

MEASUREMENT SOLUTIONS

NuFlo™

SCM Viewer[™]

User Manual

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Revision History

The following table shows the revision history for this document:

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Introduction

SCM Viewer is an offline viewer for SCM-formatted binary files downloaded from Scanner Measurement RTUs. The 32-bit SCM Viewer application supports viewing, exporting and graphing of data contained within SCM files.

SCM Viewer is required for viewing data files downloaded with ScanWin Lite. ScanWin PRO users have the option of viewing downloaded files within ScanWin or within SCM Viewer. ScanWin (Lite or PRO) can be configured to automatically initiate SCM Viewer after a data download. See the ScanWin Lite or ScanWin PRO manual for details.

SCM Viewer's easy-to-use interface offers a level of functionality that is equal to or greater than that available within ScanWin PRO.

About This Manual

The SCM Viewer User Manual provides the information and procedures required to install, uninstall, and use SCM Viewer.

This manual is intended for field technicians and managers who have a basic understanding of Microsoft Windows.[®] Prior knowledge of SCM Viewer is not required.

SCM Viewer

Chapter 1: Installing SCM Viewer

Installing SCM Viewer

To install SCM Viewer, perform the following steps:

- 1. Open the ScanWin installation CD, and click on SCMViewer_B100N_Setup.exe.
- 2. Follow the on-screen instructions.
- 3. The **Welcome Screen** will appear. Close all Windows programs, then click the *Next* button.



4. The **License Agreement** dialog is displayed. Use the scroll bar to read the entire message. Click the *Yes* button if you agree to the terms of the agreement and wish to continue the installation.

Clicking the *No* button at this time or the *Cancel* button in later dialogs will cause the following "Setup is not complete" message to be displayed.



You may continue the installation by clicking *Resume*, or terminate the installation by clicking *Exit Setup*.



5. Choose your default unit of measurement.

This unit can later be changed using the program's options settings.

 By default, the program files will be saved to your C:\BARTON\BDMS\PROGRAM\SCMVIEWER. If this location is acceptable, click *Next* to continue.

7. To install the program in a different location, click on the *Browse* button. The window shown at right will appear. Navigate to the folder in which you wish to install the files, and lick *OK*. If the directory does not already exist, you must create it before you perform this step.

Select unit of measurement to use:	 Metric Imperial 		
Wise Installation Wizard®	< Back Newt>	Cano	cel
월 SCM Viewer Destination Location			×
Setup will install SCM Viewer in the following To install into a different folder, click Browse, You can choose not to install SCM Viewer by	and select another folder.	ı	
Destination Folder C:\BARTON\BDMS\PROGRAM\SCMVIE\	WER	B <u>r</u> owse	

😼 Viewer Options

Wise Installation Wizard®

SCM Viewer Options



< <u>B</u>ack

<u>N</u>ext >

Cancel

8. The SCM Viewer installation program gives you the option of choosing a program manager group or creating your own program manager group.

Click Next to continue.

	/iewer Program Manager	Group			
Ente	er the name of the Prog	ram Manager grou	up to add SCM	Viewer icons to:	Print of Arts.
Nuf	Flo Measurement Syste	ms\Barton SCM V	/iewer		
Adr Bar Bus Car Car Del	siness Explorer non Printer Uninstaller nvas 5				
eDi	rawings mes				-

9. The **Start Installation** dialog window will appear. Click on the *Next* button to install SCM Viewer.

Start Installation You are now ready to install SCM Viewer. Click the Next button to begin the installation or the Back button to reenter the installation information.	
Start Installation	
You are now ready to install SCM Viewer.	
Click the Next button to begin the installation or t information.	he Back button to reenter the installation
Wise Installation Wizard®	< Back Next > Cancel

10. When the installation is completed, the dialog window at right appears, and a shortcut icon will appear on the desktop of your computer. Click *Finish*.



Uninstalling SCM Viewer

To uninstall SCM Viewer, select the application within the Control Panel>Add/Remove Program menu, or optionally, run the file 'Unwise.exe' within the install directory: C:\BARTON\BDMS\PROGRAM\ SCMVIEWER. Only application files will be deleted when the application is uninstalled, all data files and directories will remain on your hard drive.

SCM Viewer

Chapter 2: Using SCM Viewer

About SCM Files

An SCM file can contain up to five different types of data:

- Configuration data of selected flowruns and/or system ("S") data
- Historical data (daily and hourly) of selected flowruns
- Event data of selected flowruns noted and/or system ("S") data
- User change data of selected flowruns and/or system ("S") data
- Data logger data of selected data loggers

By default, SCM files are saved to the following directory: c:\Barton\BDMS\Data\Reports.

This destination directory is user-configurable, however. See the ScanWin PRO or ScanWin Lite manual for information on customizing the destination directory.

Opening SCM Viewer

To open SCM Viewer, click on the shortcut icon on the desktop of your computer, or click on the Start menu, navigate to the SCM Viewer application (NuFlo Measurement Systems>Barton SCM Viewer>SCM Viewer), and click to open the application.

The Main Menu screen will appear. The main menu has four headings – *File*, *Settings*, *Window* and *Help*.

] 🗟 <u>F</u> ile	<u>S</u> ettings	<u>W</u> indow	<u>H</u> elp
) 🛩 🖻 🔁			

File Menu

The file menu consists of five menu options: *Open*, *Send to Mail Recipient*, *Close*, *Recent Files* and *Exit*.



Open

Select File>Open to view a list of SCM files.

Click on an SCM file to display a summary of file contents in the right column of the screen.

