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The Genesis Group and Phil Burks
5800 Eagles Nest Blvd
Tyler, Texas 75703.

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Refer to the GenWatch3 Manual Overview for your full license. All license information contained on pages 4-7 (Book 600-2.23.5-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 600-2.23.5-AA.1) for complete support and contact information.

Document History

Revision	Description	Author
2.0.5	Initial Release	JAW
2.0.6	Updated screenshots	CLB
2.0.6.6	Revisions for Release	TDW
2.0.6.11	Added AMNP Connection	KIH
2.2	Revision before release	CWF
2.3	Revisions Before Release	CWF
2.4	Revisions Before Release	CWF
2.5	Revisions Before Release	CWF
2.5	Added APM section	JAW
2.5	Added Connection Status section; minor edits	REB
2.5	Clarified CADI Manage Zone Controllers section	WRK
2.5	Updated CADI Connection w/ ID Formats	WRK
2.6	Revisions Before Release	CWF
2.7	Updated CADI Connection	WRK
2.7	Revisions Before Release	JAW
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2.9	Clarified raw data path.	REB
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2.12	Revisions Before Release	JAW
2.13	Revisions Before Release	ATG
2.14	Revisions Before Release	JAW
2.15	Revisions Before Release	REB
2.15	Added UNS Connections chapter	JPS
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2.15	Added UCS Connections chapter	ATG
2.15	Added Primary/Backup zone controller setting.	REB
2.16	Renamed UNS connection to IMW and updated settings.	REB
2.16	Add SMTP connections	DEW
2.17.10	Added database options to SNMP connection.	REB
2.17.17	Added port option to APM connection.	REB
2.17.18	Added APM connection import.	REB
2.23.1	Added supported PMI versions	GAC

Table of Contents

Goals

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

Who Should Read This Manual?

This manual is written for the intended audience of mid-level computer network users and novice to mid-level PC users.

How This Manual Is Organized

This manual is organized as follows:

- **Overview**: Provides an overview of the GW_Connect module.
- **SNMP Connections**: Describes how to create and manage SNMP (Simple Network Management Protocol) connections. See this section for a description of SNMP.
- **APM Connections**: Describes how to create and manage connections to an Advanced Power Management server.
- **HPD Connections**: Describes how to create and manage connections to GenGET's High Performance Data (HPD) data sources.
- **CADI Connections**: Describes how to create and manage connections to Computer-Aided Dispatch Consoles.
- **PMI Connections**: Describes how to create and manage connections to ASTRO 25 Provisioning Managers.
- **UCS Connections**: Describes how to create and manage connections to Dimetra UCS servers.
- **IMW Connections**: Describes how to create and manage connections to IMW servers.
- **SMTP Connections**: Describes how to create and manage connections to SMTP servers.
- **Raw Data Files**: Describes where raw data files – used by support personnel – are saved and how to change the raw data directory.

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 provides an overview of the GW_Connect module and its function within the GenWatch3 solution.

This chapter contains the following sections:
- **What Is GW_Connect?**: Describes the role and function of the GW_Connect module.
- **GW_Connect Features:** Describes the features of the GW_Connect graphical user interface (GUI).

What is GW_Connect?

GW_Connect is a module that allows you to set up connections to the following GenWatch3 data sources:
- **SNMP: S**imple **N**etwork **M**anagement **P**rotocol is a protocol that allows network objects, both software and hardware, to deliver SNMP traps and expose SNMP values. Refer to the *SNMP Connection* section of this manual for more information on SNMP traps and values.
- **APM: A**dvanced **P**ower **M**anagement is a product by RFI that allows you to monitor various power levels of connected repeaters. Refer to the *APM Connections* section of this manual for more information.
- **HPD: H**igh **P**erformance **D**ata is a system by Motorola to enable rapid information delivery on ASTRO 25 networks. Refer to the *HPD Connections* section of this manual for more information.
- **CADI: C**omputer**-A**ided **D**ispatch **I**nterface allows filtering, relaying and processing of data from CAD servers. Refer to the *CADI Connections* section of this manual for more information.
- **PMI: P**rovisioning **M**anager **I**nterface is the connection between GenWatch3 and an ASTRO 25 Core. Refer to the *PMI Connections* section of this manual for more information.
- **UCS:** UCS is the connection between GenWatch3 and a Dimetra UCS server. Refer to the *UCS Connections* section of this manual for more information.
- **IMW:** IMW is the connection between GenWatch3 and an IMW server for requesting and receiving location and presence information about devices on a system. Refer to the *IMW Connections* section of this manual for more information.
- **SMTP:** The **S**imple **M**ail **T**ransfer **P**rotocol is a standard protocol that allows a client to send email through an SMTP server. Refer to the *SMTP Connections* section of this manual for more information.

GW_Connect connections translate the proprietary data they receive into GenWatch3 packets and send these packets to GenWatch3 for processing. Some connections are bidirectional. This means that they receive and send data to their connection.
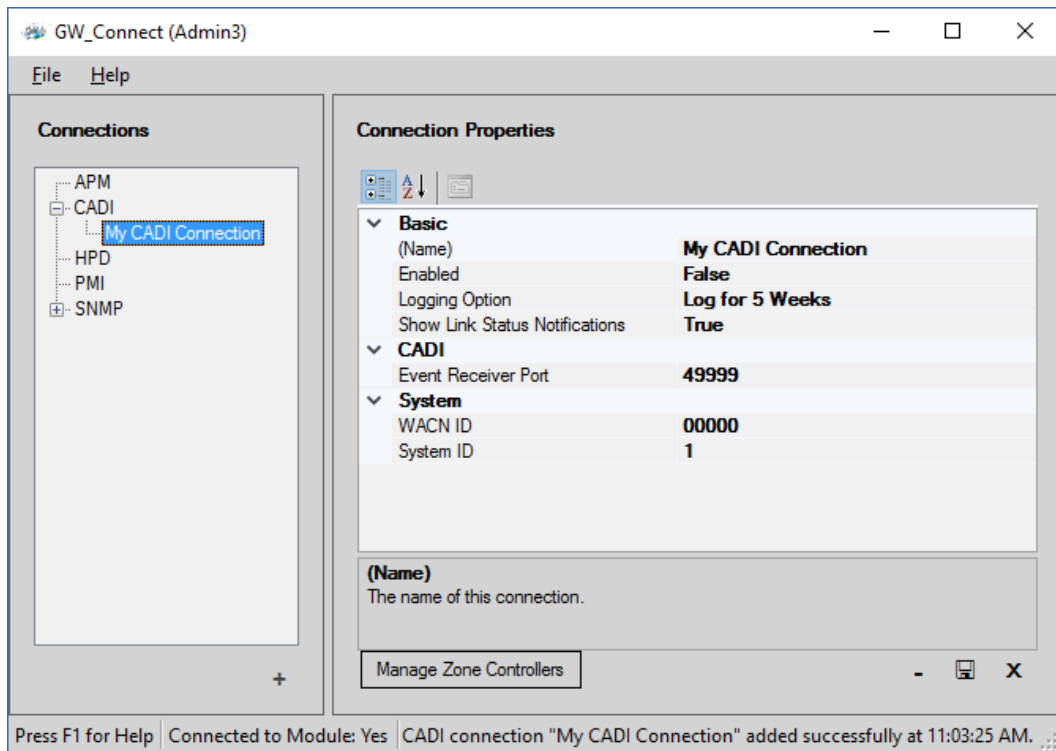
Figure 1.1 – GW_Connect GUI

