ALTUSEN™
Enterprise KVM Solutions by ATEN

GN0116 Guardian Monitor Center
User Manual

www.aten.com

User Information

Online Registration

Be sure to register your product at our online support center:

International	http://support.aten.com
North America	http://www.aten-usa.com/product_registration

Telephone Support

For telephone support, call this number:

International		886-2-8692-6959
North America	ATEN TECH	1-888-999-ATEN
	ATEN NJ	1-732-356-1703

User Notice

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The manufacturer of this system is not responsible for any radio and/or TV interference caused by unauthorized modifications to this device. It is the responsibility of the user to correct such interference.

The manufacturer is not responsible for any damage incurred in the operation of this system if the correct operational voltage setting was not selected prior to operation. PLEASE VERIFY THAT THE VOLTAGE SETTING IS CORRECT BEFORE USE.

***** Features may have been added to the GN0116 since this manual was printed. Please visit our website to download the most up to date version of the manual.

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About This Manual

This user manual is provided to help you get the most from your GN0116 Guardian Monitor Center system. It covers all aspects of installation, configuration and operation. An overview of the information found in the manual is provided below.

Overview

Chapter 1, Introduction, introduces you to the GN0116 Guardian Monitor Center System and its purpose, features and benefits are presented.

Chapter 2, Software Installation, provides step-by-step instructions for installing the GN0116 Guardian Monitor Center software.

Chapter 3, Browser Operation, describes how to log into the GN0116 Guardian Monitor Center with a browser, and explains the functions of the icons and buttons that appear on the opening page.

Chapter 4, Port Access, explains how to manage GN0116 devices at the port level.

Chapter 5, User Management, explains how to manage user accounts and user types.

Chapter 6, Device Management, describes how to add and delete GN0116 devices to the Guardian Monitor Center, as well as configuring port settings, performing logic related functions, and setting alarm notifications on GN0116 device ports.

Chapter 7, System Management, describes how to manage the GN0116 Guardian Monitor Center system settings like HTTP and HTTPS service ports, and SMTP settings, in addition to configuring system security settings including: login policy, IP filter policy, login string, and user account policy.

Chapter 8, Logs, describes how to view, search, filter and export the GN0116 Guardian Monitor Center logs.

An Appendix, at the end of the manual provides technical support and warranty information.

Conventions

This manual uses the following conventions:

`Monospaced`	Indicates text that you should key in.
[ ]	Indicates keys you should press. For example, [Enter] means to press the **Enter** key. If keys need to be chorded, they appear together in the same bracket with a plus sign between them: [Ctrl+Alt].
1.	Numbered lists represent procedures with sequential steps.
♦	Bullet lists provide information, but do not involve sequential steps.
→	Indicates selecting the option (on a menu or dialog box, for example), that comes next. For example, Start → Run means to open the *Start* menu, and then select *Run*.
	Indicates critical information.

Product Information

For information about all ALTUSEN products and how they can help you connect without limits, visit ALTUSEN on the Web or contact an ALTUSEN Authorized Reseller. Visit ALTUSEN on the Web for a list of locations and telephone numbers:

International		http://www.aten.com
North America	ATEN TECH	http://www.aten-usa.com
	ATEN NJ	http://www.aten.com

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S/W Version: V1.0.085
Manual Date: 2009-04-01

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Chapter 1
Introduction

Overview

The GN0116 Guardian Monitor Center is a software solution that offers remote environment monitoring and management of your critical computer systems over TCP/IP. Users can control the environment of their systems from any computer connected to the internet, whether down the hall, down the block, or half way around the world.

Any number of GN0116 units on the same domain can be controlled from the GN0116 Guardian Monitor Center, providing remote environment management to large enterprise centers. Installation is fast and easy; simply install the GN0116 Guardian Monitor Center software suite onto a server connected to your network.

Since the GN0116 Guardian Monitor Center software is upgradeable, you can stay current with the latest functionality improvements simply by downloading software updates from our website as they become available.

With its advanced features and ease of operation, the GN0116 Guardian Monitor Center is the most convenient, efficient, reliable, and cost effective way for administrators to monitor and manage their server environment.

Features

- Remote environment control for outlets via TCP/IP
- Individual control of each port – users can set the environment settings (Temperature, humidity, voltage and current) to allow equipment to be monitored for irregularity.
- Browser controlled configuration/management of GN0116 devices
- Administrator controlled multi-user login: users can have multiple concurrent logins to the Guardian Monitor Center
- Multi-level security – different user types have different roles: System Administrator, Device Administrator, User, Auditor and None. User defined types can be designed for specific roles
- Firmware upgradeable

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Chapter 2
Software Installation

Overview

This chapter details the procedures for installing the GN0116 Guardian Monitor Center software suite.

Requirements

- Hardware Requirements
  - CPU – Pentium 4, 2.60 GHz or higher
  - Memory – At least 512MB (1GB or more recommended)
  - Hard drive – 500MB minimum; additional disk space is required for the log file
  - Ethernet – At least 1 Ethernet adapter (100Mbps or higher)
- Operating System Requirements
  - Windows – 2000, XP, 2000 Server, Server 2003 or Windows Vista with Java Runtime Environment (JRE) Ver. 1.5 or higher

Software Installed

During the installation process, the following software is installed on the server.

- Microsoft .NET Framework 2.0
- Apache HTTP Server 2.0.54
- Apache mod_aspdotnet for Apache httpd Web Server
- MySQL Server 5.0
- MySQL Connector/Net 5.0.8.1
- MySQL Connector/ODBC 3.51

Note: If any of the above software is already installed on the server, the installation procedure for the applicable software will automatically be skipped during the GN0116 Guardian Monitor Center installation.

Installing the Software

Before You Begin

Before running the installation program make sure of that the Java JRE (version 1.5 or higher) has been installed on your system. If not, you need to download and install it. You can get the latest version from the Java web site.

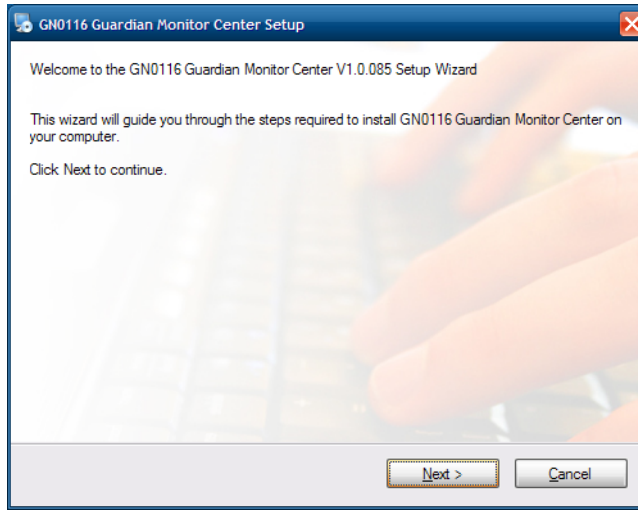
```
http://java.com
```

After the JRE has been installed on your system, you are ready to install the GN0116 Guardian Monitor Center program suite.

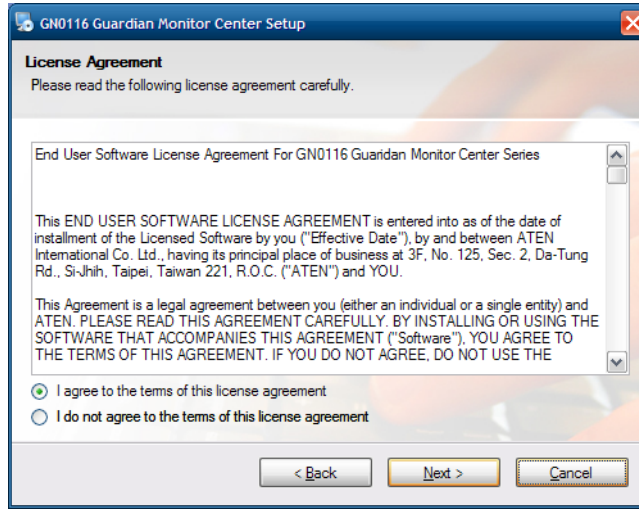
Starting the Installation

To install the GN0116 Guardian Monitor Center program suite, do the following.

1. Copy *GN0116_Monitor_Center.exe* from the software CD that came with your package to a convenient location on your server.
2. Go to the folder where *GN0116_Monitor_Center.exe* is located, and execute it. The GN0116 Guardian Monitor Center *Welcome* screen appears.

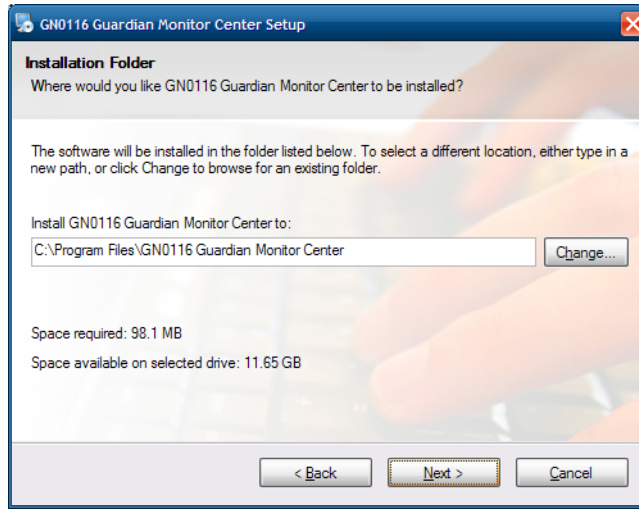


3. The *End-User License Agreement* dialog box appears.



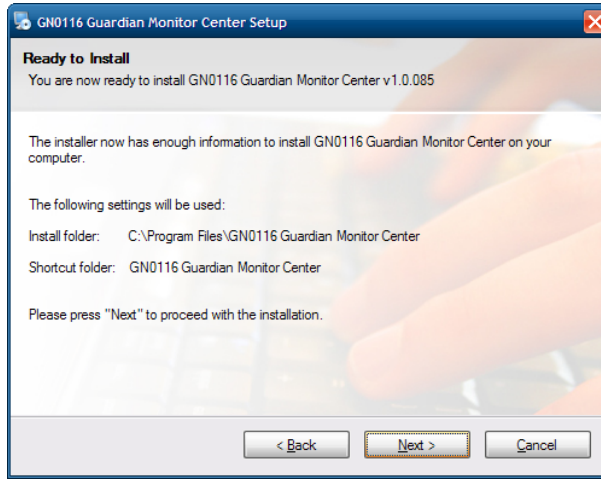
Read the contents, select *I agree...*, then click **Next** to continue.

4. The *Installation Folder* dialog box appears.



You have the option of specifying the GN0116 Guardian Monitor Center installation folder. If you don't want to use the default entry, click **Change...** to browse to another location, then click **Next** to continue.

5. The *Ready to Install* dialog box appears



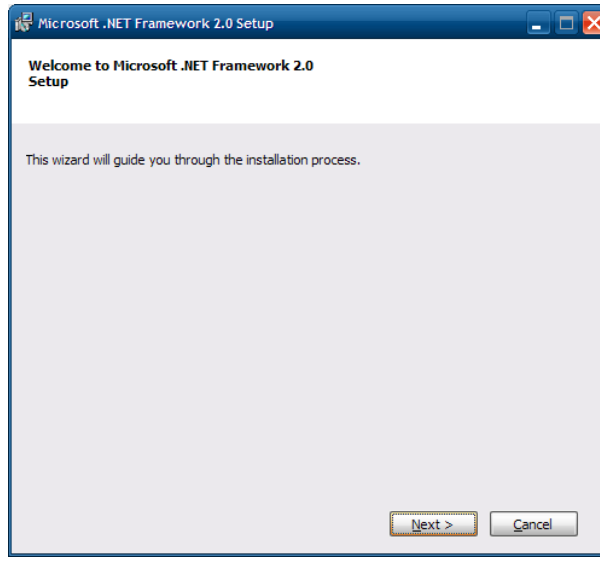
Click **Next** to continue.

6. After the preinstallation sequence has completed, the installer *Welcome* dialog box appears.

Click **Next** to continue.

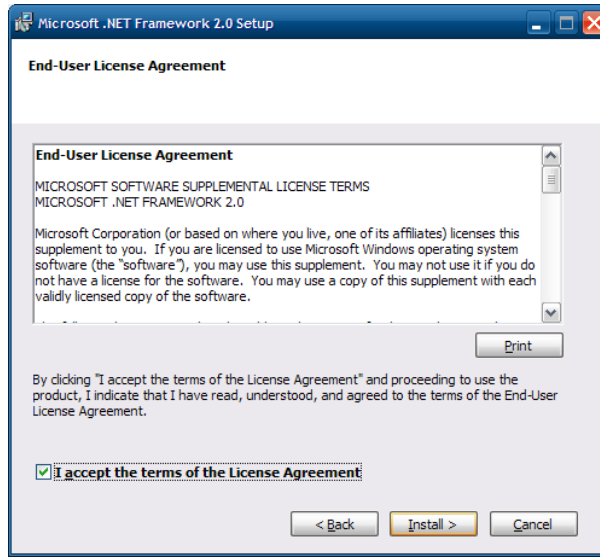
Microsoft .NET Framework 2.0

1. The *Microsoft .NET Framework 2.0 Welcome* dialog box appears.



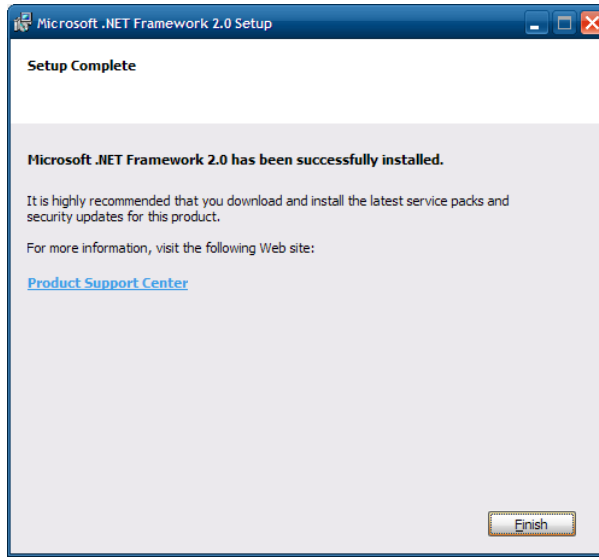
   Click **Next** to continue.

2. The *End-User License Agreement* dialog box appears.



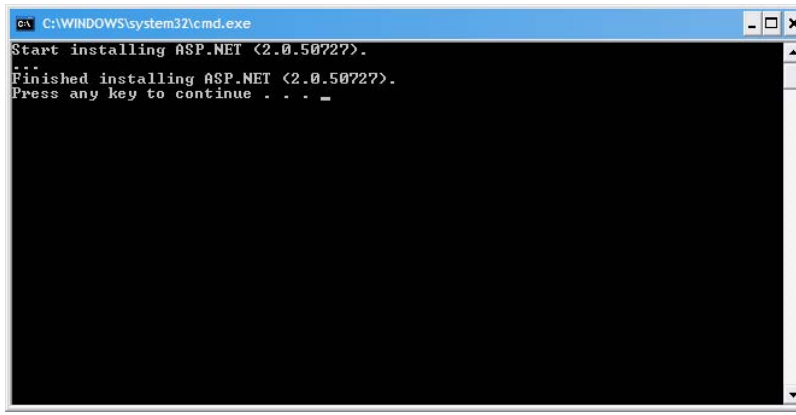
   Read the contents, select *I accept...*, then click **Install** to continue.

3. After the software installation has completed, the *Setup Complete* dialog box appears.



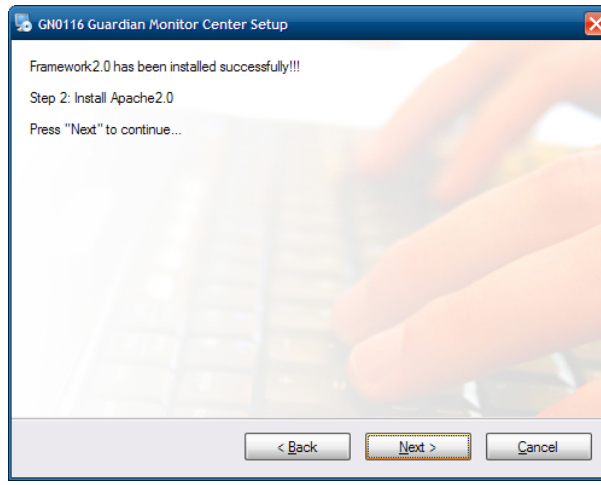
Click **Finish** to continue.

4. A command window appears after *ASP.NET* has finished installing.



Press any keyboard key to continue.

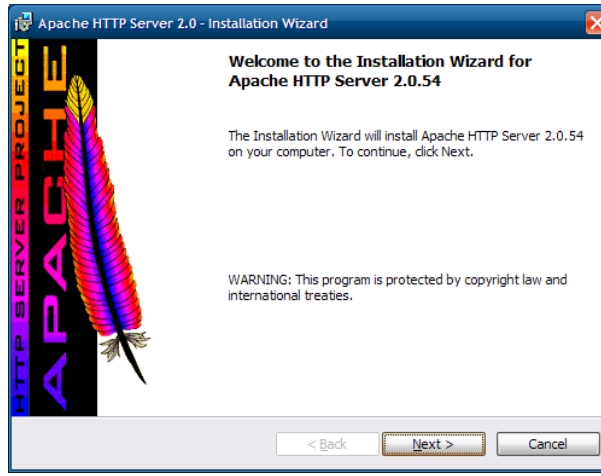
5. The installation status dialog box appears.



Click **Next** to continue.

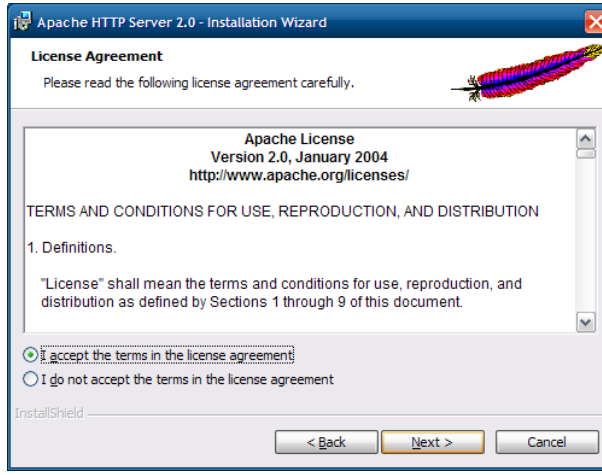
Apache HTTP Server 2.0.54

1. The *Apache HTTP Server 2.0.54 Welcome* dialog box appears.



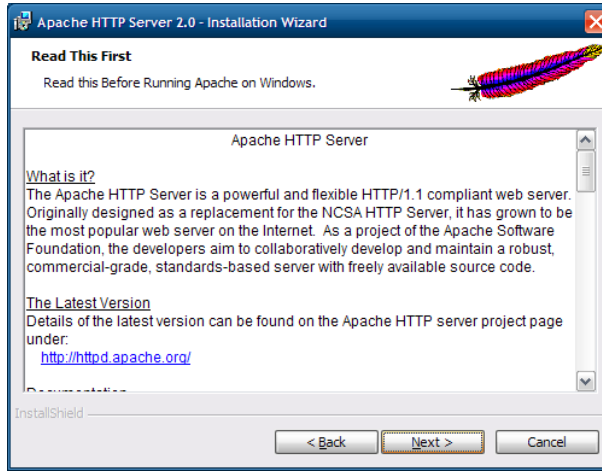
Click **Next** to continue.

2. The *License Agreement* dialog box appears.



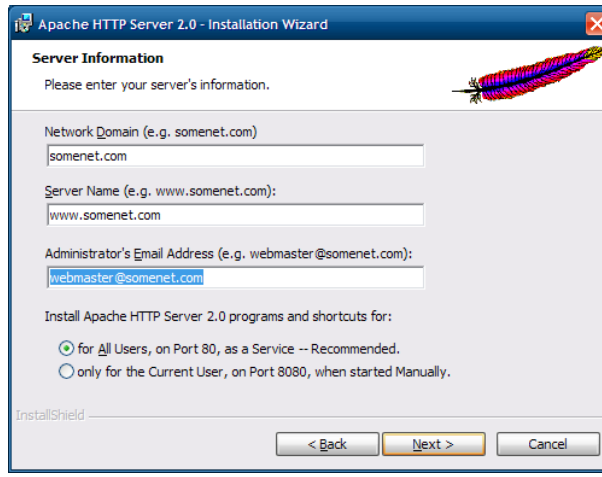
Read the License Agreement, select *I accept...*, then click **Next** to continue.

