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These notes cover new features and enhancements to all components of TotalControl Design Studio and TotalControl Building Services.

## **Version 4.5.3.20 (patch): Released 21 November 2024**

**Note:** This patch can be applied to TotalControl version 4.5.3.15 only.

### *Enhancements*

- Updated BACnet device knowledgebase to support the latest KMC Conquest models (Gen6).
- Added full interchangeability between Gen5 and Gen6 KMC Conquest models.
- Added support for TrueFit “-AMD” models.

## **Version 4.5.3.16 (patch): Released 19 July 2024**

**Note:** This patch can be applied to TotalControl version 4.5.3.15 only.

### *Software corrections*

- Publishing Dynamic Text without a background no longer results in the creation of an additional element with a transparent PNG image.
- The bottom and right borders of a Dynamic Text box now display correctly when an opaque outline is selected.
- Graphical pages using KMD points now process cached system group values correctly.
- Double quotation marks (") used in a format string no longer prevent graphical pages from rendering correctly.

## **Version 4.5.3.15: Released 19 April 2024**

### *New features*

- Added the capability to trend proprietary IDs.
- Objects can now be renamed with a right-click menu option.
- Now allows web viewing for IP connections with a right-click menu option.
- Now supports SSL email encryption for the Notification service.
- Now supports Version 2 of formatted hardware (site) keys. This allows a single hardware key to license multiple computers.

### *Enhancements*

- Now supports Microsoft Windows 11 and Windows Server 2022 operating systems.
- Enhanced `storage.dll` for improved `.bnd` file support between versions of TotalControl and KMC Connect.
- Upgraded the BACstac BACnet Protocol Stack.
- Added the Trend Archive Tool to the right-click menu on the Trend Service node.

**Version 4.5.3.15: Released 19 April 2024 (continued)**

- Made improvements to the Trend Viewer for ease of use.
- The Web Portal Trend Viewer now shows AM/PM labels as part of the date and time.
- Rearranged email message format to improve ease of use.
- Users can now assign object location to either the upper or lower portion of the STE-9xxx series NetSensor display.
- For Conquest FlexStat configuration, added a 0.1 scale option to the list of AV object references in the SETPOINTS and ADVANCED menus. Scale options were previously 1 and 0.5 only.

**Software corrections**

- Adding a midday schedule to a full-day schedule no longer results in an error when saving changes.
- Corrected an issue in some versions of Control Basic that prevented some property references from displaying in a Loop Object.
- Corrected an issue in the Web Trend Viewer that caused a 500 error and web server log message "Post exceeded allowed limits" in the Windows Event Log.
- Corrected an issue in the Web Trend Viewer page that caused HTML code to appear within `.CSV` files for export.
- Corrected an issue in the Web Portal Trend Viewer that prevented a highlighted (selected) category from expanding and automatically collapsing the group(s) below it.
- Corrected an issue in the Network Manager that caused an error when attempting to discover device number 4294967295 by entering it in the Specified Device field.
- Corrected an issue that prevented the display of the Present Value for objects within a Priority Array with an "@" component (e.g., 72@9) in the Table View for Analog Outputs and Analog Values.
- Right-clicking the New Protocol Gateway Service under the List of Processes in the Protocol Gateway Manager no longer results in overlapping selection menus.
- In the Alarm Viewer, the Filter Alarms icon no longer appears when no filter options have been selected.
- Selecting "Show Details" from the right-click selection menu for an alarm in the Alarm Viewer no longer displays an error message.
- The Audit Log page now functions correctly when the "Most Recent First" check box is selected.
- Corrected an issue in the Alarm Routing Schedules page when using the French language set that caused the days of the week in added schedules to display in English.
- Corrected an issue in the FlexStat Setpoints tab that prevented a configuration from saving if the object name was changed.
- The Device Backup Manager "Add Device" search dialog box for KMD device backups now accepts mnemonics.
- Replaced the KMD device instance In KMDigital Scheduled Backup file names with a mnemonic in the form `ServiceID_NetworkId_Device_Mnemonic_DeviceName`.
- The Add Device search dialog for KMD devices in Device Backup Manager now appears the same as the Add Device search dialog for BACnet devices.
- When specifying a Custom Y axis in Trend Logs, the saved active selection no longer moves to the top of the navigation tree.
- Corrected an issue that prevented Custom Applications from writing table objects when deploying to Conquest devices.
- The Event/Alarm Properties page for Trend Log Multiples now saves correctly when the "Detection Enabled" check box is selected.
- The Trend Graph is now the default display after navigating away from and then back to the Trend Viewer.

**Version 4.5.3.15: Released 19 April 2024 (continued)**

- Corrected an issue that prevented KMD Tier 2B devices from displaying on the Tier 2 Network Status page when using an English operating system with a French language set.
- The Refresh button in the Table View page now functions correctly when the Auto Refresh check box is selected.
- In the Trend Manager, the correct Trend Group selection now displays when canceling an "Add Trend To Group" command.
- In the Web Portal, selecting dates within or refreshing or deleting a KMD annual schedule no longer causes the view to move to the top of the page.
- In the Web Portal, the buttons "View Trend Data/Graph", "Update Trend" and "Export to CSV" are now unavailable when there is no trend or group selected.
- A Web Trend Report now uses the name of the report as the PDF file name.
- Corrected an issue that prevented a KMD Control Basic program from compiling if referencing an array that is the uses the array object's name.
- Corrected an issue in Control Basic that prevented color coding from functioning properly when there is no space immediately following an arithmetic function symbol.
- Searches in the Trend wizard for mnemonics now accept the question mark (?) within the search criteria.
- The list of objects now appears correctly when dropping an object onto Device, Object and Property in Event Enrollment.
- Corrected an issue in the Code Editor Settings dialog box inside Options that prevented the Compile with Object Names field from being marked as selected when Restore Defaults was selected.
- The "Custom" Override Duration option now accepts 24 or more hours to be entered in the HH section of the HH:MM:SS dialog.
- Duplicating a graphic page or folder with an apostrophe (') in the name no longer results in an error.
- Duplicating a folder of graphical pages now results in independent copies of pages rather than linked copies.
- KMD Control Basic programs that reference an array using the array's object name now compile correctly.
- The border along the bottom of the menu at the top of KMD Service and KMD Network configuration form now displays correctly.
- Corrected an issue in the Network Manager that caused the number of folders, rather than the number of objects, to display in the Object Count section of the tooltip when hovering over a KMD device.
- Clicking inside the User Notes box (Applications>Selection>User Notes) and then clicking elsewhere no longer results in an error.
- Clicking an area within the Devices section of a BACnet Service - Find Devices dialog box other than a radio button, a label or a text box within the Devices section no longer automatically selects the Local Network radio button in the Network section of the dialog box.
- Corrected an issue with the French language set that prevented a KMD backup from functioning correctly when a comma (,) was used as a decimal separator.
- The Tier 2B Network panel in the Configure KMD Device page now displays when using a comma (,) as a decimal separator in a text boxes or boxes.
- Corrected an issue that caused the Network Points window to appear when areas outside of the Network Input Point or Network Output Point columns were clicked.
- Corrected an issue in the Schedule Viewer that prevented the years in the Start Year pull-down menu from displaying correctly.

### **Version 4.5.2.12 patch: Released 16 March 2023**

**Note:** TotalControl must be upgraded to version 4.5.2.5 or later to use this patch.

#### *Software corrections*

- Corrected an issue that prevented some scheduled timed overrides in Web Portal graphical pages from ending at the time set.
- Corrected an issue that resulted in an error message in the Protocol Gateway Log after the cold start of a device during a scheduled override.
- Corrected an issue that prevented .bnd files saved in KMC Connect v1.0.15.8 from opening in TotalControl v4.5.2.9.
- Corrected an issue in the Alarm Viewer that caused the filter icon to continue to display next to Filter Alarms in the toolbar after a filter was removed.

### **Version 4.5.2.11 patch: Released 29 August 2022**

**Note:** TotalControl must be upgraded to version 4.5.2.5 or later to use this patch.

#### *Enhancements*

- Added a Start Date window to the Quick View function in Trend Viewer Controls in the Web Portal.

#### *Software corrections*

- Corrected an issue in the French Canadian language settings that caused an error in View Trend Data in the Web Trend Viewer when the user first entered a comma and then a period as a decimal separator.
- Category selection in Custom Start and End Date in the Web Trend Viewer when used with a French Canadian operating system now functions correctly.
- Corrected an issue that caused toggle switches in Web Portal graphical pages to briefly revert to the original position when selected.
- Corrected an issue that prevented some edited KMD System Group files from saving properly.
- Corrected an issue in Design Studio and the Web Portal that caused values read for some KMD objects in one device to appear in a different object type in another KMD device with a similar device name.

### **Version 4.5.2.9 patch: Released 12 May 2022**

**Note:** TotalControl must be upgraded to version 4.5.2.5 or later to use this patch.

#### *New features*

- Added the capability to trend proprietary property IDs.

#### *Software corrections*

- Corrected an issue that prevented the License Service from working properly when the server time uses a positive UTC adjustment (Continental Europe, Asia, etc.).
- Can now edit the Controlled Variable Reference (Input) on a BAC-5831 with R2.0.0.0 firmware.
- Corrected an issue that caused the Trend Viewer to be unresponsive and web server logs to display a "Post size exceeded allowed limits" message.
- The Export to CSV button in the Web Trend Viewer now works correctly.
- Category selection in the Web Trend Viewer now functions correctly.

### **Version 4.5.2.6 patch: Released 22 February 2022**

Note: This patch applies only to TotalControl systems running TotalControl v4.5.2.5.

#### *Software corrections*

- Corrected an issue in Design Studio that prevented some property references from being selected for objects in the Control Basic Block Editor.
- Corrected an issue that resulted in the message "The requested object was not found" in some graphical elements for KMDigital devices in Web Portal graphical pages.
- Improved performance of the Trend Manager in Design Studio and the Trend Configuration and Trend Viewer modules in the Web Portal.

### **Version 4.5.2.5: Released 5 January 2022**

#### *New features*

- Added a configuration page for the BAC-19xxxx series Conquest FlexStat. The resistive touchscreen color display includes a thermistor for temperature sensing and optional humidity, motion, and CO2 sensors. Onscreen menus allow basic display customization for features such as color scheme, brightness, and contrast. Additional features that may be customized using TotalControl include:
  - a title bar
  - room temperature and setpoint
  - a four-object icon button bar
  - time and date
  - up to 24 total rotation value displays (e.g., humidity, CO2, discharge air temperature) in three areas of eight current values each.
- Added the capability for Design Studio to save and use remote license connection information for each start.
- Added a New Live Trend chart view and table view capability for Loop Objects.
- In Design Studio, added Input Table, Offset, and Multiplier functions to the Sensor Mapping Properties panel for converting raw data transmitted from EnOcean wireless sensors to HPO-9007 series Wireless Sensor Gateways.