Connection Status

Each connection shown in the **Connections** list, on the left side of the GW_Connect GUI, represents a connection to a data source. The status of each connection is represented by a radio icon that appears in the Windows system tray (the bottom right of your desktop). The icon has the following statuses:

- ▯ : Connection is encountering an error.
- ▯ : Connection has received packets within the past several seconds. The amount of time varies by connection type.
- ▯ : Connection with a connected client has received packets within the past several seconds. The amount of time varies by connection type.
- ▯ : Connection has not received packets within the past several seconds. The amount of time varies by connection type. (Blinks between red and white background.)
- ▯ : Connection with a connected client has not received packets within the past several seconds. The amount of time varies by connection type. (Blinks between red and white background.)
- ▯ : Connection that manages multiple data sources is receiving data from at least one source, but at least one other source is either not receiving data or has a connectivity issue.

This chapter describes SNMP (Simple Network Management Protocol) and how it is used in GenWatch3.

This chapter contains the following sections:

- **SNMP Values and Traps:** Defines SNMP values and SNMP traps.
- **GET:** Describes the Global Enterprise Tool product and its role in the GenWatch3 SNMP solution.
- **SNMP Connection Overview:** Describes the SNMP connection licensing and SNMP connection properties.
- **Adding an SNMP Connection:** Describes the process of adding an SNMP connection.
- **Updating an SNMP Connection:** Describes the process of updating an SNMP connection.
- **Deleting an SNMP Connection:** Describes the process of deleting an SNMP Connection.

SNMP Values and Traps

SNMP values are values that are exposed by SNMP devices. The SNMP Manager allows you to setup a time-based, recurring query on one or more SNMP values. The SNMP Manager gathers the query results and delivers these SNMP values in a single SNMP message. An example of an SNMP value is a USB hub reporting a value of *Available Ports*.

SNMP traps (also known as SNMP notifications) are SNMP packets that originate from an SNMP device when a threshold or condition is met within the device. SNMP traps may contain one or more SNMP values. SNMP traps may contain SNMP values that are not otherwise exposed.

GET

Global **E**nterprise **T**ool is a software product offered by Genesis that allows you to:

- Setup time-based, recurring queries on SNMP values. The GET SNMP Manager then broadcasts these values in a single SNMP message.
- Allows one or more GET clients (such as the SNMP GW_Connect) to connect and receive SNMP messages and traps.
- SNMP message forwarding to GET clients.
- SNMP trap forwarding to GET clients.

Please refer to the GET documentation for more information on the GET product.

SNMP Connection Overview

SNMP License

The GenWatch3 license determines the number of SNMP connections allowed in GW_Connect. To view the number of SNMP connections in your license:

1. Click the **View License** button on GW_LaunchPad.
2. Expand the **Modules** node.
3. Expand the **GW_Connect** node.
4. Expand the **Restrictions** node.
5. See the **SNMP.Connections** value.

SNMP Connection Properties

The SNMP connection includes the following properties:

- **(Name):** Alias of this connection.
- **Enabled:** Indicates if this connection is enabled.
  - *True*: Connection is enabled.
  - *False*: Connection is not enabled.
- **Raw Data Archive Option:** The GW_Connect module can log all raw data received from a connection. This option determines how long this data is stored. Options include:
  - *Do Not Archive*: Do not log raw data.
  - *Archive for 1 Week*: Keep raw data for one week.
  - *Archive for 2 Weeks*: Keep raw data for two weeks.
  - *Archive for 5 Weeks*: Keep raw data for five weeks.
- **Show Link Status Notifications**: Indicates whether the user will receive GUI notifications when the connection's link status goes up or down.
- **Use GET Database**: Toggles whether to use the database from the GenGET SNMP 2SQL product to provide additional information in the decoded SNMP messages. This information is used to better associate SNMP messages with the relevant radio system infrastructure.
- **Database Server**: The SQL Server that hosts the database used by GenGET SNMP 2SQL. This must include the instance name if it is not the default instance.
- **Database Name**: The name of the database used by GenGET SNMP 2SQL.
- **Filter Pipe Name:** Name of the filter pipe used by GenGET SNMP 2SQL.
- **Source IP Address:** IP address of the machine hosting GenGET SNMP 2SQL.
- **Port:** Port used by GenGET SNMP 2SQL.

Adding an SNMP Connection

To add a new SNMP connection, follow the steps below:

1. Click on the **SNMP** node in the **Connection** list. This will enable the **Add Connection…** button.

2. Click the **Add Connection…** button. This will show the *Connection Properties* with default SNMP properties.
3. Enter the SNMP connection properties and click the **Update** button. This will add the SNMP connection.

Name must be alphanumeric to pass validation.

Updating an SNMP Connection

To update an existing SNMP connection, follow the steps below:
1. Click on the SNMP connection you wish to update: This will show the properties of the selected connection.
2. Change the desired SNMP connection properties and click the **Update** button: This will update the SNMP connection.