3. The *Read This First* dialog box appears.



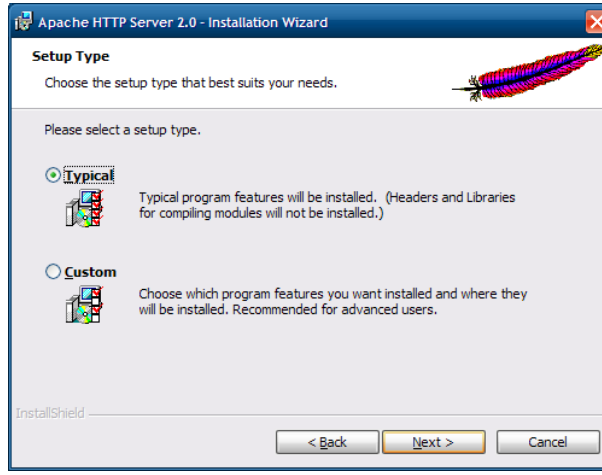
Read the contents, then click **Next** to continue.

4. The *Server Information* dialog box appears.



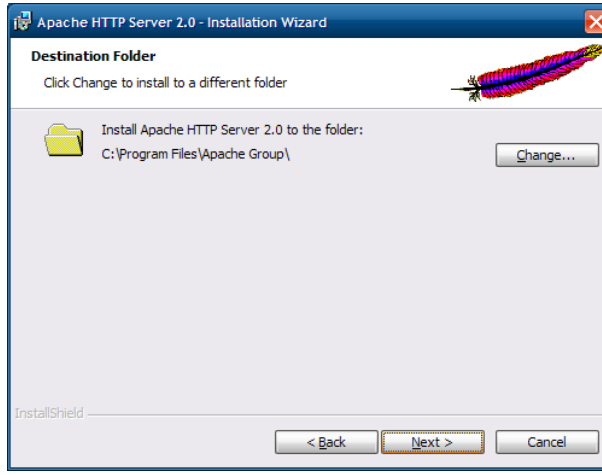
Select *for All Users...*, then click **Next** to continue.

5. The *Setup Type* dialog box appears.



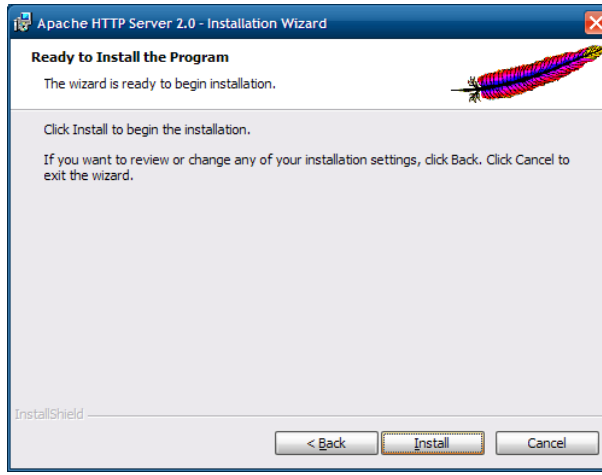
Select *Typical*, then click **Next** to continue.

6. The *Destination Folder* dialog box appears.



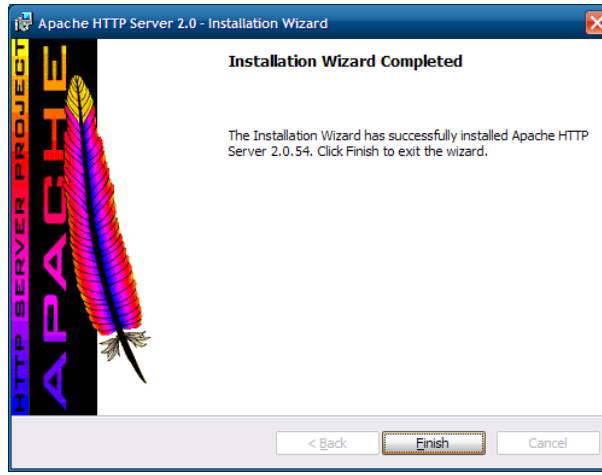
If you don't want to use the default folder, click **Change...** to browse to another location, or click **Next** to continue.

7. The *Ready to Install the Program* dialog box appears.



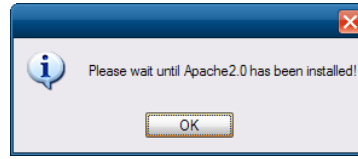
Click **Install** to continue.

8. After the software installation has completed, the *Installation Wizard Completed* dialog box appears.



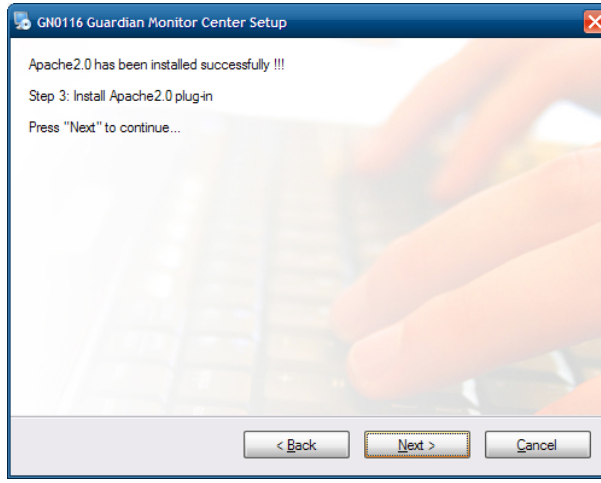
   Click **Finish** to continue.

9. The following message box appears.



   Click **OK** to continue.

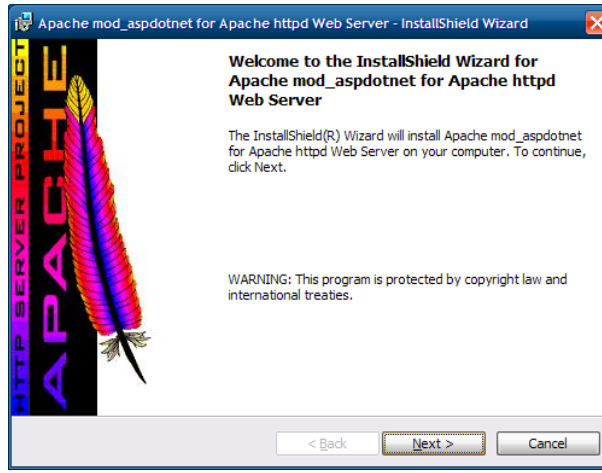
10. The installation status dialog box appears.



Click **Next** to continue.

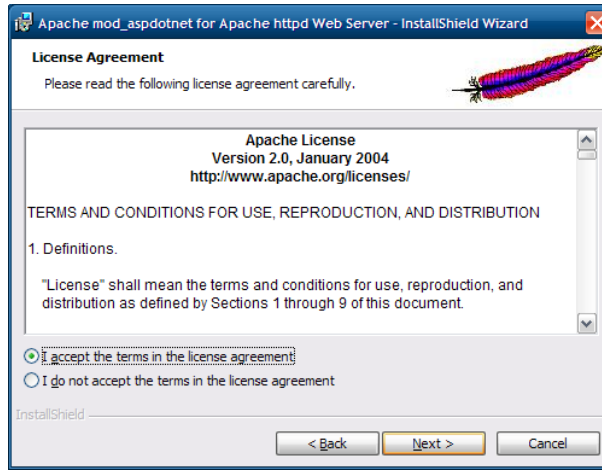
Apache mod_aspdotnet for Apache httpd Web Server

1. The *Apache mod_aspdotnet for Apache httpd Web Server Welcome* dialog box appears.



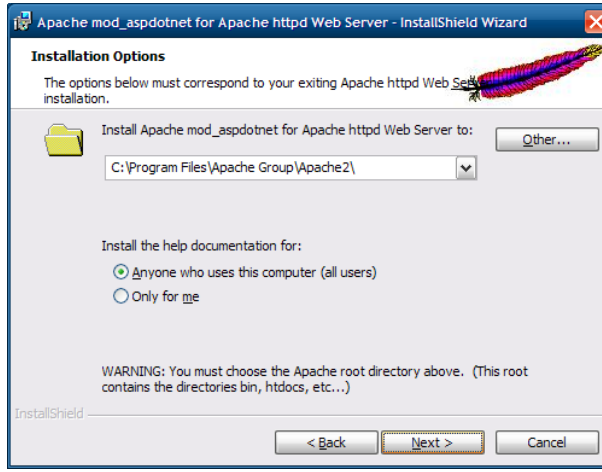
   Click **Next** to continue.

2. The *License Agreement* dialog box appears.



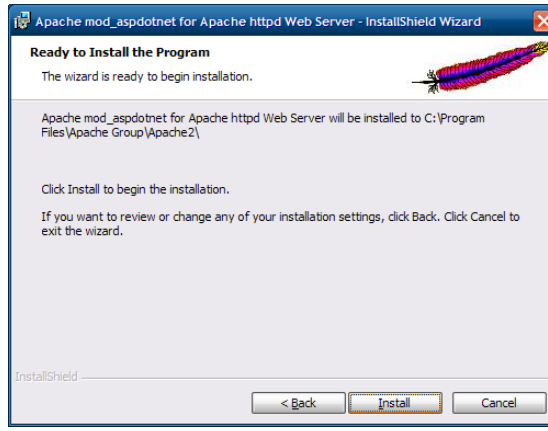
   Read the License Agreement, select *I accept...*, then click **Next** to continue.

3. The *Installation Options* dialog box appears.



Leave the default settings as they are and click **Next** to continue.

4. The *Ready to Install the Program* dialog box appears.

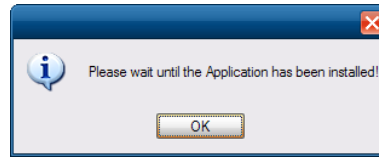


Click **Install** to continue.

5. After the software installation has completed, the *InstallShield Wizard Completed* dialog box appears.

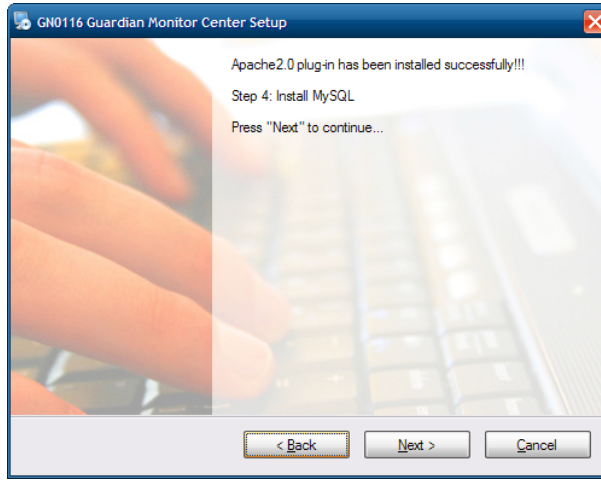
   Click **Finish** to continue.

6. The following message box appears.



   Click **OK** to continue.

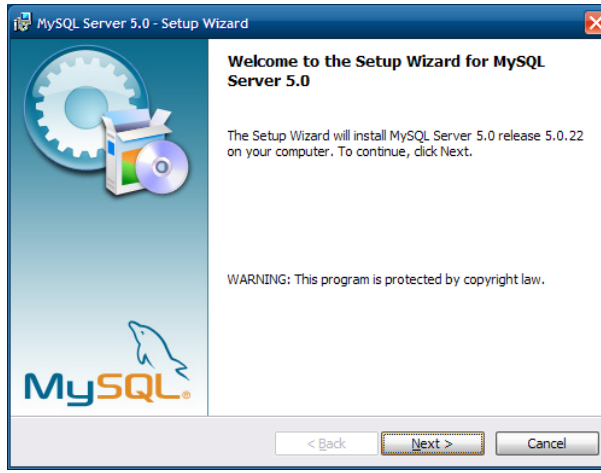
7. The installation status dialog box appears.



Click **Next** to continue.

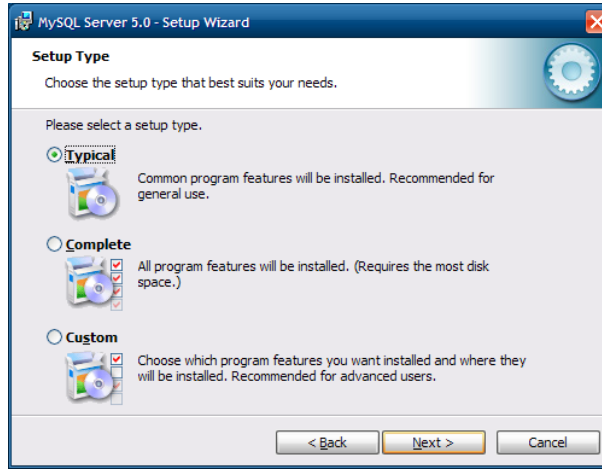
MySQL Server 5.0

1. The *MySQL Server 5.0 Welcome* dialog box appears.



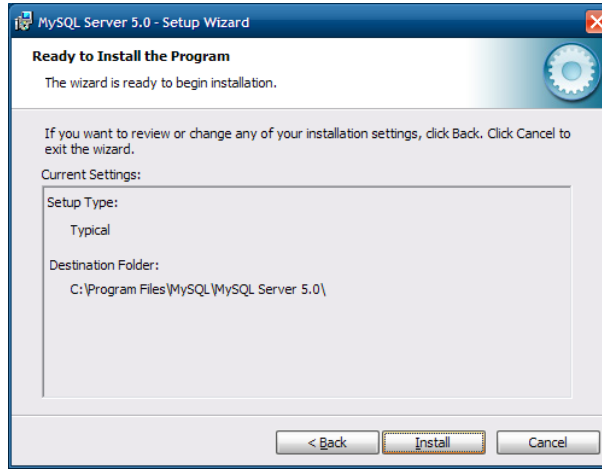
Click **Next** to continue.

2. The *Setup Type* dialog box appears.



Select *Typical*, then click **Next** to continue.

3. The *Ready to Install the Program* dialog box appears.



Click **Install** to continue.

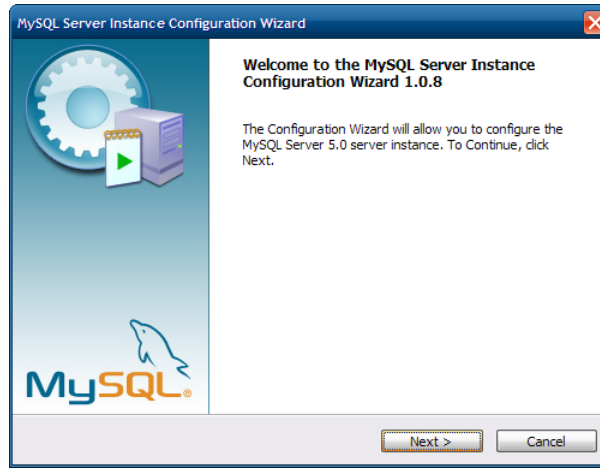
4. The *MySQL.com Sign-Up* dialog box appears.

Select *Skip Sign-Up*, then click **Next** to continue.

5. The *Wizard Completed* dialog box appears.

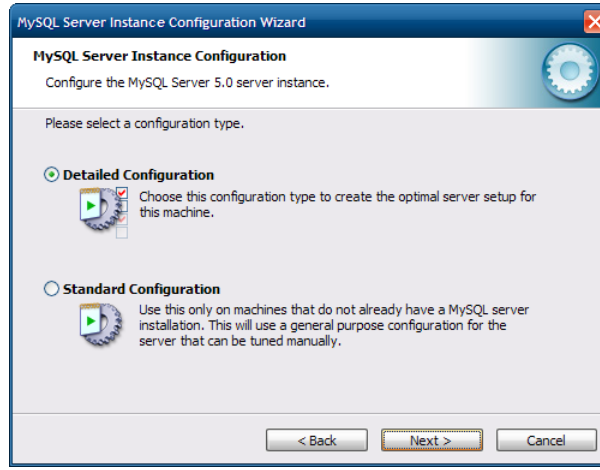
Select *Configure the MySQL Server Now*, then click **Finish** to continue.

6. The *Welcome to the MySQL Server Instance Configuration Wizard* dialog box appears.



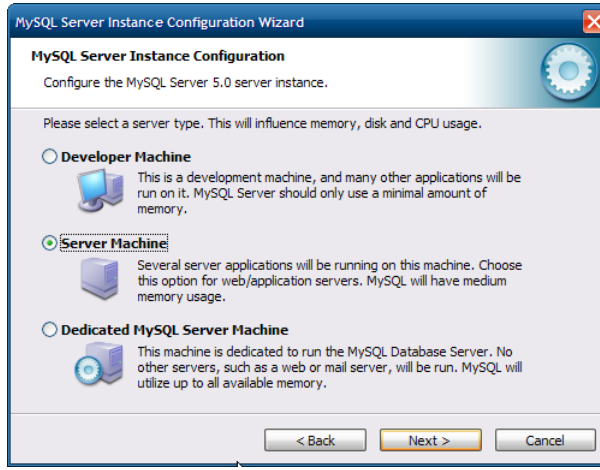
   Click **Next** to continue.

7. The *Configuration Type* dialog box appears.



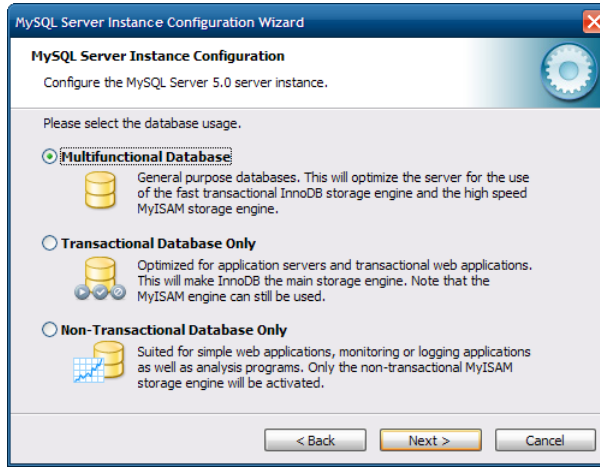
   Select *Detailed Configuration*, then click **Next** to continue.

8. The *Server Type* dialog box appears.



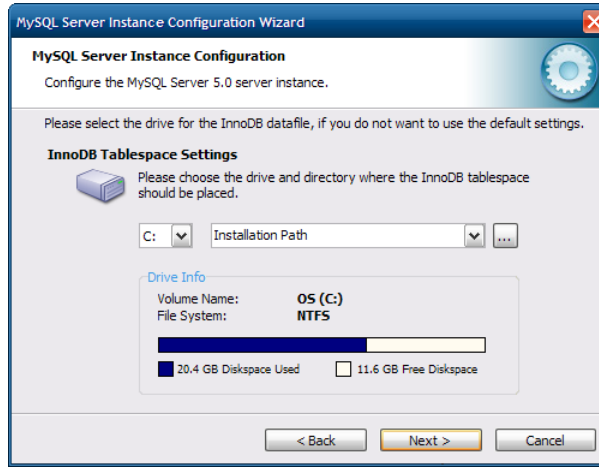
Select *Server Machine*, then click **Next** to continue.

9. The *Database Usage* dialog box appears.



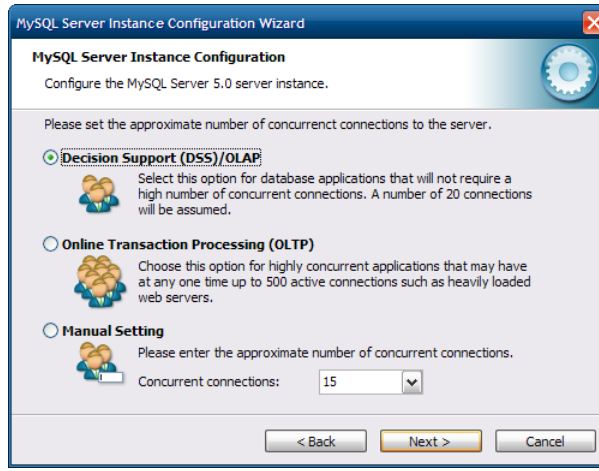
Select *Multifunctional Database*, then click **Next** to continue.

10. The *InnoDB Tablespace Settings* dialog box appears.



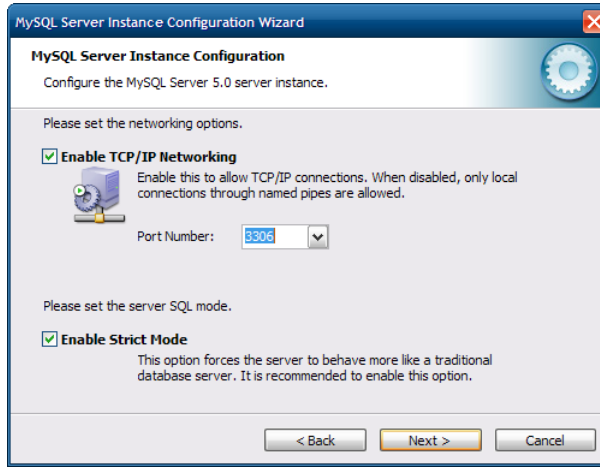
If you don't want to use the default installation path, select another drive / directory location, or click **Next** to continue.

