.
GW_Trigger	Access	Allows the user to access this module's GUI.
*EZSaveWin	Access	Allows the user to access EzSaveWin if EzSaveWin is installed.
	AddSystem	Allows the user to add a new system in EzSaveWin.
	AddToScheduler	Allows the user to add new backup schedules to EzSaveWin's Scheduler.
	DeleteFromScheduler	Allows the user to remove backup schedules from EzSaveWin's Scheduler.
	DeleteSystem	Allows the user to delete a system from EzSaveWin.
	DoBackup	Allows the user to do backups of a system through EzSaveWin.
	DoRestore	Allows the user to restore a system's data using an EzSaveWin backup.
	EditBackups	Allows the user to edit EzSaveWin backups. Has no affect unless user also has ViewBackups privilege.
	EditDefaultSettings	Allows the user to edit EzSaveWin Default Settings.
	EditOptions	Allows the user to edit EzSaveWin Options.
	EditReportsAndHistory	Allows the user to edit session reports and history.
	EditScheduler	Allows the user to edit schedules.

	EditSystem	Allows the user to edit systems in EzSaveWin.
	ImportSystem	Allows the user to import systems into EzSaveWin.
	RunScheduler	Allows the user to run the Scheduler.
	SyncSystems	Allows the user to synchronize redundant system controllers with EzSaveWin.
	ViewBackups	Allows the user to view, but not edit, backups created with EzSaveWin.
	ViewReportsAndHistory	Allows the user to view, but not edit, System Reports and Sessions created by EzSaveWin.
GW_Reports	Access	Allows the user to access this module's GUI.
	ViewAllGroups	Ignores any user-level group filters and allows the user to view all talkgroups and radio IDs when choosing report parameters.
GW_RSP25	Access	Allows the user to access this module's GUI.
	Edit	Allows the user to add, edit, and delete RSP25 connections/properties.
	SetupFilters	Allows the user to edit the filter settings for each connection.
GW_SysVista	Access	Allows the user to access this module's GUI.
GW_Trio	Access	Allows the user to access this module's GUI.
GW_GenIIB	Access	Allows the user to access this module's GUI.
	Edit	Allows the user to add, edit, and delete GenIIB controllers.

Table 8.1 – Module Privileges (cont.)

* You will see Role Privilege options for these features even if you are not licensed for these features.

Roles

Roles are used to describe and house a group of privileges. A role is assigned to a user; therefore the role's privileges are assigned to the user. Typical roles include:

- **Dispatcher:** User has access to all real-time activity GUIs, but no configuration GUIs.
- **Reporter:** User only has access to the GW_Reports module.

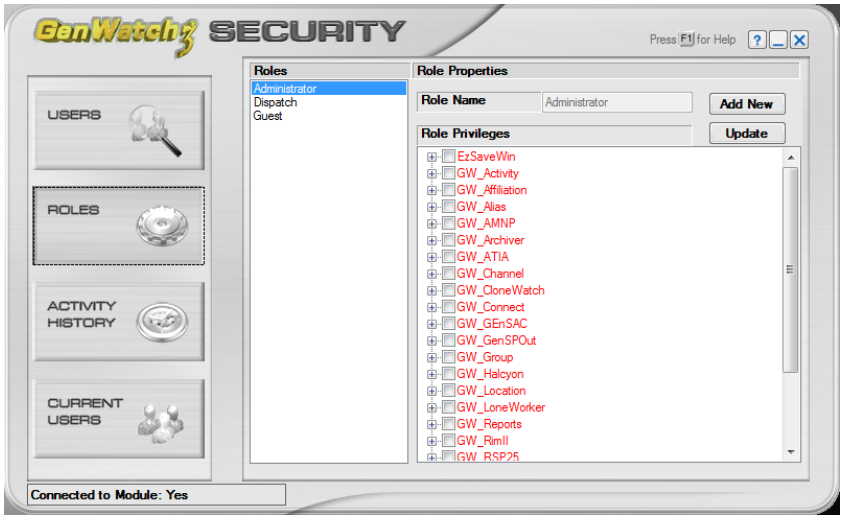


Figure 8.2 – GW_Security User Management GUI

Adding a New Role

To add a new role, you must be logged into GenWatch3 with a user that includes the *ManageRoles* privilege in its role. To add a new role, follow the steps below:

1. Load the GW_Security GUI.
2. Click the **Roles** button: This will show the role management section of the GW_Security GUI.
3. Click the **Add New** button: This will clear the role management properties and enable the **Role Name** box.
4. Enter a role name that is not already in use.
5. Under each module, check each **Role Privilege** you want to include in this role. Clicking the checkbox next to the module name will select all role privileges under the module.
6. Click the **Update** button.

