SIEMENS

Insight Revision 3.13

User Guide
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Introduction

This User Guide contains an overview about the applications within the Insight software. Detailed information about using all Insight applications is incorporated into the online help system that is automatically installed with each Insight revision.

You can access online help in an application, as well as globally, by using one of the following methods:

- To access help for a window, dialog box, or menu command, select the item and press F1. Most dialog boxes also include a Help button that displays help for the task you are performing.
- To obtain help for a specific application, open that application, and from the Help menu, click Help Topics.
- To access all help, click on the Main Menu. This displays the Online Documentation screen that allows you to access the Release Notes and information about setting up and using the software and its options.
- A shortcut to the Online Documentation screen is within the Insight Version 3 program group and is accessible even if the Insight application is not running.

What is Insight?

Welcome to Insight, a graphical software package that allows you to manage and control your building facilities from a personal computer running on Windows. Insight’s easy-to-use graphical interface is designed to support the complex and demanding needs of building operators. You can quickly and easily navigate between applications in the workstation. By using the concept of “drag and drop”, you can share information between Insight applications. This allows the operator to use the applications together instead of separately, and saves the operator time by not having to switch to and from other applications or re-enter the same information.

The numerous information and reporting capabilities allow you to make better management decisions for today and the future.
Applications

Insight Main Menu

The Insight Main Menu is the central launching point for all Insight applications. To launch an application from the Insight Main Menu, click the button that corresponds to the application you want to open.

Your access level for each Insight application determines your access to applications on the Main Menu. If your access level is No Access for an Insight application, the button for that application will not display in the Insight Main Menu when you start the Insight software.

NOTE: Depending on your access level, you can also create up to 10 custom buttons that launch applications from the Insight Main Menu. For more information, see the Insight Main Menu online help.

Following is a brief description of each button on the Insight Main Menu. If you are running the Base Insight package, you will not see the applications that are marked Optional.

- **Alarm Issue Management (Optional)** - Alarm Issue Management displays point alarm issues detected in your building system.

- **Alarm Issue Management Editor (AIM) (Optional)** - Alarm Issue Management Editor allows you to define contacts and equipment information that is used when assigning a contact to an alarm issue.

- **Alarm Status** - Alarm Status displays point alarms and Building Level Network (BLN) or Automation Level Network (ALN) messages detected in your building system.

- **Attribute Duplicator** - Attribute Duplicator allows you to copy the properties of a point to another point or a group of points. For example, a list of analog points will have all their enhanced alarm definitions modified.

- **Commander** - Commander lets you take manual control of a point and override any pre-established automatic controls for the point.

- **Database Transfer** - Database Transfer provides a way for you to manually upload and download the Insight system databases between the workstation and the field panels.
- **Dynamic Plotter (Optional)** - Dynamic Plotter is used to plot point values in a continuous graph. Historical trend point values, dynamic point value changes, or a combination of historical and dynamic values can be used to analyze and report on point activity.

- **Event Builder** - The Event Builder provides a mechanism to define Zones and Events for your building system.

- **Global Commander** - The Global Commander allows you to issue a single command to be applied to a selected group of points in the building system.

- **Graphics** - Graphics allows you to create and display color graphics of your facility and equipment for point monitoring and commanding.

- **Online Documentation Screen** - The Online Documentation screen allows you navigation capabilities, global searches to the Insight Main Help files, Insight manuals (PDF), Technical Editor e-mail address, and the Siemens Web site.

- **Panel Point Log Report** - The Point Log Report allows you to quickly create a Point Log Report without creating a report definition in Report Builder.

- **Point Detail** - Point Details is used to view information about a logical point defined in your building system.

- **Point Editor** - The Point Editor is used to enter point information into the Insight system so that the Insight software can monitor and control the equipment connected to the point.

- **Point Group Editor** - The Point Group Editor is used to organize the points in your system. Grouping points allows you create relationships and hierarchies among the points.

- **Point Summary Report** - The Point Summary Report application allows you to create three types of printed reports containing information about the points within the field panels and devices of your Building Automation System.

- **Program Editor (Optional)** - The Program Editor is used to create control programs with the Powers Process Control Language (PPCL).
Applications

Alarm Issue Management (AIM)

- **Remote Notification (Optional)** - Remote Notification allows the Insight system to send alarm and event information to external devices. These devices are alphanumeric pagers, numeric pagers, phones, or e-mail addresses.

- **Report Builder** - The Report Builder is used to configure report definitions. When you select a report type, Report Builder opens the report definition for the report you want to create.

- **Report Viewer** - The Report Viewer is used to display reports on the screen, to the printer or to file.

- **Scheduler (Report Scheduling Optional)** - Scheduler provides a way for you to schedule events, reports, and trend collection on the Insight calendar.

- **System Activity Log (Optional)** - The System Activity Log allows you to view the activities, which are logged in your system.

- **System Profile** - System Profile gives you graphical, system-wide control for defining, configuring, and maintaining your entire building control network.

- **Time-of-Day (TOD)** - Time-of-Day (TOD) is used to automatically command points based on a daily schedule or yearly calendar.

- **Trend Definition Editor** - The Trend Definition Editor allows you to define trend points that will show how your building control equipment is operating over a specified time period.

- **User Accounts** - User Accounts is used to manage access and security for the Insight software and field panels on a specified BLN or ALN.

**Alarm Issue Management (AIM)**

The Alarm Issue Management (AIM) application allows you to manage the life cycle of an alarm issue through all stages, from initiation to resolution. By selecting the Alarm Issue Management option when defining a point in Point Editor, you have the ability to manage any alarm issues occurring for that point within the system. An ordered procedure must be followed for each point in alarm; Acknowledge, Assign (to a contact), Answer, Resolve, and Clear. Each step is logged through the Alarm Issue Management application, which provides you the full history of that alarm issue and with the ability to generate reports using the Report Builder application.
**NOTE:**
APOGEE Field Panel Firmware Revision 2.5 or later is required for this application. Earlier revisions are not supported.

Point alarms provide a way to notify you that the value of a point is beyond the specified operating limits and that some action must be taken to correct the situation. Alarm Issue Management allows you to enforce a documented process for each occurrence of an alarm condition.

You enable the Alarm Issue Management option for a point from the Point Definition dialog box in Point Editor. This ensures that any classification of an alarm triggers the alarm issue.

**Alarm Issue Management Process Overview**

The Alarm Issue Management process allows you to monitor the progress of each alarm issue from initiation through resolution.

**NOTE:**
An alarm issue can't be resolved until at least one answer is provided and the point has returned to NORMAL, and stays at NORMAL. In addition, you can't answer an alarm issue until it is first assigned to a contact.
Applications
Alarm Issue Management (AIM)

Data history is kept on all alarms requiring Alarm Issue Management. The application stores:

- The first alarm time or creation time and last return to NORMAL time only if currently at NORMAL state, otherwise the field remains blank.
- User alarm acknowledgement
- Contact assignments
- User comments

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Applications

Alarm Issue Management (AIM) Editor

The Alarm Issue Management (AIM) Editor allows you to create contacts and associated devices and equipment groups for alarm issues. The contacts and their associated phone device and equipment groups allow you to assign a specific trades person qualified to investigate a point designated with Alarm Issue Management, as defined in the Point Editor application.

NOTE:
A phone is the only device you can define in Alarm Issue Management (AIM) Editor. However, if you have a Remote Notification license, you have additional choices for devices to associate with a contact, such as a pager and email. Which, once defined, will then display in AIM Editor and can be modified. For more information, see the online help for the Remote Notification application.

A system tree displays the contacts and equipment in the left pane and the right pane describes either the contact or equipment, depending on which is highlighted. This gives a quick visual view of your contacts and equipment and all relevant information.

Alarm Management

Point alarms provide a way to notify you that the value of a point is beyond the specified operating limits and that some action must be taken to correct the situation. Alarm management is not a specific Insight application, but a methodology for managing point alarms throughout the Insight software. The two Insight applications that help in this management process are Point Editor and System Profile.

Alarm management allows you to define, route, acknowledge, and resolve alarms. It allows you to determine where alarm information is sent and define the conditions that must exist in order for an alarm to be issued for the point.

About Point Alarms

A point alarm is a way to notify you that the value of a point is beyond the specified operating limits and some action must be taken to correct the situation. The following situations illustrate when you could set a point to go into alarm:

- The value of an analog point is beyond a defined high or low limit. For example, a room temperature point with a low limit of 65.0 will go into alarm whenever the temperature falls below 65°F. An alarm notifies you of the problem so you can make adjustments to assure the occupants are comfortable.
The value of a proof point does not correspond to the commanded value of a point when the proof delay time expires. For example, if you command a fan on and the proof point indicates the fan is off, an alarm is issued to notify you that the fan is not running.

**Types of Point Alarm Management**

There are two types of point alarms, standard alarms and enhanced alarms. Whether a point is configured with standard or enhanced alarms will determine how you need to use standard or enhanced alarm management.

Standard alarm management is an alarm management strategy used for points in all field panels and with any firmware revision. Standard alarming can be defined with or without destinations. A destination is a group of devices on the MLN (such as Insight workstations, field panels, and event and alarm printers) that receive the same alarm information. Point alarms are routed to every destination associated with the destinations assigned to a point. If destinations are not defined, alarms are sent to the devices associated with the default Destination 0, or up to four destinations can be defined and alarms are sent to the devices in the destinations.

Enhanced alarm management is an alarm management strategy that allows you to route alarms to the location best equipped to respond to the alarm based on alarm priority (for example, routine maintenance or critical) or operating times (for example, day mode or night mode).

**About Alarm Notification**

When a field panel detects that the value of an alarmable point is beyond its specified operating limits, the field panel issues an alarm for the point and the following events occur:

The point state changes to alarm and an alarm priority is assigned to the point. The alarm state and priority are displayed in certain Insight applications, such as Graphics, and reports, such as the Panel Point Log. In order for the alarm to print at the field panel printer, you must select the option to Print Conventional Alarms on BLN in the Point Editor.

- The field panel sends the alarm to Insight workstations and field panels that are defined as alarm destinations for the point alarm. The alarm prints at printers attached to these Insight workstations and field panels if printing is enabled for the devices in System Profile.

- The Alarm Status button on the taskbar flashes to notify you of alarms in progress you have designated as critical. For non-critical alarms, the system beeps to notify you. You can display, acknowledge, sort, or print alarms from the Alarm Status window. The alarm information includes the alarm priority, alarm status, value of the point in alarm, and the time the alarm occurred. As each alarm occurs, the Insight system logs the alarm in Alarm History.

**Alarm Status**

The Alarm Status application displays point alarms and Building Level Network (BLN) messages detected in your building system. Point alarms and BLN messages are detected by field panels and then distributed to designated alarm receivers (other field panels and Insight workstations). When the Insight software receives point alarms or
BLN messages, the point alarms display in the Point Alarm section and the BLN messages display in the BLN Message section of the Alarm Status window. While the Insight software is running, the Alarm Status window cannot be closed, only minimized. When the Alarm Status window is minimized, the alarm bell notifies you of all new alarms. In addition, the Alarm Status button in the taskbar notifies you of new critical alarms by blinking. Critical alarm notification is user-definable. For steps, see Setting Critical Alarm Notification.

Every time you log on to the Insight software, it is good practice to check for new alarms by looking at the Alarm Status icon in the taskbar or maximizing the Alarm Status window and looking at the top of the point alarm list or bottom of the BLN message list for new alarms. For more information on alarm management, see the Alarm Management online help.

The Alarm Status window is broken into two different sections:

- **The Point Alarm section** displays all received point alarms. Point alarms display in the color associated with the alarm priority or point status. The colors help identify the severity of the alarm. Status colors are assigned in System Profile.
- **The BLN Message section** displays BLN messages. BLN messages are system-based messages that give information about system activity (invalid logon attempt, PPCL program statement failures).

### Attribute Duplicator

The Attribute Duplicator application allows you to copy point properties from a single point to one or more points, and these points can be mixed types (including digital and analog, and unbundled points). Additionally, you can copy point group membership information into another existing point group. However, you cannot copy a point type or a point name. Several attributes can be selected at once; for detailed information on items representing either a single property or group of properties that can be copied together at one time, see the Attribute Duplicator online help.

