GE PulseNET Standard 4.5.0
Release Notes

Date of Release

April 2019

Software Description

GE MDS PulseNET is a software application used for monitoring devices in Industrial Communications Networks. GE MDS PulseNET Standard Edition monitors up to 500 devices, while GE MDS PulseNET Enterprise is intended for large-scale operations with 25,000+ devices. For additional information, visit the GE MDS website.

System Requirements

- **CPU:** Quad Core at 2 GHz or greater
- **Memory:** 16 GB or greater of available memory
- **Disk Space:** 120 GB or greater of available storage
- **Operating System: Windows 7** (SP1 with Convenience Rollup), **Windows 10** (with all current updates), **Microsoft Windows Server** (2008, 2012/R2 or 2016 with all current updates), **Red Hat Enterprise Linux** (version 7 or greater), **SuSe Linux Enterprise Server** (version 11 or greater)
- **Software: Java 8** (or newer)
- **Browser: Chrome** (version 55 or newer), **Firefox** (version 52 or newer), **Internet Explorer** (version 11 or newer) or **Edge** (version 41.16299.402.0 or greater)

⚠ **NOTE:** PulseNET has only been fully tested on English language OS versions; International languages of OS versions have not been fully tested.

Additional GE MDS PulseNet Documentation

The Installation Guide
The User Guide
The Administration Guide

Additions

New Features

- Export tables as a comma separated values (csv) files
- Change Diary for GE Reasons to monitor device property changes

Fixed Issues

- SDMS configuration tab not visible after discovery [issue #S-2555]
- Alert popup hover may not disappear after a screen refresh [issue #S-1760]
- Browser suggests auto-fill form field values [issue #S-2668]
- Unable to enable trap/email normal via quick update [issue #S-2881]
- Decommissioned MPRS shows in auto-discovery but fails re-authorization [issue #S-2994]
- Disallow delete of SNMP community/user if in use [issue #S-2983]
- No Data for Orbit Wifi Clients [issue #S-2943]
- Add Description column to Remotes Connected tab [issue #S-2924]
- Sending email can fail if authorization is not required by server [issue #S-2890]
- Unable to enable trap/email normal via quick update [issue #S-2881]

Known Issues

- Extra lines displayed when zooming GIS Map [issue #S-2254]
- Recommission DLINK AP before recommissioning any Remotes [issue #S-2182]
- Bar chart option is missing from the graph customizer menu [issue #S-1207]
- Option to save bookmarks [issue #S-1704]
- Report Templates unable to specify sort order for report output [issue #S-1837]
- Sorting and filtering not working when Selecting Devices in the Topology Explorer [issue #S-1708]
- Lower resolution screens do not display properly [issue #S-2312]
- Time discrepancy if user's Time Zone is different than the server [issue #S-2841]
- Differentiate between collection error/missing SNR/RSSI values [issue #S-2923]

GE PulseNET Install File Validation

A SHA256 hash code is included with the zipped files to validate there was no corruption in the download.

⚠ **NOTE:** For the migration and upgrade processes to be successful, the new system MUST be licensed properly before the migration is attempted.

GE PulseNET Migration Process

Customers with an <u>existing GE PulseNET 3.x</u> environment should obtain the GE PulseNET 4.5.0 full install file and follow the steps in the **GE PulseNET 4.5.0 Installation Guide.** For help in migrating to the new 4.5 platform, contact GE Support.

GE PulseNET Upgrade Process

Customers with an existing GE MDS PulseNET 4.1.0, 4.2.0, 4.3.0 or 4.4.0 environments should obtain the GE MDS PulseNET 4.5.0 upgrade file and follow the steps in the **GE PulseNET 4.5.0 Installation Guide**. For help in upgrading to the new 4.5 platform, contact GE Support.

Secure Deployment Guidelines

GE recommends securing the PulseNET server using a defense in depth approach. Some key security considerations when deploying the PulseNET application include ensuring:

1. Electronic and physical access to the PulseNET server is limited to only authorized individuals and clients
2. The host server is dedicated to the PulseNET application only
3. The PulseNET server is not accessible from the Internet
4. The principle of least privilege is applied to the host operating system
5. The PulseNET host server is appropriately hardened and maintained to the current patch level as indicated in these release notes and applicable setting as indicated by the National Checklist Program
6. Ensure that users with local logon privileges to the PulseNET server do so with accounts which uniquely identify them

7. Firewall rules should be established which allow only those engineers' workstations to connect to the PulseNET server on the services listed in the following table:

Function	Access	Port Number	Traffic Direction	Protocol
HTTP	External	8080	Inbound	TCP
HTTPS	External	8443	Inbound	TCP
AJP	Internal	8009	Inbound/Outbound	TCP
Shutdown	Internal	8005	Inbound/Outbound	TCP
Database	Internal	27017	Inbound/Outbound	TCP
SNMP	External	161	Outbound	UDP
Email	External	25	Outbound	TCP
ICMP	External	ICMP	Outbound	ICMP
FTP	External	21	Outbound	TCP
TELNET	External	23	Outbound	TCP
Heartbeat	External	61616	Inbound/Outbound	TCP
Netconf	External	830	Outbound	TCP
DLINK	External	9999	Outbound	TCP

Internal: This port is only used internally on the GE PulseNET server.

