

Tracer ES 4.7 Release Notes (“Readme”)

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Tracer ES 4.7 Changes

Tracer ES 4.7 includes the following changes:

Look and Feel

Header

The header has been completely redesigned reducing overall height and incorporates a new look.

- User tasks are consolidated in a user drop-down menu.
- Standard and custom reports are now accessible from a single reports’ menu.
- Graphical icons are used for Actions and Settings (formally Administration) and User Home. Help and ProcessTracker icons are now larger.
- Find buildings search has been revamped to provide an improved user experience.
- Breadcrumbs have been redesigned to enhance site navigation.

Status Pages

Tracer ES Status pages have been redesigned to enhance the user experience with a tabular status view, providing access to all data pertaining to the equipment or system.

- **Status Tab:** provides the same data as previous versions of Tracer ES, but enhances usability with new In Fault, Out of Service, and Override Icons.
- **Alarm Tab:** provides alarm history of the equipment or system.
- **Data Logs:** provides a complete list of all Data Logs available for the equipment or system.
- **More Status Values:** provides a complete BACnet point list for the equipment or system on a single page.

Navigation

Custom Graphic Back Button

- Tracer ES 4.7 introduces a stock graphical “back button” to custom graphics from a stock standard page. This allows custom graphics to be used in conjunction with standard graphics and standard pages, allowing navigation back to custom graphics.

Points

- Building points are now accessible from the left-hand navigation.

Actions and Settings

Tracer ES introduces a new layout to allow users to easily access Tracer ES configuration and functions. This will be further improved in Tracer ES 4.8



Tracer ES 4.7 Changes

Alarms

Alarm Groups

Tracer ES 4.7 introduces Alarm Grouping, allowing users to group alarms based on alarm source.

Example: A controller has a failing sensor and has sent 200 alarms to the Tracer ES alarm log. Prior to Tracer ES 4.7, these were displayed as 200 discreet entries. In Tracer ES 4.7, the user is able to group on alarm source providing a single entry within the alarm list indicating that there are 200 alarm entries. This provides a consolidated view and history in a single entry rather than possibly over multiple pages.

Additional grouping options will be available with future releases of Tracer ES.

Alarm Preferences

Users are now able to define the alarm Tracer ES priorities/categories they wish to display within the alarm logs.

Reports

Standard Reports

Standard Reports are now accessible from the Reports header.

Custom Reports

Data Normalization

Tracer ES introduces Data Normalization to provide "divide by" functionality for all charts and data value custom report widgets. This allows energy managers, Chiller Plant managers, and others the ability to normalize historical data log by a constant or another historical data log, allowing calculated comparisons and efficiencies to be created without custom programming. To utilize normalization with two data logs, each data log must be configured with the same sampling rate and the same Tracer ES offset.

Example: Data Log A is sampled at a 15 minute interval and was started at the top of the hour; Data Log B must follow the same interval and start time. If the time stamps on the data are not aligned the user will not get a value.

Chart Customization

Tracer ES introduces the ability to change the following for all chart types:

- Axis Labels
- Legend Labels
- Line Colors

Data Value and Table Calculations

Tracer ES introduces the ability to do calculations for the Data Value and Table to provide numerical calculated values.

Data Log Export

Tracer ES now supports exporting up to 50,000 data log samples during a single export. This equates to approximately 75 data logs with 1 year of data trended at a 15 minute interval. Tracer ES 4.8 will support an increased number of data logs for export.

Graphics

Graphics Upload

Tracer ES introduces import/export graphics service. Publishing new graphics is accomplished simply by publishing to a zip file with the TGE job and using the Import Custom Graphics function within Tracer ES. To export graphics from Tracer ES, use the Export Building Custom

Graphics function within Tracer ES. This functionality makes creating and updating Tracer ES graphics easier and quicker to accomplish.

HTML Widget Support

It is recommended that all Tracer ES jobs use HTML graphics. Upon new job creation within TGE, specify within the job properties dialog that this will be an HTML job type. This will provide the end user with the best graphics experience.

Tracer ES and TGE introduce HTML support for .ASPX widgets. The complete list of supported widgets are:

- Analog Binary Text
- Animation
- Table Builder
- Needle Gauge
- Fill Gauge
- Flood Fill
- Binary Toggle Control
- List Box Control
- Setpoint Control
- Override Control
- Navigation Button
- Navigation Text
- Navigation Hotspot
- Static Text
- Static Image

Scheduling

Tracer ES users are now able to view and edit Optimal Events within Trane Tracer SC.

Resolved Issues

Alarm Management

Resolved Alarm Source display: Alarm Source is defined from the BACnet point that the alarm has originated from.

Custom Reports

Resolved numerous bugs pertaining to:

- Widget alignment
- Data Value custom labeling
- Editing existing data sources
- Performance
- Incorrect sizing of charts within PDF artifacts
- Data point accessibility within the Data Value widget

Scheduling

- Process tracker is now initiated for applying and deleting global schedule exceptions



Tracer ES 4.6 SP1 Changes

- Analog Setpoint schedule members are now displayed for BCU Setpoint schedules
- Exceptions made on complex BCU schedules are now only displayed for schedule containing the exception

Report Designer

- Corrected sizing of charts within PDF artifacts, charts now follow 4:3 aspect ratio. Aspect ratios will be further improved in Tracer ES 4.8.

Known Issues

Custom Graphics

- HTML graphics are not supported in Internet Explorer 8
- Internet Explorer does not allow users to access quick-click menu when equipment is offline. Firefox and Chrome support accessing control to edit.

Report Designer

- Report Designer will output a two-page PDF when an element is placed near the margin of the page.

Header

- Header misalignment when Tracer ES is installed on Windows Server 2003 and accessed via Windows 7 and Internet Explorer 10.

Supported Languages

- Arabic
- Chinese - Simplified
- Chinese - Traditional
- English
- French
- German
- Indonesian
- Japanese
- Korean
- Spanish (Mexico)
- Thai

Tracer ES 4.6 SP1 Changes

Tracer ES 4.6 SP1 includes the following changes:

Legacy Comm

Tracer ES introduces support for Tracer SC and the Legacy Comm bridge supporting COMM3 and COMM4: VAV II/III/IV, IPAK and Voyagers for CV and VAV configurations.