The main window for the Attribute Duplicator consists of the following areas:

- **The Source Point field** displays the point name you selected as the source.
- **The Properties to Copy section** lists all the available point properties for the source point that you can copy to one or more destination points. The type of properties will change depending on the point type you choose. This list updates when the source point changes.
- The Attribute Duplicator copies attributes to the points listed in the Destination Points section.
- **The Copy Results section** displays the results of each copy attempt.

### Commander

The Commander application lets you manually control a point. When commanding a point, you gain control of the point by overriding the pre-established automatic controls in a PPCL program, the Time-of-Day (TOD) application, or the Event Builder application. Commanding a point places it in Operator (OPER) priority, which overrides the Insight software’s control. When a point is in OPER priority, the APOGEE System applications do not recognize it and cannot perform any action on it. Whenever possible, let the APOGEE System applications command points automatically through programs, such as PPCL without your intervention.
To restore a commanded point to the Insight system, you must release the command priority from OPER to NONE.

BACnet points support 16 priorities and commands for each priority assigned in a Command Priority Array. The current value of a BACnet point is regulated by the highest priority command in the array. For more information, see the Commander online help.

Use Commander to command the following information for individual points:

- alarm simulation
- alarmable/not alarmable status
- command priority (OPER, SMOKE, EMER, PDL, or NONE)
- enable/disable
- new point value
- reset value for totalization

You can command both analog and digital points, however, you can only command the points that you have access to in User Accounts. Generally, only output points can be commanded; however, the input points of LAI, LDI, or LPACI can also be commanded if they are virtual points.

If you are connected to a network, you can command points on the network. You can also use Auto-Dial to connect to a different network where you have access and then command points in that network.

You cannot command a failed point. The Commander allows you to disable the point and take it out-of-service.

Point commanding tasks, such as restoring a point to its previously commanded state or initializing a totalized point, are done using the Commander.

⚠️ CAUTION

Use the Commander application with caution, and only when you know the exact end result for the point you are commanding. Ideally, you should only use the Commander when making temporary changes, such as temperature changes, or when commanding modes of operation such as day, night, and warm-up.

It is inefficient to place a point in operator OPER command priority for a long period of time or permanently. Permanent changes that you make to points should be done in PPCL programs.

Communications Monitor

The Communications Monitor application is installed on the Insight Server and all Insight Clients on an MLN. When the Insight software is running, the Communications Monitor Application monitors the availability of all Insight workstations on the network, and signals when the Insight Server or an Insight Client becomes unavailable.

The Communications Monitor icon appears on the Windows Taskbar near the system clock. Double-clicking the icon opens the Communications Monitor window.

The Communications Monitor window provides a list of all Insight workstations on the MLN and provides the following information for each workstation:
Applications
Communications Monitor

- Whether the workstation can communicate with the workstation where Communications Monitor is running.
- The Descriptor for the workstation as defined in System Profile.
- Whether the workstation is online or offline.
- Whether the workstation is the Insight Database Server or a Standard Insight Client.
- Whether the workstation is directly or remotely connected to the MLN.

If the Insight software is started during a communication failure, some of the above information may be unavailable. Missing data is listed as not available in the Communications Monitor window.

**NOTE:** Only periodic checks are made for status changes in the Communication Monitor.

Communications Failure

When the Communications Monitor is running on an Insight workstation that is unable to communicate with the Insight Server or another Insight Client the following occurs:

- The Communications Monitor icon \(\text{ ]] \) flashes a broken network connection, and the system beeps once.

- The Insight icons in the Communications Monitor window are unlatched \(\text{ ] ] }\) if the Insight workstation cannot be reached from the Insight workstation where Communications Monitor is running.

- The status for the Insight workstation that cannot be reached changes to **Offline**.

The Insight Database Server and Insight Database Clients that communicate with the Insight Server can run all Insight applications, but cannot monitor or command BLNs attached to Insight Database Clients that are unavailable.

Insight Clients cannot run the Insight software or monitor and command BLNs when the Insight Server is unavailable. For more information on restoring communication with an Insight workstation, see the Communications Monitor online help.

Communications Restored

When communications with all Insight workstations are restored, the following occurs:

- The Communications Monitor icon \(\text{ ] ] }\) stops blinking.

- All Insight icons in the Communications Monitor window latch \(\text{ ] ] }\).

- The status for all Insight workstations changes to **Online**.
Compliance Support Option

The Compliance Support Option for Insight provides functionality for detailed tracking of modifications and deletions of supervised objects. With this option, you can track which property of an object was changed, its value before and after the change, who made the change, why the change was made, who authorized the change, and from where the change was made. This is particularly beneficial for facilities that are required to comply with the Food and Drug Administration (FDA) regulations for Electronic Records, or 21 CFR Part 11.

NOTE:
The Compliance Support Option (CSO) is dependent on the Insight MonitorSvc service (Communication Monitor application) to be running on your Insight workstation. If this service is not on, you will receive an Access Denied error message when you want to change a CSO object.

Database Transfer

The Database Transfer application provides a way for you to manually upload and download the Insight system databases between the Insight workstation and the field panels. This is necessary in the event of data loss on either side due to hardware failure, accidental erasure, a field panel cold start, or some other disruptive event.

For each database transfer you can monitor the transmission, identify transmission errors, and produce reports for each database transferred.

The Database Transfer application also allows you to back up and restore BACnet database information on BACnet BLNs for third-party BACnet devices and should not be confused with uploading or downloading data feature for APOGEE field panels. You must have Configure/Edit-level access to perform a BACnet backup or restore.

Uploading and Downloading

Uploading and downloading are terms used to describe transferring databases between two storage devices. In your Insight system:

- Uploading data is transferring data from a field panel to the Insight workstation.
- Downloading data is transferring data from the Insight workstation to a field panel.

NOTE:
The data being transferred replaces the data at the receiving site.

NOTE:
You can also download workstation database information to APOGEE BACnet field panels.
Back up and Restoring

The backing up and restoring functions are used to back up or restore third-party BACnet devices and should not be confused with uploading data from a APOGEE field panel to the Insight workstation. You must have Configure/Edit-level access to perform a BACnet backup.

Data Export Utility

The Data Export Utility, allows you to export alarms, runtime (totalization) data and trend data for points in the workstation database. The export feature creates files in a variety of formats (*.MDB, *.XML, *.CSV) which you can use to provide data for import into other systems, such as maintenance management systems.

With the Data Export Utility, you can:
- Dynamically export non-BACnet point alarms
- Export BACnet points, BACnet alarms (intrinsic) and BACnet Event Enrollment alarms (algorithmic)
- Export data to multiple files, or append to a single file
- Export files to any location on your network
- Filter non-BACnet point alarms by properties, such as name, priority, descriptor, etc.
- Filter points with wildcard support
- Schedule the export of runtime (totalization) data

The workstation applications such as Report Builder, Report Viewer and Scheduler use the Data Export Utility to export data in XML format. This utility is enabled only if you have the Data Export Utility license.

Dynamic Plotter

The Dynamic Plotter application is used to plot point values in a graph. You can set up a graph to use historical trend point values, dynamic point value changes, or a combination of historical and dynamic values. Then, you can use the graphs to analyze and report on point activity within your building system.

Once a graph is created, you can change almost any aspect of that graph to display data in a format that best meets your needs. This can include, but is not limited to, changing the graph type, adding titles, rotating the graph, or viewing the graph in 3-D.

For more information on the graph settings you can change, see the Dynamic Plotter online help.

Dynamic Plotter performs the following functions:
- add points to and delete points from a graph.
- copy a graph in ASCII, bitmap, or metafile format.
- link graphs so time spans are uniform between the graphs.
- open multiple graphs at one time.
output graphs to the screen, printer, or tab separated value for spreadsheets.
- plot dynamic point values to monitor changes.
- plot historical and dynamic data on the same graph.
- plot historical trend data that is already collected by the Insight software.
- take a snapshot of a graph for future analysis.
- zoom in on a specific time range.

Event Builder

The Event Builder application allows you to define zones, events, and BACnet Command Objects in your building system. Zones are the building resources (room, floor) that you can schedule, and events are the activities in your building that allow the HVAC equipment associated with the zone to be commanded to various states. You can also use the Event builder to program the optimization of a zone and BACnet Command Object. By adding Start/Stop Time Optimization (SSTO) logic to the zone, you can conserve energy by starting heating or cooling as late as possible prior to occupancy and stopping heating or cooling as early as possible prior to vacancy. Night operation can also be defined.

You can use the Event Builder to do the following:
- define, modify, copy, and delete zones
- define, modify, and delete event definitions
- define, modify, and delete BACnet Command Objects
- enable and define zone and BACnet Command Object Start/Stop Time Optimization (SSTO)

Global Commander

The Global Commander application allows you to issue a single command to be applied to a selected group of points in the building system. For example, you can command a set of Terminal Equipment Controller (TECs) subpoints to a specific value in a single operation. You use the Global Commander to:
- command the value of a group of BACnet FLN devices, TEC, LTEC, UC, or Equipment Scheduling zone subpoints
- initialize a group of BACnet FLN devices, TECs or LTECs
- release a group of BACnet FLN devices, TEC, LTEC, UC, or Equipment Scheduling zone subpoints
- set the command priority for a group of logical points
- update the initial values of a group of BACnet FLN devices, TECs or LTECs
Graphics

The Graphics application allows you to create color graphics of your facility and equipment for point monitoring and point commanding. You can use Graphics to:

- acknowledge alarms from points on your graphics
- add dynamic point information to graphics
- arrange and align multiple controls displayed in the dynamic graphic in rows and columns of the Graphics main window
- associate a point with an object that represents the points and points in alarm
- command points to new values
- create a graphic tree with graphic alarm links
- create an advanced link to a file, email address, Web link, or object and/or application you would like to associate with the graphic link
- create and edit color graphics of your building control system
- create enhanced graphic controls such as gauges and charts
- create, customize, and associate BACnet FLN Device, TEC or LTEC graphics
- drag-and-drop from a graphic to another graphic with Graphic Editor
- import Navigator Application Library
- link graphic files (objects) together
- monitor points in your building
- navigate to alarms on your graphics
- navigate up and down your graphics tree
- print the graphic control
- select Multiple Graphics Controls
- transfer and import/export graphic files
- view your graphic tree
- zoom in and out on portions of your graphics

The following diagram illustrates the main functionality for using the Graphics application. However, depending upon your situation you may only be responsible for monitoring and commanding points, and will have no input into creating the graphic drawing. Also, the order of the functions can be somewhat varied. For example, you can modify the display properties for the background drawing anytime after you have inserted it into the Graphics application. On the other hand, you cannot begin associating background objects to points until you have changed the display to Dynamic Mode.
Object Selector

The Object Selector allows you to retrieve a list of the objects available for use with other Insight applications. An object is an entry in your database, which you can use with Insight applications. With Object Selector, you can:

- browse the list of objects
- select the objects you need
- bring them to the application you are working in

The Object Selector is divided into two sections:

- The Look In Section allows you to display, select, and bring objects to the application you are working in.
- The Find Objects That Match These Criteria section allows you to select your own criteria to search the Insight database for a list of objects that displays in the list box section.

Point Details

The Point Details application is used to view information about a logical point defined in your building system. Point Details displays the following information about a logical point:

- Point definition information describes the characteristics of the point and is entered in the Point Editor application. For example, the point definition includes the point name, description, address, and alarm characteristics.
- Point status information may vary for a point as changes occur in the building system. For example, a point state could be an alarm state of a temperature point and a point value could be the temperature sensed by a space temperature sensor.

**NOTE:** If a point is not alarmable, Point Details indicates this by graying all alarm attribute fields.

When viewing point details, note that:

- You can only view point details for one point at a time.
- You cannot change any of the information on the window. If you want to change a point, you must edit the point definition. For more information, see the Point Editor online help.
- The point information that appears on the window is not dynamic. If the value or state of a point changes, you must redisplay Point Details to view this change.
- The physical address for point types, including a LENUM point, is shown in the Physical Address(es) field.
- The command priority for FLN subpoints displays the priorities NONE, OVRD, PDL, EMER, SMOKE, or OPER for that subpoint.
NOTE:
If you want to display dynamic information for multiple points, you can display point information blocks in the Graphics application. Point information blocks display changes to the point state or value as they occur. For more information, see the Graphics online help.

