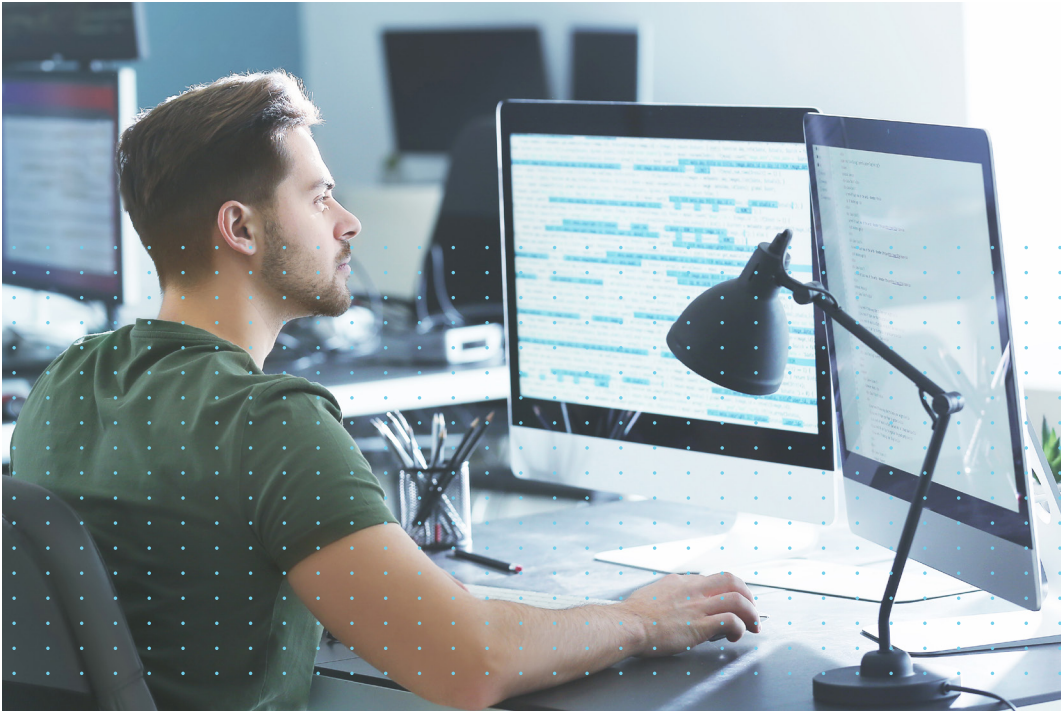


Tracer® SC+

Highlighted Features by Release

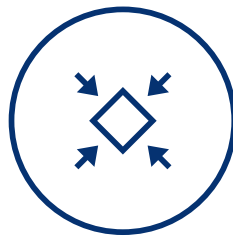


Trane® is committed to continuous product improvement, helping ensure that we can provide solutions to our customers' evolving needs. We have summarized our release notes into a few key points from each version, highlighting the latest and greatest additions. We strive to deliver excellence in four main areas with each update:



Cybersecurity

New features that follow best practices for addressing vulnerabilities or add new security-related features and enhancements.



Compatibility

With constantly evolving browsers, phones, PCs, tablets, etc.



Productivity

New features that help an operator perform their duties more effectively.



Optimization

New ways to add automation to improve comfort, energy efficiency, etc.

Drive to your Digital Destiny.

Tracer® SC+ Building Automation Systems offer secure remote access for users as well as ongoing optimization opportunities for their buildings. Tracer® Synchrony® offers full, intuitive system access, and productivity enhancements for facility managers and service technicians.

