Part Number D301703X412
December 2014

OpenEnterprise™ Field Tools 1.0 Quick Start Guide

IMPORTANT! READ INSTRUCTIONS BEFORE STARTING!

Be sure that these instructions are carefully read and understood before any operation is attempted. Improper use of this device in some applications may result in damage or injury. The user is urged to keep this book filed in a convenient location for future reference.

These instructions may not cover all details or variations in equipment or cover every possible situation to be met in connection with installation, operation or maintenance. Should problems arise that are not covered sufficiently in the text, the purchaser is advised to contact Emerson Process Management, Remote Automation Solutions for further information.

EQUIPMENT APPLICATION WARNING

The customer should note that a failure of this instrument or system, for whatever reason, may leave an operating process without protection. Depending upon the application, this could result in possible damage to property or injury to persons. It is suggested that the purchaser review the need for additional backup equipment or provide alternate means of protection such as alarm devices, output limiting, fail-safe valves, relief valves, emergency shutoffs, emergency switches, etc. If additional information is required, the purchaser is advised to contact Remote Automation Solutions.

RETURNED EQUIPMENT WARNING

When returning any equipment to Remote Automation Solutions for repairs or evaluation, please note the following: The party sending such materials is responsible to ensure that the materials returned to Remote Automation Solutions are clean to safe levels, as such levels are defined and/or determined by applicable federal, state and/or local law regulations or codes. Such party agrees to indemnify Remote Automation Solutions and save Remote Automation Solutions harmless from any liability or damage which Remote Automation Solutions may incur or suffer due to such party's failure to so act.

ELECTRICAL GROUNDING

Metal enclosures and exposed metal parts of electrical instruments must be grounded in accordance with OSHA rules and regulations pertaining to "Design Safety Standards for Electrical Systems," 29 CFR, Part 1910, Subpart S, dated: April 16, 1981 (OSHA rulings are in agreement with the National Electrical Code).

The grounding requirement is also applicable to mechanical or pneumatic instruments that include electrically operated devices such as lights, switches, relays, alarms, or chart drives.

EQUIPMENT DAMAGE FROM ELECTROSTATIC DISCHARGE VOLTAGE

This product contains sensitive electronic components that can be damaged by exposure to an electrostatic discharge (ESD) voltage. Depending on the magnitude and duration of the ESD, this can result in erratic operation or complete failure of the equipment. Read supplemental document S14006 for proper care and handling of ESD-sensitive components.

Contents

Chapter 1 – Introduction

This manual provides a brief introduction to OpenEnterprise™ (OE) Field Tools and covers software installation, licensing and initial communications setup.

For full details on using the Field Tools software, please refer to the online help included in each component application.

In This Chapter

1.1 What is OpenEnterprise™ Field Tools?

OE Field Tools provides a single integrated package for connecting with ROC, FloBoss, and ControlWave devices to configure communications with Highway Addressable Remote Transducer (HART®) and *Wireless*HART devices. A field technician uses Field Tools software running on a laptop PC to establish communications with a controller/flow computer and launch AMS Device Configurator for that controller.

Field Tools supports either a direct serial connection or an IP connection to a single controller at any one time. You establish communications with the controller using Field Tools' New Connection wizard.

Once communications are active, you can launch AMS Device Configurator to view and configure field instrumentation connected to the controller or flow computer.

In addition, if you have separately installed configuration tools for the controller (ROCLINK or TechView) you can launch them through the Field Tools connection to configure any ROC, FloBoss, ControlWave, or Network 3000 device the tools routinely support.

1.1.1 AMS Device Configurator

AMS Device Configurator, which is included in Field Tools, provides a special subset of functionality from Emerson's Asset Optimization AMS Device Manager software suite.

AMS Device Configurator communicates with wired HART devices or IEC 62591 (*Wireless*HART) devices. *Table 1-1* shows the minimum recommended controller firmware revisions for full AMS compatibility.

Table 1- 1 Firmware Versions Required for Full AMS Compatibility

Controller/Flow Computer	Firmware Version
ROC 809/827	3.60 (or newer)
FloBoss 107	1.70 (or newer)
ControlWave Micro	5.71 (or newer)

Notes:

- IEC 62591 module firmware must be 1.10 (or newer)
- HART module (Series 2) firmware must be 1.15 (or newer)
- TechView software must be version 5.9 Patch A (or newer) (Patch A installed with Field Tools)
- ROCLINK software must be version 2.40 (or newer)

Chapter 2 – Installation and Licensing

This chapter covers installation and licensing of Field Tools software.

In This Chapter

2.1 Minimum System Requirements

For optimal performance, we recommend that your laptop PC meet the following minimum requirements:

- Intel® Core™2 Duo CPU at 2.00 GHz
- 4 GB RAM
- 2.5 GB available hard disk space to install the full software package
- Windows 7 for either 32-bit or 64-bit (Service Pack 1)
- USB port (for HART modem)

2.2 Before You Begin

Caution

AMS Device Configurator is incompatible with AMS Device Manager; they cannot reside on the same computer.

Field Tools cannot reside on a computer running any components of OpenEnterprise 2.x, OpenEnterprise 3.x, or OpenEnterprise Client/Server software.

TechView and other components of BSI_Config cannot be installed on a computer running OpenBSI Network Edition.

AMS Device Configurator functions only with controllers which have firmware supporting wired HART or IEC62591 (*Wireless* HART). See *Section 1.1.1 AMS Device Configurator* for details.

- You must have administrative privileges to install Field Tools.
- You must disable User Account Control (UAC) prior to the installation (you can re-enable it after the installation). See *Section 2.2.1*.
- As part of the installation both Eltima and MACTek® device software are installed automatically. Depending upon your permissions, Windows may require you to confirm these installations before the installation can proceed.

2.2.1 Disabling User Account Control (UAC) in Windows 7

1. Click **Start** > **Control Panel** to open the Windows Control Panel.
2. Click System and Security.

Figure 2-1. Control Panel

3. Click **Change User Account Control settings** (located under Action Center).

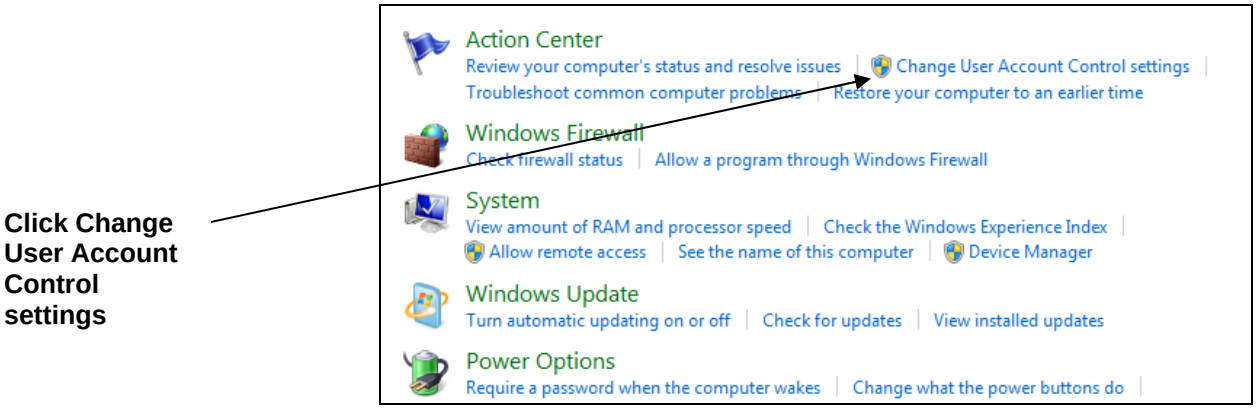


Figure 2-2. Change User Account Control Settings

4. Drag the sliding control down to **Never notify** and click **OK**.

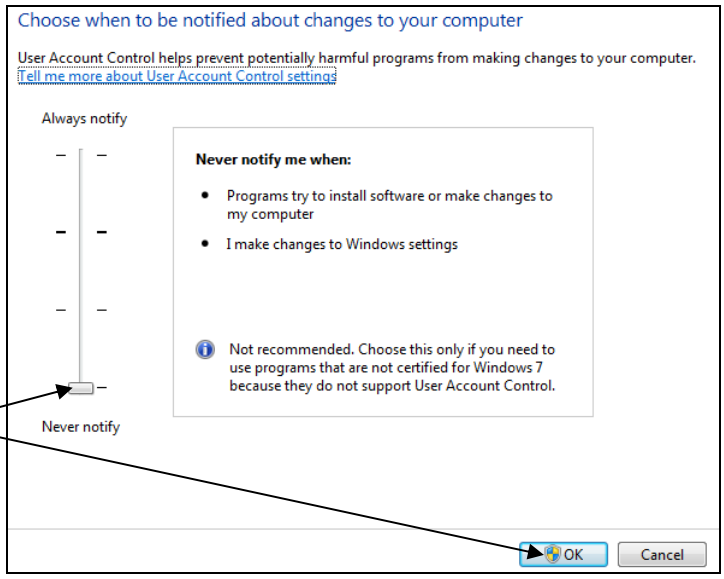


Figure 2-3. Changing User Account Control

2.3 Installing Field Tools

Insert the installation DVD-ROM in your DVD drive. The OpenEnterprise™ Field Tools introduction screen opens. Links for accessing documentation on the DVD as well as web resources for software licensing and support appear at the bottom of the introduction screen.

Notes:

- If, for any reason, the auto-start doesn't run right-click on SETUP.EXE in the root of the DVD and choose **Run as administrator**.
- You should only install from the DVD drive (drive D:); extracting files and loading from the desktop or other methods can cause an incorrect installation.

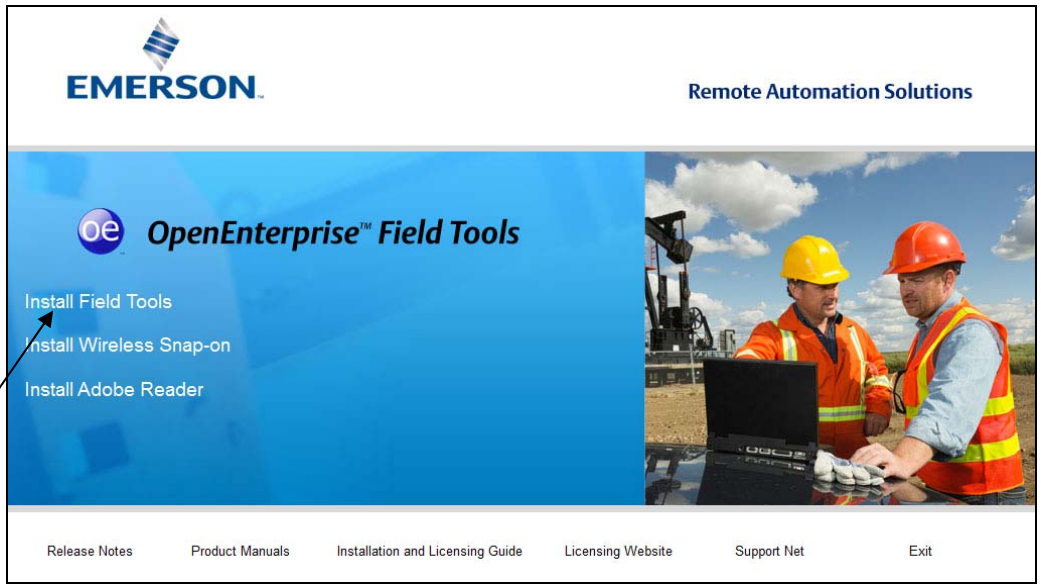


Figure 2-4. Field Tools Introduction screen

1. Click **Install Field Tools**.
2. The installation process starts and checks whether certain necessary software components exist on the laptop, and if they are not present, the installation process prompts you to install them. Click **Install**. **This process may take several minutes.** Some of the installations may require a reboot before you resume the Field Tools installation.

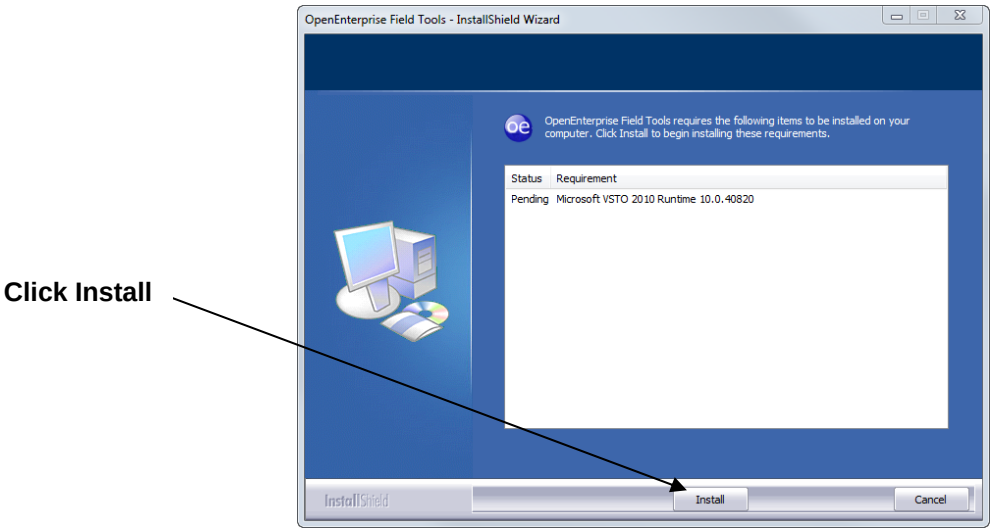


Figure 2-5. InstallShield Wizard

3. Once installation of the required components finishes, the OpenEnterprise Field Tools installation wizard starts:

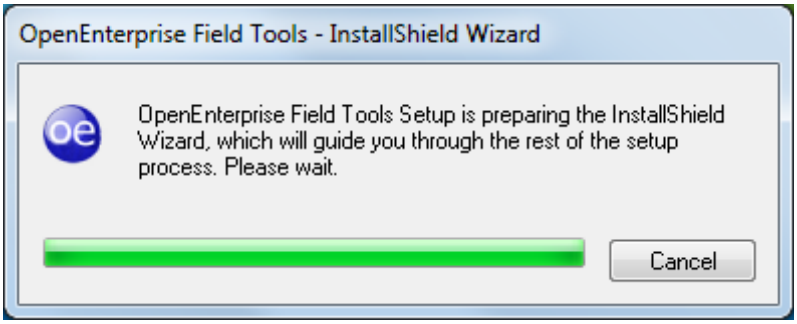


Figure 2-6. InstallShield Wizard

4. Click **Next**.

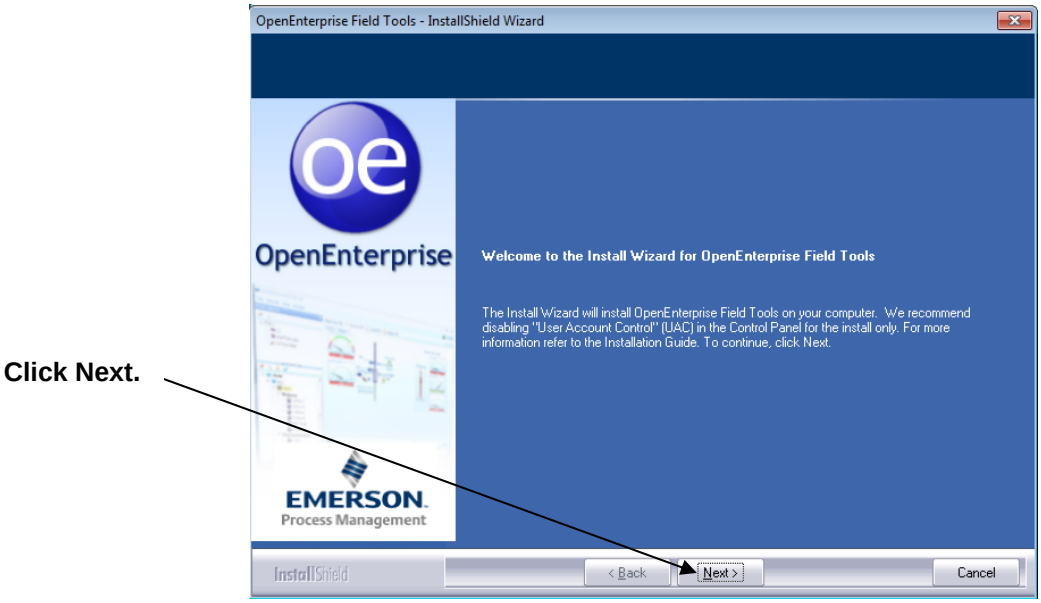


Figure 2-7. Installer Welcome screen

To proceed with the installation, click **I accept the terms of the license agreement** and then click **Next**.

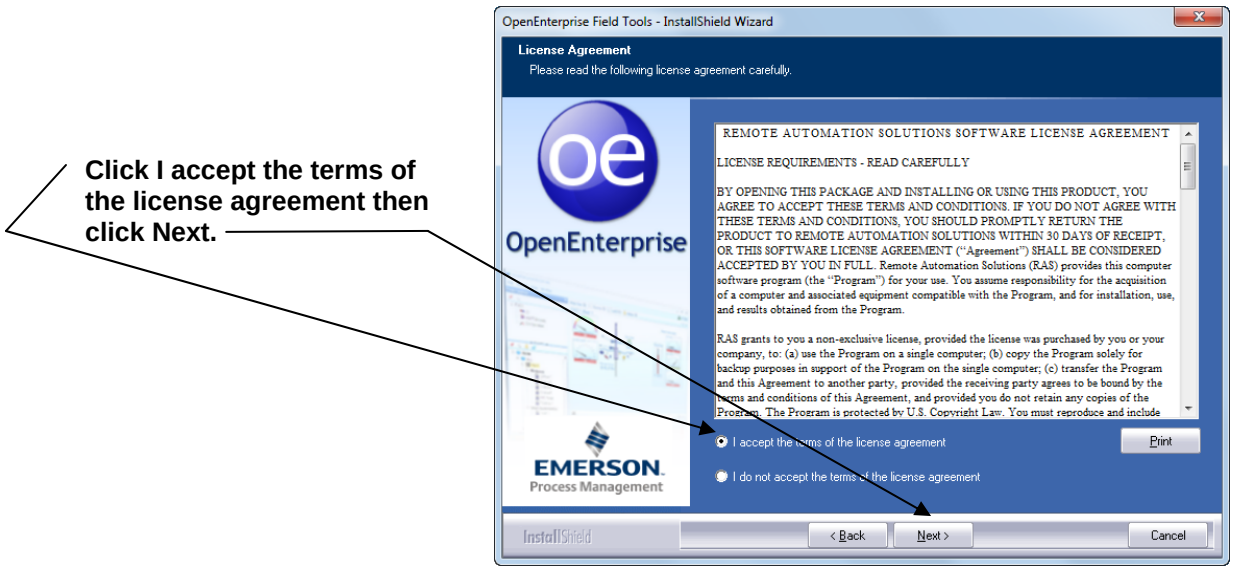


Figure 2-8. License Agreement screen

5. The installation proceeds. The installer program periodically reports which components are being installed. This may take several minutes:

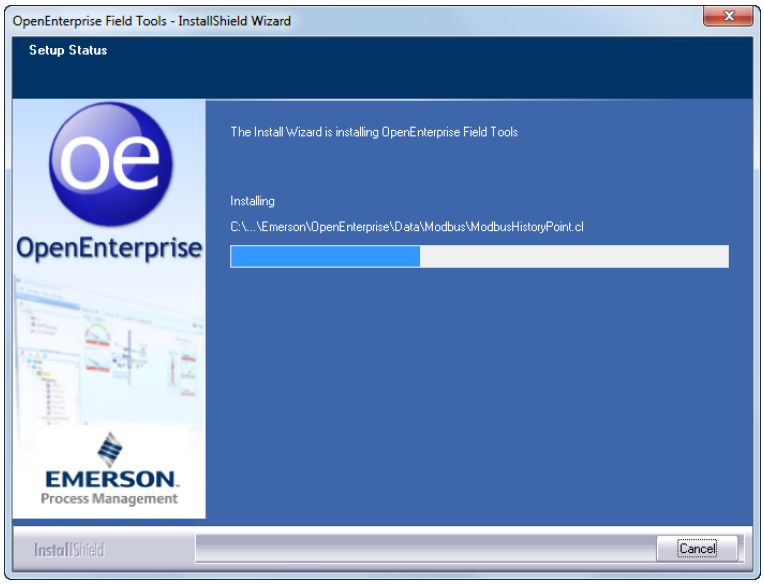
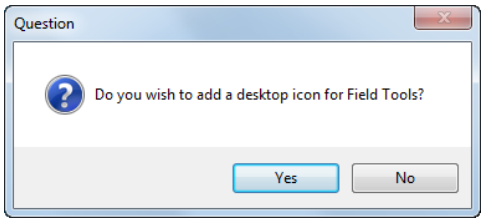


Figure 2-9. Setup Status screen

6. You'll be prompted to decide whether you want the installer to create a Field Tools desktop icon; click **Yes** if you want to start Field Tools from the desktop.



7. AMS Device Configurator is the last component in the Field Tools installation process. When you click **Finish**, the AMS Device Configurator installation process begins. Installation of AMS Device Configurator takes several minutes and prompts you to reboot after which it resumes the installation.