Deleting an SNMP Connection

To delete an existing SNMP connection, follow the steps below:
1. Click on the SNMP connection you wish to delete: This will show the properties of the selected connection.
2. Click the **Delete** button: This will delete the selected SNMP connection.

Custom SNMP Values

SNMP values are the result of polling a value exposed via standard SNMP practices (See *SNMP Values and Traps* section above). Each network has a wide variety of SNMP values that can be polled. By default, these polled values are shown in GenWatch3 as SNMP Object Identifiers (OIDs) with a value. GenWatch3 provides a way to assign an alias and a value type to these polled values. To add custom entries to these tables, please contact Genesis Support.

This chapter describes the APM (Advanced Power Management) by RFI and how it is used in GenWatch3.

This chapter contains the following sections:
- **APM Connection Overview:** Describes the APM connection licensing and APM connection properties.
- **Adding an APM Connection:** Describes the process of adding an APM connection.
- **Updating an APM Connection:** Describes the process of updating an APM connection.
- **Deleting an APM Connection:** Describes the process of deleting an APM Connection.
- **APM Channel Overrides:** Describes APM Channel Overrides and the process to configure them.

APM Connection Overview

An APM connection is a connection to a GET APM Reader or 2SQL. The GET APM Reader or 2SQL receives APM UDP Traffic packets from an APM device, archives them (in the case of the GET APM 2SQL) and forwards them on to the APM connection.

APM License

The GenWatch3 license determines the number of APM connections allowed in GW_Connect. To view the number of APM connections in your license:
1. Click the **View License** button on GW_LaunchPad.
2. Expand the **Modules** node.
3. Expand the **GW_Connect** node.
4. Expand the **Restrictions** node.
5. See the **APM.Connections** value.

APM Connection Properties

The APM connection includes the following properties:
- **(Name):** Alias of this connection.
- **Enabled:** Indicates if this connection is enabled.
  - *True*: Connection is enabled.
  - *False*: Connection is not enabled.
- **GET APM Host Name:** IP Address or DNS name of the machine hosting the GET APM 2SQL or Reader.
- **GET APM Pipe Name:** Pipe Name on the machine hosting the GET APM 2SQL or Reader.
- **GET APM Port:** TCP port used to connect to the GET APM 2SQL or Reader.

- **Raw Data Archive Option:** The GW_Connect module can log all raw data received from a connection. This option determines how long this data is stored. Options include:
    - *Do Not Archive*: Do not log raw data.
    - *Archive for 1 Week*: Keep raw data for one week.
    - *Archive for 2 Weeks*: Keep raw data for two weeks.
    - *Archive for 5 Weeks*: Keep raw data for five weeks.
- **Show Link Status Notification**: Indicates if you will receive a GenWatch3 GUI Notification when the link transitions from up to down or down to up.
- **Connection Timeout (sec):** The number of seconds to allow after the last packet is received before considering the connection to be down.
- **WACN ID:** The WACN ID for the channels on this APM.
- **System ID:** The system ID for the channels on this APM.
- **RFSS ID:** The RFSS ID for the channels on this APM.
- **Site ID:** The site ID for the channels on this APM.
- **Subsite ID:** The subsite ID for the channels on this APM.

Adding an APM Connection

To add a new APM connection, follow the steps below:
1. Click on the **APM** node in the **Connection** list: This will enable the **Add Connection…** button.
2. Click the **Add Connection…** button: This will show the *Connection Properties* with default APM properties.
3. Enter the APM connection properties and click the **Update** button: This will add the APM connection.

Name must be alphanumeric to pass validation.

Updating an APM Connection

To update an existing APM connection, follow the steps below:
1. Click on the APM connection you wish to update: This will show the properties of the selected connection.
2. Change the desired APM connection properties and click the **Update** button: This will update the APM connection.

Deleting an APM Connection

To delete an existing APM connection, follow the steps below:
1. Click on the APM connection you wish to delete: This will show the properties of the selected connection.
2. Click the **Delete** button: This will delete the selected APM connection.

Importing APM Connections

To import multiple APM connections from a comma-separated value (CSV) file, follow the steps below:

  Warning: Importing connections will first delete all the existing APM connections before the new connections are added.

1. In a spreadsheet or text-editing application, create a CSV file containing the necessary connection properties. Each row of the CSV will represent a single connection, while each column represents one of the properties of that connection. The allowed properties are detailed in the table below.
2. Click on the APM root node on the **Connections** list.
3. Click on the **Import from CSV file** button.
4. Click on the **Browse** button and select the CSV file. This will parse the file and display a list of the connection properties loaded from the file.
5. If there are any problems with the CSV file, they will be highlighted on the list. Review the marked errors and make any changes needed in the CSV file. Then repeat step 4 to try again.
6. If there are no errors in the file, the **Import** button will flash. Click it to perform the import. GW_Connect will delete all existing APM connections, then add each connection defined in the CSV file.

Name	Corresponding Property	Required	Notes
ConnectionName	Name	Yes	
ConnectionEnabled	Enabled	No	Defaults to true.
RawDataOption	Raw Data Archive Option	No	0 = Do not archive 1 = One week 2 = Three weeks 3 = Five weeks Defaults to 3.
LinkNotifications	Show Link Status Notifications	No	Defaults to true.
WacnId	WACN ID	Yes	
SystemId	System ID	Yes	
ZoneId	RFSS ID	Yes	
SiteId	Site ID	Yes	
SubsiteId	Subsite ID	No	Defaults to 0.
ApmHostName	GET APM Host Name	Yes	
ApmPipeName	GET APM Pipe Name	Yes	
ApmPort	GET APM Port	Yes	

| ApmTimeout	Connection Timeout (sec)	No	Defaults to 30.

Table 3.1 – Import fields

APM Channel Overrides

In some cases, a single APM device is setup to monitor frequencies on multiple sites. The APM Frequency Override feature allows you to assign a WACN, System, RFSS, Site and Subsite to specific frequencies, overriding the WACN, System, RFSS, Site and Subsite selected in the APM Connection Properties.