Editing a Role

To edit an existing role, you must be logged into GenWatch3 with a user that includes the *ManageRoles* privilege in its role. To edit an existing role, follow the steps below:

1. Load the GW_ Security GUI.
2. Click the **Roles** button: This will show the role management section of the GW_Security GUI.
3. Click on the role in the **Roles** list that you wish to edit.
4. Change the **Privileges** assigned to this role.
5. Click the **Update** button.

Deleting a Role

To delete an existing role, you must be logged into GenWatch3 with a user that includes the *ManageRoles* privilege in its role. Roles can only be deleted if they are not assigned to a user. To delete an existing role, follow the steps below:

1. Load the GW_ Security GUI.
2. Click the **Roles** button: This will show the role management section of the GW_Security GUI.
3. Click on the role in the **Roles** list that you wish to delete.
4. Right-click on the role in the **Roles** list that you wish to delete: This will show a menu of role options, including **Remove**.
5. Click the **Remove** option: This will result in a confirmation dialog.
6. Click **Yes** to remove the role.

 If a user does not have the GW_Security *ManageRoles* privilege, the user can view the privileges of his/her own role but not the privileges of any other roles.

Users

Users define the people that use the GenWatch3 software. Users are assigned a role and a list of groups which they can view (unconditional access to all groups is a privilege). You provide a user name (verified by a password) when you log into GenWatch3 GW_LaunchPad. This user name is passed to each of the GenWatch3 GUIs as it is loaded. Each GUI examines the privileges assigned to the user's role to determine the view and edit rights for the given user. Based on these privileges, the GenWatch3 GUI will limit the data and functions for the user.

Changes to user privileges are recognized by the GenWatch3 GUIs in real time. If you are logged into a GUI with edit privileges, and across town the system administrator removes your edit privileges for your current GUI, you will notice some buttons disappear from your GUI.

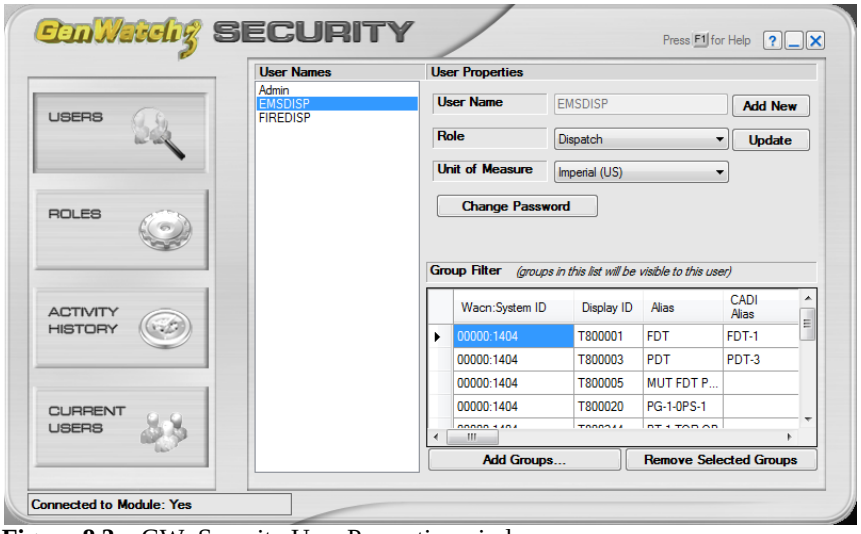


Figure 8.3 – GW_Security User Properties window

The Administrator Role and Admin User

The GenWatch3 install includes the **Administrator** role and the **Admin** user. This role and user cannot be updated. This user and role represent the administrator user with the administrator role. This role has all privileges available in GenWatch3.