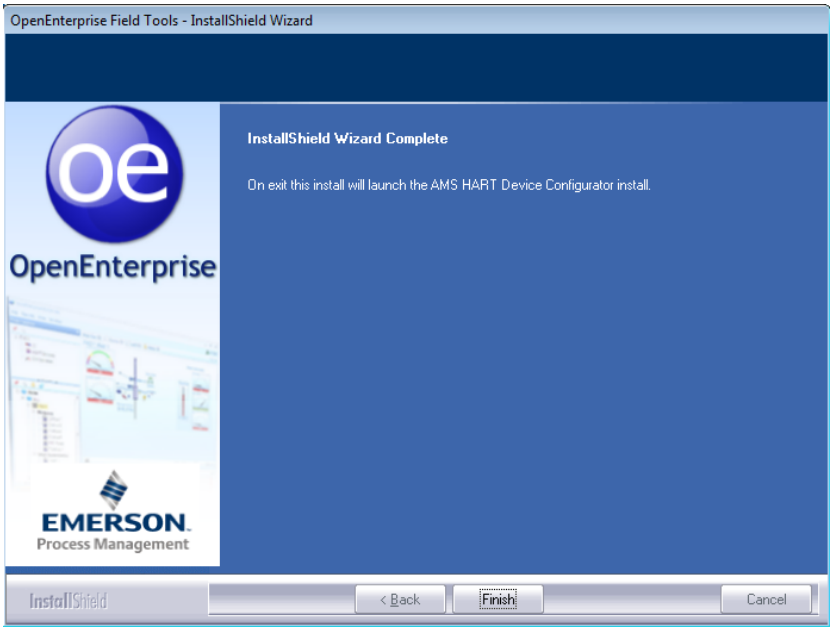


Figure 2-10. InstallShield Wizard Finish page

Notes:

- Do **not** install AMS Wireless SNAP-ON **before** you install AMS Device Configurator. Always install AMS Device Configurator **first**.
- After AMS Device Configurator installation completes, if you want to install the AMS Wireless SNAP-ON, return to the Field Tools Introduction screen (*Figure 2-4*) and choose **Install Wireless Snap-on**.

2.3.1 Special Notes for TechView Users

If you have the OpenBSI 5.9 version of TechView installed prior to installing Field Tools 1.0, the Field Tools installation automatically updates your TechView.exe file to version 5.9 Patch A. If you subsequently reinstall OpenBSI 5.9, you'll need to manually copy the 5.9 Patch A version of TechView.exe to the proper installation path on your PC. If you used the default installation paths, you can use the following examples, assuming your PC hard disk is the C drive:

For 64-bit OpenBSI Users:

Copy C:\program files (x86)\emerson\openenterprise\bin\TechView.exe C:\program files (x86)\bristol\openbsi\

For 32-bit OpenBSI Users:

Copy C:\program files\emerson\openenterprise\bin\TechView.exe C:\program files\bristol\openbsi\

2.4 Licensing the Software

After the initial installation, Field Tools software functions for a 30-day demo period.

The License Manager software displays the number of days remaining in the demo period as the **Demo Days Left** entry in the **State** field. To use Field Tools beyond the trial period you must license the software (see *Section 2.4.1*).

Notes:

- To license the software, you must have installed it and you must have an active Internet connection.
- Start and leave the License Manager software running throughout the entire licensing process. The licensing process must be performed in a single uninterrupted session.
- You need your License ID and Password to complete the process; you should have received these with the software DVD.

After you've licensed the software on a particular PC, if you decide you want to re-assign the license to a different PC, you can temporarily "park" the license on the License Registration website prior to re-assigning it (see *Section 2.4.2*).

2.4.1 Starting License Manager and Licensing Field Tools

1. Either click **Help > Licensing** from the menu bar in Field Tools, or click **Start > Programs > Emerson OpenEnterprise > Licensing > License Manager**.

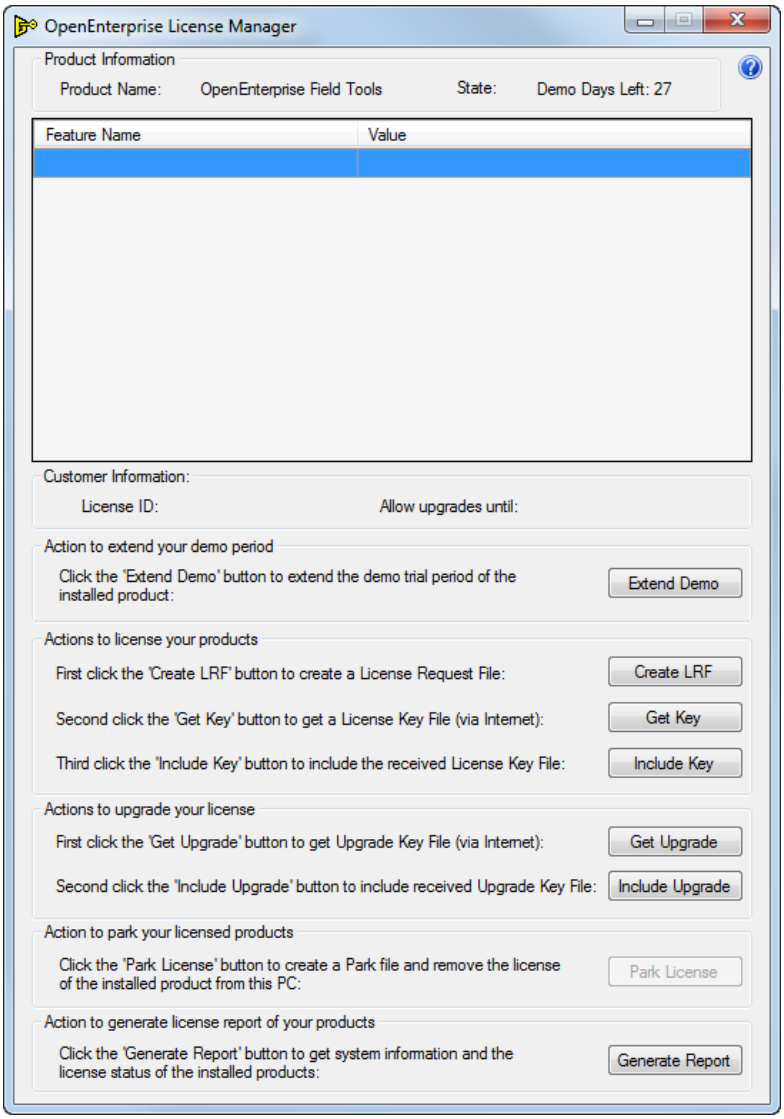


Figure 2-11. OpenEnterprise License Manager

2. Click the **Create LRF** button to generate a License Request File.

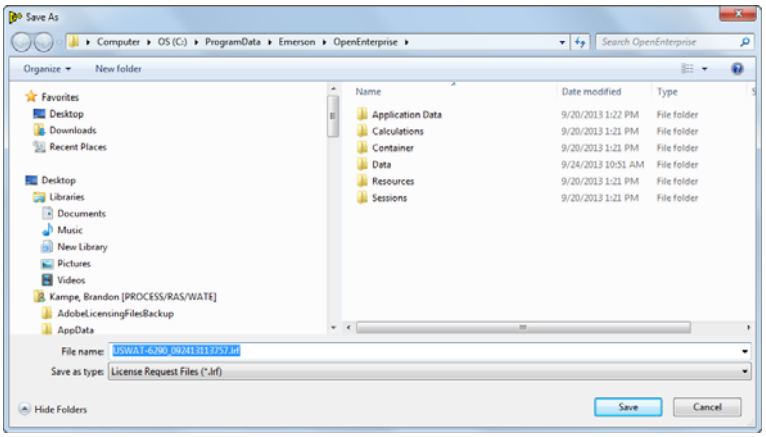


Figure 2-12. Saving the LRF File

Click **Save** and make note of the location where you store the file because you'll need it later.

3. A message box notifies you when the LRF file is complete. Click **OK** to proceed.

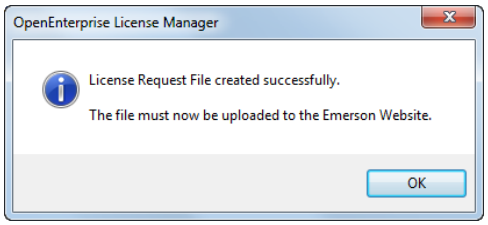


Figure 2-13. LRF Created Successfully

4. Now click **Get Key** in the License Manager to go to the software registration page of the Emerson Remote Automation Solutions website.

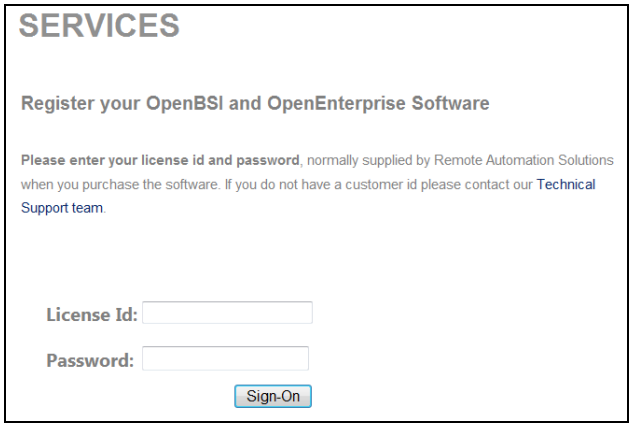


Figure 2-14. Signing on to the Website

5. Enter your **License Id** and **Password**, then click **Sign-On**.

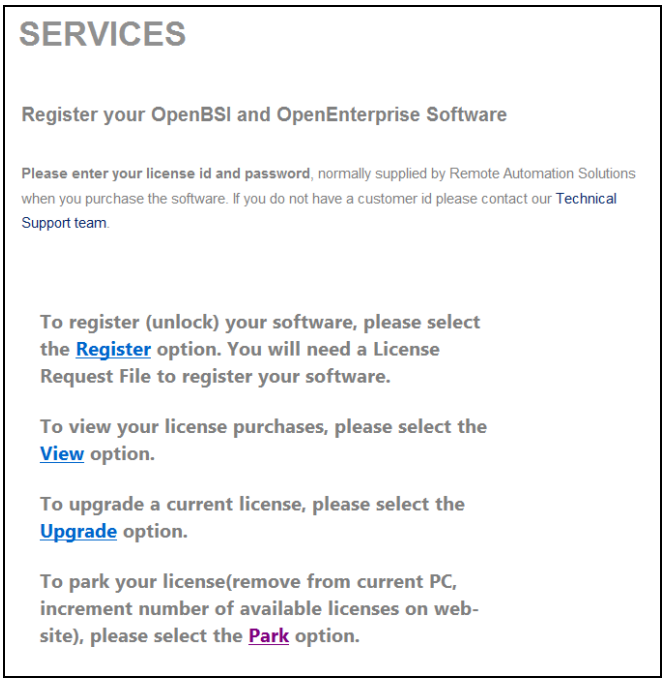


Figure 2-15. Registration Page Options

6. Click the **Register** option.

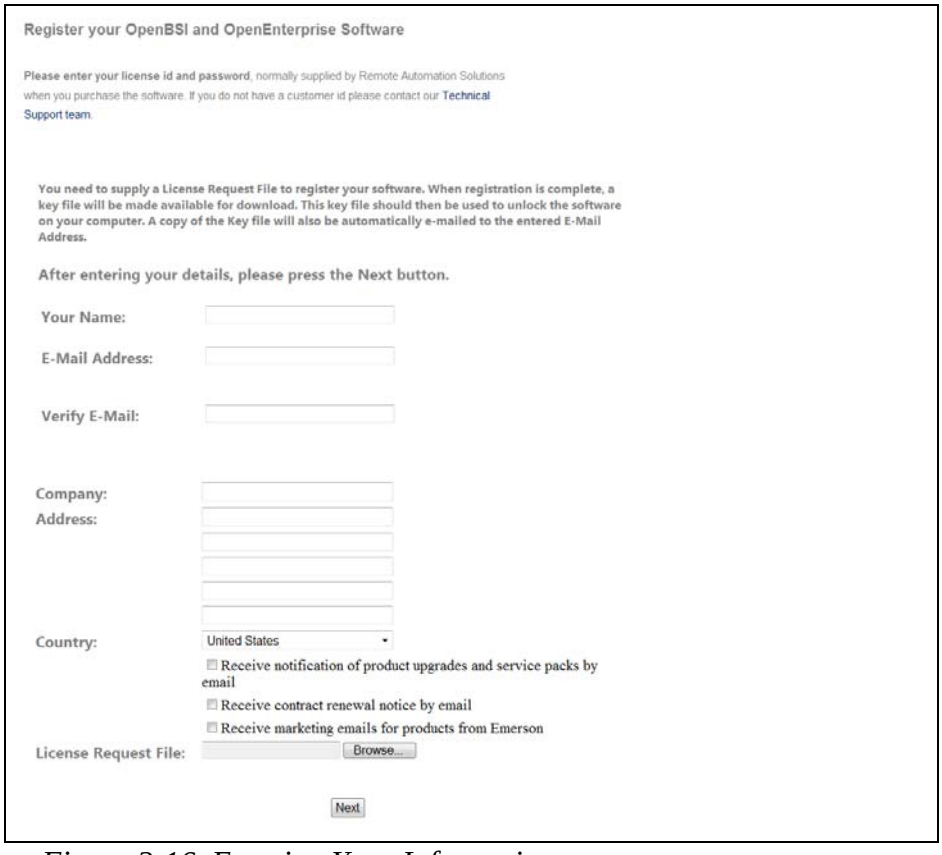


Figure 2-16. Entering Your Information

7. Enter your name in the **Your Name** field; and enter your e-mail address in both the **E-Mail Address** and **Verify E-Mail** fields. This

is the address to which the website sends your key file. Enter your **Company Address** in the fields provided.

8. Scroll down to specify your **Country** and specify your preferences about receiving notifications of product updates, service packs, contract renewals, and marketing announcements by e-mail.

9. Use the **Browse** button to locate the **License Request File** you created in Step 2 and then click **Next** to open the Unlock page.

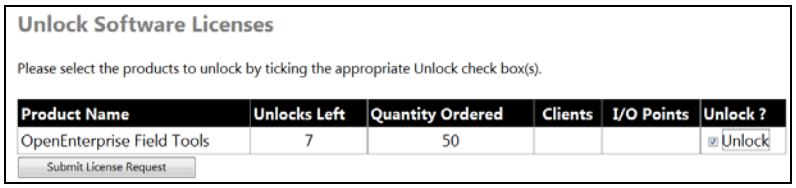


Figure 2-17. Unlock Software Licenses

10. The Unlock Software Licenses page shows a list of licenses purchased under your License Id. If the **Unlocks Left** entry for OpenEnterprise Field Tools is greater than zero, you can request one of the available licenses. Check the **Unlock** box on the OpenEnterprise Field Tools line and then click **Submit License Request**.

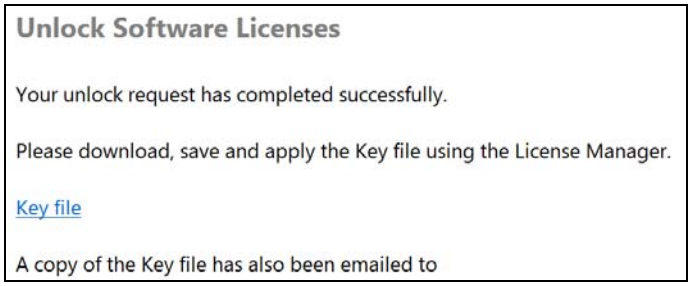


Figure 2-18. Unlocking the License

11. At this point, the website e-mails your key file to the address you specified in Step 7 along with a separate notification e-mail. You can check your e-mail for a copy of the key file and save it for the next step. Alternatively, you can click **Key file** to open the key file in a window; click **File > Save As** to save your key file.

Notes:

- If you use Microsoft® Internet Explorer 9, it automatically saves your key file with a .TXT extension. License Manager handles the .TXT extension; do not change the extension or the file may become unusable.
- If you right-click on the Key File link and select the **Save Target as** context menu item, the key file is saved with an .XML extension.
- The e-mailed key file has an extension of .KEY.
- License Manager handles .KEY, .TXT, and .XML extensions.

12. Click **Include Key** in the License Manager. Browse to the location of your key file and click **Open** to apply the key file. The State field

for Field Tools in the License Manager now shows **Licensed**. You're done!

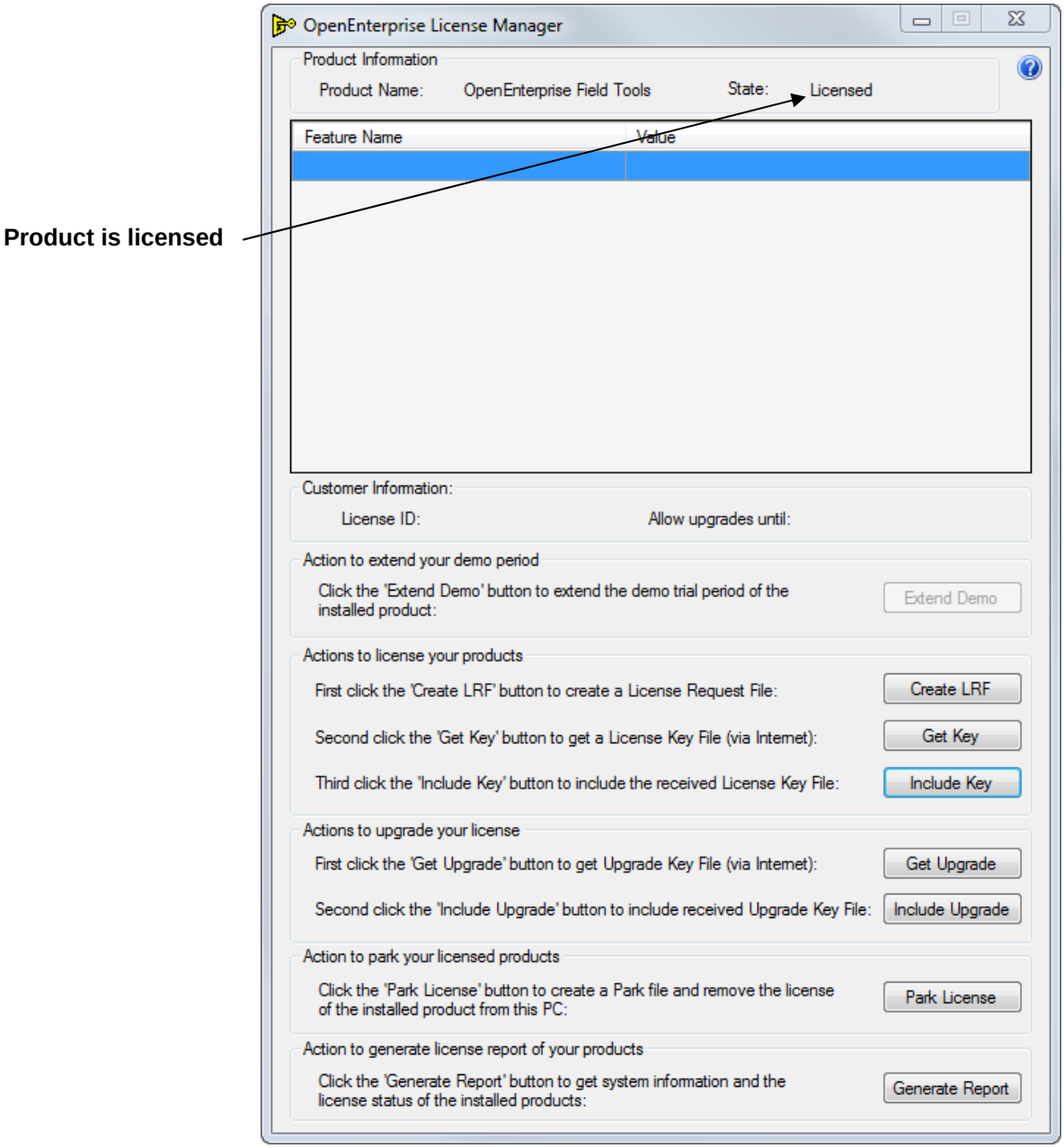


Figure 2-19. Licensed Field Tools Software

2.4.2 Re-Assigning a License to another PC (Park License)

If you license Field Tools on a particular PC and then decide you want to re-assign the Field Tools license to a different PC, you can remove the license from the first PC and then temporarily "park the license" on the License Registration website. This restores the license to your total number of purchased licenses, and you can then assign it to the new PC through the normal license registration procedure.

Note: Once you park a license (which removes it from the original PC) **you cannot assign a new license to that same PC without first contacting our Technical Support personnel** for codes to restore the demo period for that PC. The technical support phone number in the U.S. is: 1-800-537-9313; for international numbers use this link: http://www2.emersonprocess.com/en-US/brands/remote/systems_and_software/supportnet/support_contacts/Pages/support_contacts.aspx Alternatively, log into SupportNet at this link: http://www3.emersonprocess.com/remote/support/support_login.html

1. To start the License Manager, either click **Help > Licensing** from the menu bar in Field Tools, or click **Start > Programs > Emerson OpenEnterprise > Licensing > License Manager**.
2. Click **Park License** and save the PRK file. Make note of the location because you need to access the file in a later step.
3. Click **Get Key** to go to the License Registration website.
4. Enter your **License Id** and **Password** and then click **Sign-On**.
5. Click the **Park** option; this removes the license from the current PC.

