

SIEMENS

BACnet Field Panel Web Server
User Guide

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To the Reader

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Table of Contents

How to Use This Manual.....	7
Related Documents	7
Symbols Used in this Manual	7
Manual Conventions	7
Contact Us	8
Chapter 1 - Introduction to BACnet Field Panel Web Server	9
BACnet Field Panel Web Server Overview	9
Compatibility	10
Applications	10
Chapter 2 - BACnet Field Panel Web Server System Administration.....	13
Prerequisites and Browser Requirements for BACnet Field Panel Web Server	13
Prerequisites for FINlite Graphics Tool.....	14
Enabling or Disabling Web Server.....	15
Loading the User Interface	16
Performance and Limitations.....	18
Tips to Improve Performance of BACnet Field Panel Web Server	20
Network Configuration - IP Address	21
System Security.....	21
Language Support.....	22
Chapter 3 - User Interface Navigation.....	23
Login Page.....	23
Configuring the Login Page Graphic	26
User Interface after Logon.....	27
Navigation Pane User Interface	28
Device/Points Bar Icons and Messages.....	30
Application Area User Interface.....	32
Device/Points Navigation Tree	33
Common Editor Fields and Buttons	34
Chapter 4 - Status Bar.....	37
Status Bar Counts and Reports	37
Running an Alarm Report	37
Acknowledging an Alarm	38
Setup	38
Logoff.....	39
Chapter 5 - Point Commander Application	41
Point Commander Application Overview	41
User Interface Description for the Point Commander Application.....	42
Tips for Using the Point Commander Application	46
Using the Point Commander Application	47

Commanding Point Values	47
Disabling and Re-enabling a Point (Out-of-Service)	48
Resetting the Totalized Value.....	49
Priority Arrays	49
Chapter 6 - Graphics View.....	51
Tips for Using the Graphics View	51
Using the Graphics View	51
Opening a Graphics View Tab.....	51
Graphics Features	51
Graphics File Types.....	52
Graphics File Navigation	52
Chapter 7 - Reporting	54
Point Log Report Application	54
User Interface Description for the Point Log Report Application.....	54
Running a Point Log Report	55
Totalized Point Report Application	58
User Interface Description for the Totalized Point Report Application	58
Using the Totalized Point Report Application	59
Chapter 8 - Trend View	61
Trend View Overview.....	61
Tips for Using the Trend Application	61
Using the Trend Application.....	61
Viewing Trend Data of a Single Trended Point	61
Viewing Trend Data of Multiple Trended Points	63
Printing a Trend Graph	65
Customizing a Trend Graph	66
Trend Data Upload	67
Configuring the Field Panel for FTP Upload.....	68
Troubleshooting FTP Upload.....	69
Chapter 9 - Schedule View	70
Scheduler Application Overview	70
User Interface Description for the Scheduler Application.....	70
Tips for Using the Scheduler Application	72
Using the Scheduler Application.....	73
Chapter 10 - Create/Edit.....	74
Trend Application	74
Trend Application Overview	74
Using the Trend Editor Application	77
Point Editor Application.....	78
Point Editor Application Overview	78
Using the Point Editor Application	87
Schedule/Command/Calendar Object Editors	97
Schedule/Command/Calendar Object Editors Overview.....	97
Using the Schedule Object Editor.....	102

Using the Command Object Editor	107
Using the Calendar Object Editor	109
Event Enrollment	112
Event Enrollment Overview	112
Using Event Enrollment Objects	114
Notification Class	115
Section Overview	116
User Interface Description for the Notification Class Editor	116
Using the Notification Class Editor	118
Remote Notification	123
Remote Recipient List Editor Overview	123
SMTP Configuration Editor Overview	126
PPCL	129
PPCL Editor Overview	129
PPCL Assist	138
Using the PPCL Editor	146
Error Handling	157
Chapter 11 - System Configuration	158
ALN Node Table Editor	158
User Interface Description for the ALN Node Table Editor	159
Using the ALN Node Table Editor	159
Changing the Panel Time	160
FLN Editor	161
User Interface Description for the FLN Device Editor Panes	162
User Interface Description for FLN Device Discovery	165
Using the FLN Device Editor	167
Initial Value Editor	172
User Interface Description for the Initial Value Editor	173
Using the Initial Value Editor	173
Database Manager	175
Overview of ALN Database Management	176
Overview of FLN Application and Database Management	177
User Interface Description for the Database Manager	177
Using the Database Manager	184
User Account Editor	200
Using the User Account Editor	204
Change User Password	207
Panel Configuration Editor	209
User Interface Description for the Panel Configuration Editor	209
Using the Panel Configuration Editor	214
Chapter 12 - FINlite Graphics Tool	220
FINlite Graphics Tool Overview	220
User Interface Description for the FINlite Graphics Tool	221
Tips for Using the FINlite Graphics Tool	229
Using the FINlite Graphics Tool	230

Launching the FINlite Graphics Tool	230
Logging in to the Controller	230
Creating Graphics.....	231
Using the Greenleaf Component in FINlite.....	235
Editing the Graphics Animation	239
Saving and Publishing the Graphics File.....	240
Creating Device Templates	241
Backing Up Graphics	243
Deleting Graphics Files	243
Chapter 13 - Field Panel Features for BACnet Field Panel Web Server	249
Field Panel File System Operations	249
Basic File System Operation Commands.....	249
Rename a File	251
Delete a File.....	252
Move a File	253
Copy a File.....	254
Remove a Directory	255
Backing up and Restoring Databases	257
Available Memory Diagnostic Point	258
Chapter 14 - Troubleshooting	259
Clearing the FPWeb UI Browser Cache	259
Clearing the Launch Pad Cache.....	260
Clearing the FINlite Cache.....	261
Log On Error Messages.....	261
Install, Upgrade, and Connection Errors	262
Graphics Issues	263
Other Issues.....	264

How to Use This Manual

This manual is for users of APOGEE® Automation Systems who use BACnet Field Panel Web Server to command and monitor their APOGEE field panels. It is designed to describe the functions and applications of BACnet Field Panel Web Server.

To effectively use this manual, you must be familiar with the basic operation of the APOGEE Building Automation Systems and a Web browser.

Related Documents

In addition to this User Guide, please review the following Siemens Industry, Inc. documentation:

- *APOGEE BACnet ALN Field Panel User's Manual* (125-3020)

This manual, along with information about other Siemens Industry products, technical training classes, and services, can be obtained from your Siemens Industry representative.

Symbols Used in this Manual

The following table lists the safety symbols used in this manual to draw attention to important information.

Symbol	Meaning	Description
NOTICE	CAUTION	Equipment damage may occur if a procedure or instruction is not followed as specified. (For online documentation, the NOTICE displays in white with a blue background.)
	CAUTION	Minor or moderate injury may occur if a procedure or instruction is not followed as specified.
	WARNING	Personal injury or property damage may occur if a procedure or instruction is not followed as specified.
	DANGER	Electric shock, death, or severe property damage may occur if a procedure or instruction is not followed as specified.

Manual Conventions

The following table lists conventions to help you use this manual in a quick and efficient manner.

Convention	Examples
Numbered Lists (1, 2, 3...) indicate a procedure with sequential steps.	1. Turn OFF power to the field panel. 2. Turn ON power to the field panel. 3. Contact the local Siemens Industry representative.
Conditions that must be completed or met before beginning a task are designated with a	► Composer software is properly installed. ► A Valid license is available.

<p>► Intermediate results (what will happen following the execution of a step), are designated with a ⇨.</p> <p>Results, which inform the user that a task was completed successfully, are designated with a ⇨.</p>	<p>1. Select Start > Programs > Siemens > GMS > Composer. ⇒ The Project Management window displays.</p> <p>2. Open an existing project or create a new one. ⇒ The project window displays.</p>
<p>Actions that should be performed are specified in boldface font.</p>	<p>Type F for Field panels. Click OK to save changes and close the dialog box.</p>
<p>Error and system messages are displayed in Courier New font.</p>	<p>The message Report Definition successfully renamed displays in the status bar.</p>
<p>New terms appearing for the first time are italicized.</p>	<p>The field panel continuously executes a user-defined set of instructions called the <i>control program</i>.</p>
	<p>This symbol signifies Notes. Notes provide additional information or helpful hints.</p>
<p>Cross references to other information are indicated with an arrow and the page number, enclosed in brackets: [→92]</p>	<p>For more information on creating flowcharts, see <i>Flowcharts</i> [→92].</p>
<p>Placeholders indicate text that can vary based on your selection. Placeholders are specified in bold print, and enclosed with brackets [].</p>	<p>Type A C D H [username] [field panel #].</p>

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Chapter 1 - Introduction to BACnet Field Panel Web Server

Chapter 1 discusses the following topics:

- BACnet Field Panel Web Server Overview [→ 9]
- Compatibility [→ 10]
- Applications [→ 10]

BACnet Field Panel Web Server Overview

BACnet Field Panel Web Server User Interface (*Web Server* or *FPWeb UI*) includes all the applications a facility operator needs to easily configure, monitor, and control the APOGEE® Automation System.

All of the files that make up the FPWeb UI are loaded onto a field panel (PXC Modular or PXC-36) and accessed through a browser running Adobe Flash. The files can also be loaded onto a computer and accessed through Launch Pad, which is an Adobe AIR-based application. Because the same files are accessed either through the Web browser (if deployed to a Siemens PXC Modular or PXC-36) or when installed on a computer with Launch Pad (the files are installed automatically with the installation of Launch Pad) the FPWeb UI accessed through Launch Pad is identical to the FPWeb UI accessed through a browser.

In order to access the BACnet Field Panel Web Server User Interface through a browser, the files must be deployed to a PXC Modular or PXC-36 controller. Due to space constraints, the Web Server User Interface cannot be deployed to a PXC-16 or PXC-24 Compact controller.

However any PXC controller can be accessed directly using the Launch Pad software, without the need to deploy the Web UI user interface to the controller. See the *Siemens Launch Pad User Guide* (145-1005) for information on installing or upgrading the BACnet Field Panel Web Server Embedded User Interface (UI) Client Application using the Launch Pad Web Server Deployment feature. Once deployed to a panel on the network, the user interface can be accessed from any compatible Web browser (see the *Browser Requirements* [→ 13] section).

Through the Launch Pad User Interface, you can access and interact with any BACnet IP-enabled controller in the network that is Web-enabled, including PXC-16 and PXC-24 controllers.

Siemens FINlite Graphics Tool

The Siemens FINlite Graphics Tool is a graphic utility program that can be used to create, modify, animate, and save graphics files for field panels, which are Web licensed (LSM-FPWEB, LSM-FPWEBPL, or LSM-FPWEBPLHST), and are used with the Web Server Graphics View.

For more information, see Chapter 12 - *FINlite Graphics Tool* [→ 220].

Compatibility

See the following compatibility chart for the minimum firmware revision required to fully support each revision of FINlite, the FPWeb UI, and APOGEE Editor.

BACnet Field Panel Web Server Firmware Revision ^{a)}	FINlite Revision	UI/Launch Pad Revision ^{b)}	FPWeb UI for Designo® CC™	APOGEE Editor Revision ^{c)}	FIN Builder Revision/Connector
3.5	1.5.14	1.5.14	1.5.14	1.0.0.17	3.0.235/1.5.6
3.4	1.4.39	1.4.39	1.4.39	1.0.0.17	3.0.235
3.3.1	1.3.102	1.3.102	N/A	1.0.0.17	3.0.003
3.3	1.3.40	1.3.40	N/A	1.0.0.17	N/A
3.2.5	1.2.35	1.2.35	N/A	1.0.0.17	N/A
3.2.4	1.1.0.2638	1.1.0.143	N/A	1.0.0.17	N/A
3.2.3	1.1.0.2638	1.1.0.130	N/A	N/A	N/A

- a) It is recommended that you change the default passwords for the HIGH and MED accounts *before* upgrading to Firmware Revision 3.3 or later.
- b) Support for editing points and PPCL programs on FLN devices is provided in Firmware Revisions 3.3 and later.
- c) Used in conjunction with the Designo® CC™ management station.

Applications

BACnet Field Panel Web Server includes all the applications a facility operator needs to easily configure, monitor, and control the APOGEE® Automation System through a simple web-based user interface.



NOTE:

In the Web Server user interface, it is recommended to limit the total number of graphic tabs and dynamic trend tabs that are open to six (6) for performance reasons.

Status Bar Reports

Provides the ability to view reports of various conditions.

Point Commander

- Shows details for a selected point.
- Allows commanding of point values and priorities, and disabling of points.
- Provides navigation to the trending application.
- Allows totalization of point values.

Graphics

Allows you to display/view the graphics that have been created and published to the panel using the Siemens FINlite graphics utility program.

Reports

- Displays a Point Log Report for the points which meet the selected criteria.
- Displays a Totalized Point Report for the points which are totalized.
- Generates a printer-ready format of the Point Log Report or the Totalized Point Report.

Trending

- Displays Trend data in graphical or report format.
- Allows the ability to view Trend Log Object data or dynamic trend data by polling point objects.
- Generates a printer-ready format of the Trend Graph.

Scheduling

Displays schedules for a selected date, in several views: Today, Day, Work Week, Week, and Month.

Trend Editor

Allows you to create, modify, and delete Trend Log objects

Point Editor

Allows you to create, modify, and delete points.

Schedule/Command/Calendar Object Editors

Allows you to create, modify, and delete Schedule, Command and Calendar objects.

Event Enrollment Editor

Allows you to create, modify, and delete Event Enrollment objects.

Notification Class Editor

Allows you to create, modify, and delete Notification Class objects.

Remote Recipient List Editor

Allows you to add, modify, and delete Remote Recipient addresses.

SMTP Configuration Editor

Allows you to configure the settings required by the SMTP E-Mail server in order to use Remote Notification.

PPCL Editor

Allows you to create, modify and delete Powers Process Control Language (PPCL) programs with the option of using the PPCL Assist feature.

Panel Configuration

Allows you to configure a panel and view panel configurations.

ALN Node Table

Allows you to add, view, and delete ALN nodes.

Change Panel Time

Allows you to modify panel time.

FLN Device Editor

Allows you to create, modify, delete, and discover FLN Devices on multiple FLN types.

Initial Value Editor

Allows you to set and modify initial values.

Database Manager

Allows you to backup and restore ALN databases, and backup, restore, and replicate programmable FLN device databases.

User Account Editor

Allows you to create, modify, and delete user accounts.

Change User Password

Allows you to modify passwords.

Chapter 2 - BACnet Field Panel Web Server System Administration

Chapter 2 discusses the following topics:

- Prerequisites and Browser Requirements for BACnet Field Panel Web Server [→ 13]
- Prerequisites for FINlite Graphics Tool [→ 14]
- Enabling or Disabling Web Server [→ 15]
- Loading the User Interface [→ 16]
- Performance and Limitations [→ 18]
- Network Configuration - IP Address [→ 21]
- System Security [→ 21]
- Language Support [→ 22]

Prerequisites and Browser Requirements for BACnet Field Panel Web Server

Prerequisites

Before using the BACnet Field Panel Web Server User Interface, be sure to verify that:

- The panels being accessed by BACnet Field Panel Web Server User Interface use Firmware 3.2.3 or later.
 - Firmware Revision 3.2.3 must be loaded using FLT 3.11 SP1 or later
- Appropriate licenses are installed. See the *License Manager Start-up Procedures* (145-600) for more information on licenses.
- The panels have Web Server enabled through the HMI.
 - Panels are Web Server enabled by default starting with Firmware 3.2.5.
- The browser requirements below are met.
- The latest revision of the UI is installed to ensure full compatibility with the latest firmware features.

For more information, see the *Loading the User Interface* [→ 16] and *Login Page* [→ 23] sections, and the *APOGEE BACnet ALN Field Panel User's Manual* (125-3020).

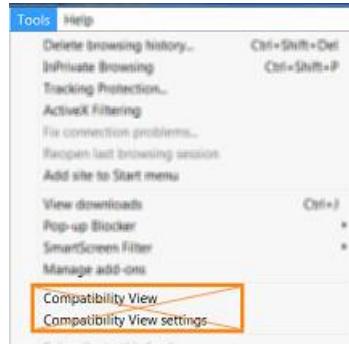
Browser Requirements

- An Internet browser that supports Adobe Flash Player Plug-in Version 25.0.0.x or later, such as Microsoft Internet Explorer (IE) 9, 10 or 11, Edge 25 or later, Chrome, or Mozilla Firefox.



NOTE:

If you use Internet Explorer, do not select the **Compatibility View** options located in the IE Tools menu.



- Cookies must be enabled. This can be done by selecting **Options** from the **Tools** menu in most browsers.
 - Adobe Flash Player Plug-in Version 25.0.0.x or later. The user interface may prompt you to update if an older version of Adobe Flash Player is installed.
-



NOTE:

If Adobe Flash Player is not installed, the browser may display an empty browser window.

- Private browsing cannot be used, as it does not allow the storage of local data.
-

Prerequisites for FINlite Graphics Tool

The Siemens FINlite graphics application must be installed.



NOTE:

FINlite is installed using the Siemens Tools Installer.

For more information, see the *FINlite Graphics Tool* section, the *Loading the User Interface* section, and the *APOGEE BACnet ALN Field Panel User's Manual* (125-3020).

For information on FIN Builder, see the *Kiosk User Guide* (A6V10435686).

Enabling or Disabling Web Server



Be sure that the FPWeb license (LSM-FPWEB) is installed on the field panel that will be accessed by FINlite graphics.

Enabling or Disabling Web Server

To enable or disable Web Server through the HMI, type the following sequence at the main menu:

HMI	S, H, E, W, M (System, Hardware, Ethernet, Webserver, Modify)
-----	---

Example

```
10:13:04 07/30/2010 FRI Logged on successfully Field panel <40091>
User: <high> <High default user account>
>Point, Application, Time, Message, Cancel, System, passWord, Bye? s
>Diagnostics, Users, dSt, Bacnet, Error_msgs, Hardware, Text, Quit? h
>Fieldpanels, Ethernet, nodeNametable, Disks, Reportprinter,
Licensemanager, Quit? e
>ipSettings, Bbmd, sNmp, Telnet, Webserver, Quit? w
>Display, Modify, Uiupgrade, Graphicsbackup, Quit? m
>Webserver Enabled (Y/N) : y
>Ok to coldstart (Y/N) : y
```

Checking the Enabled/Disabled Status of Web Server

To check the enabled/disabled status of Web Server, type the following sequence at the HMI main menu:

HMI	S, H, E, W, D (System, Hardware, Ethernet, Webserver, Display)
-----	--

Example

```
10:13:04 07/30/2010 FRI Logged on successfully Field panel <40091>
User: <high> <High default user account>
>Point, Application, Time, Message, Cancel, System, passWord, Bye? s
>Diagnostics, Users, dSt, Bacnet, Error_msgs, Hardware, Text, Quit? h
>Fieldpanels, Ethernet, nodeNametable, Disks, Reportprinter,
Licensemanager, Quit? e
>ipSettings, Bbmd, sNmp, Telnet, Webserver, Quit? w
>Display, Modify, Uiupgrade, Graphicsbackup, Quit? d
Webserver Enabled : Enabled           License: YES
>Display, Modify, Uiupgrade, Graphicsbackup, Quit?
```

Loading the User Interface

Loading or Upgrading the User Interface Using the Siemens Launch Pad

Complete this procedure to load or upgrade the User Interface file when using the Siemens Launch Pad (recommended method).

1. From the **Tools** menu in the Siemens Launch Pad tool, select **Deploy Web Server To Panel**.
 - ⇒ The **Deployment** dialog box displays the version of the user interface you are about to install.
2. Enter the name or the IP address of the field panel to which you are deploying the user interface upgrade file.
3. Enter the user name and password.
4. Select which language files to deploy.
5. Click **Start**.
 - ⇒ The progress bar displays.
6. Click **Close** when the installation is complete.

Loading or Upgrading the User Interface Using the Human-Machine Interface (HMI)

Complete this procedure to load or upgrade the User Interface file using the HMI.

1. Copy the **UIUpgrade** folder and its contents from Standard Apps/Partner Extranet onto the root of a USB memory device (such as a thumb drive). Do not change the folder or file structure.



NOTE:

The files within the **UIUpgrade** folder include wsroot/fpweb.swf, as well as language (.mo) files and other support files.

UIUpgrade	1,649,062	8/9/2010 12:30:08 PM
wsroot	1,649,062	10/21/2010 10:22:56 PM
lang	32,545	10/14/2010 6:05:33 AM
en.mo (r)	3,135	6/2/2010 5:30:54 PM
fr.mo (r)	5,984	8/23/2010 4:56:52 AM
ja.mo (r)	6,381	9/3/2010 5:24:18 AM
ko.mo (r)	5,865	8/23/2010 4:57:16 AM
zh.mo (r)	5,619	10/8/2010 12:43:21 PM
zh_tw.mo (r)	5,561	10/8/2010 12:45:47 PM
fpweb.swf	1,612,225	10/24/2010 5:56:32 PM
index.html	4,292	10/21/2010 6:15:32 PM

2. Insert the USB memory device into the USB port of the field panel.



NOTE:

Due to USB memory device manufacturer, size, and contents, the time to detect the device will vary from several seconds to one or more minutes. You may verify that the device is attached by using the HMI commands **S**, **H**, **F**, **F**, **L** to list the available drives on the field panel, and confirm that Drive **B** is listed.

3. At the HMI prompt, type **S, H, E, W, U** (System, Hardware, Ethernet, Webserver, Uiupgrade).
4. When prompted, type **Y** (Yes) and press **ENTER**.
⇒ The User Interface and support files will be installed from the USB memory device in the field panel's Drive **B** to the field panel's internal flash drive (IFD) and to the field panel's Drive **A**.

Alternate Method: Loading or Upgrading the User Interface through File Transfer Protocol (FTP)

There are many user-friendly FTP tools publicly available that can be used for transferring files between your computer and the field panel.

Telnet must be enabled in order to use FTP. Remember to disable Telnet on the field panel when you are done using the Telnet and FTP services. For information on enabling Telnet, see *Troubleshooting*.



Telnet must be enabled in order to use FTP. Once the upgrade is complete, you may disable Telnet on the field panel. For information on enabling Telnet, see the *APOGEE BACnet ALN Field Panel User's Manual* (125-3020).

Complete this procedure to load or upgrade the User Interface file through FTP (alternate method; using Launch Pad is recommended).

1. Use FTP to copy the **UIUpgrade** folder and its contents from Standard Apps/Partner Extranet or your computer to the root of Drive **A:** on the field panel.
2. Do one of the following:
 - At the HMI prompt, type **S, H, E, W, U** (**S**ystem/**H**ardware/**E**ternet/**W**ebs**E**rver/**U**iupgrade)
 - Use FTP to transfer the **Uiupgrade.txt** file from Standard Apps/Partner Extranet or your computer to the root of Drive **A:** on the field panel.
⇒ The User Interface and support files will be installed from the field panel's **A:\Uiupgrade** folder to the field panel's internal flash drive (IFD) and to the field panel's **A:** drive.

Files stored in the IFD are preserved when a field panel restarts.

After the upgrade is complete, the field panel's **A:\Uiupgrade** folder is automatically removed.

Performance and Limitations

- An interface is available via the Human-Machine Interface (HMI) to save files to and restore files from the RAM drive, USB media, or the Field Panel's Internal Flash Drive (IFD). For more information, see the *APOGEE BACnet ALN Field Panel User's Manual* (125-3020).
- Graphics files can be published from the Siemens FINlite Graphics Tool to the field panel's RAM (Drive A) or USB (Drive B). For graphics to be preserved across a coldstart, files must be saved on the IFD or stored on a USB drive. Any graphics files stored only on the panel's RAM drive will not be preserved across a coldstart. Files can be saved to the IFD using the Graphics Backup feature in the HMI.
- When files are added to or deleted from the panel's IFD, the panel's performance is impacted. All other field panel processes are interrupted, and the panel may temporarily drop off of the network and not provide COV updates.
- There are 8 MB of RAM available on the RAM (Drive A), but it is recommended that 4 MB of RAM is kept available for field panel operations. Individual graphic sizes typically range from 300 KB to 500 KB, depending on background resolution.
- Cache refresh time is affected by the number of objects and FLN devices on the panel. Panels with multiple FLN applications or multiple FLN types could experience longer refresh times.
- USB devices must be formatted as FAT. Due to USB memory device manufacturer, size, and contents, the time to detect the device will vary from several seconds to one or more minutes. Cruzer, SanDisk, and Kingston brand devices were used during development and testing.

The following devices are supported by the installed device drivers.

Brand	Description
ADISK	USB 1.1 32 MB flash disk
Aigo	USB 1.1 64 MB flash disk
Crucial	1 GB flash disk
Edge DiskGO™	1 GB USB Flash Drive Enhanced for ReadyBoost™ 2 GB USB Flash Drive Enhanced for ReadyBoost™
FPT-D	US5B2H01 18-in-1 USB card reader/writer
HP	1 GB flash disk
IBM	Portable Diskette Drive (floppy drive)
Imation	1 GB Swivel USB Flash Drive 2 GB Swivel USB Flash Drive
Integral	USB 2.0 2 GB flash disk 1 GB USB Memory Stick
Kingston	DataTraveler 1 GB flash disk DataTraveler 100 2 GB flash disk DataTraveler 16 GB flash disk
LACIE	USB 2.0 40 GB mobile hard drive

Lexar Media	JumpDrive Secure USB 2.0 512 MB flash disk
MARKEM	1 GB USB Memory Stick
Memorex	2 GB flash disk 1 GB TravelDrive™ USB Flash Drive 2 GB TravelDrive™ USB Flash Drive
NCP	XDrivePlus MMC/SD reader
Newman	USB 1.1 64 MB flash disk
PNY	Attache USB 1.1 64 MB flash disk Attache (U3) 1 GB Attache 2 GB Attache 8 GB 1 GB Attache USB Flash Drive
PQI	MMC/SD reader
RedLeaf	USB 2.0 256 MB flash disk
SanDisk	Cruzer® USB 2.0 256 MB flash disk Cruzer Micro 2 GB flash disk Cruzer Micro (U3) 2 GB flash disk Cruzer Micro (U3) 4 GB flash disk 2 GB Cruzer Crossfire USB Flash Drive 512 MB Cruzer Micro USB Flash Drive 2 GB Cruzer Micro USB Flash Drive 4 GB Cruzer Micro USB Flash Drive (U3 function not initialized)
SONY	MICROVAULT USM256U2 USB 2.0 256 MB flash disk 512 MB Micro Vault Tiny USB Flash Drive 2 GB Micro Vault Tiny USB Flash Drive 1 GB Micro Vault Classic USB Flash Drive 4 GB Micro Vault Classic USB Flash Drive
Transcend	JF V30 4 GB flash disk
X Digital Media	1 GB Itty Bit USB Flash Drive 1 GB Poker Chip USB Flash Drive 2 GB Itty Bit USB Flash Drive

- BACnet Field Panel Web Server was benchmarked with five (5) users. However, there is no limit to the number of users that can access the Web Server simultaneously. Certain actions will cause some performance degradation, when performed by multiple users simultaneously (for example: refreshing the cache, running point log reports, opening graphics, and so on.).
- BACnet Field Panel Web Server was benchmarked with ten (10) panels. However, there is no hard limit to the number of panels accessible through the Web Server. Access time and performance is affected by the number of panels. As the number of panels on the system increases, so will the login and caching time.

Tips to Improve Performance of BACnet Field Panel Web Server

Allow Browser Caching of Adobe Flash Player

This setting will be particularly helpful once the panel database is stable. This allows the BACnet Field Panel Web Server to keep information about the panel database without needing to continuously read it from the panel.

1. Right click while in a browser and accessing the BACnet Field Panel Web Server.
2. Click **Settings**.



3. In the **Adobe Flash Player Settings** window, open the folder (icon) tab.



4. Choose a local storage setting appropriate to the system being used.

Distribute Points from a Particular Panel among Several Graphics

Loading a graphic with a large number of points from a single panel may degrade the performance of the panel and will cause it to take longer to load and report changes of values (COVs). Particularly, the loading of a graphic with points from a PXC-16 or PXC-24, or their associated FLN devices, will occur more slowly, since these panels use a slower processor with lower memory.

To improve performance when loading graphics, distribute the points from the panel among several different graphics files.

Use Device Template Graphics for Viewing FLN Device Points on a Graphic

For information about creating Device Template graphics (also called *relativizing*), see the *Create Device Templates* section.

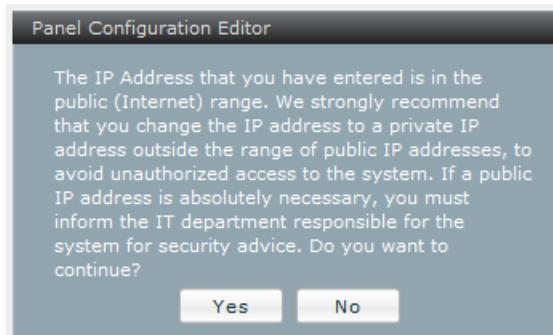
Limit Open Tabs to Six

In order to improve performance, in the Siemens FINlite graphics utility program and in the Web Server user interface, it is recommended to limit the total number of tabs that are open simultaneously to six (6). This means that exceeding six open tabs in any combination of editors or graphics files may diminish performance.

Network Configuration - IP Address

It is strongly recommended that the BACnet Field Panel Web Server is configured with a private IP address on a VLAN, rather than a public (Internet) IP address. If the BACnet Field Panel Web Server is configured with a public address, there is a potential security risk to the system integrity from unauthorized access. You must consult the IT department responsible for the system before configuring the BACnet Field Panel Web Server with a public address.

If the following message displays during the network configuration, then the entered IP address is considered to be a public (Internet) IP address.



System Security

User access to the BACnet Field Panel Web Server is controlled through individual User Accounts. Each User Account has access levels determined by a system administrator, which grant or deny permissions to work with the specific applications and features of the BACnet Field Panel Web Server.

User Accounts are password protected. The passwords are encrypted when you enter them at the Web Server User Interface.

When a User Account is created, a password expiration time can be determined by the system administrator. If a user account is created with an expiration date on the password, and if a user attempts to log in to that account three times using an incorrect password, the User Account will be locked, requiring a system administrator to unlock it. A locked User Account can be unlocked through a modification to the User Account by a system administrator.

When you log in using either of the default accounts ("high/high" or "med/med"), you are immediately prompted to change the password to something other than **high** or **med**.

The "low" accounts need not change.

The password must be created using between 3 and 15 characters.

Valid characters include **A** to **Z** (upper or lowercase) and **0** to **9**. Do not use **#**, **?**, or *****.



NOTE:

It is recommended that you change the default password *before* upgrading firmware.

For more information about access levels and passwords, see the *Users* section and the *APOGEE BACnet ALN Field Panel User's Manual* (125-3020).

Language Support

Dynamic text refers to text that lists object names, descriptors, state text, and other information that you can define.

Static text refers to text in the user interfaces (Web Server user interface, and FINlite Graphics Tool), such as menu titles, labels, error messages, and other information that you cannot modify.

Dynamic text support requires appropriate host computer regional settings for the specified language, and the appropriate language files during firmware loading using Firmware Loading Tool (FLT), typically English and a second language (French, Chinese, Korean, or Japanese).

Static text support for the Siemens Launch Pad requires selecting the appropriate language from the Language drop-down menu on the Launch Pad home page.

Static text support for FINlite requires selecting the appropriate language from the **Language** drop-down menu on the FINlite home page. See the *Setup* section and the FINlite Graphics Tool section for information on selecting a static language.

Static text support at the browser-based Web Server user interface requires selecting the appropriate language (.mo) files during Web Server Deployment from Launch Pad, and selecting the language file in the Setup application while in the browser.

Language Installation Using the Siemens Launch Pad

When using the BACnet Field Panel Web Server using the Siemens Launch Pad, language files can be deployed to the panel remotely. See the *Siemens Launch Pad User Guide* for instructions.

Chapter 3 - User Interface Navigation

Chapter 3 discusses the following topics:

- Login Page [→ 23]
 - Configuring the Login Page Graphic [→ 26]
- User Interface after Logon [→ 27]
 - Navigation Pane User Interface [→ 28]
 - Device/Points Bar Icons and Messages [→ 30]
 - Application Area User Interface [→ 32]
 - Device/Points Navigation Tree [→ 33]
- Common Editor Fields and Buttons [→ 34]

Login Page



If you have problems connecting to the BACnet Field Panel Web Server or logging on, see the *Troubleshooting* section.

Landing Page

When you begin a BACnet Field Panel Web Server session with a Web browser URL request to the field panel, using either its IP address or panel name/Fully Qualified Domain Name, the Landing Page displays. The Landing Page allows you to log onto any of the Web Services installed on the field panel.

- If only one Web Service is installed on the field panel, such as the FPWeb UI Client or the FINBuilder KIOSK, the Login Page for that service displays.
- If any combination of Web Services are installed on the field panel, the appropriate buttons display on the Landing page, allowing you to log into any of the installed services.



- If no Web Services are installed on the field panel, one of the following messages displays:
 - For a PXC-16 or PXC-24:
“This Field Panel only provides FPWeb Services. Please log onto a FPWeb Server.”
 - For a PXC Modular or PXC-36:
“This Field Panel does not have any Web Applications installed. It is currently operating as a Web Services only device. Please install one of the available Web Applications or connect to another panel.”

Accessing the Login Page through a Web Browser

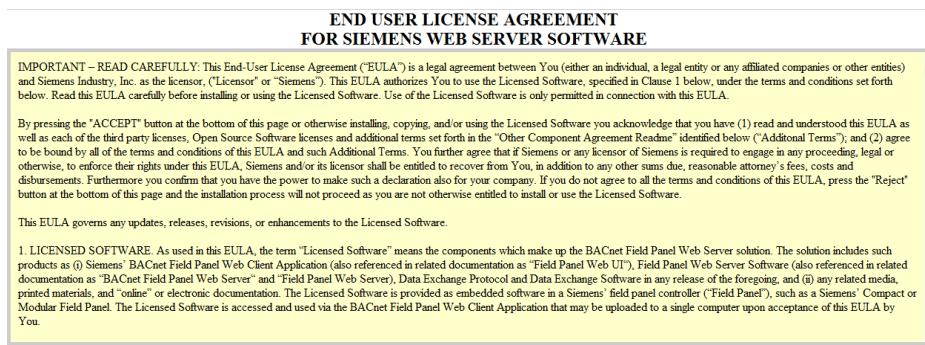
1. Open a supported Web browser on the computer.
2. Type one of the following in the **Address** field:
 - IP address of the field panel.
 - Field panel node name/Fully Qualified Domain Name.



NOTE:

The browser must be configured to ignore the proxy settings for the panel names and/or IP addresses. See Chapter 14 - *Troubleshooting* for more information.

- ⇒ The End User License Agreement (EULA) page displays.

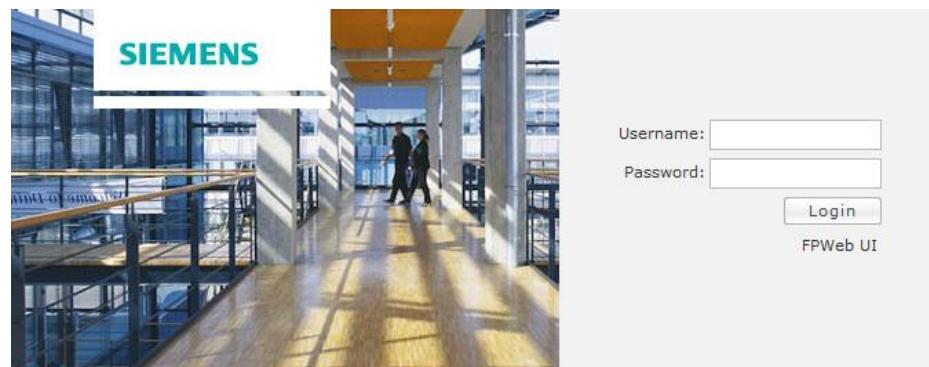


3. Click **Accept** to accept the End User License Agreement.

- ⇒ The Landing Page displays. See the *Landing Page* section for more information.

4. Click the **FPWeb UI Client** button.

- ⇒ The Login Page displays.

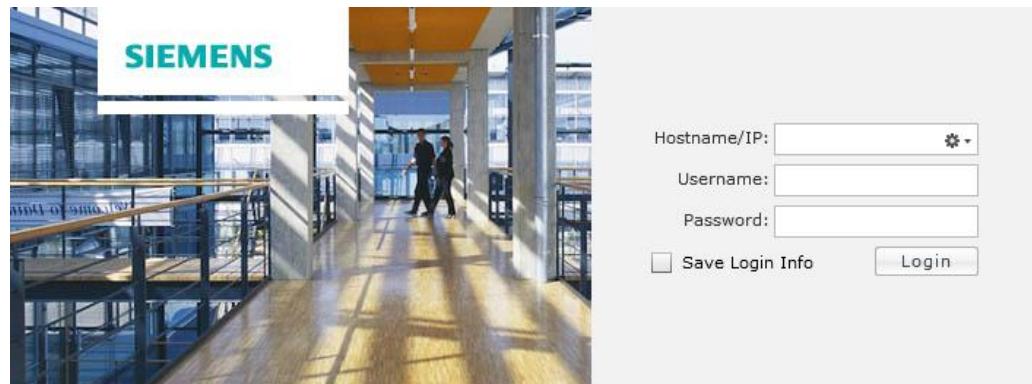


NOTE:

The graphic that displays on the Login Page can be customized. See the *Configuring the Login Page Graphic* section.

Accessing the Login Page through Launch Pad

1. Start Launch Pad.
The End User License Agreement (EULA) page displays.
2. Click **Accept** to accept the End User License Agreement.
3. Click the **Field Panel Web Server** button.
⇒ The login page displays with an additional Hostname/IP field that must be entered.



4. Select the **Save Login Info** check box to save recently-used IP addresses and user account information



NOTES:

The graphic that displays on the Login Page can be customized. See the *Configuring the Login Page Graphic* section.

Logging on to the BACnet Field Panel Web Server

- Type the user name and password of any ALN user account in the appropriate fields of the logon window and click **Login**.

If the logon is successful, a logon message is sent to all configured alarm printers.

The **Panel Navigation** screen displays a list of the connected field panels.

When you log in using either of the default accounts (“high/high” or “med/med”), you are immediately prompted to change the password to something other than **high** or **med**.

The “low” accounts need not change.

The password must be created using between 3 and 15 characters.

Valid characters include **A** to **Z** (upper or lowercase) and **0** to **9**. Do not use **#**, **?**, or *****.



NOTE:

It is recommended that you change the default password *before* upgrading firmware.

Configuring the Login Page Graphic

BACnet Field Panel Web Server provides a Login Page image, which you can change. To change the image on the Login Page:

1. Create a custom image file that is 398 × 263 pixels.
2. Name the file **login.png**.
3. Save the file to a USB drive.
4. Do one of the following to save this file in the field panel:
 - Using the USB drive as Drive **B** of the field panel, copy the login file to **A:\wsroot\login.png**. For the HMI command prompts to perform the file copy, see Chapter 13 - *Field Panel Features for BACnet Field Panel Web Server* [→ 249] in this document.
 - Using the USB drive as Drive **B** of the field panel, save the file to the **WSROOT** subdirectory in the **UIUpgrade** directory, along with the standard contents of the **UIUpgrade** folder. Perform the **UIUpgrade**, using the HMI command prompts. The login file will be transferred properly to the correct folder in both Drive **A** and the **IFD** drive. For the HMI command prompts to perform the file copy, see Chapter 13 - *Field Panel Features for BACnet Field Panel Web Server* [→ 249] in this document.
 - Use File Transfer Protocol (FTP) to save the file to **WSROOT**.



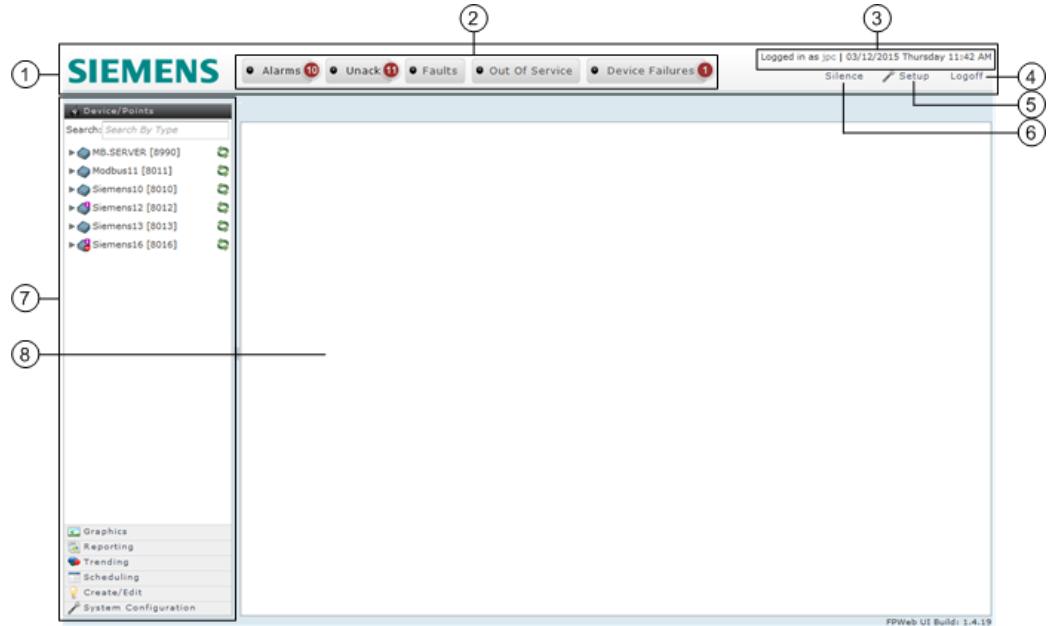
NOTE:

The **login.png** file will be deleted from Drive **A** after a field panel coldstart. Also copy the file to the Internal Flash Drive (IFD) (**IFD:\wsroot\login.png**) so that the file is preserved after a coldstart.

-
- ⇒ The custom image will display on the Login Page. If the **login.png** file is not in the **WSROOT** directory, the default Login Page image displays.

User Interface after Logon

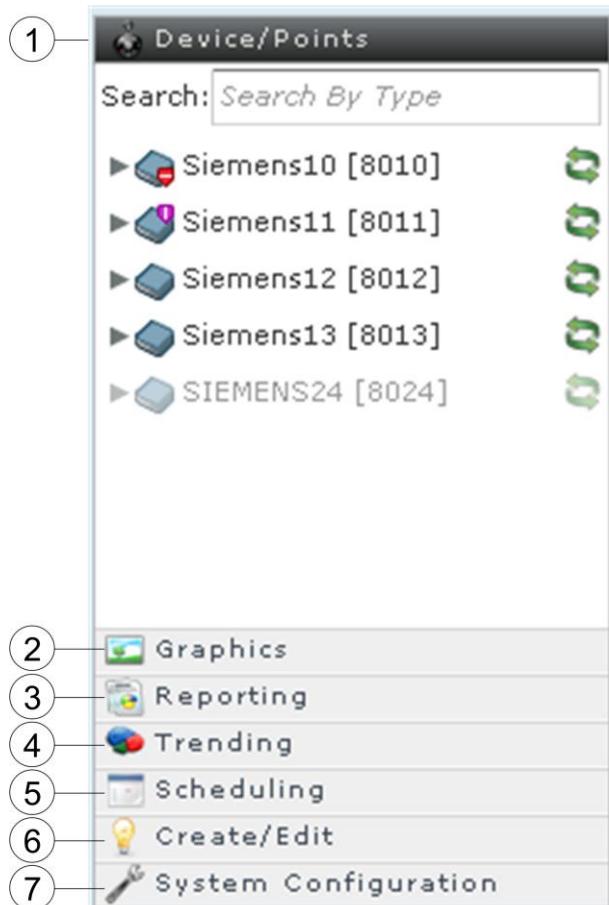
Once you are logged in, the BACnet Field Panel Web Server user interface is divided into the *status bar* (1), the *navigation pane* (7), and the *application area* (8).



- 1 Status bar.
- 2 Alarms, Unack, Faults, Out Of Service, and Device Failures buttons indicate a count for the number of items in that status. These buttons can be clicked to generate a detailed report for each item in that status. See the *Status Bar Counts and Reports* section.
- 3 User log in information and field panel time.
- 4 The **Logoff** button allows you to manually log off and return to the Login Page. See the *Logoff* section.
- 5 The **Setup** button opens a Setup window that allows you to choose colors, text language, font size, and refresh rate of Status Bar buttons. See the *Setup* section.
- 6 The **Silence** button allows you to stop the Alarms, Unack, Faults, Out Of Service, and Device Failures buttons from flashing until a new item is added to the list.
- 7 Navigation pane.
- 8 Application area.

Navigation Pane User Interface

The navigation pane includes seven main application bars for accessing the available applications. For descriptions of icons used in the Navigation Pane, see the *Device/Points Bar Icons and Messages* [→ 30] section. For information about panel accessibility, see the *Inaccessible Panels on the ALN* [→ 29] section. For more information on each application see the specific section in this manual.



- 1 **Device/Points:** This application bar opens by default after successful logon. It provides a tree view of ALN and panels and their associated objects, and FLNs and their associated objects. This tree view can be used to start several applications including Point Commander, Trend View, Schedule View, and Graphics View by selecting the appropriate object.
- 2 **Graphics:** This application bar provides a tree view of panels and their associated graphics files. Clicking a specific graphics file name in this tree view loads that graphic in the Graphics View application.
- 3 **Reporting:** This application bar provides a button for Point Log Reports and Totalized Point Reports. Clicking the **Reporting** button starts the application.
- 4 **Trending:** This application bar provides a tree view of panels and their associated Trend Log objects. Clicking a specific Trend Log object in this tree view launches the trend view application displaying the trend graph for the selected object.

- 5 **Scheduling:** This application bar provides a tree view of panels and their associated Schedule, Command, and Calendar objects. Clicking a specific Schedule object in this tree view launches the scheduler view application displaying the schedule data for the selected object.
- 6 **Create/Edit:** This application bar provides buttons to start the editing applications. The editing applications include Trend Editor, Point Editor, Schedule Editor, Command Editor, Calendar Editor, Event Enrollment Editor, Notification Class Editor, Remote Recipient List Editor, SMTP Configuration Editor, and PPCL Editor.
- 7 **System Configuration:** This application bar provides buttons to configure the field panels and FLN devices. The configuration applications include Panel Configuration Editor, ALN Node Table Editor, Change Panel Time, FLN Editor, Initial Value Editor, Database Manager, User Account Editor, and Change User Password.

**NOTE:**

The Command and Calendar objects in this tree view are inactive. They are not used to start the Schedule View application.

Inaccessible Panels on the ALN

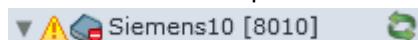
Nodes on the Automation Level Network (ALN) that are not Web-enabled display as dimmed in the Navigation Pane. These panels are not accessible by the Web Server UI.

The Web Server application can only discover databases for panels on the ALN that are Web-enabled, and ready.

Pending Database File Synchronization

When a panel on the ALN is Web-enabled and “ready”, the Web Server application can discover its database, and provide an indication when the database discovery is complete.

When a database discovery has been postponed or was never initiated, a yellow triangle icon displays in the Navigation Pane next to the panel name to indicate a conflict between the panel database file and the user interface database:



When a database discovery is needed, but the panel database file is being synchronized, a status table displays, indicating the database file synchronization status for each panel database that is being synchronized:

Database File Synchronization Notification	
Pending...	
Panel	Status
Siemens20	In Progress
Siemens21	In Progress
Cancel	

When a panel database file has been synchronized, the table displays the updated panel status:

Database File Synchronization Notification	
Checking...	
Panel	Status
Siemens21	Complete
Siemens20	In Progress
Cancel	

When all panels listed are synchronized, the status table closes, a successful database discovery occurs, and any yellow triangle icon is removed from the Navigation Pane. If you select **Cancel** during synchronization, the yellow triangle icon is added to any panel listed but not synchronized.

Device/Points Bar Icons and Messages

The Device/Points application bar opens by default after successful logon, or it can be opened during any Web Server session by clicking the Device/Points bar in the Navigation Pane. The Device/Points tree view provides status of and information about the ALN panels and their associated objects and FLNs.

Discovering the Database

A database discovery may be triggered by doing one of the following:

- Clicking the gray arrow to the left of the device name to expand a field panel in the Device/Points bar



- Clicking the green arrows to the right of the device name .

During a database discovery, status messages will display:



Static Icons

Static icons in the Device/Points bar indicate the various characteristics of the panel node. A static icon associated with a panel node is fixed for the Web session.

Icon	Description	Indication
	Red shield icon with a horizontal white bar.	<p>FPWeb license is not installed for the panel. You must obtain and install an FPWeb license (LSM-FPWEB, LSM-FPWEBPL, LSM-FPWEBPLHST) in order to use licensed features. Moving your cursor over the icon also indicates if the node has license restrictions: No FPWeb license.</p> <p>NOTE: BACnet Field Panel Web Server UI requires an FPWeb license for graphics viewing. The Device/Points accordion Graphics folder does not expand for panels that are not FPWeb licensed.</p>
	A purple shield icon with a vertical white bar.	<p>The latest firmware that the Web Server UI is aware of has not been installed in the panel. You must upgrade the panel to the appropriate firmware in order to use features associated with the version of the Web Server UI. The Panel Configuration Editor and the ALN Node Table Editor require Firmware Revision 3.2.5 or later. The Database Manager requires Firmware Revision 3.3 or later. Point Editing and PPCL Editing of programmable MS/TP FLN devices require Firmware Revision 3.3 or later. Moving your cursor over the icon also indicates if the node does not have the latest firmware installed: Not latest firmware.</p>
	Both red and purple shield icons displayed together.	<p>FPWeb license is not installed for the panel AND the latest firmware has not been installed in the panel. Moving your cursor over the icon also indicates if the node has license restrictions and does not have the latest firmware installed. No FPWeb license and Not latest firmware.</p>

Dynamic Icons

Dynamic icons in the Device/Points bar indicate the various states of the panel node. A dynamic icon associated with a panel node is updated when a change to the state of the panel is detected.

Icon	Description	Indication
	Yellow triangle icon with a red exclamation point displayed on an ALN device.	Database File Synchronization. Field panel database file synchronization is in progress. A status message displays. See the <i>Pending Database File Synchronization</i> section for more information.
	Orange triangle icon with a white exclamation point.	Panel Not Ready. <ul style="list-style-type: none"> When displayed on an ALN device, indicates that the panel is not ready. You must load the panel with a database from a software tool or front end computer, or use the Panel Configuration Editor to make the panel ready. When displayed on an FLN device indicates that the application status is failed.
	Red triangle icon with a black exclamation point.	Panel Communication Lost. Communication to the device has been lost (device failure).

Application Area User Interface

The application area shows the output of the current active application. The information displayed in the application area depends on the application being used. See the specific application section for more information.

When an application is started from the Navigation Pane, either an application window will open on the right side, or an application tab will be open on the right side.

Point Commander and Password Reset open in an application window. All other applications open in tabs.



NOTE:

In the Web Server user interface, it is recommended to limit the total number of graphic tabs and dynamic trend tabs that are open to six (6) for performance reasons.



After a successful logon, the Application Area will either be blank or loaded with the “Default.fnl” graphic file loaded in a Graphics View application tab. See the *FINlite Graphics Tool* section for more information about the default graphic.

Device/Points Navigation Tree

When you click the **Device/Points** application bar, a navigation tree displays that includes a *search box* and a list of panels.

Search Box



The **Device/Points** search box allows searching for points by name. Type any part of the desired point name into the search box and a list of matching point names will display. Click the desired point name to access the point.

Panel List

Panels that are not grayed out are Web Server-enabled panels that are communicating properly.

Panels that *are* grayed out are either not Web Server-enabled, or are Web Server-enabled panels but are not communicating properly.

1. Move your mouse over a panel name to view panel information. Click the arrow next to a Web Server-enabled panel name to expand and display folders for local points and available applications.
2. Click the arrow to expand the **Local** option and display the local points, categorized by point type. Clicking a point name will start the **Point Commander** application.
3. Click the arrow to expand the **Trends** option to see the Trend Log objects on the panel. Clicking a Trend Log object name will start the **Trend View** application.
4. Click the arrow to expand the **Schedules** option to see the Schedule, Command, and Calendar objects on the panel. Clicking a Schedule object name will start the **Schedule View** application.
- NOTE:** The **Command** and **Calendar** object names are inactive.
5. Click the arrow to expand the **Graphics** options to display the graphic files on the panel.
6. Click the arrow to the left of the **Field Level Network (FLN)** name, if available, to display the FLN devices. Click the arrow to the left of the FLN device name to see the FLN device's points, categorized by point type. Double-click the desired point name or click on the **Point Commander** icon to access the point in the **Point Commander** application.

Common Editor Fields and Buttons

Many of the editors have common fields and buttons. Some fields represent common properties of BACnet objects including Object Identifier, Object Name, and Object Description. For more information on field panel BACnet support, see the *APOGEE BACnet ALN Field Panel User's Manual* (125-3020)

Object Identifier

A BACnet Object Identifier value consists of two components: BACnet Object Type, and an instance number. The BACnet Object Type is an enumeration list. The table below shows the BACnet Object Type values supported at the field panel.

BACnet Object Type Name	BACnet Object Type Enumeration Value
Analog Input (AI)	0
Analog Output (AO)	1
Analog Value (AV)	2
Binary Input (BI)	3
Binary Output (BO)	4
Binary Value (BV)	5
Calendar	6
Commander	7
Device	8
Event Enrollment	9
Multistate Output (MO)	13
Notification Class	15
Schedule	17
Multistate Value (MV)	19
Trend Log	20

The instance number specifies which unique instance of that object type is being described.

The **Object Identifier** field in the Web Server user interface shows the two components separated by a comma.

The following Object Identifier represents the sixth Binary Value object in the database:

Object Identifier:

The **Object Identifier** field can be left blank on creation, and the controller will automatically assign an appropriate value.

If you want to enter a specific instance number, you can enter the desired instance number integer in the **Object Identifier** field.

For instance, if you want to create a Binary Value object with an instance of 100, you would enter the following in the Point Editor Object Identifier:

Object Identifier:

Upon successful creation of this object, the Object Identifier field will show both components:

Object Identifier:

The Object Identifier field cannot be modified after creation.

Object Reference

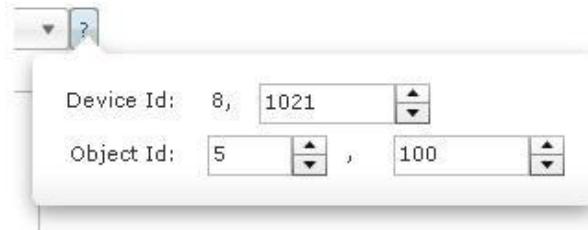
Some BACnet objects have properties that reference other BACnet objects.

For instance, an Event Enrollment object has a **Reference Point** field. This field can be filled by selecting the drop-down arrow, and selecting an object from the list, or by selecting the ? (question mark) button and manually entering an Object Reference.

The drop-down arrow option:



The ? (question mark) button option:



Manually entering an Object Reference requires entering the instance of the Device Object containing the desired object, and the Object Identifier of the desired object. The above picture indicates a reference to a Binary Value object with instance 100, on a Device with instance 1021.

Manually entering the Object Reference is required if the reference object is located in a non-FPWeb-enabled panel or a non-FPWeb-enabled panel's associated FLN device.

Common Editor Buttons and Functions

Each editor is set up similarly and uses common buttons:

- The plus  button adds a new object to the panel.
- The minus  button deletes the highlighted object from the panel.
- The **Revert** button restores all fields to the last saved values (this does not simply undo the last action).
- The **Save** button saves the object.
- The **X** button closes the application (without saving).
- Several tables allow multiple selections using the CTRL key (to choose more than one item at a time) or the SHIFT key (to choose a range of items):
 - The **Network Destinations** table and the **Remote Destinations** table within the Notification Class editor
 - The **Weekly Schedule**, **Exception Schedule**, and **Command Point Object** tables within the Schedule Editor
 - The Remote Recipient List
 - The **Actions** table within the Command Object Editor

Chapter 4 - Status Bar



Figure 1: BACnet Field Panel Web Server Status Bar.

Chapter 4 discusses the following topics related to the Status Bar:

- Status Bar Counts and Reports [→ 37]
 - Running an Alarm Report [→ 37]
 - Acknowledging an Alarm [→ 38]
- Setup [→ 38]
- Logoff [→ 39]

Status Bar Counts and Reports

Running an Alarm Report

Alarm details can be viewed in the Alarm report, which is accessible using the Status Bar (see the *User Interface after Logon* [→ 27] section for more information about the Status Bar and its features). An Alarm report lists the details of both Event Enrollment alarms and Intrinsic Alarms.

Alarms can be acknowledged from the Alarm report. Acknowledging the state of an object does not refresh the report. The report must be re-run by clicking the **Count** button to see updated data.

▷ To run an Alarm report:

1. Click the **Alarms** button in the Status Bar.
⇒ An Alarm report displays, listing alarm details.
2. Select the date and time in the **Event Time** column to see event time and acknowledge time details.
3. To close the Alarm report, click the **X** button to close the **Report** tab.

Alarm Report

							Print	Export to CSV
Point Name	EE Name	Description	Panel	Status	Event Time	Acknowledge St...		
SI12.LAI02		SI12.LAI02	Siemens12	*A3*	1-12-2015 9...	Acknowledged		
SI12.LAI03		SI12.LAI03	Siemens12	*A3*	1-12-2015 9...	Acknowledged		
SI12.LAI04		SI12.LAI04	Siemens12	*A3*	1-12-2015 9...	Acknowledged		
SI12.LAI06		SI12.LAI06	Siemens12	*A2*unACK	1-12-2015 9...	Unacknowledged		

Exporting and Saving an Alarm Report

The Alarm report can be exported to the system printer with a preview, or exported as a comma separated values (CSV) file and saved.

1. To export the Alarm report, click the Export to CSV  button in the **Alarm Report** pane.
2. In the dialog box that opens, browse to the desired location to save the CSV file.

Printing an Alarm Report

1. To print the Alarm report, click the Print  button in the **Alarm Report** pane.
2. In the dialog box that opens, choose the desired printer and click **OK**.

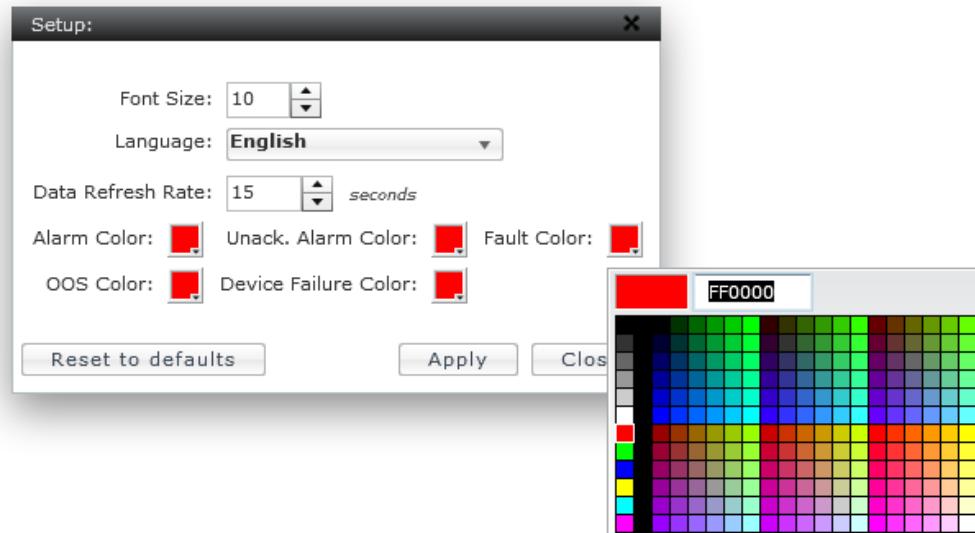
Acknowledging an Alarm

To acknowledge an Alarm:

1. Run an Alarm report or an Unack report (see the *Running an Alarm Report* section).
2. Click the **Unacknowledged** button in the **Acknowledge State** column associated to the desired alarm.
⇒ The button displays **Acknowledged** in the **Acknowledge State** column.