#### *Enhancements*

- In Design Studio, added a Server Address column to the Sites dialog box.
- In Design Studio, introduced a drop-down option for adding a sensor to the Gateway list from the Sensor Mapping Properties list in the HPO-9007 series Wireless Sensor Gateway.
- Added CAN expansion module object, address and terminal identifying information as tooltips and in input and output configuration forms in the Network Manager and the Resource Manager.
- In Design Studio, added a Cancel button to the Add Category and Add Group windows in Trend Configuration for the Web Portal.
- Redesigned the Loop Configuration form for ease of use by grouping common properties and reducing the amount of form sections.
- Updated the Autotune features in Loop Properties to reflect changes in loop processing in KMC Conquest devices.
- Added right-click menu import and export options for KMD devices in the Network Manager.

**Version 4.5.2.5: Released 5 January 2022 (continued)**

- In the Add Category dialog box in the Web Portal Trend Group configuration page, added a remaining character count label and a Cancel button.
- Added a Report Export Options dialog box (accessible from the Site Properties dialog box) to select which type of Web Portal report(s) (e.g., Alarm, Trend, Audit Log, etc.) may be exported in which file format(s) (PDF, Excel, Word).
- Expanded the types of properties that can be used with timed overrides in a published graphical page in the Web Portal.
- Added a "No data in selected timeframe" label to empty time frames in the Web Trend View.
- Added navigation buttons to the top of the All Points Report page for KMD devices in order to access other KMD report pages.
- Updated the user interface in Sensor Port Objects configuration tabs to improve clarity. .

*Software corrections*

- Corrected an issue in the Alarm Routing Manager that prevented adding an email address for a user who was previously deleted and subsequently restored.
- In the Site Explorer, individual pages within deleted sub-folders now delete correctly.
- Corrected an issue in the Control Basic Code Editor that allowed the Auto Line Number Increment by Value option to be set to 0.
- In the Design Studio Security Manager, creating a group name with more than 64 characters no longer causes an exception error.
- In Design Studio, Loop Object property names bound to elements are now labeled consistently in the property selection menu and the configuration page.
- Property names in the NFC Properties section are now labeled consistently in the device configuration window.
- Restoring a site from a backup created in TotalControl version 3.2.0.3 no longer causes an error.
- Installing TotalControl without creating a site before launching Design Studio no longer results in a "MachineName value is invalid" error.
- Corrected an issue that prevented some hardware keys from being read or updated by ReadKeys and UpdateKey executable files.
- The Web Portal Audit Log Viewer filter now sorts according to only the most recently selected checkbox.
- Deleted user names can now be used in the Web Audit Log Viewer filter.
- Corrected an issue that prevented KMDigital scheduled backup files from saving correctly.
- Copying an EnOcean Gateway configuration file from the Network Manager to the Resource Manager no longer results in an error.
- TotalControl no longer generates a "Could not close the view" message in the error log and output log when a site is closed.
- Dragging a DS object from the Resource Manager to another DS object in the Network Manager no longer result s in incorrect data transfer.
- Corrected an issue that prevented KMDigital network numbers greater than 65535 from displaying and being logged properly in the Notification Service.

**Version 4.5.2.5: Released 5 January 2022 (continued)**

- Opening a KMDigital program in the Resource Manager without having created a full device backup no longer results in an "Object reference not set" error.
- The Web Alarm Details screen in the Web Portal no longer displays fields that pertain to BACnet only.
- In the Web Portal, trends displayed in the Trend Viewer using a browser with Quick View now update correctly when clicking "Now" followed by "Update Trend" in the Trend Viewer Controls box.
- Corrected an issue that prevented EnOcean Gateway Sensor objects from being deleted when the corresponding EnOcean Gateway device is converted to a NetSensor device.
- Corrected an issue that prevented EnOcean Gateway Sensor objects from being deleted when their EnOcean Gateway device is deleted.
- The Trend Wizard now accepts the underscore (\_) in an object search.
- The Alarm Wizard now accepts the underscore (\_) in a search.
- A BACnet object search in the Device and Object fields now accepts the question mark (?) as a wildcard character.
- A BACnet object search in the Device field now accepts the asterisk (\*).
- An Audit Log search in the Device and Object fields now accepts the underscore (\_).
- Corrected an issue in Control Basic that prevented the Netpoint statement from functioning at priorities other than level 9 in the priority array.
- The DS1Sensor Port Object dragged from the Resource Manager to the Network Manager now points to references in the appropriate local Sensor Port Object.
- Opening a page from a folder in the Site Explorer, executing a Save As command and then selecting "Yes" to save the new page in the current site no longer generates an error.
- Corrected an issue that prevented the Web Portal Trend Configuration window from showing custom trend information if "Custom" was selected previously.
- Changing the Auto Refresh properties in Table View no longer generates a "None of the Property Names sent were found in the column list" error.
- Selecting menu items in the Table View when Auto Refresh is operating no longer results in an exception error.
- In the Device Backup Manager, right-clicking in the device area and selecting View Status History from the shortcut menu when no device is selected no longer generates an error.
- The Trend Viewer now updates PC Trends with information from the database or reads data from a device if the Auto Update time is less than the database trend poll time.
- Gauges in graphical pages now invert correctly.
- KMDigital output and analog and binary variable objects attached to an interactive element on a published graphical page now update correctly when the Manual Override setting is modified in the Web Portal.

**Version: 4.5.1.21 Released 22 June 2021**

*Software corrections*

**Version: 4.5.1.21 Released 22 June 2021 (continued)**

- Corrected an issue that caused an error when opening the Control Basic Block Editor.

**Version 4.5.1.19: Released 2 June 2021**

*New features*

- In Design Studio, added the Object Locate feature to bring into focus the source of an object that has become hidden due to scrolling.
- Introduced the Name/Mnemonic switching feature to allow toggling between name and mnemonic object references in Control Basic programs.
- In Control Basic, can now add or replace objects in a program open in the Text Editor by dragging them from the Network Manager or Resource Manager.
- Can now create scheduled device backups for KMDigital controllers.
- The Trend Service now retrieves Trend Log data accumulated before the previous "buffer ready" notification as necessary to fill in gaps.
- An audit log entry is now created when a user changes his or her expired password.
- Updated the HASP hardware license key driver to the most recent version.

*Enhancements*

- Added support for Windows Server 2019.
- Added support for MS SQL Server 2019.
- Improved security when installing TotalControl by requiring the server name or IP address to be typed rather than selected from a browse button or drop-down list. The default is the machine name on which the installer file is running.
- When upgrading a site, can now choose to log in using Database login credentials or TotalControl login credentials.
- Added feedback to the SQL database connection test to assist with troubleshooting unsuccessful attempts.
- Added a tooltip for the "Auto Commit and Restart" check box in the Firmware Upgrade Manager.
- Updated the icon in Design Studio for the "View in Web Portal" command.

*Software corrections*

- Linear gauge accuracy is now consistent for graphical pages rendered in HTML5 and Flash.
- Labels on graphical pages rendered in HTML5 do not appear now when the LabelVisible property is set to False.
- Linear gauge opacity now works correctly on graphical pages rendered in HTML5.
- Linear gauge measurement indicator colors now work correctly for graphical pages rendered in HTML5.
- The Auto Refresh function in Table View now works correctly when clicking Refresh.
- Navigation buttons with two lines of text now display correctly on pages rendered in HTML5.
- Corrected an issue that caused the font size and background color in a DynamicText element to render incorrectly in a published graphical page.
- Corrected an issue in TotalControl v4.5.0.8 that caused the top border of input boxes in the Alarm Override window to display incorrectly in the Chrome browser.
- Accuracy of linear gauge graphic elements created in Design Studio Graphics Designer is now consistent.
- Corrected an issue that caused an error message in the Output window when publishing a graphical page containing a COV subscription.



**Version 4.5.1.19: Released 2 June 2021 (continued)**

- Corrected an issue that caused the letter "T/t" to be deleted when used as a variable in a Control Basic program.
- Corrected an issue in Design Studio that caused a change in group roles when a user was added.
- Re-opened KMD Table Views now display information in columns correctly.
- Corrected an issue that caused an error when inserting a KMD point in Table view and then selecting "Select auto refresh properties".
- Corrected an issue in Design Studio Security Manager that prevented users from being added when creating a new group.
- Units of measurement selected in DynamicText in the Design Studio Graphics Designer now display correctly in graphical pages viewed using HTML5.
- Corrected an issue that caused existing schedules in the Device Backup Manager to be obscured when creating a new schedule until the configuration is saved.
- Corrected an issue that prevented the TotalControl Installation file from detecting when SQL Server 2019 was already installed.
- Corrected an issue in the Alarm Configuration Wizard that caused an error when regenerating a device and then attempting to select an Event Enrollment object.
- Corrected an issue in NetSensor configuration that prevented changes from being saved when a minimum or maximum value was configured to use a variable and a hardcoded value was used instead.
- Corrected an issue that prevented graphical pages from publishing on Windows 7 systems with few or no updates.
- Corrected an issue that allowed users with a Reader-level security role to make changes on web pages published in HTML5.
- Corrected an issue that prevented Web Schedule Backup files from importing from sites with certain older versions of TotalControl.
- Corrected an issue that caused an error when attempting to publish a duplicate file entry in an animation sequence created in Graphics Designer.
- Corrected an issue that prevented retrieval of trend data from some third-party BACnet devices.
- Corrected an issue that prevented some navigation elements from rendering correctly in graphical pages published to HTML5.
- Corrected an issue that prevented the Toggle button element from rendering properly in graphical pages published to HTML5.
- Corrected an issue that caused text in a paragraph text element to be truncated when the PositionType property was changed to PinPoint from the default of MiddleRight.
- Corrected an issue that prevented graphic elements using image names beginning with the plus (+) sign from rendering properly on graphical pages published in HTML5.
- Corrected an issue that resulted in an error when attempting to add a user group in the Web Administrator web module.
- Corrected an issue that prevented text in navigation buttons less than 24 pixels in height created in Graphics Designer from rendering correctly in Internet Explorer 11, Chrome, or Edge browsers on a Windows 10 system.
- Corrected an issue that caused incorrect images to display when reusing image names for different graphic elements.