11. The *Concurrent Connections* dialog box appears.



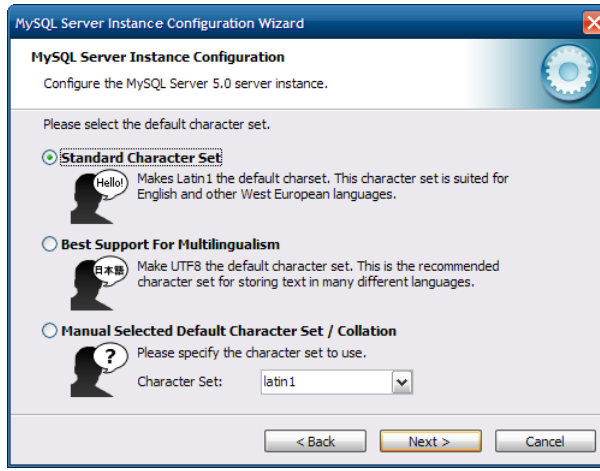
Select *Decision Support (DSS)/OLAP* , then click **Next** to continue.

12. The *Networking Options* dialog box appears.



Leave the default settings as they are and click **Next** to continue.

13. The *Default Character Set* dialog box appears.



Select *Standard Character Set*, then click **Next** to continue.

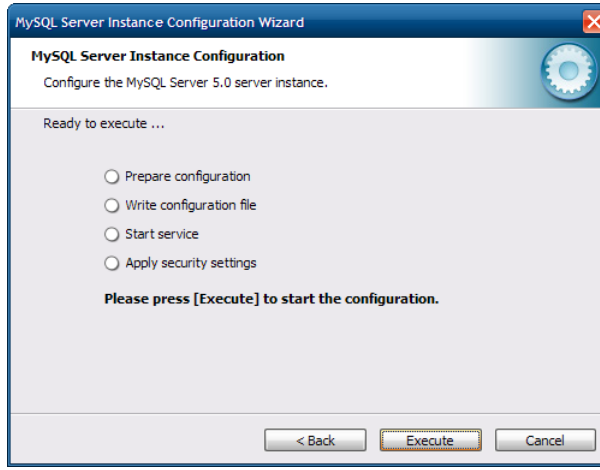
14. The *Windows Options* dialog box appears.

Leave the default settings as they are and click **Next** to continue.

15. The *Security Options* dialog box appears.

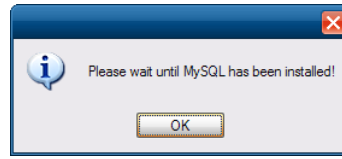
Select *Modify Security Settings*, then enter and retype “root“ (without quotation marks) as the password, and click **Next** to continue.

16. The *Ready to Execute* dialog box appears.



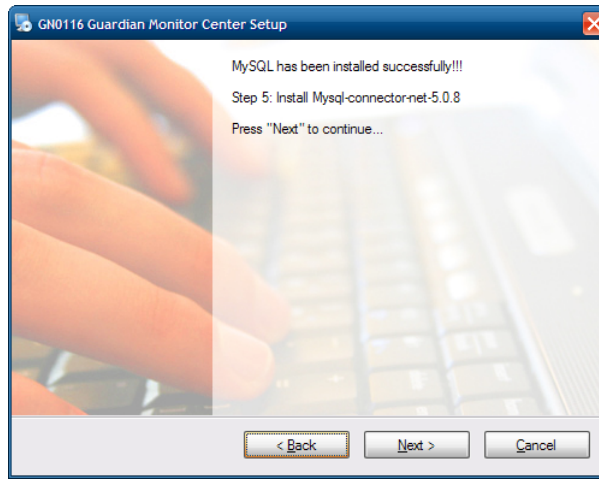
Click **Execute** to continue.

17. The following message box appears.



Click **OK** to continue.

18. The installation status dialog box appears.



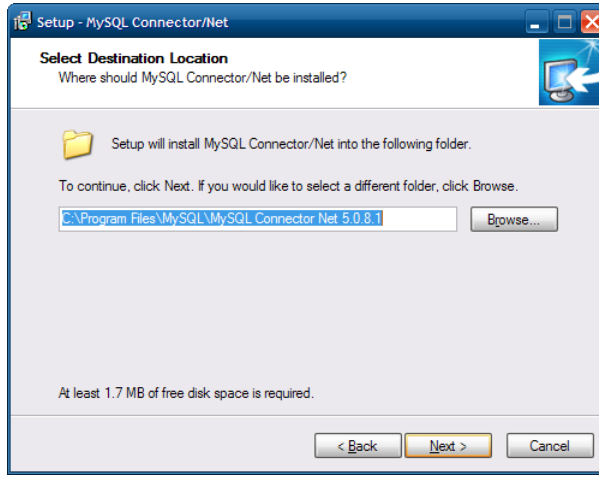
Click **Next** to continue.

MySQL Connector/Net 5.0.8.1

1. The *MySQL Connector/Net 5.0.8.1 Welcome* dialog box appears.

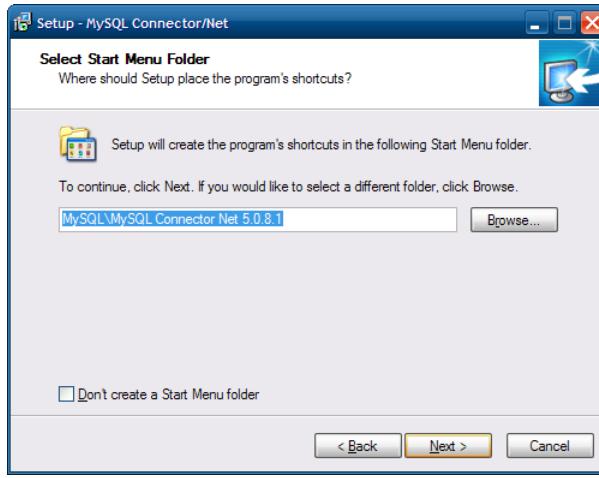
Click **Next** to continue.

2. The *Select Destination Location* dialog box appears.



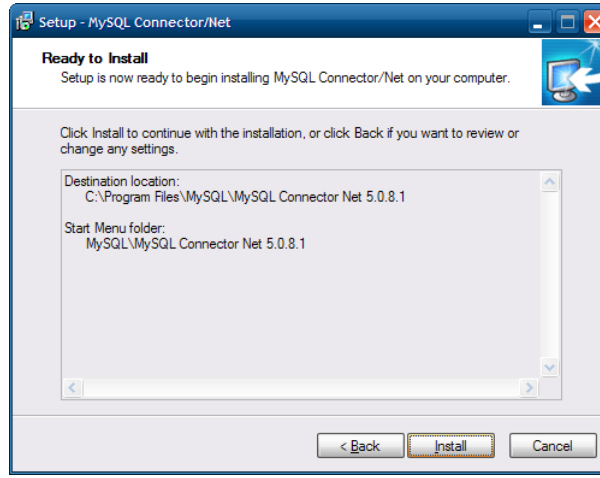
If you don't want to use the default folder, click **Browse...** to browse to another location, or click **Next** to continue.

3. The *Select Start Menu Folder* dialog box appears.



If you don't want to use the default folder, click **Browse...** to browse to another location, or click **Next** to continue.

4. The *Ready to Install* dialog box appears.

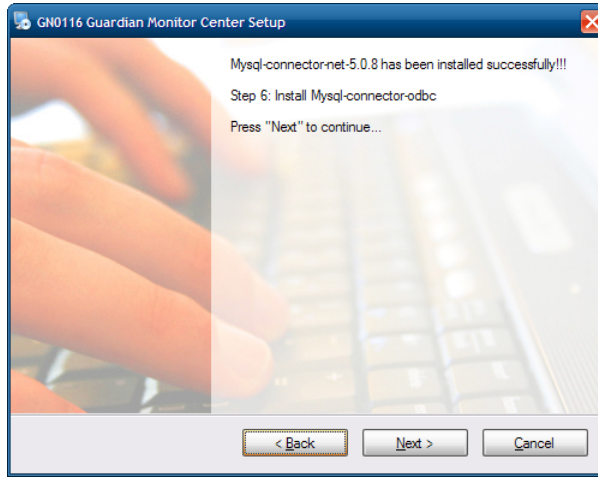


Click **Install** to continue.

5. After the software installation has completed, the *Completing the MySQL Connector/Net Setup Wizard* dialog box appears.

Click **Finish** to continue.

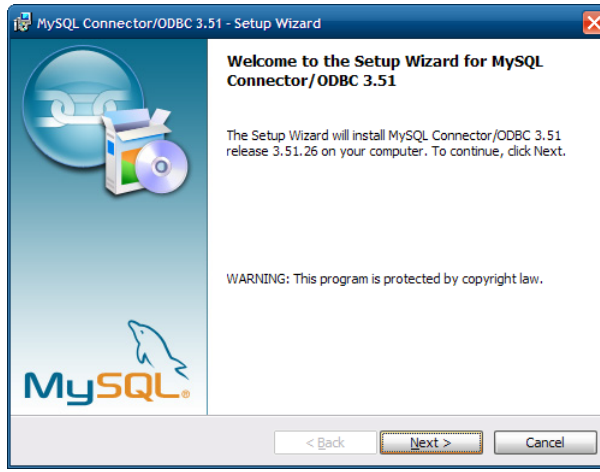
6. The installation status dialog box appears.



Click **Next** to continue.

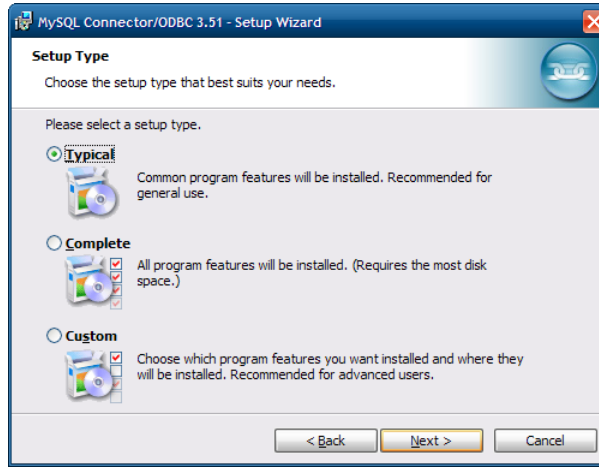
MySQL Connector/ODBC 3.51

1. The *Setup Wizard for MySQL Connector/ODBC 3.51 Welcome* dialog box appears.



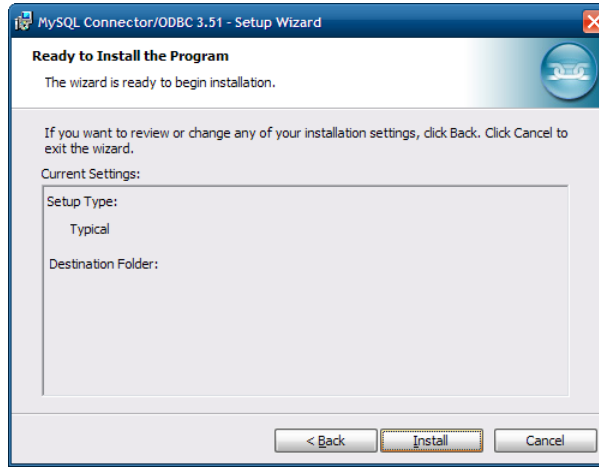
Click **Next** to continue.

2. The *Setup Type* dialog box appears.



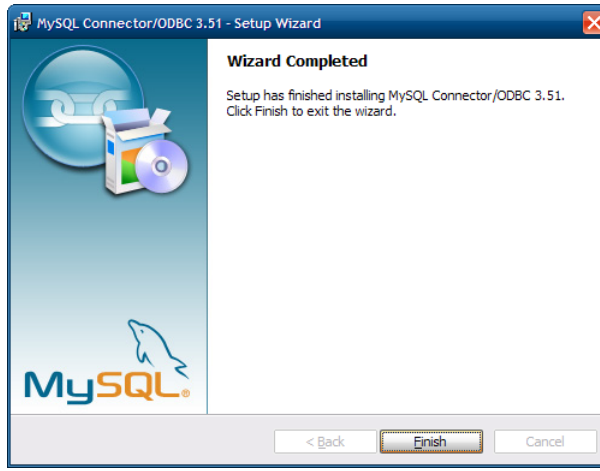
Select *Typical*, then click **Next** to continue.

3. The *Ready to Install the Program* dialog box appears.



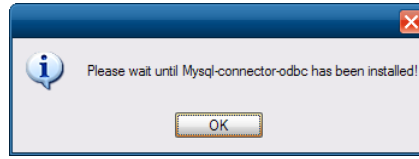
Click **Install** to continue.

4. After the software installation has completed, the *Wizard Completed* dialog box appears.



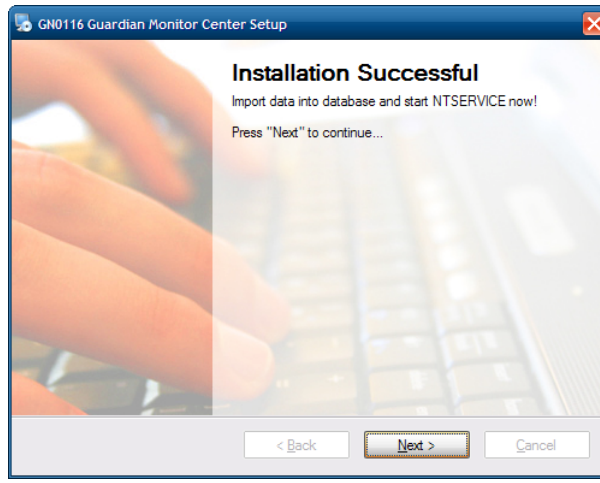
   Click **Finish** to continue.

5. The following message box appears.



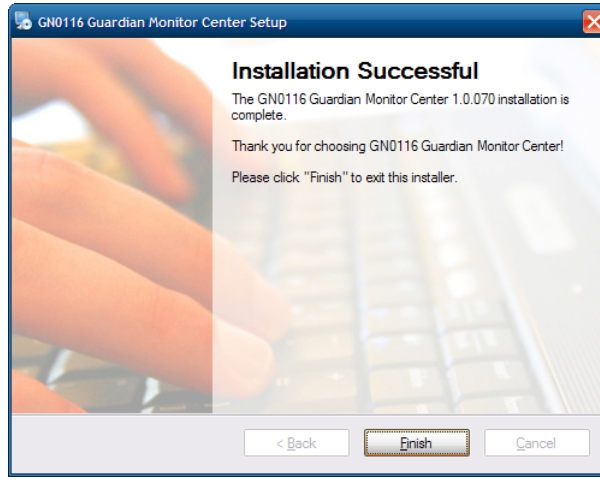
   Click **OK** to continue.

6. The installation status dialog box appears.



Click **Next** to continue.

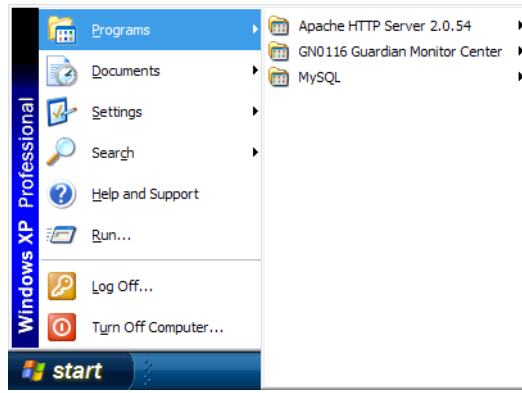
7. When the GN0116 Guardian Monitor Center software installation has completed, the *Installation Successful* dialog box appears.



Click **Finish** to exit the installer.

Start Menu

At the completion of the installation, the following entries are created in the Windows *Start* menu.



Chapter 3
Browser Operation

To ensure multi-platform operability, access to the GN0116 Guardian Monitor Center is available through most standard web browsers. Once users log in and are authenticated, the GN0116 Guardian Monitor Center user interface displays in the web browser. This chapter explains the log in procedure, and describes the Guardian Monitor Center user interface components.

Logging In

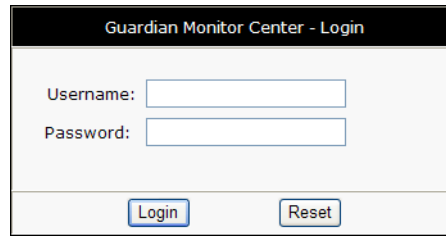
To log into the GN0116, do the following:

1. Type the full IP address of the GN0116 Guardian Monitor Center server into your web browser address bar including a forward slash (/) and “gn0116“ after the address. For example:

   ```
   http://xxx.xxx.xxx.xxx/gn0116
   ```

   Ask your Administrator if you don't know the IP address of the GN0116 Guardian Monitor Center server.

2. If a Security Alert message appears, accept the certificate – it can be trusted. The Login page appears:



3. Provide a valid Username and Password, then click **Login**.

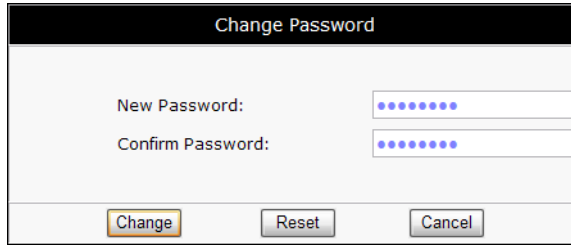
Note: There is a pre-installed system administrator account that can be used when logging in for the first time. The Username for this account is *administrator*; the password is *password*. For security purposes, we strongly recommend you change these immediately, see *Editing a User*, page 57.

First Login

When logging into the Guardian Monitor Center for the first time, we highly recommend doing the following procedures.

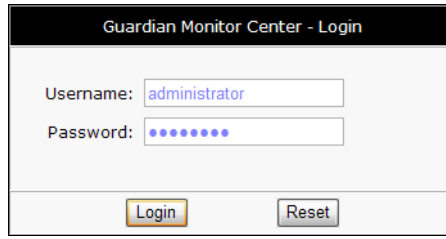
Password Change

For increased security, all users must change their pasword at their first login. Therefore, the first time a user logs into the Guardian Monitor Center, the following password change page appears:



The user must enter a new password into the *New Password* and *Confirm Password* fields, then click **Change** to apply the new password.

The user is then required to login again using the new password, as shown below.



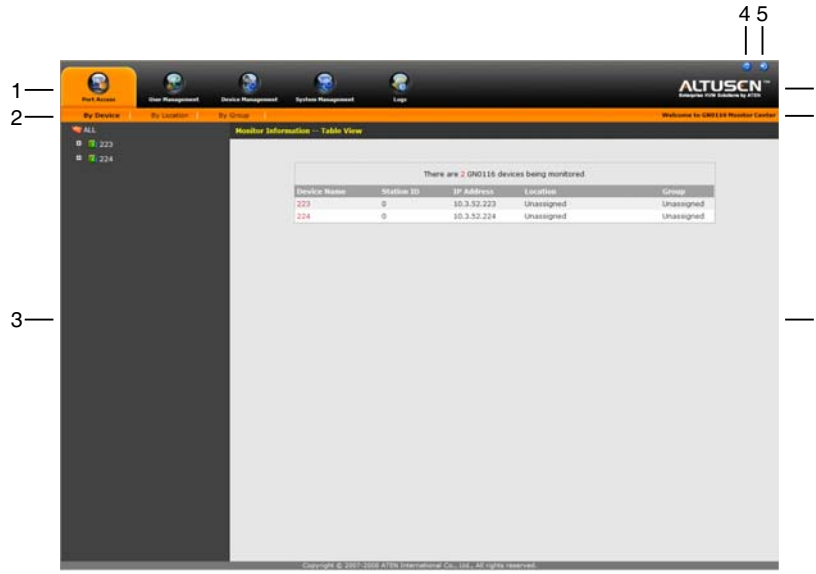
After entering the password, click **Login**.

Adding GN0116 Devices

After logging in, you can begin adding GN0116 devices to the Guardian Monitor Center. For more information, see *Adding a New Device*, page 66.

The Guardian Monitor Center User Interface

After you have successfully logged in, the Guardian Monitor Center web page appears:



The Guardian Monitor Center web page components are described in the table on the next page.