Setup

The **Setup** button allows you to choose colors, text language, font size, and refresh rate of Status Bar buttons.



1. Click the **Setup** button on the Status Bar.
⇒ The **Setup** window displays.
2. Change the font size by using the UP and DOWN arrows in the **Font Size** field.
3. *When accessing Web Server through a browser:*
Change the text language by using the **Language** drop-down menu.
When accessing Web Server through the Siemens Launch Pad:
Although this **Language** drop-down menu is active, the language must be changed using the Language drop-down within the Siemens Launch Pad. See the *Siemens Launch Pad User Guide* (145-1005) for instructions.
4. Change the refresh rate of the Status Bar buttons by using the UP and DOWN arrows in the **Data Refresh Rate** field.
5. Change the light colors of the Status Bar buttons by clicking the colored squares and then choosing the desired colors.
6. Click **Apply** to save changes. Click **Close**.
7. Return to the default settings by clicking the **Reset to Default** button.

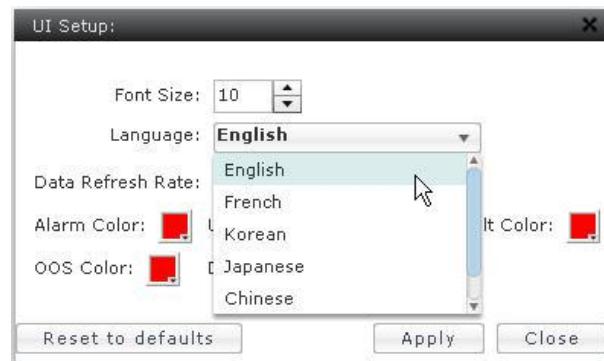
Selecting the Language

BACnet Field Panel Web Server provides static text in English as the default language. Other language files are available for selection in the language field of the Web Server UI Setup dialog box if selected during deployment. Additional languages can be downloaded into the field panel, and custom language files can be created if necessary.

See the *APOGEE BACnet ALN Field Panel User's Manual* (125-3020) for more information about languages.



Most of the static text will change after you click **Apply** and **Close**. However, logging out and logging back in is required to change all of the static text language.



Logoff

You can end a BACnet Field Panel Web Server session by manually logging off or by allowing the system to automatically log off.

- Manually logging off immediately prevents unauthorized users from accessing to the system and reduces network traffic.
- Automatic logoff ends a BACnet Field Panel Web Server session after a period of inactivity at the browser. For more information, see the *User Interface Description for the User Account Editor* section.

Whenever a BACnet Field Panel Web Server session ends, the system sends a logoff message to all configured alarm printers and returns you to the BACnet Field Panel Web Server Login page.

BACnet Field Panel Web Server performs an automatic logoff after the auto-logoff delay time (defined in the User Account) expires.

- To log off manually, click the **Logoff** button on the right side of the Status Bar.

If the web browser is closed without logging off, the session is closed after 20 minutes. It is not recommended to close the browser without a manual logoff or automatic logoff.

Chapter 5 - Point Commander Application

Chapter 5 discusses the following topics:

- Point Commander Application Overview [→ 41]
 - User Interface Description for the Point Commander Application [→ 42]
 - Tips for Using the Point Commander Application [→ 46]
- Using the Point Commander Application [→ 47]
 - Commanding Point Values [→ 47]
 - Disabling and Re-enabling a Point (Out of Service) [→ 48]
 - Resetting the Totalized Value [→ 49]
 - Priority Arrays [→ 49]

Point Commander Application Overview

All points and point-like objects (AO, BO, MSO, AV, BV and MSV) with priority array can be commanded from the BACnet Field Panel Web Server navigation tree, from a graphic screen, and/or from a trend graph. Point value, status, and priority can be commanded.

Point types without priority array (AI, BI, AV, BV and MSV) can be commanded from the commander navigation tree and/or from a graphic screen. Point value and status can be commanded.

AO	Analog Output Object
AI	Analog Input Object
BO	Binary Output Object
BI	Binary Input Object
MSO	Multi State Output Object
AV	Analog Value Object
BV	Binary Value Object
MSV	Multi State Value Object



Multi State Input Object (MSI) Points are currently not supported.



⚠ CAUTION

Command points only when you know the possible effects of making a change.

Ideally, only command points when making temporary changes, such as setpoint changes, or when commanding modes of operation, such as DAY and NIGHT. It is inefficient to place a point in Operator (OPER) command priority or to Disable a point (Out of Service) for long periods of time or permanently.

The BACnet Field Panel Web Server Point Commander Application allows you to manually control a point and override the pre-established automatic controls in a PPCL program or the Scheduler application.

Under normal operating conditions, allow the APOGEE® Automation System to control the building through programs such as PPCL, rather than relying on manual control. However, there may be special circumstances when it is necessary to take temporary, manual control of building operations.

Commanding a point may be necessary under the following conditions:

- Troubleshooting a control strategy.
- Responding to an alarm that indicates a malfunctioning device.
- Managing run-time totalization.
- Performing preventive maintenance tasks.



CAUTION

Always follow standard safety procedures when performing maintenance tasks.

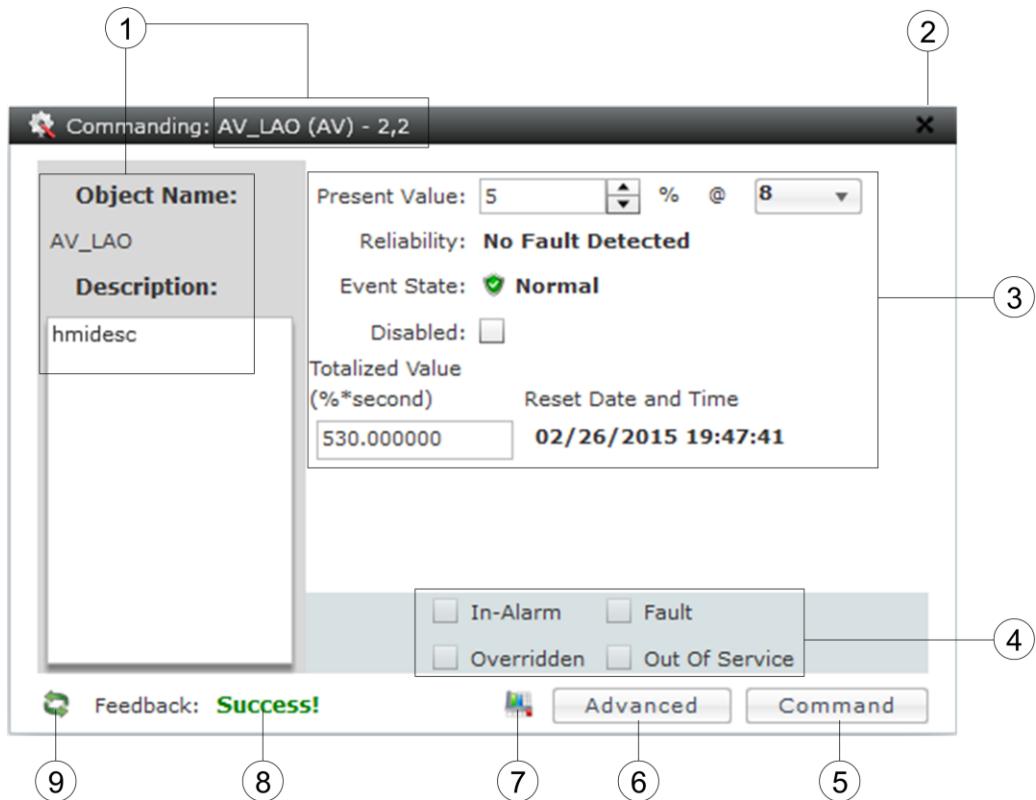
The Point Commander application window can be opened for a particular point object from the Device/Points application bar in the Navigation Pane, or from a Graphics View application tab.

User Interface Description for the Point Commander Application

The **Commanding** window can be accessed from the **Device/Points** application bar in the navigation pane.

- To open the basic (default) **Commanding** window, double-click the point name (or click the **Command** icon to the right of the point name).
- To close the Commander window, click the **X** in the top right corner of the window (See **2** in the following figure).

The following figure outlines the fields and buttons in the basic **Commanding** window. If you do not have access to a function, it displays as dimmed.



1 Point Name and Description

- The **Object Name** field shows the point name.
- (Optional) The **Description** field displays additional point information.
- The point name, point type, data type, and instance ID displays in the header of the Commanding window.

2 To close the **Commander** window, click the X in the top right corner of the window.

3 Command Options and Status

NOTE: The information in this section is only accessible to users with Command or higher access level to the point.

- Present Value** displays the current point value, and allows you to change the value of commandable points.
- The **(@)** field displays the current priority and allows you to change the point priority.
NOTE: If the point does not use a priority array, the field does not display.
- Reliability** displays any faults detected. If none, then No Fault Detected displays.
NOTE: If the point does not use the reliability property, this field does not display.
- Event State** indicates the status of the point (Normal, Failed).
- The **Disabled** check box allows you to put points in and out of service. When a point is disabled, alarm reporting capabilities for the point are disabled, and the **Out of Service** status indicator displays a check mark.
- If totalized, the current totalized value and the last date and time the value was reset are displayed.

4 Status Indicators

The following status indicators, indicate status with a check mark:

- The **In-Alarm** check box indicates when the point is in an alarm status. See the *Status Bar* section for more information.
- The **Fault** check box indicates when the point is in a fault status.
- The **Overridden** check box indicates when the point has been manually overridden.
- The **Out Of Service** check box indicates when the point has been disabled.

5 The **Command** button must be clicked to implement any changes in the Commanding window.

6 For points with priority array, advanced command options can be accessed by clicking the **Advanced** button. The button name changes to **Basic** when advanced commanding options are displayed. Click the **Basic** button to toggle back to the basic Commanding window. The left, top, and bottom sections of the window remain the same in both views.

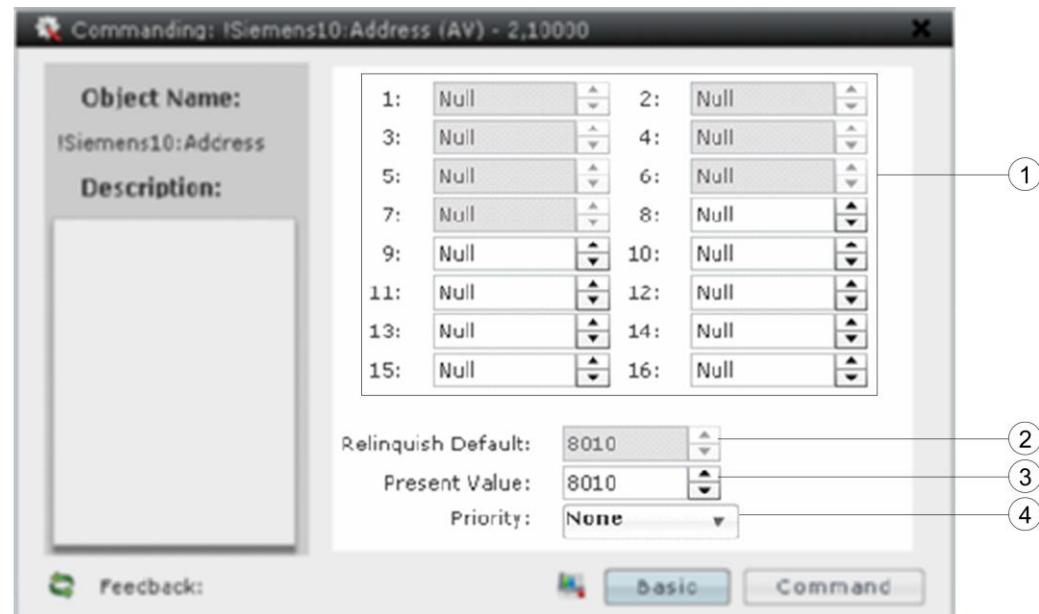
7 Click the **Trending** button to access dynamic trending for the point. For more information, see the *Trend* [→ 61] section.

8 The **Feedback** field displays a message indicating the success or failure of each action. A successful command initiates an automatic refresh of the point values. If the command was not successful, an error message displays the reason for the failure.

9 **Refresh** button. If the feedback status indicates a failure, click the refresh button to manually refresh the point values. For more information, see the *Command Feedback* [→ 45] section.

Advanced Command Options (Points with Priority Array)

If the point has priority array, the priority values can be changed through a command to a particular priority field. The priority fields that are not applicable display as dimmed.



- 1 Priority array for the point.
- 2 The **Relinquish Default** field displays the default value of the point. This value is assigned to the present value when all priorities (1 through 16) are relinquished.
- 3 The **Present Value** field shows the present value of the point at the current highest priority, and allows you to change that value.
- 4 The **Priority** drop-down menu shows the current priority, and allows you to change the priority. Priorities 1 through 7 are not accessible; if they are chosen, the priority will automatically default to the highest accessible priority value.

Command Feedback

The **Feedback** field at the bottom left of the window displays a message indicating the success or failure of each action. A successful command initiates an automatic refresh of the point values. If the command is not successful, an error message displays the reason for the failure.

!	<p>NOTICE</p> <p>If the feedback status indicates a failure, an automatic refresh of the point values is not performed.</p> <p>Click the Refresh  button to manually refresh the point values before attempting a subsequent command to the point. To troubleshoot an unsuccessful command to a specific device, refer to the user documentation for that device.</p>
---	--

The following figures show examples of the **INVALID_DATA_TYPE** and **OTHER** Error Feedback messages.

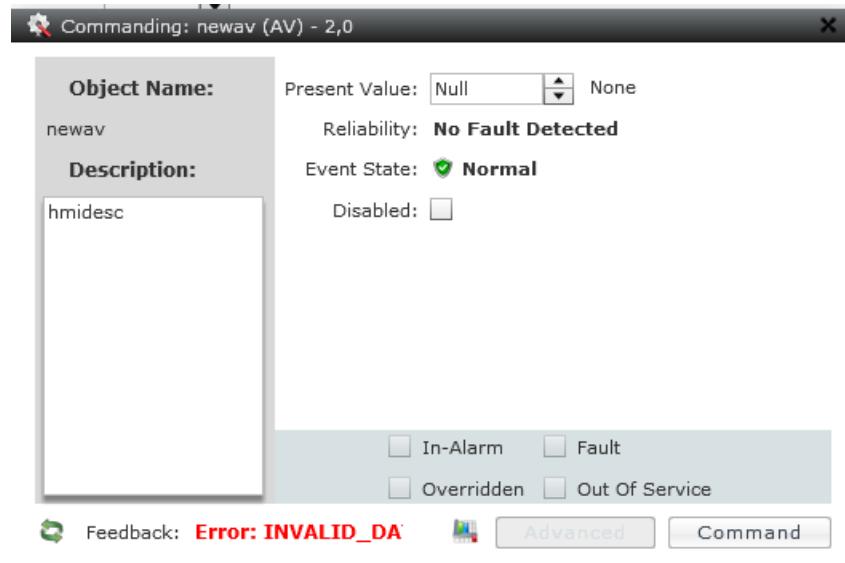


Figure 2: Example of **INVALID_DATA_TYPE** Error Feedback Message.

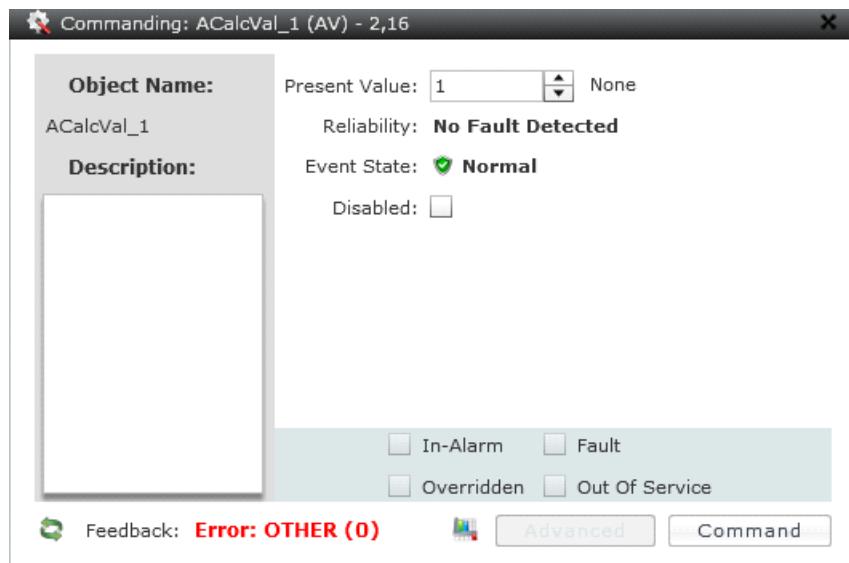


Figure 3: Example of OTHER Error Feedback Message.

Tips for Using the Point Commander Application

- Points can be commanded from the Navigation pane or from an animated graphic. See the *F/N lite Graphics Tool* [→ 220] section for information on commanding a point from a graphic.
- You can only command points if you have been given Command or higher access level to the point.
 - Analog, digital, and multistate points can be commanded.
 - Generally, only output points (AO, BO, and MSO) or virtual points (AV, BV, MSV) with a priority array can be commanded; other points such as AI and BI points may be commandable if taken out of service first.
- If the same point is commanded from two different sessions, the command with the higher priority will override. If the commands are made with the same priority, the last command will override the earlier command.
- Multi State Input Object (MSI) points are currently not supported.

Using the Point Commander Application

The following procedures are outlined in this section:

- Commanding Point Values [→ 47]
- Disabling and Re-enabling a Point (Out-of-Service) [→ 48]
- Resetting the Totalized Value [→ 49]
- Priority Arrays [→ 49]
 - Changing Point Priority (Basic Commanding Window) [→ 49]
 - Changing Point Priority (Advanced Commanding Window) [→ 50]

Commanding Point Values

Commanding a point means using the Point Commander application to manually override the system program instructions for either an output point or a virtual input point. Point commanding changes the command priority from NONE.



This procedure is only available to users with Command or higher access to points.

Steps for Commanding Point Values

1. Access the **Commanding** window through the **Devices/Points** bar in the navigation pane on the left side of the screen.
2. Drill down to the desired point.
3. Double-click the point name (or click the **Command** icon to the right of the point name) to open the basic (default) **Commanding** window.
4. For points that have priority array, toggle between the Basic and Advanced command options using the **Advanced/Basic** button at the bottom of the **Commander** window.
5. Make the necessary changes in the **Commander** window. For more information about the fields available in the **Commander** window, see the *User Interface Description for the Point Commander Application* [→ 42] section.
6. Click **Command** to initiate the changes and begin controlling the point with the new settings.
NOTE: It is not necessary to select or clear the **Out of Service** check box in a separate step.
⇒ The status of the command displays in the **Feedback** field.

This procedure is now complete. Close the **Commander** window by clicking the **X** in the top right corner of the window.



CAUTION

Release All Commanded Points

Remember to eventually release all commanded points to NULL priority so that the system is automatically controlled.

In the **Current Value** field on the **Basic** or **Advanced Commander** window, type N. NULL will be auto-filled into the field.

Failure to release commanded points may lead to unexpected results.

There are certain exceptions to this with regard to Siemens FLN devices: points such as MTR SETUP, AO DIR.REV, and other FLN device setup parameters should not be arbitrarily released as this could cause the FLN device to control improperly.

Re-enable All Points

Remember to eventually place points back In Service (re-enable) so that the system is automatically controlled.

- In the **Disabled** field on the **Basic Commander** window, ensure the check box is cleared.
- Failure to place points back **In Service** may lead to unexpected results.

Disabling and Re-enabling a Point (Out-of-Service)

Disabling a point means using the Point Commander to manually change a point status to Out-of-Service. Point priority does not change, and the value state cannot be changed by an interface terminal or PPCL statement until the point is re-enabled.

When a point is disabled, the point status displays *O* on point logs. This procedure is normally used to validate control sequences and troubleshoot equipment.



This procedure is only available to users with Command or higher access to points.

Steps for Disabling/Re-enabling a Point

1. Access the **Commanding** window through the **Devices/Points** bar in the navigation pane on the left side of the screen.
2. Drill down to the desired point.
3. Double-click the point name (or single click the command icon to the right of the point name) to open the basic (default) **Commanding** window.
4. In the Command Options section do one of the following:
 - To disable the point, select the **Disabled** check box and click **Command**.
 - To re-enable the point, clear the **Disabled** check box and click **Command**.
 - ⇒ The status of the command displays in the **Command Status** section.
5. Click **Command** to initiate the changes and begin controlling the point with the new settings.
NOTE: If the point value is being changed as well, it is not necessary to check or uncheck the Out-of-Service check box in a separate step.
 - ⇒ The status of the command displays in the **Feedback** field.

This procedure is now complete. Close the **Commander** window by clicking the X in the top right corner of the window.

Resetting the Totalized Value

The totalized value can be reset to any valid value for the selected point type.

To reset the totalized value:

1. Access the **Commanding** window through the **Devices/Points** bar in the navigation pane on the left side of the screen.
2. Drill down to the desired point.
3. Double-click the point name (or single-click the command icon to the right of the point name) to open the basic (default) **Commanding** window.
4. Enter the reset value in the **Totalized Value** field.
5. Click **Command** to reset the value and begin totalizing.
6. Close the **Commander** window using the X in the top right corner of the window.

Priority Arrays

The Point Commander application allows you to change the priority for commandable points. For more information about point priority, see the *APOGEE BACnet ALN Field Panel User's Manual* (125-3020).

Point priority can be changed using the basic or advanced **Commanding** window. Toggle between the **Basic** and **Advanced** command options using the **Advanced/Basic** button at the bottom of the **Commander** window.

In the basic **Commanding** window, you can command the point to a new value and can change only one priority, but in the advanced **Commanding** window, you can populate the entire priority array with values.



⚠ CAUTION

Release All Commanded Points

Remember to eventually release all commanded points to NULL priority so that the system is automatically controlled.

In the **Current Value** field on the **Basic** or **Advanced Commander** window, type N. NULL will be auto-filled into the field.

Failure to release commanded points may lead to unexpected results.



This procedure is only available to users with Command or higher access to points.

Changing Point Priority (Basic Commanding Window)

In the basic **Commanding** window, the (@) field displays the current priority and allows you to change the point priority.

1. Use the drop-down arrow to change the priority.
2. Click **Command** to initiate the change. The status of the command displays in the **Feedback** field.
 - ⇒ The point value displays in the (@) field, as well as in the current highest priority field in the advanced **Commanding** window.

Changing Point Priority (Advanced Commanding Window)

In the advanced **Commanding** window, the point priority can be changed in the **Priority** drop-down field. The value of the point can be changed in the current highest priority field.

1. Click the drop-down arrow in the **Priority** field to choose the priority.
2. Click the arrows in the current highest priority field OR in the **Present Value** field to change the point value in the highest priority.
3. Click **Command** to initiate the change. The status of the command displays in the **Feedback** field.
 - ⇒ When the point value is changed in the current highest priority field, the value will be reflected in the **Present Value** field once the change is initiated, and vice versa.

This procedure is now complete. Close the **Commanding** window by clicking the **X** in the top right corner of the window.

Chapter 6 - Graphics View

Chapter 6 discusses the following topics:

- Tips for Using the Graphics View [→ 51]
- Using the Graphics View [→ 51]
 - Opening a Graphics View Tab [→ 51]
 - Graphics Features [→ 51]
 - Graphics File Types [→ 52]
 - Graphics File Navigation [→ 52]

Tips for Using the Graphics View

- Graphics files can be viewed but not modified using the Graphics View in the BACnet Field Panel Web Server User Interface. See the *FINlite Graphics Tool* section for information about creating and modifying graphics.
- If your system requires large graphics, it is recommended that you use a USB memory device (such as a thumb drive) to save memory.

Using the Graphics View

Opening a Graphics View Tab

A Graphics View tab can be opened for a particular graphics file from the

 Device/Points or  Graphics

 Graphics application bars in the Navigation Pane (as the default application area due to a **default.fnl** file in the panel), or from another Graphics View tab.



NOTE:

In the Web Server user interface, it is recommended to limit the total number of graphic tabs and dynamic trend tabs that are open to six (6) for performance reasons.

Graphics Features

The graphics files created by the FINlite Graphics Tool can be published to the panel's RAM (Drive A) or USB (Drive B). These graphics files are then accessible from the BACnet Field Panel Web Server user interface.

A graphic can be used to show point values in text fields, show point values using animated graphics components, and navigate to other applications (Trend View, Schedule View, Point Commander, another graphic) and so on. For more details on the list of available graphics features, see the *FINlite Graphics Tool* section.

Graphics File Types

There are two types of graphics files.

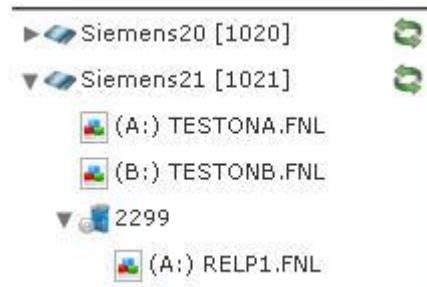
- A *standard graphic* is one where any Point Values shown on the graphic comes from a specific device and a specific object.
- A *Device Template Graphic* is one where the Point Values shown on the graphic may come from a selected FLN device.

Graphics File Navigation

Graphics can be viewed through the Graphics application in the BACnet Field Panel Web (FPWeb UI) Server user interface. Graphic files must be created and modified using the Siemens FINlite graphics tool. See the *FINlite Graphics Tool* section for more information on Siemens FINlite.

Multiple graphics can be opened simultaneously. They will display in separate tabs in the Graphics viewing window.

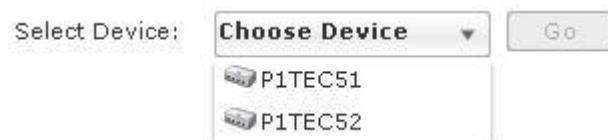
Standard graphics files are listed under the panel in which they are stored. Device Template Graphic files have an additional folder for the application number.



To view graphics files:

1. Select the **Graphics** bar from the navigation pane on the left side of the FPWeb UI.
⇒ All available panels will display.
2. Select the desired panel and graphic by clicking the panel name and then double-clicking the graphic name.
The **Graphics View** tab displays the graphics file and making the features available.

When a Device Template Graphic file is selected, a **Graphics View** tab opens, and then a **Select Device** dialog box displays, which lists any FLN device with the appropriate application number.



You select the device from an FLN device list. Then the features of the graphics file are available, and any value that is intended to come from the selected FLN device will display.

Graphics can also be viewed using the **Device/Points** bar:

1. Select the **Device/Points** bar from the navigation pane on the left side of the **FPWeb UI** screen.
 - ⇒ All available panels will display.
2. Select the desired panel.
 - ⇒ If there are graphics files in the selected panel, the **Graphics** option will display underneath the panel name.
3. View the desired graphic by clicking the **Graphics** option and then the graphic name.
The **Graphics** viewing window displays the graphics file.

Chapter 7 - Reporting

Chapter 7 discusses the following topics:

- Point Log Report Application [→ 54]
 - User Interface Description for the Point Log Report Application [→ 54]
 - Running a Point Log Report [→ 55]
- Totalized Point Report Application [→ 58]
 - User Interface Description for the Totalized Point Report Application [→ 58]
 - Using the Totalized Point Report Application [→ 59]

Point Log Report Application

The Point Log Report application allows you to run a Point Log report, which displays the panel name, point name, point description, point value/state, status, and (for commandable points) the active command priority.

The Point Log report application tab can be opened from the **Reports** application bar in the **Navigation** pane or from the **Out of Service** button in the Status Bar. When opened from the **Reports** application bar, the filters are cleared. When opened from the Status Bar, the filters are set appropriately to display point objects in that state.

User Interface Description for the Point Log Report Application

The **Point Log Report** application can be accessed using the **Reporting** bar in the navigation pane on the left side of the **BACnet Field Panel Web Server** screen. Click the **Point Log Report** icon:



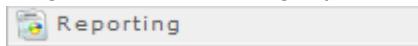
Point Log Report

The **Point Log Report** window displays.

- The **Panels** drop-down allows you to choose the panel(s) within which to run the Point Log report.
- The **Name** field allows you to search on the point name, using wildcard characters if necessary.
- The **Type** drop-down allows you to choose the type of point on which to run the Point Log Report.
- The **Search BACnet FLN** check box determines whether or not the report will include MS/TP points.
- The **Go** button runs the report.
- The **Cancel** button cancels the report.
- The **Status Filters** check boxes allow you to filter the report based on the status options (In-Alarm, Fault, Out of Service, Overridden, and Unacknowledged Alarm). See the *Running a Point Log Report* section for more information.
- The **Print** button allows you to print the report.
- The **Export to CSV** button allows you to export the report data to a comma separated values (CSV) file which can be saved.

Running a Point Log Report

- To generate a Point Log report, click the **Reporting**



bar in the left navigation pane, and then click



the **Point Log Report** icon.

⇒ A report pane displays and allows filter selection.

- Select the desired panel by clicking the panel name in the **Panels** drop-down field.

⇒ When a panel is selected, a check mark displays in front of the panel name.

**NOTE:**

A Point Log report can be run on multiple field panels at the same time. In the **Panels** drop-down field, select all of the desired panels, or choose **All**. The selected panels are indicated by checkmarks.

(Tip: To select all but one or a few panels, click **All** and then deselect the unwanted panels.)

Querying and Filtering a Point Log Report

Point Log reports can be queried on the point name and point type. Use the query fields (Panels, Name, Type, Search BACnet FLN) in the top section of the Point Log Report window to query the report.

- The **Point Name** query string allows wildcard characters: use (*) to replace any text; (?) to replace one character only. For example, (Temp*) returns all points starting with "Temp". For more information, see the *APOGEE BACnet ALN Field Panel User's Manual* (125-3020).
- The **Point Type** drop-down field functions the same way as the **Panels** drop-down field. See above.

Point Log reports can be filtered on the status (in alarm, fault, out of service, overridden, or unacknowledged alarms) of the points queried. Click the check boxes in the second row of the report pane filtering area to filter on a specific status.

Filtering on multiple status filters will return points that fulfill both filter criteria. For example, checking the **In-Alarm** and the **Unack. Alarm** check boxes will result in a list of points which are BOTH in alarm AND unacknowledged.

- **In-Alarm** will include any points which are currently in an alarm state.
- **Fault** will include any points which are currently in a fault state.
- **Out of Service** will include any points which are in an out of service state.
- **Overridden** will include any points which have been manually overridden (HAND).
- **Unack. Alarm** will include any points which have an unacknowledged condition (that is, an unacknowledged alarm, fault, or return-to-normal).

**NOTE:**

When the ****** wildcard is entered in the **Name** field and the **Search BACnet FLN** check box is selected, additional status filters are not available.

The screenshot shows the 'Point Log Report' dialog box. At the top, there are four dropdown menus: 'Panels' (set to 'ALL'), 'Name' (containing the wildcard '**'), 'Type' (set to 'ALL'), and 'Search BACnet FLN' (which has a checked checkbox). Below these dropdowns is a note: 'Additional filtering is disabled when searching BACnet FLN and using wildcarding (*) in the Name selection.'

Generating a Point Log Report

- To generate a Point Log report, click **Go**.

The Point Log report results display as a table in the report pane.

- To cancel a report in progress, click **Cancel**.

Changing the Width and Order of the Report Columns

The width and order of the report table columns can be changed in the report pane. The report information can also be sorted by column.

- To change the width of the columns, click and hold the vertical edge of the column header and move the line to the desired width.
- To change the order of the columns, click and hold the column and move it to the desired location within the table.
- To sort the report information by column, click the arrow in the column header. The numbers next to the column names indicate the sorting priority.

Using the Drag-and-Drop Feature to Generate a Point Log Report of FLN Devices

You can also use the drag-and-drop feature to automatically generate a Point Log report of FLN device points.

1. To automatically generate a Point Log report, click the **Reporting** bar in the left navigation pane, and then click the **Point Log Report** icon .
⇒ The **Report** pane displays.
2. Click the **Device/Points** bar in the left navigation pane, and navigate to the FLN device for which you want to generate a Point Log report.
3. Drag-and-drop that device onto the report pane.
⇒ The Point Log report for that device is automatically generated.

Exporting, Saving, and Printing a Point Log Report

The Point Log report can be exported to the system printer with a preview, or exported as a comma separated values (CSV) file and saved.

Exporting the Point Log Report

1. Click the **Export to CSV** button at the top right section of the report pane.
⇒ A dialog box opens.
2. Browse to the desired location to save the CSV file.
3. To close the Point Log report, click the × on the title tab of the report pane.

Printing the Point Log Report

1. Click the **Print** button  at the top right section of the report pane.
⇒ A print dialog box opens.
2. Choose the desired printer and click **OK**.
3. To close the Point Log report, click the  on the title tab of the report pane.

Totalized Point Report Application

The **Totalized Point Report** application allows you to run a Totalized Point report, which displays the panel name, point name, totalized value, reset date and time, and reset value.

The Totalized Point report application tab can be opened from the **Reports** application bar in the Navigation Pane. When opened, the filters are cleared.

User Interface Description for the Totalized Point Report Application

The **Totalized Point Report** application can be accessed using the **Reporting** bar in the navigation pane on the left side of the **BACnet Field Panel Web Server** screen. Click the **Point Log Report** icon:



Totalized Point Report

The **Totalized Point Report** window displays.

- The **Panels** drop-down allows you to choose the panel(s) within which to run the Totalized Point report.
- The **Name** field allows you to search on the point name, using wildcard characters if necessary.
- The **Type** drop-down allows you to choose the type of point on which to run the Totalized Point Report.
- The **Go** button runs the report.
- The **Print** button allows you to print the report.

- The **Export to CSV** button allows you to export the report data to a comma separated values file which can be saved.

Using the Totalized Point Report Application

Running a Totalized Point Report



NOTE:

A Totalized Point report can be run on multiple panels at the same time. In the **Panels** drop-down field, select all of the desired panels, or choose **All**. When a panel is selected, a checkmark displays in front of the panel name. (Tip: To select all but one or a few panels, click **All** and then deselect the unwanted panels.)

1. In the left navigation pane, click the **Reporting** bar, and then click the **Totalized Point Report** icon.
⇒ The **Report** pane displays and allows filter selection.
2. Select the desired field panel by clicking the panel name in the **Panels** drop-down field.
⇒ The chosen panel is indicated by a check mark.
3. Totalized Point reports can be queried on the point name and point type. Use the query fields (Panels, Name, Type) in the top section of the **Totalized Point Report** window to query the report.
 - The **Point Name** query string allows wildcard characters: use (*) to replace any text; (?) to replace one character only. For example, (Temp*) returns all points starting with “Temp”. For more information, see the *APOGEE BACnet ALN Field Panel User’s Manual* (125-3020).
 - The **Point Type** drop-down field functions the same way as the **Panels** drop-down field. See above.
4. Click the **Go** button.
⇒ The Totalized Point report results display in the **Report** pane.

Totalized Point Report				
Panels: <input type="button" value="Siemens..."/> Name: <input type="text" value="*"/> Type: <input type="button" value="ALL"/> <input type="button" value="Go"/>				
Results <input type="button" value="Print"/> <input type="button" value="Export to CSV"/>				
Panel	Point Name	Totalized Value	Reset Date and Time	Reset Value
Siemens10	AV111	0.0 Hours	09-01-2015 11:46:38	0.0
Siemens10	avTtlDemo	0.0 Minutes	09-01-2015 11:46:38	0.0
Siemens10	avTTLHour	33877.56 kW Hours	09-01-2015 11:46:39	0.0
Siemens10	avTTLMinute	2032654 kJ Minutes	09-01-2015 11:46:39	0.0
Siemens10	AV_LAO	0.0 PCT Minutes	09-01-2015 11:46:39	0.0
Siemens10	bvTTLHour (OFF)	338.7741 Hours	09-01-2015 11:46:40	0.0
Siemens10	bvTTLHour (ON)	338.8041 Hours	09-01-2015 11:46:40	0.0
Siemens10	bvTTLSecond (REVERSE)	1219583 Seconds	09-01-2015 11:46:40	0.0
Siemens10	bvTTLSecond (FORWRD)	1219698 Seconds	09-01-2015 11:46:40	0.0
Siemens10	moTTLHour (STOP)	677.5549 Hours	09-01-2015 11:46:41	0.0
Siemens10	moTTLHour (SLOW)	0.0 Hours	09-01-2015 11:46:41	0.0

Changing the Width and Order of the Report Columns

The width and order of the report table columns can be changed in the report pane. The report information can also be sorted by column.

- To change the width of the columns, click and hold the vertical edge of the column header and move the line to the desired width.
- To change the order of the columns, click and hold the column and move it to the desired location within the table.
- To sort the report information by column, click the arrow in the column header. The numbers next to the column names indicate the sorting priority.

Exporting, Saving, and Printing a Totalized Point Report

The Totalized Point report can be exported to the system printer with a preview, or exported as a comma separated values (CSV) file and saved.

Exporting the Totalized Point Report

1. Click the **Export to CSV** button at the top right section of the report pane.
⇒ A dialog box opens.
2. Browse to the desired location to save the CSV file.
3. To close the Totalized Point report, click the  on the title tab of the report pane.

Printing a Totalized Point Report

1. Click the **Print** button at the top right section of the report pane.
⇒ A print dialog box opens.
2. Choose the desired printer and click **OK**.
3. To close the Totalized Point report, click the  on the title tab of the Report pane.

Chapter 8 - Trend View

Chapter 8 discusses the following topics:

- Trend View Overview [→ 61]
 - Tips for Using the Trend Application [→ 61]
- Using the Trend Application [→ 61]
 - Viewing Trend Data of a Single Trended Point [→ 61]
 - Viewing Trend Data of Multiple Trended Points [→ 63]
 - Printing a Trend Graph [→ 65]
 - Customizing a Trend Graph [→ 66]

Trend View Overview

A Trend View application tab can be opened for a particular Trend Log Object from the **Device/Points** application bar in the Navigation Pane, from the **Trending** application bar in the Navigation Pane, or from a **Graphics View** application tab. In addition, a Trend View application tab can be opened for a particular Point Object from the **Point Commander** application window.



When opened by the Point Commander application window, the Trend View application tab begins dynamically trending the point by polling the Point Object.

Tips for Using the Trend Application

- Existing trends can also be viewed using the **Device/Points** bar in the navigation pane on the left side of the **BACnet Field Panel Web Server** screen, but trends cannot be created, modified, or deleted using the **Device/Points** bar.

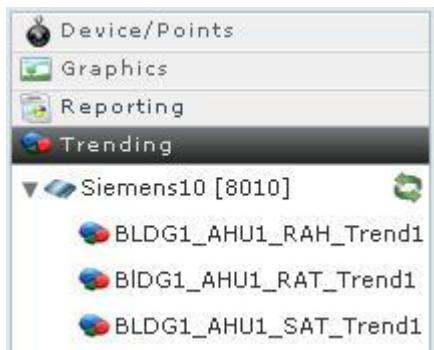
Using the Trend Application

Viewing Trend Data of a Single Trended Point

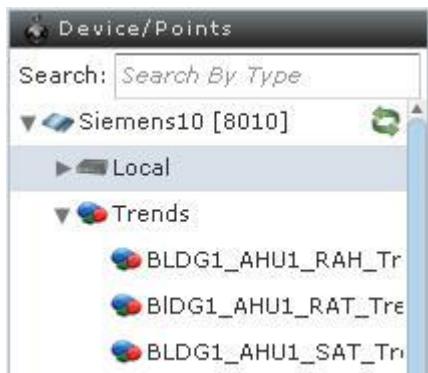
The procedures in this topic are available to users with Read Only or higher access to Trend.

Trending can be accessed from two places in the navigation pane:

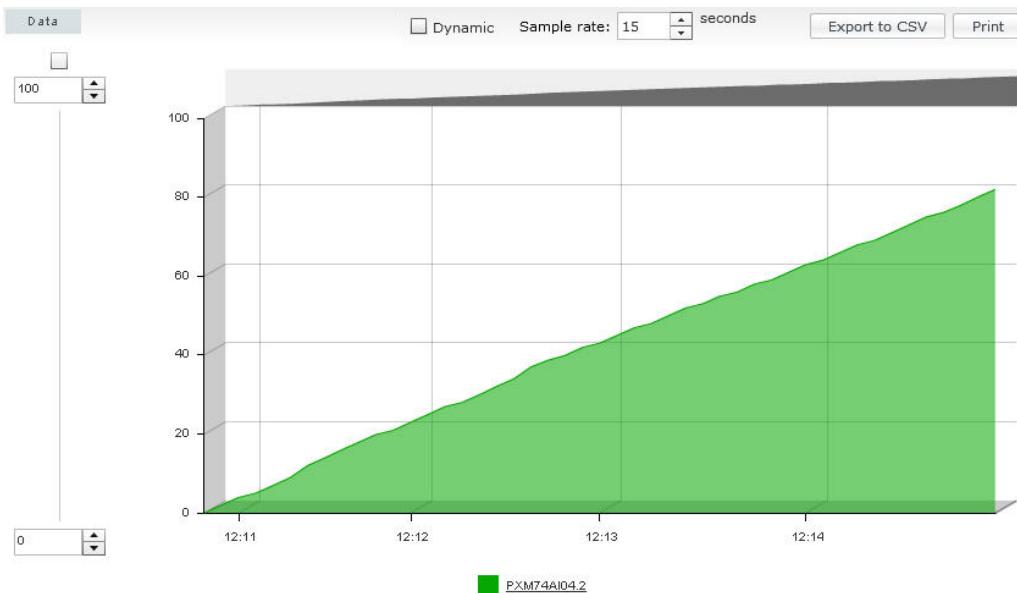
1. Click the **Trending** bar in the navigation pane.
2. Choose the desired panel to select the Trend Object from.



3. OR
4. Click the **Device/Points** bar in the navigation pane.
5. Choose the desired panel.
6. Click the **Trends** option to see the Trend Object list in that panel.



7. THEN
8. Select a Trend Object from either list in the navigation pane by double-clicking on the Trend Object name.
 - ⇒ A trend graph displays in the right pane with the trend data of the selected Trend Object.



You can navigate to other applications while the system is generating a Trend graph.

- To cancel a Trend graph, do one of the following:
 - Start a new Trend graph
 - Close the trend viewing tab
 - Log off BACnet Field Panel Web Server.

For more information, see the *Customizing a Trend Graph* [→ 66] section.

Viewing Trend Data of Multiple Trended Points

The Trending Application allows trended data of up to six (6) points to be viewed at the same time on one graph or in a single data report.

The **Data** button in the top left section of the graphs will display a report in a data view for all points being viewed in the graph. The button allows you to toggle between the data view and the graphical view.

To view the trended date of multiple trended points, first generate a graph for one point. See the *Viewing Trend Data of a Single Trended Point* [→ 61] section.

- Using the navigation pane, drag additional points or trend log objects onto the graph in the right pane. Additional point or trend information will display on the graph in the right pane.



Printing a Trend Graph

**NOTE:**

Do not use the browser print feature for printing BACnet Field Panel Web Server reports or graphs.

1. Once the Trend graph is generated, click the **Print** button in the upper right corner of the trending pane.
⇒ The system generates a printer-ready format of the graph and opens the Print dialog box.
2. Choose the desired printer and click **OK**.
3. To close the Trend graph, click the **x** on the title tab of the trending pane.



Displaying the Data for a Trend Graph

1. Once the Trend graph is generated, click the **Data** button to display the data in a report.
2. To print the report, click the **Print** button in the upper right corner of the trending pane.
3. To export the data as a comma separated values (CSV) file, do the following:
 - Click the **Export to CSV** button at the top right section of the report pane.
 - In the dialog box that displays, browse to the desired location to save the CSV file.
4. To toggle the display back to the Trend graph, click the **Graph** button.

5. To close the Trend graph, click the  on the title tab of the trending pane.

Customizing a Trend Graph

Trend graphs can be customized within BACnet Field Panel Web Server.

Customization options include:

- Vertical access values
- Dynamic display
- Viewing more data
- Line color and thickness
- Fill alpha
- Chart type

Vertical Access Values

To change the values of the vertical access, use the numeric scroll box to choose values.

Dynamic Display

To view the trend(s) dynamically, check the **Dynamic** check box at the top of the right pane. The delay intervals can be changed using the numeric scroll box at the top of the right pane. The delay values display in seconds.



NOTE:

If the **Trend Object type** is time-based, and the **Stop when full** check box is not checked, it is recommended that the value of the Trend Object is set to five (5) seconds or more.

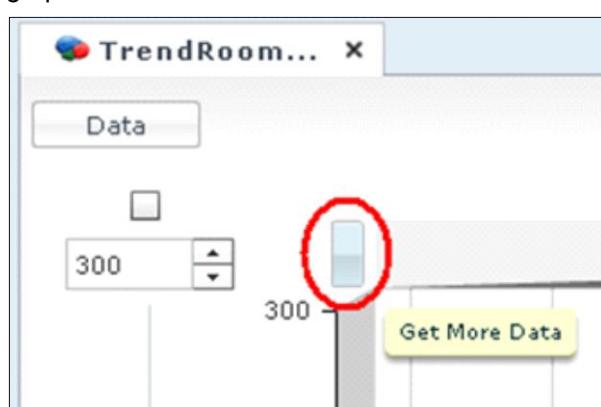
Otherwise, during dynamic trending, when the buffer is filled, the first data sample will drop off to make space in the buffer. Because it takes more than one second for this action, the Trend graph will be unable to display the current data samples accurately.

Clicking the **Zoom out** button will also allow the longer time span to display, but this must be done manually, and every time the buffer fills.

Viewing More Data

The trend graph defaults to displaying the 50 most recent data samples.

To view more data, click the “Get more data” button in the top left corner of the trend graph:



The trend graph will now add the previous 50 data samples to the display. Clicking the button again adds another 50 data samples to the display.

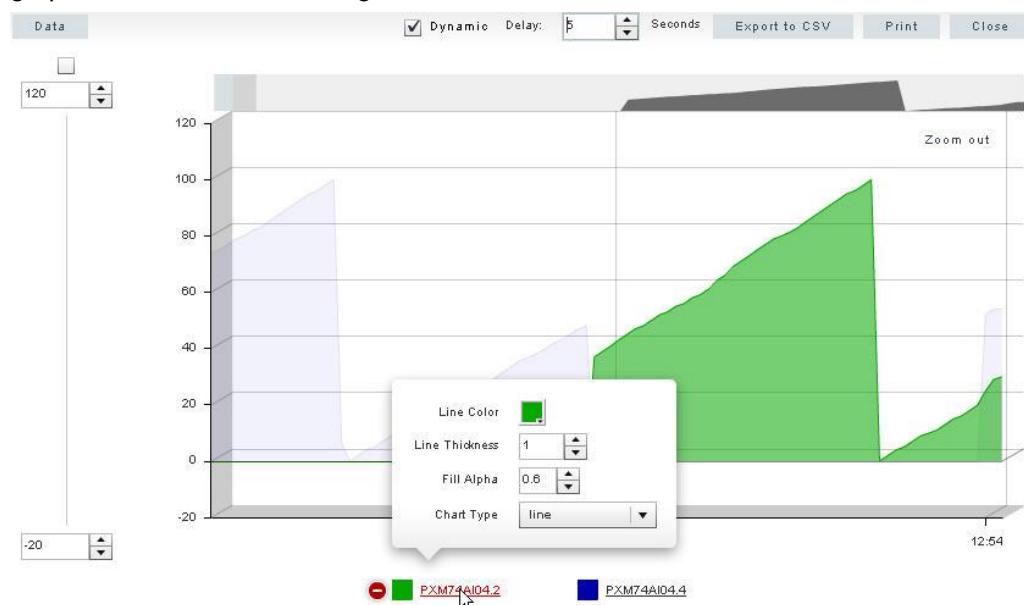
Line Color and Thickness, Fill Color, and Chart Type

The line color, line thickness, fill color (“Fill Alpha”), and chart type (lines, columns, or steps) can be customized using the dialog box which displays at the bottom of the right pane. To access the **Customization** dialog box, click the point name underneath the trend graph in the right pane. To exit the dialog box, click the white space on the right pane.

Removing Points from a Graph

To remove a point from a graph entirely, click the point name underneath the trend graph in the right pane, and then click the  icon next to the point name.

To remove a point from a graph temporarily, click on the colored box next to the point name underneath the trend graph in the right pane. To re-display the point on the graph, click the colored box again.



Trend Data Upload

Trend Data Upload is a feature with Firmware Revision 3.5 or later that allows you to configure automatic export of Trend data to a user-defined network location using File Transfer Protocol (FTP).

A FTP Server is necessary to be configured for uploading trend data collected by the field panel. Individual Trend Objects may be enabled for FTP Upload. A FTP Server is not necessary if the FTP Upload feature is not used.

Configuring FTP Trend Upload

One .CSV file is uploaded per selected trend object. The number of trend objects that can be defined for upload is only limited by the field panel's memory.

See the *APOGEE BACnet ALN Field Panel User's Manual (125-3020) Trend Procedures, Configuring the FTP Server* section for the following procedures:

- Configuring the field panel with the address, user name and password for the remote FTP server.
- Designating trend log objects to upload to an FTP server.
- Creating a folder on the FTP Server to store the .CSV export files.



NOTE:

For more information on Trending, see the *BACnet Field Panel Web Server User Guide (125-3584), Chapter 10 – Create/Edit, Trend Application* section.

Configuring the Field Panel for FTP Upload

The FTP Server must be configured as follows:

- A username and password for a dedicate FTP user that the field panel can use to access the FTP server.
- A folder in the root of the home directory of that user named, **TrendData**.
NOTICE! This is case sensitive.

Setting up the field panel using Launch Pad

1. From **Launch Pad**, left window pane, click **System Configuration, Panel Configuration** and then select the **FTP Server** tab.
2. In the **Trend Editor, Create/Edit, Trend**, specify the point trend definition.
3. Click the **FTP Upload** check box.



NOTE:

When you add multiple defined trend log objects, it can impact field panel performance.

Troubleshooting FTP Upload



NOTE:

The FTP Upload feature will not upload a file to the FTP Server until the notification threshold is reached. By default, this occurs when the number of samples has reached 80% of the maximum sample storage.

If Trend samples are not getting uploaded, use the following procedure to troubleshoot.

- ▷ Use a computer with an FTP Client installed or use the Command Prompt to access the FTP Server.

1. From the **HMI**, verify that you can connect (ping) the FTP Server.
2. Logon using the same user name and password credentials that you defined for the field panel FTP Server.
3. From the **Command Prompt FTP** command, type **ls**, press **ENTER** to display a directory list and then verify that the TrendData directory (folder) exists



NOTE:

If using a GUI based FTP Client, ensure that the TrendData folder is present in the home directory, which is the folder that you are logged on to by default.

Chapter 9 - Schedule View

Chapter 9 discusses the following topics:

- Scheduler Application Overview [→ 70]
 - User Interface Description for the Scheduler Application [→ 70]
 - Tips for Using the Scheduler Application [→ 72]
- Using the Scheduler Application [→ 73]

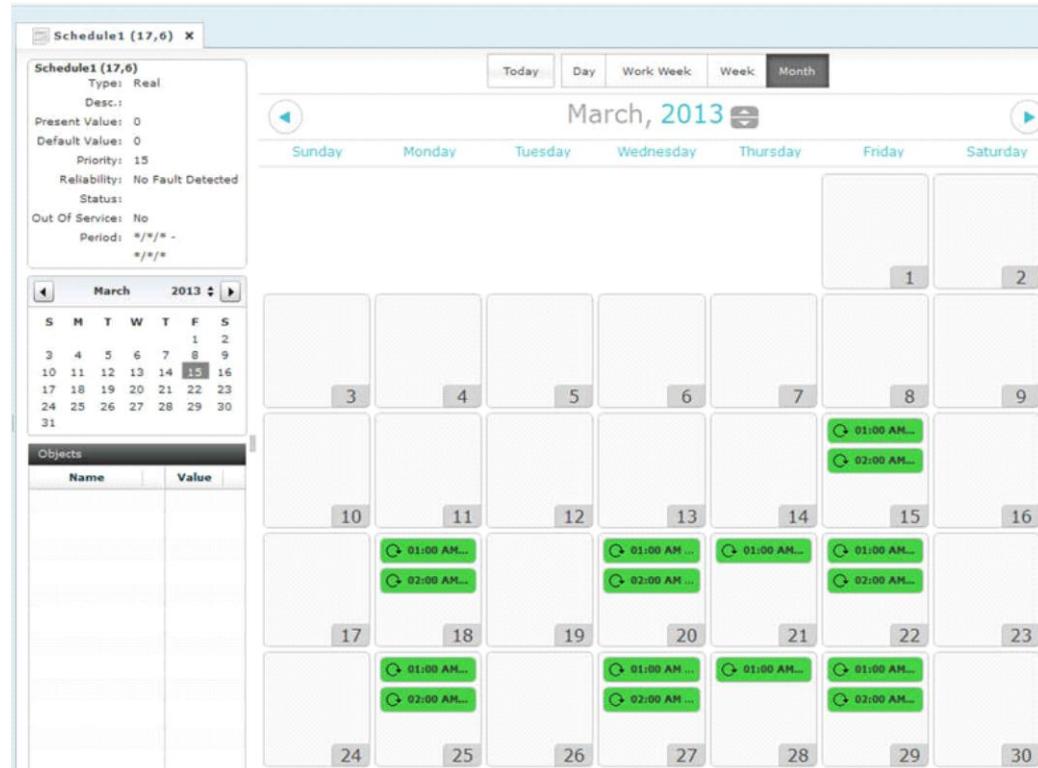
Scheduler Application Overview

The BACnet Field Panel Web Server Scheduler Application allows you to view existing schedules, referenced objects, and schedule details.

The Schedule View application tab can be opened from the **Device/Points** application bar in the Navigation Pane, from the **Scheduling** application bar in the Navigation Pan, or from a **Graphics View** application tab.

User Interface Description for the Scheduler Application

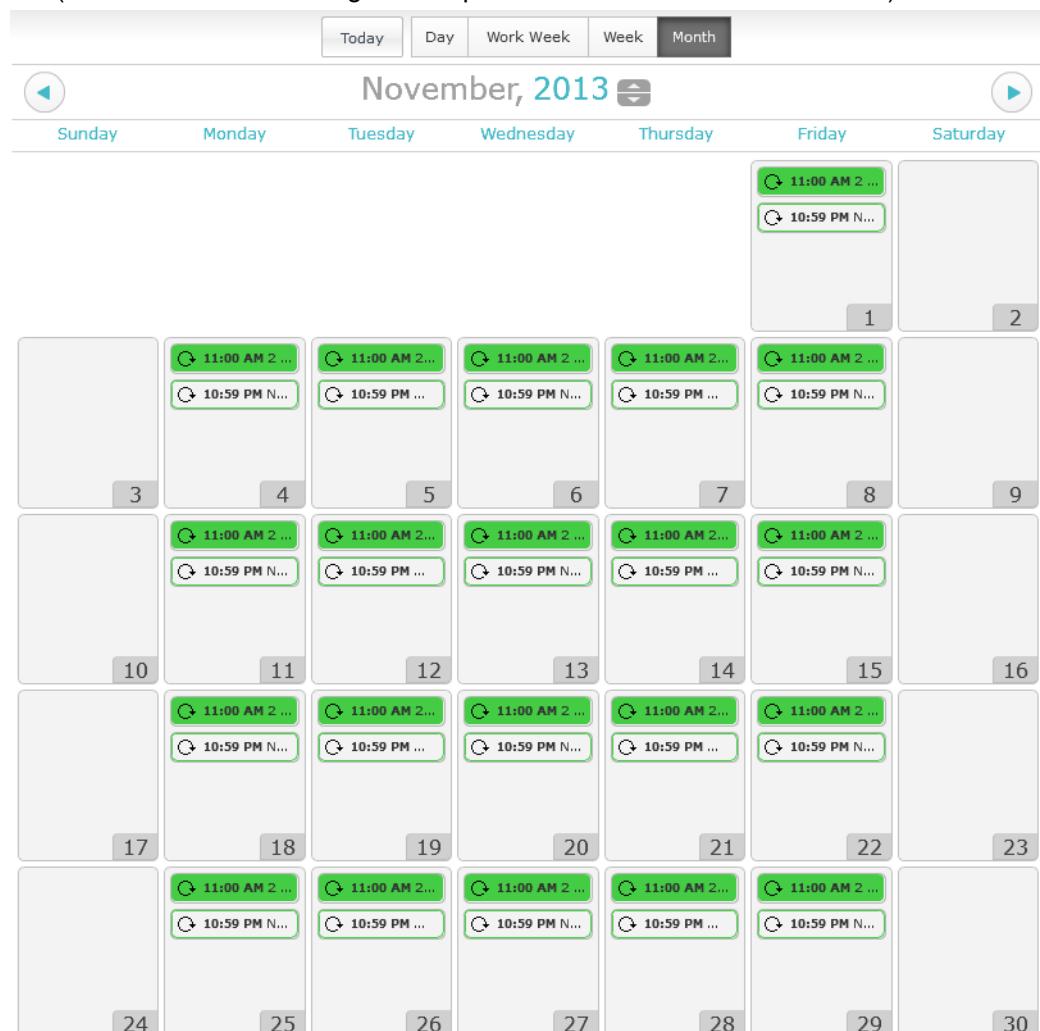
The Scheduler window can be accessed using the **Scheduling** bar in the navigation pane on the left side of the screen. Choose the desired panel, and click the existing schedule name to open the **Scheduler** viewing window and its related views:



- The upper left portion of the Schedule window displays the schedule details, including object identifier, description, present value, default value, priority, reliability, status, out-of-service status, and schedule period.

- The **Objects** section of the **Schedule** window displays the objects associated with the schedule being viewed.
- The left and right arrows at the top of the **Schedule** window allow you to view a prior or future day, work week, week, or month, depending on which mode you are viewing.
- The up and down arrows allow you to view the next or previous year.
- The **Today** button displays the schedules for the current day.
- The **Day** button displays the schedules for a desired day.
- The **Work Week** button displays the schedules for a desired week, Monday through Friday.
- The **Week** button displays the schedules for a desired week, Sunday through Saturday.
- The **Month** button displays the schedules for a desired month.
- In Day, Week, or Work Week view, an existing schedule is indicated by a green bar across the date (or a red bar indicating an exception).

NOTE: An existing schedule with a value of NULL is indicated by a green outline (or a red outline indicating an exception schedule with a value of NULL).