**Version 4.5.1.19: Released 2 June 2021 (continued)**

- Corrected an issue in the Information icon slideout in graphical pages published to the Web Portal that prevented editing an Out of Service item even when editing for the element was enabled in Graphics Designer.
- Corrected an issue in the Information icon slideout in graphical pages published to the Web Portal allowed the user to relinquish a priority level when Relinquish Default was not enabled for the element in Graphics Designer.
- Corrected an issue in the Information icon slideout in graphical pages published to the Web Portal allowed the user to relinquish a priority level when "Is Writable" for the priority level was not enabled in Graphics Designer.
- Corrected an issue in which the Information icon did not consistently show when an object was overridden (i.e., had a value at a priority with a numeric value equal to or less than 8).
- Corrected an issue in which the version of TotalControl displayed in various locations throughout the software was inaccurate.
- Line endpoints in graphical pages created in Design Studio are no longer truncated when viewed in the Web Portal.
- An empty configuration file no longer prevents the TotalControl KMD Service from hosting a connection.
- Limit Monitoring Interval and Pulse Rate in Accumulator objects created in a Conquest series device (e.g. BAC-5901CE) now function correctly when opened in the Resource Manager.
- Design Studio configuration files in the Network Manager can no longer be copied between MS/TP and Ethernet devices by dragging.
- Corrected an issue that prevented sites with special characters (such as letters with diacritical marks) in their names from displaying HTML5 graphical pages in the Web Portal.
- Corrected an issue that prevented graphical pages with drop-down boxes containing an apostrophe (') as part of their state text from rendering in HTML5.
- Corrected an issue that prevented an open kiosk window from closing when a site was closed.
- Corrected an issue that caused an error when attempting to open the Web Administrator module before a user group or web user was added in Design Studio Security Manager.
- Corrected an issue that caused an error when opening Trend Manager with no Trend Groups defined.
- Corrected an issue that caused an error when zooming in on a blank Trend Log Multiple chart.
- The label for a NetSensor configuration panel in a Table View tab now lists device and object identifying information.
- Corrected an issue that prevented Control Basic programs in Conquest `.bnd` files written in TotalControl v3.3.7.x from being written when dragged into the Network Manager.
- Corrected an issue that caused an error when selecting or deselecting the Binary State check box for a KMD Input object.
- Corrected an issue that caused an error when selecting or deselecting the Binary State check box for a KMD Input object.
- Corrected an issue that caused an error when saving a `.kmd` table containing an incorrectly formatted data value (e.g., too many decimal points, space between digits, etc.).
- Corrected an issue that caused an "Error Adding Workspace Form" message to display when multiple Configuration tabs or Control Basic programs are open.
- Corrected an issue that prevented TotalControl from displaying a message stating that a file copied from the Resource Manager did not compile.
- Trend charts in operating systems set up for languages that use a comma (,) rather than a period (.) as a decimal separator now function correctly.

***Version 4.5.1.19: Released 2 June 2021 (continued)***

- Corrected an issue that prevented Device Backup and Site Schedule Backup files from showing AM or PM designations on some operating systems. Twenty-four hour time format is now used automatically for operating systems that use the 24-hour clock.
- Corrected an issue that prevented the Chart View in Trend Viewer from displaying certain changes in Boolean values.
- Corrected an issue that caused an error message to display in the Output window when attempting to create a Table View for non-KMC Controls BACnet devices.
- Corrected an issue that prevented KMD Annual Schedules from being edited correctly in Design Studio and the Web Portal.
- Corrected an issue that caused DynamicText set to PinPoint PositionType to render above the correct location in a published graphical page.
- Corrected an issue that caused a "Cannot resolve collation..." error when attempting to install, restore, or upgrade a site from TotalControl v3.5.x.x to v4.5.0.8.
- Corrected an issue that allowed Input objects without a parent device to be convertible in the Resource Manager.
- Corrected an issue that caused an error when choosing "Yes" in the "Close program without saving?" dialog box for KMD Control Basic programs.
- Corrected an issue that caused attempts to restore a TotalControl site using a site backup file created in TotalControl v3.3.5.3 to fail.
- Modified password references in Sensor Port objects used with an HPO-9001 NetSensor Distribution Module now save correctly.
- Corrected an issue that caused restorations using TotalControl site backup files on some SQL servers to fail.
- Corrected an issue that caused some Foreign Keys in a restored TotalControl site to have "Check Existing Data on Creation or Re-Enabling" set to "No".
- Corrected an issue that allowed Object names created in one KMD network currently being accessed by TotalControl to be used in all KMD devices in all open KMD networks to which the TotalControl site has access.
- A device with a space at the end of its name in an open KMD network no longer prevents the copying of a KMD Device or the copying or editing of a Control Basic program .
- Writing an object name to a KMD-5802 with v8.09 firmware now functions correctly.

***Version 4.5.0.13 patch: Released 27 January 2021***

**Note:** TotalControl must be upgraded to version 4.5.0.8 or later to use this patch.

*New features*

- Added the Advanced Publishing Options - Legacy Publishing feature to correct an issue in which some elements on graphics pages created in Design Studio Graphics Designer may not render correctly in HTML5 mode. Legacy Publishing attempts to publish pages in HTML5 mode to match graphic element placement characteristics in legacy Flash Player.

### **Version 4.5.0.13 patch: Released 27 January 2021 (continued)**

#### *Software corrections*

- Navigation buttons with two lines of text now display correctly in the Web Portal in HTML5 mode.
- Corrected an issue that caused an exception when the Out of Range list in the Animation Builder in Design Studio Graphics Designer was left empty. When the Out of Range list is empty, the first frame from the In Range image list will be used.
- Corrected an issue that allowed the Read-Only Web User role to change values on published web pages in HTML5 mode.
- A duplicate file entry in an animation sequence created in Frameset Builder or Animation Builder no longer causes a duplicate key exception when publishing.
- Corrected an issue in pages created in Design Studio Graphics Designer that may have truncated text in paragraph elements when the Position Type property was changed from its default of Middle Center.
- Corrected an issue that caused elements created in Design Studio Graphics Designer that use image file names starting with a plus sign (+) to display incorrectly in HTML5 mode. The plus sign (+) used at the beginning of an image file name will be replaced with "pls". If a file name already includes the characters "pls", "pls#", in which the number sign (#) represents an automatically incremented number, will be substituted to prevent duplication.
- Graphic elements created in Design Studio Graphics Designer that are specified with fractional numbers for properties such as location and size now render correctly on host operating systems that use a comma (,) rather than a period (.) as a decimal separator.
- Accuracy of linear gauge graphic elements created in Design Studio Graphics Designer is now consistent.
- Units of measurement in Dynamic Text now display properly in the Web Portal.
- Vertical alignment for Dynamic Text elements now functions correctly in HTML5 mode.
- Tooltips with a backslash (\) in the text now render correctly in HTML5 mode.
- The HTML5 Timed Override now functions correctly with Binary Variables in KMD devices.
- Trend data retrieval from a third-party device now works correctly.
- The TotalControl Service Control Panel now functions correctly when using a remote SQL server with permissions that do not allow remote SQL access.
- Corrected an issue that caused page publishing to fail on devices running Windows 7 with few or no updates.
- The slideout dialog box for the Information icon (i) in HTML5 graphical pages now works correctly.
- The Override Value input dialog box in graphical pages now displays correctly in the Chrome browser.

### **Version 4.5.0.8 Released 18 March 2020**





#### *New features and enhancements*

- Added a Republish Pages command to the Site Explorer. Republish Pages publishes only those pages that have been previously published.
- Upgrades to the Web Portal and publishing for HTML 5 browsers.

**Version 4.5.0.8 Released 18 March 2020 (continued)**

- Flash is no longer required to view graphic pages, but Flash can still be used as determined by local policy. Pages need only a compatible HTML 5 browser for animations, text boxes and toggle switches.
- In Web Portal pages, users can apply timed overrides to BACnet Value objects and KMD Variable points that are represented by text boxes or toggle button elements. Permission to use timed overrides is granted by user security group.
- The device and object are now included in the BACnet priority array slide-out. The value for Relinquish Default is displayed in gray text to indicated that it is for information only.
- Information icons can be set to either large or small.
- Added additional Information icons as listed in the following table:

**Table 1: Information icons**

Color		Condition
Blue		Data is loading.
Red		Data is not available.
Purple		The point is using the timed override value.
Green		The point is operating normally, but a timed override is scheduled.

- Added support for Conquest wireless sensors and gateway.

**Software corrections**

- To increase publish speed, publishing no longer waits for COV to respond before moving on to publishing pages.
- The Audit Log now correctly captures changes to User Group roles.
- Days in the Time Range drop-down and the Days check boxes in the Add Schedule Dialog in the Web Portal Schedule Manager will change to match each other.
- When updating an existing user in the Security Manager, leaving the password text box empty now leaves the existing password unchanged.
- In the Web Portal, the All Points report now correctly exports KMD points to an Excel file.
- In the Graphics Designer, corrected a problem when connecting lines to connection points of a graphic element.
- Administrators can no longer delete a security group that has users assigned to it.
- Closing Design Studio when there is an unsaved schedule in the Device Backup Manger no longer causes an unhandled exception error.
- In Control Basic, object names in a CAN-5900 are now correctly referenced. Previously, the object name was a reference to an Analog Value object.
- When installing or upgrading from a backup file, the installation no longer stops when the backup configuration contains credentials.
- The Firmware Update Manager will now correctly cancel an update if an error occurs.

### ***Version 4.5.0.8 Released 18 March 2020 (continued)***

- In the Site Backup tab, added time and date to the Annual, SemiAnnual and Weekly selections for Period Type.
- A scheduled site backup no longer fails if the date and time settings in the Site Backup tab are not in the U.S. format.
- In a KMD-5210 Lan Controller, Variable Points 97 and above now open correctly.
- In the Web Portal Alarm report, the End Date calendar is now positioned correctly.
- In the Web Portal Schedule Viewer module, partial dates that are otherwise valid for KMD schedules are now handled correctly.
- Users with expired passwords can no longer log on to the Web Portal.
- In Graphics Designer, corrected issues with tooltips not updating correctly for KMD points.
- In the Security Manager, the default role for new groups is now Reader.
- In the Security Manager, user groups can now be renamed.
- Updated the Web Administrator role in the Web Portal Web Administrator module. The Web Administrators can no longer assign users to the Administrator group or change their own account.
- In the Web Portal Web Administration module, Web Administrators can now only see groups to which they belong.
- Site Explorer folders named with an apostrophe (') no longer cause problems with publishing.
- Correct several issues with the Web Portal Schedule Manager module.
- Sorting by "System Monitor Service" in the Web Portal Audit Log viewer now yields the correct result.
- Improved the speed to view a KMD-5270 Annual Schedule in the Web Portal Schedule Viewer Module.
- When KMD points are saved in a Table View and the view is reopened, the columns are now displayed correctly.