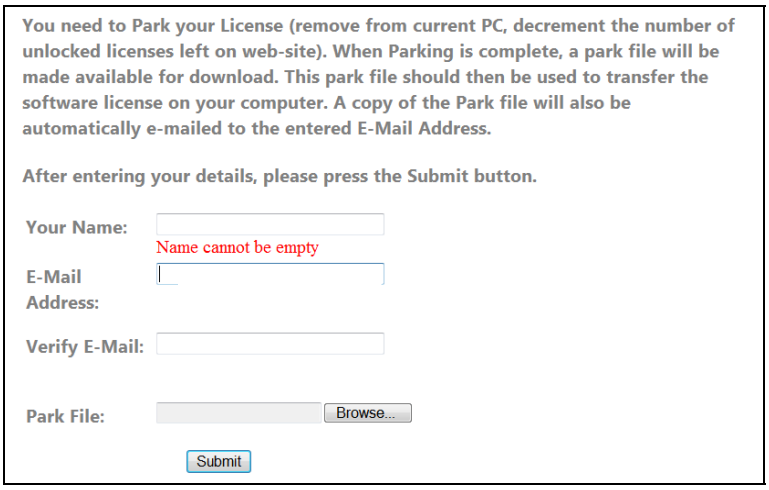


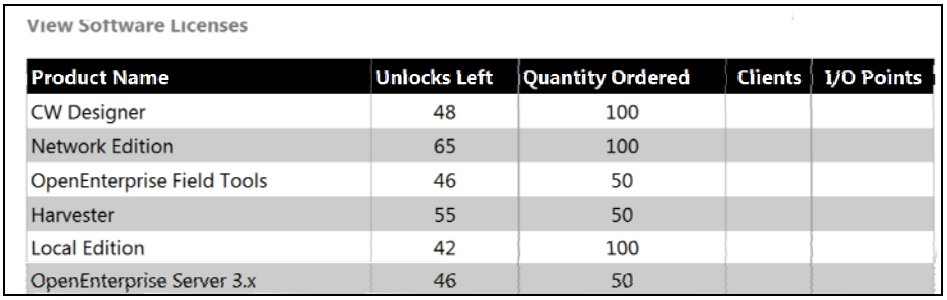
Figure 2-20. Parking a License

6. Enter your name in the **Your Name** field; and enter your e-mail address in both the **E-Mail Address** and **Verify E-Mail** fields. This is the address to which the licensing website sends your key file.
7. Use the **Browse** button to locate the **Park File** you created in Step 2.
8. Click **Submit**. When the website accepts the park file, it shows the message **Park File Operation Completed Successfully**.
9. Exit the License Manager. You can now re-assign the license to a different PC by following the licensing procedure on the new PC. (See *Section 2.4.1*.)

2.4.3 Viewing the Licenses Available Under your License Id

If you want to see which licenses have been purchased under your License Id and which ones are available to be unlocked and used, you can view this on the License Registration website.

1. To start the License Manager, either click **Help** > **Licensing** from the menu bar in Field Tools, or click **Start** > **Programs** > **Emerson OpenEnterprise** > **Licensing** > **License Manager**.
2. Click **Get Key** to go to the License Registration website.
3. Enter your **License Id** and **Password** and then click **Sign-On**.
4. On the Services page, click **View** to see a table of licenses purchased using your License Id. The **Unlocks Left** column displays the number of licenses available for use. To unlock one of the licenses, follow the procedure in *Section 2.4.1*.


View Software Licenses

Product Name	Unlocks Left	Quantity Ordered	Clients	I/O Points
CW Designer	48	100		
Network Edition	65	100		
OpenEnterprise Field Tools	46	50		
Harvester	55	50		
Local Edition	42	100		
OpenEnterprise Server 3.x	46	50		

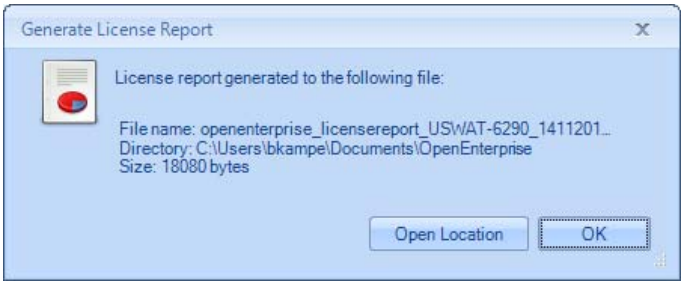
Figure 2-21. Viewing Available Licenses

2.4.4 Get Upgrade / Include Upgrade

These features are not yet available for Field Tools. **(Reserved for future use.)**

2.4.5 Generate a Report of License Information

To see which OpenEnterprise features are installed on your computer, click the **Generate Report** button.



Click **OK** to open the license report:

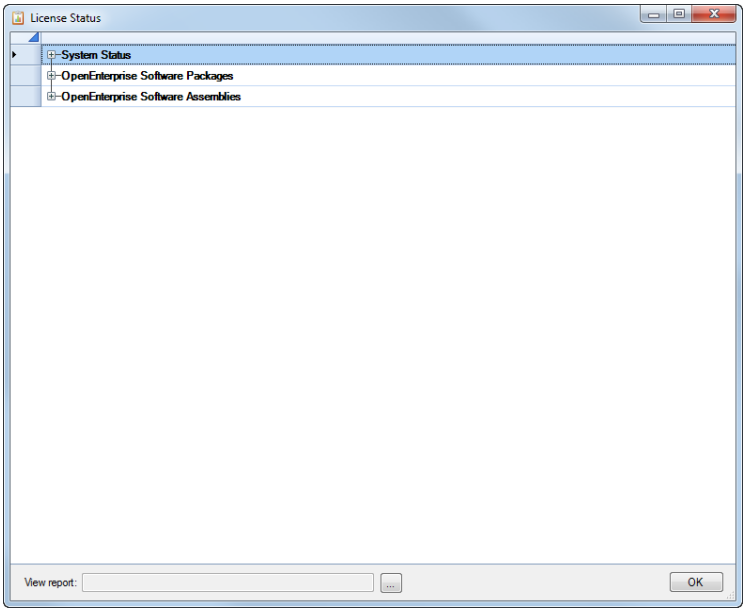


Figure 2-22. License Status – Tree Items Hidden

Click the plus "+" icons to expand the tree and view items.

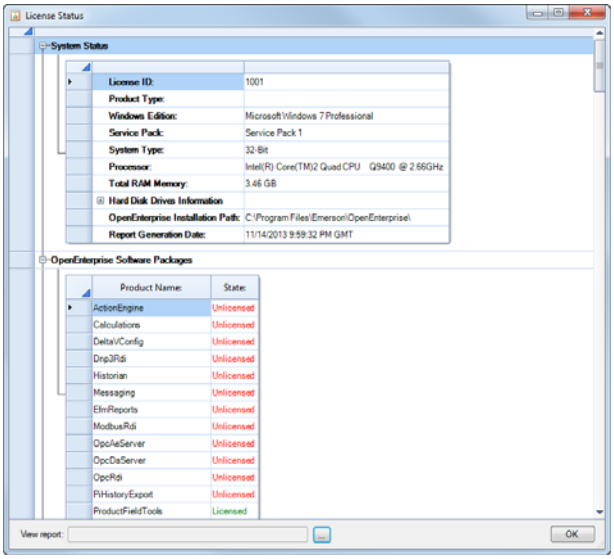


Figure 2-23. License Status

Use the scroll bar to view system information and the list of installed OE components.

Optionally, you can click the **[…]** button to open the location of the raw XML file; you can double-click the file to view the XML.

Click **OK** to exit.

Chapter 3 – Communication Setup

This chapter covers initial communication setup with OE Field Tools.

In This Chapter

3.1 Using OE Field Tools to Establish a Connection

OE Field Tools can communicate with a controller or flow computer using either a direct serial connection or through an IP network.

3.1.1 Before You Begin

- For IP connections, connect the laptop to the same IP network which includes the controller or flow computer.
- For serial connections, you would typically connect a serial cable between the laptop computer and a serial port on the controller or flow computer. Other options for serial connections could include a radio or modem.

  Note: When using OE Field Tools for serial communication, you must plug into the Local Port. For ControlWave-series units, this is a port for which you've set the _P*n*_LOCAL_PORT system variable TRUE in the ControlWave project running in the unit. Local ports answer to requests sent to a BSAP local address of 1 which is what Field Tools requests. For Network 3000, this is a BSAP slave or pseudo-slave port. For a ROC and FloBoss, the Local Port is a specific port (the LOI port) which answers to the address of 240 and a group number of 240.

- For ControlWave/Network 3000 devices only, you need to know which TechView session (*.TVS) file is appropriate for your device

so you can specify it when you establish your connection. If you installed TechView, a set of default TVS files resides on your hard disk in your \openbsi installation path. The New Connection wizard opens that folder first when you specify your TVS file. For example, there is a CWaveEFM.TVS file to support the ControlWave EFM, a CWaveGFC.TVS file to support the ControlWave GFC, and so on. If you have a customized application with a customized TVS file, you should place it in that folder. For ControlWave devices, you also optionally specify the ControlWave project associated with the field device.

3.1.2 Starting OE Field Tools and Logging In

1. Start OE Field Tools either from the desktop icon or click: **Start>Programs> Emerson OpenEnterprise > Field Tools**.

   In the Log In dialog box, enter your **User name** and **Password** and click **Log in**.

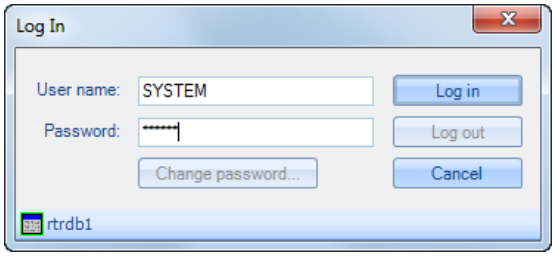


Figure 3-1. Log In dialog box

Note: The very first time you log in, use SYSTEM for the **User name** and leave the **Password** field blank. Once you've logged in with these defaults, Field Tools prompts you to change your password. See *Section 3.1.3.*

2. The Field Tools main screen opens. Use it to establish a connection with the controller / flow computer.

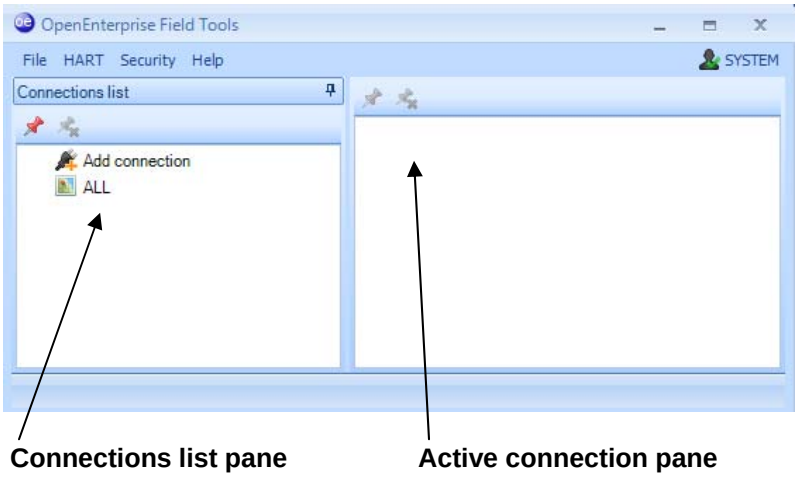


Figure 3-2. Field Tools Main Screen

3.1.3 Changing the Password

You can also change the password for the currently logged on user at any time by clicking **Security > Change password** from the menu bar. This opens the Change Password dialog box.

The very first time you start Field Tools, the default password for the SYSTEM account is blank, and Field Tools forces you to define a new password; click **OK** to open the Change Password dialog box.

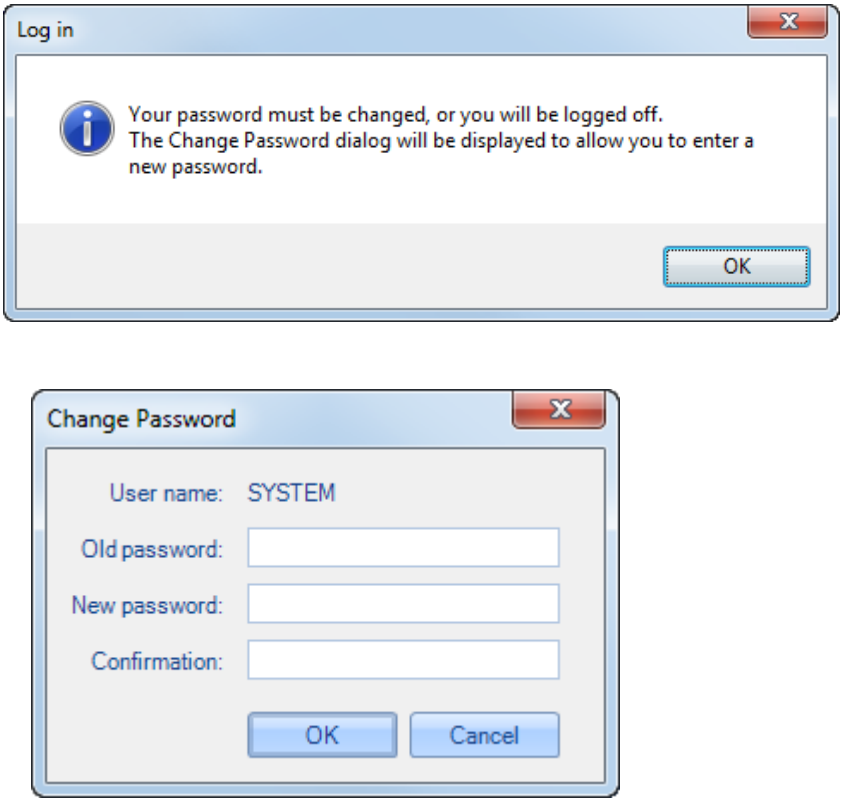


Figure 3-3 Change Password dialog box

In the Change Password dialog box, enter the current password in the **Old password** field, then enter the new password in both the **New password** and **Confirmation** fields, then click **OK.** Your password is now changed.

3.1.4 Defining Users

You can define the Field Tools users on this PC by clicking **Security > User management** from the menu bar. This opens the User Management dialog box.

The User Management dialog box lets you define Field Tools users, and also configure RTU login credentials for them.

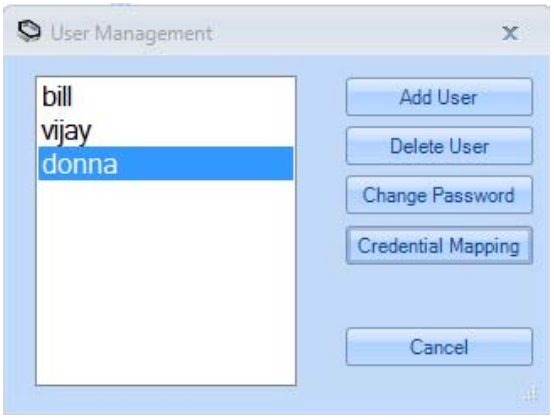


Figure 3-4. User Management dialog box

Adding a User

1. Click Add User.
2. Enter a **User Name** for the user.

   Note: Usernames are case-insensitive and are stored in the database as lowercase.

3. Enter their password in the **Password** and **Confirm Password** field.
4. Click **Create**.

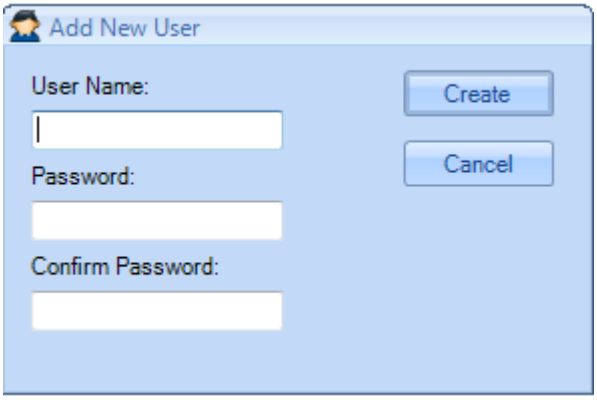


Figure 3-5 Add New User dialog box

Deleting a User

1. Click the name of the user you want to delete.
2. Click **Delete User**.
3. Click **Yes** when prompted to confirm the deletion.

Assigning RTU Login Credentials

1. Click the name of the user for which you want to define RTU login credentials.
2. Enter a **Username** and **Password** for the accessing the particular RTU type(s).

   Note: For the ROC/FloBoss, usernames for RTU access cannot exceed 3 characters and the default is “LOI”.

3. Click **Ok**.

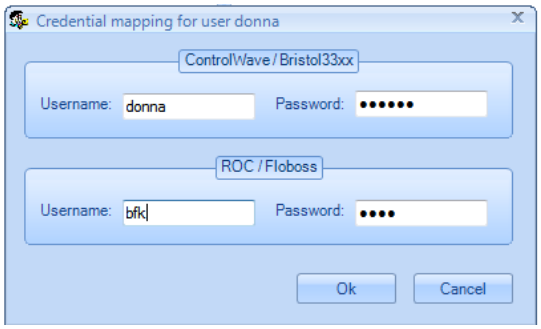


Figure 3-6. – Credential Mapping dialog box

3.1.5 Connections List

The left pane of the Field Tools main screen displays the Connections list tree. This shows connections you've previously saved or used, and also lets you create new connections.

Note: Although you can have many connections in the Connections list, only **one** can be active at any one time. The active connection is highlighted in a green box ☐. When you activate a connection from the Connections list, you'll be prompted to terminate any connection already in use.

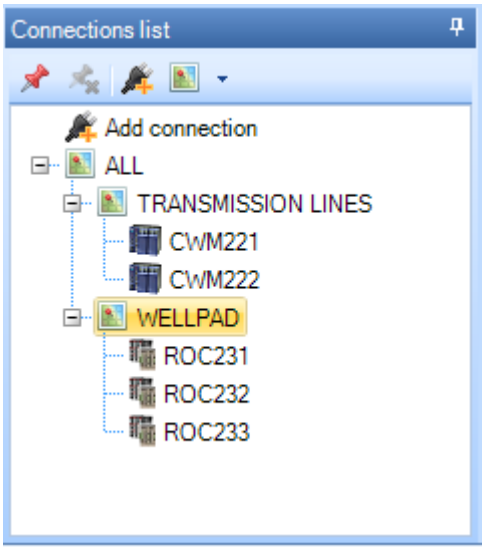
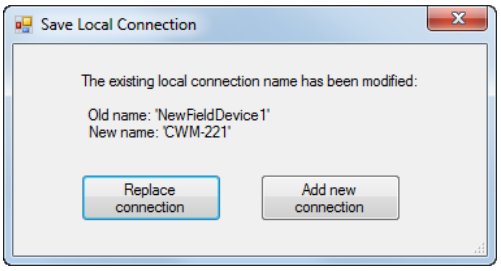


Figure 3-7. Connections List

Table 3-1. Icons Used in Connections List Pane and Context Menus

Icon	Description
	Identifies a previously configured connection to a ROC, DL8000, or FloBoss. The name of the device appears next to the icon. Double-click the icon to re-start the connection.
	Identifies a previously configured connection to a ControlWave or Network 3000 (33xx) controller. The name of the device appears next to the icon. Double-click the icon to re-start the connection.
	Site - A site is just a name underneath which you can group one or more connections. It could represent a geographical area, a department, or any other logical grouping you need. The Connections list comes with a default site name called “ALL” which you can rename and/or add additional sites underneath. Although you can rename it, you cannot delete the “ALL” site; you can delete other sites if they have no devices underneath.
	Add Connection – Click to launch the New Connection wizard. You can find this icon in the Connections list toolbar and in the Connections list tree, and in the context menu when you right click on a site.
	Edit Connection – Click to change the connection parameters for the selected connection. **Note:** If you change the connection name, when you save, Field Tools prompts you to decide whether you want to save the connection as a new connection under the new name (**Add new connection**), or to just rename the existing connection (**Replace connection**). **Note:** You **cannot** edit an active connection. 
	Connect - Click to activate the selected connection.
	Direct Connect – This toolbar icon appears when you position the cursor on the Add Connection icon in the Connections list tree. When you click the Direct Connect icon, you select the type of device from options presented, and Field Tools attempts to make a local serial connection by sequentially trying each serial port using the default settings for that device type.
	Delete – Click to delete the selected connection or site.
	Add Site – Click this context menu item to add a site underneath the currently selected site.
	Rename Site – Click this context menu item to call up the Modify Site dialog box and rename the currently selected site.
	Expand branch – Click to expand this branch of the Connections tree.
	Hide branch – Click to hide the portion of the Connections tree underneath.

Icon	Description
	Apply Pin –Click to display only the portion of the tree below the current position of the cursor. This is useful if you have a large Connections list tree with many items and you only want to see a portion of it.
	Remove Pin – Click to turn off the Apply Pin option and display the entire Connections list tree.
	Click this toolbar icon to launch ROCLINK for the selected connection. (ROCLINK must have been installed previously).
	Click this toolbar icon to launch TechView for the selected connection. (TechView must have been installed previously).

3.1.6 Starting an Existing Connection

If you have previously established connections from this laptop, Field Tools displays them in the Connections list pane. (See *Figure 3-7*.)

To activate a connection, double-click on its icon and Field Tools activates that connection.

Notes:

- If a connection is already active, Field Tools prompts you to terminate the existing connection; click **Yes** to terminate the previous connection and activate the new one you just selected. (See *Figure 3-8*.)
- If you do not want to use one of the previously defined connections, just click the Add Connection icon to define a new connection.