Resolved Issues

- Resolved issue with creation of multiple schedule exception not being applied correctly.
- Resolved time remaining on override dialogs when navigating from custom graphic.

- Resolved issue with alarm email application with alarms produced by a MP580 installed in a Tracer SC.
- Resolved issue with incorrectly displaying license version.

Known Issues

Tracer ES cannot reset LON controller diagnostics when installed on Tracer SC.

Tracer ES 4.6 Changes

Tracer ES 4.6 includes the following changes:

Licensing

Tracer ES v4.6 introduces licensing changes to support Federal Information Processing Standards (FIPS) and introduces feature-based licensing and Software Maintenance Plans. A new license containing the new Server ID and a valid Software Maintenance Plan is required to upgrade to Tracer ES v4.6. This new license provides updated security features and allows for future product improvements and supportability.

NOTICE:

To prevent loss of historical data verify the correct core license is present (Full or Express) within the licensing system. If the correct core license is not present, contact tech support for assistance.

Table 1. Software Maintenance Plan

Maintenance Plan	Benefit
Tracer ES Service Maintenance Plan - 1 year	Provides 1 year of software upgrades from the day of license application
Tracer ES Service Maintenance Plan - 2 year	Provides 2 years of software upgrades from the day of license application
Tracer ES Service Maintenance Plan - 3 year	Provides 3 years of software upgrades from the day of license application
Tracer ES Unlimited Service Maintenance Plan - 1 year	Provides 1 year of software upgrades from the day of license application for Tracer ES with unlimited licenses

Table 2. Feature License - Database Maintenance.

Core License Type	SQL Version	Maximum Database Size
Tracer ES Express	SQL Express 2005	3.5GB
	SQL Express 2008/2012	9.5GB
	SQL 2005/2008/2012	9.5GB
Tracer ES	SQL Express 2005	3.5 GB
	SQL Express 2008/2012	9.5 GB
	SQL 2005/2008/2012	No Limit

New Features/Functionality

Scatterplot Graph

Tracer ES V4.6 has added a new scatterplot graph option for custom reports. The scatterplot graph allows visualization of the relationship between separate data series by plotting samples of one data point (y-axis) versus the corresponding value of a different data point (x-axis) at the same time.

Tracer ES 4.6 Changes

For example, a plot of chiller plant efficiency versus chiller plant capacity may have a value of 65% for the chiller plant efficiency at the same time that the chiller plant was running at 233 tons capacity, where 65% would be the y-axis coordinate of the data point on the graph and 233 tons would be the x-axis coordinate.

Note: *x-y samples must have a time stamp of the same minute in order for them to relate to each other in the scatterplot. Thus, two data logs sampled every 5 minutes that are not sampled at the same minute would display no points in a scatterplot because the two data series would not have any common samples that were collected in the same minute.*

Building Subgroup Security Access

Tracer ES V4.6 introduces a new concept for user security called Subgroups. Subgroups allow the system administrators to define subsets of Tracer ES buildings for the purposes of granting or restricting user access. Functionally, this allows multiple users to have access to different subsets of the same or similar types of building equipment, such as for multiple tenants of an office building or other property management application.

Subgroups can be created and configured from the Advanced menu of the building navigation links presented on the left-hand side of the user interface.

Once a subgroup is created for a building and its members assigned, it will be available for granting users access to the building. If it is desired that a user only have access to the members in one or more subgroups rather than the building as a whole, the user should be granted only access to those subgroups. This is defined in the user's security profile as an enhancement to the Set Building Access screen.

Note: *If the **Give the user access to all buildings** option is selected for the user's profile, they will automatically have access to all objects in a building, depending on their role access. In this case, subgroup definitions would not apply.*

Redesigned Building Advanced Menu

V4.6 includes a redesigned Advanced menu for buildings. The menu was graphically restyled to logically group similar parameters for the building and integrate building Subgroup configurations.

Edit Schedules from Building Schedules List

Tracer ES V4.6 has expanded functionality to edit schedules from the Building Schedules list page. This page displays a graphical representation of schedules for any particular day. Users are now able to click on individual events from this page and edit them in the presented dialog box. Users may also add a new event or delete existing events.

These edits may be saved to the permanent weekly events list for the schedule or as a single-day exception for the schedule.

Note: *If the day already has an exception applied, this edit function will always result in a single-day exception to the schedule.*

HTML Graphics Support

Tracer ES 4.6 supports, in conjunction with Tracer Graphics Editor V8.3, custom graphics in the HTML format. This is the same graphics format used for the Tracer SC new user interface and the TD7 operator display. HTML graphics displays support all ASPX graphic format elements except status widgets (thermometer, water tank, etc) and the checkbox control. HTML graphics also support floodfill controls and the binary toggle radio button control.

HTML graphics are saved in a different folder location than ASPX graphics:

- ASPX Graphics: <installdirectory>/UI/CustomApplications
- HTML Graphics: <installdirectory>/UI/Graphics

HTML Graphics support the same language and building directory structure as ASPX graphics. HTML graphics require a separate folder per graphic, however, and that folder must contain all imagery and animation files associated with the graphic which differs from ASPX graphic rules.

See also: Tracer Graphics Editor V8.3 release notes.

Edit Graphic Point Mapping

Quick-click functionality from custom graphics has been expanded to allow for editing of the mapping of data points in custom graphics. To edit point mapping on graphics, click on the data point to be remapped and select **Details**. A dialog displays that shows where the data for the point is coming from. Click **Edit** to remap the data point in the graphic. Note that this edit functionality is not enabled for template data points thus is not available for standard graphics.

Note: *Edit functionality is not enabled for template data points, thus it is not available for standard graphics. Tracer SC point names display BACnet point names rather than Tracer SC friendly names.*

Note: *For proper operation, the graphics files must have proper file permissions to support online graphic point editing.*

Optional Languages Supported

Users can now define what languages are available to display for language toggles and user preferences.