APM Channel Override options include:

- **Frequency**: The frequency to override.
- **WACN ID**: The WACN ID to report when APM activity is received on this frequency.
- **System ID**: The System ID to report when APM activity is received on this frequency.
- **RFSS ID**: The RFSS ID to report when APM activity is received on this frequency.
- **Site ID**: The Site ID to report when APM activity is received on this frequency.
- **Subsite ID**: The Subsite ID to report when APM activity is received on this frequency.
- **TX RSSI Mode:** Indicates that this frequency is a TX frequency that may be reported at an RX frequency in APM RSSI packets. Checking this option will prevent notifications that APM is reporting activity on frequencies that do not exist in the Alias database.

Adding an APM Frequency Override

1. Click on the **Frequency Override** button (✶)
2. Click on the **Add…** button (+).
3. Enter the APM Channel Override Options.
4. Click the **OK** button.
5. Click the **Save** button (🖫) on the *APM Frequency Override* window.
6. Click the **Save** button (🖫) on the GW_Connect window.

Deleting an APM Frequency Override

1. Click on the **Frequency Override** button (✶)
2. Select (click on) the frequency to delete in the *APM Frequency Overrides* list.
3. Click the **Delete** button (-)
4. Click the **Save** button (🖫) on the *APM Frequency Override* window.
5. Click the **Save** button (🖫) on the GW_Connect window.

Editing an APM Frequency Override

1. Click on the **Frequency Override** button (✖)
2. Select (click on) the frequency to edit in the *APM Frequency Overrides* list.
3. Click the **Edit…** button (✎)
4. Edit the APM Channel Override Options.
5. Click the **Save** button (🖫) on the **APM Frequency Override** window.
6. Click the **Save** button (🖫) on the GW_Connect window.

This chapter describes how GenWatch3 allows connections to GenGET's High Performance Data (HPD) data sources and how they are used in GenWatch3.

This chapter contains the following sections:
- **HPD Connection Overview:** Describes the HPD connection licensing and HPD connection properties.
- **Adding an HPD Connection:** Describes the process of adding an HPD connection.
- **Updating an HPD Connection:** Describes the process of updating an HPD connection.
- **Deleting an HPD Connection:** Describes the process of deleting an HPD Connection.

HPD Connection Overview

HPD License

The GenWatch3 license determines the number of HPD connections allowed in GW_Connect. To view the number of HPD connections in your license:
1. Click the **View License** button on GW_LaunchPad.
2. Expand the **Modules** node.
3. Expand the **GW_Connect** node.
4. Expand the **Restrictions** node.
5. See the **HPD.Connections** value.

HPD Connection Properties

The HPD connection includes the following properties:
- **(Name):** Alias of this connection.
- **Enabled:** Indicates if this connection is enabled.
    - *True*: Connection is enabled.
    - *False*: Connection is not enabled.
- **Raw Data Archive Option:** The GW_Connect module can log all raw data received from a connection. This option determines how long this data is stored. Options include:
    - *Do Not Archive*: Do not log raw data.
    - *Archive for 1 Week*: Keep raw data for one week.
    - *Archive for 2 Weeks*: Keep raw data for two weeks.
    - *Archive for 5 Weeks*: Keep raw data for five weeks.
- **Show Link Status Notification**: Indicates if you will receive a GenWatch3 GUI Notification when the link transitions from up to down or down to up.

- **Pipe Name:** The filter pipe name configured in GenGET.
- **Server:** IP address of the primary GenGET HPD connection.
- **Port:** Port of the primary GenGET HPD connection.

Adding an HPD Connection

To add a new HPD connection, follow the steps below:
1. Click on the **HPD** node in the **Connection** list: This will enable the **Add Connection…** button.
2. Click the **Add Connection…** button: This will show the *Connection Properties* with default HPD properties.
3. Enter the HPD connection properties and click the **Update** button: This will add the HPD connection.

Name must be alphanumeric to pass validation.

Updating an HPD Connection

To update an existing HPD connection, follow the steps below:
1. Click on the HPD connection you wish to update: This will show the properties of the selected connection.
2. Change the desired HPD connection properties and click the **Update** button: This will update the HPD connection.

Deleting an HPD Connection

To delete an existing HPD connection, follow the steps below:
1. Click on the HPD connection you wish to delete: This will show the properties of the selected connection.
2. Click the **Delete** button: This will delete the selected HPD connection.

Chapter 5   CADI Connections

This chapter describes CADI (Computer-Aided Dispatch Interface) and how it is used in GenWatch3.

This chapter contains the following sections:
- **CADI Connection Overview:** Describes the CADI connection licensing and CADI connection properties.
- **Adding a CADI Connection:** Describes the process of adding a CADI connection.
- **Updating a CADI Connection:** Describes the process of updating a CADI connection.
- **Deleting a CADI Connection:** Describes the process of deleting a CADI Connection.
- **Deleting a Zone Controller:** Describes the process of deleting a Zone Controller.

CADI Connection Overview

CADI License

The GenWatch3 license determines the number of CADI connections allowed in GW_Connect. To view the number of CADI connections in your license:
1. Click the **View License** button on GW_LaunchPad.
2. Expand the **Modules** node.
3. Expand the **GW_Connect** node.
4. Expand the **Restrictions** node.
5. See the **CADI.Connections** value.

CADI Connection Properties

The CADI connection includes the following properties:
- **(Name):** Alias of this connection.
- **Enabled:** Indicates if this connection is enabled.
    - *True*: Connection is enabled.
    - *False*: Connection is not enabled.
- **Logging Option:** The GW_Connect module can log all data received from a connection. This option determines how long this data is stored. Options include:
    - *Log for 1 Week*: Keep data for one week.
    - *Log for 2 Weeks*: Keep data for two weeks.
    - *Log for 5 Weeks*: Keep data for five weeks.
- **Show Link Status Notification**: Indicates if you will receive a GenWatch3 GUI Notification when the link transitions from up to down or down to up.

- **Event Receiver Port:** The port the CADI connection provides to the port mapper for negotiating communication between the CADI connection and the CADI host.
- **WACN ID:** The WACN associated with this connection.
- **System ID:** The system associated with this connection.

Manage Zone Controllers

A CADI connection can have multiple zone controllers associated with it. For interzone trunking capable systems, it is only necessary to have a connection to the zone configured to control the talkgroups belonging to your security group.

ℹ️ In a multi-zone system that is not interzone trunking capable, a CADI connection will be needed for each zone controller that you wish to issue commands to.

