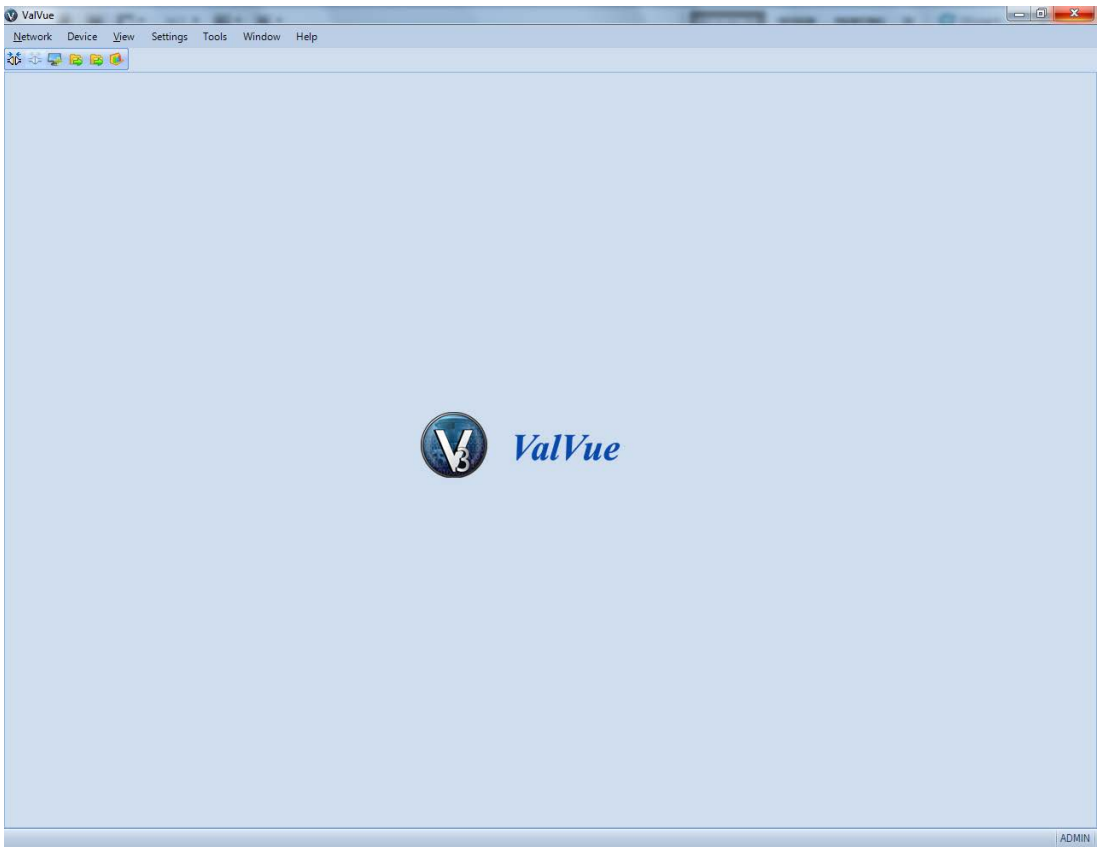
Masoneilan™

ValVue™ Software

Instruction Manual (Rev. H)



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Document Changes

Version/Date	Changes
A/10-2014	Original release
B/11-2014	Added a chapter for the SQL Server for ValVue 3 Install and a chapter for Installing SVI™ FF in an AMS with ValVue 3,
C/11-2015	Added the Valve Data Management and Signature Management sections. Reworked the licensing registration section to reflect the new unified module.
D/03-2016	Added functions to Export and Import device data for SVI II AP. Added new Valve Details information. Added AMS Communication DTM section. Edited Observe and Diagnosis menu descriptions and functionality.
E/06-2017	Added section on GE Documentation Resources. for Masoneilan Products. Added section on Failure to Communicate. Added notes on Factory Version operation and enhanced diagnostics calculations. Added text to Column Settings. Updated Find New Devices text. Updated Add a Valve section. Added a discussion on Migrating Positioner and Diagnostic Data from ValVue 2.8x to ValVue 3.x. Updated Print/Print Preview section.
F/05-2018	Removed unregister function from licensing. Added Using Control Panel to Add Windows Login to ValVue Admin Group Added note on versions to DTM Library discussion.
G/06-2019	Changed aspects of Sequencer documentation. Added contact information. Updated registration information. Removed Ribbon Layout and Theme choices. Changed View Signature History to View Diagnostic and Report. Removed Print and Print Preview Topology menu items. Removed Device Specific Report section. Removed Observe. Refer to next revision details on the next page.

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Document Changes

Version/Date	Changes
H/01-2021	Added DCS item to Field Networks Bench Quick Start Guide reference removed, no longer available Hardware operating and system requirements updated Valvue3 now deploys CodeWright HART CommDTM Login password changed from ValVue 3 to ValVue3 Removed context-sensitive Intelligent Help section and all related references "FF won't appear if using an SVI3 DTM" removed "...SVI3, https://valves.bakerhughes.com/resource-center" changed to "SVI3, SVI II AP..." "Other Communication" field network option added to pulldown list "Add Child Area" and "Rename Area" sub-sections added to "Device Task" section "Edit a Field Network" sub-section removed Removed "Device Critically Settings" sub-section "Security Settings" sub-section renamed to "User Management" Email address references changed from ge.com to bakerhughes.com Sequencer Management notes updated "Signature Test (SVI FF only)" added to Diagnostics task 0 to 150 psi range removed from Autotune task "Currently only SVI FF devices can be added to execute a sequence" note removed Free format is populated with the free format data manually or by QR code scan "Export / Import Signature History" sub-section removed "Export Signatures" sub-section renamed to "Signatures" "Import Signatures" sub-section removed "Standard Signature Test Results Historical Trend" figure updated "Topic Search" removed from Help menu "Installing SVI FF in an AMS-DeltaV System and Starting Using ValVue with AMS" section renamed to "Connect Masoneilan Devices to an AMS DeltaV System and Starting Using ValVue with AMS" UI images updated BHGE references removed Audit Trail Events for the SVI3 table updated "HART" section updated Firmware Downloading" section changed to "Firmware Download". Content update"Masoneilan PRM Communication DTM" section added

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1. Introduction

ValVue Introduction

The ValVue (*ValVue Main Screen*) is a user-friendly interface for using Masoneilan and Masoneilan DTMs to setup, control and diagnose Masoneilan control valves.

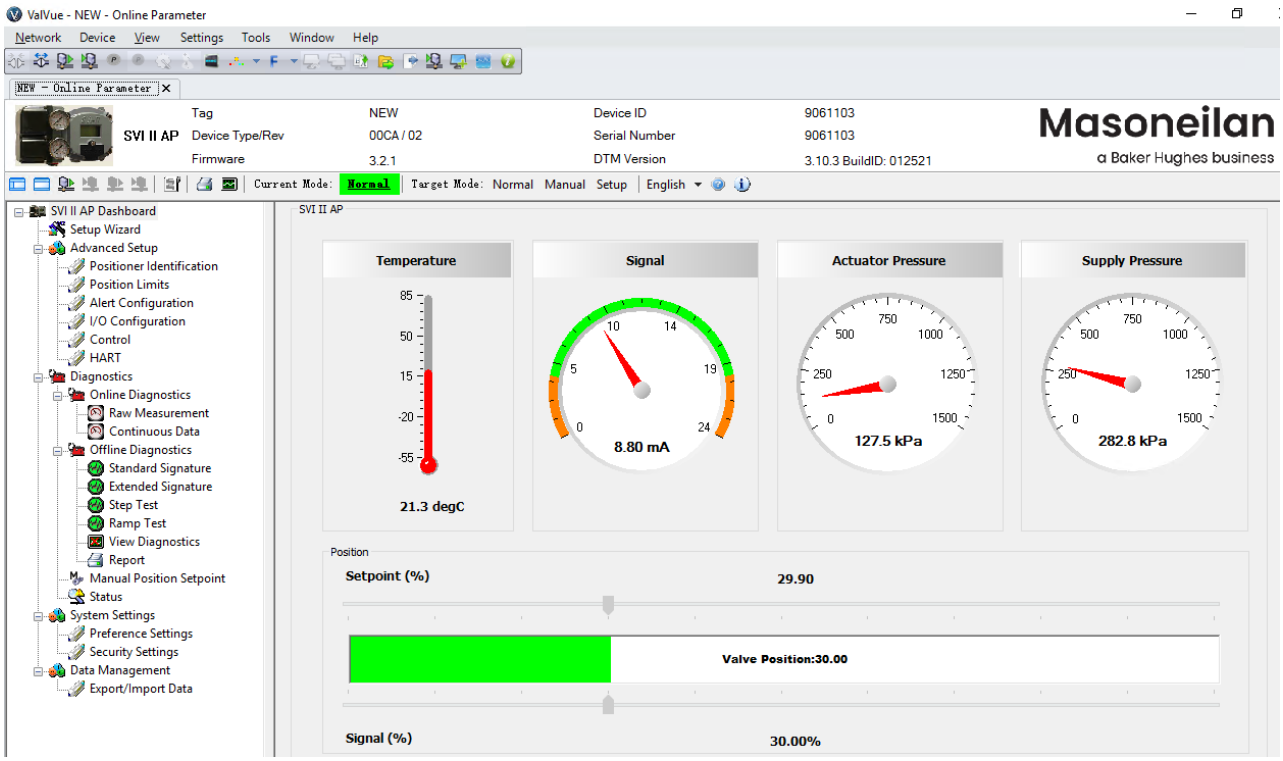

Figure 1 ValVue Main Screen

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About This Manual

These instructions are intended to help a field engineer use the ValVue interface to install, configure, calibrate and diagnose valves using various proprietary DTM software. If you experience problems that are not documented, contact Baker Hughes or your local representative.

This is a menu-driven manual, which also maps the menu items to their icon counterparts. Additionally, “Getting Started Tasks” on page 41 gives a task-driven list.

Conventions Used in This Manual

Conventions used in this manual are as follows:

- √ *Italicized* letters are used when referencing a term used in the display window, for emphasis on important items and for fields where data appears or for user-entered data.
- √ Actions performed on buttons, checkboxes, etc. appear **bolded**.

Indicates important facts and conditions.

Indicates a potentially hazardous situation, which if not avoided could result in property damage or data loss.

Indicates a potentially hazardous situation, which if not avoided could result in death or serious injury.

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Baker Hughes Documentation Resources for Masoneilan Products

Baker Hughes publishes several different resources for documentation on Masoneilan products:

- √ Bench quick starts contain information related to configuration and testing in a bench top environment.
- √ Hardware quick starts contain installation information and other basic information related to getting a device installed and very generally configured.
- √ Hardware instruction manuals contain more complete information for configuration of a device. This manual also includes information on background functionality and special circumstances useful in installation, configuration and operation/ troubleshooting.
- √ Software manuals contain more complete information for the software configuration of a device. This manual also includes information on background functionality and special circumstances useful in configuration and operation (including diagnostics and their interpretation). These manuals represent the same source material as the online help.
- √ Handheld documents: Give the DD mappings for the product.

Check the website: *https://valves.bakerhughes.com/resource-center*.

Related Documentation for ValVue 3

SVI3

- √ Masoneilan SVI3 Digital Positioner Advanced Performance Quick Start Guide Masoneilan
- √ SVI3 Digital Positioner Advanced Performance Installation and Maintenance Manual

SVI II AP

- √ Masoneilan SVI II AP Digital Positioner Advanced Performance Quick Start Guide Masoneilan
- √ Masoneilan SVI II AP Digital Positioner Advanced Performance Installation and Maintenance Manual
- √ Masoneilan SVI II AP Advanced Performance Digital Positioner Bench Quick Start

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12400

- √ Masoneilan 12400 Series Level Transmitter/Controller Instruction Manual & Safety Guide
- √ 12400 online help

SVi1000

- √ Masoneilan SVi1000 DTM Software Instruction Manual
- √ Masoneilan SVi1000 Positioner Instruction Manual
- √ SVi1000 Bench Quick Start Manual
- √ Pushbutton Guide for SVi1000 (Emerson® 475 Handheld)

SVI™ FF

- √ SVI FF Digital Positioner Quick Start Guide
- √ SVI FF Digital Positioner Instruction Manual
- √ SVI FF Bench Quick Start Manual
- √ SVI FF Quick Card for the Emerson 475

NOTE

If you are new to DTM technology there is a good explanation given on the fdtgroup home page. Visit: https://fdtgroup.org/technology/components/ for an explanation of basic frame and DTM concepts.

Masoneilan Help Contacts

- √ Email: svisupport@bakerhughes.com
- √ Phone: 888-SVI-LINE (888-784-5463)

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2. Installation and Logon

Installation

Requirements

Using the ValVue installation procedures discussed requires basic knowledge of Microsoft® Windows® operating systems. Download the Codewrights HART® Communication DTM and install.

Hardware and Operating System Requirements

To successfully install and run ValVue software, your computer system must meet or exceed the following minimum hardware and software requirements.

- √ Windows Server® 2008 R2 SP1, Windows Server® 2008 SP2, Windows Server® 2012, Windows Server® 2016, Windows® 7 sp1, Windows® 8.0 or Windows® 10
- √ Microsoft.NET Framework 2.0 SP2, Microsoft.NET Framework 4.0 FULL, and Microsoft.NET Framework 3.5 SP1
- √ 4 G of RAM
- √ 10 G of free hard disk space

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HART® Related Issues

Before installing the DTM, determine which port the computer uses for serial (RS-232 or USB) communication. The HART® modem uses this port for communication with the SVI3 positioner.

HART® Compliance

The SVI3 Advanced DTM requires a HART® compliant communications loop. The HART® protocol specifies the noise level, impedance requirements, and configuration of the loop. Conventional communications loops consisting of the following components meet requirements for HART® compliance.

- √ Quality current source having low noise and high impedance
- √ Minimum loop impedance of 250 Ohms
- √ Twisted pair cable suitable for 4 - 20 mA current loops

When a safe barrier separates the communicating devices, a HART® compliant barrier must be used.

You cannot connect or use the DTM and another HART® master terminal device (at the same time), for example a handheld device.

Some Distributed Control System output circuits are incompatible with the HART® protocol. Connecting a HART® modem to such a circuit can cause a process upset. Use a HART® filter. Consult the DCS manufacturer to verity that the DCS is compatible with HART®, before connecting a HART® modem and using the DTM.

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Installing ValVue and DTM Software

This installs not only the ValVue and DTM software but the SQL Express® software, the Masoneilan NI-FBUS-H1 Comm. DTM, CodeWright HART CommDTM, Microsoft® VC++ Redistributable package and the .Net framework.

Operation of the SVI3 Advanced DTM requires installation of the following software components:

√ SVI3 Advanced DTM software or one of the items listed under below to access the SVI3 Advanced DTM:

PACTWare software, which includes generic HART® DTM software and HART® communications software

AMS Version 13 or above

PRM software from Yokogawa

Field Device Manager (FDM) from Honeywell

fdtContainer from M&M Software GmbH

If you have a previous installation of the Masoneilan NI-FBUS-H1 Comm. DTM, you need to use Control Panel to uninstall before proceeding.

During the install, SQL is installed. It is highly recommended that you check for ValVue updates on the Baker Hughes website (https://valves.bakerhughes.com/resource-center) every six months to keep this program current for security issues.

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To install the software:

1. Double-click **ValVue3.xFullEditionInstaller.exe** and Figure 2 appears.

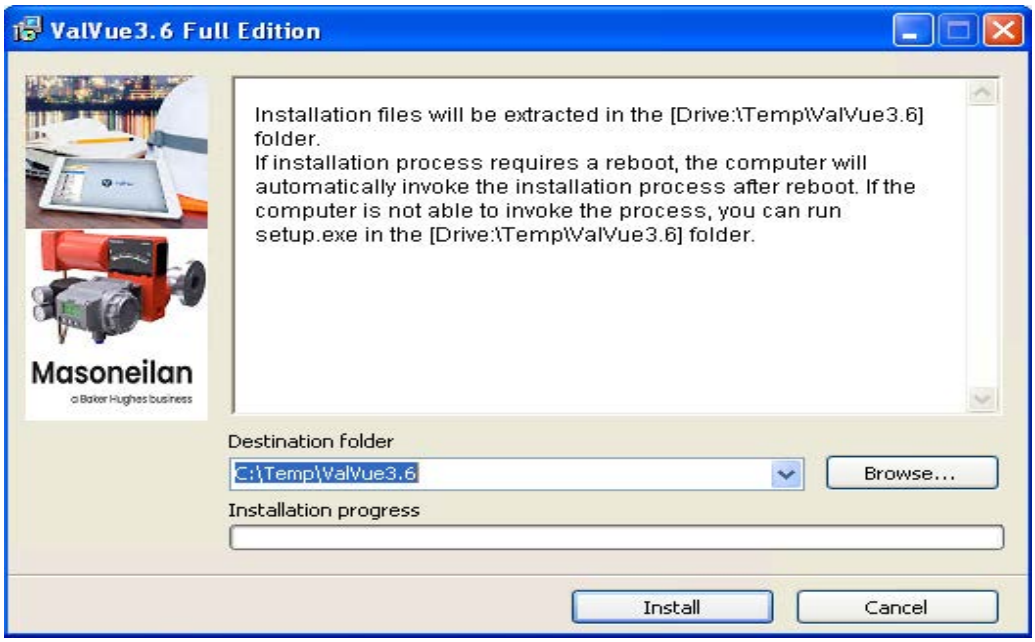

Figure 2 Install Unzip

2. Click **Install** and the extraction process begins. Click to allow instillation on any intermediate messages that appear. The *Preparing Setup* dialog appears. If you have not previously installed ValVue3 then Figure 3 appears.

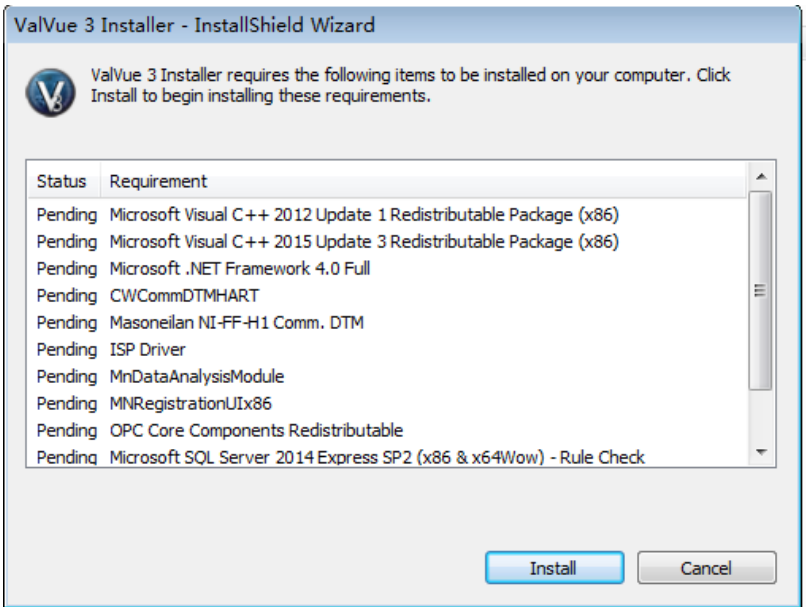

Figure 3 Install Masoneilan NI-FF-H1 Comm. DTM

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3. Click **Install** and Figure 4 appears.

NOTE

During the initial installation, if you do not have SQL installed, you are prompted to reboot your system. Follow the prompts to do so and the ValVue install automatically commences after reboot.

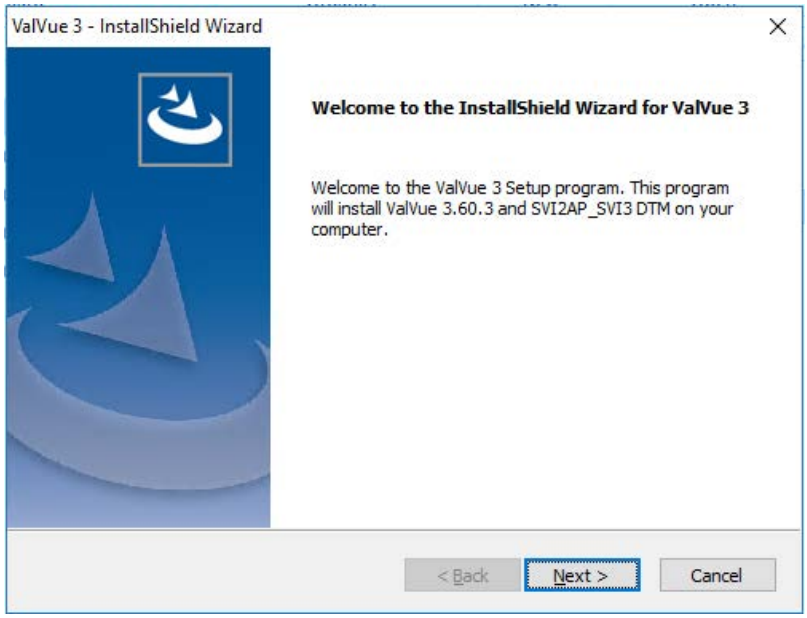

Figure 4 ValVue Install Welcome

4. Click **Next** and Figure 5 appears.

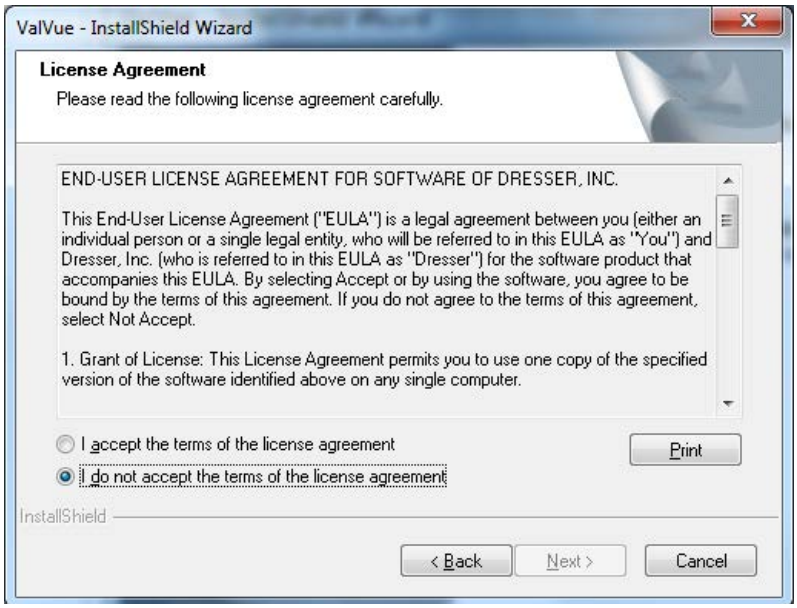

Figure 5 ValVue License

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5. Click **I accept the license**....., **Next** and Figure 6 appears.

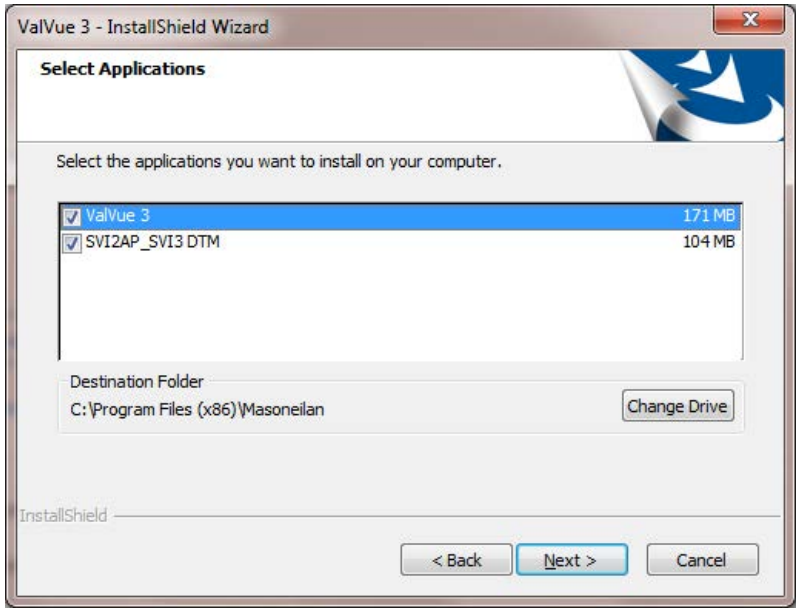

Figure 6 Choose Programs for Installation

6. Click **Next** and Figure 7 appears.

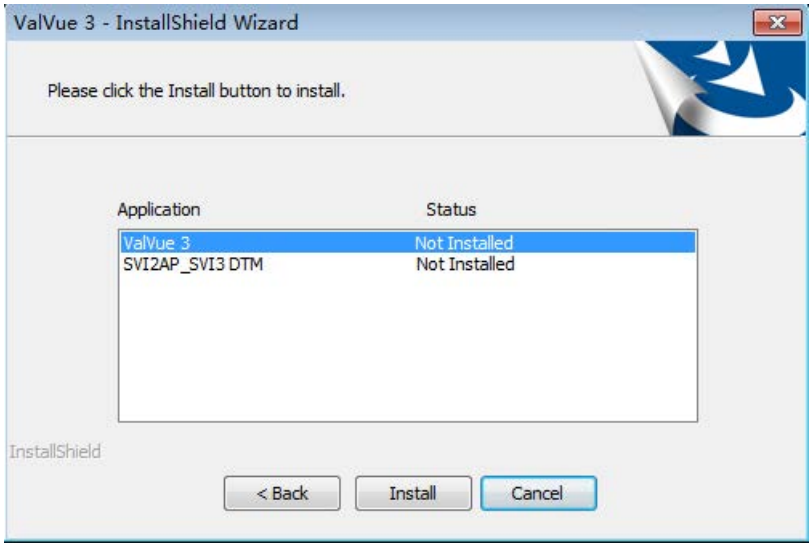

Figure 7 Display Application Status

7. Click **Change**, navigate to or create the target folder, click **OK** and the dialog reappears.
8. Click **Install** and the install proceeds followed by the *InstallShield Wizard Complete* dialog.
9. Click **Finish**.

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Log On

1. Select **Start > All Programs > Masoneilan > ValVue3 > ValVue** and Figure 8 appears.

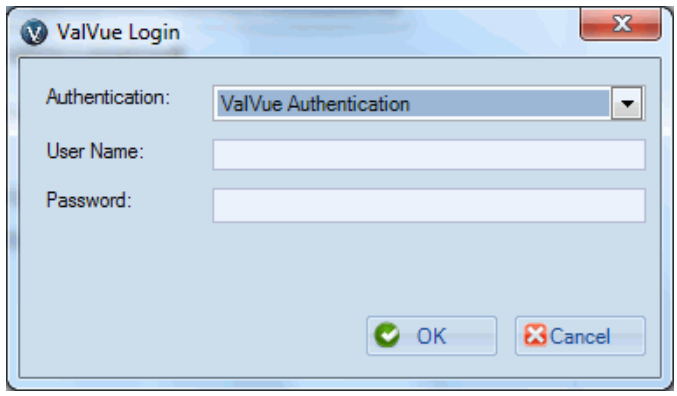

Figure 8 ValVue Login

2. Sign on to ValVue3 with default values:

   User Name: admin

   Password: ValVue3

NOTE

For security purposes, you are forced to change your password during the first use.

The ValVue and SV3 DTM license trial period works as follows:
1. Once you download and install the ValVue software, you are granted a 30 day trial period. During the 30 days, you have access to all the advanced features of ValVue and the SVI3 DTM.
2. Once the first 30 days expires, you lose the advanced features of both ValVue and the SVI3 DTM. You then have an additional 30 day period with just standard features, after which you must register to continue using the product.
We strongly encourage you to register your license with us as soon as possible. Contact Baker Hughes at software.reg@bakerhughes.com.

The evaluation periods for both are independent of each other and commence with first use.

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NOTE

If you have installed/deleted DTMs or updated ValVue, a dialog appears when you open ValVue3: Click:

- √ ***Yes*** *and the library is updated.*
- √ ***No*** *and you need to manually updated from the DTM Library Management dialog to access any new functionality.*

3. Use the *Authentication* pulldown to select either:
   - √ *Windows Authentication:* Any user in the list of the ValVue user group can logon. This user group is created by the system administrator.
   - √ *ValVue Authentication*: This is the default username and password for first login. Username *Admin* and Password: *ValVue3*. These must be changed after the first login.

   During your initial login Figure 9 appears.

Figure 9 Change Password

You must change your password according to the constraints shown in Figure 10.

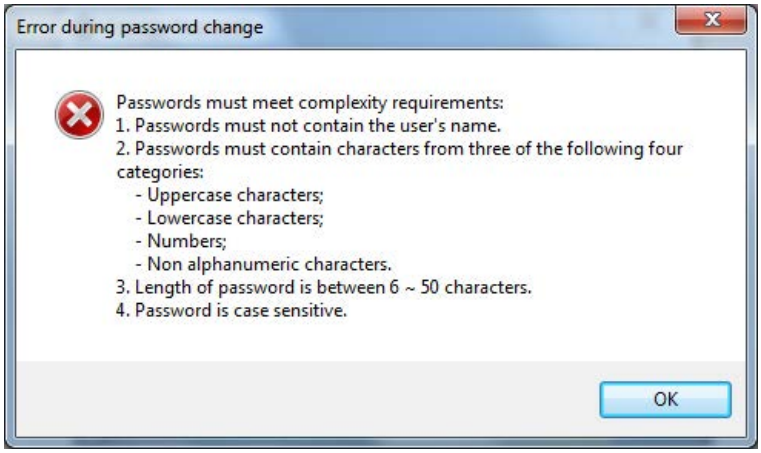

Figure 10 Passwords Constraints

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- √ *Login as Current Windows User*: Your *Domain\Username* appear in *User Name*. For:
- √ *Windows Authentication:* Enter a *Username, Password* and use the *Domain* pulldown to select the domain.
- √ *ValVue Authentication*: Enter a *User Name* and *Password*.
- √ *Login as Current Windows User*

4. Click **OK** and the main screen appears.

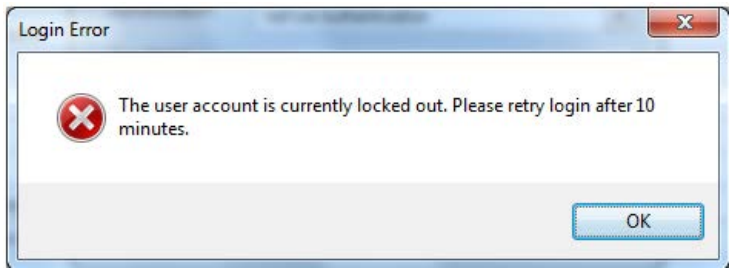
NOTE

After you successfully login into ValVue3, the User Authentication Mode is saved and next time you login, the last authentication mode automatically appears.

NOTE

User Account Security Lockout

A user account is locked out after five unsuccessful password entries and the following dialog appears:



If this occurs, wait ten minutes and retry. This behavior occurs cyclically until a successful login is completed.

The lockout behavior is account specific and occurs when using either Login as Windows Authentication or ValVue Authentication.

NOTE

If you are installing a new version over an existing version, you must delete all devices from the topology tree before doing so. After reinstalling use the Select the HART® communications network in the topology pane, right-click and select ***Rebuild Network***. SVI3

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Failure to Communicate

If the PC (using a modem) fails to communicate with the HART® or ValVue displays then either the message *No Devices Found* in the DTM main screen, or a COM port communication error occurs, or the message *HART I/O Failed* appears if the device communications fails during the session. Communication failure prevents the PC from establishing a link. Possible causes of communications failure related to installation include:

- √ Insufficient loop current and voltage
- √ Poor wiring contacts
- √ Improper connection of the HART® modem to the computer or a busy port (wait for COM port to clear or use another port)
- √ Incorrect serial port
- √ Using the DTM with another HART® master terminal in service
- √ Insufficient loop impedance (a minimum of 250 Ohms is required)
- √ Field device has a non-zero polling address (Set to multidrop)

If HART® compliance problems are suspect prepare a detailed description of the loop, including all devices on the loop, type of wiring used, loop length, and presence of any possible interference sources before contacting the factory for assistance.

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3. ValVue Work Environment

ValVue Work Environment

This section describes the ValVue main screen and how to accomplish general ValVue tasks. After you have successfully launched and logged into the ValVue, *ValVue Main Screen* appears. The main screen includes four main components:

- √ "Command Area", which includes the title bar, main menu and the toolbar.
- √ DTM "UI Panel" on page 31, which displays the UI interface for the specific device DTM.
- √ Various "Docked Panes" on page 32, which include the topology pane, device library, help, and error log tracking.
- √ "Status Bar" on page 35.

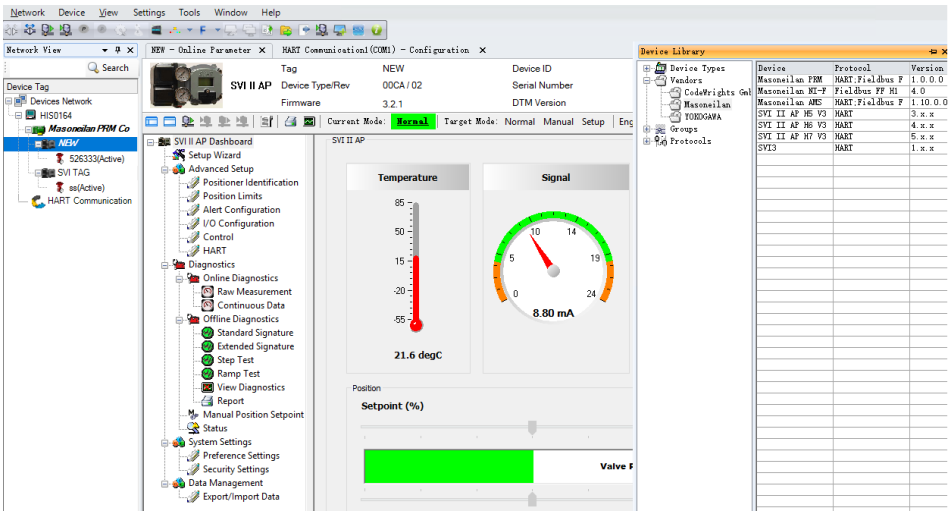

Figure 11 ValVue Main Screen

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Command Area

Command area is composed of three components:

√ Title bar: lists the application name and information about current project and current opened DTM UI and has buttons to minimize/maximize and close.

Figure 12 Title Bar

√ Main menu: Provides items for all functions of the DTM software. See the individual menu discussions.

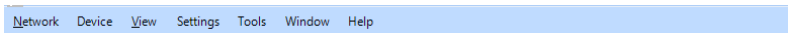

Figure 13 Main Menu

√ Toolbar: An icon-driven representation of the main menu. The number of items and those that are active depend on the item selected in the topology. See “Network Menu” on page 43 for more description of the icons.

Figure 14 Toolbar

Exclamation Point and Pencil Icons

Throughout ValVue3 and the Masoneilan DTMs a:

√ Red exclamation point ( ) indicates a value in the associated field is out of range.

√ Pencil icon ( ) indicates a value that has not been saved.

These icons also appear in the topology tree to indicate a tab where there is an out of range or and unsaved value (Figure 15). The out of range exclamation point always takes precedence.

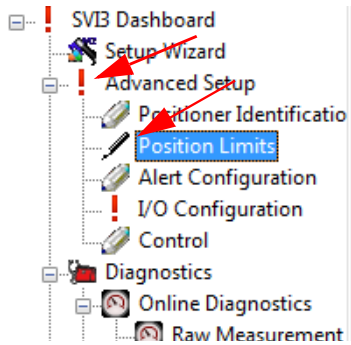

Figure 15 Topology Tree with Icons

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UI Panel

The UI panel depends on the device installed and selected. For Masoneilan products see the individual DTM help. See vendor documentation for non-Masoneilan products.

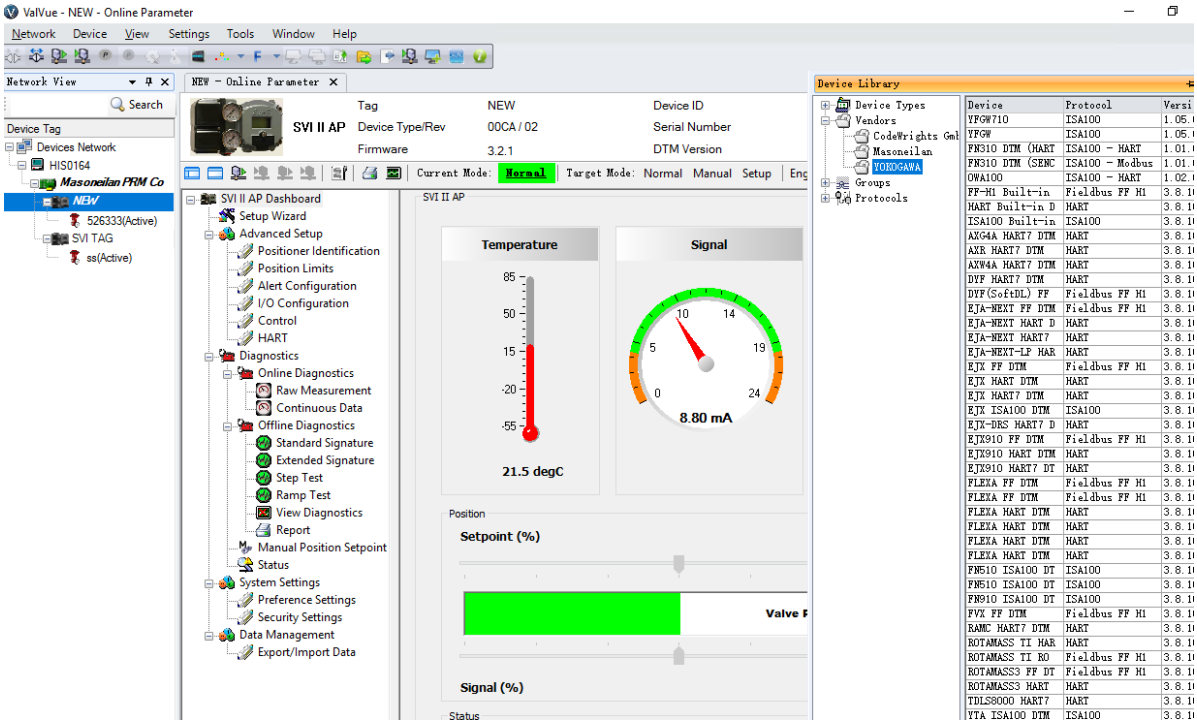

Figure 16 UI Panel

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Docked Panes

ValVue Topology Pane

The topology pane (*ValVue Topology Pane: Network View*) is used to navigate the various areas and devices in each area and open a device's proprietary DTM. This navigation tree can be changed to one of four different views:

- √ *Topology View*
- √ *Area View*
- √ *Protocol View*
- √ *Manufacturer View*

See "Device Menu" on page 45 for a more detailed explanation.

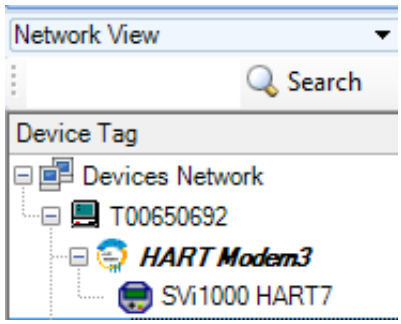

Figure 17 ValVue Topology Pane: Network View

The tree is broken down into the following functional areas:

- √ *View:* Listed just below the yellow bar is the view in use.
- √ *Field Network* or *Area*: One level below is either the protocol in use or a listing of the user-defined areas.
- √ *Protocol*: Next is the protocol in use.
- √ *Device*: Next is a list of the devices added.

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Column Settings

You can add and remove columns appearing in the topology pane. The default is to display a minimal amount of columns and the columns available depend on the active *Network View*. These items are useful in identify particular valve/positioners. It may be necessary to pull th e topology pane to display the fields. Columns available for display include:

- √ *Device Tag*
- √ *Address*
- √ *Channel*
- √ *Device Type (DTM)*
- √ *Changed*: Indicates an unsaved parameter change using the pencil icon.

To configure columns:

1. Right-click at the device tag level.

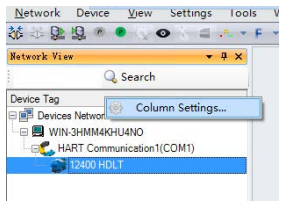
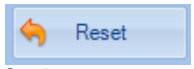


Figure 18 Column Settings Right Click Menu

The image shows the menu when more than the default columns are shown. Only *Column Settings* appears then.

Use the *Reset Columns* menu item or 

on the *Column Settings* dialog to reset the column configuration to default.
Use the *Hide This Column* menu item to hide a selected column.

2. Click **Column Settings** and the dialog appears.

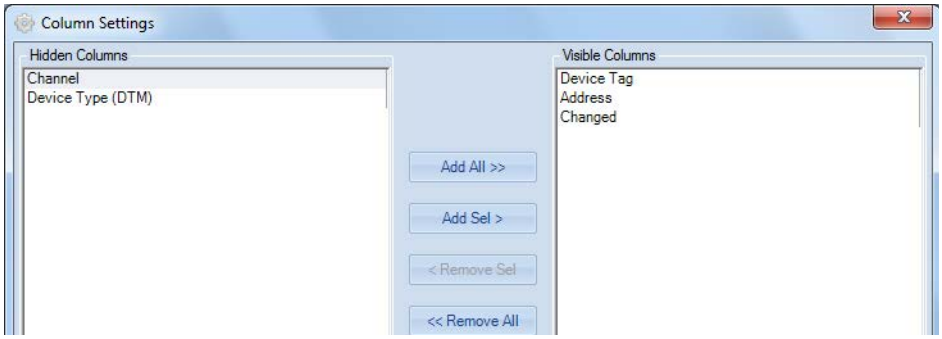


Figure 19 Column Settings

3. Use the add and remove buttons to add/remove items from the *Hidden Columns* or *Visible Columns* lists.

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4. Use the move buttons to arrange the order and click **OK**. The topology pane appears with the columns appearing and arranged as dictated.

Device Library

Use the *Device Library* to view lists of protocols and devices in the *DTM Library*. In the *DTM Library* means that they are installed and ready for use by ValVue. Other protocols and DTM may be on the system, but not ready. See “DTM Library Management” on page 84 for instructions on how to manage DTMs.

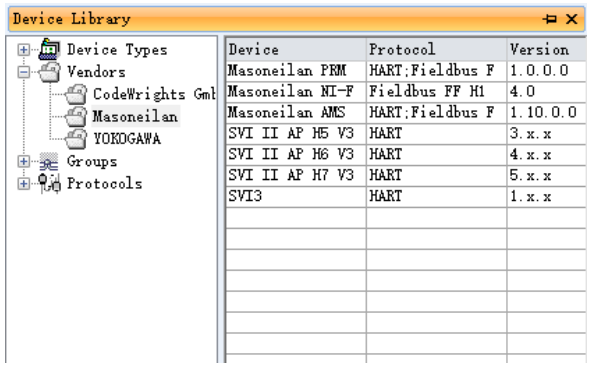

Figure 20 Device Library

If you right-click on and item in the *Device* list you can access a dialog with display only *DTM Info*.

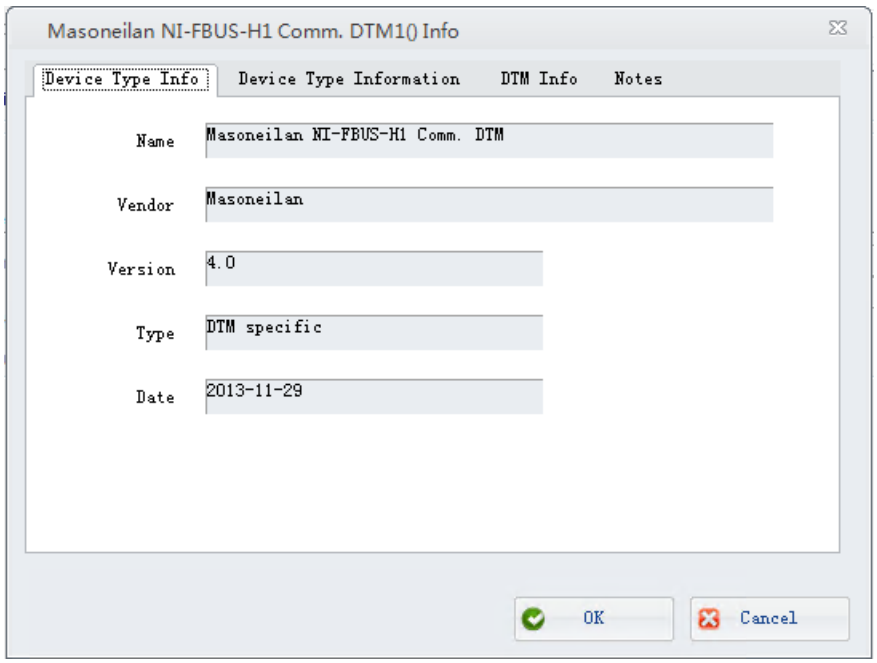

Figure 21 DTM Info

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Error Log Tracking

Accessed from the *View* menu and clicking in the status bar, use this, via a right-click menu, to view errors, clear errors and view details (*Error Info*).

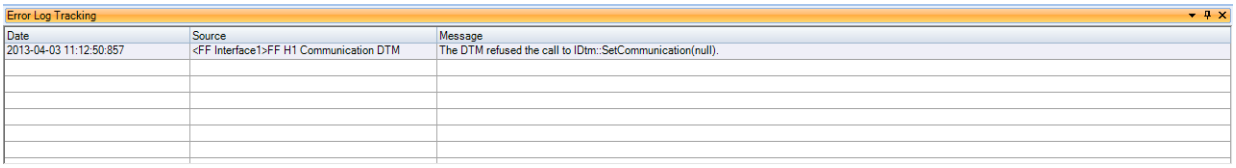

Figure 22 Error Log Tracking Pane

Information in the *Error Info* dialog can be copied and pasted for troubleshooting purposes.

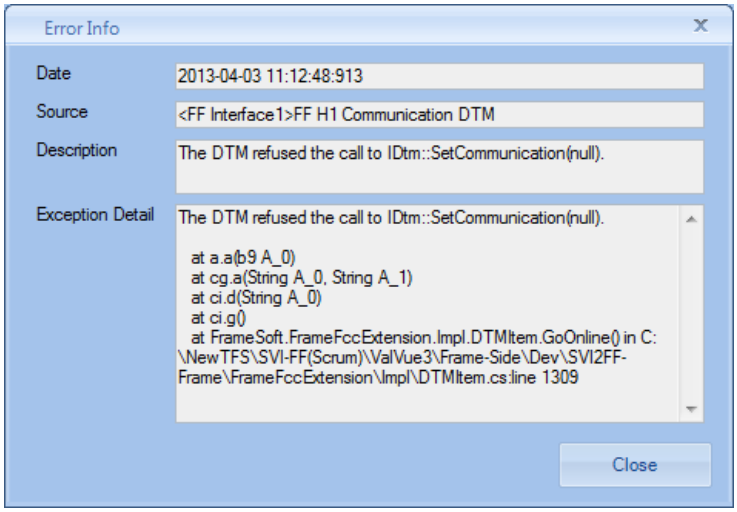

Figure 23 Error Info

Status Bar

This displays the current user and an icon to indicate errors exist. When you mouse over the
user label, the tooltip shows the role information. If you click the error icon , the *Error Log Tracking* appears.

Figure 24 Status Bar

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Assign Device Type

If the scan detects a device that is unknown or has unknown device properties, the *Assign Device Type* dialog appears. Use this dialog to review the information gathered during the network scan and to add or edit to that data. You can then save the assigned data for use with that device type. Only device types that match the specific DTM appear.

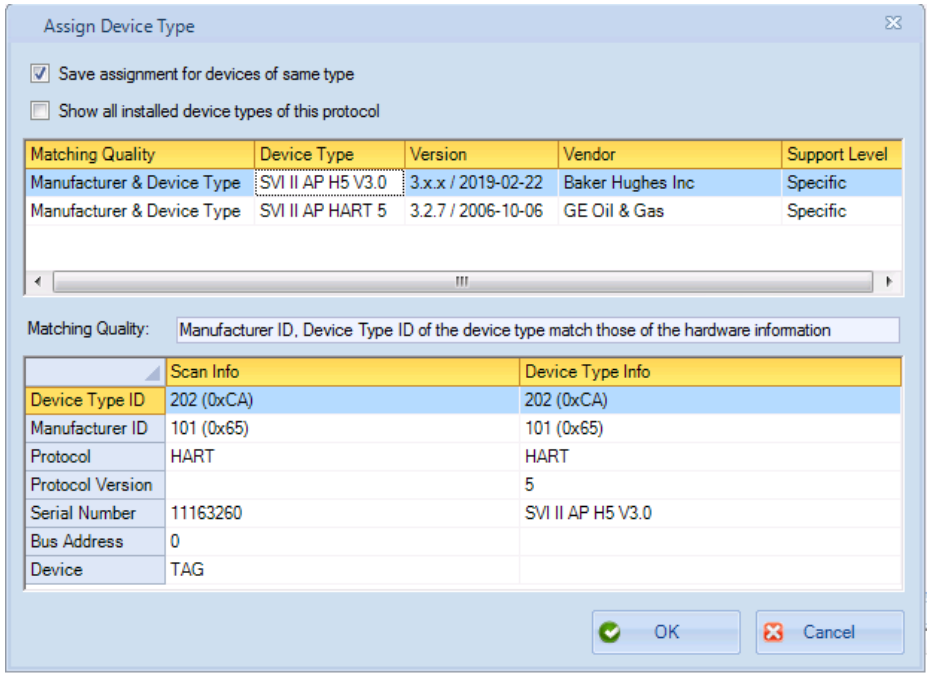

Figure 25 Assign Device Type

Fields and Buttons

Save assignment for devices of same type	Click this checkbox to save configuration changes made using this dialog for devices of the same type once OK is clicked.
Show all installed device types of this protocol	Click this checkbox to display all devices scanned that are for the detected protocol. This is useful to see related information as reference.
Matching Quality	Detects the common quality detected. In this case, this is the protocol.
Device Type	Displays the device type detected.
Version	Displays the version detected.
Vendor	Displays the vendor detected.
Support Level	Displays the support level detected.
Matching Quality	Displays text associated with the detected *Matching Quality* as an explanation.

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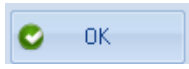
Scan Info	Displays the scanned data for: √ *Device Type ID* √ *Manufacturer ID* √ *Protocol* √ *Protocol Version* √ *Serial Number* √ *Bus Address* √ *Device*
Device Type Info	Enter amended data for the scanned data for: √ *Device Type ID* √ *Manufacturer ID* √ *Protocol* √ *Protocol Version* √ *Serial Number* √ *Bus Address* √ *Device*

Configure Assign Device Type

If the *Assign Device Type* dialog appears:

1. Review the Scan Info fields and ensure that all information is accurate.
2. Click **Show all installed device types of this protocol** to see information for reference, if required.
3. Click **Save assignment for devices of same type** and click 

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Topology Right-Click Menu

Use the topology view right-click menu to access functions some of which are ValVue 3 related and some SVI3 DTM related. Figure 26 shows which items are related to positioner DTM operations and which to ValVue 3 (Black boxes are SVI3 operations and red are ValVue 3).