The only attribute of this user and role that can be changed is the password. This password will be 'Genesis13' by default and should be changed as soon as possible, as anyone who reads this document will know the password of your administrator user.


Only **Administrator** role users can assign the **Administrator** role to other users. For non-**Administrator** role users, the **Administrator** role is not included in the Role list.

Adding a New User

To add a new user, you must be logged into GenWatch3 with a user that includes the *ManageUsers* privilege in its role. To add a new user, follow the steps below:

1. Load the GW_ Security GUI.
2. Click the **Users** button: This will show the **User Properties** section of the GW_Security GUI.
3. Click the **Add New** button: This will clear and enable the **User Name** box and show the **Password** and **Confirm** boxes.
4. Enter a **User Name** that is not already in use.
5. Select a role from the **Role** list.
6. Choose a **Unit of Measure** for your region. (This is used to display miles or kilometers, depending on your preferred unit of measure.)
7. Enter a password for this user in the **Password** box and the **Confirm** box.
8. If you would like for the user to only be able to see certain groups or message types, modify this in the **Group Filter** panel. (see the *Group Filters* section below)
9. Click the **Update** button.

Editing a User

To edit an existing user, you must be logged into GenWatch3 with a user that includes the *ManageUsers* privilege in its role. To edit an existing user, follow the steps below:

1. Load the GW_ Security GUI.
2. Click the **Users** button: This will show the **User Properties** section of the GW_Security GUI.
3. Click on the user in the **User Names** list that you wish to edit.
4. Optionally, change the **Unit of Measure**.
5. If you would like for the user to only be able to see certain groups or message types, modify this in the **Group Filter** panel. (see the *Group Filters* section below)
6. Click the **Update** button.

Changing a User's Password

To change a user's password, take the following steps:

1. Click on the user in the **User Names** whose password you wish to change.
2. Click the **Change Password** button: This will show the *Change Password* window.
3. Enter the password for the current GenWatch3 user in the **Current Password for <username>** box.
4. Enter the user's new password in the **New Password for <username>** box and the **Confirm new password for <username>** box.
5. Press the **OK** button.


The GW_Security *ChangePassword* privilege is required to change another user's password. The logged-in user can change his/her own password without this privilege.

Deleting a User

To delete an existing user, you must be logged into GenWatch3 with a user that includes the *ManageUsers* privilege in its role. To delete an existing user, follow the steps below:

1. Load the GW_ Security GUI.
2. Click the **Users** button: This will show the *User Management* section of the GW_Security GUI.
3. Click on the user in the **User Name** list that you wish to delete.
4. Right-click on the user in the **User Name** list that you wish to delete: This will show a menu of user options, including **Remove**.
5. Click the **Remove** option: This will result in a confirmation dialog.
6. Click **Yes** to remove the user.


This will not delete the user's history.

Group Filters

For users that do not have the *ViewAllGroups* privilege for each module, the groups that they can view are selected in the **Group Filter** panel in the bottom right.

Adding Groups

To add groups to the **Group Filter**:

- Click the **Add Groups…** button: This will load the *Select Talkgroups* window.
- Enter search criteria and click the **Search…** button: This will populate the talkgroups list.
- Select one or more talkgroups by clicking the checkbox in the **System ID** column. To select all talkgroups in the list, click the **Select All** button. To unselect all talkgroups in the list, click the **Unselect All** button.
- Click the **OK** button: This will close the *Select Talkgroups* window and populate the **Group Filter** with the selected talkgroups.
- Click the **Update** button on the **User Properties** panel: This will save the **Group Filter** changes.

Removing Groups

To remove groups from the **Group Filter**:

- Select the groups in the **Group Filter**. Use Shift+Click to select a range. Use Ctrl+Click to select additional groups.
- Clicking the **Remove Selected Groups** button: This results in a confirmation dialog.
- Click **Yes** on the confirmation dialog: This will remove the selected groups.
- Click the **Update** button on the **User Properties** panel: This will save the **Group Filter** changes.