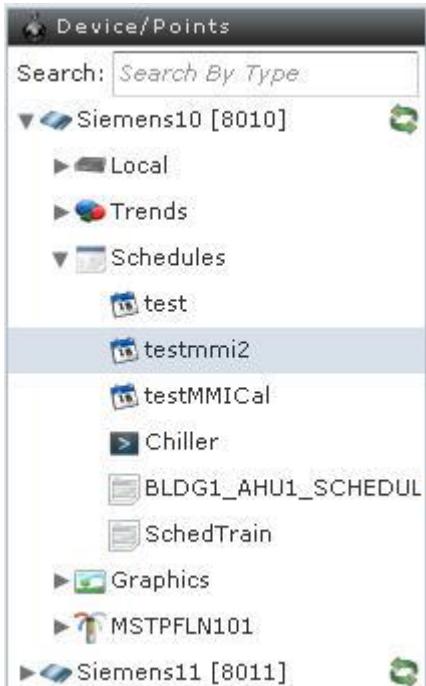


- If a particular day has too many schedules to fit in the graphical view, option buttons display in the bottom of the date box, allowing you to view the remaining schedules:



Tips for Using the Scheduler Application

- Schedule details can be viewed using Today, Day, Work Week, Week, or Month views. Use the buttons at the top of the Schedule window to choose among the available views or to advance to the next Schedule segment (day, work week, week, or month).
- Existing schedules can also be viewed using the **Device/Points** bar in the navigation pane on the left side of the Web Server screen, but schedules cannot be created, modified, or deleted using the **Device/Points** bar. Command object and calendar objects cannot be viewed, modified, created, or deleted using the **Device/Points** bar.



Using the Scheduler Application

1. Select the **Scheduling** bar from the navigation pane on the left side of the **BACnet Field Panel Web Server** screen.
 - ⇒ All available panels will display.
2. Select the desired panel and schedule object by clicking the panel name and then the schedule object name.

NOTE: Command objects and calendar objects cannot be opened through the Scheduler application. For more information, see the *Schedule/Command/Calendar Object Editors* section.

 - ⇒ The **Schedule** window displays schedule object details. See the *User Interface Description for Scheduler* section for more information.
3. Use the viewing buttons to view the schedule in the desired view: Today, Day, Work Week, Week, Month.
4. Use the right and left arrow buttons to view the next or previous day, work week, week, or month.

Chapter 10 - Create/Edit

Chapter 10 discusses the following topics:

- Trend Application [→ 74]
- Point Editor Application [→ 78]
- Schedule/Command/Calendar Object Editors [→ 97]
- Event Enrollment [→ 112]
- Notification Class [→ 115]
- Remote Notification [→ 123]
- PPCL [→ 129]

Trend Application

This section discusses the following topics:

- Trend Application Overview [→ 74]
 - User Interface Description for the Trend Editor Application [→ 74]
 - Off-Node Trending [→ 76]
- Using the Trend Editor Application [→ 77]
 - Creating a Trend Object [→ 77]
 - Viewing a Trend Object [→ 77]
 - Modifying a Trend Object [→ 77]
 - Deleting a Trend Object [→ 78]

Trend Application Overview

The Trend Editor application in the BACnet Field Panel Web Server allows you to create Trend Objects. The Trend Editor Application is accessible using the **Create/Edit** bar in the left navigation pane.

For more information on Trending, see the *APOGEE BACnet ALN Field Panel User's Manual* (125-3020).

User Interface Description for the Trend Editor Application

The Trend Editor application can be accessed by clicking the **Trend** icon in the **Create/Edit** bar in the navigation pane on the left side of the screen:



For information about off-node trending, see the *Off-Node Trending* section.

Trend Editor

Object Name: * AIR VOLUME Trend

Object Identifier: 20,3

Description:

Trend Log Enabled

Point to be trended: * PTEC110:AIR VOLUME

Trend Type: Timed

Trend Interval: 1 minute 30 minute
 5 minute 1 hour
 10 minute Custom 15 second

Start Date/Time: 1 : 49 AM

End Date/Time: 1 : 49 AM

Stop when full

Max Samples: 200

Notification Threshold: 160

Notification Class: NCO

FTP Upload Enabled

FTP Upload Status: Success 13:51:27 02-20-2017 MON

- The **Trend Object Editor** window displays on the right side of the screen.
- The **Object Name** field allows you to name the Trend Object using up to 30 characters. This field is mandatory for creating a Trend Object and cannot be edited in an existing Trend Object.
- The **Object Identifier** field displays the Trend Object identification information. If you do not enter a value, the controller will automatically enter the next available Object ID. This field cannot be edited in an existing Trend Object.
- (Optional) The **Description** field allows you to describe the point using up to 16 characters. This field can be edited.
- The **Trend Log Enabled** check box allows you to enable or disable the trend log object. This option can be edited later. This check box defaults to YES.
- The **Point to be Trended** field has a drop-down menu to select the available points in the selected panel. The **Point to be Trended** field also has a question mark (?) button that can be selected to enter a BACnet Device Object Identifier. This field cannot be edited in existing Trend Objects.
- The **Trend Type** drop-down menu allows you to define the trend type (COV or Timed). This field can be edited in existing Trend Objects.
- The **Trend Interval** choices allow you to define the time interval for time-based trends.
- The **Start Date/Time** and **Stop Date/Time** check boxes allow you to enter a trend start and stop Date/Time. This option can be edited in existing Trend Objects. By default, these check boxes are not checked, so a trend start and stop Date/Time are all wildcards.

- The **Start Date/Time** fields allow you to specify a date/time value for a trend to begin (if the enable check box is checked). These fields can be edited in existing Trend Objects.
- The **End Date/Time** fields allow you to specify a date/time value for a trend to end (if the enable check box is checked). These fields can be edited in existing Trend Objects.
- The **Stop when full** check box allows you to define whether trending will stop when the trend log is full. Otherwise, new trend records will rollover old trend records. This check box defaults to unchecked (NO).
- The **Max Samples** field allows you to define the trend buffer size. If you do not specify a minimum value, the default value is 5. The maximum value is 2500; the circular buffer will drop off data points after the maximum value is reached.
- The **Notification Threshold** field allows you to define the notification threshold for filling the trend buffer. This field defaults to 80% of maximum samples.
- The **Notification Class** drop-down allows you to select the notification class desired for sending alarm notification. This option can be edited in existing Trend Objects. This field defaults to Notification 0 or the first Notification Class.
- The **FTP Upload Enabled** check box allows you to enable FTP upload of data collected for a Trend Object.
- The **FTP Upload Status** field displays Success/Failed/Unknown status to indicate the result of past attempts to upload trend data to the FTP Server. If the last try was successful, the displayed time indicates when data was last uploaded. If the last try failed, the displayed time indicates when the failure was first detected. The status Unknown indicates that no attempt has yet been made to upload to the FTP Server. Note that the **FTP Upload Status** field is not automatically updated on the UI upon each try, but is retrieved from the field panel whenever the trend object is selected.

For more information on trending, see the *APOGEE BACnet ALN Field Panel User's Manual* (125-3020).

Off-Node Trending

On-node trending is when the trended object resides in the same panel as the trend log object.

Off-node trending is when the trended object is located in a different device than the trend log object.

For more information about on- and off-node trending, see the *APOGEE BACnet ALN Field Panel User's Manual* (125-3020).

Depending on where the object is located, the **Point To Be Trended** field in the Trend Editor will display either the object name or the BACnet Encoded Name alias.

The **Point To Be Trended** field will display the object name when one of the following occurs:

- The point to be trended resides in the local panel and is resolved at the time of creation.
- The point to be trended resides in a local MS/TP device located on the panel's physical MS/TP network and is resolved at the time of creation.

If these conditions are not fulfilled at the time of creation, the point to be trended will display the BACnet Encoded Name alias in the **Point To Be Trended** field.



Ensure that the panel containing the point to be trended is refreshed prior to opening a trend graph and attempting to make it dynamic.

Using the Trend Editor Application

Creating a Trend Object

1. Select the **Trend** icon from the **Create/Edit** bar.
⇒ The **Trend Editor** window will open.
2. Click **Select a Panel** at the top of the left pane of the **Trend Editor** window to display available panels.
3. Select the desired panel by clicking the panel name in the left pane of the **Trend Editor** window.
4. Click the **+** button at the bottom left of the **Trend Editor** window.
⇒ The object information window displays a new Trend Object.
5. Enter the new Trend Object information.
6. Click **Save**.
⇒ The **Save** button becomes grayed out once the modifications are complete.

For information about off-node trending, see the *Off-Node Trending* section.

Viewing a Trend Object

1. Select the **Trend** icon from the **Create/Edit** bar.
⇒ The **Trend Editor** window will open.
2. Click **Select a Panel** at the top of the left pane of the **Trend Editor** window to display available panels.
3. Select the desired panel and the desired Trend Object by clicking the panel name and then the Trend Object name.
⇒ The object information window displays Trend Object details.

Modifying a Trend Object

1. Select the **Trend** icon from the **Create/Edit** bar.
⇒ The **Trend Editor** window will open.
2. Click **Select a Panel** at the top of the left pane of the **Trend Editor** window to display available panels.
3. Select the desired panel and the desired Trend Object by clicking the panel name and then the Trend Object name.
⇒ The object information window displays Trend Object details.
4. Make the desired modifications to the existing Trend Object.
5. Click **Save**.
⇒ The **Save** button becomes grayed out once the modifications are complete.

Deleting a Trend Object

1. Select the **Trend** icon from the **Create/Edit** bar.
⇒ The **Trend Editor** window will open.
2. Click **Select a Panel** at the top of the left pane of the **Trend Editor** window to display available panels.
3. Select the desired panel and the desired Trend Object by clicking the panel name and then the Trend Object name.
⇒ The Trend Object information window displays Trend Object details.
4. Click the - button at the bottom left of the **Trend Editor** window.

A message box will display, allowing you to verify deletion of the selected Trend Object. Click **Yes** to delete the selected object.

Point Editor Application

This section discusses the following topics:

- Point Editor Application Overview [→ 78]
 - User Interface Description for the Point Editor Application [→ 78]
 - Slope/Intercept Calculator [→ 84]
 - Tips for Using the Point Editor Application [→ 86]
- Using the Point Editor Application [→ 87]
 - Creating a Point [→ 87]
 - Viewing a Point [→ 90]
 - Modifying a Point [→ 92]
 - Deleting a Point [→ 94]

Point Editor Application Overview

Through the **Create/Edit** bar in the left navigation pane, you can create, modify, view, and delete points.

Physical points are local points which have a physical address and are bound to a physical I/O. Virtual points are not bound to a hardware I/O.

UI Revision 1.3.x Point Editor introduces the ability to create, modify, view, and delete points in MS/TP FLN programmable devices (PTEC and UEC/PANEL). See *Custom Application Management Error Handling* [→ 198] for compatibility and other setup requirements.

User Interface Description for the Point Editor Application

The Point Editor application can be accessed by clicking the **Point** icon in the **Create/Edit** bar in the navigation pane on the left side of the Web Server screen:



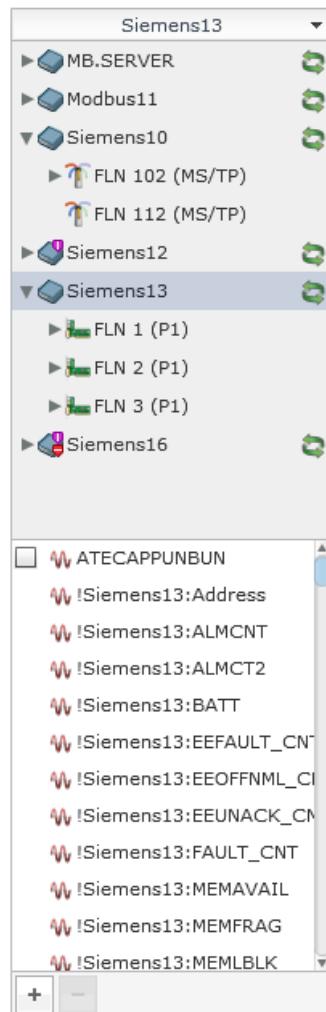
Point



NOTE:

Programmable BACnet MS/TP FLN devices residing on a field panel's local MS/TP FLN ports are accessible through this editor. Routed MS/TP FLN and BACnet IP FLN devices are not accessible.

The Point Editor navigation pane displays on the left side of the editor. Panels, P1 FLN devices, Integration FLN devices, and MS/TP FLN programmable devices display in the Point Editor's device tree. When you select a panel or device, the points in that panel or device display in the object list in the bottom half of the tree:



When you select a point from the object list for an ALN panel device, or P1 device, or UEC/PANEL device, the point characteristic information displays in the right pane of the editor. Not all parameters are shown in the following images:

(AV) Virtual LAI

Object Name:	<input type="text" value="AV_LAI"/>
Object Identifier:	<input type="text" value="2,3"/>
Description:	<input type="text"/>
Virtual Point #:	<input type="text"/>
Engineering Units:	<input type="text" value="%"/>
COV Limit:	<input type="text" value="1"/>
Data Type:	<input type="text" value="Float"/>
Decimal Places:	<input type="text" value="2"/>
Totalization Rate:	<input type="text" value="None"/>
Relinquish Default:	<input type="text" value="0"/>
 <input checked="" type="checkbox"/> Alarmable	
High Alarm Limit:	<input type="text" value="10"/>
Low Alarm Limit:	<input type="text" value="0"/>
Time Delay (secs):	<input type="text" value="0"/>
Deadband:	<input type="text" value="0"/>
<input type="checkbox"/> Annunciate to Normal Transitions	
<input checked="" type="checkbox"/> Annunciate to Off-Normal Transitions	
<input type="checkbox"/> Annunciate to Fault Transitions	
Notification Class:	<input type="text" value="0"/>

(BO) Physical LDO

<input type="radio"/> LDI	<input checked="" type="radio"/> LDO	<input type="radio"/> L2SL	<input type="radio"/> L2SP
Object Name:	<input type="text" value="Rm219Lights"/>		
Object Identifier:	<input type="text"/>		
Description:	<input type="text"/>		
Address (FLN/Drop/Point):	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
State Text Table:	<input type="text" value="Default LDO"/>		
<input type="checkbox"/> Invert value			
<input type="checkbox"/> Totalize			
Relinquish Default:	<input type="text" value="0"/>		
 <input type="checkbox"/> Alarmable			
Time Delay (secs):	<input type="text" value="0"/>		
<input type="checkbox"/> Annunciate to Normal Transitions			
<input type="checkbox"/> Annunciate to Off-Normal Transitions			
<input type="checkbox"/> Annunciate to Fault Transitions			
Notification Class:	<input type="text" value="0"/>		

- The **Point** Editor window displays on the right side of the screen.
- The **Object Name** field allows you to name the point using up to 30 characters. This field is required for the creation of a point and cannot be edited.
- The **Object Identifier** field displays the point Object Identifier information. An Object Identifier consists of an object type and instance number. The object type is the BACnet standard object type enumeration value (see table above). You can enter an instance number on point creation in this field, or leave it blank. If you do not enter an instance number in the Object Identifier field on creation, the controller will automatically enter the next available instance number. After creation, the Object Identifier field cannot be edited and the field will show the object type and instance number separated by commas.
- (*Optional*) The **Description** field allows you to describe the point using up to 16 characters. This field can be edited.
- The **State Text Table** drop-down menu allows you to choose the text to be associated with the various states of the point object. The state text table being displayed resides in the field panel on the ALN.

If you create custom state text tables in the field panel, those state text tables are not automatically available in the Field Panel Web Server. To make these custom state text tables available, follow the instructions in *Chapter 14 - Troubleshooting* to clear the Field Panel Web UI browser cache [→ 259] or to clear the Launch Pad cache [→ 260], exit the Field Panel Web Server and logon again. This action will trigger the loading of State Text Tables.



NOTE:

If the point object is being created in a UEC, any state text tables used must reside in the UEC before they can be applied. This can be done by doing one of the following:

- Use only default state text tables, which already reside in both the UEC and the field panel on the ALN.
- Using Commissioning Tool or the HMI, recreate custom state text tables in the UEC to match those in the field panel on the ALN.

- The **Alarmable** check box, if checked, allows you to activate BACnet intrinsic alarming for the point. If not checked, the related alarm properties are inactive and are grayed out. This check box defaults to unchecked.

- The **Update** button (PTEC and UEC devices) opens the Database Manager.

Other fields, such as Address settings, Data Type, and so on. are available depending on the point type. For more information on point characteristics, and for a more inclusive list of point characteristics, see the *APOGEE BACnet ALN Field Panel User's Manual* (125-3020).

User Interface Description for the PTEC Point Editor

When you select a PTEC device, the object list indicates the ability to select the **Custom Point Table**:



After selecting the Custom Point Table from the object list, the PTEC Point Editor table displays the custom application point objects:

PTEC Point Editor

Name	Type	Instance #	Engineering ...	State Text T...	Inactive Text	Act
APP12072.BO1	BO	1000		NONE	OFF	ON
APP12072.BO2	BO	1001		NONE	OFF	ON
APP12072.BO3	BO	1002		NONE	OFF	ON

- The **Name** column displays the point name (maximum of 12 characters: uppercase letters A through Z, numbers 0 through 9, period, question mark, character space).

- The **Type** column displays in a drop-down the point type (AO or BO).
- The **Instance #** column displays the instance number (1,000 or higher).
- The **Engineering Units** column displays, in a drop-down, the standard BACnet engineering units used to indicate point value. This column is disabled for BO points.
- The **State Text Table** column displays, in a drop-down, the state text used to indicate point value. This column is disabled for AO points.
- The **Inactive Text** column displays the value used for the inactive (0) point state. This column is disabled for AO points (maximum of 6 characters: uppercase letters A through Z, numbers 0 through 9, period, question mark, character space).
- The **Active Text** column displays the value used for the active (1) point state. This column is disabled for AO points (maximum of 6 characters: uppercase letters A through Z, numbers 0 through 9, period, question mark, character space).
- The **Default Value** column displays, in a numeric field for AO points and in a drop-down for BO points.

All information is editable.

The width and order of the columns can be changed and the information can also be sorted by column.

- To change the width of the columns, click and hold the vertical edge of the column header and move the line to the desired width.
- To change the order of the columns, click and hold the column and move it to the desired location within the table.
- To sort the report information by column, click the arrow in the column header. The numbers next to the column names indicate the sorting priority.

Slope/Intercept Calculator

Analog Input (AI) and Analog Output (AO) points require scaling factors (slope and intercept) to be entered in the Point Editor. You can also choose which type of sensor input or actuator output is being connected to the controller. These are required fields and are critical for achieving accurate results.

If you know the correct values for slope and intercept for the point being added, you can enter them directly into these fields.

Sensor Type:	RTD 1K Platinum 375
Slope:	1
Intercept:	-0.311762

- Slope and Intercept are factors used to convert signals that the field panel uses for analog points into engineering units that represent point values. Slope and intercept constants are determined by the type of input or output device that is represented by the point.

For more information, see the *Slope and Intercept Calculations* section of the *APOGEE BACnet ALN Field Panel User's Manual* (125-3020) for the field panel where the point resides.

- The Sensor Type and Actuator Type refer to the signal on the wires that is read from or sent to the field device. The available types are:
 - Voltage
 - Current

- Pneumatic
- Thermistor 10K Type 2
- Thermistor 10K Type 3
- Thermistor 100K
- L Type
- RTD 1K Platinum 375
- RTD 1K Platinum 385
- RTD 1K @ 32F Nickel LG-Ni
- RTD 1K @ 70F Nickel JCI
- RTD 1K Nickel DIN
- Custom

If you are not sure what values to enter for the slope and intercept, the Point Editor supports a Slope/Intercept Calculator for Modular and Compact field panels and UEC/Panel on FLNs. The Slope/Intercept Calculator is accessed from Point Editor by clicking the **Slope/Intercept Calculator** button while editing a physical analog input or output point.

Slope Intercept Calculator

Point type: **(AI) Physical LAI**

Sensor Type: **Voltage**

Calculation Units: English S.I.

Slope: []

Intercept: []

Signal Range: Low [0] High [10] volts, mA, etc.

Device Range: Low [0] High [100] °F, rh%, ppm, etc.

Calculate **Ok** **Cancel**

Slope Intercept Calculator

Point type: **(AI) Physical LAI**

Sensor Type: **RTD 1K Platinum 375**

Calculation Units: English S.I.

Slope: **1.000000**

Intercept: **-0.566840**

Wire Size: **18 AWG ~ 0.75 mm²**

Wire Length: **100** ft

Total Resistance: **1.200000** Ω

Calculate **Ok** **Cancel**

- The **Point Type** field indicates the point type (Physical LAI or Physical LAO).
- The **Sensor Type** field allows you to choose the sensor type:

- Voltage
 - Current
 - Thermistor 10K Type 2
 - Thermistor 10K Type 3
 - Thermistor 100K
 - RTD 1K Platinum 375
 - RTD 1K Platinum 385
 - RTD 1K @ 32F Nickel LG-Ni
 - RTD 1K @ 70F Nickel JCI
 - RTD 1K Nickel DIN
- The **Calculation Units** radio buttons (LAI points only) allow you to choose from English or S.I.
 - The **Slope** field displays the calculated slope of the point.
 - The **Intercept** field displays the calculated intercept of the point.
 - The **Calculate** button uses the defined parameters to calculate the slope and intercept of the point, and displays the results in the **Slope** and **Intercept** fields.
 - The **Signal Range** fields indicate the high and low value range of the signal from the input device or to the output device. Examples: Voltage (0-10v) or current (4-20 mA).
 - The **Device Range** fields indicate the high and low value range of units which represent the signal range. Examples: Deg F, Deg C, PPM, %RH, and so on.
 - The **Wire Size** field allows you to choose wire size from a selection of standard wire sizes.
 - The **Wire Length** field indicates the length of the wire between the sensor and the controller in one direction.
 - The **Total Resistance** field indicates the calculated resistance of the wire based on the wire size and wire length or allows you to enter the total measured resistance of the actual wire.
 - The **OK** button accepts the calculated values of slope and intercept, and populates them in the Point Editor as defined.
 - The **Cancel** button rejects all parameters entered in the Slope/Intercept Calculator, and returns to the Point Editor with no changes made.

Tips for Using the Point Editor Application

- During editing you cannot change the point type. For example, if you created an LAO, it cannot be changed to an LAI.

Using the Point Editor Application

Creating a Point for Panel on ALN or UEC/PANEL on FLN



⚠ CAUTION

All point names on ALN level devices must be unique. Do not create two or more points with the same name in two or more different panels, especially if that point name is to be referenced in PPCL. To verify that a point name has not been used, run a Point Log Report. See the *Point Log Report* section for more information.

1. Select the **Point** icon from the **Create/Edit** bar.
⇒ The **Point Editor** window will open.
2. If available panels/devices are not displayed, click **Select a Device** at the top of the left pane of the **Point Editor** window to display available panels/devices.
3. Select the desired device. To select a UEC/PANEL on FLN, click the arrows next to the supervising panel name and next to its FLN name, and then click the UEC/PANEL device name in the left pane of the **Point Editor** window.
4. Click the plus button at the bottom left of the **Point Editor** window.
⇒ A new point creation window opens, prompting you to enter the new name and choose the new point type:

Point Name:

Point type: **Analog Physical (AI, AO)**

Create



NOTE:

UEC point names longer than 12 characters will not fit into the supervising panel's APPLICATION description's System Name. The supervising panel's APPLICATION description's System Name will be truncated to use the BACnet encoding scheme. For example, a UEC device reference named **Building1.UEC** with an analog input (AI) point, instance number 15, entered as **WestWing.Room219.Temp** will have a System Name of **Building1.UEC:AI_15**.

If you enter a UEC point name greater than 12 characters, a red box displays around the Point Name field, along with warning hover text. A warning icon and hover text also display for that object in the object list.

5. Click **Create**.
⇒ The point information window displays a new point.
6. Enter the new point information.
7. Click **Save**.

⇒ The **Save** button is unavailable once the modifications are complete.

(AO) Physical LAO

LAI LPACI LAO

Object Name: * B990.OAD

Object Identifier:

Description:

Address (FLN/Drop/Point): 0 0 0 0

Engineering Units: %

Actuator type: Voltage

Slope: 0.003255

Intercept: 0

COV Limit: 1

Data Type: Float

Decimal Places: 2

Relinquish Default: 0

Alarmable

High Alarm Limit: 0

Low Alarm Limit: 0

Time Delay (secs): 0

Deadband: 0

Annunciate to Normal Transitions

Annunciate to Off-Normal Transitions

Annunciate to Fault Transitions

Notification Class: 0



NOTE:

After creating custom points on a UEC/PANEL on FLN device, be sure to update the FLN custom application using the Database Manager.

Using the Slope/Intercept Calculator

1. Click the **Slope/Intercept Calculator** button. The **Slope/Intercept Calculator** window opens.
2. Select the **Sensor Type** or **Actuator Type** being created.
3. Select the appropriate **Calculation Units** (LAI point type only).
4. Enter all appropriate data into the fields in the right-hand pane.
5. Click the **Calculate** button. The calculated slope and intercept appears in the fields above the button.
6. Click **OK** to accept the calculated values or click **Cancel** to reject the values.

Creating a PTEC Point

1. Select the Point icon from the Create/Edit bar.
 - ⇒ The Point Editor window will open.
2. If available panels/devices do not display, click **Select a Device** at the top of the left pane of the Point Editor window to display available panels/devices.
3. To select the desired PTEC device, click the arrows next to the supervising panel name and next to its FLN name, and then click the PTEC device name in the left pane of the Point Editor window. When you select a PTEC device, the object list indicates the ability to select the Custom Point table. Select the **Custom Point Table** object.
 - ⇒ The PTEC Point Editor table displays, showing all custom points (user-defined BACnet objects) in the PTEC device.
4. Click the + button at the bottom left of the PTEC Point Editor window.
 - ⇒ A new row displays in the PTEC Point Editor table. The new row is configured for an AO type point by default:

Name	Type	Instance...	Engineer...	StateText...	Inactive...	ActiveText	Default...
POINT1000	AO	1000	None				0
POINT1001	BO	1001		NONE	OFF	ON	OFF



NOTE:

If the initial sort order is kept, the new row is inserted at the bottom of the table. If the sort order has been modified, the new row is inserted at the location based on the chosen sort order.

5. Enter the new PTEC point information.

6. Click **Save**.

- ⇒ A verification prompt displays:



7. Click **Yes**.

- ⇒ The **Save** button is unavailable once the modifications are complete.



NOTE:

After modifying custom points on a PTEC device, be sure to update the FLN custom application using the Database Manager.

Intrinsic Alarming on ALN Panel

Intrinsic reporting allows a device to provide one or more event sources, intrinsic to the device, which generate alarm or event notifications that may be directed to one or more destinations.

For more information on Intrinsic Alarming, see the *APOGEE BACnet ALN Field Panel User's Manual* (125-3020).

An Intrinsic Alarm can be created using the Point Editor application.



NOTE:

It is not recommended to add intrinsic alarms to UEC/PANEL device points.

Alarm reports can be generated using the **Status Information Bar Alarm** button.

1. Select the **Point** icon from the **Create/Edit** bar.
⇒ The **Point Editor** window opens.
2. Click **Select a Panel** at the top of the left pane of the **Point Editor** window to display available panels.
3. Select the desired panel by clicking the panel name in the left pane of the **Point Editor** window.
4. Either select an existing point or create a new point by clicking the **+** button at the bottom left of the **Point Editor** window.
⇒ The point information window displays the point information.
5. Select the **Alarmable** check box to create an Intrinsic Alarm and enter related information. See the *User Interface Description for the Point Editor Application* section for more information about related fields.
6. Click **Save**.
⇒ The **Save** button is unavailable once the modifications are complete.

Alarmable

High Alarm Limit:	<input type="text" value="0"/>
Low Alarm Limit:	<input type="text" value="0"/>
Time Delay:	<input type="text" value="0"/>
Deadband:	<input type="text" value="0"/>
<input type="checkbox"/> Annunciate To Normal Transitions	
<input type="checkbox"/> Annunciate To Off Normal Transitions	
<input type="checkbox"/> Annunciate To Fault Transitions	
Notification Class:	<input type="text" value="0"/>

Viewing a Point

1. Click the **Point** icon from the **Create/Edit** bar.
⇒ The **Point Editor** window opens.
2. If available panels/devices do not display, click **Select a Device** at the top of the left pane of the **Point Editor** window to display available panels/devices.
3. Select the desired panel/device and the desired point by clicking the arrow next to the panel name to display devices, and then clicking the device name in the left pane of the **Point Editor** window.
⇒ The point information window displays the point details:

(AI) Physical LAI

Object Name:	SI12.LAI01
Object Identifier:	0,0
Description:	SI12.LAI01
Address (FLN/Device/Point):	0 <input type="button" value="▲"/> 0 <input type="button" value="▼"/> 7 <input type="button" value="▲"/> <input type="button" value="▼"/>
Instance Number:	0 <input type="button" value="▲"/>
Engineering Units:	V <input type="button" value="▼"/>
Sensor type:	Voltage <input type="button" value="▼"/>
Slope:	1 <input type="button" value="▲"/> <input type="button" value="▼"/>
Intercept:	0 <input type="button" value="▲"/> <input type="button" value="▼"/>
COV Limit:	0 <input type="button" value="▲"/> <input type="button" value="▼"/>
Data Type:	Float <input type="button" value="▼"/>
Decimal Places:	2 <input type="button" value="▲"/> <input type="button" value="▼"/>
Output Format:	0 <input type="button" value="▲"/> <input type="button" value="▼"/>
 <input checked="" type="checkbox"/> Alarming	
High Alarm Limit:	7.5 <input type="button" value="▲"/> <input type="button" value="▼"/>
Low Alarm Limit:	2.4 <input type="button" value="▲"/> <input type="button" value="▼"/>
Time Delay:	0 <input type="button" value="▲"/> <input type="button" value="▼"/>
Deadband:	0 <input type="button" value="▲"/> <input type="button" value="▼"/>
<input checked="" type="checkbox"/> Annunciate To Normal Transitions	
<input checked="" type="checkbox"/> Annunciate To Off Normal Transitions	
<input checked="" type="checkbox"/> Annunciate To Fault Transitions	
Notification Class:	0 <input type="button" value="▲"/> <input type="button" value="▼"/>

Viewing a PTEC Point

1. Select the **Point** icon from the **Create/Edit** bar.
⇒ The **Point Editor** window will open.
2. If available panels/devices do not display, click **Select a Device** at the top of the left pane of the **Point Editor** window to display available panels/devices.

3. To select the desired PTEC device, click the arrows next to the supervising panel name and next to its FLN name, and then click the PTEC device name in the left pane of the **Point Editor** window. When you select a PTEC device, the object list indicates the ability to select the Custom Point Table. Select the **Custom Point Table** object.
 - ⇒ The **PTEC Point Editor** table displays all custom points (user-defined BACnet objects) in the PTEC device.

Modifying a Point for Panel on ALN or UEC/PANEL on FLN

1. Select the **Point** icon from the **Create/Edit** bar.
 - ⇒ The **Point Editor** window will open.
2. If no panels/devices display, click **Select a Device** at the top of the left pane of the **Point Editor** window displays available panels/devices.
3. Select the desired panel/device and the desired point device by clicking the arrow next to the panel name to display devices, and then clicking the device name in the left pane of the **Point Editor** window.
 - ⇒ The point information window displays point details.
4. Make the desired modifications to the existing point.
5. Click **Save**.
 - ⇒ The **Save** button is unavailable once the modifications are complete.

(AI) Physical LAI

Object Name:	SI12.LAI01
Object Identifier:	0,0
Description:	SI12.LAI01
Address (FLN/Device/Point):	0 <input type="button" value="▲"/> 0 <input type="button" value="▼"/> 7 <input type="button" value="▲"/> <input type="button" value="▼"/>
Instance Number:	0 <input type="button" value="▲"/> <input type="button" value="▼"/>
Engineering Units:	<input type="button" value="▼"/> <input type="button" value="▼"/>
Sensor type:	<input type="button" value="Pneumatic"/> <input type="button" value="▼"/>
Slope:	Current
Intercept:	Pneumatic
COV Limit:	Thermistor 10K
Data Type:	Thermistor 10K Type 3
Decimal Places:	2 <input type="button" value="▲"/> <input type="button" value="▼"/>
Output Format:	0 <input type="button" value="▲"/> <input type="button" value="▼"/>

Modifying a PTEC Point

1. Select the **Point** icon from the **Create/Edit** bar.
 - ⇒ The **Point Editor** window will open.
2. If available panels/devices do not display, click **Select a Device** at the top of the left pane of the **Point Editor** window to display available panels/devices.
3. To select the desired PTEC device, click the arrows next to the supervising panel name and next to its FLN name, and then click the PTEC device name in the left pane of the **Point Editor** window. When you select a PTEC device, the object list indicates the ability to select the Custom Point Table. Select the **Custom Point Table** object.
 - ⇒ The **PTEC Point Editor** table displays all custom points (user-defined BACnet objects) in the PTEC device.
4. Make the desired modifications to the existing point information in the table.
5. Click **Save**.
 - ⇒ A verification prompt displays:



6. Click **Yes**.
 - ⇒ The **Save** button is unavailable once the modifications are complete.

PTEC Point Editor									
Name	Type	Instance #	Engineering Units	State Text Table	Inactive Text	Active Text	Default Value		
DX 1	BO	1001		1NONE	OFF	ON	OFF		
SFAN	BO	1000		1NONE	OFF	ON	OFF		
HCV 4	AO	1002	%				30		



NOTE:

After modifying custom points on a PTEC device, be sure to update the FLN custom application using the Database Manager.

Configuring a Point for Totalization

The totalization function accumulates the runtime value of a point. It can be used to:

- Accumulate run time for fans and pumps.
- Accumulate volume total from a flow rate sensor.
- Calculate degree days (used in PPCL).

To configure a point for totalization:

1. Select the **Point** icon from the **Create/Edit** bar.
⇒ The **Point Editor** window opens.
2. If no panels/devices display, click **Select a Device** at the top of the left pane of the **Point Editor** window to display available panels/devices.
3. Select the desired panel/device and the desired point device by clicking the arrow next to the panel name to display devices, and then clicking the device name in the left pane of the **Point Editor** window.
⇒ The point information window opens, displaying point details.
4. Select the **Totalization Rate**. Options include Seconds, Minutes, or Hours.
⇒ For binary and multistate point types, a totalized value is calculated for each state and represents an accumulation of time spent in that state.
⇒ For analog point types, the totalized value is calculated using the following equation:

$$\frac{((V_1*T_1) + (V_2*T_2) + \dots + (V_n*T_n))}{\text{Totalization Rate in seconds.}}$$

Where:

V = value; T = time at that value. All times are in seconds.

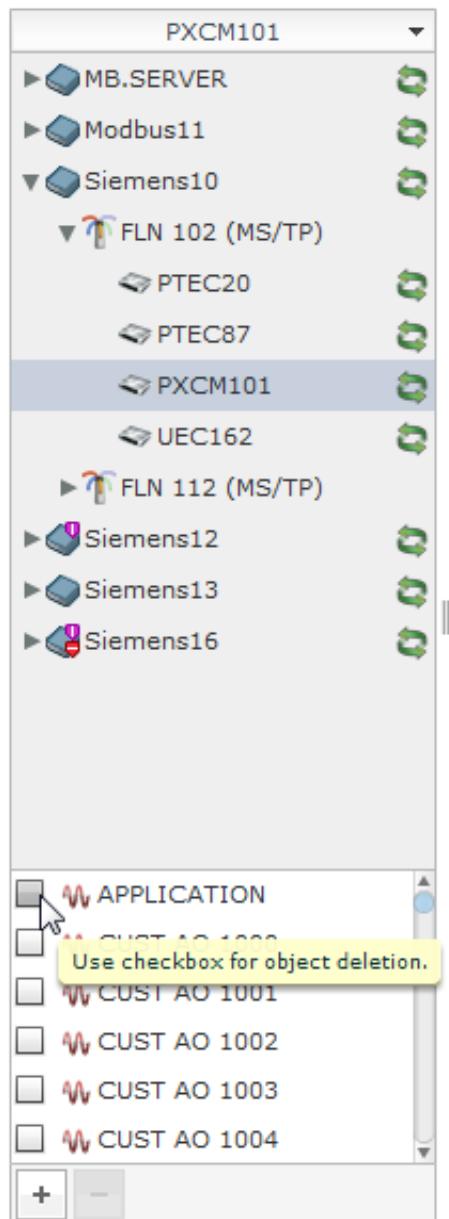
The Totalized Value can be viewed in Point Commander.

5. Click **Save**.

⇒ The **Save** button is unavailable once the modifications are complete.

Deleting a Point

1. Click the **Point** icon from the **Create/Edit** bar.
⇒ The **Point Editor** window opens.
2. If available panels/devices do not display, click **Select a Device** at the top of the left pane of the **Point Editor** window to display available panels/devices.
3. Select the desired panel, the desired FLN, and the desired device by clicking the arrow next to the panel name to display FLNs, and then clicking the arrow next to the FLN name to display devices, and then clicking the device name in the left pane of the **Point Editor** window.
⇒ The available points display in the lower half of the left pane.
4. Select the points to be deleted by checking the check box(es) to the left of the point names.



5. Click the - button at the bottom left of the **Point Editor** window.

A message box displays, allowing you to verify deletion of the selected point(s). Click **Yes** to delete the selected point(s).



NOTE:

After modifying custom points on a UEC/PANEL on FLN device, be sure to update the FLN custom application using the Database Manager.

Deleting a PTEC Point

1. Click the **Point** icon from the **Create/Edit** bar.
⇒ The **Point Editor** window opens.
2. If available panels/devices do not display, click **Select a Device** at the top of the left pane of the **Point Editor** window to display available panels/devices.
3. To select the desired PTEC device, click the arrows next to the supervising panel name and next to its FLN name, and then click the PTEC device name in the left pane of the **Point Editor** window. When you select a PTEC device, the object list indicates the ability to select the Custom Point Table. Select the **Custom Point Table** object.
⇒ The **PTEC Point Editor** table displays all custom points (user-defined BACnet objects) in the PTEC device.
4. Select one or more points to delete from the table.
NOTE: The **CTRL** and **Shift** keys can be used to select non-contiguous points or ranges of points for deletion.
5. Click the **-** button at the bottom left of the **PTEC Point Editor** window.
6. Click **Save**.
⇒ A verification prompt displays:



7. Click **Yes**.
⇒ The **Save** button is unavailable once the modifications are complete.



NOTE:

After modifying custom points on a PTEC device, be sure to update the FLN custom application using the Database Manager.

Schedule/Command/Calendar Object Editors

This section discusses the following topics:

- Schedule/Command/Calendar Object Editors Overview [→ 97]
 - User Interface Description for the Schedule/Command/Calendar Object Editors [→ 98]
 - Tips for Using the Schedule/Command/Calendar Object Editors [→ 102]
- Using the Schedule Object Editor [→ 102]
 - Creating a Schedule Object [→ 102]
 - Viewing a Schedule Object [→ 106]
 - Modifying a Schedule Object [→ 106]
 - Deleting a Schedule Object [→ 107]

Schedule/Command/Calendar Object Editors Overview

The BACnet Field Panel Web Server Schedule/Command/Calendar Object Editors allow you to create, modify, view, and delete schedule objects, calendar objects, and command objects. You can also view the properties of an object or override a schedule on a selected date.

The Object Editors are accessible using the **Create/Edit** bar on the navigation pane on the left side of the Web Server screen.



Existing Schedules can also be viewed through the Scheduler Application, accessible using the **Scheduling** bar on the navigation pane on the left side of the Web Server screen. Choose the desired panel to view any existing schedules. Schedules cannot be created, modified, or deleted using this view.

The following attributes of an existing schedule can be modified through the Schedule editor:

- Description
- Effective time period
- Weekly schedule
- Exception schedule
- Schedule default values
- List of objects/property reference
- Write priority
- Out of service status

You can also create Calendar Objects to be used with the Schedule editor. The calendar object created will be referenced by the Schedule Object. You can also view, delete, and modify existing Calendar Objects.

The following attributes of an existing Calendar Object can be modified through the Calendar Editor:

- Description
- Date List

You can also create Command Objects to be used with the Schedule Editor. The Command Object created will be referenced by the Schedule Object. You can also view, delete, and modify existing Command Objects.

The following attributes of an existing Command Object can be modified through the Command Editor:

- Description
- Action
- Action Text

User Interface Description for Schedule/Command/Calendar Object Editors

Schedule Object Editor User Interface

The **Schedule Editor** window can be accessed using the **Create/Edit** bar in the navigation pane on the left side of the Web Server screen. Click the **Schedule** icon to open the **Schedule Editor** window and its related windows:



Schedule

The **Schedule Editor** window displays:

Schedule Editor

Object Name:	<input type="text" value="ExceptionRange"/>
Object Identifier:	<input type="text" value="17,0"/>
Description:	<input type="text"/>
Type:	<input checked="" type="radio"/> Real <input type="radio"/> Bool <input type="radio"/> Enum <input type="radio"/> Unsigned
Effective Start:	<input type="text"/> <input type="button" value="..."/>
Effective Stop:	<input type="text"/> <input type="button" value="..."/>
Write Priority:	<input type="text" value="15"/>
Default Value:	<input type="text" value="0"/>
<input type="checkbox"/> OOS/Disabled	
<input type="button" value="Weekly Schedule"/>	
<input type="button" value="Exception Schedule"/>	
<input type="button" value="Command Point Objects"/>	

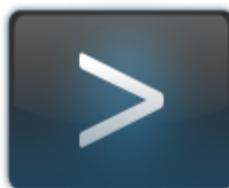
- The **Object Name** field allows you to name the Schedule Object using up to 30 characters. This field is required for creating a schedule and cannot be edited in existing schedules.
- The **Object Identifier** field displays the Object identification information. If you do not enter a value, the controller will automatically enter the next available Object ID. This field cannot be edited in existing schedules.
- (*Optional*) The **Description** field allows you to describe the Schedule Object using up to 16 characters. This field can be edited.
- The **Type** options allow you to choose the Schedule type:
 - Real (for analog)
 - Boolean (to enable/disable trend log objects and for calendar objects)
 - Enumerated (for binary)
 - Unsigned (for command objects and multi-state)

NOTE: Data types for the properties of BACnet objects must match the data type property of the BACnet schedule; otherwise, the schedule will not function properly.

- (*Optional*) The **Effective Start/Stop** fields display the starting and ending dates for the Scheduler Object. These fields can be edited.
- (*Optional*) The **Write Priority** drop-down displays the priority level of the scheduler object. This field can be edited.
- (*Optional*) The **Default Value** field displays the value of the schedule object when none of the schedules is active. This field can be edited.
- The **OOS/Disabled** check box determines whether the Scheduler Object is active or Out of Service after creation. This check box can be checked or unchecked when creating an object, and can be edited.
- (*Optional*) The **Weekly Schedule** button opens the **Edit Weekly Schedule** window, which allows you to create and edit an array for seven days of the week. Each day can have multiple schedules. This field can be edited.
- (*Optional*) The **Exception Schedule** button opens the **Edit Exception Schedule** window, which allows you to create and edit exceptions to the existing schedule, using either dates, date ranges, week'n'day, or references to calendar objects. This can be edited.
- The **Command Point Objects** button opens the **Edit Command and Point Objects** window, which allows you to create and edit Command Objects, providing a list of objects to be commanded by the Scheduler Object. This field can be edited.

Command Object Editor User Interface

The **Command Object Editor** window can be accessed using the **Create/Edit** bar in the navigation pane on the left side of the screen. Move your cursor over the **Schedule** icon to view the **Command** icon. Click the **Command** icon to open the **Command Object Editor** window:



Command

The **Command Object Editor** window displays:

Command Object Editor



Object Name: * CommandObject1

Object Identifier: 1

Description: Command Object

Present Value: 0

Schedule Optimization Enabled

Actions

Action 1	1

+ -

- The ? button displays the **Command Object Editor Help** window.
- The **Object Name** field allows you to name the Command Object using up to 30 characters. This field is required when creating a Command Object and cannot be edited in existing schedules.
- The **Object Identifier** field displays the Object identification information. If you do not enter a value, the controller will automatically enter the next available Object ID. This field cannot be edited in existing schedules.
- (*Optional*) The **Description** field allows you to describe the Command Object using up to 16 characters. This field can be edited.
- (*Optional*) The **Present Value** field displays the value that the object after it is created. This field can be edited.
- The **Schedule Optimization Enabled** check box enables this Command Object to be used in a Schedule Object which has Start/Stop Time Optimization (SSTO) enabled. This field cannot be edited in existing schedules, or once a new object is saved.
- (*Optional*) The **Actions** list displays the objects created, as well as their value, priority, and “Quit on Failure” status. This can be edited.

Calendar Object Editor User Interface

The **Calendar Object Editor** window can be accessed using the **Create/Edit** bar in the navigation pane on the left side of the screen. Move your cursor over the **Schedule** icon to view the **Calendar** icon. Click the **Calendar** icon to open the **Calendar Object Editor** window:



Calendar

The **Calendar Object Editor** window displays:
Calendar Object Editor

Object Name: *

Object Identifier:

Description:

Date Range Week'N'Day

Start: Wildcard?

End: Wildcard?

Date Range Week'N'Day

Month:

Week of Month:

Day of Week:

- The **Object Name** field allows you to name the Calendar Object using up to 30 characters. This field cannot be edited in existing schedules.
- The **Object Identifier** field displays the Object identification information. If you do not enter a value, the controller will automatically enter the next available Object ID. This field cannot be edited in existing schedules.
- (*Optional*) The **Description** field allows you to describe the Calendar Object using up to 16 characters. This field can be edited.
- (*Optional*) The **Date, Range, and Week'N'Day** list displays the dates referenced in the Calendar Object, using dates, date ranges, or week and day. Wildcard characters can be used. This can be edited.

Tips for Using Schedule/Command/Calendar Object Editors

- Existing schedule details can also be viewed using the Scheduler bar in the navigation pane on the left side of the Web Server screen. Schedule details can be viewed using Today, Day, Work Week, Week, or Month views. Use the buttons at the top of the Schedule window to choose among the available views or to advance to the next Schedule segment (day, work week, week, or month).
- The Schedule Object Editor allows you to enable or disable an existing schedule on a specific date, which adds or removes an override on that specific date.
- Additional overrides can be made for a specific date to change the starting time, ending time, and day span values of a schedule entry. The actual schedule definition does not change; only the control values used by the schedule for the specific date are changed.
- The Object Name and Object Identifier of an existing Schedule, Calendar, or Command Object cannot be changed.
- When creating a weekly schedule, use the **Add Multiple** button to add a weekly schedule to multiple days of the week.

Using the Schedule Object Editor

Creating a Schedule Object

1. Click the **Schedule** icon from the **Create/Edit** bar.
⇒ The **Schedule Editor** window displays.
2. Click **Select a Panel** at the top of the left pane of the **Object Editor** window to display available panels.
3. Select the desired panel by clicking the panel name in the left pane of the **Schedule Editor** window.
4. Click the + button at the bottom left of the **Schedule Editor** window.
⇒ The **Schedule Editor** window displays a new schedule object.
5. Enter the new schedule object information (Object Name, Object Identifier, Description, Type, Effective Start and Stop dates/times, Write Priority, Default Value).
6. Click the **Weekly Schedule**, **Exception Schedule**, or **Command Point Objects** buttons to access those windows.
7. Click **Save**.

- ⇒ The **Save** button is not available once the modifications are complete.

Creating a Weekly Schedule

1. From within the **Object Editor** window, click the **Weekly Schedule** button to open the **Edit Weekly Schedule** window.
2. Choose the day of the week by clicking the tabs at the top of the window.
3. Click the + sign at the bottom left of the window to add rows to the Time/Values table.
4. Click the – sign at the bottom left of the window to delete rows from the Time/Values table.
5. Double-click the entry in the Time column to change the start and stop times.
6. Double-click the entries in the Value column to change the desired values.

Time	Value



NOTE:

To add a schedule to multiple days of the week, click the **Add Multiple** button.

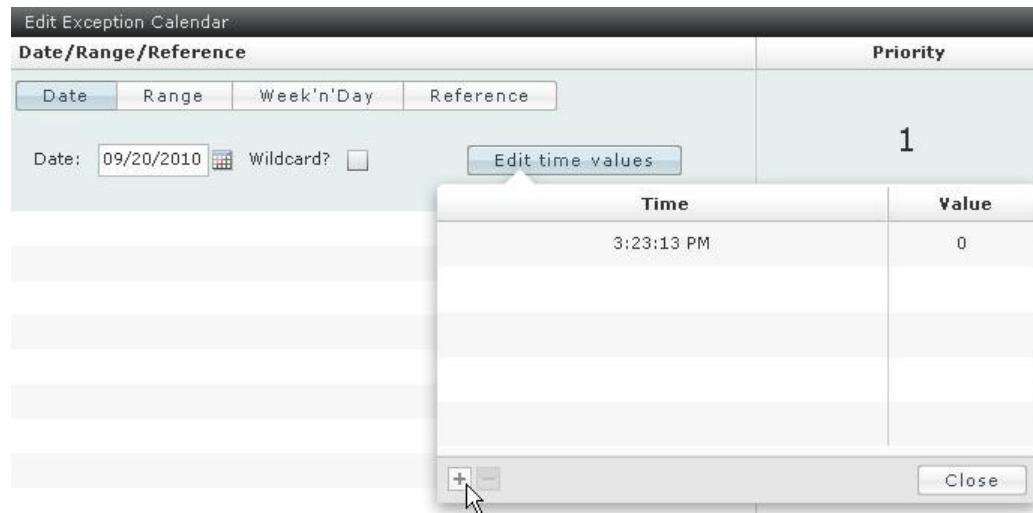
Days:	<input checked="" type="checkbox"/> Monday	<input type="checkbox"/> Tuesday	<input checked="" type="checkbox"/> Wednesday	<input type="checkbox"/> Thursday	<input checked="" type="checkbox"/> Friday	<input type="checkbox"/> Saturday	<input type="checkbox"/> Sunday
Time:	1	:	09	AM	PM		
Value:	0						
Add							

Creating a Schedule Exception

1. From within the **Object Editor** window, click the **Exception Schedule** button to open the **Edit Exception Calendar** window.
2. Click the **+** sign at the bottom left of the window to add an Exception Schedule.
- Choose Date, Date Range, Week'N'Day, or Reference (to reference an existing Calendar Object)
- Enter schedule details.

Edit Exception Schedule		Priority
Date/Range/Reference		Priority
<input type="radio"/> Date <input type="radio"/> Range <input type="radio"/> Week'N'Day <input type="radio"/> Reference Date: <input type="text" value="01/06/2014"/> <input type="button" value="Edit time values"/> Wildcard? <input type="checkbox"/> Start: <input type="text" value="01/06/2014"/> <input type="button" value="Edit time values"/> Wildcard? <input type="checkbox"/> End: <input type="text" value="01/06/2014"/> <input type="button" value="Edit time values"/> Wildcard? <input type="checkbox"/>	1	
<input type="radio"/> Date <input type="radio"/> Range <input type="radio"/> Week'N'Day <input type="radio"/> Reference Month: <input type="text" value="All Months"/> <input type="button" value="Edit time values"/> Week of Month: <input type="text" value="Every Week Of This Month"/> <input type="button" value="Edit time values"/> Day of Week: <input type="text" value="All Days"/> <input type="button" value="Edit time values"/>	1	
<input type="radio"/> Date <input type="radio"/> Range <input type="radio"/> Week'N'Day <input type="radio"/> Reference Calendar: <input type="text" value=""/> (No Calendar Object on Siemens12) <input type="button" value="Edit time values"/>	1	
<input style="border: 1px solid black; padding: 2px 5px; margin-right: 5px;" type="button" value="+"/> <input style="border: 1px solid black; padding: 2px 5px;" type="button" value="-"/>	<input style="border: 1px solid black; background-color: #333; color: white; padding: 2px 10px;" type="button" value="Continue"/>	

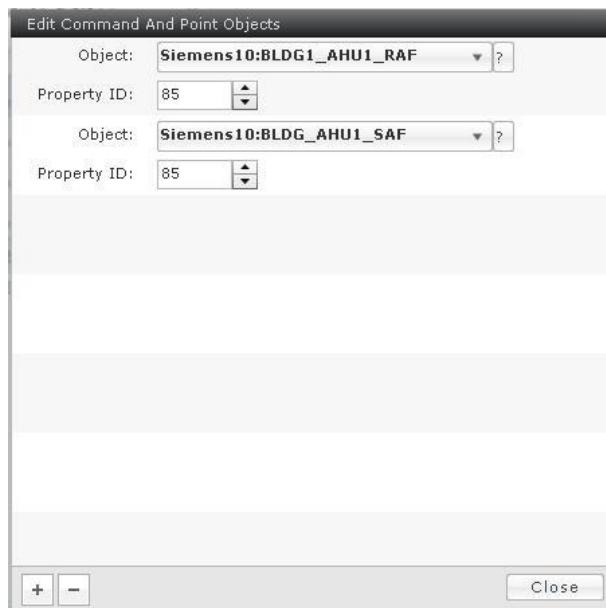
3. Click the **Edit Time Values** button to add time values to the Exception Schedule.
 - Click the plus sign at the bottom of the **Edit Time Values** window to add rows to the **Time/Values** table.



4. Click the value under the Priority column to change the exception priority. The Exception priority is the priority in which exception schedules are executed. If there are more than one exception schedules for the same time, the exception schedule with the higher priority will be executed.
5. Click the minus - sign at the bottom left of the window to delete an Exception Schedule.

Command Point Objects

1. From within the **Object Editor** window, click the **Command Point Objects** button to open the **Edit Command Objects** window.
2. Click the + sign at the bottom left of the window to add a Command Object to the Schedule Object.
 - Click the **Object** drop-down to choose a reference objects or a Command Object.
 - Enter a property identifier in the **Property ID** field.



3. Click the minus  sign at the bottom left of the window to delete a Command Object from the Schedule Object.

Viewing a Schedule Object

1. Click the **Schedule** icon from the **Create/Edit** bar.
⇒ The **Schedule Editor** window displays.
2. Click **Select a Panel** at the top of the left pane of the **Schedule Editor** window to display available panels.
3. Select the desired panel and the desired schedule object by clicking the panel name and then the schedule object name.
⇒ The **Schedule Editor** window displays the schedule object details.

Modifying a Schedule Object

1. Click the **Schedule** icon from the **Create/Edit** bar.
⇒ The **Schedule Editor** window displays.
2. Click **Select a Panel** at the top of the left pane of the **Schedule Editor** window to display available panels.
3. Select the desired panel and the desired schedule object by clicking the panel name and then the schedule object name.
⇒ The **Schedule Editor** window displays the schedule object details.
4. Make the desired modifications to the existing schedule (Description, Effective Start and Stop dates/times, Write Priority, Default Value).
5. Click **Save**.
⇒ The **Save** button becomes grayed out once the modifications are complete.

Deleting a Schedule Object

1. Click the **Schedule** icon from the **Create/Edit** bar.
 - ⇒ The **Schedule Editor** window displays.
2. Click **Select a Panel** at the top of the left pane of the **Schedule Editor** window to display available panels.
3. Select the desired panel and the desired schedule by clicking the panel name and then the schedule object name.
 - ⇒ The **Schedule Editor** window displays the schedule object details.
4. Click the **-** button at the bottom left of the **Schedule Editor** window.

A message box will display, allowing you to verify deletion of the selected schedule object. Click **Yes** to delete the selected object.

Using the Command Object Editor

Creating a Command Object

1. Click the **Command** icon from the **Create/Edit** bar (hover over the **Schedule** icon to view it).
 - ⇒ The **Command Object Editor** window displays.
2. Click **Select a Panel** at the top of the left pane of the **Command Object Editor** window to display available panels.
3. Select the desired panel by clicking the panel name in the left pane of the **Command Object Editor** window.
4. Click the **+** button at the bottom left of the **Command Object Editor** window.
 - ⇒ The **Command Object Editor** window displays a new command object.
5. Enter the new command object information (Object Name, Object Identifier, Description).
6. Select the **Schedule Optimization Enabled** check box to enable SSTO. See the *Start/Stop Time Optimization (SSTO)* section.
7. Click the **+** button at the bottom left of the **Command Object Editor** window to add an action to the command object.
8. Click the new action to add a title in the **Action Title** field, and to add point information.
 - Click the **+** button to add rows to the Action table.
 - Click each cell in the new row to add Point, Value, Priority, and Quit on Failure information.
9. Click **Save**.
 - ⇒ The **Save** button becomes grayed out once the modifications are complete.

Start/Stop Time Optimization (SSTO)

When the **Schedule Optimization Enabled** check box is selected:

- The 12 default SSTO Action Titles are added to the **Action** list (see table below).
- The + and - buttons of the **Action** list are grayed out.
- You can add commands to the action.
- You cannot change the name of the actions. The **Action Title** field in the **Actions** dialog box is grayed out.

Index	Action Title	Description of "State"
1	VAC	Actions for vacant (unoccupied) time periods
2	OCC1	Actions for 1st occupied time period
3	OCC2	Actions for 2nd occupied time period
4	OCC3	Actions for 3rd occupied time period
5	OCC4	Actions for 4th occupied time period
6	OCC5	Actions for 5th occupied time period
7	WARMUP	Early start time actions used to heat the zone to occupied setpoint
8	COOLDOWN	Early start time actions used to cool the zone to occupied setpoint
9	NGHTHTG	Night time actions for controlling heating
10	NGHTCLG	Night time actions for controlling cooling
11	STOPHTG	Early stop time actions used when in heating
12	STOPCLG	Early start time actions used when in cooling

When you save the Command object:

- The **Schedule Optimization Enabled** checkbox is grayed out.
- The Command Object is saved to the field panel.

Viewing a Command Object

1. Click the **Command** icon from the **Create/Edit** bar (hover over the **Schedule** icon to view it).
⇒ The **Command Object Editor** window displays.
2. Click **Select a Panel** at the top of the left pane of the **Command Object Editor** window to display available panels.
3. Select the desired panel and the desired command object by clicking the panel name and then the command object name.

⇒ The **Command Object Editor** window displays the command object details.

Modifying a Command Object

1. Click the **Command** icon from the **Create/Edit** bar (hover over the **Schedule** icon to view it).
⇒ The **Command Object Editor** window displays.
2. Click **Select a Panel** at the top of the left pane of the **Command Object Editor** window to display available panels.
3. Select the desired panel and the desired schedule object by clicking the panel name and then the schedule object name.
⇒ The **Command Object Editor** window displays the command object details.
4. Make the desired modifications to the existing schedule (Description, Actions). See the *Create a Command Object* section for more information.
5. Click **Save**.
⇒ The **Save** button becomes grayed out once the modifications are complete.

Deleting a Command Object

1. Click the **Command** icon from the **Create/Edit** bar (hover over the **Schedule** icon to view it).
⇒ The **Command Object Editor** window displays.
2. Click **Select a Panel** at the top of the left pane of the **Command Object Editor** window to display available panels.
3. Select the desired panel and the desired schedule by clicking the panel name and then the command object name.
⇒ The **Command Object Editor** window displays the command object details.
4. Click the - button at the bottom left of the **Command Object Editor** window.

A message box will display, allowing you to verify deletion of the selected command object. Click **Yes** to delete the selected object.

Using the Calendar Object Editor

Creating a Calendar Object

1. Click the **Calendar** icon from the **Create/Edit** bar (hover over the **Schedule** icon to view it).
⇒ The **Calendar Object Editor** window displays.
2. Click **Select a Panel** at the top of the left pane of the **Calendar Object Editor** window to display available panels.
3. Select the desired panel by clicking the panel name in the left pane of the **Calendar Object Editor** window.
4. Click the **+** button at the bottom left of the **Calendar Object Editor** window.
⇒ The **Calendar Object Editor** window displays a new calendar object.
5. Enter the new calendar object information (Object Name, Object Identifier, Description).
6. Click the **+** button at the bottom left of the **Calendar Object Editor** window to enter Date, Range, or Week'N'Day information.
7. Click **Save**.
⇒ The **Save** button becomes grayed out once the modifications are complete.