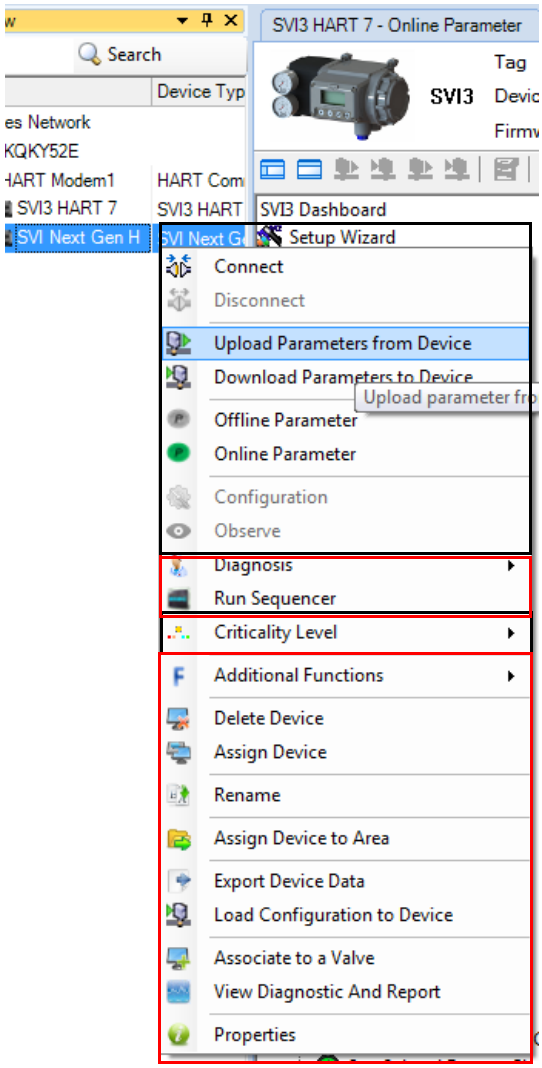

Figure 26 Topology Right-Click Menu

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4. How Do I?

Getting Started Tasks

- √ “Add a Field Network” on page 55
- √ “Work with Device Areas” on page 59
- √ “Add New Device” on page 63
- √ “Update DTM Library” on page 84
- √ “Import Configuration” on page 166
- √ “Add/Remove DTMs in the DTM Updates List” on page 85
- √ “Installation and Logon” on page 19
- √ “Delete Device Areas” on page 61
- √ “Add an Area and Move Device (s)” on page 60

How Do I?

- √ “Add a Field Network” on page 55
- √ “Work with Device Areas” on page 59
- √ “Add New Device” on page 63
- √ “Add an Area and Move Device (s)” on page 60
- √ “Delete Device Areas” on page 61
- √ “Register the Product” on page 114
- √ “Sequencer Settings” on page 119
- √ “Valve Data Management” on page 139
- √ “View Events Details” on page 77
- √ “Filter Events” on page 78
- √ “Acknowledge Event” on page 79
- √ “Create Report of Event and Audit Trail” on page 79
- √ “Export Event and Audit Trail Report” on page 81
- √ “Update DTM Library” on page 84
- √ “Add/Remove DTMs in the DTM Updates List” on page 85
- √ “HART®” on page 89
- √ “Import Configuration” on page 166
- √ “Signature Management” on page 148

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5. Network Tasks

Network Menu

Use this menu to structure and rebuild the network.

NOTE

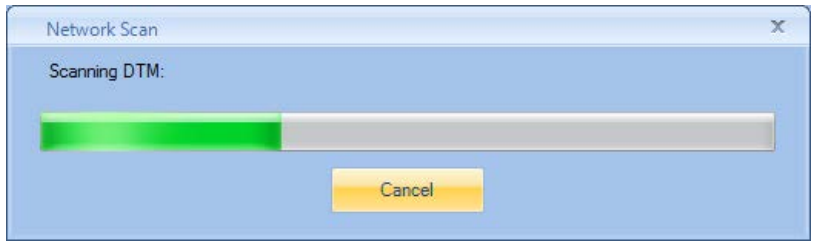
If ValVue crashes on a Rebuild Hierarchy command while using Windows® XP:

1. Open System Properties.
2. On the Advanced tab select Performance Options.
3. Click ***Turn on DEP for essential Windows programs and services only****.*

Menu Items

Rebuild Network

Performs a *Network Scan* of all field networks that are connected and correctly configured, detecting the network elements and reauthenticating them. If properly configured the element appears in bold italic type. This process consumes an amount of time related to the number of devices on the network.



CAUTION

If you use *Rebuild Network*, and the device is not connected, the device is deleted from the topology tree and its associated settings are removed from the database.

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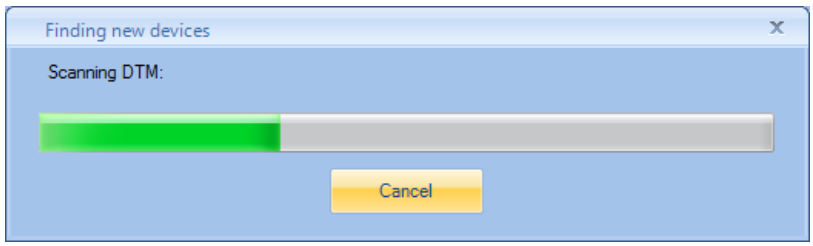
The scan checks the configuration done during the “Add a Field Network” on page 55. The general steps involved in adding a field network are:

1. DTM Management (see “DTM Library Management”).
2. Setting up Field Networks (see “Field Networks” on page 86).
3. Network Communication and Preference Settings (see “Network Communication Preference Settings” on page 91).
4. Building the Network.

Open Connected Device

Performs a search of the field network for all devices whether connected or not, connects any unconnected devices and adds related device DTMs to the device topology, using the device’s configuration. The *Online Parameters* tab opens. For a gateway DTM, it continues scanning until add all the devices are added. If the correct DTM software is not in the Device Library, the *Assign Device Type* dialog appears (see “Assign Device Type” on page 36.) If you choose the wrong DTM, the DTM can be assigned to the device, but the DTM cannot communicate with the device.

This command is the preferred method for adding devices to the those shown on the topology. If you use *Rebuild Network*, and the device is not connected, the device is deleted from the topology tree and its associated settings are removed from the database.



NOTE

If the scan detects a device that is unknown or has unknown device properties, the Assign Device Type dialog appears. Refer to “Assign Device Type” for further explanation.

Refresh

Refreshes the screen data and *Device Tags*.

Exit

Exits ValVue, prompting you if all data is not saved.

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6. Device Tasks

Device Menu

Use this menu to structure and rebuild the network.

When using the right-click menu in the topology pane, you access functionality that depends on the whether you access the field network level, communications DTM level or device level.

Menu Items

Device Network and *Station* level only

Connect All

Attempts to connect all DTMs in the *Devices Network* as per their configuration.

The application operates devices in either connected or disconnected mode. If the device is:

- √ Not connected, data are stored to the database, and applied when the device is connected.
- √ Connected, all the functions are available.

If the *Assign Device Type* dialog appears, see “Assign Device Type” on page 36.

Disconnect All

Disconnects all DTMs and devices in the *Devices Network*.

Add a Field Network

Opens the *Add Field Network - Field Network Tab* dialog to configure a new field network (“Add a Field Network” on page 87).

Rebuild Network

When at the communications DTM level, using this scans the network for all devices.

Assign Devices To Area

Use this command to create new areas inside an existing area and/or to assign devices to an area. You can add child areas to existing areas. See “Work with Device Areas” on page 59.

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Group Devices

Opens the *Group Devices* dialog to performing device grouping. See"Group Devices" on page 61.

This choice is available at the communications protocol level as well.

Display Option

Opens a sub-menu to choose whether to display in the topology tree:

√ *Instrument Only*
√ *Valve Only*
√ *Show All*

This useful for simplifying the display and is available in the *Area View* only.

Right click menu for a selected device.

These items are also iconically represented in the tool bar.

Connect

Attempts to connect the selected DTM as per its configuration. Double-clicking on a device in the Topology tree connects the device and opens the *Online Parameters* tab for the device, if physically connected.

If the *Assign Device Type* dialog appears, see "Assign Device Type" on page 36.

Disconnect

Disconnects the selected DTM.

Upload Parameters from Device

Uploads the parameters presently loaded on a selected device.

Download Parameters to Device

Downloads the parameters presently configured using the UI to a selected device.

Offline Parameter

Opens the *Offline Parameter* tab in the DTM UI Panel. See the documentation for the proprietary DTM.

This DTM function enables you to adjust parameter values in the project database. Any changes to the parameters of the device do not take effect until the data is downloaded. All data created in the DTM is automatically saved to the database.

Online Parameter

Opens the *Online Parameter* tab in the DTM UI Panel. See the documentation for the proprietary DTM.

This DTM function enables you to do all the online operation to the device.

Configuration

Opens the *Configuration* tab for the FF in the DTM UI Panel. This is the same configuration as on the *Configuration* tab of the "Signature Management" on page 148.

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Diagnosis	Enables you to observe diagnostics on the device by accessing the individual DTM's *Check* or *Status* tabs.
Add Child Area	Use this to add a new child area below an existing top level area or child area. This is only available in *Area View*.
Remove Area	Use this to remove a child area including all devices with their configuration. This is only available in *Area View.*
Rename Area	Use this to rename a child area. This is only available in *Area View.*
Run Sequencer	Opens the *Sequencer Preview* dialog. Using this you can access all sequencer functionality. See "Sequencer Management" on page 124.
Criticality Level	Use the popup to set the criticality level for alarming, which dictates the sampling interval: √ *Very Critical:* 60 second interval √ *Critical:* 300 second interval √ *Moderate:* 600 second interval (default) √ *Low:* 3600 second interval √ *Do not bother:* Not monitored √ *Inherit From Parent Area:* Assigns the criticality configured in the parent level. This is only available in *Area View*. This menu item is only available when a device is selected. The ValVue 3 *Device Criticality* settings determine the scan period for monitoring of a positioner. Selecting *Do Not Bother* means no status is monitored for display. Ensure if you use *Inherent from Parent Area* that the settings do not include *Do Not Bother.* The ValVue 3 *Device Status Monitor Running* must also be active for any status to appear on an individual DTM's *Status* tab. Status updates for active faults also appear on the *Healthy Status* and *Device Monitor: Data Displayed*.
Additional Functions	The additional functions are device-specific to the device DTM. If available, they appear in the sub-menu. For example, the SVI FF DTM includes: √ *Node Address:* Opens the *Node Address* tab to change and save the device address. √ *Registration:* Opens the registration process. √ *Report:* Opens a *Configuration Report*. See the individual DTM help files for further explanations.
Display channels/Do not display channels	Select the communications DTM level to toggle on/off the displaying of channels with a device added or not.
Display only channels with device	Select the communications DTM level to toggle on/off the displaying of only channels with a device added.

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Open Connected Devices	Establishes connection to all connected devices. See “Network Menu” on page 43. The *Online Parameters* tab opens. If the correct DTM software is not in the Device Library, the *Assign Device Type* dialog appears (see “Assign Device Type” on page 36.) If you choose the wrong DTM, the DTM can be assigned to the device, but the DTM cannot communicate with the device.
Add New Device	Opens the *Add New Device* dialog. See “Add New Device” on page 63 for a procedure.
Import and Add New Device	Opens the *Import Device Data from File* dialog. Use this dialog to import a *.ddf* or *.devData* file, which contains all the configuration parameters saved from another device using *Export Device Data*. See “Import and Add New Device” on page 65 for a procedure. For this release this exists only for https://valves.bakerhughes.com/resource-centers.
Delete Field Network	Deletes a selected field network if it is not connected and there are no associated tabs open.
Delete Device	Deletes a selected device if it is not connected and there are no associated tabs open.
Assign Device	Opens the *Assign Device* dialog to assign a device to an existing device type.
Rename	Select rename for a selected item and the cursor is placed in the name for editing.
Assign Devices to Area or *Assign Devices Under to Area*	Use this command to create new areas inside an existing area and/or to assign devices to an area. You can add child areas to existing areas. See “Work with Device Areas” on page 59.
Export Device Data	Opens the *Export complete valve device and signature history* dialog to navigate to a directory and save a device description file (*.ddf f*or earlier than ValVue 3.6 or *.ddf2* for ValVue 3.6+). This later can be loaded onto another https://valves.bakerhughes.com/resource-center. See “Export Device Data” on page 66. Only available for the https://valves.bakerhughes.com/resource-center.

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Load Configuration to Device

Opens the *Choose Configuration* dialog to choose a configuration that exists. This data can then be downloaded to the device using menu commands.

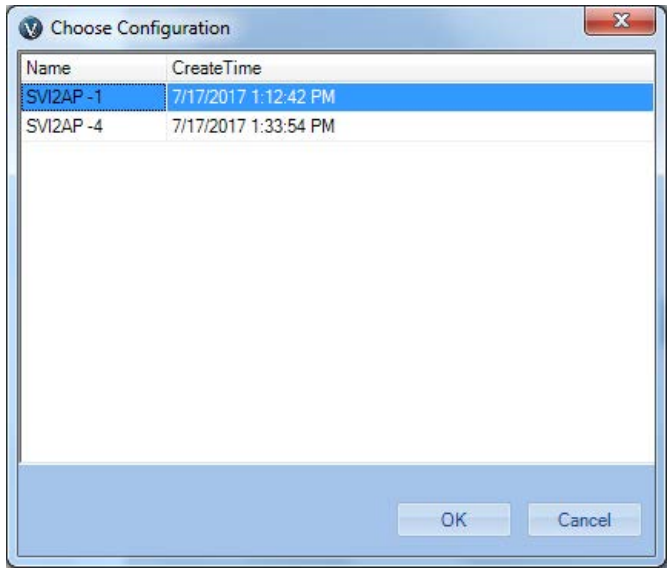

Figure 27 Choose Configuration

Associate to a Valve

Opens the *Valve Management* dialog to associate a positioner to a valve. This only available at the positioner level.

Multiple associations are allowed, however, only one association can active at anytime. Activation/deactivation is via the right-click menu on the valve level. See “Valve Management” on page 139.

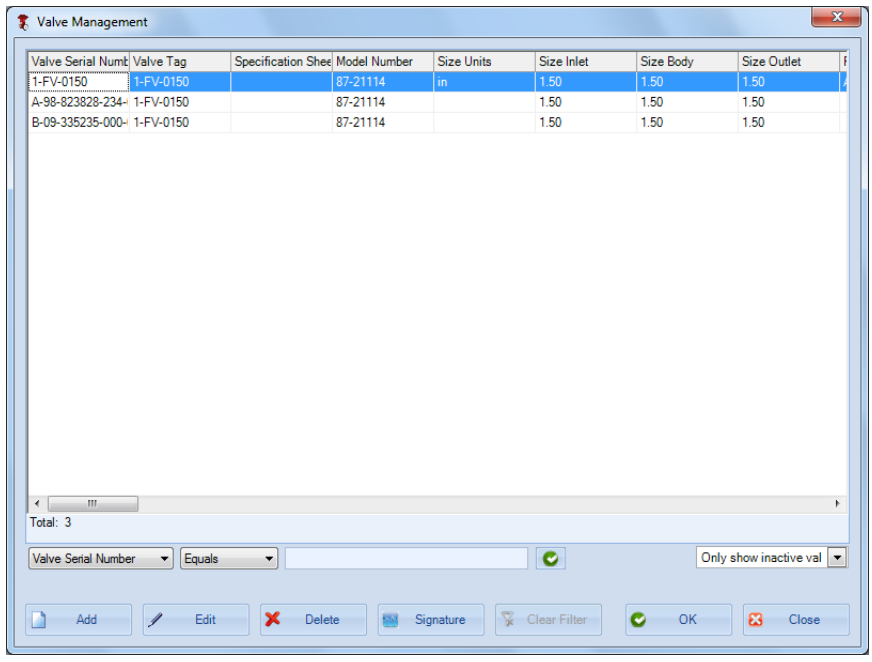

Figure 28 Valve Management

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Activate Valve/ Deactivate Valve

Activates the selected valve as the valve to which the positioner is connected. This also designates the saving of signature date be associated to that valve and it is saved to that selected valve's database.

At any one time there may be no valve activated.

Delete Valve Association

Deletes a valve association with a positioner. All data previously gathered is still available in the specific valve database. The valve can be added again at a later time.

Assign Valve to Area

Opens a dialog to assign a valve to a user-created area. See "Work with Device Areas" on page 59.

View Diagnostic and Report

Opens the *View Customize Diagnostics Report* dialog to select a test result or results to view. Test results can be exported to an Unified Signature format (.usf). This is available at both the valve and positioner level. See "View Diagnostic and Report" on page 149.

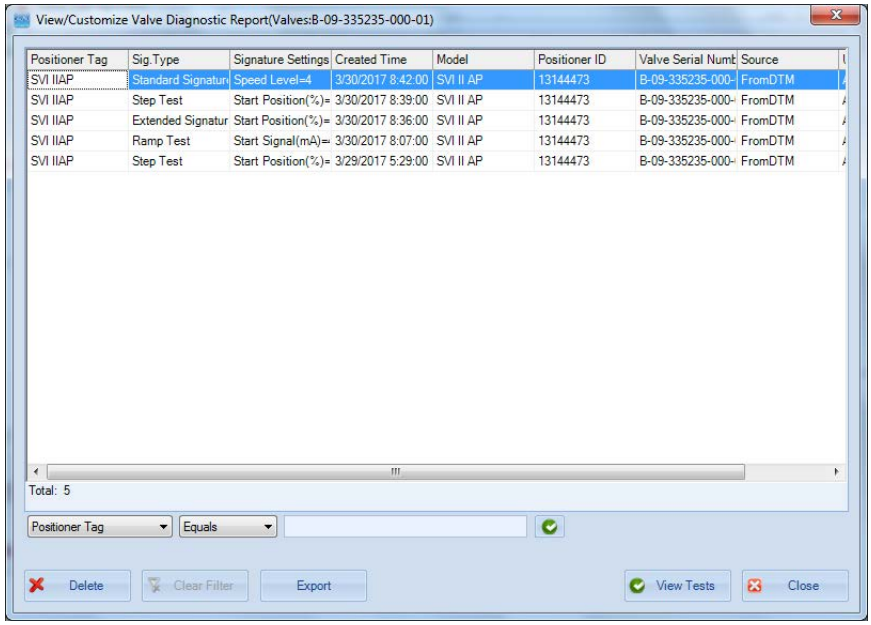

Figure 29 View Customize Diagnostics Report

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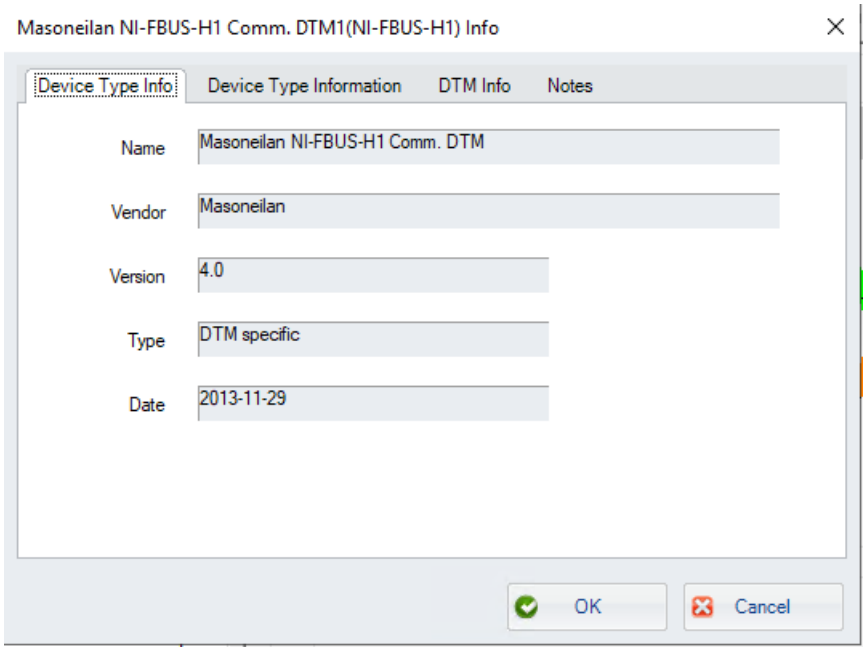
Properties and *Edit Properties* (valve-level only)

Opens a dialog that is dependent on the topology level.

Communication Interface level: Opens an *Info* dialog for a selected communications interface. This dialog has two tabs a *Properties* tab and a *Notes* tab where you can enter text related to the interface, which is saved by clicking **OK**.



Positioner level: Opens an *Info* dialog for a selected positioner. This dialog has two tabs a *Properties* tab and a *Notes* tab where you can enter text related to the positioner, which is saved by clicking **OK**.

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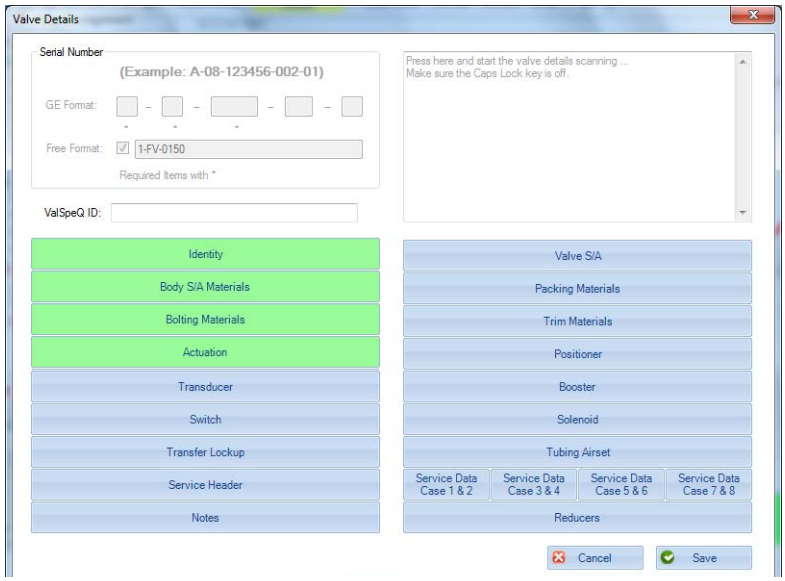
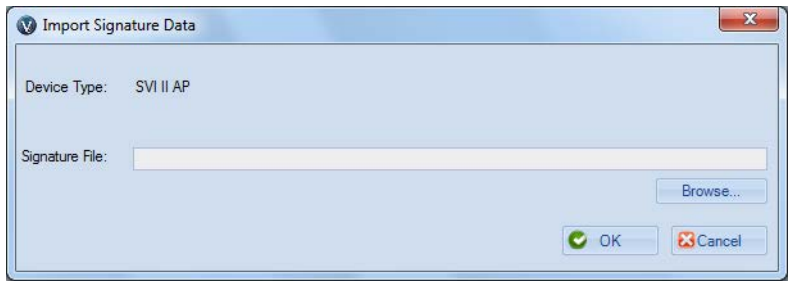
Valve level: Opens the *Valve Details* dialog. this data is editable ("Valve Data Management" on page 139).



Import Diagnostic Data

Use this valve-level selection to import signature data for SVI3, SVI II AP, FVP, SVi1000 or SVI FF from a legacy device or another DTM. Before the data is imported it is checked to ensure it is of the same format - for a similar valve.

The following dialog appears:



Use the *Browse* button to navigate to the desired file.

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Device Monitor: Data Displayed

The following information is monitored at the same polling schedule with the device status.

- √ Healthy Status
- √ Process Variables: Hart® Command 3.
- √ Device Mode
- √ Device Information: Manufacturer ID, Device Type ID, Device ID, Device Tag.

While in *Network View*, mouse over to the device status icon (red arrow below) and the thee tooltip panel appears and all the online information appears on the tooltip.

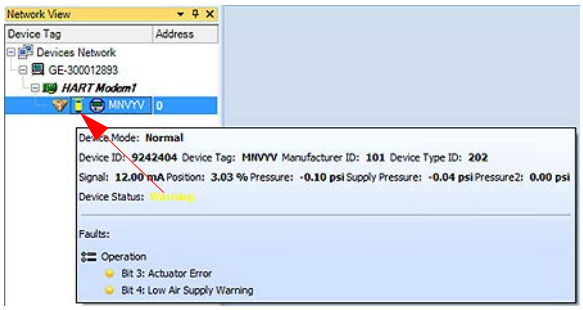

Figure 30 Device Monitor

For HART devices, the healthy status is calculated from the *Device Status*. One of five icons can appears here to indicate the device health:

Healthy - indicates operation is within range.

Maintenance Required - indicates maintenance is necessary.

Out of specification - indicates any specification is out of range and flags the situation for analysis.

Function check - indicates temporary invalid output.

Failure - indicates failure.

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Table 1 lists the communications protocols and the associated data that can appear.

Table 1 Communications Protocol

Protocol	Data Displayed
HART	Device mode
Foundation fieldbus™	Resource block mode, Transducer block mode

Table 2 lists the device types and associated process variables that can appear.

Table 2 Device Type

Device Type	Data Displayed
SVI3	Signal, Position, Pressure, Supply Pressure
DLT 12300	Current, Level, Current Temperature, External Temperature
DLT 12400	Current, Level, Current Board Temperature, Current Sensor Temperature
SVI II AP	Signal, Position, Pressure, Supply Pressure, Pressure2
SVI II ESD	Signal, Position, Pressure
SVi1000	Signal, Position
VECTOR™	PV Loop Current, PV, Direct Power Voltage, Electronics Temperature
SVI FF	Setpoint, Actual Position, Supply Pressure, Actuator Pressure A, Actuator Pressure B
FVP™	Setpoint, Target Position, Actual Position, Pressure

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Add a Field Network

You must be at the Field Network level for this task.

1. Select **Device > Add a Field Network** and the dialog appears with the *Field Network* tab selected.

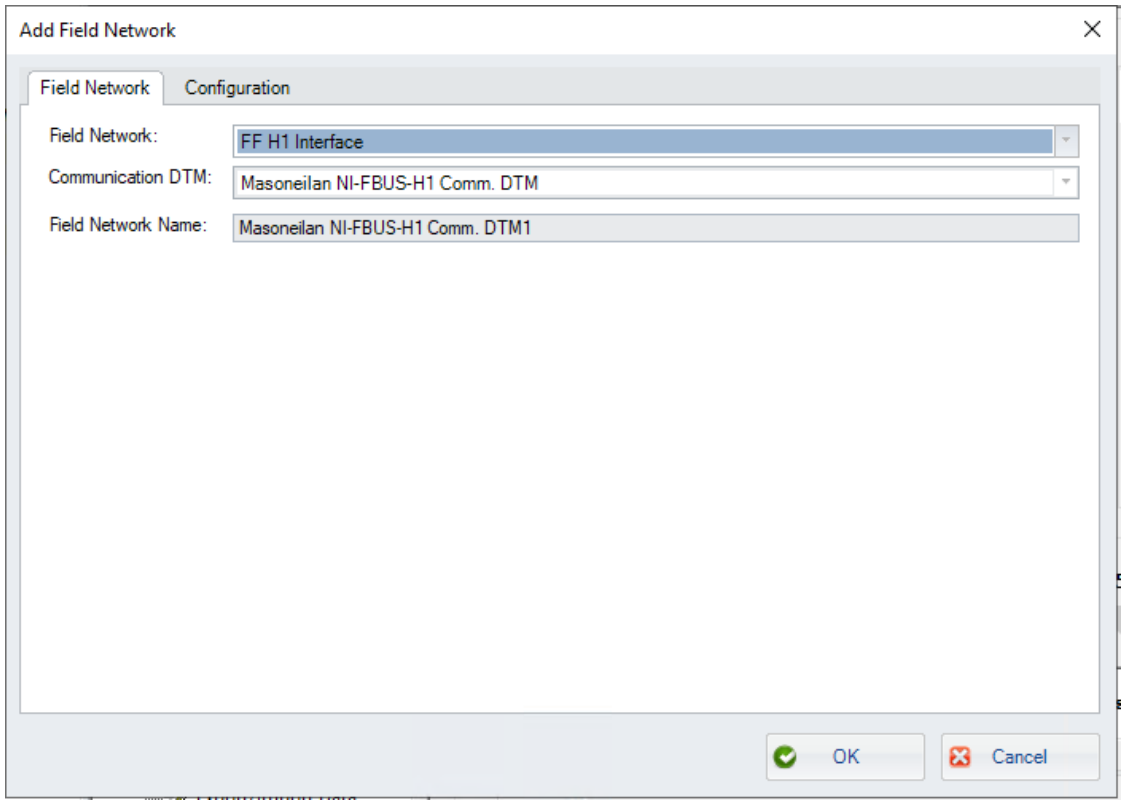

Figure 31 Add Field Network - Field Network Tab

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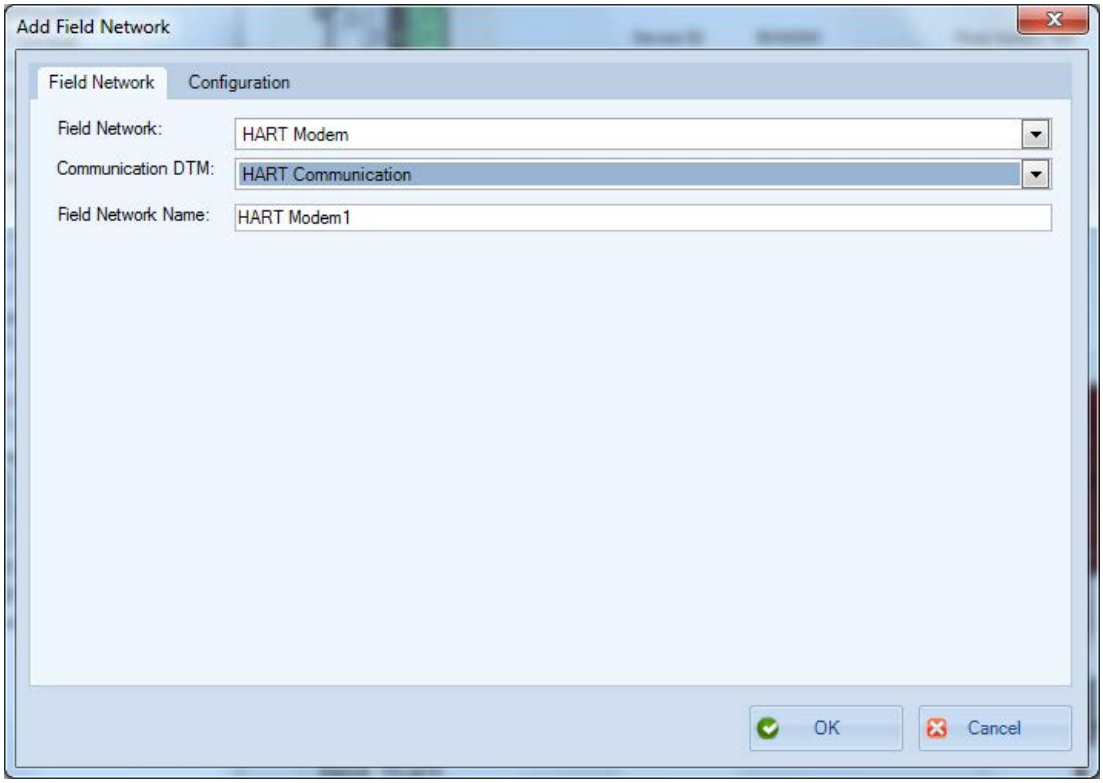

Figure 32 Add Field Network - HART® Network Tab

2. Select a *Field Network* from the pulldown:

   √ **HART Modem**

   √ **FF H1 Interface** - the *NI-FFBus Communications Manager* must launch.

   √ **FF HSE**

   √ **HART IP Communication**

   √ **DCS Communication**

   √ **Other Communication**

   The *Communication DTM* automatically populates based on the *Field Network* choice.

   The *Field Network Name* automatically populates to the Field Network with the number in sequence of that field network type appended. This is editable.

3. Edit the *Field Network Name*, if required.

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4. Select **Configuration** and the appropriate field network tab appears.

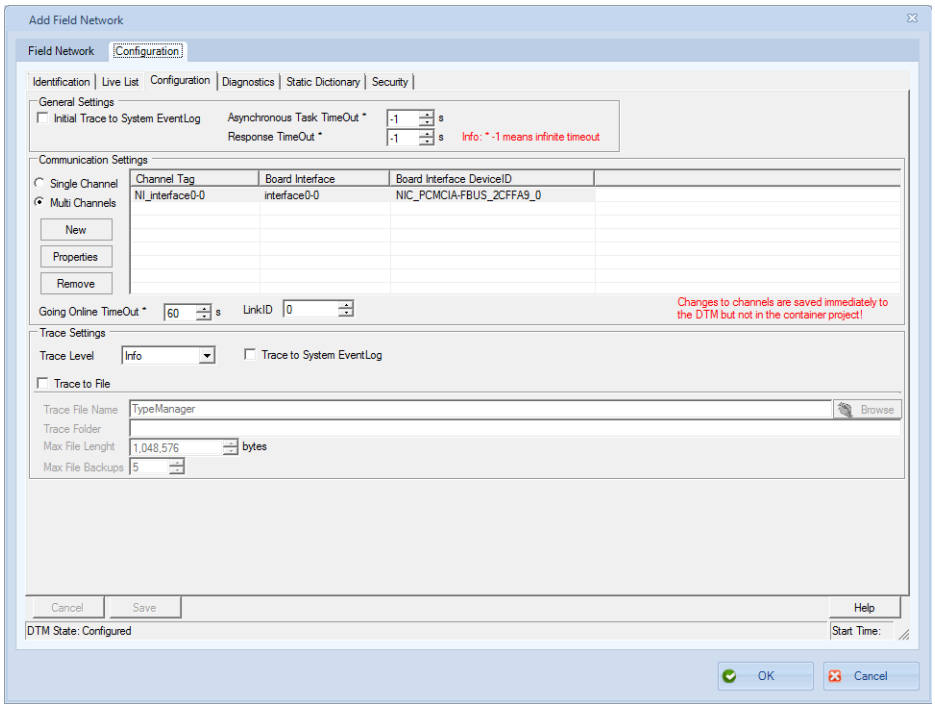

Figure 33 Add Field Network - FF™ Configuration Tab

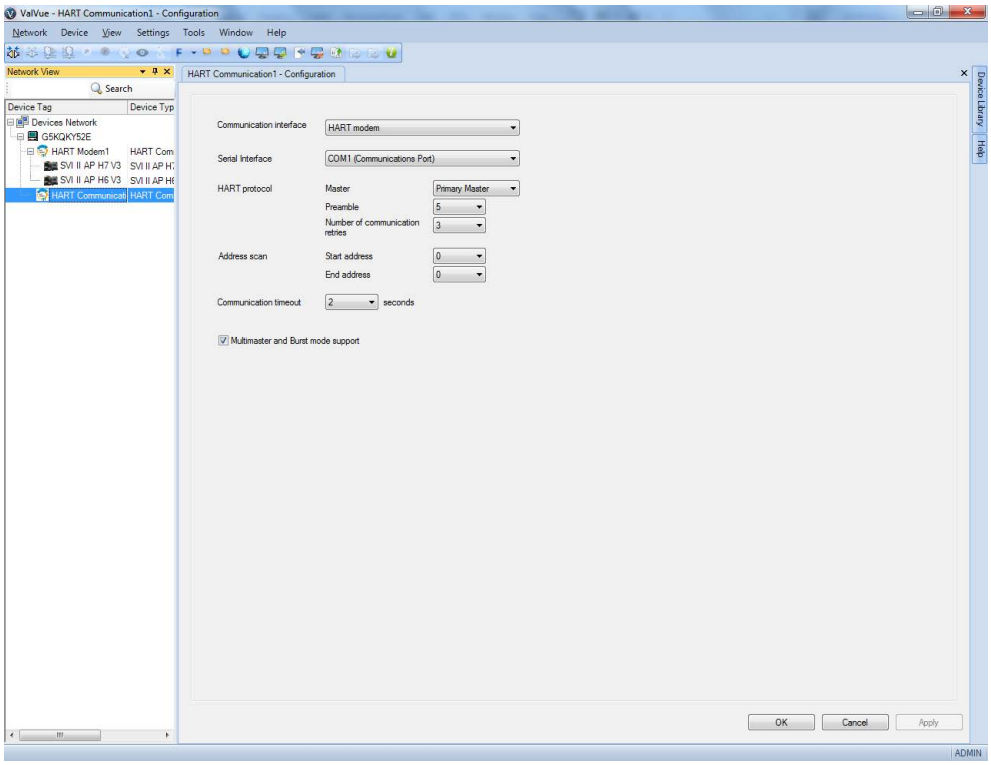

Figure 34 Add Field Network - HART® Configuration Tab

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When using HART®, you might find it easier to limit the number of addresses scanned using the Start address and End Address fields to limit scan time.

5. Refer to the communication DTM's online help to configure any features. Under most circumstances, this dialog does not need further configuration.
6. Click **OK**.

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Work with Device Areas

This section discusses the functionality for creating device areas and child areas. This can be done from several different places in the program and when different menu options are active.

When originally opened, all devices found in the network appear under the spare folder (plant). By right clicking the Plant folder, you can add a folder (group, or hierarchy). Devices under the root folder then can be moved (drag and drop) into any folder/ subfolder; copy is not allowed.

A folder or subfolder can be deleted, and devices under folder to be deleted will be automatically placed under the spare folder. Folder can be renamed or moved as well.

Once areas are created, existing specific devices and groups of devices can be assigned to that area.

This function is available at all levels including the communications protocol and device levels. At the higher level you can assign multiple devices to a new area or an existing area. An individual device can be reassigned to a newly created are or an existing area.

Assign a Valve to an Area

1. Select a valve in the directory tree (while in *Area View*), right-click and select **Assign Valve to Area** and a dialog appears.

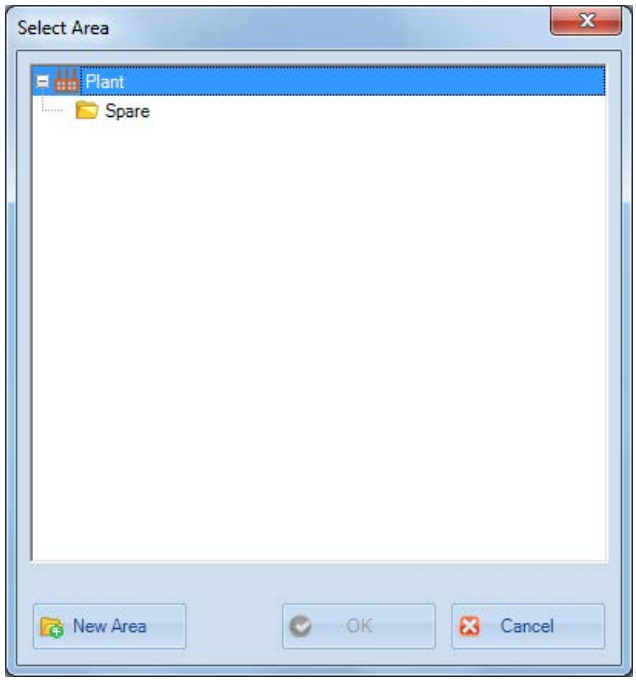

Figure 35 Select Area

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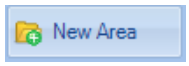
2. Select on an existing area and click 

and a line appears labeled *New Area*. At this moment the cursor is in the field and it can be renamed. Once the cursor has left the line, the item can only be renamed in topology pane.
3. Enter a name for the area.
4. Click **OK**.

Add an Area and Move Device (s)

1. Select a level in the directory tree and click **Assign Devices to Area** or select a level and click **Device > Assign Devices to Area** and a dialog appears.

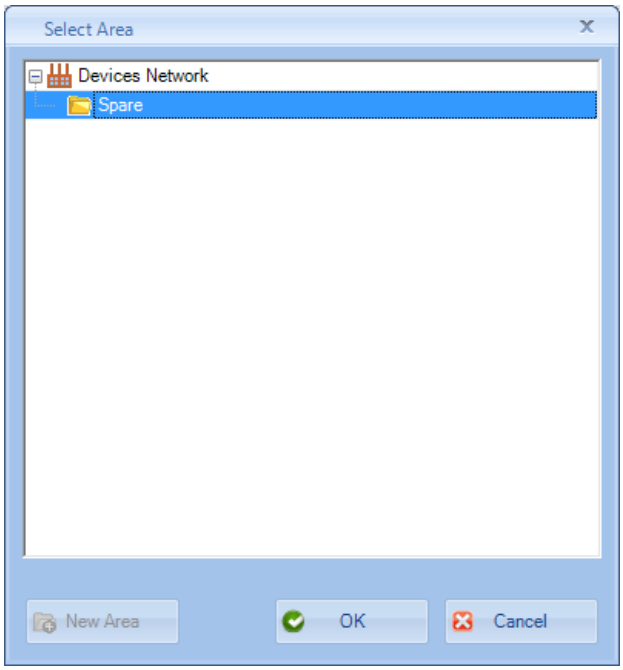
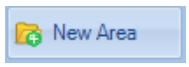


Figure 36 Select Area

NOTE

This menu item changes to Assign Device to Area at the individual device level.

2. Select on an existing area and click 

and a line appears labeled *New Area*. At this moment the cursor is in the field and it can be renamed. Once the cursor has left the line, the item can only be renamed in topology pane.
3. Enter a name for the area.
4. Click **OK**.

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Delete Device Areas

You can use the *Remove Area* command to delete a selected device area.

Group Devices

Use this functionality to:

√ Group devices under areas created using the “Add an Area and Move Device (s)” on page 60

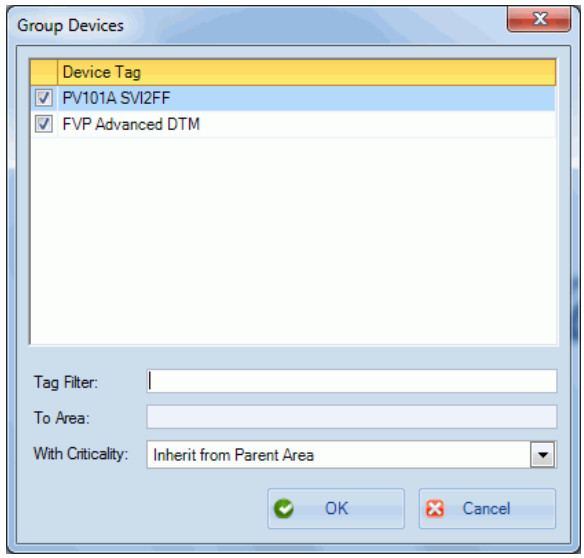

Figure 37 Group Devices

Create a Device Group

1. Select **Device > Group Devices** or click and the *Group Devices* dialog appears.
2. Click the checkboxes associated with the devices.

NOTE

You can enter part of the device name in the Tag Filter field and use it as a search function.

3. Use the *To Area* pulldown to select an area created using “Add an Area and Move Device (s)” on page 60.
4. Use the *With Criticality* pulldown to select a level for the group, which includes *Inherit from Parent Area*.
5. Click **OK**.

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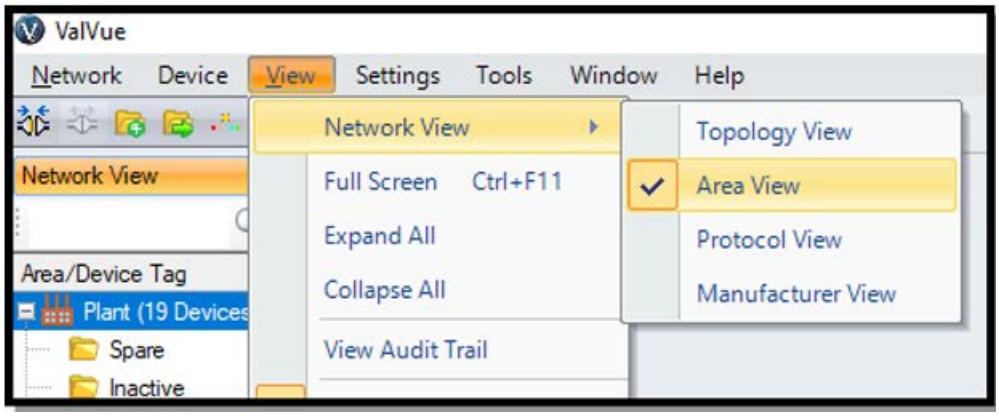
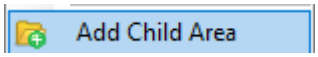
Add Child Area

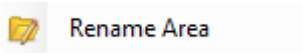
1. Switch Network View to Area View.



2. Select on an existing area and click 

in right click menu, and a child area appears under the selected area.

Rename Area

1. Switch Network View to Area View.
2. Select on an existing area and click 

in right click menu, and the name of the selected area turns to editable, user can change the name.

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Add New Device

1. Click **Add New Device** from the *Device* menu or by right-clicking on a protocol and *Add New Device - FF* appears.

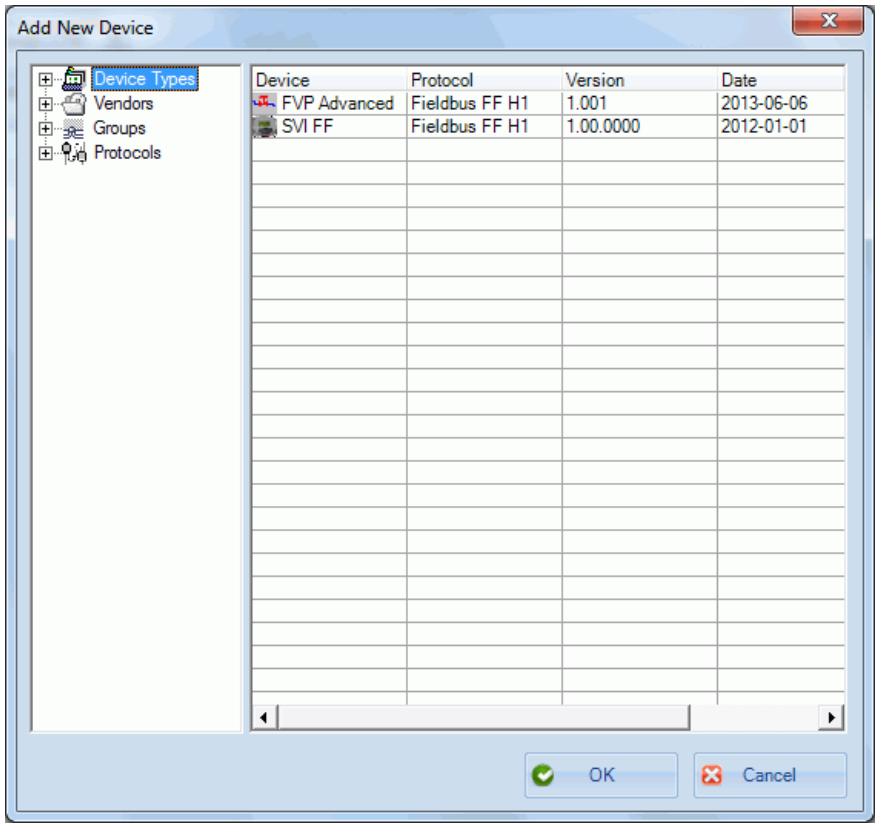

Figure 38 Add New Device - FF

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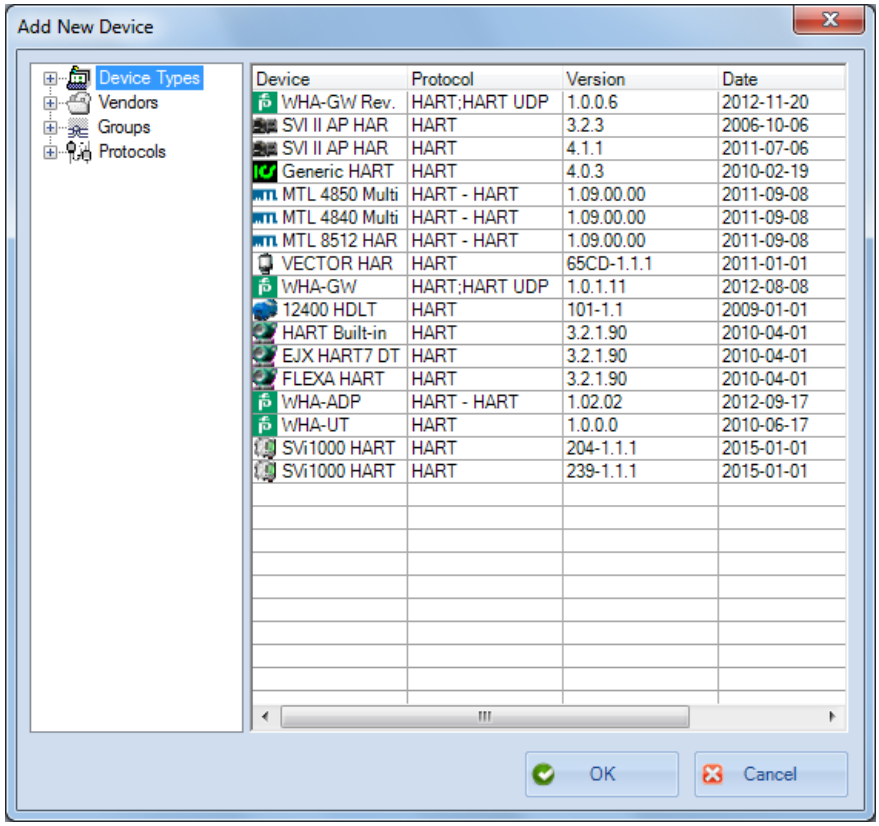

Figure 39 Add New Device - HART

The dialog appears with the devices listed from the most recent catalog update. See “DTM Library Management” to update the device catalog.

2. Select a device, click **OK** and the device appears under the area selected.

   At this point you can configure the device using a proprietary DTM.

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Import and Add New Device

Use this feature to add the information from an existing positioner into the topology tree. The information imported comes from a *.ddf, .ddf2* or *.devData* file. The file is created using the *Export* right-click menu item for a selected existing positioner. This is a useful tool in facilities where positioner configurations are very similar.

.ddf files contain: DTM device type, DTM data, device information (device ID and device tag), valve Information, as well as test information and related sequencer execution information.

.devData files contain all data except the valve information.

To do this:

1. Select the device in the topology tree at the communications DTM level, right-click and select **Import and Add New Device** and Figure 40 appears.