Point Editor
The Point Editor application enables you to enter point information into the Insight software so that the Insight system can monitor and control the equipment connected to the point. You can do the following with Point Editor:
- copy a point
- create a point
- delete a point
- modify a point
- open a point
- set up point alarm management

Point Group Editor
The Point Group Editor application enables you to organize the points in your system. The following examples shows some ways of organizing your points:
- by location (rooms, buildings, floors)
- by functions (security, maintenance)
- by equipment (fans, sensors, pumps, chillers)
Grouping points allows you to organize points and create hierarchies among the points. With groups, you don’t have to remember all the point names in your system because you can open the group to display the contents. This is helpful when editing databases, or interpreting changes in dynamic graphics.

NOTE:
You can’t command point groups because they don’t exist in the field panel. However, you can always display the points in a group and command them individually.

Point Summary Report
The Point Summary Report application enables you to create reports by selecting field panels, and choosing the fields that will display in the report. In addition, you can export a report from the Point Summary Report application to a Microsoft Excel spreadsheet application. From Excel, you can modify the report, save the report as an Excel worksheet, and print the report.
NOTE:
You can't save a report in the Point Summary Report application itself—once you close the Point Summary Report application, the report information is not stored. To work around this, either print the report or export the report data to Microsoft Excel and save it from there.

The Point Summary Report application allows you to:
- create a new report.
- create labels for TECs using Microsoft Excel.
- export report data to a Microsoft Excel spreadsheet.
- print a report.

Program Editor

The Program Editor application enables you to create control programs with the Powers Process Control Language (PPCL). PPCL is the programming language used to write field panel control programs for building control and energy management functions. PPCL consists of various types of statements, each performing a different task. Put together, these statements become ordered instructions called control programs, which are executed at the field panel. These control programs instruct the field panel on how to perform calculations, evaluate control strategies, perform time-based actions, and command points.

CAUTION
A change in just one line of a PPCL program can affect the operation and performance of an entire system. Any changes to PPCL programs should be carefully considered. Inexperienced users should not attempt to apply PPCL programs to building control.

The Program Editor allows you to:
- assign colors, fonts, and font sizes to different elements of a program.
- bookmark specific program lines.
- build statements using the command assist feature.
- compile a single program line or the entire program.
- copy or move program lines.
- create a new program.
- enable and disable program lines in a field panel.
- enable and disable the display of a point's current value in the tooltip.
- import and export programs between databases (for example, program libraries).
- modify or delete existing programs.
- open an existing program.
- open multiple programs.
- renumber program lines automatically.
- search for text in a program.
Before you begin using the Program Editor, you should complete the following tasks:

- Obtain formal instruction in PPCL programming.
- Be familiar with the equipment controlled by the PPCL program and understand the configuration of the equipment installed in your facility. For information on viewing the setup of your building control network, see the System Profile online help.
- Understand how points are set up in your system and how changes to PPCL code will affect the operation of these points. Identify any points associated with life safety, fire, or smoke control and take any necessary precautions when working with these types of points. Also, identify any points that influence the operation of other points and evaluate how a change will affect these points and take any necessary precautions.

Remote Notification

The Remote Notification Option application allows Insight to send alarm and event information to external devices. These devices can be alphanumeric pagers, numeric pagers, phones, SMS, or e-mail (includes cellphones enabled with Internet service). Once a notification is sent, a contact responds to the notification. A contact is a potential notification candidate for alarms and events, and has devices by which to be notified if these conditions arise. Remote Notification Option can run at either an Insight Server or Client workstation, and it runs independently of Insight operation.

CAUTION

If you install a Remote Notification Option server on an Insight client, verify that the Insight RENOServer service is not running (set to disabled) on the Insight database server. If it is, you will receive duplicate notifications.

Remote Notification includes the following features:

- ability to add new wireless carriers, modify, and delete existing wireless carriers.
- ability to provide SMS via text message
- adding multiple E-Mail Addresses
- alarm escalation
- device grouping
- integration with other notification systems and third party devices
- manual notification
- notification for all points within the APOGEE database, regardless of origin (for example, BACnet or other system points that don’t reside in an APOGEE field panel)
- notification for BLN events
- notification for Standard and Enhanced alarms, and the ability to customize notification for each alarm level
- support for calling into the system to hear and stop notification
- the ability to stop and restart escalation
How Remote Notification Works

Remote Notification Option allows the Insight software to send alarm and event information to external devices. These devices are alphanumeric pagers, numeric pagers, phones, SMS, or e-mail (includes cellphones enabled with Internet service).

An alarm is a way for the Insight software to notify you that the value of a point in your building system is outside of its normal operating range. An event can be a Building Level Network (BLN) failure, panel failure, a device return from failure, etc.

**NOTE:** Remote Notification Option excludes Insight failures.

Remote Notification Option can run even while no one is logged onto the system, which allows notifications to be sent whether or not an operator is logged on. Once a notification is sent, contacts respond to the notification. A contact is a potential notification candidate for alarms and events, and can have devices by which to be notified if these conditions arise. Contacts will only be notified for points for which they have at least Read Only access.

**NOTE:**
Responding to notification indicates that the contact has received Remote Notification Option. It does not mean that the contact has acted on whatever caused the alarm or event.

Report Builder/Viewer

The Report Builder application allows you to customize predefined reports. A report displays information about your building system. You can use reports as a reference or as a troubleshooting mechanism. The Insight product offers a wide range of reports designed to give you specific information concerning your building system. For a detailed list of all available reports, see the Report Builder online help.

When you select a report type, Report Builder opens the report definition for the report you want to create. You can configure each section within the report definition to ensure the report gives you the information you need. Once you have configured the report definition, you can save the report definition for later use, and run the report.

Report Builder allows you to:
- create report definitions
- open multiple report definitions to modify or run
- schedule report definitions to run at defined times using the Scheduler application.

For more information on scheduling, see the Scheduler online help.

The Report Viewer application allows you to display previously-saved report definitions on the screen, printer, file, or e-mail. To view reports on your screen, you must check the **Screen** check box in the **Output** section of the report definition.

When you run a report definition configured to output on the screen, the Report Viewer opens and displays the report based on the information you provided in the report definition. Report Viewer also allows you print a report, export the report to a file, or e-mail the exported file.
You can run a report from within the Report Builder or click from the Insight Main Menu and select a report definition to run.

Report Viewer allows you to:
- copy report data to the clipboard
- enable and disable the display of a point's current value in the tooltip
- export report data to a file
- export report data to a file and then send the file as an e-mail attachment
- print a report
- view a report

Scheduler

The Scheduler application allows you to schedule zones, events, reports, and trend collections on the Insight calendar. Schedules contain start and stop times for equipment events and zones and start times for reports and trend collections.

The Scheduler application also allows you to edit schedules and calendars in BACnet devices. You can add, modify, or delete BACnet objects in both native Siemens BACnet field panels and in third-party field panels. All schedule and calendar objects for Siemens BACnet field panels are stored in Insight database.

NOTE: Third-party BACnet field panels must be online to edit, view, or delete schedules or calendars.

The Scheduler allows you to:
- ability to optimize the BACnet schedules
- add, modify, or remove exception schedules
- add special assignments:
  - day shifts
  - replacement days
  - TOD special days and holidays
- configure BACnet schedules through the Basic as well as Advanced BACnet Schedule Properties dialog box
- edit schedules and calendars in devices
- filter schedule by type and your access level
- schedule events, zones, reports and trend collections using the following information:
  - date started
  - time started
  - time ended (zones and events only)
  - number of days spanned (zones and events only)
  - frequency with which an event is repeated
  - the term (until a date, for a number of weeks or days, continuously)
override event and zone schedules
• schedule reports to automatically produce daily, weekly, monthly, quarterly, end-of-month, and end-of-quarter reports. Reports are sent to a designated printer, or a file that can be imported into a spreadsheet using a macro.
• schedule trend data collections to the workstation for trend data storage and reporting.
• support SSTO (an energy optimization application) to optimize BACnet schedules
• view details of Schedules, Objects, Notes and Legend
• view schedules in Daily, Weekly, Replacement Days and Timeline Views

System Activity Log
The System Activity Log application allows you to monitor and print reports about the activities that are logged in your system, including BACnet information. The types of activity include: alarm acknowledgment, object changes, data uploads and downloads, logon and logoff activity, and more. You can determine which information to display on your screen or send to your printer.

NOTE: The Insight software also includes a System Activity Log report that allows you to collect alarm, system, and user information stored by the System Activity Log application and generate a report that can be scheduled using the available Scheduler Report option.

NOTE: You can configure the amount of data stored in the System Activity Log using the project settings in System Profile. For more information, see the System Profile online help.

System Profile
The System Profile application gives you graphical, system-wide control for defining, configuring, and maintaining your entire building control network. You can use the System Profile application to:
• add BACnet FLN devices, BIMs, DPUs, MPUs, PXMs, TECs, and UCs to the FLN
• add BLNs to the MLN
• add field panels to the BLN
• add Insight workstations to the MLN
• add LTECs to an FLN on an MBC that supports LONWORKS® technology
• add modems and establish their remote connections to an Insight workstation or a field panel
• auto logon to 64-bit operating systems using the Insight Definition dialog box in the application
• configure a BACnet MS/TP FLN from the BACnet Field Panel Definition and MS/TP FLN Settings dialog boxes
• configure a MS/TP network that may support up to ninety-six MS/TP devices
• configure and control alarm destinations and communications
• configure BACnet MS/TP BLN that may support up to 10 devices. BACnet field panels, with Firmware Revision 3.1 or later, can reside on BACnet IP or MS/TP networks.
• configure event printers for an Insight workstation or a field panel
• configure MS/TP BLN and FLNs
• define BACnet Event Enrollment Objects through the Point Editor and System Profile applications
• define custom bitmaps to represent items in the system tree.
• delete the application of MSTP FLN devices for firmware revision 3.2.2 or later without deleting the devices
• edit the PPCL program and points of Unitary Equipment Controller (UEC) and Programmable TECs (PTEC) in the Siemens Launch Pad application for firmware revision 3.3 or later
• globally view and manage phone connections for Auto-Dial equipment
• graphically copy or move a device or network from one location in the system tree to another
• graphically define, organize, and enable equipment on the Management Level Network (MLN), Building Level Network (BLN), and Floor Level Network (FLN)
• print labels for MBC modules
• support Unitary Equipment Controller (UEC) on MS/TP, Point Pickup Modules (PPM) and COMPACT I/O Point Counts
• view and manage BACnet objects and device, including third-party BACnet objects and devices, using the BACnet Object Browser application.

When To Use System Profile
Your facility is defined and configured when the Insight software is installed. Once configured, you can use System Profile to add new devices, change existing devices, and delete devices. You can change the definitions of existing network trunks and devices, determine global settings for the network and a Insight workstation, and connect (or disconnect) devices for the entire facility.

In addition, the system tree gives you a graphical overview of the entire network. Each network trunk and device is represented by a unique icon that you can copy as needed to represent the current structure of your building.

System Profile offers flexibility in maintaining the configuration of the network because you can do either of the following equipment connection methods:
• Use System Profile first to define device parameters and position of the device in the network before physically connecting the device.
• Connect the device first, and then use System Profile to define device parameters and position it in the network corresponding to its physical connection.
• Use the System Profile application to show logical grouping of devices in your facility.

For example, you can use System Profile to define the parameters of a new field panel on the BLN and then connect the panel or you can connect the panel first and then define its parameters and network position. You do not have to connect the devices before using System Profile to define associated parameters.
NOTE: System Profile can define a BLN and upload it to automatically add all field panels for the BLN.

**BACnet Object Browser**

The BACnet Object Browser application allows you to browse Siemens BACnet devices and objects and third-party BACnet devices and objects for diagnostic purposes. Launch this application from the System Profile application by selecting either a BACnet BLN or BACnet field panel, and then from the **Tools** menu click **BACnet Object Browser**. The BACnet Object Browser displays the hierarchy of a BACnet network and its detailed device and object information.

The main window is divided into three separate panes. The left pane contains a system tree showing the hierarchy of the BACnet network. The root is the entire network, followed by devices on the network, folders of object groups of the same type, and then the objects themselves. The right pane displays all the properties and property values of the object selected in the system tree view. The bottom pane displays any error messages.