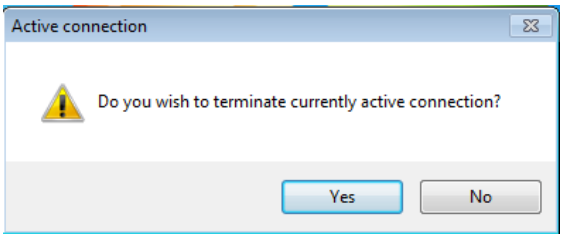


Figure 3-8. Prompt to Terminate an Existing Connection

3.1.7 Creating a New Connection to a Device (Controller/Flow Computer)

Note: To create a direct serial connection to a HART device, go to *Chapter 4*.

1. If the connection for the controller/flow computer you want to communicate with already exists in the Connections list just double-click on it. If no previous connection exists to this device, double-click the **Add connection** icon in the Connections pane toolbar (or click **File > Add connection…**). This opens the New Connection wizard.

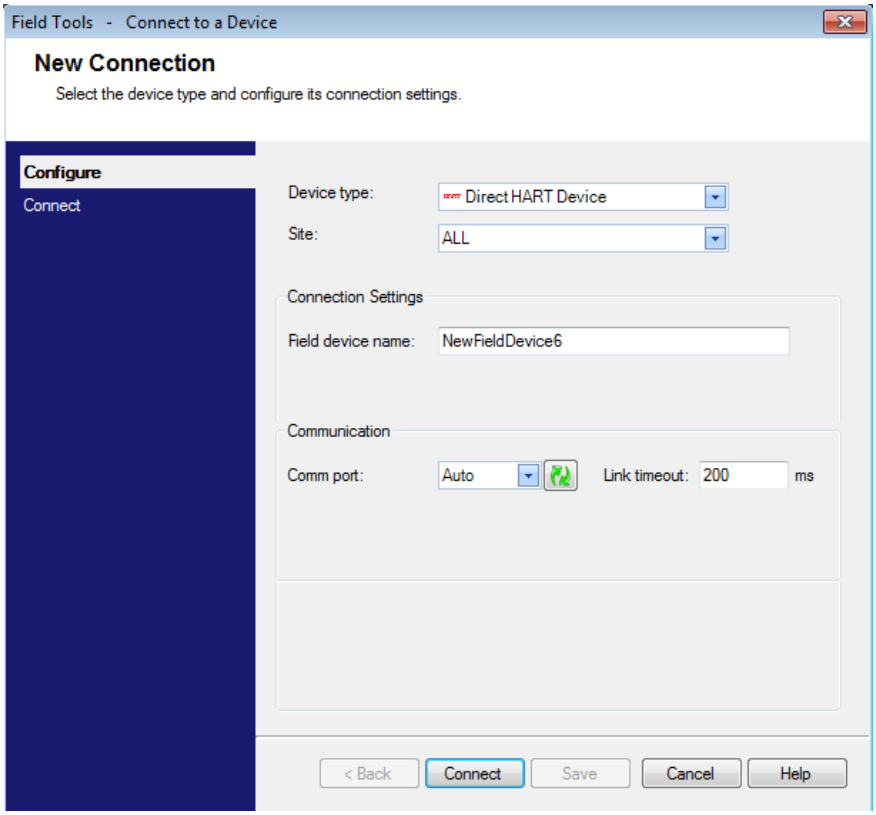


Figure 3-9. New Connection

2. Select the type of device to which you want to connect in the **Device type** field. The choices are: **FloBoss/ROC/DL8000**, **ControlWave/33xx**, or **Direct HART Device**.

Notes:

- The fields displayed on the screen vary depending on your chosen **Device type**. For information on **Direct HART Device** see *Chapter 4*.
- 33xx" refers to Network 3000 devices.

3. If you've defined sites select the desired **Site**; otherwise use the default of **ALL**. (Sites are just a way to organize the devices in the tree; they could represent geographical areas, departments, or any other organizational meaning you want.) For more information on working with sites, see the online help.
4. Specify the name of the field device in the **Field device name** field.
5. For an RTU or flow computer, if you want to define a default username/password combination for this device click **RTU Credentials** in the New Connection page (see *Figure 3-11* or *Figure 3-12*) to open the RTU Credentials dialog box (see *Figure 3-10*). In the RTU Credentials dialog box, enter a valid **Username** and **Password** combination for access to this controller / flow computer, and re-enter the password in the **Verify Password** field; this username/password combination will be used for this controller/flow

computer throughout this Field Tools session. If you want to use this username / password combination as the default for this RTU for all subsequent connection sessions check the **Save as default** box. Click **OK** to finish and close the dialog box.

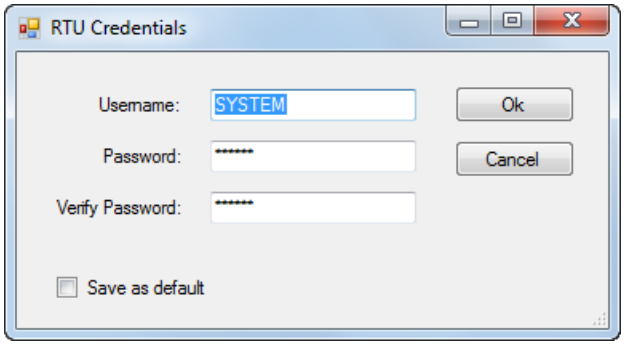


Figure 3-10. RTU Credentials dialog box

6. Using the buttons, select the type of connection, either **Serial** or **IP**. Proceed to Step 7 for serial communication; skip to Step 8 for IP communication.

7. For serial communication:

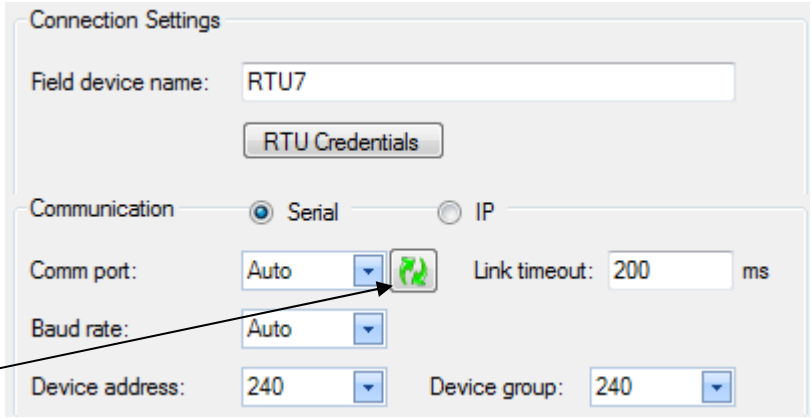


Figure 3-11. Serial Connection Settings - ROC/FloBoss

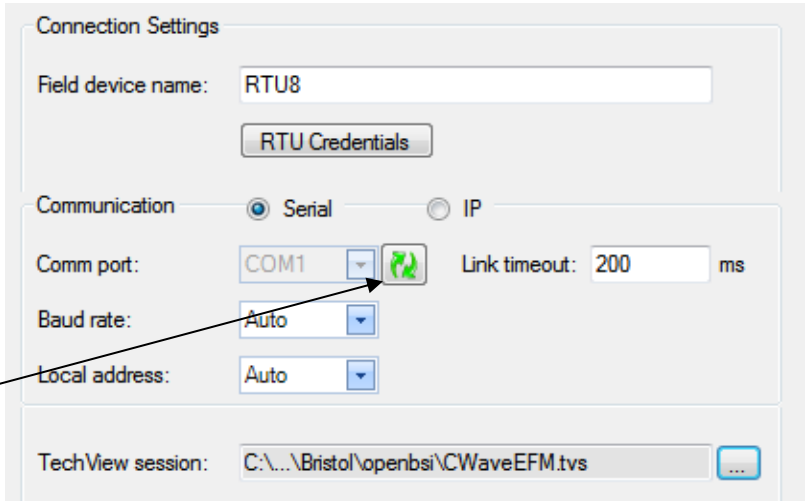


Figure 3-12. Serial Connection Settings – ControlWave/33xx

- Select the PC communication port in the **Comm port** drop down menu, otherwise leave it at the **Auto** default which causes the New Connection Wizard to cycle through the various ports until it finds the correct one. You can refresh the port selections by clicking the refresh button.
- Specify the **Link Timeout** for this connection. That is the period of time (in milliseconds) Field Tools waits for a response from the RTU or flow computer before declaring a communication failure. If you enter **0** Field Tools uses a default of 200 milliseconds. If the RTU is a ROC/FloBoss in a Distributed RTU™ Network, see *Section 3.1.8.*
- If you know the baud rate for communicating with the field device, you can specify it in the **Baud rate** drop-down field, otherwise leave it at the **Auto** default which causes the New Connection Wizard to cycle through various baud rates until it finds the correct one. The supported baud rates are: 9600, 19200, 38400, 57600 and 115200.
- For ROC/FloBoss units only: Specify the **Device address** and **Device group**. These range from 0 to 255. Normally you should leave these both at **240** which are for local connections on the LOI port.
- For ControlWave/Network 3000 units only: If you are not connected to the local port or BSAP slave port (as specified in the ControlWave project or ACCOL load, respectively) but you know the BSAP local address for the field device, you can specify it in the **Local Address** drop-down field, otherwise leave it at the **Auto** default which causes the New Connection Wizard to try each address in the range (1 to 127) until it finds the correct one. Use the **[…]** button to specify the **TechView session** file you want to use with this controller / flow computer. The TechView session file must reside on this laptop PC.

Note: The **Auto** options are useful if you do not know the communication port, baud rate, or (for ControlWave/33xx only) the local address. If you leave all of these fields at **Auto**, however, it could take considerable time to establish the connection since the system must successively try each port, each of the five supported baud rates, and for ControlWave/33xx each of 127 possible local addresses.

The maximum number of connection attempts if all fields are left at **Auto** for a ROC/FloBoss is (# of serial ports) * 5.

The maximum number of connection attempts if all fields are left at **Auto** for a ControlWave/33xx is (# of serial ports) * 635.

- When you've completed this step, go to Step 9.

8. For IP communication:

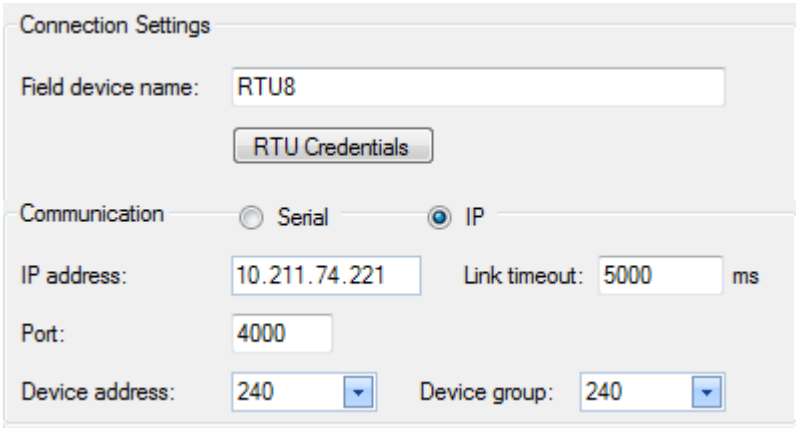


Figure 3-13. IP Connection Settings – ROC/FloBoss

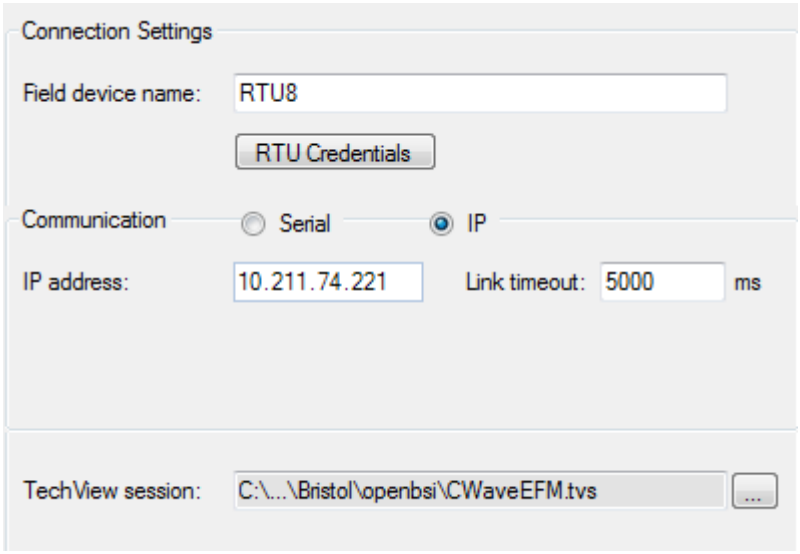


Figure 3-14. IP Connection Settings – ControlWave/33xx

- Specify the **IP address** of the RTU. Position your cursor in the left-most digit position of the **IP address** field, enter the value for that position and use the tab key to move to the next position and so on until you enter the complete IP address.
- Specify the **Link Timeout** for this connection. That is the period of time (in milliseconds) Field Tools waits for a response from the RTU or flow computer before declaring a communication failure. If you enter **0** Field Tools uses a default of 5000 milliseconds. If the RTU is a ROC/FloBoss in a Distributed RTU™ Network, see *Section 3.1.8.*
- For ROC/FloBoss units only: Specify the **Port** (socket) number. The default is 4000. Specify the **Device address** and **Device group**. These range from 0 to 255. Normally you should leave these both at **240** which are for local connections on the LOI port.
- For ControlWave/Network 3000 units only: Use the **[…]** buttons to specify the **TechView session** file. The TechView session file must reside on this laptop PC.

Note: If you make an invalid entry in one of the New Connection wizard fields, a warning icon blinks, and you must correct the invalid entry.

9. If you don't want to activate the connection right now, but just want to save your configuration entries, you can click **Save;** this saves your entries in the Connection list, and exits the wizard. If you want to connect right now, click **Connect** and the wizard attempts to establish the connection.

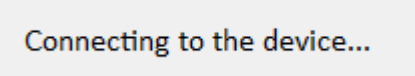


Figure 3-15. Connection in progress

10. If the connection is successful, the **Active connection** pane of the Field Tools main screen displays an icon for the newly connected device and its toolbar populates with icons appropriate to the device type. You can right-click on the device to launch associated configuration tools (if they've been installed previously).

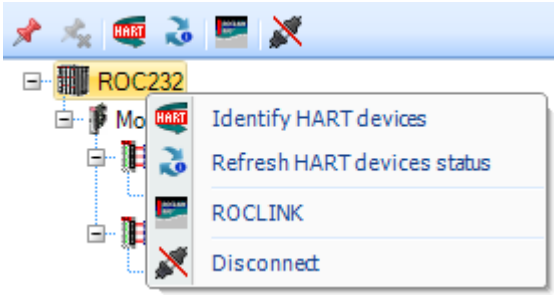


Figure 3-16. Launching Tools

3.1.8 Communication Timeout on Distributed RTU™ Network

If you are using Field Tools' AMS Device Configurator to communicate with a device on a ROC/FloBoss Distributed RTU™ Network, you may need to increase the link timeout to allow enough time for data to reach the device below the distributed RTU node, and for its response to come back through Field Tools.

You set the link timeout (in milliseconds) when configuring connection settings.

Besides changing the timeout here, you must also manually edit AMS Device Configurator's initialization file FMS.INI located in the C:\Windows folder. In the [RAS Network] section of the file, specify a corresponding timeout (in seconds):

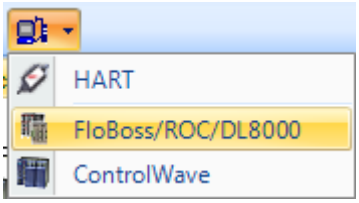
HighLatencyTimeoutSeconds=180

LowLatencyTimeoutSeconds=180

3.1.9 Making a Direct Connection

The term **direct connection** refers to a direct **serial** connection to a device. (For HART devices, see *Chapter 4* for information on the HART USB interface and configure that before you make a direct connection.)

The Direct Connect toolbar icon  appears when you position the cursor on the Add Connection icon in the Connections list tree. When you click the Direct Connect icon, you select the type of device from options presented, and Field Tools attempts to establish a local serial connection by sequentially trying each serial port using the default settings for that device type.



3.1.10 Active Connection pane

The Active Connection pane shows details for the currently active connection, and allows you to launch AMS Device Configurator and other installed configuration tools for use with the device(s) on that current connection.

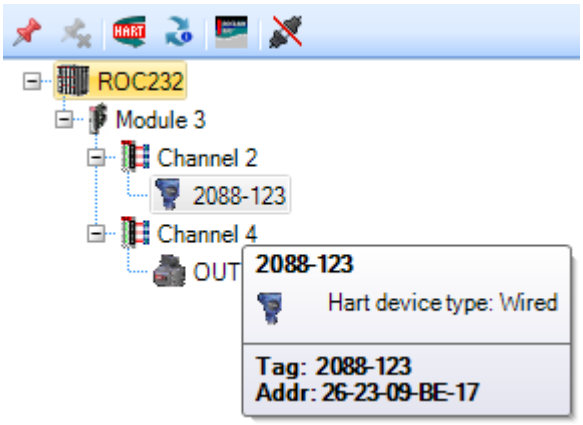


Figure 3-17. Active Connection Pane

To see information about a device (RTU, flow computer, HART device) move the cursor over that device and a small status box opens that shows details based on the type of device. This could include its address, or certain status information.

To launch a tool associated with the device, right-click on the device icon. See *Section 3.1.11* through *Section 3.6* for more information.

Table 3-2. Icons Used in Active Connection Pane

Icon	Description
	ROC or FloBoss controller
	ControlWave or Network 3000 (33xx) controller connection
	Device icon(s). **Note:** The device icons are supplied through the device descriptor (DD) files for the device; therefore depending upon the type of HART or *Wireless*HART devices you see, you will see different device icons.
	HART device. A green generic HART device icon displays if the device has a conditional icon, but has not been scanned. A scan of the device and a refresh of the hierarchy in Field Tools should display the proper device icon.
	Expand branch – click on this to expand this branch of the tree.
	Hide branch – click on this to hide the portion of the tree underneath.
	Apply Pin –Click this to display only the portion of the tree below the current position of the cursor. This is useful if you have a large tree with many items and you only want to see a portion of it.
	Remove Pin – Click here to turn off the Apply Pin option and display the entire tree.
	Refresh HART devices status. Updates the status for HART devices in the Active Connection pane.
	Failure – Indicates some sort of failure associated with this device.
	Terminate Connection – Click here to shutdown the active connection. Field Tools prompts you to confirm this action.
	Click this to identify HART and *Wireless*HARTdevices; AMS Device Configurator runs and auto-detects these devices.
	Click this to launch ROCLINK. (ROCLINK must have been installed previously.)
	Click this to launch TechView. (TechView must have been installed previously.)

3.1.11 Saving Connections / Importing Connections

If you have configured a group of connections, you can save the connection configuration details in an XML file. You can then transfer that XML file to another PC/laptop running Field Tools, so that you don't need to re-create the connections on that PC, you can just click on them to start the connection.

Saving Connections

Right-click on the name of a site (or ALL) if you don't have other sites, and click **Site** > **Export connection data**.

Specify a filename for the XML file.

Importing Connections

Right-click on the name of a site (or ALL) if you don't have other sites, and click **Site** > **Import connection data**. Navigate to the XML file that contains the connection information and click **Ok**.

3.2 Launching ROCLINK

Note: ROCLINK (the ROC and FloBoss configuration tool) is **not** included in Field Tools installer; you must have purchased and installed it separately in order to launch it from within Field Tools.

To launch ROCLINK configuration software, either:

- Right-click on the icon for the ROC or FloBoss device and choose **ROCLINK** from the pop-up menu.

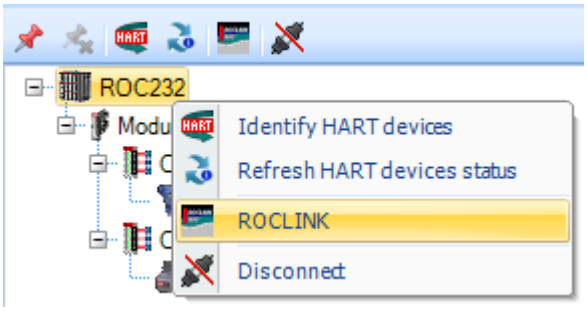


Figure 3-18. Launching ROCLINK

-or-

- Left-click on the icon for the ROC or FloBoss device and then click the ROCLINK icon  .

Note: Once you establish communications using ROCLINK, do **not** change communication connection parameters within the ROCLINK software because this interferes with OE Field Tools.

3.3 Launching TechView

Note: TechView (the ControlWave and Network 3000 configuration tool) is **not** included in Field Tools installer; you must have installed it separately in order to launch it from within Field Tools.

To launch TechView configuration software, either:

- Right-click on the icon for the ControlWave/33xx device and choose **TechView** from the pop-up menu.

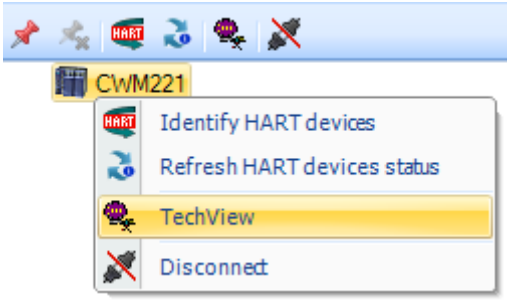


Figure 3-19. Launching TechView

-or-

- Left-click on the icon for the ControlWave device and then click the TechView icon .