The properties for these zone controllers are as follows:
- **Zone ID:** The ID of the zone controller.
- **Hostname/IP Address:** The hostname or IP Address of the zone controller.
- **Port:** The port to connect to on the zone controller.
- **Primary/Backup:** Specifies whether the zone controller is the primary or backup core for its zone ID. When a zone has both a primary and backup core, any commands sent by clients targeting that zone will be delivered to the active core.
- **Program Number:** the number that Portmapper uses to identify the CADI on the zone controller.
- **Program Version:** Selection of the RPC version.
- **Username:** Used to authenticate to the zone controller.
- **Password:** Used to authenticate to the zone controller.
- **Encrypted:** Specify if the credentials are encrypted or not.
- **Unit ID Format:** Select the format that the Zone Controller expects for Unit IDs.
  - **Numeric**
  - **7xxxxx**
- **Talkgroup ID Format:** Select the format that the Zone Controller expects for Talkgroup IDs.
  - **Numeric**
  - **8xxxxx**
  - **8xxxxxxx**

ℹ️ Within a CADI connection, each zone ID can have at most one zone controller designated as primary and one as backup. Attempting to add multiple zone controllers with the same **Zone ID** and **Primary/Backup** designation will result in a validation failure.

Adding a CADI Connection

To add a new CADI connection, follow the steps below:

1. Click on the **CADI** node in the **Connection** list: This will enable the **Add Connection…** button.
2. Click the **Add Connection…** button: This will show the *Connection Properties* with default CADI properties.
3. Enter the CADI connection properties.
4. Add Zone Controllers as desired and click the **Save** button on the *Manage Zone Controllers* form.
5. Click the **Update** button on the CADI Connection: This will add the CADI connection and associated zone controller(s).

Name must be alphanumeric to pass validation.

Updating a CADI Connection

To update an existing CADI connection, follow the steps below:

1. Click on the CADI connection you wish to update: This will show the properties of the selected connection.
2. Change the desired CADI connection properties.
3. Edit/Add Zone Controllers as desired and click the **Save** button on the *Manage Zone Controllers* form
4. Click the **Update** button on the CADI Connection: This will update the CADI connection.

Deleting a CADI Connection

To delete an existing CADI connection, follow the steps below:

1. Click on the CADI connection you wish to delete: This will show the properties of the selected connection.
2. Click the **Delete** button: This will delete the selected CADI connection.

Deleting a Zone Controller

To delete an existing Zone Controller associated with a CADI connection, follow the steps below:

1. Click on the CADI connection you wish to delete the Zone Controller(s) from and click on the Manage Zone Controllers button: this will bring up the Manage Zone Controllers form.
2. Select the Zone Controller you wish to remove and click the **Delete** button: This will delete the selected Zone Controller.

This chapter describes the PMI (Provisioning Manager Interface) by Motorola and how it is used in GenWatch3.

This chapter contains the following sections:
- **PMI Connection Overview:** Describes the PMI connection licensing and PMI connection properties.
- **Adding a PMI Connection:** Describes the process of adding a PMI connection.
- **Updating a PMI Connection:** Describes the process of updating a PMI connection.
- **Deleting a PMI Connection:** Describes the process of deleting a PMI Connection.

PMI Connection Overview

What is PMI?

PMI is the interface for the Motorola ASTRO 25. This interface allows application providers to easily add the ability to provision on ASTRO 25 with a single point of entry without risk to the integrity of the process.

If the PMI connection and the Trio module are included in your license, requests to add, update and delete ASTRO PMI resources (such as radios) in Trio are propagated down to the PMI interface. See the Trio manual for more information on its interaction with PMI.

If the PMI connection and the GenIIB module with the PMI feature are included in your license, third parties can use the GenIIB interface to perform Get, GetList, Add, Update and Delete operations on the "provisionable" PMI resources (such as groups, radios, channels, etc.). See the GenIIB manual and its appendices for more information on the GenIIB interface for PMI.

PMI License

The GenWatch3 license determines the number of PMI connections allowed in GW_Connect. To view the number of PMI connections in your license:
1. Click the **View License** button on GW_LaunchPad.
2. Expand the **Modules** node.
3. Expand the **GW_Connect** node.
4. Expand the **Restrictions** node.
5. See the **PMI.Connections** value.

PMI Connection Properties

The PMI connection includes the following properties:

- **(Name):** Alias of this connection.
- **Enabled:** Indicates if this connection is enabled.
  - *True*: Connection is enabled.
  - *False*: Connection is not enabled.
- **Raw Data Archive Option:** The GW_Connect module can log all raw data received from a connection. This option determines how long this data is stored. Options include:
  - *Do Not Archive*: Do not log raw data.
  - *Archive for 1 Week*: Keep raw data for one week.
  - *Archive for 2 Weeks*: Keep raw data for two weeks.
  - *Archive for 5 Weeks*: Keep raw data for five weeks.
- **Show Link Status Notification**: Indicates if you will receive a GenWatch3 GUI Notification when the link transitions from up to down or down to up.
- **PMI Server:** Name of the computer hosting the PMI server.
- **Version:** Version of the PMI server. See *PMI Compatibility* section below for supported versions.
- **Verbose Logging:** Indicates if a detailed log of PMI traffic packets should be logged.
  - *True*: Verbose logging is enabled.
  - *False*: Verbose logging is not enabled.
- **User Name:** User name used to connect with the PMI server.
- **Password:** Password used to connect with the PMI server.
- **WACN ID:** The WACN ID for the resources managed by this PMI connection.
- **System ID:** The System ID for the resources managed by this PMI connection.
- **UNC Password:** Password used during distribution (notifying the PMI server that its database has changed)
- **UNC User Name:** User name used during distribution (notifying the PMI server that its database has changed)

PMI Compatibility

This version of GenWatch3 supports the following versions of PMI:

- 0100
- 0200
- 0300
- 0400
- 0500
- 0510
- 0600
- 0720
- 0730
- 0760
- 0770

❌ The Motorola Hardening Kit is not supported on GenWatch3 hosts for use with PMI versions 0100 and 0200.