Most proprietary property object information is not available unless it's simple data types such as unsigned, float, string, etc. However, the BACnet Object Browser will display proprietary objects in the system tree.

To use this application, you must have either Read-level access (which allows you to view and browse to any available devices and objects) or Configure-level access (which allows you to write properties, import points, reinitialize devices, or use device communication controls as needed) to the BACnet Object Browser. User access level settings are configured through the User Accounts application.

**Time of Day**

The Time of Day (TOD) application enables you to automatically command points based on a daily schedule or yearly calendar. Points used in TOD schedules must already be defined in the Insight Point database. If you are building a new schedule or entering commands for a new point, be sure that you have entered the point using the Point Editor before writing TOD schedules.

Time of Day scheduling allows you to:

- create temporary new commands for days that have no scheduling
- determine when systems and controls are activated or deactivated based on occupancy and vacancy
- disable specific points in a group for maintenance
- operate your facility more efficiently
- override existing commands to plan for holidays and special days

Time of Day consists of the following three parts:

- Occupancy schedules are where you assign absolute times (specific hour and minute that the point should be commanded) to occupancy labels.
- Control schedules are where you enter the TOD commands for the points in the zone. Control schedules contain specific commands for equipment and setpoints.
Zones are groups of points put into a Time of Day schedule. All points that are controlled by Time of Day must be placed into zones. For more details, see the APOGEE Scheduling Application Guide (125-2211).

**Trend Definition Editor**

The Trend Definition Editor application allows you to collect information about how your building control equipment is operating over a specified time period. With the Trend Definition Editor, you define trend definitions that provide a historical record of both analog and digital point activity. You can also monitor the changes in value or state for a point. You define whether point data at the field panel is sampled by time-interval trending or by COV (Change-Of-Value) trending.

The **Trending Wizard** in the Trend Definition Editor guides you through the process of creating trend definitions for multiple points, adding the points to a Trend Collection Report, and scheduling the report. It also allows you to modify existing trend definitions, reports, and schedules.

You can use collected trend data to:

- assist in designing maintenance and service schedules
- assist in loop tuning
- help with equipment troubleshooting
- maintain a history of point activity over time
- monitor operating conditions, energy consumption, and equipment run-time schedules

**User Accounts**

The User Accounts application enables you to manage access and security for Insight workstations and field panels on a specified Building Level Network (BLN), including BACnet BLNs. By creating individual accounts, a system administrator can grant users access to objects and applications in any Insight workstation on the Management Level Network (MLN). The administrator can also grant access to objects and functions residing in field panels on a specified BLN. Users without a high level of access to User Accounts can only view their own account.

Specifically, a system administrator can:

- assign access levels to access groups
- assign access levels to custom buttons (up to ten)
- assign access levels to field panel functions residing in the field panels on a specific BLN (BLN accounts only)
- assign access levels to Insight applications (Insight accounts only)
- define the users, through individual accounts, who can access a specific BLN
- define the users, through individual accounts, who can access the Insight applications
## Appendix

Designer supports filters for the following drawing applications:

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<thead>
<tr>
<th>Applications</th>
<th>Extensions</th>
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Glossary

A

Access Group
Grouping objects (points, point groups, programs, graphics) with similar characteristics. Access groups are assigned an access level that applies to all objects in the access group. See Access Level.

Access Level
Determines your ability to access objects, Insight applications, and field panel functions. Insight access levels include: No Access, Read Only, Command, Configure/Edit. BLN access levels include: No Access, Read Only, Command, Edit.

Account
See User Account.

Active Window
The window you are currently working in. The active window receives the next action you perform.

Address Assistant
A feature of the Point Editor application that helps you set up each part of a point address.

Advanced FLEX String
A feature of the System Profile application that allows you to override the AT command for modem drivers on your network.

Alarm
A means for the Insight workstation to notify you that the value of a point in your building system is outside of its normal operating range, and action should be taken to correct the situation. See Point Alarm.

Alarm Acknowledgment
Your response to an alarm by reporting receipt of the alarm from an Insight computer or field panel connected to the same Building Level Network (BLN) as the alarm.

Alarm By Command State
A point attribute that indicates the point has been commanded into alarm by an operator or by the control program. The point remains in this state until it is commanded back to the Normal state by an operator or control program.

Alarm Destination
A grouping of devices on the MLN (such as Insight computers, field panels, and printers), which receive the same alarm information. Point alarms are routed to every destination associated with the destinations assigned to the point.

Alarm Detection
The ability for a field panel to determine an alarm condition and then report the alarm to the designated alarm receivers. If an alarm receiver is off-line, detected alarms are stored and displayed when the receiver is online again.

Alarm Differential
A buffer, above or below the alarm level, that a point in enhanced alarm must cross before it reports a change in alarm level. The alarm differential determines when a point is no longer in the reported alarm level. For example, a point fluctuating near the alarm level will continue to be in alarm until it reaches an acceptable differential level below the alarm level.

**Alarm Distribution**
The circulation of alarm activity throughout your building system. Alarm distribution is achieved by defining Destinations. See Alarm Destination.

**Alarm History**
A log of every alarm received by Insight.

**Alarm Issue**
An alarm issue is a point, in alarm, that you designate with the Alarm Issue Management application, which allows you to manage an alarm from its creation to resolution.

**Alarm Issue Management**
A strategy you use to acknowledge, assign, answer, resolve, and clear alarms. Alarm Issue Management allows you to track alarm information and define the conditions that must exist in order for an alarm to be issued for the point.

**Alarm Issue Management Editor**
An application that allows you to create contacts and equipment groups.

**Alarm Level**
An offset value above or below the setpoint that triggers an alarm when reached. If a point uses enhanced alarming, alarm levels are used to trigger alarms at offset values above or below the set point. For example, if the set point is 70° and the alarm level is defined as 4° higher than the set point, the alarm level is 74°.

**Alarm Management**
A management process that allows you to define, route, acknowledge, and resolve alarms. Alarm management lets you determine where alarm information is sent and define the conditions that must exist in order for an alarm to be issued for the point. See Standard Alarm Management; Enhanced Alarm Management.

**Alarm Message**
A user-defined message, entered in Point Editor or System Profile, that typically gives instructions on what to do if a point goes into alarm. See Point Messages.

**Alarm Printer**
A device located on the Building Level Network (BLN) that can be designated as an alarm receiver to print incoming alarms.

**Alarm Priority**
Attribute assigned to a point alarm that ranks the severity of an alarm in your building system. A point can have up to six alarm priorities; Level 1 for the most critical alarms and Level 6 for the least critical alarms.

**Alarm Receiver**
A field panel, Insight computer, or printer in your building system designated to receive alarms.

**Alarm Status**
The Insight application that allows you to view and manage point alarms and BLN messages received from your building system. The Alarm Status window includes
functionality for sorting point alarms, acknowledging point alarms, and printing the point alarm or BLN message list.

**Analog Bar**
An object in a dynamic graphic (similar to a thermometer) that monitors values for analog points. See Commanding Analog Bar.

**Analog Input (AI) Point**
A point that receives a continuous variable signal. For example, flow rate sensors (water or air), temperature sensors (room or duct), pressure sensors (static or velocity), and humidity sensors (room, duct or outdoor).

**Analog Output (AO) Point**
A point that sends a continuous signal to command equipment. For example, dampers, valves, or fan inlet vane controllers.

**Analog Point**
A point that uses a range of numerical values to represent a continuously changing condition, for example, damper position and flow rate. Analog points can be input (variable information from the building to the field panel) or output (variable commands from the field panel to the building).

**Analog Point Value**
A measurement of the properties of an analog point-like temperature or pressure. The analog bar displays analog point values in a dynamic graphic.

**Answer**
Provides a method of explaining what steps were taken to correct the alarm issues, including multiple answers.

**APDU**
An application protocol data unit (APDU).

**Argument**
A type of variable whose value is not a direct function of another variable. Arguments can represent the location of a number in a mathematical operation, or the number with which a function works to produce its result.

**Arrow**
An object in a dynamic graphic that displays and controls values for an analog point.

**Assign**
Allows you to specify the contact in Alarm Issue Management who is responsible for investigating an alarm issue.

**Associated Point**
A background object (symbol), such as a fan or pump, which is joined to, or associated with, a point in your building or with another graphic.

**Association**
In the Graphics Application, a connection or link between a background object and a point, or between a background object and a dynamic graphic file.

**Auto Clear**
Auto Clear is the option of automatically choosing to clear alarm issues when they become resolved and the point returns to NORMAL.
One of three views the Insight computer has of a remote Building Level Network (BLN) trunk. Automatic instructs the Insight computer to connect, send, and disconnect automatically. An automatic connection to a trunk is done over leased lines without explicit instructions. See Direct; Explicit.

**Automatic Trend Collection**
The process by which the Insight computer is notified whenever a trend buffer in the panel exceeds a pre-determined threshold, calculated to be 80%. When trend data is sampled at the panel and the 80% storage capacity is reached for a point, the panel notifies the Insight computer to collect the trend data. The Insight computer responds by collecting trend data at the panel for points whose threshold has been reached. The field panel then resets its level marker for the trend buffer and the "watch process" of auto-collection starts over.

**Automation Level Network (ALN)**
The communication trunk connecting Insight computers and field panels in your building control system. You must have an ALN Account in order to access and perform operations at a field panel on a specific ALN. See Building Level Network (BLN).

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**B**

**Background Graphic**
The basic drawing of your building control that represents the physical parts of your system, including ducts, mechanical equipment, and sensors. Background graphics are used with the Graphics application. See Dynamic Graphic.

**Background Object**
A picture created in the background graphic that appears in the dynamic graphic to represent a specific unit of HVAC equipment like a fan, chiller, boiler, sensor, and damper.

**Backup**
The function of backing up your data in Insight by making a copy of it on another data storage device.

**BACnet**

**BACnet Backup**
A feature that backs up a database in selected third-party BACnet field panel (device) to an Insight workstation, if supported by the device.

**BACnet Command Object**
Contains lists of actions that are performed based on the present value of the command object. Different lists of actions can exist for each value. An action list element consists of what device, object, and property you want commanded and the value to command it to.

**BACnet FLN Device**
A BACnet device used to provides a method to pass and receive information on a BACnet/IP or BACnet MS/TP BLN networks. The device can be a logical or physical device that is grouped with other such devices on a MS/TP FLN. Groups of BACnet
FLN devices can be a mix of either Siemens devices and/or third-party devices in a logical or physical grouping. Physical devices connect to the network through an FLN port on a BACnet field panel with Firmware Revision 3.1 and later. Logical devices connect to other network segments and communicate through a BACnet router.

**BACnet Object Browser**
The BACnet Object Browser is an application that allows you to browse Siemens BACnet devices and objects and third-party BACnet devices and objects for diagnostic purposes.

**BACnet Restore**
A feature that restores previously backed up databases from an Insight workstation to selected third-party BACnet field panel (device), if supported by the device.

**BIM**
See Bus Interface Module.

**BLN**
See Building Level Network.

**BLN Account**
Grants you access to all the field panels on the designated BLN. See User Account.

**BLN Message**
System-based messages that provide information about building system activity (invalid logon attempt, PPCL program statement failures).

**Bookmarks**
Lets you mark a particular program line so that you can quickly locate the line in the program code. The position is anchored to the program line and moves with that line when other lines are added or deleted from the program.

**Building Level Network (BLN)**
The communication trunk connecting Insight computers and field panels in your building control system. You must have a BLN Account in order to access and perform operations at a field panel on a specific BLN.

**Bundled Point**
A logical point that monitors and commands several physical points for a single piece of equipment. This allows you to control the equipment without having to reference each physical point separately.

**Bus Interface Module (BIM)**
A point expansion device that resides on the FLN and provides additional point capacity to a field panel. A BIM supports any combination of point modules that include a variety of digital and analog inputs/outputs.

**C**

**Cabinet**
See Field Panel.

**Calendar**
See Insight Calendar.

**Change-Of-Value**
See COV.

**Change-Of-Value Limit**
See COV Limit.

Clear
Removes the resolved alarm issue from the Resolved Alarms Waiting to be Cleared section in the lower half of the Alarm Issue Management window.

Cloaking
Allows you to remove a field panel from the System Profile tree. This hides BACnet devices that you don't want to be seen on an Insight workstation and prevents the Discovery feature from constantly re-adding them to a BLN.