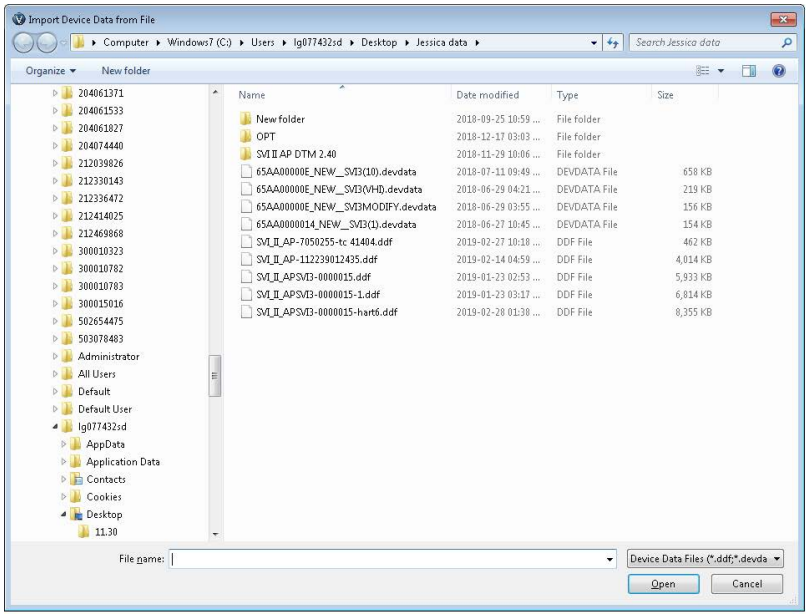

Figure 40 Import and Add New Device

NOTE

There is no default directory where these files are stored.

2. Navigate to, select the correct file and click **Open**. A device of the same type appears in the topology tree with all of the original positioner settings configure and measurement data in the DTM.

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Export Device Data

Use this feature to export the information from an existing positioner to a device description files (*.ddf* for earlier than ValVue 3.6 or *.ddf2* for ValVue 3.6+*)*. This is a useful tool in facilities where positioner configurations are very similar.

1. Select in the device in topology tree, right-click and select **Export Device Data** and Figure 41 appears.

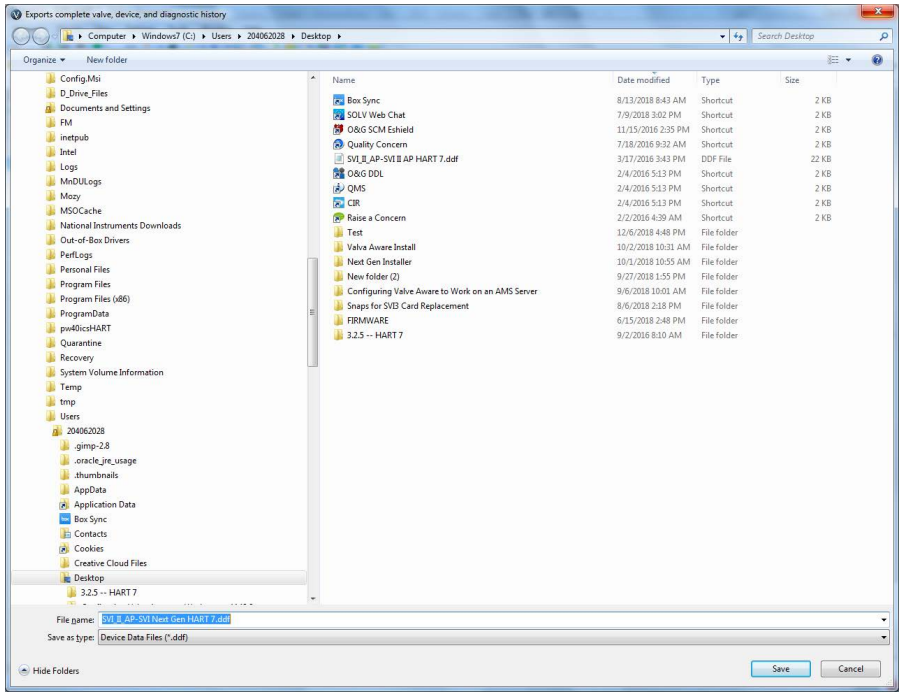

Figure 41 Export Device Data

NOTE

There is no default directory where these files are stored.

2. Navigate to the correct directory file, enter a file name and click **Save**.

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Copying a Configuration from Device to Device

The overall process for copying a configuration from device to device consists of:

1. Connect positioner with the desired configuration. Connect with ValVue3 and the DTM (for, example the https://valves.bakerhughes.com/resource-center DTM). If necessary download data into the positioner.
2. Export all data. See"Export Device Data" on page 66.
3. Disconnect device and connect new target device. Connect with ValVue3 and the DTM (for, example the https://valves.bakerhughes.com/resource-center DTM).
4. From the ValVue3 right-click menu select Import and Add Device. The *Import Device From Valve File* dialog appears.

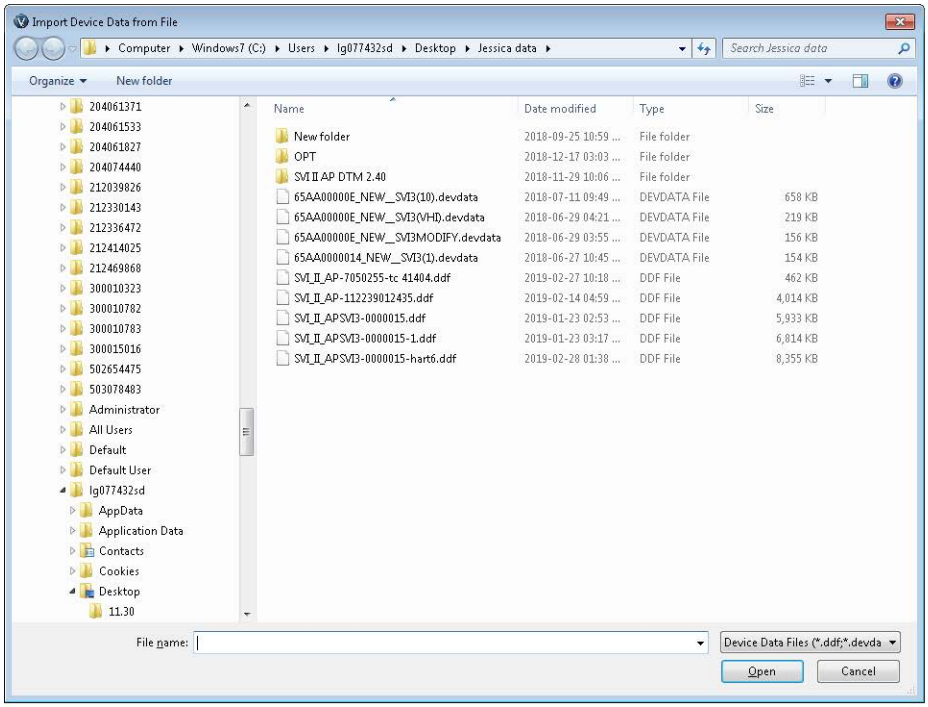

Figure 42 Import Device From Valve File

5. Navigate to the file you exported, select it and click **Open**.
6. At new imported DTM, click **Connect**. If a dialog pops up to *Upload all parameters from Device*, click **No**.
7. Download the data to the new device.

NOTE

There is also and Import/Export function available in the DTM. See the DTM documentation.

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7. View Tasks

View Menu

Use this menu to set the view of ValVue3 user interface.

Menu Items

Device Network and *Station* level only

Network View The *Network View* pane appears on the left side of the screen and at anytime can display *one* of the following views:

√ *Topology View* - Shows the communication protocols and devices installed with them.

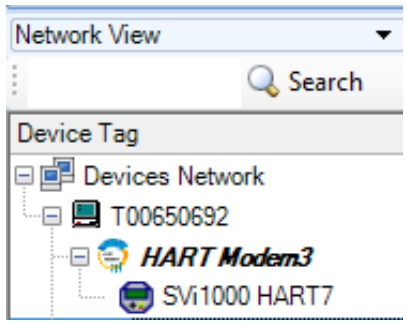

Figure 43 Topology View Tree

√ *Area View* - Shows the area structure that is built using the program and the devices in each area. Each area is user-added and carries the user-assigned label.

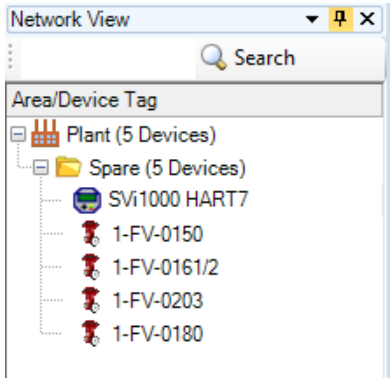

Figure 44 Area View Topology

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√ *Protocol View* - Shows the protocol in use for each device or set of devices.

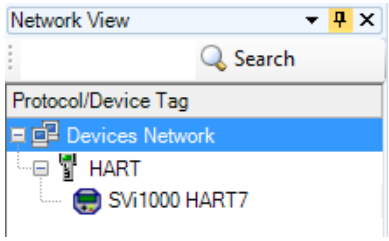

Figure 45 Protocol View Topology

√ *Manufacturer View* - Shows the device manufacturer and the devices in the area from that manufacturer.

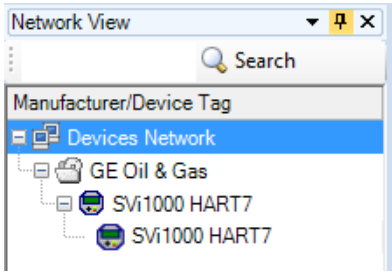

Figure 46 Manufacturers View Topology

Full Screen	Toggles the screen to show only the menus and the UI panel. Toggle this off by selecting one of the *Network Views*.
Expand All	Expands the protocols and devices shown in the topology pane as dictated by selections in *View* > *Network View*.
Collapse All	Collapses the protocols and devices shown in the topology pane as dictated by selections in *View* > *Network View*.
View Audit Trail	Opens the “Event & Audit Trail Viewer” on page 71 for use in troubleshooting and acknowledging events.
Network View	Toggles the *Network View* pane on/off.
Device Library	Toggles the *Device Library* pane on/off.
Error Log Tracking	Toggles the *Error Log Tracking* pane on/off.

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Event & Audit Trail Viewer

Use this feature to:

- √ “View Events Details” on page 77
- √ “Filter Events” on page 78 for display by type and date range
- √ “Acknowledge Event” on page 79
- √ “Create Report of Event and Audit Trail” on page 79 a record of events in PDF format
- √ “Export Event and Audit Trail Report” on page 81 events to Excel format for later printing or to save as a file

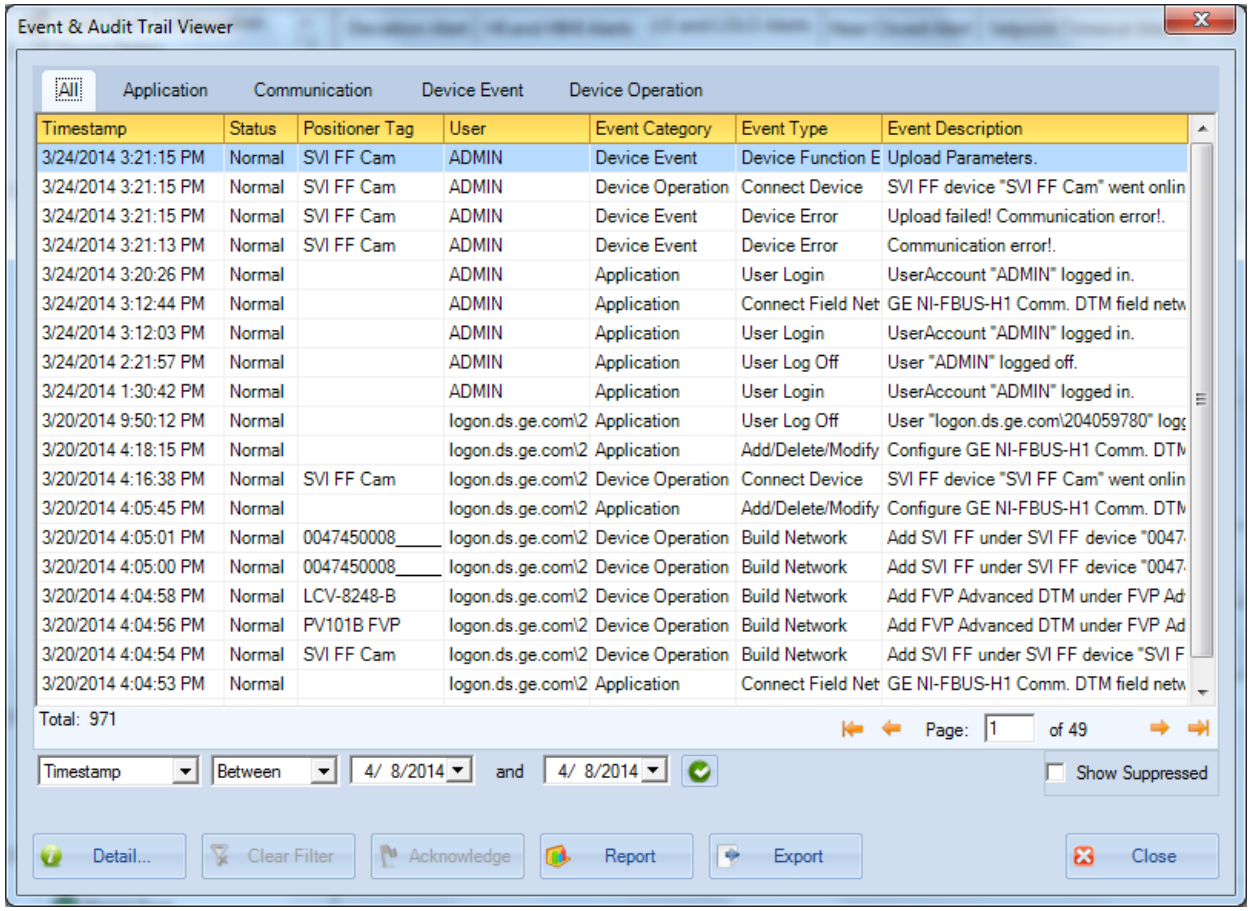

Figure 47 Event and Audit Trail Viewer: FF

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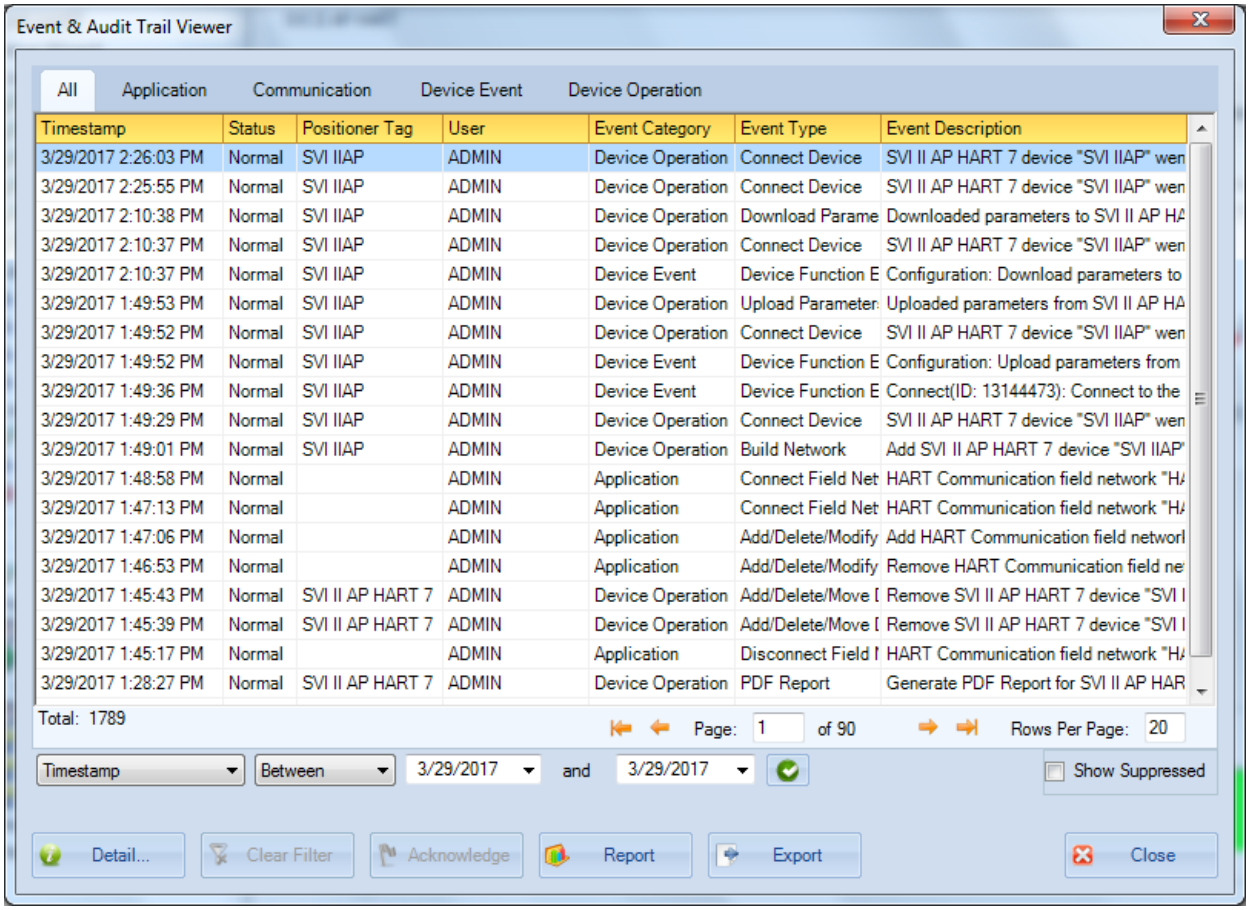

Figure 48 Event and Audit Trail Viewer: SVI3

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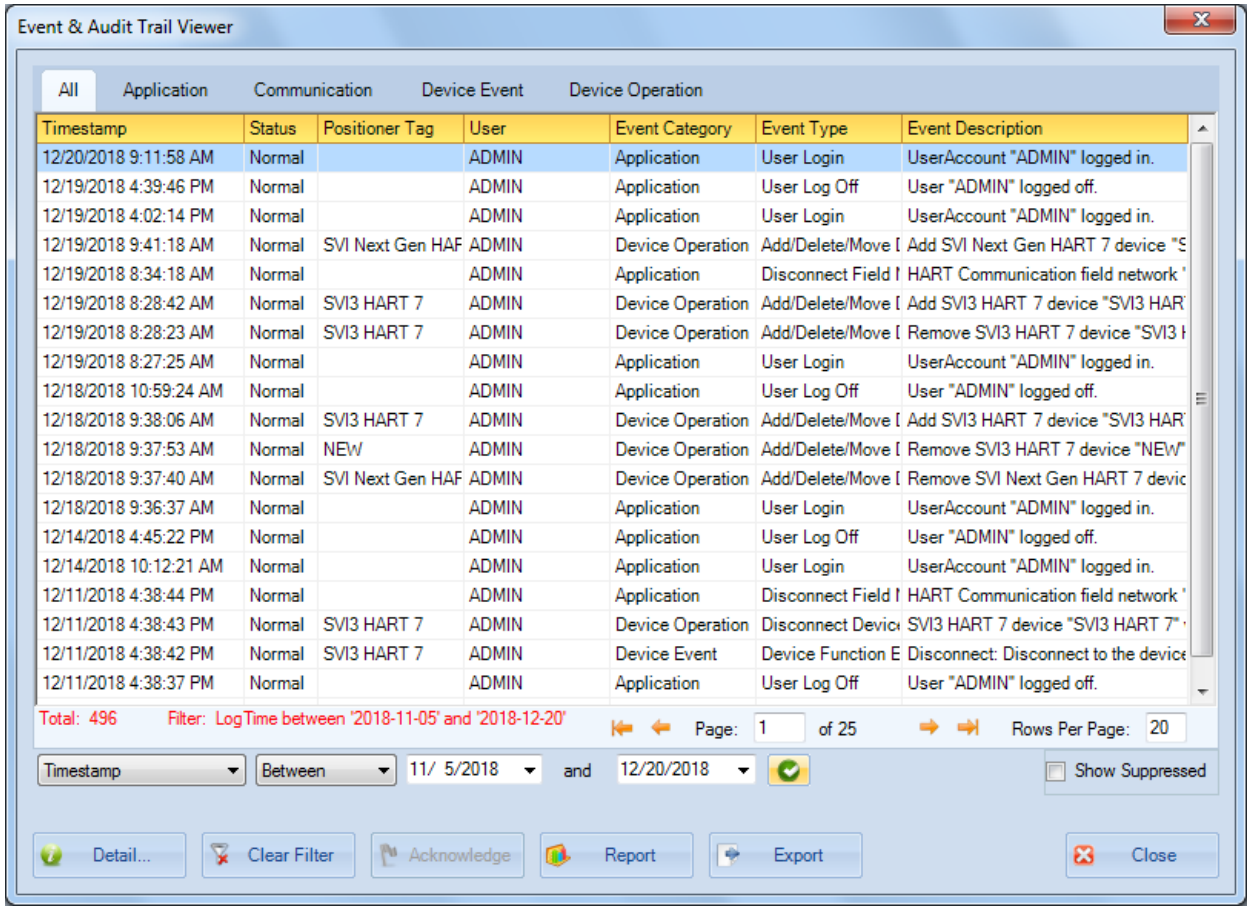

Figure 49 Event and Audit Trail Viewer: SVI3

This dialog has five tabs used to present events in the following areas:

- √ *All:* Lists all events.
- √ *Application:* Lists only application level events.
- √ *Communication:* Lists communication events.
- √ *Device Event:* Lists events related to the attached devices.
- √ *Device Operation:* Lists events generated by users requests such as adding devices and creating reports.

For each events on all tabs there is a *Timestamp, Status, Positioner Tag, User, Event Type* and *Event Description*.

An event in the device could be the following:

- √ Device Status Change (fault/alarm triggered)
- √ Device Status/Healthy Changes
- √ Any command from its parent status changed (start, error, complete)

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- √ Any operation status changed from within DTM
- √ Process Variable Alarm
- √ Communication Event

The Device Status Changes and Healthy Status change are monitored in two ways:

- √ A DTM sends notification to ValVue through Standard FDT Event/Audit trail interfaces when device status changes (preferred)
- √ ValVue sends requests to the DTM via Masoneilan specific interface to get status/ healthy information.

When a device is online, the DTM sends any event or audit trail information to ValVue via standard FDT/DTM event interfaces.

Device / healthy status change event is polled using the configured update interval, either polling with in DTM (preferred), or polling from ValVue.

Audit Trail from ValVue includes:

- √ *Application Start/Exit*
- √ *User login/Off*
- √ *Network Settings*
- √ *Security Settings*
- √ *Operations:*

  Build network

  Connect/Disconnect devices

  Adding/Deleting Devices

  Performing operations to device

Events from ValVue include:

- √ *Device stops responding*
- √ *Exception errors*
- √ *Communication Failure*

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Table 3 lists the events specific to SVI3.

Table 3 Audit Trail Events for the SVI3

Event Category	Event Description
Diagnostics	Run Ramp Test successfully
	Run Ramp Test fail.
	Run Standard Actuator Signature fail.
	Run Standard Actuator Signature successfully.
	Run Step test successfully.
	Run Step Test fail.
	Reset Continuous Diagnostic Data successfully.
	Run Clear All Faults successfully.
	Run Clear Current Faults successfully.
	Reset SVI3 AP successfully.
Calibration	Run Autotune successfully.
	Run Autotune fail.
	Run Automatic Find Stops successfully.
	Run Automatic Find Stops fail.
	Set Valve Position to XXXXXX as signal in mA.
	The full closed done.
	The full open done.
	Write Open Stop Adjustment parameter successfully.
	Run Live Tuning successfully.
	Run Manual Find Stops successfully.
	Run Manual Find Stops fail.
	The calibration has been reset.
	The pressure calibration changed.
	The signal calibration finished.
	Run Pressure calibration failed.
	The open stop adjustment changed.

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Table 3 Audit Trail Events for the SVI3 (Continued)

Event Category	Event Description
Configuration	Download parameters to device successfully.
	Write Commission configuration parameters successfully.
	Write Retransmitter Range parameters successfully.
	Write Output Switches parameters successfully.
	Write Device Info parameters successfully.
	Write Air Action parameters successfully.
	Write PID configuration parameters successfully.
	Write Position limits configuration parameters successfully.
	Write General configuration parameters successfully.
	Write HART configuration parameters successfully.
	Write I/O configuration parameters successfully.
	Write Option configuration parameters successfully.
	Reset Configuration Changed status.
Digital Upgrade	Records digital upgrade event.
Cloning	Leads you through the process to clone the device.
Reset	Reset incidents.
Connect	Connect to the device. DeviceID: xxxxxxxxxxxxxx
Disconnect	Disconnect to the device. DeviceID: xxxxxxxxxxxxx
Factory Edition	Record the event that ValVue3 temporarily upgrades the diagnostic level of SVI3 device to run Signtature tests through SVI3 DTM.
Data Management	Record the events that user exports/imports device data at DTM side.
Report	Record print DTM report event.

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View Events Details

NOTE

Use the "Filter Events" on page 78 to filter events to make specific events easier to find.

√ Select an event, click Detail... and *Event & Audit Trail Details* appears.

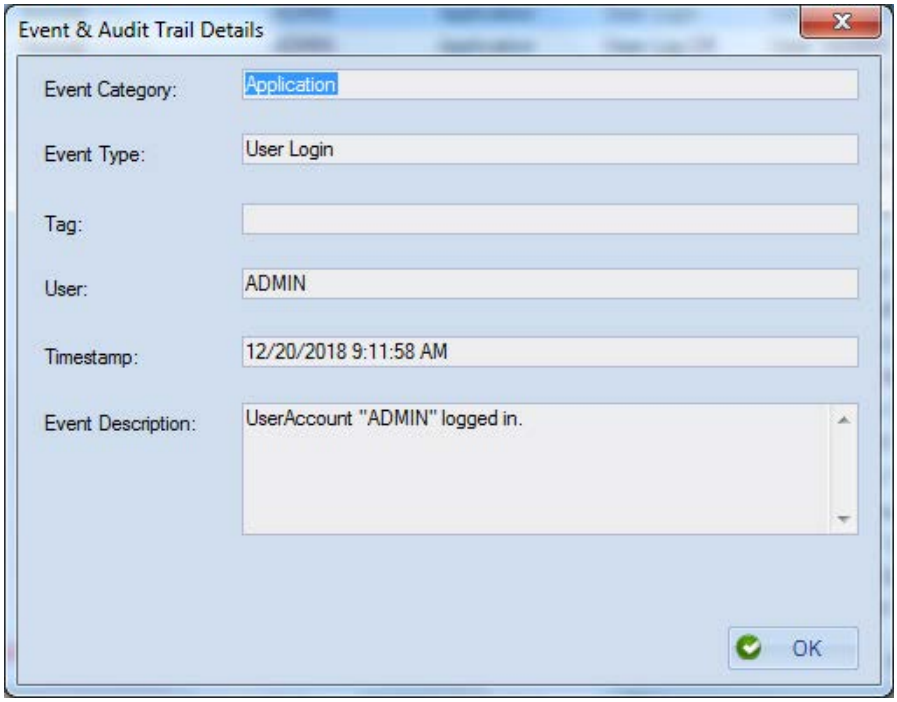

Figure 50 Event & Audit Trail Details

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Filter Events

You can filter event types or date range. Once filtered, the filter conditions appear in red text at the bottom of the filtered list.

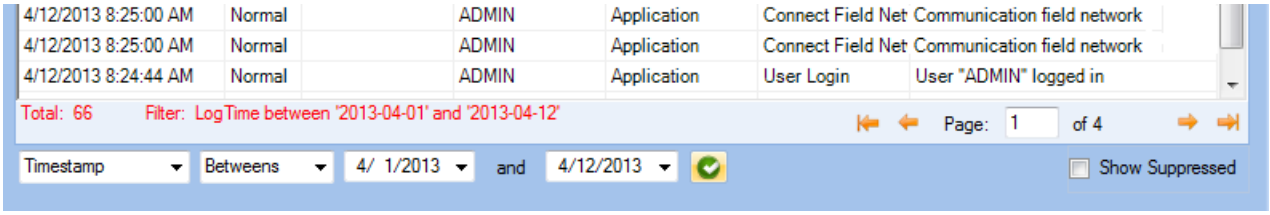


Figure 51 Filtered Conditions Parameters

1. Use the event type pulldown to select:
   - √ **Timestamp**
   - √ **Positioner Tag**
   - √ **User**
   - √ **Event Description**
   - √ **Event Type**
2. Configure the filter conditions. For:
   - √ **Timestamp**: Use the two *Between* dates to set the date range, if required.
   - √ **Positioner Tag**, **User** or **Event Description**:
   a. Use the pulldown to select:

      Equals*:* Indicates search for an exact string

      Contains*:* Indicates search for a string with the enter data anywhere

      isNull*:* Indicates search for an empty entry

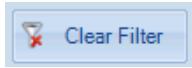
   b. Enter text,

   - √ *Event Type:*

   a. Use the pulldown to select **Equals**.

   b. Use the pulldown to the right to select an event type.
3. Click **Show Suppressed** to show repeat events. If unchecked, repeat events are not shown, even if device status is changed.
4. Click .

NOTE

Use the 

to remove the filter conditions from the dialog.

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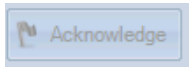
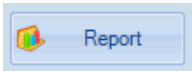
Acknowledge Event

√ Select an event and click 

. The acknowledged event grays out.

Create Report of Event and Audit Trail

Print the filtered or unfiltered events to a pdf format, which can then be printed out.

1. Perform a filter function, if required (“Filter Events” on page 78).
2. Click 

and the *Report Setup* appears.

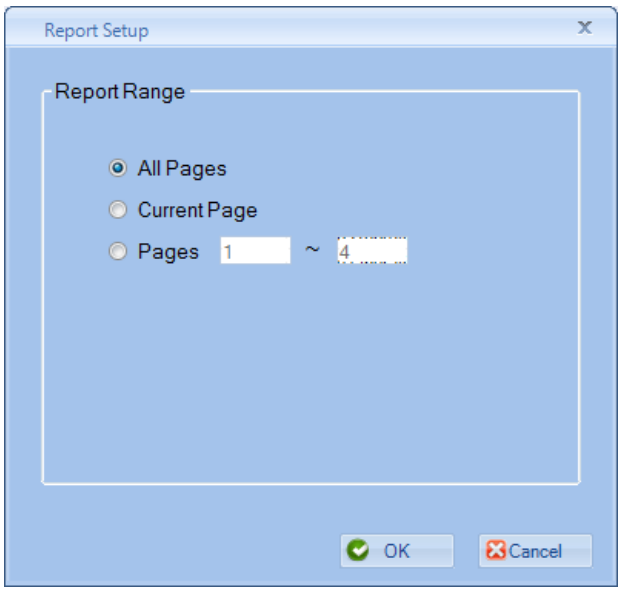


Figure 52 Report Setup

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3. Select one of the radio buttons and add a range for *Pages*, if applicable, click **OK** and a pdf of the report appears.

Timestamp	Status	Tag	Event Type	User	Description
Event Category:	**Device Operation**				
12/19/2018 9:41:18 AM	Normal	SVI Next Gen HART 7	Add/Delete/Move Device	ADMIN	Add SVI Next Gen HART 7 device "SVI Next Gen HART 7" under HART Communication field network "HART Modem1".
12/19/2018 8:28:42 AM	Normal	SVI3 HART 7	Add/Delete/Move Device	ADMIN	Add SVI3 HART 7 device "SVI3 HART 7" under HART Communication field network "HART Modem1".
12/19/2018 8:28:23 AM	Normal	SVI3 HART 7	Add/Delete/Move Device	ADMIN	Remove SVI3 HART 7 device "SVI3 HART 7".
12/18/2018 9:38:06 AM	Normal	SVI3 HART 7	Add/Delete/Move Device	ADMIN	Add SVI3 HART 7 device "SVI3 HART 7" under HART Communication field network "HART Modem1".
12/18/2018 9:37:53 AM	Normal	NEW	Add/Delete/Move Device	ADMIN	Remove SVI3 HART 7 device "NEW".
12/18/2018 9:37:40 AM	Normal	SVI Next Gen HART 7	Add/Delete/Move Device	ADMIN	Remove SVI Next Gen HART 7 device "SVI Next Gen HART 7".
12/11/2018 4:38:43 PM	Normal	SVI3 HART 7	Disconnect Device	ADMIN	SVI3 HART 7 device "SVI3 HART 7" went offline.
12/11/2018 1:13:10 PM	Normal	SVI3 HART 7	Connect Device	ADMIN	SVI3 HART 7 device "SVI3 HART 7" went online.
12/11/2018 1:12:45 PM	Normal	SVI3 HART 7	Connect Device	ADMIN	SVI3 HART 7 device "SVI3 HART 7" went online.
12/11/2018 1:12:28 PM	Normal	SVI3 HART 7	Connect Device	ADMIN	SVI3 HART 7 device "SVI3 HART 7" went online.
12/11/2018 9:25:08 AM	Normal	SVI Next Gen HART 7	Add/Delete/Move Device	ADMIN	Add SVI Next Gen HART 7 device "SVI Next Gen HART 7" under HART Communication field network "HART Modem1".
12/11/2018 8:38:16 AM	Normal	SVI3 HART 7	Connect Device	ADMIN	SVI3 HART 7 device "SVI3 HART 7" went online.
12/11/2018 8:38:12 AM	Normal	SVI3 HART 7	Connect Device	ADMIN	SVI3 HART 7 device "SVI3 HART 7" went online.
12/11/2018 8:38:01 AM	Normal	SVI3 HART 7	Add/Delete/Move Device	ADMIN	Add SVI3 HART 7 device "SVI3 HART 7" under HART Communication field network "HART Modem1".
12/11/2018 8:37:32 AM	Normal	NEW	Add/Delete/Move Device	ADMIN	Remove SVI3 HART 7 device "NEW".
12/11/2018 8:37:25 AM	Normal	SVI Next Gen HART 7	Add/Delete/Move Device	ADMIN	Remove SVI Next Gen HART 7 device "SVI Next Gen HART 7".
12/10/2018 4:26:57 PM	Normal	NEW	Disconnect Device	ADMIN	SVI3 HART 7 device "NEW" went offline.
12/10/2018 3:07:21 PM	Normal	NEW	Connect Device	ADMIN	SVI3 HART 7 device "NEW" went online.
12/10/2018 3:07:06 PM	Normal	NEW	Connect Device	ADMIN	SVI3 HART 7 device "NEW" went online.
12/10/2018 3:06:46 PM	Normal	NEW	Connect Device	ADMIN	SVI3 HART 7 device "NEW" went online.
12/10/2018 3:06:43 PM	Normal	NEW	Connect Device	ADMIN	SVI3 HART 7 device "NEW" went online.
12/10/2018 3:06:33 PM	Normal	NEW	Disconnect Device	ADMIN	SVI3 HART 7 device "NEW" went offline.
12/10/2018 3:05:31 PM	Normal	SVI Next Gen HART 7	Disconnect Device	ADMIN	SVI Next Gen HART 7 device "SVI Next Gen HART 7" went offline.
12/10/2018 2:52:42 PM	Normal	NEW	Connect Device	ADMIN	SVI3 HART 7 device "NEW" went online.
12/10/2018 2:33:07 PM	Normal	NEW	Disconnect Device	ADMIN	SVI3 HART 7 device "NEW" went offline.
12/10/2018 2:11:33 PM	Normal	SVI Next Gen HART 7	Connect Device	ADMIN	SVI Next Gen HART 7 device "SVI Next Gen HART 7" went online.
12/10/2018 2:07:25 PM	Normal	NEW	Connect Device	ADMIN	SVI3 HART 7 device "NEW" went online.
12/10/2018 1:59:26 PM	Normal	NEW	Connect Device	ADMIN	SVI3 HART 7 device "NEW" went online.
12/10/2018 1:59:23 PM	Normal	NEW	Connect Device	ADMIN	SVI3 HART 7 device "NEW" went online.
12/10/2018 1:55:43	Normal	NEW	Disconnect Device	ADMIN	SVI3 HART 7 device "NEW" went offline.

Figure 53 PDF of Event Report

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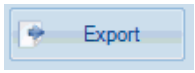
Export Event and Audit Trail Report

Use this to export event details to an Excel spreadsheet.

1. Perform a filter function, if required (“Filter Events” on page 78).

2. Click 

and the *Export Setup Range* dialog appears.

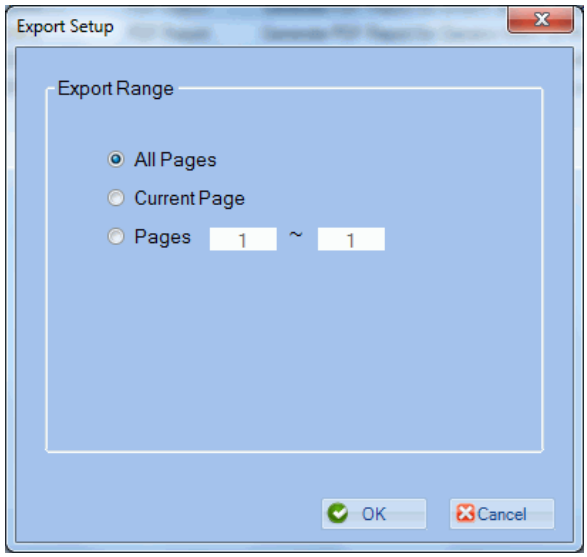


Figure 54 Export Setup Range

3. Select one of the radio buttons and add a range for Pages, if applicable, click **OK** and the *Export Save As* dialog appears.

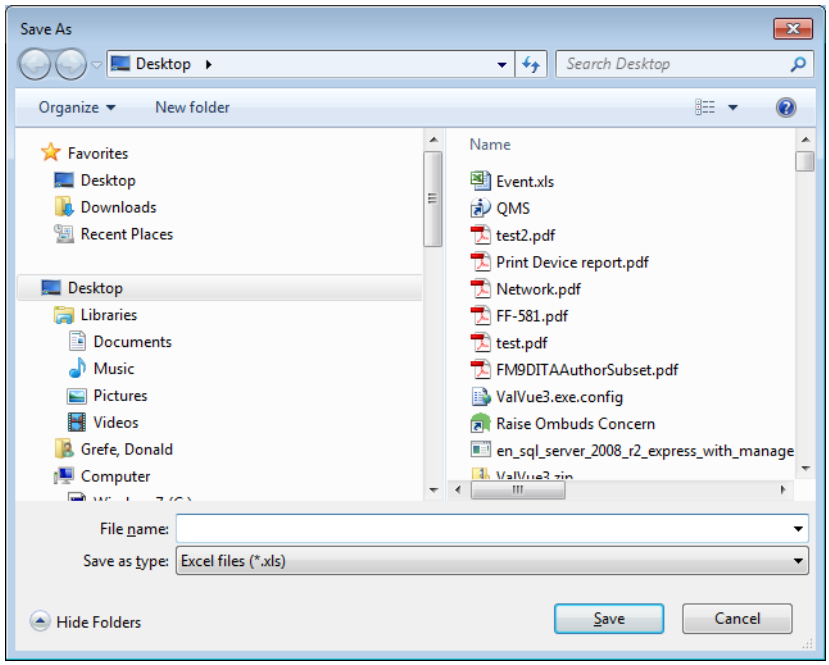


Figure 55 Export Save As

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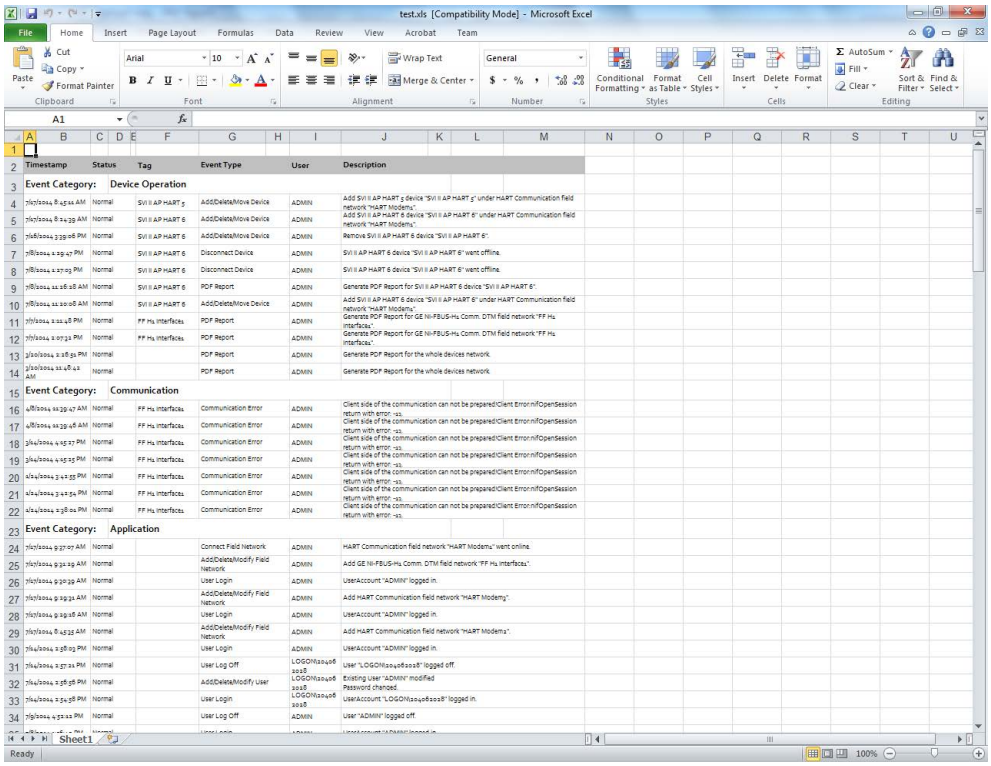
4. Enter a filename, click **Save** and the report appears.



Timestamp	Status	Tag	Event Type	User	Description
Event Category:	**Device Operation**				
7/7/2014 8:45:44 AM	Normal	SVI II AP HART 5	Add/Delete/Move Device	ADMIN	Add SVI II AP HART 5 device "SVI II AP HART 5" under HART Communication field network "HART Modems".
7/7/2014 8:24:39 AM	Normal	SVI II AP HART 6	Add/Delete/Move Device	ADMIN	Add SVI II AP HART 6 device "SVI II AP HART 6" under HART Communication field network "HART Modems".
7/6/2014 3:39:06 PM	Normal	SVI II AP HART 6	Add/Delete/Move Device	ADMIN	Remove SVI II AP HART 6 device "SVI II AP HART 6".
7/8/2014 1:29:47 PM	Normal	SVI II AP HART 6	Disconnect Device	ADMIN	SVI II AP HART 6 device "SVI II AP HART 6" went offline.
7/8/2014 1:27:05 PM	Normal	SVI II AP HART 6	Disconnect Device	ADMIN	SVI II AP HART 6 device "SVI II AP HART 6" went offline.
7/8/2014 11:26:38 AM	Normal	SVI II AP HART 6	PDF Report	ADMIN	Generate PDF Report for SVI II AP HART 6 device "SVI II AP HART 6".
7/8/2014 11:20:06 AM	Normal	SVI II AP HART 6	Add/Delete/Move Device	ADMIN	Add SVI II AP HART 6 device "SVI II AP HART 6" under HART Communication field network "HART Modems".
7/7/2014 2:11:48 PM	Normal	FF H1 Interface1	PDF Report	ADMIN	Generate PDF Report for GE NI-FBUS-H1 Comm. DTM field network "FF H1 Interface1".
7/7/2014 2:07:32 PM	Normal	FF H1 Interface1	PDF Report	ADMIN	Generate PDF Report for GE NI-FBUS-H1 Comm. DTM field network "FF H1 Interface1".
3/20/2014 2:58:31 PM	Normal		PDF Report	ADMIN	Generate PDF Report for the whole devices network.
3/20/2014 11:46:42 AM	Normal		PDF Report	ADMIN	Generate PDF Report for the whole devices network.
Event Category:	**Communication**				
4/8/2014 10:39:47 AM	Normal	FF H1 Interface1	Communication Error	ADMIN	Client side of the communication can not be prepared!Client Error:niFOpenSession return with error: -13.
4/8/2014 10:39:46 AM	Normal	FF H1 Interface1	Communication Error	ADMIN	Client side of the communication can not be prepared!Client Error:niFOpenSession return with error: -13.
3/24/2014 4:45:37 PM	Normal	FF H1 Interface1	Communication Error	ADMIN	Client side of the communication can not be prepared!Client Error:niFOpenSession return with error: -13.
3/24/2014 4:45:35 PM	Normal	FF H1 Interface1	Communication Error	ADMIN	Client side of the communication can not be prepared!Client Error:niFOpenSession return with error: -13.
3/24/2014 3:43:35 PM	Normal	FF H1 Interface1	Communication Error	ADMIN	Client side of the communication can not be prepared!Client Error:niFOpenSession return with error: -13.
3/24/2014 3:43:34 PM	Normal	FF H1 Interface1	Communication Error	ADMIN	Client side of the communication can not be prepared!Client Error:niFOpenSession return with error: -13.
3/24/2014 2:38:04 PM	Normal	FF H1 Interface1	Communication Error	ADMIN	Client side of the communication can not be prepared!Client Error:niFOpenSession return with error: -13.
Event Category:	**Application**				
7/7/2014 9:37:07 AM	Normal		Connect Field Network	ADMIN	HART Communication field network "HART Modems" went online.
7/7/2014 9:31:19 AM	Normal		Add/Delete/Modify Field Network	ADMIN	Add GE NI-FBUS-H1 Comm. DTM field network "FF H1 Interface1".
7/7/2014 9:30:39 AM	Normal		User Login	ADMIN	UserAccount "ADMIN" logged in.
7/7/2014 9:29:31 AM	Normal		Add/Delete/Modify Field Network	ADMIN	Add HART Communication field network "HART Modems".
7/7/2014 9:19:16 AM	Normal		User Login	ADMIN	UserAccount "ADMIN" logged in.
7/7/2014 8:45:35 AM	Normal		Add/Delete/Modify Field Network	ADMIN	Add HART Communication field network "HART Modems".
7/4/2014 3:58:09 PM	Normal		User Login	ADMIN	UserAccount "ADMIN" logged in.
7/4/2014 2:57:41 PM	Normal		User Log Off	LOGON1204062018	User "LOGON1204062018" logged off.
7/4/2014 2:56:56 PM	Normal		Add/Delete/Modify User	LOGON1204062018	Existing User "ADMIN" modified Password chanced.
7/4/2014 2:54:58 PM	Normal		User Login	LOGON1204062018	UserAccount "LOGON1204062018" logged in.
7/3/2014 4:52:12 PM	Normal		User Log Off	ADMIN	User "ADMIN" logged off.

Figure 56 Exported Event Excel Report

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8. Settings Tasks

Settings Menu

Use this menu to manage the DTM available to the program, map field networks to DTMs, configure all aspects of field networks and their operation, including security.

Menu Items

DTM Library	Opens *DTM Library Management* for updating available DTMs and DTM management. See “DTM Library Management” on page 84 for more information.
Field Networks	Opens *Field Networks* to map ValVue field networks to user-defined configurations. See “Field Networks” on page 86 for more information.
Device Type Assignments	Opens the *Device Type Assignments* dialog where you create a catalog of associations between a device type and manufacturer data.
Field Network Settings	Use this menu item to configure field network settings, including: √ *Network Communication Preference Settings* - Use this dialog for assigning a Field Network type to an available DTM. See “Field Network Settings” on page 90. √ *Criticality Polling Schedule* - Set the *Update Intervals* by *Device Criticality*. √ *Device Criticality Settings* - Assign criticalities to devices.
User Management	Opens *User Management* adding, editing, deleting users and assign privilege levels. See “User Management” on page 93 for more information.

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DTM Library Management

Use this feature to:

- √ “Update DTM Library” on page 84
- √ “Add/Remove DTMs in the DTM Updates List” on page 85

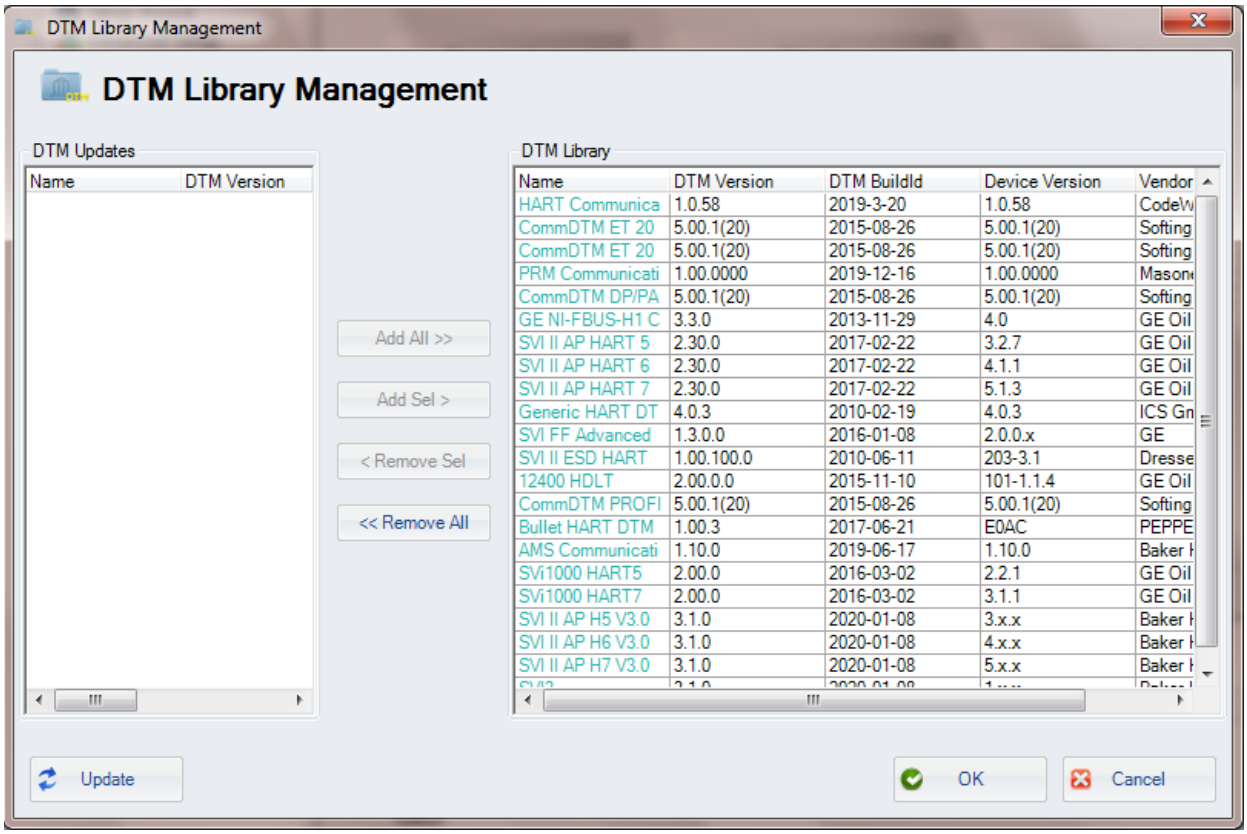

Figure 57 DTM Library Management

NOTE

*To see the correct version of ValVue3 or an individual DTM, click **Help** > **About** for ValVue3 or the About icon for a DTM ( ). Do not reference the Version field in DTM Library Management.*

Update DTM Library

Use this function to scan for DTM that are on the system but not yet loaded into ValVue. Once loaded they are available in the *DTM Updates* list to add into the *DTM Library*.