Initial Load

Each time the host service is started, or the PMI connection is updated, the PMI module requests a list of resource on the PMI server. The more resources of a given type (such as talkgroups or IVD radios), the more time this initial load requires. Depending on the version of PMI and the PMI server resources, this initial load can take anywhere from 5 minutes to more than an hour.

Adding a PMI Connection

To add a new PMI connection, follow the steps below:

1. Click on the **PMI** node in the **Connection** list: This will enable the **Add Connection…** button.
2. Click the **Add Connection…** button: This will show the *Connection Properties* with default PMI properties.
3. Enter the PMI connection properties and click the **Update** button: This will add the PMI connection.

ℹ️ Name must be alphanumeric to pass validation.

Updating a PMI Connection

To update an existing PMI connection, follow the steps below:

1. Click on the PMI connection you wish to update: This will show the properties of the selected connection.
2. Change the desired PMI connection properties and click the **Update** button: This will update the PMI connection.

Deleting a PMI Connection

To delete an existing PMI connection, follow the steps below:

1. Click on the PMI connection you wish to delete: This will show the properties of the selected connection.
2. Click the **Delete** button: This will delete the selected PMI connection.

This chapter describes how GenWatch3 allows connections to a Motorola UCS server and how they are used in GenWatch3.

This chapter contains the following sections:
- **UCS Connection Overview:** Describes the UCS connection licensing and UCS connection properties.
- **Adding an UCS Connection:** Describes the process of adding a UCS connection.
- **Updating an UCS Connection:** Describes the process of updating a UCS connection.
- **Deleting an UCS Connection:** Describes the process of deleting a UCS Connection.

UCS Connection Overview

UCS License

The GenWatch3 license determines the number of UCS connections allowed in GW_Connect. To view the number of UCS connections in your license:
1. Click the **View License** button on GW_LaunchPad.
2. Expand the **Modules** node.
3. Expand the **GW_Connect** node.
4. Expand the **Restrictions** node.
5. See the **UCS.Connections** value.

UCS Connection Properties

The UCS connection includes the following properties:
- **(Name):** Alias of this connection.
- **Enabled:** Indicates if this connection is enabled.
    - *True*: Connection is enabled.
    - *False*: Connection is not enabled.
- **Raw Data Archive Option:** The GW_Connect module can log all raw data received from a connection. This option determines how long this data is stored. Options include:
    - *Do Not Archive*: Do not log raw data.
    - *Archive for 1 Week*: Keep raw data for one week.
    - *Archive for 2 Weeks*: Keep raw data for two weeks.
    - *Archive for 5 Weeks*: Keep raw data for five weeks.
- **Show Link Status Notification**: Indicates if you will receive a GenWatch3 GUI Notification when the link transitions from up to down or down to up.
- **Password:** Password used to connect to the UCS server.
- **UCS Host Name:** The hostname of the UCS server.

- **UCS Port:** Port to be used for the UCS server.
- **User Name:** User name used to connect to the UCS server.
- **WACN ID:** The WACN ID for the resources managed by this UCS connection.
- **System ID:** The System ID for the resources managed by this UCS connection.

Adding a UCS Connection

To add a new UCS connection, follow the steps below:
1. Click on the **UCS** node in the **Connection** list: This will enable the **Add Connection…** button.
2. Click the **Add Connection…** button: This will show the *Connection Properties* with default UCS properties.
3. Enter the UCS connection properties and click the **Update** button: This will add the UCS connection.

Name must be alphanumeric to pass validation.

Updating a UCS Connection

To update an existing UCS connection, follow the steps below:
1. Click on the UCS connection you wish to update: This will show the properties of the selected connection.
2. Change the desired UCS connection properties and click the **Update** button: This will update the UCS connection.

Deleting a UCS Connection

To delete an existing UCS connection, follow the steps below:
1. Click on the UCS connection you wish to delete: This will show the properties of the selected connection.
2. Click the **Delete** button: This will delete the selected UCS connection.

This chapter describes how GenWatch3 allows connections to a Motorola IMW server and how they are used in GenWatch3.

This chapter contains the following sections:
- **IMW Connection Overview:** Describes the IMW connection licensing and IMW connection properties.
- **Adding an IMW Connection:** Describes the process of adding an IMW connection.
- **Updating an IMW Connection:** Describes the process of updating an IMW connection.
- **Deleting an IMW Connection:** Describes the process of deleting an IMW Connection.

IMW Connection Overview

IMW License

The GenWatch3 license determines the number of IMW connections allowed in GW_Connect. To view the number of IMW connections in your license:
1. Click the **View License** button on GW_LaunchPad.
2. Expand the **Modules** node.
3. Expand the **GW_Connect** node.
4. Expand the **Restrictions** node.
5. See the **IMW.Connections** value.

IMW Connection Properties

The IMW connection includes the following properties:
- **(Name):** Alias of this connection.
- **Enabled:** Indicates if this connection is enabled.
    - *True*: Connection is enabled.
    - *False*: Connection is not enabled.
- **Location Processor:** Specifies where location data is processed.
    - *IMW Connection:* This connection processes all data from an IMW.
    - *IMW Connection and Legacy MUPS Clients:* This connection processes all data from an IMW and also forwards location data to the GW_Location module for backward compatibility with MUPS clients.
- **Raw Data Archive Option:** The GW_Connect module can log all raw data received from a connection. This option determines how long this data is stored. Options include:
    - *Do Not Archive*: Do not log raw data.
    - *Archive for 1 Week*: Keep raw data for one week.