Viewing a Calendar Object

1. Click the **Calendar** icon from the **Create/Edit** bar (hover over the **Schedule** icon to view it).
⇒ The **Calendar Object Editor** window displays.
2. Click **Select a Panel** at the top of the left pane of the **Calendar Object Editor** window to display available panels.
3. Select the desired panel and the desired calendar object by clicking the panel name and then the calendar object name.
⇒ The **Calendar Object Editor** window displays the calendar object details.

Modifying a Calendar Object

1. Click the **Calendar** icon from the **Create/Edit** bar (hover over the **Schedule** icon to view it).
⇒ The **Calendar Object Editor** window displays.
2. Click **Select a Panel** at the top of the left pane of the **Calendar Object Editor** window to display available panels.
3. Select the desired panel and the desired calendar object by clicking the panel name and then the calendar object name.
⇒ The **Calendar Object Editor** window displays the calendar object details.
4. Make the desired modifications to the existing calendar object (Description, Date, Range, or Week'n'Day).
5. Click **Save**.
⇒ The **Save** button becomes grayed out once the modifications are complete.

Deleting a Calendar Object

1. Click the **Calendar** icon from the **Create/Edit** bar (hover over the **Schedule** icon to view it).
⇒ The **Calendar Object Editor** window displays.
2. Click **Select a Panel** at the top of the left pane of the **Calendar Object Editor** window to display available panels.
3. Select the desired panel and the desired calendar object by clicking the panel name and then the calendar object name.
⇒ The **Calendar Object Editor** window displays the calendar object details.
4. Click the - button at the bottom left of the **Calendar Object Editor** window.

A message box will display, allowing you to verify deletion of the selected schedule object. Click **Yes** to delete the selected object.

Event Enrollment



For information about intrinsic alarming, see the *Point Editor* [→ 78] section of this document.



To receive alarms from BTECs and PPMs, Event Enrollment must be used.

This section discusses the following topics:

- Event Enrollment Overview [→ 112]
 - User Interface Description for the Event Enrollment Editor [→ 112]
 - Tips for Using the Event Enrollment Editor [→ 114]
- Using Event Enrollment Objects [→ 114]
 - Creating an Event Enrollment Object [→ 114]
 - Viewing an Event Enrollment Object [→ 115]
 - Modifying an Event Enrollment Object [→ 115]
 - Deleting an Event Enrollment Object [→ 115]

Event Enrollment Overview

Event Enrollment objects are stand-alone alarm objects which change their status based on the condition of another object. The purpose of an event enrollment object is to identify an event (for example, exceeding of an alarm level) and to provide a connection between the event occurrence and the transmission of notification messages to one or more recipients.

User Interface Description for the Event Enrollment Editor

The **Event Enrollment Editor** can be accessed using the **Create/Edit** bar in the navigation pane on the left side of the screen.

1. Click the **Event Enrollment** icon:



Event Enrollment

⇒ The **Event Editor** window displays.

2. In the **Event Editor**, choose the desired field panel, and click the existing Event Enrollment Object name to open the viewing area in the right pane of the **Event Editor** (a COS type Event Enrollment Object is shown):

Event Editor

The screenshot shows the Siemens Field Panel Web Server User Guide's Event Editor. The form includes fields for Object Name (ee_cos), Object Identifier (9,0), Description, and event type options (COS, FAL, LIM, OOR). It also has checkboxes for OFFNORMAL, NORMAL, and FAULT Alarm Enabled, and dropdowns for Notify Type (Alarm) and Reference Point (Siemens10:BV_LDI). A States section displays 'OFF' with a plus/minus button. A Time Delay (secs) field is set to 0, and a Notification Class dropdown shows NCO.

Object Name: * ee_cos

Object Identifier: 9,0

Description:

COS FAL LIM OOR

OFFNORMAL Alarm Enabled

NORMAL Alarm Enabled

FAULT Alarm Enabled

Notify Type: **Alarm**

Reference Point: Siemens10:BV_LDI

States: OFF

Time Delay (secs): 0

Notification Class: NCO

- The **Object Name** field allows you to name the Event Enrollment Object using up to 30 characters. This field cannot be edited in an existing object.
- The **Object Identifier** field displays the point Object Identifier information. An Object Identifier consists of an object type and instance number. The object type is the BACnet standard object type enumeration value (Event Enrollment object type enumeration value is 9). You can enter an instance number on point creation in this field, or leave it blank. If you do not enter an instance number in the **Object Identifier** field when creating, the controller automatically enters the next available instance number. After creation, the Object Identifier field cannot be edited and the field will show the object type and instance number separated by commas.
- (*Optional*) The **Description** field allows you to describe the Event Enrollment Object using up to 16 alphanumeric characters. This field can be edited.
- The event type options allow you to choose the Event Enrollment Object type:
 - **COS** - Change of State (for BI, BV, MI, and MV point types)
 - **FAL** - Command Failure (for BO and MO point types)
 - **LIM** - Floating Limit (for AO and AV point types)
 - **OOR** - Out of Range (for AI, AO, and AV point types)
- (*Optional*) The **OFFNORMAL**, **NORMAL**, and **FAULT** **Alarm Enabled** check boxes allow you to define which transitions will be reported. These parameters can be edited.
- The **Notify Type** drop-down menu allows you to choose “alarm” or “event” type of notification.
- The **Reference Point** field allows you to choose the object reference for the object to be monitored. This parameter is required for creating an Event Enrollment Object and cannot be edited.
- The **Time Delay** field allows you to specify the time (in seconds) that the object must be in or out of alarm or fault for a notification to be sent.

- The **Notification Class** drop-down menu allows you to choose the notification class that the Event Enrollment Object will use. If no Notification Class is specified, no panels will be notified.

Type-specific Parameters:

- The **States** list displays the available alarm values. This parameter applies to COS Event Enrollment Object types only.
- The **Feedback Point** drop-down menu provides the object reference for the feedback from the object to be monitored. This parameter is required for creating an Event Enrollment Object and cannot be edited. This parameter applies to FAL Event Enrollment Object types only.
- The **Set Point** drop-down menu provides the object reference for the setpoint. This parameter is required for creating an Event Enrollment Object and cannot be edited. This parameter applies to LIM and OOR Event Enrollment Object types only.
- The **High Diff Limit** and **Low Diff Limit** fields allow you to set the differential limit from the setpoint. These parameters apply to LIM Event Enrollment Object types only.
- The **High Limit** and **Low Limit** fields allow you to set object's high and low limit alarm values. These parameters apply to OOR Event Enrollment Object types only.
- The **Deadband** field allows you to set the deadband value to determine normal alarm parameters. This parameter applies to LIM and OOR Event Enrollment Object types only.

Tips for Using the Event Enrollment Editor

- If the Event Enrollment object is not configured as alarmable, it will not be counted in fault counts even if the object is in fault status.

Using Event Enrollment Objects

Creating an Event Enrollment Object

1. Click the **Event Enrollment** icon from the **Create/Edit** bar.
⇒ The **Event Enrollment Editor** window displays.
2. Click **Select a Panel** at the top of the left pane of the **Event Enrollment Editor** window to display available panels.
3. Select the desired panel by clicking the panel name in the left pane of the **Event Enrollment Editor** window.
4. Click the + button at the bottom left of the **Event Enrollment Editor** window.
⇒ The **Event Editor** window displays a new Event Enrollment object.
5. Enter the new Event Enrollment object information.
6. Click **Save**.
⇒ The **Save** button becomes grayed out once the modifications are complete.

Viewing an Event Enrollment Object

1. Click the **Event Enrollment** icon from the **Create/Edit** bar.
 - ⇒ The **Event Enrollment Editor** window displays.
2. Click **Select a Panel** at the top of the left pane of the **Event Enrollment Editor** window to display available panels.
3. Select the desired panel and the desired Event Enrollment object by clicking the panel name and then the Event Enrollment object name.
 - ⇒ The **Event Editor** window displays the Event Enrollment object details.

Modifying an Event Enrollment Object

1. Click the **Event Enrollment** icon from the **Create/Edit** bar.
 - ⇒ The **Event Editor** window displays.
2. Click **Select a Panel** at the top of the left pane of the **Event Enrollment Editor** window to display available panels.
3. Select the desired panel and the desired Event Enrollment object by clicking the panel name and then the Event Enrollment object name.
 - ⇒ The **Event Editor** window displays the Event Enrollment object details.
4. Make the desired modifications to the existing Event Enrollment object.
5. Click **Save**.
 - ⇒ The **Save** button becomes grayed out once the modifications are complete.

Deleting an Event Enrollment Object

1. Click the **Event Enrollment** icon from the **Create/Edit** bar.
 - ⇒ The **Event Editor** window displays.
2. Click **Select a Panel** at the top of the left pane of the **Event Enrollment Editor** window to display available panels.
3. Select the desired panel and the desired Event Enrollment object by clicking the panel name and then the Event Enrollment object name.
 - ⇒ The **Event Editor** window displays the Event Enrollment object details.
4. Click the - button at the bottom left of the **Event Enrollment Editor** window.

A message box will display, allowing you to verify deletion of the selected Event Enrollment object. Click **Yes** to delete the selected object.

Notification Class

Section Overview

This section discusses the following topics:

- Notification Class Overview
 - User Interface Description for the Notification Class Editor
- Notification Class Editor Step-by-Step Instructions
 - Creating an Notification Class Object
 - Modifying an Notification Class Object
 - Viewing an Notification Class Object
 - Deleting an Notification Class Object

User Interface Description for the Notification Class Editor

The **Notification Class Editor** can be accessed using the **Create/Edit** bar in the navigation pane on the left side of the screen.

1. Click the **Notification Class** icon:



⇒ The **Notification Class Editor** window displays.

2. In the left navigation pane of the **Notification Class Editor** window, choose the desired panel, and click the existing Notification Class Object name to open the viewing area in the right pane of the **Notification Class Editor** window:

Notification Class Editor

Object Name:	<input type="text" value="S10.Notification"/>
Object Identifier:	<input type="text" value="15,0"/>
Description:	<input type="text"/>
Ack. required:	<input checked="" type="checkbox"/> to OFFNORMAL Priority: <input type="text" value="1"/>
	<input checked="" type="checkbox"/> to FAULT Priority: <input type="text" value="0"/>
	<input checked="" type="checkbox"/> to NORMAL Priority: <input type="text" value="1"/>

Network Destinations:

Process ID	Recipient	Valid Days	From Time - To Time	Transitions	Confirmed
600	Global Broadcast	Mon, Tue, Wed, Thu, Fri, Sat, Sun	* - *	To-OffNormal, To-Fault, To-Normal	No

Remote Destinations:

Remote Recipient	Valid Days	From Time - To Time	Transitions

- The **Object Name** field allows you to name the Notification Class Object using up to 30 characters. This field is required for creating a Notification Class Object and cannot be edited in an existing object.
- The **Object Identifier** field displays the Object identification information. If you do not enter a value, the controller will automatically enter the next available Object ID. This field cannot be edited in an existing object.
- (*Optional*) The **Description** field allows you to describe the Notification Class Object using up to 16 characters. This field is optional for creating a Notification Class Object creation and can be edited.
- (*Optional*) The **To OFFNORMAL**, **To FAULT**, and **To NORMAL** Priority fields allow you to set the notification priority for the three transition types. This parameter is optional for Notification Class creation and can be edited.
- (*Optional*) The **Network Destinations table** is a table which lists notification class destinations and rules. One entry line is allotted for each destination and rule. This table is optional for Notification Class and can be edited. Each destination has the following parameters:
 - **Process ID** – the default is 600 but it can be set to any other value.
 - **Recipient** – Select one of the following:
Device Instance – Integer providing the device object identifier.
Address – MAC address and integer for network number.
Broadcast – Select one of three: Local (Broadcast to local network only), Remote and Network # (Broadcast to remote network), or Global (Broadcast to all networks).
 - **Valid Days** – Select one or multiple days when the Notification Class is valid (Mon, Tue, Wed, Thu, Fri, Sat, Sun).
 - **From Time** – Start time when the Notification Class is valid. This field uses local panel time.
 - **To Time** – End time when the Notification Class is valid. This field uses local panel time.

- **Transitions** – Defines which transitions are sent by the Notification Class (Off Normal, Fault, Normal).
- **Confirmed notification** – Enables confirmed notification, which means that the notification expects an acknowledgement of receipt from the notification recipient. Not available if broadcasts are selected for notifications.
- (*Optional*) The **Remote Destinations table** is a table which lists remote recipient destinations and rules. One entry line is allotted for each destination and rule. This table is optional for Notification Class creation and can be edited. Each destination has the following parameters:
 - **Remote Recipient** – Select the remote notification e-mail address from a drop-down list.
 - **Valid Days** – Select one or multiple days when the Remote Notification Destination is valid (Mon, Tue, Wed, Thu, Fri, Sat, Sun).
 - **From Time** – Start time when the Remote Notification Destination is valid. This field uses local panel time.
 - **To Time** – End time when the Remote Notification Destination is valid. This field uses local panel time.
 - **Transitions** – Defines which transitions are sent by the Notification Class (Off Normal, Fault, Normal).

The width and order of the table columns can be changed in the application pane, but the changes remain only for the current session. Once you leave the editor, the column configuration reverts to the default settings.

- To change the width of the columns, click and hold the vertical edge of the column header and move the line to the desired width.
- To change the order of the columns, click and hold the column and move it to the desired location within the table.

Using the Notification Class Editor

If a Remote Destination is added to a Notification Class object, all recipients in the Remote Destinations table will receive an e-mail notification of the alarm condition.

Notification will come from the **Sender's E-mail Address** field as configured in the SMTP Configuration Editor. The e-mail notification will indicate the *time local to the field panel*, as well as the field panel name, point system name, point descriptor, "to" state, event value, and priority:

```
From: MichaelS@fwrd.rd.net [mailto:MichaelS@fwrd.rd.net]
Sent: Friday, September 09, 2011 4:29 AM
To: Smith, Michael
Subject: Building Automation Alarm Notification
```

```
Field panel name :EPXCM80
Time Stamp :09:29:17 SEP-09-2011 FRI
Point system name :mm
Point Descriptor :
To State :*A1*unACK
Event Value : 100.0
Priority :BN08
```

Creating a Notification Class Object

1. Click the **Notification Class** icon from the **Create/Edit** bar.
 - ⇒ The **Notification Class Editor** window displays.
2. Click **Select a Panel** at the top of the left pane of the **Notification Class Editor** window to display available panels.
3. Select the desired panel by clicking the panel name in the left pane of the **Notification Class Editor** window.
4. Click the **+** button at the bottom left of the **Notification Class Editor** window.
 - ⇒ The **Notification Class Editor** window displays a new Notification Class object.
5. Enter the new Notification Class object information.
6. To add a network destination, click the **+** button at the bottom left of the **Network Destinations** table.
 - In the **Process ID** cell, enter the process ID. The default value is 600.
 - In the **Recipient** cell, enter the recipient using the drop-down choices.
 - In the **Valid Days** cell, choose the valid days by checking the desired check boxes.
 - In the **From Time-To Time** cell, enter the desired times.
 - In the **Transitions** cell, choose the desired transition options.
7. To add a remote recipient, click the **+** button at the bottom left of the **Remote Destinations** table.
 - In the **Remote Recipient** cell, choose the recipient using the drop-down choices, which displays all of the email addresses from the Remote Recipient List Editor. Remote Recipients will display the index number, the alias, and then the remote address.

NOTE: Entries that have been deleted or partially deleted from the Remote Recipient List, but are still referred to from a Notification Class object, will display with “(Empty)” in the deleted field.
 - In the **Valid Days** cell, choose the valid days by checking the desired check boxes.
 - In the **From Time-To Time** cell, enter the desired times.
 - In the **Transitions** cell, choose the desired transition options.
8. Click **Save**.
 - ⇒ The **Save** button becomes grayed out once the modifications are complete.

Notification Class Editor

Object Name: * Unnamed Object

Object Identifier:

Description:

Ack. required:

<input type="checkbox"/> to OFFNORMAL	Priority: 0	▲	▼
<input type="checkbox"/> to FAULT	Priority: 0	▲	▼
<input type="checkbox"/> to NORMAL	Priority: 0	▲	▼

Network Destinations:

Process ID	Recipient	Valid Days	From Time - To Time	Transitions	Confirmed

Remote Destinations:

Remote Recipient	Valid Days	From Time - To Time	Transitions

Viewing a Notification Class Object

1. Click the **Notification Class** icon from the **Create/Edit** bar.
⇒ The **Notification Class Editor** window displays.
2. Click **Select a Panel** at the top of the left pane of the **Notification Class Editor** window to display available panels.
3. Select the desired panel and the desired Notification Class object by clicking the panel name and then the Notification Class object name.
⇒ The **Notification Class Editor** window displays the Notification Class object details.

Notification Class Editor

Object Name:	*	S10.Notification			
Object Identifier:	15,0				
Description:					
Ack. required:	<input checked="" type="checkbox"/> to OFFNORMAL	Priority: 1			
	<input checked="" type="checkbox"/> to FAULT	Priority: 0			
	<input checked="" type="checkbox"/> to NORMAL	Priority: 1			
Network Destinations:					
Process ID	Recipient	Valid Days	From Time - To Time	Transitions	Confirmed
600	Global Broadcast	Mon, Tue, Wed, Thu, Fri, Sat, Sun	* - *	To-OffNormal, To-Fault, To-Normal	No
[+] [-]					

Network Destinations:

Remote Recipient	Valid Days	From Time - To Time	Transitions	Confirmed
[+] [-]				

Modifying a Notification Class Object

1. Click the **Notification Class** icon from the **Create/Edit** bar.
⇒ The **Notification Class Editor** window displays.
2. Click **Select a Panel** at the top of the left pane of the **Notification Class Editor** window to display available panels.
3. Select the desired panel and the desired Notification Class object by clicking the panel name and then the Notification Class object name.
⇒ The **Notification Class Editor** window displays the Notification Class object details.
4. Make the desired modifications to the existing Notification Class object.
5. Click **Save**.
⇒ The **Save** button becomes grayed out once the modifications are complete.

Notification Class Editor

Object Name:	* S10.Notification
Object Identifier:	15,0
Description:	
Ack. required:	<input checked="" type="checkbox"/> to OFFNORMAL Priority: 1
	<input checked="" type="checkbox"/> to FAULT Priority: 0
	<input checked="" type="checkbox"/> to NORMAL Priority: 1

Network Destinations:

Process ID	Recipient	Valid Days	From Time - To Time	Transitions	Confirmed
600	Global Broadcast	Mon, Tue, Wed, Thu, Fri, Sat, Sun	* - *	To-OffNormal, To-Fault, To-Normal	No
600	Siemens10	Mon, Tue, Wed, Thu, Fri, Sat, Sun	* - *		No
	Siemens11				
	Siemens12				
	Siemens13				
	Global Broadc				

Remote Destinations:

Remote Recipient	Valid Days	From Time - To Time	Transitions

Deleting a Notification Class Object

1. Click the **Notification Class** icon from the **Create/Edit** bar.
⇒ The **Notification Class Editor** window displays.
2. Click **Select a Panel** at the top of the left pane of the **Notification Class Editor** window to display available panels.
3. Select the desired panel and the desired Notification Class object by clicking the panel name and then the Notification Class object name.

⇒ The **Notification Class Editor** window displays Notification Class object details.

4. Click the - button at the bottom left of the **Notification Class Editor** window.

A message box will display, allowing you to verify deletion of the selected Notification Class object. Click **Yes** to delete the selected object.

Remote Notification

Remote Notification is a feature of the Notification Class application that allows the system to send alarm information to external devices by e-mail.

The Remote Recipient List Editor allows you to add, modify, and delete Remote Recipient addresses, which can then be added to Notification Class objects as remote destinations. See *Using the Remote Recipient List Editor* [→ 124] for more information.

The SMTP Configuration Editor allows you to configure the settings required by the SMTP e-mail server in order to use Remote Notification. See the *SMTP Configuration* section for more information.



NOTICE

If you are using Insight software in addition to the BACnet Field Panel Web Server, you must use the Insight Remote Notification (RENO®) application rather than the Web Server application. If you migrate from a Web Server solution to a solution using Insight software, you must reconfigure Remote Notification to use the Insight application.

Remote Recipient List Editor Overview



The Remote Recipient List can contain up to 50 entries.



To view or modify the panel's Remote Recipient List, you must be logged in to the Web Server with an account that has Application Edit privileges. If you do not have Application Edit privileges, the editor will not open, and an Access Denied error will display.

This section discusses the following topics:

- Using the Remote Recipient List Editor [→ 124]
- Creating a Remote Recipient [→ 125]
- Modifying a Remote Recipient [→ 125]
- Deleting a Remote Recipient [→ 126]
- Replicating a Remote Recipient List [→ 126]
- Clearing All Remote Recipient Lists [→ 126]

Using the Remote Recipient List Editor

The **Remote Recipient List Editor** can be accessed using the **Create/Edit** bar in the navigation pane on the left side of the screen.

1. Hover over the **Notification Class** icon to view the **Remote Recipient List** icon:



Remote Recipient List

2. Click the **Remote Recipient List** icon to open the **Remote Recipient List Editor** window.
3. Choose the desired panel from the left navigation pane of the **Remote Recipient List Editor** window. The Remote Recipient List displays.

Index	Alias	Remote Address
1	STL01	SysTest01@fwrdrd.net
2	STL02	SysTest02@fwrdrd.net
3	STL03	SysTest03@fwrdrd.net
4	STL04	SysTest04@fwrdrd.net
5	STL05	SysTest05@fwrdrd.net
6	STL06	SysTest06@fwrdrd.net
7	STL07	SysTest07@fwrdrd.net
8	STL08	SysTest08@fwrdrd.net
9	STL09	SysTest09@fwrdrd.net
10	STL10	SysTest10@fwrdrd.net

The width and order of the table columns can be changed in the application pane, but the changes remain only for the current session. Once you leave the editor, the column configuration reverts to the default settings.

- To change the width of the columns, click and hold the vertical edge of the column header and move the line to the desired width.
- To change the order of the columns, click and hold the column and move it to the desired location within the table.



If you do not save modifications to the **Remote Recipient List Editor**, and close the editor, all modifications will be discarded. Be sure to save any changes using the **Save** button.

Creating a Remote Recipient

1. Click the + button at the bottom left of the **Remote Recipient List Editor** table.
 - ⇒ The **Remote Recipient List** displays a new Remote Recipient entry. The Remote Recipient List can contain up to 50 entries.
 - ⇒ The **Index** cell is populated with the next consecutive Index number available. This cell is not editable.
 - ⇒ The **Alias** cell is populated with the assigned Index number. The Alias cell is editable.



The **Alias** cell can be used as a placeholder within the Remote Recipient List if necessary. For example, an alias of "Manager" might be created without a remote address. The remote address can be added at a later time.

2. Edit the **Alias** cell.



The Alias is required and must be unique. It can have up to 30 characters; this field is not case sensitive.

Do not use the following characters in the Alias cell:

- Asterisk: *
- Open or closed brackets: []
- Quotation marks: "
- Question mark: ?

3. Edit the **Remote Address** cell.



If an incorrectly formatted e-mail address is entered, an error message will display. The validity of the specific e-mail address is not verified.

4. Click **Save**.

⇒ The **Save** button is no longer available once the modifications are complete.

Modifying a Remote Recipient

1. Click the cell to be modified within the **Remote Recipient List**.
2. Edit the Alias cell and/or the Remote Address cell.
 - ⇒ The Alias is required and must be unique.



The Alias cell can be used as a placeholder within the Remote Recipient List, if necessary. For example, an alias of "Manager" might be created without a remote address. The remote address can be added at a later time.



If an incorrectly formatted e-mail address is entered, an error message will display. The validity of the specific e-mail address is not verified.

3. Click **Save**.

⇒ The **Save** button becomes grayed out once the modifications are complete.

Deleting a Remote Recipient

1. Within the **Remote Recipient List**, click the Remote Recipient entry to be deleted.
2. Click the - button at the bottom left of the **Remote Recipient List Editor** window.
⇒ The Remote Recipient line will be deleted from the **Remote Recipient List**.
3. Click **Save**.
⇒ The **Save** button becomes grayed out once the modifications are complete.

Replicating a Remote Recipient List

The replicate feature allows you to copy the entire Remote Recipient List to *all* other online web-enabled field panels on the local ALN.

1. While in the **Remote Recipient List Editor**, click the **Replicate** button.
2. A confirmation message displays. Click **Yes**.
⇒ A status window displays. Once replication is complete, a completion message displays.

If a panel is offline, a message displays asking you to confirm the replication. During replication, a status window displays, indicating to which panel the replication could not be completed.

Clearing All Remote Recipient Lists

- To clear all Remote Recipient Lists from all field panels, delete all remote recipients from one Remote Recipient List, and replicate the empty list to all field panels.

SMTP Configuration Editor Overview



To view or modify the panel's SMTP configuration data, you must be logged in to the Web Server with an account that has Hardware Edit privileges. If you do not have Hardware Edit privileges, the editor will not open, and an Access Denied error will display.



Saving the SMTP Configuration information to the panel requires a coldstart of the field panel. A message will display, allowing you to choose whether to continue with a coldstart (requiring re-authorization), or to discard the changes to the configuration information.

This section discusses the following topics:

- Using the SMTP Configuration Editor [→ 127]
- Creating a Heartbeat Message [→ 128]

Using the SMTP Configuration Editor

You must communicate with the local Information Technology services to obtain the information necessary to update the SMTP Configuration fields.

The **SMTP Configuration Editor** can be accessed using the **Create/Edit** bar in the navigation pane on the left side of the screen.

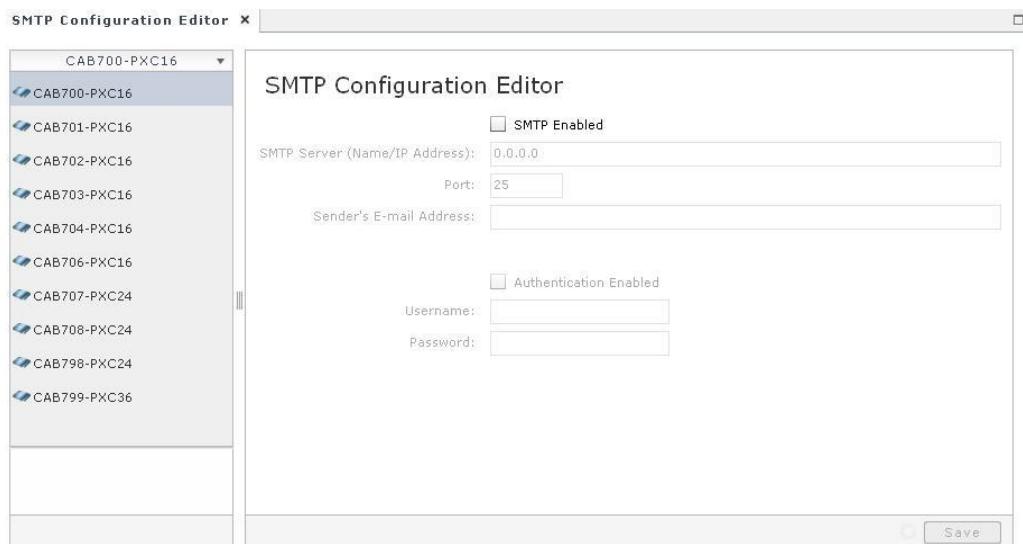
1. Move your cursor over the **Notification Class** icon to view the **SMTP Configuration** icon:



SMTP Configuration

2. Click the **SMTP Configuration** icon to open the **SMTP Configuration Editor** window.
3. Choose the desired panel from the left navigation pane of the **SMTP Configuration Editor** window.

⇒ The SMTP configuration data displays.



4. Edit the SMTP configuration data as necessary. See the field descriptions below.
5. Click **Save**.



NOTE:

Each field panel can have only one set of SMTP configuration data.

- The **SMTP Enabled** check box indicates whether or not SMTP is enabled for that field panel. If it is checked, the fields in the editor will be populated with the data from the field panel. If it is not checked, the fields are grayed out, though they will still display any data from the field panel. The **SMTP Enabled** check box allows you to enable or disable SMTP for that field panel by checking or unchecking the box.

- The **SMTP Server** field displays the name or the IP address of the SMTP server which the field panel will use to send out remote notifications. You can edit this field if SMTP is enabled at the field panel. If you are using the SMTP server name, the panel must have a DNS server defined in order to resolve the SMTP server name.
- The **Port** field displays the port being used by the SMTP server (typically port 25). You can edit this field if SMTP is enabled at the field panel.
- The **Sender's E-Mail Address** field displays the email address that will display in the **FROM:** field of the remote notification e-mail. You can edit this field if SMTP is enabled at the field panel. If the e-mail address is missing an “at” symbol (@) or a period (.), or if the address is formatted incorrectly, a red outline will appear around the field, and an error message will display as hover text when you move your cursor over the field.
- The **Authentication Enabled** check box indicates whether or not authentication is required by the SMTP server. If authentication is disabled (check box unchecked), the Username and Password fields are grayed out. The **Authentication Enabled** check box allows you to enable or disable authentication by checking or unchecking the box.
- The **Username** field displays the user name used for authentication by the SMTP server. You can edit this field if SMTP is enabled at the field panel and if authentication is enabled.
- The **Password** field displays the password used for authentication by the SMTP server. This information is displayed in unreadable characters (*****). You can edit this field if SMTP is enabled at the field panel and if authentication is enabled.



If you do not save modifications to the **SMTP Configuration Editor**, and close the editor, all modifications will be discarded. Be sure to save any changes using the **Save** button.



Saving the SMTP Configuration information to the panel requires a coldstart of the field panel. A message will display, allowing you to choose whether to continue with a coldstart (requiring re-authorization), or to discard the changes to the configuration information.

Creating a Heartbeat Message

The “heartbeat” functionality can be used to send periodic e-mails to remote recipients in order to let them know that remote notification is functioning correctly.

1. Create a Notification Class object with one or more Remote Destination(s).
2. Create an alarmable point named, for example, Email_Test. Make sure this point uses the notification Class created in Step 1.
3. Supply a description which lets the Remote Recipient know that the e-mail they are receiving is *not* an alarm, but a verification that remote notification e-mail is functioning correctly, for example: “Your Remote Notification is currently online and functioning properly.”
4. Create a Schedule object to trigger this point into and out of alarm at a specific time and interval. Choose an interval (for example: daily) that meets the needs of the heartbeat notification. See the *Schedule/Command/Calendar* section for more information.

- ⇒ The Remote Addresses chosen in the **Remote Destinations table** will receive a periodic e-mail notification to verify that the remote notification e-mail system is still functioning.

PPCL

This section discusses the following topics:

- PPCL Editor Overview [→ 129]
 - User Interface Description for the PPCL Editor
 - Referenced Points List
 - Program Pane
 - Point Value Pop-up
 - Error Table
 - Settings
- PPCL Assist [→ 138]
 - Manual Programming
 - Command Menus
 - Color Coding
 - Form Entry
 - Drag and Drop
- Using the PPCL Editor [→ 146]
 - Creating a PPCL Program
 - Modifying a PPCL Program
 - Viewing a PPCL Program
 - Deleting a PPCL Program
- PPCL Reference for Field Panels and UEC Devices [→ 153]
 - PPCL Validation Rules
 - Reserved Words
 - Error Handling

PPCL Editor Overview

The PPCL Editor allows you to complete the following Powers Process Control Language (PPCL) tasks in field panels, PTECs, or UECs:

- Create, modify, or delete a PPCL program.
- Modify line numbers.
- Enable or disable lines of code.
- Delete lines of code.
- Reset trace bits.
- Import and export PPCL programs as text files.
- Print PPCL programs.
- Use the PPCL Assist feature to facilitate program creation or modification.

For more information about PPCL, see the *APOGEE Powers Process Control Language (PPCL) User's Manual* (125-1896) and the *APOGEE BACnet ALN Field Panel User's Manual* (125-3020).

User Interface Description for the PPCL Editor

The PPCL Editor window can be accessed using the **Create/Edit** bar in the navigation pane on the left side of the Web Server screen.



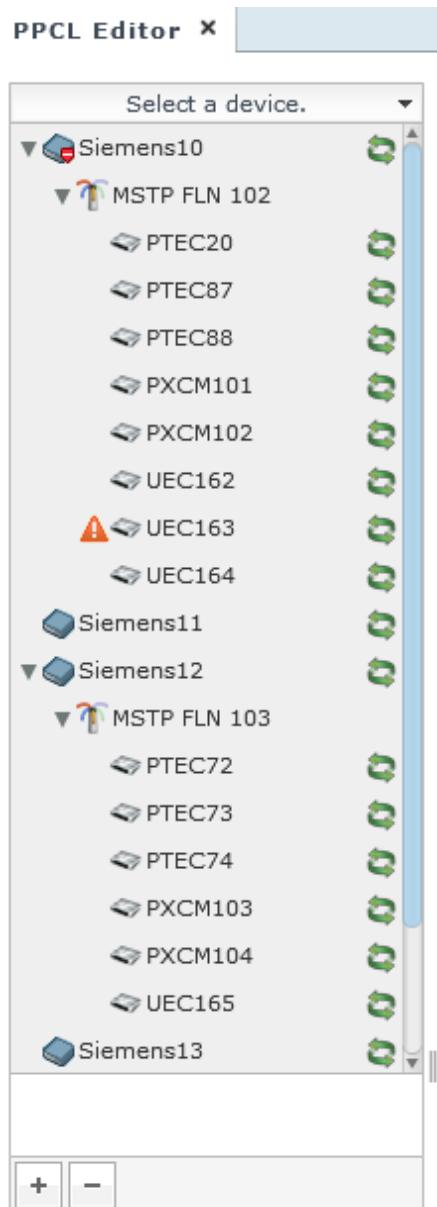
PPCL

The PPCL Editor navigation pane displays on the left side of the editor. Panels and programmable BACnet FLN devices (on the local FLN) display in the PPCL Editor's device tree:

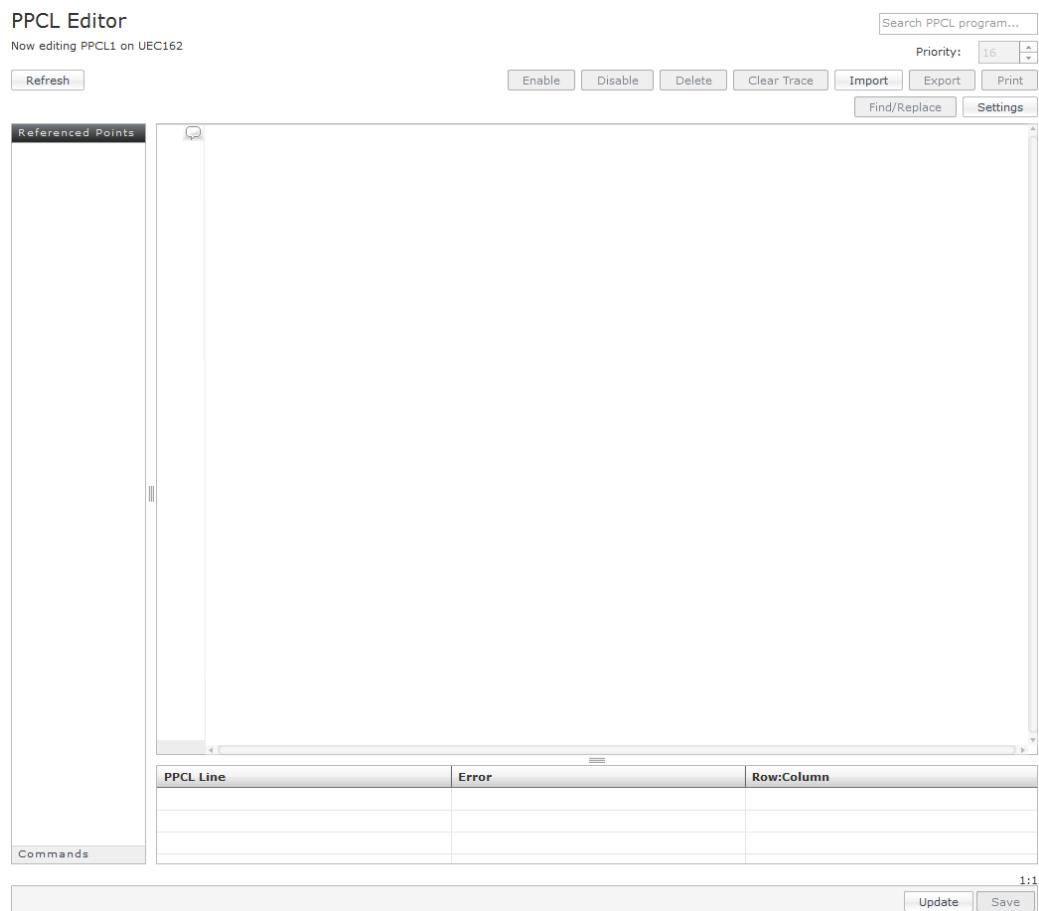


NOTE:

Programmable BACnet MS/TP FLN devices residing on a field panel's local MS/TP FLN ports are accessible through this editor. Routed MS/TP FLN and BACnet/IP FLN devices are not accessible.



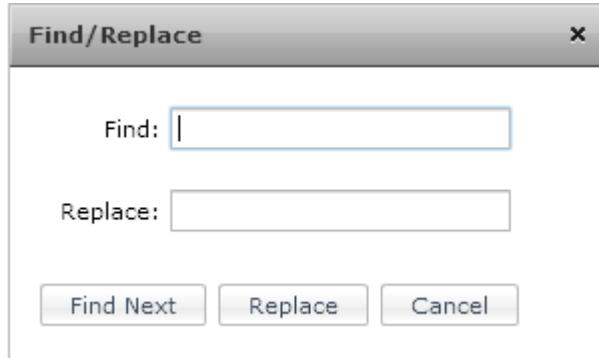
The rest of the PPCL Editor window consists of the **Referenced Points** list, the **Commands** list, the program pane, and the error table:



The following fields and buttons are used in the PPCL Editor window. If you do not have access to a function, the field or button display is dimmed.

- The Device Tree allows you to choose the desired programmable device and PPCL program.
- The search box allows you to enter a search string. Matching words or character strings in the program code will be highlighted in the editing space.
- The Priority field allows you to view the priority of the PPCL program.
- The Refresh button reloads the PPCL program from the device. All pending changes since the last save are lost.
- The Enable button allows you to choose lines of PPCL to enable. See the *Using the PPCL Editor* section for more information.
- The Disable button allows you to choose lines of PPCL to disable. See the *Using the PPCL Editor* section for more information.
- The Delete button allows you to delete lines of PPCL.
- The Clear Trace button clears all trace bits. This indicates which lines are currently being executed.
- The Import button allows you to import a stored PPCL program from the client computer or from network shares accessible from the client computer.
- The Export button exports the program as a text file (.PCL) to the client local hard drive or a network share accessible from the client computer.
- The Print button allows you to print the program to a printer accessible from the client computer.

- The **Find/Replace** button allows you to find a specific word or sequence of characters in the program and replace it with another specific word or sequence of characters.



- The **Settings** button allows you to customize the settings in the PPCL Editor and the PPCL Assist feature. See the *PPCL Assist* section for more information.
- The **Update** button (PTEC and UEC devices) opens the Database Manager.
- The **Referenced Points** list displays a list of points which have been referenced in the PPCL program and can display their current values for troubleshooting purposes. See the *Referenced Points List* section for more information.
- The **Commands** list displays a list of PPCL commands which can be dragged and dropped (or double-clicked) into the PPCL program. See the *PPCL Assist* section for more information.
- The **Save** button allows you to save the PPCL program to the field panel. If the editor detects syntax errors in the program, a **Save Program** dialog box displays:



If you click **Yes**, the program will be saved, potentially losing the lines of PPCL which contain errors. If you click **No**, the program will not be saved.

NOTE: To save a program with errors, click **No** and then export the program to a text file. Then save the program, ensuring that your program is backed up.

Referenced Points List

The **Referenced Points** list is an automatically-generated list of all objects (points, default PPCL program variables, resident points, and program-defined local variables) used in the open PPCL program. Once an object is automatically added to the **Referenced Points** list, the check box to the left of the object can be selected or deselected (default = deselected), allowing you to monitor that object. When monitored, the value of the point is displayed and updated based on the currently configured data refresh rate defined in the **Setup** menu.



NOTE:

If a point is not present in the **Device/Points** list, it will not appear in the **Referenced Points** list.

Referenced Points	
<input type="checkbox"/>	APPLICATION
<input type="checkbox"/>	ROOM TEMP
<input checked="" type="checkbox"/>	DO 8
<input type="checkbox"/>	AI 4
<input type="checkbox"/>	BO.74.5
<input type="checkbox"/>	BO.74.3

ET	10	APPLICATION = 12524
ET	11	IF(ROOM TEMP.GT.85)THEN ON(DO 8)
ET	20	IF ("ROOM TEMP" .LT. 65) THEN OFF ("DO 8")
ET	30	IF (AI 4.GT.77) THEN ON (BO.74.5) ELSE OFF (BO.74.3)

The default setting for the Data Refresh Rate is 15 seconds. This is recommended for typical applications. However, the more points that are selected, the higher the Data Refresh Rate value should be. It is recommended that you set the Data Refresh Rate to no less than five (5) seconds under any circumstances.

Setting the Data Refresh Rate to a lower value does not guarantee that the points will update at the specified rate.



NOTE:

In order to keep the data update speed at a reasonable level, it is recommended to have no more than 20 points selected when viewing a program in a panel, and no more than 10 points selected when viewing a program on a UEC or PTEC.

Program Pane

There are several elements in the program pane of the PPCL Editor:

D	1	C This is a Loop Statement
D	10	IF("Lowlimit" .EQ. ALARM) THEN GOTO 100
D	20	IF("DAYMODE" .EQ. OFF) THEN GOTO 150
D	30	ON(SFAN)
D U	40	LOOP(0,DAT,HWV,HWSP,PG,IG,DG,1,5.5,3.0,8.0,0)
D	50	GOTO 200
D	100	OFF(SFAN,RFAN)
D	110	SET(100.0,HWV)
D	120	GOTO 200
D	130	OFF("SFAN",RFAN)
D	140	SET(0,RFAN)
D	200	GOTO 10

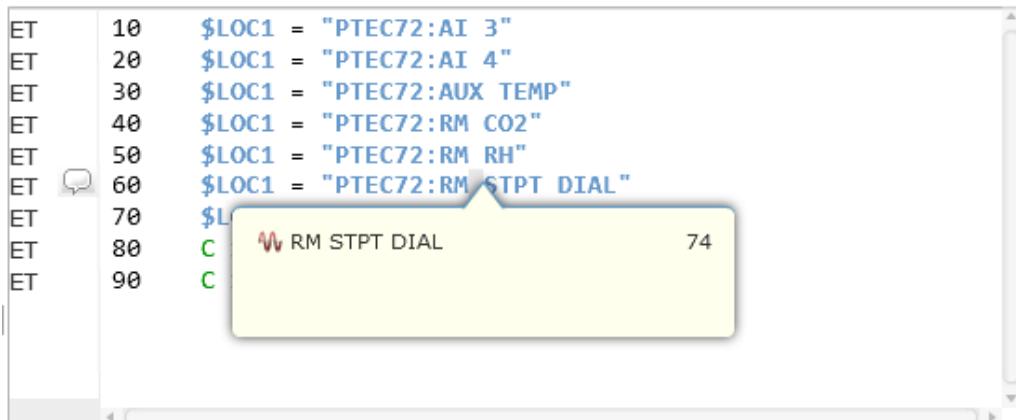
The status of each PPCL statement is displayed in the first four columns of each row.

- Enabled or Disabled
- Traced (or a space if not traced)
- Unresolved (or a space if resolved)
An "Unresolved" status indicates that the point referenced in a PPCL program cannot be found in the local panel or in another panel on the ALN (if applicable).
- Failed (or a space if not failed)

The Assist Bubble displays to the left of the line number in the line where the cursor is placed. See the *PPCL Assist* section for more information.

Point Value Pop-up

When you click a point name, local variable, or PPCL variable in a line of PPCL, a pop-up displays the name and current value for that item.



If the item is selected in the Referenced Points List, the current value for that item continues to be updated at the current data refresh rate. If an update cannot be successfully received from the end device, **Pending** displays instead of the current value.

If the item is not selected in the Referenced Points List, the current value for that item is only updated once.

Error Table

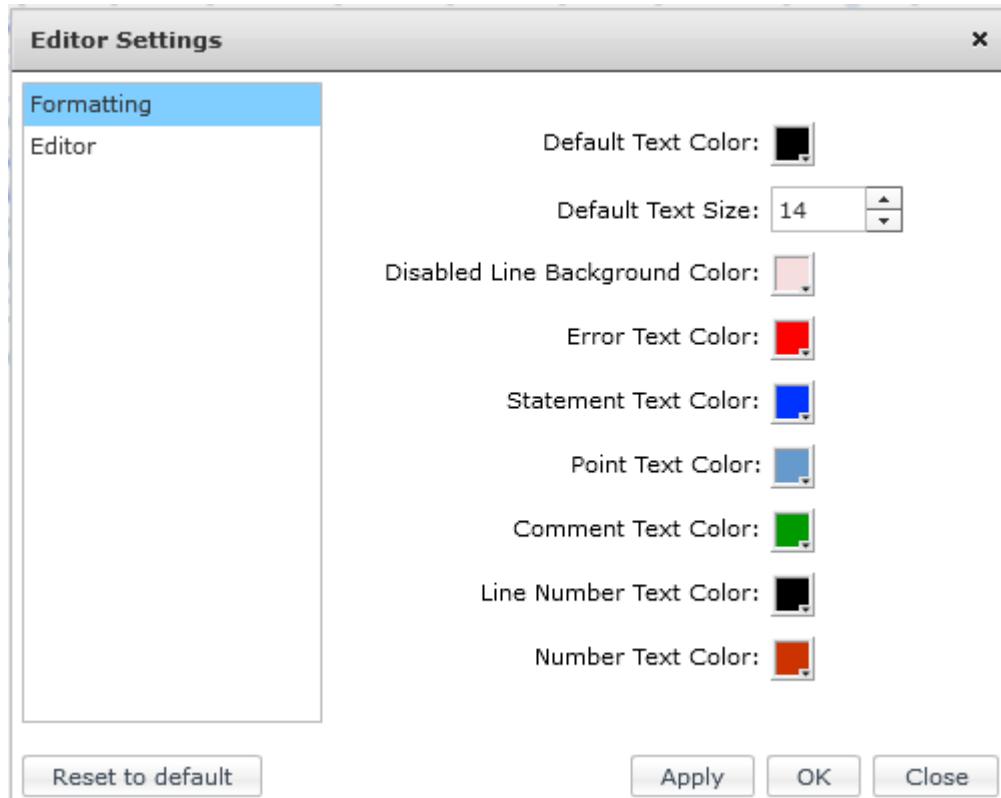
The Error Table at the bottom of the PPCL Editor window displays a list of errors which exist in the current PPCL program:

PPCL Line	Error	Row:Column
10	The beginning of the line is not a valid keyword or point name	[1:7]

- The **PPCL Line** column displays the PPCL statement line number which contains the error.
- The **Error** column displays an error message describing the nature of the error.
- The **Row:Column** column displays the sequential line and character position (row:column) of the text where the error resides. This uses the same format as the line and character cursor position indicator in the lower right corner of the editor pane (near the **Save** button).
- If you double-click an error in the Error Table, your cursor will be brought to the appropriate line within the PPCL Editor pane.

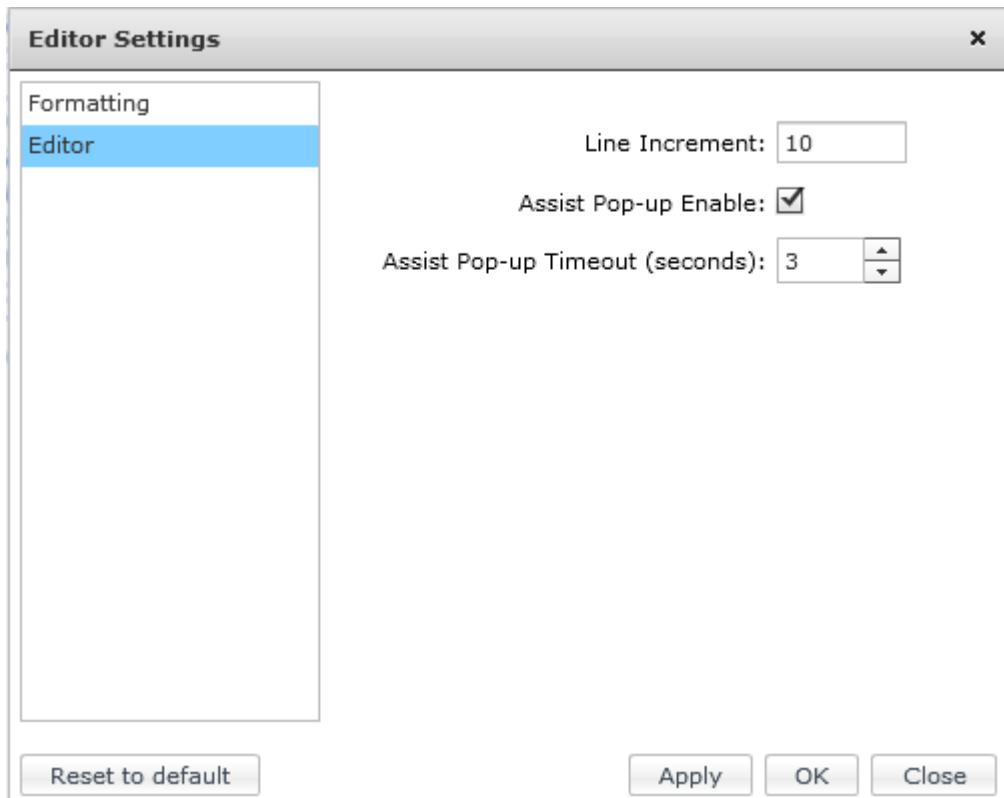
Settings

The **Settings** button in the PPCL Editor opens a customization box containing two windows. The **Formatting** window allows you to customize the text size and colors used in the programming pane:



- The Default Text size field allows you to change the size of the font in the editor (10 to 120 point font; default = 14).

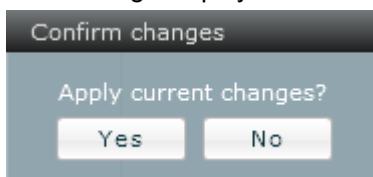
The **Editor** window allows you to customize other attributes of the PPCL Editor:



- The **Line Increment** field allows you to change the automatic line increment numbers (1 to 32767; default = 10)
- The **Assist Pop-up Enable** checkbox allows you to enable or disable the automatic appearance of the **Commands Selection** pop-up. See the *PPCL Assist* section for more information.
- The **Assist pop-up timeout (seconds)** field allows you to change the amount of time that will pass before the commands selection pop-up and the point value pop-up features display (3 to 120 seconds; default = 3). See the *PPCL Assist* section for more information.

Both **Editor Settings** windows have the following four buttons:

- The **Reset to default** button resets all customizations to their default settings.
- The **Apply** button applies all customizations immediately and leaves the **Editor Settings** window open.
- The **OK** button applies all customizations immediately and closes the **Editor Settings** window.
- The **Close** button closes the **Editor Settings** window. If no changes are pending, the window closes immediately. If any changes are pending, a confirmation message displays:



If you click the **Yes** button, all customizations are applied immediately and the **Editor Settings** window is closed. If you click the **No** button, all customizations are ignored and the **Editor Settings** window is closed.

PPCL Assist

The PPCL Assist feature assists you in creating PPCL statements:

- The Assist Bubble offers a selection of commands.
- The Referenced Points list allows you to see current point values.
- The Device/Points bar in the navigation tree allows you to easily add points to your program using the Drag and Drop feature.
- The error table guides you in creating accurate PPCL statements.

Manual Programming

PPCL programs can be created and modified manually (without automatic PPCL Assist features) using the PPCL Editor. You may simply type or copy/paste PPCL lines, including statements, point information, and punctuation, into the program pane in the PPCL Editor. Be sure that the **Assist Pop-up Enable** check box in the Editor Settings window is deselected. See the *Creating a PPCL Program* section for more information.

Please note:

- The PPCL Assist category pop-up does not display when you stop typing.
- The ability to drag and drop commands from the **Commands** list is still available when using manual programming.
- The Assist Bubble is active and supplies one instance of assistance each time you click it.

Command Menus

The **Commands** list allows you to easily insert PPCL statements into a program. To insert a statement into a program using the Commands list:

1. Click the **Commands** bar in the PPCL Editor window.
 - ⇒ The command menus display.
2. Click the desired category folder.
 - ⇒ The available PPCL statements display.
3. Either double-click the desired statement or drag-and-drop the desired statement into the PPCL program.
 - ⇒ The statement displays in the PPCL program at the cursor.

Command Menus for Field Panels and UECs

Program Control	Point Control	Operational Control	Emergency Control	Energy Management	Special Function	Arithmetic Function
ACT DEACT ENABLE DISABL GOSUB GOTO ONPWRT RETURN SAMPLE IF/THEN/ELSE	ON OFF FAST SLOW AUTO SET INITTO WAIT STATE	ENALM DISALM LLIMIT HLIMIT	EMON EMOFF EMFAST EMSLOW EMAUTO EMSET RELEAS	DAY NIGHT DC DCR TOD TODMOD TODSET HOLIDA SSTO SSTOCO PDL PDLDAT PDLMTR PDLSET PDLDPG LOOP ADAPTM ADAPTS	DBSWIT DEFINE LOCAL MAX MIN TIMAVG TABLE OIP	ATN COM COS EXP LOG .ROOT. SIN SQRT TAN

NOTE: The ALMPRI and TOTAL commands can be manually entered into a line of PPCL, but they are not accessible through the Command Menus or the PPCL Assist Forms.

Command Menus for PTECs

Program Control	Point Control	Emergency Control	Energy Management	Special Function
GOTO IF/THEN/ELSE	ON OFF SET INSERVICE OUTOFSERVICE	RELEAS	LOOP	DBSWIT MAX MIN TABLE

Commands Supported by PTECs Only

OUTOFSERVICE

The OUTOFSERVICE command is used to place a point out of service. After a point has been placed OUTOFSERVICE it is possible to assign a value to that point. You can place up to 16 points OUTOFSERVICE.

Syntax: OUTOFSERVICE (POINT 1, POINT 2,... POINT 16)

Example: OUTOFSERVICE (ROOM TEMP, OA TEMP)

INSERVICE

The INSERVICE command removes the manual override of an input point initiated by the OUTOFSERVICE command.

Syntax: INSERVICE (POINT 1, POINT 2,... POINT 16)

Example: INSERVICE (ROOM TEMP, OA TEMP)

Color Coding

The elements of a PPCL program are color-coded to assist in program creation and modification. The example below shows the default color-coding:

```
D 1 C This is a Loop Statement
D 10 IF("Lowlimit" .EQ. ALARM) THEN GOTO 100
D 20 IF("DAYMODE" .EQ. OFF) THEN GOTO 150
D 30 ON(SFAN)
D U 40 LOOP(0,DAT,HWV,HWSP,PG,IG,DG,1,5.5,3.0,8.0,0)
D 50 GOTO 200
D 100 OFF(SFAN,RFAN)
D 110 SET(100.0,HWV)
D 120 GOTO 200
D 130 OFF("SFAN",RFAN)
D 140 SET(0,RFAN)
D 200 GOTO 10
```

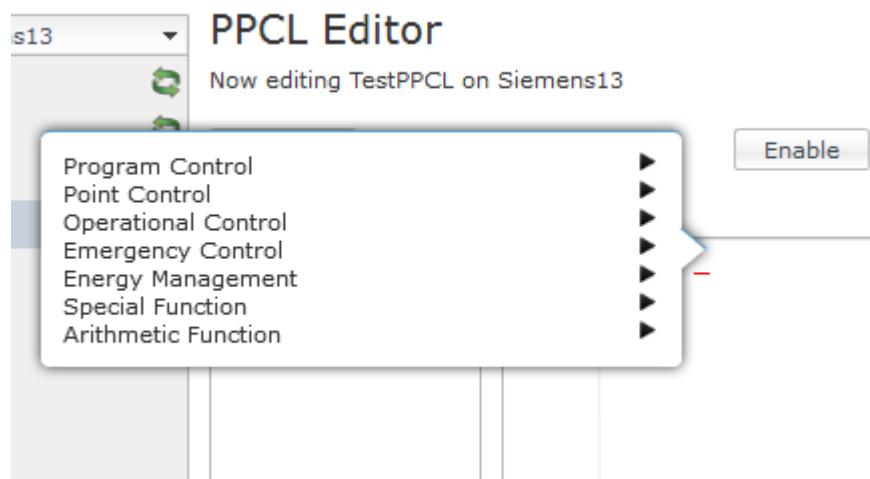
The color-coding within PPCL programs can be customized using the **Settings** button in the PPCL Editor. See the *Settings* section for more information.

Form Entry

The Form Entry feature assists you in easily creating accurate PPCL programs using Command Selection pop-ups and PPCL Assist forms.

Using the Form Entry Feature

When you create the first line of a new PPCL program, the **Command Selection** pop-up displays after the number of seconds in the **Assist Pop-up Timeout** field in the **Settings** window. You can also manually select the PPCL Assist Bubble. Subsequent displays of the **Command Selection** pop-up occur only when you manually select the PPCL Assist Bubble.



- From the Command Selection pop-up, select the command category.

The PPCL Assist Form for that category displays:

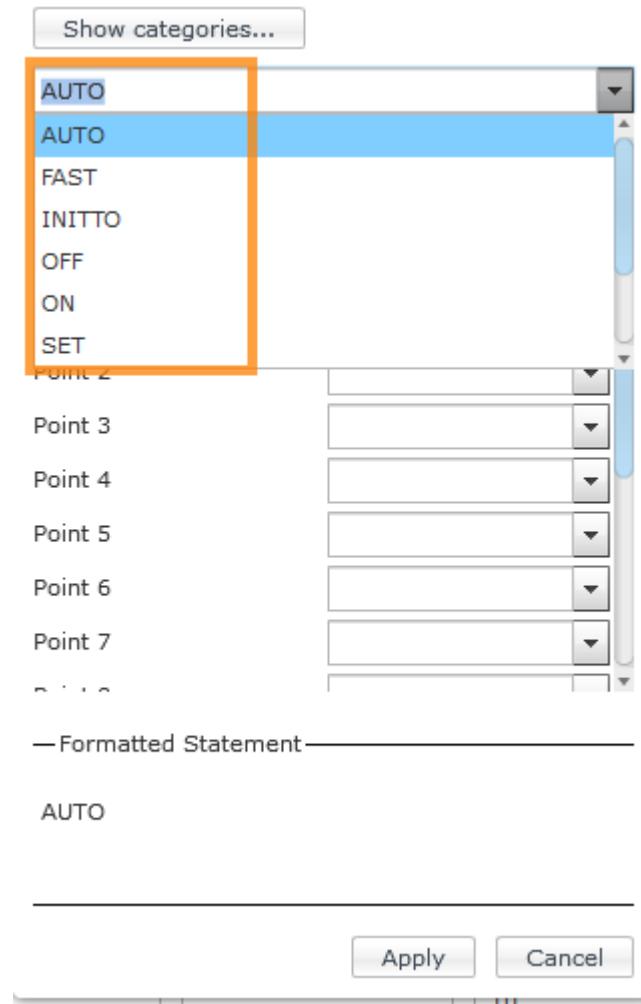
The screenshot shows a software interface for creating or editing a PPCL statement. At the top left is a button labeled "Show categories...". Below it is a dropdown menu showing "ACT". To the right of the dropdown is a button labeled "Activate lines". In the center, there is a section titled "Statement Arguments" with a horizontal line. Below this, there are eight input fields labeled "Line 1*" through "Line 8", each with a vertical scroll bar on its right side. To the right of these fields is a vertical blue scroll bar. Below this section is another horizontal line and a section titled "Formatted Statement" with a horizontal line. Under "Formatted Statement" is the text "ACT". At the bottom right are two buttons: "Apply" and "Cancel".