- √ Click Update and a progress bar appear as the *DTM Updates* list is updated.

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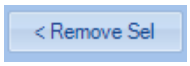
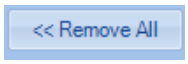
Add/Remove DTMs in the DTM Updates List

Use this function to move available DTMs between the *DTM Updates* list where they are available for use in field networks and the *DTM Updates* list where they are not.

The following buttons are used for this purpose:

Add All 	Adds all the DTMs to the *DTM Library* list.
Add Sel 	Adds the selected DTM to the *DTM Library* list.
Remove Sel 	Removes the selected DTM to the *DTM Updates* list.
Remove All 	Removes all DTMs to the *DTM Updates* list.

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Field Networks

Use this feature to map ValVue field networks to user-defined configurations. ValVue can support multiple field networks. This linked to the current configuration.

You can also delete and existing setting. The data is not retrievable.

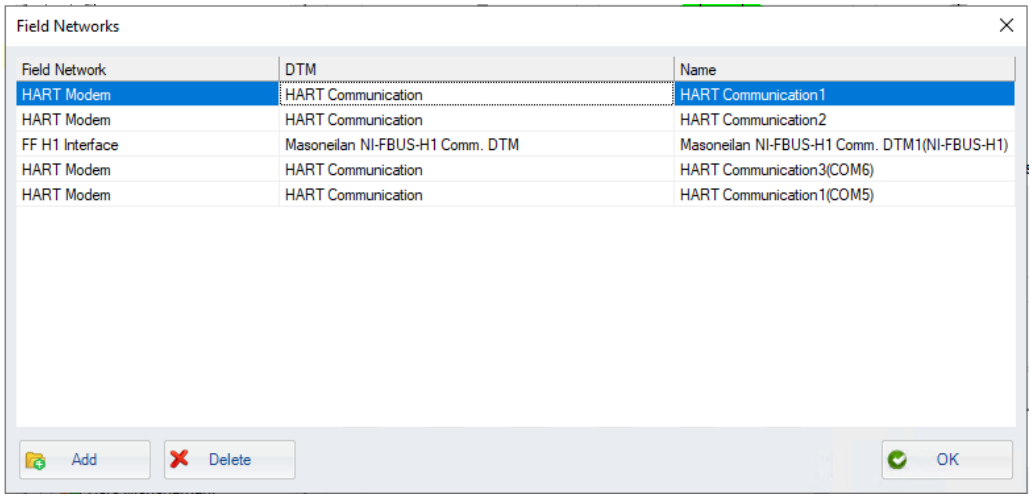

Figure 58 Field Networks

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Add a Field Network

FOUNDATION Fieldbus

1. Select **Settings > Field Networks** and *Field Networks* appears.
2. Click and the *Add Field Network* dialog appears.

Figure 59 Add Field Network - Field Network Tab

3. Select a *Field Network* from the pulldown. The *NI-FBus Communications Manager* must launch.

   The *Communication DTM* automatically populates based on the *Field Network* choice.

   The *Field Network Name* automatically populates to the Field Network with the number in sequence of that field network type appended. This is editable.

4. Edit the *Field Network Name*, if required.

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5. Select **Configuration** and the *Add Field Network - Configuration Tab* appears.

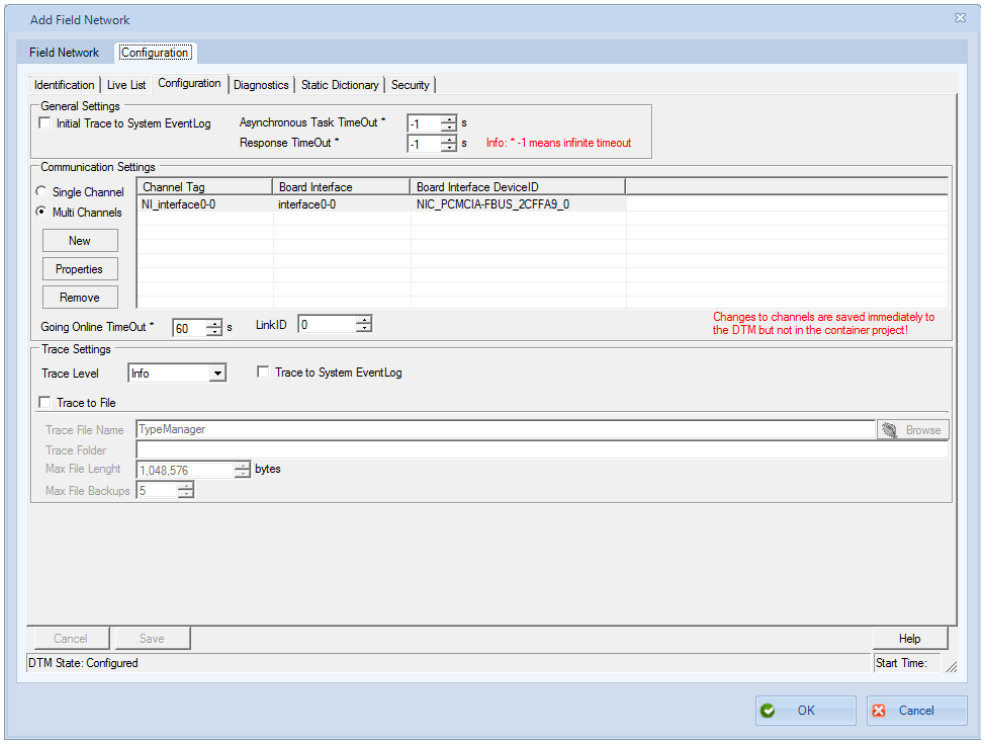

Figure 60 Add Field Network - Configuration Tab

6. Click **OK**.

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HART®

1. Select **Settings > Field Networks** and *Field Networks* appears.
2. Click and the *Add Field Network* dialog appears.

Figure 61 Add Field Network - HART Tab

3. Select a *Field Network* from the pulldown:

   √ **HART Modem**

   √ **HART IP Communication**

   The *Communication DTM* automatically populates based on the *Field Network* choice.

   The *Field Network Name* automatically populates to the *Field Network* with the number in sequence of that field network type appended. This is editable.

4. Edit the *Field Network Name*, if required.
5. Click **OK.**

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Device Type Assignments

Use this dialog to create and delete a catalog of association between a DTM and *Manufacturer ID* and *Device Type*. If you create a new database, this saves the DTM association so that it will not need to be recreated.

Create a Device Type Assignment

1. Click **Settings > Device Type Assignments** and *Device Type Assignments* appears.

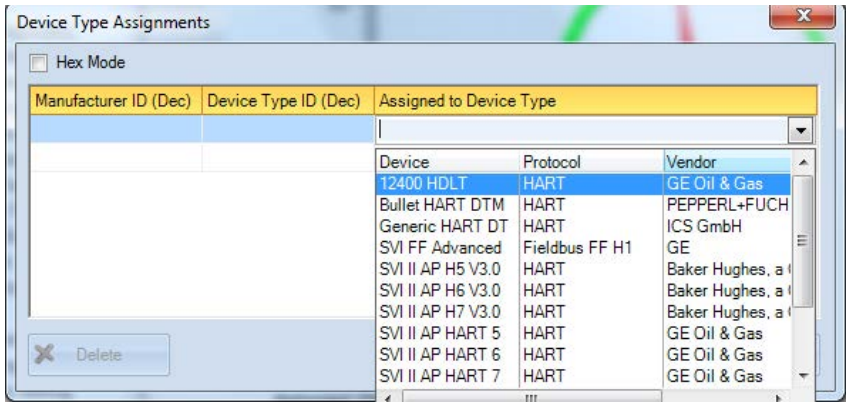

Figure 62 Device Type Assignments

2. Click *Hex Mode* to enter data as hex code.
3. Enter a *Manufacturer ID* and *Device Type ID*.
4. Select a device type from the *Assigned to Device Type* pulldown and click **OK**.

Delete a Device Type Assignment

√ Select a line item and click **Delete**.

Field Network Settings

Use this menu to configure the following:

√ “Network Communication Preference Settings”

√ “Criticality Polling Schedule” on page 92

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Network Communication Preference Settings

Use this dialog for assigning a supported *Field Network* type to an available communication DTM.

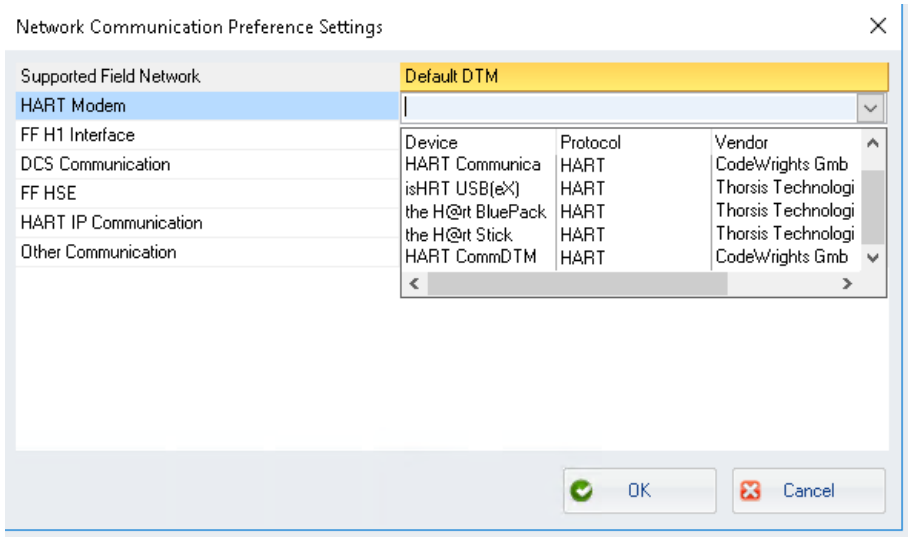

Figure 63 Network Communication Preference Settings

1. Select an item from *Supported Field Network*.
2. Select an item from the *Default DTM* pulldown and click **OK**.

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Criticality Polling Schedule

Use this feature to set the time in seconds between updates for the criticality levels.

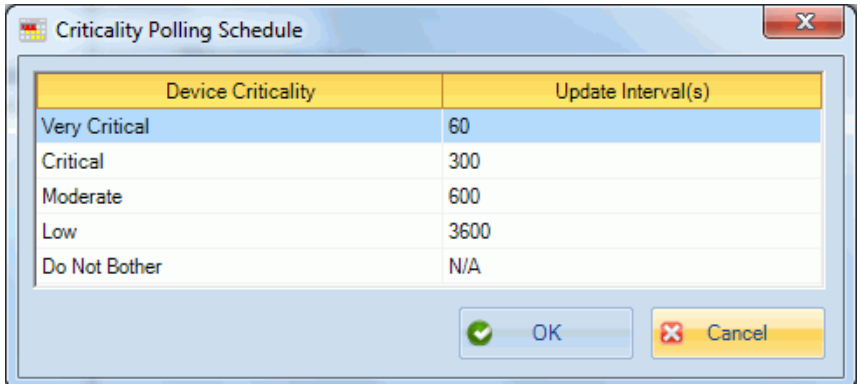

Figure 64 Criticality Polling Schedule

√ Select an **Update Interval (s)** for the *Device Criticality,* edit the interval and click **OK**.

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User Management

Use this function to add and manage:

- √ Users (“User Manager” on page 94),
- √ Roles (“Role Manager” on page 99),
- √ and Groups (“Group Manager” on page 103).

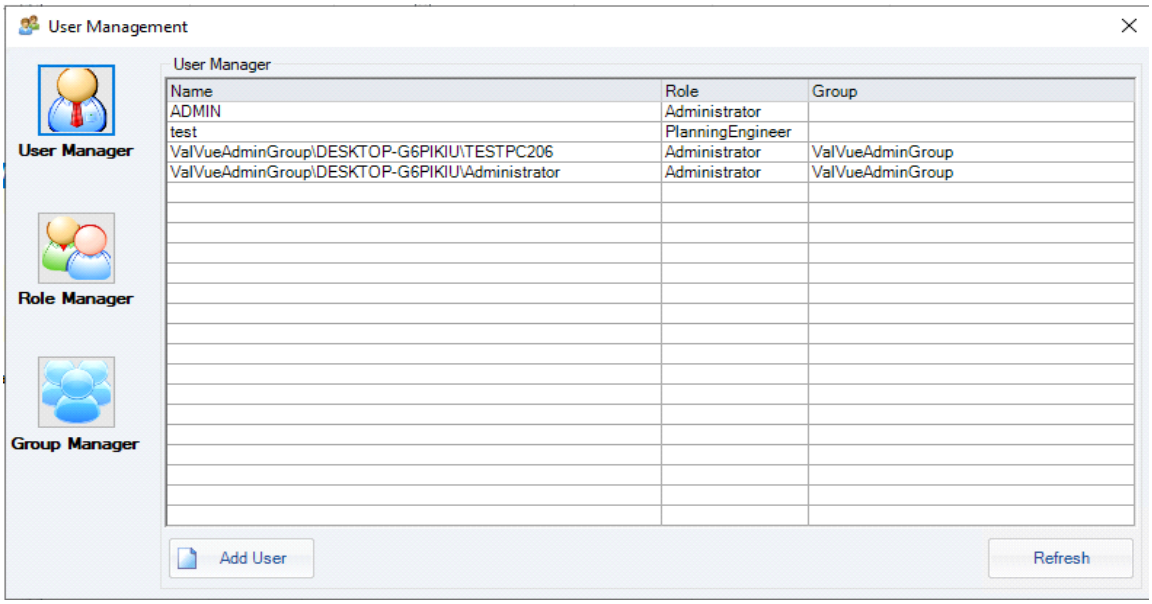

Figure 65 Security Settings Without User Selected

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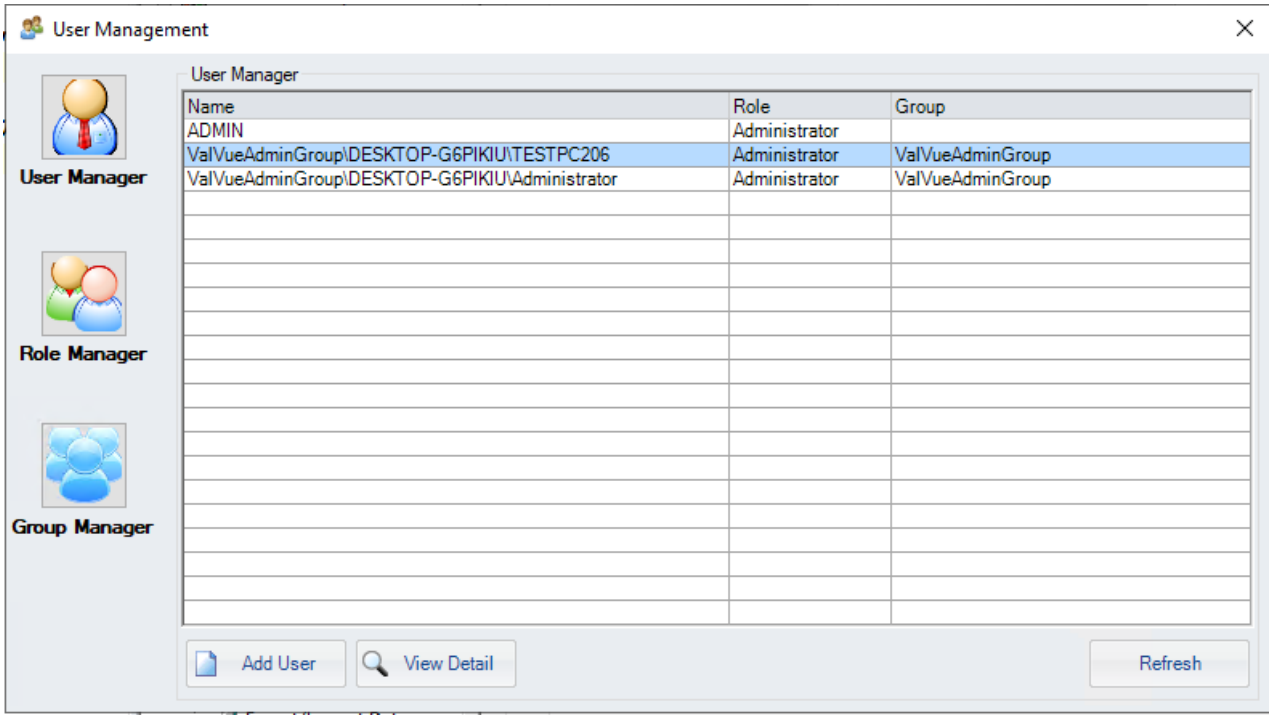
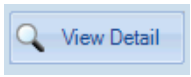


Figure 66 User Management With User Selected

User Manager

Use this function to view user details, add users, edit user profiles and delete user profiles.

View Detail



Opens the view-only user details.

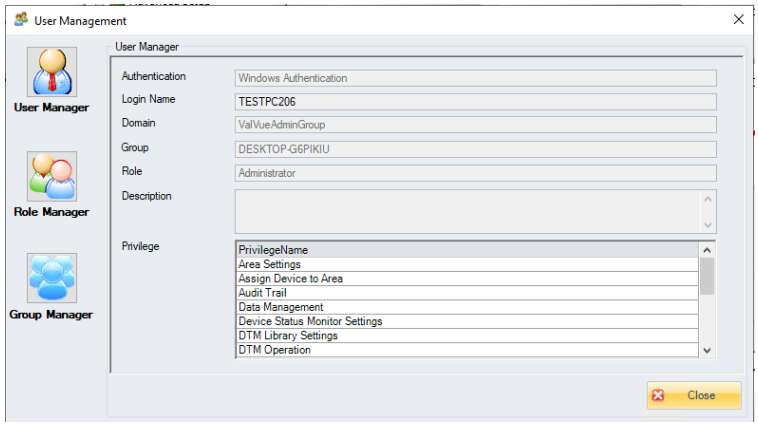
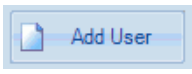


Figure 67 User Details

Add User



Opens the details for adding a new user. See “Add a New User” on page 95.

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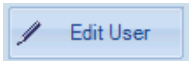
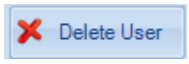
Edit User



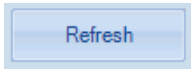
Opens the details for editing. See “Edit a User” on page 97.

Delete User



Deletes the selected user. See “Delete a User” on page 98.

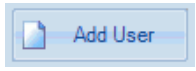
Refresh



Refreshes the dialog.

Add a New User

Use this function to add new users to the program.

1. Click 

and the *User Manager* tab appears.

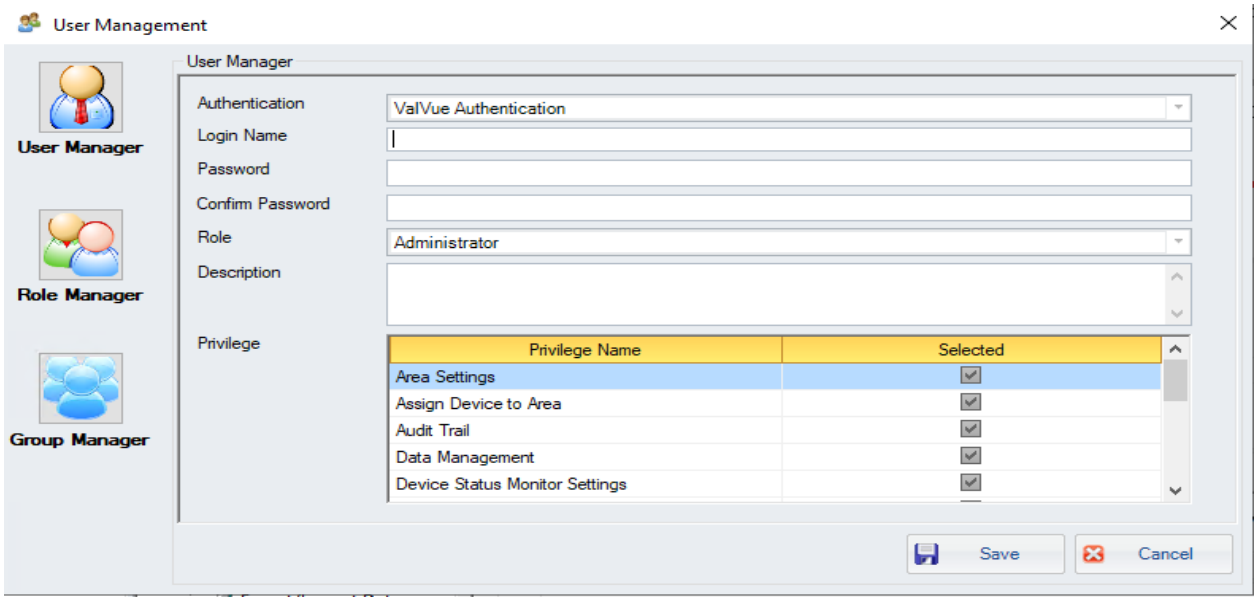


Figure 68 User Details Adding a New User

2. Use the *Authentication* pulldown to select an authentication type:
   - √ *ValVue Authentication* - Default User Name: *Admin* and *Password* is *ValVue3*. This password must be changed after initial login. Use the *Group Manager* to add groups for use.
   - √ *Windows Authentication* - Use Windows® credentials. Use the *Group Manager* to add a Windows® or domain user, if the logged in user is in a ValVue domain.
3. Enter a unique *Login Name*. For *Windows Authentication*, you must enter the correct Windows®/domain user name.

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4. Enter a *Password* and *Confirm Password*. Passwords must contain three of the four following requirements:
   - √ Uppercase characters
   - √ Lowercase characters
   - √ Numbers
   - √ Non alphanumeric characters.
5. Use the *Role* pulldown list to select a role. The system roles are:

- √ *Administrator* - Roles are defined in the fdt specification.
- √ *MaintenanceEngineer*
- √ *PlanningEngineer*
- √ *SystemObserver*
- √ *SystemOperator*

6. Use the *Selected* checkbox associated with the privileges to extend.
7. Enter *Comments* related to the user.
8. Click **Save**.

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Edit a User

Use this function to edit an existing user.

1. Select a user and click Edit User and the *User Manager* tab appears.

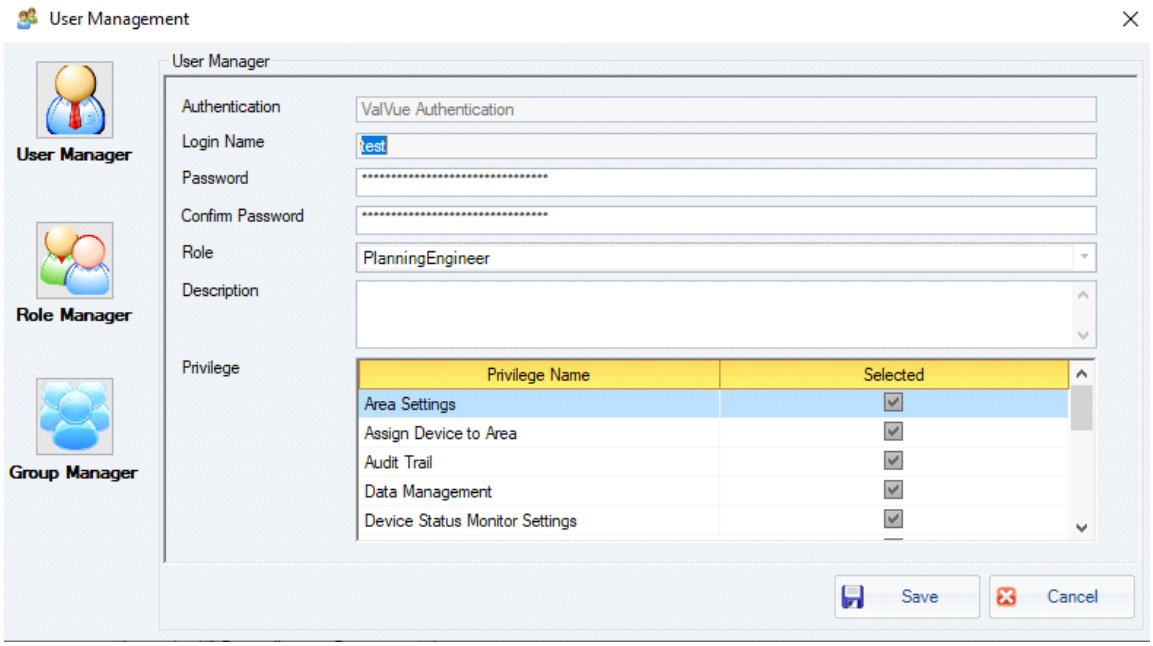

Figure 69 User Details Editing a User

2. Enter a changed *Password* and *Confirm Password*, if required.
3. Use the *Role* pulldown list to select a role, if required.
4. Use the *Selected* checkbox associated with the privileges to change, if required.
5. Edit the *Comments* related to the user, if required.
6. Click **Save**.

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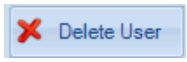
Delete a User

Use this function to delete an existing user.

1. Select a user and click 

and the *Confirm to Remove* dialog appears.

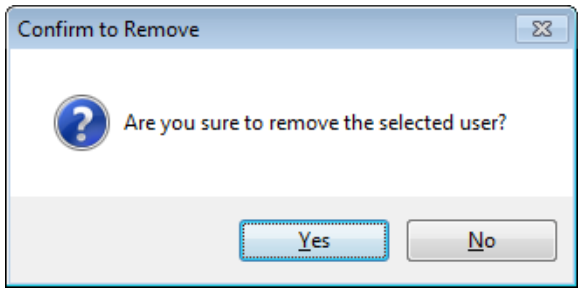
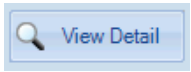


Figure 70 Confirm to Remove

2. Click **Yes**.

View Detail

√ Click 

and the dialog appears.

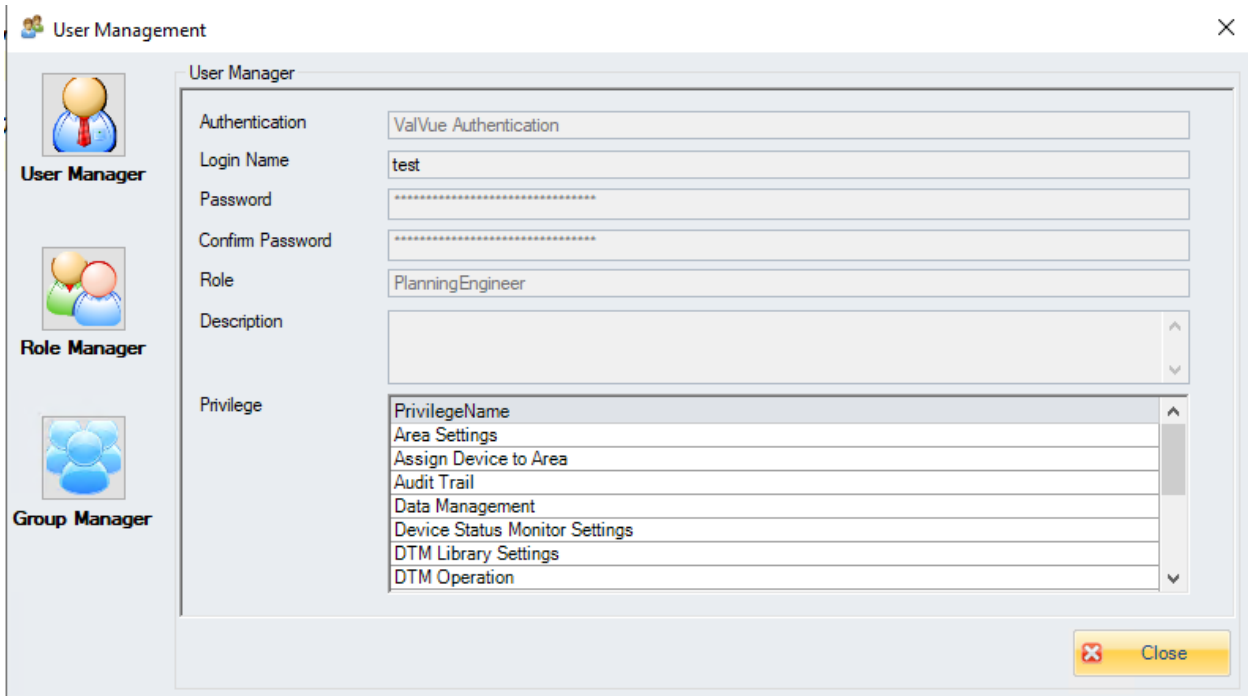


Figure 71 View Detail

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Role Manager

Use this function to view role details and edit roles. You can not delete or add roles as the roles are part of various FDT DTM operations.

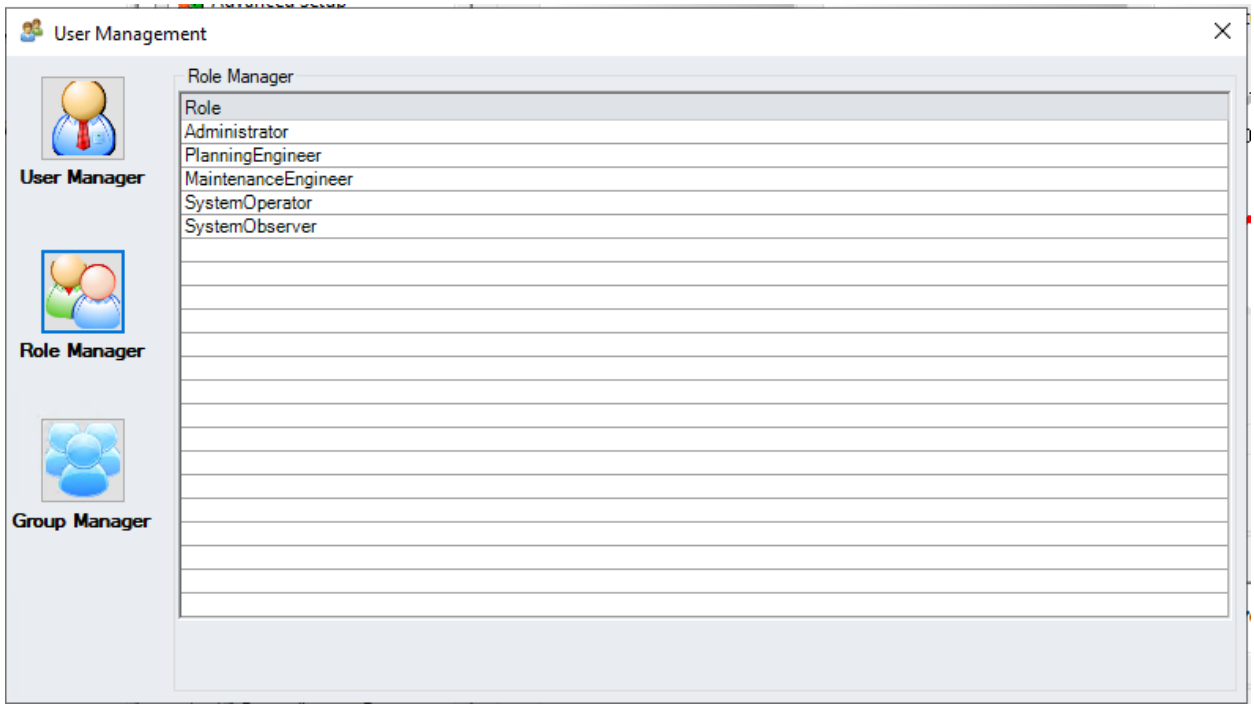

Figure 72 Role Manager with No Role Selected

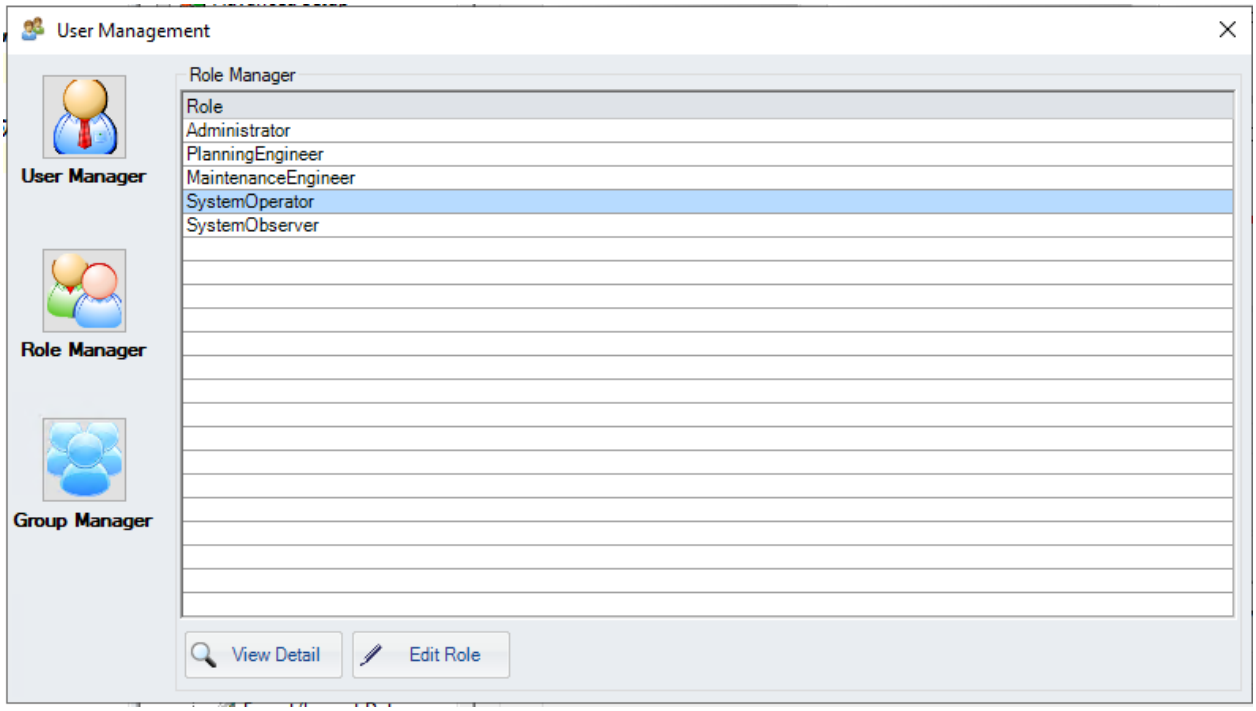

Figure 73 Role Manager with a Role Selected

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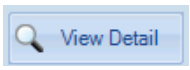
Buttons and Fields

View Detail



Opens the view-only role details.

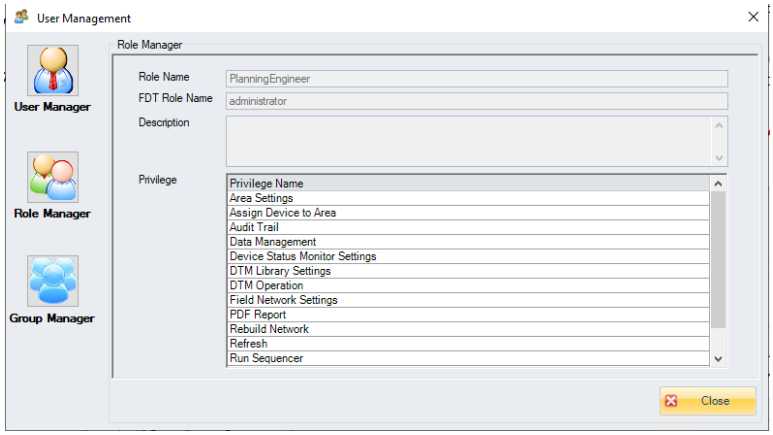
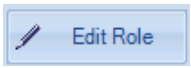


Figure 74 Role Details

Edit Role



Opens the role for editing. See “Edit a Role” on page 101.

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Edit a Role

Use this function to edit an existing role.

1. Select a role and click Edit Role and the *Role Manager* tab appears.

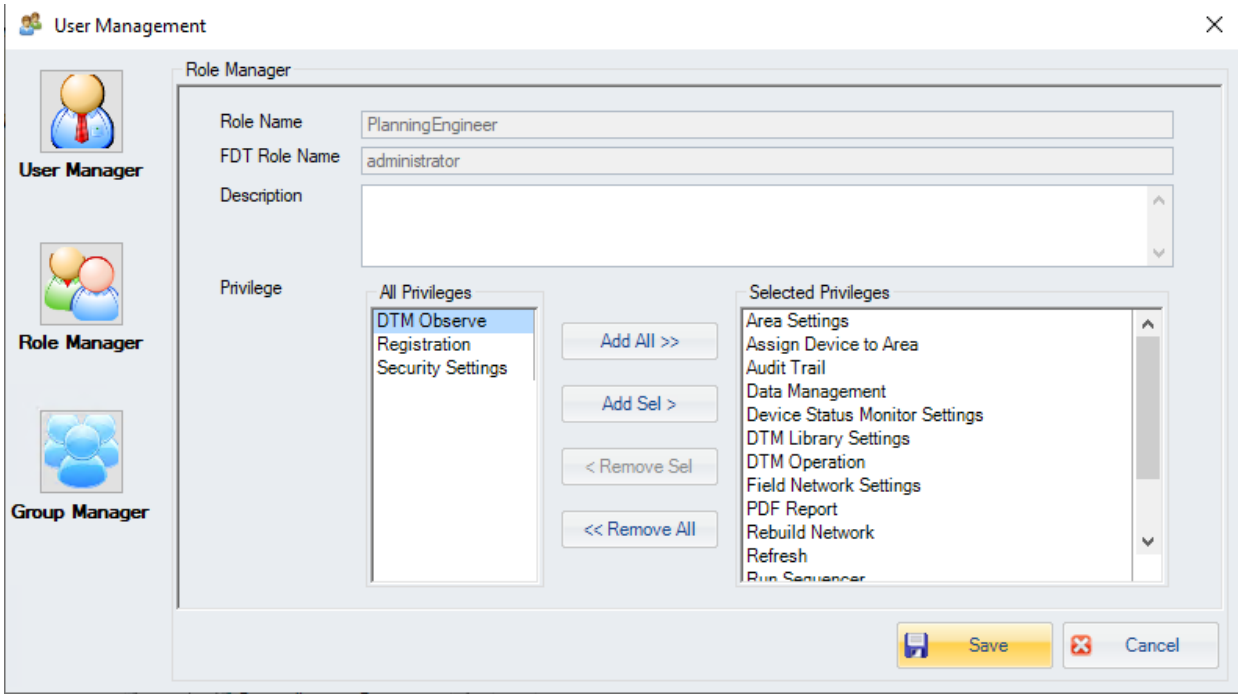

Figure 75 User Details Editing a Role

2. Edit the description related to the role.
3. Use the *All Privileges* list to select privileges.
4. Add/delete privileges to *Selected Privileges* by:

   √ Using a double-click on a single privilege.

   or

   √ Selecting a single privilege and clicking Add Sel > or < Remove Sel .

   or

   √ Clicking Add All >> or << Remove All to move all items remaining in the list.

5. Click Save .

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View Role Detail

√ Click View Detail and the dialog appears.

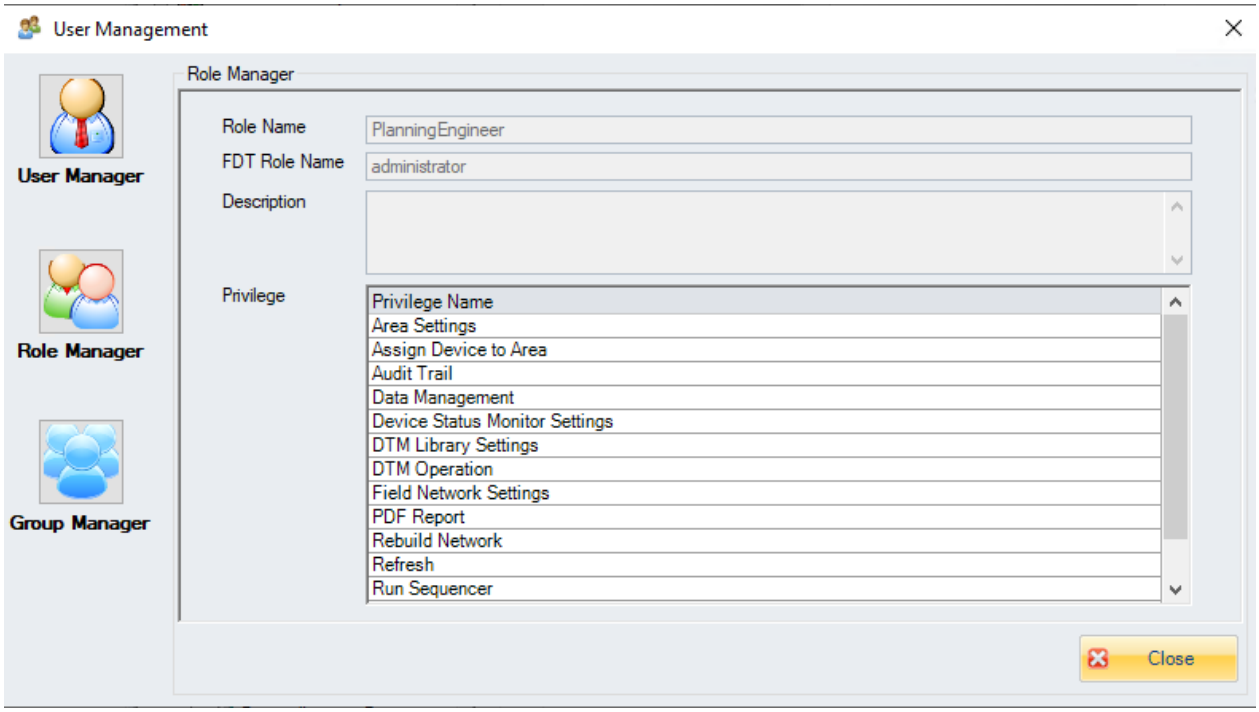

Figure 76 View Role Detail

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Group Manager

Use this function to view group details, edit groups and create mappings.

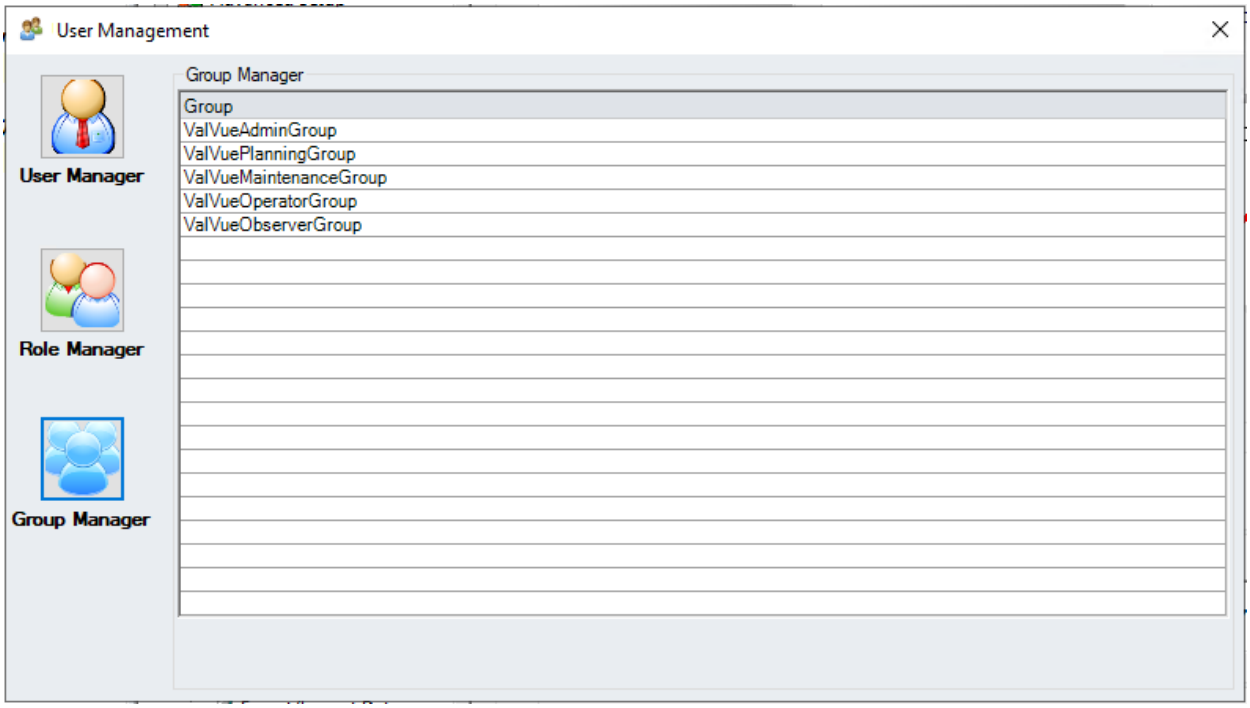

Figure 77 Group Manager with No Group Selected

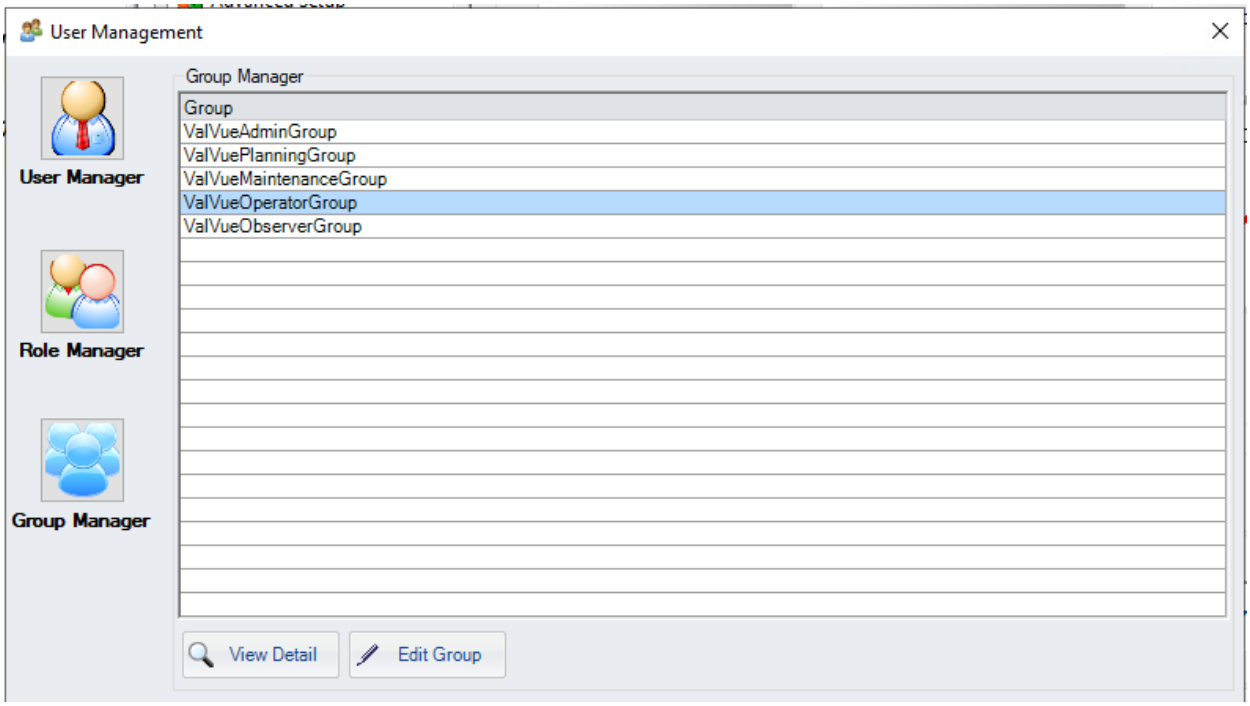

Figure 78 Group Manager with a Group Selected

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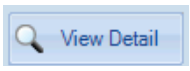
Buttons and Fields

Opens the view-only group details.

View Detail



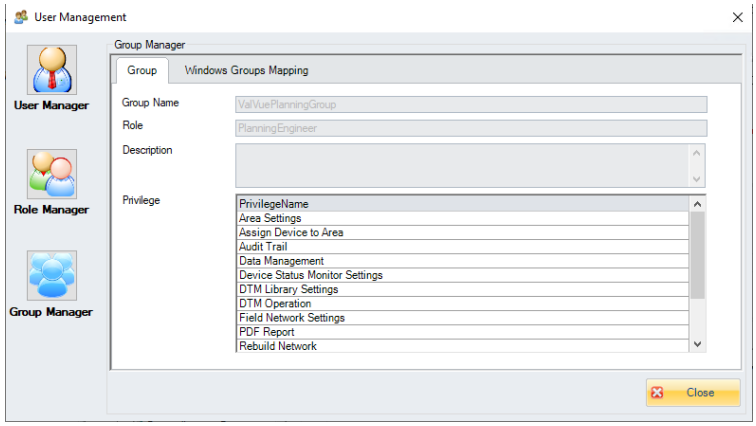
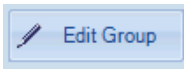


Figure 79 Group Details

This is comprised of two tabs:

- √ *Group* - Contains the *Group Name, Role, Privilege* assigned and *Description*. See “View Group Detail” on page 108.
- √ *Windows Groups Mapping*- Displays the mappings created for the group using the edit function.

Edit Group



Opens the group for editing the privileges assigned to a group and adding and deleting mappings. See “Edit a Group” on page 105.

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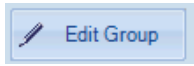
Edit a Group

Use this function to edit an existing group. You can configure privileges and add and remove *Windows Group Maps* (“Add a Mapping” on page 106).

1. Click , select a group, click 

and the *Group Manager* tab appears.

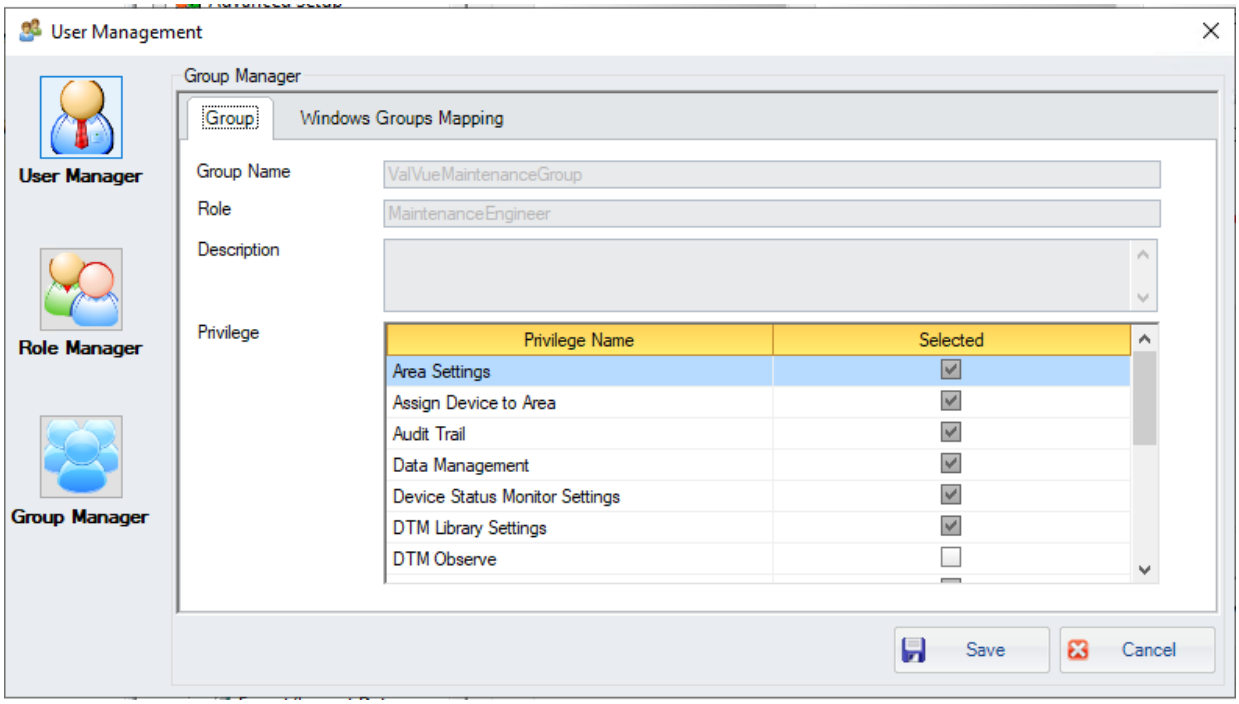


Figure 80 Group Manager Details Editing a User

2. Edit the *Description* related to the role.
3. Select a **Privilege Name**, and select the checkbox (es) related to the rights to extend.
4. Configure *Windows Group Mappings* (“Add a Mapping” on page 106).
5. Click

.