Screen Components

The Guardian Monitor Center web page screen components are described in the table, below:

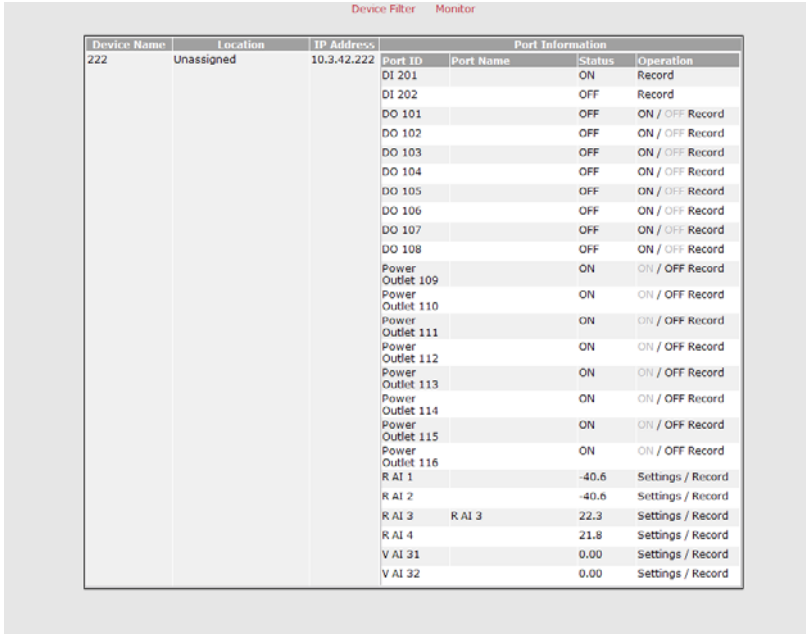
No.	Item	Description
1	Tab Bar	The tab bar contains the Guardian Monitor Center main operation categories. The items that appear in the tab bar are determined by user type.
2	Menu Bar	The menu bar contains operational sub-categories that pertain to the item selected in the tab bar.
3	Side Bar	The side bar provides a tree view listing of nodes that relate to the various tab bar and menu bar selections.
4	About	About provides information regarding the current version of the GN0116 Guardian Monitor Center.
5	Logout	Click this button to log out.
6	Altusen Logo	Click the Altusen logo to open a browser window to the Aten website (www.aten.com).
7	Welcome Message	The welcome message displays here.
8	Interactive Display Panel	This is the main work area. The screens that appear reflect menu choices and Side Bar node selection.

Sidebar Tree View Considerations

- Only nodes a user is authorized to access appear in the Side Bar's tree view.
- A plus (+) sign in front of a node means that there are additional nodes nested inside of it. Click the plus sign to expand the view and show the nested nodes.
- The plus sign changes to a minus sign (-) when a node is expanded. Click the minus sign to collapse the view and hide the nested nodes.
- For devices, if the device is on line, its icon is in color; if it is off line, its icon is gray.

Interactive Display Panel

The Interactive Display Panel is your main work area. The screens that appear reflect your menu choices and Side Bar node selection. The reason it is called an interactive display panel, is that in addition to displaying the contents of your menu choices, it is also a work area where you can make configuration settings and perform actions on selected devices. An typical display panel is shown below.



Sort Order of Information

Some tables displayed in the Interactive Display Panel (page 39) can have their information sorted by clicking a column heading. Column headings that are underlined can be clicked to rearrange the sort order of the table information based on the selected heading.

The default sort order for tables is alphabetically in ascending order (with numbers preceding letters) according to the leftmost column. Clicking an underlined column heading will toggle the sort order between alphabetically ascending and alphabetically descending (with letters preceding numbers).

Monitor Mode

Monitor Mode refers to a special viewing mode of Guardian Monitor Center pages. Guardian Monitor Center pages that support Monitor Mode are continually refreshed based on the time interval set in the *Monitor Refresh Frequency* (page 87) field of the *System Management* page. Monitor Mode is supported on Guardian Monitor Center pages that report status updates of GN0116 device port information.

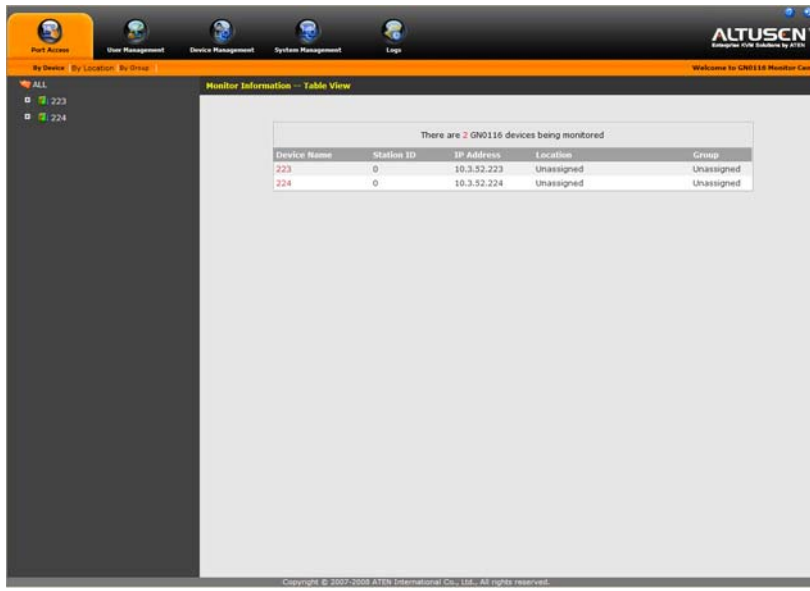
Chapter 4
Port Access

Overview

The Port Access page contains four menu items: By Device, By Location, and By Group. Together, they allow users to perform the following functions:

- View the GN0116 devices connected to the Guardian Monitor Center server.
- Order GN0116 devices by name, location, or group.
- Display GN0116 device port information in either table or chart view, in the main user interface or in a separate window.
- Configure port settings for connected GN0116 devices.
- Turn some ports on or off.
- Record port data to a graph or export port data to a file.
- Filter GN0116 device information.

By default, the Port Access page opens to the By Device menu.

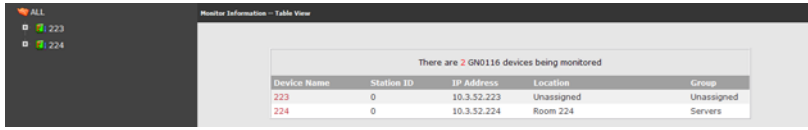


Organizing Devices

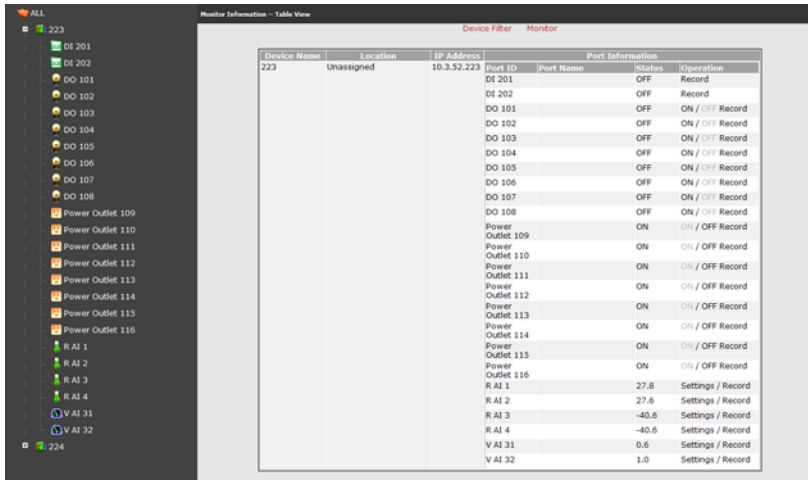
The Port Access page offer three primary methods for organizing GN0116 devices connected to the Guardian Monitor Center: by device name via the By Device page, by location name via the By Location page, and by group name via the By Group page. Each method organizes the GN0116 devices based on the attributes entered when the device was added to the Guardian Monitor Center. For more information on GN0116 device attributes, see *Device Configuration*, page 66.

By Device

The primary function of the By Device page is to organize GN0116 devices connected to the Guardian Monitor Center by their device names (see page 67). The default view has a side bar menu listing all GN0116 devices, while the Interactive Display Panel displays all the GN0116 devices in Table View.

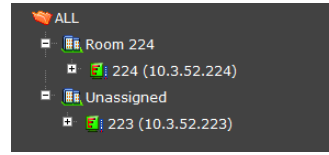


Clicking the plus sign (+) next to a device in the side bar menu expands its port list. Also, clicking the device's name from either the side bar menu or the Table View displays the device's port information in the Table View.



By Location

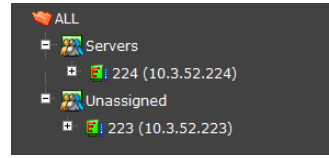
The primary function of the By Location page is to organize GN0116 devices connected to the Guardian Monitor Center by their location names (see page 67). The default view has a side bar menu listing all GN0116 devices organized into sets by their location names, while the Interactive Display Panel displays all the GN0116 devices in Table View. GN0116 devices without a location name are placed in an *Unassigned* set.



As shown in the *By Device* section above, clicking the plus sign (+) next to a device in the side bar menu expands its port list; and, clicking the device's name from either the side bar menu or the Table View displays the device's port information in the Table View.

By Group

The primary function of the By Group page is to organize GN0116 devices connected to the Guardian Monitor Center by their group names (see page 67). The default view has a side bar menu listing all GN0116 devices organized into sets by their group names, while the Interactive Display Panel displays all the GN0116 devices in Table View. GN0116 devices without a group name are placed in an *Unassigned* set.



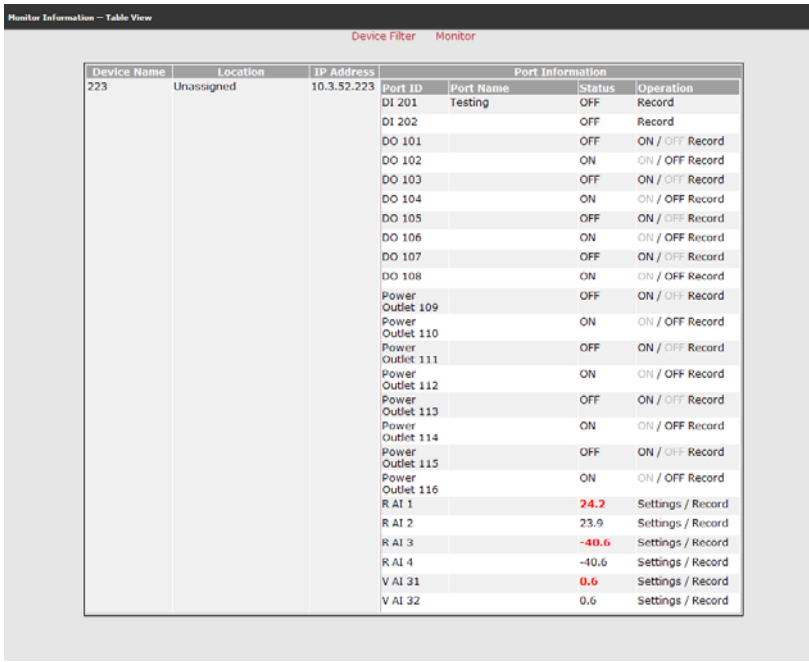
As shown in the *By Device* section above, clicking the plus sign (+) next to a device in the side bar menu expands its port list; and, clicking the device's name from either the side bar menu or the Table View displays the device's port information in the Table View.

Port Monitoring and Configuration

The Monitor Information - Table View of the Port Access page has functions for monitoring GN0116 device ports, filtering GN0116 devices, recording port data, and setting port configuration parameters as well as on/off status.

Monitor Information - Table View

The Monitor Information - Table View displays device port information and data in an easy to read format. Some of the information listed in the table is set when adding the GN0116 devices to the Guardian Monitor Center (see *Device Configuration*, page 66.). Users can easily see the status of the device ports displayed and notice any irregularities occurring on a port.



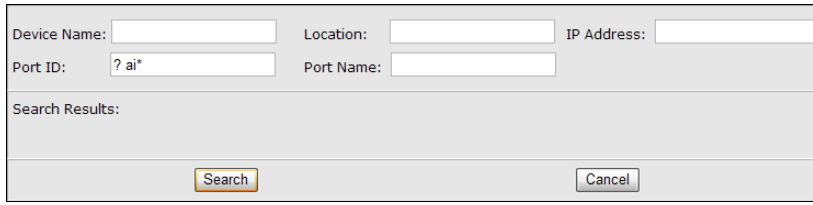
Device Name	Location	IP Address	Port Information			
			Port ID	Port Name	Status	Operation
223	Unassigned	10.3.52.223	DI 201	Testing	OFF	Record
			DI 202		OFF	Record
			DO 101		OFF	ON / OFF Record
			DO 102		ON	ON / OFF Record
			DO 103		OFF	ON / OFF Record
			DO 104		ON	ON / OFF Record
			DO 105		OFF	ON / OFF Record
			DO 106		ON	ON / OFF Record
			DO 107		OFF	ON / OFF Record
			DO 108		ON	ON / OFF Record
			Power Outlet 109		OFF	ON / OFF Record
			Power Outlet 110		ON	ON / OFF Record
			Power Outlet 111		OFF	ON / OFF Record
			Power Outlet 112		ON	ON / OFF Record
			Power Outlet 113		OFF	ON / OFF Record
			Power Outlet 114		ON	ON / OFF Record
			Power Outlet 115		OFF	ON / OFF Record
			Power Outlet 116		ON	ON / OFF Record
			R AI 1		24.2	Settings / Record
			R AI 2		23.9	Settings / Record
			R AI 3		-40.6	Settings / Record
			R AI 4		-40.6	Settings / Record
			V AI 31		0.6	Settings / Record
			V AI 32		0.6	Settings / Record

A description of items in the Monitor Information - Table View is given below.

Column		Description
Device Name		The name assigned to the GN0116 device.
Location		The location of the GN0116 device, if entered when the device was added to the Guardian Monitor Center.
IP Address		The IP address of the GN0116 device.
Port Information	Port ID	The port IDs of the GN0116 device.
	Port Name	The port name, if entered when the device was added to the Guardian Monitor Center.
	Status	The current status of the port. The information displayed here may be dependent on the *Monitor Refresh Frequency* (see page 87).
	Operation	You can perform different operations on ports depending on the port type. Clicking on the corresponding word in the column initiates the operation. Operations include: ◆ **Record** – all ports support this operation which allows you to record data on the port over a set time, and display the information in a graph. See *Record*, page 49, and page 50. ◆ **ON/OFF** – DO ports and power outlets have the ability to be toggled on or off. ◆ **Settings** – AI ports support this operation which adjusts the high and low threshold values for the port. See *AI Port Configuration*, page 73.

Device Filter

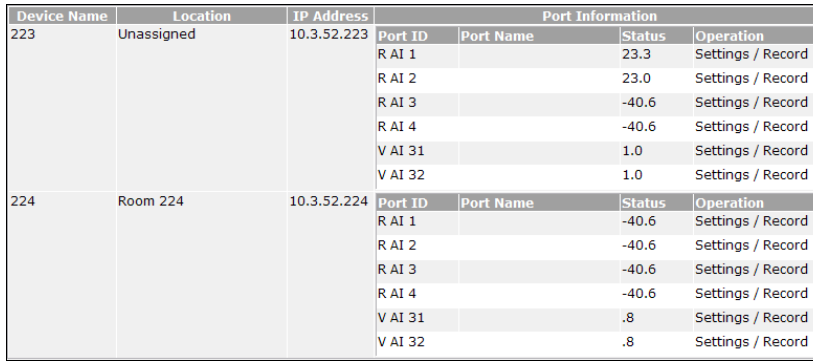
Clicking **Device Filter** at the top of the Monitor Information - Table View page displays the device filtering dialog box.



Devices can be filtered based on the criteria entered into the dialog box. To filter devices in the Monitor Information - Table View page:

1. Click **Device Filter** at the top of the Monitor Information - Table View page.
2. Enter the filtering criteria into one or more of the filter selection textboxes.
    1. Wildcard characters (? *) can be used in the search criteria.
    2. Search criteria is not case sensitive.
    3. Leaving all fields empty results in a search displaying all ports on all devices.
3. After Entering the filtering criteria, click **Search** to display the results in the Monitor Information - Table View page.

Note: Click **Cancel** at any time to exit the device filter dialog box and return to the Monitor Information - Table View page.



Device Name	Location	IP Address	Port Information			
			Port ID	Port Name	Status	Operation
223	Unassigned	10.3.52.223	R AI 1		23.3	Settings / Record
			R AI 2		23.0	Settings / Record
			R AI 3		-40.6	Settings / Record
			R AI 4		-40.6	Settings / Record
			V AI 31		1.0	Settings / Record
			V AI 32		1.0	Settings / Record
224	Room 224	10.3.52.224	Port ID	Port Name	Status	Operation
			R AI 1		-40.6	Settings / Record
			R AI 2		-40.6	Settings / Record
			R AI 3		-40.6	Settings / Record
			R AI 4		-40.6	Settings / Record
			V AI 31		.8	Settings / Record
			V AI 32		.8	Settings / Record

Monitor

Clicking **Monitor** at the top of the Monitor Information - Table View page opens a separate window displaying a full screen view of the Monitor Information - Table View page.

Single Device Table View

The full screen view of the Monitor Information - Table View page is displayed by default and is the same as the one displayed in the Guardian Monitor Center user interface.

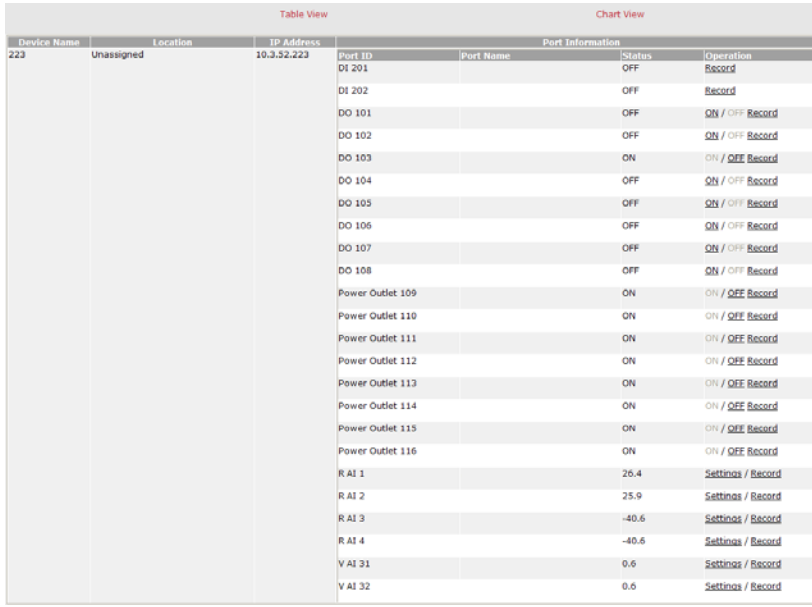
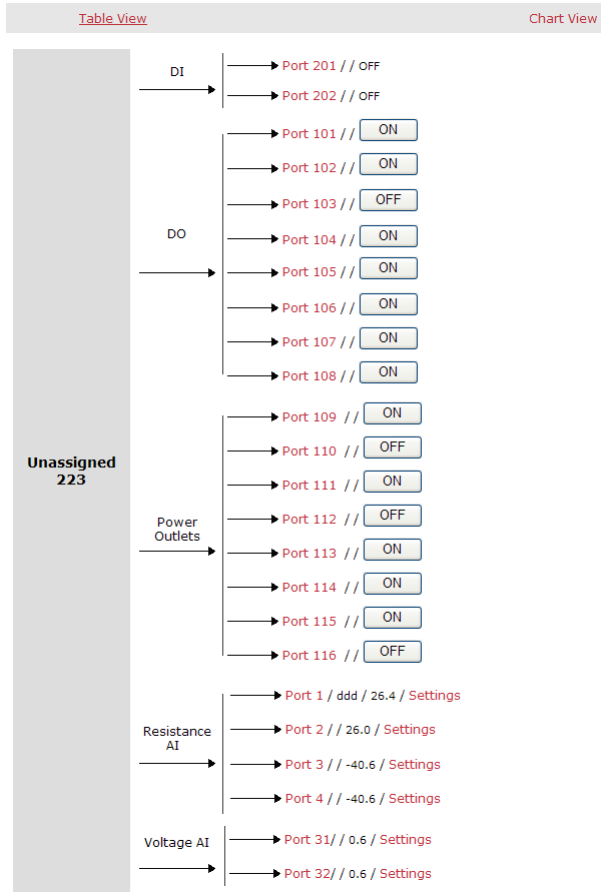


Table View Chart View

Device Name	Location	IP Address	Port Information			
223	Unassigned	10.3.52.223	Port ID	Port Name	Status	Operation
			DI 201		OFF	Record
			DI 202		OFF	Record
			DO 101		OFF	ON / OFF Record
			DO 102		OFF	ON / OFF Record
			DO 103		ON	ON / OFF Record
			DO 104		OFF	ON / OFF Record
			DO 105		OFF	ON / OFF Record
			DO 106		OFF	ON / OFF Record
			DO 107		OFF	ON / OFF Record
			DO 108		OFF	ON / OFF Record
			Power Outlet 109		ON	ON / OFF Record
			Power Outlet 110		ON	ON / OFF Record
			Power Outlet 111		ON	ON / OFF Record
			Power Outlet 112		ON	ON / OFF Record
			Power Outlet 113		ON	ON / OFF Record
			Power Outlet 114		ON	ON / OFF Record
			Power Outlet 115		ON	ON / OFF Record
			Power Outlet 116		ON	ON / OFF Record
			R AI 1		26.4	Settings / Record
			R AI 2		25.9	Settings / Record
			R AI 3		-40.6	Settings / Record
			R AI 4		-40.6	Settings / Record
			V AI 31		0.6	Settings / Record
			V AI 32		0.6	Settings / Record

Single Device Chart View

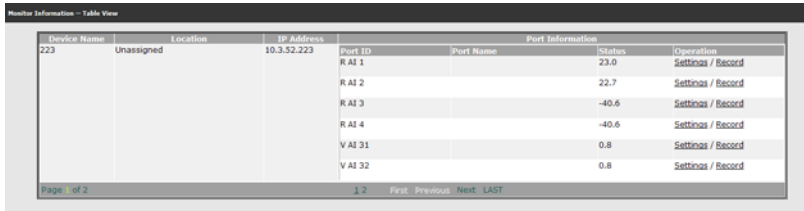
Clicking **Chart View** at the top of the full screen view of the Monitor Information - Table View page displays the device information as a chart.