If you scroll to the right in the **Group Filter** panel, you will see a list of checkboxes for different kinds of radio events. A user can also be filtered from seeing certain kinds of messages by unchecking these boxes. **PTT Display**, **Affiliation**, **Emergency Alarm**, **Call Alert**, **Change Me**, **Message**, **Radio Ack**, and **Status** can all be toggled in the **Group Filter** panel. In this version of GenWatch3, these options only affect event delivery in the RPC connection in GW_Halcyon.

Activity History

GenWatch3 stores an activity log for each user for no more than 30 days. This information allows you to view the actions of each user. User activity includes the following information per activity entry:

- **Timestamp:** The date and time the activity occurred.
- **Description:** Full description of the activity.
- **Module:** The GenWatch3 GUI in which the activity occurred.
- **Computer Name:** The computer name on which the activity occurred.

To view user activity for other users, you must be logged into GenWatch3 with a user that includes the *ViewUserActivity* privilege in its role and then follow the steps below:

1. Load the GW_Security GUI.
2. Click the **Activity History** button: This will show the user activity section of the GW_Security GUI.
3. Select the user for which you want to view activity: This will show the activity for this user for the past 30 days in the **User Activity** list to the right of the **User Names** list.

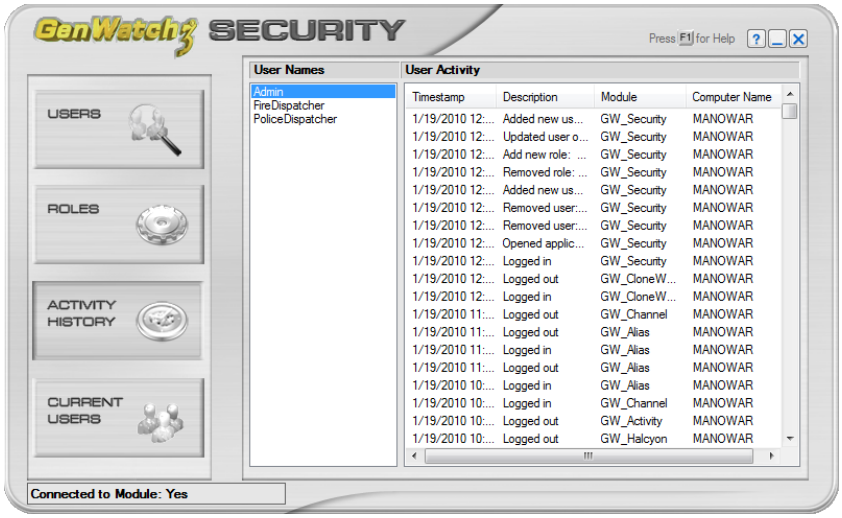


Figure 8.4 – GW_Security Activity History window

Current Users

GenWatch3 monitors user information for each user. This information allows you to view the current user information for each user. This information includes the following per user:

- **User Name:** The name of the user.
- **Role:** The role of the user.
- **Logged In:** Shows if the user is currently logged into GW_Alerts. *(If this GenWatch3 user name is used on multiple GenWatch3 clients, this value may show 'No' while this user is logged into GW_Alerts.)*
- **Last Location:** The computer on which this user logged in most recently.
- **Last Activity:** The date and time this user performed one of the following actions:
    - Logging into a GenWatch3 module GUI.
    - Logged out from a GenWatch3 module GUI.
    - Perform an administrative function such as adding an input module connection.
    - When a user is denied access to a GenWatch3 module GUI due to security denial.

Please refer to the **Activity History** for this user to view the details of the last activity entry.

To view current login states for other users, you must be logged into GenWatch3 with a user that includes the *ViewCurrentUsers* privilege in its role and then follow the steps below:

1. Load the GW_ Security GUI.
2. Click the **Current Users** button: This will show the **Current Users** section of the GW_Security GUI.