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Add a Mapping

Use this function to add a mapping.

A mapping creates a map between a pre-defined FDT group and either a local PC user group or domain user group.

1. Select a user and click Edit Group, click **Windows Group Mapping** and the *Add a Mapping Empty* dialog appears.

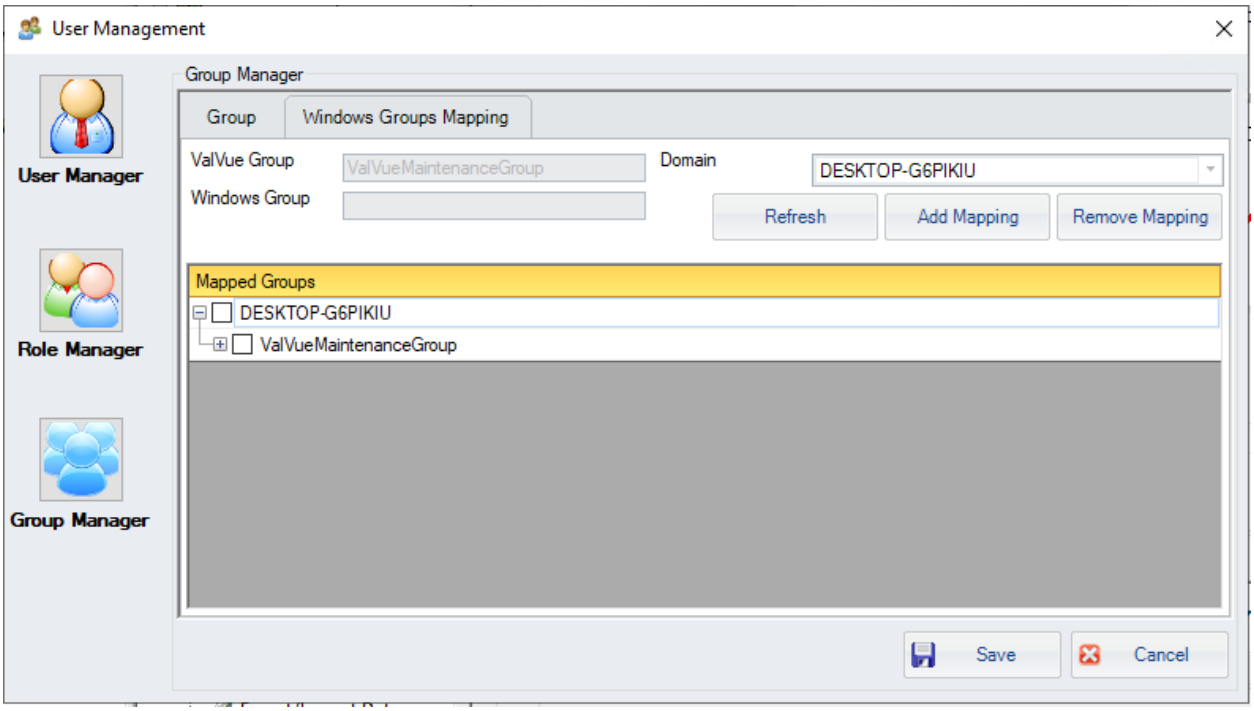

Figure 81 Add a Mapping Empty

2. Select a domain:

   √ Local laptop.

   or

   √ A detected Windows® domain.

3. Enter a *Group* in *Windows Group*. This must be exactly as in the *Group List*.
4. Click Add Mapping and *Mapping Added* appears.

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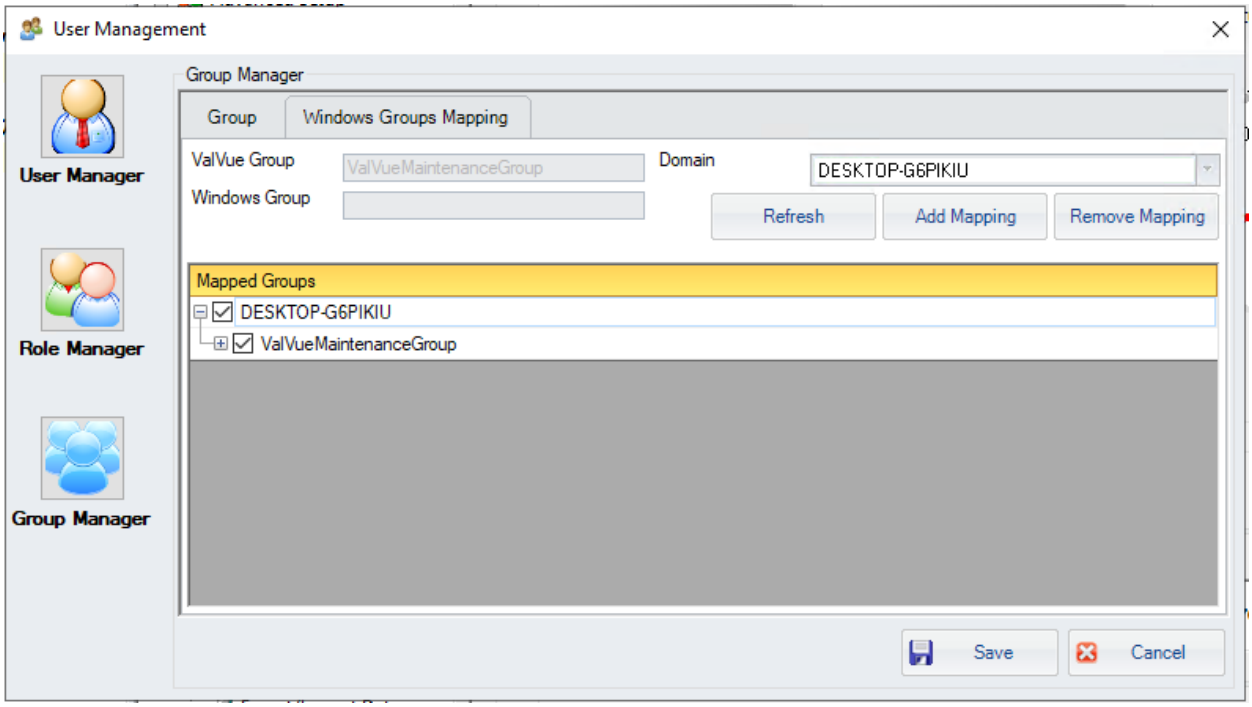

Figure 82 Mapping Added

5. Click the **+** next to the group in the list and a dialog appears as a scan of the laptop or network occurs for users in that group.

NOTE

The scan can take some time on a network.

6. Click Save .

NOTE

Click Remove Mapping *to delete an existing mapping.*

NOTE

Click Refresh *to refresh the settings for the user group lists.*

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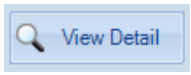
View Group Detail

√ Click 

and the dialog appears.

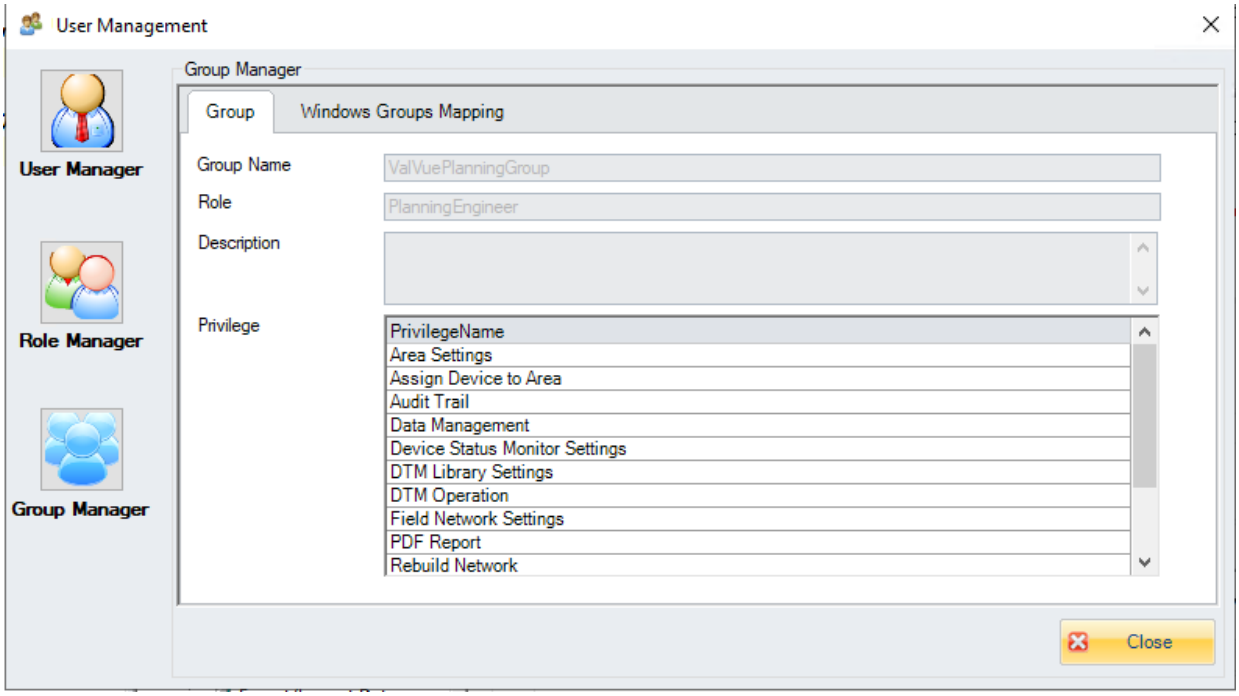


Figure 83 View Group Detail

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9. Tools Tasks

Tools Menu

Use this menu to perform licensing functions, add system tasks, configure tasks into sequences and run the sequences.

Menu Items

Firmware Downloading	Use this feature to change/upgrade the connected positioner's firmware. The firmware upgrade if it represents an: √ Upgrade of features: Upgrade an electronics board to advanced edition from standard edition. √ Upgrade firmware to fix known issues. For the upgrade procedure, see "Firmware Download" on page 110.
ValVue Licensing	See "If selected the firmware product has valid license available, user can start download. A complete download actions include:" on page 111 for more information.
Device Status Monitor Running	Toggles on/off the *Device Status Monitor*.
Sequencer Settings	*Task Settings:* Opens the *Task Settings* dialog where you assign values to they system task performed during a user-configured sequence ("Sequencer Management" on page 124). See "Sequencer Management" on page 124 to configure a sequence of events and "Execute Sequencer" on page 132 to execute the sequence. *Sequencer Management:* Opens the "Sequencer Management" on page 124 dialog for adding, editing and deleting sequences of tasks configured in "Task Settings" on page 119. This is also accessed via the *Executing Sequencer* dialog. *Execute Sequencer:* Opens the *Executing Sequencer* dialog (see "Execute Sequencer" on page 132) to run the sequences (s) created. *Sequencer Execution Management*: Open the "Sequencer Execution Management" on page 136 dialog to filter and review sequencer operations.
Valve Data Management	*Valve Management*: Add and delete valves assigned to a positioner, along with their data, in the topology. See "Valve Management" on page 139. *Signature Management*: Import/export signatures and view signature data. See"Signature Management" on page 148.
Import Configuration	Use this to import configurations from existing positioners. See "Import Configuration" on page 166.

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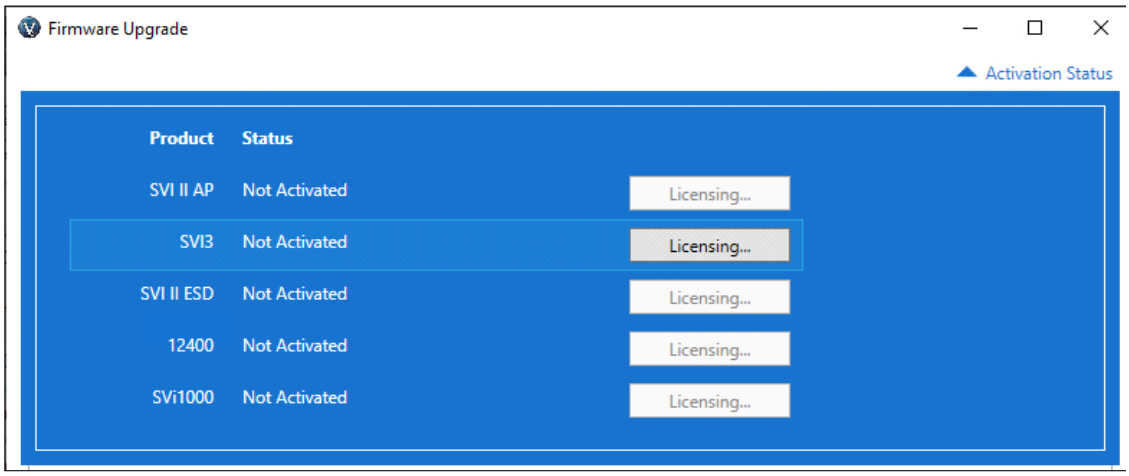
Firmware Download

ValVue3 now supports upgrading firmware for Masoneilan HART devices (SVI3, SVI II AP, SVI II ESD and 12400) with using ISP adapter. Flashing firmware to a virgin unit or upgrading firmware that must be running on different type of hardware.

Firmware image file of SVI3 uses fwc format that combines the images of mainboard, pneumatic module, option module and LCD module. User can upgrade all the modules of SVI3 positioner through one fwc file.

Firmware to be downloaded must be licensed based on the serial number download. User needs to purchase firmware license (either with charge or free) from iStore, and then a firmware license S/N will be issued. The user needs to send registration request to Baker Hughes for license (Key). Each product needs to use a separate S/N.

After the license is activated, user can see the total number of licenses purchased and available number of licenses for use.



Following are Part Numbers defined for Firmware Download licensing (based on 1 download):

Product	Part Number	Comments
SVI II AP	720075281-888-0000	Support All released firmware
SVI II ESD	720075282-888-0000	Support All released firmware
SVI3	720075285-888-0000	Product to be released
12400	720075284-888-0000	Support All released firmware
SVi1000	720075283-888-0000	Upgrade is not supported now

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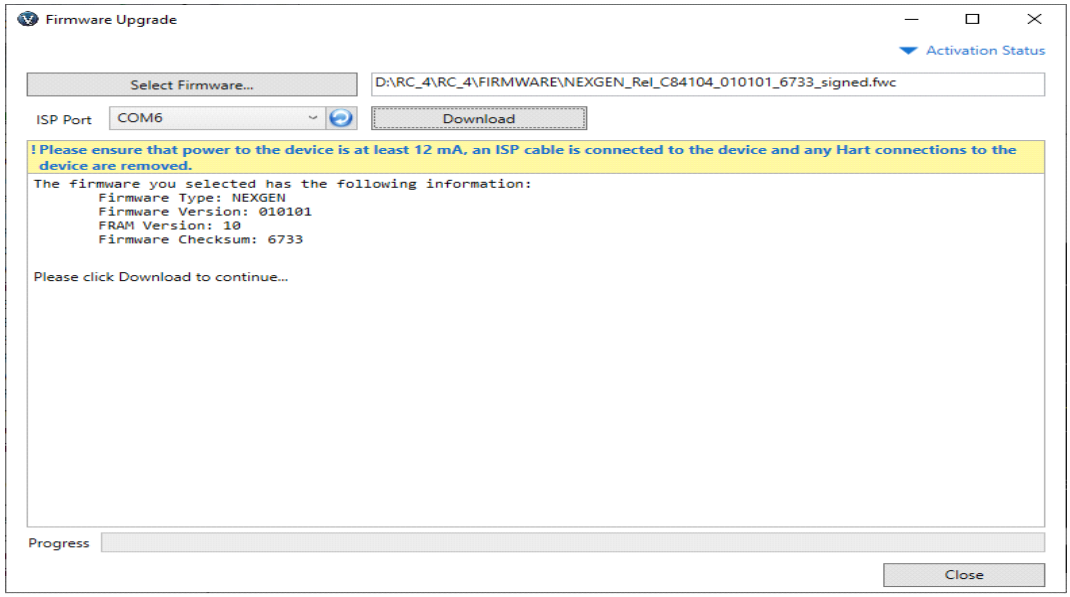
If selected the firmware product has valid license available, user can start download. A complete download actions include:

- √ Validate Selected Firmware
- √ Upload existing device image (NVM)
- √ Convert existing NVM to new NVM format that new firmware relays on
- √ Download New firmware to device
- √ Validate download result
- √ Restore converted NVM



The Steps for Firmware Download

1. Ensure the positioner is connected, in Setup mode and not in process control.
2. Unplug the LCD connector if applicable and connect the ISP device from the positioner to a COM port on your laptop.
3. 3. Select Tools > Firmware Downloading and Firmware Download appears.

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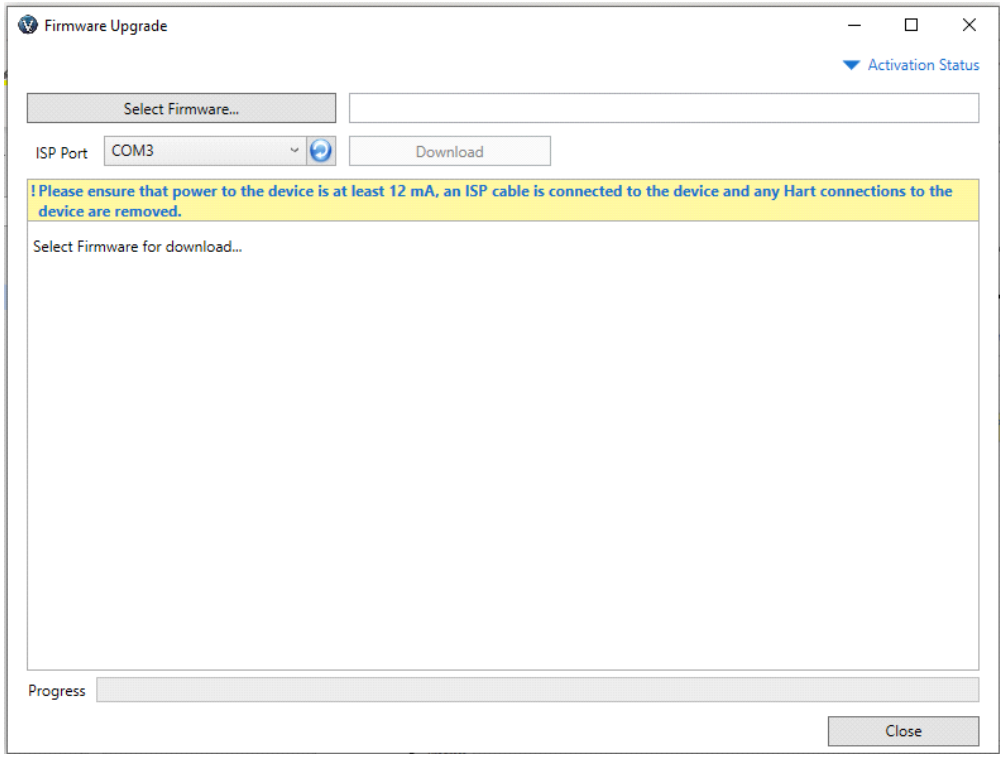

4. Use the ISP Port pulldown list to select the COM port where you connected the ISP device. Click the reload icon ( ) to refresh the list of ports. If you are unsure which COM port you are using open Control Panel > Device Manager > Ports (COM & LPT1) to see a list of in use COM ports.
5. Click Select Firmware and an Open dialog appears. Then navigate to and select the firmware to download.

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ValVue Licensing

This section is meant to be a generic discussion of the licensing process for ValVue and Masoneilan software DTMs. In this discussion we use ValVue as an example. Dialogs that appear differ based on the Masoneilan software is use. For example, the SVi™ 1000 and 12400 DTMs have only 30 day trial periods.

Registration Process

To open the registration dialog:

- √ Select **Tools** > **ValVue Licensing** for ValVue.
- √ Select a device and then select **Additional Functions > Registration** for DTMs.

The Masoneilan ValVue Serial Number is obtained by contacting one of our channel partners or by contacting Baker Hughes directly (software.reg@bakerhughes.com).

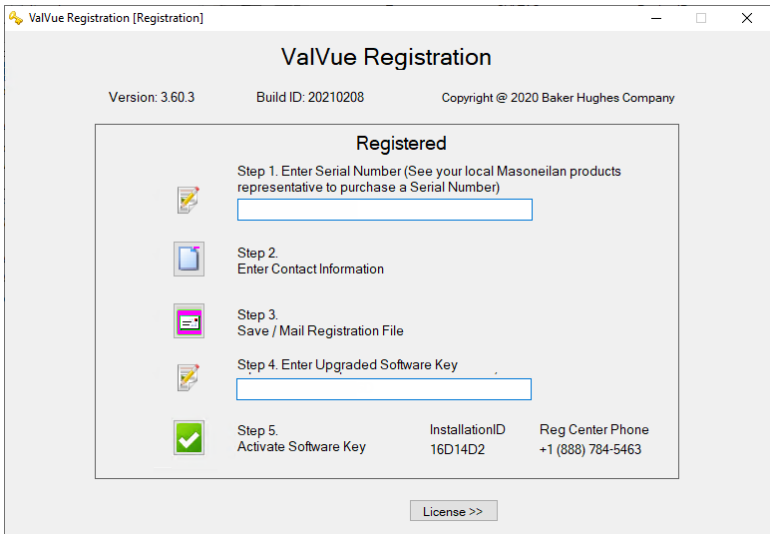

Figure 84 ValVue Registration

Use the registration dialog (Figure 84) to:

- √ "Register the Product" on page 114 - Required before use or at the end of the 30 day trial period.
- √ "Activate License" on page 116 - Required before use or at the end of the 30 day trial period.

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Register the Product

To register the product:

1. Enter the serial number in *Step 1*. The *Serial Number* auto-fills for the *Basic Edition*.
2. Click or click **Next** and Figure 85 appears.

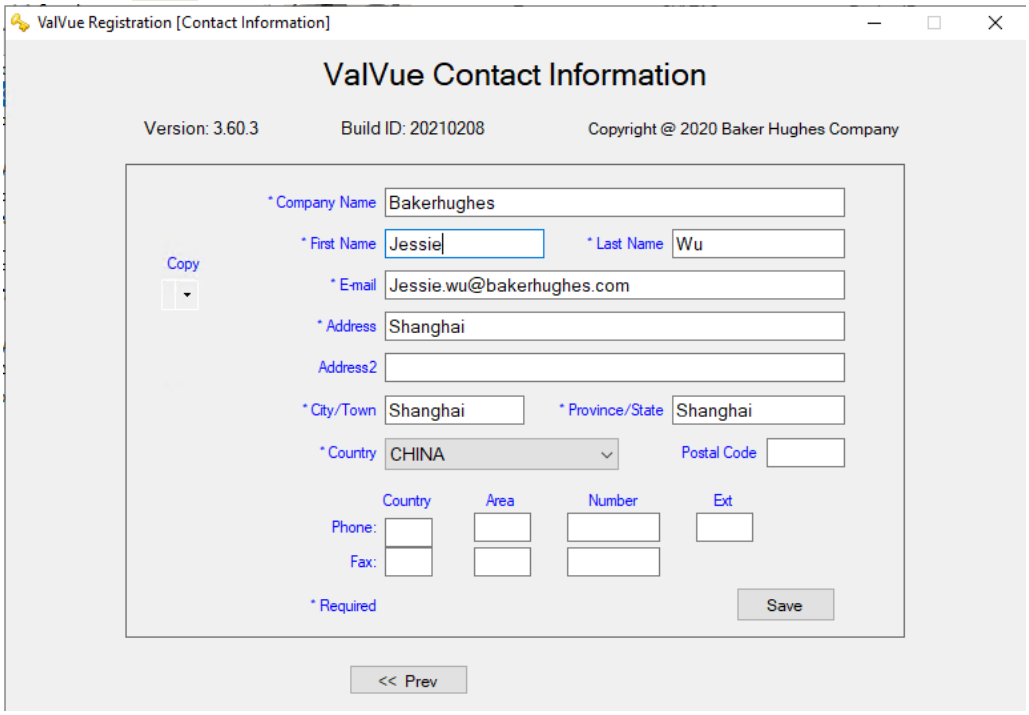

Figure 85 Contact Information

Use the copy pulldown to import information that has been previously entered for another Masoneilan software.

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3. Enter all required information, as marked by *, click Save then << Prev and click

and Figure 86 appears.

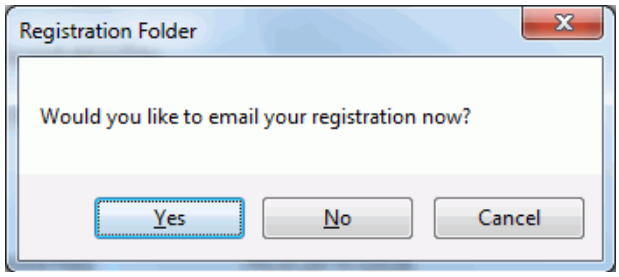

Figure 86 Email Registration

4. Ensure you have email access, click **Yes** and the registration email appears using your default email setup. The email has an *.xml* attachment containing licensing information. If sending the email fails or you wish to send from a different laptop/PC, click **No.** A dialog appears which you can use to save the file to a location for use.

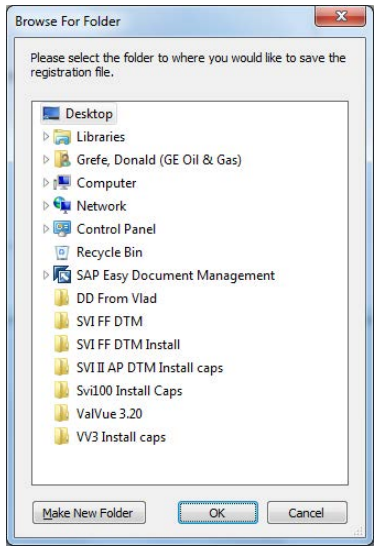

Figure 87 Browse for Folder

5. Send the email (software.reg@bakerhughes.com). A return email is sent containing the activation code. Proceed to “Activate License” on page 116.

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Activate License

To activate the license:

1. Enter the emailed or channel partner acquired software key.
2. Click and Figure 88 appears.

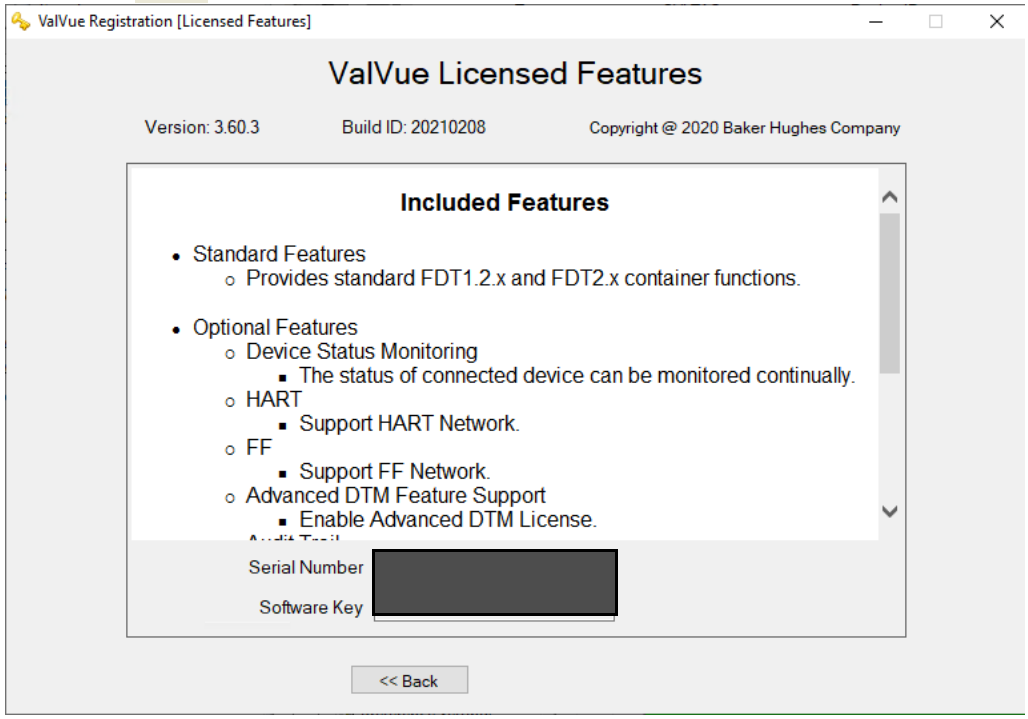

Figure 88 Included Features

3. Click **Close**.

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Registration During the Trial Period

The license trial period works as follows:

1. Once you download and install the ValVue software, you are granted a 30 day trial period. We strongly encourages you to register your license with us as soon as possible. During the 30 days, you have access to all the advanced features of ValVue.
2. Once the first 30 days expires, you lose the advanced features. You then have an additional 30 day period, after which you must register to continue using the product. Contact Baker Hughes at software.reg@bakerhughes.com.

NOTE

For DTMs (not ValVue) click:

√ Register Now and follow the prompts to register, before the trial completely expires (see"Register the Product" on page 114).

√ Register Later to continue use until the 30 days expires (see"Register the Product" on page 114).

The first time you open ValVue, if the product is on trial, a dialog appears.

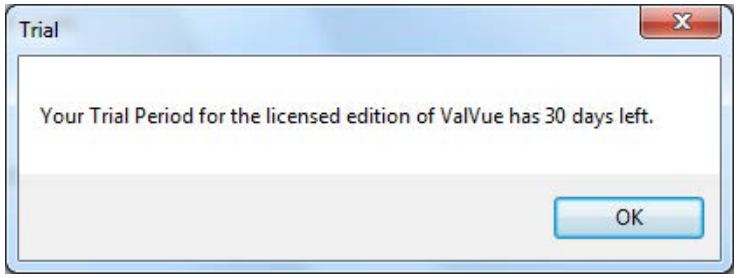

Figure 89 Trial Registration Dialog: Newly Installed

After 30 days without purchase or registration, the first time you open the DTM, Figure 90 appears.

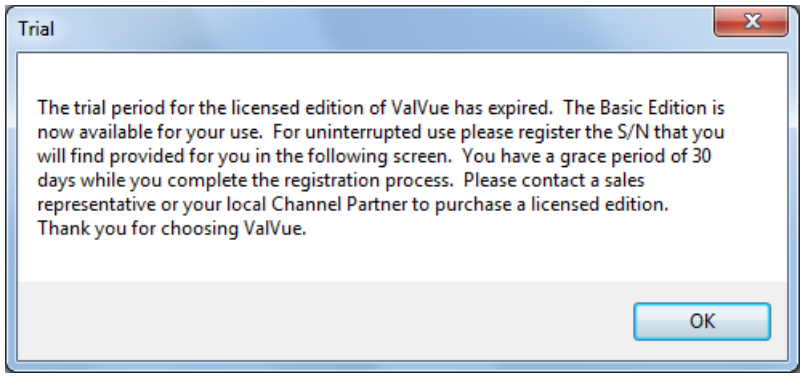

Figure 90 Advanced Features Expired

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After the first time you open an expired license, and you select **Additional Functions > Registration**, Figure 91 appears. When you click **OK** the registration process starts (see “Register the Product” on page 114).

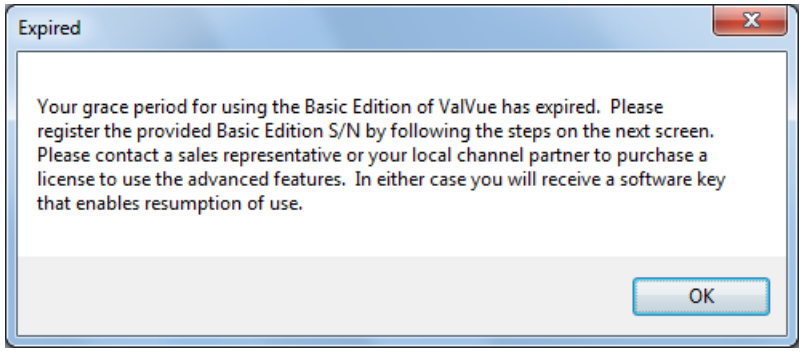

Figure 91 Ongoing Expiration

If you click anywhere in the DTM after the trial period expires, Figure 92 appears. When you click **OK**, the registration process starts (see“Register the Product” on page 114).

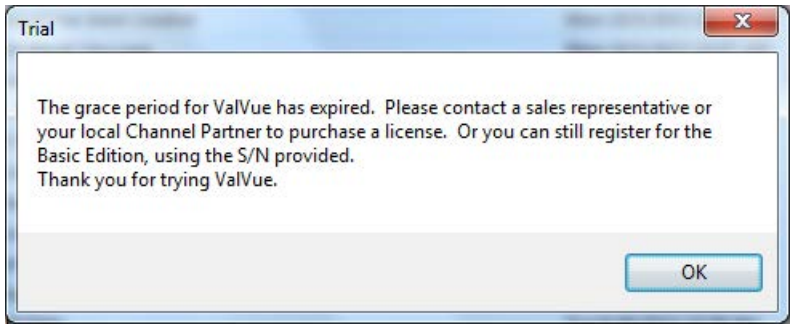

Figure 92 Trial Expired

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Sequencer Settings

Sequencer Settings is comprised of:

- √ "Task Settings"
- √ "Sequencer Management" on page 124
- √ "Execute Sequencer" on page 132
- √ "Sequencer Execution Management" on page 136

CAUTION

*The sequencer should **NOT** be used when a procedure (e.g. Find Stops, Auto Tune, Step Test, Ramp Test, Signature) is running in the DTM.*

Task Settings

Use the *Task Settings* dialog to assign values to they system task performed during a user-configured sequence. See "Sequencer Management" on page 124 to configure a sequence of events and "Execute Sequencer" on page 132 to execute the sequence.

Tasks are predefined and are categorized into three categories: *Configuration*, *Calibration*, and *Diagnostics* tasks. The tasks by category are:

Configuration	Calibration	Diagnostics
√ *Set Tag*	√ *Autotune*	√ *Standard Signature*
√ *Set Address*	√ *Find Stops*	√ *Extended Signature (AP and SVI3 only)*
√ *Air Action*		√ *Run Ramp Test*
√ *Set Valve Type (FF only)*		√ *Run Step Test*
		√ *Signature Test (SVI FF only)*
√ *Change Mode*		√ *Clear Faults (AP, SVi1000 and SVI3 only)*

Each task will have a unique task ID so that both frame application and DTM understand the task and its input/output parameters. ValVue sends each task to Device/DTM through its Masoneilan special FDT/DTM interface. The dialog display can be limited to show items only by *Device Type*.

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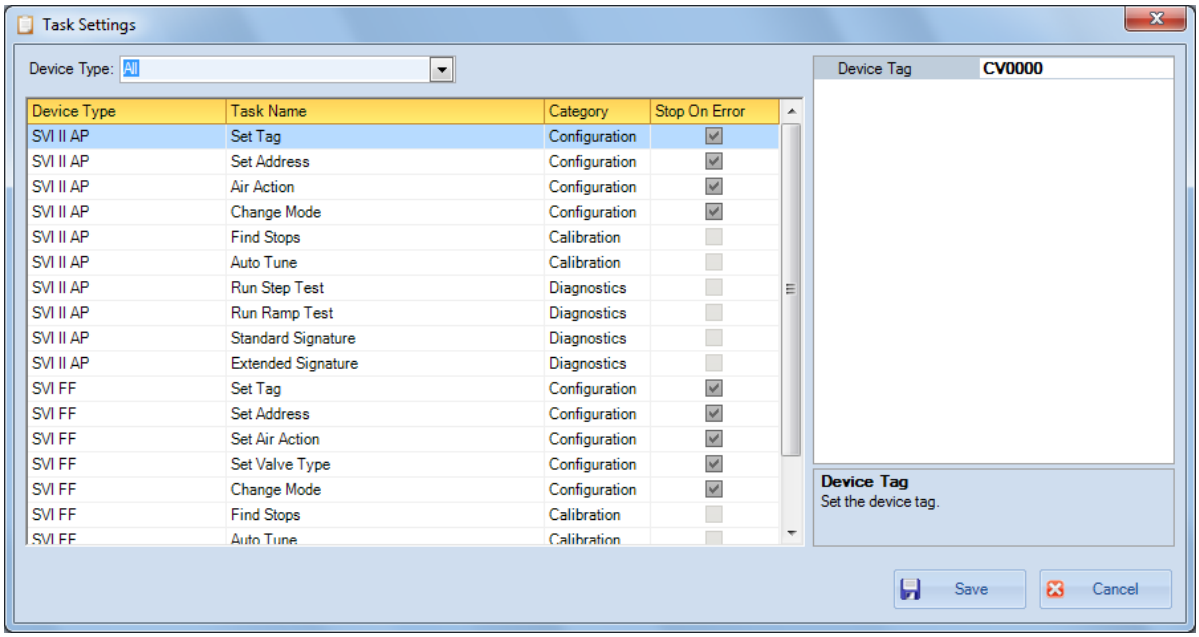

Input Parameters of Tasks

Input parameters are required in order to execute the task in the device. The table below lists all predefined input parameters.

Task	Input Parameters	Description
Set Tag	Device tag (text)	Set the device tag.
Set Address	Device address (integer, 16-255)	Set the device address.
Set Air Action	ATC/ATO	Configure the actuator to operate as Air to Close, or Air to Open.
Set Valve Type	Valve Type (*Undefined/Linear/Rotary/Other*)	Choose the valve type.
Find Stops	√ *Travel Range* √ *Travel Unit* √ *Open Stop Adjustment*	√ A numeric value, describing the range of travel. Is used to calculate the Working Setpoint value (Not for SVi1000, SVI II AP and SVI3). √ Choose unit type (Not for SVi1000, SVI II AP and SVI3). √ Open stop adjustment.
Autotune	√ *Aggressiveness* √ *Supply Pressure*	√ Choose whether to tune for fast response or no overshoot. √ Air Supply Pressure in psi.
Changing Mode	Target Mode (*Out of Service/Auto/Manual)*	Choose the target mode.

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Task	Input Parameters	Description
Extended Signature	√ *Start Position* √ *Stop Position* √ *Speed Level*	√ Set the start position in %, required for extended signature test. √ Set the end position in %, required for extended signature test. √ Set the speed from *1* to *10*.
Standard Signature	√ *Speed Level* √ *Save to Device*	√ Set the speed from *1* to *10*. √ Select *To Baseline 1 or 2, To Saved* or *None* (SVI3 only).
Clear Faults	√ *Current* √ *All*	√ Clears only current faults √ Clears current and historical faults
Run Step Test	Step Test Type: Set the step test type. Different types of step test require different parameters.	*Single Step*: √ *Direction (One Way/Both Ways)*: Set direction, required for *Single Step* and Multiple Steps. √ *Initial Time*: Set initial time in seconds, required for *Single Step*, *Multiple Steps* and *Pre-Defined Steps* (Not for SVi1000, SVI II AP and SVI3). √ *Sample Rate*: Enter a number of samples per second. Required for all *Step* tests. Range: *2* to *20*. √ *Start Position*: Set the start position in %, required for *Single Step* and *Multiple Steps*. √ *End Position*: Set the end position in %, required for *Single Step* and *Multiple Steps*. √ *Step Time*: Set step time in seconds, required for *Single Step*, *Multiple Steps* and *Pre-Defined Steps*. *Multiple Steps*: √ *Direction (One Way/Both Ways)*: Set direction, required for *Single Step* and *Multiple Steps*. √ *Initial Time*: Set initial time in seconds, required for *Single Step*, *Multiple Steps* and *Pre-Defined Steps* (Not for SVi1000, SVI II AP and SVI3). √ *Sample Rate*: Enter a number of samples per second. Required for all *Step* tests. Range: *2* to *20*. √ *Start Position*: Set the start position in %, required for *Single Step* and *Multiple Steps*. √ *End Position*: Set the end position in %, required for *Single Step* and *Multiple Steps*. √ *Step Time*: Set step time in seconds, required for *Single Step*, *Multiple Steps* and *Pre-Defined Steps*. √ *Step Size*: Set step size in %, required for *Multiple Steps*.

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Task	Input Parameters	Description
		Pre-Defined Steps: √ *Around Type* (*Around Middle*/*Around Current Setpoint*): Set around type, required for *Pre-Defined Steps*. √ *Direction* (*Up* and *Down*/*Up*/*Down*): Choose direction, required for Pre-Defined Steps. √ *Initial Time*: Set initial time in seconds, required for *Single Step*, *Multiple Steps* and *Pre-Defined Steps* (Not for SVi1000, SVI II AP and SVI3). √ *Sample Rate*: Enter a number of samples per second. Required for all *Step* tests. Range: *2* to *20*. √ *Step Time*: Set step time in seconds, required for *Single Step*, *Multiple Steps* and *Pre-Defined Steps*. √ *Max Step*: Set max step in %, required for *Pre-Defined Steps*. √ *Step Increase*: Set step increase in %, required for *Pre-Defined Steps*.
Run Ramp Test	Ramp Test Type (Single Ramp)	√ *Direction* (*One Way*/*Both Ways*): Set direction, required for *Single Ramp* (Not for SVi1000, SVI II AP and SVI3). √ *Initial Time*: Set initial time in seconds, required for *Single Ramp* (Not for SVi1000, SVI II AP and SVI3). √ *Start Position*: Set the start position in %, required for *Single Ramp*. √ *End Position*: Set the end position in %, required for *Single Ramp*. √ *Ramp Time*: Set ramp time in seconds, required *for Single Ramp.* √ *Sample Rate*: Enter a sample rate (per 10 secs) between *1* and *10* (Not for SVI FF). √ *Speed Level*: Enter a speed level from *1* to *10* (Not for SVI FF). √ *Ramp* Rate: Set ramp rate in %/s, required for *Single Ramp* (Not for SVi1000, SVI II AP and SVI3).

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Configure Task Settings

1. Use the *Device Type* pulldown to display only by a particular device type.
2. Click a **Task Name** and the name appears in the *Parameters* list and the configurable value (s) appear to the right. There can be fields or pulldowns lists.
3. Enter values.

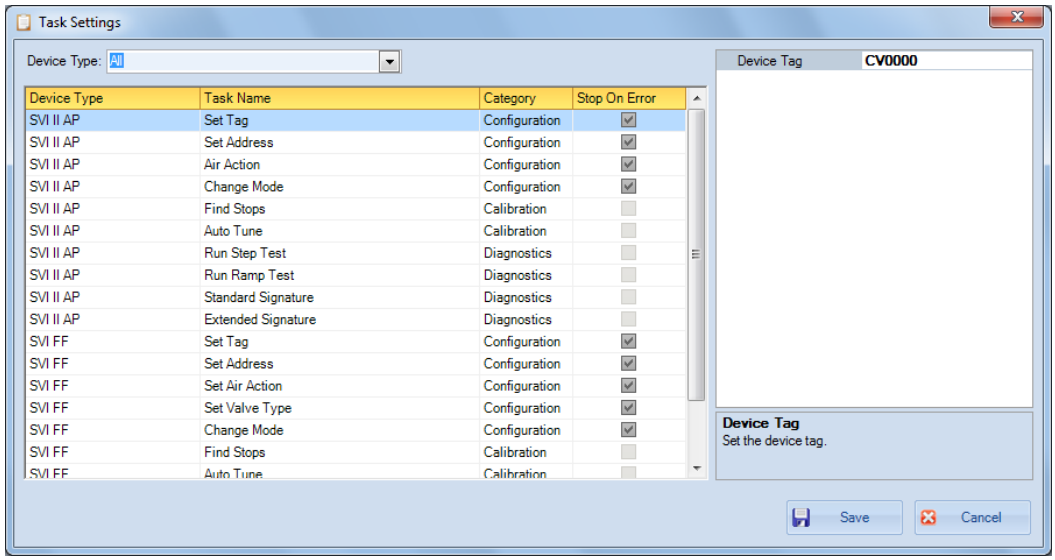

Figure 93 Configurable Parameters

4. Click and the dialog closes.

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Sequencer Management

Use the *Sequencer Management* dialog for adding, editing and deleting sequences of tasks configured in *Task Settings*. This is also accessed via the *Executing Sequencer* dialog.

A sequencer is a set of tasks that ValVue requests device/DTM to perform silently. Depending on the physical network, a sequencer tasks can be performed by multiple devices concurrently.

CAUTION

*The sequencer should **NOT** be used when a procedure (e.g. Find Stops, Auto Tune, Step Test, Ramp Test, Signature) is running in the DTM.*

NOTE

Once changes are made to an existing sequencer test the Save button activates. If you configure a new sequencer, you must save it before exiting the dialog.

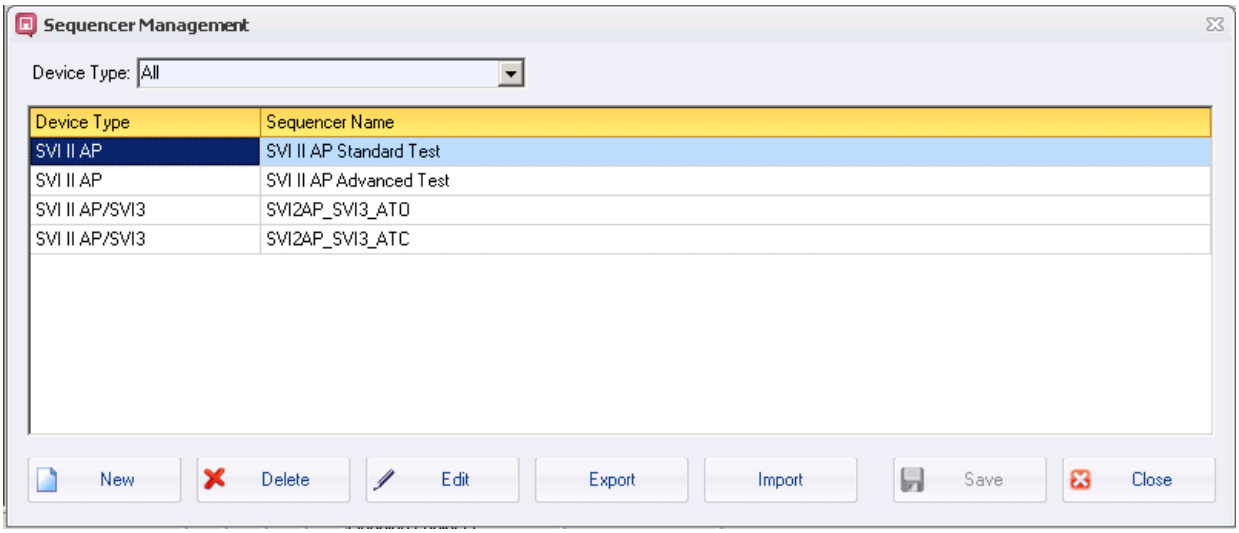

Figure 94 Sequencer Management

NOTE

By default, the software has two sets of sequencers: SVI2AP_SVI3_ATO and SVI2AP_SVI3_ATC for SVI3 and SVI II AP devices. The sequencers contain items commonly used by most users. Take care as these can be deleted. Their default directory is: C:\ProgramData\Dresser\ValVue3\Test.

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Add a New Sequence

1. Select **Tools > Sequencer Settings > Sequencer Management**, click

and a dialog appears.

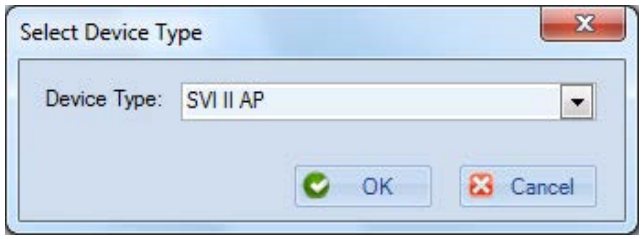

Figure 95 Select Device Type

2. Use the *Device Type* pulldown to limit the list in the dialog that follows, click **OK** and the *Sequencer Setup Wizard - New Sequencer* dialog appears.

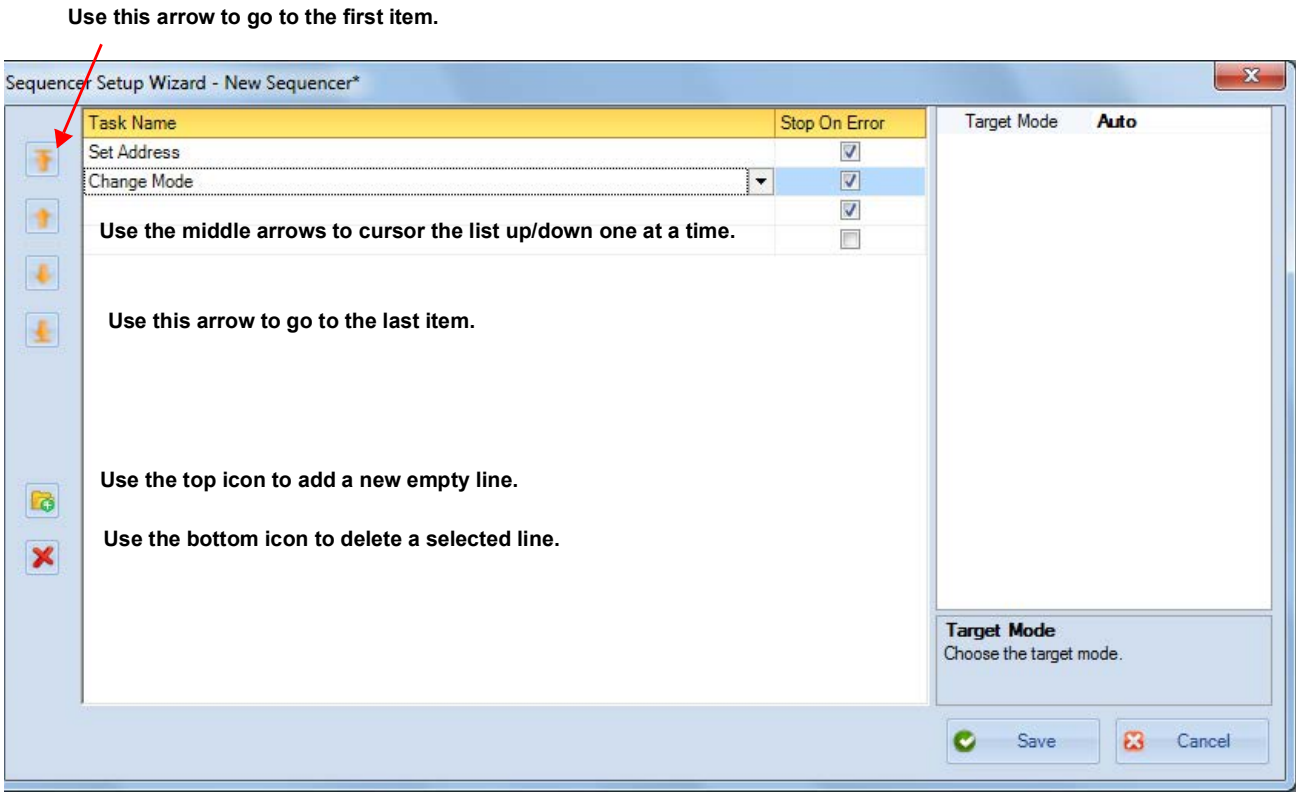

Figure 96 Sequencer Setup Wizard - New Sequencer

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3. Create a new item by:
   a. Clicking underneath *Task Name* or click and a row is inserted, which can later be rearranged.
   b. Configuring the associated *Stop On Error* checkbox.
   c. Editing the value for the action in the field that appears in the pane to the right.
   d. Repeat steps a through c as required.
4. Click and a dialog appears.