The chart is the same as the one displayed in the Guardian Monitor Center user interface under the *Device Management* page. For more information on the functions associated with the device chart, see *Device Chart*, page 70.

Multiple Device Table View

The full screen view of the Monitor Information - Table View page for multiple devices is slightly different than that of the Single Device Table View (described above). Multiple device views can be created from filtering devices in the Monitor Information - Table View page (see *Device Filter*, page 46) and then selecting a full screen view of the table (see *Monitor*, page 47).



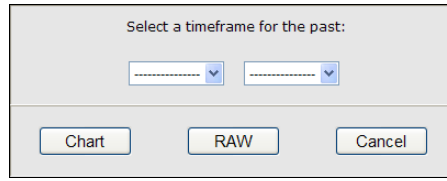
The table itself is the same with the type of information shown; however, the Multiple Device Table View displays filtered device information for only one device at a time. Use the device navigation buttons at the bottom of the table to navigate between devices.

Note: Chart views cannot be generated for filtered views of the Monitor Information - Table View page.

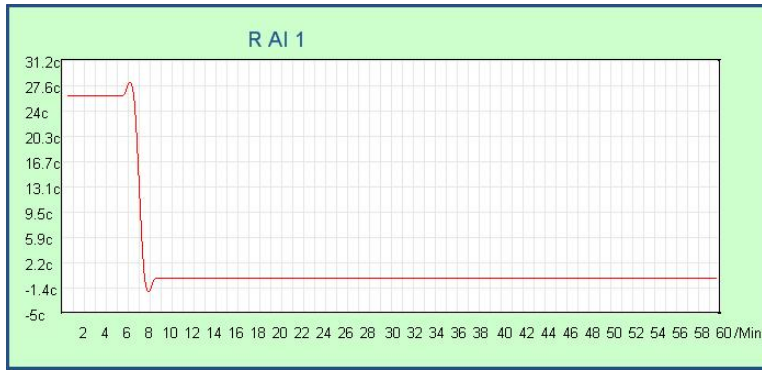
Record

Port data can be viewed in a graph or exported to a CSV file to show variances in the status of the port over time – this is called making a port record. To make a port record:

1. Click **Record** beside a port in the Monitor Information - Table View page, or click the port name of a port in the Chart View. The following dialog box appears.

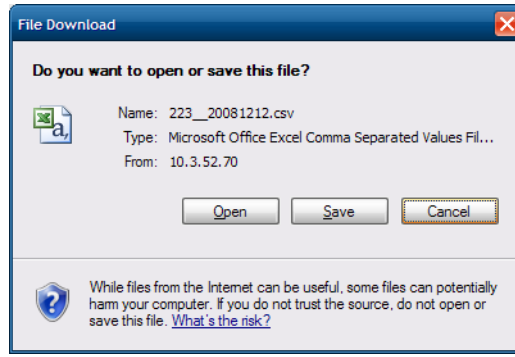


2. From the left dropdown listbox, select a unit of time for the graph. Choices include:
   - Minutes
   - Hours
   - Days
   - Months
3. From the right dropdown listbox, select the amount of time for the graph. Choices for amounts of time are dependent on the unit of time chosen.
4. Click **Chart** to create a graph of the data;



The horizontal axis shows the time range into the past, while the vertical axis shows the total variance in the range of the data. See *AI Port Configuration*, page 73 for more information on port data types.

You also have the option to click **RAW** to export the data to a CSV file.

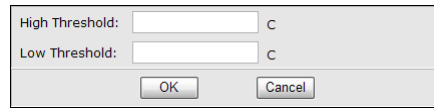


Follow the on-screen instructions for saving the file.

Setting

AI port threshold settings can quickly be changed directly from the Monitor Information - Table View page, or Chart View. To change a port's threshold settings:

1. Click **Settings** beside an AI port in the Monitor Information - Table View page, or in Chart View. The following dialog box appears.



2. Enter a value for the low and high thresholds.
3. Click **OK** to save the settings; or click **Cancel** to exit the dialog box without saving any changes.

For more information on port threshold settings, see *AI Port Configuration*, page 73.

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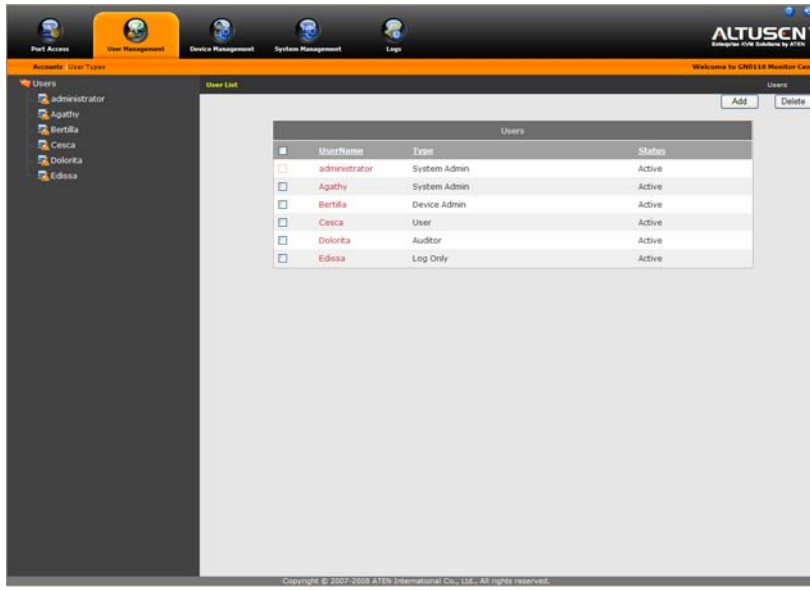
Chapter 5
User Management

Overview

The User Management page contains two menu items: Accounts, and User Types. Together, they allow System Administrators to perform the following functions:

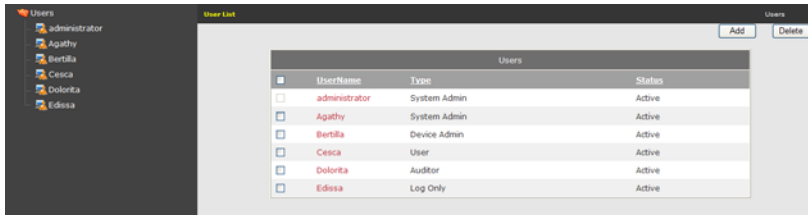
- Add, modify and delete user accounts.
- Assign users to the built-in user types, or create new user types and assign users to them.
- Specify access rights for users to the Guardian Monitor Center and devices based on built-in or custom defined user types.

By default, the User Management page opens to the Accounts page.



Accounts

In the Accounts page, System Administrators can add, edit, and delete users. The default view has a side bar menu listing all users, while the Interactive Display Panel displays the User List with all the users. Near the top right-hand corner of the page are buttons for adding or deleting users.



Clicking **Users** from either the side bar menu or at the right-hand side of the screen (above the Add and Delete buttons) returns you to the default User List view. A description of each item in the User List table is given below.

Column	Description
Checkbox	When deleting users, use the checkbox to individually select the users you want to delete, or click the checkbox in the table heading to select or deselect all users.
Username	The user's login name.
Type	The user's type. See *User Types*, page 58.
Status	The status of the user account. User accounts can be either **Active** or **Expired**. Users with expired accounts cannot log into the Guardian Monitor Center until a System Administrator reactivates their account.

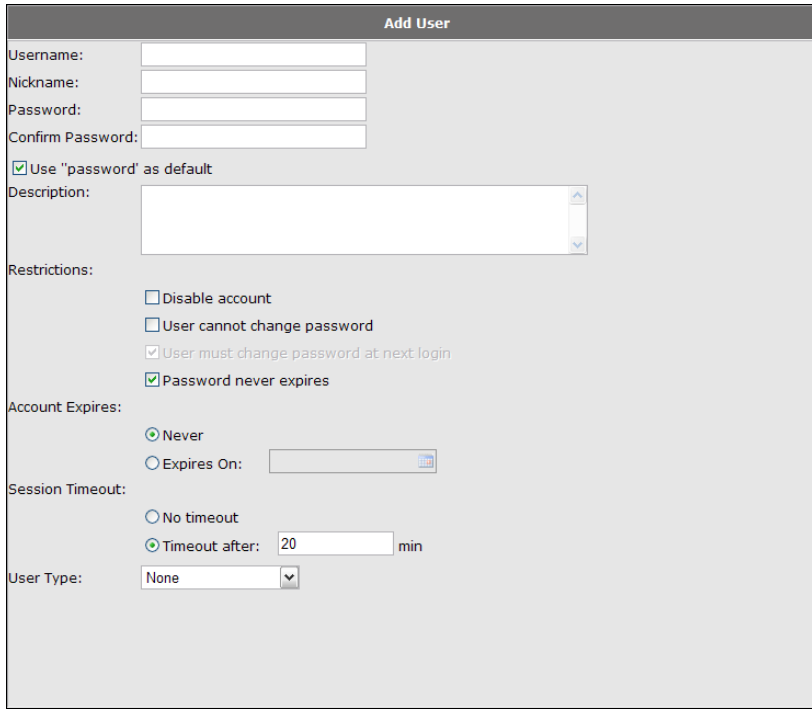
The column headings can be clicked to rearrange the sort order of the table information based on the selected heading. For more information see *Sort Order of Information*, page 40.

Clicking a user's name from either the side bar menu or from within the User List table displays the Edit User dialog box where you can edit the user's attribute information. See *Editing a User*, page 57.

Adding a User

To add a user from the Accounts page:

1. Click **Add**. The Add User dialog box appears.



Enter the required information in the appropriate fields. A description of each of the fields is given in the table on the following page.

Item	Description
Username	Type in the user's username here. Policies for username length, password use and allowable characters are set in the *System Security* page. See *System Security*, page 89.
Nickname	A user's nickname appears beside the Welcome message. See *Welcome Message*, page 38.
Password	◆ *Use "password" as default* is checked by default and sets **password** as the user's password. ◆ If you uncheck *Use "password" as default*, enter the user's password in the *Password* field. ◆ To be sure there is no mistake in the password, enter it again in the *Confirm Password* field. The two entries must match.
Description	Additional information about the user can be entered here.
Restrictions	◆ *Disable account* – temporarily disables a user's account without deleting it, so that the account can easily be reinstated at a future time. ◆ If *User cannot change password* is enabled, the user can't change his own password. Otherwise, the user can change his own password. ◆ If *User must change password at next login* is enabled, the user must change his password the next time he logs in. By default, this item is checked when adding a new user and cannot be unchecked. All new users must change their password at their first login. ◆ Enabling *Password never expires*, prevents the user's password from expiring after a given period of time. This feature overrides the *Enable Password Expires After* policy under *System Security* (page 90). **Note:** Enabling some restrictions automatically disables others.
Account Expires	◆ Clicking the *Never* radio button sets it so that the account never expires. ◆ To have the account expire on a certain date, click the *Expires On* radio button; then click the calendar icon to select the expiration date.
Session Timeout	◆ If you don't want to have a session time out after the user has been idle for a specified amount of time, select the *No timeout* radio button. ◆ If you do want to have a session time out after the user has been idle for a specified amount of time, select the *Timeout after* radio button.
User Type	The user's user type. See *User Types*, page 58.

2. After entering the required information, click **Save** to add the new user.

Note: You can also click **Reset** to clear the fields, or click **Cancel** to return to the User List.

Editing a User

User attribute information can be edited even after adding a user to the Guardian Monitor Center. The Edit User dialog box is the same as the Add User dialog and can be accessed by clicking one of the users from the sidebar menu or the User List. You can then modify the fields as necessary. See *Adding a User* above.

Note: 1. You cannot change the Username when editing user attributes.

2. Not all fields can be edited for the default System Administrator account.

Deleting a User

You can easily delete a single user, or all users from the User List (page 54).

Note: The default System Administrator account cannot be deleted.

To delete a user:

1. Select the checkbox beside the Username of the user you want to delete.

Note: To delete all users, select the checkbox at the left-hand side of the User List table headings.

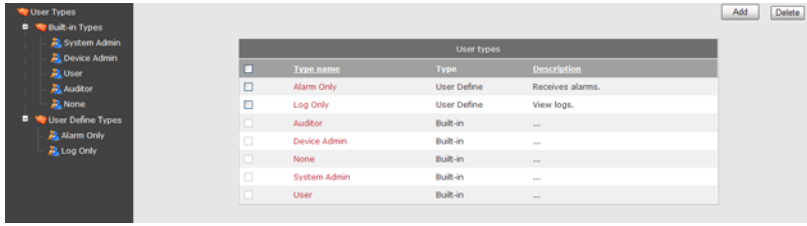
2. Click **Delete**. The User List updates with the remaining users.

User Types

In the User Types page, System Administrators can view, add, edit, and delete user types.

User Types List

The default view has a side bar menu listing all user types, while the Interactive Display Panel displays the User Types List with all the user types. Near the top right-hand corner of the page are buttons for adding or deleting user types.



Clicking **User Types** from either the side bar menu or at the right-hand side of the screen, above the Add and Delete buttons (when available), returns you to the default User Types List view. A description of each item in the User Types List table is given below.

Column	Description
Checkbox	When deleting user types, use the checkbox to individually select the user types you want to delete, or click the checkbox in the table heading to select or deselect all user types.
Username	The user's login name.
Type name	The user's type.
Description	Additional information about the User Type.

The underlined column headings can be clicked to rearrange the sort order of the table information based on the selected heading. For more information see *Sort Order of Information*, page 40.

User Types

There are two major categories of user types: Built-in Types and User Defined Types. The following sections describe these user types in detail.

Built-in Types

By default, the Guardian Monitor Center supports five built-in user types. These are referred to as built-in user types because they are built into the Guardian Monitor Center. The roles assigned to members of these user types are fixed and cannot be changed. The roles associated with each of the built-in types are described in the table below.

Built-in Type	Roles
System Administrator	Has unrestricted access to all the Guardian Monitor Center functions. Can manage users and devices, perform system tasks, backup and restore the database, manage user sessions, and view and export logs.
Device Administrator	Can view and manage devices at the port and device levels, configure port settings, record port data, manage port logic operations and alarm notifications, and view and export logs.
User	Can view devices at the port level, configure port settings, record port data, and view and export logs.
Auditor	Can view devices at the port level, configure port settings, and record port data.
None	Disables the account until a System Administrator changes it to another type.

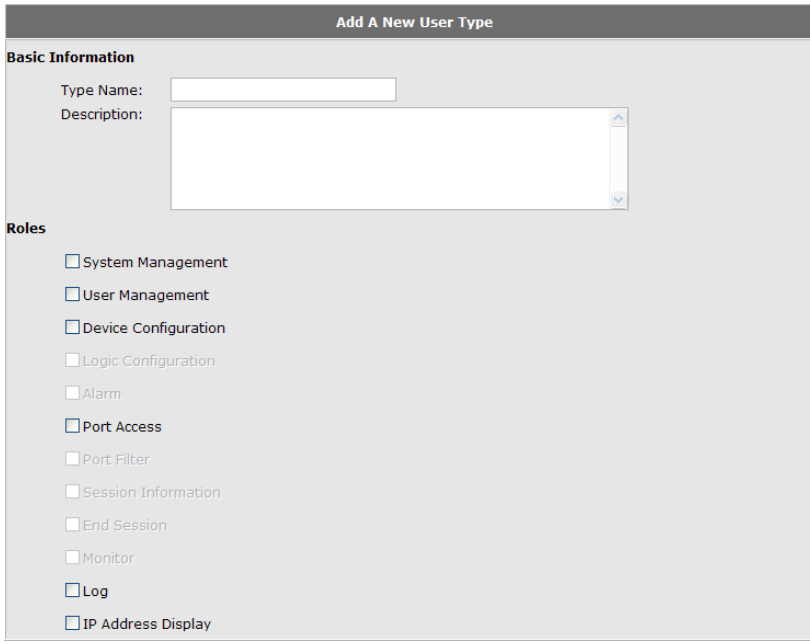
User Defined Types

The User Defined Types category provides you with the convenience and flexibility of assigning various combinations of roles that best suit your installation's requirements to create your own user types. See the following sections for more information.

Adding a User Defined Type

To add a User Defined Type from the User Types page:

1. From the side bar menu, click **User Defined Types**.
2. Click **Add**. The Add a New User Type dialog box appears.



Enter the required information in the *Basic Information* fields and select the roles that define the functions of the user type. A description of each item is given in the following table.

Item		Description
Basic Information	Type Name	Enter the User Type name here. A maximum of 16 characters can be used. Any combination of letters and numbers can be used.
	Description	Additional information about the User Type can be entered here.
Roles	System Management	Users assigned this role have access to the System Management tab functions only.
	User Management	Users assigned this role have access to the User Management tab functions only.
	Device Configuration	Users assigned this role have access to the *Device Configuration* and *Port Configuration* functions of the Device Management tab.
	Logic Configuration	Users assigned this role have access to the *Logic Configuration* functions. **Note:** This option only becomes available after the Device Configuration role has been enabled.
	Alarm	Users assigned this role have access to the *Alarm Configuration* functions. **Note:** This option only becomes available after the Device Configuration role has been enabled.
	Port Access	Users assigned this role have access to the Port Access tab functions only.
	Port Filter	Users assigned this role have access to the *Device Filter* function. **Note:** This option only becomes available after the Port Access role has been enabled.
	Session Information	Users assigned this role have access to the *User Sessions* functions. **Note:** This option only becomes available after the System Management role has been enabled.
	End Session	Users assigned this role can end user sessions. **Note:** This option only becomes available after the Session Information role has been enabled.
	Monitor	Users assigned this role can open a separate window displaying a full screen view of the Monitor Information - Table View page. **Note:** This option only becomes available after the Port Access role has been enabled.
	Log	Users assigned this role have access to the Log tab functions only.
	IP Address Display	Controls the dispay of the user's IP address in the *User Sessions* page.

3. After entering the required information, click **Save**.

Note: You can also click **Reset** to clear the *Type Name* field.

Editing User Types

Both Built-in Types and User Defined Types can be edited. To edit a User Type from the User Types page:

1. From the side bar menu, click one of the User Types.
2. Click **Type Information** at the right-hand side of the screen, above the Add and Delete buttons. The User Type Information dialog box appears.
3. Modify the fields as necessary. See *Adding a User Defined Type* above for more information.

Note: The Description field of the User Type Information dialog box is the only field that can be edited for Built-in Types.

Deleting User Defined Types

You can easily delete a single User Defined Type, or all User Defined Types from the User Types page.

Note: The Built-in Types cannot be deleted.

To delete a User Defined Type from the User Types page:

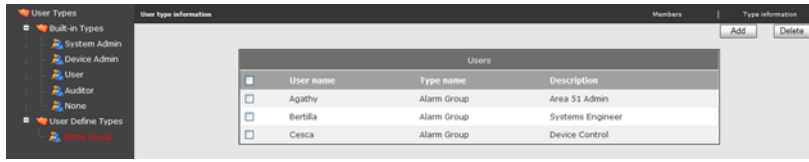
1. Select the checkbox beside the Type Name of the User Defined Type you want to delete.

Note: To delete all User Defined Types, select the checkbox at the left-hand side of the User Types List table headings.

2. Click **Delete**. The User Types List updates with the remaining user types.

Members

Adding Users as members of a User Type is a quick and convenient way of assigning roles to many users at once. Users cannot be members of more than one User Type. Selecting a User Type from the side bar menu displays the members list for that type in the User Type Information page.