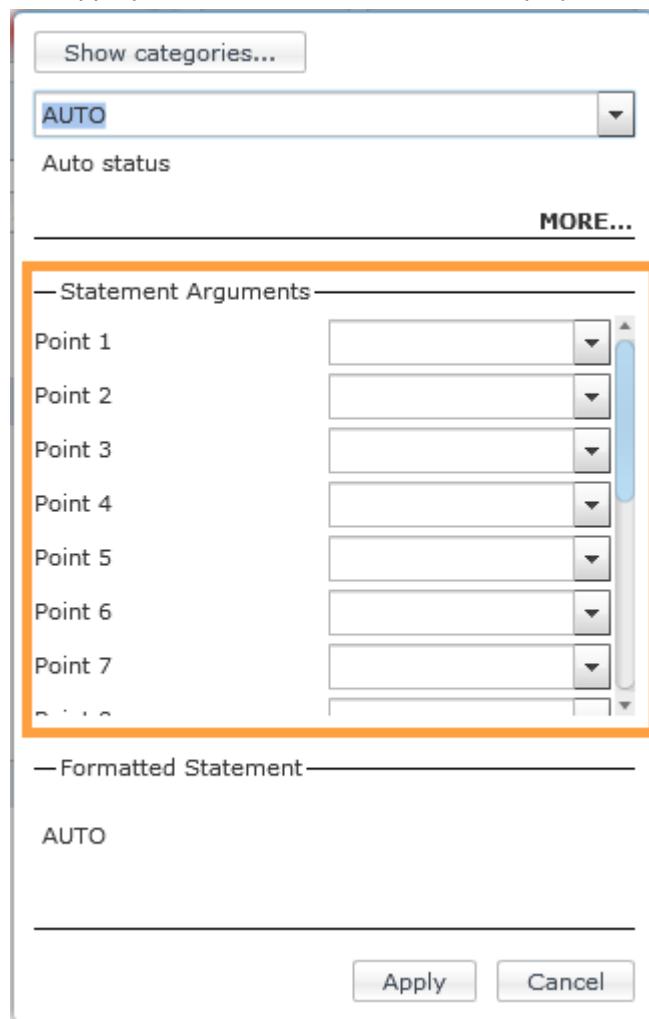
NOTE:

The **Show categories** button returns you to the category selection menu.

- From the drop-down menu, choose the desired statement for the selected category:



The appropriate fields for that statement display:



1. Enter the parameters for the statement based on the rules in the *Statement Parameter Rules* section.
2. Click **Apply**.
3. The statement and its parameters are added to the PPCL program line at the current cursor location.

Referencing Points using the Tree View

If the parameter allows points to be referenced, a tree view of available points displays in the drop-down menu.

If you are editing a PPCL program that resides in an ALN panel device, the tree view displays all available points in all FLN devices and panels on the ALN.

The resident points for the panel hosting the PPCL program are located in a Resident Point folder. If you need to access resident points from another panel, those resident points will be located in the analog values folder for that panel. They will be in the form of **PPCLName:pointName** or **!panelName:pointName**.

If you are accessing the form through a UEC or PTEC device, the tree view displays only the points for that device.

Show categories...

OFF

Off status

MORE...

— Statement Arguments —

Priority -DEFAULT-

Point 1* Point name

- ▼ PXCC3602
 - Local
 - PXCC3602.P1TEC

Point 2

- Local

Point 3

- ResidentPoint

Point 4

- Click the arrows to expand/contract the tree view:

Show categories...

OFF

Off status

MORE...

— Statement Arguments —

Priority -DEFAULT-

Point 1* Point name

- ▼ PXCC3602
 - ▼ Local
 - PXCC3602.AI07
 - DMRPCOMD
 - PXCC3602.AO09

Point 2

- PXCC3602.Address

Point 3

- !PXCC3602:Address

Point 4



NOTE:

Excessive referencing of points from other panels may cause network performance issues.



NOTE:

Only points located in the Web client's cache (as displayed in the Device/Points list) will display in the tree view. If the desired point is not displayed, the cache must be refreshed by clicking the refresh arrows.

Statement Parameter Rules

If the parameter can only be a number:

- You can only enter 0 through 9, -, or . (period).

If the parameter can only be a point:

- You must adhere to the rules for Point Names. See the *PPCL Manual* for more information about Point Names.
- If “” or @ are required (such as a point name beginning with a number, or a point name greater than 6 characters), the editor will automatically apply “” around the point name.



NOTE:

You cannot enter “” in a point name, as this is a prohibited character for a point name. However, “” can be entered around a point name.

If the parameter can be either a number or a point:

- If you enter a parameter containing all numbers, or all numbers and a single decimal point, the entry will be treated as a number.
- If the parameter begins with a - and all remaining characters are 0 through 9, the entry will be treated as a number.
- If you enter “” around the parameter, the entry will be treated as a point name.
- If the parameter contains any non-alphanumeric characters, the entry will be treated as a point name and “” will be added when applicable.

Drag and Drop

The Drag and Drop feature allows you to drag points from the **Device/Points** list and drop them into a line of a PPCL program.



NOTICE

You CANNOT drag a point from the **Device/Points** list and drop it into a parameter of an open command form. See the *Forms* section for more information about using forms.

- When a point is dropped into a PPCL program in an ALN Device, the System Name will be dropped into the line of PPCL. For more information, see the *System Name and Name* section.

- You cannot drag a point into a PPCL program in the UEC unless the point is from the same UEC as the PPCL program.
- When a point is dragged from a UEC into a PPCL program in the same UEC, the Name will be dropped into the line of PPCL.
- You cannot drag a point into a PPCL program in the PTEC unless the point is from the same PTEC as the PPCL program.
- When a point is dragged from a PTEC into a PPCL program in the same PTEC, the Name will be dropped into the line of PPCL.
- A "No Drop Allowed" indicator  displays for all prohibited drops.

	<p>CAUTION</p> <p>Resident Points (that is, <i>!DeviceName:PointName</i>) used in PPCL programs will retain their DeviceName through a replication.</p> <p>If replicating a UEC database to multiple devices, you must manually update the DeviceName for these points in the replicated PPCL Program.</p>
---	---

Name/System Name

The term "Name" refers to the information in the **Name:** field that displays when you move your cursor over the point in the Devices/Points list. This is the name that is used when referring to that point in a PTEC's or UEC's PPCL program.

The term "System Name" refers to the information in the **System Name:** field that displays when you move your cursor over the point in the Devices/Points list. This is the name that is used when referring to that point in a Field Panel's PPCL program.



These are different concepts from System Name/Name as they appear in Insight, Commissioning Tool (CT) Point Editor, or in the point definition display of a point at the HMI.

- AI 3
- AUX TEMP AI4
- DISCH TEMP
- RM CO2
- RM RH
- RM STPT DIAL
- Name: ROOM TEMP
- System Name: UNIT VENT:ROOM TEMP

Using the PPCL Editor

Creating a PPCL Program

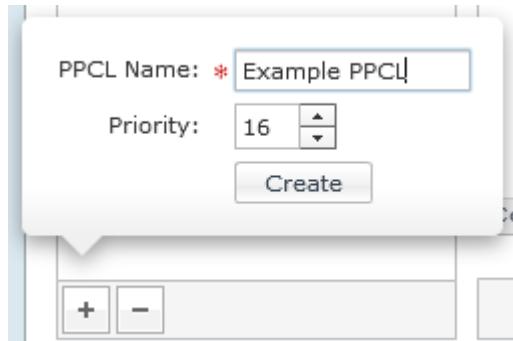


CAUTION

Do not use a PPCL program in one field panel to command subpoints that reside in an FLN device that is connected to a different field panel.

1. Click the **PPCL** icon from the **Create/Edit** bar.
⇒ The **PPCL Editor** window displays.
2. Under **Select a Device**, expand the tree to locate the field panel, UEC, or PTEC in which you want to create a PPCL program.
3. Select the desired device.
4. Click the **+** button at the bottom left of the **PPCL Editor** window.
⇒ An information box displays.

Field panel or UEC



1. Enter a name for the PPCL Program in the **PPCL Name** field. A range of 1 to 30 characters is allowed.
2. Choose the PPCL program priority. Be sure to consciously choose the priority, as changing it after the program is enabled has the consequence that points may remain set at the program's original priority. A range of 1 to 16 is allowed, but the recommended priority is 16.
3. Click **Create**.
4. In the Navigation Pane, click the PPCL Program name you just created.
⇒ The **PPCL Editor** window displays a blank programming space.
5. Enter the new lines of PPCL, or copy and paste from existing lines of PPCL, or import a program from a library. For information about using the **PPCL Assist** feature, see the **PPCL Assist** section.

6. Click **Save**.

If the editor detects syntax errors in the program, a **Save Program** dialog box displays:



If you click **Yes**, the program will be saved, potentially losing the lines of PPCL which contain errors. If you click **No**, the program will not be saved.

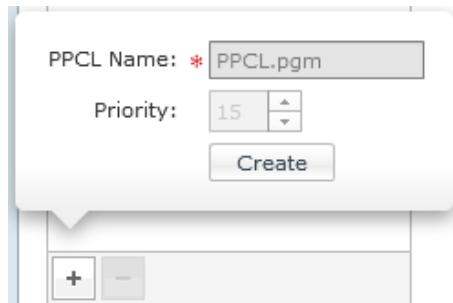
The **Save** button becomes grayed out once the save is complete.

Changing Priority

To change the priority of a PPCL program in a field panel or UEC:

1. Create a new program, but assign it the exact same name as the program whose priority you are changing.
2. Change the priority to the desired value.
3. Select Create.

PTEC



NOTE:

Only one PPCL program can be created per PTEC device.

1. The program name **PPCL.pgm** displays in the **PPCL Name** field. This field cannot be modified.
2. The priority of 15 displays in the **Priority** field. This field cannot be modified.
3. Click **Create**.
4. In the Navigation Pane, click the PPCL Program name you just created.
⇒ The **PPCL Editor** window displays a blank programming space.
5. Enter the new lines of PPCL, or copy and paste from existing lines of PPCL, or import a program from a library. For information about using the PPCL Assist feature, see the *PPCL Assist* section.

6. Click **Save**.

If the editor detects syntax errors in the program, a **Save Program** dialog box displays:



If you click **Yes**, the program will be saved, potentially losing the lines of PPCL which contain errors. If you click **No**, the program will not be saved.

The **Save** button becomes grayed out once the save is complete.

Update Resident Points in a Panel on the ALN

To ensure that any PPCL resident points used in the program display in the Referenced Points list:

1. In the navigation pane, refresh the panel by clicking the green arrows next to the panel name.
2. In the PPCL Editor window, refresh the PPCL program by clicking the **Refresh** button.

Update Resident Points in a UEC

To ensure that any PPCL resident points used in the program display in the Referenced Points list:

1. In the Database Manager, select the checkbox next to the UEC.
2. Click the **Update** button in the FLN Action Screen in the Database Manager. This procedure may take several minutes. See the *Updating a Custom FLN Application* [→ 191] section for more information about the behavior of the device/panel after an update.
3. In the PPCL Editor window, refresh the PPCL program by clicking the **Refresh** button.

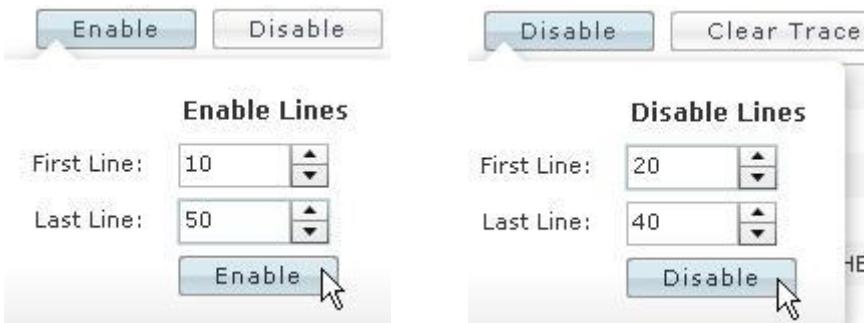


NOTE:

Points that do not display in the Device/Points navigation pane will not display in the Referenced Points list.

Enable or Disable PPCL Lines

1. Enable or disable lines of PPCL by clicking the **Enable** or **Disable** button.



- ⇒ Field panel UEC devices: The **Enable Lines** or **Disable Lines** window displays (lines are disabled by default).
- 2. Type the numbers or use the arrows to select the first and last lines to enable or disable, and click the **Enable** or **Disable** button in the **Enable Lines** or **Disable Lines** window. The fields default to asterisks (*), which are used as wildcards.
 - ⇒ PTEC devices: The **Enable Lines** or **Disable Lines** window does not display, and the button triggers enabling/disabling the whole program (all lines are enabled by default and are re-enabled after a power cycle, initialization, or program load).

Viewing a PPCL Program

1. Click the PPCL icon from the Create/Edit bar.
⇒ The PPCL Editor window displays.
2. Under **Select a Device**, expand the tree to locate the Field Panel, UEC, or PTEC in which you want to view a PPCL program.
3. Select the desired device and the desired PPCL program by clicking the device name and then the PPCL program name.
⇒ The PPCL Editor window displays the PPCL program.

The screenshot shows the PPCL Editor interface. On the left, there is a tree view under 'Referenced Points' with nodes like LOWLIMIT, DAYMODE, SFAN, DAT, HWV, HWSP, and RFAN. On the right, the main pane displays the PPCL program code:

```
D 1 C This is a Loop Statement
D 10 IF("Lowlimit" .EQ. ALARM) THEN GOTO 100
D 20 IF("DAYMODE" .EQ. OFF) THEN GOTO 150
D 30 ON(SFAN)
D U 40 LOOP(0,DAT,HWV,HWSP,PG,IG,DG,1,5.5,3.0,8.0,0)
D 50 GOTO 200
D 100 OFF(SFAN,RFAN)
D 110 SET(100.0,HWV)
D 120 GOTO 200
D 130 OFF("SFAN",RFAN)
D 140 SET(0,RFAN)
D 200 GOTO 10
```

Modifying a PPCL Program



NOTE:

After modifying a custom sequence of operations through a PPCL program on an FLN device, be sure to update the FLN custom application using the Database Manager.

1. Select the PPCL icon from the Create/Edit bar.
⇒ The PPCL Editor window displays.
2. Under **Select a Device**, expand the tree to locate the Field Panel, UEC, or PTEC in which you want to modify a PPCL program.
3. Select the desired device and the desired PPCL program by clicking the device name and then the PPCL program name.
⇒ The PPCL Editor window displays the PPCL program.

The screenshot shows the PPCL Editor interface. On the left, there is a 'Referenced Points' list containing points like LOWLIMIT, DAYMODE, SFAN, DAT, HWV, HWSP, and RFAN. The main area displays a PPCL program:

```
D 1 C This is a Loop Statement
D 10 IF("Lowlimit" .EQ. ALARM) THEN GOTO 100
D 20 IF("DAYMODE" .EQ. OFF) THEN GOTO 150
D 30 ON(SFAN)
D 40 LOOP(0,DAT,HWV,HWSP,PG,IG,DG,1,5.5,3.0,8.0,0)
D 50 GOTO 200
D 100 OFF(SFAN,RFAN)
D 110 SET(100.0,HWV)
D 120 GOTO 200
D 130 OFF("SFAN",RFAN)
D 140 SET(0,RFAN)
D 200 GOTO 10
```

4. Make the desired modifications to the existing program.

5. Click **Save**.

If the editor detects syntax errors in the program, a **Save Program** dialog box displays:

- If you click **Yes**, the program will be saved, potentially losing the lines of PPCL that contain errors.
- If you click **No**, the program will not be saved.

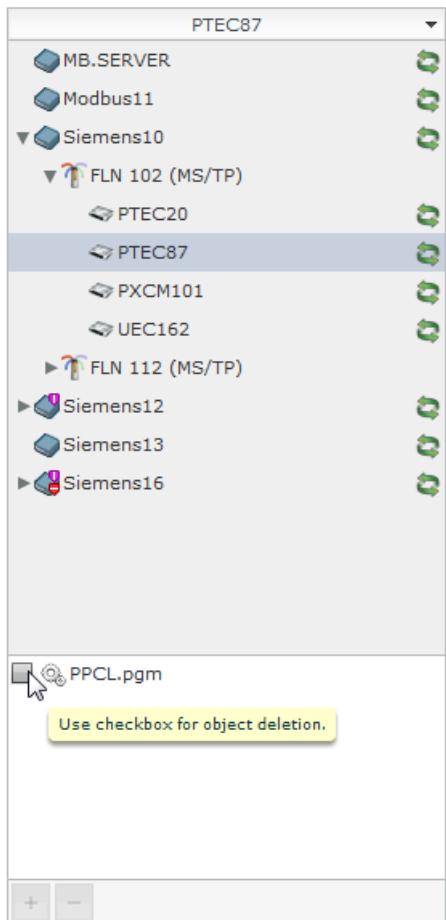


⇒ The **Save** button becomes grayed out once the save is complete.

Deleting a PPCL Program

1. Click the **PPCL** icon from the **Create/Edit** bar.
⇒ The **PPCL Editor** window displays.
2. If available panels/devices do not display, click **Select a Device** at the top of the left pane of the **PPCL Editor** window to display available panels/devices.
3. Select the desired panel, the desired FLN, and the desired device by clicking the arrow next to the panel name to display FLNs, and then clicking the arrow next to the FLN name to display devices, and then clicking the device name in the left pane of the **PPCL Editor** window.
⇒ The available PPCL programs display in the lower half of the left pane.

- ⇒ Select the program(s) to be deleted by checking the check box(es) to the left of the program name(s).



4. Click the - button at the bottom left of the PPCL Editor window.

A message box displays, allowing you to verify deletion of the selected program(s). Click **Yes** to delete the selected program(s).

PPCL Reference for Field Panels and UEC Devices

PPCL Rules for Field Panels and UEC Devices

- 198 character limit per line. This limit includes tabs, spaces, and line numbers. Comment lines are limited to 81 characters, not including the initial C character.
- Illegal characters include: ^ ~ # ; < > \ |
On import and when reading a PPCL program from a file or device, the following conversions are done:
 - whitespace (tabs, line breaks, multiple spaces) becomes a single space
 - ^ ~ # ; \ | become a single space
 - > becomes .GT.
 - < becomes .LT.
- 32767 line limit per program. This limit includes comment lines.
- Duplicate line numbers are not allowed in a single PPCL program.

- Line numbers must be in sequential ascending order.
- Empty program lines are eliminated when the program is saved to the Field Panel. When the program is refreshed, empty program lines no longer display.
- For field panel and UEC devices, a program name must be provided before a new PPCL program can be saved. The program name cannot be edited once the program has been saved.
- Object (point) names in program lines have validation rules:
 - Valid name length: 1 to 30 characters
 - Valid characters include: A-Z a-z 0-9 space ` ! @ \$ % & _ - + = { } [] : ' , . ? /
NOTE: The following characters are allowed only in specific positions of the point name:
! \$ [] % “
See the *Naming Conventions* section for details.
 - Point names which are over 6 characters in length must be enclosed in “ ”
 - Point names whose first character is 0-9 and whose name is up to 6 characters in length must be prefaced with @ or enclosed in “ ” (for example, @223TMP or “223TMP”)
 - Names that use characters other than A-Z, a-z, or 0-9 must be enclosed in “ ” (for example “Rm.10”)
 - Reserved words are not allowed. See the *Reserved Words* section for a list of reserved words.
- Lines and sections of PPCL code can be reused (copied/cut and pasted).
- PPCL SAMPLE statements cannot be used in front of the following statements. An error will display in the error table.
 - ADPATM
 - ADAPTS
 - DC
 - DCR
 - LOOP
 - PDL
 - PDLDAT
 - PDLDPG
 - PDLMTR
 - PDLSET
 - SAMPLE
 - SSTO
 - SSTOCO
 - TIMAVG
 - TOD
 - TODMOD
 - TODSET
 - WAIT

Command Priority for Field Panels and UEC Devices

- The command priority defaults to 16. It is recommended that the correct priority is chosen before creating the program.

- Adding a PPCL program with the same name allows you to change its priority without deleting any of the existing program. However, this action does not release any points set at the program's original priority.
- If a field panel must command a PTEC point, the priority of the PPCL program must be set to 15 or higher.
- If a field panel must command a UEC point, the priority of the program commanding it must be set higher than the priority of any UEC program that commands the point. Not all points in the UEC will be commanded by PPCL.

List of Reserved Words for Field Panels or UEC Devices

The following keywords and statements are reserved for specific functions and *should not* be used as or as part of point names used in a Field Panel or UEC PPCL program.

\$ARG1 through \$ARG15	COS	GOTO	OR
\$BATT	CRTIME	GT	PDL
\$LOC1 through \$LOC15	DAY	HAND	PDLDAT
\$PDL	DAYMOD	HLIMIT	PDLDPG
.AND.	DAYOFM	HOLIDA	PDLMTR
.EQ.	DBSWIT	IF	PDLSET
.GE.	DC	INITTO LE	PPCL
.GT.	DCR	LINK	PRFON
.LE.	DEACT	LLIMIT	RELEAS
.LT.	DEAD	LOC1 through LOC15	RETURN
.NAND.	DEFINE	LOCAL	ROOT
.NE.	DISABL	LOG	SAMPLE
.OR.	DISALM	LOW	SECND1 through SECND7
.ROOT.	DISCOV	LOOP	SECND7
.XOR.	DPHONE	LSQ2	SECNDS
@EMER	ELSE	LSQDAT	SET
@NONE	EMAUTO	LT	SIN
@OPER	EMER	MAX	SLOW
@PDL	EMFAST	MIN	SMOKE
@SMOKE	EMOFF	MONTH	SQRT
ADAPTM	EMON	NAND	SSTO
ADAPTS	EMSET	NE	SSTOCO
ACT	EMSLOW	NGTMOD	STATE
ALARM	ENABLE	NIGHT	TABLE
ALMACK	ENALM	NODE1 through NODE99	TAN
ALMCNT	ENCOV	NONE	THEN
ALMCT2	EPHONE	NOR	TIMAVG
ALMPRI	EQ	NORMAL	TIME
AND	EQUAL	OFF	TOD
ARG1 through ARG15	EXP	OIP	TODMOD
ATN	FAILED	OK	TODSET
AUTO	FAST	ON	TOTAL
C (comment)	GE	ONPWRT	WAIT
COM	GOSUB	OPER	XOR

PPCL Reference for PTECs

PPCL Rules for PTECs

- 80 character limit per line. This limit includes tabs, spaces, and line numbers.
- Illegal characters include: ^ ~ # ; < > \ |
On import and when reading a PPCL program from a file or device, the following conversions are done:
 - white space (tabs, line breaks, multiple spaces) becomes a single space
 - ^ ~ # ; \ | become a single space
 - > becomes .GT.
 - < becomes .LT.
- Range of line numbers is 1 to 32767.
- 200 line limit per program. This limit includes comment lines.
- Duplicate line numbers are not allowed in a single PPCL program.
- Line numbers must be in sequential ascending order.
- Empty program lines are eliminated when the program is saved to the PTEC. When the program is refreshed, empty program lines no longer display.
- For PTEC devices, only the single "PPCL.PGM" program name is available. The program name cannot be edited.
- Object (point) names in PTEC program lines have validation rules:
 - Valid name length: 1 to 12 characters
 - Valid characters include: A-Z 0-9 space . ?
 - Reserved words are not allowed. See the *Reserved Words* section for a list of reserved words.
 - Validation of keywords: see the *PTEC PPCL Keywords* section for a list of PTEC PPCL keywords. In addition:
 - Only 2 SECNDS timers are allowed (SECNDS and SECND1)
 - Only 4 \$LOC points are supported (\$LOC1 through \$LOC4)
- **NOTE:** The SECNDS and LOCn objects only exist in the PTEC program. They will not show up in the Device/Points List and cannot be dragged into the program. They are not displayed in the Referenced Points List.
- Lines and sections of PPCL code can be reused (copied/cut and pasted).

Priority

- For PTEC devices the command priority is 15, and cannot be changed.
- If a field panel must command a PTEC point, the priority of the PPCL program must be set to 15 or higher.

Reserved Words for PTECs

The following keywords, statements, and characters are reserved for specific functions and *should not* be used as or as part of point names used in a PTEC PPCL program.

=	@OPER	IF	OUTOFSERVICE
+	@PDL	INSERVICE	RELEAS
-	@SMOKE	LOOP	SECNDS
*	C	MAX	SECND1
/	DBSWIT	MIN	SET
\$LOC1 through \$LOC4	ELSE	OFF	TABLE
@EMER	GOTO	ON	THEN
@NONE			

**NOTE:**

When using the DBSWIT statement in PTEC PPCL, the HI or LOW limit values must be entered as an integer number. If a \$LOC or a custom point (in its .OBJ file) is entered as a HI or LOW limit in the DBSWIT statement(s) in the residing PTEC, the line fails.

Error Handling

Syntax errors are determined while you type a line of PPCL.

Syntax errors are determined when the program is initially read from a device or file.

**NOTE:**

Programs in a Field Panel or UEC should not have any syntax errors as they will already have been corrected.

In the editor, errors are underlined and the text is displayed using the font color specified in the **Settings** options. This indication of an error is displayed from the point of the error through the end of the line of PPCL. See the *Settings* [→ 135] section in this chapter.

Errors are also displayed in the Error Table. For information, see the *Error Table* [→ 135] section.

Chapter 11 - System Configuration

Chapter 11 discusses the following topics:

- ALN Node Table Editor [→ 158]
- Changing the Panel Time [→ 160]
- FLN Device Editor [→ 161]
- Initial Value Editor [→ 172]
- User Account Editor [→ 200]
- Change User Password [→ 207]
- Panel Configuration Editor [→ 209]

ALN Node Table Editor

The ALN Node Table Editor allows you to add, view, and delete ALN nodes through the BACnet Field Panel Web Server user interface.



NOTE:

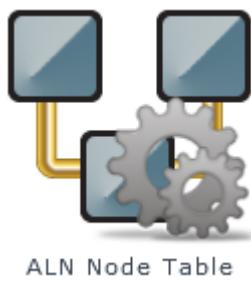
Advanced settings and diagnostics are only available through the HMI.

Accessing the Node Table Editor

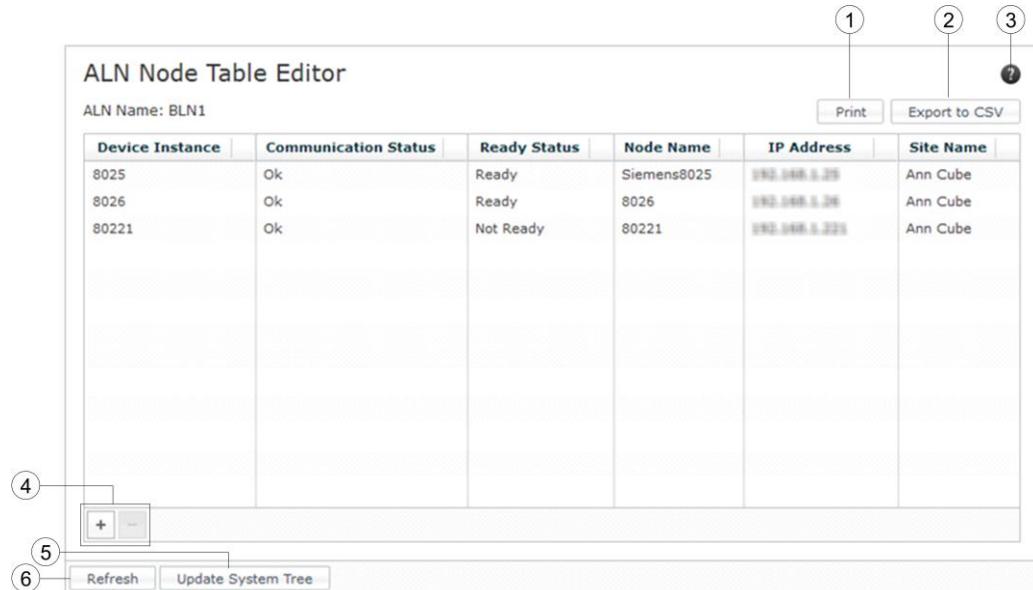
To access the ALN Node Table Editor, move your cursor over the **Panel Configuration**



icon in the **System Configuration** bar on the left side of the screen, and then click the **ALN Node Table** icon:



User Interface Description for the ALN Node Table Editor



- 1 The **Print** button allows you to print the Node Table Report.
- 2 The **Export to CSV** button allows you to export the data to a Comma Separated Variable file which can be saved.
- 3 The **?** button displays the System Configuration Help window.
- 4 • The **plus** button allows you to add a node to the node table.
• The **minus** button allows you to delete a node from the node table.
- 5 The **Refresh** button refreshes the node table data.
- 6 The **Update System Tree** button refreshes the session and updates the system tree.

Using the ALN Node Table Editor

Adding a Node

1. Click the **ALN Node Table** icon from the **System Configuration** bar.
⇒ The **ALN Node Table Editor** window displays.
2. Select the desired panel by clicking the panel name in the left pane of the **ALN Node Table Editor** window. Only panels which support this feature will display in the navigation pane.
3. Click the plus  button at the bottom left of the **ALN Node Table Editor** window.

4. In the **Device Instance** pop-up window, enter the device instance of the node you want to add to the table.
 - ⇒ The node table will be populated with the new node's configuration information.

Viewing a Node

1. Click the **ALN Node Table** icon from the **System Configuration**  bar.
 - ⇒ The **ALN Node Table Editor** window displays.
2. Select the desired panel by clicking the panel name in the left pane of the **ALN Node Table Editor** window. Only panels which support this feature will display in the navigation pane.
 - ⇒ The node table displays.

Deleting a Node

1. Click the **ALN Node Table** icon from the **System Configuration**  bar.
 - ⇒ The **ALN Node Table Editor** window displays.
2. Select the desired panel by clicking the panel name in the left pane of the **ALN Node Table Editor** window. Only panels which support this feature will display in the navigation pane.
3. Select the node you want to delete from the node table.
4. Click the minus  button at the bottom left of the **ALN Node Table Editor** window.
 - ⇒ A confirmation window displays.
5. Click **Yes**.
 - ⇒ The node is deleted from the node table.

Changing the Panel Time

The Change Panel Time function allows you to change the date and the time of day on the panel.

1. Click the **System Configuration**  bar on the left side of the screen, and move your cursor over the **Panel Configuration**  icon.

2. Click the **Change Panel Time** icon:



Change Panel Time

⇒ The **Change Panel Time** window displays.

3. Enter the desired date and time of day, and click **Save**.

⇒ When the information has been saved, the **Save** button becomes grayed out.

The **Use PC Time** check box allows you to synchronize the panel time and date with the PC time and date.



Once you save the date and time with the **Use PC Time** check box checked, the date and time will change to the computer time as expected, but the check box will return to unchecked.

FLN Editor

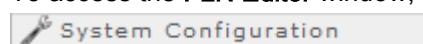
The FLN Editor allows you to create, modify, and delete FLN devices through the BACnet Field Panel Web Server user interface.

- MS/TP Routed and Integration FLNs may be added through the FLN Editor if the field panel has been enabled for MS/TP FLN and has Firmware Revision 3.4.
- The Device Discovery feature is available if the field panel has been enabled for MS/TP FLN and has Firmware Revision 3.3 or later. If the field panel has Firmware Revision 3.4 or later, the Device Discovery feature is also available on routed MS/TP FLNs and the IP FLN.

The Device Discovery feature allows you to display a list of all Master devices that are physically connected to the network but have not been added to the field panel database. You can modify reference information for these devices and then add the device references to the database.

Accessing the FLN Editor

To access the **FLN Editor** window, click the **System Configuration**



bar in the navigation pane on the left side of the screen and then click the **FLN** icon:



FLN

FLN Device Types Supported

Each controller can support only one type of FLN device.

- With Firmware Revision 3.3.1 and earlier, only MS/TP and P1 FLN network types are supported.
- With Firmware Revision 3.4 and later, the following FLN network types are supported:
 - **Local MS/TP FLN (MS/TP):** RS-485 network, which is built into the controller. Depending on the hardware type, a Primary Local MS/TP FLN and/or a Secondary Local MS/TP FLN may be defined on each field panel. For more information on the primary and secondary FLN ports, see the *Using the Panel Configuration Editor* [→ 214] section.
 - **Routed MS/TP FLN (MS/TP Routed):** RS-485 network, which resides on a different field panel or on an IP-to-MS/TP router device. Many Routed MS/TP FLN networks may be defined on each field panel.
 - **BACnet network IP FLN (IP):** Ethernet (BACnet/IP) network to which the field panels are connected. Only one IP FLN may be defined on each field panel.
 - **Integration driver FLN (INT):** RS-485 network, which is built into the controller, or Ethernet/IP network to which the Integration driver panel is connected. Depending on the driver type, many Integration FLN networks may be defined on each field panel.
 - **P1 FLN (P1):** RS-485 network, which is built into the controller. Depending on the hardware type, one, two, or three P1 FLN networks may be defined on each field panel.

When you create a new FLN device, the field panel is queried regarding the type of FLN device supported, and the Web Server generates the appropriate FLN Device Editor window. For more information, see the *User Interface Description for the FLN Device Editor Panes* [→ 162] section.

User Interface Description for the FLN Device Editor Panes

When you select an FLN object in the FLN Editor, the appropriate FLN Device Editor pane displays.

MS/TP and IP Devices

The following figure outlines the device editor user interface for both MS/TP devices and IP devices.

- When an MS/TP device is selected from the FLN Editor device tree, the **MS/TP Device Editor** pane displays.
- When an IP device is selected from the FLN Editor device tree, the **IP Device Editor** pane displays.

MS/TP Device Editor

Object Name: * PTEC41	Object Name: * AS_066
Description: D1.D2.D3	Description: DXRE 66
Application #: 2593	Application #: 12344
<input checked="" type="radio"/> Master <input type="radio"/> Slave	
Instance #: 801241	Instance #: 70066
Network #: 102	Network #: 8
MAC Address: 41	MAC Address: 10.173.124.106:BAC0
Initial Value Priority: 15	Initial Value Priority: 15
<input type="radio"/> Yes <input checked="" type="radio"/> No	Save Relinquish Default values? <input checked="" type="radio"/> Yes <input type="radio"/> No
Device Password:	Device Password:

IP Device Editor

- 1 **Object Name** - The name of the FLN Device. This field cannot be modified once the device has been added to the database. Up to 30 alphanumeric characters are allowed. The following characters are not allowed: * : ? [] #
- 2 **(Optional) Description** - The device description. This field can be edited. Up to 16 alphanumeric characters are allowed. The following characters are not allowed: * : ? []
- 3 **Application Number** - allows you to specify the application number.
 - If the device is a PPM or third-party device, the valid range for the **Application Number** field, in order for the field panel to learn the MS/TP application, is 10000 through 11999.
 - If the device is a UEC, PANEL, PTEC, or BTEC, the valid range for the **Application Number** field is 1 through 32767, or the field can be left blank. If left blank, the panel will query the device for the Application Number.
- 4 The **Master/Slave** options allow you to select the type of device being created. This field can be modified.
NOTE: IP devices can only be Master devices and do not have this field.
 - When an MS/TP device is added as a Master device, either the **Instance #** or the **MAC Address** must be specified. After a Master device is added to the database, the **Network #** and the **MAC Address** cannot be modified
 - When a device is added as a Slave device both the **Instance #** and the **MAC Address** must be specified. After a Slave device is added to the database, the **Network #** and the **MAC Address** can be modified.
- 5 **Instance #** - Allows you to enter a device identification number. This field cannot be edited in an existing object.
 - If the FLN Device is a Master device, and you do not enter a value, the controller automatically enters the next available Object ID.
 - If the FLN Device is a Slave device, then the pre-assigned Object ID must be provided.
- 6 **Network Number** - Allows you to enter the selected FLN network number of the selected field panel. If no value is provided, the controller uses the network number from the database.
- 7 **MAC Address** - Allows you to enter the MAC address. This field *can be* modified in the MS/TP Device Editor form. This field *cannot be* modified in the IP Device Editor form.

- 8 **Initial Value Priority** - Allows you to provide the priority used for writing initial values. The default value is 15.
- 9 The **Save Relinquish Default Value** options (Y/N) - Allows you to specify whether or not the relinquish default values of the device will be stored in the field panel.
- 10 **Device Password** - Allows you to choose a password for the device, using up to 20 alphanumeric characters.
If the FLN device is a UEC/PANEL:
 - This field is required in order to use the Point Editing, PPCL Editing, and Database Management features of UI Revision 1.3.x.
 - Enter the password for the **HIGH** user account that is stored in the UEC/PANEL device database in all uppercase. Use Commissioning Tool (CT)/HMI to set the HIGH user account password in the UEC/PANEL FLN device database.

P1 Device and Integration Device Editor Windows

The following figure outlines the device editor user interface for both P1 devices and Integration devices.

- When a P1 device is selected from the FLN Editor device tree, the **P1 Device Editor** pane displays.
- When an Integration FLN device is selected from the FLN Editor tree, the **Integration Device Editor** pane displays.

P1 Device Editor Integration Device Editor

<p>Object Name: * ATEC3 Description: Address (FLN/Drop): 1 ▲ 3 ▲ Application #: 2520 Instance #: 16500 <input checked="" type="checkbox"/> Use English Units <input type="checkbox"/> Duct is present Duct Type: Night OVRD: 0</p>	<p>Object Name: * DIAGMODBUS11 Description: Address (FLN/Drop): 253 ▲ 31 ▲ Application #: 4500 Instance #: 10300 <input checked="" type="checkbox"/> Use English Units <input type="checkbox"/> Duct is present Duct Type: Night OVRD: 0</p>
--	--

- 1 **Object Name** - The name of the FLN Device. This field cannot be modified once the device has been added to the database. Up to 30 alphanumeric characters are allowed. The following characters are not allowed: * : ? [] #
- 2 (*Optional*) **Description** - The device description. This field can be edited. Up to 16 alphanumeric characters are allowed. The following characters are not allowed: “* : ? []
- 3 **Address** - Allows you to enter the FLN Number and Drop Number. This field cannot be modified once the device has been added to the database
- 4 **Application Number** - Allows you to specify the application number.
- 5 **Instance #** - Allows you to enter a device identification number. This field cannot be edited in an existing object.

- 6 **English Units** check box - When selected, the English (US) units rather than SI units are displayed. This check box cannot be edited in existing devices.
- 7 The **Duct (Y/N)** check box - ("Duct is present") Allows you to indicate whether or not a duct is present.
- 8 The **Duct Type** drop-down menu - Allows you to select the duct type (Rectangular, Circle, Oval). When a duct type is selected, the **Duct measurement fields** display so that you can provide the duct measurements for the selected duct type.
 - Rectangle: **Duct size height** and **Duct size width** fields display.
 - Circle: **Duct size diam** field displays.
 - Oval: **Diam before flat** and **Height of flat** fields display.
- 9 **Night Override** - Allows you to define the override time.

User Interface Description for FLN Device Discovery

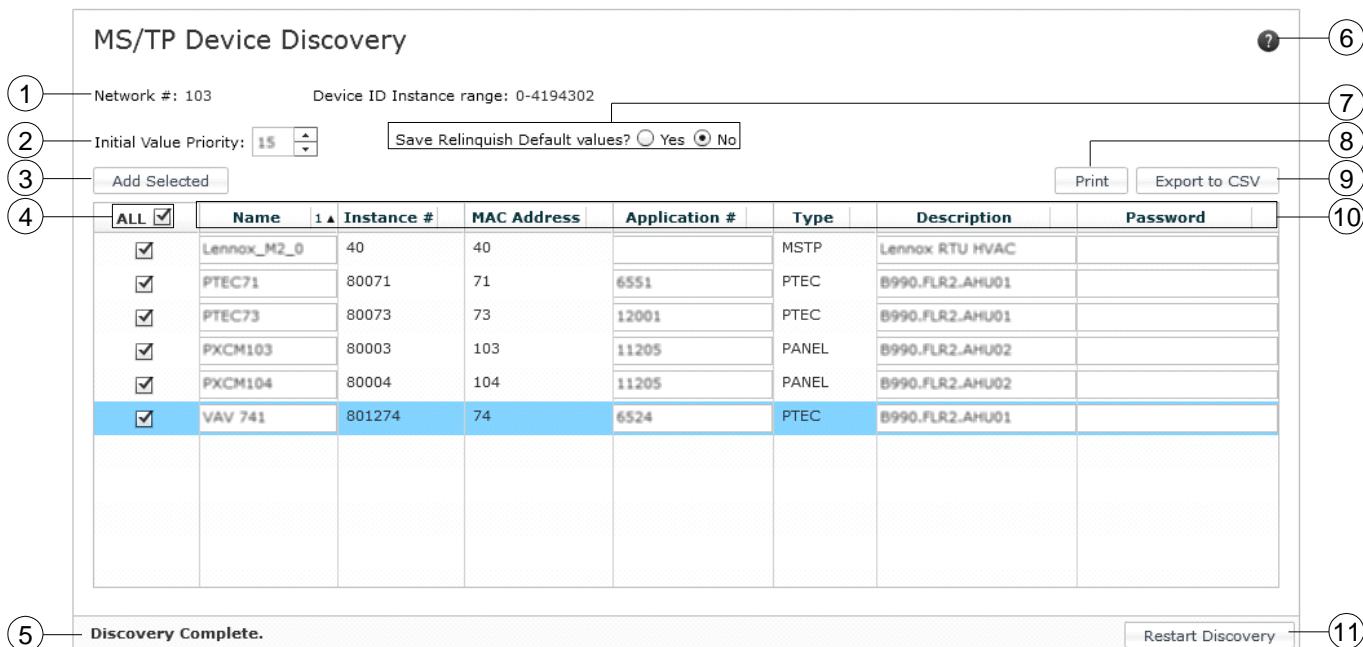
Device discovery is available through the FLN Editor. If the selected field panel has been enabled for MS/TP FLN and has Firmware Revision 3.3 or later, the **Discover Devices** button displays at the bottom of the FLN Editor device tree pane.



The Device Discovery Pane

The width and order of the table columns can be changed in the **Device Discovery** pane. The information can also be sorted by column.

- To change the width of the columns, click and hold the vertical edge of the column header and move the line to the desired width.
- To change the order of the columns, click and hold the column and move it to the desired location within the table.
- To sort the information by column, click the arrow in the column header. The numbers next to the column names indicate the sorting priority.



- 1 **Network #** - Displays the selected FLN network number of the selected field panel. This field cannot be modified.
- 2 **Device ID Instance range** displays the filtering used for the discovered list.
- 3 Click the **Add Selected** button to add all of the selected device references to the database.
- 4 Select the **ALL** check box to select all devices in the table to be added to the database. The check box for individual devices can also be selected or cleared.
- 5 Device discovery status.
 - While the devices are being discovered, the message **Discovery in progress**. Currently displaying **partial list...** displays.
 - When the discovery process is complete, the message **Discovery Complete** displays.
- 6 Click the **?** button to display the Device Discovery help window.
- 7 The **Save Relinquish Default Values** options (Y/N) - Allows you to specify whether or not the relinquish default values of the device will be stored in the field panel.
- 8 Click the **Print** button to print the displayed table.

- 9 Click the **Export to CSV** button to export the displayed table data to a Comma Separated Variable (.csv) file, which can be saved.
- 10 The data in the following columns is read directly from the discovered device(s):
 - **Instance #** - The device identification number. This field cannot be modified.
 - **Name** - The device name. This field is required, and it cannot be modified once the device has been added to the database. Up to 30 alphanumeric characters are allowed. The following characters are not allowed: * : ? [] #
 - **MAC Address** - The MAC address of the device. This field cannot be modified.
 - **Application #** - The device application number. When using the Device Discovery table, this field is required in order for the field panel to learn the application. This field cannot be modified after the device is added to the database.
 - If the device is a PPM or third-party device, the valid Application number range is 10000–11999.
 - If the device is a UEC, panel, PTEC, or BTEC, the valid Application number range is 1–32767, or the field can be left blank. If left blank, the field panel will query the device for the application number.
 - **Type** - The device type (BTEC, PTEC, MSTP, PPM, UEC, PANEL, DXRE, or DXRM). This information cannot be modified.
 - **Description** - The device description. This field is optional and can be edited. Up to 16 alphanumeric characters are allowed. The following characters are not allowed: “ * : ? []
 - **Password** - Allows you to choose a password for the device, using up to 20 alphanumeric characters. For a UEC or field panel, this field is required in order to use the Point Editing, PPCL Editing, and Database Management features of the BACnet Field Panel Web Server. If the device is a UEC/PANEL, enter the password for the HIGH user account that is stored in the UEC/PANEL device database in all uppercase.
- 11 Click the **Restart Discovery** button to manually trigger a device discovery process. This button is only available when the discovery process status is complete.

Using the FLN Device Editor

Adding an FLN Device

In addition to the default FLNs displayed, MS/TP Routed and Integration FLNs may be added if the field panel has been enabled for MS/TP FLN and has Firmware Revision 3.4. A routed FLN allows the field panel to supervise FLN devices on the MS/TP side of an IP-to-MS/TP router.

The field panel's FLN configuration determines the default FLNs displayed for a panel. For more information, see the *Panel Configuration Editor* [→ 209] section.

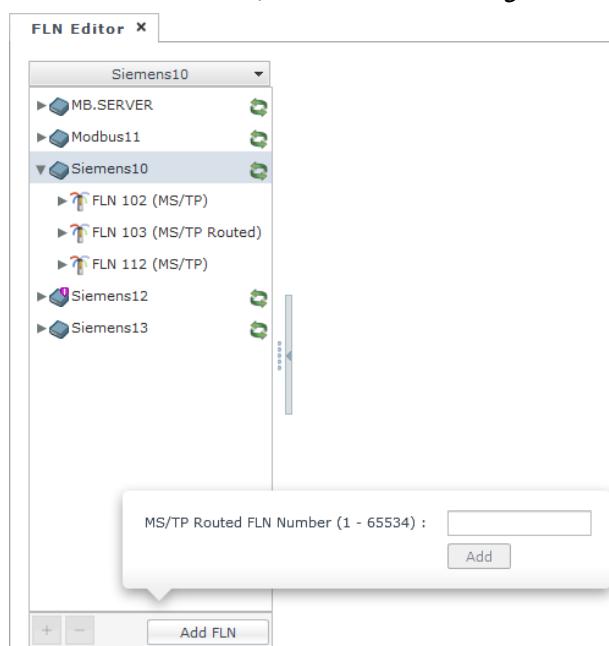


Figure 4: Adding a Routed FLN to the Field Panel.

1. In the FLN Editor, select a field panel with Firmware Revision 3.4 or later.
2. Click the **Add FLN** button at the bottom of the pane.
⇒ A dialog box opens.
3. Enter the FLN number associated with the network to be accessed.
4. Click the **Add** button.

Creating an FLN Device

▷ If you're adding a device to the primary or secondary FLN, you must know the MS/TP FLN Network Number. To determine this, navigate to the **Panel Configuration Editor**, click the **FLN Settings** tab, and note the numbers for the Primary and Secondary FLNs. To determine which physical port is primary and which is secondary, see the Using the *Panel Configuration Editor* [→ 214] section.

1. In the FLN Editor, select a field panel in the device tree to display available FLNs.
2. Select the desired FLN.

3. Click the plus  button at the bottom left of the **FLN Device Editor** window.
⇒ The **Device Editor** window displays a new FLN Device.
4. Enter the new FLN Device information.
5. Click **Save**.
⇒ The **Save** button is not available once the modifications are complete.

Discovering FLN Devices

The Device Discovery feature, in the Field Panel Web Server User Interface, is available if the field panel has been enabled for MS/TP FLN and has Firmware Revision 3.3 or later. The field panel automatically triggers a discovery process on startup for the local MS/TP FLN(s).

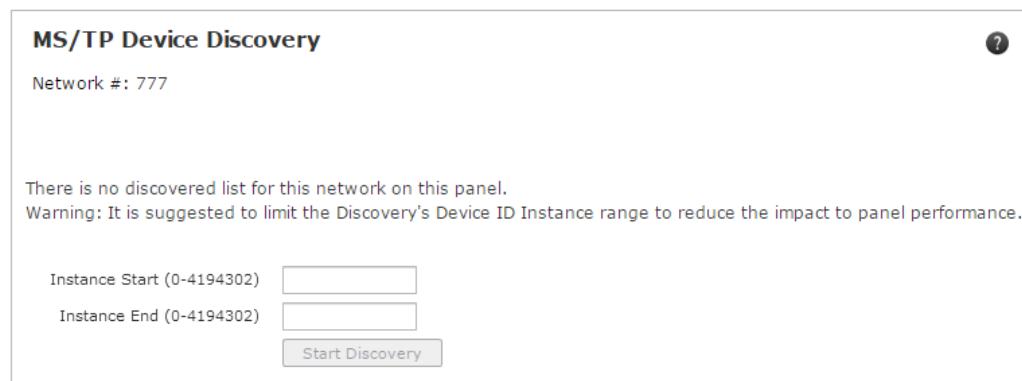


NOTE:

When data is modified in the Device Discovery table, the device reference that is stored in the field panel database is modified when the device is added. Modifying data in the Device Discovery table does not modify the properties that are stored in the FLN device.

Use the following procedure to manually trigger a discovery process:

1. In the **FLN Editor**, select a field panel with Firmware Revision 3.3 or later.
2. Select the desired FLN.
3. Click the **Discover Devices**  button at the bottom of the FLN Editor device tree pane.
4. Complete the following steps if they apply to your network:
 - If the field panel has Firmware Revision 3.4 or later, you can enter a range of instance numbers to filter the discovered list and reduce the impact to panel performance.
 - During the first device discovery on a routed MS/TP FLN or IP FLN, the following window displays. Enter the range of instance numbers to discover. This range will then be used for any subsequent discoveries of the same network.



- ⇒ The **Device Discovery** pane displays a list of all devices that are physically connected to the network but have not been added to the field panel database.

5. Do one of the following:
 - Select the **ALL** check box to select all devices in the table to be added to the database.
 - Select the check box for individual devices to be added to the database.
6. Enter or modify any device information. For more information, see the *User Interface Description for FLN Device Discovery* [→ 165] section.
NOTE: A field with an invalid entry displays a red border. Move your cursor over the field to display the valid entry parameters.
7. Click the **Add Selected** button to add all selected devices to the panel database.



NOTE:

Before adding a UEC to the database, the UEC must be made ready.

If device discovery is in progress, the **Refresh List** button is available. To refresh the list of discovered devices, click the **Refresh List** button at the bottom of the pane.



CAUTION

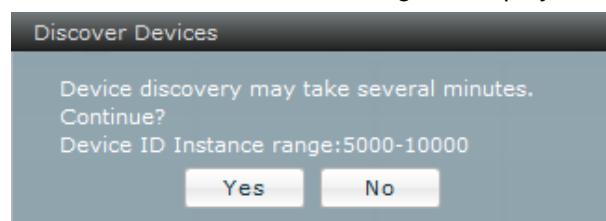
Changes made to the Device Discovery table are overwritten when you click the **Refresh List** button. Before refreshing the list, click the **Add Selected** button to add all selected devices to the database.

Restarting Device Discovery

Selecting the **Restart Discovery** button triggers a new discovery process and updates the list to include any changes to the physical network. The **Restart Discovery** button is available if discovery is complete.

To restart the device discovery process:

1. Click the **Restart Discovery** button in the bottom right corner of the **Device Discovery** pane.
 - If the field panel has Firmware Revision 3.4 or later, you can enter a range of instance numbers to filter the discovered list and reduce the impact to panel performance.
⇒ A **Discover Devices** dialog box displays.



2. Click **Yes** to continue.

⇒ A Discovering Devices progress bar displays:



If you click the **Cancel** button to close the progress window, a current (partial) list of discovered devices displays in the **Device Discovery** pane. While the discovery process continues, you can work with the current list of devices.

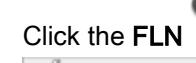
If Discovery is in progress, the **Refresh List** button is available. To refresh the list of discovered devices, click the **Refresh List** button at the bottom of the pane.



CAUTION

Changes made to the Device Discovery table are overwritten when you click the **Refresh List** button. Before refreshing the list, click the **Add Selected** button to add all selected devices to the database.

Viewing an FLN Device

1. Click the  icon from the **System Configuration** bar.
⇒ The **FLN Editor** window displays.
2. Select the desired panel and FLN by clicking the arrow next to the panel name  and then the arrow next to the FLN device name.
3. Select the desired FLN device by clicking the FLN name.
⇒ The appropriate **Device Editor** window displays the FLN device details.

Modifying an FLN Device

1. Click the  icon from the **System Configuration** bar.
⇒ The **FLN Editor** window displays.
2. Select the desired panel and FLN by clicking the arrow next to the panel name and then the arrow next to the FLN name.
3. Select the desired FLN device by clicking the FLN device name.
⇒ The appropriate **Device Editor** window displays the FLN device details.
4. Make the desired modifications to the existing FLN device.
5. Click **Save**.
⇒ The **Save** button is not available once the modifications are complete.

Deleting an FLN Device

1. Click the  icon from the **System Configuration** bar.
⇒ The **FLN Editor** window displays.
2. Select the desired panel and FLN by clicking the arrow next to the panel name and then the arrow next to the FLN name.
3. Select the desired FLN device by clicking the FLN device name.
⇒ The appropriate **Device Editor** window displays the FLN device details.
4. Click the minus  button at the bottom left of the **FLN Device Editor** window.
⇒ A message box displays, allowing you to verify deletion of the selected FLN Device.
5. Click **Yes** to delete the selected device.

Initial Value Editor

The Initial Value Editor allows you to load initial values into a Siemens (or other third-party) device that uses P1 or BACnet MS/TP communication, through the BACnet Field Panel Web Server user interface, if necessary.

The Initial Value Editor allows you to:

- Save the current initial values of a device into the field panel using the **Update Panel** button.
- Load initial values into a device using the **Initialize Device** button.
- Set new values or release existing values using the **Save** button.

Accessing the Initial Value Editor

To access the **Initial Value Editor**, move your cursor over the  icon in the **System Configuration** bar on the left side of the screen, and then click the **Initial Value** icon:



Initial Value

About Initial Values

The purpose of initial values is to provide a starting value for an FLN device in case power is cycled. If the device is connected to a BACnet field panel, these values are retained and sent to the device. If a device becomes damaged, the new device can be addressed, and its application set, and the field panel will send the initial values so the device is configured correctly.

The Initialize Device feature allows you to load initial values to a device if necessary. Also, individual points can be released through the Initial Value Editor.



The Initial Value feature requires the correct case-sensitive password for MS/TP device re-initialization. The password for MS/TP device re-initialization is configured when adding/modifying an MS/TP FLN device to the field panel.

User Interface Description for the Initial Value Editor

Initial Value Editor

Update Panel **Initialize Device**

Points:

Point Name	Object Id	Initial Value	Release
DUCT AREA	1,97	0.35	<input type="checkbox"/>
ERROR STATUS	1,99		<input type="checkbox"/>
FLOW	1,75		<input type="checkbox"/>
FLOW BIAS	1,74		<input type="checkbox"/>
FLOW COEFF	1,36	0.67	<input type="checkbox"/>
FLOW D GAIN	1,73		<input type="checkbox"/>
FLOW I GAIN	1,72		<input type="checkbox"/>
FLOW P GAIN	1,71		<input type="checkbox"/>
FLOW STPT	1,93		<input type="checkbox"/>
LOOP TIME	1,98		<input type="checkbox"/>
MTR SETUP	1,58	5	<input type="checkbox"/>
MTR1 TIMING	1,51	97	<input type="checkbox"/>
MTR2 COMD	1,52		<input type="checkbox"/>
MTR2 POS	1,53		<input type="checkbox"/>
MTR2 TIMING	1,55		<input type="checkbox"/>

Save

- The **Update Panel** button allows you to update the panel with the initial values.
- The **Initialize Device** button allows you to initialize the selected device by commissioning the values set.
- The **Points** table lists the points that exist in the selected FLN device. The table lists the following point information:
 - Point Name – displays the name of the point.
 - Object ID – displays the Object Identifier.
 - Initial Value – allows you to set or modify the initial value of the point.
 - Release check box – allows you to release the selected point, returning the initial values to their relinquished default values.

Using the Initial Value Editor

Setting the Initial Value

1. Click the **Initial Value** icon from the **System Configuration** bar.
⇒ The **Initial Value Editor** window displays.
2. Select the desired panel by double-clicking the panel name or by clicking the arrow next to the name of the desired panel in the left pane of the **Initial Value Editor** window.
3. Select the desired device by clicking the arrow next to the name of the desired FLN and then clicking the name of the desired device.
⇒ The **Points** table displays.
4. Set the initial value by using the cells under the **Initial Value** column in the **Points** table.
5. Click **Save**.
⇒ The **Save** button becomes grayed out once the modifications are complete.

Updating the Panel

**NOTE:**

The Update Panel functionality is not supported on DXR devices.

1. Click the **Initial Value** icon from the **System Configuration** bar.
⇒ The **Initial Value Editor** window displays.
2. Select the desired panel by double-clicking the panel name or by clicking the arrow next to the name of the desired panel in the left pane of the **Initial Value Editor** window.
3. Select the desired device by clicking the arrow next to the name of the desired FLN and then clicking the name of the desired device.
⇒ The **Points** table displays.
4. Update the panel by clicking the **Update Panel** button.
⇒ The **Initial Value** column is automatically filled in with values read from the device.

Initializing

1. Click the **Initial Value** icon from the **System Configuration** bar.
 - The **Initial Value Editor** window displays.
2. Select the desired panel by double-clicking the panel name or by clicking the arrow next to the name of the desired panel in the left pane of the **Initial Value Editor** window.
3. Select the desired device by clicking the arrow next to the name of the desired FLN and then clicking the name of the desired device.
 - ⇒ The **Points** table displays.
4. Initialize the device by clicking the **Initialize Device** button.

The device may fail and return while it is initializing.



NOTE:

The Initial Value feature requires the correct case-sensitive password for MS/TP device re-initialization. The password for MS/TP device re-initialization is configured when adding/modifying an MS/TP FLN device to the field panel

Releasing Points

1. Click the **Initial Value** icon from the **System Configuration** bar.
 - ⇒ The **Initial Value Editor** window displays.
2. Select the desired panel by double-clicking the panel name or by clicking the arrow next to the name of the desired panel in the left pane of the **Initial Value Editor** window.
3. Select the desired device by clicking the arrow next to the name of the desired FLN and then clicking the name of the desired device.
 - ⇒ The **Points** table displays.
4. Release points by checking the check box in the **Release** column of the **Points** table. Multiple points can be released at the same time.
5. Click **Save**.
 - ⇒ The **Save** button becomes grayed out once the modifications are complete.