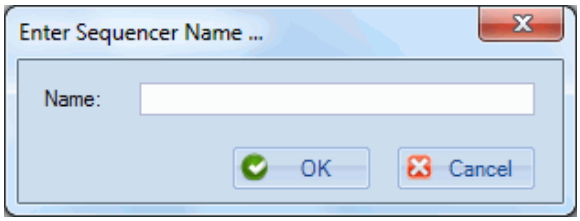

Figure 97 Enter the Sequencer Name....

5. Enter a unique name and click **OK** and the *Sequencer Management* dialog re-appears with the sequence added. Once a name is added, you can edit it by double-clicking.

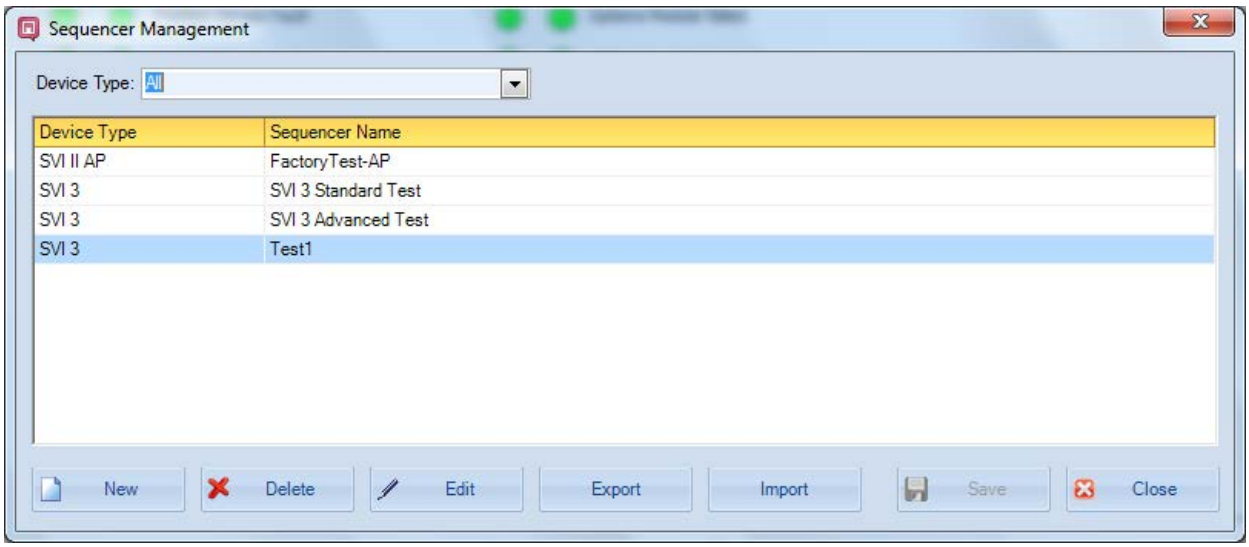

Figure 98 Sequencer Management with Sequence Added

When *Sequencer Management* dialog is opened again the newly added sequence appears in the *Task Name* list in the next position.

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Edit a Sequence

1. Select **Tools > Sequencer Settings > Sequencer Management** and the dialog appears.
2. Select a sequence and click Edit and the *Sequencer Setup Wizard - Edit Sequencer* dialog appears.

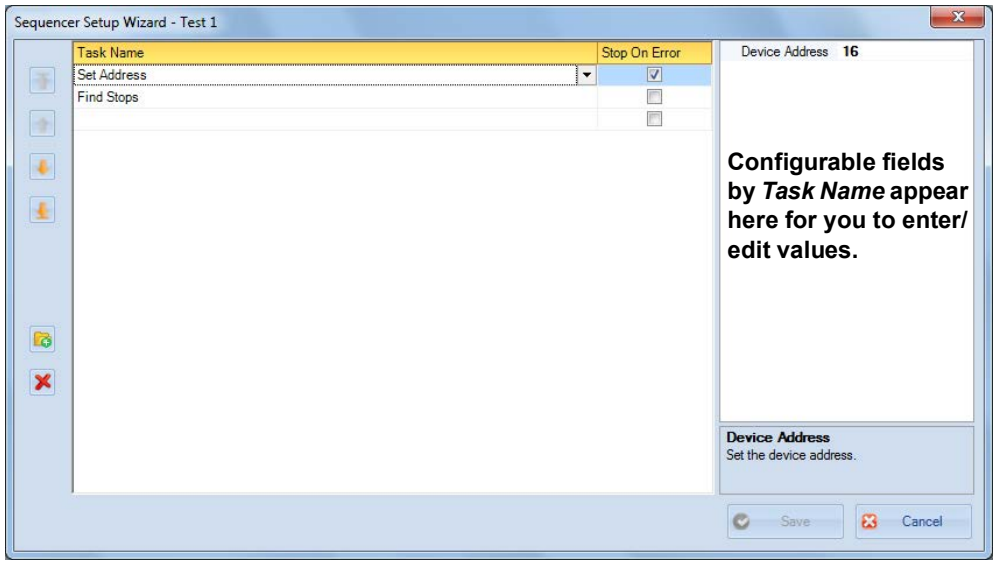

Figure 99 Sequencer Setup Wizard - Edit Sequencer

3. Either:

   √ Create a new item by:

   a. Clicking underneath *Task Name* or click and a row is inserted, which can later be rearranged.

   b. Configuring the associated *Stop On Error* checkbox.

   c. Editing the value for the action in the field that appears in the pane to the right.

   d. Repeat steps a through c as required.

   √ Edit an existing item by:

   a. Selecting a task and editing the associated *Stop On Error* checkbox.

   b. Editing the value for the action in the field that appears in the pane to the right.

   c. Repeat steps a and b as required.

4. Click Save and the *Sequencer Management* dialog appears.

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Export a Sequence

Use this function to export a sequencer configuration in a file form (*.seq*). This can then be imported and used for another positioner of the same type.

1. Select **Tools** > **Sequencer Settings** > **Sequencer Management** and Figure 100 appears.

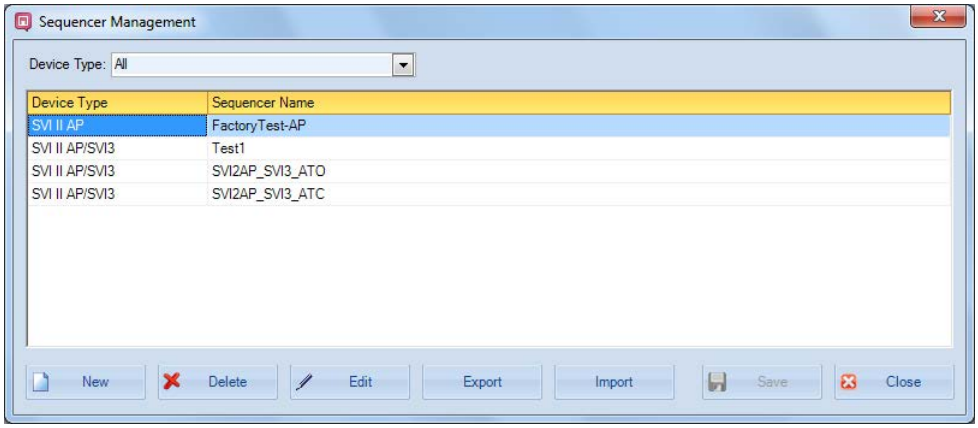
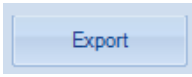


Figure 100 Sequencer Management

2. Click  and Figure 101 appears.

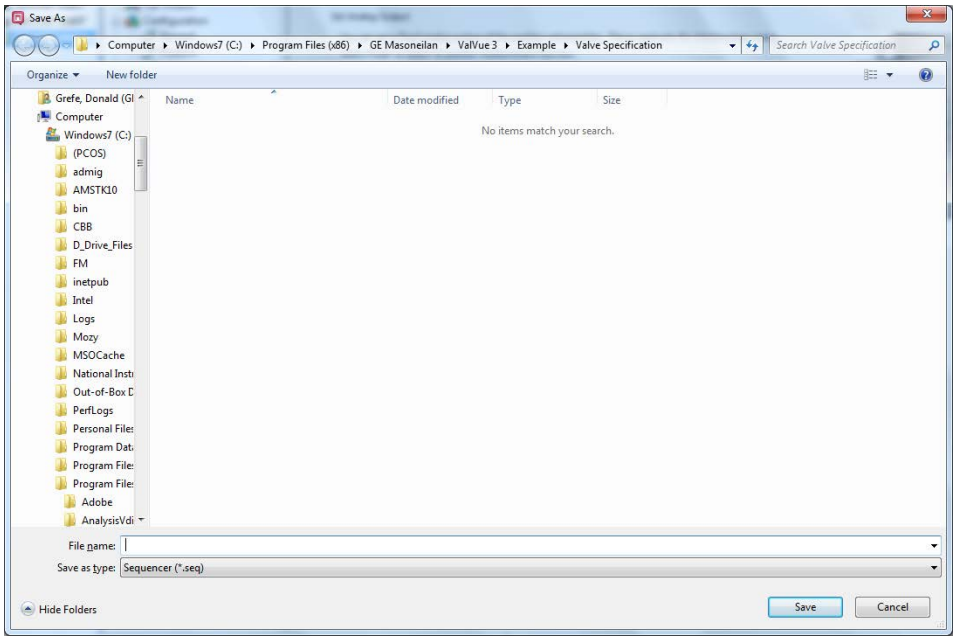


Figure 101 Save a .seq File

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3. Navigate to the target directory, enter a filename, click **Save** and Figure 102 appears.

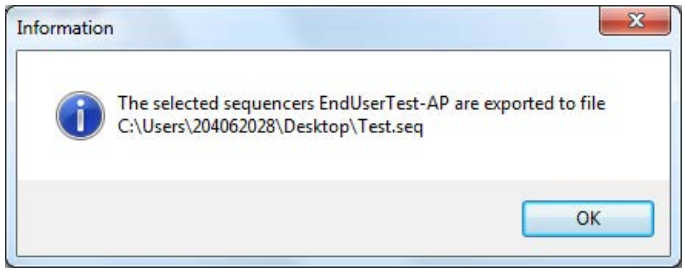

Figure 102 Sequencer Export File Confirmation

4. Click **OK**. and the *Sequencer Management* dialog reappears. Click **Close**.

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Import a Sequence

Use this function to import a sequencer configuration in a file form (*.seq*).

1. Select **Tools** > **Sequencer Settings** > **Sequencer Management** and Figure 100 appears.

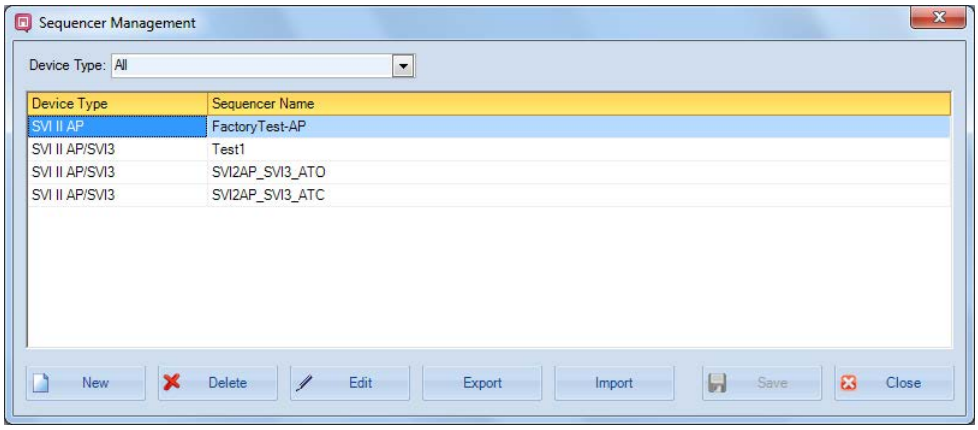
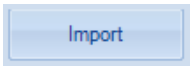


Figure 103 Sequencer Management

2. Click  and Figure 104 appears.

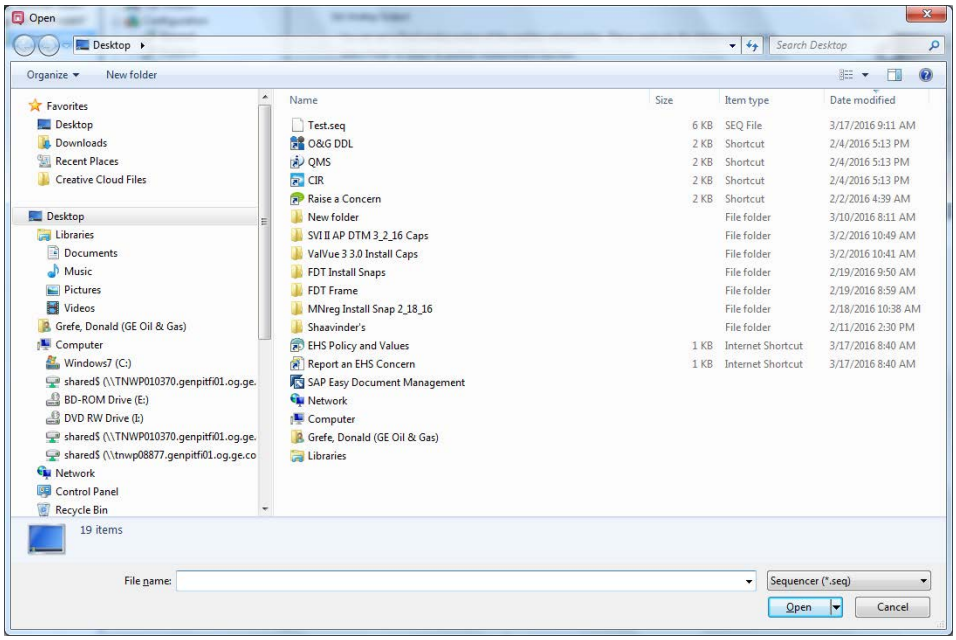


Figure 104 Open a .seq File

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3. Navigate to the target directory, select a file, click **Open** and Figure 105 appears.

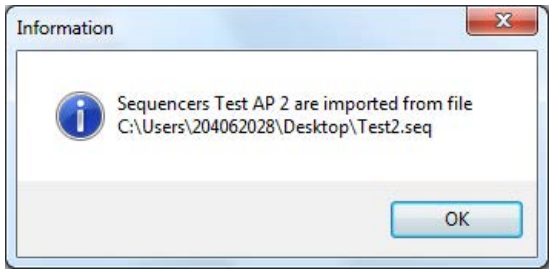
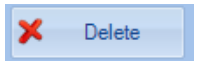


Figure 105 Sequencer Import File Confirmation

4. Click **OK**. The *Sequencer Management* dialog reappears.
5. Click **Close**.

Delete a Sequence

1. Select **Tools > Sequencer Settings > Sequencer Management** and the dialog appears.
2. Select a sequence and click 

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Execute Sequencer

Execution of a sequencer can apply to one or multiple devices. A device can be added by selecting a device in the device tree and by adding a group of devices. You can choose whether a sequencer is executed concurrently or sequentially. The execution can also be schedule based.

If a sequencer uses different parameters for different positioner, click **Detail** and ValVue lists all tasks and their parameters for all devices. You can then modify parameters before a sequencer is executed.

CAUTION

*The sequencer should **NOT** be used when a procedure (e.g. Find Stops, Auto Tune, Step Test, Ramp Test, Signature) is running in the DTM.*

On this dialog you can:

- √ Choose a sequence and execute it immediately.
- √ Choose a sequence and schedule it to run.
- √ Choose sequences on different devices and run them concurrently.
- √ Configure a new sequence, save it and run it.
- √ View details.
- √ Export results.
- √ Make changes to a sequencer and then save it.

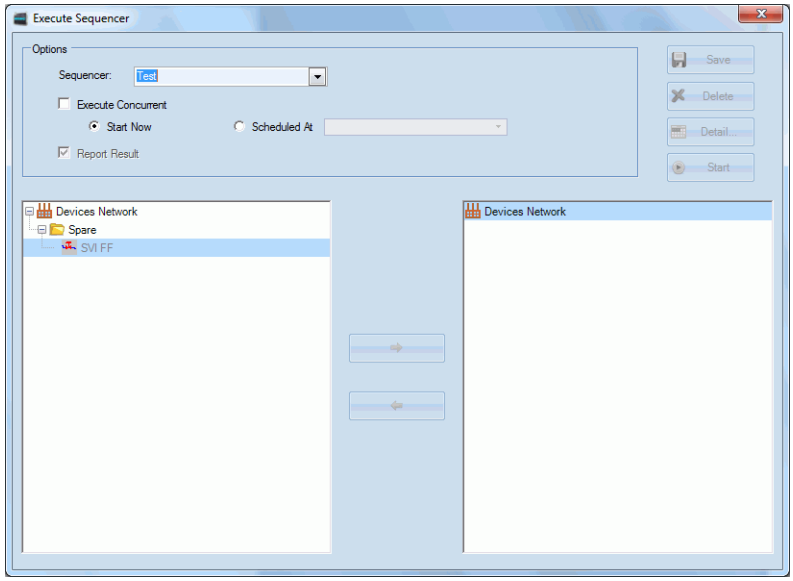

Figure 106 Execute Sequencer

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Run a Sequencer

CAUTION

*The sequencer should **NOT** be used when a procedure (e.g. Find Stops, Auto Tune, Step Test, Ramp Test, Signature) is running in the DTM.*

Use this dialog to run the sequencer.

The:

- √ *Status* column icons indicate whether a test is proceeding (green) or failed (red).
- √ *Progress* column lists messages related to the individual task.
- √ *Result* column displays the individual task result.

1. Use the *Sequencer* pulldown to either select:
   - √ An existing sequence. Proceed to step 2.
   - √ Click **Create New Sequencer**. Refer to "Add a New Sequence" on page 125 for instructions.
2. Click Start and the *Preview Sequencer* dialog appears.
3. Click the checkbox to the left of each device for execution.

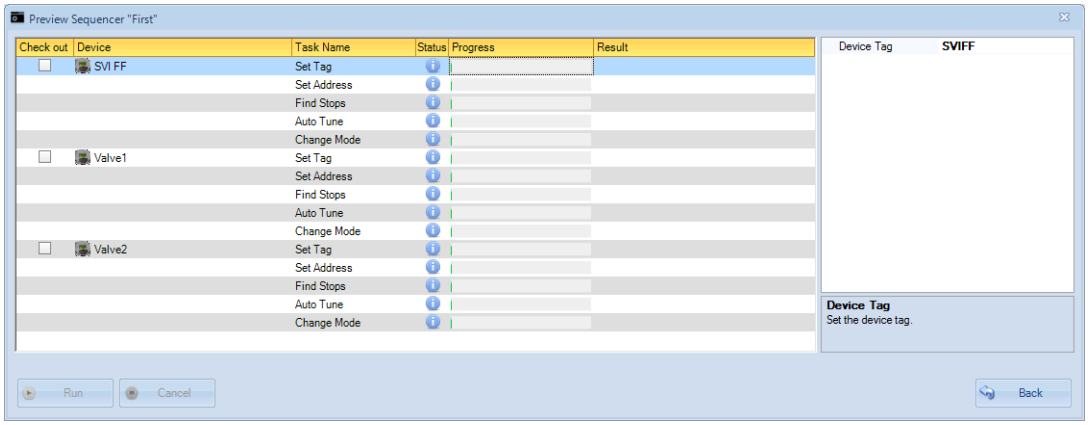

Figure 107 Preview Sequencer

4. Click **Execute Concurrent** to execute sequences on different devices concurrently.

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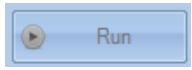
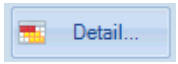
5. Click either:
   - √ **Start Now**: To commence the test as soon as

is clicked.
   - √ **Scheduled At**: Use the pulldown to set the date on the calendar and enter the time in the fields to the date's right.
6. Use the right and left arrows to add/subtract all or individual items or parent and child items together to the pane on the right for execution.
7. Click 

and the items are executed.

Detail

Click 

and the *Preview Sequencer* dialog appears.

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Sequencer Execution Report

This *Sequencer Execution Report* includes:

- √ The report title includes *Sequence Name*, *Task Count* and the *User*.
- √ *Device Info* lists the device information and the task execution summary.
- √ *Task Execution Summary* lists the tasks by *Check out* item, including timestamps and completion status.
- √ *Task Execution Details* lists the results with configured tasks and input parameters and errors/results.
- √ *Configuration*: Details the device configuration.

Positioner Info:

Positioner Tag:	NEW24
Device ID:	16144612
Device Type ID:	202 (0xCA)
Address:	0
Manufacturer ID:	101 (0x65)
Start Time:	5/23/2019 4:28:04 PM
End Time:	5/23/2019 4:57:30 PM
Total Task Count:	10
Succeeded Task Count:	10

Configuration:

Air Action	Air To Close	**Actuator Type**	Single
Diagnostic Level		**Position Unit**	%
Button Lock	Allow Local Buttons	**Language**	English
Bumpless Enabled	Off	**Bumpless Value**	0
Characterization Type	Linear	**Custom Points**	In 100.0 Out 100.0
Lower Limit Enabled	Off	**Lower Limit**	0.000
Upper Limit Enabled	Off	**Upper Limit**	50.000
Position Rate Limit Up	OFF	**Position Rate Limit Down**	OFF
Position Rate Limit	0.00	**Position Error Time**	10.00
Tight Shutoff Enabled	On	**Tight Shutoff**	0.018
Position Error Enabled	Off	**Position Error Band**	5.00

Figure 108 Sequencer Execution Report

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Sequencer Execution Management

Use this dialog to view a listing of all sequencer executions (*All* tab), sequencer executions that have been run (*History* tab) and those that have just been scheduled (*Scheduled* tab), but not executed. Additionally, you can use the filtering functionality to sort and present only data of interest.

There are two ways in which a sequencer execution is saved in the database:

- √ If a sequencer is executed, the result of the sequencer is saved under *History*.
- √ If a sequencer is scheduled to run, the input parameters for the sequencer are saved as *Scheduled* sequencer execution.

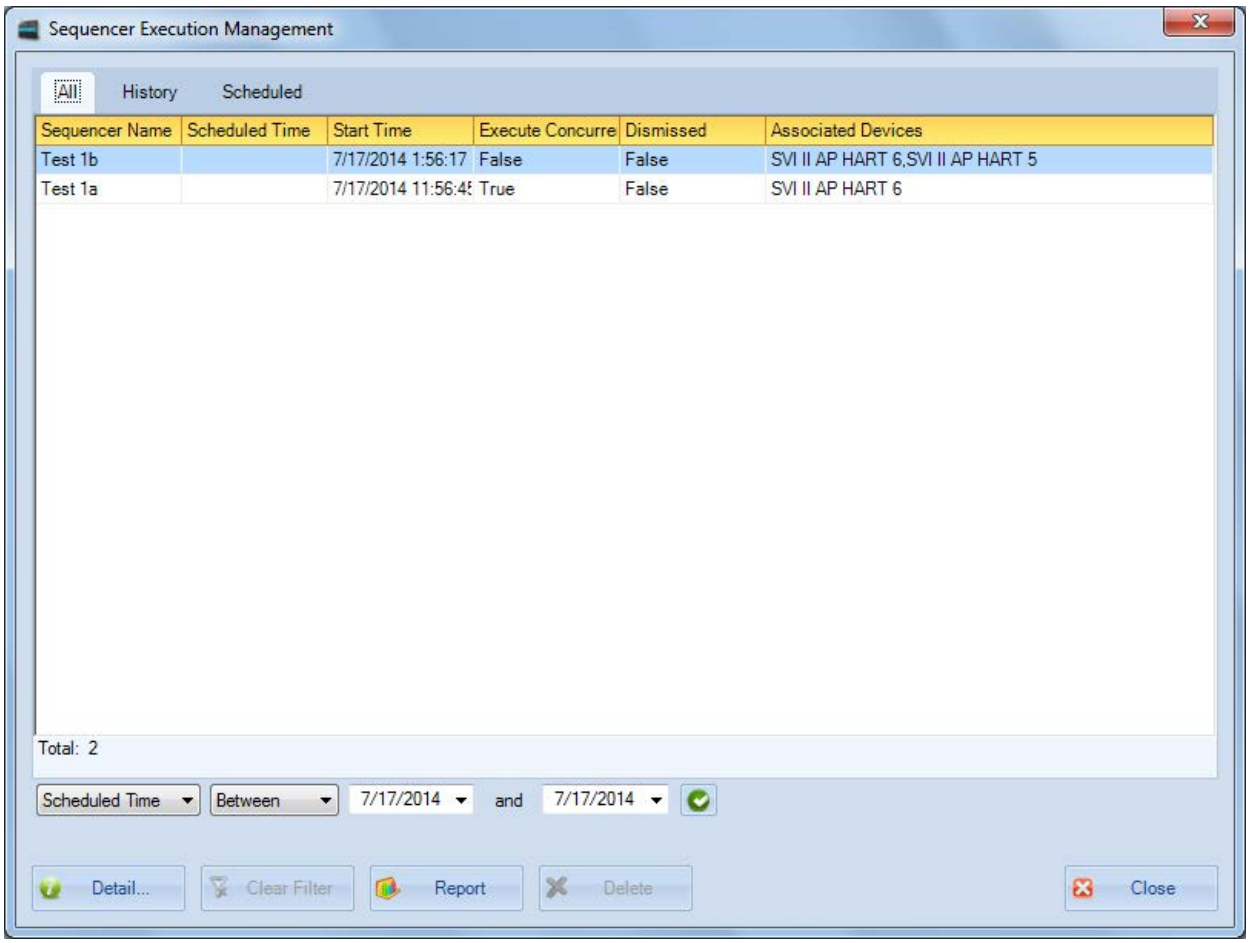

Figure 109 Sequencer Execution Management

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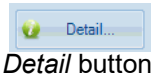
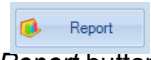
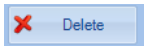
Fields

Sequencer Name	Lists the name of the sequencer as created using “Sequencer Management” on page 124.
Scheduled Time	Lists the time that the sequence originally was scheduled to run. This field is empty if the sequencer was run without being scheduled.
Start Time	Lists the time that the sequence originally was run, scheduled or otherwise.
Execute Concurrent	Lists whether the sequencer was run concurrently with another sequencer.
Dismissed	Lists whether the sequencer was complete or dismissed due to failure or user intervention.
Associated Devices	Lists all the devices used during the sequencer run.
Filtering Operations	Use the filtering features on a tab-by-tab basis to present only the data of specific interest. See “Filter Events” on page 138.
 *Detail* button	Opens the *Execute Sequencer* details dialog for each sequencer as selected.
 *Report* button	Opens a report for the selected *Sequencer Name*. This report is in pdf and can be printed or saved as a Word or Excel file. If a report for selected sequencer does not exist, ValVue3 loads test results from the database and generates a new report.
 *Delete* button	Deletes the selected *Sequencer Name*.

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Filter Events

You can filter event types or date range. Once filtered, the filter conditions appear in red text at the bottom of the filtered list.

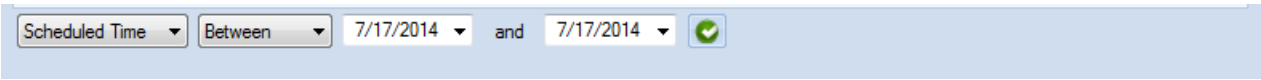


Figure 110 Filtered Conditions Parameters for Sequencer Management

1. Use the event type pulldown to select:
   - √ **Scheduled Time**
   - √ **Start Time**
   - √ **Sequencer Name**
2. Configure the filter conditions. For:
   - √ *Between*: Use the two *Between* dates to set the date range, if required.
   - √ *Sequencer Name*:
   a. Use the pulldown to select:

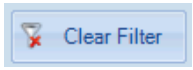
      Equals*:* Indicates search for an exact string

      Contains*:* Indicates search for a string with the enter data anywhere

      isNull*:* Indicates search for an empty entry

   b. Enter text.
3. Click .

NOTE

Use 

to remove the filter conditions from the dialog.

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Valve Data Management

This section discusses the capabilities to associate a positioner with a valve and in doing so associate, view and analyze test data for that valve.

NOTE

When using the right-click menu in the topology pane, you access functionality that depends on the whether you access the field network level, communications DTM level or device level.

Valve Management

Use this window to:

- √ Add a valve by importing its data from View a ValSpeQ generated PDF or be entering data manually (“Add a Valve”). For a full discussion of all valve fields, refer to the ValSpeQ documentation.
- √ Edit data for an existing valve in the database (“Edit a Valve”).
- √ Delete a valve from the database (“Delete a Valve”).
- √ Filter valves displayed using serial number, valve tag and model numbers (“Filter Displayed Valves”).

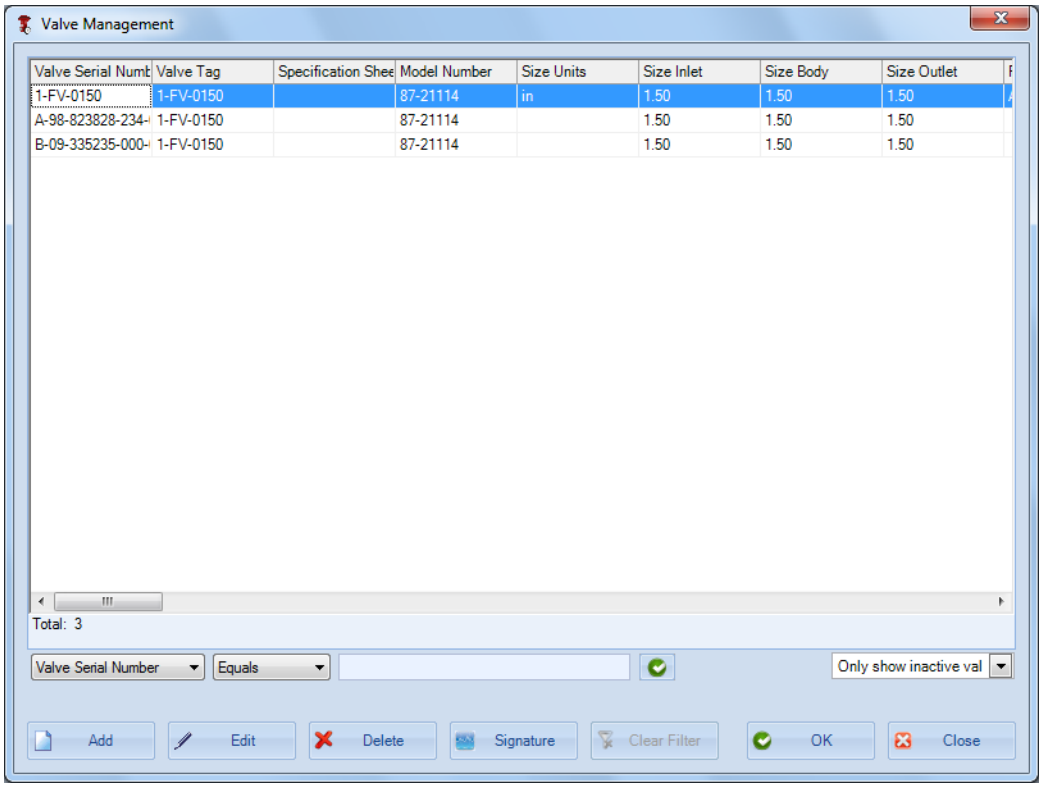

Figure 111 Valve Management

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Add a Valve

Use this window to add a valve to the database. It is then available to add to the topology and be assigned to a positioner. This can then be used to generate, save and view test signatures.

In using the *Valve Management* window you can effectively create a template for a valve. This is useful if you facility has many valves of the same type.

Information can be extracted from ValSpeQ pdfs and also, for later versions of ValSpeQ using a QR or barcode reader, or manually. ValVue3 now supports using QR code scanner to import valve spec data only.

Only ValSpeQ generated pdfs are usable. Pdfs created from scanned material are not readable.

To add a valve:

1. Select **Tools> Valve Data Management > Valve Management** and the *Valve Management* window appears.

2. Click and Figure 112 window appears.

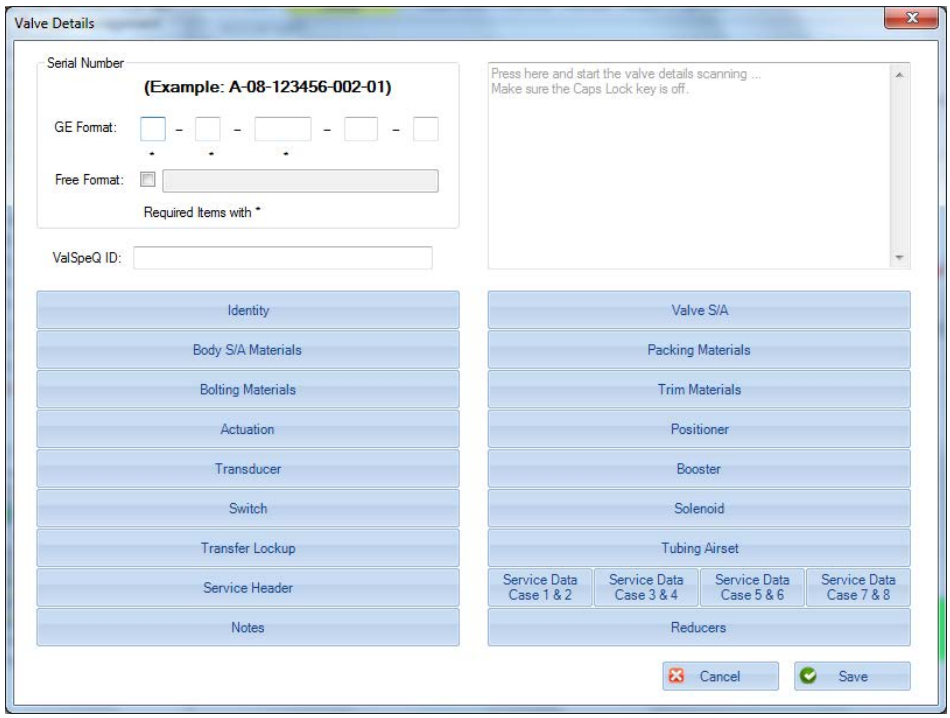

Figure 112 Valve Details

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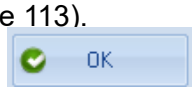
There are several means for adding information into the *Valve Details* window, which include:

√ Inputting information directly or editing information that was imported. To input data directly: click on one of the labels, for example, *Identity* and a sub-dialog for that data appears (Figure 113).
Enter the data and click 

.

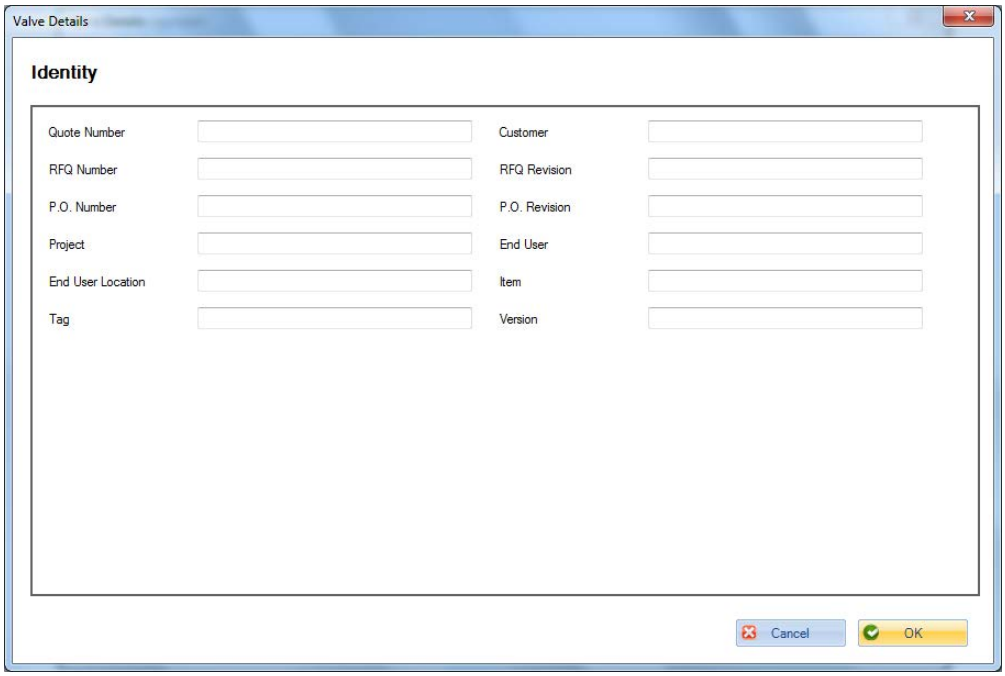


Figure 113 Identity Sub-Dialog

√ Alternately, you can scan QR codes for each of the areas represented on the *Valve Details* dialog. To scan, place a cursor in the field in the upper right side of the dialog. As data is scanned for each QR code, the data scrolls through this area.

3. Figure 114 reappears with all fields populated except *Serial Number*. On this dialog areas with data populated are green-shaded.

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Figure 114 Valve Details Populated

4. Enter a *Serial Number* and ensure that all the required fields are completed. Not all fields are required.
   There are two *Serial Number* fields:
   - √ *Baker Hughes Format*: You can enter the Baker Hughes specific serial number.
   - √ *Free Format*: Is populated with free format data manually or by QR code scan - even if in *Baker Hughes Format*.
5. Click

.

Edit a Valve

Use this window to edit a valve. It is then available to add to the topology and be assigned to a positioner.

To edit a valve:

1. Select **Tools> Valve Data Management > Valve Management** and the *Valve Management* window appears. See “Filter Displayed Valves” for a description on filtering operations.
2. Select a valve.
3. Click

and Figure 115 appears.

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Figure 115 Valve Details

4. Edit fields as necessary and click Save. Not all fields are required.
5. Click OK and the *Valve Management* window reappears.

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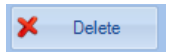
Delete a Valve

Once you delete a valve, all valve data (test signatures, etc.) are deleted as well and is un-retrievable. Save this data before valve deletion. To delete a valve:

1. Select **Tools> Valve Data Management > Valve Management** and the *Valve Management* window appears. See "Filter Displayed Valves" for a description on filtering operations.
2. Select a valve and click 

.

Signatures

1. Select **Tools> Valve Data Management > Valve Management** and the *Valve Management* window appears.
2. Select a valve, click

and Figure 116 appears with all the signatures in the target directory.
The signature history displayed is for the selected valve. This valve is identified by the valve serial number.

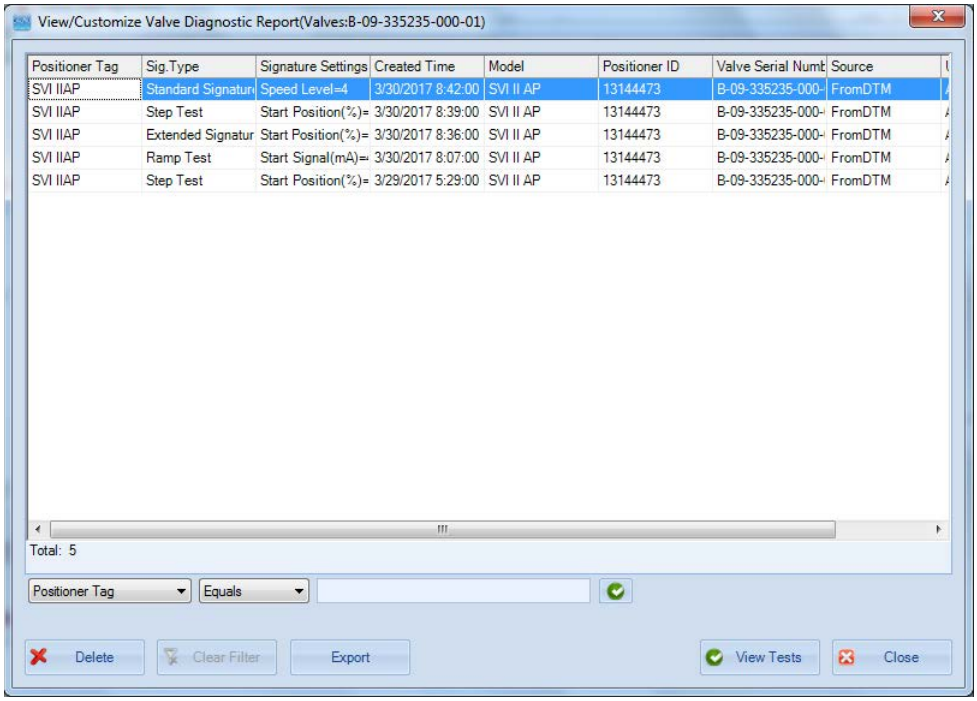


Figure 116 View Signature History

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3. Select as many as required, click

and a *Save As* dialog appears.

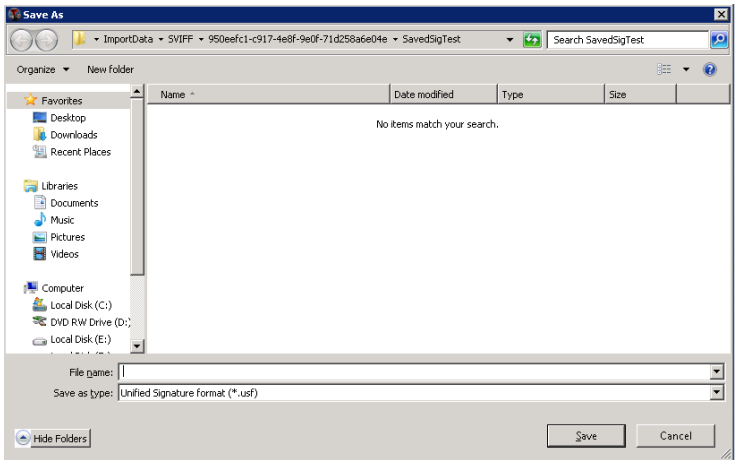

Figure 117 Export Signatures

4. Enter a *Filename*, navigate to the directory where signatures are stored, and click **Save**.

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Filter Displayed Valves

Use this feature to limit the number of valves appearing in the *Valve Management* window. This useful in installations where there are a large volume of valve installs.

NOTE

The pulldown allows you to filter the signatures shown by: Show all valves, Only show active valves, or Only show inactive valves.

1. Select **Tools> Valve Data Management > Valve Management** and the *Valve Management* window appears.

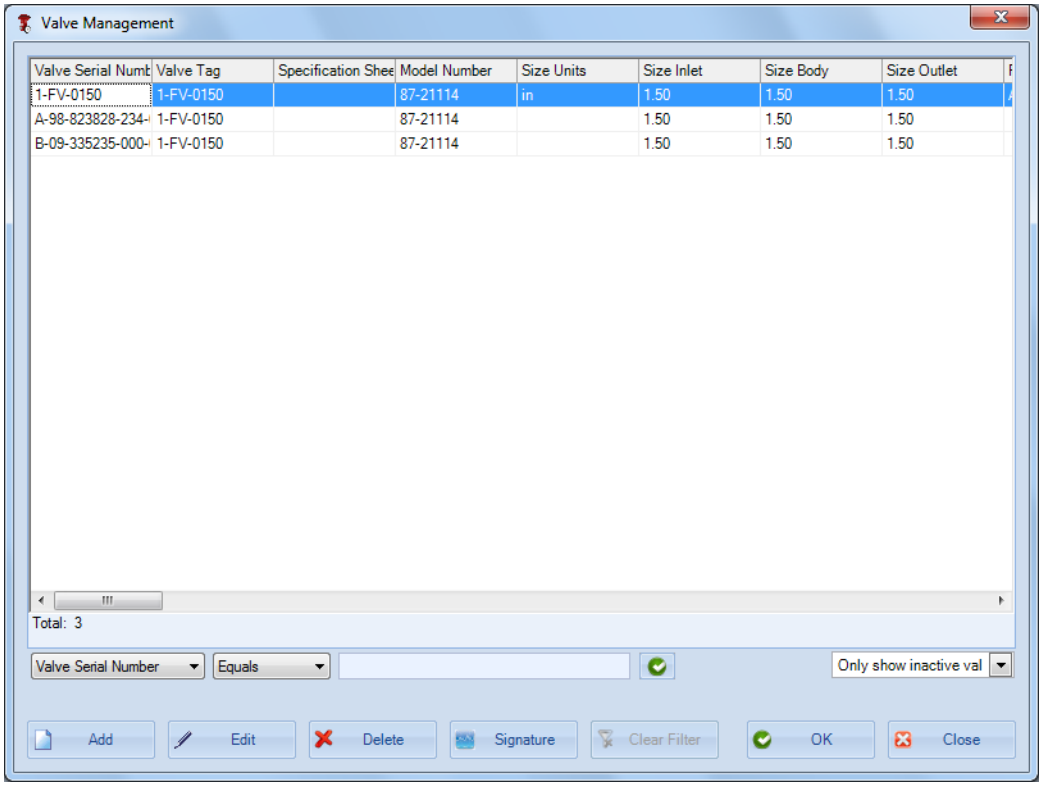

Figure 118 Valve Management

2. Use the leftmost pulldown to select either:
   - √ **Valve Serial Number**
   - √ **Valve Tag**
   - √ **Model Number**

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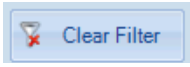
3. Use the operator pulldown to select either:

   Equals*:* Indicates search for an exact string

   Contains*:* Indicates search for a string with the enter data anywhere

   isNull*:* Indicates search for an empty entry

4. Enter a string in the associated text field.
5. Click the green check and the filter conditions are applied to the valve list.

   Click 

and the filter conditions are applied.

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Signature Management

Use this feature to view a list of signatures, filter the list, import and export signatures and delete signatures. This dialog offers sorting via all column heads. You can:

NOTE

A .usf file combines multiple test data, for multiple positioners/ valves into one file,

- √ Export and import signatures.
- √ Delete signatures. Deletes the signatures from the database.
- √ Filter signatures displayed using *Positioner Tag*, *Sig. Type*, *Valve Serial Number, Created Time*, *Model, Positioner ID*, *User Name,* and *Source (*"Filter Signatures" on page 161*)*.
- √ View signature data in a viewer where the results can be compared with other results ("View Diagnostic and Report" on page 149).

NOTE

ValVue version 3.6 introduces enhanced friction calculations for the Standard Signature test. These enhancements amount to friction calculations where comparing tests done with earlier versions may show differences in precision.

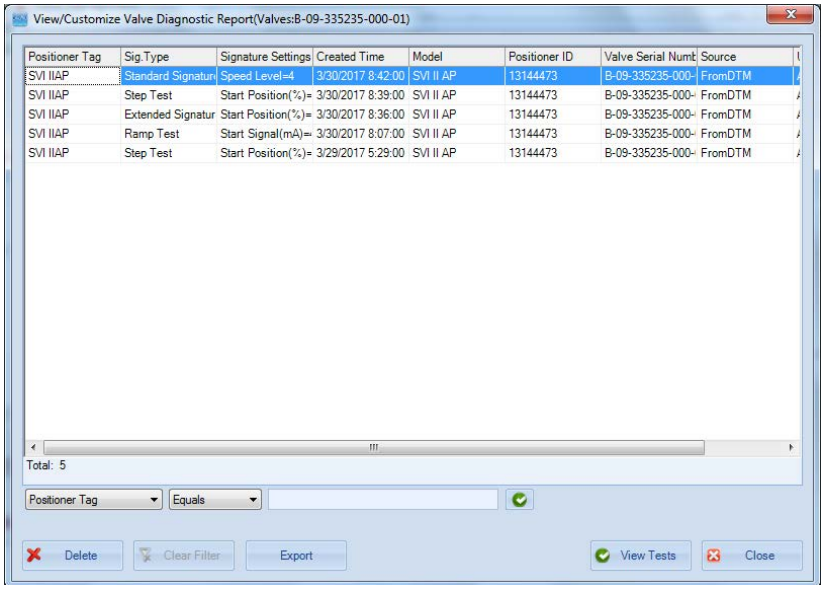

Figure 119 View Signature History

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View Diagnostic and Report

Use this feature to view a test result, view multiple test results and overlay test results for comparison. One pane appears for each test type and if multiple tests of one type are selected they appear together in that test pane.

1. Select **Tools> Valve Data Management > Signature Management** and the *View Signature History* window appears.

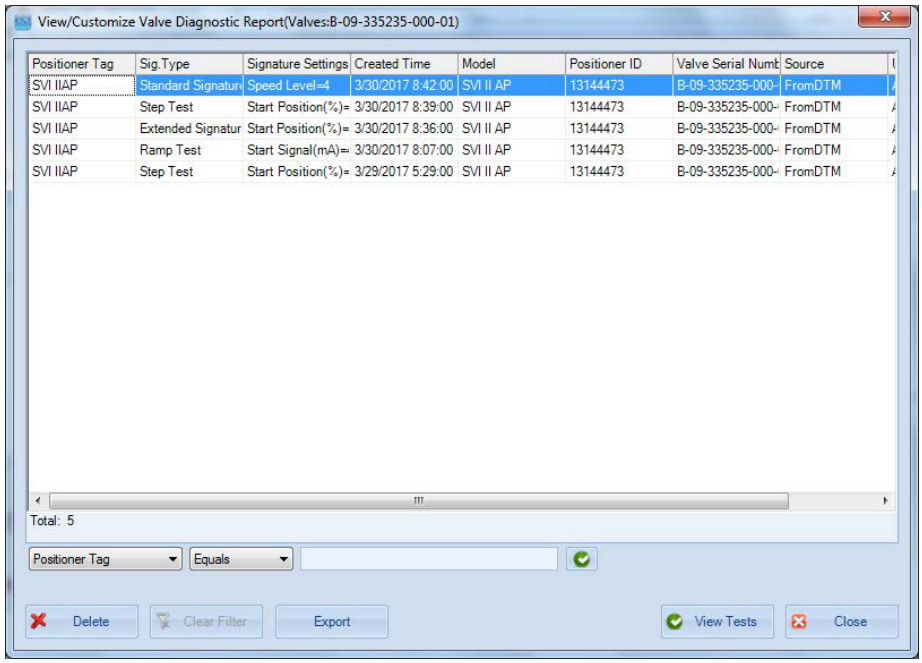

Figure 120 View/Customize Valve Diagnostic Report

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To view signatures:

√ Select a signature or multiple signatures, click

and Figure 121 appears.