Version 5.7 – December 2022

Feature	Benefit
New BACnet Capture Feature	This feature now has the built-in capability to capture BACnet traffic on any active link on the SC+ (i.e. IP, MS/TP, Air-Fi).
New Equipment Families and Equipment Types	This feature has been expanded to include new support equipment families and equipment types to allow for better product grouping during installation.
New Sync Time with Trane NTP Server or DHCP	- This feature serves as an alternative method for ensuring that controllers at the customer's facility maintain accurate time. - This new method gives facility operators a more streamlined and automated way that is less complex, more secure, and doesn't require IT involvement to maintain.
Change of Value (COV) Data Log Enhancements	- Enhancements have been made to improve the user experience of Change of Value (COV) Data Logs - An improved verification process has been implemented to determine if a BACnet device supports the COV.
Air-Fi Wireless Capability Enhancements	New features have been added to improve management of the Air Fi BACnet network.
Security Enhancements	Cybersecurity enhancements have been made to increase protection of user credentials and permissions.
Miscellaneous Enhancements	- Miscellaneous features may have been added and/or enhanced. - For the protection of our customers, each Tracer SC+ release may contain non-specified, security-related enhancements. - These enhancements may be related to open-source or Trane software and may result from Trane, Trane partner, or non-Trane testing/analysis

Version 5.6 – September 2021

Feature	Benefit
Datalogs - Creation of Change of Value (COV)	Enables users to create data logs that record a sample immediately upon a change in the data rather than a set interval.
Chiller Plant Control Application Enhancements	- Enhanced Creation Wizard: Improved setup wizard and visual aids to show images of plant type and chiller configuration choices. - Low Limit Cycling Avoidance: Prevents unnecessary chiller starts when a chiller cycles due to low load. - Feed Forward Control: Improved stability and performance of a chilled water loop while a chiller is being added or removed. - Pony Chiller Type: Allows for the option to designate a chiller to handle night or low loads. - New Staging Option: Ability to stage based on plant tons and peak chiller energy performance. - New Chiller Plant Dashboard: A piping graphic with key points and key performance indicators is automatically generated for all chiller plants.
New Support Equipment Capabilities	Support equipment (fans, pumps, VFDs) can now be created as individual elements—improving user experience and connected analytics offerings.
Enhanced Trane Setpoint Widget	Trane Setpoint Widget has been redesigned to support equipment with dual setpoints. The widget will detect single or dual setpoint application and show the appropriate configuration on graphics.
Enhanced Custom Views	- Custom Views now allows users to dynamically list and provide visual indication of points with abnormal and out-of-range values. - Users can now customer view directly from the spaces page to provide a configurable alternative to the fixed spaces page, reducing the need for custom graphics in most cases.
New Standard Graphic Assignment Tool	New standard graphic assignment tool allows users to assign or reset graphic assignments. The assign option allows the user to assign a custom or standard graphic to one or multiple selected pieces of equipment.
New Alarm Suppression Tool	- This standardization tool allows for the suppression of nuisance alarms. - This functionality provides a standard solution to implement Hierarchical Alarm Suppression as defined by the ASHRAE Guideline 36. This technique is based upon the principle that if a fault occurs both at a source and a load, then the fault at the load is likely caused by the fault at the source. - Consider suppressing alarms in the VAV boxes, this suppression would allow a user to identify the source of a problem much quicker than traditional solutions.
Hardening Report Enhancements	Enhanced cybersecurity features have been added to the Hardening Report to test user SC+ exposure to the internet and relay the results.
New BACnet Secure Connect (Node) Support	Tracer SC+ now supports BACnet Secure Connect (BACnet/SC) as a Node device. This secure, encrypted datalink layer allows the SC+ to join a BACnet/SC network and communicate to Ensemble Cloud without an IPSec Tunnel.
Miscellaneous Enhancements	- Miscellaneous features may have been added and/or enhanced. - For the protection of our customers, each Tracer SC+ release may contain non-specified, security-related enhancements. - These enhancements may be related to open-source or Trane software and may result from Trane, Trane partner, or non-Trane testing/analysis