### ***Version: 4.0.5.12 Released 28 August 2019***

#### *New features*

- The Repeats property for the KMD PID Controller is now limited to 455 minutes or 4:15 hours.
- A message is added to the Output Window to indicate that a graphics page has been saved.
- In STE-9000 series NetSensors with firmware E5.1.0.15 and earlier, the list of objects in the Home Screen Upper and Lower Display Values lists cannot be left empty.
- The Web Portal Schedule Viewer module no longer requires Flash.
- Can now change the order that the pages are displayed in the kiosk.
- In the Design Studio Alarm Viewer, the next alarm in the list is selected after an alarm is acknowledged .
- Added humidity and CO2 offset support for STE-9000 series NetSensors.
- Can now enable individual STE-9000 series NetSensors when using an HPO-9001 distribution module.
- In the Firmware Upgrade Manager tab, devices are now listed by model in ascending alphabetical order.
- A hardware key with either BACstage or WCXL+ cannot be converted to a soft key with `HardKeyToSoftKey.exe` that is distributed with TotalControl.
- Added Check All and Clear All buttons to the BACnet Backup Devices dialogs.

**Version: 4.0.5.12 Released 28 August 2019 (continued)**

- In the Schedule Manager, the KMD network name is now added to the Schedule Group name.
- Added a right-click shortcut menu to select or delete devices to the BACnet Backup Devices dialogs.
- Added icons to the Schedule and Trend Manager Exclude User dialogs.

*Software corrections*

- The Update and Refresh buttons now work correctly in the View Trend area of a KMD Trend Log point.
- The Update and Refresh buttons now work correctly in the View Runtime area of a KMD Runtime Log point.
- Corrected the label for the Open Control Basic Program dialog when opening from File.
- In the Web Portal Schedule Manager, the Select Schedule Group list can now be expanded for long schedule names.
- In the Graphics Designer, changing the Fill Color property for an UpDownButton element no longer causes a problem when publishing a page.
- Can now edit the name for NetSensor objects in the configuration tab.
- Graphic `.diagram` files will now open from the Application Selection tool.
- In the Trend Viewer, changing Auto Update Interval now takes place immediately after a change. Previously, Auto Update Interval had to be selected and then cleared.
- Can no longer drag objects from the Resource Manager to a schedule group.
- Added choices to the Never Refresh Every list in the Web Portal Audit Log View module
- Corrected a problem with KMD Table points that caused an exception error if a space was entered for a value.
- In the Security Manager, names of buttons have been changed to be consistent with the associated dialogs.
- In the Web Administrator module, the number of characters is now limited to 64 for First Name, Last Name, and UserName. The length of Answer is limited to 128 characters.
- Exporting KMD Runtime Log points now works correctly.
- Group Names in the Trend Manager are now limited to 128 characters.
- In Design Studio Schedule Manager, a group name is now limited to 128 characters.
- In the Site Backup Schedule tab, the default value for a One Time schedule is now set to the next occurring midnight.
- In the Design Studio Security Manager, the confirmation dialog for deleting groups is now named correctly.
- In the Web Portal Audit Log Viewer module, corrected a problem with buttons not working.
- Corrected problems with scrolling and refreshing in the Design Studio Audit Log.
- The Alarm Routing Manager now limits the number of characters for a person's name.
- The Alarm Routing Manager Alarm Message Delivery Details now limits the number of characters.
- In the Web Portal Web Administrator module, corrected problems with leaving a password unchanged when editing a user.
- In the Design Studio Alarm Viewer module, filters no longer have to be reset when the page refreshes.
- Corrected several problems when purging the Web Portal Audit Log report.
- In the Security Manager, users must confirm they are closing without saving.

**Version: 4.0.5.12 Released 28 August 2019 (continued)**

- In the Web Portal Alarm Viewer module, selecting or clearing the Archive check box now selects or clears the check box on all pages.
- Corrected a problem with selecting a custom date for password expiration in the Web Portal Web Administrator module.
- When setting up a site backup, a valid location is now required in the Backup File Folder text box.
- Corrected a problem in the Table Viewer when changing a property in one of the monitored objects.
- In the Graphics Designer, corrected problems editing frames in the Animation Builder element.
- Expanded the capabilities of Find and Replace in the Graphics Designer.
- In the installer, corrected a problem with using the Database User Name and Password instead of Windows Authentication.
- Attempting to save changes in a Program Object when the Reason For Halt is Error no longer causes an exception error.
- Corrected a problem that prevented any Windows drag-and-drop operations while a drag-and-drop from the Network Manager to the Resource Manager is running.
- In the Network Manager, corrected problems when editing the KMD System name.
- When closing a graphics page, a confirmation dialog opens to confirm that changes should be saved.
- Unique properties for NetSensors and Control Basic are now written correctly when dragging a `.bnd` file from the Resource Manager to the Network Manager.
- In the Design Studio Trend Viewer, a Trend Log Multiple trend will now refresh correctly when clicking Update From Device.
- In Design Studio, editing a user in the Security Manager will no longer delete the user's home page entry.
- Maximum values in the Display Range List in the Dynamic Text element property are now handled correctly.
- Corrected page layout problems for the Web Schedule Manager module.
- Corrected problems with KMD page level binding.
- Corrected problems with alarm printing that also prevented email messages from being sent.
- Removed the limit on the number of categories and schedules in the Design Studio Schedule Manager.
- When restoring a site from Design Studio, KMD Network IP addresses are no longer changed to machine names.
- The passwords for STE-9000 series NetSensors are now saved correctly.
- Copying the password property from an STE-9000 series NetSensor now copies only the password instead of all the NetSensor properties.
- Configuration forms for KMD points now show the KMD network name and number.
- Changing models of the STE-9000 series NetSensor now uses the correct configuration.
- The STE-9000 series NetSensor lower display scale setting now works correctly.
- Values from binary and multistate objects now display correctly in the STE-9000 series NetSensor.
- Corrected problems with auditing a custom application.
- KMD runtime logs are now saved correctly.



**Version: 4.0.5.12 Released 28 August 2019 (continued)**

- In the Service Control Panel, corrected a file not found exception error for the KMD Protocol Driver Service.
- Corrected problems when deploying custom application files.
- Can now add devices to an existing Device Backup Schedule.
- Improved the process of restoring large sites that were backed up with TotalControl versions earlier than 4.0.4.4.
- Creating a new Alarm Category no longer cause an exception error.
- In the Security Manager, the user's security question is now saved correctly.
- When restoring a KMD controller from a `.kmd` file, all of the points (objects) are now copied correctly.
- When closing the configuration form for the STE-9000 series NetSensor, user's are prompted if there are unsaved changes.
- Corrected layout problems with the Web Portal Trend Report.
- In a table view, converting a KMD analog output point to binary when the Delay column is hidden no longer causes an exception error.
- In the Graphics Designer, tooltips now publish correctly.
- In the Schedule Manager, importing a schedule with KMD weekly schedules now works correctly.
- In the Graphics Designer, the Service ID, Device Instance, and Network ID properties in grouped elements can now be change with page level binding.
- Improved publishing large graphic pages to correct an SWF ImageSet error.
- Can no longer duplicate network names in the Network Manager.
- In the Web Portal, corrected a problem with the Audit Log Viewer module that caused an exception error if the last day is selected.
- Can now open a `.diagram` graphics page from the Document Selection List in the Application Selection Tool.
- Changes made in Design Studio are no longer tagged to a user that was automatically logged out and another user logged in.
- Corrected a problem when auditing BAC-8000 (SimplyVAV) controllers.
- Corrected problems with grouped elements on a graphics page.
- When renaming a network, the network name can no longer be left empty.
- Trend Group names are now limited to 128 characters.
- In the Web Portal, corrected problems when archiving alarms that caused the Alarm Viewer module to close unexpectedly.
- Adding a Routing Class name that is over 50 characters long to the Alarm Configuration Wizard no longer causes an exception error.
- In the Alarm Group Manager, renaming a group now works correctly.
- In the Trend Manager, renaming a group no longer causes a duplicate name error.
- Changing the Routing Class Name in the Alarm Configuration Wizard no longer causes an error.
- Changing a Group or Category name in the Schedule Manager no longer causes a duplicate name error.
- In the Web Portal, clicking ACK for an active alarm no longer causes an error.

**Version: 4.0.5.12 Released 28 August 2019 (continued)**


- Entering a page number less than 1 in the Web Portal Audit Log Viewer module no longer generates an exception error.
- A new process added to the Protocol Gateway Service will now start without restarting the Protocol Gateway Service.
- Improved the naming of devices when adding a KMD service or network to the Schedule Manager for both Weekly and Annual schedules.
- Corrected tooltips for the icons in the Alarm Group and Trend Managers.
- Clicking New Job in the Application Selection Tool no longer causes an error.
- Corrected a problem that caused an exception error when creating a new category name in the Schedule Manger .
- Corrected a problem that caused an exception error when creating a new category in the Trend Manager.
- Changing the Session Timeout in Design Studio no longer causes a problem in the Web Portal if a user is logged in.
- The Cancel button in the Firmware Upgrade form no longer changes to Upgrade if the user clicks on another part of the form.
- The KMD Array point now saves correctly if the length is changed.
- Canceling when renaming a Trend Group no longer results in a duplicate name error.
- Creating a new category in the Schedule Manager no longer expands an existing, collapsed category.
- Anonymous Access will now allow more than one user.
- Corrected the error message that opens when attempting to create a Schedule Group without a name.
- Corrected problems in the Web Portal Audit Log that showed an anonymous user logged in.
- The Web Portal session now times out correctly if a user leaves the Trend Viewer module open.
- To conserve memory, the Output Window is limited to 5000 rows. A message will be added to the message list that older messages are in the `TotalControlDesignStudioOutput.log` file in the Resource Manager Logs folder.

**Version 4.0.4.8 patch: Released 19 February 2019**

*New features*

- Several changes to improve speed when reading KMD points.

*Software corrections*

- On web pages with graphic elements bound to KMD points, the error that contains "does not contain definition for" has been corrected. This correction also corrects a problem with graphic elements bound to KMD points that display the red dot error .
- The prefixes F: and R: for KMD network IP addresses now work correctly.
- Improved the speed when reading KMD points by requesting multiple points from the same controller with a single request instead of several individual requests for multiple points.
- TotalControl is now reading only the KMD System Group that is opened. Previously, TotalControl was reading all System Group points in the controller when a single group was opened.
- When using Soft Key licensing, system components now license correctly.

### **Version 4.0.4.4 Released 14 May 2018**

**Note:** With this release, TotalControl no longer supports SQL Server 2005. See *Service Bulletin SB180410A, Upgrading TotalControl from SQL Server 2005* for the procedures to upgrade a site that is using any edition of SQL Server 2005.