Tracer SC Direct Link Setup

Tracer SC V3.7 has changed the process for setting the IP address of Tracer ES in order to enable automatic authentication when linking from Tracer ES directly to the Tracer SC user interface. Formerly, this setup was in the user preferences for the user profile in the Tracer SC. In Tracer SC V3.7, this setting has moved to the **Tools** setup screen and is universal for all user profiles on the Tracer SC.

Note: *If DNS name lookup is being used for the Tracer ES server it is still necessary for the IP address of the trusted Tracer ES server to be entered in the Tracer SC Tools configuration. The automatic authentication will not resolve with DNS names. Direct links will still function, but the user will be required to log on to the SC.*

Resolved Issues

The following issues were resolved in Tracer ES V4.6:

Custom Graphics

- Resolved issues with “swipe and type” control when assigned to select point types.
- Resolved redirect issue with “swipe and type” control.

Custom Reports -Miscellaneous

- Added option to **Save as** a report, creating a copy of the report with a different name.
- Exported report definitions, PDF, and Excel files include the report name in the filename.
- Report designer now displays the name of the report that is being edited.
- Data mapping for points and data logs is now consistent whereas in V4.5 mapping a data log required the user to know that the data came from a certain point type (Analog Input, etc) rather than selecting an equipment type and the information desired.
- Implemented canvas size logic to limit element placement based on desired hard copy/print size.
- Resolved reported issue where reports were not being e-mailed to addresses that were not associated with Tracer ES user profiles.

Tracer ES 4.6 Changes

Alarming

- Resolved inconsistencies in the Alarm Source and Alarm Details for BCU and Tracker buildings. This is resolved in the Alarm Log and E-mails.
- Resolved issue with Alarm E-mails not following user preferences.
- Changed logic to include alarm e-mail recipients in **To** field of e-mails.
- Corrected alarm acknowledgment logic for BCU alarms. Tracer ES must be able to communicate with BCUs to acknowledge alarms and the alarm acknowledgment is set correctly so as to prevent alarm escalation.
- Resolved issue where alarm acknowledgment from Tracer ES takes an excessive amount of time to show the alarm as 'acknowledged' in Tracer ES.

Scheduling

- Resolved issue with BCU schedule display when an exception was applied to a schedule with optimal start.
- Resolved issue with representation of exceptions with optimal start and stop events.
- Corrected issue where Tracer ES would not send schedule exception to BCU schedule with 'full' exception property. This applies only when the exception applied is for the current day. Tracer ES will now always write exception for the current day.

General

- Corrected logic where BCI-I controllers were being discovered as generic BACnet controllers.
- Resolved system error resulting from enabling FIPS 140 encryption for system cryptography in Local Policies of server.
- Implemented data log support for the following data types: BacnetBinaryPV, BacnetDeviceStatus, BacnetEngineeringUnits, BacnetEventState, BacnetEventType, BacnetPolarity, BacnetProgramState, BacnetPropertyId, BacnetReliability, SummitOPMode, PcmOperatingMode, Vav1FlowControl and Vav2And3FlowControl.
- Implemented logic to address an issue where BACnet devices using a Unicast I-Am response to a broadcast Who-Is request are not being discovered by or re-connecting to Tracer ES. Tracer ES will now add these devices to the Tracer ES building that uses the same UDP port as the device and reconnect during application startups. Devices will not be discovered or reconnected if multiple buildings in Tracer ES are utilizing the same UDP port. Discovery may still fail if the Tracer ES has a Windows firewall enabled. The IP address of the response would not be known by Windows and may be blocked. You can disable the Windows firewall, set the Windows firewall to allow all incoming messages, or add a rule for allowing incoming messages for the UDP port of the device to the Windows firewall to further address this issue.

Known Issues

- LynxSpring Jenesys devices does not support the following functions:
 - BACnet schedule creation
 - Editing BACnet exception priority
 - BACnet Calendar creation
- Microsoft Internet Explorer V10 (IE10) is not supported.
- Installations that are upgrades from V4.5 may need to clear the cache in client browsers in order for the report designer to function properly. Client sessions download resource files from Tracer ES for the report designer functionality, and it is necessary to manually clear the cache from client browsers to download the updated resource files associated with V4.6.

- Users are unable to delete a recipient from the recipient list of the notification class object in a Tracer SC with BACnet viewer.
- If a new event type is added through Tracer Summit or an operator display to a schedule in a BCU (such as a set analog event), the Set Analog schedule will not appear in Tracer ES until a database synchronization occurs. This is specific to BCU schedules that may have up to three Tracer ES schedules to represent the single complex BCU schedule with HVAC, Lighting, and Set Analog events.
- Editing custom canvas sizes in the Report Designer may not enable the save button by itself. As a workaround, edit another parameter in the report, such as toggling a font style or something similar.

Tracer ES 4.5 SP1 Changes

Tracer ES 4.5 SP1 includes the following changes:

Resolved Issues

- Resolved issues with custom graphics not displaying data properly.
- Resolved re-direct issue regarding custom graphic assigned to equipment types.
- Resolved unit conversion issues when SC is programmed in SI and the ES user preferences is set to IP for fluidic pressure.
- Added Supply Fan Status to SC space controllers stock status pages.
- Resolved installer verification checks when Tracer ES is using SQL Server 2005 for its database server.
- Resolved issues with discovering Non-Trane BACnet devices.
- Improved equipment summary page load time.
- Improved data log list page load time.

New Features/Functionality

Tracer ES 4.5 includes the following changes:

Reports

Tracer ES V4.5 introduces a custom reporting engine that includes an updated data log graphing tool. The reporting engine can be accessed through the existing data log graphical viewer or from a new link in the Tracer ES header. Custom reports may include the updated line charts or new bar charts with calculations on historical data as well as specified snapshot data from the system.

Calculations on historical data include average, sum/total, maximum value and minimum value for the specified time periods. Calculations are performed on single data logs over the samples existing in the database for a specified time period. For example, select a month of Space Temperature data, select the 'maximum value' calculation for daily time periods to display a graph of daily maximum space temperatures for a month.