Database Manager

Database Manager allows you to backup and restore ALN device databases.

Database Manager allows you to backup a programmable FLN device database, and perform FLN custom application management. FLN application management can include updating an FLN application description in supervising panels and restoring an FLN application database to one or more FLN devices.



NOTE:

Programmable BACnet MS/TP FLN devices residing on a panel's local MS/TP FLN ports are accessible through this editor. Routed MS/TP FLN and BACnet IP FLN devices are not accessible.



NOTE:

An ALN device database backup file has a .db or .zdb extension. A database backup file representing a UEC/PANEL FLN application has a .db extension. Database backup files representing a PTEC application have a .obj and a .pgm extension.

If these file extensions do not display while doing a backup of these devices, you should setup your system's view of files to "show hidden files, folders, and drives."

Overview of ALN Database Management

ALN devices can be configured and their databases created with FPWeb UI.

An ALN device database can be backed up and restored using Database Manager in the FPWeb UI.



NOTE: To guarantee proper operation of the ALN, every ALN panel database must be unique. Do not restore the same database to multiple panels on the same ALN.

Overview of FLN Application and Database Management

FLN Devices must first be configured with appropriate tools outside of the FPWeb UI.

WCIS is used to configure PTEC FLN device properties such as MAC address, Device ID, Device Name, Location, Description, and Base Application. See the *WCIS Getting Started* (125-3180) document.

Commissioning Tool/HMI is needed to set up a UEC/PANEL FLN device including upgrading firmware, and to configure its properties such as MAC Address, Device ID, Device Name, Autorestore, Autosave, Device Password, and to make the UEC/PANEL ready. See *Commissioning Tool*/Help information.



NOTE:

When using Commissioning Tool to load a database to a UEC/PANEL, disable Autorestore. After Commissioning Tool is finished loading the database, it is strongly recommended to enable Autosave and Autorestore.

Once FLN devices are configured using these appropriate tools, the FLN Discovery features that are part of the FLN Editor in the FPWeb UI make it possible to quickly add FLN devices to the panel's FLN database. See the *FLN Device Editor* section.

Once an FLN device is added to the panel's database, the Initial Value Editor features in the FPWeb UI make it possible to view/modify the initial values for an FLN device. See the *Initial Value Editor* section.

Once an FLN device is added to the panel's database, the Point Editor and PPCL Editor features in the FPWeb UI make it possible to manage a programmable FLN device's custom application. Database Manager allows you to back up a programmable FLN device database and perform FLN custom application management.



CAUTION

Resident Points (that is, *!DeviceName:PointName*) used in PPCL programs will retain their DeviceName through a replication.

If replicating a UEC database to multiple devices, you must manually update the DeviceName for these points in the replicated PPCL Program.

User Interface Description for the Database Manager

The Database Manager window can be accessed by clicking the Database Manager icon in the **System Configuration** bar in the Navigation pane on the left side of the screen.



Database Manager

As soon as the editor is opened, the application automatically performs a Database Discovery on any panel not already in the cache.

- The **Device** radio button opens the **Select a Device** screen (selected by default).
- The **File** radio button opens the **Select File(s) for FLN Application Management** screen.



Selecting a Device

Select a device.

- The **Show FLN Device Type** drop-down menu allows you to filter the FLN devices shown in the device tree by device type.
 - The **Show FLN Application #** drop-down menu allows you to filter the devices shown in the device tree by application number.
 - The device tree displays all FPWeb-enabled panels on the ALN that are not failed, and that have Firmware Revision 3.3 or later. Underneath each panel is a list of each programmable FLN device associated with that panel. If the programmable FLN device has a normal device status, a checkbox displays to the left of the device name. If the device has a failed device status, no checkbox displays; instead, a red triangle icon displays. If the device has a normal device status but a failed application status, a checkbox displays but an orange triangle icon displays. See the *Device/Points Bar Icons and Messages* section in Chapter 3 for more information about status icons.
- The device tree allows you to select a device, which displays the appropriate action screen(s).
- To the right of the panel on the ALN device name, the device instance number is listed.
 - To the right of the FLN device name, the type of FLN device and the current application number associated with the device reference at the panel are listed.
 - Once a device is selected, the appropriate action screen displays.

Selecting a File

Select File(s) for FLN Application Management

Select both the .pgm file and the .obj file for a PTEC application.
Select the .db file for a UEC/PANEL application.

[Browse to select file\(s\)...](#)

***To restore an ALN panel database from a file, select Device radio button, select the ALN panel device, then select the Restore from PC button.

- The **Browse to select file(s)** button displays a window which allows you to select files for FLN Application Management.
 - When selecting files for a PTEC application, you must select both the .PGM and .OBJ files at the same time. Do this using any of the standard Windows multi-select methods (such as SHIFT+CLICK).
 - When selecting a file for a UEC/PANEL application, you must select the .DB file.
- Once files have been selected, the appropriate action screen displays.

User Interface Description (ALN)

When an ALN device is selected from the **Select a Device** screen, the Database Manager allows you to generate the ALN device database backup file and save it to a computer, or to select an ALN device database file from a computer and restore to the ALN device.

Panel

 Siemens10 [8010]

[Backup to PC](#)

[Restore from PC](#)

User Interface Description (FLN)

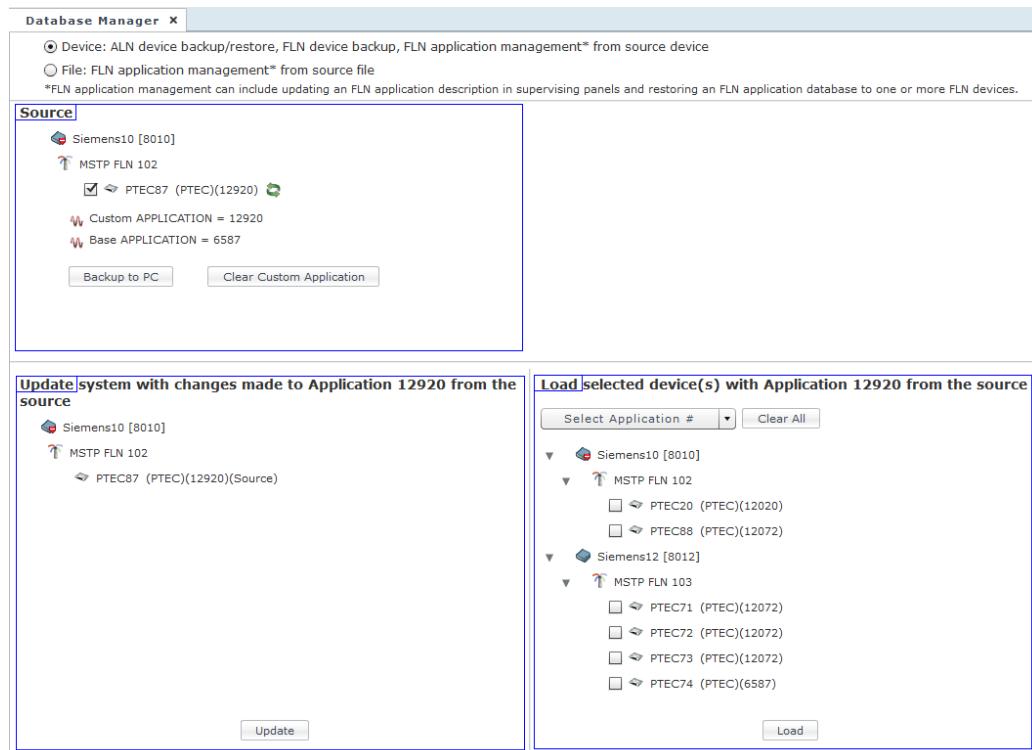
When an FLN application source is selected, the **Database Manager** user interface action screen has three sections: the **Source** section, the **Update** section, and the **Load** section.

Source

An FLN application source can be a PTEC device, a UEC/PANEL device, or files representing a PTEC application or UEC/PANEL application.

PTEC Device Source

The following example shows the user interface when a PTEC device is selected.



The source tree indicates the relationship between the source device and the system. The Custom APPLICATION number displays the value of the APPLICATION number managed by the PPCL.pgm program line that identifies the custom application number in the selected PTEC.



NOTE:

If the Custom APPLICATION value displays NOT FOUND, this indicates that the preferred workflow for PTECs to manage a line in the **PPCL.pgm** was not followed for the selected PTEC.

If the Custom APPLICATION value displays EMPTY, this indicates that there is no custom application in the selected PTEC.

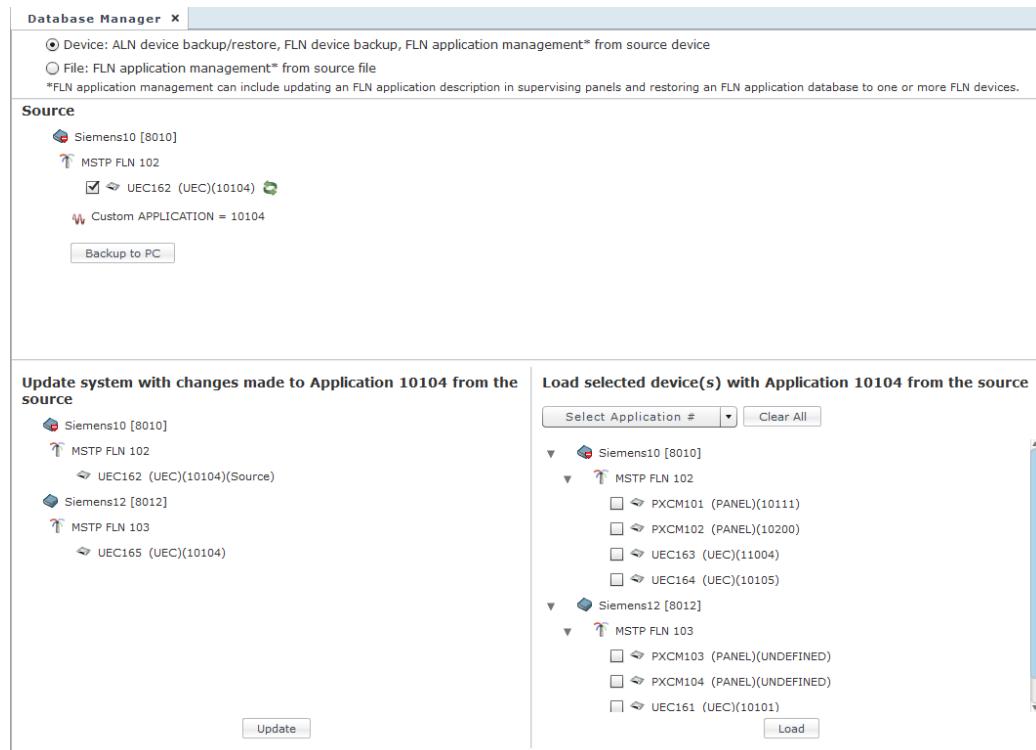
The Base APPLICATION number displays the Relinquish Default value of the APPLICATION point, which indicates the application without customization.

The **Backup to PC** button allows you to back up the PTEC application database files to a computer.

The **Clear Custom Application** button allows you to send files representing an empty custom application to the selected PTEC causing it to revert to its base application.

UEC Device Source

The following example of the user interface when a UEC device is selected.



The source tree indicates the relationship between the source device and the system. The Custom APPLICATION number displays the relinquish default value of the APPLICATION point that identifies the custom application number in the selected UEC/PANEL.



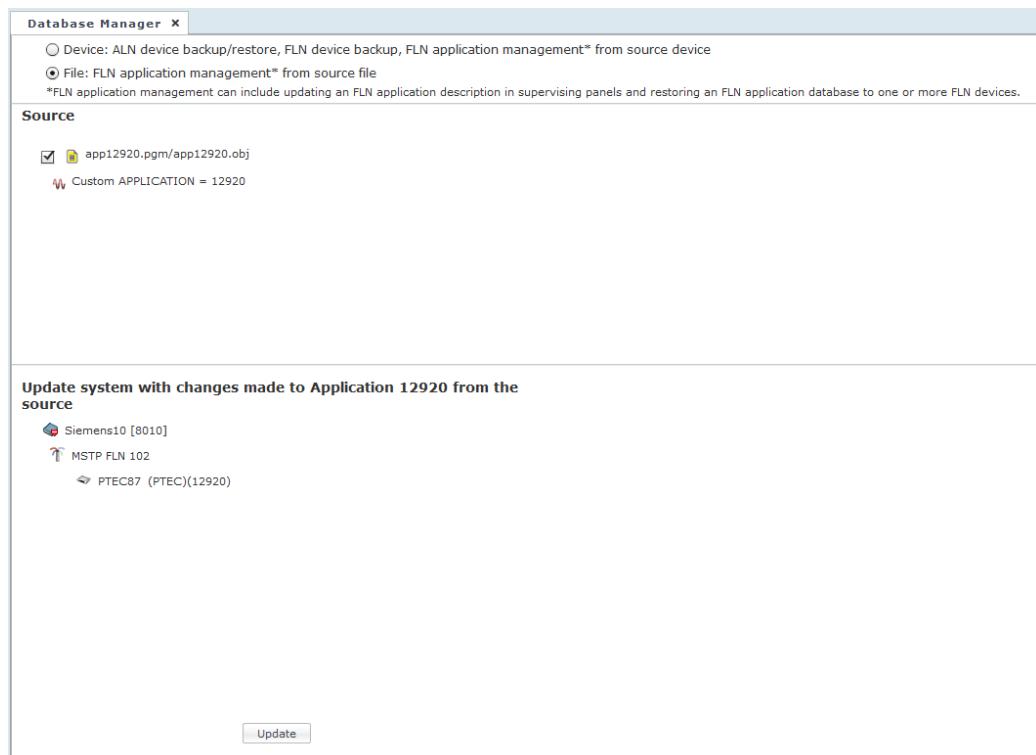
NOTE:

If the Custom APPLICATION value displays NOT FOUND, this indicates that the preferred workflow for UEC/PANEL devices to manage a point named APPLICATION was not followed for the selected UEC/PANEL.

The **Backup to PC** button allows you to back up the UEC/PANEL application database file to a computer.

Files for PTEC Application Source

The following shows an example of the user interface when files are selected representing a PTEC application. In this example, the source file Custom APPLICATION number exists on a PTEC device reference on the ALN so only the **Update** section is available.



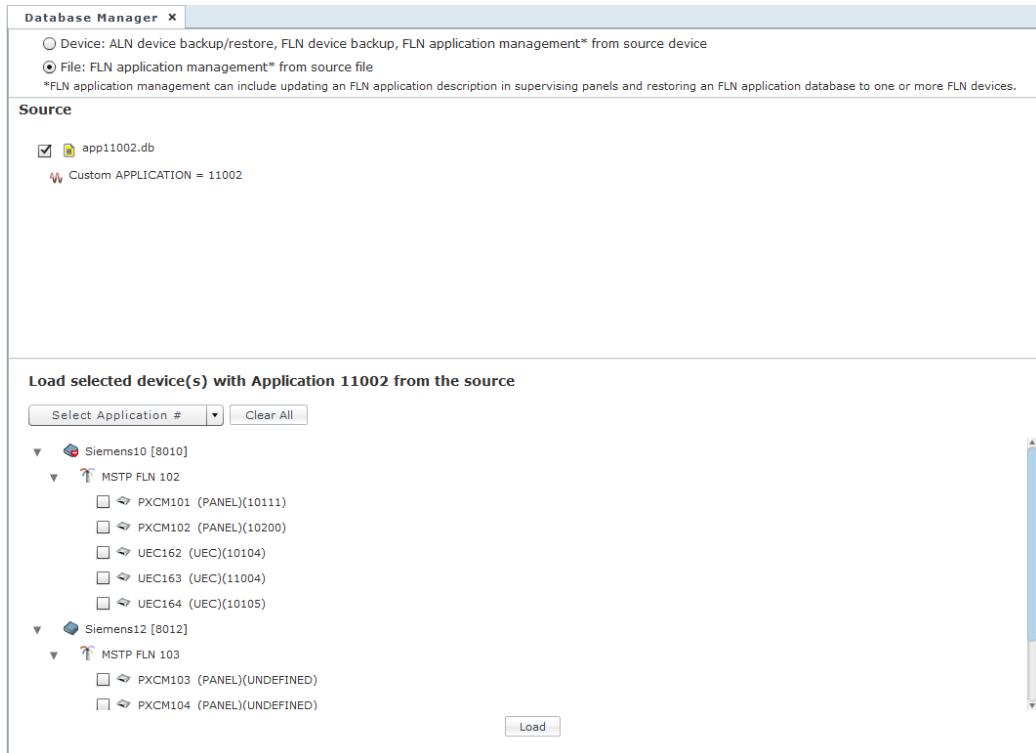
The source tree indicates the relationship between the source files and the system. The Custom APPLICATION number displays the value of the APPLICATION number managed by the PPCL.pgm program line that identifies the custom application number in the selected files.

**NOTE:**

If the Custom APPLICATION value displays NOT FOUND, this indicates that the preferred workflow for PTECs to manage a line in the **PPCL.pgm** was not followed for the selected files.

File for UEC/PANEL Application Source

The following example shows the user interface when a file is selected representing a UEC/PANEL application. In this example, the source file Custom APPLICATION number does not exist on a UEC/PANEL device reference on the ALN so only the Load section is available.



The source tree indicates the relationship between the source file and the system. The Custom APPLICATION number displays the relinquish default value of the APPLICATION point that identifies the custom application number in the selected file.



NOTE:

If the Custom APPLICATION value displays NOT FOUND, this indicates that the preferred workflow for UEC/PANEL devices to manage a point named **APPLICATION** was not followed for the selected file.

Available RAM in the Field Panel

Before transferring a file to a field panel or its FLN device, you must verify that enough RAM is available in the field panel to hold the entire file; otherwise, it cannot be transferred to its final location.

Update

The device tree in the **Update** section shows all device references with the application number equal to the source Custom APPLICATION number.

When you click the **Database Manager Update** button, the application description is updated at each affected supervising panel. All FLN device references with the same application number as the source receive the source database.

Using the Update feature ensures that a change to the FLN custom application is reflected throughout the system.

Create/modify PTEC Custom FLN Application using Update

1. Create/modify the points of a custom PTEC FLN application using the Point Editor.
2. Create/modify the sequence of operations of a custom PTEC FLN application using the PPCL Editor.
3. Identify the application number of the custom PTEC FLN application in the PPCL Editor by managing a line in the PPCL.PGM.
For example, 10 APPLICATION=XXXXX
Where XXX is the FLN application number in the range 12000 through 12999.
4. Use Database Manager to update the system to reflect the changes.

Create/modify UEC/PANEL Custom FLN Application using Update

1. Create/modify the points of a custom UEC/PANEL FLN application using the Point Editor.
2. Create/modify the sequence of operations of a custom UEC/PANEL FLN application using the PPCL Editor.
3. Identify the application number of the custom UEC/PANEL FLN application in the Point Editor by creating/managing an Analog Value point object named APPLICATION (all upper case) and setting the Relinquish Default value to XXXXX where XXXXX is the FLN application number in the range 10000 through 11999.
4. Use Database Manager to update the system to reflect the changes.

Load

The **Load** section shows all device references of the same type with an APPLICATION number not equal to the source Custom APPLICATION number.

The Database Manager Load feature provides the ability to convert the application running in the selected FLN device from one application to a different custom application.

The Load feature should be used with a source that reflects an updated application: use the **Update** button before the **Load** button if the source is a device rather than a file.

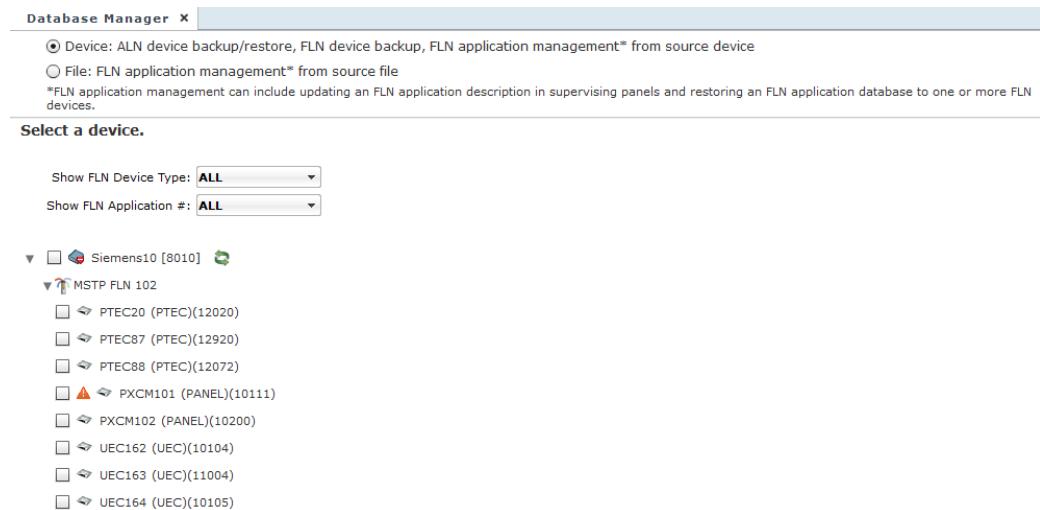
NOTE: Destination PTEC devices must have the same base APPLICATION number as the source PTEC application. For example, if the source device has a base APPLICATION 6587 and Custom APPLICATION of 12000, only destination devices with base APPLICATION of 6587 should be selected to receive the Application 12000 database. The base APPLICATION of the destination devices is not displayed in the **Load** section.

Using the Database Manager

Backing up an ALN Database File

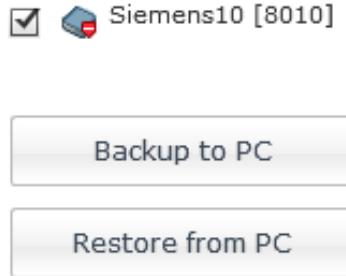
To generate and store an ALN database backup file:

1. Click the **Database Manager** icon in the **System Configuration** bar.
 - ⇒ The **Database Manager** window displays. The **Device** radio button is selected by default, and the **Select a device** window displays under the radio buttons.

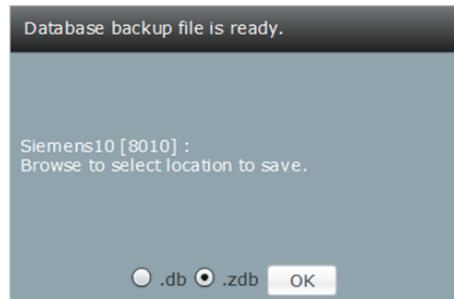


2. If desired, close the panel expansion arrows to filter the display to only show ALN devices. Select an ALN device by selecting the checkbox to the left of the ALN device name. To the right of the device name, the device instance number is listed.
 - ⇒ The **Panel** action screen displays.

Panel



3. Click the **Backup to PC** button.
 - ⇒ A message displays indicating that the backup file is ready.

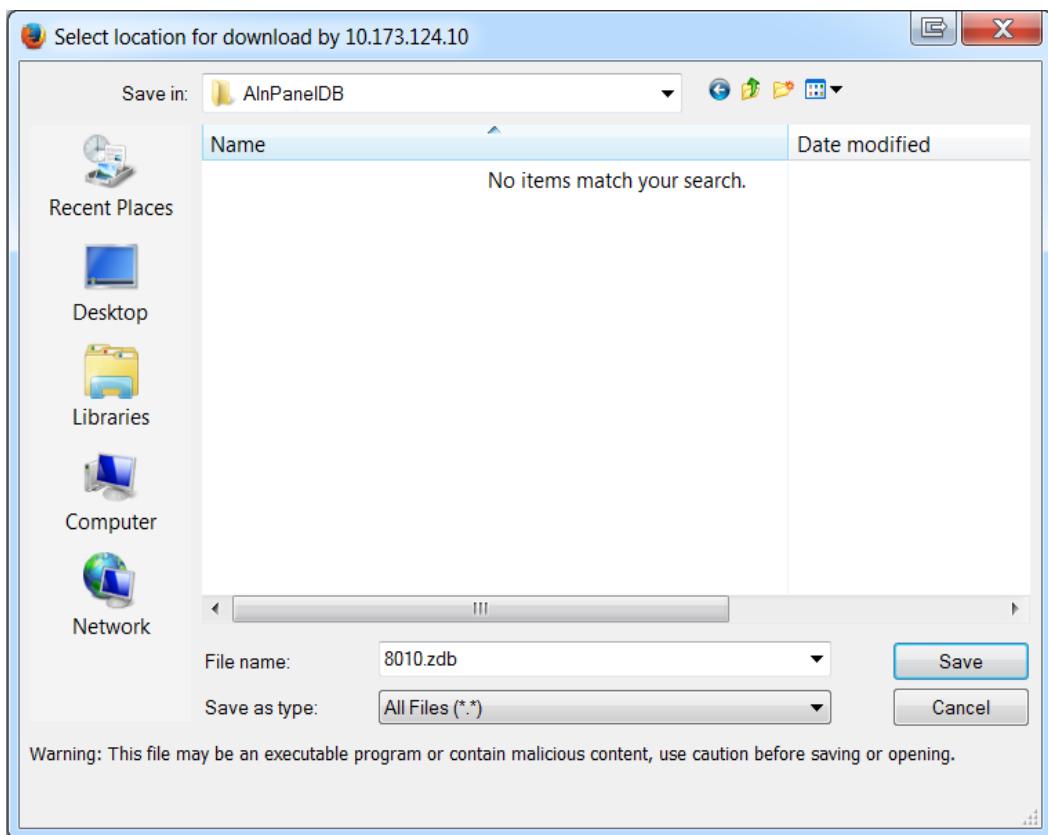


4. Select backup file format.

⇒ You may choose the backup file format to be compressed (.zdb) or not compressed (.db).

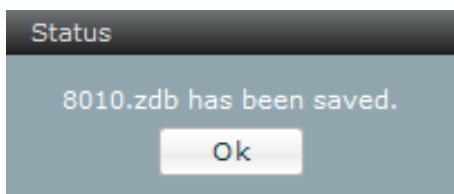
5. Click OK.

⇒ A window displays where you can choose a backup file location and file name. The name of the file can be changed, but it is good practice to keep the file extension .zdb or .db to indicate whether the file is compressed or not.



6. Select the location and file name, and click Save.

⇒ A status window displays indicating that the backup file has been saved.



7. Click **OK**.

Restoring an ALN Database File



NOTE:

Restoring the database will coldstart the panel. The panel will return from the coldstart with the selected database running.

To restore an ALN database file:

1. Click the **Database Manager** icon in the **System Configuration** bar.
 ⇒ The **Database Manager** window displays. The **Device** radio button is selected by default, and the **Select a device** window displays under the radio buttons.



Database Manager X

- Device: ALN device backup/restore, FLN device backup, FLN application management* from source device
- File: FLN application management* from source file

*FLN application management can include updating an FLN application description in supervising panels and restoring an FLN application database to one or more FLN devices.

Select a device.

Show FLN Device Type: **ALL** ▾
 Show FLN Application #: **ALL** ▾

▼ Siemens10 [8010]

▼ MSTP FLN 102

- PTEC20 (PTEC)(6520)
- PTEC87 (PTEC)(12920)
- PTEC88 (PTEC)(12072)
- PXCM101 (PANEL)(10111)
- PXCM102 (PANEL)(10200)
- UEC162 (UEC)(10104)
- UEC163 (UEC)(11004)
- UEC164 (UEC)(10105)

▼ Siemens12 [8012]

▼ MSTP FLN 103

- PTEC71 (PTEC)(12072)
- PTEC72 (PTEC)(12072)
- PTEC73 (PTEC)(12072)

2. If desired, close the panel expansion arrows to filter the display to only show ALN devices. Select an ALN device by selecting the checkbox to the left of the ALN device name. To the right of the device name, the device instance number is listed.

⇒ The **Panel** action screen displays.

Panel

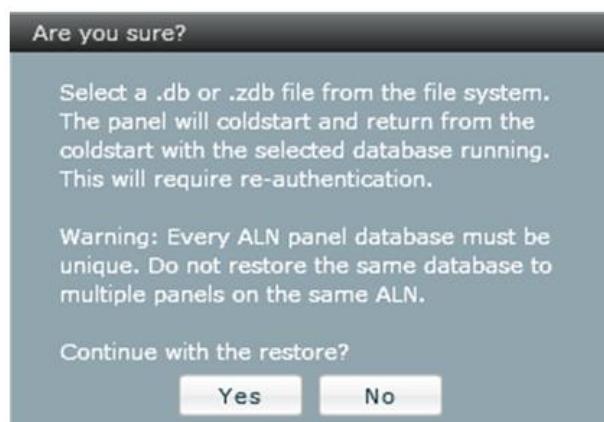
 Siemens10 [8010]

Backup to PC

Restore from PC

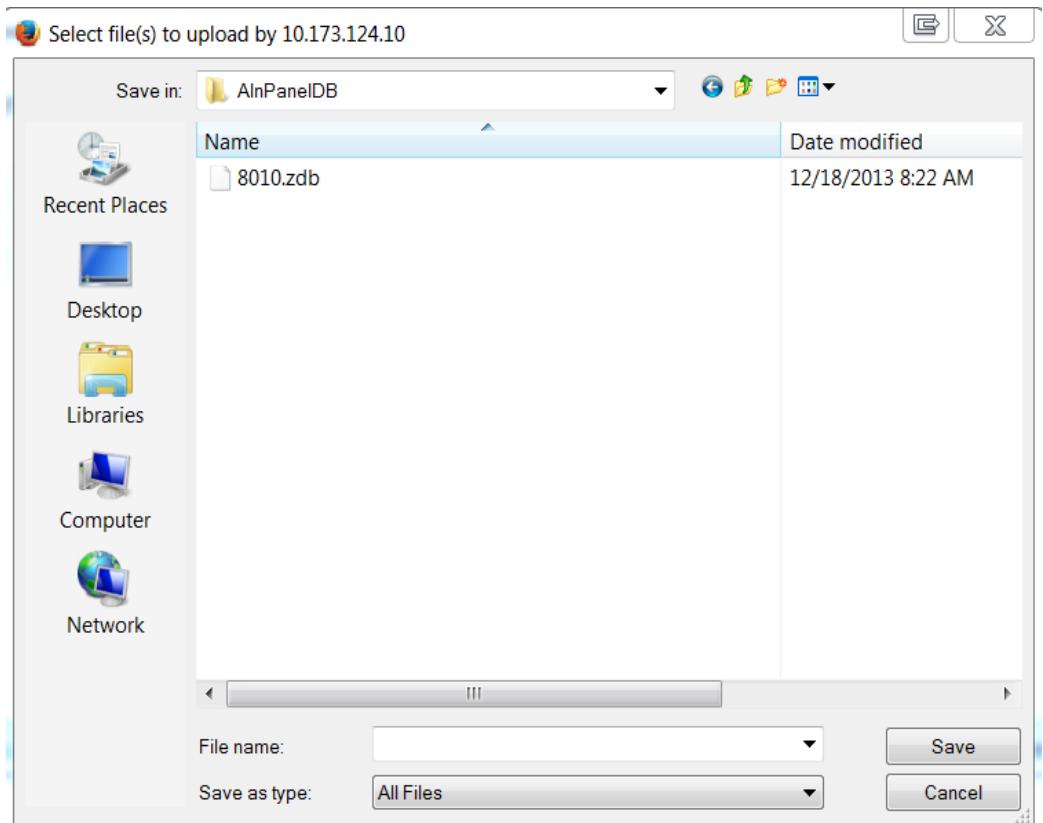
3. Click the **Restore from PC** button.

⇒ A message displays indicating that the panel will coldstart and return from the coldstart with the selected database running. This will require re-authorization.



4. If you choose to continue with the restore, click **Yes**.

⇒ A window displays where you can browse to the location of the file you want to restore.



5. Select the file to restore to the panel and click **Save**.
6. Click **Yes** at the **Are you sure?** prompt.

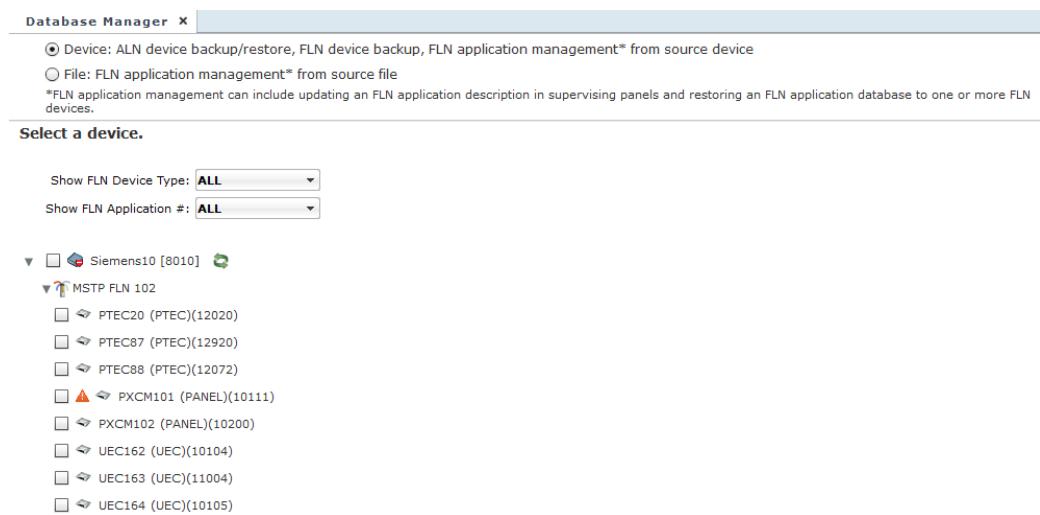


- ⇒ The modifications are sent to the panel. The panel coldstarts. The Welcome screen displays.

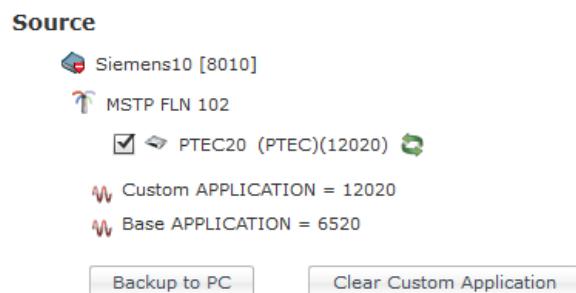
Backing up an FLN Device Database File(s)

To back up an FLN database file:

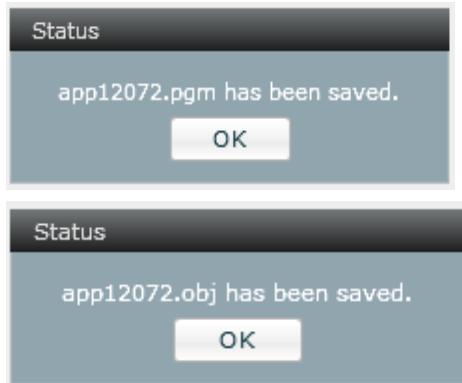
1. Click the **Database Manager** icon in the **System Configuration** bar.
 - ⇒ The **Database Manager** window displays. The **Device** radio button is selected by default, and the **Select a device** window displays under the radio buttons.



2. If desired, use the **Show FLN Device Type** and **Show FLN Application #** dropdowns to filter the FLN devices.
3. Select an FLN device by selecting the check box to the left of the FLN device name.
To the right of the device name, the device type and device reference application number is listed.
 - ⇒ The **FLN APPLICATION** action screen displays with a **Source** section.



4. Click the **Backup to PC** button.
 - ⇒ A window displays where you can choose a location and name to save each backup file.
5. Choose a location and name to save each backup file. The names of the files can be changed, but the extension for a UEC/PANEL file must be .db, and the extension for the point file for a PTEC is .obj and the extension for program file for a PTEC is .pgm.
 - ⇒ A message displays indicating that each backup file has been saved.



6. Click OK.

Updating a Custom FLN Application

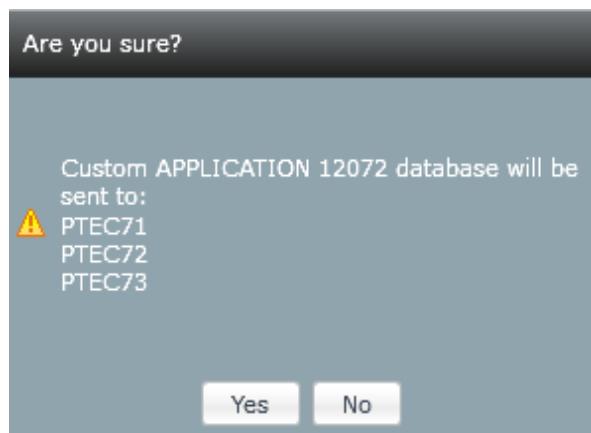
**NOTE:**

The Update feature in Database Manager will only work on UEC application databases if all of the source and destination FLN devices have the same HIGH user account password before attempting the Update. The HIGH user account password must be established at the UEC device using the HMI, and the "device password" in the supervising panel's FLN Device Reference database must be established in the FLN editor.

Optional: Using Point Editor, modify the custom APPLICATION point list. See the *Point Editor* section for more information.

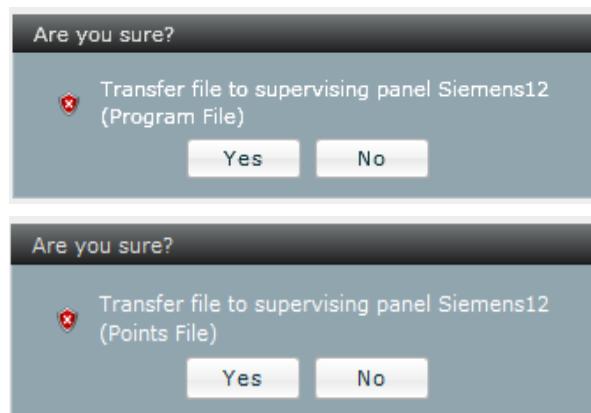
Optional: Using PPCL Editor, modify the custom application sequence of operations. See the *Modifying a PPCL Program* [→ 151] section and the *APOGEE Powers Process Control Language (PPCL) User's Manual* (125-1896) for more information.

1. To update a custom FLN application throughout the system, use Database Manager. To update a custom FLN application from a Device source, use the **Select a Device** screen and select an appropriate PTEC or UEC/PANEL device. To update a custom FLN application from a File source, use the **Select a File** screen and select appropriate files representing a PTEC or UEC/PANEL application.
 - ⇒ An FLN Action Screen displays.
2. Click the **Update** button at the bottom of the Update section.
 - ⇒ If there are devices in the device tree other than the source device, a warning displays, indicating that these devices will receive the updated application database.



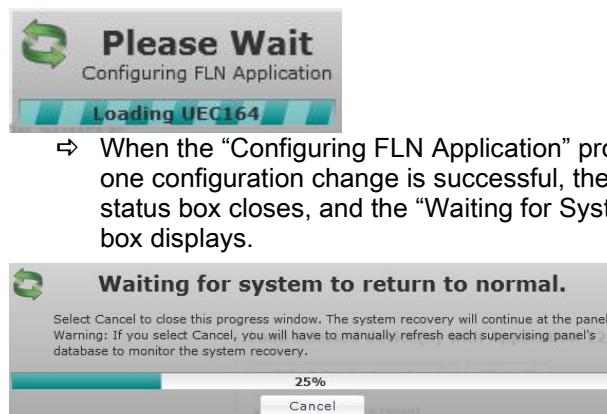
3. Click **Yes**.

- ⇒ If there are devices in the device tree under a different supervising panel than the source device, there will be a warning indicating the need to transfer file(s).



4. Click **Yes** on each transfer file verification.

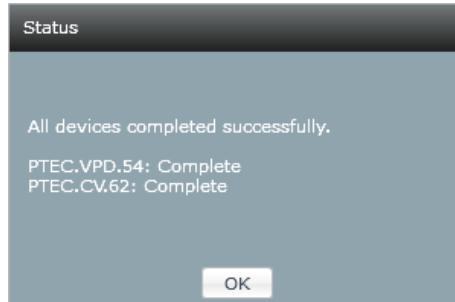
- ⇒ The "Configuring FLN Application" status box displays.



NOTE:

The **Device Failure** button in the Status Bar will indicate an additional device failure for each device loaded/updated. When the device returns from failure, the Status Bar will be updated. The time for each device to return from failure will vary.

- ⇒ This progress box automatically closes when all successfully configured FLN devices have a device status of Normal and an application status of Normal. When this progress box closes, a **Status** window displays the completion status of each device loaded or updated.



- ⇒ If you click the **Cancel** button on the progress box, the progress box closes and a Status window displays with the completion status of each device loaded or updated, and a warning message indicating that not all devices have returned to a normal status.



- ⇒ If an error occurs during loading, a status window displays the load or update status of each device. If the load status indicates FAILED or Incomplete, resolve the error and load or update the device again.



5. Click **OK**.
 - ⇒ The **Select a Device** screen displays, which allows you to see the current state of the system.
 - ⇒ The affected supervising panels learn the updated application, and each affected supervising panel's database is updated. The Database File Synchronization Notification window may display.
6. If you selected the **Cancel** button in the progress box, you may have to refresh the supervising panel(s) by clicking the Refresh  icon next to the field panel name(s) until the updated FLN device(s) have a device status of **Normal** and an application status of **Normal**.

Loading a Custom FLN Application

The Database Manager Load feature provides the ability to convert the application running in the selected FLN destination device(s) from one application to a different selected custom application.



NOTE:

The Load feature in Database Manager will only work on UEC application databases if all of the source and destination FLN devices have the same HIGH user account password before attempting the Load. The HIGH user account password must be established at the UEC device using the HMI, and the "device password" in the supervising panel's FLN Device Reference database must be established in the FLN editor.

1. To load a custom FLN application from a Device source, use the Select a Device screen and select an appropriate PTEC or UEC/PANEL device. To load a custom FLN application from a File source, use the Select a File screen and select appropriate files representing a PTEC or UEC/PANEL application.
 - ⇒ An FLN Action Screen displays.
2. In the **Load** section, select the destination device reference(s) to be converted to the source application.

Load selected device(s) with Application 12920 from the source

Select Application #

Siemens10 [8010]
MSTP FLN 102
PTEC20 (PTEC)(6520)
PTEC88 (PTEC)(12072)
Siemens12 [8012]
MSTP FLN 103
PTEC71 (PTEC)(12072)
PTEC72 (PTEC)(12072)
PTEC73 (PTEC)(12072)
PTEC74 (PTEC)(6587)

- ⇒ If desired, use the **Select Application #** drop down list to quickly select all destination device references with a selected Application #. Select application numbers, and then click outside of the drop down list.

Select Application #

- ALL
- 12072
- 6520
- 6587

- ⇒ All device reference(s) checkboxes with the selected Application #s are checked.

Load selected device(s) with Application 12920 from the source

Select Application #

- ▼  Siemens10 [8010]
 - ▼  MSTP FLN 102
 - PTEC20 (PTEC)(6520)
 - PTEC88 (PTEC)(12072)
- ▼  Siemens12 [8012]
 - ▼  MSTP FLN 103
 - PTEC71 (PTEC)(12072)
 - PTEC72 (PTEC)(12072)
 - PTEC73 (PTEC)(12072)
 - PTEC74 (PTEC)(6587)

3. Click the **Load** button at the bottom of the **Load** section.
 - ⇒ A warning displays, indicating that the selected devices will receive the application database.
4. Click **Yes**.
 - ⇒ If there are selected devices under a different supervising panel than the source device, a warning displays, indicating the need to transfer files.
5. Click **Yes** on each transfer verification.
 - ⇒ The “Configuring FLN Application” status box displays.



- ⇒ When the “Configuring FLN Application” process is complete, and if at least one configuration change is successful, the “Configuring FLN Application” status box closes, and the “Waiting for System to Return to Normal” progress box displays.



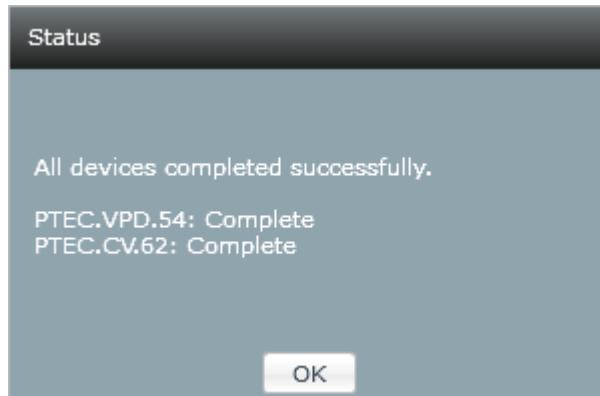


NOTE:

The **Device Failure** button in the Status Bar will indicate an additional device failure for each device loaded. When the device returns from failure, the Status Bar will be updated. The time for each device to return from failure will vary.

This progress box will automatically close when all successfully configured FLN devices have a device status application status of normal.

When this progress box closes, a **Status** window displays the completion status of each device loaded.



If you click the **Cancel** button on the progress box, the progress box closes and a Status window displays with the completion status of each device loaded or updated and a warning message indicating that not all devices have returned to a normal status.

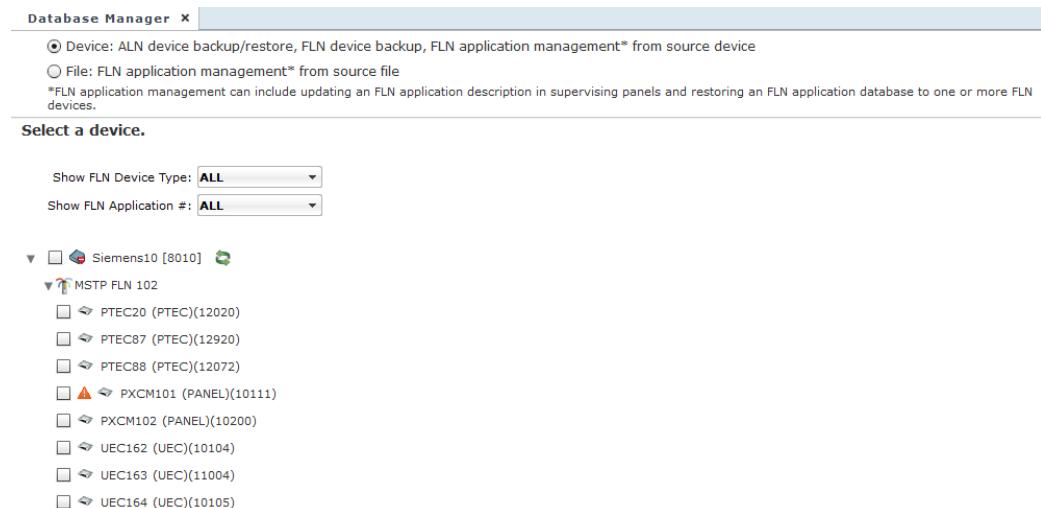
6. Click OK in the Status window.

- ⇒ The **Select a Device** screen displays, which allows you to see the current state of the system.
- ⇒ The affected supervising panels learn the application, and each affected supervising panel's database is updated. The **Database File Synchronization Notification** window may be displayed.

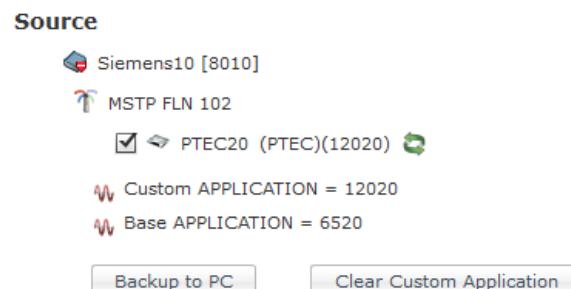
Clearing a Custom PTEC Device Application

To clear a custom PTEC device application:

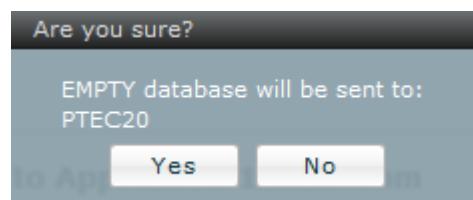
1. Click the **Database Manager** icon in the **System Configuration** bar.
 ⇒ The **Database Manager** window displays. The **Device** radio button is selected by default, and the **Select a device** window displays under the radio buttons.



2. If desired, use the **Show FLN Device Type** and **Show FLN Application #** dropdowns to filter the devices.
3. Select an FLN device by selecting the checkbox to the left of the FLN device name. To the right of the device name, the application number is listed.
 ⇒ The **Source** section displays.



4. Click the **Clear Custom Application** button.
5. Click **Yes** in the **Are you sure** message windows to send an EMPTY database.



6. Click **Yes** in the **Are you sure** message windows to transfer files.
 ⇒ Message displays showing progress.

- ⇒ Message displays indicating success or failure.
7. Click OK.
- ⇒ The **Select a Device** screen displays, which allows you to see the current state of the system.
 - ⇒ The affected supervising panels learn the base application.

Custom Application Management Error Handling

Compatibility

Database Manager requires Firmware Revision 3.3 or later on all ALN devices.

Database Manager requires Firmware Revision 3.3 or later on all UEC/PANEL FLN devices.

A UEC/PANEL FLN device with an earlier firmware revision cannot successfully be selected as the source of an Application database. If the correct version of firmware is not loaded in the UEC/PANEL FLN device source, the following error message displays:



A UEC/PANEL FLN device with an earlier revision of firmware cannot successfully be selected as the destination of an Application database in Database Manager. If such a device is in the destination list, this device will be left in the Application Failed state.

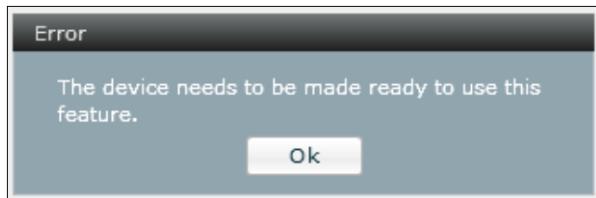


NOTE:

It is recommended that you change the default passwords for the HIGH and MED accounts before upgrading to Firmware Revision 3.3.

Device Ready

Point Editing, PPCL Editing, and database management of UEC/PANEL FLN devices requires the UEC/PANEL FLN device to be made ready. If the UEC/PANEL FLN is not made ready, the following error message displays:



Device Password

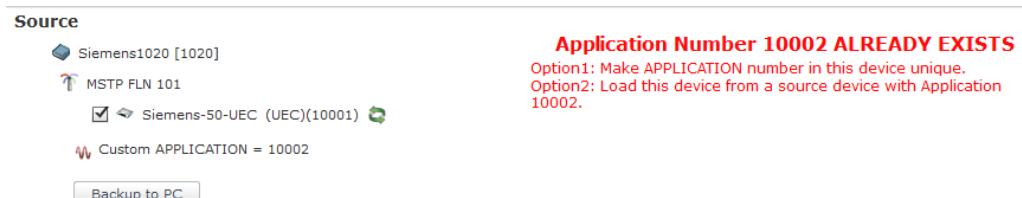
As described in the FLN Editor section, the device reference for a UEC/PANEL must include the password for the HIGH user account that is stored in the UEC/PANEL device database in all uppercase. If the device reference for a UEC/PANEL is not correctly entered, the following error message displays:



Application Number already exists

When an FLN device source is chosen, and the device reference application number is different from the device's Custom APPLICATION number but an application description with the same application number already exists on the ALN, an error message displays.

The intention is to always keep all device references with the same APPLICATION number running with identical application databases. Therefore, if a device already exists on the ALN with the identified Application number, then that device should be selected as the source, and its database loaded.



Database Error

When an FLN application source (device or file) is chosen, and the application source database is invalid because of application number, or file syntax, or device restrictions, the following error message displays:



- The error may display if the source (file or device) indicates an invalid custom application number. Verify that the custom application number of the source is within the correct range. If the source is a UEC/panel device or file for a UEC/panel, verify that the Relinquish Default value of the APPLICATION point is within the range of 1 through 32767 (preferred range is 10000 through 11999). If the source is a PTEC device or files for a PTEC, verify that the PPCL program is setting the APPLICATION point value in the range of 1 through 32767 (preferred range is 12000 through 12999).
- If the error displays after you have selected files for a PTEC (.pgm, .obj), the syntax checking of the .pgm file may prevent use of this file in Database Manager. As a workaround, use the PPCL Editor Import functionality to view the syntax error and load the .pgm file. Then use the **Select a Device** option in the Database Manager to update.

- If the error displays after you have selected files for a PTEC (.pgm, .obj), the syntax checking of the .obj file may prevent the use of this file in Database Manager. Verify the correct number of columns in the .obj file. Verify the correct number of rows in the .obj file (maximum 15).

Database Cannot Be Used

When an FLN device application source is chosen, and the device reference application number description with the same application number already exists on the ALN as a different device type, the following error message displays:



User Account Editor

The User Account Editor can be accessed by clicking the **Users** icon under the **System Configuration** bar on the left navigation pane:



Users

The left pane of the User Account Editor lists the existing accounts. The right pane of the User Account Editor shows the **User Info** tab and the **Permissions** tab.

User Info Tab

The screenshot shows the 'User Info' tab of a software interface. The 'User Info' tab is selected. The form contains the following fields:

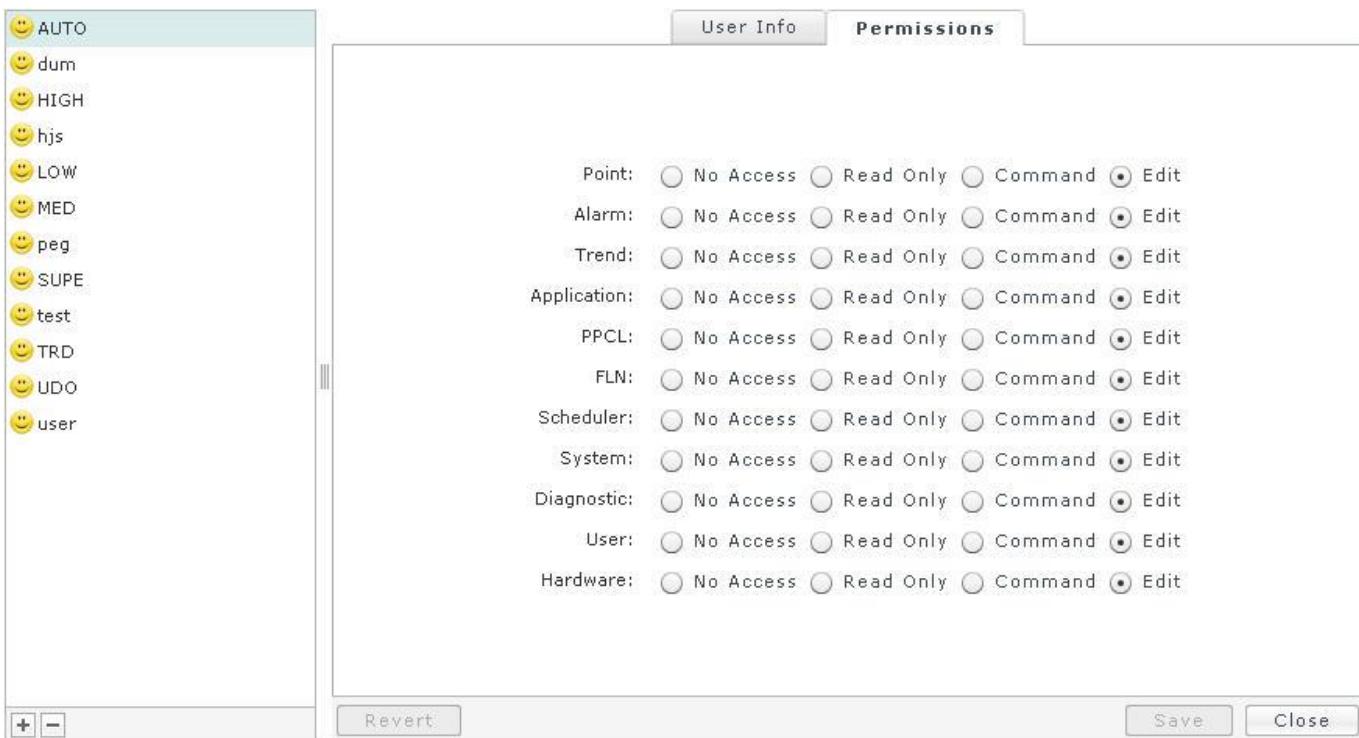
- Account name: AUTOLOGON
- User initials: AUTO
- Password: (empty)
- Verify Password: (empty)
- Password expire limit: 0
- Language: 0409
- Time format: HH:MM:SS
- Date format: MM/DD/YYYY
- Log-off automatically
- Auto log-on to PXM10T devices

At the bottom of the window are three buttons: 'Revert', 'Save', and 'Close'.

- The **Account Name** field allows you to name the account being created, using up to 40 characters. This field cannot be edited in an existing User Account. The words "None" and "Syst" are reserved words and cannot be used in the Account Name field.
- The **User Initials** field allows you to create a unique user name to be used at log on, using up to 4 characters. This field cannot be edited in an existing User Account.
- The **Password** and **Verify Password** fields allow you to create and then verify a password using between 3 and 15 characters. Valid characters include A to Z and 0 to 9. Do not use #, ?, or *. These fields are case sensitive, and must match exactly.
NOTE: When a password is changed, it may take several minutes, depending on the size of the network, for you to be able to log in using the new password.
- The **Password Expire Limit** field allows you to specify how many days the current password will stay valid. If a password expiration limit is required, this field can be set to a minimum of 1 and a maximum of 365 days. By default the value is 0, meaning that the password will not expire.
- The **Language** field allows you to select the language for the User Account.
- The **Time Format** field allows you to select from a list the format used to show the time. This field defaults to HH:MM:SS (14:14:14). Other choices (with examples) include:
 - HH:MM (14:14)
 - HH:MM:SSAP (02:14:14pm)
 - HH:MMAP (02:14am)
 - MILITARY (1414)
 - MILITARY:SS (1414:14)**NOTE:** The Time Format field is only applied at the HMI, and not at the Web Server User Interface.

- The **Date Format** field allows you to select from a list the format used to show dates. This field defaults to MM/DD/YYYY (01/02/1997). Other choices (with examples) include:
 - MM/DD/YY (01/02/97)
 - TTT/DD/YYYY (JAN/02/1997)
 - TTT/DD/YY (JAN/02/97)
 - DD/MM/YYYY (02/01/1997)
 - DD/MM/YY (02/01/97)
 - DD/TTT/YYYY (02/JAN/1997)
 - DD/TTT/YY (02/JAN/97)
 - YYYY/MM/DD (1997/01/02)
 - YY/MM/DD (97/01/02)
 - YYYY/TTT/DD (1997/JAN/02)
 - YY/TTT/DD (97/JAN/02)
 - MM-DD-YYYY (01-02-1997)
 - MM-DD-YY (01-02-97)
 - TTT-DD-YYYY (JAN-02-1997)
 - TTT-DD-YY (JAN-02-97)
 - DD-MM-YYYY (02-01-1997)
 - DD-MM-YY (02-01-97)
 - DD-TTT-YYYY (02-JAN-1997)
 - DD-TTT-YY (02-JAN-97)
 - YYYY-MM-DD (1997-01-02)
 - YY-MM-DD (97-01-02)
 - YYYY-TTT-DD (1997-JAN-02)
 - YY-TTT-DD (97-JAN-02)
- **NOTE:** The Date Format field is only applied at the HMI, and not at the Web Server User Interface.
- The **Auto Logoff** check box allows you to enable or disable automatic logoff.
- The **Auto Logoff Delay** field allows you to define in minutes the amount of time before an automatic logoff occurs. The minimum value for this field is 1 and the maximum value is 1440.
- The **PXM10T Auto Login** check box allows you to enable or disable the account for use with PXM10Tiny auto login.