The SCM File contents can contain the following information:

- File name
- SCM file format version
- Number of flowruns within the file
- Number of records within the file
- The date and time the data was downloaded from a Scanner

Look in:	🗀 SCM		- 🗧 🖻 🖛	•	SCM File Contents
My Recent Documents Desktop My Documents My Computer	a) 1131DE00.SCM a) 1131DE01.SCM a) 1131DE01.SCM a) 1131DE02.SCM a) 1131DE04.SCM a) 1131DE04.SCM a) 1131DE05.SCM a) 1131DE05.SCM a) 1131DE09.SCM a) 1131DE09.SCM a) 1131DE09.SCM a) 1131DE10.SCM a) 1131DE11.SCM a) 1131DE13.SCM a) 1131DE13.SCM a) 1131DE13.SCM a) 1131DE13.SCM	A) 1131DE15.SCM A) 1131DE16.SCM A) 1131DE16.SCM A) 1131DE17.SCM A) 1131DE17.SCM A) 1131DE19.SCM A) 1131DE20.SCM A) 1131DE20.SCM A) 1131DE20.SCM A) 1131DM00.SCM A) 1131DM00.SCM A) 1131DM00.SCM A) 1131DM00.SCM A) 1131DM04.SCM A) 1131DM04.SCM A) 1131DM05.SCM	▲ 1131DM06.SCM ■ DEM1UN00.SCM		File: 1131DE07.SCM Version: SCM 1.2 No. of flowruns: 3 Date collected: 23 Date collected: 2005-09-13 13:05:33 Node: 1131DEM3 - Data - Cfg: S 1 2 3 Hist: 1 2 3 Evts: S UCs : S 1 2 3 DLs : 1 Range 2005-09-12 15:47:1. to 2005-09-13 13:04:33
My Network	File name: 1	131DE07.SCM	-	Open	
Places	Files of type:	canWin SCM files	-	Cancel	iL

- The name of the node related to the data collected
- Data: A summary of data types contained in the file, and the number of flowruns or dataloggers represented. An "S" indicates data that is specific to the entire system.
- Range: The beginning and ending date/time of all data collections within the file. Not all data will have the same beginning and ending date/time, but all data will fall on the beginning or ending date or somewhere in between.

To open the file, push the *Open* button. The screen shown on page 13 will appear. See Chapter 3 for a detailed explanation of parameters displayed.

To close the dialog without opening a file, click the *Cancel* button.

SCM Viewer - [Node: F	PL_DEMO (F	ile: PL	DEM00.SC	M)]						
🖳 🔄 Eile Settings Window	<u>H</u> elp									_ 8 ×
Poll Date: 2005-12-20 11:26:29) Firmw	are: NFlo	P4.3.2Fb2	Fi	e: C:\Barton\I	odms\DATA\	EXPORTS\S	CM\PL_DEM	00.SCM	
(Hourly History) Daily History	Configuration	n Eve	nts ScanPl	.C Log						
Time	Status Fl	ags	Total Volume	Differenti al Pressure	Flow Extension	Flowing Pressure	Live Temperat ure	Meter factor	Flowtime	
			E3M3	kPa		kPaa	С		9/0	
2005-08-24 22:00:00	U	P GV	0.348	19.161	332.916	706.023	21.111	1.000	100.000	
2005-08-24 23:00:00	υ	P GV	0.348	19.161	332.916	706.023	21.111	1.000	100.000	
2005-08-25 00:00:00	υ	P GV	0.348	19.161	332.916	706.023	21.111	1.000	100.000	
2005-08-25 01:00:00	υ	P GV	0.348	19.161	332.916	706.023	21.111	1.000	100.000	
2005-08-25 02:00:00	υ	P GV	0.348	19.161	332.916	706.023	21.111	1.000	100.000	
2005-08-25 03:00:00	υ	P GV	0.348	19.161	332.916	706.023	21.111	1.000	100.000	
2005-08-25 04:00:00	υ	P GV	0.348	19.161	332.916	706.023	21.111	1.000	100.000	
2005-08-25 05:00:00	υ	P GV	0.348	19.161	332.916	706.023	21.111	1.000	100.000	
2005-08-25 06:00:00	υ	P GV	0.348	19.161	332.916	706.023	21.111	1.000	100.000	~
PL_DEMO [#1] PL [#2]										
e- estimate	date/time H - HW out of F - flowrun alar C - check alar	rms	D - DP defau P - SP defau T - Temp def	lt .	💹 <u>G</u> raph	• A • •	election All Tabs Current Tab			
	1 - status #1		G - Gr/RHof V - Hv defau	default	Export <u>E</u> xport		<u>Print</u>			

Send to Mail Recipient

The Send to Mail Recipient option allows a user to send an SCM file as an email attachment. To send a file, select the SCM file, then choose File>Send to Mail Recipient. A message is composed in the default e-mail program, and the SCM file will appear as an attachment. Simply enter the recipient's email address in the "To..." field and press Send to transmit the file via email.

The Send to Mail Recipient option is active only when an SCM file is open.

Please review this file: 1131DE07.SCM (Node: 1131DEM3) - Message (Plain Text)	
¹ <u>F</u> ile <u>E</u> dit <u>V</u> iew Insert Format <u>T</u> ools <u>A</u> ctions <u>H</u> elp	
	= = = = = = =
This message has not been sent.	
To	
Cc	
Subject: Please review this file: 1131DE07.5CM (Node: 1131DEM3)	
Attach Attach Attach	Attachment Options
File: 1131DE07.SCM	
Version: SCM 1.2	
No. of flowruns: 3 No. of records: 23	
Date collected:	
2005-09-13 13:05:38	
Node: 1131DEM3	
- Data -	
Cfg : S 1 2 3 Hist 1 2 3	
Evts: S	
UCs: S123 DLs: 1	
Range	
2005-09-12 15:47:11 to 2005-09-13 13:04:35	
	V

Close

Pressing the Close button will close the active open SCM file.

Recent Files List

The Recent Files List contains the four most recently opened SCM files. Any of these files can be opened simply by clicking on it.

Exit

Pressing the Exit button will close the application.