- o *Archive for 2 Weeks*: Keep raw data for two weeks.
- o *Archive for 5 Weeks*: Keep raw data for five weeks.
- **Show Link Status Notification**: Indicates if you will receive a GenWatch3 GUI Notification when the link transitions from up to down or down to up.
- **Update Aliases**: Indicates whether the GW_Alias module should update aliases for IDs, Talkgroups, and Sites with aliases received in presence events from the IMW server. Enable only if it is known that the aliases received from the IMW match the aliases received from any ATIA connection(s) configured for the same system.
- **Location Command Processor**: Specifies where location commands are processed for this system.
    - o *IMW Connection:* This connection will process IMW Location commands such as an IMW Immediate Location Request.
    - o *ASTRO® 25 OLS Connection:* This connection will not process IMW Location commands. To send location commands to this system, an ASTRO® 25 OLS connection must be enabled and configured in the GW_Location module. At that point, commands such as a GPS Immediate Location Request can be sent.
- **Client Port:** Port to be used for the Legacy Connection. The GW_Location module will connect on this port.
- **Legacy Client Application ID:** Application ID used by the Legacy Connection.
- **Legacy Client Unit of Measure:** The Unit of Measure to be used when translating IMW location data into the format for the Legacy Connection.
- **All Devices Group:** Name of the Group configured on the IMW server which has access to all devices.
- **Include Presence Events:** Toggles whether to subscribe to presence events from the IMW server.
- **Enable Location Set/Stop Reporting:** Indicates whether the IMW server is capable of processing Location Set/Stop Reporting commands. In general, the IMW server must be on version 5.2.2 to be capable of these commands. If the IMW server is an earlier version and this option is enabled, this connection will not be able to successfully connect.
- **Identity Server Settings:** The settings for the identity server.
    - o **Client ID:** Client ID issued for this IMW deployment.
    - o **Client Secret:** Client secret issued for this IMW deployment.
    - o **Identity Server Port:** Port used by the identity server.

- o **Primary Identity Server Host Name:** The hostname of the primary identity server.
- o **Secondary Identity Server Host Name:** The hostname of the secondary identity server in a DSR.
- **IMW Server Settings:** The settings for the IMW server on the network.
  - o **Agency Domain:** Domain name of the agency.
  - o **Primary IMW Hostname:** Hostname of the primary IMW server on the network.
  - o **Secondary IMW Hostname:** Hostname of the secondary IMW server on the network in a DSR.
  - o **Use SSL:** Indicates whether SSL should be used when connecting to the IMW.
  - o **REST Location API Port:** Port used by the REST Location API on the IMW.
  - o **REST Presence API Port:** Port used by the REST Presence API on the IMW.
  - o **WebSocket Location API Port:** Port used by the WebSocket Location API on the IMW.
  - o **WebSocket Presence API Port:** Port used by the WebSocket Presence API on the IMW.
- **WACN ID:** The WACN ID for the resources managed by this IMW connection.
- **System ID:** The System ID for the resources managed by this IMW connection.

Adding an IMW Connection

To add a new IMW connection, follow the steps below:
1. Click on the **IMW** node in the **Connection** list: This will enable the **Add Connection…** button.
2. Click the **Add Connection…** button: This will show the *Connection Properties* with default IMW properties.
3. Enter the IMW connection properties and click the **Update** button: This will add the IMW connection.

Name must be alphanumeric to pass validation.

Updating an IMW Connection

To update an existing IMW connection, follow the steps below:
1. Click on the IMW connection you wish to update: This will show the properties of the selected connection.
2. Change the desired IMW connection properties and click the **Update** button: This will update the IMW connection.

Deleting an IMW Connection

To delete an existing IMW connection, follow the steps below:

1. Click on the IMW connection you wish to delete: This will show the properties of the selected connection.
2. Click the **Delete** button: This will delete the selected IMW connection.

Legacy MUPS Client Connections

To provide backward compatibility with MUPS clients that do not support IMW, the IMW Connection can serve as an intermediary between a GW_Location module connection and the IMW. This will translate the location data provided by the IMW into the LRRP format and distribute that data to the clients.

To create a legacy location connection as an intermediary with the IMW, first follow the steps in the *Adding an IMW Connection* section above. The **Location Processor** should be set to *IMW Connection and Legacy MUPS Clients*. Next, you will need to create a connection in the GW_Location module that will connect to the legacy client side of the IMW connection. See the GW_Location module book for more information about creating a GW_Location connection.

In the GW_Location connection:

- The **MUPS Server** should be set to the string *localhost*. Any other value could result in problems related to DNS resolution.
- The **MUPS TCP/IP Port** must match the **Client Port** setting in your IMW connection.
- The **Application Id** must match the **Legacy Client Application ID** in your IMW connection.
- The IMW connection supports only the following commands. Therefore, any **Authorized Clients** created in the GW_Location connection should enable only the supported commands.
  - **Immediate Location Request**
  - **Triggered Location Request**
  - **Triggered Location Stop Request**
- The **Unit of Measure** must match the **Legacy Client Unit of Measure** setting in your IMW connection.
  - IMW data uses metric units, such as speed values being in meters per second. But GW_Location expects LRRP speeds to be either miles-per-hour or kilometers-per-hour. Matching this setting ensures the values are translated and processed correctly by both ends.

In IMW, direction/bearing values can be fractional degrees. The LRRP format expects only whole degrees. The IMW connection will truncate the fractional portion of IMW direction values when converting to the LRRP format.

This chapter describes how GenWatch3 allows connections to a Simple Mail Transfer Protocol (SMTP) server and how they are used in GenWatch3.

This chapter contains the following sections:
- **SMTP Connection Overview:** Describes the SMTP connection licensing, SMTP connection properties, and SMTP connection usage.
- **Adding an SMTP Connection:** Describes the process of adding an SMTP connection.
- **Updating an SMTP Connection:** Describes the process of updating an SMTP connection.
- **Deleting an SMTP Connection:** Describes the process of deleting an SMTP Connection.

SMTP Connection Overview

SMTP License

The GenWatch3 license determines the number of SMTP connections allowed in GW_Connect. To view the number of SMTP connections in your license:
1. Click the **View License** button on GW_LaunchPad.
2. Expand the **Modules** node.
3. Expand the **GW_Connect** node.
4. Expand the **Restrictions** node.
5. See the **Smtp.Connections** value.

SMTP Connection Properties

The SMTP connection includes the following properties:
- **(Name):** Alias of this connection.
- **Enabled:** Indicates if this connection is enabled.
  - *True*: Connection is enabled.
  - *False*: Connection is not enabled.
- **Host:** The host name or IP address of the SMTP server.
- **Port:** The port number on which the SMTP server is listening.
- **Use SSL:** Indicates whether SSL should be used when connecting to the SMTP server.
- **Sender Address:** The email address from which emails will be sent. This must be unique across all SMTP connections. Email addresses with special international characters (UTF-8) are not supported.
- **Sender Name:** The name of the sender from which emails will be sent.
- **User:** The username to use to authenticate with the SMTP server.
- **Password:** The password to use to authenticate with the SMTP server.
- **Verbose Logging:** Indicates whether all communication with the SMTP server should be logged.