#### *New features*

- Added the KMDigital, Protocol Gateway, and OPC services protocols.
- Can now connect to a KMDigital Tier 2 network without going through a Tier 1 controller.
- Added an MS/TP Automatic MAC Address report to Design Studio.
- Users in the Security Manager can now be sorted by user name, first name, or last name.
- In the Web Portal, when assigning users to a home page with the Web Administrator module, the Home Page selection button now displays folders.
- In the Web Portal, the default names for the Audit Report are now more descriptive of the actual report data.
- The Web Portal Audit Log can now be exported as a `.csv` file.
- Added a progress indicator for the Audit Log purge process.
- Can now set the Web Portal session timeout period in the Design Studio Site Properties dialog.
- Added an option to enable or disable the Alarm Monitor Bar from opening when an alarm is received in the General Options dialog.
- If the SQL server is not running when Design Studio opens, the user will now be prompted to start the server.
- Can now edit the Alarm Values property for multistate input and value objects.
- Now supports clearing the Factory Test Mode in the Network Manager.
- Added support for adding properties of data type integer to trend logs.
- When an object name changes in the Network Manager, the name will now be changed in the Alarm Group Manager.
- In the Design Studio Alarm Viewer, the BACnet and KMD alarm details have been improved to be more consistent.
- Added the Device Backup Manager to schedule individual devices for a backup.
- Added an Auto Commit and Restart check box to the firmware upgrade form. When selected, the update process automatically commits the new firmware to the controller.
- When backing up all controllers the second time by dragging a network from Network Manager to the Resource Manager, the user will be prompted to backup or skip all controllers. Previously this required a click for each controller.
- In the Control Basic Line Editor, hovering over a BACnet object displays a tooltip with the value of the object. Display Live Values must be selected.
- A user's secret question is no longer visible in the Security Manager or the SQL database.
- Added Help to the Web Portal.
- The Web Portal no longer requires Silverlight.

**Version 4.0.4.4 Released 14 May 2018 (continued)**

- In the Web Portal Schedule Manager module, schedules can now be copied from one day to another.
- Improved Web Portal to improve compatibility with Google Chrome, Mozilla Firefox, and Microsoft Explorer and Edge.
- Can now copy device configurations from most devices that previously were not interchangeable by dragging from device to device in the Network Manager.
- In the Trend Viewer, added a tooltip that displays the full device name when hovering over a device name.
- The Firmware Upgrade Manager now logs both the old and new versions of firmware in the Output Window.
- Objects with a Present Value property that are of data types Float or Double now use a value of 1.0 for the default COV increment. This includes Analog Input, Analog Output, Analog Value, Lighting Output, Large Analog Value, Loop, Pulse Converter, Trend Log Multiple, and Trend Log objects.
- Can now monitor integers—properties of data type Signed—with Trend Log and Trend Log Multiple objects, and the live trend viewer.
- Can now add or remove text for Event Message Text and Event Message Configuration properties for Multistate Input and Multistate Value objects.
- Can now copy device configurations from most devices that previously were not interchangeable by dragging from device to device in the Network Manager.
- Live values for BACnet objects are now displayed in the Control Basic Line and Block editors.
- BACnet objects in the Network or Resource Managers can be compared by pressing and holding **Shift** while dragging one object to another.
- Improved the vertical scroll bar in the Trend Viewer table view.
- Added Export button to the Audit Log viewer.
- Can now configure Logging Object and Logging Record properties in an Accumulator object.
- Can now select individual devices when exporting `.bnd` backup files from a service or network.
- Added network and service level BACnet backup service. Includes individual device selection.
- Added KMD-5551E as a recognized KMC device.
- Reduced time for BACnet backups and exporting `.bnd` files. Multiple controllers are now simultaneously backed up or restored.
- Added an Analog Output Wizard to configure BACnet Analog Output objects.
- Added a refresh timer, page selection, and other navigation tools to improve performance of the Audit Log viewer.

**Software corrections**

- Can now restore or install TotalControl with site backup files from version 3.3.
- The default value for End Date in the Audit Log Viewer is now automatically set to the current date maintained in the computer.
- When saving trend data to an `.xml` file with the Trend Archive Tool, the data is now saved correctly.

**Version 4.0.4.4 Released 14 May 2018 (continued)**

- When deleting trend data with Trend Archive Tool schedule, data is now deleted correctly.
- The Web Portal Web Audit Log Viewer module can now be set to never refresh.
- Using drag-and-drop to add entries to the Exclude User Groups list in the Alarms Group Manager now works correctly.
- Using drag-and-drop to add entries to the Exclude User Groups list in the Schedule Manager now works correctly.
- Purging the Audit Log now works correctly.
- Installing or restoring from a site backup file on a 64-bit Server 2012 R2 now works correctly.
- The expiration date for a user name can now be added in the Web Portal Web Administrator Module.
- When linking from a web page to a trend group, users can now choose views other than "1 Week" in the Quick View list.
- The user is prompted to save changes when closing the Create/Edit Groups dialog in the Security Manager.
- Corrected a problem with deleting database trends.
- Can now delete a schedule group that contained an excluded group that had previously been deleted.
- Removed extra scaling lines when displaying PC trends from the Design Studio Trend Viewer.
- Improved adding schedules with drag-and-drop in the Schedule Manager.
- Corrected a problem that prevented the Services Control Panel from opening.
- In the Web Portal, alarms linked from a graphic page are now correctly filtered by user permission.
- In the Web Portal Alarm Viewer module, the automatic refresh period can now be set to Never.
- In the Web Portal Alarm Viewer module, alarms selected for archiving are not cleared when the page refreshes.
- In the Web Portal Alarm Viewer module, selecting an alarm for archiving in the Alarm History list will automatically select all newer notifications of the same alarm.
- If the Alarm History list is open in the Web Portal Alarm Viewer module, selecting Archive in Quick View will automatically select alarms in the Alarm History list.
- Corrected problems with restoring or installing from a site backup file saved in a previous version.
- Corrected compatibility issues between versions 3.3 and 4.0 of the Hard Key To Soft Key conversion tool.
- Job names for Application Selection are limited to prevent errors with path names that are too long for Windows. The exact length will depend on the length of the application name.
- In Application Selection, deleting jobs now works correctly.
- Clicking Cancel while the Applications Custom Wizard is loading now works correctly.
- Can now clear KMD want-points.
- Alarms are now synchronized among the Design Studio Alarm Viewer, the Alarm Monitor Bar, and the Alarm Viewer Web Portal module.
- Alarms from different KMD points that use the same alarm text message are now handled correctly.

**Version 4.0.4.4 Released 14 May 2018 (continued)**

- In the Web Portal Web, new user names are now limited to 64 characters, the same as Design Studio.
- Automatic logout now works correctly for the Web Portal Anonymous and Kiosk modes.
- In the Web Portal, users can now hear the alarm sound when viewing graphic pages.
- A PC trend set to start on a future date now starts on the correct date instead of starting immediately.
- Corrected a problem with imported graphic pages that were not storing relative bound points.
- In the Design Studio Schedule Manager, a Schedule object can no longer be added to multiple schedule groups.
- In a Table View, the sort order for the Select Auto Refresh Object dialog is now alphanumeric.
- Multistate Value objects created in devices in the Resource Manager now have valid Present Value and Relinquish Default properties.
- Closing a Table View with unsaved changes to properties now opens a dialog with the choice to save the changes.
- On the Group object configuration form, changing the object name now updates the automatic refresh.
- In the Resource Manager, creating an object while editing Control Basic in the same device will no longer discard unsaved changes.
- The BACnet service now uses the BACstac maximum request property. This will reduce the number of BACSTAC\_STATUS\_OUT\_OF\_RESOURCES messages.
- The "increment" argument for the COV statement now works correctly. Previously a decimal point had to be added. For example 1.0 would work correctly but not 1. Applies to Generation 5 Control Basic only.
- In Control Basic, integer division using a backslash (\) now works correctly in Conquest controllers.
- Corrected a problem when changing polarity in the Binary Input Wizard.
- When setting up an STE-9000 series NetSensor, only Multistate Value objects can now be selected from the Mode Object list under the User Setpoints tab.
- Trend Viewer now shows the correct times and dates when opened from the Trend Manager.
- When using the Time Synchronization shortcut menu from a Network Manager service or network, the Time selection box now works correctly.
- Event Enrollment objects are now deleted without errors.
- Multiple Trend Log objects can now be deleted without errors.
- A message is now added to the Output Window after exporting a single device to the Resource Manager.
- Converting input objects to a different type no longer causes unhandled exception errors.
- Changing the input and output object types in BAC-5800 series and BAC-7000 series controllers no longer causes an error to be added to the Output Window.
- When dropping a .bnd file on a device, deleted objects are now handled correctly.
- Corrected a problem with using object names in Macro blocks in the Control Basic Block Editor.

### ***Version 4.0.4.4 Released 14 May 2018 (continued)***

- When dropping a .bnd file on a device in the Network Manager list, new objects are created in the correct sequence to compile Control Basic programs without errors.
- During a BACnet restore, objects in the restore file, but not in the controller, are now created. Previously this caused an error.
- Closing and opening the Output Window now retains the messages in the window.
- Opening a .bnd file in an older version of TotalControl no longer results in errors.
- Messages added to the Output Window for programs that fail to run are more consistent .
- Dragging an offline device from the Network Manager to the Devices area of the Audit application no longer causes Design Studio to fail.

### ***Version 4.0.0.18 Released 23 May 2017 (Limited release)***

- Corrected problem with Trend Archive and Delete Option.

### ***Version 4.0.0.17 Released 6 January 2017***

**Note:** TotalControl 4.0 supports only the BACnet protocol. Do not use this version to upgrade systems with the KMD or OPC protocols.

#### *New features*

TotalContol 4.0 adds the following major features previously introduced in KMC Connect.

- Full support for Conquest controllers including upgrading firmware over the network and setting the network communications for Ethernet, IP, or IP foreign device
- Input, Trend, and Alarm wizards
- VAV balancing and airflow monitoring tool
- Audit tool
- Application tool to select, configure, and deploy standard applications
- Custom application wizard
- Live trend viewer for multiple objects
- Support for Generation 5 Control Basic and block programming.

#### *Enhancements to existing features*

- Can now use drag and drop in the Schedule Manager to move objects between schedule groups.
- Can create a partial backup (.bnd) file by holding CTRL while dragging and object to the Resource Manager.
- Can now restart BACstac from the BACnet service icon in Network Manager.
- BACnet networks can now be named in Network Manager.
- Under Exception Schedule in a Schedule object, the Calendar Object now includes the name of the Calendar object.

***Version 4.0.0.17 Released 6 January 2017 (continued)***


- The Web Portal now supports Mozilla Firefox browser.
- In BACnet Multistate Value objects, the numerical value is now shown next to the text in the State Text property box.
- In a Notification Class object, can now change time by scrolling.
- When restoring an object from the Resource Manager, the listing order is changed so that AV2 follows AV1 instead of AV10, BV2 follows BV1, etc.
- Added columns for Device Name and Device ID in Table View.
- An End User License Agreement is now included in the installer.
- Added Anonymous mode for the Web Portal.
- In the Resource Manager you can now create a backup of an object or group of objects by holding the ALT key and dragging the objects out of a backup file.
- Added Use COV check box to the Graphics Designer Options dialog to enable or disable all COV subscriptions on graphic pages.
- When copying a device from the Resource Manager to a device in the Network Manager, a dialog prompts the user for permission to compile and run Control Basic programs.
- Can now copy File objects from the Resource Manager to a Network or Service Icon.
- When installing TotalControl from a restored site, the restored site is automatically added to the Design Studio known sites list as the default site.
- Added a Purge button to the Audit Log to delete entries by start and end dates.
- The Alarm Group and Schedule Managers now create unique default names when a new category or group is added.