Reports can be run manually or scheduled to run in the future in a recurring fashion. Reports can be viewed from the Tracer ES web UI or e-mailed to recipients as a PDF attachment. Both scheduled reports and manually generated reports can be e-mailed.

Note: *There are a number of known issues when using Microsoft Internet Explorer V8 to access the custom report designer and viewer. It is recommended that you use an alternative supported browser such as Microsoft Internet Explorer V9 or Google Chrome.*

B-OWS Certification

Features delivered in Tracer ES V4.5 are expected to complete functionality required to certify Tracer ES as a BACnet Testing Laboratories (BTL) BACnet Operator Workstation (B-OWS). Features delivered in V4.5 include the following:

Tracer ES 4.5 SP1 Changes

- Support for BACnet wildcards and calendars for BACnet schedule exceptions
- BACnet Calendar object support - view/edit/create/delete, available to reference calendars from BACnet exceptions
- BACnet alarm and event enrollment reports available from the BACnet Viewer
- View BACnet device event log functionality
- Option to select devices from list when adding building or new devices to existing building
- Option to connect to buildings through 'Local Discovery' without requiring a BACnet Broadcast Management Device (BBMD)
- Added report for results of manual database synchronization
- Expanded edit functionality in BACnet viewer
- Option to synchronize specific devices and specific object types in devices rather than the entire building for a manual synchronization
- Database synchronization schedule configurable by building

Screen Display Width

Expanded Tracer ES user interface to stretch across the entire display area of your browser.

- Header and footer stretch to cover the entire screen
- Alarm log and Data Log/reports viewer can stretch to cover more than 1024 pixel width

Platform Support

Tracer ES continues to expand support for new Trane unit controllers as well as client user interface platforms.

- High-capacity Tracer SC support
- iPad/iPhone Safari browser, Android 4.0 phone/tablet browser support

When accessing Tracer ES from a mobile platform, keep in mind the following considerations:

- Tooltips will not function from a touchscreen interface.
- Some mobile platforms require special gestures to scroll in list controls.
- The Report Designer is not supported in mobile platforms. Create and edit reports from a workstation browser.
- Shockwave Flash files (.SWF) are not supported in modern Android and iOS operating systems. Animated .GIF files operate correctly and are recommended for animation controls in custom graphics.
- The rocker switch on the simplified override dialog does not move left to right from a swiping action on touchscreen displays. To move the toggle, tap on the side of the toggle desired, auto or manual.
- The simplified override popup will display full screen on mobile platforms, as mobile operation systems do not support popup dialogs the way workstation browsers do. This will prevent the user from viewing multiple simplified override dialogs simultaneously.
- User guides are not accessible through the online help when accessing Tracer ES from a mobile platform.
- Button text in mobile platforms does not wrap consistently. This occasionally results in buttons that only display a portion of the button text. For example "Synchronize" rather than "Synchronize Database."
- Functions relating to file transfer cannot be accomplished from mobile platforms without access to their file systems. Examples include uploading license files or changing the audible alarm file.

- Button and other control styles vary between multiple browsers, especially comparing workstation and mobile browsers. In addition, control styles can vary when comparing .aspx graphics controls to .html graphics controls on mobile platforms.

Building Management

Tracer ES V4.5 added options for building connections and discovery and redesigning the management options of a building once it is discovered. These changes include the following:

- Local Discovery connection option for buildings. This allows Tracer ES to connect to building controllers without requiring a BACnet Broadcast Management Device (BBMD) for the connection.
- The option to select devices to include in building discovery. This allows the installer/programmer to view a list of devices that responded in the initial discovery phase and select the appropriate devices for the installation. This reduces the discovery time for installations supporting a subset of a large BACnet network and eliminates the need to unlicense extraneous devices after building discovery.
- Ability to synchronize existing device database separately from adding new BACnet devices. As part of this redesign, the Synchronization link under the Advanced menu has been renamed to Device Updates and the Device Updates page now includes Synchronize Database and Add New Devices buttons.
- Selective synchronization. The Synchronize Database button allows either synchronizing all devices in the building or optionally the operator may choose one or more devices to synchronize. The operator can also specify what BACnet object types to include in the synchronization. A report is available after synchronization completes to inform the user of operation results.
- New options for adding new devices. The Add New Devices button allows the operator to add new BACnet devices to the building. The new devices can be discovered using the same options utilized when adding a new building. This is now the only way to add new devices to a Tracer ES building; scheduled synchronization of the database will only synchronize existing devices in the building.

Setpoint Source for Tracer SC Space Controllers

Prior to Tracer ES V4.5, there were two fields on the stock status page for Tracer SC space controllers that were used to convey the source of the setpoint for the controller. These fields were "Active Setpoint Request" and "Active Setpoint Source." In addition to resolving a validation error that would display when attempting to edit these fields, the field labels and behavior was changed in order to improve the usability of the interface.

The new fields are "Local Setpoint" and "Space Temperature Setpoint: BAS." "Local Setpoint" has two possible values, Yes and No and is tied to the "in/out of service" property of the Space Temperature Setpoint: BAS point.

- When "Local Setpoint" displays Yes, the "Space Temperature Setpoint: BAS" point is Out of Service, meaning the controller does not take into account the BAS-communicated active setpoint request.
- When "Local Setpoint" is set to No, "Space Temperature Setpoint: BAS" is placed 'In Service' and the controller takes that point's value as the active setpoint request. This behavior only applies to Spaces on Tracer SCs.

Resolved Issues

- Adjusted graphics navigation logic to take into account user's preference for graphics versus stock pages when navigating to a piece of equipment, space, or subsystem.
- BACnet points that are "Out of Service" will display their value in stock status and custom graphics pages rather than displaying the text "Out of Service."