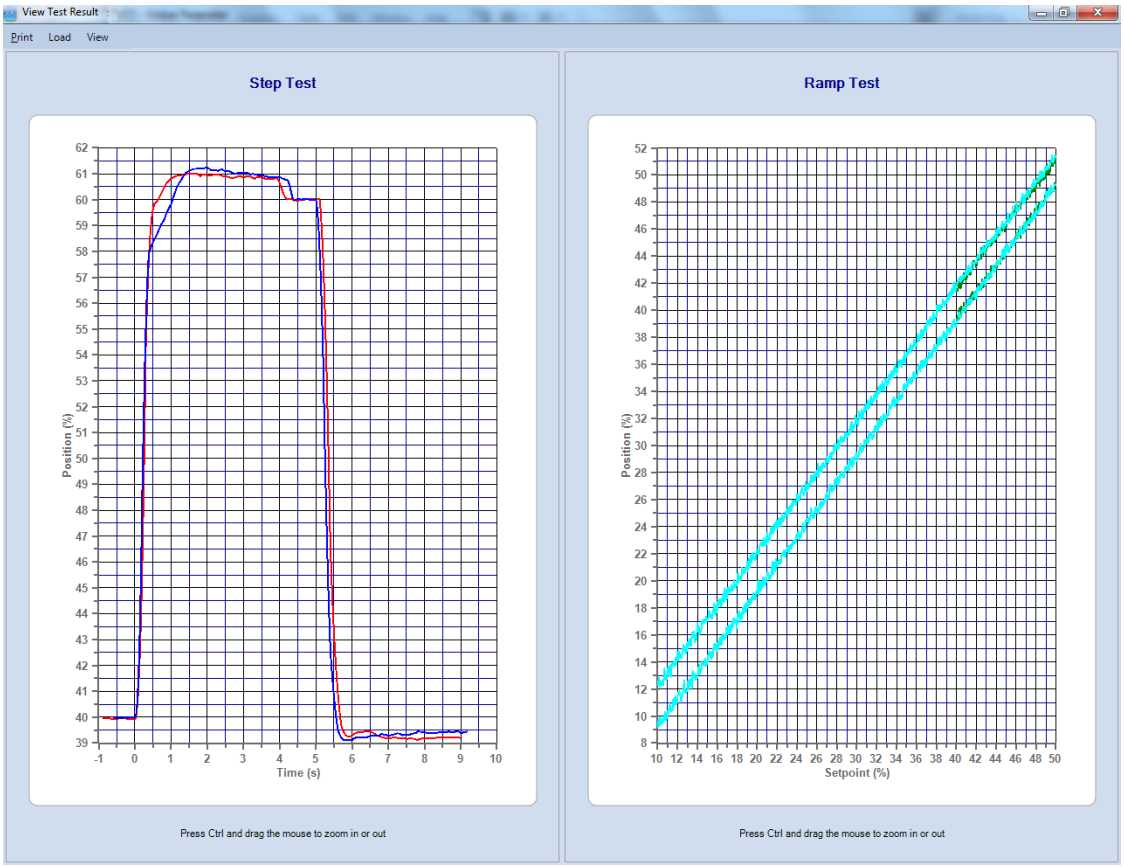

Figure 121 View Signature Data

This window has various functionalities that are explained in the Table 4 and the Table 5 tables. Additionally, if you mouse-hover of a particular test graph line, a tooltip dialog appears containing the data for that point.

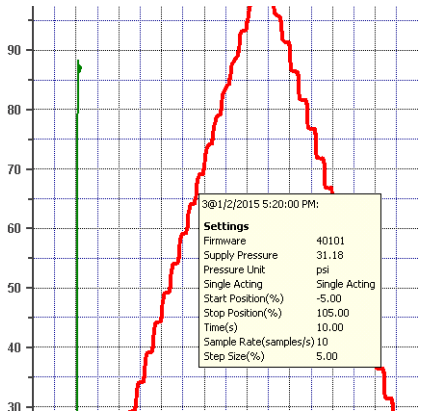

Figure 122 View Signature Data Tooltip

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Table 4 View Signature Data Menus

Item	Description
Print	
View Valve Report	Open the *Report Settings* dialog to choose the items that will display in the valve report. Then preview the valve report.
Print	Open the *Report Settings* dialog to choose the items that will display in the valve report. Then generate a valve report.
Exit	Closes the dialog.
Load	
Load Test Data	Opens the *View/View Customize Valve Diagnostic Report* window from which you can add more signatures to the viewer.
View	Consists of one checkbox for each test type (*Step Test*, *Ramp Test*, *Standard Actuator Signature*, *Extended Actuator Signature*) to toggle the test on or off on the display.

Table 5 View Signature Data Right-click Menus

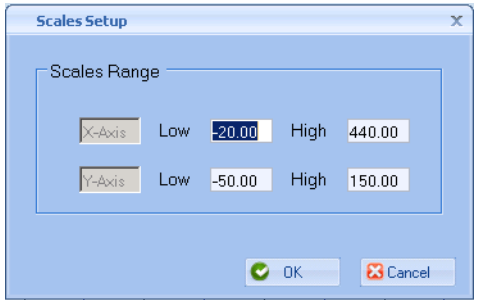
Item	Description
Print Graph	Prints the graphs to the default printer.
Scales Setup	Opens this dialog to upper and lower ranges for the scale for each graph. The test type dictates what range is available based on whether it is for pressure, time, etc. 
Show Legend	Adds a legend for the curves based on the test type and how many individual tests are represented.
Show Data Points	Adds data points to each test result for a graph.
Show Setpoints	Adds setpoints to the display for a *Step Test* only.
Grid Line	Adds or formats each graph grid line. Choices are: *Solid*, *Dot* or *None*.

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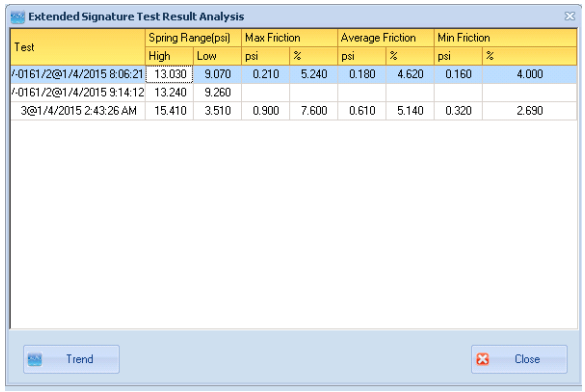
Table 5 View Signature Data Right-click Menus (Continued)

Item	Description
Result Analysis	Opens the *Test Result Analysis* dialog. This dialog has content based on the test type and accesses a *Trend* display. See "Test Results Analysis and Trend Dialogs" on page 153. 
Hide This Graph	Hides the selected graph. Once hidden you can retrieve the graph using the *View* menu.
Show This Graph Only	Leaves only the selected graph. displayed.
Zoom Out	This item is activated once you change the graph scale in the graph setup.
Remove Selected Curve	Removes the selected curve from the graph.
Export to Excel	Opens a *Save As* dialog to export the data for the displayed items to an .xls file.

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Test Results Analysis and Trend Dialogs

The data that appears depends on the test type. Each test type dialog is shown below.

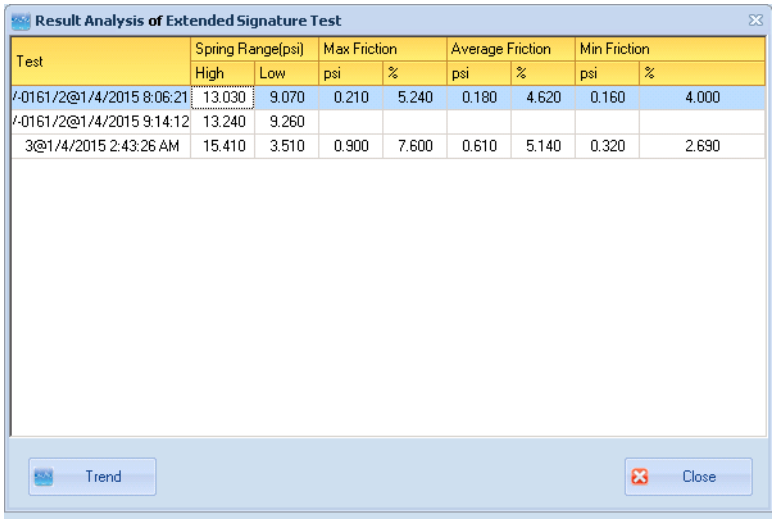

Figure 123 Extended Signature Test Results Analysis

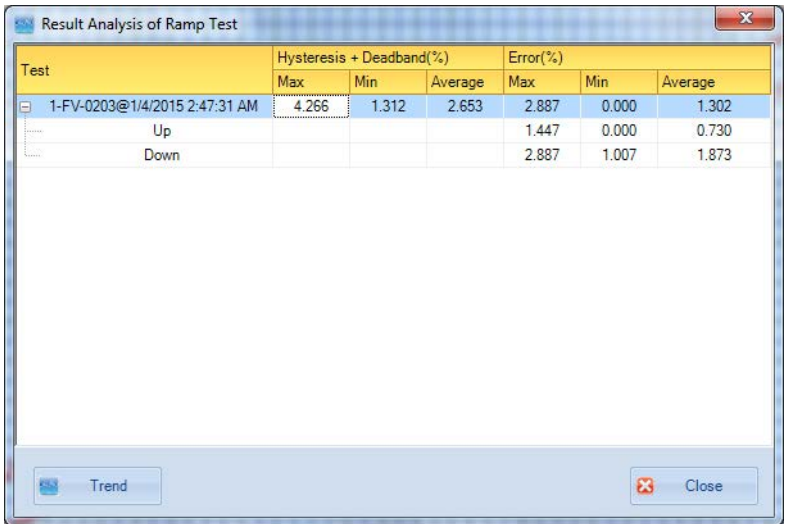

Figure 124 Ramp Test Results Analysis

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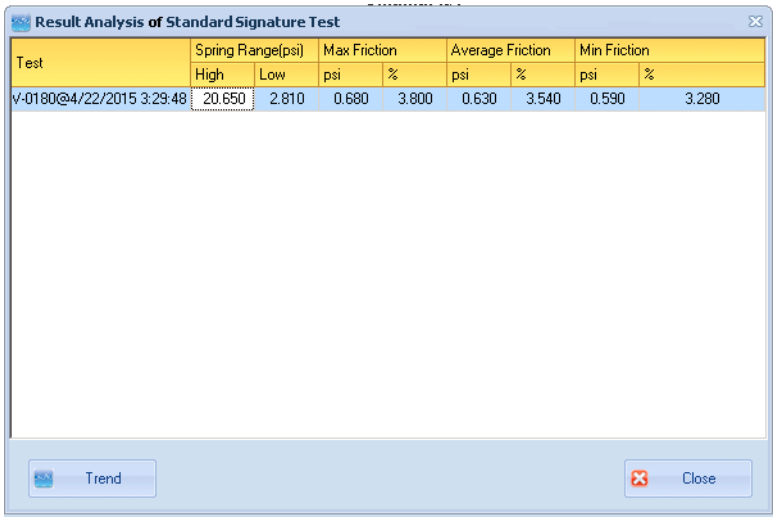

Figure 125 Standard Signature Test Results Analysis

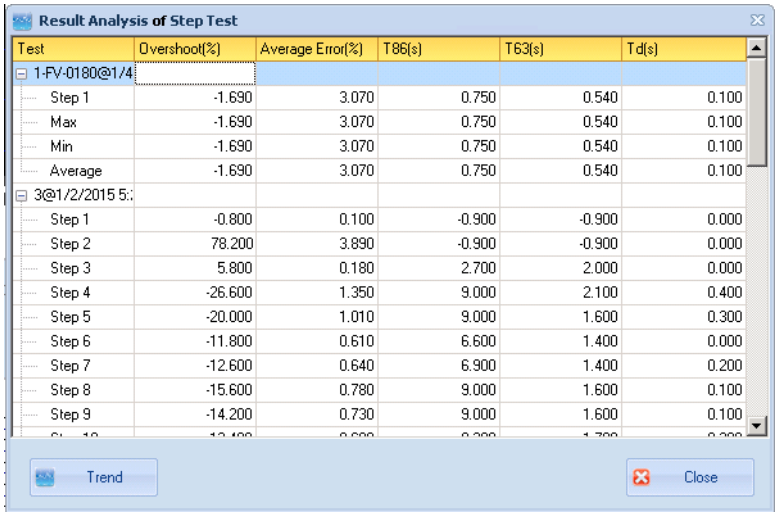

Figure 126 Step Test Results Analysis

Click to access an associated *Trend* dialog. Each dialog appears below. The tabs that appear are test-dependent. The function of the right-click menu options are given in Table 6.

Table 6 Historical Trend Right-click Menu

Item	Description
Print Graph	Prints the graphs to the default printer.
Show Legend	Adds a legend for the curves based on the test type and how many individual tests are represented.
Show Data Point	Adds data points to each test result for a graph.

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Table 6 Historical Trend Right-click Menu (Continued)

Item	Description
Grid Line	Adds or formats each graph grid line. Choices are: *Solid*, *Dot* or *None*.
Trend	Removes or adds a selected curve: *Max*, *Min* and *Average*.

The *Ramp Test Results Historical Trend* has the following tabs:

√ *Hysteresis + Deadband*

√ *Error*

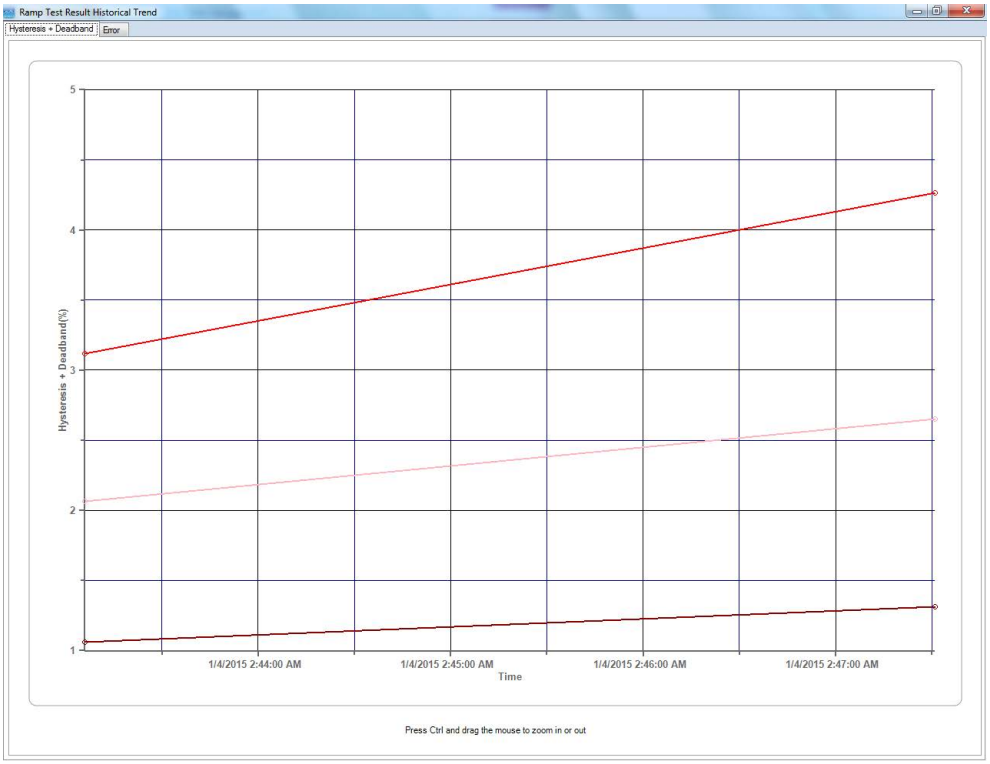

Figure 127 Ramp Test Results Historical Trend

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The *Step Test Results Historical Trend* has the following tabs:

- √ *Overshoot*
- √ *Average Error*
- √ *T86*
- √ *T63*
- √ *Td*

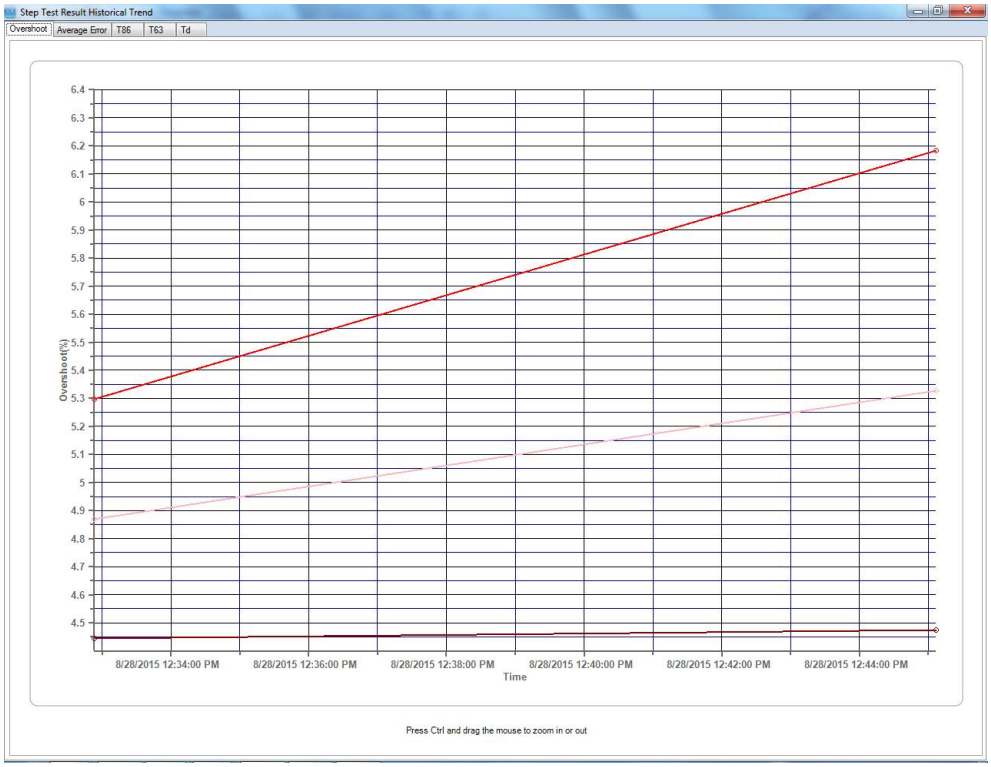

Figure 128 Step Test Results Historical Trend

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The *Standard Signature Test Results Historical Trend* has the following tabs:

√ *Spring Range* √ *Friction %*

√ *Friction*

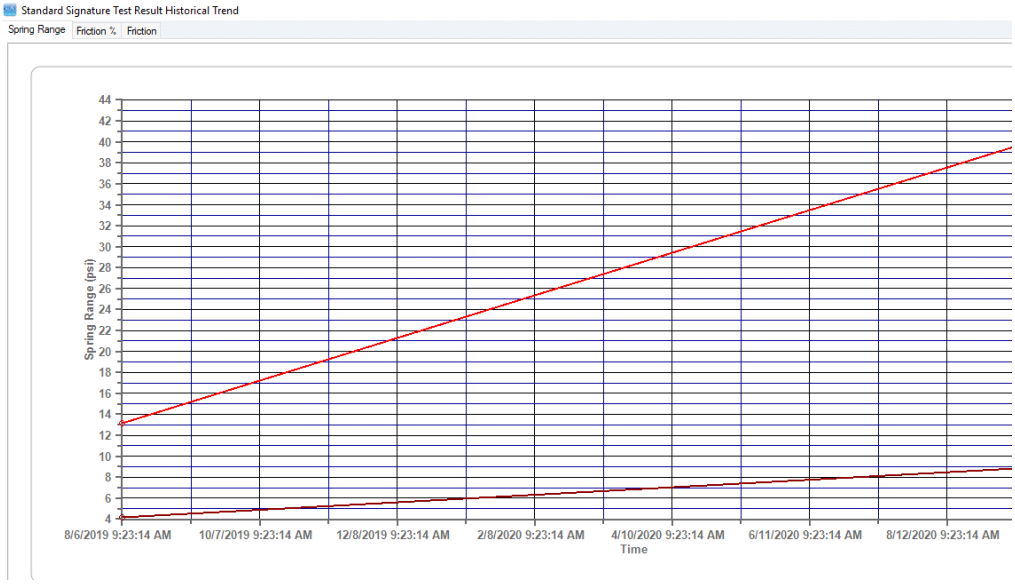

Figure 129 Standard Signature Test Results Historical Trend

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The *Extended Signature Test Results Historical Trend* has the following tabs:

√ *Spring Range* √ *Friction %*

√ *Friction*

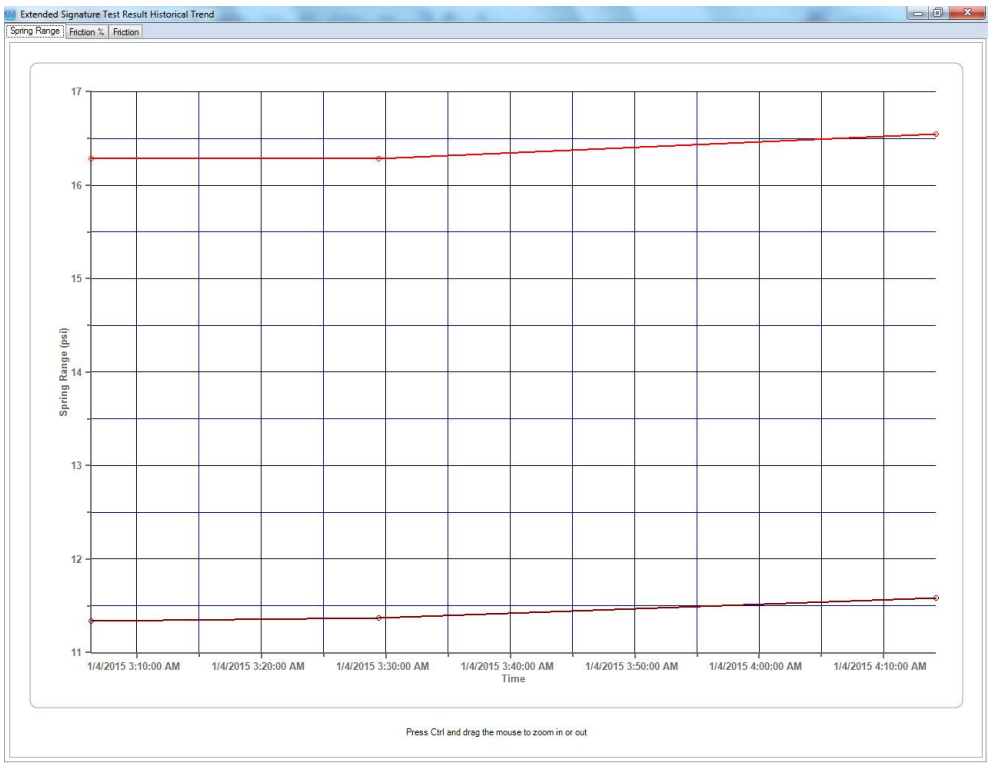

Figure 130 Extended Signature Test Results Historical Trend

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Export Signatures

To export signatures for use on another system:

1. Select a signature or signatures for export. Click Export and a *Save As* dialog appears.

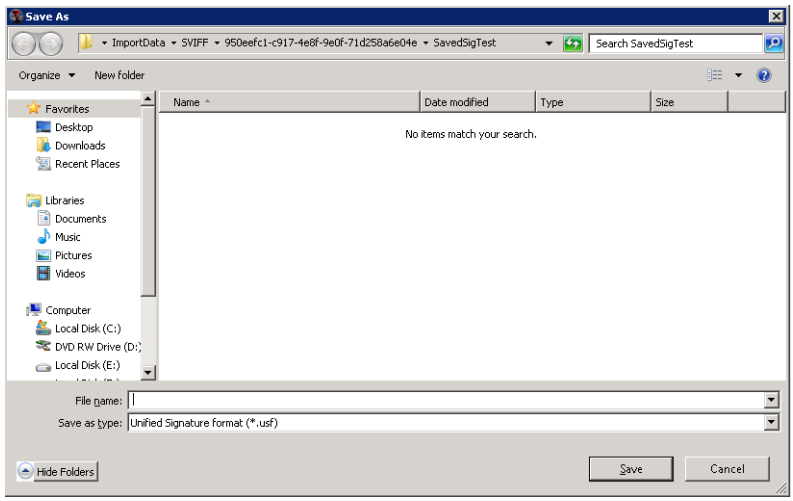

Figure 131 Export Signatures

2. Enter a *Filename*, navigate to the directory where signatures are stored, and click **Save**. If you selected multiple signatures this coalesces them into one file.

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Import Signatures

To import signatures:

1. Click Import and an *Open* dialog appears.

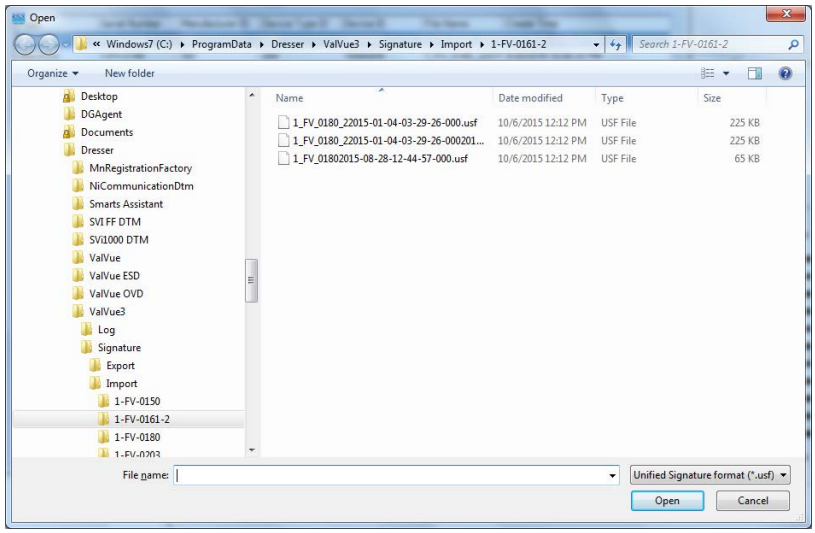

Figure 132 Import Signatures

2. Navigate to the directory where signatures are stored, select a file and click Open.

   The signatures appear the *Select Signature to Report* window for use in reports.

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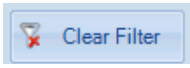
Filter Signatures

Use this feature to filter signatures appearing on the *Select Signature to Report* dialog. Filter signatures displayed using *Positioner Tag*, *Sig. Type*, *Valve Serial Number, Created Time*, *Model, Positioner ID*, *User Name,* and *Source.* To filter signatures:

1. Use the leftmost pulldown to select an option:
2. Use the operator pulldown to select either:
   - √ **Equals**: Indicates search for an exact string
   - √ **Contains**: Indicates search for a string with the enter data anywhere
   - √ **isNull**: Indicates search for an empty entry
3. Enter a string in the associated text field.
4. Click the green check and the filter conditions are applied to the signatures list.
5. Click 

and the filter conditions are applied.

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Print

Use this feature to configure the items that appear on the report. This then prepares a pdf for use. You must have the signature associated with a valve to do this (see “Valve Management” on page 139).

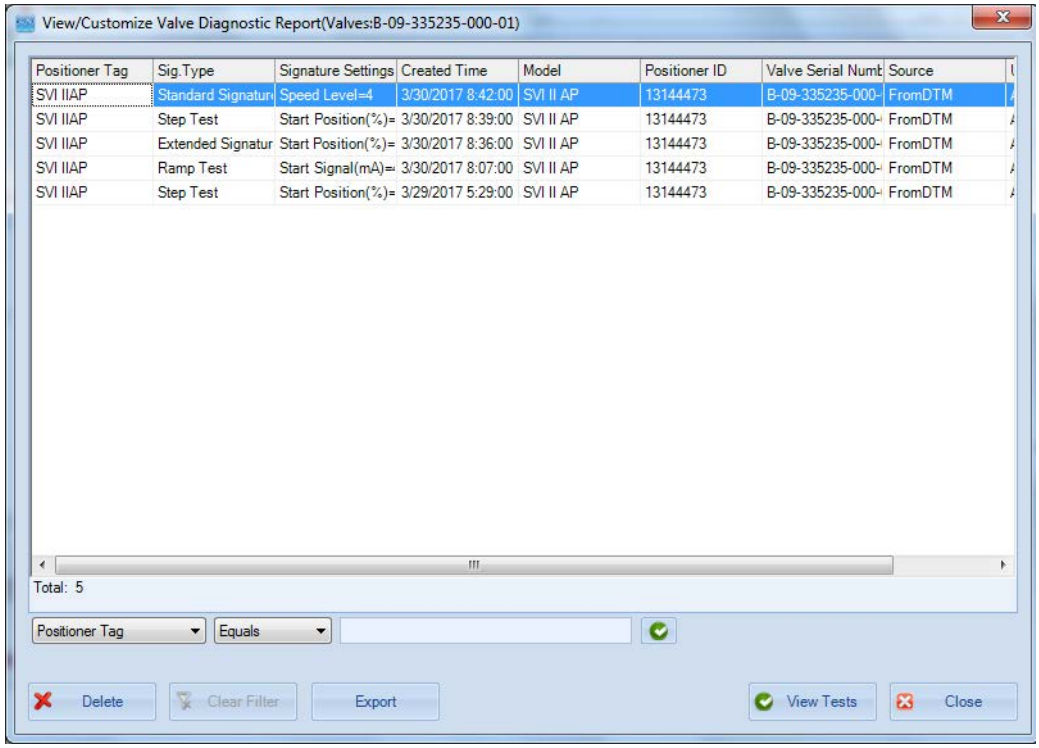

Figure 133 View/Customize Valve Diagnostic Report

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To do this:

1. Select the valve in the topology pane, right-click and select **View Diagnostic and Report** and the *View/Customize Valve Diagnostic Report* window appears.

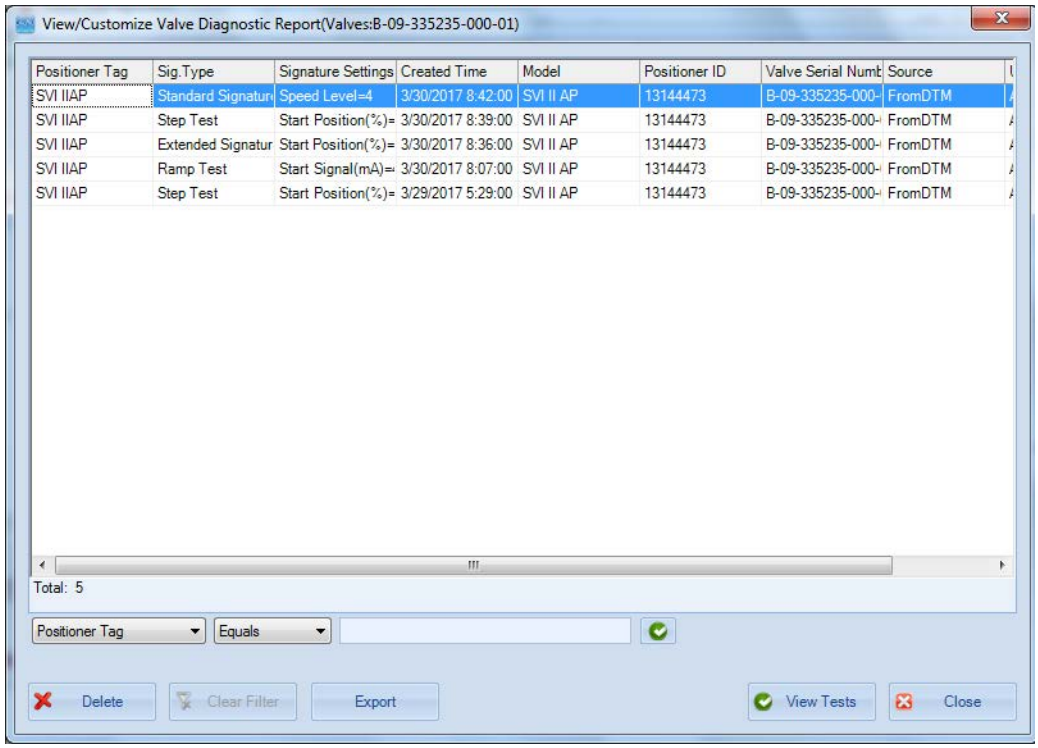

Figure 134 View/Customize Valve Diagnostic Report

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2. Select an item(s) and click **View Report** and the *View Signature Data* dialog appears.

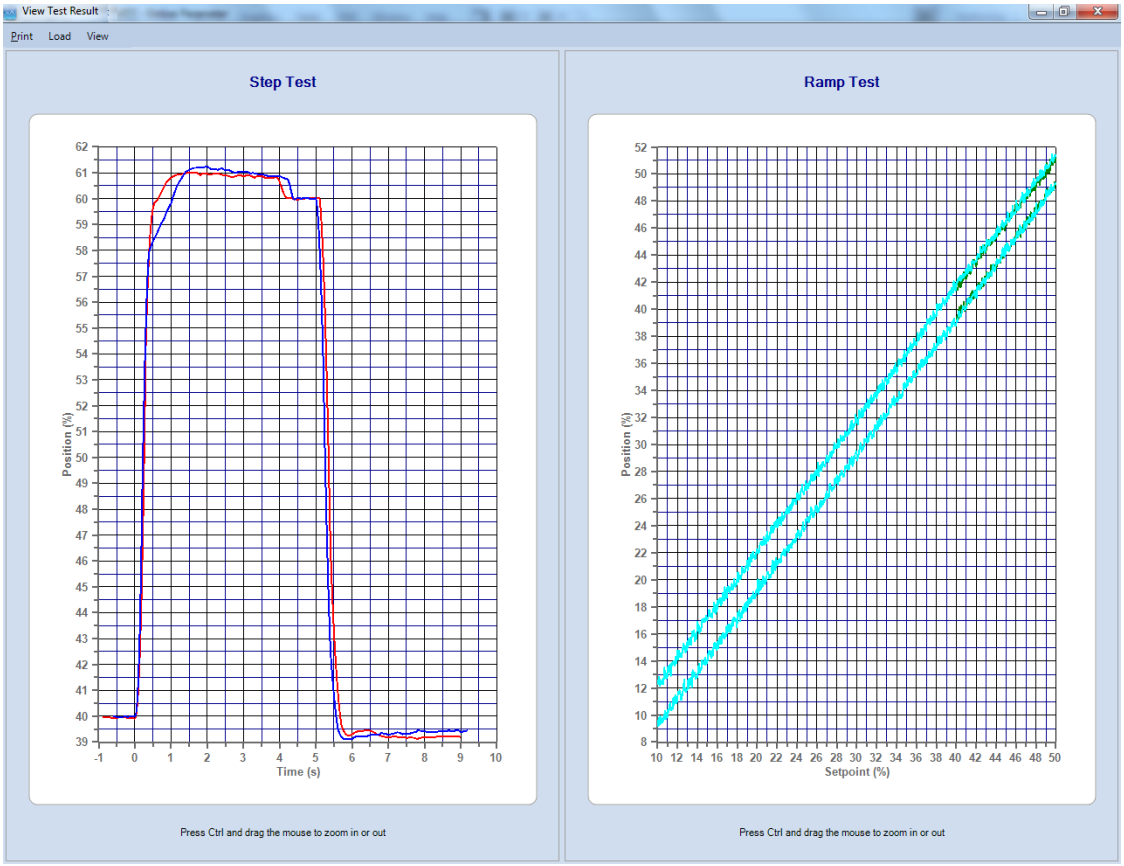

Figure 135 View Signature Data

3. Select an item/s, click **Print** and the *Report Settings* window appears.

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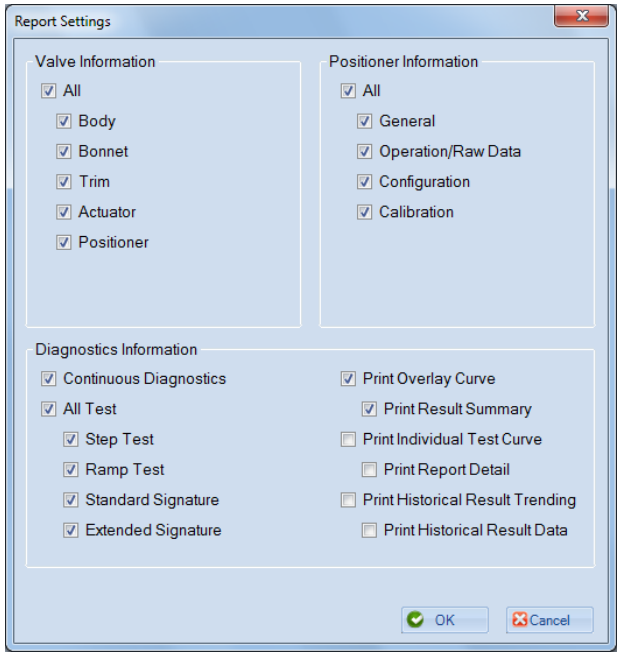

Figure 136 Report Settings

4. Activate/deactivate checkboxes as required, click

and a dialog appears.

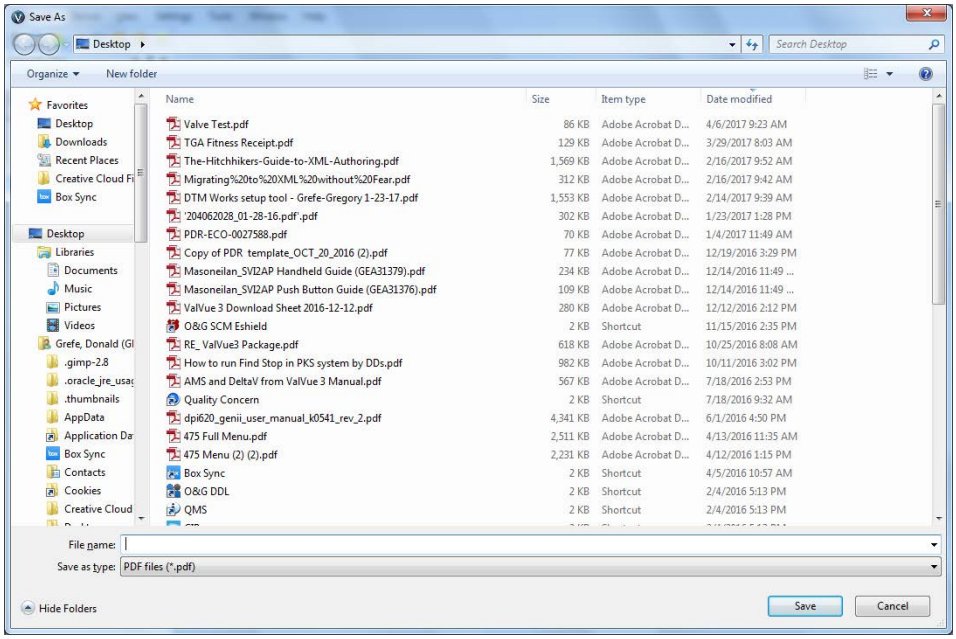

Figure 137 Save As For Valve Report

5. Navigate to the required directory, enter a file name for the pdf and click **OK**.

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Import Configuration

Use this feature as a quick means to copy an existing configuration and its parameters to another positioner. Data from a ValVue 2.8x positioner can be copied and used on a ValVue 3x positioner of the same type.

To import a configuration:

1. Click **Tools > Import Configuration** and *Import Configuration* dialog appears.

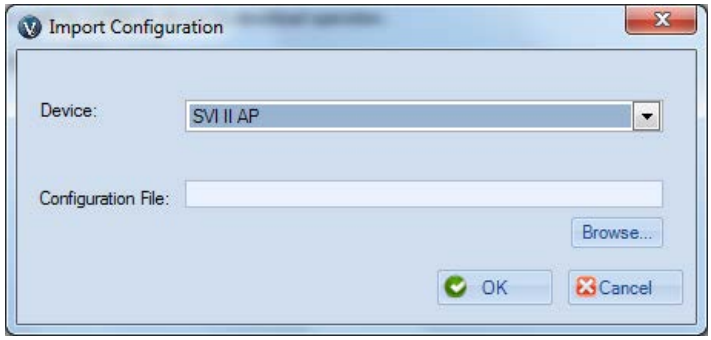

Figure 138 Import Configuration

2. Click Browse... and the *Open .dp File* dialog appears. The files have an extension, depending on positioner version of *.dp, .dp1* or *.dp2*. These files be default are in the *Program Data > Dresser > ValVue > SVI2AP > Data* directory. As the program is used, they may have been placed elsewhere.

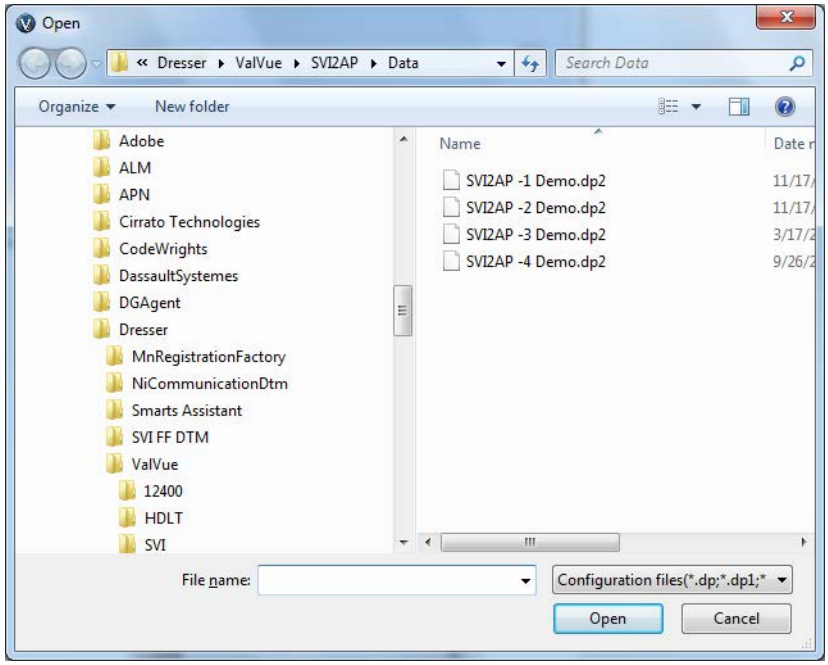

Figure 139 Open .dp File

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3. Navigate to the file, click **Open** and the *Import Configuration* dialog reappears.
4. Click **OK** and, if successful, the *Import Configuration Success* appears.

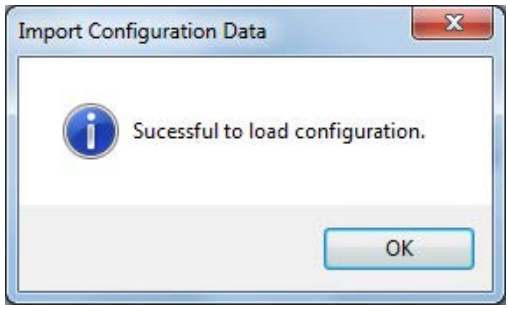

Figure 140 Import Configuration Success

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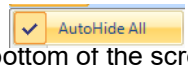
10. Window Menu

Use this menu to perform some basic operations on how the software interface appears.

Menu Items

AutoHide All	When active (), the panes open are minimized to tabs on the sides and/or bottom of the screen. Click an item to reopen it.
Reset Layout	Reset Layout will close all opened device DTM windows, and return ValVue3 to default layout.

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11. Help Menu

Use this menu to access help functions.

Menu Items

Contents	Opens the *ValVue3* help document.
About	Opens the *About* dialog.

Figure 141 About

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12. Connect Masoneilan Devices to an AMS-DeltaV System and Starting Using

ValVue with AMS

You need to download the device DD from *https://valves.bakerhughes.com/resource-center:*. You must also have the AMS software installed. Use SVIFF device as an example.

1. Add the SVI FF DD into the AMS system by:
   a. Launching the *Add Device Type* program located at *\AMS\Bin* or by clicking **Start Menu -> AMS Device Manager -> Add Device Type** and *Add Device Type* appears.

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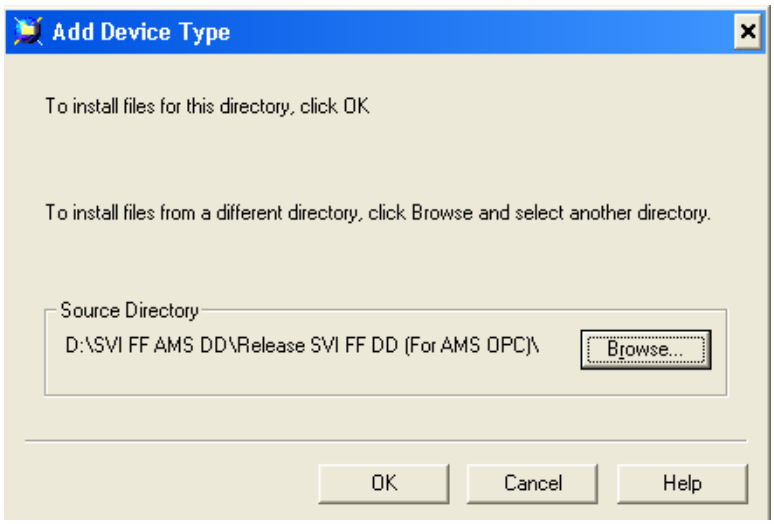

Figure 142 Add Device Type

b. Browse to where the SVI FF DD is located and click **OK** to add the *Device Type*.

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2. Connect SVI FF device, then to the DeltaV IO card, and in the DeltaV Explorer click **Download->Physical Network** to scan this device into DeltaV Explorer.

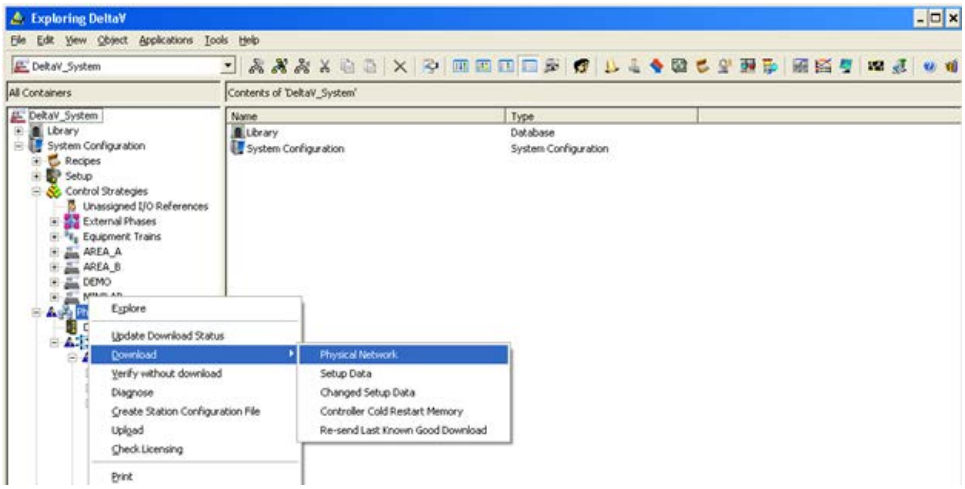

Figure 143 Exploring DeltaV

Wait until the SVI FF device is found.

3. Right-click and click **Place in standby**.
4. Drag the device from the *Decommissioned Fieldbus Devices* branch out one branch to its corresponding *Fieldbus Port* branch and *Fieldbus Device Properties* appears.

Figure 144 Fieldbus Device Properties

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5. Enter the AMS *Device tag* for the device, edit other fields as necessary, click **OK** and the *Device Commissioning Wizard* appears to commission the device.

Figure 145 Device Commissioning Wizard

6. Click **Finish** to begin commissioning.
7. Click **Control Network** in the *Containers* pane and select **Download > Control Network**. Download the control network. The SVI FF device is now installed into the DeltaV system.

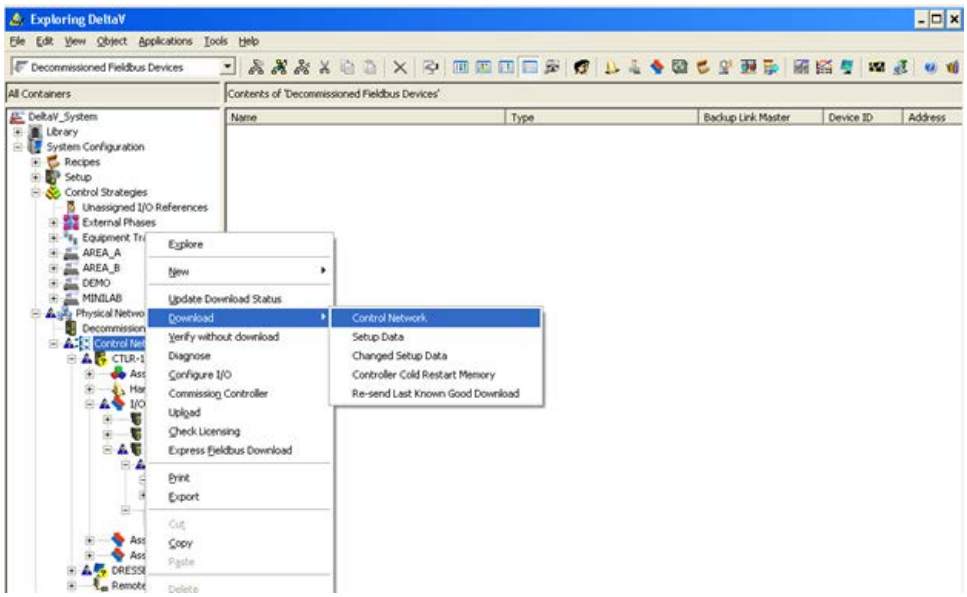

Figure 146 Download Control Network

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8. Open the *AMS Device Manager*, and drill down to and select the device. Right-click and select **Rebuild Hierarchy** to find the device in DeltaV.