COMPACT
A type of field panel that is similar to an MEC but cannot have FLNs assigned to it. COMPACT points work with CrossTrunk and can be exported to BACnet.

COM Port
The serial port on the Insight computer that connects to a field panel, either by a serial cable and truck interface (TI), or by a modem.

Combined Graph
A graph using a combination of historical data plots and dynamic data on one graph. If a point is not trended at the Insight computer or field panels, then no historical values appear for that point.

Comma Separated Value
Denotes an ASCII file type that can be readily imported into a spreadsheet format. CSV is used by the Advanced Report Output Options.

Command
An instruction evaluated by the computer.

Command Access
Level of access, used in Insight and BLN accounts, that allows you to read and command objects.

Command Priority Array
Allows you to view and/or the priority level(s) at which a user is able to command and relinquish at. Commandable BACnet properties have an associated Command Priority Array which stores commands issued to the property.

Command Priority
A point attribute that determines whether an operator or a particular control program is responsible for controlling the point. A command priority is assigned to each point. There are five priority levels. A hierarchy has been established to define which source has the priority over another to change a point's value. See OPER; SMOKE; EMER; PDL; NONE.

Commander
The Insight application that allows you to put an output point (or a virtual input point) into OPER (operator) command priority and temporarily take control of the point. OPER priority overrides the PPCL program statements that normally control the point.

Commanding
Manually overriding the Insight program instructions for an output point or a virtual input point. Point commanding changes the command priority of the point from NONE to OPER, SMOKE, EMER, or PDL. See Commander.

Commanding Analog Bar
An analog bar that monitors the point values, as well as allowing you to command, or change the value, of the analog output point.

**Comment Line**
Information that is written into the PPCL program but is not interpreted as a program command. The compiler skips over the comment line during compilation. Comment lines allow you to enter text information describing the functionality of a specific section of code. Comment lines are helpful for describing subroutines and areas of program code that are difficult to understand.

**Communications Trunk**
The main data link between devices on the Protocol 2 (P2) trunk.

**Compliance Support Option**
Insight option that allows detailed tracking of modifications and deletions of objects. With this option, you can track which property of an object was changed, its value before and after the change, why the change was made, who authorized the change, and where the change was made from. This provides audit trail functionality to support compliance with federal regulations (e.g., 21 CFR Part 11).

**Condition**
The result of a comparison between two values.

**Configure**
To set the parameters in a report definition section.

**Configure/Edit Access**
Level of access, used in Insight accounts, that allows you to read, command, and configure objects.

**Constant**
A value that can be added to trend reports for a future calculation.

**Contact**
Potential notification candidate for alarms and events. A contact can have devices by which to be notified if these conditions arise. There are two types of remote notification contacts: those who work with Remote Notification Option on a daily basis (they already have Remote Notification Option accounts and access levels defined); and those who don’t work with Remote Notification Option (they don’t have Remote Notification Option accounts), but who want to receive remote notification for informational purposes only. See also Emergency Contact.

A contact is a person who may be assigned to investigate an alarm issue in the Alarm Issue Management application.

**Control Properties**
A feature of the Insight Graphics application that allows you to add dynamic point information to a graphic in order to monitor and command points graphically. Graphics controls include point information blocks, analog bars, arrows, and graphic links.

**COV**
A method of sampling a point at a field panel. A COV is a value that represents the amount of change in a measured reading of an analog point (such as a temperature sensor reading). A trend method that scans field panels for changes in a point value or state based on a pre-defined limit.

**COV-Based Samples**
Trend samples taken by the field panel for specified points with a Change-Of-Value (COV) in either point value (for analog points) or point state (for digital points).
COV Limit
The amount of change that an analog point can encounter before the Trend Definition Editor reports the change. The minimum value of the COV limit is the value of the slope for the analog point. The COV limit is entered in the Point Editor application when you define points to Insight.
This feature is only available for Firmware rev. 13 or higher.

CSO
Compliance Support Option.

CSV
See Comma Separated Value.

D
Data Markers
A bar (in bar graphs), dot or symbol (in line and scatter graphs), or shape (in pie or doughnut graphs) that represent values.

Database
An organized collection of data. The data within a database is composed of records that you can create, read, modify, or delete when you use the Insight system.

Database Transfer
The Insight application that allows you to manually upload and download the Insight system databases between the Insight computer and the field panels. This is necessary in the event of data loss at either site due to a disruptive event such as hardware failure, accidental erasure, or a field panel cold start.

Day Shift
A one-time substitution (shift) of one day's schedule to another day. For example, Monday's scheduled equipment events may be shifted to a Saturday. Scheduled reports are not affected.

Debugging
A process that tests the logic of the program for errors. A program is said to have "bugs" when it fails to function properly.

Default Graphic
A graphic that displays automatically when you open the Graphics application.

Delimited Format
A file format in which a delimiter, such as a comma or tab, separates each field. Delimiters are used for transferring data to spreadsheets.

Delimiter
A character used to separate information.

Decision Tables
Provides a visual representation of how specific equipment interacts with other equipment during each mode.

Destination
A group of devices on the MLN (such as Insight computers, field panels, and event and alarm printers) that receive the same alarm information. Point alarms are routed to every destination associated with the destinations assigned to a point. See Alarm Destination.
Device
Alphanumeric pager, numeric pager, SMS, e-mail, or telephone number by which a contact is notified of alarms or events.

Dial-in
A field panel or other network device calling from a remote site to the host Insight computer or to another device on the network.

Dial-out
A call from the host Insight computer, or host caller field panel on the network, to a remote site.

Dial-up
The Insight feature that allows an Insight computer or field panel to automatically call and connect to remote sites through a modem and phone lines.

Digital Input (DI) Point
A point that receives a two-state signal such as On/Off and Open/Closed. For example, low temperature detectors, differential pressure switches, flow proof switch, and door closures.

Digital Output (DO) Point
A point that sends a two-state signal such as On/Off and Open/Closed. For example, 2-speed fan motor starters, 2-position valves and dampers, pump motor starters, lighting switches, and chiller and boiler switches.

Digital Point
A point that accepts a two-state signal such as On/Off; Open/Close; and Yes/No, to represent the status of field equipment like fans, chillers, pumps, and flow proof switches. A digital point is either latched (sustained contact) or pulsed (momentary contact). See Analog Point.

Direct
One of three views the Insight computer has of a remote BLN trunk. Direct instructs the Insight computer that the phone line to the field panel is a Direct (RS232) connection or leased line (the modem is not used). Direct is generally used for tool connection to a field panel for development and testing. See Automatic; Explicit.

Direction
The arrow rotation that points in the direction of a point value. For analog points, the arrow points in several directions depending on the point value. For digital points, the arrow points in one of two directions.

Discovery
The discovery or detection of BACnet devices and objects on existing BACnet networks.

Domain
A collection of computers and users that share a common database and security policy that is stored on a Windows Server domain controller. Each domain has a unique name.

Download
The transferring of data from the Insight computer to a field panel. See Upload.

Duration
The length of time an equipment event takes, from the start time to the end time, spanning up to seven days. The minimum duration is one minute.
Dynamic COV
Dynamic Change of Value. The Field Panel will automatically change the points (LAO or LAI) COV limit in an attempt to obtain approximately 1 COV per 100 seconds. The algorithm will increase the COV limit if the point is generating too many COV’s and decrease the COV limit if the point is more stable. Using Dynamic COVs will optimize the number of COVs you receive from a point, ensuring you receive important data without generating excessive network traffic.
This feature applies to MECs\MBCs\RBCs\SCUs with Firmware Revision 2.0 or later.

Dynamic Mode
The run mode of a dynamic graphic where graphic links are active and you can command points. Dynamic Mode does not let you add or edit control properties such as point information blocks, analog bars, arrows, and graphic links. See Edit Mode.

Dynamic Graph
A type of graph that gathers point values, plots the values in a graph, and updates the values on the graph as changes to point values occur in the field panels.

Dynamic Graphic
A background graphic to which you add dynamic point information such as point information blocks, analog bars, associated points, and graphic links. A dynamic graphic represents information about physical points. The background graphic does not become a functioning dynamic graphic until you associate the background objects (symbols) to either points or dynamic graphic files. It is at this point that you can graphically monitor and command the point. See Background Graphic.

Dynamic Plotter
The Insight application that allows you to create a graph using historical trend point values, dynamic point value changes, or a combination of historical and dynamic values. You can use the graph to analyze and report on point activity within your building system.

Dynamic Point Information
Information that you place on a background drawing to make it a dynamic graphic. Dynamic point information includes information blocks, analog bars, associated points, and graphic links.

E
Edit Access
A level of access, used in BLN accounts, that allows you to read, command, and edit objects.

Edit Mode
The mode of a dynamic graphic where graphic links are inactive and you cannot command points. When a dynamic graphic is in Edit Mode, you can create and edit Graphics control such as point information blocks, analog bars, arrows, graphic links or background associated points. See Dynamic Mode.

Emergency Contact
Device or group that you want notified in case no contact is available during escalation. See also Contact.

Enable
1) The System Profile command that connects a disabled device. 2) The Trend Definition Editor command that enables a trend definition so that collection takes place.

**Engineering Units**
Common units of measurement that represent a point value such as pressure, temperature, voltage, and volume flow rate. For example, degrees Fahrenheit (DEG F), degrees Celsius (DEG C) and Kilowatt-hours (KWH).

**Enhanced Alarm Management**
A management process that allows you to route alarms to the location best equipped to respond to the alarm based on alarm priority (for example, routine maintenance or critical) or operating times (for example, day mode or night mode).

**Enhanced Alarm Message**
A custom message that can be printed or displayed for a point when the point meets the conditions for enhanced alarming. The message typically contains instructions on what to do when the point goes into alarm.

**Equipment**
Consists of a group of contacts who can service a particular piece or type of equipment.

**Equipment Event**
The activation of a physical device, or group of devices, in the Insight system in response to an activity in a specified zone.

**Erase**
Removing an acknowledged alarm from the Alarm Status window. Only acknowledged alarms can be erased.

**Escalation**
Process by which the system calls notification devices in an escalation list until the alarm or event notification is responded to. See also Escalation List.

**Escalation List**
Contains notification devices and/or groups to be contacted upon an alarm condition. Each device or group in an escalation list is referred to as a “stage” of the escalation list. The system moves (escalates) to the next stage in the list if the current one does not respond within a specified amount of time. When a group is contained within an escalation list, all members of that group are notified, even if the first group member stops escalation. See also Escalation.

**Event**
Activation of a physical device, or group of devices, in the Insight system in response to an activity in a specified zone.

**Event Builder**
The Insight application that defines the building activities that place demands on equipment.

**Event Printer**
A device on the Management Level Network (MLN) that can be designated print events in your building system.

**Event Time Span**
The number of day boundaries crossed by an equipment event. For example, an equipment event can have a 30 minute duration yet span one day if it is scheduled from 23:45 p.m. to 00:15 a.m. (military time format). The maximum event time span is
seven days (0 to 6). The Start Time is the time the event begins on day 0. The End Time is the time the equipment event terminates on the last day in the span.

**Execute**

To carry out the instruction of an expression or program.

**Explicit**

One of three views the Insight computer has of a remote BLN trunk. Explicit instructs the Insight computer not to call the field panel automatically so that you can connect and call manually (by explicit command) as desired. Insight applications use Explicit to connect and disconnect. See Automatic; Direct.

**Expression**

A statement that describes a set of variables, constants, or values combined with arithmetic, logical, or relational operators.

**F**

**Failed**

A point status indicator that indicates the field panel is unable to command or read any of the physical points associated with a logical point. This may be the result of hardware failure or a sensor reading outside of its defined limits. See Point Status Indicator.

**Field Panel**

A device in the building system that contains a microprocessor that allows it to monitor and operate building equipment. Field panels provide a termination point for wiring from the field equipment being controlled and the sensors that are monitored by the system. Some types of field panels have the ability to pass information directly to other field panels or a central computer.

Types of field panels include the Modular Building Controller (MBC), the Remote Building Controller (RBC), and the Stand-alone Control Unit (SCU).