Tracer ES 4.5 SP1 Changes

- Resolved issue where errors may be returned when assigning graphics in the navigation tree editor.
- Added advanced override options for the Terminal Unit Controller (TUC).
- Corrected default setting where users were unable to edit their own user preferences. By default, users are now able to edit their own user preferences.
- Removed functionality from Tracer ES Smart Client which was intended to convert Tracer ES V1 graphics to V2 format. This function was corrupting files when run on graphics that were not Tracer ES V1 format.
- Resolved issue where exception templates were not reliably applied to multiple schedules spanning multiple days.
- Corrected logic which was excluding details from alarm e-mails.
- Resolved an issue where schedule events that were set very close to each other prevents the user from clicking on each individual event.
- Corrected logic for calculating Variance on Tracer SC space controllers.
- Resolved issue where BCI-I and BCI-R controllers were not being discovered properly.
- Corrected issues with BACnet alarm subscription reporting success in Tracer ES interface when the subscription did not complete correctly. Specifically affects BCI-I controller.
- Priority Array labels have been updated to display labels consistent with Tracer SC user interface for objects residing in BACnet controllers (Tracer SC, UC, 3rd- party BACnet, etc). Objects in BCUs will continue to display priority array labels consistent with Tracer Summit.
- Corrected logic for calculating Variance for Tracer SC space controllers.

Known Issues

- Calendar reference and recurrence patterns are not available for global exception scheduling.
- Saved report definitions and artifacts are not named descriptively.
- Online help incomplete or inaccurate for many topics.
- Data Log Viewer is missing functionality from previous versions, specifically displaying multiple graphs for 3 or more y-axes of data and being able to customize the color/style of the data on the graphs.
- Values for Binary and Multistate points are displayed in the Data Log Viewer and reporting applications with the point configuration state text rather than display test from Tracer SC equipment applications.
- When viewing data in the BACnet viewer, Tracer ES is displaying '---' if data is not immediately available rather than displaying a blank field until the read is complete. Refresh the page to view data if available. Pages without automatic refresh generally have a 'refresh' button.
- Some navigational links in the breadcrumbs result in page errors. The final string in the breadcrumbs should not be a navigable link. If the end of the breadcrumbs displays as a navigable/clickable hyperlink, clicking on it will likely result in a page error rather than navigation.
- View Panel Schedule page may display a numeric value for event values of exceptions rather than the descriptive text string (0 instead of Unoccupied, for example).
- Unable to drag controls down to a second page in the report designer. To create multiple-page reports, add a long data table to the report which extends beyond the single page.
- Report Viewer scaling of graphs is not consistent with scaling of graphs in report designer or data log viewer.

Tracer ES 4.0 SP2 Changes

- When entering or editing the name of a report while saving, if the 'Loading' dialog appears while the user is typing, the user may navigate 'back' if they are hitting the Backspace key or jump to the bottom of the page if hitting Space Bar.
- Scrolling up and down on the canvas of the report designer can result in a 'select box' being displayed rather than the desired scroll behavior.
- Accessing Tracer ES through an iPad can result in termination of dynamic data refresh on some screens such as the device update screens which was the 'Synchronization' page prior to V4.5. This issue should not affect status pages or standard and custom graphics.
- Some data points in Tracer SC buildings do not display data units.
- If synchronization of BACnet devices results in the license count being exceeded, the ability to license/unlicensed BACnet devices may be affected.
- Data logs that are harvested from trend objects in Tracer SCs may display in incorrectly converted values if the system default units of the Tracer SC are not consistent with the units definition of the data value being logged in the trend log in the SC. This will occur most frequently when UC400 or other BACnet controllers have different units defined than the system units of the SC.
- Due to resolution of an issue with licensing logic, it is possible that your existing license file is no longer valid after upgrading to V4.5. Generate a new license request file and download a new license file.

[Tracer ES 4.7 Release Notes \("Readme"\)](#)

Tracer ES 4.0 SP2 Changes

Tracer ES 4.0 SP2 includes the following changes:

- Addressed an issue that caused a loss of communication between Tracer ES and a BCU or Tracker panel when the panels were sending alarms to Tracer ES.
- Addressed an issue where target buttons did not work when a user does not have access to all graphics.
- Addressed an issue where an unhandled exception error occurred when viewing a CCP Panel group summary page or when viewing a custom graphic that contained one or more points for objects that did not have defined UI in Tracer ES. This resulted in custom graphics showing three dashes for all values and an error being logged in the status.log file.

[Tracer ES 4.7 Release Notes \("Readme"\)](#)

Tracer ES 4.0 SP1 Changes

Tracer ES 4.0 SP1 includes the following changes:

- Removed support for Microsoft Internet Explorer V7 due to issues uncovered with the browser handling large amounts of data. Customers must upgrade to Internet Explorer V8 or above or use one of our other approved internet browsers.
- Resolved issue where override behavior with Programmable Control Module (PCM) and Universal PCM (UPCM) equipment was inconsistent.
- Resolved issue where custom graphics data for programmable controllers installed in Tracer SC buildings was not displayed correctly.
- Resolved issue where the navigation tree could hang when trying to expand nodes.

[Tracer ES 4.7 Release Notes \("Readme"\)](#)



Tracer ES 4.0 Changes

Tracer ES 4.0 Changes

Tracer ES 4.0 includes the following changes:

BACnet Viewer

Status view of BACnet objects allowing integrators and service technicians visibility of BACnet-specific objects and properties. Allows editing of writeable non-complex properties such as "Active State Text" for binary points. The BACnet viewer is available under the Advanced menu within a building and is not available per security settings of user roles by default.

Read Property: Multiple

BACnet infrastructure update that enables Tracer ES to more efficiently communicate with BACnet devices by requesting multiple pieces of information at once. Reduces time required to discover and synchronize devices that support the BACnet "read property multiple" service. May increase performance of status and graphics displays that request multiple pieces of information from single BACnet devices.

Device ID Range Discovery

Option for building discovery and synchronization that allows the installer/programmer to specify the exact BACnet Device IDs, or a Device ID range, for devices to be included in the building. This allows installers to add only a subset of devices on a large BACnet network to a building, significantly reducing discovery and synchronization time for a small installation of Tracer ES on a larger network. Also allows the installer to break large networks into multiple 'buildings' by discovery subsets of the large network of devices through different BBMDs, specifying a separate BBMD IP address for each building.