***Software corrections***

- Excluded user groups no longer cause an exception error in the Web Portal.
- Alarm pop-up and audible alarm now works if "Ack Required" is not set.
- In Event Enrollment objects, the Low and High Limit properties are now saved correctly when the Event Type is set to Signed Out Of Range or Unsigned Out Of Range.
- Improved the time to open a Web Portal on large systems.
- Site backup dialog now closes when the current site is closed.
- In Table View, can now sort columns by clicking the column header.
- Corrected problems with the Archive and Delete options for trend logs.
- Improved the responsiveness for the Alarm Viewer, Alarm Monitor Bar, and Alarm pop up.
- In the Design Studio Trend Manager, the names for groups and categories now increment with each new group or category.
- In the Design Studio Trend Manager, the name dialog for groups and categories now shows the number of remaining characters that can be used for the name.



**Version 4.0.0.17 Released 6 January 2017 (continued)**

- In the Web Portal Alarm Viewer module, the icon for alarms that do not require an acknowledgment icon  now matches the icon in the Design Studio Alarm Viewer.
- In the Web Portal, the reports generated from the Alarm Viewer module no longer have odd or unusual symbols.
- Can no longer move files from the Custom Application Library folder in the Resource Manager.
- In the Web Portal Schedule Manager module, the Start Date cannot be later than the Stop Date.
- In an Exception Schedule in a BACnet Schedule object, the Start Date entry can no longer be later than the Stop Date entry.
- In the Web Portal Schedule Manager module, an entry for a Start Date in an Exception schedule cannot be later than the Stop Date entry.
- In the Web Portal Schedule Manager module, groups no longer expand unexpectedly.
- In the Web Portal Trend Manager, groups no longer expand unexpectedly.
- Added tooltips to the icons in the Building Controller Site Manager.
- Corrected problems with daylight saving time configuration in the Device object for a BAC-1616 Building Controller.
- In the Web Portal Web Administrator module, existing passwords are no longer cleared when editing a security questions.
- Restarting the Trend service no longer duplicates trend data.
- Improved the time it takes to load the Audit Log in the Web Portal.
- Corrected the scroll bars in the Building Control Site Manager.
- Renaming a graphics page in Site Explorer or Resource manager now works correctly.
- When adding a new service in the Network Manager, pressing Enter no longer opens the service configuration form.
- An open graphics page can no longer be deleted.
- Corrected a problem with the Site Explorer Find and Replace that caused an unhandled exception error.
- Corrected tooltips for air handler graphic elements.
- In the Web Portal, removed an extra border when a single trend is selected.
- Corrected a problem in the Graphics Designer Find and Replace that did not change a device instance on a page with page level binding.
- In the Web Portal Trend Viewer module, corrected a problem with the "Update From Device" hyperlink disappearing.
- Design Studio can no longer be closed while Graphics Designer is publishing a page.
- In Site Explorer, the Remove From Web Server command will now remove folders of pages.
- In the Graphics Designer Find and Replace now will make changes on the Comm Service on pages with page level binding.
- The Format String property for a Dynamic Text graphic element no longer reverts to the default value when binding.

### **Version 4.0.0.17 Released 6 January 2017 (continued)**

- Text boxes on configuration forms now turn red when writing to an object fails.
- When running Find and Replace from the Site Explorer, the user now has an option to check out pages.
- Design Studio now confirms that Design Studio and the web services are connected to the same site before publishing pages.
- Corrected a problem with page numbers in the Web Portal Audit Log Viewer.
- Repositioned the Go button in the Web Portal Audit Log viewer to prevent repositioning with high page numbers.
- In the Web Portal Trend Viewer module, corrected a problem with the "Update From Device" hyperlink for Trend Log Multiple objects.
- When dragging an object to the Device, Object and Property box of an Event Enrollment object, the Event Type automatically changes to Change of State.
- Select Database Type dialog removed from installer.
- The Device Application Library and the Device Templates are now listed as components in the installer.
- Corrected a problem when clicking No after canceling an installation.
- Added the BACnet Event Message Text to several objects in the Event/Alarms properties section.
- Improved performance of the Schedule Manager that contains a large number of groups and categories.
- Corrected a problem in the Alarm Viewer when acknowledging an alarm and the acknowledgment didn't register.
- Can no longer add folders to the Deleted folder in the Site Explorer.
- Corrected a problem in the Alarm Viewer that caused acknowledged alarms to revert to unacknowledged after a second alarm was acknowledged.

### **3.3.7.7 Released 6 January 2017**

- Corrected a problem with the Web Portal Schedule Manager. It became unresponsive when loading a large number of schedules.
- Now displays tooltips correctly in Design Studio Graphics Designer.

### **3.3.7.5 Released 28 July 2016**

#### *New features*

- Added a check box in the Graphics Designer Options dialog to force tooltips to update when rebinding elements.

#### *Software corrections*

- Web Portal tooltips are now updated when graphic elements are rebound.
- COV subscriptions are no longer added automatically for BACnet Loop objects.
- Corrected a problem with the BACnet service to prevent freezing with a high number of COV subscriptions.
- COV subscriptions for devices that are unreachable can now be removed from the BAC Service configuration form.

### **3.3.7.5 Released 28 July 2016 (continued)**

- Improved Flash performance in the Web Portal. Previously, the alarm monitor and graphic pages would stop rendering and display a gray or white rectangle.
- On a graphics page, a copy of a dynamic text element is unlinked from the original. Previously, changing the copy would change both.
- In Graphics Designer, binding an object to a graphic item that is already bound to an object, the object property from the existing binding is retained. Previously, the new binding would automatically change to the Present Value property.
- In the Graphics Designer, tooltips now updated when an object or device binding changes with Find and Replace.

### **3.3.7.1 Released 29 February 2016**

#### *New features*

- Added page level binding for Navigation button links to trend logs and schedules.
- Added `.bnd` files for BAC-7001, BAC-7003, BAC-7051 and BAC-7053 with application version 2.2.
- Added tooltip tagging for device names and object names.

#### *Software corrections*

- When linking a Navigation button to a trend or schedule, double-clicking a trend or schedule in the selection dialog now selects the trend or schedule. Previously, dragging the trend or schedule was the only method to select it.
- The Refresh button in the dialog that links a trend to a Navigation button is now correct.
- The dynamic text box bound to a KMD point now updates when animation is tested.
- A dynamic text box bound to the name of a KMD device now works correctly.
- Graphic Designer can no longer have multiple pages from the same page level binding group open at the same time.
- Web portal logon time reduced for systems with a large amount of graphic pages.

### **3.3.6.1 Released 5 May 2014**

#### *New features*

- Added an enhanced table view to the Configure Objects feature in Network manager. Users can now hide properties, add objects from other controllers, and save custom tables in the Resource Manager.
- Added Page Level Binding to simplify replicating graphic pages that are bound to controllers with identical configuration.
- In Graphics Designer, the items in the Binding Elements List can now be edited.
- Added an option to automatically use the KMD system name when adding a new KMD network to Network Manager.
- When dragging a program object from the Resource Manager to a controllers, Design Studio now prompts to run the program.
- Improved BACnet backup and restore. Files are now saved as a `.bbk` file type.

### **3.3.6.1 Released 5 May 2014 (continued)**

- Added support for Windows 8.1 and Server 2012 R2.
- Improved the trend view for BACnet trend log objects in Design Studio.
- Added support for the following BACnet objects: Date Pattern Value, Date Value, DateTime Pattern Value, DateTime Value, Integer Value, Large Analog Value, Octet String Value, Positive Integer Value, Time Pattern Value, and Time Value.
- Navigation buttons added to graphic pages can now link to specific schedules.
- Added a Log Out option to the navigation buttons in Graphics Designer.
- Simplified KMD schedules in the Web Portal Schedule Viewer module.
- The header, footer, and menu bar in the Web Portal are now optional for the site.
- Group permission for a graphic page are now maintained when the page is duplicated.
- Added support for the Calendar and DST properties in BAC-4000 series controllers (AppStat).
- Installs with BACstac 6.4c.

#### *Software corrections*

- Activity logs now show the user names in the logs.
- The alarm count in the Web Portal Alarm View module now shows only the count of alarms that a user has security permission to view.
- Audit logs now show web users logging in and logging out.
- Changes to a KMD variable points are now saved correctly.
- Corrected a problem with the Test button in Design Studio Site Properties that produced the error “This is not a valid web server” on Windows 8 computers.
- Input table objects will now open correctly when the Regional and Language settings are set to French( Canada).
- Added a progress bar to show activity when dragging Control Basic programs from Resource Manager to the controllers in the Network Manager list.
- In the Resource Manager, right-click shortcut menus are now available for BACnet backup files.
- Can no longer make changes to cells that represent unsupported properties in table view.
- Opening a Control Basic program on a computer running a French version of Windows no longer cause an error.
- Changing a KMD binary input to an analog input no longer causes an error on a computer running a French version of Windows.
- Changing the name or length of a KMD array no longer causes an error.
- When running on a computer with a French version of Windows, the values for objects bound to dynamic text boxes with fractional font sizes now display correctly in the Web Portal.

### 3.3.2.4: Released 1 July 2013

#### New features

- To improve the capability to add new models between released versions of TotalControl, device characteristics are now stored in an `.xml` file.
- Added Graphical Program Language and `.kgrp` template files.
- Design Studio no longer limits the number of Calendar objects in BAC-A1616BC building controllers to six.
- Copying `.bnd` files between devices and the Resource Manager is now less restrictive for similar types of controllers. For example, `.bnd` files are interchangeable between a BAC-5801 and a BAC-5802.
- In BAC-A1616BC building controllers, TotalControl made it easier to add device and object instances for remote devices to Schedule objects.
- In the Security Manager Groups dialog, multiple groups can now be modified and new groups can be added without closing the dialog.
- The Update Key utility distributed with this version now supports connecting through a proxy server.
- Can now drag objects from the Network Manager or the Resource Manager to the Assignment column when configuring a NetSensor.
- The Relinquish Default property is now in the General part of the object entry tab instead of with Priority Array tab.
- In the Web Portal, a Now button has been added to trend charts.
- When opening a Trend Report from the Trend Viewer page in the Web Portal, the start and ending times and dates from the page are now used to open the report.
- When adding a new site in Design Studio, the process now starts from the Open Site dialog which lists all of the known sites.
- Added a dialog to add or delete BAC-A1616 building controllers from a connection list when opening the Building Controller Site tool.
- When closing a page in Graphics Designer, can now close the page with saving, without saving or leave the page open.
- When installing a new site, can now choose a specific BACnet device instance for the BACnet PDS.
- When adding a recipient to the Recipient List in a Notification Class object, the device instance of the BACnet PDS is now the default value.
- In the Web Portal, when alarms are acknowledged and the audible alarm is silenced in one Web Portal browser session, the alarm is silenced in all other open browser sessions.
- When dragging a folder of objects from a `.bnd` file in the Resource Manager to a device that can add or delete objects in the Network Manager list, an option was added to delete all old objects before adding new objects of the same type. This eliminates a mix of old, irrelevant objects and new objects.
- When dragging a device from the Resource Manager, added a right-click shortcut menu to select similar groups of objects.
- User is now prompted to save changes before an object configuration tab is refreshed.