**Field Panel GO**

Field panels containing Field Panel GO firmware provide a graphical user interface of a building automation system. You can use it to monitor and control all the points and data across all the APOGEE field panels on an Ethernet-Building Level Network. You can load up to 10 custom graphics into a field panel containing Field Panel GO firmware. Also, any TEC template graphic can be loaded into a field panel containing Field Panel GO firmware if exported to the panel.

**Field Panel Program**

A PPCL program that is stored in a specific field panel. Multiple PPCL programs can be run in a single MBC with firmware revision 2.0 or higher. Each program has its own set of line numbers, resident points, and local variables. Field panel programs can be identified by the extension .PCL (for example, COOLING PLANT CONTROL.PCL).

**Filter**

A method of finding specific object names and types in an access group.

**Firmware**

A program stored on silicon memory chips. The silicon chip is also known as Erasable Programmable Read-Only Memory (EPROM). See Logical Firmware; Physical Firmware; Unitary Firmware; CM Firmware.

**FLN Device**
A controller on the FLN that provides additional point capacity to a field panel or provides individual room or mechanical equipment control.

FLN devices include Bus Interface Modules (BIMs), Digital Point Units (DPUs), Multi-Point Units (MPUs), Terminal Control Units (TCUs), Terminal Equipment Controllers (TECs), and Unitary Controllers (UCs).

**Floor Level Network (FLN)**

A data communications link that passes information from an FLN device to the BLN and from the BLN to an FLN device. The Floor Level Network is used for the exchange of data on all floor levels of a building.

**FLN Trunk**

A data communications link that allows the passing of information to and from computers, field panels and other nodes (usually located within one building) on the network. Also known as Floor Level Network Trunk.

**Flow Control**

A modem communications feature that controls the flow of data in and out of the modem’s transmit and receives data buffers.

**Flowcharts**

A diagram that shows the logical step-by-step progression of an operation and how each decision or action leads to the next.

**Foreign Device**

A "foreign" device is a BACnet device that has an IP subnet address different from those already included on the BACnet/IP network that the device seeks to join. The foreign device may be a full-time node on the foreign subnet or may be a part-time participant.

**Gain**

A factor that converts pulses from a LPACI point into the engineering units that represent point values. Gain can be from 0.001 to 5000.0 engineering units represented by each pulse count. Also known as Gain-per-pulse-edge.

**Graph Data**

A graph that uses one of three types of data: historical, dynamic, and combined. See Historical Graph; Dynamic Graph; Combined Graph.

**Graph Type**

The graphic format that represents data (line, scatter, or bar graph). Dynamic Plotter has 14 different graph types.

**Graph**

A graphic representation of the values from selected points in your building system.

**Graphic Link**

A symbol that connects one dynamic graphic to another to help you organize related dynamic graphics.

**Graphics**

The Insight application that allows you to create color graphics of your facility and equipment for monitoring and commanding points.

**Group**
Collection of Remote Notification Option devices for contacts.

H
Heartbeat
Feature of Remote Notification Option that informs predefined devices or groups at regular intervals that the system is functioning properly.
Hierarchy
The organizational structure of points and point teams. See Parent Level; Point Group Editor.
High Alarm Limit
The highest value an analog point can reach before the point goes into alarm. For example, a temperature point with the high limit set at 100°F will go into alarm whenever the temperature exceeds 100°F.
Historical Graph
A graph that plots trend values that were gathered and stored at the field panel and Insight computer.
Host Caller
The field panel in a remote network that is connected to, or enables, a TIU (Terminal Interface Unit). As a host caller, the field panel calls the Insight computer and receives calls from the Insight computer.
Host Computer
The Insight computer that controls a communications network or another Insight computer.

I
Information Block
See Point Information Block.
Informational Text
A user-defined message, entered in Point Editor, that provides general information or instructions about a point that you can view if the point goes into alarm. For example, the location of a point in a building or a description of what the point is controlling or monitoring. See Point Messages.
Input Point
A point that collects information from the environment (sensors) and provides the information, or input, to the field panel. You use input points to monitor your building equipment. Input points indicate facility conditions such as temperature, relative humidity, flow, static pressure, damper position, and the state of equipment. See Output Point.
Insight
A software program that provides a graphical approach to managing and controlling a building environment using an easy-to-use-interface.
Insight Account
See User Account.
Insight Main Menu
The main menu that allows you to move from one Insight application to another. It also provides context sensitive application launching through drag and drop.

**Insight PC**
One or more PC's that have Insight software installed. Insight allows you to control, monitor, and communicate with field panels in your facility. System Profile allows you to define one master Insight PC and any additional Insight PC's you want to include in your network.

**Instance Number**
A unique number you specify for BACnet objects in a BACnet field panel or device. The instance number combined with the object type gives you the BACnet object ID. Object IDs must be unique per BACnet device.

**Integer**
A whole number (non-decimal number).

**Intercept**
Factor that converts signals that the field panel uses for analog points into the engineering units that represent point values. The formulas used to calculate intercept are determined by the type of field panel or FLN device that contains the point and type of input or output device represented by the point.

**Intersite**
A different site where BACnet devices reside on a BACnet network.

**Interval Trending**
A trend method that scans field panels to collect and record values and states for specified points at pre-determined time periods, for example, once every 15 minutes or once every hour.

**Intrasite**
The same site where BACnet devices reside on a BACnet network.

**Inverted Point**
A point attribute that indicates that the commands used to energize and de-energize a digital output point are reversed. You invert a point in order to command equipment that runs when the point is in the de-energized state.

**Job Site Name**
The custom name of your building control network that appears in the System Profile Tree. See Tree.

**L**

**L2SL Point**
A logical point type that commands one latched digital output point and indicates the status of one latched digital input point (proof). For example, two-state (On/Off) motors that provide proof, such as fan motors. Also known as Logical Two State Latched point.

**L2SP Point**
A logical point type that commands two pulsed digital output points (On and Off) and indicates the status of one optional latched digital input point (proof). For example,
state (On/Off) push-button motors that provide proof, such as fan motors. Also known as Logical Two State Pulsed point.

**LAI Point**
A logical point type that checks the current value of one analog input point. LAI points measure analog input values from sensors such as temperature, flow, pressure, and humidity. Also known as Logical Analog Input point.

**LAO Point**
A logical point type that commands one analog output point. You can use a LAO point to position dampers, valves, and control motors to a desired setting. Also known as Logical Analog Output point.

**Latched**
A digital point attribute that indicates that the point changes states by using a switch (sustained contact with a physical device), such as when you turn a light on.

**LDI Point**
A logical point type that indicates the status of one latched digital input point for a two state (On/Off) device. For example, door contacts, smoke and low temperature detectors, damper end switches, differential pressure switches, and flow and fan proof switches. Also known as Logical Digital Input point.

**LDO Point**
A logical point type that commands one latched digital output point for a two state (On/Off) device. For example, lighting, chiller, and boiler switches, fan and pump motor starters, and 2-position valves and dampers. Also known as Logical Digital Output point.

**Legend**
A key that displays the color assigned to the point, point name, current value, and engineering units. You can decide whether or not to display the legend under the graph.

**LENUM Point**
A logical point type that commands points that have multiple values or states and each value or state has text assigned to it. An LENUM point is a virtual point that stores operational values for applications such as SSTO. Also known as Logical Enumerated point.

**Less Than (LT)**
PPCL relational operator that compares two values to determine if the first value (value1) is less than the second value (value2). The comparison between the two values is true if value1 is less than value2.

**Less Than Or Equal To (LE)**
PPCL relational operator that compares two values to determine if the first value (value1) is less than or equal to the second value (value2). The comparison between the two values is true if value1 is less than or equal to value2.

**Level Delay**
The amount of time the system waits to verify that the point is in alarm once the value crosses an alarm level. The alarm is only reported if the value of the point is in alarm when the delay timer expires. This will suppress alarms when the point is bouncing above and below the alarm level.

**LFSSL Point**
A logical point type that commands two latched digital output points (Fast/Stop and Slow/Stop) and indicates the status of one optional latched digital input point (proof). For example, three state (Fast/Slow/Stop) motors that provide proof, such as two-speed fan motors. Also known as Logical Fast/Slow/Stop Latched point.

**LFSSP Point**

A logical point type that commands three pulsed digital output points (Fast, Slow, and Stop) and indicates the status of one optional latched digital input point (proof). For example, three state (Fast/Slow/Stop) push-button motors that provide proof, such as two-speed fan motors. Also known as Logical Fast/Slow/Stop Pulsed point.

**Line**

A statement of program code assigned to a unique line number.

**Local Variable**

Locations within each field panel that store values for PPCL programs. Local variables function like virtual points except that they require less memory, are predefined, and cannot be directly displayed. Local variables can contain analog or digital values.

**Logical Firmware**

Designed to accept engineering values (Deg F, kPa, psi) for parameters in PPCL commands.

**Logical Point**

Represents a piece of equipment or a building condition you want Insight to monitor or control. Each logical point can have one or more physical and/or virtual points associated with it. The point grouping is referred to by a single, unique logical point name. You reference the logical point when you use Insight to command, monitor, and store information for points.

**Logical Point Type**

An attribute that identifies the number and type (DI, DO, AI, or AO) of physical and/or virtual points that are associated with the logical point. When adding a point to Insight, you must assign it a logical point type.

**Logoff**

Process that terminates your Insight session.

**Logon**

Process that allows you to access Insight applications and databases on the current network by entering your operator name and password.

**LOOAL Point**

A logical point type that commands two latched digital output points (On/Off and Auto) and indicates the status of one optional latched digital input point (proof). For example, three state (On/Off/Auto) motors that provide proof, such as fan motors. Also known as Logical On/Off/Auto Latched point.

**LOOAP Point**

A logical point type that commands two pulsed digital output points (On and Off) and one latched digital output point (Auto). This point can also indicate the status of one optional latched digital input point (proof). For example, three state (On/Off/Auto) push-button motors that provide proof, such as fan and pump motors. Also known as Logical On/Off/Auto Pulsed point.

**Low Alarm Limit**
The lowest value that an analog point can reach before the point goes into alarm. For example, a temperature point with a low alarm limit of 35.0 goes into alarm whenever the temperature falls below 35° F.

**LPACI Point**
A logical point type that counts the number of pulses (momentary contacts) for one digital point. For example, a LPACI point can track electrical consumption by totaling the number of contact closures from a KWH power meter or a flow meter. You can use an LPACI point to total the amount of time a point remains energized. Also known as Logical Pulse Accumulator Input point.

**L-type Sensor**
An analog input sensor that is terminated on a FLN device. See Floor Level Network.

**M**

**Man Machine Interface (MMI)**
The terminal and its interface program that allows you to communicate with a field panel or equipment controller.

**Management Level Network (MLN)**
The communications connection between individual Insight computers in a System 600 building control system.

**Manual Collection**
An option in the Trend Definition Editor that allows you to immediately collect trend data for the selected trend definition.

**Mass Storage Device**
An Insight computer that stores information from field panels. Changes in field panel storage buffers are uploaded automatically to the mass storage Insight computer. If a field panel loses power, the mass storage device downloads data to restore the field panel.

**Master-Slave/Token-Passing (MS/TP)**
Master-Slave/Token-Passing (MS/TP). The BACnet MS/TP protocol uses a token-passing scheme to control access to a bus network. A Master device that holds the token can initiate the transmission of a data frame. All other master and slave devices on the network can respond to requests from this master by transmitting data.

**Metafile**
A type of graphic that stores image information as a series of commands, and then interprets and displays it as an image by the computer software. Metafiles typically use less space than bitmapped images.

**MLN**
See Management Level Network.

**MMI**
See Man Machine Interface.

**Mode**
Modes allow you to establish different set points, alarm levels, alarm destinations, and alarm messages for different building conditions (such as when the building is unoccupied). For points using enhanced alarming, you can define a day mode, night mode, and up to four special modes (for example a warm-up mode). The mode affects where the point goes into alarm and where the alarm is routed.
Mode Delay
Amount of time, in minutes, required for the system to reach a new set point and stabilize after a mode change. For example, a 15 minute mode delay would allow a room 15 minutes to reach its day temperature set point of 70°F from the night set point of 68°F, before the field panel checks that the new set point is achieved. If the set point is not achieved after the mode delay, the point goes into alarm.