Alarm Management

Implemented advanced search and display filter, allowing the user to delete all alarms from the data log that match specified criteria from a single page. This allows users to delete all alarms from the log with a single action rather than having to delete page by page for displayed alarms. Added audible alarm chime to play when a new alarm is received by Tracer ES.

Globalization

Added German as an available language for user preferences. Implemented language toggle buttons on the login page in order to view the login page in your desired language. Selecting a different language from the toggle buttons on the login page will automatically set your user preference to the toggled language after a successful login. Implemented translated state text display for Tracer SC binary and multistate data. Added support for displaying commas versus periods (and vice versa) in numeric display for international markets. System data displayed in the Alarm Log such as temperatures will now be displayed per the user's units preferences.

Tracer SC Global Setpoint Edit

Added support for Tracer SC space controllers and areas to global edit of setpoints.

User Administration - Added capability for user administrators to edit user's preferences. Added security check to edit preferences, allowing administrators the option to prohibit a user from editing their own preferences.

Auto Logoff Warning

Warning dialog displayed to user when the system is about to log them off automatically.

Addressed Graphic Refresh Lockup

After pressing the Refresh command button from the Administration/Global Applications/Customize System Pages/List Custom Graphics the 0-100% progress bar should no longer lockup. In the past this was caused if Tracer ES discovered a problem that prevented a graphic to load. Instead the problem graphic will be skipped, and other graphics will continue to be loaded. There is no direct user notification that any graphics were skipped and not loaded. However, a two line entry is appended to the Administration.log file for each problem graphic, for example:

```
1  5/15/2012                12:54:31 PM                Administration
Error : Graphic file AOP Page.aspx has invalid Title and cannot be uploaded
```

The Administration.log file is found on the Tracer ES application server under the folder that Tracer ES is installed in the path TracerES/Server/Logs/Start_xx/Administration (where xx is the highest number of the up to 20 Start folders). You can address the problem with the graphic and reload it at a later time.

Override Button Icons

Graphical display of override status on override buttons in custom and standard graphics. Indicates to the user if an override is currently in effect for the object, consistent with behavior in Tracer SC user interface. Icons are displayed to the left of the button text display and may cause display issues with button text if the buttons are not large enough to display the icon and the full button text.

Tracer SC Direct Link - Enabled feature that allows Tracer ES users to directly link to Tracer SC user interface without having to log on to the Tracer SC. Requires Tracer SC V3.5. User profiles modified to include "Tracer SC user name" which must match existing user name in targeted Tracer SC. Tracer SCs must also be configured to 'trust' the IP address of the ES server in order to enable auto logon.

[Tracer ES 4.7 Release Notes \("Readme"\)](#)

Tracer ES 3.5 SP2 Changes

Tracer ES 3.5 SP2 includes the following changes:

Additions and Enhancements

TR200 Communications

Resolved issue where Tracer ES was unable to reestablish communication with TR200 controllers.

Data Log Viewer

Resolved issue where Data Log Viewer was unable to display correct units for charted data.

[Tracer ES 4.7 Release Notes \("Readme"\)](#)

Tracer ES 3.5 SP1 Changes

Tracer ES 3.5 SP1 includes the following changes:

Additions and Enhancements

Database Maintenance

The Database Maintenance feature that was introduced in version 3.5 has been fixed to work as originally intended.

Tracer ES 3.5 Changes

Alarm E-mail Content

Some issues were resolved where alarms received from BACnet controllers in Tracer SC buildings did not show the Tracer SC equipment source information in forwarded alarm messages.

[Tracer ES 4.7 Release Notes \("Readme"\)](#)

Tracer ES 3.5 Changes

Tracer ES 3.5 includes the following changes:

Additions and Enhancements

Export Stored Procedures

Note: This Export Stored Procedures information did not appear in the original version 3.5 README file: It was inserted in the version 3.5 SP1 version of the document.

V3.5 introduced the ability to export information from certain TracerES tables for use by external applications. This ability is implemented by use of the following SQL Server Stored Procedures:

- SysAdmin_ExportAlarmLogTablePr
- SysAdmin_ExportDataLogTablePr
- SysAdmin_ExportGlobalPointControlLogTablePr
- SysAdmin_ExportSystemLogTablePr
- SysAdmin_ExportUserChangeLogTablePr

The default names for the exported data from the corresponding stored procedures will go to the following tables:

- [Export_TESAlarmLog]
- [Export_TESDataLog]
- [Export_GlobalPointControlLog]
- [Export_TESSystemTaskLog]
- [Export_TESUserChangelog]

The exported data will be formatted for clear understanding.

Important: The stored procedures have an optional parameter that allows you to assign a custom name to the exported table. Currently there are no restrictions on the table name that you assign. Any name that is a valid SQL table name will work. This allows you to specify a name that matches an existing table in the TracerES database. Some TracerES tables will allow you to overwrite them. To prevent overwriting a critical TracerES table, always prefix the table name with "Export_".

The stored procedures do not allow for filtering the data that is being exported. Everything in the source table will be exported. The intended application of the exported data will need to filter and resolve duplicates.

HVAC schedule support for Tracer SC V3.0+

V3.5 includes support for HVAC schedules in Tracer SC building controllers. Tracer ES will now discover these schedules as HVAC schedules rather than multistate and will only allow Occupied, Unoccupied or Release for event values. This is consistent with what is available from the SC user interface. In addition, Tracer SC HVAC schedules are available for global edit and applying global exceptions along with Tracer Summit BCU or Tracker HVAC schedules. Tracer SC HVAC schedules are also supported through the Emergency Schedule application.

Note: Tracer ES only supports HVAC schedules in Tracer SC building controllers that are at V3 or higher.

Schedule templates for Binary, Multistate and Tracer SC HVAC schedules

V3.5 allows the user to create and apply exception schedule templates for BACnet Binary and Multistate schedules as well as HVAC schedules in Tracer SC controllers. These templates may be applied and managed the same as legacy HVAC, Set Analog, and Lighting exception templates.