External: This port provides communication with other systems. Ensure Firewall is configured to allow port access.

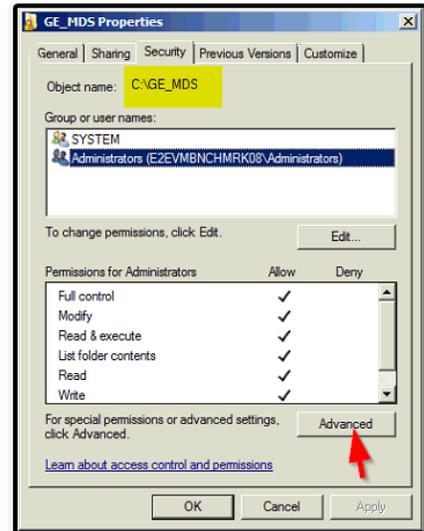**Telnet:** Used by Mercury and iNET radios

Securing File System

In PulseNET Enterprise 4.5 on a Windows system, the software's home directory may need to be secured from possible non-administrator Write Inherited Permissions.

To lock down your file system, start by viewing the properties of the GE PulseNET home directory.
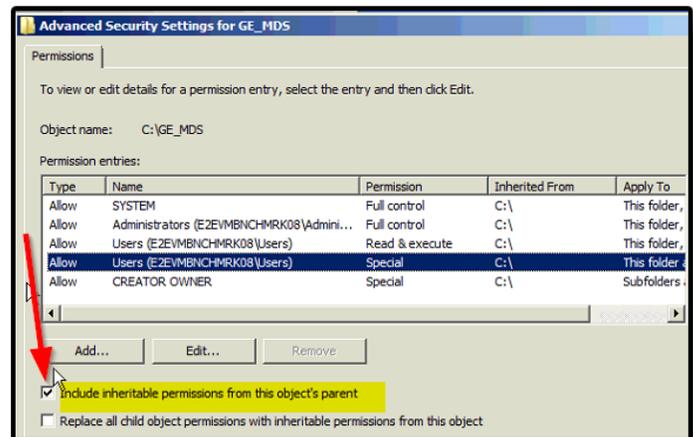
Select the **Advanced** button.