**3.3.2.4: Released 1 July 2013 (continued)**

- Improved BACnet reliability when restarting the BACstac service from the Service Control Panel.
- When upgrading sites that have the Web Portal resolved to a URL instead of an IP address, the URL is maintained.
- Design Studio limits the calibration of the NetSensor input to +/- 3.4° F.
- After installing the BACnet PDS, a dialog opens to remind the installer to set up BACstac.
- In the Control Basic editor, added Bookmarks to the Edit menu to manage lines bookmarked with Find and Replace.

*Software corrections*

- Design Studio no longer limits the number of Schedule objects in a BAC-A1616 building controller to four.
- Corrected problems with Design Studio recognizing a license key.
- In Design Studio, the alarm dialog now clears correctly after an alarm from a KMC controller is acknowledged.
- In the Network Manager, the Generate Object Names for KMD devices now works correctly.
- Improved the way TotalControl reads Exception Schedule properties.
- When the Code By Device Object Name check box is selected for Code Editor options, Control Basic programs now open correctly with object names instead of mnemonics.
- The TotalControl Service Control Panel no longer appears to stop when using remote licensing and the remote license service is no longer available.
- Checking the Mute Audio Alert check box for General Application options now works correctly.
- Changing the Auto Numbering To On for Code Editor options now works correctly.
- When working with a `.bnd` file in the Resource Manager, saving Control Basic that does not compile no longer deletes the Control Basic from the editor.
- The Design Studio Alarm Viewer now correctly creates a history instead of multiple entries for the same alarm.
- In the Web Portal, the Web Schedule Viewer module now handles BACnet schedules for binary objects correctly.
- In the Web Portal, corrected issues with archiving alarms with the Archive button.
- In the Web Portal, when an alarm is in the alarm list and the controller is no longer online, a dialog opens to archive the alarm. Previously this caused an error.
- When configuring the Notification service in Design Studio, the Test Connection button now works correctly.
- Setting security levels for KMD output points now works correctly.
- In KMD Tier 1 controllers, TotalControl can now correctly select the Timer and Repeat Minutes check boxes when setting up programs.
- In Design Studio, corrected problems with the Web Trend Manager when a KMD controller was removed from the network.
- Corrected problems in the Web Portal, with Audit log snapshots not completing and causing errors for BACnet reports.
- In the Web Portal graphics page, changing an interactive element bound to an out-of-service property now works correctly.

**3.3.2.4: Released 1 July 2013 (continued)**

- Corrected an issue when collecting a trend log for a BACnet multistate value object. The trend now stores the correct state.
- In the Web Portal, corrected an issue that would sometimes open an error message when logging off.
- In the Web Portal, changing a schedule with the Web Schedule Viewer module no longer causes an error.
- When converting BACnet input objects to a different type (analog, binary, accumulator) an error message is no longer added to the Output Window list.
- Changing or deleting custom messages for BACnet Event Enrollment objects now works correctly.
- In the Web Portal, AM/PM in the header for the Trend report is no longer cut off and the names are properly aligned.
- When editing the State Text property for a multistate object in Design Studio, the Backspace key now works correctly.
- Corrected a problem when setting up a program in a KMC-5210 LAN Controller that deleted the Name and Description text after selecting the On or other check boxes.
- When dragging a graphics page to a KMD system group and the page has more points in it than the allowable number of points for the group, a dialog opens with a list of points that will not be added to the group.
- Can now clear Control Basic programs in a BAC-A1616 building controller without seeing error messages in the output window.
- Corrected a problem in the Web Portal Alarm Viewer that caused an error when setting an early Start Date.
- Corrected a problem that caused graphic page publishing to fail in some new building controllers.
- In the Web Portal Alarm Viewer, corrected a problem with reports from sites with a very large alarm list.
- Corrected a problem with the TotalControl service icon  in the notification area. The icon now changes to indicate a service, such as BACstac, is not running .
- When opening Design Studio, corrected the dialog about missing license keys.
- In the Web Portal, a Web Administrator can now modify any user entry without being part of the user's group.
- The installer program will now halt installation if the name of the computer on which the web components are being installed is composed of characters other than letters, numbers, or a hyphen(-).
- Changing the order of the columns in the tab for a group of objects (for example right-clicking a folder for inputs in the Network Manager and choosing Configure Inputs) no longer causes an error.
- Deleting device template files from the Resource Manager no longer requires that Design Studio be reinstalled.
- The BACnet PDS will now automatically remove any COV subscriptions for unknown objects and the Network Manager will refresh the subscription list.
- Corrected a problem with large weekly schedules in Schedule objects.
- Corrected problems that caused the back up to .bnd file to stop because of a problem with a required property.
- The delete folder no longer expands when publishing or removing a page from the Site Explorer list.


**3.3.2.4: Released 1 July 2013 (continued)**

- Setting the end date prior to a start date in Trend View, Trend Report and Alarm Report is not permitted. This previously caused an error.
- In the Web Portal Trend Viewer module the *View Trend Report* link no longer disappears. when user clicks on trend group in web twice
- In the Web Portal, Web Administrators can now change a user's home page.
- Corrected a problem with the Notification Monitor service for Web Portals that use a resolved URL instead of the default URL.
- Corrected an installation issue when upgrading from older versions and the newer version is not installed on the same disk as the previous version.
- In the Web Portal, the Audit Report Viewer dates are now in the correct order for a computer with Canadian regional settings.
- When cloning devices in the Resource Manager, the device instance will now automatically increment.
- Control Basic programs that use object names will now compile.
- In the Resource Manager, converting an analog input to a binary input now works without errors.
- Scanning and repairing uninitialized or empty configuration files in BAC-58xx and BAC-7xxx controllers now works correctly.
- In a KMD controller in the Network Manager list, right clicking a folder for a group of objects—for example Inputs—and choosing Configure Inputs no longer causes an error.
- A `.bnd` file cloned in the Resource Manager pane now works correctly when dragging it to a device.
- Corrected a problem that stopped the BACnet PDS when dragging a BAC-A1616BC building controller `.bnd` file from the Resource Manager to a device in the Network Manager.

**Version 3.3.1.0: Released 3 December 2012***New features*

- Added support for Microsoft Windows 8, Windows Server 2012, and SQL Server 2012.
- Now installs SQL Server Express 2008 as the default SQL server for all operating systems except Windows XP Professional 64-bit and Server 2003 32-bit and 64-bit versions. For those versions, SQL Server Express 2005 is installed.

*Software corrections*

- In the Web Portal, the out-of service check box in the priority information dialog  now works correctly.
- A site database is now created correctly if there is a restart during installation
- The installer no longer tries to install a Flash player that is older than the currently installed player.



### ***Version 3.3.0.8 Released 28 June 2012***

This version includes features and software corrections from all previous versions and service patches.

#### *New features*

- TotalControl models TC-BAC, TC-BACUNL, and TC-STUDIO are now listed by the BACnet International Testing Laboratory as an Advanced Operator Workstation (B-AWS).
- Added support for Access Door, Averaging, Command, Event Log, Group, Life Safety Point, Life Safety Zone, Load Control, Multistate input, Multistate output, Structured View, and Trend Log Multiple objects.
- Improved the user interface for BACnet schedule objects.
- Added *Jumpered(12 volt)* check box to the dialog for calibrating Analog Input objects that have the Device Type set to Custom. This will correctly calculate the calibration for the BAC-A1616BC when an input is jumpered for a 0-12 volt input.

#### *Software corrections*

- Fixed a memory issue that would cause the System Monitor Engine to shut down without notice.
- Corrected several issues when compiling and saving Control Basic. This includes opening Control Basic either from controllers in the Network Manager or list from files in Resource Manager.
- The Bitmask property in BACnet Event Enrollment objects now display correctly when the property is set to Status Flags and Change criteria is set to Bit String. Previously, it would change when the tab was closed and reopened.
- In the Alarm View module of the Web Portal, the View Alarm Report now lists alarms without error when BACnet alarms are in the report.
- Restoring a group of trend logs from a KMD controller file in Resource Manager now works correctly.
- When restoring a BACnet object with priority arrays from a file in Resource Manager, the array is now added to the controller with the same priority values as the original file.
- Time values added to the Exception Schedule in a BACnet Schedule object are now saved correctly.
- After publishing pages to a BAC-A1616BC and the Clean check box selected, the check box is now cleared. The check box is also cleared when the Building Controller Site Manager is closed.

### ***Version 3.2.4: Service Pack 3 Released 18 April 2012***

This version includes updates from Service Packs 1 and 2, which were limited releases.

- Corrected handling of an unconfigured NetSensor.
- Improved handling of non-BACnet compliant devices.
- Corrected Kiosks DNS resolution issues.
- Corrected a memory problem with software license keys.
- Improved name handling for OPC networks.
- Updated Control BASIC compilers to correctly handle references to loop objects 6-12.


### **Version 3.2.4: Released 1 June 2011**

This version includes features and software corrections from all previous versions and service patches.

#### *Enhancements and new features*

- A site can now be set to either include or exclude, by security groups, all graphic pages in the Web Portal.
- Added BAC-5841 and BAC-5842 to the model list.
- Added the kiosk mode for automatic page display from the Web Portal of designated computers. Each kiosk requires a license added to a key on the computer running the System Monitor Service.
- When publishing pages to a BAC-A1616 building controller, TotalControl will now add any folders or images that are missing from the building controller.
- Can now drag a notification handling device from the Network Manager list to the recipient list property in a notification class object.
- In a BACnet trend log object, the object reference property list is filtered to show only properties within the device that can be logged.
- Added check box for using Control Basic object names to Code Editor Options dialog.