Note: Once you establish communications using TechView, do **not** change communication connection parameters within the TechView software because this interferes with OE Field Tools.

3.4 Identifying HART Devices

If you have HART or *Wireless*HART devices connected below your ControlWave/ROC/FloBoss field device they are automatically identified when you first establish your connection. If you add an additional device, you can do the following:

- Right-click on the icon for the controller or flow computer to which the HART devices are attached and choose **Identify HART devices** from the pop-up menu.

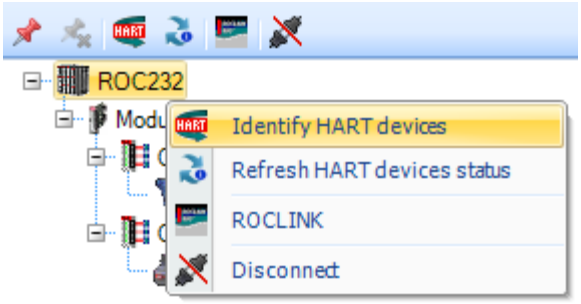
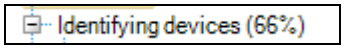


Figure 3-20. Identifying HART Devices

-or-

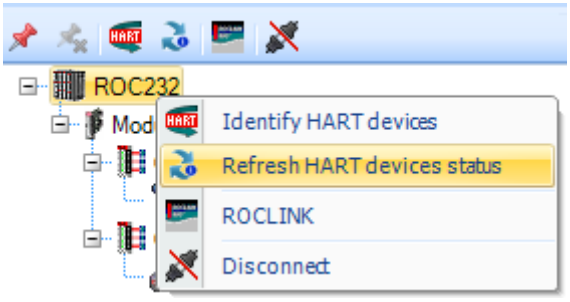
- Left-click on the icon for the controller or flow computer and then click the Identify HART Devices icon .



In either case, the software performs an auto-discovery operation to add the various HART devices to the project tree. As long as the text "Identifying Devices" remains visible, the auto-discovery is still in progress.

3.5 Refreshing the HART Device Status

To refresh the status of HART devices in the Active pane tree, right-click on the icon for the controller or flow computer to which the HART devices are attached and choose **Refresh HART devices status** from the pop-up menu. Alternatively, left click on the icon for the controller or flow computer, then click the Refresh HART devices status icon .



3.6 Launching AMS Device Configurator

Once a HART device exists in the project tree, you can right-click on its icon to launch features in the AMS Device Configurator software.

Select **Configure/Setup** from the HART context menu to configure the HART device.

Alternatively, you can bring up the Configure/Setup item (the first item in the menu) by just double-clicking on the icon for the HART device.

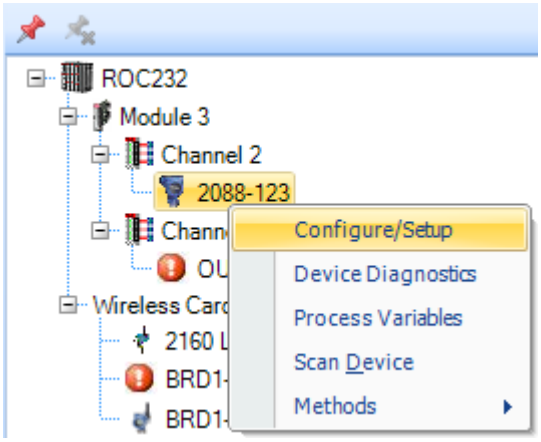


Figure 3-21. AMS Device Configurator options

The HART Device context menu items **Configure/Setup**, **Device Diagnostics** and **Process Variables** open up an AMS Device Configurator Device Window. The **Scan Device** and **Methods** items will be different depending on the device type and may open a dialog for a specific function like **Scan Device** which will launch the Scan Manager. For more information consult the AMS Device Configurator online help.

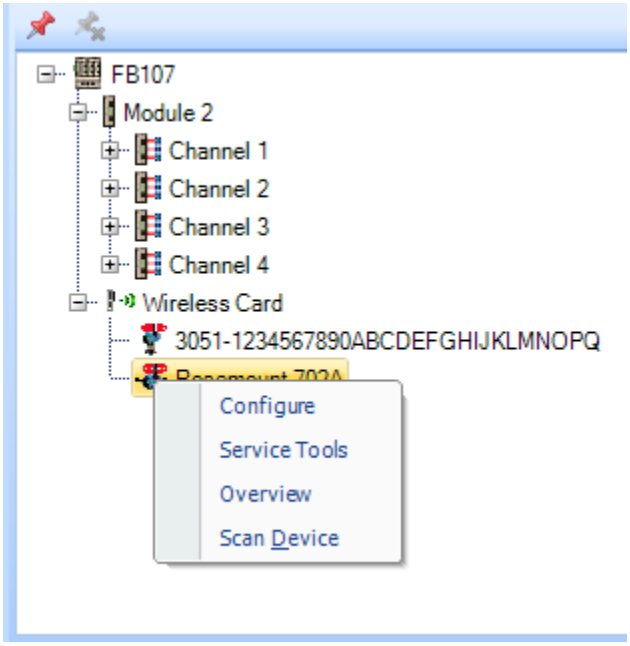


Figure 3-22. HART Device Context Menu

These HART Device context menu items will open up a Device Dashboard in AMS Device Configurator

Notes:

These devices organize key information at your fingertips and allow you to quickly act on alerts. For these devices:

- Process Variables view is identified as **Overview**.
- The Device Diagnostics view is identified as **Service Tools**.
- The Configure/Setup view is identified as **Configure**.

3.7 Adding a HART Device Type

If you have a HART device with a device descriptor (DD) unknown to the system, you can add that device type. You must know the location of the DD file to proceed.

Click **HART > Add HART device type**.

Refer to the online help in the AMS Device Configurator for more information on adding the HART device type.

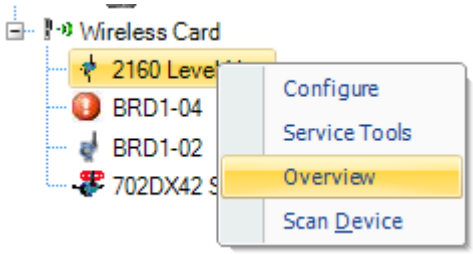
3.8 Launching the AMS Wireless SNAP-ON

Caution

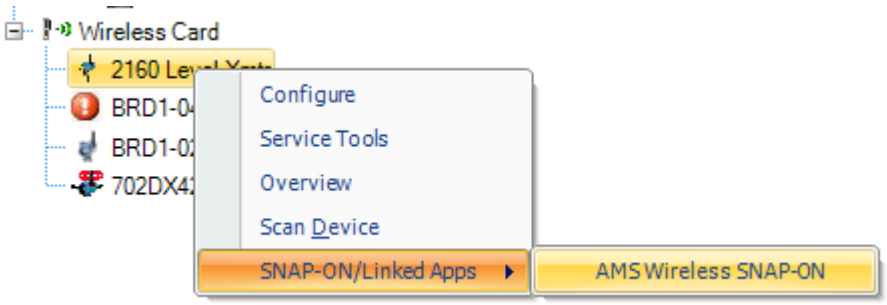
The default parameters in AMS Wireless SNAP-ON are set to work optimally with approximately 10 devices. If, in the ControlWave environment, you experience challenges or need to manage more devices, contact Remote Automation Solutions Technical Support for information on setting the appropriate parameter values.

If you have it installed, you can launch the AMS Wireless SNAP-ON software provided that AMS Device Configurator is running.

1. In the Active connection pane, click on the wireless device and call up an AMS menu, such as the Overview display:



2. Once the AMS menu is retrieved, right click on the wireless device and click **SNAP-ON/Linked Apps > AMS Wireless SNAP-ON**.



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Chapter 4 – Using AMS Device Configurator Software

OpenEnterprise Field Tools' AMS Device Configurator software works with both wired HART and *Wireless*HART devices.

Before you can include a *Wireless*HART device in your network, you must configure the long tag name, network ID, and join key parameters. You can accomplish this using either a hand-held Rosemount 375/475 Field Communicator, or by using AMS Device Configurator software and a HART modem. This chapter describes the method using the AMS Device Configurator software and a HART modem.

Field Tools' AMS Device Configurator can communicate with HART and *Wireless*HART devices devices by sending messages *through an RTU* (ControlWave, ROC, FloBoss) provided that the RTU supports the necessary hardware modules needed for this communication. AMS Device Configurator can also communicate directly with the HART and *Wireless*HART devices if the laptop running Field Tools connects to the device using a HART modem.

Note: The instructions in this chapter only apply to selected HART and *Wireless*HART devices manufactured by Rosemount. **If you have *Wireless*HART devices from a different manufacturer that you want to include in your *Wireless*HART network, the configuration will be different.** Refer to the device manufacturer for information on configuring these devices. For AMS Device Configurator functions beyond setting the Long Tag, Network ID, and Join Key, consult the AMS Device Configurator online help.

In This Chapter

4.1 Connecting Directly to the HART or *Wireless*HART Device

To use AMS Device Configurator software to connect directly to a HART or *Wireless*HART device that doesn't yet belong to a network, you need a HART modem.

Emerson Remote Automation Solutions recommends the MACTek® Viator USB HART® Interface. This is the only HART modem Emerson Remote Automation Solutions supports and has tested.

4.1.1 Before You Begin

- The Field Tools installation installs MACTek Viator drivers. If you need to reinstall them for any reason, run the **Setup.exe** appropriate for your operating system (in either the MACTek Drivers 32bit or 64bit folders on the Field Tools installation DVD). Once installed, see the *MACTek Viator USB HART® Interface Users' Manual* and the Viator help/readme files for more information. These are installed on your hard disk in the **\program files\MACTek VIATOR Utility\documentation** folder.
- These instructions assume you have a working HART or *Wireless*HART device.
- If you have a wired HART device for which you want wireless connectivity through a Rosemount Smart Wireless THUM™ Adapter, review *Section 4.1.2 Smart Wireless THUM™ Adapter and Field Tools*.

4.1.2 Smart Wireless THUM™ Adapter and Field Tools

You can use a Rosemount Smart Wireless THUM™ Adapter to provide wireless connectivity to a wired HART device. If you want to use Field Tools either to configure the device or to set the network ID, join key, or long tag in the THUM, you need to:

1. Connect the THUM to the wired HART device.
2. Connect the Viator USB HART interface that connects to Field Tools to the same 20 mA current source used by the THUM.

Refer to the *Bench Top Configuration* section in the following Rosemount document for information on wiring the HART USB interface to the THUM:

- *Smart Wireless THUM™ Adapter Quick Installation Guide,00825-0100-4075, Rev DA, July 2011*

Notes: If using an IEC 62591 module in a ROC/FloBoss or ControlWave device to communicate with wireless devices, both the THUM and the HART device may be detected by the Smart Wireless Field Link and included in the Active List, however, it is only necessary to commission the HART device, not the THUM adapter.

4.1.3 Establishing the Connection

1. Connect the USB end of the Viator USB HART interface to the USB port on your Field Tools laptop PC.

Figure 4-1. Connect Viator USB HART Interface to an open USB Port

2. Connect the other end of the Viator USB HART interface (two test clips) across the HART or *Wireless*HART device.

Note: You may find it easier to remove the battery from the HART or *Wireless*HART device in order to see the connection points better. After you connect the clips, re-connect the battery.

   a. To use the test clip, press down on the button at the bottom of the clip holder to push the test clip out beyond the shield.

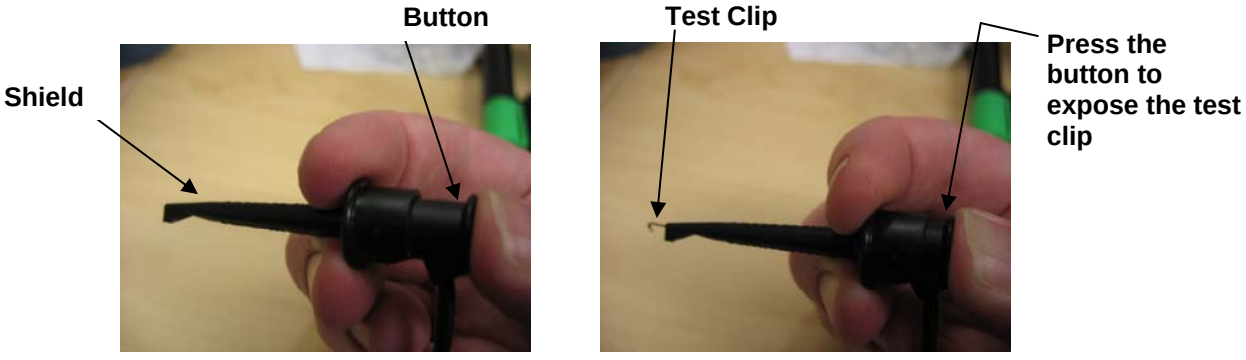


Figure 4-2. Test Clip Covered by Shield (left) and Pressing Button to push Clip Out (right)

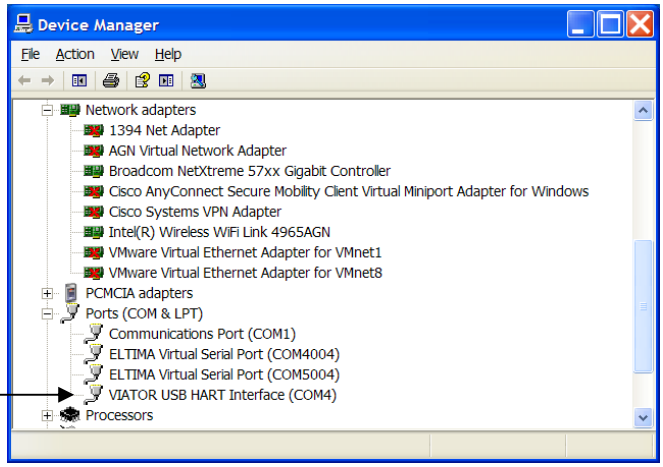
   b. Connect both clips to the communication connectors on the wireless device.

Figure 4-3. Both Test Clips Connected to the Wireless Device

c. If you disconnected the battery to attach the test clips, re-connect it now.

3. You must now verify that there is a COM number associated with the Viator USB HART interface on the laptop that runs your Field Tools software:

- For Windows 7 users, you can find this out by opening Windows™ Control Panel and choosing **System & Security** > **System** > **Device Manager** > **Ports** and looking for Viator USB.



Viator USB HART Interface installed (COM4)

Figure 4-4. Viator USB HART Interface in Windows Device Manager

Caution **If you cannot locate the Viator USB device under the ports item, its drivers were <u>not</u> installed correctly. <u>STOP. Do not proceed to Step 4 until you correct this problem</u> – a connection will not be possible until you resolve this issue. Consult the Viator documentation for more information.**

4. Start OE Field Tools either from the desktop icon or click: **Start>Programs> Emerson OpenEnterprise > Field Tools**.

5. Log in using a valid username/password combination.
6. Click the Add Connection icon in the toolbar, **or** double-click the Add Connection icon in the Connections list **or** just click **File** > **Add Connection…** (You can also click the Add Connection icon, and then choose the Direct Connect icon and select HART from the menu, in which case you would skip steps 7 through 9.)
7. In the New Connection wizard, leave the **Device type** at **Direct HART Device**.
8. Choose the **Site** you want to associate with the HART/*Wireless*HART device.
9. Enter a name for the HART/*Wireless*HART device in the **Field device name** field.
10. Specify the **Comm port** used for the Viator USB HART Interface. If there is only one serial port; this option is grayed out. If there are multiple serial ports but you don't select one and instead choose **Auto**, during the connection attempt, Field Tools sequentially tries each port for a pre-defined number of passes, sending a "Device Identify" message.
11. Click **Connect**.

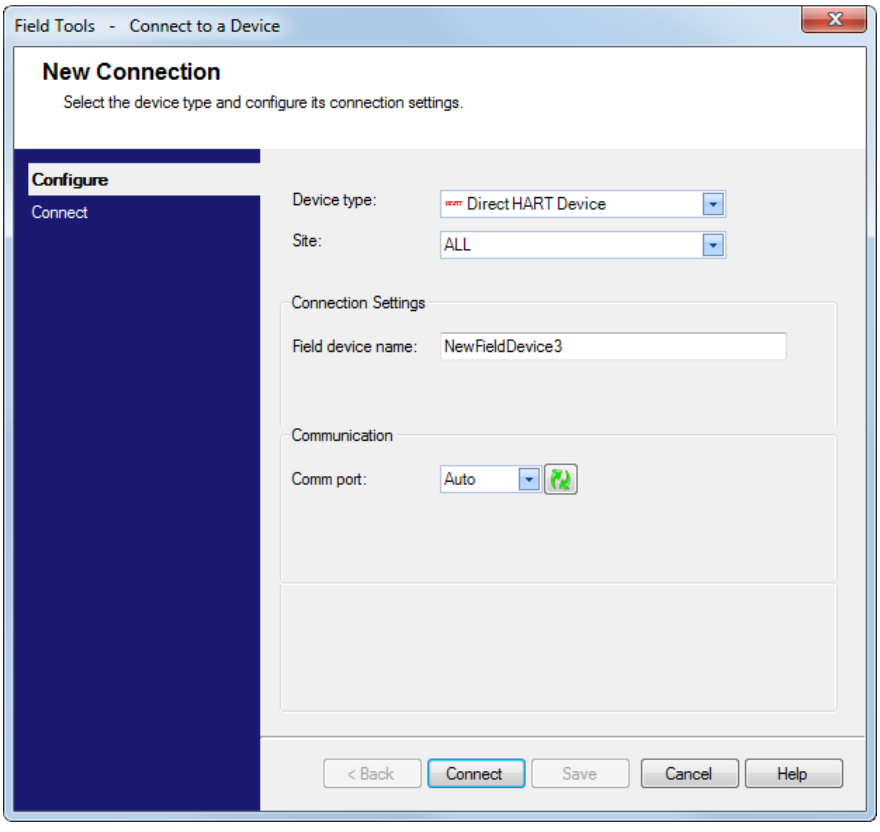
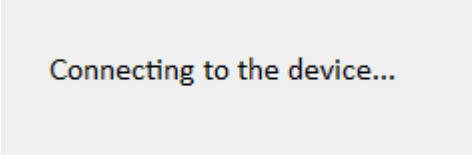


Figure 4-5. Connection Selection

12. You will see the message "Connecting to the device…"



The software then begins polling for the HART or *Wireless*HART device at all possible addresses. The software makes up to four search passes to discover the device before declaring failure. Once it discovers a device, click **Stop Detection** and then click **Next**.

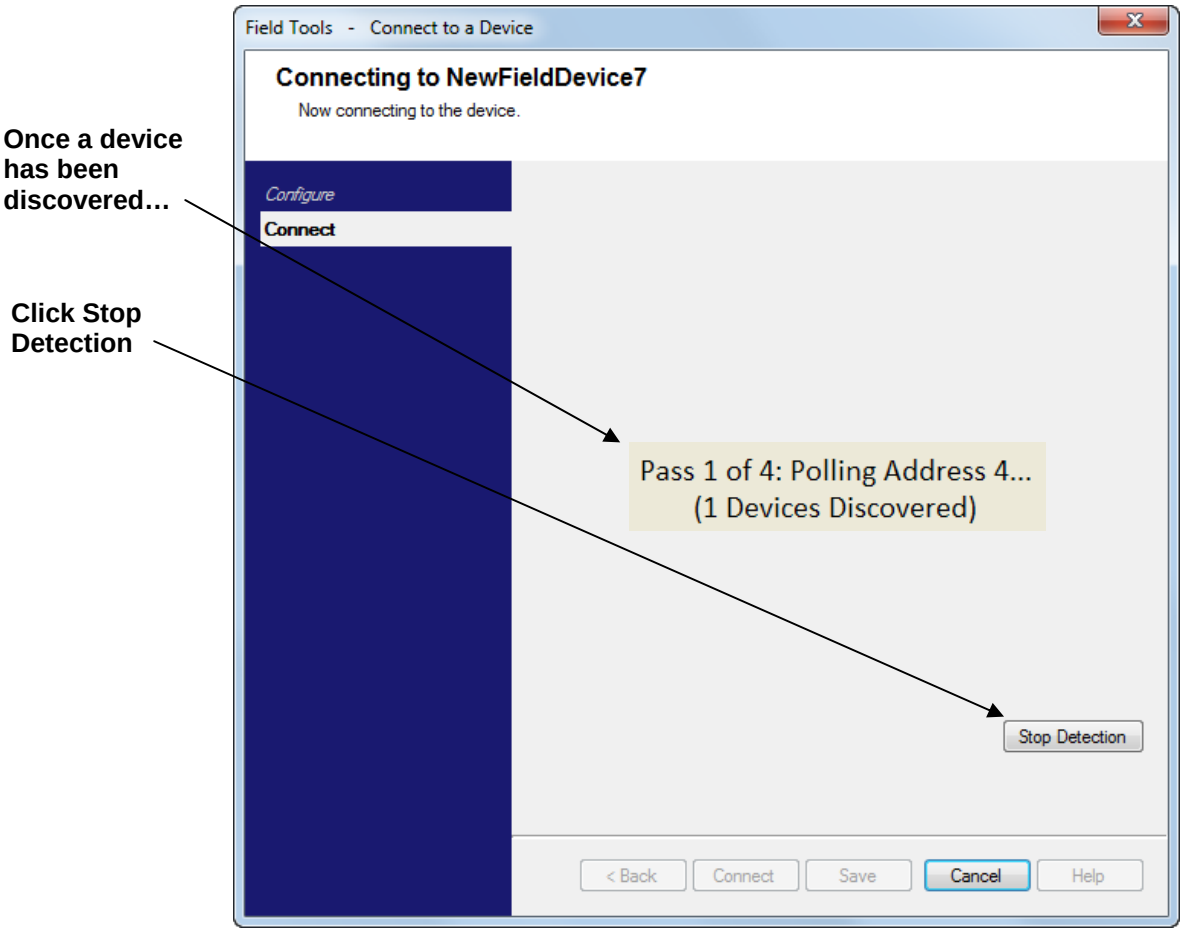


Figure 4-6. Stop Detection Once It Discovers a Device

13. Once Field Tools shows icons for HART and/or *Wireless*HART devices in the Active Connection tree, right-click on the icon for the desired device and choose **Configure/Setup** from the pop-up menu.