Settings

The Settings menu options (*Options*, *Unit Type* and *Logging Level*) allow the user to change settings affecting the application. Changes will not affect currently open SCM files, but will apply to any files opened after the settings are changed.

🗟 SC	CM Viewer	
File	<u>Settings</u> <u>W</u> indow <u>H</u> elp	
2	Options Unit Type Logging Level	

Options

The Options menu is the general dialog that specifies how data will be represented within the application. Changes made to this dialog become effective only after the 'OK' button is pressed. To exit the dialog without making changes, press 'Cancel.'

History Tab

The History tab allows the user to specify how specific data will be displayed within the application. The settings are categorized under four main groupings: General, Spreadsheet, Graph, and Graph Settings. The user can change the following data (as shown in the column headings of the screen capture on page 15):

1) General

- Name: The name NuFlo applications use internally to describe the data.
- ID: The hex number NuFlo applications use internally for this data.
- User Text: The name the user can set to describe the data.
- Decimal Places: The number of decimal places displayed in the values shown within the application. If the Decimal Places setting is set at -1, then the decimal places will be identical to

	Gene	ral		Spre	eadsheet				Graph			
Name	ID	User Text	Decimal Places	Show	Column Width	Show	Color	Min Range	Auto Min	Max Range	Auto Max	ŀ
Total Volume (Base	03060010	Total Volume	0	✓	64	✓		0.00	V	100.00	V	1
Fotal Mass	0E040010	Total Mass	0	~	64	~		0.00	~	100.00	~	
Total Energy	11040010	Total Energy	0	•	64	✓		0.00	~	100.00		
Uncorrected Pulse Total	08020010	Uncorrected Pulse Total	0	✓	64	✓		0.00	~	100.00	~	
Average Input frequency	0803001	verage Input frequency	0		69	 ✓ 		0.00		00.00	V	
Differential Pressure	04020010	fferential Pressure	0			✓		0.00		90.00	V	
low Extension (=sqrt(DP *	02020010	pw Extension	0			<		0.00		30.00	~	
Flowing Pressure	01030010	Flowing Pressure	0	~	64	v		0.00	V	100.00	v	
live Temperature	01020010	Live Temperature	0	~	64	<		0.00	~	100.00	~	
Real Gas Relative density	07010010	Real Gas Relative density	0	~	64	~		0.00	~	100.00	~	
Fluid Density at flowing	06010010	Fluid Density at flowing	0	<	64	<		0.00	V	100.00	V	
olumetric Heating value	10010010	Volumetric Heating value	0	✓	64	<		0.00	~	100.00	~	
Meter factor (interpolated)	04110010	Meter factor	0	~	64	✓		0.00	~	100.00	~	
Base Solids and Water	2D010010	Base Solids and Water	0	✓	64	<		0.00	V	100.00	V	
Peak Pressure (hourly)	45010010	Peak Pressure	0	~	64	<		0.00	V	100.00	~	
Peak Volume Flow Rate	45030010	Peak Volume Flow Rate	0	<	64	✓		0.00	V	100.00	~	

the decimal places used within the SCM file.

- 2) Spreadsheet
 - Show: This checkbox determines whether or not the data is shown on the spreadsheet. If the checkbox is checked, the data is shown on the spreadsheet; if the checkbox is not checked, the data will not be shown on the spreadsheet. If the data is not shown on the spreadsheet, it cannot be shown on the graph either.
 - Column Width: This value is the width this data takes up on the spreadsheet. The column width can be changed on the fly by positioning the cursor on the right boundary of a column and dragging it to the right or left.
- 3) Graph
 - Show: This checkbox determines whether or not the data is shown on the graph. If the checkbox is checked, the data is shown on the graph; if the checkbox is not checked, the data will not be shown on the graph. If the data is not shown on the spreadsheet, it cannot be shown on the graph either.
 - Color: The color used to draw the line of data on a graph. To change the color, click on the color displayed and then select a new color. Press "OK" to select the color. Click "Cancel" to revert to the original color.
 - Min Range: Theminimum valueto beshown on the graph. This number is ignored if "Auto Min" is selected.
 - Auto Min: Automatically determines the minimum value to allow the bottom-most range data to be shown on the graph.
 - Max Range: The maximum value to be shown on the graph. This number is ignored if "Auto Max" is selected.
 - Auto Max: Automatically determines the maximum value to allow the bottom-most range data to be shown on the graph.

4) Graph Settings

The Graph Settings box near the bottom of the screen allows the user to establish the number of days of data that are visible at one timeon the graph and to specify the background color of the graph. All data is loaded into the graph. The range refers to how many days are visible in the default graph view. The user can use the scroll bars to view additional data.

Units Tab

The Unit tab allows the user to specify the unit to use with each item of data. For historical data, the user can select different units depending upon the type of flowrun: gas, liquid or monitor. Units for configuration data are based upon categories and any changes here will affect all data within that category.

To change a unit, simply select the cell with the old unit to view a dropdown menu. Then, choose a new unit from the dropdown options. If no dropdown menu appears, units are not applicable for the selected type of data, or the unit cannot be changed from this screen (and must be edited manually within the related scmviewer.ini file).