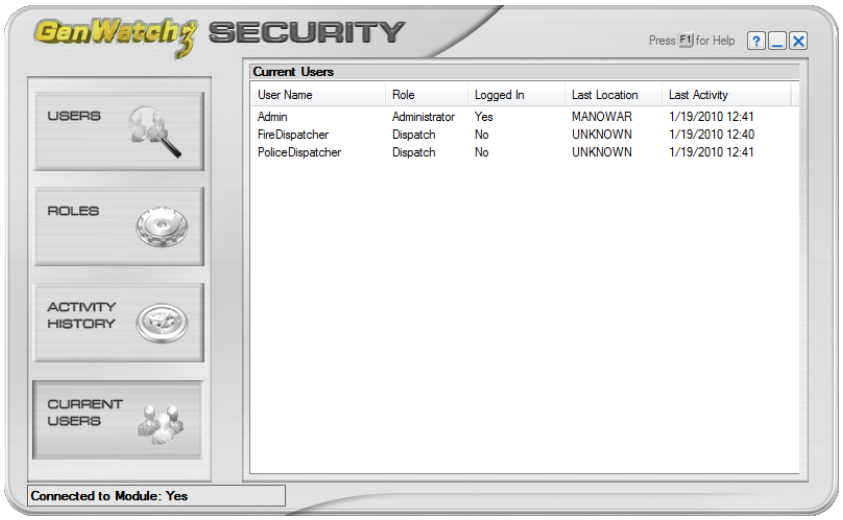


Figure 8.5 – GW_Security Current Users panel

If the GenWatch3 software closes unexpectedly, the currently logged in user will appear to be logged in until the next time they successfully log out.

Chapter 9 GW_SysLog GUI

This chapter contains the following sections:

- **What is GW_SysLog?** Describes the role of GW_SysLog within GenWatch3.
- **SysLog Packets:** Defines the structure of a SysLog packet.
- **SysLog Connections:** Describes the role of SysLog connections.

What is GW_SysLog?

GW_SysLog manages SysLog connections. The GW_SysLog module routes events and notifications created by the GenWatch3 service and modules to each of these SysLog connections.

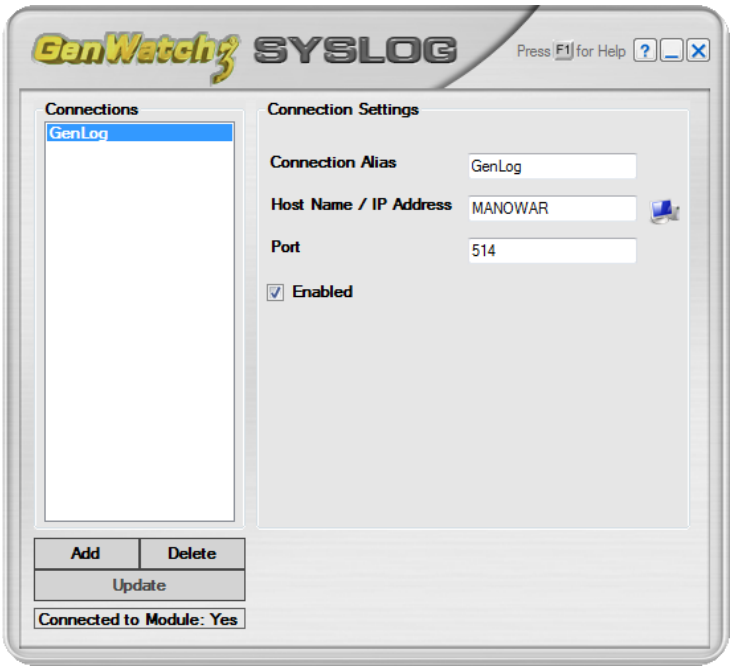


Figure 9.1 – SysLog GUI

SysLog: A de facto standard for forwarding log messages in an IP network. There are several 3rd party applications (sold by vendors other than The Genesis Group) that can receive, process, store, and issue alarms based on SysLog packets.

SysLog Packets

SysLog is an event format that has been the standard in the UNIX world for many years. SysLog packets are basically ASCII text (letters and numbers), limited to 1024 characters, in which the information in the text follows the SysLog format. Some information in SysLog packets is optional, such as date and time. The SysLog packets sent by the GenWatch3 GW_SysLog module have the following format:

- <PRI> Message

The PRI is a numeric value that stores both the message facility (Local7 is always used within GenWatch3) and the severity. To determine the value for facility and severity, divide the PRI value by 8. The quotient is the facility, and the remainder is the severity.