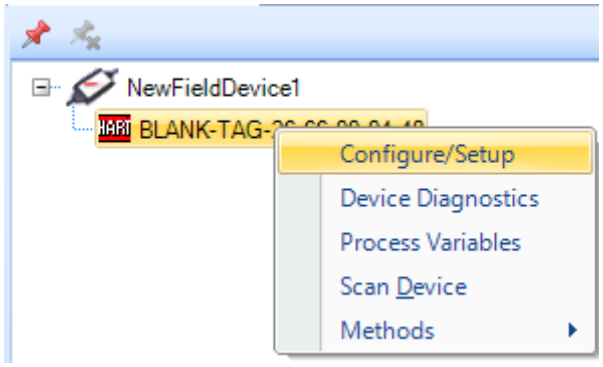


Figure 4-7. Configuring the HART Device

14. This starts AMS Device Configurator software. On the **Wireless** tab, click **Manual Setup**.

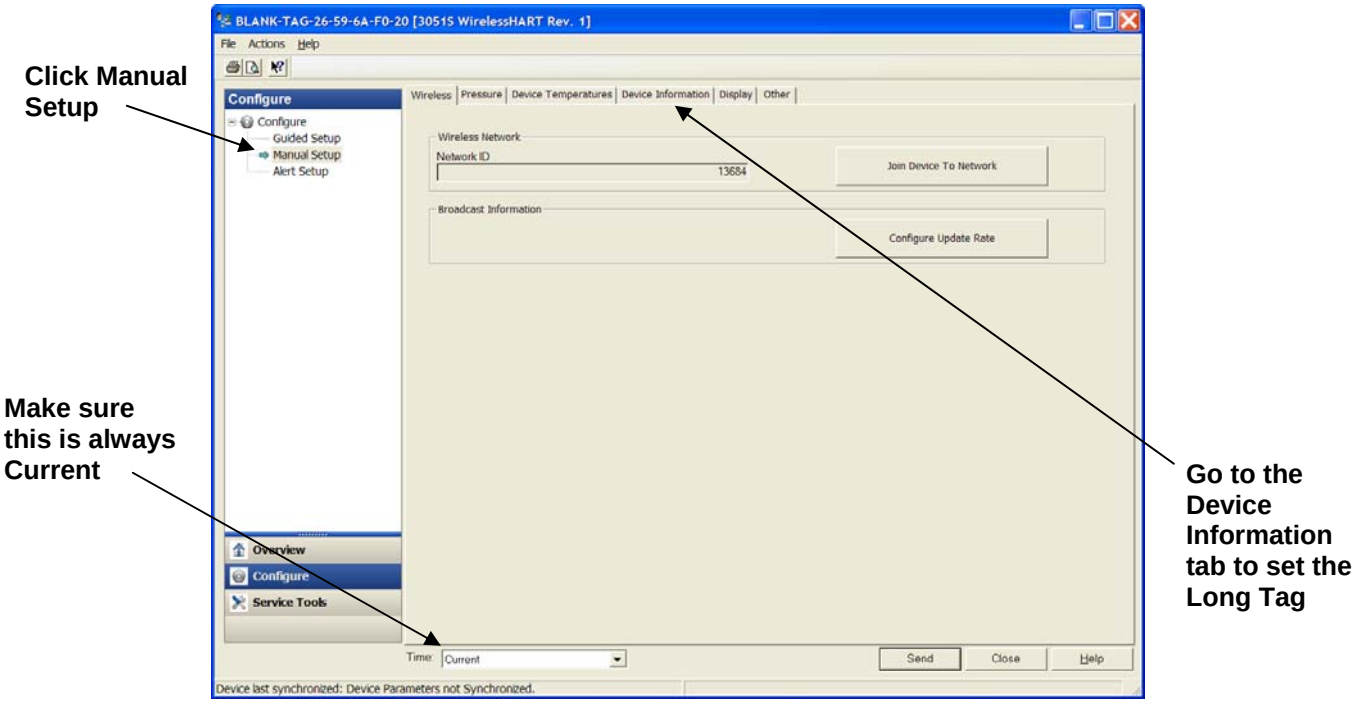


Figure 4-8. Manual Setup

15. Make sure the **Time** field shows **Current** since we need to communicate with the live device. If it's anything else, change it to **Current**.

16. Now click the **Device Information** tab and see *Section 4.2* for information on setting the long tag.

4.2 Setting the Long Tag

To use *Wireless*HART devices with ROC or ControlWave devices, you must configure them with long tag names. The long tag name for the device can be up to 32 characters long.

Note: You will need to know the long tag you set here later during configuration / commissioning in ROCLINK or ControlWave Designer. See the *IEC62591 Wireless Interface Manual* specific to your RTU/flow computer (ROC or ControlWave) for more information on that subject.

1. On the **Device Configuration** tab, enter the long tag name in the **Long Tag** field and click **Send**.

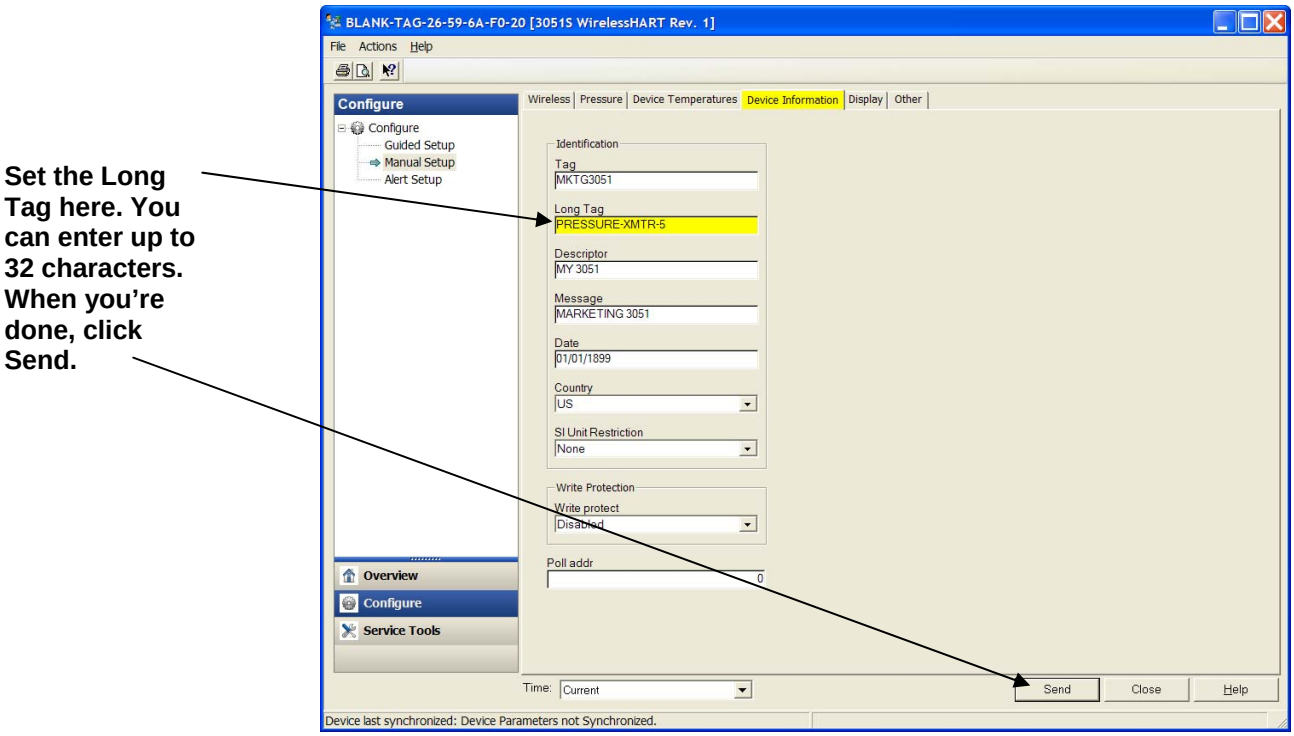


Figure 4-9. Setting the Long Tab

2. The software prompts you to confirm the update to the device. Click **Yes** to proceed and update the tag in the device.

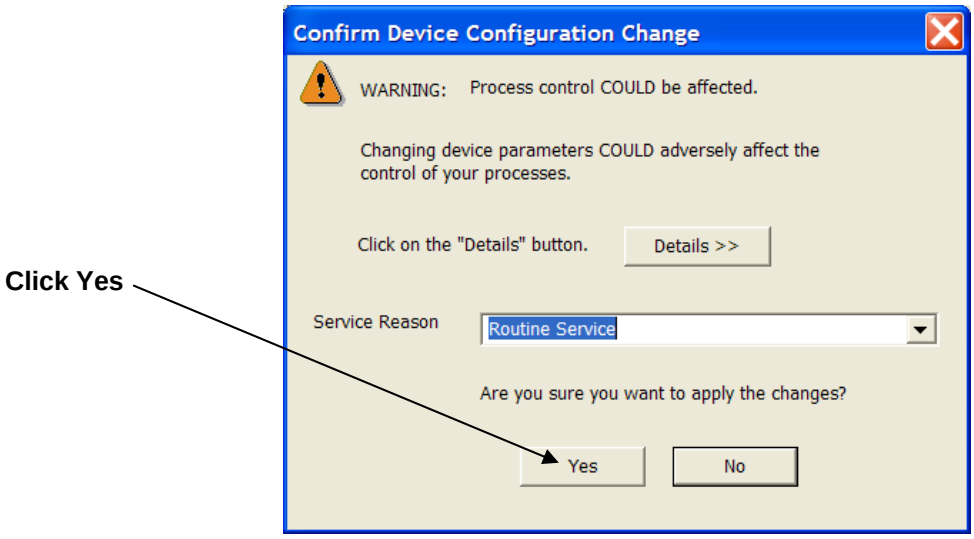


Figure 4-10. Confirm the Change

Note: The title bar does not update with the long tag until the next time you start the Configurator with this device.

4.3 Setting the Network ID and Join Key

After you establish a connection with the *Wireless*HART device and enter manual configuration mode within AMS Device Configurator software (described in *Section 4.1*) you can set the Network ID and Join Key.

A Network ID defines one logical grouping of *Wireless*HART devices, all of which send their information to one Field Link.

Note: A Network ID or Join Key cannot be all zeros (such as 0000).

The Join Key is the password that allows a device to access its defined network. During configuration, you also provide the device with its network-specific Join Key.

Note: You will need to know the Network ID and Join Key you set here later during configuration and commissioning in ROCLINK or ControlWave Designer. See the *IEC62591 Wireless Interface Manual* specific to your RTU/flow computer (ROC or ControlWave) for more information on that subject.

1. The **Network ID** field on the **Wireless** tab shows the Network ID. To set a new Network ID, click **Join Device to Network**.

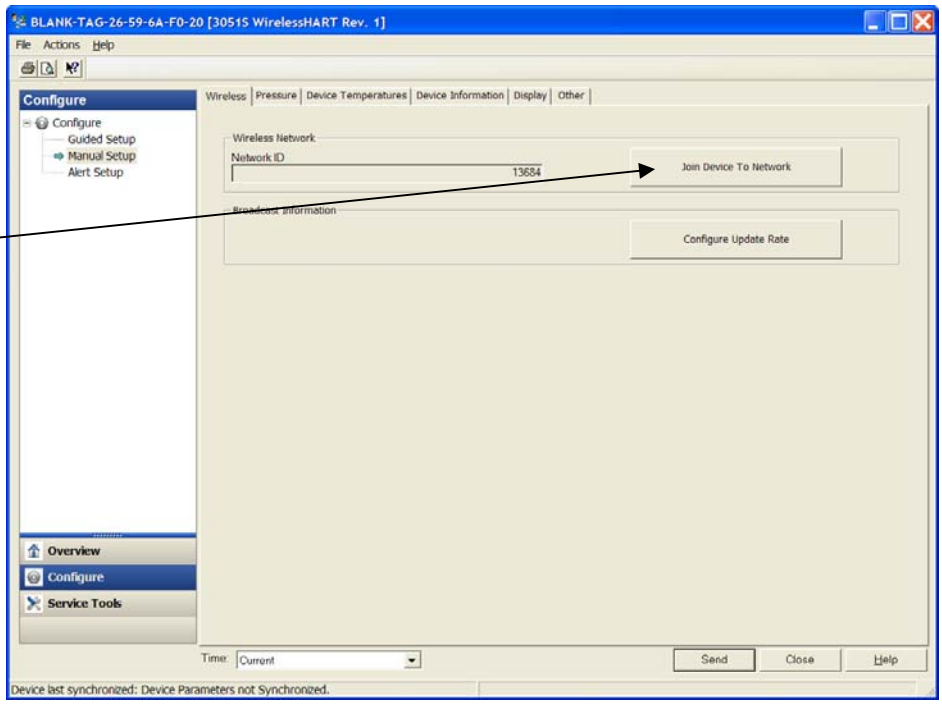


Figure 4-11. Network ID

You'll need to wait for a moment while the software communicates with the device.