History					Configuration		
Name	Gas	Liquid	Monitor	-	Category	Units	ł
Total Volume (Base	MCF	 MCF 	MCF		Temperature	F	-
Total Mass	Lbm	Lbm	Lbm		¥olume	MCF	
Total Energy	MMBTU	MMBTU	MMBTU		Distance	in	
Uncorrected Pulse Total	MCF	MCF	MCF		Static Pressure	kPaa	
Average Input frequency	Hz	Hz	Hz		Differential Pressure	IWC	
Differential Pressure	IWC	IWC	IWC		Energy	MMBTU	
Flow Extension (=sqrt(DP					Mass	Lbm	
Flowing Pressure	psia	psia	psia		Density	Lbm/CF	
Live Temperature	F	F	F		Time	s	
Real Gas Relative density	RDg	RDg	RDg		Current	A	
Fluid Density at flowing	Lbm/CF	Lbm/CF	Lbm/CF		Voltage	v	
Volumetric Heating value	BTU/CF	BTU/CF	BTU/CF		Absolute Viscosity	Lbm/Fts	
Meter factor					Percent N2	%	
Base Solids and Water					Percent CO2	%	
Peak Pressure (hourly)	psig	psig	psig		Percent C1	%	
Peak Volume Flow Rate	MCF/d	MCF/d	MCF/d		Volume Rate	MCF/d	
Hourly Flowtime	%	%	%		Mass Rate	Lbm/d	
Input 1					Energy Rate	MMBTU/d	
Input 2					Mass Heating Value	BTU/Lbm	
Input 3					Volume Heating	BTU/CF	
System input voltage	v	v	v	•	% per Static	%/MPag	

Unit Type

The Unit Type menu allows the user to select which unit format the application will use, either metric or Imperial. The default is set when the application is installed (see *Chapter 1: Installing SCM Viewer*).

Log Level

The Log Level menu sets the level of messages that will be written to the log file while loading an SCM file into the viewer. The following list contains the common settings. Level 20 is the default.

- 1 Only error messages
- 10 As above plus warning messages and summary
- 20 As above plus basic conversion tracking
- 40 As above plus more conversion tracking
- 50 As above plus conversion processing details
- 60 As above plus detailed tracking
- 80 As above plus extensive tracking
- 100 As above plus internal details

110 - As above plus extensive details

Window

The Window menu allows the user to either select an open SCM file or automatically arrange the open files, as shown below. The Window options are available for selection only when an SCM file is open.

SCM Viewer -	Node: PL_I	DEMO (File: P	L_DEMOO.SC	M)]
Eile Settings	Window Hel	P		
Poll Date: 12/20/20	Tile Horizo	ally		Log
Time	✓ <u>1</u> Node: P	L_DEMO (File: Pl	DEM00.SCM)	feren al rressur
			E3M3	kPa

Help

About

Through the About selection, a user can determine the version of SCM Viewer and view the end-user license agreement to which he or she agreed when installing the application.

Manual

Click on Manual to access an electronic copy of this document.

Send File to NuFlo

The Send File to NuFlo option is a shortcut for seeking technical support, and is active only when a file is open. When this menu item is selected, the default email program composes a message to to the NuFlo HelpDesk. Attached to this message will be the SCM file you have open, as well as the log file that is associated with it.

To aid technical support staff in solving the problem, add an explanation of the problem at the end of the message.

<u>File Settings Window</u>	Help
	<u>A</u> bout <u>M</u> anual Send File to NuFlo

😭 Attention : Scanner Software Product Team Leader - Message (Plain Text)	- - ×						
Eile Edit View Insert Format Iools Actions Help							
∷⊡ <u>S</u> end 🛃 🛃 🕡 🛄 🦉 📜 📲	三日日年年年月						
This message has not been sent.							
To NuFlo Helpdesk <helpdesk@nuflotech.com></helpdesk@nuflotech.com>							
Cc							
Subject: Attention : Scanner Software Product Team Leader							
Attach (Attachment Options							
Product Version: SCM Viewer B1.0.0Nb19 Operating System: Windows XP (Build: 2600: SP2) Computer CPU: Intel(R) Pentium(R) 4 CPU 2.80GHz Available Memory: 509.98 MB (Used: 54 %) Please enter the problems you have encountered with this SCM file:	×						

SCM Viewer

Chapter 3: Viewing an SCM File

Opening an SCM File

From the Main screen, select File>Open to view the SCM files available for viewing.

Click on an SCM file to display a summary of file contents in the right column of the screen.

Click the *Open* button to fully display the contents of the file.

The file contents is categorized by data type, with each data type stored under a separate tab (for example, Hourly History, Daily History, Configuration, etc.).

When an SCM file is opened, the data is read from the file and populated under the appropriate tab. As the file loads, the progress is shown on the log tab and entries are added to the log, depending upon the log level. When the file load is complete, the loading progress bar will read "100%" and the Main screen will open with the left tab displayed for viewing. Only tabs that reflect data contained within the SCM file will be displayed.

Above the tab, the following information is displayed:

• Poll Date: the date/time the data was collected from the Scanner



E Ele Settings Window	Help								-	- 8
Poll Date: 2005-12-20 11:26:2	9 Firms	ware: NFlo	P4.3.2Fb2	File: 0	:\Barton\bdm	s\DATA\EXF	ORTS\SCM\	PL_DEMOD	SCM	
Hourly History	Configuratio	Ever	nts ScanP							
Time	Status		Total	Differential	Flow	Flowing	Live	Meter	Flowtime	
			Volume	Pressure	Extension	Pressure	Temperat ure	factor		1
			E3M3	kPa		kPaa	С		%	
2005-08-24 22:00:00	U	P GV	0.348	19.161	332.916	706.023	21.111	1.000	100.000	
2005-08-24 23:00:00	υ	₽ GV	0.348	19.161	332.916	706.023	21.111	1.000	100.000	
2005-08-25 00:00:00	U	P GV	0.348	19.161	332.916	706.023	21.111	1.000	100.000	
2005-08-25 01:00:00	U	P GV	0.348	19.161	332.916	706.023	21.111	1.000	100.000	
2005-08-25 02:00:00	U	P GV	0.348	19.161	332.916	706.023	21.111	1.000	100.000	
2005-08-25 03:00:00	U	P GV	0.348	19.161	332.916	706.023	21.111	1.000	100.000	
2005-08-25 04:00:00	U	P GV	0.348	19.161	332.916	706.023	21.111	1.000	100.000	
2005-08-25 05:00:00	υ	P GV	0.348	19.161	332.916	706.023	21.111	1.000	100.000	
2005-08-25 06:00:00	U	P GV	0.348	19.161	332.916	706.023	21.111	1.000	100.000	
PL_DEMO [#1] PL [#2]										
Status Flag - Current selected	date/time					Print Selec	tion			
p - partial	H - HW out o		D - DP defai		Graph	(All T	555 C			
e- estimate M- memory fault	F - flowrun al C - check ala		P - SP defau T - Temp de	AL		C Curre	ent Tab			
E- events occurred	1 - status #1		G - Gr/RHof		Export	AB	rint			
U - user changes occurred	2 - status #2		V - Hy defai		man					