SysLog PRI Facility Values

Value	Description	
0	kernel messages	
1	user-level messages	
2	mail system	
3	system daemons	
4	security/authorization messages (note 1)	
5	messages generated internally by SysLog	
6	line printer subsystem	
7	network news subsystem	
8	UUCP subsystem	
9	clock daemon (note 2)	
10	security/authorization messages (note 1)	
11	FTP daemon	
12	NTP subsystem	
13	log audit (note 1)	
14	log alert (note 1)	
15	clock daemon (note 2)	
16	local use 0 (local0)	
17	local use 1 (local1)	
18	local use 2 (local2)	
19	local use 3 (local3)	
20	local use 4 (local4)	
21	local use 5 (local5)	
22	local use 6 (local6)	
23	local use 7 (local7)	← *Value used by GenWatch3 GW_SysLog module*

SysLog PRI Severity Values

Value	Description
0	Emergency: system is unusable
1	Alert: action must be taken immediately
2	Critical: critical conditions
3	Error: error conditions
4	Warning: warning conditions
5	Notice: normal but significant condition
6	Informational: informational messages
7	Debug: debug-level messages

SysLog Connections

The **Connections** list on the left side of the SysLog GUI shows all current SysLog connections. GW_SysLog broadcasts each SysLog packet that it receives to each SysLog connection. These connections use unencrypted UDP *(universal datagram packet)* protocol, so the message is sent to the destination (Host Name / IP Address and port) even if the destination is not listening. There are many SysLog client applications on the market that allow you to:

- Monitor SysLog activity on a destination.
- Log the packets to file, database, etc.
- Send out e-mail messages, page a person, or trigger another event when a certain severity level is received.
- Route the packets to another location.
- Many more options.

Creating a SysLog Connection

To create a SysLog connection, take the following steps:

1. Click the **Add** button: This will result in a new item being added to the **Connections** List. The new item will have an alias similar to "New Connection 1".
2. Click on the new entry in the **Connections** list. This will show the settings for this connection in the **Connection Settings** section.
3. Enter a value for **Connection Alias**.
4. Enter a value for **Host Name / IP Address**: This value can be any value that can be successfully resolved via DNS (Directory Name Service); so a computer name on your network or an IP address to a computer will both work. Notice that the default value is 127.0.0.1. This value is the IP address of the local machine.
5. Enter a value for **Port**: Port 514 is the standard SysLog port.
6. Check the **Enabled** checkbox.
7. Click the **Update** button.

Deleting a SysLog Connection

To delete a SysLog connection, take the following steps:

1. Select the connection that you wish to delete in the **Connections** list.
2. Click on the **Delete** button: This will result in a confirmation message.
3. Click **Yes**.

Disabling a SysLog Connection

If you wish to keep a SysLog connection in place without sending packets to the connection, you can disable the connection. To disable a connection, take the following steps:

1. Select the connection that you wish to disable in the **Connections** list.
2. Uncheck the **Enabled** checkbox.
3. Click the **Update** button.

Chapter 10 GenWatch3 Notifications

This chapter contains the following sections:

- **What is a Notification?** Describes the role of notifications within GenWatch3.
- **Working with Notifications:** Describes the process of dealing with notifications.

What is a Notification?

A notification is sent to GenWatch3 users when certain events happen on the system. Some events only target the **Administrator** role while some target all users. These events are similar to those available in the GW_Trigger module. They use the same core GenWatch3 notification process, minus the archiving of notifications, external relays, and responsibility logic.