2. Enter the Network ID in the highlighted field and then click **Next**.

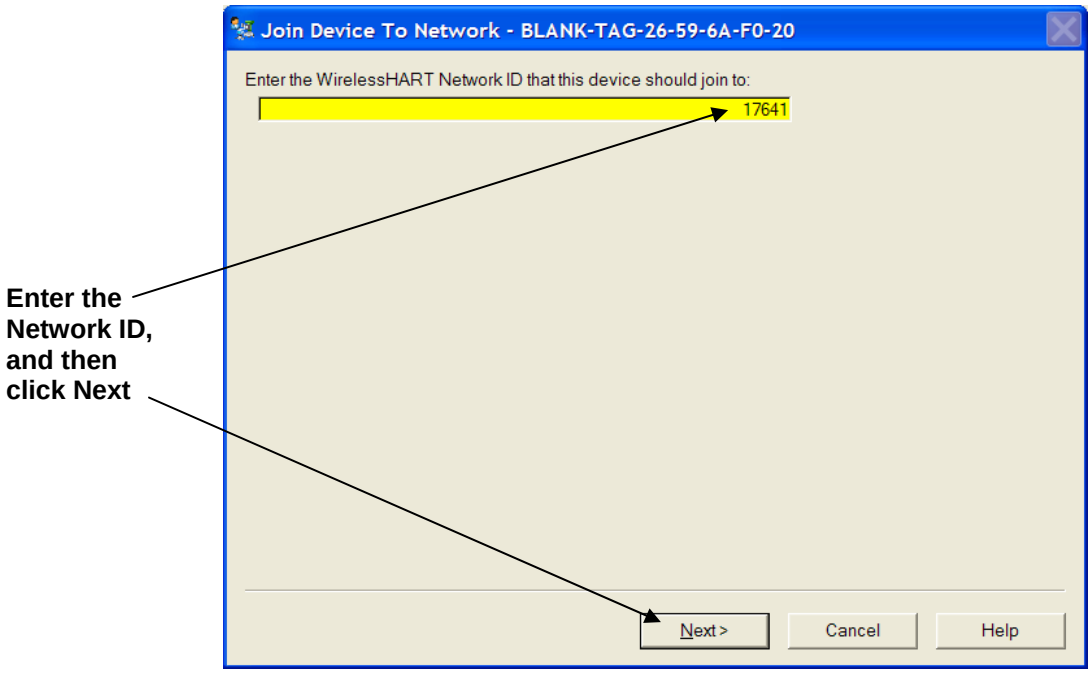


Figure 4-12. Entering the Network ID

3. Enter the first of four parts of the Join Key and then click **Next**.

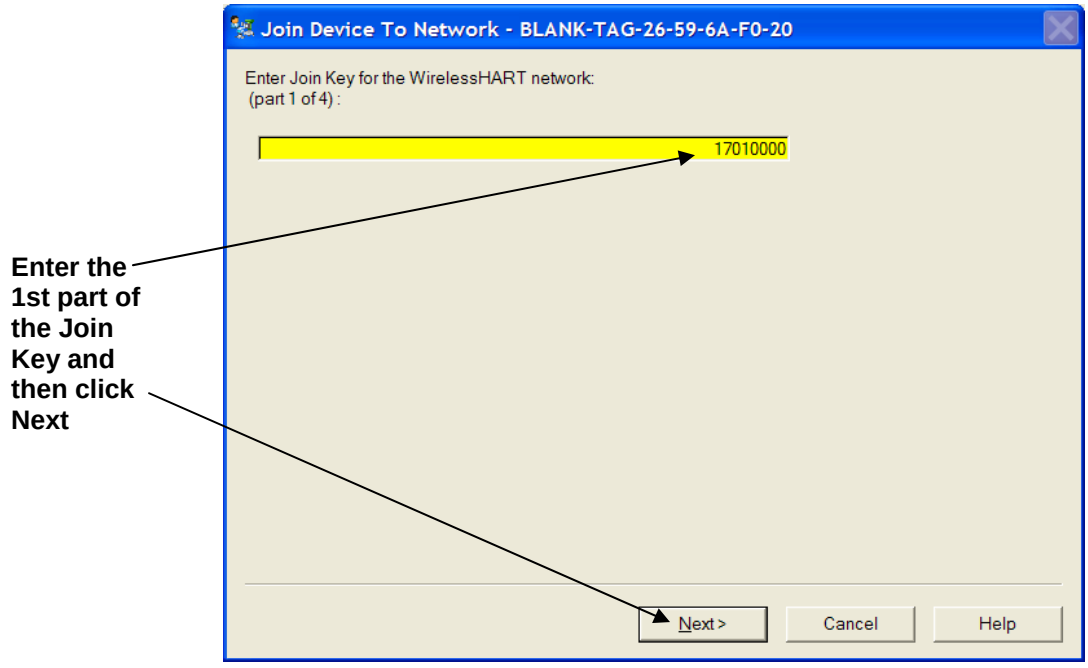


Figure 4-13. Entering the First Part of the Join Key

4. Enter the second of four parts of the Join Key and then click **Next**.

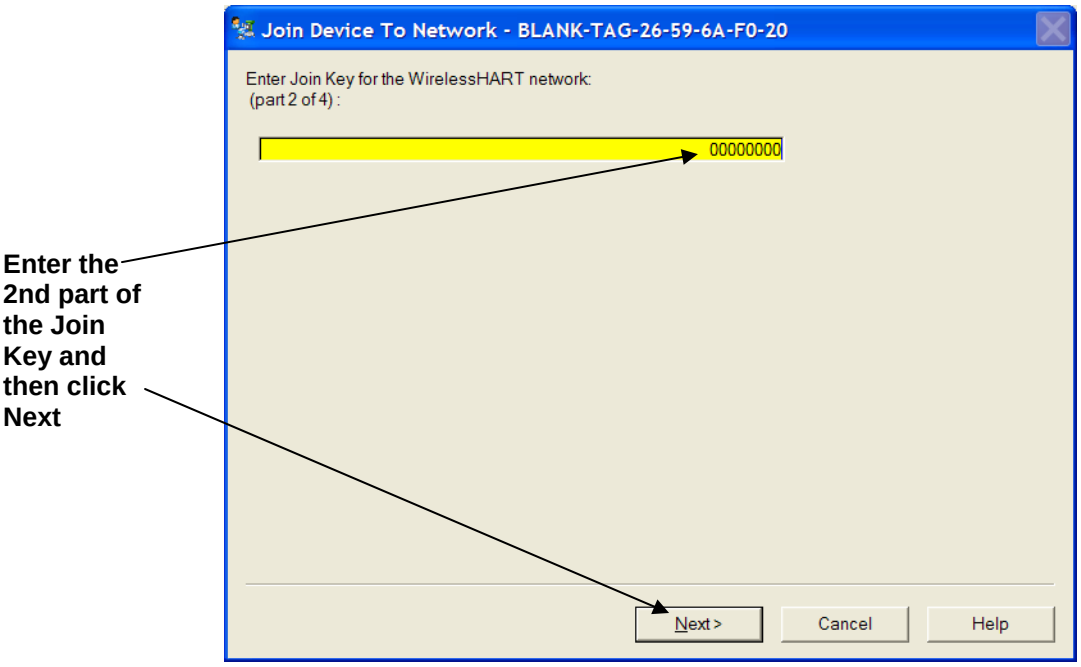


Figure 4-14. Entering the Second Part of the Join Key

5. Enter the third of four parts of the Join Key, then click **Next**.

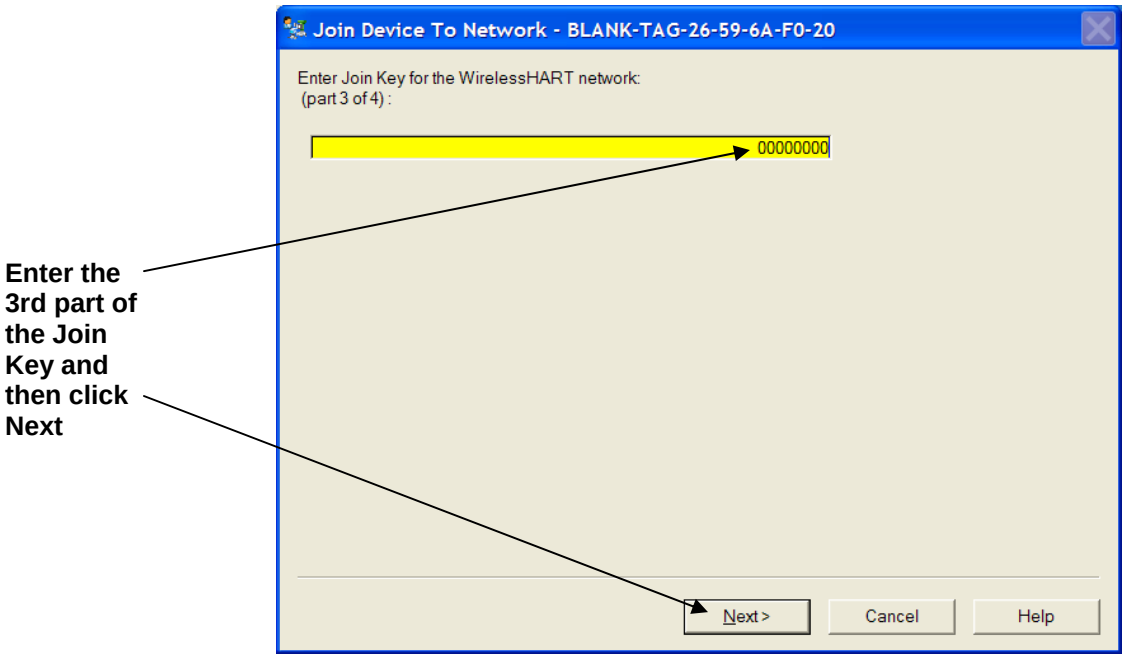


Figure 4-15. Entering the Third Part of the Join Key

6. Enter the fourth of four parts of the Join Key and then click **Next**.

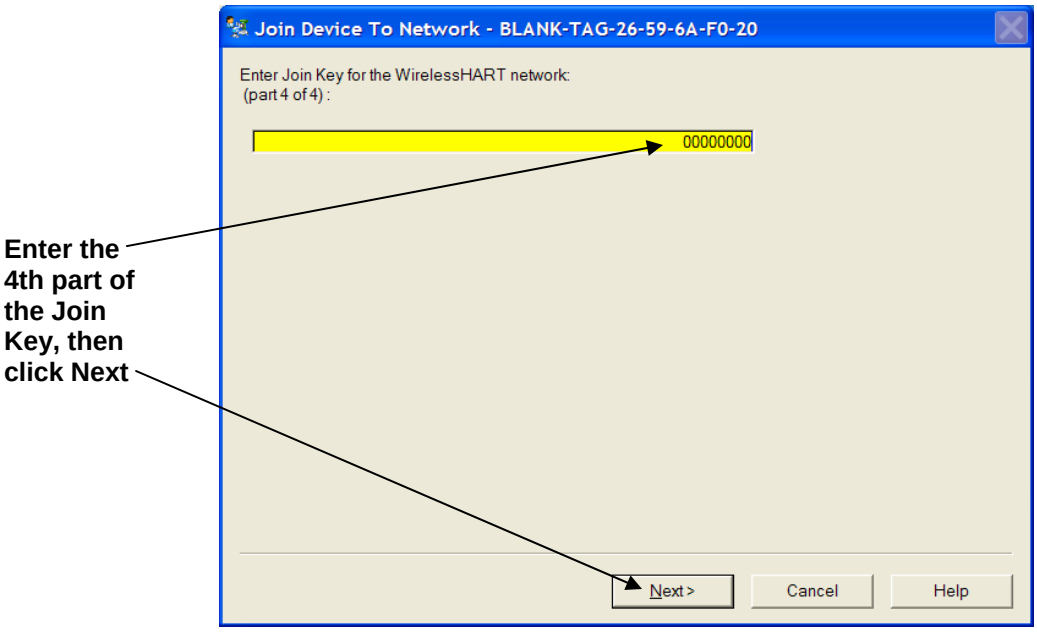


Figure 4-16. Entering the Fourth Part of the Join Key

7. Check to see that you entered the Network ID and Join Key correctly. If you did click **Next**. If you made a typo or need to change what you entered, select **Re-enter join key** and click **Next** to go back to Step 2.

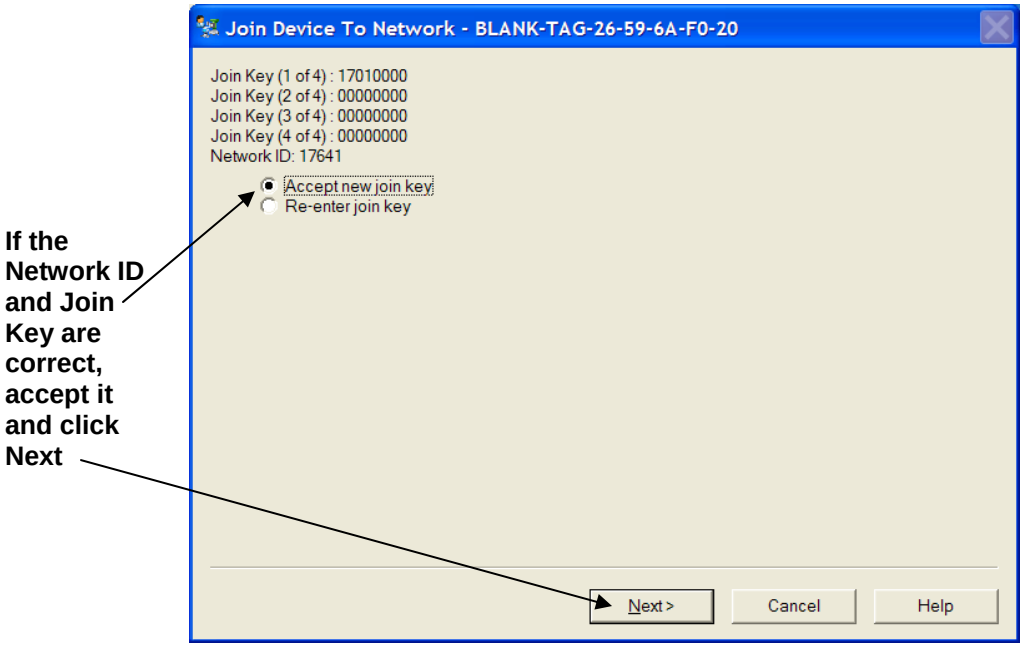


Figure 4-17. Confirm the Network ID and Join Key

8. The following screen opens; you may need to wait a few minutes.

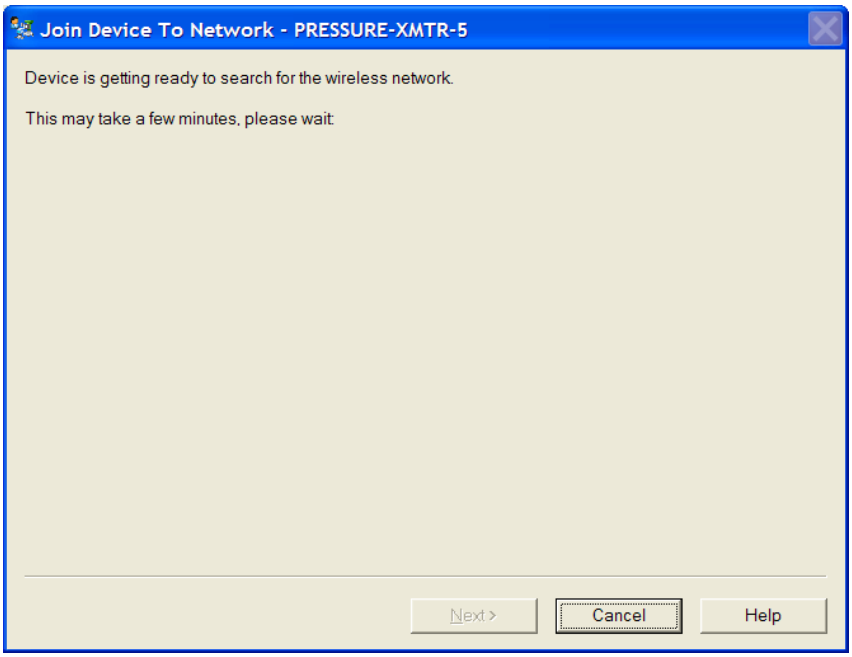


Figure 4-18. Device Searching for Network

Note: If you receive an error message saying that you cannot update the Network ID and Join Key at this time, see the troubleshooting information in *Appendix A*.

9. The following message confirms the update to the Network ID and Join Key; click **Next**.

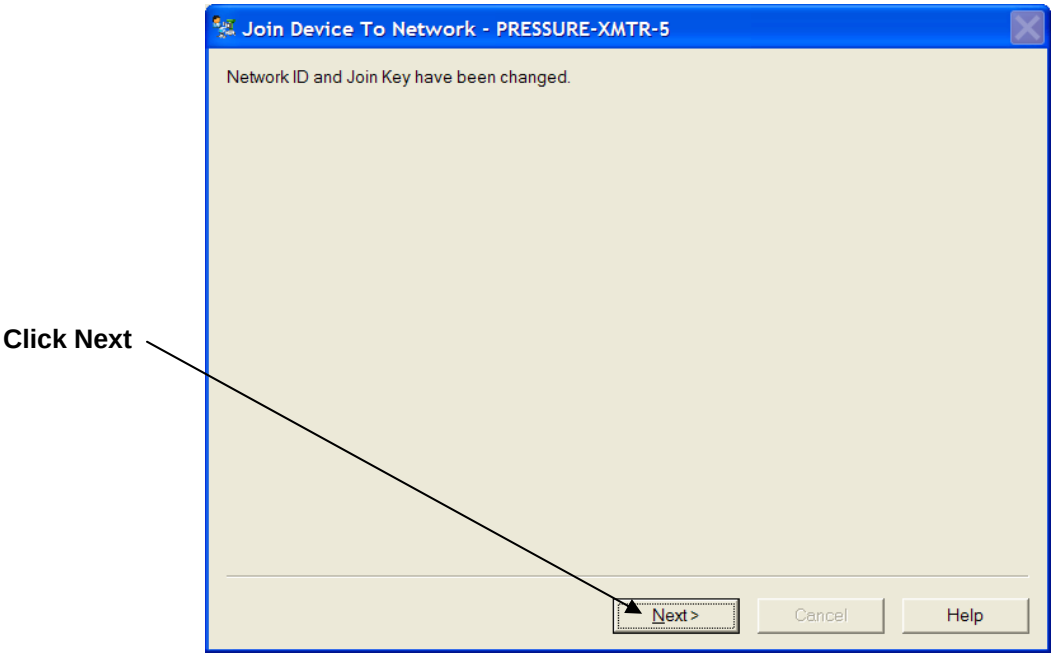


Figure 4-19. Network ID and Join Key Updated

10. Click **Finish**. You can now exit the AMS Device Configurator software.

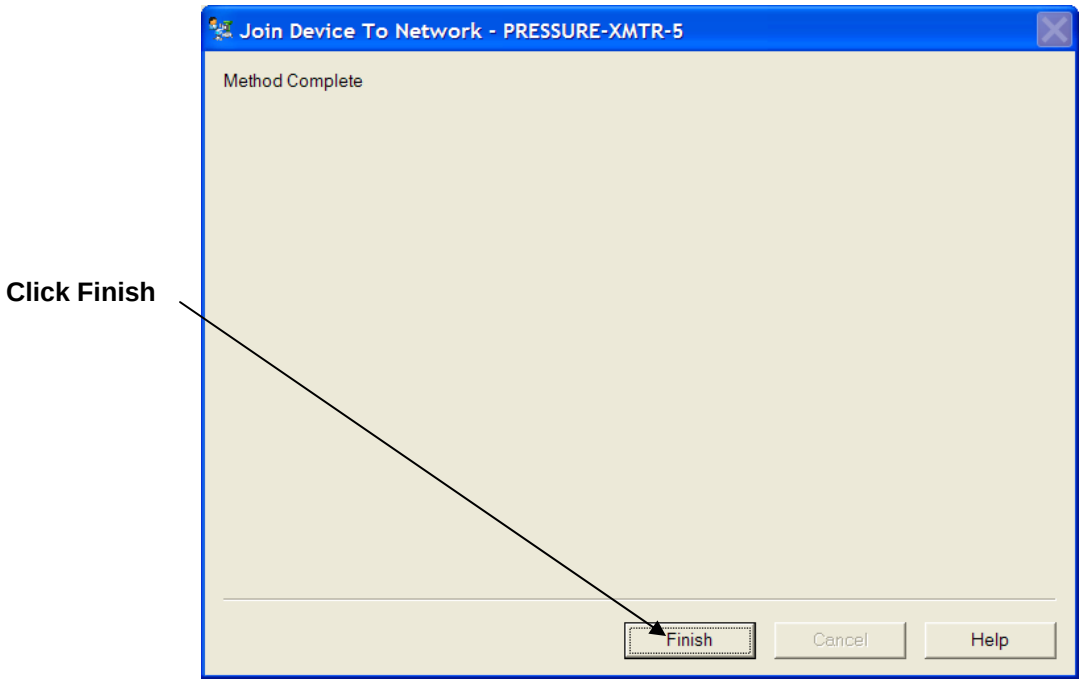


Figure 4-20. Update Finished

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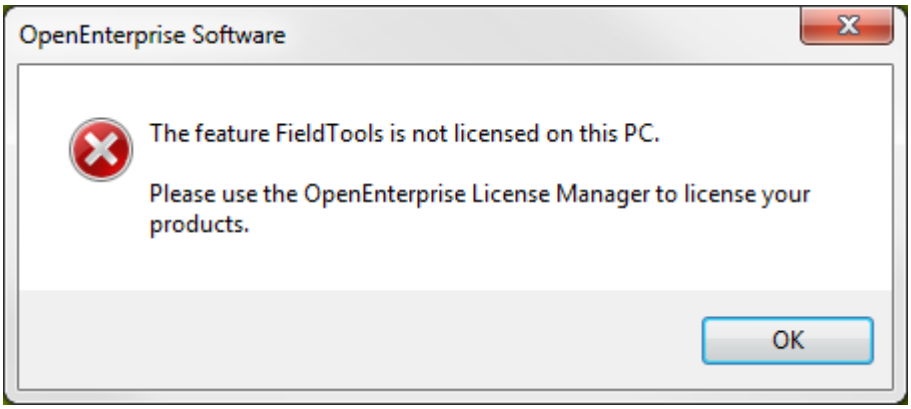
Appendix A – Troubleshooting Tips

The following are some common problems that may occur, and procedures for resolving them.

Field Tools won't start due to not being licensed

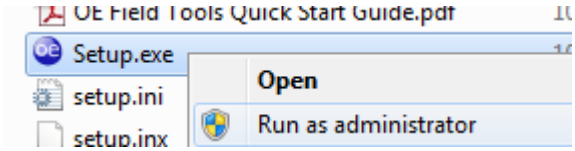


Run the License Manager software as discussed in *Section 2.4*.

"Unlicensed – License file not found" message in License Manager

This can occur if there was a problem during software installation.

1. From the Windows™ Control Panel, uninstall OE Field Tools.
2. To begin the reinstallation, ensure you've disabled UAC control. Insert the OE Field Tools software DVD in your DVD drive, and browse to the root directory using Windows Explorer.
3. Right-click on **Setup.exe** and choose **Run as administrator**.

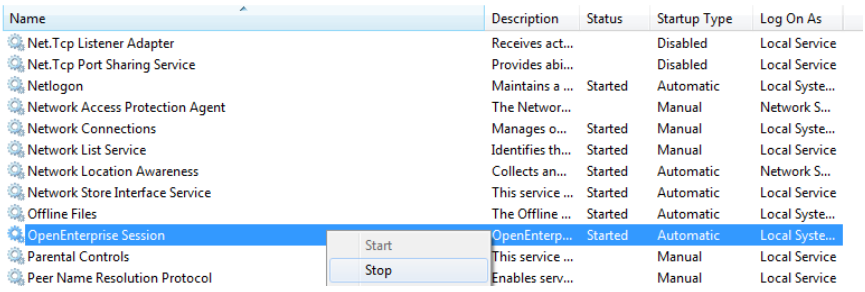


4. Follow the instructions in *Chapter 2* for installation and licensing.

"Failed to connect to Comm Manager" message appears.

You may see this message if something disrupts a communications connection. Stop and re-start the OpenEnterprise session using these steps:

1. In Windows Control Panel, double-click **Administrative Tools**.
2. Double-click **Services**.



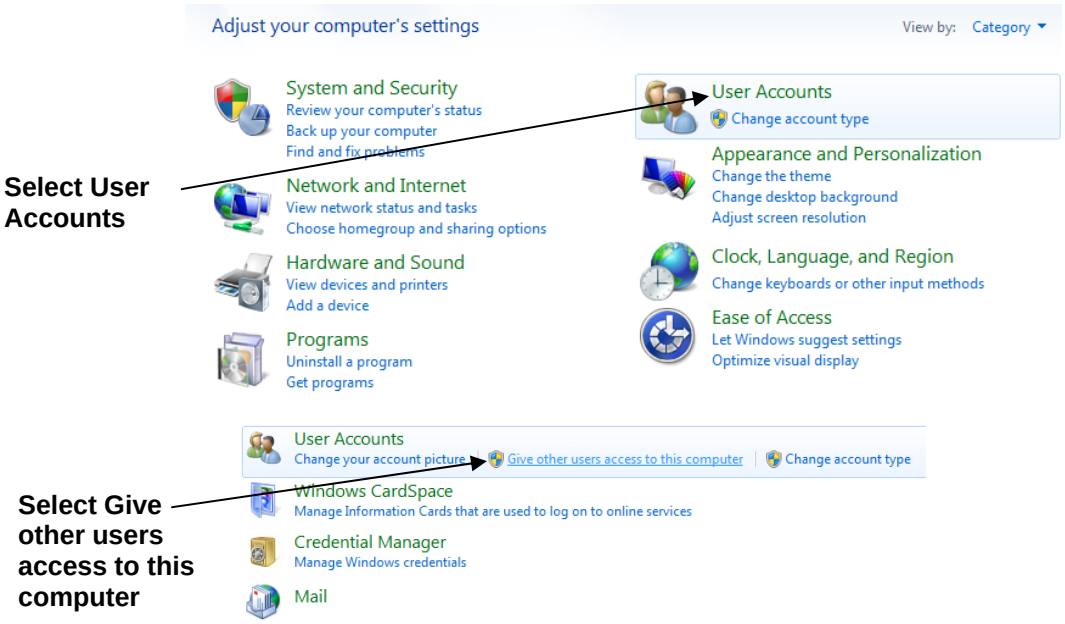
3. Right-click on the OpenEnterprise Session, and choose **Stop** from the menu.
4. Right-click on it again, and choose **Start** from the menu.