- Firmware: the firmware version of the Scanner from which data was collected
- File: the file path of the file being viewed

Changing Column Width

Hourly History, Daily History, and Configuration data are presented in tabular format. It may be necessary to adjust the default column width to properly view the data in table cells. To change the width of a column, position the cursor on the right border of the header cell in the column you want to change. When the cursor aligns with the border and changes shape, hold down the left mouse button and drag to widen the column. These changes will be saved and will be displayed the next time the application is run.

K Ele Settings Window	Help										- 8
e 280											
Poll Date: 2005-12-20 11:26:2	9 Firmw	are: I	NFlo	P4.3.2Fb2	File: 0	:\Barton\bdm	s\DATA\EXF	ORTS\SCM\	PL_DEM00.	SCM	
Hourly History Daily History	Configuratio	n	Ever	nts ScanP	LC Log						
Time	Status F			Total Volume	Differential Pressure	Flow Extension	Flowing Pressure	Live Temperat ure	Meter factor	Flowtime	
				E3M3	kPa		kPaa	с		%	
2005-08-24 22:00:00	U	P	GV	0.348	19.161	332.916	706.023	21.111	1.000	100.000	
2005-08-24 23:00:00	υ	P	GA	0.348	19.161	332.916	706.023	21.111	1.000	100.000	
2005-08-25 00:00:00	U	P	GV	0.348	19.161	332.916	706.023	21.111	1.000	100.000	
2005-08-25 01:00:00	U	P	GV	0.348	19.161	332.916	706.023	21.111	1.000	100.000	
2005-08-25 02:00:00	U	P	GV	0.348	19.161	332.916	706.023	21.111	1.000	100.000	
2005-08-25 03:00:00	U	P	GV	0.348	19.161	332.916	706.023	21.111	1.000	100.000	
2005-08-25 04:00:00	U	P	GV	0.348	19.161	332.916	706.023	21.111	1.000	100.000	
2005-08-25 05:00:00	U	P	GV	0.348	19.161	332.916	706.023	21.111	1.000	100.000	
2005-08-25 06:00:00	U	P	GV	0.348	19.161	332.916	706.023	21.111	1.000	100.000	
PL_DEMO [#1] PL [#2]											
Status Flag - Current selecter	date/time	-					Print Selec	tion			
p - partial	H - HW out of					💓 Graph	€ AIIT	abs			
e- estimate M- memory fault	F - flowrun ale C - check ala			P · SP defau T · Temp de	AL	- Trabin	C Curre	ent Tab			
E- events occurred	1 - status #1			G - Gr/RHol		Export	A	Print			
U - user changes occurred	2 - status #2			V - Hy defau		E					

Hourly / Daily History Tabs

The Hourly History and Daily History tabs show historical data from the SCM file. Sub-tabs allow the user to select the flowrun to be viewed. The sub-tabs are labeled with the flowrun name and [number]—for example, RUN001(#1).

The columns shown for each flowrun depend upon the data contained within the SCM file and the columns that the user has selected for display. All spreadsheets show the date/time in the first column and the status flags for the associated date in the second column. To view what status flags are associated with each date/time, click on a cell within that row. Explanations of associated status flags are highlighted at the bottom of the screen.

Buttons at the bottom of the screen allow the user to view the data in a graph, to export the data to a file, or to print one or all tabs. Right-clicking in a cell within the table displays a dropdown list with similar options, plus options to copy a selection or an entire sheet to the clipboard for pasting in another application.

	2 Firmware: NFIo M4.	.3.4RaAb	File: C:\barto	n\bdms\DATA\	EXPORTS\SI	CM\1131DE23.SC	ЭМ	
Hourly History Daily History	Configuration Events	User Changes	Log					
Time	Status Flags	Total ¥olume	Total Energy	Uncorrecte d Pulse Total	Flowing Pressure	Live Temperature	Meter factor	Hourly Flowtime
		MCF	MMBTU	MCF	psia	F		%
2005-10-29 13:00:00	PTGV	4785985	4881705	2358125	31	78	1	100
2005-10-29 14:00:00	PTGV	4786368	4882095	2358313	31	78	1	100
2005-10-29 15:00:00	PTGV	4786368	4882095	2358313	31	78	1	100
2005-10-29 16:00:00	PTGV	4786368	4882095	2358313	31	78	1	100
2005-10-29 17:00:00	PTGV	4786751	4882486	2358502	31	78	1	100
2005-10-29 18:00:00	PTGV	4785985	4881705	2358125	31	78	1	100
2005-10-29 19:00:00	PTGV	4786751	4882486	2358502	31	78	1	100
2005-10-29 20:00:00	PTGV	4785985	4881705	2358125	31	78	1	100
2005-10-29 21:00:00	PTGV	4787698	4883451	2358969	31	78	1	100
	PTGV	4785038	4880739	2357658	31	78	1	100
2005-10-29 22:00:00	DECH	4786751	4882486	2358502	31	78	1	100
2005-10-29 22:00:00 2005-10-29 23:00:00	PIGV							
2005-10-29 23:00:00 RUN001 [#1] RUN002 [#2] Status Flag - Current selected	RUN003 (#3) I date/time	DP default	1	- Print S	election	1		