Permissions Tab



The **Permissions** tab allows you to specify the level of access granted to each application or feature of the BACnet Field Panel Web Server. The access levels default to "Edit Access".

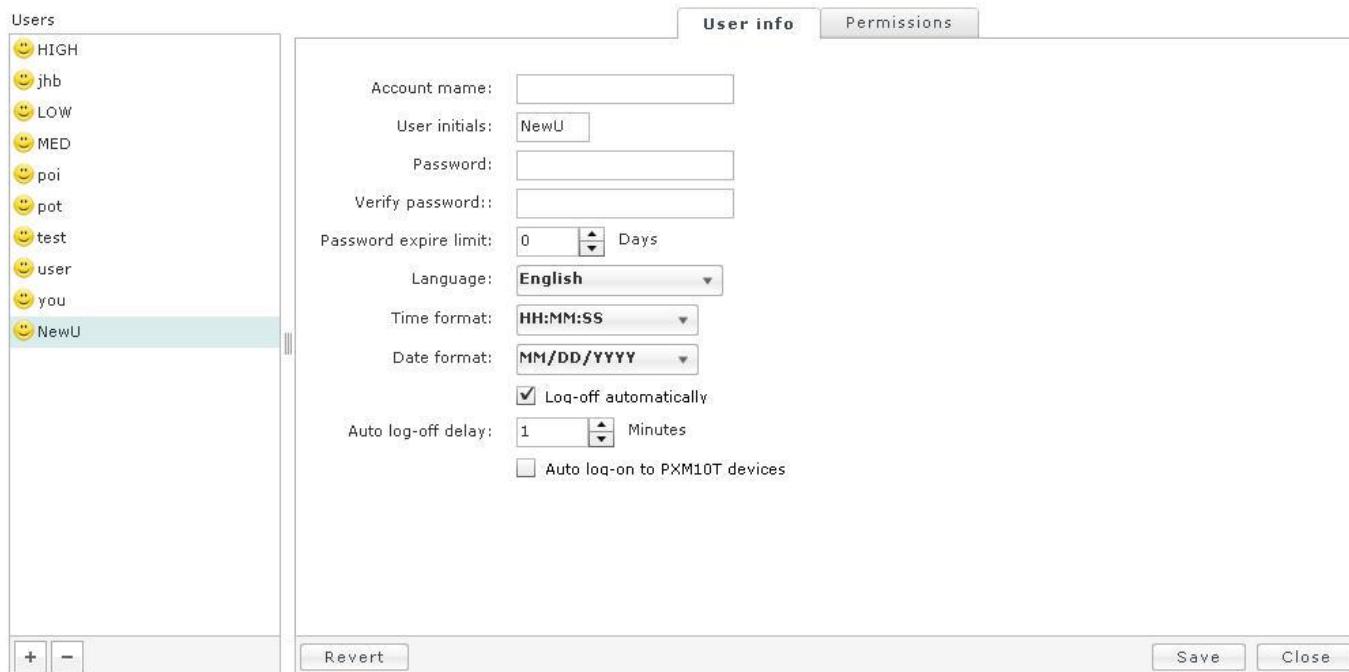
- **Point** – Allows you to define user rights for working with points. Point privileges are required for Alarm and Trend access.
- **Alarm** – Allows you to define user rights for working with alarms. Alarm privileges require Point privileges. If no Point privileges are enabled, then this option is grayed out.
- **Trend** – Allows you to define user rights for working with trending. Trend privileges require Point privileges. If no Point privileges are enabled then this option is grayed out.
- **Application** – Allows you to define user rights for working with controller applications. Application privileges are required for PPCL, FLN Devices, Scheduler, Remote Recipient List, and Notification Class Editor access.
- **PPCL** – Allows you to define user rights for working with PPCL programs. PPCL privileges require Application privileges. If no Application privileges are enabled then this option is grayed out.
- **FLN Devices** – Allows you to define user rights for working with FLN devices. FLN privileges require Application privileges. If no Application privileges are enabled then this option is grayed out.
- **Scheduler** – Allows you to define user rights for working with scheduling. Scheduler privileges require Application privileges. If no Application privileges are enabled then this option is grayed out.
- **System** – Allows you to define user rights for working with system options. System privileges are required for Diagnostic, User, and Hardware access.
- **Diagnostic** – Allows you to define user rights for working with diagnostic options. Diagnostic privileges require System privileges. If no System privileges are enabled then this option is grayed out.

- **User** – Allows you to define user rights for working with user accounts. User privileges require System privileges. If no System privileges are enabled then this option is grayed out.
- **Hardware** – Allows you to define user rights for working with hardware options. Hardware privileges are required for SMTP Configuration Editor access. Hardware privileges require System privileges. If no System privileges are enabled then this option is grayed out.

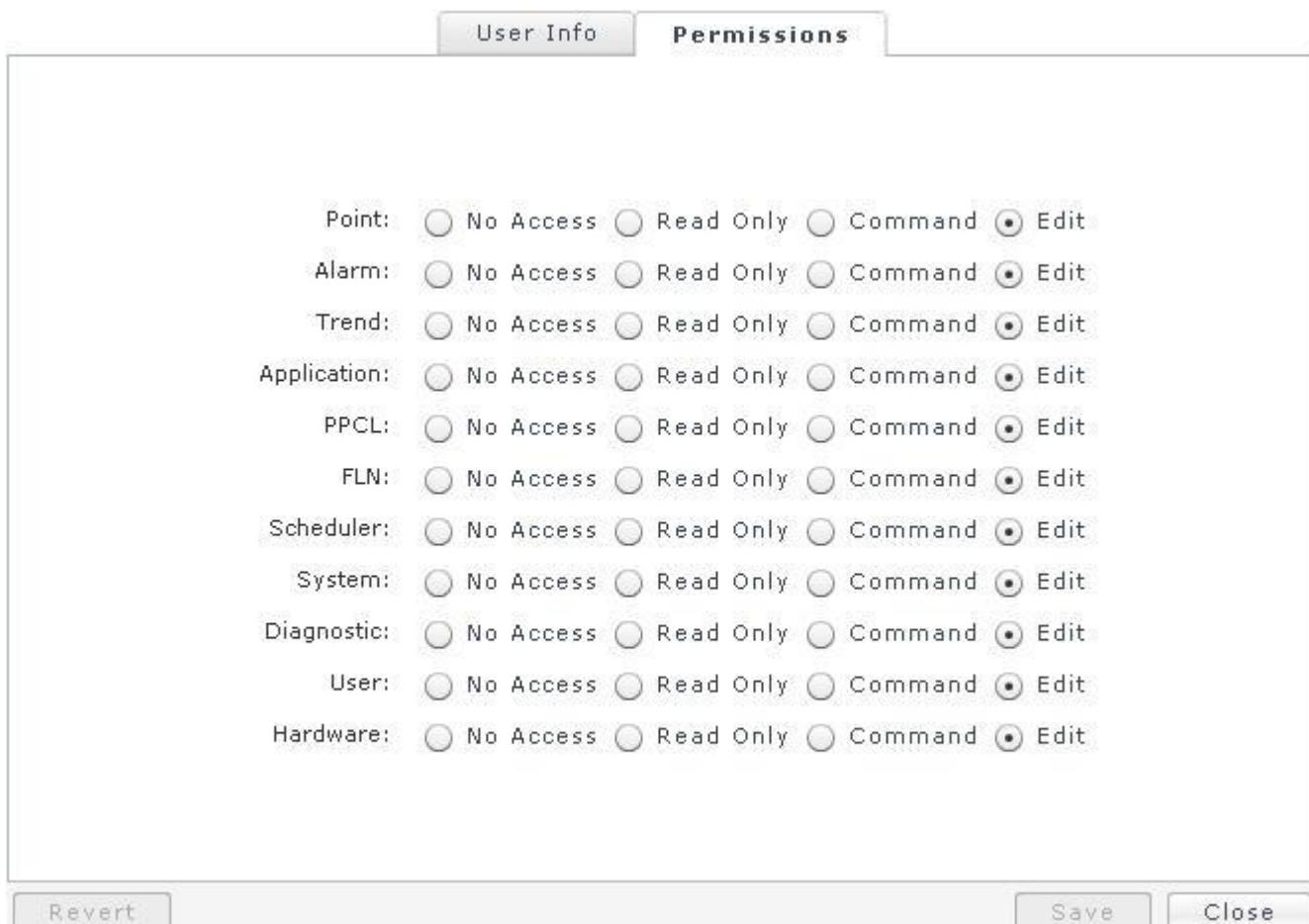
Using the User Account Editor

Creating a User Account

1. Click the **Users** icon from the **Create/Edit** bar.
⇒ The **User Account Editor** window displays.
2. Click the **+** button at the bottom left of the **User Account Editor** window.
⇒ The User Account information area displays the **User Info** window.



3. Enter the new user information. Note that the **Password** and **Verify Password** fields are case sensitive, and must match exactly.
4. Select the **Permissions** tab at the top of the **User Account Editor** window.
⇒ The **Permissions** window displays.

**Revert****Save****Close**

5. Choose the user access levels for each application or feature.

6. Click **Save**.

⇒ The **Save** button will becomes grayed out once the modifications are complete.

Modifying a User Account

1. Click the **Users** icon from the **Create/Edit** bar.

⇒ The **User Account Editor** window displays.

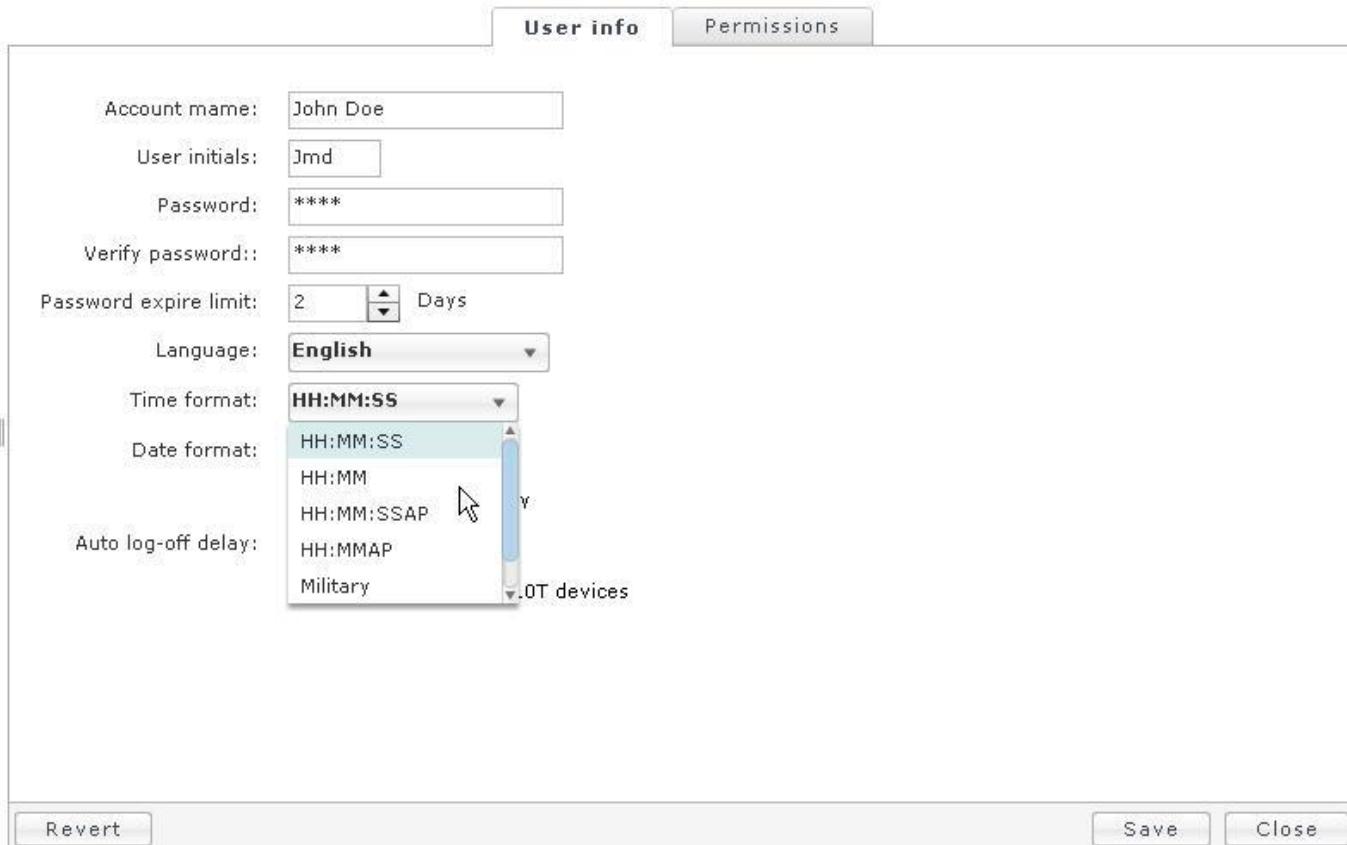
2. Select the desired User Account by clicking a name in the left pane.

⇒ The User Account information area displays the **User Info** window.

3. Make the desired modifications to the existing User Account.

4. Click **Save**.

⇒ The **Save** button becomes grayed out once the modifications are complete.



Viewing a User Account

1. Click the **Users** icon from the **Create/Edit** bar.
⇒ The **User Account Editor** window displays.
2. Select the desired User Account by clicking a name in the left pane.
⇒ The User Account information area displays the **User Info** window.

User info Permissions

Account name: John Doe

User initials: Jmd

Password: ****

Verify password: ****

Password expire limit: 2 Days

Language: English

Time format: HH:MM:SS

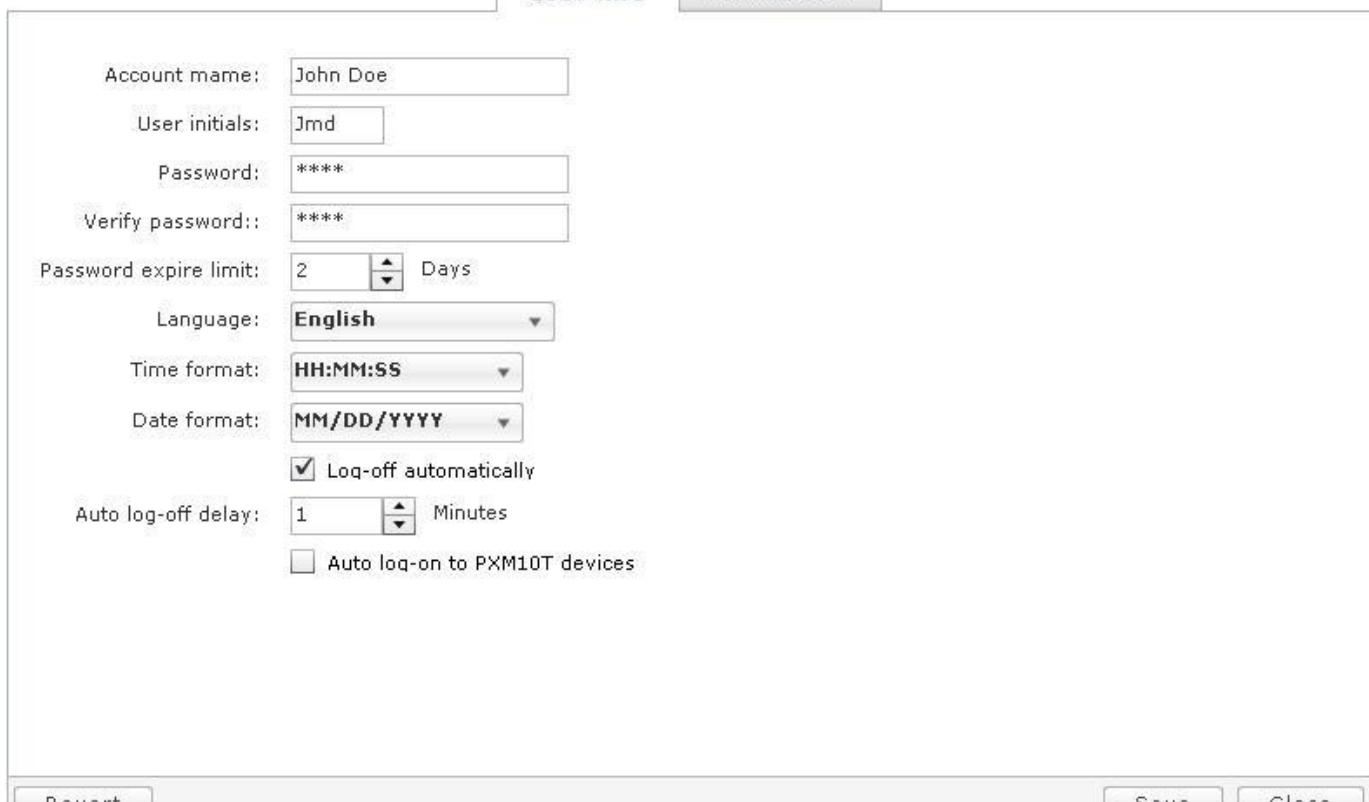
Date format: MM/DD/YYYY

Log-off automatically

Auto log-off delay: 1 Minutes

Auto log-on to PXM10T devices

Revert Save Close



Deleting a User Account

1. Click the **Users** icon from the Create/Edit bar.
⇒ The **User Account Editor** window displays.
2. Select the desired User Account by clicking a name in the left pane.
3. Click the **-** button at the bottom left of the **User Account Editor** window.

A message box displays, allowing you to verify deletion of the selected User Account. Click **Yes** to delete the selected User Account.

Change User Password

Changing the Default Password

When you log in using either of the default accounts ("high/high" or "med/med"), you are immediately prompted to change the password to something other than **high** or **med**.

The "low" accounts need not change.

The password must be created using between 3 and 15 characters.

Valid characters include **A** to **Z** (upper or lowercase) and **0** to **9**. Do not use **#**, **?**, or *****.

**NOTE:**

It is recommended that you change the default password *before* upgrading firmware.

Changing a Password

A user with Edit permissions for User Accounts can change password for any accounts at any time. See the *Using the User Account Editor* section.

You can change your password using the Change User Password feature:

1. Move your cursor over the **Users** icon in the **System Configuration** bar in the left navigation pane.
2. Click the **Change User Password** icon:



Change User Password

3. Enter the old password once and the new password twice in the appropriate fields.
4. Click **Save**.

User Account Passwords Using Double Byte Character Sets

Double byte characters cannot be directly entered in the Password field at the Web Server User Interface or in FINlite.

At the Web Server User Interface there are password fields at the authentication page, the User Account editor, and the password reset editor.

In FINlite there are password fields whenever a connection is being made to a panel.

You have the following options for passwords:

1. Use only single byte characters for user account passwords. This option does not require special procedures to enter the user account password at the Web Server User Interface or in FINlite.

Use double byte characters for user account passwords. This option requires copying the characters from another field (such as the User Name field) or another application (such as Notepad) and pasting the characters into the password field at the Web Server User Interface or in FINlite. The location from which the characters are copied must support viewing of the double byte characters appropriately.

New User Account

When a new User Account is created, and the password expiration time is set to a non-zero value (zero meaning the password will not expire), you are prompted to change the password upon the first login:



Changing an Expired Password

When a User Account password has expired, you are prompted to change the password upon the first login after the password has expired.

Panel Configuration Editor

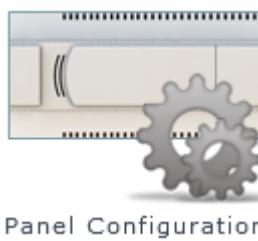
The Panel Configuration Editor allows you to configure a panel from the factory defaults to the appropriate values for your system, and to view panel configurations, through the BACnet Field Panel Web Server user interface.

A FTP Server is necessary to be configured for uploading trend data collected by the field panel. Individual Trend Objects may be enabled for FTP Upload. A FTP Server is not necessary if the FTP Upload feature is not used.

See the *Trend Editor, User Interface Description* section for more information.

User Interface Description for the Panel Configuration Editor

The **Panel Configuration Editor** window can be accessed by clicking the **Panel Configuration** icon in the **System Configuration** bar in the navigation pane on the left side of the screen:



Panel Configuration

The editor consists of three tabs: the **General** tab, the **FLN Settings** tab and the **FTP Server** tab. If there is an error on one of the tabs, an asterisk will be displayed in the tab label.



NOTE:

Advanced settings and diagnostics are only available through the HMI.

General Tab (example)

The screenshot shows the 'General' tab of the 'Panel Configuration Editor'. The window title is 'Panel Configuration Editor'. The 'General' tab is selected. The form contains the following fields:

- ID_STRING: PXC36-EFA080506A00016
- Node Name: Default-HostName
- ALN Name: Default BLN
- Site Name: Default Site
- Device Instance Number: 100
- Device Location: Default Location
- Device Description: Default Description
- BACnet IP Network Number: 1
- UDP Port: 47808

Below these fields are two radio buttons: Static IP and DHCP. Underneath are fields for Static IP Address (192.168.1.100), Subnet Mask (255.255.255.0), Default Gateway (0.0.0.0), DNS Suffix, DNS 1 (0.0.0.0), and DNS 2 (0.0.0.0). At the bottom are three checkboxes:
 Telnet Enabled
 Auto Backup to Flash Enabled
 Auto Restore from Flash Enabled

- The ? button displays the **System Configuration Help** window.
- The **ID_STRING** field is automatically populated with the field panel identifier for licensing purposes.
- The **Node Name** field (required) allows you to enter the node name using up to 30 alphanumeric characters. Valid characters also include some punctuation and symbols (- . ` @). Combinations of -- - . .. or -. are not allowed.
- The **ALN Name** field (required) allows you to enter the ALN name using up to 30 alphanumeric characters.
- (*Optional*) The **Site Name** field allows you to enter the site name using up to 30 alphanumeric characters.
- The **Device Instance Number** field (required) allows you to enter the device instance number using a number between 0 and 4194302.
- (*Optional*) The **Device Location** field allows you to enter the device location using up to 40 characters.
- (*Optional*) The **Device Description** field allows you to enter the device description using up to 40 characters.

- The **BACnet IP Network Number** field allows you to enter the BACnet IP network number using a number between 1 and 65534. The BACnet IP network number and MS/TP network numbers must not conflict with one another. If the enabled network numbers are not unique, an error message will display. Default = 1.
- The **UDP Port** field allows you to enter a UDP port number using a number between 1 and 65534. Default = 47808.
- The **Static IP** and **DHCP** (required) radio buttons allow you to choose between Static IP and DHCP. Default = Static IP.
- The **Static IP Address** field (required if the Static IP radio button is chosen) allows you to enter the static IP address. Default = 192.168.1.100
- The **Subnet Mask** field (required if the Static IP radio button is chosen) allows you to enter the subnet mask IP address. Default = 255.255.255.0
- The **Default Gateway** field (required if the Static IP radio button is chosen) allows you to enter the default gateway IP address.
- The **DNS Suffix** field (required if the Static IP radio button is chosen) allows you to enter the DNS suffix using up to 33 characters.
- The **DNS 1** field (required if the Static IP radio button is chosen) allows you to enter the DNS 1 IP address.
- The **DNS 2** field (required if the Static IP radio button is chosen) allows you to enter the DNS 2 IP address.
- The **Telnet Enabled** check box allows you to enable or disable Telnet functionality. Default = unchecked.
- The **Auto Backup to Flash Enabled** check box allows you to enable or disable the Auto Backup feature. Default = checked.
- The **Auto Restore from Flash Enabled** check box allows you to enable or disable the Auto Restore feature. Default = checked.
- The **Backup to Flash** button forces a manual backup of the database to flash. Graphics files are not included in this backup.
- The **Save** button saves the changes to the panel .xml file and coldstarts the panel.
- The **Make Ready** button makes the field panel ready. If the field panel is ready, this button is not displayed.

FLN Settings Tab (example)

General **FLN Settings** FTP Server ?

Panel Configuration Editor

FLN Network Type: MSTP

BACnet FLN Port Primary

Enable MS/TP FLN

MS/TP FLN Baud Rate: * 38400

MS/TP FLN Network Number: * 38

MS/TP FLN Node Address: * 38

MS/TP Max Master: * 127

BACnet FLN Port Secondary

Enable MS/TP FLN

MS/TP FLN Baud Rate: * 38400

MS/TP FLN Network Number: * 138

MS/TP FLN Node Address: * 38

MS/TP Max Master: * 127

Refresh Backup to Flash Save

General **FLN Settings** ?

Panel Configuration Editor

FLN Network Type: P1

FLN 1 Baud Rate: 4800

FLN 2 Baud Rate: 4800

FLN 3 Baud Rate: 4800

Refresh Backup to Flash Save

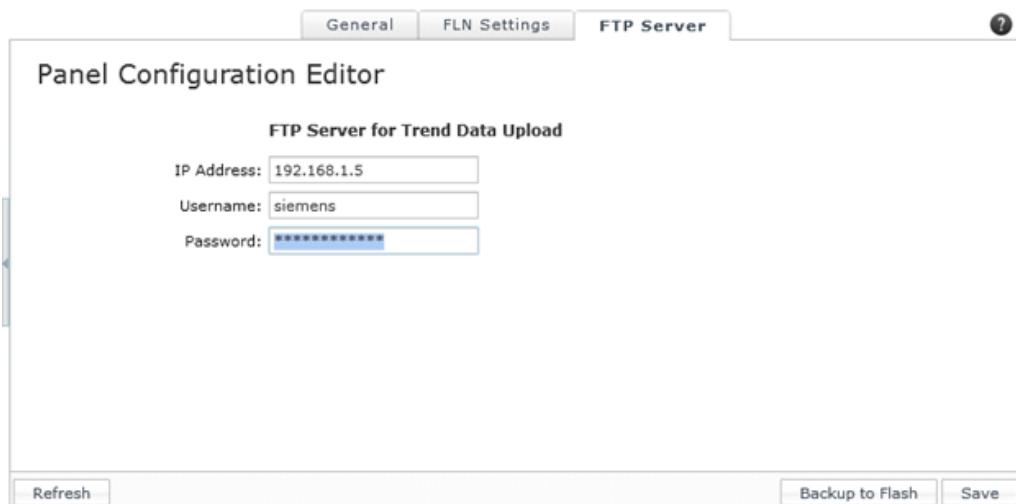
- The **FLN Network Type** field (read only) displays MSTP, P1, or None.

- The **Baud Rate** field (for MS/TP networks, active only if MS/TP FLN is enabled) allows you to select the FLN baud rate from a drop-down menu.

MS/TP Networks Only

- The **Enable MSTP FLN** check box allows you to enable or disable the MS/TP FLN.
- The **MSTP FLN Network Number** field (active only if MS/TP FLN is enabled) allows you to enter the network number using a number between 1 and 65534. The BACnet IP network number and the MS/TP network numbers must not conflict with one another. If the enabled network numbers are not unique, an error message will display.
- The **MSTP FLN Node Address** field (active only if MS/TP FLN is enabled) allows you to enter the MS/TP FLN node address (MAC address) using a number between 0 and 127.
- The **MS/TP Max Master** field (active only if MS/TP FLN is enabled) specifies the highest allowable address for master nodes. The value of Max Master must be between 0 and 127.

FTP Server Tab (Example)



- The **IP Address** field allows you to enter the IP address of the FTP server.
- The **Username** field allows you to enter a user name associated with the user account registered with the FTP server.
- The **Password** field allows you to enter a password associated with the user account registered with the FTP server.



NOTES:

- If you have no intention to use the Trend Data Upload function, there is no need to enter information to these fields.
- If no IP Address or Username is entered, the FTP Server is considered to be undefined. A reminder will appear in the Trend Editor if you try to enable FTP upload for a Trend Object.
- Saving FTP Server settings will not result in a panel coldstart. The newly saved settings will take effect upon the next FTP upload attempt.

Using the Panel Configuration Editor



NOTICE

For the PXC-36 hardware platform:

The "BACnet FLN Port Primary" is the "A" port.

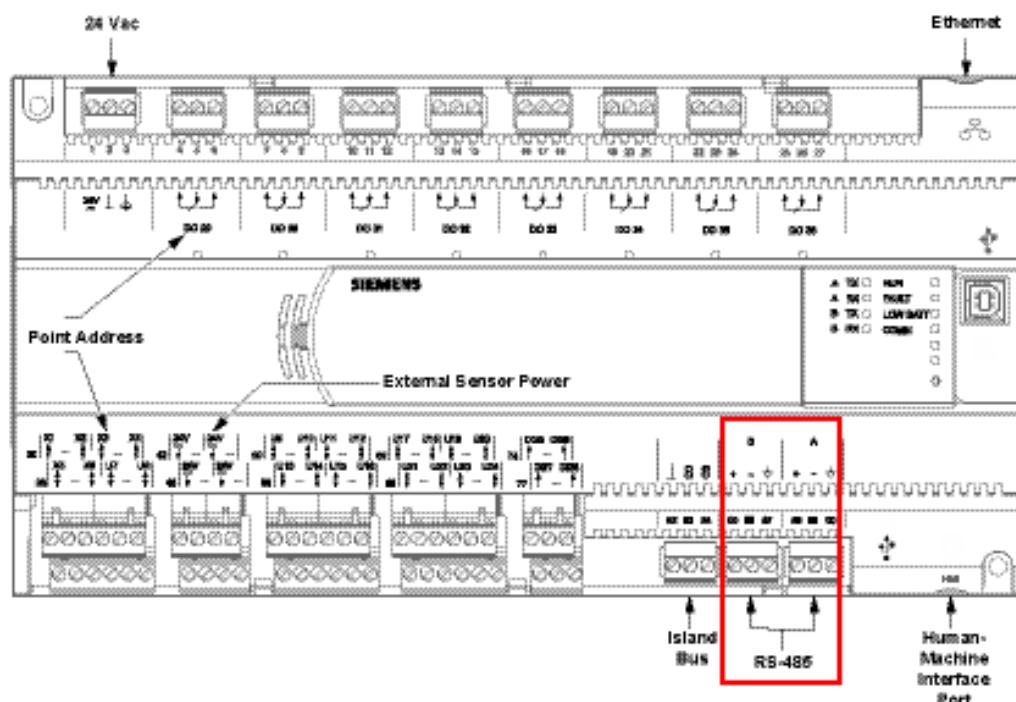
The "BACnet FLN Port Secondary" is the "B" port.

For the Modular hardware platform:

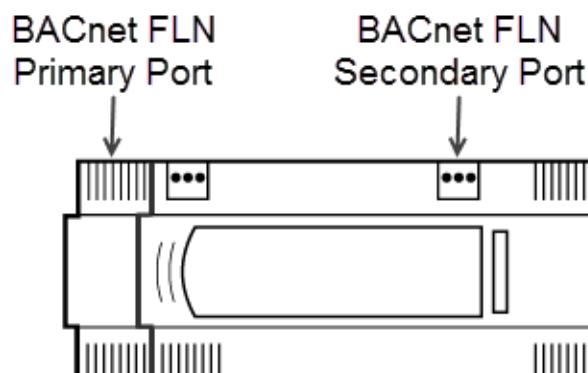
The "BACnet FLN Port Primary" is the "Expansion Module '1'" port.

The "BACnet FLN Port Secondary" is the modular's port.

For more information, see the following figures.



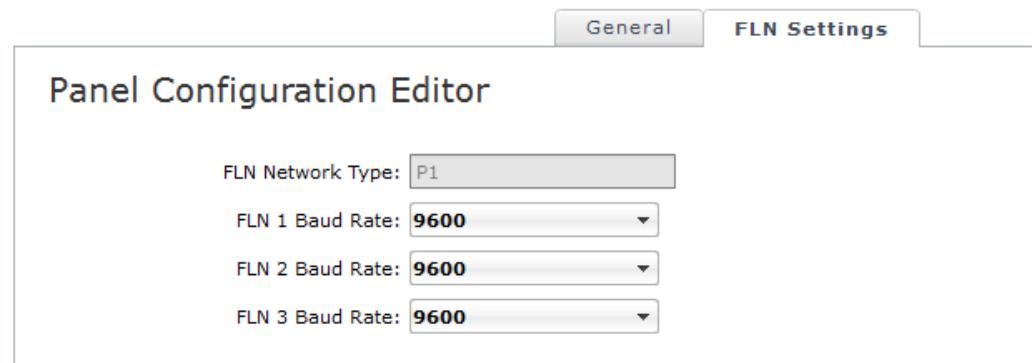
Primary and Secondary Ports on PXC-36.



Primary and Secondary Ports on PXC Modular.

Configuring a Panel

1. Click the **Panel Configuration** icon from the **System Configuration** bar.
⇒ The **Panel Configuration Editor** window displays.
2. Select the desired panel by clicking the panel name in the left pane of the **Panel Configuration Editor** window. Only panels that support this feature will display in the Navigation pane.
3. Enter the panel configuration information.
 - If the panel has Firmware Revision 3.4 or later, and the panel is FLN equipped and configured for P1, the **FLN Settings** tab will include configuration of each available P1 FLN port. Each port's baud rate can be configured.
 - If the panel has Firmware Revision 3.3.1 or earlier, and the panel is FLN equipped and configured for P1, the **FLN Settings** tab will not include configuration of any P1 FLN port.



- If the panel has Firmware Revision 3.4 or later, and the panel is FLN equipped and configured for MS/TP, the **FLN Settings** tab will include configuration of each available BACnet FLN port. Each port's baud rate, network number, node address, and max master can be configured. For more information on which physical port is primary and which is secondary, see the *Using the Panel Configuration Editor* [→ 214] section.
- If the panel has Firmware Revision 3.3.1 or earlier, and the panel is FLN equipped and configured for MS/TP, the **FLN Settings** tab will include configuration of only the primary BACnet FLN port. The primary port's baud rate, network number, and node address can be configured.

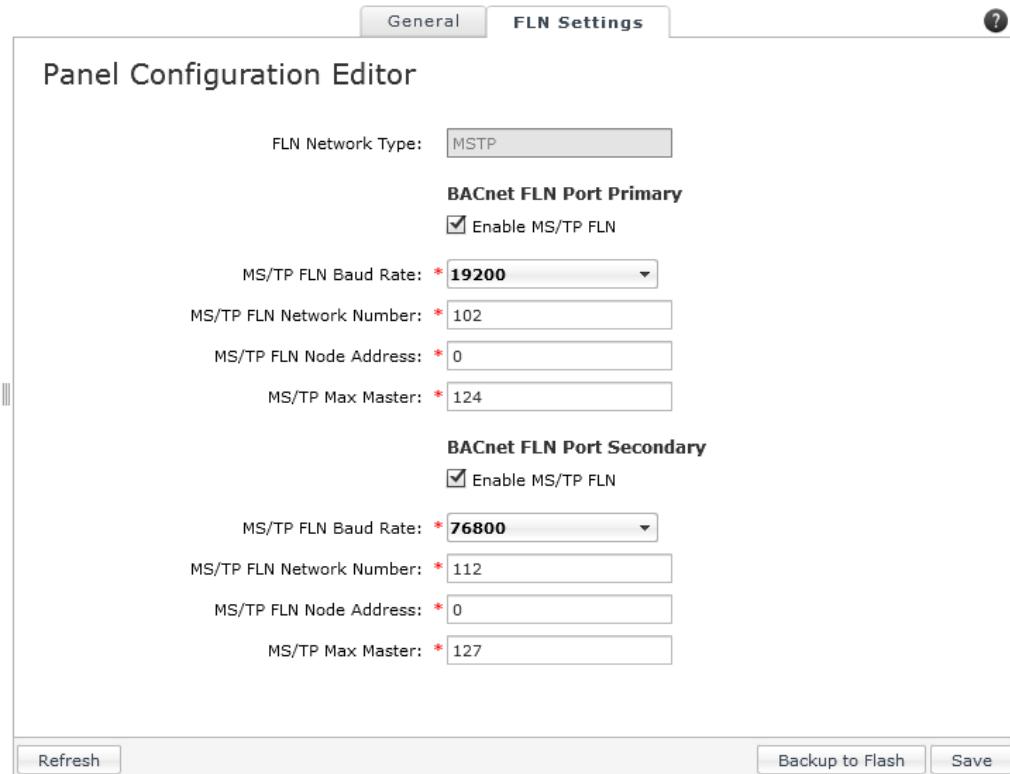


Figure 5: FLN Settings Tab for Firmware Revision 3.4 or Later.

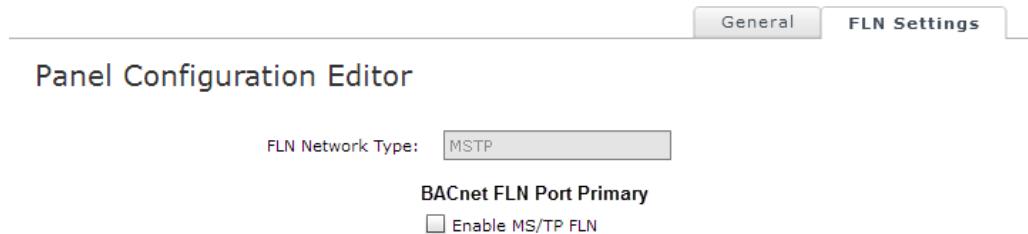


Figure 6: FLN Settings Tab for Firmware Revision 3.3.1 or Earlier.

4. Click Save.

⇒ The modifications are sent to the panel.

Panel Coldstart

Saving changes to any of the fields highlighted in orange results in a panel coldstart and a return to the **Welcome Screen**. Saving changes to any of the fields highlighted in green does not result in a panel coldstart.

General FLN Settings

Panel Configuration Editor

Node Name:	PXC36
ALN Name:	BLAN
Site Name:	SITE
Device Instance Number:	7036
Device Location:	JPC
Device Description:	JPC
BACnet IP Network Number:	77
UDP Port:	47808
<input checked="" type="radio"/> Static IP <input type="radio"/> DHCP	
Static IP Address:	192.168.1.36
Subnet Mask:	255.255.255.0
Default Gateway:	0.0.0.0
DNS Suffix:	
DNS 1:	0.0.0.0
DNS 2:	0.0.0.0
<input checked="" type="checkbox"/> Telnet Enabled	
<input checked="" type="checkbox"/> Auto Backup to Flash Enabled	
<input checked="" type="checkbox"/> Auto Restore from Flash Enabled	

General FLN Settings

Panel Configuration Editor

FLN Network Type: MSTP

BACnet FLN Port Primary

Enable MS/TP FLN

MS/TP FLN Baud Rate: * 19200

MS/TP FLN Network Number: * 7361

MS/TP FLN Node Address: * 0

MS/TP Max Master: * 127

BACnet FLN Port Secondary

Enable MS/TP FLN

MS/TP FLN Baud Rate: * 19200

MS/TP FLN Network Number: * 7362

MS/TP FLN Node Address: * 0

MS/TP Max Master: * 127

Fields that result in a coldstart when modified:

- Node Name
- ALN Name
- Device Instance Number
- BACnet IP Network Number
- UDP Port
- Changing from DHCP to Static IP
- Changing from Static IP to DHCP
- If Static IP:
 - Changing the Static IP Address
 - Changing the Subnet Mask
 - Changing the DNS Suffix
 - Changing the DNS1
 - Changing the DNS2
- If configured for MS/TP (primary or secondary):
 - Changing from Enable MS/TP to disabled
 - Changing from disabled to Enable MS/TP
- If MS/TP is enabled:
 - Changing the MS/TP FLN Network Number
 - Changing the MS/TP FLN Node Address

Panels with Firmware 3.3.1 or earlier will coldstart and return to the Welcome page for any change.

Viewing Panel Configurations

1. Click the **Panel Configuration** icon from the **System Configuration** bar.
⇒ The **Panel Configuration Editor** window displays.
2. Select the desired panel by clicking the panel name in the left pane of the **Panel Configuration Editor** window. Only panels which support this feature will display in the navigation pane.
⇒ The panel configuration information displays.

Chapter 12 - FINlite Graphics Tool

Chapter 12 discusses the following topics:

- FINlite Graphics Tool Overview
 - User Interface Description for the FINlite Graphics Tool [→ 221]
 - Tips for Using the FINlite Graphics Tool [→ 229]
- Using the FINlite Graphics Tool [→ 230]
 - Launching the FINlite Graphics Tool [→ 230]
 - Logging in to the Controller [→ 230]
 - Creating Graphics [→ 231]
 - Using the Greenleaf Component in FINlite [→ 235]
 - Editing the Graphics Animation [→ 239]
 - Saving and Publishing the Graphics File [→ 240]
 - Creating Device Templates [→ 241]
 - Backing up Graphics [→ 243]
 - Deleting Graphics Files [→ 243]

FINlite Graphics Tool Overview

The Field Panel Web Server Graphics Application is a graphic utility program called Siemens FINlite. FINlite can be used to create, modify, animate, and save graphics files to be used with the Web Server user interface.



NOTE:

FINlite does not use vector graphics, so the graphics are not scalable. Graphics must be created for the resolution of the monitor on which they will be displayed.

Siemens FINlite can connect to a panel and bind graphical elements to data points. While connected to the panel, the user will be able to see current values, and command points to see the affects on graphics.

Graphic files can be deleted from FINlite or the HMI.

Graphics files can be backed up to the Internal Flash Drive (IFD) through the HMI, using the **Graphics backup** feature, and deleted using the **Delete_file** feature in the HMI..



NOTE:

Siemens FINlite supports Windows 7 and Windows 10.



NOTE:

Siemens FINlite is an Adobe AIR application.

Siemens FINlite provides the following operations:

- Graphics creation and deletion
- Graphics manipulation
- Graphics animation

- Test animation with live data before publication
- Saving the graphics components to the user library for reuse
- Publishing graphics to the panel(s)
- Opening a pre-constructed graphics file from the local file system

**NOTE:**

In the Web Server user interface, it is recommended to limit the total number of graphic tabs and dynamic trend tabs that are open to six (6) for performance reasons.

Graphics Application Workflow

**NOTE:**

Siemens FINlite supports .png and .jpg graphics file formats only.

1. Create a graphics background file using Designer, Auto CAD, or another designing tool. Save the file (as a .png or .jpg) to the local file system or hard drive. Use the designing tool's Export feature to convert the native file type to a .png or .jpg format for use with Siemens FINlite.

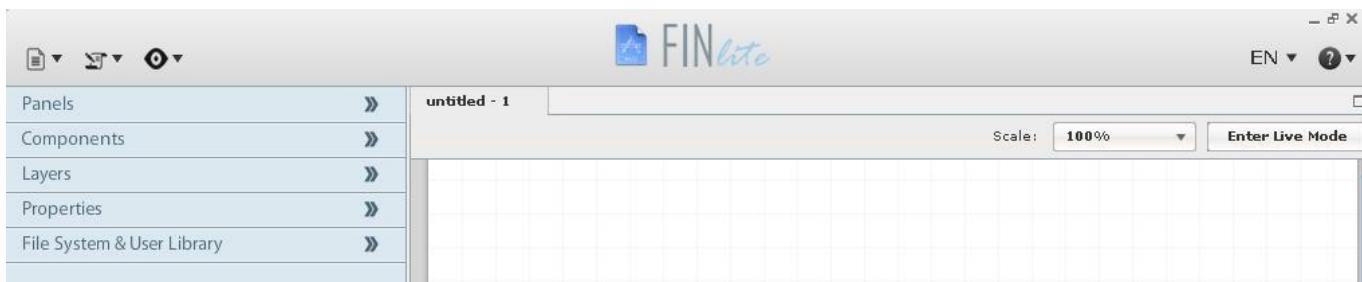
**NOTE:**

After a new animation image has been added to the set of frames in FINlite's Animation Editor window, existing images are sometimes automatically resized to match the frame added by the user.

Before bringing them into FINlite, be sure the images to be added for editing animation are sized similarly to the existing images, to avoid automatic resizing issues.

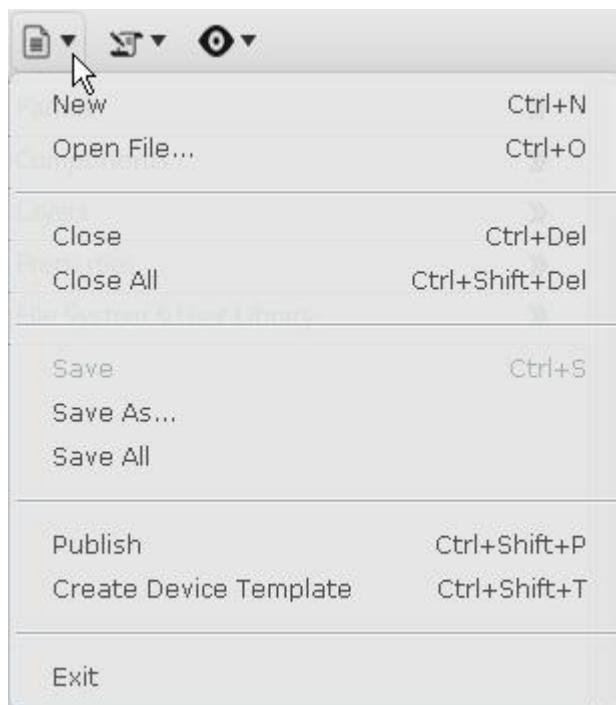
2. Open the pre-constructed graphics background file from Siemens FINlite to add animated graphics. The background file can be sized in the canvas before graphics are added.
3. Once the graphics are published from FINlite to the panel(s), they can be viewed via the Field Panel Web Server user interface. See the *Viewing Graphics in the Web Server User Interface* section.

User Interface Description for the FINlite Graphics Tool



The drop-down menus at the top of the Siemens FINlite Application and the navigation pane bars on the left side of the Siemens FINlite Application allow you to work with the graphics files in many ways.

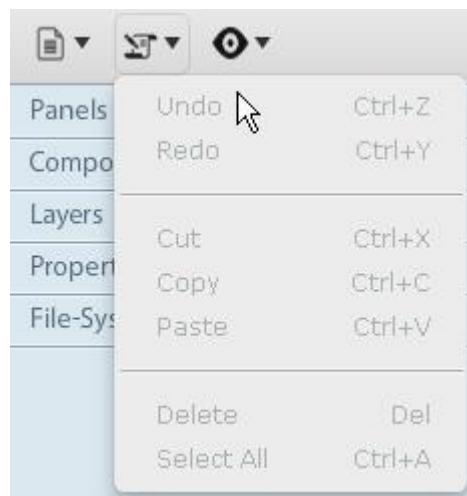
File Menu



The **File** menu allows you to access the File commands:

- **New** opens a new graphics file.
- **Open File** opens an existing graphics file.
- **Close** closes the current file.
- **Close All** closes all open files.
- **Save** allows you to save the current file.
- **Save As** allows you to save the current file in a new location with a new name.
- **Save All** saves all open files.
- **Publish** allows you to download the graphics file to the panel so it is visible using the BACnet Field Panel Web Server user interface.
- **Create Device Template** turns a graphics file into a device template. This allows you to *relativize* points for later reuse. Relativizing allows you to re-associate points to graphical components. This is important when creating a graphic associated with a specific FLN application number and using points from a selected FLN device.
- **Exit** closes the application.

Edit Menu



The **Edit** menu allows you to access the Edit commands:

- **Undo** allows you to reverse the last action.
- **Redo** allows you to reverse the last Undo action.
- **Cut** removes the image from the file and puts it into the clipboard.
- **Copy** puts a copy of the image into the clipboard.
- **Paste** places the image from the clipboard into the file where the cursor is located.
- **Delete** allows you to delete the highlighted object or file.
- **Select All** allows you to select all files or objects simultaneously.

View Menu



The **View** menu allows you to access the View commands:

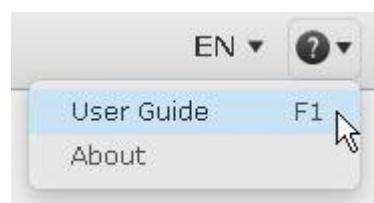
- **Show Side Panel** allows you to open or close the navigation pane on the left side of the application.
- **Enable Choice Pop-up** launches the three-button pop-up window accessible upon starting the FINlite application. The three buttons are: Open, Create, and User Guide. See the *Launching the FINlite Graphics Tool* section.

Language Dropdown



The **Language** menu allows you to change the language used in the FINlite application.

Question Mark Icon



The **Question Mark** icon opens the User Guide and product information.

- **User Guide** opens the product documentation as a PDF.
- **About** displays product information.

Panels Bar



The **Panels** bar allows you to connect to and access information from the available panels.

- The **Connect To Panel** button opens the **Panel Login** window, which allows you to log in to the available, licensed panels.



Static Icons

Static icons in the Panels bar indicate the various characteristics of the panel node. A static icon associated with a panel node is fixed for the Web session.

Icon	Description	Indication
	Red shield icon with a horizontal white bar.	FPWeb license is not installed for the panel. You must obtain and install an FPWeb license (LSM-FPWEB, LSM-FPWEBPL, LSM-FPWEBPLHST) in order to use FINlite features.
	Purple shield icon with a vertical white bar.	Panel is not upgraded to the latest firmware. You must upgrade the panel to the appropriate firmware in order to use features associated with the version of the FINlite, such as the Delete Graphics feature.
	Both red and purple shield icons displayed together.	FPWeb license is not installed for the panel AND the latest firmware has not been installed in the panel. Moving your cursor over the icon also indicates if the node has license restrictions and does not have the latest firmware installed. No FPWeb license and Not latest firmware.

Dynamic Icons

Dynamic icons in the Panels bar indicate the various states of the panel node. A dynamic icon associated with a panel node is updated when a change to the state of the panel is detected.



NOTE:

You must perform a panel refresh before the dynamic icons will indicate a change of state.

Icon	Description	Indication
	Yellow triangle icon with a red exclamation point.	Database File Synchronization. Field panel database file synchronization is in progress.
	Orange triangle icon with a white exclamation point.	Panel Not Ready. You must load the panel with a database from a software

Icon	Description	Indication
	exclamation point.	tool or front end computer, or use the Panel Configuration Editor in the Field Panel Web Server to make the panel ready.
	Red triangle icon with a black exclamation point.	Panel Communication Lost. Communication to the device has been lost (device failure).

Components Bar



The **Components** bar displays the available components which can be dragged and dropped to the canvas and customized. Supplied component images are intended for use with binary points.

Layers Bar



The **Layers** bar allows you to create layers within the graphics file. Layers can be moved or locked. Components can be copied or moved to an existing layer or to a new layer.

- The **New Layer** button creates a new graphics layer.
- The **Delete Layer** button deletes the highlighted layer.

Properties Bar



Clicking a component in the canvas on the right side of the application, and opening the **Properties** bar in the left navigation pane opens the Properties area for the specific component. Each type of component has different customizable properties.

Opening the **Properties** bar with nothing on the canvas allows you to customize the size and background color of the canvas itself.

Customizable properties include, but are not limited to:

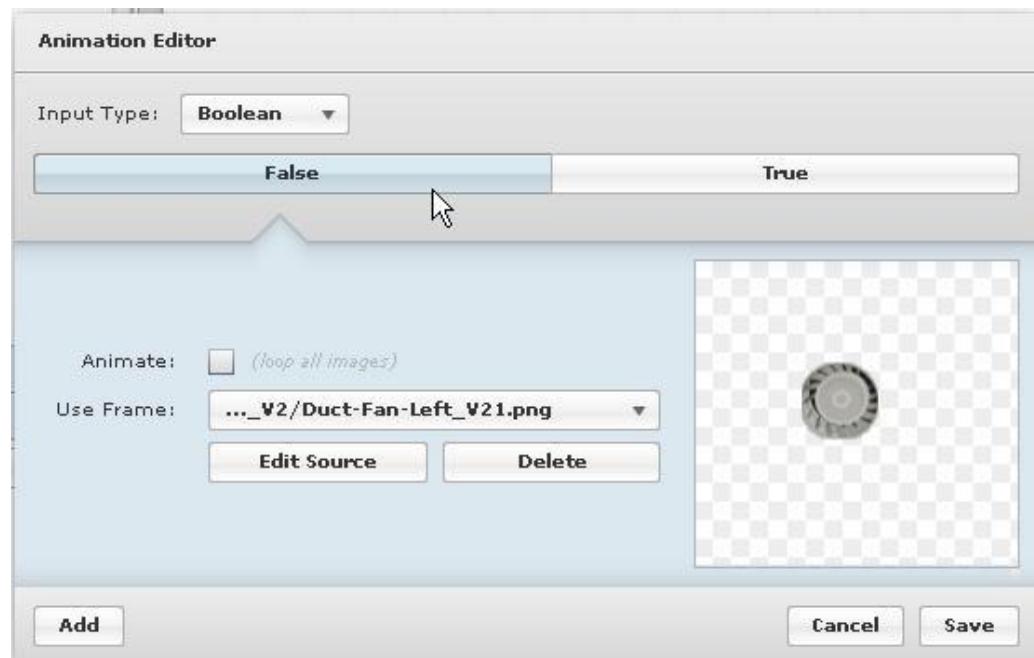
- Name of the component.
- Type of component.
- Object the component is bound to.
- Font size and color of labels.
- Width and height of the component.
- Background color and alpha (transparency) level.
NOTE: The background color defaults to white, and the alpha level defaults to 100 (no transparency). You may need to adjust these levels to achieve the desired appearance.
- Alignment of the component within the background.
- Invisible or visible on the completed graphics file.

Other features of the Properties area include:

- The **Locked** check box, which ensures that no other changes are made to the properties.
- The **Edit Animation** button, which opens the **Animation Editor** window.

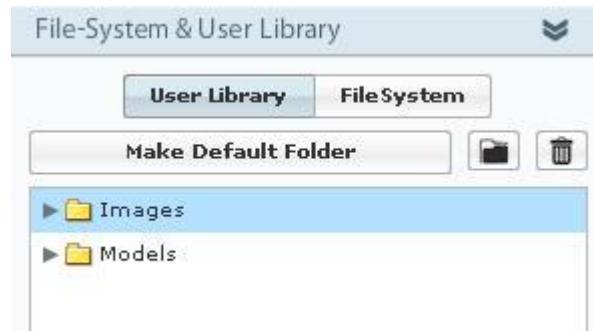
Animation Editor

The Animation Editor allows you to customize the animation of a graphics component.



See the *Editing the Graphics Animation* [→ 239] section for more information.

File-System & User Library Bar



The **File-System & User Library** bar displays your available local file system and the saved images and models.

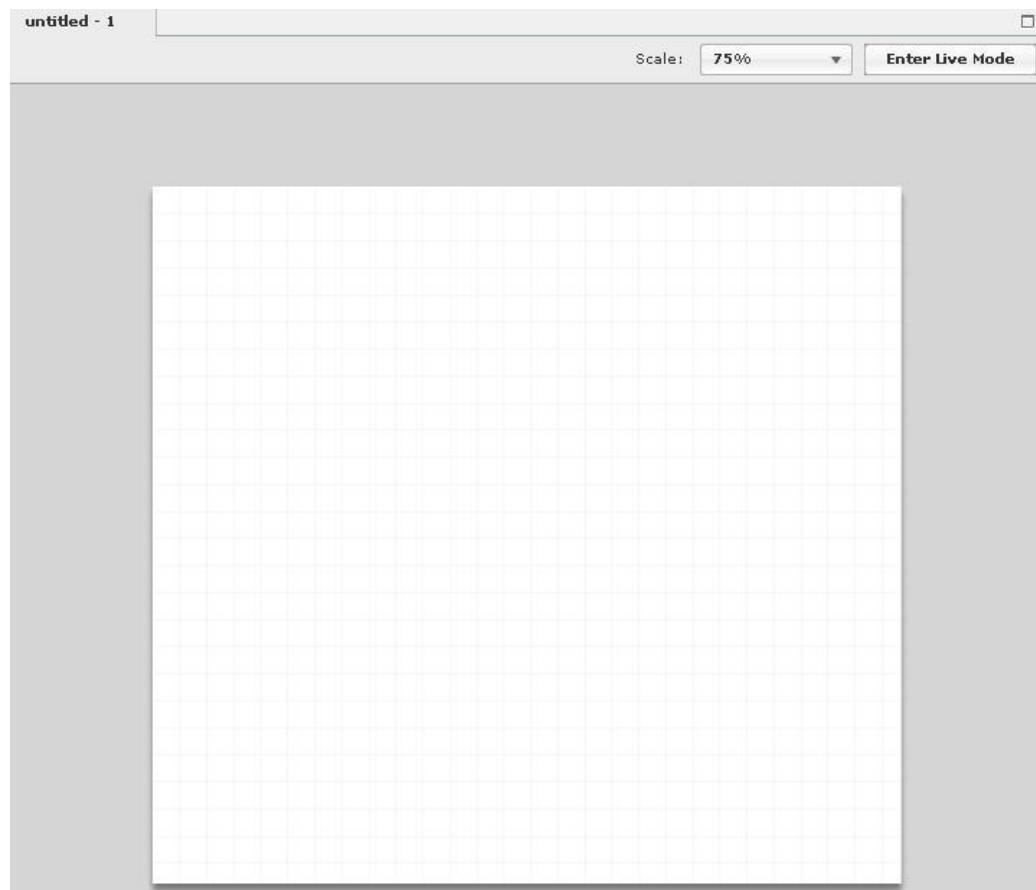
The **User Library** and **File System** buttons allow you to toggle between the folders.

The **Make Default Folder** button sets the chosen folder as the default when you choose the **Add to Favorites** button in the Properties bar.

The **Folder** button creates a new folder within the displayed file system.

The **Trash** button deletes the highlighted folder or file.

The Canvas



The canvas is the graphics workspace on the right side of the FINlite application window.

The top left tab displays the name of the graphics file.

The **Maximize** button allows you to maximize the workspace canvas and no longer display the left navigation bar (side panel).

The **Scale** drop-down menu allows you to change the size of the workspace canvas.

The **Enter Live Mode** button allows you to begin polling points and view the graphics animation through the FINlite application.

Tips for Using the FINlite Graphics Tool



NOTE:

Graphics can only be published to the Modular series and Compact series 36-point controllers.

- Graphics files can be created and viewed using the Siemens FINlite Graphics Tool.
- Graphics files can be viewed but not modified using the Graphics View in the BACnet Field Panel Web Server User Interface. See the *Graphics View* section.
- Once published to a panel, graphics files can be modified using the same computer used to create them, or they must be copied manually from the field panel to a computer running the Siemens FINlite application.

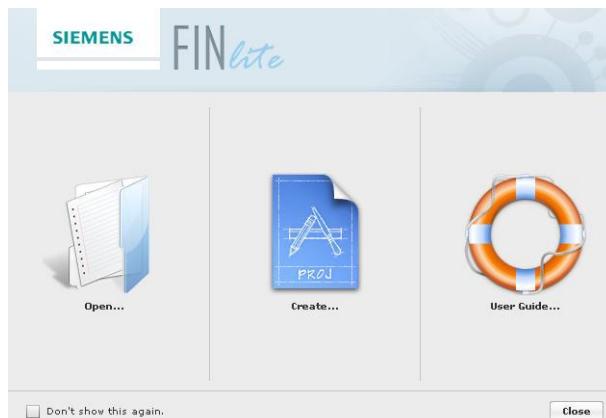
- If your system requires large graphics, it is recommended that you use a USB memory device (such as a thumb drive) to save memory.
- Library components should be saved before bindings are made; otherwise, additional work may be required.