From the User Type Information page you can add and delete members from a User Type, and edit the User Type Information. For information about editing User Types, see *Editing User Types*, page 62. For information about managing User Type members, see the following sections.

Adding and Removing Members

To add or remove members from a User Type:

1. From the User Type Information page, click **Add** at the right-hand side of the screen. The Select User dialog box appears.

2. To add a user to the members list, select the user's name from the left panel, then click **Add Selected** to move the user to the right panel.

   To add all users to the member list, click **Add All** to move all users to the right panel.

   To remove a user from the members list, select the user's name from the right panel, then click **Remove Selected** to move the user to the left panel.

To remove all users to the members list, click **Remove All** to move all users to the left panel.

3. After adding or removing members, click **Save** to save your changes, or click **Cancel** to return to the User Type Information page without saving any changes. The User Type Information page updates with the any changes made.

Note: 1. Use caution when changing a user's type. When users become members of a User Type, they assume all roles and privileges of the User Type. For example, it would be very easy to make all users of the Guardian Monitor Center System Administrators by adding them as members of the System Administrator Type.

2. Users can also have their User Type set in the *User Type* field of their user account settings. See *User Type*, page 56.

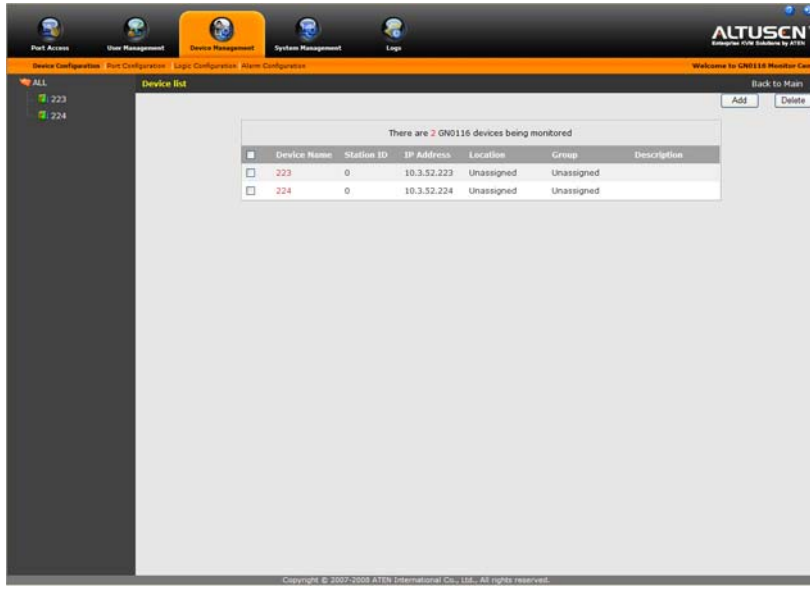
Chapter 6
Device Management

Overview

The Device Management page contains four menu items: Device Configuration, Port Configuration, Logic Configuration, and Alarm Configuration. Together, they allow system administrators and device administrators to perform the following functions:

- Add and delete GN0116 devices to the Guardian Monitor Center.
- Configure GN0116 device information options.
- Configure port settings for connected GN0116 devices.
- Perform logic related functions on GN0116 device ports.
- Set alarm notifications for connected GN0116 devices.

By default, the Device Management page opens to the Device Configuration menu.



Device Configuration

In the Device Configuration page, system administrators and device administrators can add, configure, and delete GN0116 devices.

Device List

The Device Configuration page default view displays the Device List of GN0116 devices being monitored. The side bar menu lists each GN0116, while the Interactive Display Panel lists the devices in table view. Near the top right-hand corner of the page are buttons for adding or deleting GN0116 devices.

Adding a New Device

To add a new GN0116 device to the Guardian Monitor Center:

1. From the Device Configuration page, click **Add**. The following dialog box appears.

   Enter the required information in the appropriate fields.

A description of each of the fields is given in the following table.

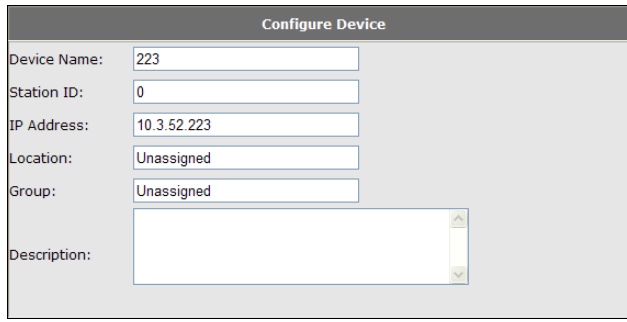
Item	Description
Device Name	The name of the GN0116 device you want to connect. This is a required field.
Station ID	The station ID of the GN0116. The default value is 0.
IP Address	The IP address of the GN0116 device you want to connect. This is a required field. **Note:** The GN0116 device you want to connect must be on the same domain as the GN0116 Guardian Monitor Center server.
Location	Use this field to group multiple GN0116 by location. The default value is Unassigned. See *Device Filter*, page 46 for more information.
Group	Use this field to group multiple GN0116 together. The default value is Unassigned. See *By Group*, page 43 for more information.
Description	Use this field to add any extra information needed to describe the GN0116 device you want to connect.

2. After entering the required information, click **Save** to add the new GN0116 device.

Note: You can also click **Reset** to clear the fields, or click **Cancel** to return to the Device List view.

Configuring a Device

GN0116 device attribute information can be modified even after adding a GN0116 to the Guardian Monitor Center. The Configure Device dialog box is the same as the Add A New Device dialog and can be accessed by clicking one of the GN0116 devices from the sidebar menu or the Device List. You can then modify the fields as necessary. See *Adding a New Device* above.



Deleting a Device

You can easily delete a single GN0116 device, or all GN0116 devices from the Guardian Monitor Center Device List webpage (page 66).

To delete a GN0116 device:

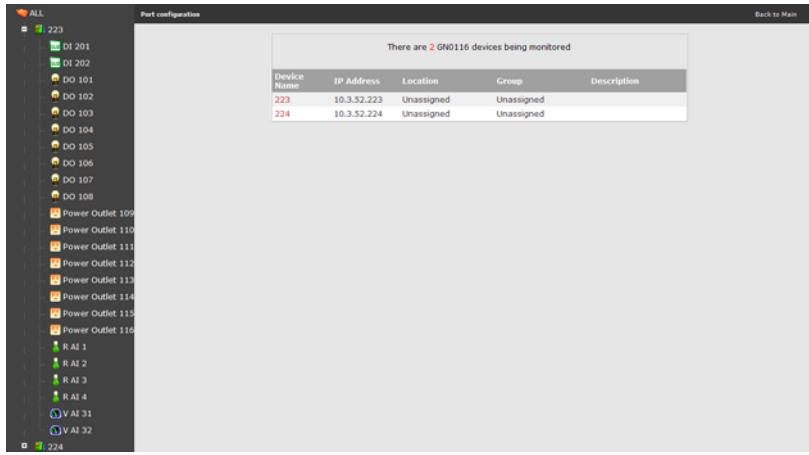
1. Select the checkbox beside the Device Name of the GN0116 you want to delete.

   Note: To delete all GN0116 devices, select the checkbox at the left-hand side of the Device List table headings.

2. Click **Delete**. The Device List updates with the remaining GN0116 devices being monitored, if any.

Port Configuration

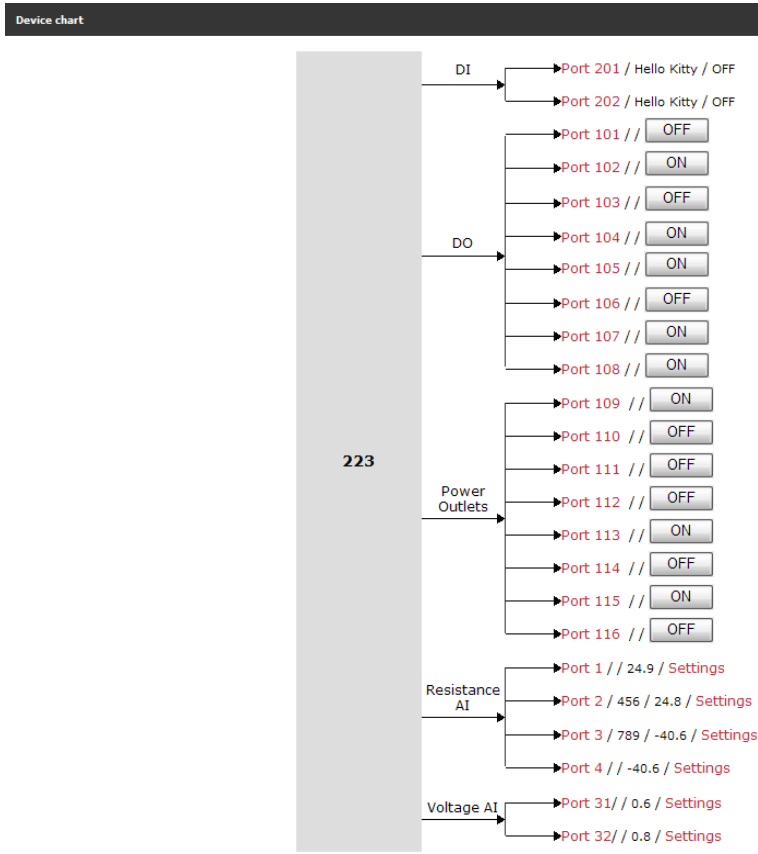
In the Port Configuration page, you can configure GN0116 devices at the port level. The default view lists the GN0116 devices being monitored and any attribute information entered when adding the devices to the Guardian Monitor Center (see *Adding a New Device*, page 66).



Clicking the plus sign (+) beside a device in the side bar menu expands the device's port list for direct access to a port's configuration options. Clicking **Back to Main** or **All** at any time returns you to the default view.

Device Chart

Selecting a GN0116 device from the side bar menu or the table in the Interactive Display Panel displays the Device Chart. The Device Chart displays a graphical representation of the selected GN0116 ports. The main benefit of the Device Chart is that it conveniently displays the status of all ports of the GN0116 device at once.



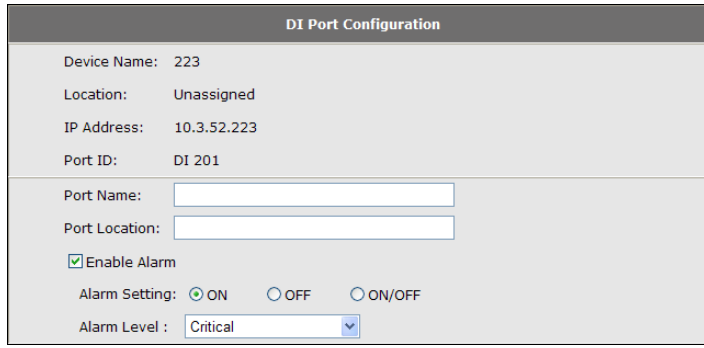
The status of the ports is updated, or “refreshed“ based on the Monitor Refresh Frequency setting in the System Settings page. See *Monitor Refresh Frequency*, page 87 and *Monitor Mode*, page 40 for more information.

Other functions in the Device Chart include:

- Quick access to port configuration options – simply click any port name to access its Port Configuration page.
- DO ports and Power Outlet Ports can be toggles on or off by clicking the button next to the port.
- Resistance and Voltage AI ports can have their Low Threshold and High Threshold levels changed quickly by clicking **Settings** next to the port. This shortcut eliminates the need to access the AI Port Configuration dialog box for making quick changes to the threshold values.
- Quickly view all Resistance and Voltage AI ports to see any problems. If the sensors attached to the ports return a value outside of the range set by the Low Threshold and High Threshold settings (see the *DI / DO / Power Outlet Port Configuration* and *AI Port Configuration*sections that follow), the value is highlighted in red, letting you know the reading is outside the normal range.

DI / DO / Power Outlet Port Configuration

Selecting a DI (Digital Input), DO (Digital Output), or Power Outlet port from either the Port Configuration page side bar menu or Device Chart opens a Port Configuration dialog box similar to the one below.



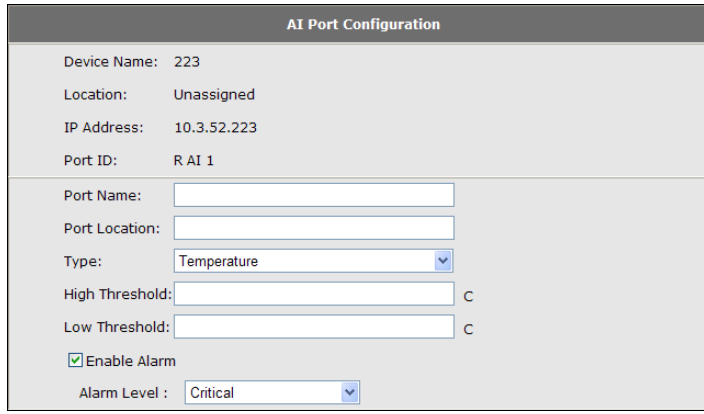
A description of each item in the Port Configuration dialog box is given in the following table.

Item	Description
Device Name	The name of the GN0116 device. This item is information only and cannot be changed here. To change the Device name, see *Configuring a Device*, page 68.
Location	The location of the GN0116 device. This item is information only and cannot be changed here. To change the Location, see *Configuring a Device*, page 68.
IP Address	The IP address of the GN0116 device. This item is information only and cannot be changed here. To change the Device name, see *Configuring a Device*, page 68
Port ID	The Port ID of the GN0116 device. This item is information only and cannot be changed here. To change the Device name, see *Configuring a Device*, page 68
Port Name	You can add a name to more easily identify the port rather than using the Port ID alone. The Port Name will be shown beside the Port ID in the side bar menu and the Device Chart.
Port Location	Enter additional information about the port's location. This field is included in the .csv file when exporting the log.
Enable Alarm	Check this item to enable alarm notifications to be sent when an alarm is triggered on the port. If this item is unchecked, no email notifications will be sent for this port. See *AI Port Configuration*, page 73 and *Alarm Configuration*, page 80 for more information.
Alarm Setting	If Enable Alarm is checked, you can select which port state triggers an alarm: **ON** – when the port state changes to on, an alarm is triggered. **OFF** – when the port state changes to off, an alarm is triggered. **ON/OFF** – when the port state toggles between on and off, an alarm is triggered.
Alarm Level	When an alarm is triggered on the port it can have one of the following levels: **Critical**, **Warning**, **Information**. Each Alarm Level is associated with an Alarm Configuration setting (page 80) so that users can receive email notification of the alarm.

After adding or changing any information in the Port Configuration dialog box, you can click **Save** to save the changes, click **Reset** to clear the changes, or click **Cancel** to exit without saving any changes.

AI Port Configuration

Selecting a resistance or voltage AI (Analog Input) port from either the Port Configuration page side bar menu or Device Chart opens an AI Port Configuration dialog box similar to the one below.



Some of the items in the AI Port Configuration dialog box are the same as those in the Port Configuration dialog box described above.

The following table describes only those items unique to the AI Port Configuration dialog box.

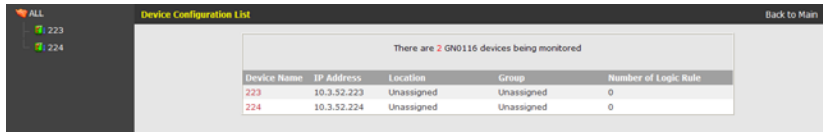
Item	Description
Type	The port can be configured for the following types of analog sensors. **Temperature** – configures the port for temperature sensor data. Available only for R AI ports. **Current** – configures the port for current sensor data. Available only for V AI ports. **Humidity** – configures the port for humidity sensor data. Available only for V AI ports. **Voltage** – configures the port for voltage sensor data. Available only for V AI ports.
High Threshold	Depending on the selected AI Port Configuration Type, the High Threshold value is automatically configured to display sensor readings in one of the following ways: **A** – for ports configured as a Current Type, the port sensor data is displayed in amps. C – for ports configured as a Temperature Type, the port sensor data is displayed in degrees Celsius. **%** – for ports configured as a Humidity Type, the port sensor data is displayed as a percentage of the relative humidity. **V** – for ports configured as a Voltage Type, the port sensor data is displayed in volts. Port sensors returning a value higher than that set by the High Threshold are shown red in the Device Chart and will trigger an alarm. See *Alarm Configuration*, page 80.
Low Threshold	The Low Threshold setting works similar to the High Threshold setting except that port sensors returning a value lower than that set by the Low Threshold are shown red in the Device Chart and will trigger an alarm. See *Alarm Configuration*, page 80.

After adding or changing any information in the AI Port Configuration dialog box, you can click **Save** to save the changes, click **Reset** to clear the changes, or click **Cancel** to exit without saving any changes.

Logic Configuration

In the Logic Configuration page, you can configure logical operations for digital and analog input ports on GN0116 devices to trigger events on digital output ports or power outlets on the same or other GN0116 devices. An example of this would be using the temperature sensor data of a port on one GN0116 to turn on the fan plugged into the power outlet of another GN0116 if the temperature sensed is too high.

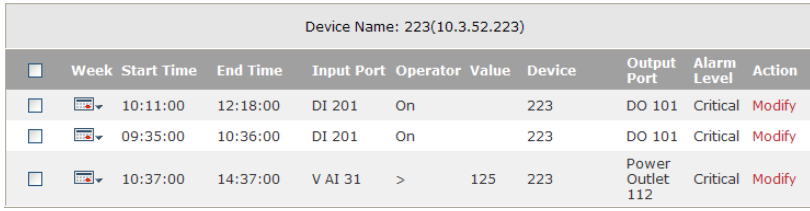
The default view lists the GN0116 devices being monitored and any attribute information entered when adding the devices to the Guardian Monitor Center (see *Adding a New Device*, page 66).



Note: Logical operations that trigger events on digital output ports or power outlets can only toggle the ports on or off depending on the current state of the output port. In the example above if a high temperature sensor reading was used to turn on a fan connected to a power outlet, you would have to create another logical operation in order to turn off the fan when the sensor sensed a lower temperature.

Device Configuration List

From the Logic Configuration page, selecting a GN0116 device from the side bar menu or the table in the Interactive Display Panel displays the Device Configuration List. The Device Configuration List displays a list of the port logic rules created for the GN0116 device. From the Device Configuration List page you can add, modify or delete port logic rules.



A description of the items in the Device Configuration List is given below.

Column	Description
Checkbox	When deleting port logic rules, use the checkbox to individually select the port logic rules you want to delete, or click the checkbox in the table heading to select or deselect all the port logic rules.
Week	Clicking the calendar icon in the Week column displays a dialog box with the days of the week selected for the port logic rule. This item displays information only and cannot be changed here. To change the days of the week that the port logic is active, see *Adding Port Logic Rules*, page 78.
Start Time	The time when the port logic rules becomes active.
End Time	The time when the port logic rules becomes inactive.
Input Port	The input port for the logic rule.
Operator	The logical operator for the logic rule. For digital input ports the options are **ON** or **OFF**; for analog input ports the options are greater than (**>**), or less than (**<**).
Value	Used only with analog input ports, it is the (integer) value coupled with the greater than (>) or less than (<) operator that triggers an event on the output port. For R AI ports, the value is in degrees Celsius. For V AI ports, the value corresponds to the units of the port Type. See *AI Port Configuration*, page 73.
Device	The GN0116 device on which to apply the logic rule.
Output Port	The output port of the GN0116 selected in the **Device** field.
Port Status	For use with analog input ports only. Sets the port status of the **Output Port** based on selections made in the **Input Port**, **Operator** and **Value** fields. If the condition set by those fields returns true, the port status on the output port is set to the value selected here.

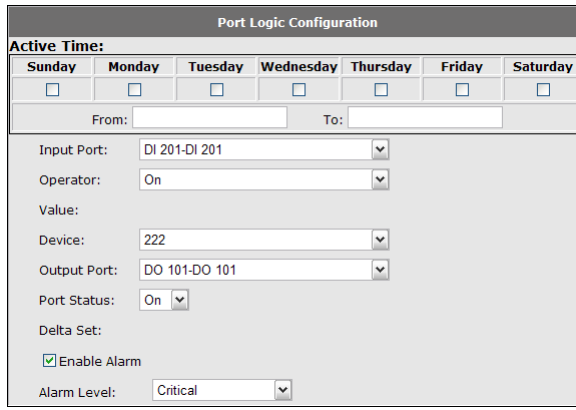
Column	Description
Delta Set	For use with analog input ports only. This represents the amount of variance from the number set in the **Value** field before the setting on the **Output Port** is reversed. For example, the Input Port R AI 1 is selected, along with the < Operator and a Value of 10, as well as the Output Port being set to DO 101, the Port Status set to On and the Delta Set value set to 2. With these settings, if the temperature sensed by the Input Port is less than 10 degrees Celsius, the Port Status of the DO 101 port will be set to On. However, based on the Delta Set value, the DO 101 port would not be set to Off until the temperature sensed by the Input Port reached 12 degrees Celsius. This setting works similarly for V AI ports with the value set according to the units of the port Type. See *AI Port Configuration*, page 73.
Alarm Level	The alarm level of the logic rule. See *Alarm Configuration*, page 80.
Action	Click this to modify the port logic rule. See , page 78.