In the Advanced Security Settings view, select the **Change Permissions** button.
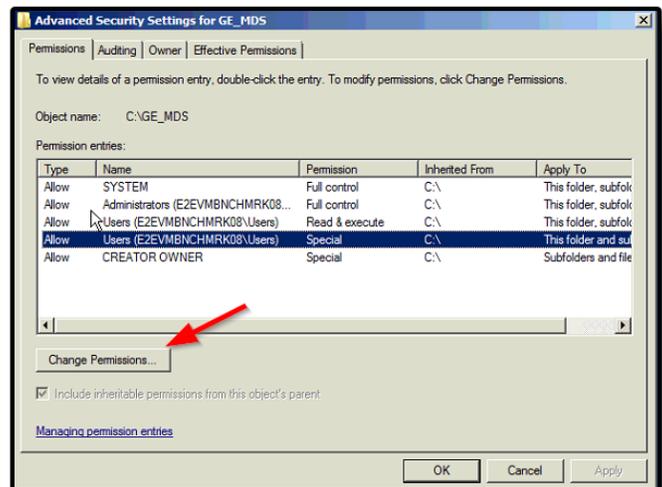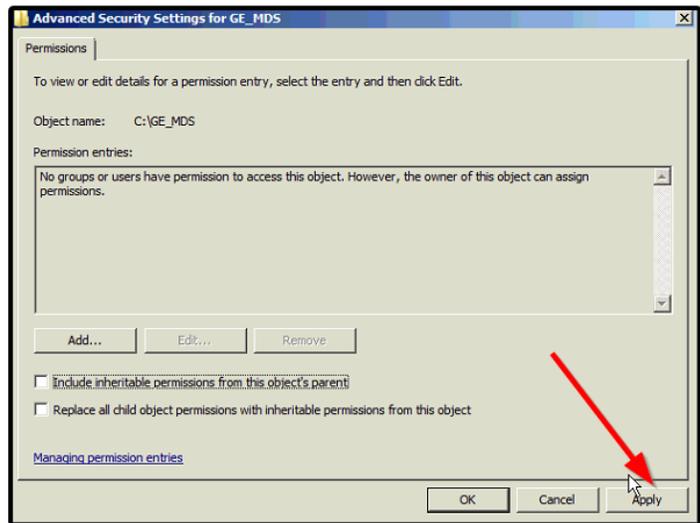
Uncheck the box next to:
"I*nclude inheritable permissions from this object's parent*".
A warning message will be displayed. Click the **Remove** button.
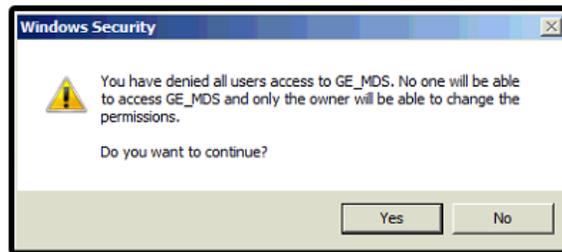
Verify all permissions are removed.
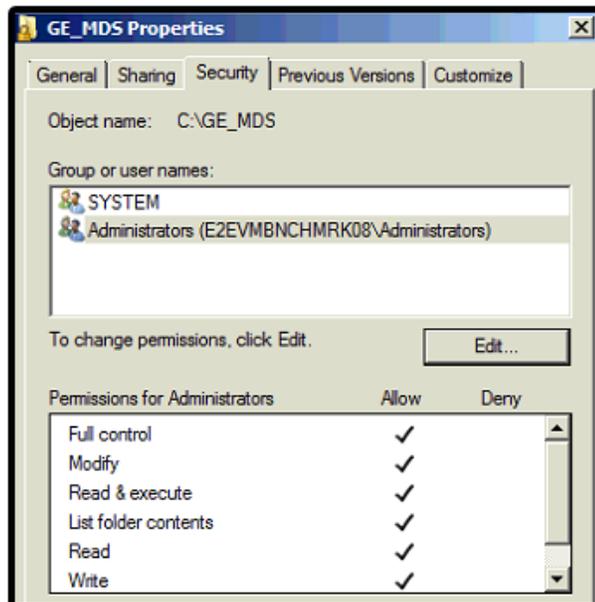
Select the **Apply** button.

This Windows Security warning message may pop up.

Select the **Yes** button to continue.

All permissions for the GE PulseNET home directory are now lost for all users.

Add System and Administrator Users back with full control using the **Edit** button.

About GE MDS

Over two decades ago GE MDS began building radios for business-critical applications. Since then we have installed millions of radios in countries across the globe. We overcame impassable terrain, brutal operating conditions, and complex network configurations to succeed. We also became experts in wireless communication standards and applications worldwide. The result of our efforts is that today thousands of organizations around the world rely on GE MDS wireless networks to manage their critical assets.

Thanks to our durable products and comprehensive solutions, GE MDS is the wireless leader in industrial automation— including oil and gas production and transportation, water/wastewater treatment, supply, and transportation, electric transmission and distribution, and many other applications.

GE MDS is also at the forefront of wireless communications for private and public infrastructure and online transaction processing. As your wireless needs change, you can continue to expect more from GE MDS. We'll always put the performance of your network above all.

GE MDS ISO 9001 Registration

GE MDS adheres to the internationally-accepted ISO 9001 quality system standard.

To GE Customers

We appreciate your patronage. You are our business. We promise to serve and anticipate your needs. We will strive to give you solutions that are cost effective, innovative, reliable and of the highest quality possible. We promise to engage in a relationship that is forthright and ethical, one that builds confidence and trust. Data sheets, frequently asked questions, application notes, firmware upgrades and other updated information is available on the GE MDS Web site.

Manual Revision and Accuracy

This manual was prepared to cover a specific version of our product. Accordingly, some screens and features may differ from the actual version you are using. While every reasonable effort has been made to ensure the accuracy of this guide, product improvements may also result in minor differences between the manual and the product shipped to you. If you have additional questions or need an exact specification for a product, please contact our Customer Service Team using the information below. In addition, manual updates can often be found on the GE MDS Web site.

About End 2 End Technologies

End 2 End (E2E) Technologies offers a unique combination of wireless communications and information technology expertise. We improve efficiency, reduce risk and lower the cost of industrial field operations via modernization and management of our customer's wireless communications networks. From initial planning through lifecycle support we assist your team in adopting a wireless solution that keeps communication costs low while maximizing network reliability and performance. For more information visit us at **www.e2etechinc.com**.

Customer Support

If you have problems, comments, or questions pertaining to the GE PulseNET application, please contact GE MDS via one of the methods below:

Phone: 585-241-5510
Email: gemds.techsupport@ge.com
Fax: 585-242-8369

License Credits

GE PulseNET contains several third party components. Please refer to the complete list of these components at **www.e2etechinc.com/legal**