SMTP Connection Usage

SMTP connections are used to send notifications in GW_Trigger and to send reports from GW_Trio.

Adding an SMTP Connection

To add a new SMTP connection, follow the steps below:

1. Click on the **SMTP** node in the **Connection** list. This will enable the **Add Connection…** button.
2. Click the **Add Connection…** button. This will show the *Connection Properties* with default SMTP properties.
3. Enter the SMTP connection properties and click the **Update** button. This will add the SMTP connection.

Name must be alphanumeric to pass validation.

Sender Address must be unique across all SMTP connections to pass validation.

Email addresses with special international characters (UTF-8) are not supported.

Updating an SMTP Connection

To update an existing SMTP connection, follow the steps below:

1. Click on the SMTP connection you wish to update. This will show the properties of the selected connection.
2. Change the desired SMTP connection properties and click the **Update** button. This will update the SMTP connection.

Deleting an SMTP Connection

To delete an existing SMTP connection, follow the steps below:

1. Click on the SMTP connection you wish to delete. This will show the properties of the selected connection.
2. Click the **Delete** button. This will delete the selected SMTP connection.

This chapter describes how GenWatch3 allows connections to a Terrafix server and how they are used in GenWatch3.

This chapter contains the following sections:
- **Terrafix Connection Overview:** Describes the Terrafix connection licensing and Terrafix connection properties.
- **Adding a Terrafix Connection:** Describes the process of adding a Terrafix connection.
- **Updating a Terrafix Connection:** Describes the process of updating a Terrafix connection.
- **Deleting a Terrafix Connection:** Describes the process of deleting a Terrafix Connection.

Terrafix Connection Overview

Terrafix License

The GenWatch3 license determines the number of Terrafix connections allowed in GW_Connect. To view the number of Terrafix connections in your license:
6. Click the **View License** button on GW_LaunchPad.
7. Expand the **Modules** node.
8. Expand the **GW_Connect** node.
9. Expand the **Restrictions** node.
10. See the **Terrafix.Connections** value.

Terrafix Connection Properties

The Terrafix connection includes the following properties:
- **(Name):** Alias of this connection.
- **Enabled:** Indicates if this connection is enabled.
  - *True*: Connection is enabled.
  - *False*: Connection is not enabled.
- **Raw Data Archive Option:** The GW_Connect module can log all raw data received from a connection. This option determines how long this data is stored. Options include:
  - *Do Not Archive*: Do not log raw data.
  - *Archive for 1 Week*: Keep raw data for one week.
  - *Archive for 2 Weeks*: Keep raw data for two weeks.
  - *Archive for 5 Weeks*: Keep raw data for five weeks.
- **Show Link Status Notification**: Indicates if you will receive a GenWatch3 GUI Notification when the link transitions from up to down or down to up.
- **Terrafix Server:** The host name or IP address of the Terrafix server.

- **Connect TCP Port:** The port number on which a connection to the Terrafix server is established.
- **Receive TCP Port:** The port number on which the Terrafix server is sending data.
- **WACN ID:** The WACN ID for the resources managed by this IMW connection.
- **System ID:** The System ID for the resources managed by this IMW connection.

Adding a Terrafix Connection

To add a new Terrafix connection, follow the steps below:
4. Click on the **Terrafix** node in the **Connection** list. This will enable the **Add Connection…** button.
5. Click the **Add Connection…** button. This will show the *Connection Properties* with default Terrafix properties.
6. Enter the Terrafix connection properties and click the **Update** button. This will add the Terrafix connection.

Name must be alphanumeric to pass validation.

Updating a Terrafix Connection

To update an existing Terrafix connection, follow the steps below:
3. Click on the Terrafix connection you wish to update. This will show the properties of the selected connection.
4. Change the desired Terrafix connection properties and click the **Update** button. This will update the Terrafix connection.

Deleting a Terrafix Connection

To delete an existing Terrafix connection, follow the steps below:
3. Click on the Terrafix connection you wish to delete. This will show the properties of the selected connection.
4. Click the **Delete** button. This will delete the selected Terrafix connection.

Information on Raw Data Files

GenWatch3 stores raw data files on your GenWatch3 computer. Genesis and Motorola support personnel use these files to help diagnose control channel decode issues you may have with GenWatch3.

By default, GenWatch3 will keep five weeks (approximately 2 GB) worth of raw data files. You may wish to conserve hard drive space by choosing to only keep one week's worth of raw data files. We suggest you keep the full five weeks, just in case it takes you awhile to notice a control channel decode issue.

These raw data files are stored in the following directory:
ProgramData\Genesis\GenWatch3\RawData\<Connection Type>

Depending on the connection type, one or more additional subfolders may be used to partition the raw data by the system hierarchy. Folders after the *<Connection Type>* folder will follow this order: *<WACN ID>\<System ID>\<RFSS ID>\<Site ID>\<Subsite ID>*.

For example, in the default GenWatch3 installation directory, if the WACN ID is BEE00, the System ID is 1404, the RFSS ID is 1 and the Site ID is 10, the GenWatch3 raw data directory is:
> *C:\ProgramData\Genesis\GenWatch3\RawData\<Connection Type>\BEE00\1404\1\10*

The files in this directory are in the following format:
> *GW3_<year><month><day>_<hour>.RAW*

The raw data file for the 3:00 p.m. hour on 3/24/2023 would be:
> *GW3_20230324_15.RAW*

ⓘ In the above directory paths, *<Connection Type>* should be replaced with the name of the connection type (e.g., *SNMP*.)

Changing the Raw Data File Directory

Changing the GenWatch3 raw data directory is usually not recommended. However, if the default location might not have enough disk space to store the raw data, you may wish to move this archive operation to another drive. For instructions on how to change the raw data file directory, see the *GenWatch3 Config Files* section of *Chapter 3 – GenWatch3 Service* in the *GenWatch3 Core Manual*.

Warning: Make sure you only change the RawDataFilePath setting. Changing other GenWatch3.config settings can cause your computer to become unstable or even unusable. When in doubt, ask for assistance from your IT department or Genesis support.