Adding Port Logic Rules

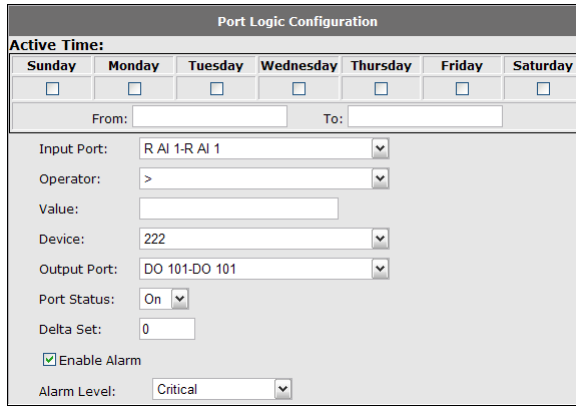
To add a port logic rule from the Device Configuration List page:

1. Click **Add**. The Port Logic Configuration dialog box appears for either a digital input port or analog input port.

Port Logic Configuration - Digital Input

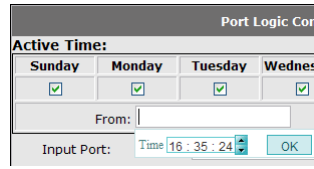


Port Logic Configuration - Analog Input

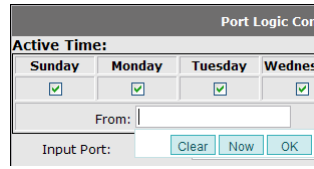


2. Select at least one day of the week that the logic rule will be active.

3. Enter the **From**: and **To**: times that the logic rule will be active. Clicking either textbox will display the current time in a separate input dialog box.



   The time format is HH:MM:SS based on a 24-hour clock. Hovering your mouse over the OK button gives you the added options of clearing the time field or selecting now as the time to enter into the time field.



4. Select an input port.
5. Select an operator.
6. If you are working on an analog port (R AI, or V AI), select a value.
7. Select an output device.
8. Select an output device port.
9. Select a port status setting.
10. Enter a value in the Delta Set field.
11. To enable an alarm notification, check **Enable Alarm**.
12. If you have enabled the alarm, select an alarm level.
13. Click **Save** to save the changes, click **Reset** to clear the changes, or click **Cancel** to exit without saving any changes.

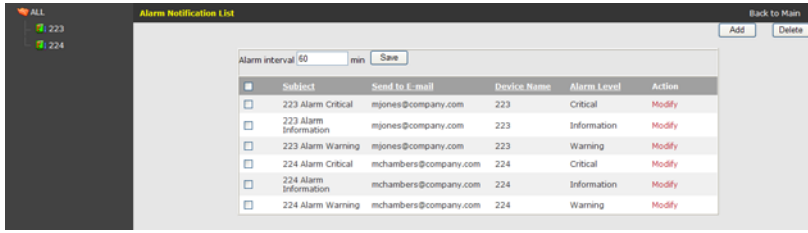
Modifying Port Logic Rules

Port logic rules can be modified after adding them. The dialog box is the same as the Port Logic Configuration dialog box for either a digital input port or analog input port and can be accessed by clicking one of the port logic rules from the Device Configuration List (page 75). See *Adding Port Logic Rules* above.

Alarm Configuration

In the Alarm Configuration page, you can view and configure email notifications sent to users of alarm events triggered on GN0116 devices.

The default view has a side bar menu listing each GN0116, while the Interactive Display Panel displays the Alarm Notification List for every GN0116 device. Near the top right-hand corner of the page are buttons for adding or deleting notifications; and above the Alarm Notification List table is a textbox for setting the alarm interval.



A description of each item in the Alarm Notification List table is given below.

Column	Description
Checkbox	When deleting notifications, use the checkbox to individually select the notifications you want to delete, or click the checkbox in the table heading to select or deselect all the notifications.
Subject	The subject of the notification.
Send to E-mail	The email address of the person being notified.
Device Name	The GN0116 device to be monitored for alarms.
Alarm Level	The alarm level of the notification. Choices are **Critical**, **Warning** and **Information**. These alarm notification levels correspond to the alarm levels set in the *Port Configuration* (page 69) and *Logic Configuration* (page 75) settings.
Action	Click this to modify the notification.

Column headings that are underlined can be clicked to rearrange the sort order of the table information based on the selected heading. For more information see *Sort Order of Information*, page 40.

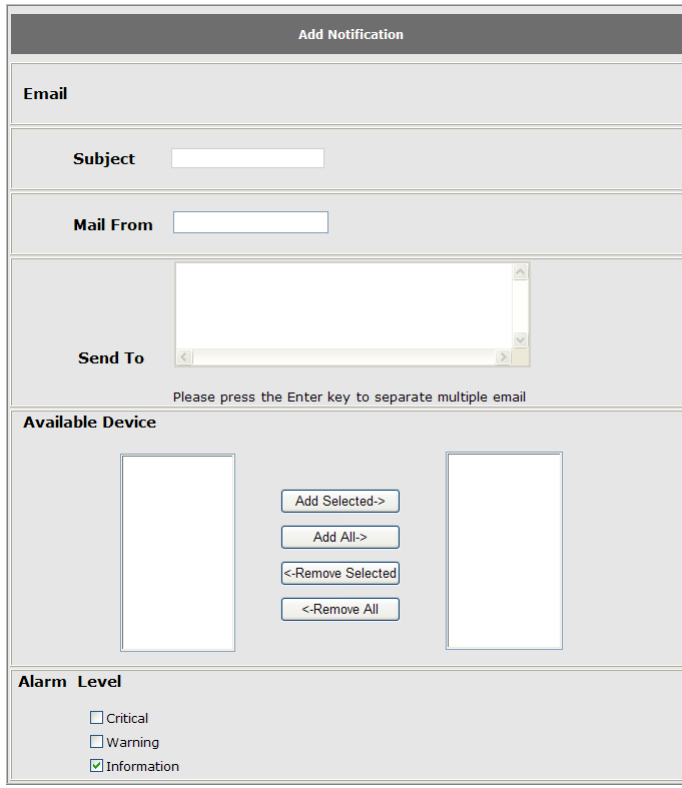
Filtering Notifications

By clicking one of the GN0116 devices in the side bar menu, you can filter the Alarm Notification List to display notifications for only that GN0116 device. To view all notifications for all GN0116 devices, click **ALL** at the top of the side bar menu. Clicking **Back to Main** or **All** at any time returns you to the default view.

Adding Alarm Notifications

To add an Alarm Notification from the Alarm Configuration page:

1. Click **Add**. The Add Notification dialog box appears.



2. Enter a Subject heading for the email.

3. Enter an email address into the **Mail From** textbox.

> **Note:** A valid email address must be entered, otherwise the email notification will not be sent. Also, the email server must be within the same domain as the GN0116 Guardian Monitor Center, otherwise the Guardian Monitor Center will not be able to access the email server to send the email.

4. Enter an email address into the **Send To** listbox. You can enter multiple email addresses, but each email address must entered on a separate line with no extra spaces.
5. Select a GN0116 device and click **Add Selected**, or click **Add All** to add all GN0116 devices to be monitored for alarms.

> **Note:** GN0116 devices can also be removed from the list by selecting a device and clicking **Remove Selected**, or by clicking **Remove All** to remove all GN0116 devices.

6. Select an **Alarm Level**.
7. Click **Save** to save the changes, click **Reset** to clear the changes, or click **Cancel** to exit without saving any changes.

Modifying Alarm Notifications

Alarm Notifications can be modified after adding them. The dialog box is the same as the Add Notification dialog box and can be accessed by clicking **Modify** in the Action column for the selected notification on the Alarm Configuration page. See *Adding Alarm Notifications* above.

Deleting Alarm Notifications

You can easily delete a single Alarm Notification, or all Alarm Notifications from the Alarm Notification List page.

To delete an Alarm Notification:

1. Select the checkbox beside the Alarm Notification you want to delete.

> **Note:** To delete all Alarm Notifications, select the checkbox at the left-hand side of the Alarm Notification List table headings.

2. Click **Delete**. The Alarm Notification List updates with the remaining Alarm Notifications, if any.

Setting the Alarm Interval

When an alarm is triggered on a port and an alarm notification has been set for the GN0116 device, an email notification is sent to the user. The Alarm Interval checks all GN0116 devices on the installation for alarm conditions at the set interval and sends email notifications for all triggered alarms.

For example, if a sensor on a port senses a temperature higher than the maximum threshold setting, an alarm is triggered on the port. If the GN0116 device has also been configured to send an alarm notification, an email is sent to the user. If the Alarm Interval has been set to 10 minutes, and the alarm condition still exists after 10 minutes, another email notification of the alarm is sent to the user. Email notifications will continue to be sent every 10 minutes for as long as the alarm is triggered on the port.

For information on port alarm settings, see *Port Configuration*, page 69 and see *Logic Configuration*, page 75.

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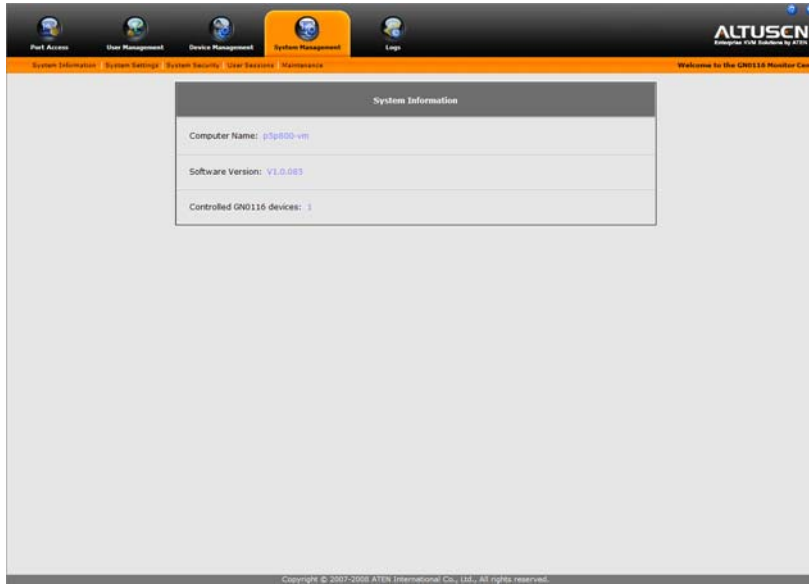
Chapter 7
System Management

Overview

The System Management page contains five menu items: System Information, System Settings, System Security, User Sessions, and Maintenance. Together, they allow system administrators to perform the following functions:

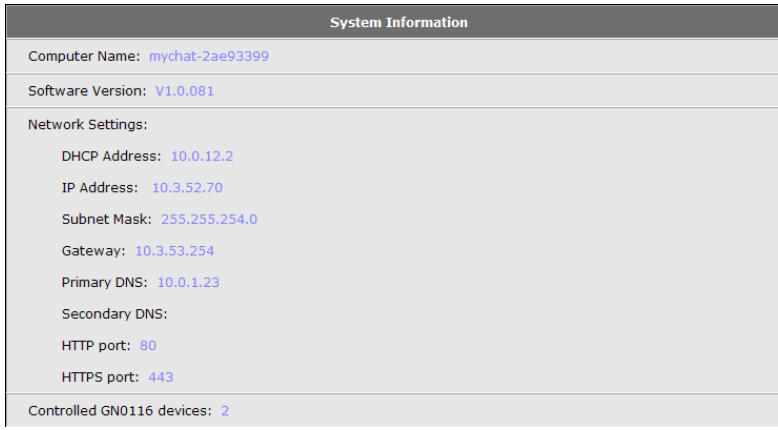
- View the Guardian Monitor Center server system information.
- Configure the system settings including: monitor refresh frequency, HTTP and HTTPS service ports, and SMTP settings.
- Configure the system security settings including: login policy, IP filter policy, login string, and user account policy.
- Control current user sessions.
- Back up and restore configuration and user profile information.

By default, the System Management page opens to the simplified System Information page.



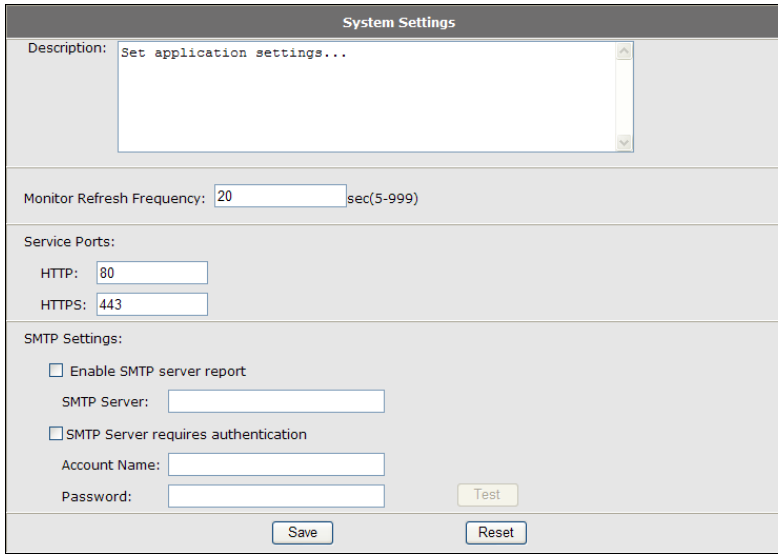
System Information

For users with advanced privileges, the System Information page displays more information than the simplified System Information page about the Guardian Monitor Center server settings and connected GN0116 devices.



System Settings

The System Settings page is where the basic Guardian Monitor Center server settings are configured.

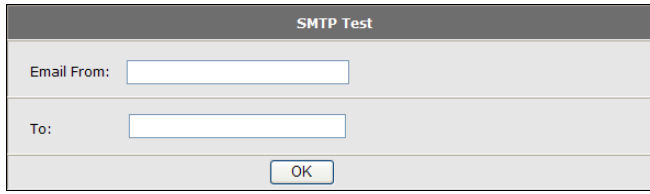


The following table describes options found on the System Settings page.

Item		Description
Description		Enter any additional information here to describe the GN0116 Guardian Monitor Center server, such as the server's location, etc.
Monitor Refresh Frequency		The monitor refresh frequency sets the time interval that the screen is refreshed when viewing Guardian Monitor Center pages that provide continuous status updates to devices (see *Monitor Mode*, page 40). Enter a value from 5–999 seconds; the default setting is 20 seconds.
Service Ports	HTTP	The port that the GN0116 Guardian Monitor Center server uses for web communication. The default is 80. If you use a different port, users must specify the port number in the URL of their browsers. If, for example, you have specified port 90, users would key the following address: http://XX.XX.XX.XX:90
	HTTPS	The port that the GN0116 Guardian Monitor Center server uses for secure web communication. The default is 443. If you use a different port, users must specify the port number in the URL of their browsers. If, for example, you have specified port 554, users would key the following address: https://XX.XX.XX.XX:554
SMTP Settings	Enable SMTP server report	The GN0116 Guardian Monitor Center can send email notification of event traps (as defined by each device), on installed devices. To enable trap notification, check this item.
	SMTP Server	The IP address or the domain name of the computer running your SMTP server.
	SMTP Server requires authentication	If the SMTP server requires authentication, check this item.
	Account Name	Enter a valid authentication account name on the SMTP server.
	Password	Enter the password for the authentication account name.

SMTP Test

If *Enable SMTP server report* is checked, and you have entered an IP address for the SMTP server, you can test if the settings are correct by sending an email through the specified mail server. Clicking on **Test** in the SMTP Settings section will display the following dialog box.

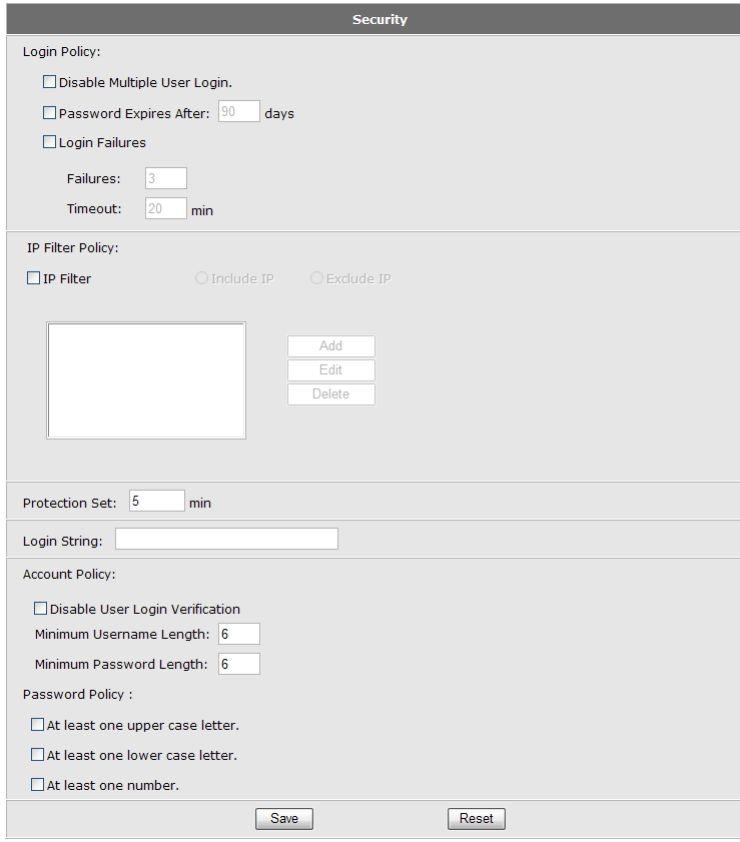


Enter valid email addresses into the *Email From:* and *To:* text boxes, then click **OK** to send the test email.

Note: If the email is not received, make sure that the SMTP server specified is correct and that you have entered valid email addresses into the *Email From:* and *To:* text boxes.

System Security

The System Security page is where the Guardian Monitor Center server security settings are configured.



After configuring the security settings, click **Save** to save any changes or click **Reset** to reset the *Login Policy*, *Protection Set*, *Login String*, and *Account Policy* settings to their default values.

Login Policy

In the Login Policy section, system administrators can set policies governing multiple concurrent user logins, password expiry time, and login failures. Check a policy and enter the required information in the appropriate fields. A description of each item is given in the following table.

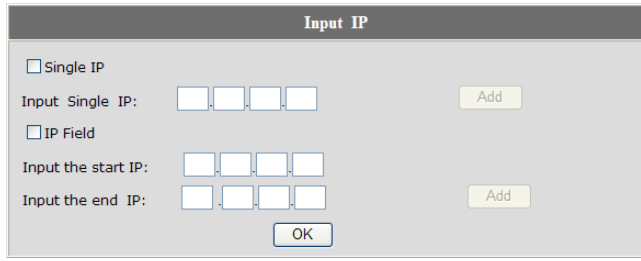
Item	Description
Disable Multiple User Login	By default users can have multiple concurrent logins to the GN0116 Guardian Monitor Center. If checked, this item disables multiple concurrent logins by the same user. **Note:** This policy does not affect the total number of different users that can log into the server, only the number of connections the same user can have to the server at one time.
Enable Password Expires After	If checked, you can set the number of days after which users must change their login password. The default setting is 90 days. **Note:** This global setting is applied individually to user accounts depending on the day the account was created, or the last time the password was changed.
Enable Login Failure	If checked, users will be unable to login to the GN0116 Guardian Monitor Center for a period of time after a specified number of failed login attempts. **Note:** If you don't check this box, users can attempt to login an unlimited number of times with no restrictions. For security purposes, we recommend that you enable this policy. ◆ **Failures** – The number of login failures a user is allowed before having to wait to attempt another login. ◆ **Timeout** – The number of minutes a user must wait before attempting another login.

IP Filter Policy

Checking *IP Filter Enable* gains access to the IP filtering controls. Filter lists of IP addresses are categorized into two groups: included IP addresses and excluded IP addresses. By clicking either *Include IP* or *Exclude IP*, the current IP filter list is displayed in the textbox.

Adding IP Addresses

To add IP addresses to the filter list (after selecting either *Include IP* or *Exclude IP*) click **Add**. The following IP address input box appears.



You have the option of adding a single IP address or a range of IP addresses to the filter list.

To add a single IP address:

1. Select **Single IP**.
2. Key in the IP address.
3. Click **Add**. You can repeat steps 1–3 as often as necessary to continue adding IP addresses to the filter list.
4. When you are finished adding IP addresses to the filter list, click **OK**.