Mode Point
A virtual LAO point whose value indicates the mode that an enhanced alarming point is using. For each mode point, you can define a day mode (0), night mode (1), and up to four special modes (2, 3, 4, and 5), for example a warm-up mode. The value of the mode point can be changed by various system conditions such as Time-Of-Day control schedule, a PPCL program, or the position of a switch.

Modem
A device that transmits and receives data through a communication channel, often through telephone lines.

Modular Programming
A method of programming that logically organizes code into common functions, such as operational modes.

Monitoring Analog Bar
Analog bar that displays the current value of a point and updates information as the point changes.

MS/TP
See Master-Slave/Token-Passing.

Name
Unique name assigned to an object that identifies the object in Insight. For objects in MBCs with firmware revision 2.0 or higher, the name can contain up to 30 characters, uppercase and lowercase letters, numbers, periods and spaces. Names can be changed.

Network
A collection of Insight computers, field panels, printers, and equipment controllers that are electronically and physically connected to communicate with each other for sharing building control data.

Network Protocol
A set of rules that governs the way data is transferred across a network.

No Access
Level of access, used in Insight and BLN accounts, that does not allow you to see objects, Insight applications, or field panel functions.

Normal
A point state that indicates a point is in regular operation. The point's value and alarm conditions can be updated by control programs or operator commands. See Point State.

Normally Closed (NC)
A digital input point attribute that indicates the contacts for the point are wired to be closed when no energy is applied to the point.
Notification Class
Contains information required for the distribution of event notifications from a BACnet device. Defines a set of BACnet devices and workstations to receive events from BACnet object assigned to the Notification Class Object.

Notification Device
See Device.

Null
NULL means that there is no command associated with the point's Present Value property.

Null Value
Instructs the Insight software to stop using an exception schedule and to go back (fall back) to the normal weekly schedule. If the weekly schedule is not defined, the schedule default is used.

Object
1) An entry in your database, composed of single or multiple elements.
2) Points, PPCL programs, graphics, zone definitions, event definitions, plots, field panels, TECs, Unitary Controllers, and report definitions that you can view or manipulate.
3) A symbol created in the background drawing, that appears in the dynamic graphic and represents a specific unit of HVAC equipment like a fan, chiller, boiler, sensor, and damper. See Background Object.

Object Selector
The Insight application that allows you to retrieve a list of the objects available to use with other Insight applications. Objects can include points, point groups, PPCL programs, graphics, zone definitions, event definitions, plots, field panels, TECs, Unitary Controllers, and report definitions that have been defined in Insight.

Offset
A value above or below the set point that an analog point must cross in order to be in a particular alarm level range so an enhanced alarm can be issued at that level. The offsets define the ranges of alarm levels. A point enters different alarm levels as it moves progressively further away from the set point and crosses different offsets.

OPER (Operator)
A command priority that indicates an operator has direct control for commanding the point to a new value. The sequence of operation that has been set up in the control program is overridden. OPER is the highest command priority. The control program cannot command the point until it is released to a lower priority. See Command Priority.

Operator Disabled for Alarming
A point state that indicates that the point cannot report an alarm because the alarm reporting capabilities have been disabled by an operator. The point cannot report alarms until it is taken out of the Disabled for Alarming state by an operator or control program. See Point State.

Operator Initials
One to three unique characters that identify a user in Insight. A user’s initials display in logs and reports to identify the user’s activities within the building system.

**Optimization**
Feature of the Remote Notification Option application that enables you to minimize the amount of notifications sent in the case of many alarms. Instead of sending out a separate notification for each alarm, the system sends a single notification that indicates the number of alarms.

**Order of Precedence**
The order in which operators (arithmetic, relational, logical, and special function) are evaluated in a command statement. Operators that have a higher precedence are evaluated before operators that are at a lower precedence. If all the operators in the statement have equivalent precedence levels, then the operators are evaluated from left to right.

**Orientation**
The position of an analog bar in the dynamic graphic. An analog bar can have one of two orientations: vertical or horizontal. Vertical displays the analog bar taller than it is wide; horizontal displays the analog bar wider that it is tall.

**Out-of-Service**
A point state that indicates that the point has been disabled by an operator. The point value and alarm conditions cannot be updated by operator commands or control programs and the point may enter the Failed state. See Point State.

**Output Point**
A point that acts upon the building equipment and is controlled by signals, or output, from the field panel. You use output points to command equipment such as fans, pumps, chillers, valves, lights, and dampers. See Input Point.

**Parent Graphic**
A dynamic graphic designated to have other graphics relate to it. For example, a mechanical room that contains separate systems (and graphics) for boilers and chillers.

**Parent Level**
A higher-level point in the data hierarchy. See Hierarchy.

**Partner**
An Insight computer (or field panel) with a modem. A partner provides communications with a remote BLN. See Building Level Network.

**PDL**
A command priority that indicates a point is commanded by a Peak Demand Limiting (PDL) control program. PDL control is a special energy management program that limits electrical demand by turning off electrical loads when demand approaches a set point (for example, shutting down an air handling unit if it approaches a set point). PDL is the fourth highest command priority level.

**Personality**
Defines how an Insight computer is connected to, and released from, a remote BLN trunk. Personality is the Insight computers view of the remote BLN. The combination of
the three personalities (Automatic, Direct, and Explicit) gives you flexibility in configuring the remote BLN. See Automatic, Direct, and Explicit.

**Physical Firmware**
Designed to accept values for parameters in PPCL commands derived from formulas and calculations.

**Physical Point**
A piece of field equipment plus its physical connection to a unique termination in the field panel. For example, a fan motor starter wired to a single termination in a field panel. A physical point is classified as a digital input, digital output, analog input, or analog output.

**PIB**
See Point Information Block.

**Pivot Point**
The point that the arrow rotates around. You can display or omit the pivot point in the arrow.

**Point**
A piece of equipment (physical) or a value (virtual) that you want Insight to monitor or control. Points are physical (a room temperature sensor), virtual (a room temperature set point), digital (two states), analog (more than two states), input (receives) or output (sends). All points are classified as logical. One or more physical and/or virtual points can be associated with each logical point.

**Point Alarm**
A way for Insight to notify you that the value of a point is outside of its normal operating range and some action must be taken to correct the situation.

**Point Address**
Unique address defined for each physical and virtual point associated with a logical point. The address identifies where a physical point terminates within a field panel and the network where the point information is transferred to.

**Point Attribute**
The characteristics that define a point, such as point address, point state, and command priority.

**Point Database**
A collection of information that describes each point in the building system that Insight controls. The point database contains logical points.

**Point Descriptor**
Text that provides an additional explanation about the application or location of the point and helps you to identify the point on Insight windows and reports.

**Point Details**
The Insight application that displays information about the characteristics of a point defined in the point database. Characteristics include point name, description, address, and alarm characteristics.

**Point Editor**
The Insight application that allows you to add, edit, and delete points in the Insight Point database. The point database contains the points and their characteristics defined in your building control system.

**Point Group**
A cluster of related points grouped logically in order to organize the points in your system.

**Point Information Block**
A block of text on a dynamic graphic that contains point name, point description, and point state or value. Also known as PIB.

**Point Markers**
A symbol (circle, triangle, square) that marks an exact value plotted on the graph.

**Point Messages**
Messages that provide additional information about points in your building system. These messages are attached to points and give instructions or general information concerning the point alarm. There are three types of point messages. See Point Memo; Information Text; Alarm Message.

**Point Memo**
A message you can attach to a point alarm displaying in the Alarm Status window. You can use a point memo to pass along information concerning a point that is not relayed in an alarm message or informational text. Point memos can be read by any Insight on the Building Level Network (BLN).

**Point Specific Graphic**
A dynamic graphic defined to a specific point in the Point Editor application.

**Point State**
A point attribute that indicates the current condition assigned to a logical point. The point states are: Normal, Proofing, Alarm, Alarm by Command, Operator Disabled for Alarming, Program Disabled for Alarming, Out-of-Service, and Failed.

**Point Type**
The logical point classification that indicates whether the point is input or output, analog or digital, and the number of physical points used. You must assign a point type to each point that you add to Insight. The information that Insight requires you to specify for the point depends on the point type. Also known as Logical Point Type.

**Point Value**
A point attribute that indicates the last commanded state (such as On) or the last measured reading (such as a temperature sensor reading) of a logical point. For analog point types, the current value is displayed in engineering units, such as DEG F, GPM, and KWH. For digital point types, the value is displayed as a state, such as On, Off, Auto, Fast, and Slow.

**Powers Process Control Language (PPCL)**
A programming language used to write field panel control programs for building control and energy management functions. PPCL consists of various types of statements, each performing a different task. These statements become ordered instructions called control programs that are executed at the field panel. These control programs instruct the field panel on how to perform calculations, evaluate control strategies, perform time based actions, and command points.

**Primary Contact**
A primary contact is the main trades person responsible for a particular piece of equipment or equipment group. The primary contact displays in bold font in the system tree of the Alarm Issue Management Editor.

**Priority**
See Command Priority.
Program
A collection of instructions combined in a logical order to accomplish a specific task in PPCL.

Program Editor
An Insight application you can use to create control programs with the Powers Process Control Language (PPCL).

Proof Delay Time
The number of seconds before a field panel checks the status of a proof after the point is commanded to a new value. If the point is alarmable and the proof value does not correspond to the commanded value within the delay time, the point goes into alarm.

Proof Point
A digital input point that is monitored to verify equipment is commanded successfully. If the value of a proof does not correspond to the commanded value of an associated output point within a specific proof delay time, the field panel puts the point into alarm. For example, proof points are used for flow proof switches and door contacts.

Proofing State
A point attribute that indicates the field panel is waiting to verify that the value of a proof point corresponds to the commanded value of an associated output point. The point remains in this state for as long as the proof delay time has been specified. See Proof Delay Time.

Protocol 2
The communications trunk that enables Insight computers, field panels, and equipment controllers to communicate with each other and with other devices on the network. Also known as P2.

Pseudocode
A non-syntactical description of program logic.

Pulsed
A digital point attribute that indicates the point is changing states by sending a series of electrical pulses (momentary changes in voltage), such as when you press a push-button on a fan motor starter.

Purge
A method to permanently delete a set of cleared alarm issues stored on your system.

Q
Query
An inquiry about information in the Insight database. You initiate a query by selecting specific criteria that is used to search through the database for information matching your criteria.

R
Read Only Access
Level of access, used in Insight and BLN accounts, that allows you to view objects.

Refresh
Refreshes the Alarm Issue Management screen to include new alarm entries recently received into the Insight database.

**Relinquish Default**
Displays the relinquish (release) default value for the BACnet point. A BACnet point is set to the Relinquish Default setting when there are no commands for BACnet priorities 1 through 16.

**Remote Destination Member**
Remote Insight computers and field panels that deliver messages assigned to a destination. See Destination Member.

**Remote Site**
A network of Insight computers, field panels, and equipment controllers with a modem and a Terminal Interface Unit (TIU) to allow trunk connection. The remote site must match the Host ID defined in the field panel. The remote site must also be the same Host ID for all remote networks in your building control system. Also known as Dial-up Network. See Dial-up.

**Replacement Day Schedule**
A predefined daily schedule that replaces a scheduled day. Replacement days are used during holidays (for example, replace the Monday schedule with the Christmas schedule on December 25th), or to change the schedule in response to unpredictable circumstances (for example, Monday is replaced with Snow Day). Scheduled reports are not affected by replacement schedules.

**Remote Notification**
An Insight application that allows Insight to initiate contact with a notification device in order to provide alarm and event information. Remote notification contacts can check system status and stop notification/escalation.

**Report Builder**
The Insight application you use to configure report definitions. Once you configure the report definition, you can save the report definition for later use, run the report, or schedule the report. See Report Viewer.

**Report Definition Section**
A framed area within a report definition where you configure the parameters of a report.

**Report Definition**
Report templates that provide all the information necessary for creating a report. Each report definition consists of sections you can configure, such as what information displays in the report, where the report gets the information, and how the report presents the information. Each report definition uses different sections.

**Report Viewer**
The Insight application that reads the configuration of a report definition and displays a report based on the configurations. See Report Builder.

**Reserved Words**
Words that are reserved for specific functions and cannot be used as point names.

**Resident Point**
A predefined logical point that permanently resides in the PPCL program in the field panel. Insight references resident points to provide time-based and system status information such as checking the current time and date. Resident points can also monitor alarms, modes of operation, and communications between nodes. Examples
of resident points include alarm count (ALMCNT), battery status ($BATT), day of the month (DAYOFM), and military time (TIME). Also known as Reserved Points.