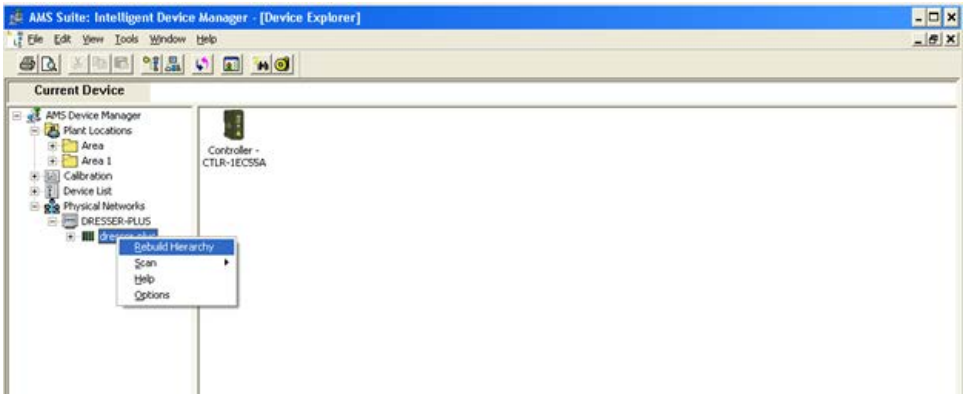

Figure 147 AMS Device Manager: Rebuild Hierarchy

9. Drill down and select the *Fieldbus Controller* for the device, right-click and select **Scan > All Devices** to synchronize the parameters of the device.

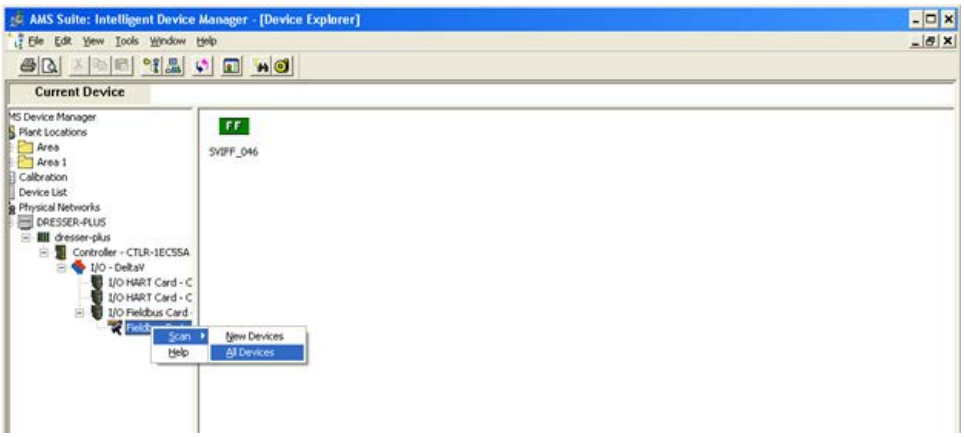

Figure 148 Scan All Devices

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The *Scan Manager* appears.

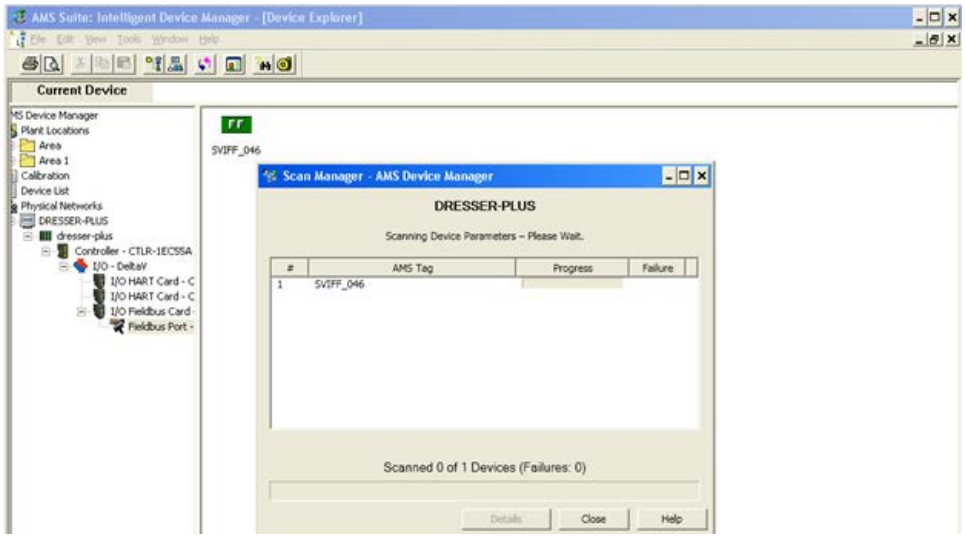

Figure 149 Scan Manager

10. Double-click the device to open the DD to the *Configuration/Setup-> Block Mode* tab. This step increases system performance - *leave open*.

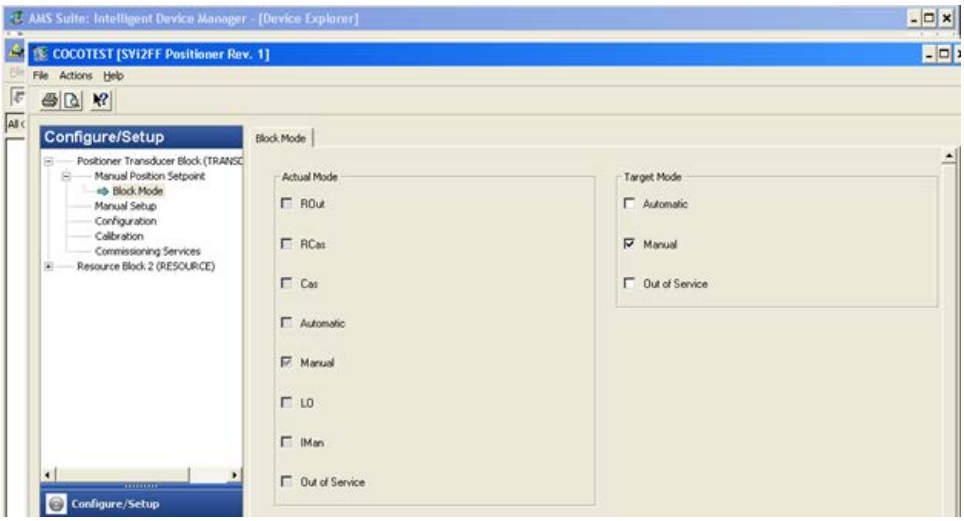

Figure 150 Configuration/Setup-> Block Mode

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11. Click the **Device Diagnostics** menu, then click **Sensor Measurements** and click **Pressures** for best performance. This step increases system performance - *leave open*.

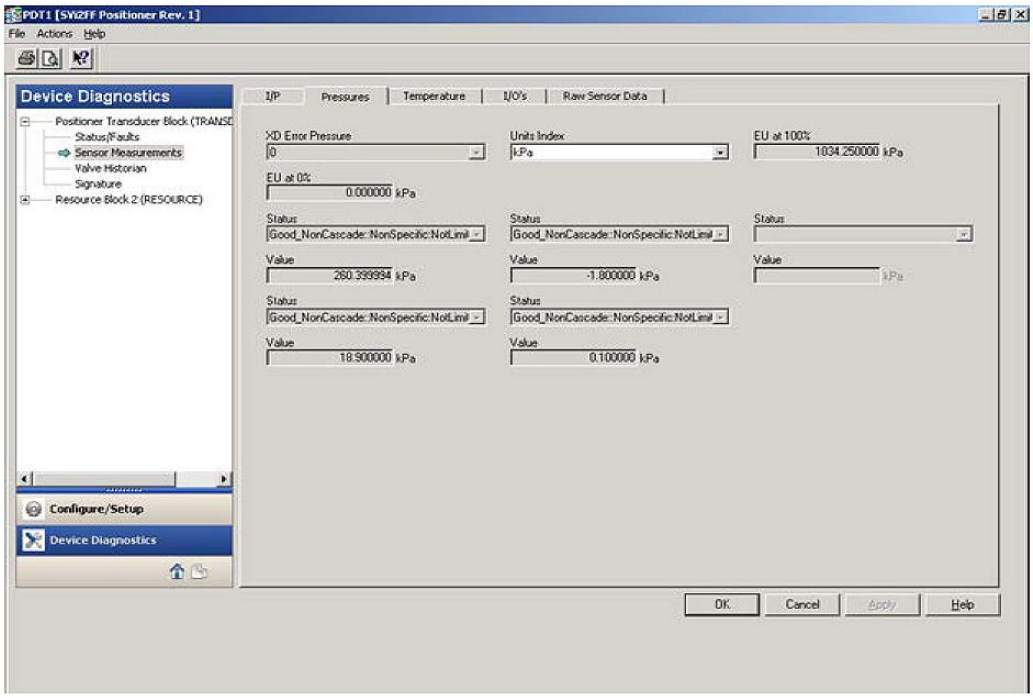

Figure 151 Pressures Tab

12. Open ValVue 3, select **Settings > DTM Library** and *DTM Library Management* appears.

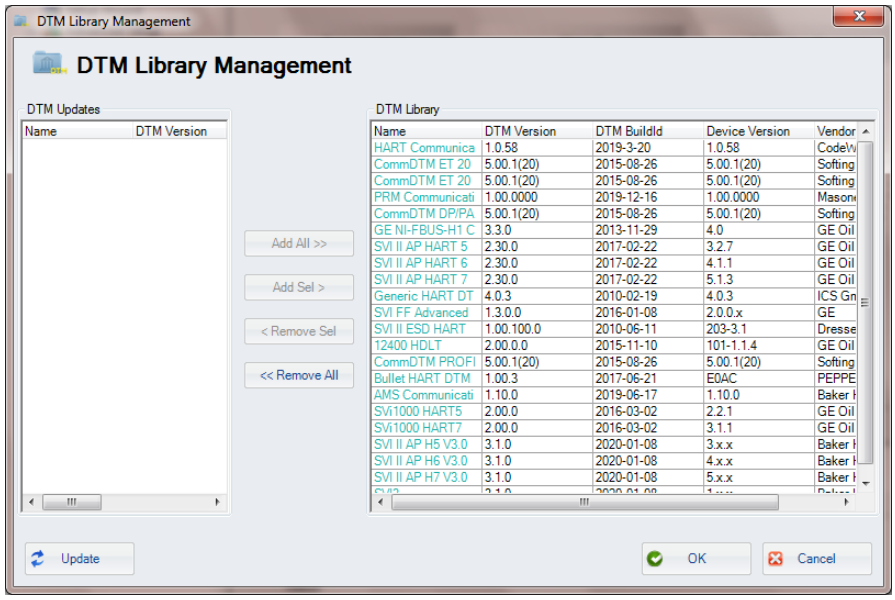

Figure 152 DTM Library Management

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13. Click **Update** and when update completes click **OK.**
14. Click **Device Add Field Network** to begin adding a new field network.
15. Select the **DCS Communication**, right-click and select **Add a Field Network** and *Add AMS Field Network* appears.

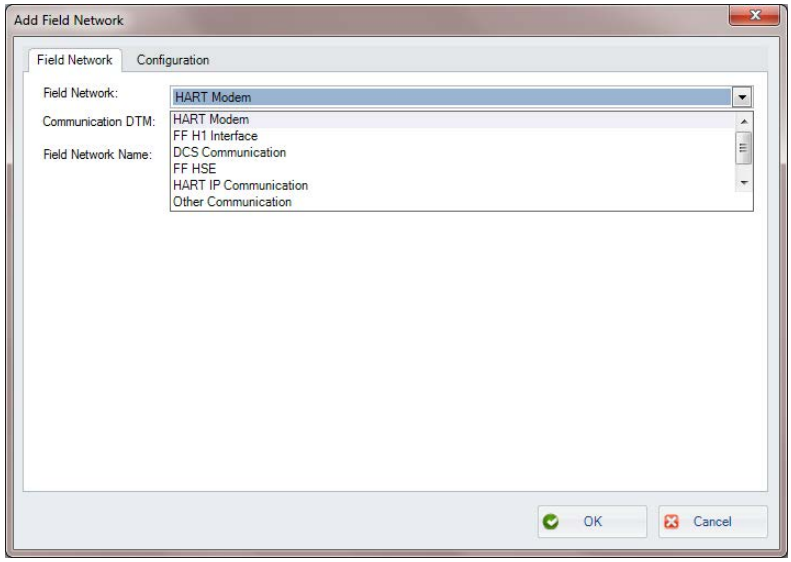

Figure 153 Add AMS Field Network

16. Select **AMS Communication DTM** from the *Communication DTM* pulldown menu. Enter a name for the *Field Network Name* field and click **OK** and *Configure AMS Communication DTM* appears.

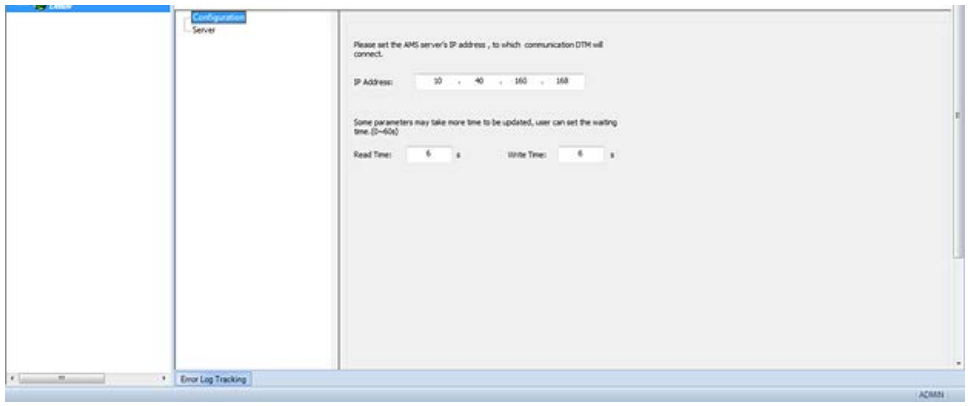

Figure 154 Configure AMS Communication DTM

17. Enter the AMS Server *IP address*, then right-click the network and click **Connect**.

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18. Click **Server** and click **Scan All** to scan the entire topology of AMS server into ValVue. Then click **Network > Open Connected Device** from the menu bar to add SVI FF DTM for the SVI FF device into ValVue.

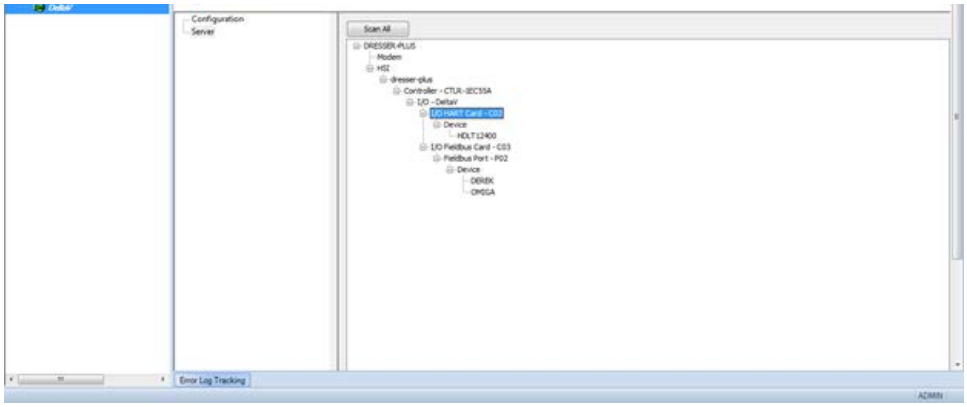

Figure 155 ValVue 3 AMS Server Communication Configuration

You can now open the SVI FF DTM UI to do monitor, configuration, calibration and diagnostic function for the SVI FF devices. See the online help for instructions.

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13. AMS® Communication DTM

Use the AMS communication DTM to connect the AMS server, which reads and writes parameters from the AMS server via OPC. AMS communication DTM supports Masoneilan Hart and FF protocol devices.

NOTE

When using ValVue 3 in a large network use the Scan Next Level command to load information as in Figure 156.

Figure 156 AMS OPC Scan Next Level

To use the AMS Communication DTM:

1. Update the ValVue3 device library to add the AMS Communication DTM into ValVue3.
2. Add the Windows® user name and password of the ValVue3 computer into the AMS Server. Add into *Administrator* group and the *AMSDeviceManager*.

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3. Select the ValVue3 device network level, right-click and select **Add a Field Network** and *Add a Field Network with DCS Communication*, and set *DTM Communication* as *AMS Communication DTM*.

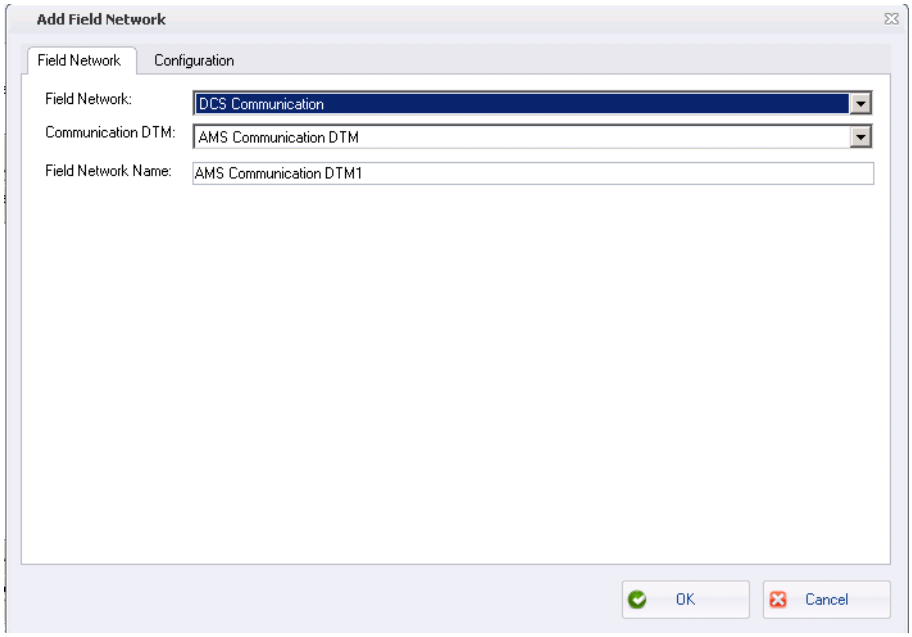

Figure 157 Add a Field Network with AMS Communication DTM

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4. Click **OK** and the *AMS Communications Page* appears.

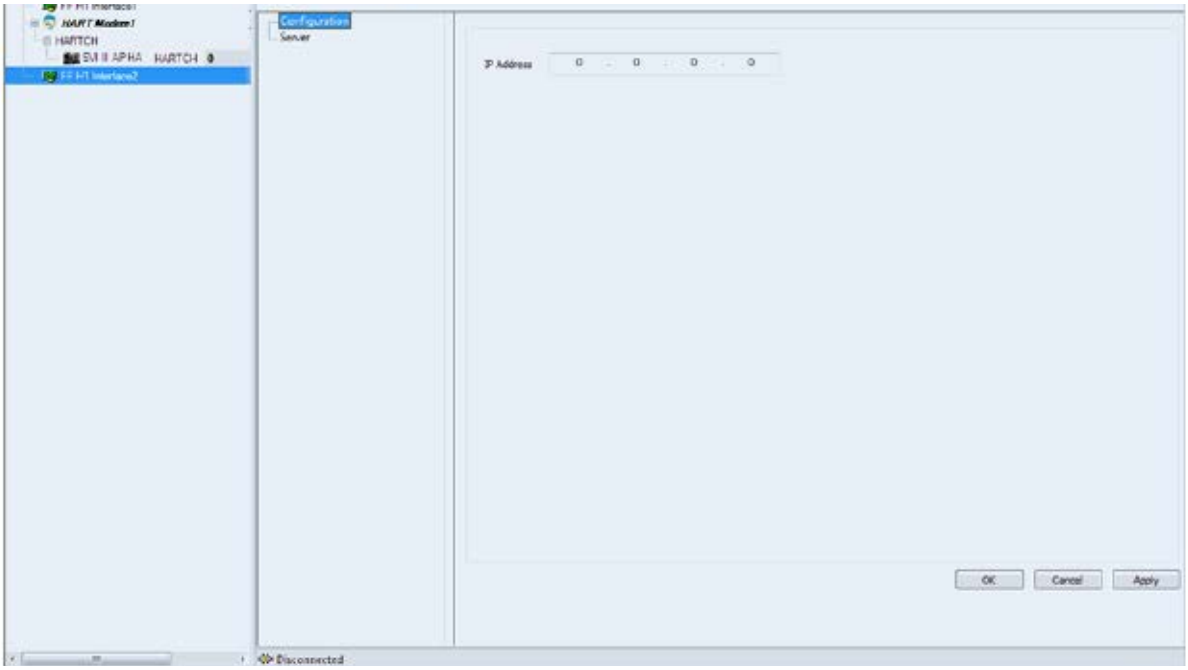

Figure 158 AMS Communications Page

5. Set the *IP Address* of the AMS Server and click **OK**.

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6. Click **Server** in the pane to the left and the *AMS Server Hierarchy Page* appears.

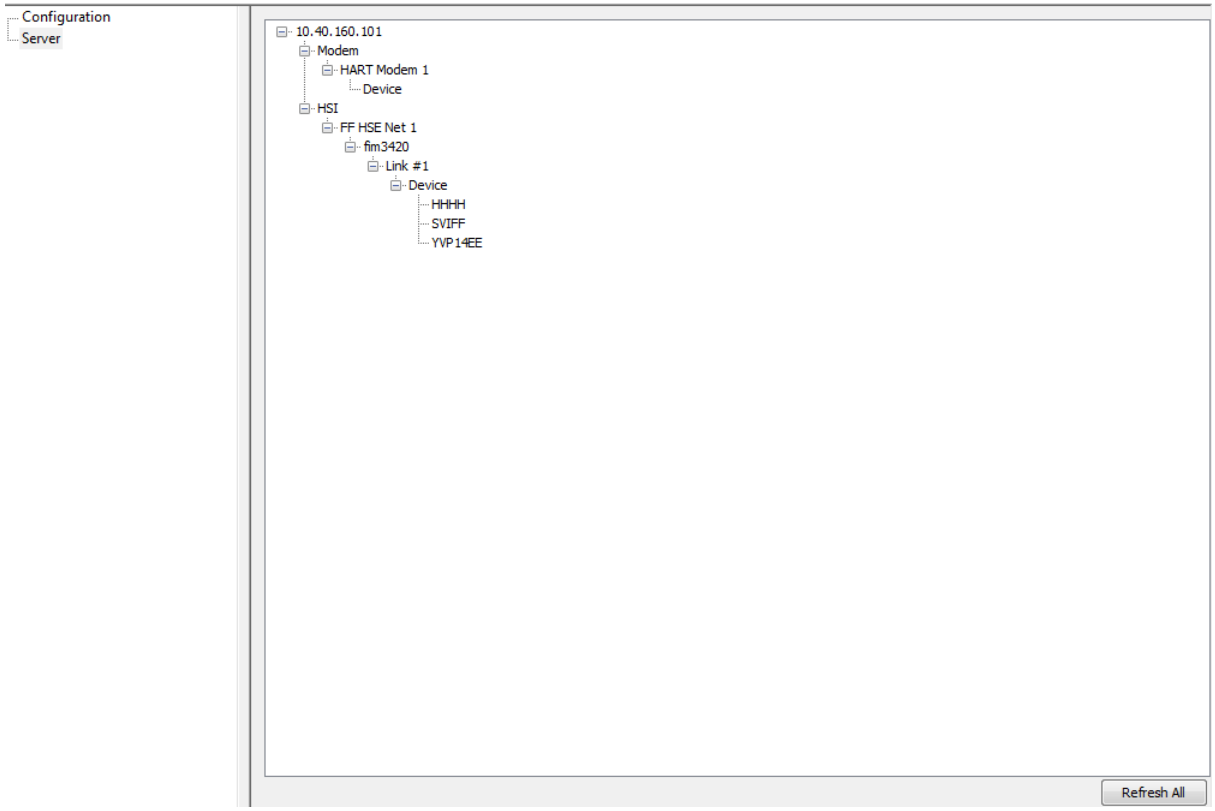

Figure 159 AMS Server Hierarchy Page

7. Connect the AMS Communication DTM and click Scan All. A list of the connected devices appears.
8. Choose on a device and add this device into ValVue3.
   For SVI FF device, AMS OPC does not support the read/write parameters of the MIB block. So Network Setting parameters in SVI FF DTM do not work under AMS Communication DTM.

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14. Masoneilan PRM Communication DTM

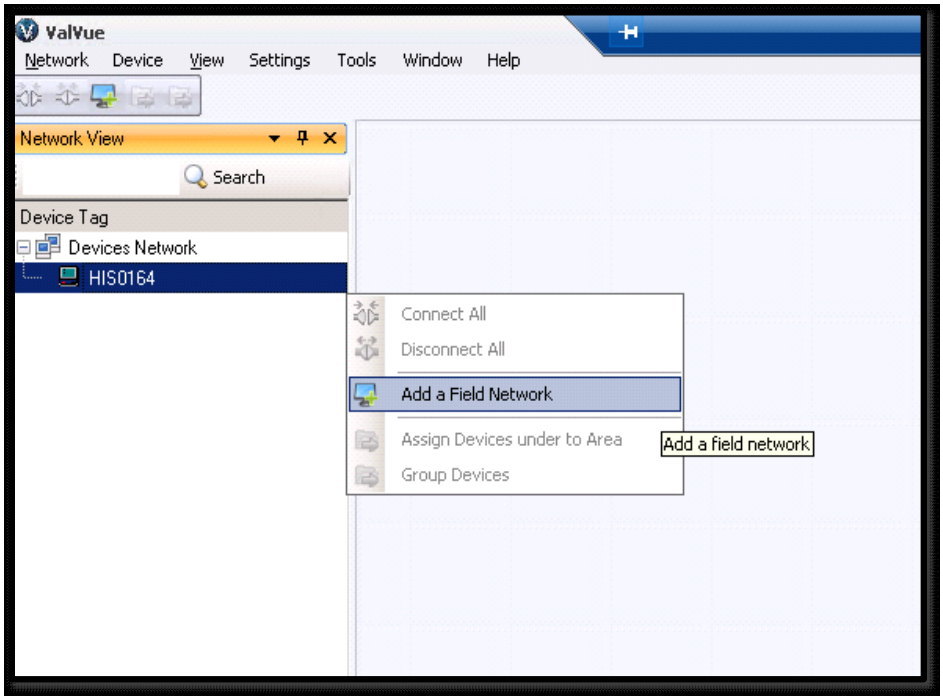
“Masoneilan PRM Communication DTM” is a newly added communication DTM in ValVue3.60. The goal of this DTM is to integrate ValVue3 with Yokogawa Plant Resource Manager (PRM). ValVue3 can communicate with Masoneilan HART and Foundation Fieldbus devices that are installed on PRM system through Masoneilan PRM Communication DTM. This release will only support HART protocol devices (HART Multiplex connection will be supported in next phase). Foundation Fieldbus protocol devices will be supported in next phase.

Connect Field Devices

Add Field Devices

PRM Communication DTM runs on an operation system that PRM server or PRM client has been installed. Below steps show how to add field devices through PRM Communication DTM.

1. Install ValVue3.60 full installer package->Open ValVue3.60 and add a Field Network.



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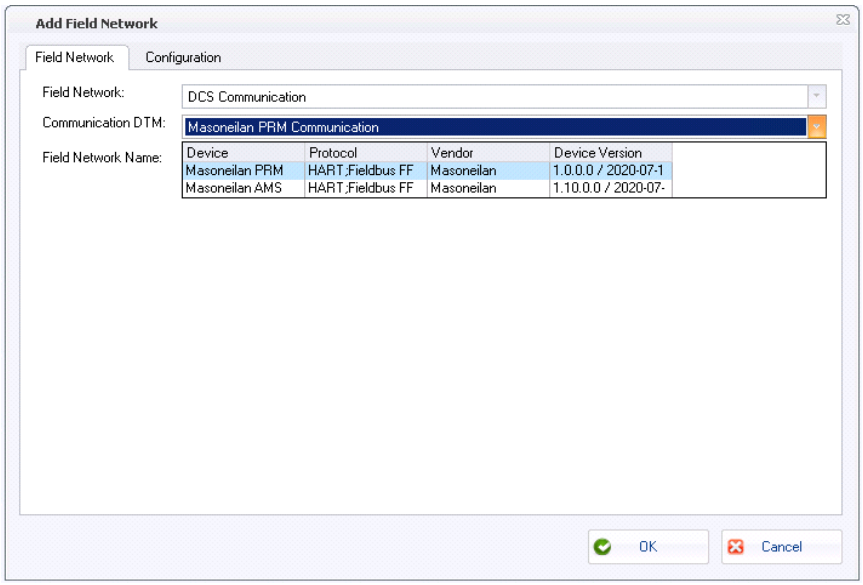
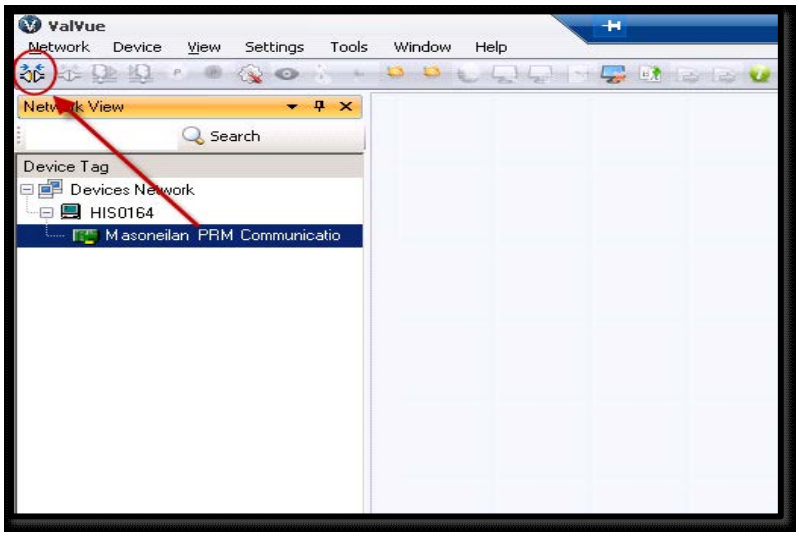
2. Choose Field Network as DCS Communication->Masoneilan PRM Communication->Click OK.



3. Connect the Masoneilan PRM Communication DTM in the ValVue3.



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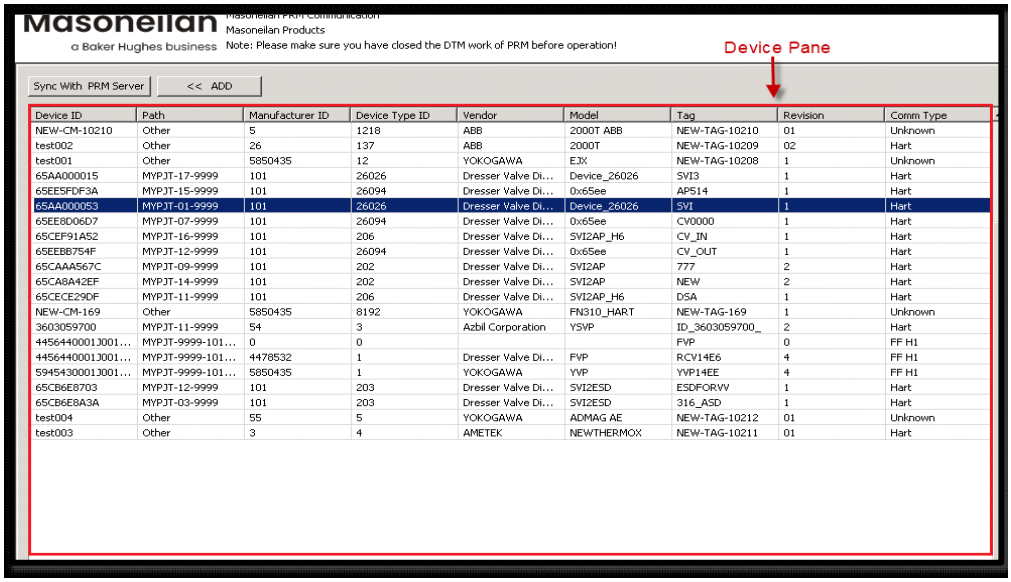
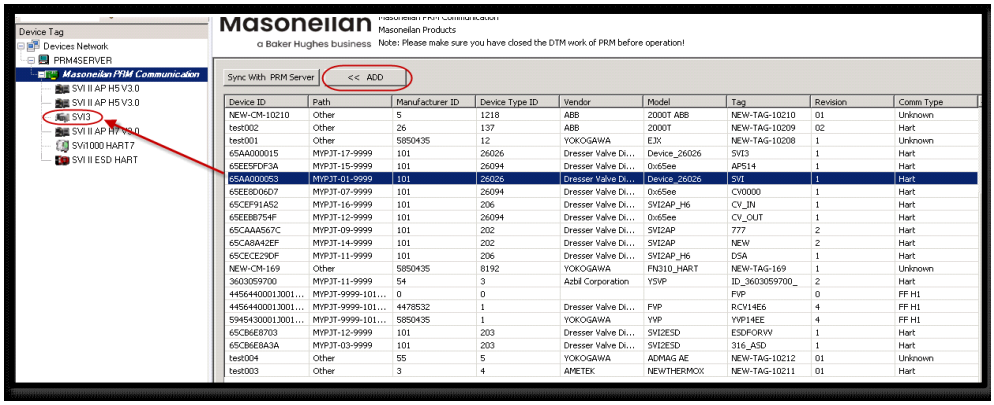
4. Double-click on the Masoneilan PRM Communication DTM to open Configuration page->Click **Sync With PRM Server** button on the Configuration page-> A list of the devices that connect to the PRM server will be updated on the PRM Communication DTM device pane. Communication Type displays as Unknown if the connected device is not HART protocol or Foundation Fieldbus protocol device.



Device ID	Path	Manufacturer ID	Device Type ID	Vendor	Model	Tag	Revision	Comm Type
NEW-CM-10210	Other	5	1218	ABB	2000T ABB	NEW-TAG-10210	01	Unknown
test002	Other	26	137	ABB	2000T	NEW-TAG-10209	02	Hart
test001	Other	5850435	12	YOKOGAWA	EJX	NEW-TAG-10208	1	Unknown
65AA000015	MYPJT-17-9999	101	26026	Dresser Valve Di...	Device_26026	SVI3	1	Hart
65EE5FDF3A	MYPJT-15-9999	101	26094	Dresser Valve Di...	0x65ee	AP514	1	Hart
65AA000053	MYPJT-01-9999	101	26026	Dresser Valve Di...	Device_26026	SVI	1	Hart
65EE8D06D7	MYPJT-07-9999	101	26094	Dresser Valve Di...	0x65ee	CV0000	1	Hart
65CEF91A52	MYPJT-16-9999	101	206	Dresser Valve Di...	SVI2AP_H6	CV_IN	1	Hart
65EEBB754F	MYPJT-12-9999	101	26094	Dresser Valve Di...	0x65ee	CV_OUT	1	Hart
65CAAA567C	MYPJT-09-9999	101	202	Dresser Valve Di...	SVI2AP	777	2	Hart
65CA8A42EF	MYPJT-14-9999	101	202	Dresser Valve Di...	SVI2AP	NEW	2	Hart
65CECE29DF	MYPJT-11-9999	101	206	Dresser Valve Di...	SVI2AP_H6	DSA	1	Hart
NEW-CM-169	Other	5850435	8192	YOKOGAWA	FN310_HART	NEW-TAG-169	1	Unknown
3603059700	MYPJT-11-9999	54	3	Azbil Corporation	YSVP	ID_3603059700_	2	Hart
44564400013001...	MYPJT-9999-101...	0	0			FVP	0	FF H1
44564400013001...	MYPJT-9999-101...	4478532	1	Dresser Valve Di...	FVP	RCV14E6	4	FF H1
59454300013001...	MYPJT-9999-101...	5850435	1	YOKOGAWA	YVP	YVP14EE	4	FF H1
65CB6E8703	MYPJT-12-9999	101	203	Dresser Valve Di...	SVI2ESD	ESDFORVV	1	Hart
65CB6E8A3A	MYPJT-03-9999	101	203	Dresser Valve Di...	SVI2ESD	316_ASD	1	Hart
test004	Other	55	5	YOKOGAWA	ADMAG AE	NEW-TAG-10212	01	Unknown
test003	Other	3	4	AMETEK	NEWTHERMOX	NEW-TAG-10211	01	Hart

5. Choose a Masoneilan device to be communicated on the device pane->Click ADD button -> The selected device can be added to ValVue3 device network view at the left side of the window.



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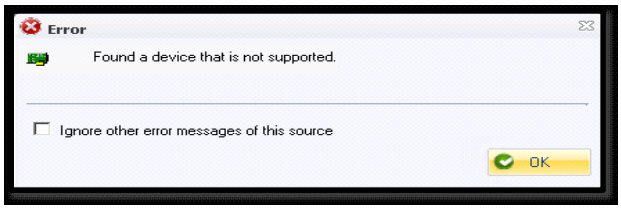
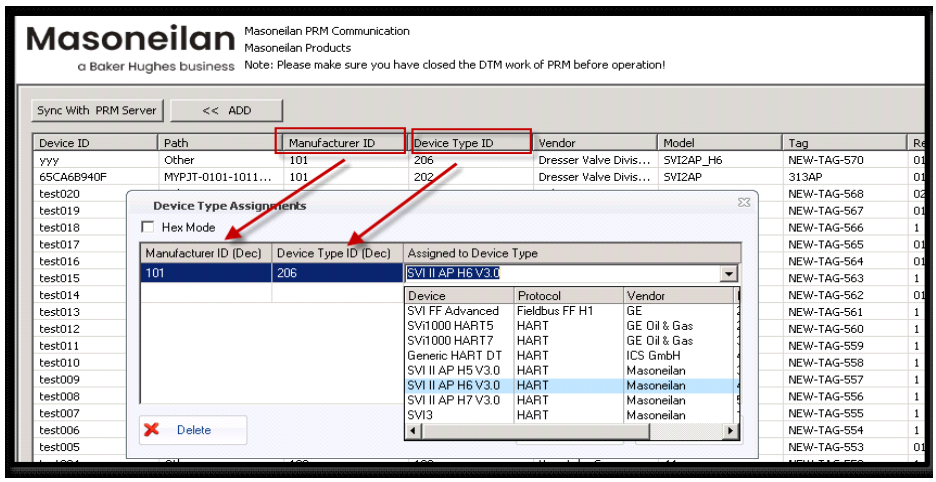
If user tries to add a device which Communication Type is FF or Unknown, PRM Communication DTM pops up a message:



If ValVue3 does not find the matched DTM during adding device, PRM Communication DTM pops up a message to guide user manually choose a DTM to match the device that user wants to add.

6. Open Device Type Assignments dialog under ValVue3 Settings menu-> Type in Manufacturer ID and Device Type ID based on the information that displays in the Device Pane-> Click OK to save the configuration-> Then try to add the device.



NOTE

Hart Multiplexer connection is not supported in this release.

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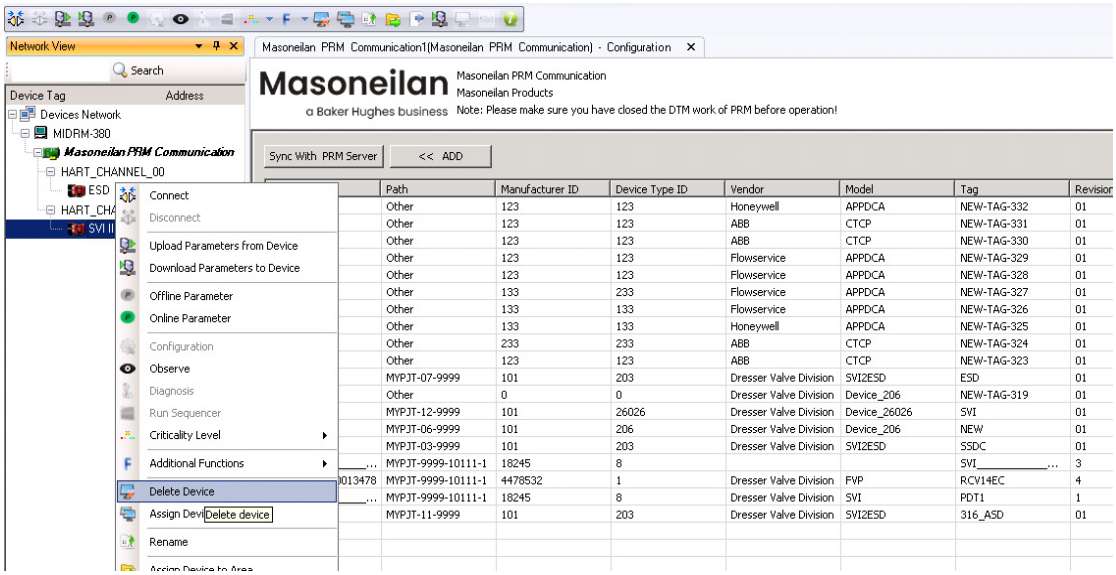
Remove Field Devices

User can remove the device from ValVue3 device network view with Delete Device Command. After the device is removed, the occupied communication channel will be released for the new device that user wants to add.



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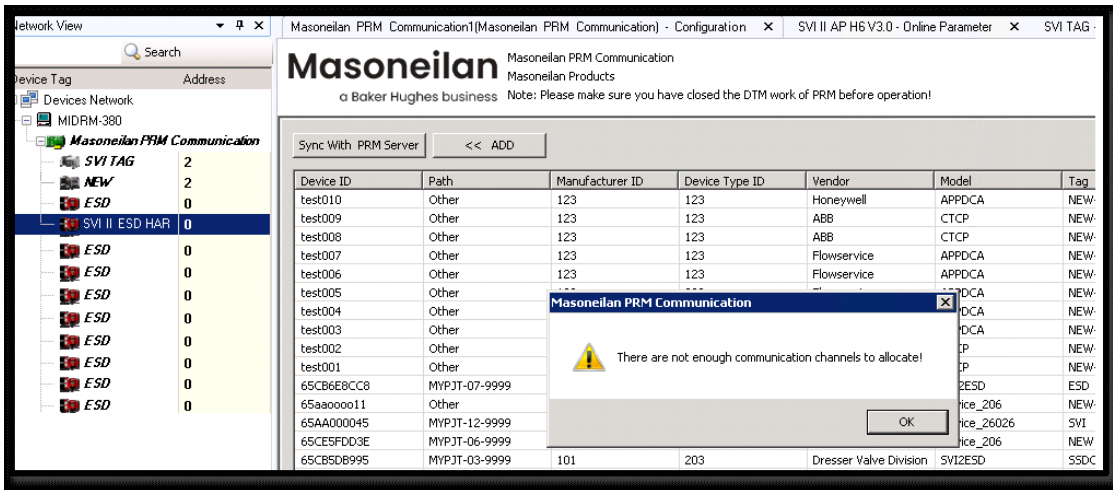
ESD Device Connection

If user tries to add Masoneilan ESD device, there is limit on the number of communication channel. PRM Communication DTM can provide up to 100 communication channels for ESD devices. A warning message “There are not enough communication channels to allocate” appears when user adds more than 100 ESD devices into ValVue3 device network view. For this case, please remove some of ESD devices from ValVue3 device network view to release the communication channels, and then try to add new ESD device again.



No limit on the number of communication channel when connecting with the devices such as SVI3, SVI II AP and SVi1000.

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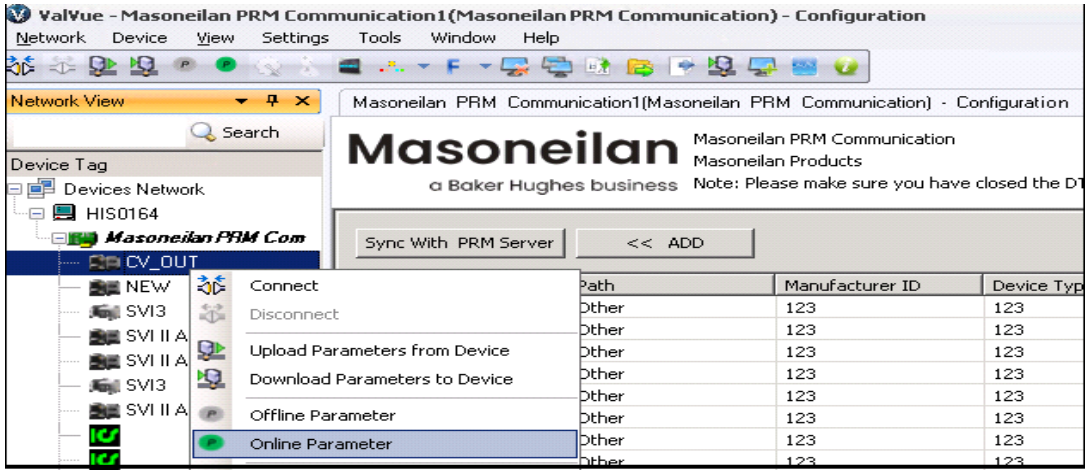
Run Field Devices

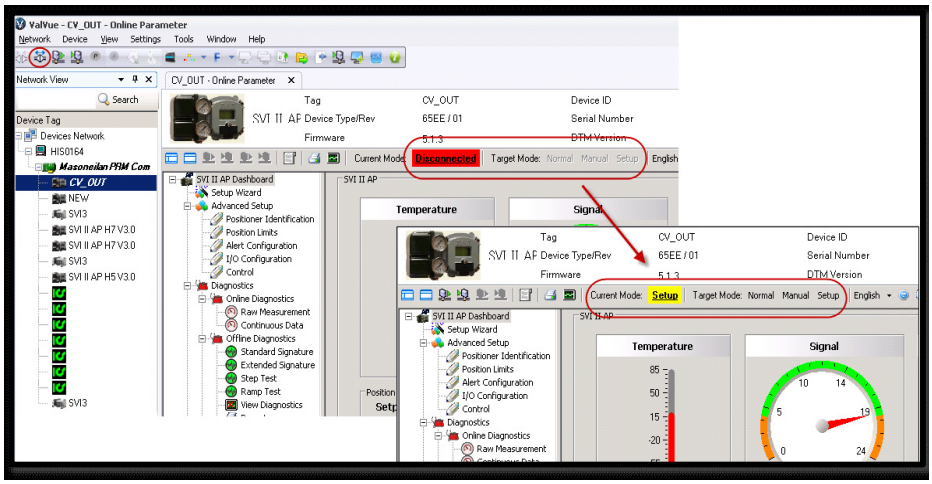
User can run Masoneilan devices by device DTMs or ValVue3 Sequencer after the devices are added into ValVue3 device network view.

Using Device DTM

1. Select the device->Right click the mouse to have pop up menu->Click “Online Parameter”.



2. Connect Device DTM and wait until the DTM gets real status from PRM side ->Then configure device or run calibration test and diagnostic tests on the device through the device DTM.



NOTE

Due to maximum number of concurrent opened devices is 5 at PRM side, if connecting more than 5 device DTMs at the same time, performance from the 6th device will be very slow.

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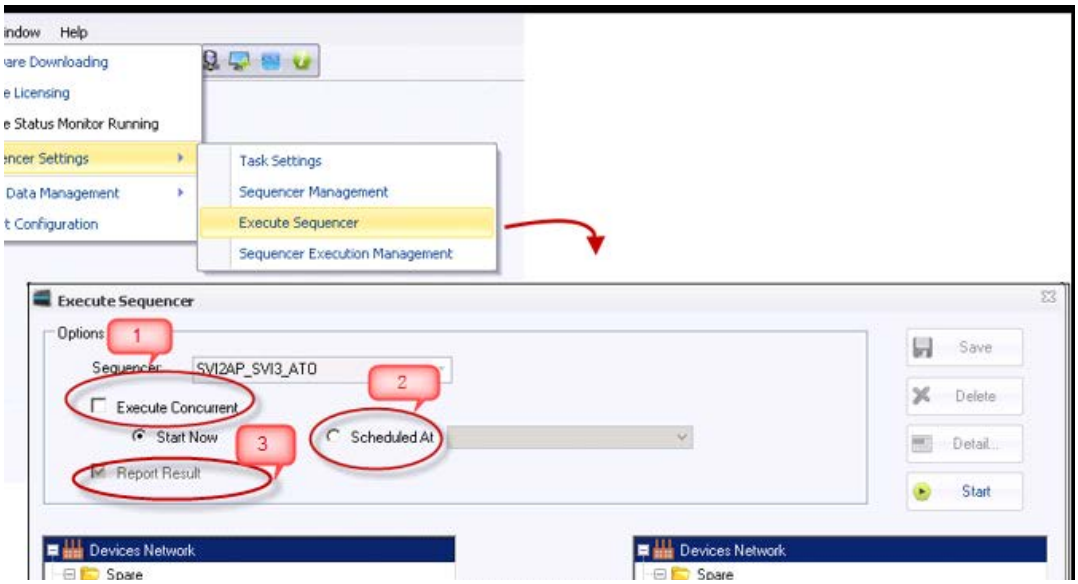
Using ValVue3 Sequencer

1. Open Execute Sequencer window under ValVue3 Tools menu-> Choose a sequencer to run on the devices.



2. Execute Concurrent:
   - √ Turn on: The sequencer will be concurrently executed on all devices.
   - √ Turn off: The sequencer will be executed on the devices one by one.

NOTE

Due to maximum number of concurrent opened devices is 5 at PRM side, if executing ValVue3 sequencer more than 5 devices at one time, errors pops up starting from the 6th device.

To make sure sequencer can be successfully executed on multiple devices:

- √ Option off “Execute Concurrent” before running sequencer
- √ Disconnect the devices before running sequencer

Please turn off ValVue3 Device Monitor Function that may cause communication error during the sequencer.

3. Schedule At: Schedule a time to automatically execute the sequencer on the devices.

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4. Report Result: By default, this option is always ON. A sequencer report that contains positioner information and task result will be generated when all the devices finished the sequencer.

Sequencer Execution Report

Sequencer Name: mode
Task Count: 1
User: HIS0164\Administrator

Positioner Info:

Positioner Tag:	CV_OUT
Device ID:	12285263
Device Type ID:	26094 (0x65EE)
Address:	1
Manufacturer ID:	101 (0x65)
Start Time:	10/26/2020 1:47:12 PM
End Time:	10/26/2020 1:47:19 PM
Total Task Count:	1
Succeeded Task Count:	1

Configuration:

Air Action	Air To Close	**Actuator Type**	Single
Diagnostic Level	Advanced Diagnostics	**Position Unit**	%
Button Lock	Allow Local Buttons	**Language**	French
Bumpless Enabled	On	**Bumpless Value**	1 s/100 %
Characterization Type	Linear	**Custom Points**	N/A
Lower Limit Enabled	On	**Lower Limit**	0.000 %
Upper Limit Enabled	Off	**Upper Limit**	Disable
Position Rate Limit Up	ON	**Position Rate Limit Down**	ON
Position Rate Limit	8.00	**Position Error Time**	3.00 s
Tight Shutoff Enabled	On	**Tight Shutoff**	0.500 %
Position Error Enabled	ON	**Position Error Band**	2.00 %
Allow Diagnostics to Override Limits	On	**Near Closed**	2.00

NOTE

Configuration section cannot be displayed in the sequencer report if the sequencer is executed on multiple devices. This issue will be fixed in next release version.

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