 Be Settings Window Be B □ Poll Date: 12/20/2005 11:26:2 		vare: NFlo	P4.3.2Fb2	Fi	le: C:\Barton\	bdms\DATA\	exports\s	CM/PL_DEM	100.SCM	_8
Hourly History Daily History	Configuratio	n Eve	nts ScanP	LC Log						
Time	Status	Flags	Total Volume	Differenti al Pressure	Flow Extension	Flowing Pressure	Live Temperat ure	Meter factor	Flowtime	
			E3M3	kPa		kPaa	с		%	
2005-08-24 22:00:00	U	P GV	0.348	19.161	332.916	706.023	21.111	1.000	100.000	
2005-08-24 23:00:00	U	P GV	0.348	19.161	332.916	706.023	21.111	1.000	100.000	
2005-08-25 00:00:00	U	P CV	0.348	19.161	332.916	706.023	21.111	1.000	100.000	
2005-08-25 01:00:00	U	P GV	0.348	19.161	332.916	706.023	21.111	1.000	100.000	
2005-08-25 02:00:00	U	PGV	0.348	19.161	332.916	706.023	21.111	1.000	100.000	
2005-08-25 03:00:00	U		Copy Selection	an L	332.916	706.023	21.111	1.000	100.000	
2005-08-25 04:00:00	υ	P	Copy Sheet		332.916	706.023	21.111	1.000	100.000	
2005-08-25 05:00:00	U		Graph		332.916	706.023	21.111	1.000	100.000	
2005-08-25 06:00:00	U	P	Export		332.916	706.023	21.111	1.000	100.000	1
PL_DEMO [#1] PL [#2]			Print All Tabs		An and the second second second	have a second second second	Annen in concerne	Log of Color	Antonio In-	
Status Flag - Current selected			Print Current			Print S	election	1.		
p · partial	H - HW out o		D - DP defai		Graph	Sec. 1	All Tabs			
e-estimate M-memory fault	F - flowrun all C - check ala		P - SP defau T - Temp de		the graph	1 00	Current Tab			
	1 - status #1		G - Gr/RHof			1 4	Print			
U - user changes occurred	2 - status #2		V - Hv defau	4	- E Popost					

Graph

To view data from the active flowrun as a graph, click on the Graph button at the bottom of the main SCM Viewer screen. The data shown is dependent upon the data within the spreadsheet and any user-configurable options selected. Since the graph appears in a window that is separate from the main SCM Viewer screen, users can tab through graphs of associated flowruns by keeping the graph dialog open and selecting a different flowrun tab from the Main screen.

The parameter represented by the y-axis scale (on the left) is determined by the selection in the "Scale to use" dropdown menu above the graph.

🗟 Node: KOCH (File: KOCH00.5CM)	_ 🗆 🗵
2005-08-05 Start Date: 04:00 Scale to use: Officiential Pressure End Date:	2005-08-18 • 04:00 •
•	•
Flowrun: 95161160T1 [#1]	
E 0.12 B 0.09 C 0.09	
2005-08-06 2005-08-06 2005-08-10 2005-08-12 2005-08-14 2005-08-16 00:00 00:00 00:00 00:00 00:00 00:00 Deterfine Image: Constraint of the state of the s	2005-08-18 00:00
Right click scale to Brance Export	<u> </u>

The user selects the types of data to be displayed in the graph by checking (or unchecking) the checkboxes in the legend below the graph.

The range of data viewed on the screen can be changed by specifying a Start date and an End date at the top of the screen, or by using the zoom buttons. Regardless of the view displayed, the "Reset" button at the top of the screen will restore the default range view.

Export from Graph Window

The "Export" button at the bottom of the screen allows the user to copy, save, or email the graph in a variety of formats. To export the graph, click Export, select the format desired, select a color setting, and press the appropriate button—Copy, Save, or Send—at the bottom of the dialog screen. Click "Close" to return to the Graph screen.



Print from Graph Window

The "Print" button at the bottom of the screen allows the user to preview the graphical display before it is printed. To print a graph, click Print in the graph window, specify the printer, choose file setup options, orientation, margins, etc., and click Print in the Preview of Graph window. Click "Close" to return to the Graph screen.



Close

The "Close" button at the bottom of the graph screen closes the graph dialog.

Export from Hourly / Daily History Tab

Clicking on the Export button at the bottom of the main SCM Viewer screen exports all the data from the flowruns in a variety of file formats including Excel, comma delimited, text, HTML, and Microsoft Word.

Print from Hourly / Daily History Tab

Clicking on the Print button at the bottom of the main SCM Viewer screen sends data to a selected printer. Radio buttons located immediately above the Print button give the user the option of printing from only the selected flowrun (Current Tab) or all the flowruns included in the SCM file (All Tabs).

RUN001 [#1] RUN002 [#2] RUN003 [#3]			
- Status Flag - Current selected	d date/time			Print Selection
p - partial e- estimate M- memory fault E- events occurred U - user changes occurred	H - HW out of range F - flowrun alarms C - check, alarms 1 - status #1 2 - status #2	D - DP default P - SP default T - Temp default G - Gr/RHof default V - Hv default	Export	All Tabs C Current Tab Print

Configuration Tab

The Configuration tab shows the configuration data from the SCM file. Subtabs allow the user to select the flowrun to be viewed, and a System sub-tab shows configuration data specific to the Scanner as a whole.

Buttons at the bottom of the screen allow the user to export the data to a file, or to print one or all tabs.

Right-clicking in a cell within the table displays a dropdown list with similar options, plus options to copy a selection or an entire sheet to the clipboard for pasting in another application.