Version 5.5 – December 2020

Feature	Benefit
New Support for Trane® USB Cellular Module	• This module simplifies connectivity to the Trane Cloud, enabling Remote Access, and many analytic and service based features. • This module simplifies installation (single USB connection) and security (private network) vs. other competitive solutions. • This module simplifies installation (single USB connection), and security (private network) vs. other solutions.
New Support for Trane USB Wi-Fi Module	• This module adds network flexibility to Tracer SC+. Tracer SC+ can function as a Client or an Access Point—enabling: - Tracer SC+ to connect to an existing Access Point. - Tracer SC+ to connect to another Tracer SC+ without an external Access Point. - Trane external touchscreen displays to connect to the Tracer SC+ without an external Access Point. - Technicians to connect directly to Tracer SC+ without an external Access Point.
New Demand Management Application	• Tracer® SC+ Demand Management Application provides a robust solution for limiting the energy demand of a facility. Features include: - Demand Response to utility signaling for use with Gridflex. This application helps to directly support energy targets and can decrease demand charges, commonly 30-70% of a commercial building's energy bill.* - Demand Limiting via common demand limiting strategies—without the need to utilize a separate programming tool: examples include changing space temperature setpoints, resetting outdoor air ventilation, or current limiting a chiller. Users can utilize Tracer Synchrony's intuitive web UI for configuration and daily operations.
New Custom Views replaces feature formerly known as 'Custom Values Table'	• Custom Views allows a Tracer Synchrony user to quickly create a table of information that helps simplify common tasks. • New custom views wizard: now allows for column customization, direct overrides, and multiple points/properties per equipment/space member
Enhanced Air-Fi Sensor Functionality	• Streamlined setup for monitoring sensors and associating them with equipment.
Enhanced Support Files functionality	• Files can be associated to a specific device to lower search time for a specific document. • Links allow interaction from graphics, and navigation tree.
Trim/Respond chart enhancements	• Several improvements based upon user suggestions to the Trim/Respond chart.
New Change of Value (COV) support for data logs	• User created data logs can now be configured to gather data based upon a value change or a configured time interval.
Miscellaneous Enhancements	• Miscellaneous features may have been added and/or enhanced. • For the protection of our customers, each Tracer® SC+ release may contain non-specified, security-related enhancements. - These enhancements may be related to open-source or Trane software and may result from Trane, Trane partner, or non-Trane testing/analysis.

Version 5.4 – July 2020

Feature	Benefit
New support for Mitsubishi VRF via XML/IP Protocol	• Tracer® SC+ now supports advanced integration of Mitsubishi VRF systems via an XML interface—this interface includes support for indoor and outdoor units. • Integration has the same look and feel as Tracer® Synchrony® and includes data, graphics, alarms, and datalogs for indoor and outdoor units as well as branch controllers.
Enhanced Customization of Factory Equipment Graphics	• Users can customize a Factory Equipment Graphic by adding and/or removing desired datapoints. • This allows users to benefit from Factory Equipment Graphics while also customizing desired data points.
Miscellaneous Enhancements	• Miscellaneous features may have been added and/or enhanced. • For the protection of our customers, each Tracer® SC+ release may contain non-specified, security-related enhancements. - These enhancements may be related to open-source or Trane software and may result from Trane, Trane partner, or non-Trane testing/analysis.

Version 5.3 – May 2020

Feature	Benefit
New Template Editing for Multi-Equipment Devices	• User can now edit templates for multiple pieces of physical equipment that are controlled by a single unit controller.
New IPV6 Ethernet Communication	• Tracer® SC+ now supports IPV6 communications to ensure compatibility with IT requirements.
Miscellaneous Enhancements	• Miscellaneous features may have been added and/or enhanced. • For the protection of our customers, each Tracer® SC+ release may contain non-specified, security-related enhancements. - These enhancements may be related to open-source or Trane software and may result from Trane, Trane partner, or non-Trane testing/analysis.

*Nrel.gov. 2017. Identifying Potential Markets for Behind-the-Meter Battery Energy Storage: A Survey of U.S. Demand Charges.