Permissions problems with AMS Device Configurator

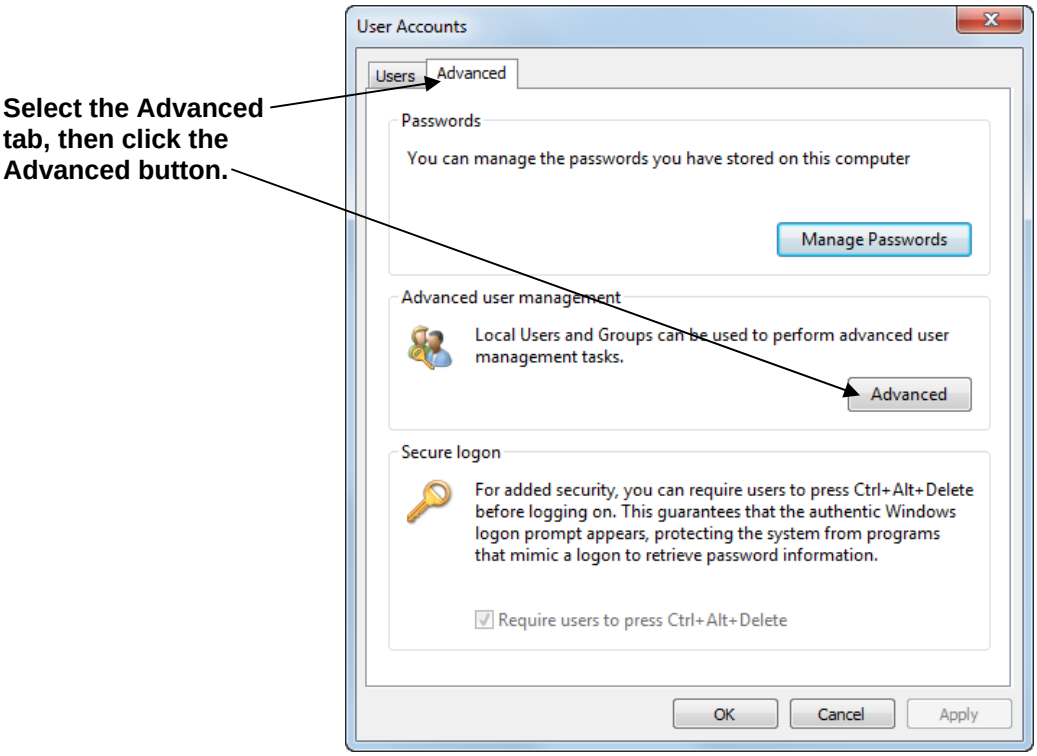
Certain FieldTool functions require special access rights on your PC. All Field Tools users (including Administrator users) on the PC must belong to the AMSDeviceManager group. Normally the system adds standard users automatically during installation. If you need to add one or more users after installation, you can add them manually:

These instructions reflect Windows 7:

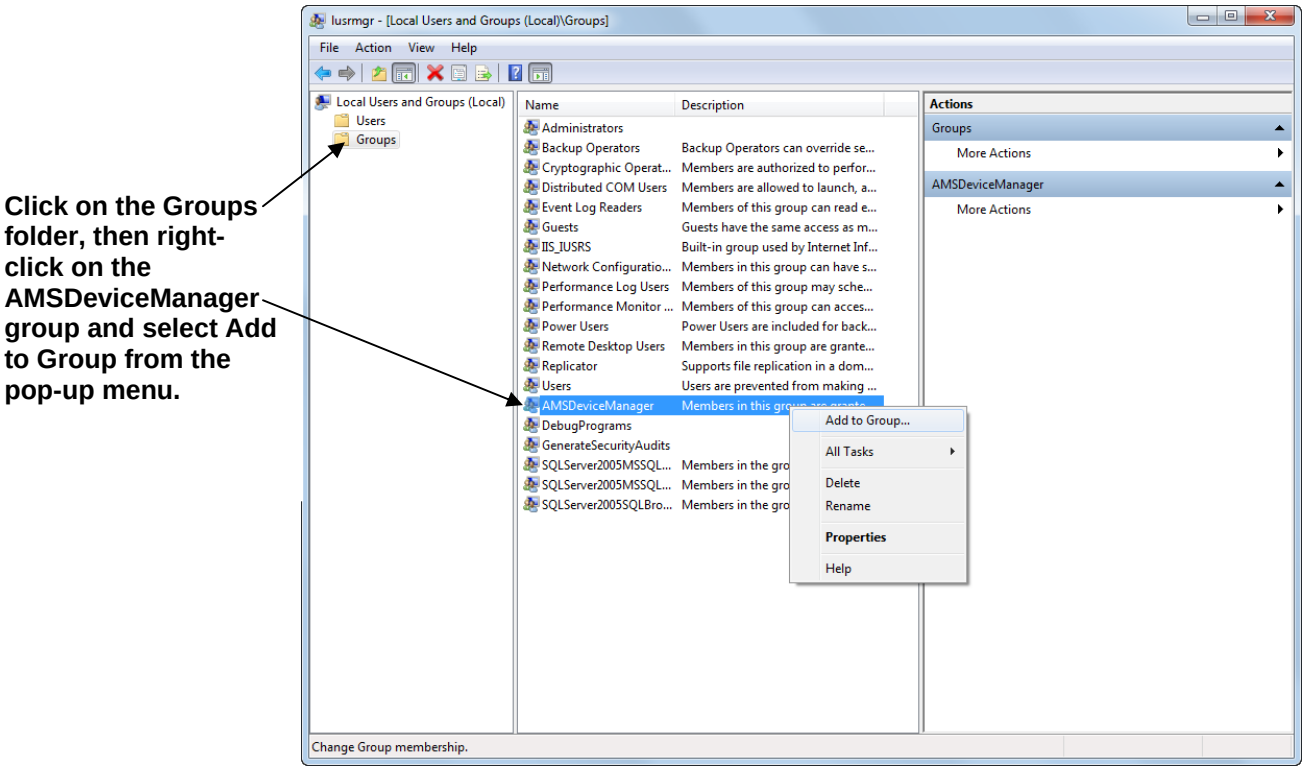
1. Select **User Accounts** in the Windows control panel, then choose **Give other users access to this computer.**



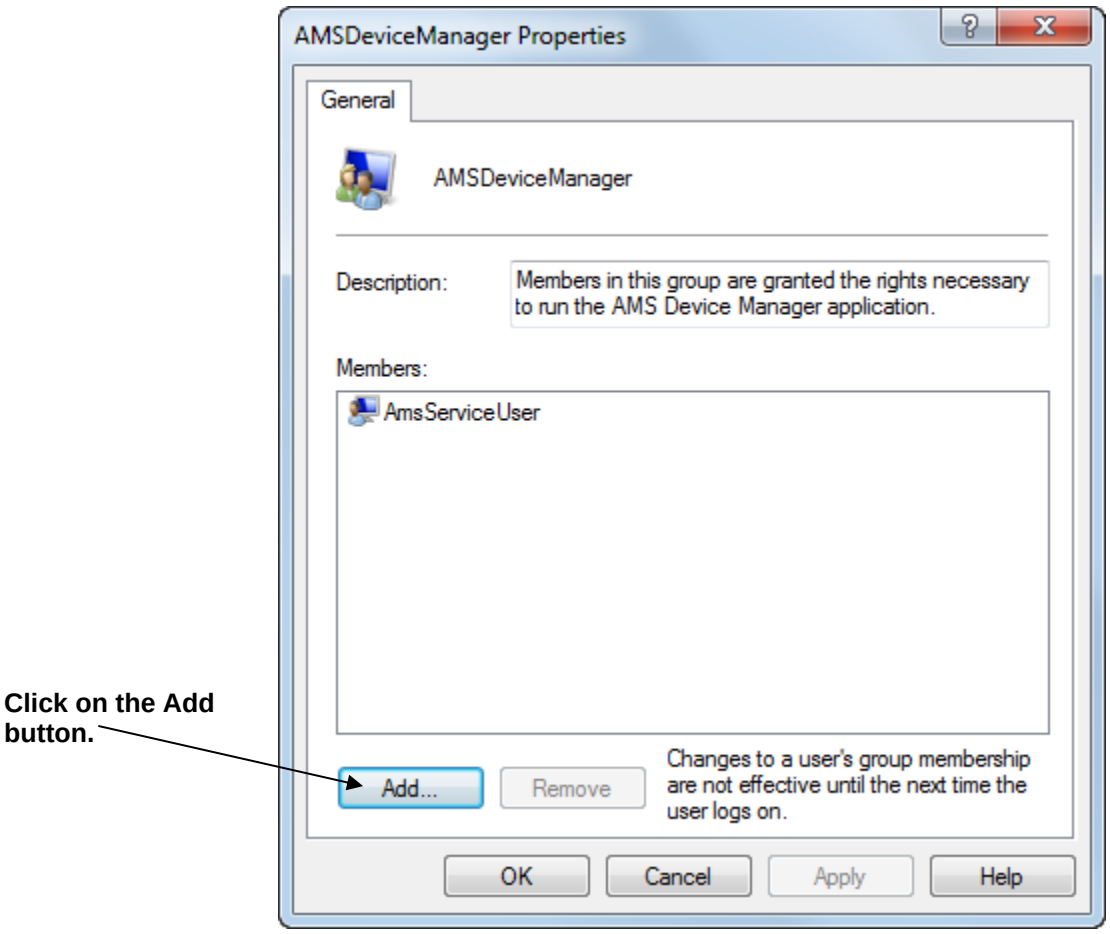
2. In the User Accounts dialog box, click the **Advanced** tab, then from the Advanced tab, click the **Advanced** button.



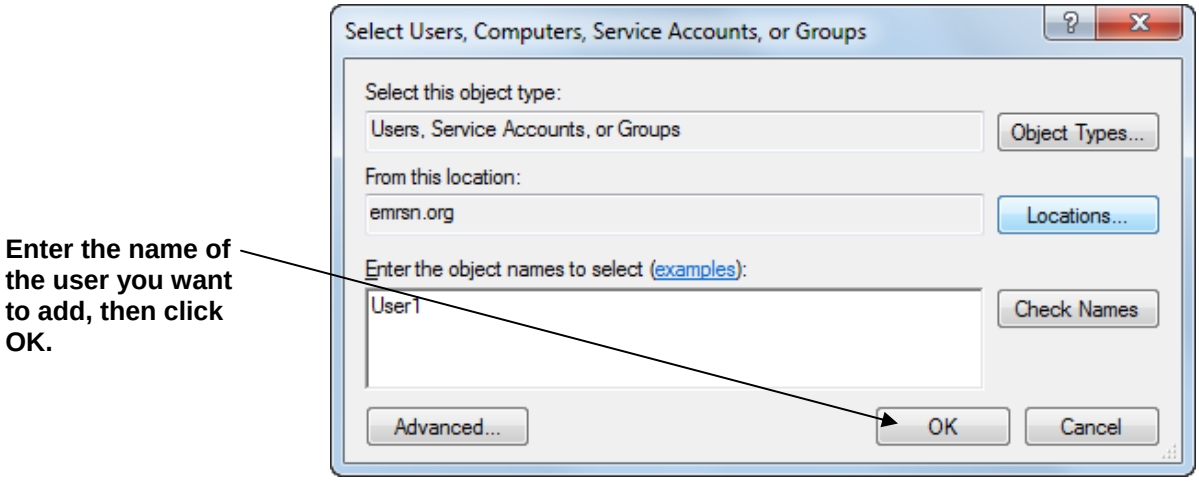
3. In the Local Users and Groups page, click on the Groups folder to show the groups, then right-click on the AMSDeviceManager group and select **Add to Group** from the pop-up menu.



4. In the AMSDeviceManager Properties dialog box, click the **Add** button.

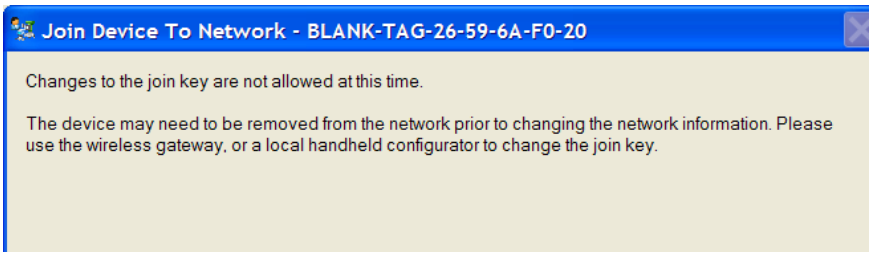


5. Enter the name of the user you want to add and click **OK.**



Unable to Update the Network ID and Join Key in AMS Device Configurator

If you see the following screen when you attempt to update the Network ID and Join Key, it means that the update failed. Click **Next** and then on the Method Complete screen, click **Finish**.



Changes Not Allowed at this Time

A typical reason for the update to fail is that the device already belongs to an existing network and so it rejects the update. To try the update again:

1. Physically disconnect the battery from the wireless device, and leave it unconnected for at least one minute. This temporarily removes the device from its existing network.
2. Re-connect the battery, and immediately re-establish a new communication connection to begin the update process again. You must do this before the wireless device re-connects to its existing network.

Cannot Restore Communication with Device after Communication Failure is Fixed

When a communication failure with a device occurs, AMS Device Configurator uses archived data for that device and does not try to communicate with it.

If, when the communication failure is fixed, communications cannot be restored because AMS Device Configurator still uses archived data, you can delete the archived data to force AMS Device Configurator to communicate and obtain current data. To do this:

1. Stop AMS Device Manager Server.

2. Go to the \AMS\Bin folder and double-click on the DelDev.exe utility. Leave the password field blank in the User Login dialog box; just click **OK**.
3. In the Remove Device screen delete the previous device data from the archive.

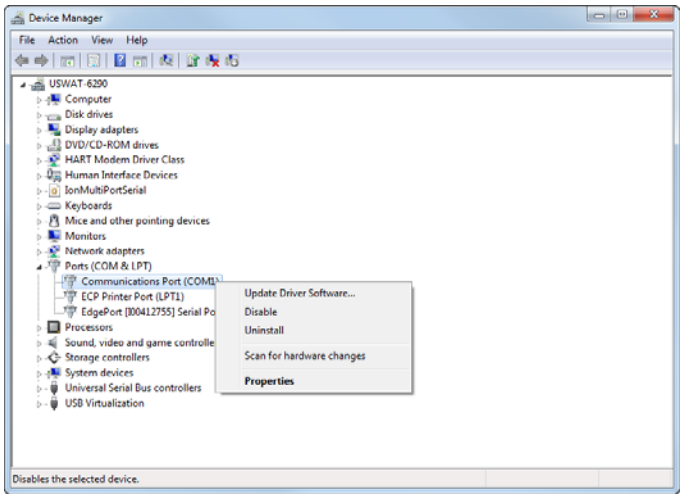
4. Restart AMS server and verify that data shown is current:

Communication Problem Causing Truncated Messages

If you use RTS/CTS with radios, and encounter a problem where Field Tools can transmit, but RTUs are unable to respond, it could be related to PC port configuration in Windows which results in messages being truncated.

If this problem occurs follow these steps:

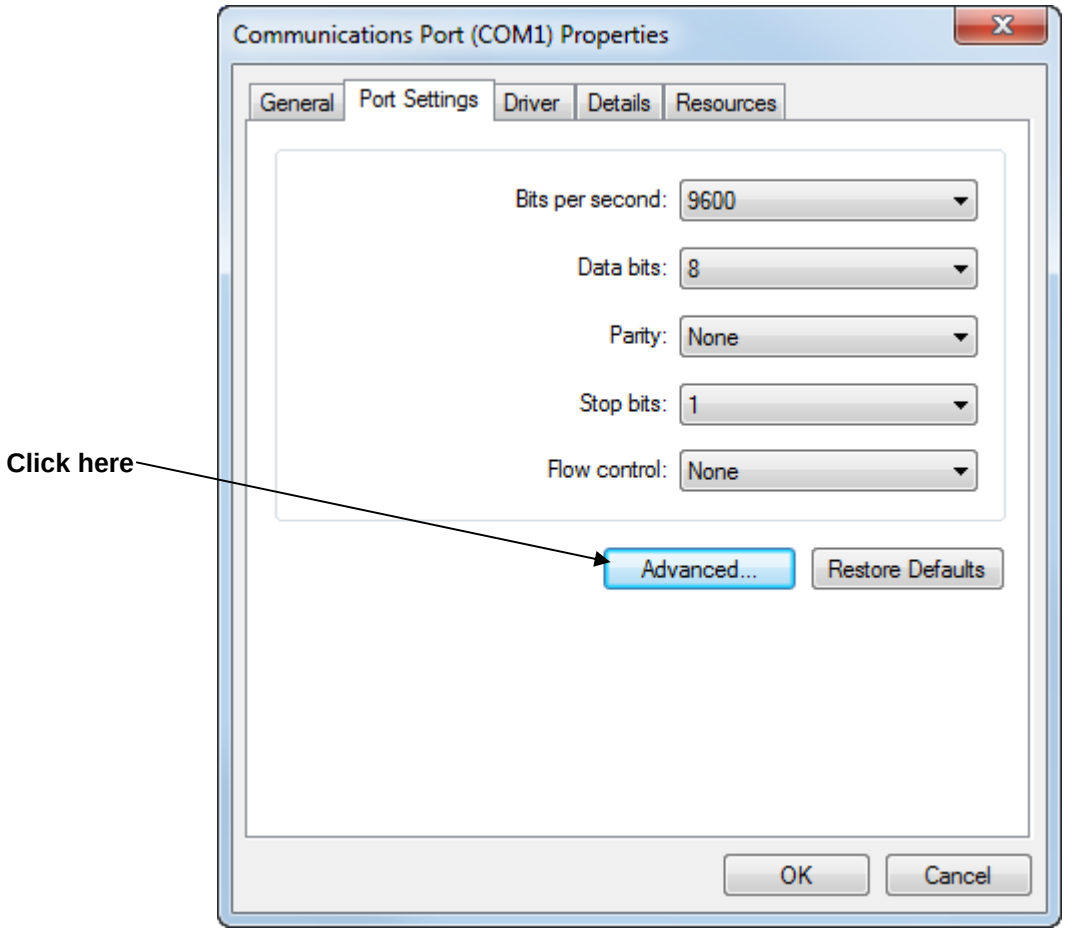
1. Double-click the **System** icon in the Windows Control Panel. The System Properties dialog box opens.
2. Click the **Device Manager** button:
3. Expand the “Ports (COM & LPT)” selection. This displays a list of ports.



List of Ports in Device Manager

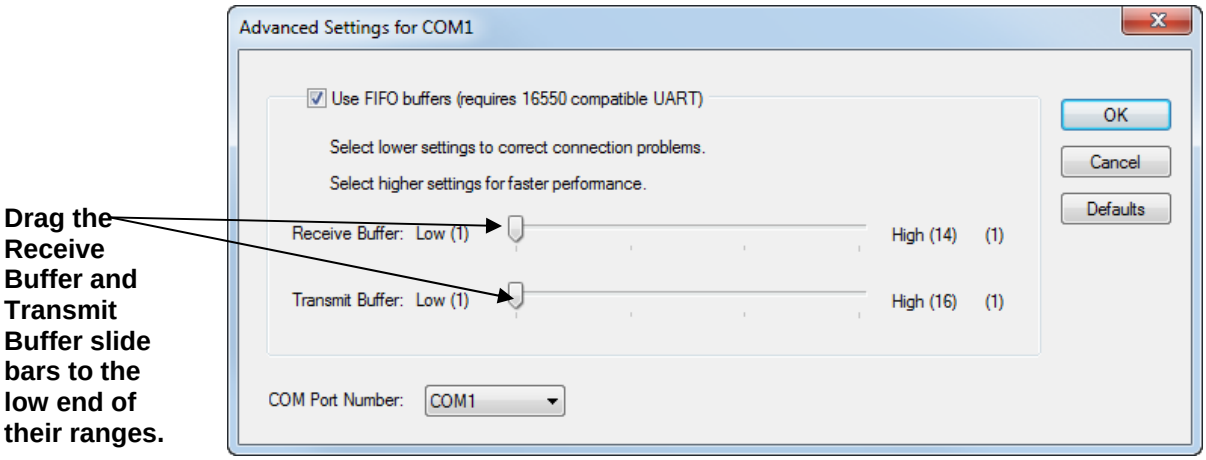
4. Right-click once on the port used for Field Tools communications and choose **Properties** from the pop-up menu.

5. The Communication Port Properties dialog box opens; click the **Port Setting**s tab, then click the **Advanced** push button to call up the Advanced Port Settings dialog box.



Communication Port Properties dialog box

6. In the Advanced Port Settings dialog box, drag the **Receive Buffer** and **Transmit Buffer** slide bars to the low end of their ranges, and click **OK.**

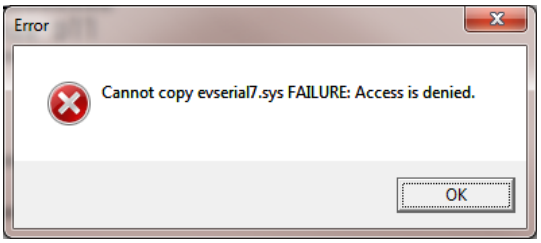


Editing the Advanced Settings for the Port

7. Then choose **OK** in the Communication Port Properties dialog box, and exit the device manager and control panel to save the settings.
8. Reboot your PC for the new settings to take effect.

Eltima "FAILURE: Access is denied" Message

You may see this message during installation if Eltima software had already been installed. This is not an issue. Click **OK** to allow the installation to continue.



AMS Services is not Starting

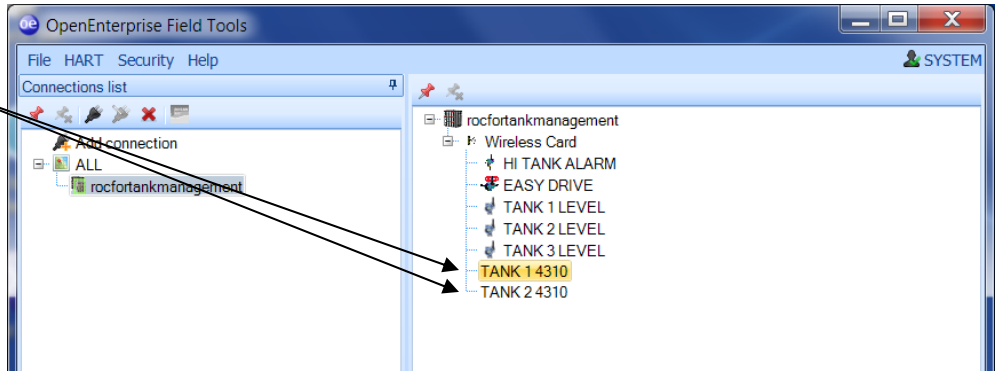
One possible cause of AMS services not starting could be if Microsoft® .NET software is not functioning properly. Check the Windows Event Log. If you see the message:
"System.ServiceModel.Diagnostics.TraceUtility threw an exception"

in the Event Log, try uninstalling Microsoft .NET 4.5, then reinstall it with all security patches and updates using Windows Update.

AMS Wireless SNAP-ON Failure - Missing Icons in Trees

If the Active Connection pane includes devices for which a label is displayed with no icon, this can indicate that the device descriptor (DD) was not properly loaded. This can cause a failure of the AMS Wireless SNAP-ON.

Devices without icons may not have device descriptor (DD) loaded.



If this happens, you can load the device descriptor. See *Section 3.7 – Adding a HART Device Type*.

AMS Wireless SNAP-ON Defaults

The default parameters in AMS Wireless SNAP-ON are set to work optimally with approximately 10 devices. If, in the ControlWave environment, you experience challenges or need to manage more devices, contact Remote Automation Solutions Technical Support for information on setting the appropriate parameter values.

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