C Rei Constanti	34BaAb File: C:\barton\bdms\DAT	A\EXPORTS\SCM\1131DE23.SC
Hourly History Daily History Configuration Events	User Changes Log	
Item	¥alue	Units
Board ID Number	00080866	
Station number	1131	
Gas Day Hour	8	
Number of flowruns	3	
Input battery voltage	14.8331	V
Battery charging voltage	28.8882	V
Low battery level	11.5	V
Low battery deadband	0.25	V
Low battery alarm status	0	
Low battery alarm output	Unassigned	
ATOD System Voltage Reference	4.99729	V
NVRAM backup battery voltage	3.13725	V
System (RUN001 [#1] (RUN002 [#2] (RUN003 [#3] /		

Export

Clicking on the Export button at the bottom of the main SCM Viewer screen exports all the data from the flowruns in a variety of file formats including Excel, comma delimited, text, HTML and Microsoft Word.

Print

Clicking on the Print button at the bottom of the main SCM Viewer screen sends data to a selected printer. Radio buttons located immediately above the Print button give the user the option of printing from only the selected flowrun (Current Tab) or all the flowruns included in the SCM file (All Tabs).

\System (RUN001 [#1] (RUN002 [#2]) RUN003 [#3] /		
	Export	Print All Tabs Print Current Tab Print

Events

The Events tab shows the events data from the SCM file. Sub-tabs allow the user to select the flowrun to be viewed, and a System sub-tab shows event data specific to the Scanner as a whole.

Buttons at the bottom of the screen allow the user to export data to a file, or to print one or all tabs.

Right-clicking in a cell within the table displays a dropdown list with similar options, plus options to copy a selection or an entire sheet to the clipboard for pasting in another application.

Export All / Export

Clicking on the Export All button at the bottom of the main SCM Viewer screen saves all events and user changes in a single file, ordered by number. Clicking on the Export buttons saves only events to the SCM file, ordered by number. The data is saved in a Word document format.

Print

Clicking on the Print button at the bottom of the main SCM Viewer screen prints the data to a selected printer. Radio buttons located immediately to the left of the Print button give the user the option of printing from only the selected flowrun (Print Current Tab) or all the flowruns included in the SCM file (Print All Tabs).

User Changes

The User Changes tab shows the user changes data from the SCM file. Sub-tabs allow the user to select the flowrun to be viewed, and a System sub-tab shows user change data specific to the Scanner as a whole.

Buttons at the bottom of the screen allow the user to export data to a file, or to print one or all tabs.Right-clicking offers the user the same options as the buttons plus the ability to copy a selection to the clipboard.



Export All / Export

Clicking on the Export All button at the bottom of the main SCM Viewer screen saves all events and user changes in a single file, ordered by number. Clicking on the Export buttons saves only user changes to the SCM file, ordered by number. The data is saved in a Word document format.

Print

Clicking on the Print button at the bottom of the main SCM Viewer screen prints the data to a selected printer. Radio buttons located immediately to the left of the Print button give the user the option of printing from only the selected flowrun (Print Current Tab) or all the flowruns included in the SCM file (Print All Tabs).

ScanPLC

If ScanPLC data exists in the SCM file, a ScanPLC tab will be displayed.

The format for these events takes the information from a plc_evt.fmt initialization file.

Buttons at the bottom of the screen allow the user to export data, to generate a report in Word format, or to print one or all tabs.Rightclicking offers the user the same options as the buttons plus the ability to copy a selection to the clipboard.

🗟 SCM Viewer - [Node: EQT-Plunger (File: EQT-PI00.SCM)]	_ 🗆 ×
🗟 File Settings Window Help	_ 8 ×
Poll Date: 2005-11-15 09:12:16 Firmware: NFIo P4.3.1F File: C:\barton\bdms\DATA\EXPORTS\SCM\EQT-P100.SCM	
Hourly History Daily History Configuration Events User Changes ScanPLC Log	
User Change Number: 692	
User Change Type: ScanPLC program generated	
User Change Occurred on: November 24, 2004 19:16:57	
User logged in: None	
Record Type: 150	
Event: Shutin	
Length: 24 String = 90.0,80.0,65.0,6.1,68.0	
Casing (psig) : 90.0	
Tubing (psig) : 80.0	
Line (psig) : 65.0	
DP (iwc): 6.1	
Flow (MCF/d) : 68.0	
User Change Number: 693	
User Change Type: ScanPLC program generated	
User Change Occurred on: November 24, 2004 19:16:59	
User logged in: None	
Record Type: 150	-
	_
Export Export Emport	

Export

Clicking on the Export button at the

bottom of the main SCM Viewer screen saves all data in a in comma delimited format.

Report

Clicking on the Report button at the bottom of the main SCM Viewer screen saves all data in Word document format.

Print

Clicking on the Print button at the bottom of the main SCM Viewer screen prints all data to a selected printer.

DataLoggers Tab

Data logs can be used to log variables that are not included in the flowrun hourly logs or to log data at intervals other than hourly and daily. Data logs are useful as troubleshooting tools.

The DataLoggers tab is very similar to the Hourly and Daily History tabs. Sub-tabs allow the user to select the datalogger to be viewed. The subtabs are labeled with the datalogger number—for example, DL #1. Clicking on a sub-tab allows the user to view the associated historical data for that datalogger.