Version 5.2 – August 2019

Feature	Benefit
New Support for Active Directory Authentication	Enables users to authenticate with their company's Active Directory implementation (i.e. single sign-on, company credentials, etc.)
New Trim and Respond Application	- New Trim and Respond application provides out-of-the-box support for common reset strategies utilizing standard and custom rulesets. - Configuration is completed via the Tracer Synchrony web-based interface without the need to utilize a separate programming tool. - Examples include Duct Static Pressure Optimization and Discharge Air Temperature Reset. - This functionality allows technicians to easily deploy common ASHRAE Guideline 36 sequences. - In addition to configuration, Tracer Synchrony also allows for intuitive, daily operation—with descriptive status and simple override options.
New Linear Reset Application	- New Linear Reset application provides out-of-the-box support for simple linear reset calculations. - Configuration is completed via the Tracer Synchrony web-based interface without the need to utilize a separate programming tool. - An example would include a reset of the Discharge Air Temperature of an Air Handler based upon the Outdoor Air Temperature. - In addition to configuration, Tracer Synchrony also allows for intuitive, daily operation—with descriptive status and simple override options.
Enhanced Chiller Plant Control Functionality	Tracer SC+ now allows for most CPC options to be changed without having to stop plant operation.
New Options for BACnet Objects	- A new point type that allows more flexibility in when points are read or written to. - Enables additional data points to be read/written by external Workstations (e.g., Tracer® Ensemble®).
Enhanced Global Referencer Application	- A new option to update points based upon a conditional trigger. - Provides an additional mechanism for delivering calculated values to multiple recipients (e.g., Demand Limiting).
Enhanced Variable Air Systems Application Support	Tracer SC+ VAS application now supports Staged Heat (Hybrid Change Over) systems without the need for custom programming.
Miscellaneous Enhancements	- Miscellaneous features may have been added and/or enhanced. - For the protection of our customers, each Tracer® SC+ release may contain non-specified, security-related enhancements. - These enhancements may be related to open-source or Trane software and may result from Trane, Trane partner, or non-Trane testing/analysis.

Version 5.1 – November 2018

Feature	Benefit
New Air-Fi® Sensor Support (Direct)	Allows for Air-Fi® sensors to communicate directly with an SC+, eliminating the need for installation into a Unit Controller first.
New Support File library	Use Tracer® Synchrony® to upload and view support files. These files can be associated with equipment and spaces, keeping important and useful information readily available.
Custom Values Table on Tracer® Synchrony®	Provides a simple way to view tabular data without the need to create a custom graphic or navigation to multiple individual pages.
Enhanced Data Log Creation	- Easy creation for data collection of multiple points at the same time. - Improved detection of duplication, allowing user to replace or duplicate if desired.
Enhanced Data Log Viewer	- Specific data for each data log is shown on hover. - Legend has been re-located to avoid overlapping relevant data. - Default colors changed to improve interaction for vision/color impaired users.
New Alarming Options for Editing Multiple Points	Improved process for editing alarm configurations for multiple points, controllers, and applications in one simple action.
Miscellaneous Enhancements	- Miscellaneous features may have been added and/or enhanced. - For the protection of our customers, each Tracer® SC+ release may contain non-specified, security-related enhancements. - These enhancements may be related to open-source or Trane software and may result from Trane, Trane partner, or non-Trane testing/analysis.

Version 5.0 – February 2018

Feature	Benefit
Support for Tracer® SC+ Hardware	- Improved application & user interface performance. - Provides an additional RS485 port for additional BACnet® MS/TP & Modbus® RTU flexibility. - Supports XM30/XM32 modules to simplify transition from BCU and non-Trane controls. - Support for up to 4 USB accessories, including Trane USB Wi-Fi module, Trane USB Cellular Module, U60 LonTalk® adapter. - Support for Micro SD (backup/restore) and coin cell battery (date/time retention). - A simple, drop-in, replacement for existing Tracer® SC installations.
New Tracer® Synchrony® User Interface	- Improved page and data loads vs. Tracer® SC user interface. - Improved touch-friendly features to support Phones & Tablets more seamlessly. - Login page customization. - The ability to perform firmware updates through Tracer® Synchrony® without the need for an external service tool. - Consistent with Tracer Ensemble User Interface for user familiarity.
Miscellaneous Enhancements	- Miscellaneous features may have been added and/or enhanced. - For the protection of our customers, each Tracer® SC+ release may contain non-specified, security-related enhancements. - These enhancements may be related to open-source or Trane software and may result from Trane, Trane partner, or non-Trane testing/analysis.



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BAS-SLB131-EN
03/01/2023