Simplified Overrides

Tracer ES V3.5 introduces *simplified override* functionality in the Trane web controls platforms. This feature displays a graphical dialog to allow a user to take points or equipment out of auto control and put them into manual control by overriding their operation or current values to a new state. This functionality replicates features delivered in Tracer Summit V17, extended to support new BACnet object types and features of the next generation of Trane controllers, including multistate and value object types as well as allowing the user to set overrides to expire after a set amount of time.

Simplified override dialogs are displayed when users indicate a desire to perform an override, whether from a status page, custom graphic override button or quick-click option from custom graphics. Simplified override dialogs will only be displayed if the user's preference is set to show simplified overrides by default, otherwise the user will be taken to the advanced override screen.

Simplified override is only available for Trane control points: BCUs, Tracer SCs, or Tracer UCs. Override of points in non-Trane BACnet devices is not supported by simplified override and the user will be taken to the advanced override page.

Automatic harvesting of automated Tracer SC Trends/Data Logs

Tracer ES 3.5 will automatically harvest trend logs in discovered Tracer SC controllers if the logs were created by the Tracer SC applications. For example, trend logs created by the equipment application in the Tracer SC to track critical data for an air handler will automatically be harvested into Tracer ES when Tracer ES discovers the trends.

View Data Logs from Equipment or System status pages

Tracer ES 3.5 includes the option from stock status pages for equipment, spaces, and subsystems to view data logs in Tracer ES that are recording data from the context of the status page. For example, if Tracer ES has six data logs that have data from an air handler, when the user clicks View Data Logs from the stock status page of that air handler, they will be displayed the six data logs that are tracking data for that air handler to choose from.

Multiple-Building Data Log Viewer

V3.5 allows the user to view data logs from multiple buildings rather than being limited to only logs in a single building.

To view data logs for multiple buildings:

1. Select multiple buildings from the Building List page.
2. Click **View Data Logs**.

Deep Links to Tracer SC user interface

V3.5 includes links to the user interface of Tracer SC V3+ building controllers. These links are available from the Building Summary page or from equipment, space, and subsystem status pages. These links will open a new browser window with the login page for the appropriate Tracer SC. After the user logs in, the appropriate page in the Tracer SC will be displayed based on the context of the link from Tracer ES. The deep link from the Building Summary page in Tracer ES will take the user to the default home page in Tracer SC. The deep link from equipment, space, or subsystem status pages in Tracer ES will take the user to the status page for that piece of equipment, space, or subsystem in the Tracer SC.

A user security check is available in order to allow or disallow access to this functionality per user role.

Tracer ES 3.0 Changes

Standard Graphics for Tracer SC equipment

V3.5 will automatically assign a standard graphic to equipment and spaces discovered through a Tracer SC building controller. Standard graphics are assigned based on the graphic assignment of the equipment/space in the Tracer SC equipment application. Equipment or space controllers that are not installed to the equipment application of the Tracer SC will not have standard graphics applied to them in Tracer ES.

Standard graphics are available in the Standard folder inside of the Graphics folder in the Tracer ES directory structure (... \Trane\TracerES\UI\Custom Applications\[language]\Graphics) and may be used as any other graphic in the system. Note: Standard graphics for Tracer SC equipment and spaces will not work for Tracer Summit BCU or Tracker equipment and spaces unless the graphic is modified with Tracer Graphics Editor by altering point mapping to the appropriate template points for the Tracer Summit or Tracker contexts.

Diagnostics for Tracer SC equipment and spaces

V3.5 supports display and reset of diagnostics for equipment and spaces that are installed with Tracer SC building controllers.

Expanded dimensionality options for user preferences

V3.5 has added dimensionality options consistent with Tracer SC options to better support user preferences for Trane systems. The new dimensionality options are:

- Power Electrical
- Power Cooling
- Power Heating
- Energy Electrical
- Energy Cooling
- Energy Heating
- Area
- Acceleration

Points in Trane controllers that support these dimensionalities will display per the user's preference for these dimensionalities.

Note: *Points configured with units that may apply to more than one dimensionality (such as Kilowatts) will display their native units at all times, regardless of Tracer ES user preference, if the points do not support dimensionality (such as Tracer Summit BCUs and non-Trane BACnet devices).*

[Tracer ES 4.7 Release Notes \("Readme"\)](#)

Tracer ES 3.0 Changes

Tracer ES 3.0 includes the following changes:

Additions and Enhancements

Graphics features for V3.0

V3.0 offers improved support of Tracer SC equipment graphics. Templates can be created in Tracer Graphics Editor V7.0 for familiar equipment types (e.g. Fan Coil Units, VAV boxes, etc.).

Graphic templates can be mapped to multiple pieces of equipment using a new feature found at Home / Administration / Global Applications / Customize System Pages / Assign Graphic.

Status features for Version 3.0

V3.0 automatically create status pages for equipment and subsystems (Area, VAS, CPC) discovered within the Tracer SC. Data logging and override functions performed from status pages will function in a similar way as from BCU pages.

Note: *You must perform a database synchronization following an upgrade to version 3.0 to initialize this new functionality. This is not necessary for new installations.*

Alarming feature for Version 3.0.

Alarm source will now contain the user friendly names for the source rather than the raw BACnet object name. For instance, "Bill VAV" versus "keyname|vav-12."

BACnet Scheduling features (including Tracer SC support) for V3.0

In addition to existing Industry standard BACnet schedule functionality, Tracer ES now enables users to edit schedule members, create/delete BACnet schedules. Schedule members also now contain the 'friendly' configured name for the schedule. BACnet schedules have also been further differentiated into Analog, Binary, and Multistate schedules.

[Tracer ES 4.7 Release Notes \("Readme"\)](#)

Tracer ES 2.5 SP2 Changes

Tracer ES 2.5 SP2 includes the following changes:

Additions and Enhancements

BACnet schedule type support

Tracer ES V2.5 SP2 added logic to differentiate between different types of BACnet schedules. The three different types are Analog, Binary, and Multistate. Tracer ES determines the schedule type of BACnet schedules based on the schedule membership. For example, if the schedule's member is a binary output object, the schedule is a Binary schedule. Schedules without BACnet members are considered Analog schedules by default, allowing the user to enter any numeric value for events.