🗟 SCM Viewer - [Node: VLI	test31 (File: ¥Lte	st01.5CM)]		_ []
🗟 File Settings Window	Help			_ 8
🗳 🖷 🗉 🛛				
Poll Date: 2005-11-23 09:23:0	18 Firmware:	NFIo M4.3.4RbC	File: C:\BARTON\BDMS\DATA\Exports\SCM\VLtest01.SCM	
Hourly History Daily History	Configuration	Events User Ch	anges DataLoggers Log	
Time	Flowrun #1:	Flowrun #1:		
	Single Live Differential	Gauge Pressure		
	Pressure	FICSSOIC		
	kPa	kPag		
	snapshot	snapshot		
2005-11-18 09:20:00	12.442	3102.600		
2005-11-18 09:25:00	12.442	3102.600		
2005-11-18 09:30:00	12.442	3102.600		
2005-11-18 09:35:00	12.442	3102.600		
2005-11-18 09:40:00	12.442	3102.600		
2005-11-18 09:45:00	12.442	3102.600		
2005-11-18 09:50:00	12.442	3102.600		
2005-11-18 09:55:00	12.442	3102.600		
2005-11-18 10:00:00	12.442	3102.600		
2005-11-18 10:05:00	12.442	3102.600		
2005-11-18 10:10:00	12.442	3102.600		
2005-11-18 10:15:00	12.442	3102.600		
DL #1				
			Graph Export Current Tab	Print

The columns shown for each datalogger depend upon the data contained within the SCM file.

Buttons at the bottom of the screen allow the user to view the data in a graph, to export the data to a file, or to print one or all tabs. Right-clicking in a cell within the table displays a dropdown list with similar options, plus options to copy a selection or an entire sheet to the clipboard for pasting in another application.

Graph

To view data from the active datalogger as a graph, click on the Graph button at the bottom of the main SCM Viewer screen. The data shown is dependent upon the data within the spreadsheet and any userconfigurable options selected. Since the graph appears in a window that is separate from the main SCM Viewer screen, users can tab through graphs of associated dataloggers by keeping the graph dialog open and selecting a different datalogger tab from the Main screen.

The parameter represented by the y-axis scale (on the left) is determined by the selection in the "Scale to use" dropdown menu above the graph.



The user selects the types of data to be displayed in the graph by checking (or unchecking) the checkboxes in the legend below the graph.

The range of data viewed on the screen can be changed by specifying a Start date and an End date at the top of the screen, or by using the zoom buttons. Regardless of the view displayed, the "Reset" button at the top of the screen will restore the default range view.

Chapter 3: Viewing an SCM File

Export from Graph Window

The "Export" button at the bottom of the screen allows the user to copy, save, or email the graph in a variety of formats. To export the graph, click Export, select the format desired, select a color setting, and press the appropriate button—Copy, Save, or Send—at the bottom of the dialog screen. Click "Close" to return to the Graph screen.

Print from Graph Window

The "Print" button at the bottom of the screen allows the user to preview the graphical display before it is printed. To print a graph, click Print in the graph window, specify the printer, choose file setup options, orientation, margins, etc., and click Print in the TeeChart Print Preview window. Click "Close" to return to the Graph screen.

Close

The "Close" button at the bottom of the graph screen closes the graph dialog.

Export from DataLogger Tab

Clicking on the Export button at the bottom of the main SCM Viewer screen exports all the data from the dataloggers in a variety of file formats including Excel, comma delimited, text, HTML and Word document.

Print from DataLoggers Tab

Clicking on the Print button at the bottom of the main SCM Viewer screen sends data to a selected printer. Radio buttons located immediately above the Print button give the user the option of printing from only the selected datalogger (Current Tab) or all the dataloggers included in the SCM file (All Tabs).

RUN001 [#1] RUN002 [#3	2] RUN003 [#3]			
- Status Flag - Current selecte	d date/time			Print Selection
p - partiel e- estimate			🔯 Graph	 All Tabs C Current Tab
M- memory fault		T - Temp default		
E- events occurred	1 - status #1		Export	📇 Print
U - user changes occurred	2 - status #2			







Log

The Log tab shows the information that is logged as the file is loaded. The amount of information depends upon the log level. If the file could not be loaded successfully, an explanation will appear within the log.

Right-clicking the log data pulls up a menu that has the same options as the buttons on this page and the ability to copy any selected text to the clipboard to be pasted in another application.

🗟 SCM Viewer - [Node: 1131DEM3 (File: 1131D	E23.SCM)]				_ 0 >
🖳 <u>F</u> ile <u>S</u> ettings <u>W</u> indow <u>H</u> elp					_ 8 >
Poll Date: 2005-11-08 13:13:32 Firmware: NFIo N Hourly History Daily History Configuration Event			\bdms\DATA	\EXPORTS\SCI	M\1131DE23.SCN
		Loading Prog	ress:	100%	
SCM:					
SCM: Message Summary:					
SCM:					
SCM: Poll Time Messages:	1				
SCM: Flowrun List Messages:	1				
SCM: Flowrun Config Messages: SCM: Event Messages:	2				
SCM: Event Messages: SCM: User Change Messages:	4				
SCM: Flowrun Parameter Messages:	6				
SCM: Flowrun History Messages:	13				
SCM:					
SCM: Convert Time: 2 seconds					
		Export	🖹 <u>P</u> rint	Der Ei	nd

Export

Clicking on the Export button at the bottom of the main SCM Viewer screen exports the contents of the log into an HTML file.

Print

Clicking on the Print button at the bottom of the main SCM Viewer screen sends log data to a selected printer.

Find

Clicking this button allows the user to search for specified text within the logged information.

Find		? 🗙
Find what:		Eind Next
Match whole word only	Direction	Cancel
☐ Match <u>c</u> ase	○ <u>U</u> p ⊙ <u>D</u> own	

Chapter 4: Troubleshooting Information

Troubleshooting Information

This chapter is dedicated to identifying common errors and problems encountered through normal use of this product. This information is constantly being updated as new items are found. if your problem is not listed, contact the NuFlo Scanner <u>*HelpDesk*</u> at 1-877-805-7226 or (403) 291-4814.

Problem: Unable to Install SCM Viewer

Symptom: The operating system should provide a message similar to the following:

Installation Aborted!	×
Internal Error	
OK]	

Cause: Attempting the installation on a NT/2000/XP machine as a user without administrator rights. This error commonly occurs when the machine is part of a Novell network.

Solution: Log into the computer as a user with Administrator rights and re-run the install.

SCM Viewer

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