Using the FINlite Graphics Tool

Launching the FINlite Graphics Tool

To launch the Siemens FINlite Graphics Application:

1. Follow the instructions for the Tools Installer.
2. Launch the FINlite application from the desktop icon created by the Installer, or from the **Start** menu icon created by the Installer..
 - ⇒ After the application starts, the **Choice** window displays three button choices: Open, Create, and User Guide.



3. To keep the Choice window from displaying upon start-up, check the **Don't show this again** check box.
4. Click the **Open** button to open an existing Graphics file from the local file system.
NOTE: A Graphics file can also be opened by selecting **New** from the **File** menu.
5. Click the **Create** button to begin creating a new Graphics file.
6. Click the **User Guide** button for assistance with the Graphics Application.

Logging in to the Controller

To log in to the controller:

1. Click the **Panels** bar in the left navigation pane to access a specific controller.
 - ⇒ The object list of the chosen controller displays.
2. Click the **Connect** button.
 - ⇒ The **Panel Login** dialog box displays.



3. In the **Panel Login** dialog box, enter the panel IP address, user name, and password.
 - ⇒ The tool authenticates with the panel, retrieves the panel list, and then authenticates with all of the panels on the network.
 - ⇒ Once the login is complete, the object list of the chosen panel displays in a tree format in the left navigation pane.

**NOTE:**

Check the **Save Login Info** check box to allow recently used IP addresses and user account information to be saved.

User Account Passwords Using Double Byte Character Sets

Double-byte characters cannot be directly entered in the password field in FINlite. In FINlite there are password fields whenever a connection is being made to a panel.

You have the following options for passwords:

- Use only single byte characters for user account passwords. This option does not require special procedures to enter the user account password in FINlite.
- Use double byte characters for user account passwords. This option requires copying the characters from another field (such as the user name field) or another application (such as Notepad) and pasting the characters into the password field in FINlite. The location from which the characters are copied must support viewing of the double byte characters appropriately.

Creating Graphics

Click the **Components** bar in the left Navigation pane to open the Components area of the FINlite application.

Once a component is edited and customized, it is called a *Model*. Once a Model is saved, it can be reused in multiple graphics files.

The **Layers** bar in the left navigation pane allows you to layer the components in a specific order. For instance, in a Graphics file, the Air Handler Unit (AHU) template may be on the bottom-most layer while all of the AHU elements represented by the components may be on the middle layer, with the labels on the top layer. Be sure to layer the background image first, and then layer buttons and labels on top. If the background is layered on top of a button, for example, the button won't function properly.

To create a Model:

1. Drag a component to the canvas on the right side of the FINlite window.
2. Click the **Properties** bar in the left navigation pane to customize the features of the component. See the *User Interface Description for the FINlite Graphics Tool* section for more information.
3. Click the **Add to Favorites** button in the Properties area.
⇒ The new Model is saved to the **Models** folder in the File System and User Library area of the Navigation pane.



NOTE:

Library components should be saved before bindings are made; otherwise, additional work may be required.

Label Component:

Labels can also be modified to display updates of point name, status, value, description, priority, device name, and/or units.

1. Drag a **Label** component to the canvas on the right side of the FINlite window.
2. Click the **Properties** bar in the left navigation pane to customize the features of the label.
3. To activate the label for point value updates or other point information:
 - a. Once the label is bound to a point, the **Text** field will display a + sign, allowing you to choose point characteristics to add to the label's **Text** field. Click the + sign and choose each characteristic, one at a time, until all desired characteristics have been chosen.
 - b. Click on **Enter Live Mode** to see the live, updated status.

The features of a **Label** component can be modified using the **Properties** bar: name, label text, bound point, size, position, background color, background color transparency, visibility, locked status, corner shape, font color/size, and font style and alignment.

Button Component:

The button component can be used for several different purposes.

- If the button is bound to a **Point**, selecting the button opens the Point Commander for that point.
- If the button is bound to a **Graphic**, selecting the button opens the bound graphic.
- If the button is bound to a **Schedule Object**, selecting the button opens the schedule object for viewing.
- If the button is bound to a **Trend Log**, selecting the button opens the Trend View and display the bound trend data.
- If the button is bound to a **Web page**, selecting the button opens the bound Web page in a new window in your browser.

To bind a button to a point:

1. Expand the **Panels** bar and connect to a panel on the desired ALN, if not already connected.
2. Expand the **Components** bar and drag a button onto the workspace.

3. From the **Panels** bar, expand the panel with the desired point. Expand the **Local** section of that panel, and then expand the applicable point type (analog input, analog output, etc.).
4. Select the point you want to associate with the button and drag it onto the button in the workspace (this binds the point to the button).
5. Select the button on the workspace and expand the **Properties** bar.
6. Verify that in the Properties area, the **On Click** field displays **Open Resource** and below this is the name of the desired point.
7. Publish the graphic. A button bound to a point will not work unless the graphic is published to the panel and used through the user interface. If you try to use the button in FINlite, even in Live Mode, it will not work.
8. Open the Graphics View in the BACnet Field Panel Web Server user interface, navigate to the published graphic, and open the graphic containing the button.
9. Click on the button to bring up the Point Commander Application for the associated (bound) point.

To bind a button to a graphic:

1. Expand the **Panels** bar and connect to a panel on the desired ALN, if not already connected.
2. Expand the **Components** bar and drag a button onto the workspace.
3. From the **Panels** bar, expand the panel with the desired graphic, and then expand the **Graphics** section of that panel.
4. Select the graphic you want to associate with the button and drag it onto the button in the workspace (this binds the graphic to the button).
5. Select the button on the workspace and expand the **Properties** bar.
6. Verify that in the Properties area, the **On Click** field displays **Open Resource** and below this is the name of the desired graphic.
7. Publish the graphic. A button bound to another graphic will not work unless the graphic is published to the panel and used through the user interface. If you try to use the button in FINlite, even in Live Mode, it will not work.
8. Open the Graphics View in the BACnet Field Panel Web Server user interface, navigate to the published graphic, and open the graphic containing the button.
9. Click on the button to bring up the associated (bound) graphic.

NOTE: Both the graphic with the button and the graphic that is bound to the button must be published to their appropriate panels.

To bind a button to a Schedule Object:

1. Expand the **Panels** bar and connect to a panel on the desired ALN, if not already connected.
2. Expand the **Components** bar and drag a button onto the workspace.
3. From the **Panels** bar, expand the panel with the desired Schedule Object, and then expand the **Schedules** section of that panel.
4. Select the Schedule Object you want to associate with the button and drag it onto the button in the workspace (this binds the Schedule Object to the button).

5. Select the button on the workspace and expand the **Properties** bar.
6. Verify that in the Properties area, the **On Click** field displays **Open Resource** and below this is the name of the desired Schedule Object.
7. Publish the graphic. A button bound to a Schedule Object will not work unless the graphic is published to the panel and used through the user interface. If you try to use the button in FINlite, even in Live Mode, it will not work.
8. Open the Graphics View in the BACnet Field Panel Web Server user interface. Navigate to the published graphic, and open the graphic containing the button.
9. Click on the button to bring up the associated (bound) Schedule Object.

To bind a button to a Trend Log Object:

1. Expand the **Panels** bar and connect to a panel on the desired ALN, if not already connected.
2. Expand the **Components** bar and drag a button onto the workspace.
3. From the **Panels** bar, expand the panel with the desired Trend Log Object, and then expand the **Trends** section of that panel.
4. Select the Trend Log Object you want to associate with the button and drag it onto the button in the workspace (this binds the Trend Log Object to the button).
5. Select the button on the workspace and expand the **Properties** bar.
6. Verify that in the Properties area, the **On Click** field displays **Open Resource** and below this is the name of the desired Trend Log Object.
7. Publish the graphic. A button bound to a Trend Log Object will not work unless the graphic is published to the panel and used through the user interface. If you try to use the button in FINlite, even in Live Mode, it will not work.
8. Open the Graphics View in the BACnet Field Panel Web Server user interface. Navigate to the published graphic, and open the graphic containing the button.
9. Click on the button to bring up the associated (bound) Trend Log Object.

To bind a button to a web page:

1. Expand the **Components** bar and drag a button onto the workspace.
2. Select the button on the workspace and expand the **Properties** bar.
3. From the **On Click** menu, select **Go to Webpage**.
4. Enter the desired URL address in the field below the **On Click** menu.
5. Publish the graphic.
6. Open the Graphics View in the BACnet Field Panel Web Server user interface. Navigate to the published graphic, and open the graphic containing the button.
7. Click on the button to bring up the associated (bound) Web page.

The features of a **Button** component can be modified using the **Properties** bar: name, label text, on-click action, size, position, visibility, locked status, corner shape, font style/color/size, and button color/shading.

To create a Graphics file:

1. Click the **Components** menu in the left navigation pane of the Graphics Application window.
2. To assign an object to the component, click the arrows next to the panel and objects names in the navigation pane to navigate to the desired object from the object list in the left pane and drag it on top of the component that has just been dropped onto the canvas.
3. Once all the desired components have been added to the canvas, click the **Enter Live Mode** button in the upper right corner of the window, above the canvas. This allows the panel to begin polling points and displaying current information on the graphic.

NOTE: While in live mode you can open the Commander application and command the objects to see the graphic being manipulated. However, if a PPCL program or any other application is influencing the object, the change will be seen without any user interaction such as using the Commander application.

To Publish a Graphics File:

1. From the **File** menu, select **Publish**.
2. Open the BACnet Field Panel Web Server user interface.
3. In the left Navigation pane, click either the **Devices/Points** bar or the **Graphics** bar.
4. Navigate to the panel where the graphic was published.
 - ⇒ The published graphic will display under the panel name.

Using the Greenleaf Component in FINlite

A FINlite graphic component called *Greenleaf* is available in the FINlite components list. This component allows you to display the current value of the DXR application Greenleaf energy efficiency indicator in your FINlite graphic. When the component is bound to one of the available Greenleaf objects, the model will indicate the energy efficiency state as determined by the DXR energy efficiency algorithm.

Icon	Indication
	Gray indicates that the DXR energy efficiency is in an undefined state or that there is a connection or binding issue with the equipment or graphic.
	Green indicates that the DXR energy efficiency rating is Good or Excellent.
	Red indicates that the DXR energy efficiency rating is Satisfactory or Poor.

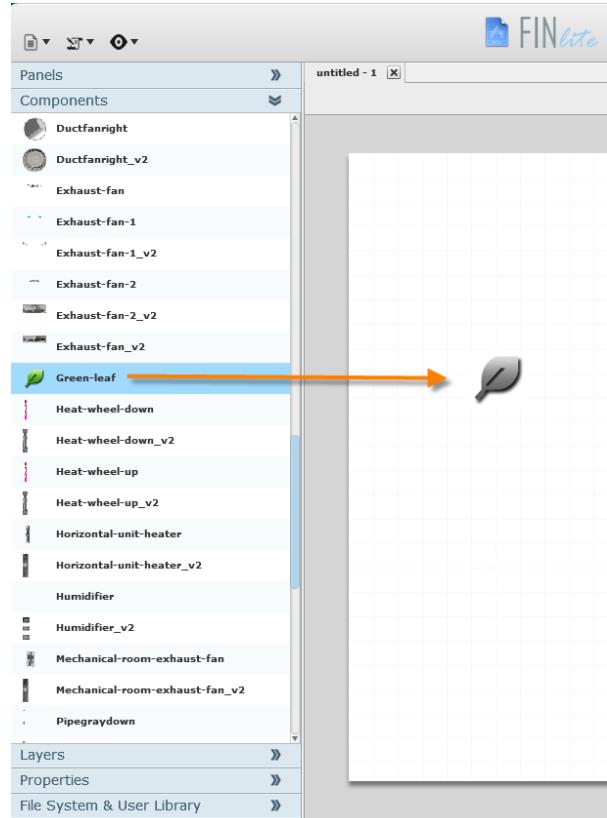


Greenleaf functionality is supported for a variety of features within a DXR Application. For a detailed understanding of the feature and the appropriate objects to bind to the model, refer to the *DXR Application Guide* for the application you are using.

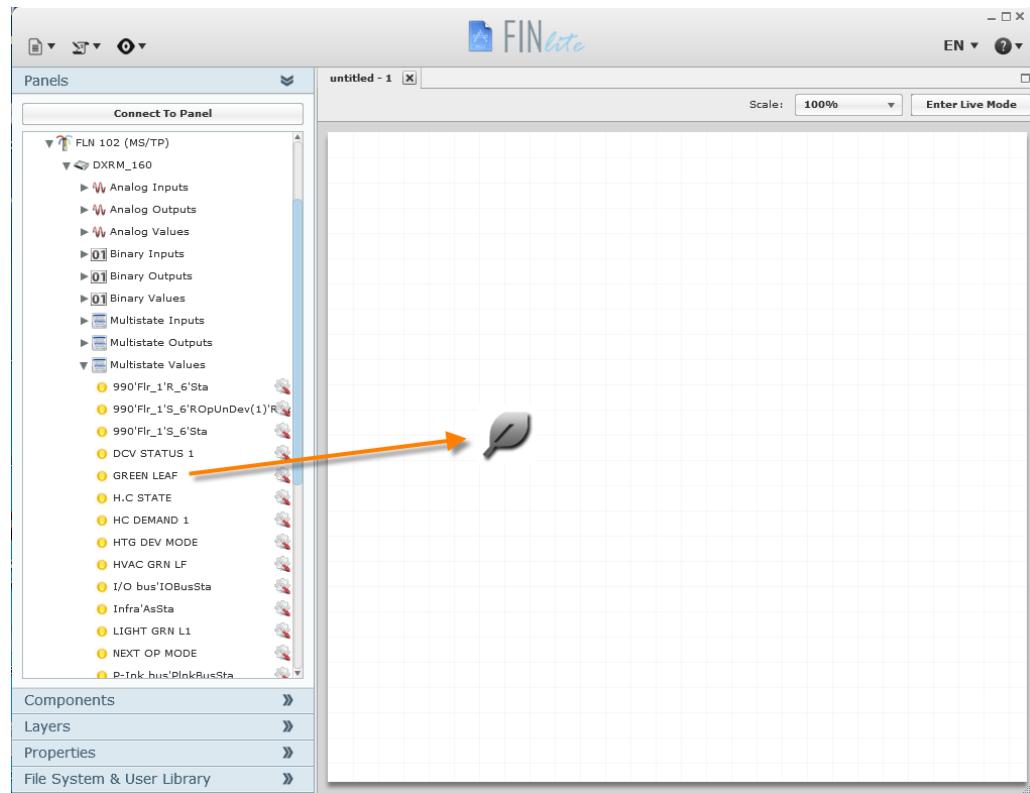
Using the Greenleaf Component

See the *Creating Graphics* [→ 231] section for more information.

The Greenleaf component can be dragged from the Components List and dropped onto a FINlite graphic canvas:



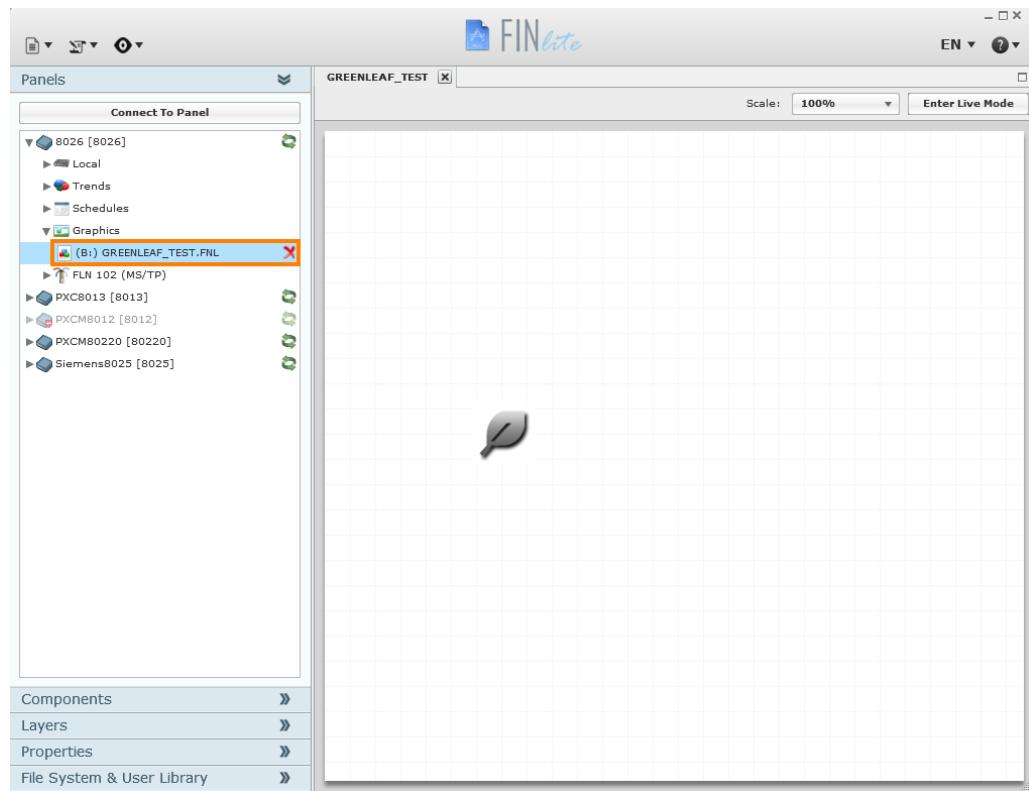
The Greenleaf object from a DXR device can be bound to the component:



When you click the **Enter Live Mode** button, the Greenleaf component color correctly reflects the state of the bound object.

A graphic using the Greenleaf component can be published to Drive A or Drive B of an ALN field panel. The published graphic will be listed in that panel's **Graphics** folder as well as in the **Graphics** pane under that panel.

The graphic can be viewed using the FPWeb UI Client or Launch Pad:



Editing the Graphics Animation

Components can be further manipulated by editing the animation. Several images of a component can be saved individually to the user library for reuse with animation. Once an object is assigned to the component, the object can be commanded to different values. Each value commanded will access a different component graphic, which creates the graphic animation.

To Edit the Animation:

1. On the canvas, highlight the component you want to animate by clicking it.
2. Click the **Properties** bar in the left navigation pane.
3. Click the **Edit Animation** button.
 - ⇒ The **Animation Editor** window displays.
4. Use the **Input Type**, **Values From**, and **To** fields to customize the animation options for the component graphic.
5. Choose a section in the values line (Boolean component types will have only “True” and “False”) by clicking in between the triangles.
6. Use the **Use Frame** drop-down to choose an image to connect to the chosen value.

The **Animate** check box will loop all chosen images when the object value is set to “True” (or any chosen value). This will give the graphic the appearance of moving.

Saving and Publishing the Graphics File

**NOTE:**

Graphics can only be published to the Modular series and Compact series 36-point controllers.

**NOTE:**

Before transferring a file to a field panel, you must verify that enough RAM is available in the field panel to hold the entire file or it cannot be transferred to its final location.

To save the Graphics file:

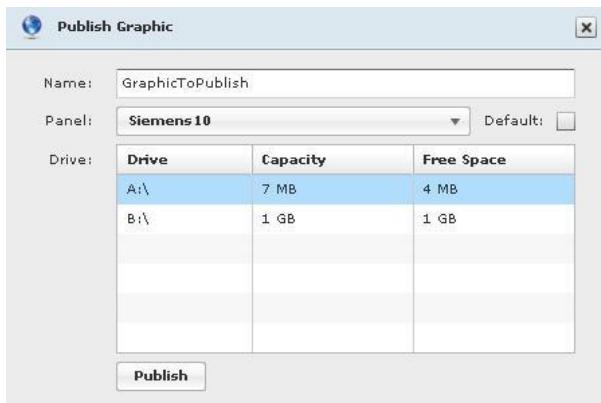
- After the components are edited and the Graphics file is complete, save the Graphics file to the local file system by clicking **Save** from the **File** menu.
Graphics file names must not:
 - Exceed 20 characters in length
 - Contain special characters: . \ : * ? “ < > | (includes period)
 - Contain characters with accent marks (such as é or ô)

To publish the Graphics file:

- From the **File** menu, select **Publish**.

⇒ The **Publish Graphic** window displays, allowing you to name the graphics file, and select the panel and drive (A: or B: if available) to publish to.

NOTE: Do not use a period or any of the special characters listed above in the file name.



- To set the graphic as the default graphic for the panel, check the **Default** check box. For more information on default graphics, see the *Default Graphics* section.
- Click **Publish**.
- The graphics files on Drive A can be backed up to the Internal Flash Drive (IFD) using the HMI.

Default Graphics

To set a default graphic for the panel:

- When publishing the file, select the **Default** check box.

2. Select Drive A.

NOTE: Default graphics can only be saved to Drive A. If you select Drive B, FINlite will automatically change the selection to Drive A, graying out the Drive B row in the **Drive** table.

3. Click **Publish**.

- ⇒ FINlite automatically renames the file to **default.fnl**.
- ⇒ When you connect to that panel from the BACnet Field Panel Web Server user interface, the graphic will display as the default graphic.

NOTE: Because Device Template graphics are published to the **Graphics\Application\AppID** folder on the panel, rather than in the **Graphics** folder, they cannot be used as default graphics. See the *Creating Device Template* section for more information on Device Templates.

Creating Device Templates

You can create a graphics template from a single file for reuse with multiple FLN devices that have the same application ID. This is accomplished by using the *Create Device Template* feature (also called *relativizing a file*).

To Relativize a Graphics File:

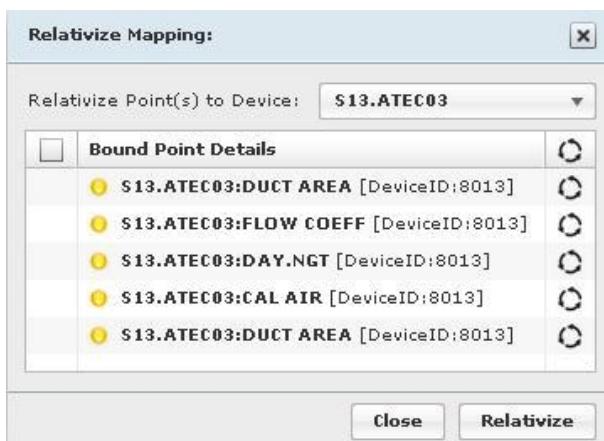
1. Create a graphics file using a background graphic and components.
2. Connect to a panel.
3. Bind points from one of the desired FLN devices to each of the components in the graphic.
4. From the **File** menu, select **Create Device Template**.
 - ⇒ The **Relativize Mapping** window displays.



5. In the **Relativize Points to Device** drop-down list, select the panel to relativize to.
6. Choose any or all of the device points to relativize by clicking the check boxes next to the point name(s). Checking the topmost check box will select all points.

7. Click Relativize.

- ⇒ Once points are relativized, a circular arrow icon displays in the **Relativize Mapping** window, to the right of the point name.



8. To un-relativize any or all points, click the **Un-relativize Points** icon (the circular arrows to the right of the point names). Clicking the topmost icon will un-relativize all points.
9. Save and publish the graphics file.



NOTE:

In order to relativize an existing graphics file, you must be connected to a panel.

In the BACnet Field Panel Web Server User Interface

To apply the relativized graphics file to an FLN device:

1. Open the relativized graphics file.



NOTE:

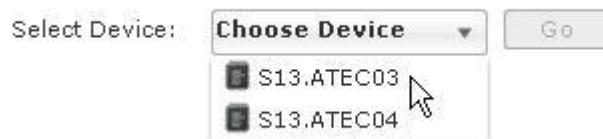
Device Template graphics (relativized graphics files) are stored within the selected panel in the Graphics area, by application ID (Graphics\Application\ApplicationID).



NOTE:

Because Device Template graphics are published to the Graphics\Application\AppID folder on the panel, rather than in the Graphics folder, they cannot be used as default graphics.

- A **Select Device** drop-down list will display in the Graphics Viewer on the right side of the Web Server.



2. Select the device whose live data should display in the relativized graphic.
3. Click **Go**.
⇒ The relativized graphic will display the live data from the selected device.

Backing Up Graphics

Use this procedure to back up graphics files using the HMI.

HMI	S, H, E, W, G (System, Hardware, Ethernet, Webserver, Graphicsbackup)
-----	---

Example

```
10:13:04 07/30/2010 FRI Logged on successfully Field panel
<40091>
User: <high> <High default user account>

>Point, Application, Time, Message, Cancel, System, password,
Bye? s
>Diagnostics, Users, dSt, Bacnet, Error_msgs, Hardware, Text,
Quit? h
>Fieldpanels, Ethernet, nodeNametable, Disks, Reportprinter,
Licensemanager, Quit? e
>ipSettings, Bbmd, Telnet, Webserver, Quit? w
>Display, Modify, Uiupgrade, Graphicsbackup, Quit? g
>Are you sure : y

DONE
```

Deleting Graphics Files

Graphics files consist of .fnl files and *media files*. Media files (backgrounds, component images, and so on.) are shared among all graphics. The .fnl files are stored separately from the media files, and Device Template > FLN files are stored in a different location than non-Device Template graphics.

- The .fnl files for standard graphics are stored in **A:\wsroot\graphics**.
- The .fnl files for Device Template graphics are stored based on the Application ID of the FLN Device in question (for example: **A:\wsroot\graphics\applications\2486**).
- Media files for standard and Device Template graphics are stored in **A:\wsroot\graphics\media**.
- Graphics can be published to Drive **B**, and may need to be deleted from that location.
- Once graphics are backed up, they also reside in the Internal Flash Drive (IFD), and may need to be deleted from that location.

In order to delete a graphic entirely so it will not appear in the User Interface, the file must be deleted from the Graphics folder in A:\wsroot. This can be done through the HMI (see the *Field Panel Features for BACnet Field Panel Web Server* section as well as the example at the end of this section) or through FINlite (see the *Deleting Graphics Using FINlite* section).

In order to delete graphics files to create more memory space, you must first determine which graphic files to delete. You must then determine which media files are being used by that graphic. If no other graphics are using the media files, then they can be deleted. However, if you delete a file that is needed by another graphic, then that graphic will no longer work.



CAUTION

Deleting Graphic Files

Before deleting graphic files, you must be certain that no component of that file is being used in another graphics file.



WARNING

Deleting Graphics Files from All Locations

You must also be sure to delete .fnl files and associated media files from all locations (such as Drive B or IFD).

Deleting Graphics Using FINlite



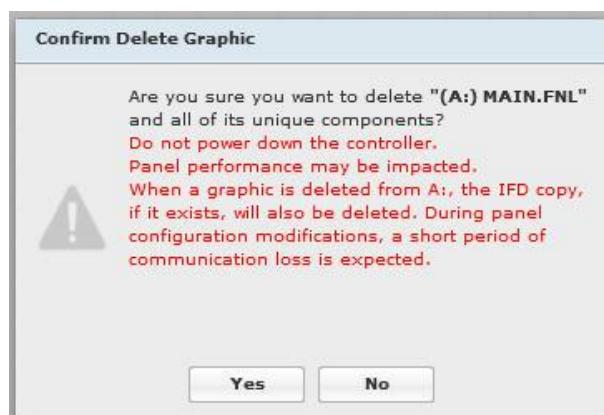
NOTE:

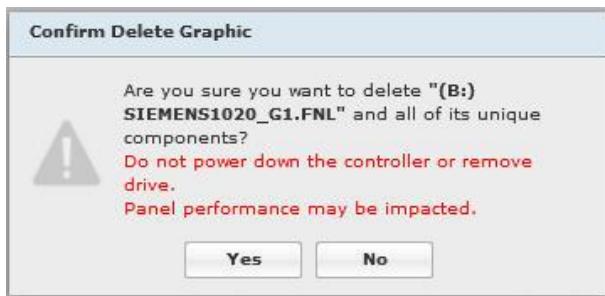
Deleting a graphic from Drive **A** also deletes it from the IFD.

Deleting a graphic from Drive **B** does NOT delete it from the IFD.

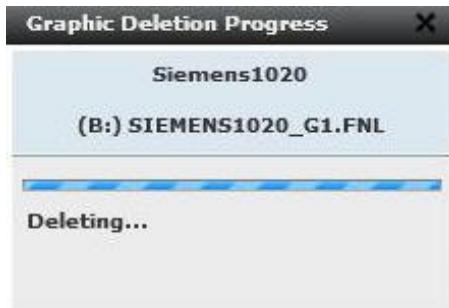
To delete a graphic file from the field panel using FINlite:

1. Click the **Delete** icon to the right of the graphic name in the navigation pane:
⇒ A confirmation window displays the drive from which the graphics file is being deleted.



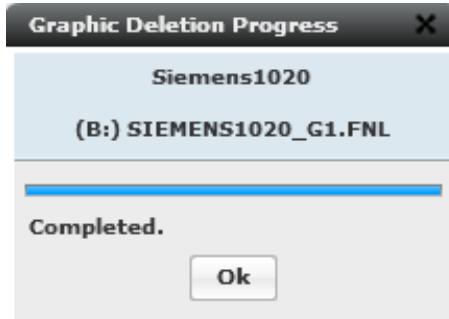


2. Select Yes. FINlite will appear frozen, and a confirmation window will display:



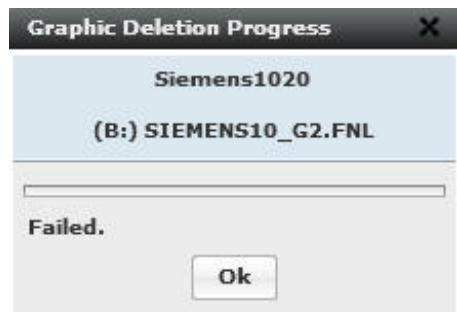
3. You can cancel the progress window by selecting the X button at the top right. This will allow you to continue working in FINlite while the deletion process continues.
⇒ When the deletion process is completed successfully, the progress window updates to indicate success. The graphics list is updated in the navigation pane.

4. Click OK:

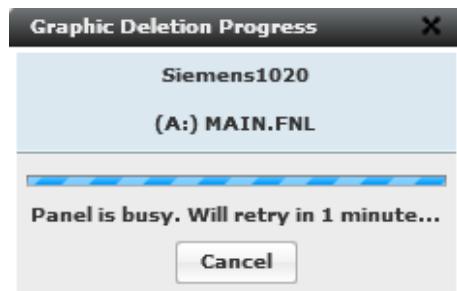


FINlite Graphics Deletion Errors

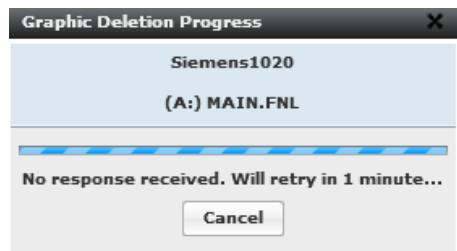
- When the deletion process is not successful, for example, because the drive was removed, the progress window will update to indicate failure. Click OK to remove the progress window:



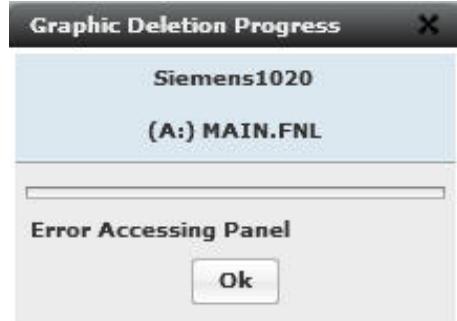
- The panel supports deleting only one graphic at a time. When more than one graphic deletion request has been made to the panel, the progress window will update to indicate that the panel is busy. FINlite will retry in one minute. To cancel the subsequent attempt, click **Cancel**:



- If a request is successfully initiated, but no response is returned within five minutes, the progress window will update. FINlite will attempt several retries. To cancel the subsequent attempt(s), click **Cancel**:



- If an original request or subsequent retry request is not successfully initiated, and the application detects panel communication failure, the progress window will update to indicate that no response from the panel will be received:



Example: Deleting a Graphic from the BACnet Field Panel Web Server

Viewing Directory Structure

```
Point, Application, Time, Message, Cancel, System, passWord, Bye? s
Diagnostics, Users, dSt, Bacnet, Error_msgs, Hardware, Text, Quit? h
Fieldpanels, Ethernet, nodeNametable, Disks, Reportprinter,
Licensemanager, Quit? f
Log, Display, Add, dElete, Modify, Config, Filesys, Quit? f
List_drives, Set_drive, listDirectory, Change_dir, File_ops,
Remove_dir, Quit? l
```

08/05/2011 FRI Drives List 11:49

Disk Size Free Space

```
IFD 10 MB 7445 KB
A:\ 8174 KB 5380 KB
End of report
```

Verifying Graphic before Deleting from IFD Directory

```
Point, Application, Time, Message, Cancel, System, passWord, Bye? s
Diagnostics, Users, dSt, Bacnet, Error_msgs, Hardware, Text, Quit? h
Fieldpanels, Ethernet, nodeNametable, Disks, Reportprinter,
Licensemanager, Quit? f
Log, Display, Add, dElete, Modify, Config, Filesys, Quit? f
List_drives, Set_drive, listDirectory, Change_dir, File_ops,
Remove_dir, Quit? s
Drive name : -----ifd
List_drives, Set_drive, listDirectory, Change_dir, File_ops,
Remove_dir, Quit? d
```

08/05/2011 FRI File Directory 10:09

```
-
Path: IFD:\

08/04/2011 17:47:37 4056 wsroot\Graphics\PURPLE.FNL
***
```

Deleting Graphics

```
List_drives, Set_drive, listDirectory, Change_dir, File_ops,
Remove_dir, Quit? s
Drive name : ifd
```

```
List_drives, Set_drive, listDirectory, Change_dir, File_ops,  
Remove_dir, Quit? f  
Copy_file, Rename_file, Move_file, Delete_file, Quit? d  
File name : wsroot\graphics\purple.fnl  
Are you sure : y  
Deleting wsroot\graphics\purple.fnl...  
wsroot\graphics\purple.fnl deleted successfully.
```

Deleting the Same Graphic from Drive A

```
List_drives, Set_drive, listDirectory, Change_dir, File_ops,  
Remove_dir, Quit? s  
Drive name : a:-----  
A:\  
List_drives, Set_drive, listDirectory, Change_dir, File_ops,  
Remove_dir, Quit? c  
File Directory : wsroot-----  
Path: A:\WSROOT\  
List_drives, Set_drive, listDirectory, Change_dir, File_ops,  
Remove_dir, Quit? c  
File Directory : graphics-----  
Path: A:\WSROOT\GRAPHICS\  
List_drives, Set_drive, listDirectory, Change_dir, File_ops,  
Remove_dir, Quit? d
```

10/11/2011 TUE File Directory 13:42

```
-----  
Path: A:\WSROOT\GRAPHICS\  
10/11/2011 13:38:56 1393 PURPLE.FNL  
End of report
```

```
List_drives, Set_drive, listDirectory, Change_dir, File_ops,  
Remove_dir, Quit? f  
Copy_file, Rename_file, Move_file, Delete_file, Quit? d  
File name : -----  
purple.fnl  
>Ok to continue (Y/N) : y  
Deleting purple.fnl...  
purple.fnl deleted successfully.
```

Chapter 13 - Field Panel Features for BACnet Field Panel Web Server

Chapter 13 discusses the following topics:

- Field Panel File System Operations [→ 249]
- Backing up and Restoring Databases [→ 257]
- Available Memory Diagnostic Point [→ 258]

Field Panel File System Operations

Basic File System Operation Commands

Use these procedures to set drives, change directories, list drives, or list files in a directory using the HMI.



Do not use the \ (backslash) symbol before entering a file name.

Set Drive

Set Drive is used to set the drive for all file operations. The drive must be set before any other file operations can be performed.

HMI	S, H, F, F, S, (System, Hardware, Fieldpanels, Filesys, Set_drive)
-----	--

Example

10:13:04 07/30/2010 FRI Logged on successfully Field panel <40091>
User: <high> <High default user account>

```
>Point, Application, Time, Message, Cancel, System, passWord, Bye?  
s  
>Diagnostics, Users, dSt, Bacnet, Error_msgs, Hardware, Text, Quit?  
h  
>Fieldpanels, Ethernet, nodeNametable, Disks, Reportprinter,  
Licensemanager, Quit? f  
>Log, Display, Add, dElete, Modify, Config, Filesys, Quit? f  
>List_drives, Set_drive, listDirectory, Change_dir, File_ops,  
Remove_dir, Quit? s  
>Drive name: a-----
```

A:\

Change Directories

The drive must be set before this file operation can be performed. See the *Set Drive* section.

HMI	S, H, F, F, C, (System, Hardware, Fieldpanels, Filesys, Change_dir)
-----	---

Example

```
10:13:04 07/30/2010 FRI Logged on successfully Field panel <40091>
User: <high> <High default user account>

>Point, Application, Time, Message, Cancel, System, passWord, Bye?
s
>Diagnostics, Users, dSt, Bacnet, Error_msgs, Hardware, Text, Quit?
h
>Fieldpanels, Ethernet, nodeNametable, Disks, Reportprinter,
Licensemanager, Quit? f
>Log, Display, Add, dElete, Modify, Config, Filesys, Quit? f
>List_drives, Set_drive, listDirectory, Change_dir, File_ops,
Remove_dir, Quit? c
>File Directory: wsroot-----
Path: A:\WSROOT\
```

List Drives

HMI	S, H, F, F, L, (System, Hardware, Fieldpanels, Filesys, List_drives)
-----	--

Example

```
10:13:04 07/30/2010 FRI Logged on successfully Field panel <40091>
User: <high> <High default user account>
```

```
>Point, Application, Time, Message, Cancel, System, passWord, Bye?
s
>Diagnostics, Users, dSt, Bacnet, Error_msgs, Hardware, Text, Quit?
h
>Fieldpanels, Ethernet, nodeNametable, Disks, Reportprinter,
Licensemanager, Quit? f
>Log, Display, Add, dElete, Modify, Config, Filesys, Quit? f
>List_drives, Set_drive, listDirectory, Change_dir, File_ops,
Remove_dir, Quit? l
```

07/30/2010 FRI Drives List 10:15

Disk Size Free Space

IFD 10 MB 8652 KB

```
A:\ 8174 KB 6542 KB
B:\ 1907 MB 1659 MB
```

End of report

List Files in a Directory

The drive must be set before this file operation can be performed. See the *Set Drive* section.

HMI	S, H, F, F, D, (System, Hardware, Fieldpanels, Filesys, listDirectory)
-----	--

Example

```
10:13:04 07/30/2010 FRI Logged on successfully Field panel <40091>
User: <high> <High default user account>
```

```
>Point, Application, Time, Message, Cancel, System, passWord, Bye?
s
>Diagnostics, Users, dSt, Bacnet, Error_msgs, Hardware, Text, Quit?
h
>Fieldpanels, Ethernet, nodeNametable, Disks, Reportprinter,
Licensemanager, Quit? f
>Log, Display, Add, dElete, Modify, Config, Filesys, Quit? f
>List_drives, Set_drive, listDirectory, Change_dir, File_ops,
Remove_dir, Quit? d
```

```
07/30/2010 FRI File Directory 10:17
-----
```

Path: A:\

```
07/28/2010 11:27:20 0 WSROOT <DIR>
07/28/2010 11:27:20 197 CROSSDOMAIN.XML
07/28/2010 11:27:22 327 LicenseVault.xml
07/28/2010 11:27:24 7342 FieldPanel.xml
07/30/2010 09:55:04 33924 40091.db
```

End of report

Rename a File

Use this procedure to rename a file within the current directory, using the HMI. The drive must be set before this file operation can be performed. See the *Set Drive* section.

HMI	S, H, F, F, F, R, (System, Hardware, Fieldpanels, Filesys, File_ops, Rename_file)
-----	---

Example

```
10:13:04 07/30/2010 FRI Logged on successfully Field panel <40091>
User: <high> <High default user account>

>Point, Application, Time, Message, Cancel, System, passWord, Bye?
s
>Diagnostics, Users, dSt, Bacnet, Error_msgs, Hardware, Text, Quit?
h
>Fieldpanels, Ethernet, nodeNametable, Disks, Reportprinter,
Licensemanager, Quit? f
>Log, Display, Add, dElete, Modify, Config, Filesys, Quit? f
>List_drives, Set_drive, listDirectory, Change_dir, File_ops,
Remove_dir, Quit? f
>Copy_file, Rename_file, Move_file, Delete_file, Quit? r
>File name: testone-----
-----
>New File Name: testtwo-----
-----

DONE
```

Delete a File

Use this procedure to delete a file from the current directory, using the HMI. The drive must be set before this file operation can be performed. See the *Set Drive* section.

HMI	S, H, F, F, F, D, (System, Hardware, Fieldpanels, Filesys, File_ops, Delete_file)
-----	---

Example

```
10:13:04 07/30/2010 FRI Logged on successfully Field panel <40091>
User: <high> <High default user account>

>Point, Application, Time, Message, Cancel, System, passWord, Bye?
s
>Diagnostics, Users, dSt, Bacnet, Error_msgs, Hardware, Text, Quit?
h
>Fieldpanels, Ethernet, nodeNametable, Disks, Reportprinter,
```

```

Licensemanager, Quit? f
>Log, Display, Add, dElete, Modify, Config, Filesys, Quit? f
>List_drives, Set_drive, listDirectory, Change_dir, File_ops,
Remove_dir, Quit? f
>Copy_file, Rename_file, Move_file, Delete_file, Quit? d
>File name: wsroot\fpweb.swf-----
>Are you sure: y
Deleting wsroot\fpweb.swf...

wsroot\fpweb.swf deleted successfully.

```



When deleting a panel using *.* in the filename prompt, do not use the \ (backslash) symbol before entering *.*. The panel may coldstart.

Move a File

Use this procedure to move a file from the current directory to another directory or drive, using the HMI. This procedure deletes the file from the current directory. The drive must be set before this file operation can be performed. See the *Set Drive* section.

HMI	S, H, F, F, F, M, (System, Hardware, Fieldpanels, Filesys, File_ops, Move_file)
-----	---

Example

10:13:04 07/30/2010 FRI Logged on successfully Field panel <40091>
User: <high> <High default user account>

```

>Point, Application, Time, Message, Cancel, System, passWord, Bye?
s
>Diagnostics, Users, dSt, Bacnet, Error_msgs, Hardware, Text, Quit?
h
>Fieldpanels, Ethernet, nodeNametable, Disks, Reportprinter,
Licensemanager, Quit? f
>Log, Display, Add, dElete, Modify, Config, Filesys, Quit? f
>List_drives, Set_drive, listDirectory, Change_dir, File_ops,
Remove_dir, Quit? f
>Copy_file, Rename_file, Move_file, Delete_file, Quit? m
>Source File Name: testtwo-----
-----
>Destination Path: -----
-----
b:\testtwo.swf-----

```

DONE

Copy a File

Use this procedure to copy a file from the current directory to another directory or drive (root or subfolder), using the HMI. This procedure does not delete the file from the current directory. The drive must be set before this file operation can be performed. See the *Set Drive* section.

HMI	S, H, F, F, F, C, (System, Hardware, Fieldpanels, Filesys, File_ops, Copy_file)
-----	---

Examples

Copying the file to a subfolder within the destination drive:

```
10:13:04 07/30/2010 FRI Logged on successfully Field panel <40091>
User: <high> <High default user account>

>Point, Application, Time, Message, Cancel, System, passWord, Bye?
s
>Diagnostics, Users, dSt, Bacnet, Error_msgs, Hardware, Text, Quit?
h
>Fieldpanels, Ethernet, nodeNametable, Disks, Reportprinter,
Licensemanager, Quit? f
>Log, Display, Add, dElete, Modify, Config, Filesys, Quit? f
>List_drives, Set_drive, listDirectory, Change_dir, File_ops,
Remove_dir, Quit? f
>Copy_file, Rename_file, Move_file, Delete_file, Quit? c
>Source File Name: fpweb.swf-----
-----
>Destination Path: -----
-----
-----
ifd:\wsroot\-----

DONE
```

Copying the file to the root of the destination drive:

```
10:13:04 07/30/2010 FRI Logged on successfully Field panel <40091>
User: <high> <High default user account>

>Point, Application, Time, Message, Cancel, System, passWord, Bye?
s
>Diagnostics, Users, dSt, Bacnet, Error_msgs, Hardware, Text, Quit?
h
>Fieldpanels, Ethernet, nodeNametable, Disks, Reportprinter,
Licensemanager, Quit? f
>Log, Display, Add, dElete, Modify, Config, Filesys, Quit? f
>List_drives, Set_drive, listDirectory, Change_dir, File_ops, Quit? f
>Copy_file, Rename_file, Move_file, Delete_file, Remove_dir, Quit?
```

```
C  
>Source File Name: index.html-----  
-----  
>Destination Path: -----  
-----  
-----  
ifd:\-----  
  
DONE
```

Remove a Directory

Use this procedure to remove a directory from Drive A or B (root or subfolder), using the HMI. The drive must be set before this file operation can be performed. See the *Set Drive* section. To remove files from the Internal Flash Drive (IFD), you must use the wildcard feature (*.*).



This procedure will not remove a directory that has subdirectories within it. Subdirectories must be removed first.

You must be one directory or drive above the desired directory. Use the Set_drive, Change_dir, and listDirectory procedures to navigate to the desired location.

HMI	S, H, F, F, R (System, Hardware, Fieldpanels, Filesys, Remove_dir)
-----	--

Example

```
>Point, Application, Time, Message, Cancel, System, passWord, Bye?  
s  
>Diagnostics, Users, dSt, Bacnet, Error_msgs, Hardware, Text, Quit?  
h  
>Fieldpanels, Ethernet, nodeNametable, Disks, Reportprinter,  
Licensemanager, Quit? f  
>Log, Display, Add, dElete, Modify, Config, Filesys, Quit? f  
>List_drives, Set_drive, listDirectory, Change_dir, File_ops,  
Remove_dir, Quit? s  
>Drive name : a-----  
  
A:\  
>List_drives, Set_drive, listDirectory, Change_dir, File_ops,  
Remove_dir, Quit? c  
>File Directory : wsroot-----  
  
Path: A:\WSROOT\  
>List_drives, Set_drive, listDirectory, Change_dir, File_ops,  
Remove_dir, Quit? c  
>File Directory : graphics-----
```

```
Path: A:\WSROOT\Graphics\
>List_drives, Set_drive, listDirectory, Change_dir, File_ops,
Remove_dir, Quit? c
>File Directory : media-----

Path: A:\WSROOT\Graphics\MEDIA\
>List_drives, Set_drive, listDirectory, Change_dir, File_ops,
Remove_dir, Quit? d

05/11/2011 WED File Directory 12:12

Path: A:\WSROOT\Graphics\MEDIA\

05/11/2011 08:24:28 20140 FAN_CENTRIFUGAL_SF_1.PNG
05/11/2011 08:24:28 21785 CHWV_BELIMO_4.PNG
05/11/2011 08:24:28 0 VALANIMATION1 <DIR>

End of report

>List_drives, Set_drive, listDirectory, Change_dir, File_ops,
Remove_dir, Quit? r
>Directory Name : valanimation1-----
>Are you sure : y

Deleting FAN-R1.JPG...
Deleting FAN-R2.JPG...
Deleting FAN-R3.JPG...
Deleting THERM50.JPG...

valanimation1 deleted successfully.
```

Wildcard Example

```
>Point, Application, Time, Message, Cancel, System, password, Bye?
s
>Diagnostics, Users, dSt, Bacnet, Error_msgs, Hardware, Text, Quit?
h
>Fieldpanels, Ethernet, nodeNametable, Disks, Reportprinter,
Licensemanager, Quit? f
>Log, Display, Add, dElete, Modify, Config, Filesys, Quit? f
>List_drives, Set_drive, listDirectory, Change_dir, File_ops,
Remove_dir, Quit? s
>Drive name : ifd-----

IFD
>List_drives, Set_drive, listDirectory, Change_dir, File_ops,
Remove_dir, Quit? d
```

05/11/2011 WED File Directory 12:13

Path: IFD:\

```
04/24/2009 14:06:28 7580 FieldPanel.xml
03/01/2010 14:45:26 328 LicenseVault.xml
wsroot\Graphics\MEDIA\VALANIMATION1\THERM0.JPG
05/11/2011 11:18:53 5600
wsroot\Graphics\MEDIA\VALANIMATION1\THERM10.JPG
05/11/2011 11:18:54 5601
wsroot\Graphics\MEDIA\VALANIMATION1\THERM20.JPG
05/11/2011 11:18:56 5620
```

End of report

```
>List_drives, Set_drive, listDirectory, Change_dir, File_ops,
Remove_dir, Quit? f
>Copy_file, Rename_file, Move_file, Delete_file, Quit? d
>File name : wsroot\Graphics\MEDIA\VALANIMATION1\*.*--
>Are you sure : Y
```

```
Deleting wsroot\Graphics\MEDIA\VALANIMATION1\THERM0.JPG...
Deleting wsroot\Graphics\MEDIA\VALANIMATION1\THERM10.JPG...
Deleting wsroot\Graphics\MEDIA\VALANIMATION1\THERM20.JPG...
deleted successfully.
```

Backing up and Restoring Databases

The Auto Save feature initiates an automatic backup of the database after a period of 15 minutes, after the database has been modified. The Auto Restore feature restores the database at start up.

When Web Server is enabled on a panel, Auto Save and Auto Restore are enabled as the default. You can manually disable them using the HMI.



NOTE:

If you are using Insight software as a mass storage device, do not enable Auto Restore in Web Server. If Auto Restore is already enabled, it must be manually disabled.

For more information, see the *Enabling Auto Save* section and the *APOGEE BACnet ALN Field Panel User's Manual* (125-3020).

**NOTE:**

Graphics files cannot be backed up using the Auto Save feature. For information about backing up graphics files, see the *Saving and Publishing the Graphics File* section.

Available Memory Diagnostic Point

The BACnet Field Panel Web Server provides a diagnostic point called *MEMAVAIL*, which displays the available memory in the controller.

The *MEMAVAIL* point is a trendable, virtual point which resides in the analog values option of the local controller.

Although it is a virtual point, the *MEMAVAIL* point *cannot* be commanded. If the point is commanded, a *success* message displays in the **Commander** window, but the point value reverts back to the actual available memory in the controller, rather than the commanded value.

Chapter 14 - Troubleshooting

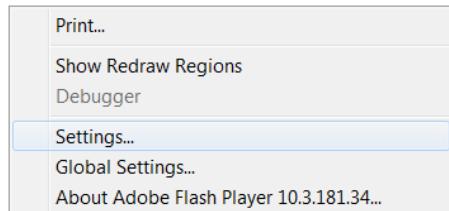
General Troubleshooting Tips

When first experiencing issues, try the following general tips:

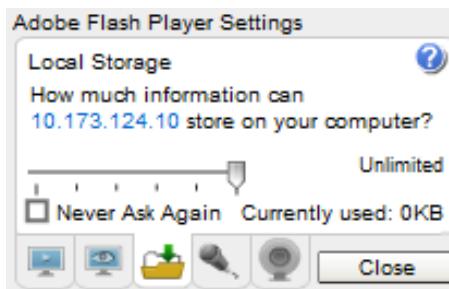
1. Refresh the panel
2. Log off, close the browser, log on
3. Clear the FPWeb UI browser cache (see below)
4. Clear the Launch Pad cache (see below)
5. Clear the FINlite cache (see below)

Clearing the FPWeb UI Browser Cache

1. While in the browser, right click and select **Settings**:



2. Select the folder icon:



3. Move the slider bar all the way to the left to indicate no storage:



4. A warning will display indicating that information will be removed. Click **OK**.



5. Move the slider back to the right to allow storage.



6. Click Close.
7. After clearing the UI cache with the steps above, it may also help to log off, close the browser, and log on.

Clearing the Launch Pad Cache

1. Close Launch Pad.
2. Do one of the following:
 - In Windows XP:
In file explorer, navigate to the following folder, substituting the appropriate username:
C:\Documents and Settings\[username]\Application Data\SiemensLaunchPad\Local Store\#SharedObjects
 - In Windows 7 and Windows 10:
In file explorer, navigate to the following folder, substituting the appropriate username:
C:\Users\[username]\AppData\Roaming\SiemensLaunchPad\LocalStore\#SharedObjects
3. Delete the contents of this folder.

Clearing the FINlite Cache

1. Close FINlite.
2. Do one of the following:
 - In Windows XP:
In file explorer, navigate to the following folder, substituting the appropriate username:
C:\Documents and Settings\[username]\Application Data\SiemensFIN\Local Store\#SharedObjects
 - In Windows 7 and Windows 10:
In file explorer, navigate to the following folder, substituting the appropriate username:
C:\Users\[username]\AppData\Roaming\SiemensFIN\Local Store\#SharedObjects
3. Delete the contents of this folder.

Log On Error Messages

When you log in using either of the default accounts (“high/high” or “med/med”), you are immediately prompted to change the password to something other than **high** or **med**.

The “low” accounts need not change.

The password must be created using between 3 and 15 characters.

Valid characters include **A** to **Z** (upper or lowercase) and **0** to **9**. Do not use **#**, **?**, or *****.



NOTE:

It is recommended that you change the default password *before* upgrading firmware.

Account Expired

Issue: The user name and password entered are valid for a user account, but the password has expired.

Solution: Contact your system administrator to reset your password.

Account is Locked

Issue: Three or more login attempts have been made with an incorrect password to a user account.

Solution: Contact your system administrator to unlock your account. A locked account can be unlocked through a modification to the User Account by a system administrator.



Login has Failed

Issue: Either the user name or the password is invalid.

Solution: Enter the correct information in the **User Name** and **Password** fields. The account will be locked if an incorrect password is entered more than three times.

NOTE: The name used for logging on to the BACnet Field Panel Web Server is the name entered into the **User Initials** field when creating a User Account.



Server is Busy

Issue: Server memory is limited.

Solution: Attempt to connect at a later time.

No Web Server Access

Issue: The user name and password entered are valid for a user account, but the user has not been granted any user account privileges for the applications available through the BACnet Field Panel Web Server.

Solution: Contact the administrator to change the user account privileges.



Install, Upgrade, and Connection Errors

BACnet Field Panel Web Server User Interface Upgrade Fails

Issue: A BACnet Field Panel Web Server User Interface upgrade fails.

Solution: A User Interface upgrade requires approximately 2.7 MB. Before performing the upgrade, verify that Drive A has enough space. If necessary, delete the siemensviewer.swf and fpweb.swf files from the A:\wsroot folder.

For information about deleting files using the HMI, see the *Field Panel Features for BACnet Field Panel Web Server* section.

Also, FTP can be used to add and remove files from the RAM drive.

Browser Will Not Connect to the Panel

Issue: The browser window displays an error message, or the browser connects to the Web Server, but only one panel in the navigation pane is active (the rest are grayed out).

Solution: The browser must be configured to ignore the proxy settings for the panel names and/or IP addresses. This can be done in most browsers using the Options dialog box. For example:

- In Internet Explorer: In the **Tools** menu, select **Internet Options**. On the **Connections** tab, click the **Settings** button. In the **Proxy Server** area, select the **Use a proxy server** check box and the **Bypass proxy server** check box. Click the **Advanced** button. In the **Exceptions** area, add the panel names and/or IP addresses being used. Separate entries with semicolons. Click **OK**.

- In Firefox: In the **Tools** menu, select **Options**. On the **Advanced** tab, click the **Network** tab, and then the **Settings** button. Select the **Manual Proxy Configuration** option, and add the panel names and/or IP addresses being used. Separate entries with commas. Click **OK**.



Be sure to verify with IT personnel, if necessary, before making this change.

Empty Browser Window

Issue: The browser window displays an empty browser page.

Solution: Install Adobe Flash Player Plug-in Version 16.0.0.305 or later.

Error Accessing Panel Message

Issue: Error Accessing Panel message displays:



If one panel loses communication, the **Error Accessing Panel** message will display, indicating the name of the panel which has lost communication. If multiple panels lose communication, an error message will display for each panel, indicating which panel has lost communication.

If an FPWeb-enabled panel loses communication, the Device Failures Count will increase, and the Panel will have an associated triangle icon in the navigation pane instead of an arrow.

Solution: Check connections. Verify the panel is still FPWeb-enabled. Communications should be reestablished automatically as long as the browser session has not been terminated.

Graphics Issues

Displaying New Graphics in Browser

Issue: The Web browser displays an older graphics file, even after the file has been modified and saved.

Solution: Internet Explorer and Firefox store Web pages and flash files as “temporary Internet files” for faster loading. Clear the cache by deleting temporary Internet files (see browser Help system for more information). This should allow the application to display the newest graphics files.

Graphics Are Not Scalable

Issue: Graphics are not scalable.

Solution: FINlite does not use vector graphics, so the graphics are not scalable. Graphics must be created for the resolution of the monitor on which they will be displayed.

Existing Images are Resized after New Animation Frames are Added

Issue: After a new animation image has been added to the set of frames in FINlite's Animation Editor window, existing images are automatically resized to match the frame you added.

Solution: Before bringing them into FINlite, be sure the images to be added for editing animation are sized similarly to the existing images, to avoid automatic resizing issues.

User is Unable to Log in to Panel Using FINlite

Issue: If you open a graphic from your local file system before you have logged into any panels and then select **Enter Live Mode**, FINlite will display an error message. When you click **OK**, the login screen will display. The Panel Address will be populated with the last address that was used for login. If this is the first login of the current FINlite session, then the URL of the first bound point in the graphic is used. The **Panel Address** field is grayed out. If this is not the desired panel or if this panel is currently failed or unavailable, you cannot change to a different panel address.

Solution: Cancel the login by selecting the **X** in the corner of the error window. Click **Connect To Panels** and login to one of the existing panels.

Graphics Files do not Save Properly

Issue: When using some special characters in graphics file names, the files do not save to the panel properly.

Solution: You cannot create files which will be saved to Drive **A** or **B** that contain any of the following:

- The following special characters:
. \ / : * ? " < > | (includes period)
- Characters with accent marks (such as é or ô)

Other Issues

Panel Not Saving Automatically

Issue: The panel is not Saving Automatically, even though Auto Save and Auto Restore are enabled.

Solution: The panel must be made ready for Auto Save to function properly.

Performance Issues

Issue: Transmissions do not complete and/or applications lock up.

Solution: In order to improve performance, in the Siemens FINlite graphics utility program, it is recommended to limit the total number of tabs that are open simultaneously to six (6). This means that exceeding six open tabs in any combination of editors or graphics files may diminish performance.

See the *Performance and Limitations* section for more information on improving performance.

Problems with Dynamic Trending of Off-Node Trend Objects

Issue: Trend Graph not updating in Dynamic Mode for Off-Node Trended points

Solution: Ensure that the panel containing the point to be trended is refreshed prior to opening a trend graph and attempting to make it dynamic.

Issues with Multiple Browser Sessions

Issue: You are logged off of a browser session when using Web Server with more than one tab in the same browser.

Solution: Use Web Server with one tab of any particular browser at a time. If two concurrent sessions are needed from the same computer, open two different browsers (for example, IE and Firefox).

Issue: Alarm counts are not accurate when Web Server is being used with more than one tab on the same browser.

Solution: Use Web Server with one tab of any particular browser at a time.

Access Denied Error

Issue: An Access Denied error displays when you try to use an editor such as the SMTP Configuration Editor.

Solution: Ensure that you are logged in using a user account with the appropriate permission levels. For example, in order to access the SMTP Configuration Editor, you must be logged in to the Web Server with an account that has Hardware Edit privileges.

See the *User Account Editor* section for more information about user accounts and permissions.

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