Available event values are populated based on the possible present value options for the first BACnet member in the member list of the schedule. For example, a Multistate schedule with a multistate output as the member will display the state text for the configured states of that multistate output as the possible values to set for the schedule events.

Global exception support for BACnet schedules

Added capability to apply exceptions to multiple BACnet schedules at the same time. All schedules must be of the same type, such as Analog or Binary.

Available events for Binary exceptions are On or Off, regardless of the state text of the multiple schedules selected.

Available events for Multistate exceptions are State 1 through State 10, regardless of the state text or number of states of the multiple schedules selected.

Quick-Click from custom graphics

Capability to click status points on custom graphics in order to view the stock status page for the piece of equipment or override. Also includes option to view stock status page of equipment subsystem such as Area or VAS, if applicable. Quick-click is accessed from a standard left-mouse click for most user platforms.

[Tracer ES 4.7 Release Notes \("Readme"\)](#)



Tracer ES 2.5 SP1 Changes

Tracer ES 2.5 SP1 Changes

V2.5 SP1 includes the following changes:

Additions and Enhancements

French and Spanish languages added

V2.5 SP1 delivered functionality supporting the user preference option of displaying Tracer ES user interface in French or Spanish as well as English. This also includes the capability to display language-specific custom graphics based on user preference.

Note: Before V2.5 SP1, French was unavailable on the Tracer ES V2+ platform, it was only available on the ES V1 platform.

Alarm e-mail template management

Capability to edit/create/delete the templates that are used to format e-mail messages supporting alarm forwarding functionality. By default, Tracer ES provides two templates, one is standard which displays most information and is intended for routing to e-mails that will be viewed from a rich client interface such as a workstation. The PDA template option includes minimal information and is intended for routing to e-mails that will be viewed on a small mobile device such as a cellular phone.

SMS alarm e-mail support

Capability to select predefined SMS carrier e-mail addresses for alarm e-mail routing. Also capability to specify separate e-mail address for Tracer ES user specifically for SMS/text messaging. Also includes capability to define alarm e-mail template to be used in order to send alarm information to the SMS/text messaging address.

[Tracer ES 4.7 Release Notes \("Readme"\)](#)

Tracer ES 2.5 Changes

Tracer ES 2.5 includes the following changes:

Additions and Enhancements

BACnet schedule support

Tracer ES 2.5 added support to edit the weekly events for BACnet schedules as well as to apply exceptions to BACnet schedules.

[Tracer ES 4.7 Release Notes \("Readme"\)](#)

Tracer ES 2.1 Changes

Tracer ES 2.1 includes the following changes:

Additions and Enhancements

Global Edit of setpoints

V2.1 included features to allow the global editing of setpoints throughout the system. This functionality allows users to globally edit Area setpoints in Building Control Units, edited (default) setpoints for VAV 2/3/4 and Space Comfort Controllers (SCCs) in Building Control Units as well as the override of output points in building controllers.

Global Edit of building attributes

V2.1 included features to allow the global editing of building attributes. This allows the user to edit various attributes of multiple buildings without having to access each building one at a time.

[Tracer ES 4.7 Release Notes \("Readme"\)](#)

Tracer ES 2.0 Changes

Tracer ES 2.0 includes the following changes:

Additions and Enhancements

Product infrastructure redesign

V2.0 represents a complete product infrastructure redesign that significantly increases the stability and usability of the application.

Scheduling application redesign

Redesign of scheduling application to display and edit events graphically rather than being text-based. Also treating schedules dynamically, reading events from the building controllers to display rather than reading from information in database which may not be accurate.

Integrated System Maintenance and Global Point Control

Integrated the system maintenance utility and the global point control application into the core of the Tracer ES product.

System Logging

Implemented a system to log user changes to building controllers as well as errors that occur during normal application execution.

[Tracer ES 4.7 Release Notes \("Readme"\)](#)

Tracer ES 1 SP5 Changes

Tracer ES 1 SP5 includes the following changes:

Additions and Enhancements

Exception scheduling

Redesigned scheduling application to write exceptions to Tracer Summit BCU and Tracker schedules rather than editing the weekly events.

[Tracer ES 4.7 Release Notes \("Readme"\)](#)

Tracer ES 1 SP4 Changes

Tracer ES 1 SP4 includes the following changes:

Additions and Enhancements

Exception scheduling

Initial redesign of the scheduling application to write exceptions to Tracer Summit BCU and Tracker schedules rather than editing the weekly events.

[Tracer ES 4.7 Release Notes \("Readme"\)](#)

Tracer ES 1 SP3 Changes

Contact Trane for information about Tracer ES 1 SP3 changes:



Tracer ES 1 SP2 Changes

[Tracer ES 4.7 Release Notes \("Readme"\)](#)

Tracer ES 1 SP2 Changes

Contact Trane for information about Tracer ES 1 SP2 changes:

[Tracer ES 4.7 Release Notes \("Readme"\)](#)

Tracer ES 1 SP1 Changes

Tracer ES 1 SP1 includes the following changes:

Additions and Enhancements

Global Point Control application

V1 SP1 delivered the Global Point Control application which allows Tracer ES to read a data point in a building and write that value out to one or more points in the same or different buildings, enabling data sharing across multiple buildings and BACnet networks.

French language support

V1 SP1 provided the optional French language preference for users.

[Tracer ES 4.7 Release Notes \("Readme"\)](#)

Tracer ES 1 Features

Tracer ES 1 includes the following features:

Features

Auto discovery

Tracer ES automatically discovers controllers and equipment communicating on BACnet networks with optimization for Trane-specific application such as Tracer Summit Building Control Units (BCUs)

Web-based daily operator interface

Tracer ES provides a web-based daily operator interface to building control systems. This interface allows users to view status of buildings, change setpoints, view and edit schedules, manage alarms and view historical data from the entire enterprise.



Tracer ES 1 Features



Tracer ES 1 Features