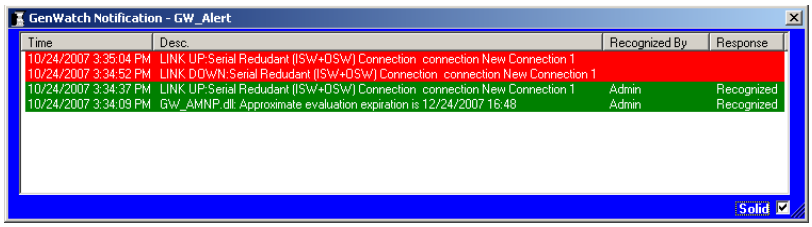


Figure 10.1 – GenWatch3 Notification window

Above is an example of the *GenWatch Notification* window. We have received several notifications concerning our input connection to a data stream. The newest notification is at the top. The topmost notification is "Link Up." This tells us that we lost the data stream a couple of times within a few seconds. In the end, the data stream was back up.

If the message description is longer than what will fit in the Desc. column, you can move and rest your mouse over the Desc. column.

GenWatch3 sends the following notifications:

Type	Source	Targets
Existing talkgroup reported by data stream as a multigroup	GW_Alias	Administrator
Conflicting RIM-II settings with those reported by the Central Controller	GW_RIMII	Administrator
New Suspect Notification	GW_CloneWatch	Administrator
Link Down Notification	Data stream input modules	All Connected Users
Link Up Notification	Data stream input modules	All Connected Users

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What Do Notifications Mean to Me?

Notifications are provided for two reasons:

1. To inform users of the status of the data stream, as it goes up and down. This notification will prompt administrators to attempt to restore the connection and will let other users know why they are not receiving real-time data. As a user or administrator, these notifications are useful.
2. To inform administrators of a conflicting GW_RIMII setting or a data entry issue regarding groups and multigroups. This allows the administrators to be proactive in correcting these issues. As an administrator, these notifications are useful.
3. GW_Trigger trigger rule violations. Some trigger events (set up in the GW_Trigger module) include showing a GenWatch3 Notification window (for additional warning that the trigger event occurred). Sometimes a sound will play or a relay will remain open until a user clicks on the trigger event in the GenWatch3 Notification window, therefore incorporating the GenWatch3 Notification window into the trigger event's workflow.

Working with Notifications

When a module issues a notification, a *GenWatch Notification* window will appear. When you select the event in the Notification window list, it will respond to the event. This means that all GenWatch3 users (including you) will see your user name in the **Recognized By** column and the **Response** column will read Recognized.

Chapter 11 Automatic Purging

This chapter contains the following sections:

- **What is Automatic Purging?** Describes the need and function of the automatic purging operation within GenWatch3.
- **Automatic Purge Settings:** Describes the settings used for automatic purging by GenWatch3.
- **Viewing Purging Results:** Describes how you can view the results of the automatic purging operation.

What is Automatic Purging?

GenWatch3 continually logs activity. If left unchecked, these activities would eventually take up a large amount of database space and decrease GenWatch3's performance. To avoid this issue, GenWatch3 performs an automatic purging operation every night at 12:00 AM. The type of purging is defined in the automatic purge settings.

Automatic Purge Settings

The automatic purge settings are defined in the ***Purge*** table in the ***GW*** database. The ***Purge*** table contains the following settings for each automatic purging operation:

- **ID:** Unique identifier for this automatic purging operation.
- **GWModuleID:** ID of the module responsible for performing this automatic purging operation. This value references a row in the ***GW_Modules*** table.
- **TableName:** Name of the table to purge.
- **DateAgeDays:** Number of days before an activity is purged.
- **MaxRows:** Maximum number of rows allowed in the table.
- **ByAge:** 0 if this table is not purged by age. 1 if this table is purged by age. Each ***DateTime*** column in this table is checked for a date older than ***DateAgeDays*** days. If one or more ***DateTime*** values are older than ***DateAgeDays***, then the activity is purged.
- **ByRows:** 0 if this table is not purged by maximum number of rows. 1 if this table is purged by maximum number of rows. Each activity in excess of ***MaxRows*** is purged.

The ***ByAge*** and ***ByRows*** options are not mutually exclusive. A table can be purged with the ***ByAge*** and the ***ByRows*** option. In this case, the ***ByAge***-based purging occurs first, followed by the ***ByRows***-based purging.

Viewing Purging Results

The automatic purging results are reported in the Windows Event log if the purging operation removes one or more activities. See Chapter 3 of this manual for instructions on viewing the Windows Event log.