**Resolve**
Indicates that all work on the alarm issue is complete, the point has returned to NORMAL, and is no longer open.

**Restore**
Copying backed up data to the Insight computer. Current data on Insight is overwritten when data is restored.

**Retrieving**
Obtaining a list of objects that result from a search.

**Routing**
Altering the flow of a program by transferring control to a line of the program other than the next sequential line number.

**S**

**Scheduled Report**
A report assigned to the calendar. Reports can be scheduled as one-time or repetitive occurrences: daily, weekly, monthly, end-of-month, or end-of-quarter.

**Scheduler**
The Insight application that allows you to schedule events, reports and trend collection on the Insight calendar. Schedules contain start and stop times for equipment events and start times for reports and trend collection. See Insight Calendar.

**SDL**
See System Default Language.

**Secondary Contact**
The alternate trades person chosen when the primary contact is unavailable to investigate an alarm issue.

**Secure Mode TEC**
21-CFR-Part 11 TECs featuring a setting that, when enabled, prevents users from accessing the TEC through its RTS port. See also Terminal Equipment Controller.

**Sensor**
A device that monitors or measures items such as temperature, relative humidity, flow, and pressure.

**Set Point**
A virtual point that stores a point value such as a temperature setting. Points that monitor inputs, such as temperature, report actual values. For the system to make adjustments to control equipment, the system must compare the actual point value to the desired value (set point). When you want to change a building condition, you command a single set point rather than having to command several physical points.

**Shifted Day**
Substitutes, or shifts the scheduled equipment events from one scheduled day to another. Reports and one-time equipment events are not shifted from the donor day. All equipment events on the receiving day, except one-time equipment events, are overridden. Reports on the receiving day are not affected.

**Slope**
Numeric factor that converts the signals passed from the field panel (for LAI and LAO points) into the engineering units that represent point values. The formula that calculates the slope of an LAI or LAO point is determined by: the type of field panel or LAN the point is defined in; the type of physical input or output device represented by the point; and whether the point is a physical point or a virtual point.

**Slope Intercept Calculator**
A feature of the Point Editor application that automatically calculates the slope and intercept for LAI and LAO points.

**SMOKE**
A command priority indicating that a point is commanded by a special smoke control program that monitors smoke alarms. SMOKE is the second highest command priority. See Command Priority.

**SMS**
Short Message Service. The transmission of short text messages to and from a device, such as a mobile phone. Once a message is sent, a Short Message Service Center (SMSC) receives it. The SMSC then sends the message to the appropriate device. See also Device.

**SMTP**
Simple Mail Transfer Protocol. Used in sending and receiving e-mail.

**Snapshot**
A feature that creates a bitmap image of a graph and copies the image to the Clipboard.

**Soft Controller**
An Insight option that allows you to create and command points, run PPCL, send and receive COVs, run equipment scheduler, and trend points without a physical panel or physical wiring. In essence, a Soft Controller is a virtual field panel with many capabilities normally associated with physical field panels.

**SOP**
Standard Operating Procedures (SOPs) are any related documentation for the Alarm Issue Management application for specific points, equipment, or generic information.

**Span**
A time measurement describing the number of day boundaries crossed by an event.

**Standard Alarm Management**
An alarm management strategy used for points in all field panels and with any firmware revision. Standard alarming can be defined with or without destinations. If destinations are not defined, alarms are sent to the devices associated with the default Destination 0, or up to four destinations can be defined and alarms are sent to the devices in the destinations.

**Standard Alarm Message**
A custom message that can be printed or displayed for a point when the point goes into standard alarm. The message typically contains instructions on what to do and who to contact when the point goes into alarm.

**State**
The current condition of a digital point. For example, On or Off, Energized or De-energized.

**State Colors**
The colors you specify to represent the different states (On, Off, Open, Closed) of a point.

**State Control**
A dial symbol that monitors and/or commands the values of a digital point. Digital points accept two-state signals, such as On/Off, Open/Close, and Yes/No, three-state signals such as OFF/SLOW/FAST, or multi-state signals such as LENUM (Home/Car/Office/Vacation). The state-signal represents the status of field equipment such as fans, chillers, pumps, and flow proof switches.

**State Text**
Descriptive text that represents the different state of a point, such as On and Off, or Start and Stop. Text assigned to a point state is displayed when you are viewing the point state in Insight applications.

**Statement**
A collection of instructions to the computer in order to perform an operation.

**Subroutine**
A portion of program code referenced repeatedly through one pass of the program.

**Supervised Object**
Object that presents an additional warning and/or requires a user and/or supervisor password in order to be edited or deleted. This protects against inadvertent changes damaging critical system functions, as well as enabling enhanced logging on objects to provide audit trails. Depending on how the object is set up, users attempting to edit/delete the object will either be warned and allowed to continue, be warned and not allowed to continue if they don't have the Compliance Support Option enabled, or be warned and also required to re-enter their user password and/or have a supervisor enter a password to continue. In addition, users are required to explain why the change was made. In order to designate objects as supervised, you must have the Compliance Support Option enabled. See also Compliance Support Option.

**Supervisor**
Users given supervisor rights over all objects that they have Configure access to. When they authorize changes, they enter their Windows User Name and Password. In order to designate users as supervisors, you must have Configure/Edit access to User Accounts and the Compliance Support Option enabled. Administrator accounts are not automatically designated as Supervisors. See also Compliance Support Option.

**System Activity Log**
The Insight application that allows you to monitor and print reports about the activities that are logged in your system. Activities include alarm acknowledgment, object changes, data uploads and downloads, and log on and log off activity. You can determine which information to display on your screen or send to your printer. Changes made to the Point database are recorded in the System Activity Log.

**System Name**
Unique name assigned to an object that identifies the object in Insight. For objects in MBCs with firmware revision 2.0 or higher, the system name can contain up to 30 characters, uppercase and lowercase letters, numbers, periods and spaces. System names can not be changed.

**System Profile**
The Insight application that gives you graphical, system-wide control for defining, configuring, and maintaining your entire building control network. System Profile allows
you to define network levels and devices, configure remote communications parameters, determine alarm destinations, and set global system parameters.

**T**

**TAPI**
Telephony API. Application Programming Interface for telephony. See also Telephony.

**TCP/IP**
Transmission Control Protocol/Internet Protocol. Set of protocols and standards that is responsible for interpreting data packets over the network and communicating them to any computer on the network. The TCP/IP protocol must be installed on the Insight workstation in order for Insight to run properly.

**TEC**
See Terminal Equipment Controller.

**Telephony**
Technology associated with the point-to-point electronic transmission of information using a telephone or pager. See also TAPI.

**Terminal Equipment Controller (TEC)**
An application-specific equipment controller used in pressure independent Variable Air Volume (VAV) applications. See also Secure Mode TEC.

**Text-to-Speech**
Software that converts text and control sequences into synthesized speech.

**Thermistor**
A thermo-electric element with an electrical resistance that falls rapidly and predictably with the rise of temperature.

**Thumb**
An Object Selector utility that allows you to quickly scroll (thumb) through a long list by opening a small window along the list box scroll bar. Releasing the thumb puts the object displayed in the small window at the top of the object list.

**Time-Based Sample**
Interval trend samples taken by the field panel for specified points at a defined interval, such as every 15 minutes.

**Time-of-Day (TOD) Editor**
The Insight application that enables you to automatically command points based on a daily schedule or yearly calendar.

**To-Fault**
A BACnet event indicating that the BACnet object (point) has transitioned to the Fault state from some other state for the recipient or device. A BACnet object may or may not require acknowledgement of this event by a user.

**To-Normal**
A BACnet event indicating that the BACnet object (point) has transitioned to the Normal state from some other state for the recipient or device. A BACnet object may or may not require acknowledgement of this event by a user.

**To-OffNormal**
A BACnet event indicating that the BACnet object (point) has transitioned to the OffNormal state from some other state for the recipient or device. OffNormal states in
BACnet are: OffNormal, high-limit, low-limit, and life-safety-alarm. A BACnet object may or may not require acknowledgement of this event by a user.

**Totalization**
A point attribute that indicates the point’s value is totaled in either days, hours, minutes, or seconds. Totalization allows the system to track point information such as total run time for a fan or pump, or total volume from a flow rate sensor.

**Transmission Fault**
An unsuccessful transfer of a record in a database.

**Tree**
A feature of the Insight System Profile application that displays your building control network and devices in a graphical overview showing the structure of the entire network. Each network level (MLN, BLN, and FLN) and each device (Insight computer, field panel, printer, modem, TEC, and UC) is represented by a unique icon. The Device toolbar in the Tree contains the icons that let you graphically add new devices, change existing ones, and delete devices. You can copy and move network levels and devices by dragging and dropping them in the Tree.

**Trend Buffer**
The storage area in a field panel where trend samples are stored temporarily before they are uploaded and collected by the Insight computer.

**Trend Data**
Historic trend information collected at the field panel for a point you specified. Trend data is either: (1) the current value for a point collected when the Change-Of-Value (COV) trend method is used, or (2) the current value or state for a point collected at a precise interval when the Interval trend method is used. Trend data can be uploaded from the field panel to the Insight computer for storage and reporting, and the data can be converted to several spreadsheet formats for further analysis and reporting.

**Trend Data Conversion**
A feature of the Trend Definition Editor application that allows you to convert collected trend data to a format compatible with spreadsheet applications.

**Trend Data Point**
An object defined by the Trend Definition Editor application that collects performance data.

**Trend Definition**
Defines the method for collecting trend data from the field panel.

**Trend Definition Editor**
The Insight application that allows you to collect information about how your building control equipment is operating over a specified time period. With the Trend Definition Editor you define trend definitions that provide a historical record of both analog and digital point activity. You can also monitor the changes in value or state for a point. You define whether point data at the field panel is sampled by (time interval) trending or by (Change-Of-Value) trending.

**Trended Point**
A point in your building control system that has at least one trend definition (Interval or COV) associated with it.

**Trigger**
Occurrence that initiates a remote notification, such as an alarm or event.
**U**

**Unitary Controller (UC)**
A microprocessor-based equipment controller that can be programmed to coordinate the activity of mechanical equipment that controls your building control system.

**Unitary Firmware**
Firmware that uses a subset of PPCL commands found in logical firmware.

**Uploading Data**
The transferring of data from the field panel to the Insight computer. See Download.

**User Accounts**
The Insight application used to manage access and security for Insight and field panels on a specified Building Level Network (BLN). By creating individual accounts, a system administrator can grant users access to objects and applications in any Insight computer on the Management Level network (MLN), as well as objects and functions residing in field panels on a specified BLN.

**User Name**
A unique name used for identification during logon; can contain a maximum of 40 characters.

**V**

**Value**
Indicates the last commanded state of the point, for example On or Off, or the last measured reading for an analog point, for example, degrees Fahrenheit. For analog points, value is displayed in engineering units (DEG F, GPM, and KWH). For digital points, value is displayed as a state (Off, On, Auto, Fast, and Slow).

**Virtual Point**
A “dummy” digital output point or analog output point that resides in a field panel but does not have a physical connection to a piece of equipment. Virtual points store operational values and are used as set points, trigger points, and mode points. The value of a virtual point can be set by a control program instruction or by an operator. Virtual points are primarily used in PPCL.

**W**

**Wildcard**
A special replacement character that saves you time when searching for object names by narrowing the list of all names. A wildcard allows you to specify general search criteria for an object name instead of specific search criteria. For example a (*) replaces any text, a (?) replaces one character only, and [0 - 9]* returns all points starting with 0 through 9.

**Wire Resistance**
Applies to LAI points. An adjustment to a point’s intercept value to compensate for long runs of wire. This applies in cases where the resistance of the sensor wire is significant enough to affect the point’s engineering value.

**Workstation**
One or more computers that have Insight software installed. Insight software allows you to control, monitor, and communicate with field panels in your facility. The System Profile application allows you to define one master computer or workstation and any additional workstations you want to include in your network.

X

Xon/Xoff
Standard ASCII control characters used to tell a modem to start or stop the transmission of data.

Z

Zone
A defined area in your building system, such as a building, floor, or room.