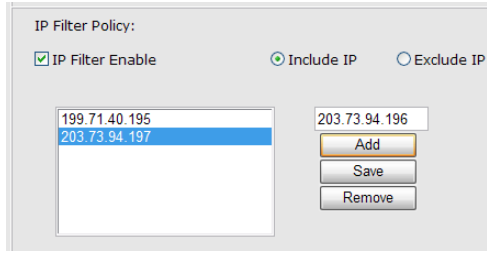
To add a range of IP addresses:

1. Select **IP Field**.
2. Key in the start IP address of the range into **Input the start IP**.
3. Key in the end IP address of the range into **Input the end IP**.
4. Click **Add**. You can repeat steps 1–4 as often as necessary to continue adding IP address ranges to the filter list.

Editing IP Addresses

IP addresses in either the *Include IP* or *Exclude IP* filter lists can easily be edited. To edit an IP address:

1. Select either **Include IP** or **Exclude IP** to view the proper filter list.
2. Select an IP address from the filter list.
3. Click **Edit**. A textbox appears above the Add button where you can edit the IP address.



4. After editing the IP address, click **Save**.

Removing IP Addresses

IP addresses in either the *Include IP* or *Exclude IP* filter lists can easily be removed. To remove an IP address:

1. Select either **Include IP** or **Exclude IP** to view the proper filter list.
2. Select an IP address from the filter list.
3. Click **Remove**.

Protection Set

The *Protection Set* field is global time delay interval that controls how often *Logic Configuration* rules are executed on all GN0116 devices controlled by the Guardian Monitor Center.

GN0116 device port information updates to the Guardian Monitor Center are primarily based on the *Monitor Refresh Frequency* setting. However, if the *Monitor Refresh Frequency* setting has a relatively low value (less than 1 minute, for example), a situation can occur where a logic configuration rule is continually switching a port on and off, eventually causing the port to become damaged due to overuse.

For example, a temperature sensor is connected to a GN0116 R AI 1 port. The GN0116 has its *Monitor Refresh Frequency* set to 20 seconds and the R AI 1 port has a *Logic Configuration* rule set to switch Power Outlet 109 port off when the temperature sensed is less than 20 degrees Celsius. If the temperature sensor is placed in an area where the temperature changes frequently, it could be possible that, based on the *Logic Configuration* rule, Power Outlet 109 port could be switched on and off every 20 seconds – eventually damaging the port.

The *Protection Set* field sets a global time delay interval, in minutes, that overrides the *Monitor Refresh Frequency* setting and controls how often the *Logic Configuration* rules are executed on specific ports of GN0116 devices. The default value is 5 minutes.

In the example above, the *Monitor Refresh Frequency* would update information to the Guardian Monitor Center every 20 seconds, but the *Protection Set* setting would protect Power Outlet 109 port from being turned off for 5 minutes, and then it would be turned off only if the temperature sensed by R AI 1 port was still less than 20 degrees Celsius.

The *Protection Set* and *Delta Set* (page 77) settings can be used together to prevent damaging a port.

Login String

The *Login String* field lets a system administrator specify a login string (in addition to the IP address) that users must include when accessing the GN0116 Guardian Monitor Center with a browser. For example:

```
192.168.0.126/abcdefg
```

Note: 1. There must be a forward slash between the IP address and the string.

2. If no login string is specified here, anyone will be able to access the GN0116 login page using the IP address alone. This makes your installation less secure.

For security purposes, we recommend that you change this string periodically.

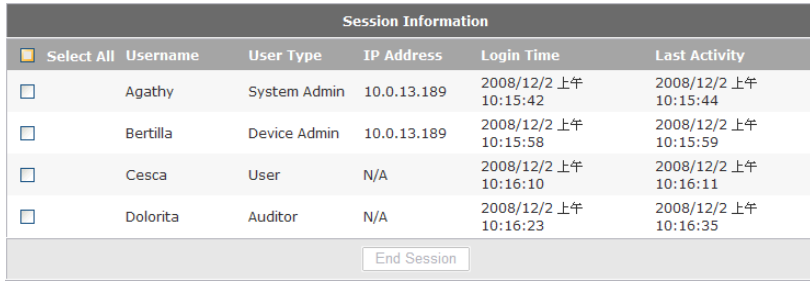
Account Policy

In the Account Policy section, system administrators can set policies governing usernames and passwords. Check a policy and enter the required information in the appropriate fields. A description of each item is given in the following table.

Item	Description
Disable Username Length	Disables the need for a username and password to log into the Guardian Monitor Center server.
Minimum Username Length	Sets the minimum number of characters required for a username. Enabled by default, but can be disabled by selecting **Disable username length**.
Minimum Password Length	Sets the minimum number of characters required for a password. Enabled by default, but can be disabled by selecting **Disable username length**.
Password must contain at least one uppercase letter, one lowercase letter and one number.	Check this item to requires users to include at least one uppercase letter, one lowercase letter and one number in their password. **Note:** This policy does not affect existing user accounts. Only new user accounts created after this policy has been enabled, and users required to change their passwords are affected.

User Sessions

The User Sessions page displays the Session Information table listing the users who have active sessions.



A description of each item in the Session Information table is given below.

Column	Description
Select All	Click this to quickly select all user sessions. Click it again to deselect all user sessions.
Username	The username of the logged in session.
User Type	The user type of the logged in session.
IP Address	The IP address of the logged in computer. Controlled by the *IP Address Display* setting. See page 61 for details.
Login Time	The time that the user logged in and started the session.
Last Activity	The time that the Guardian Monitor Center last logged any activity by the user.

Ending User Sessions

Any or all active sessions can be ended by a system administrator, including his own. To end active user sessions:

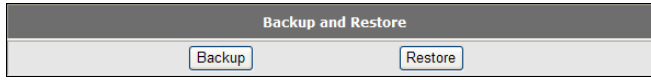
1. Select the user sessions to be ended by clicking the checkbox next to their username. You can select as many user sessions as you want, including your own.

   Note: To quickly select all active sessions, click **Select All**. If you have chosen to end your own session, you will automatically be logged out of the Guardian Monitor Center.

2. Click **End Session**.

Maintenance

The Maintenance page gives you the option of backing up or restoring Guardian Monitor Center configuration data.



Backup files are stored on the GN0116 Guardian Monitor Center server and contain the following information:

- Port configuration settings
- User account settings
- System information

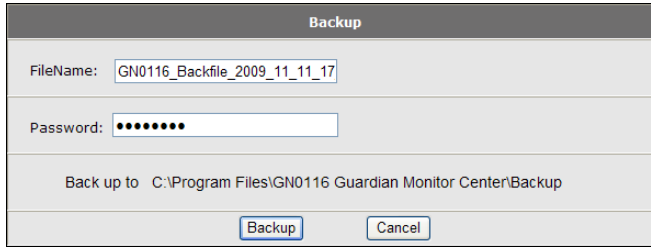
Some information is not saved in the backup files such as:

- Log information
- Sensor data received from devices connected to any GN0116

Backing Up Configuration Data

To backup the Guardian Monitor Center configuration data:

1. Click **Backup** on the Maintenance page. A dialog box similar to the one below appears.



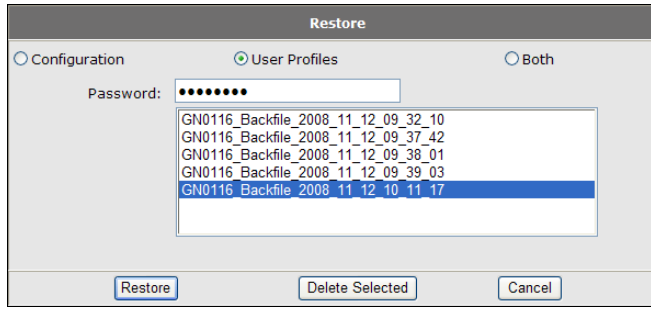
   You can choose to leave the default file name which includes the date and time of the backup file, or you can key in a file name of your own. Both a file name and a password are required before you can save the file.

2. Key in a password for the backup file.
3. Click **Backup** to save the file, or click **Cancel** to exit without saving.
4. Click **Cancel** to exit.

Restoring Configuration Data

To restore a saved version of the Guardian Monitor Center configuration data:

1. Click **Restore** on the Maintenance page. A dialog box similar to the one below appears.

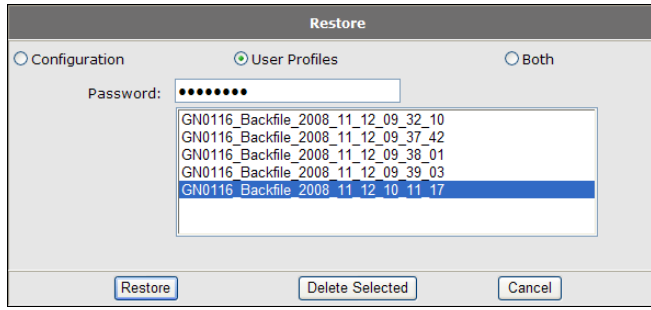


1. Select the your choice of restoring only system configuration information (port and device management information), user profile information, or both.
2. Select one of the backup files from the list.
3. Type in the password for the selected file.
4. Click **Restore** to restore the selected backup information, or click **Cancel** to exit without restoring any information.
5. Click **Cancel** to exit.

Deleting Configuration Data

To delete a saved version of the Guardian Monitor Center configuration data:

1. Click **Restore** on the Maintenance page. A dialog box similar to the one below appears.



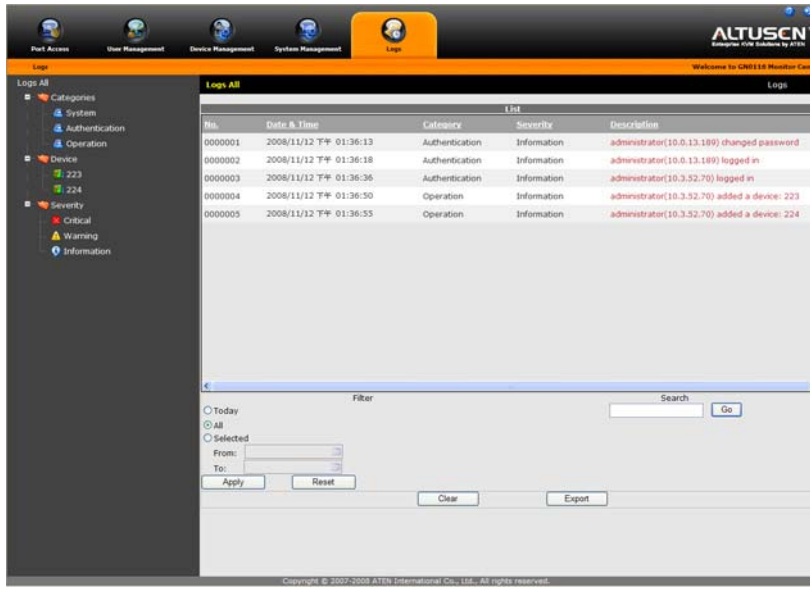
1. Select one of the backup files from the list.
2. Type in the password for the selected file.
3. Click **Delete Selected** to delete the backup file, or click **Cancel** to exit without deleting the file.
4. When you are finished deleting files, click **Cancel** to exit.

Chapter 8
Logs

Overview

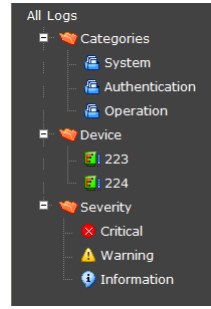
A log of events is kept in a database on the Guardian Monitor Center server and is viewable from the Logs page.

The Logs page is divided into three main areas: the Preset Filter side bar, the List Table, and the User Defined Filter. Each of these areas is described in the sections that follow.



Preset Filters

The Logs page side bar presents a tree view listing of preset filters for quickly filtering information in the List Table.

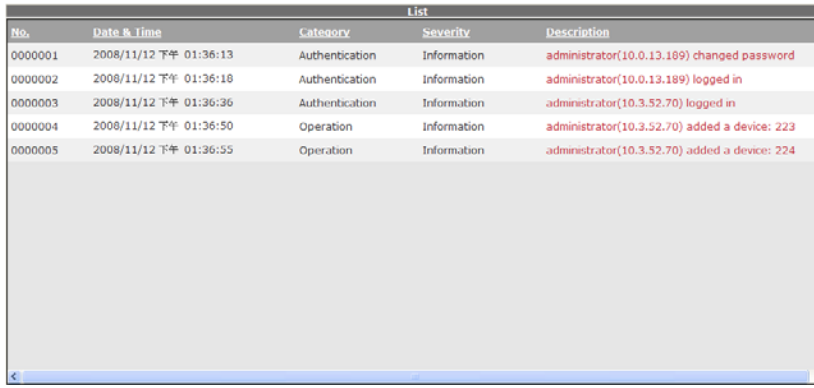


The following table describes the preset filter options.

Item	Description
All Logs	Displays all log records. This is the default view for the List Table.
Categories	Filters records according to their category. Choices are **System**, **Authentication**, or **Operation**. **Note:** Clicking **Categories** filters all records with a category setting.
Devices	Filters records by the device selected. **Note:** Clicking **Devices** filters all records with a device setting.
Severity	Filters records according to their severity. Choices are **Critical**, **Warning**, or **Information**. **Note:** Clicking **Severity** filters all records with a severity setting.

The List Table

The List Table is the main viewing area of the log records.



When a list of records is generated a number is assigned to each record. The number is used as a unique identifier for each of the records in the list. Selecting any of the Preset Filters from the side bar, or creating a user defined filter generates a new list of renumbered records. Sorting the list (see page 40) does not generate a new list of records and does not affect a record's number.

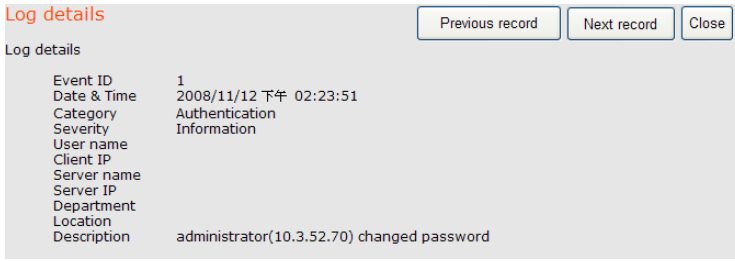
Note: The maximum number of records displayed in the list is 10,000. If the number of records exceeds the maximum, the earliest records are dropped from the list as each new record is added. However, all records are kept in the log database and can be viewed by exporting the log to a CSV file (see *Exporting the Log*, page 105).

List Table Sorting

You can sort the information displayed in the List Table by clicking any of column headings. For more information on sorting information in the Interactive Display Panel, see *Sort Order of Information*, page 40.

Log Details

Clicking the Description of a record will display its Log details.

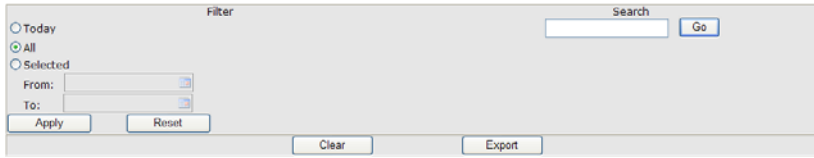


Navigation Buttons

Navigation buttons are provided to conveniently scroll through the log details of other records without having to return to the List Table to click and view a record's description. Click **Previous record** or **Next record** to view other records, or **Close** to exit the Log Details page and return to the List Table.

User Defined Filtering

The User Defined Filter can filter records in the List View by methods other than using the Preset Filters (page 100).



Users with log viewing privileges can use the User Defined Filter to display log records by date and time, for the current day, or by searching for a text string in a record's Description. Other options include clearing the log of records and exporting the log to a file. The default sort order for user defined filtered log records is by date and time. Filtering options are described in the following sections.

Today's Records

To filter the log records so that only the current day's records are shown:

1. Click the **Today** radio button.
2. Click **Apply**. The current day's log records are shown in the List Table.

All Records

To display all the log records:

1. Click the **All** radio button.
2. Click **Apply**. All the log records are shown in the List Table.

Note: You can also display all the log records using the following methods:

1. By clicking **Logs** under the Welcome message.
2. By clicking **Logs** under the Port Access icon.
3. By clicking **All Logs** at the top of the side bar.

Selected Records

To filter the log so that records over a range of time are shown:

1. Click the **Selected** radio button.
2. Click the text box beside From: and select a date and time.
3. Click the text box beside To: and select another date and time.

   Note: The To: date and time must be later than the From: date and time.

4. Click **Apply**. The selected log records are shown in the List Table.

Calendar Functions

The From: and To: date and time selection calendars have the following functions:

- The double-left and double-right arrows incrementally change the calendar by one year.
- The single-left and single-right arrows incrementally change the calendar by one month.
- Clicking the month will display a list of all months.
- Clicking the year will display a scrolling list of years from 1900 to 2099.
- The time format is HH:MM:SS using a 24-hour clock.
- Hovering over the OK button displays additional CLEAR and NOW buttons. The CLEAR button clears the date and time value from the text box. The NOW button enters the current date and time into the text box.
- Clicking OK enters the selected date and time values into the text box.

Resetting Input Values

Click **Reset** to clear the current values from the To: and From: text boxes, as well as the search text box.

Searching the Log

Log records can be filtered using the Search function on text strings in a record's Description. To search for a text string in a record's Description:

1. Enter a text string into the Search text box.
2. Click **Go**. All records with descriptions matching the text string are displayed in the List Table.

Note: The Search function cannot be used together with any of the Preset Filters or other User Defined Filter functions, and is performed on all records in the log.

Other Log Options

In addition to filtering and searching the log, you also have the option of clearing the log, or exporting it to a file.

Clearing the Log

To clear the log, click **Clear** near the bottom of the Logs webpage. All records in the log are deleted from the List View.

Exporting the Log

The log can be exported as a comma-separated value (CSV) file. By default, the entire log is exported to the CSV file, regardless of which records are shown in the List Table. To export the log:

1. Click **Export** near the bottom of the Logs webpage.
2. Click **Save** in the File Download dialog box.
3. Click **Save** in the Save As dialog box to accept the default folder location and filename (LogRecordsData.csv). You may optionally navigate to another folder and key in another filename.

Note: If another log file with the same name already exists, you have the option of overwriting it, or saving the file with a different name.

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Appendix

Technical Support

Technical support is available both by email and online (with a browser over the web):

International

Email Support		support@aten.com
Online Support	Technical Support	http://support.aten.com
	Troubleshooting Documentation Software Updates	http://www.aten.com
Telephone Support		886-2-8692-6959

North America

Email Support		ATEN TECH	support@aten-usa.com
		ATEN NJ	sales@aten.com
Online Support	Technical Support	ATEN TECH	http://www.aten-usa.com/support
		ATEN NJ	http://support.aten.com
	Troubleshooting Documentation Software Updates	ATEN TECH	http://www.aten-usa.com
		ATEN NJ	http://www.aten.com
Telephone Support		ATEN TECH	1-888-999-ATEN
		ATEN NJ	1-732-356-1703

When you contact us, please have the following information ready beforehand:

- Product model number, serial number, and date of purchase.
- Your computer configuration, including operating system, revision level, expansion cards, and software.
- Any error messages displayed at the time the error occurred.
- The sequence of operations that led up to the error.
- Any other information you feel may be of help.

Limited Warranty

ALTUSEN warrants this product against defects in material or workmanship for a period of one (1) year from the date of purchase. If this product proves to be defective, contact ALTUSEN's support department for repair or replacement of your unit. ALTUSEN will not issue a refund. Return requests can not be processed without the original proof of purchase.

When returning the product, you must ship the product in its original packaging or packaging that gives an equal degree of protection. Include your proof of purchase in the packaging and the RMA number clearly marked on the outside of the package.

This warranty becomes invalid if the factory-supplied serial number has been removed or altered on the product.

This warranty does not cover cosmetic damage or damage due to acts of God, accident, misuse, abuse, negligence or modification of any part of the product. This warranty does not cover damage due to improper operation or maintenance, connection to improper equipment, or attempted repair by anyone other than ALTUSEN. This warranty does not cover products sold AS IS or WITH FAULTS.

IN NO EVENT SHALL ALTUSEN'S LIABILITY EXCEED THE PRICE PAID FOR THE PRODUCT. FURTHER, ALTUSEN SHALL NOT BE RESPONSIBLE FOR DIRECT, INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THE PRODUCT, ITS ACCOMPANYING SOFTWARE, OR ITS DOCUMENTATION. ALTUSEN SHALL NOT IN ANY WAY BE RESPONSIBLE FOR, WITHOUT LIMITATION, LOSS OF DATA, LOSS OF PROFITS, DOWNTIME, GOODWILL, DAMAGE OR REPLACEMENT OF EQUIPMENT OR PROPERTY, AND ANY EXPENSES FROM RECOVERY, PROGRAMMING, AND REPRODUCTION OF ANY PROGRAM OR DATA.

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ALTUSEN reserves the right to revise or update its product, software or documentation without obligation to notify any individual or entity of such revisions, or update.

For details about extended warranties, please contact one of our dedicated value added resellers.

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