#### *Software corrections*

- In a BAC-A1616 Building Controller, dragging a notification class object from the Resource Manager list to replace a deleted notification class object no longer results in an exception error.
- In BAC-A1616 building controllers or FlexStats, the notification class properties in unconfigured event enrollment objects are no longer handled as unsupported.
- Improved reliability when sending long Control Basic programs to controllers.
- In the Web Portal, the BACnet priority icon  now correctly displays yellow for priorities 1-7.
- Corrected a problem when dragging a multistate value object with only one state to an object in the Network Manager list.
- In the Web Portal, trend log colors are now set to the same color that is selected in Design Studio. In the Trend Configuration module, web safe colors are now the listed colors. All other colors are listed as an RGB value.
- In the loop configuration dialog tab, the priority for writing is now shown with a number.
- When Design Studio scans for devices, device objects are now correctly detected.
- Previously when editing the Object Name in a BACnet program object, using the delete key would delete characters in Control Basic. This is now corrected.
- Corrected problems with the KMD PDS when sending the names, descriptions, and output configurations to KMD-7000 series controllers.
- Corrected missing names and descriptions in the All Point report for KMD controllers.
- Corrected the icons for both the KMD and BACnet All Point reports.
- In the Web Portal Web Administrator module, changing the user's home page now works correctly.
- Corrected problem with changing trend log names in KMD-7000 series controllers.

### ***Version 3.2.4: Released 1 June 2011 (continued)***

- Changing an array in a KMD Tier 1 controller now longer results in an exception error.
- Corrected a problem with KMD trend logs that did not include a controller number in the Trended Points list.
- BACnet controllers that use Next Generation Control Basic will always use object names.
- Correct the date and time in KMD-6000 series weekly schedules. Invalid times—such as 2401—will now leave an empty slot.
- Corrected a problem when backing up the KMD Tier 2 controllers that will result in faster operation.

### ***3.2 SP2***

- Saving a schedule default in BAC-58xx and BAC-7xxx series controllers with firmware 1.5.0.3 now works correctly. Previously it required two attempts.
- Updated the Update Key utility to better handle corrupt keys and errors returned from the host server.
- Improved the Read Key utility when handling corrupt keys.
- In the Web Portal, the Web Trend Viewer module will now correctly display binary values that have text associated with them.
- In the Web Portal, the Schedule Viewer module now displays binary values as Active/Inactive or On/Off instead of 0 or 1. In previous versions this caused schedule changes to fail.

### ***Version 3.2: Released 13 September 2010***

Version 3.2 is a major release that requires hardware license keys with 3.2 licenses.

#### *Enhancements and new features*

- Can now run on the 64-bit and 32-bit versions of all supported operating systems.
- Added a busy indicator when loading schedules, loading events, or saving changes.
- In the Web Portal Alarm Viewer module, multiple alarms can be selected for archiving.
- Improved memory use when dragging between Resource Manager and Network Manager.
- Automatically initialize zero-length configuration files in KMC BAC-5xxx and BAC-7xxxx series controllers.
- Values of points are now shown in the tab for KMD system groups.
- Cimetrics BACstac configuration is now opened from the start menu.
- When a trend log is logging a binary value set up with COV, the trend line in the Web Portal will extend to the current time.
- Added shortcuts to KMD system groups tab to delete all points or just selected points.
- Can now update the TotalControl system group .XML file when changes are made to system groups with WinControl XL Plus.

**Version 3.2: Released 13 September 2010 (continued)**

- Can lock the TotalControl system group .XML file from changes by selecting or clearing a check box in the KMD service configuration tab.
- Site backup and scheduled backup are now separate commands in the Tool menu.
- Added a shortcut menu command to scan and repair uninitialized configuration files in KMC BACnet controllers.
- Will now recognize more FlexStat models.
- Added support for File Transfer Protocol (FTP) connection to BAC-A1616BC Building Controller.
- Can now enter up to 63 characters for the name and description properties in BACnet device objects.
- In the Network Manager Options dialog, the Include Trend Log Data in .BND files now works for both BACnet and KMD controllers. Wording has been changed.
- Can now go to a specific page of a report in the Web Portal Report Viewer module.
- Hasp drivers for hardware license keys are updated to the same version as BACstage and WinControl XL Plus.

*Software corrections*

- In the Web Portal, very large audit logs no longer cause an error.
- Monitor Statistics function and check box in both the KMD and BACnet service configuration tab now works correctly.
- Can now restore multiple objects from either KMD or BACnet controllers by dragging from the Resource Manager list to devices in the Network Manager list.
- In Design Studio, the Calendar view for BACnet exception schedules now match the Web Portal Schedule modules.
- Added support to BACnet multistate objects to display the numerical state value for vendor devices that do not support multistate text.
- On KMC BACnet controllers with firmware 1.6.0.3 or newer, the alarm/event property in a notification object is now correct.
- On KMC BACnet controllers with firmware 1.7.0.5 or newer, the feedback value for a binary output object is now correct.
- On KMC BACnet controllers with firmware 1.7.0.5 or newer, the polarity property for a binary input object is now correct.
- On KMC BACnet controllers with firmware 1.6.0.3 or newer, PID loop action property is now correct.
- Corrected a problem when exporting a .CSV file from the Trend View module in the Web Portal.
- Messages and icons in the Output Window now display correctly after scrolling vertically.
- A KMD variable formatted as time can now be changed with an interactive text box on a graphic page.
- Points in a Tier 1 system group from a KMD-5500 and KMD-6000 series controller now show the correct value when bound to a graphic element on a page.
- KMD Tier 2 variables VAR33 and up are now saved correctly in system groups.

**Version 3.2: Released 13 September 2010 (continued)**

- Nonrecurring schedules can no longer span two days.
- In the Web Portal Schedule Manager module, analog or binary values can be entered for KMD override schedules.
- In a BACnet schedule object, Calendar View now shows daily and weekly schedules correctly.
- When starting Design Studio, the splash screen closes after a few seconds to prevent it from covering the Log On to Site dialog.
- When starting Design Studio you no longer have to click on the Log On to Site dialog before typing a user name or password.
- In the Web Portal, the last day of the month can now be removed from a KMD annual schedule.
- Design Studio limits names for nonrecurring schedules to 128 characters.
- In the Network Manager list, after selecting an object with the arrow keys the correct object now opens after pressing Enter.
- In the Web Portal, corrected the Schedule Manager module to display Unsaved Changes after changes are made to the schedule.
- Control Basic now checks to make sure that there is at least one RETURN statement for every GOSUB statement.

**Version 3.1.3: Released 15 June 2010**

*New features and enhancements*

- Audit logs can be searched and filtered in the Web Portal.
- In Design Studio, user can now enter a custom unit in the Dynamic text box.
- PC trend log can now be set by users in Design Studio tools/options/network manager
- Added nonrecurring schedules in the Web Portal for KMD points.
- Added support for automatic display blanking to the NetSensor configuration tab for BACnet controllers.

*Software corrections*

- Can now clone a .KMD file in the Resource Manager list.
- Trend logs from the BAC-A1616BC Building Controller are now displayed with all records.
- Control Basic programs now run after they are saved.
- Corrected problems with upgrading from TotalControl versions 2.0.5.4 and 3.0.0.9. Should now upgrade correctly on Windows Vista, Windows Server 2008, and Windows 7.
- In Design Studio, the Web Schedule Manager and Web Trend Manager tool tabs can now be open at the same time as other tool tabs.
- Changing a KMD master schedule with Design Studio Web Schedule Manager now correctly changes subordinate schedules.
- Editing KMD override schedules with Design Studio Web Schedule Manager no longer causes an error. Editing a KMD override schedule using the web schedule manager causes an error.

### ***Version 3.1.3: Released 15 June 2010 (continued)***

- System groups created from graphic pages in Tier 1 controllers with Tier 2 points will now correctly add weekly schedules to the system group.
- System groups in KMD Tier controllers now retain the correct numbering for variables VAR129-VAR256.
- In Design Studio archived alarms can now be acknowledged without errors.
- Enabling the Auto Refresh option for Site Explorer no longer results in system memory errors.
- In Design Studio the tab for a KMD weekly schedule now will correctly refresh after changes are made from the Web Portal.
- KMD weekly schedules that are not in a system group and are bound to a dynamic text box no longer results in an "Unrecognized PDS response" error.
- Converting a NetSensor .BND file to a .BAC file no longer results in the wrong values.

### ***Version 3.1.2: Released 19 April 2010***

#### *Enhancements and new features*

- Delete key now works correctly for both the Web Trend and Web Schedule managers.
- Backup files for KMD controllers now appear in the correct numerical order in the Resource Manager list.
- Items deleted from either the Site Explorer list or Resource Manager list are now placed in the Recycle Bin.
- Added support for Microsoft Windows Server 2008.


#### *Software corrections*

- Items in the Resource Manager list are now sorted in numerical order.
- Pressing **CTRL+X** now works correctly.
- Can now rename files in the Site Explorer or Resource Manager lists.
- Trend log data can now only be archived if the user is logged in.
- The date in the Calendar view of the BACnet schedule object is displayed using the computer regional settings.
- When a master schedule is deleted in the Web Schedule Manager, the next schedule in the list is designated as the master schedule.
- When trend logs or trend groups have previously been assigned to a navigation button, the selected trend log or group will be shown in the Trend Selection dialog.
- In Design Studio, appointments in the schedule object calendar view are now aligned. The Show Weekend check box was removed.
- Corrected a memory leak problem with the KMD PDS. The memory leak could have eventually occupied all available RAM.
- In the Web Portal alarm view, the KMD controller mnemonic is now included in the device column.

### **Version 3.1: Released 15 March 2010**

Version 3.1 is a major release that requires hardware license keys with 3.1 licenses.

#### *Enhancements and new features*

- Can now run on the 32-bit versions of Windows® 7 Business and Windows® 7 Ultimate operating systems.
- Added Schedule Manager to the Web Portal. Schedules are presented in daily, weekly or monthly graphic format. Schedules are visually consistent between BACnet and KMD schedules.
- Pages deleted from the Site Explorer list are placed in a Deleted Items folder before permanent removal from the site database.
- Can now remove a page from the Web Portal without deleting the page from the Site Explorer list.
- When dragging a page from the Network Manager to a page with the same name in the Site Explorer list, Design Studio now prompts the operator to replace or duplicate the page.
- The order of pages in the Navigation menu of the Web Portal is set by the order of the pages and folders in the Site Explorer list.
- Added Move Up and Move Down commands to the Site Explorer shortcut menus to change the order of the pages in the Site Explorer list.
- Added utility for software license key option.
- Added site and scheduled backup tools and a restore site tool to Design Studio.
- Can now install a TotalControl site using the settings and data from a backup file.
- Can filter schedules, trend logs and alarm view lists for the Web Portal based on security user groups.
- Added the Building Controller Site Management tool. With this tool, graphic pages in a BAC-A1616BC can be added, removed, and sorted without connecting the building controller to a TotalControl site.
- Now supports find-and-replace for Site Explorer pages at the folder and site level. This includes changing the page refresh interval and max staleness properties.
- Can now use either mnemonics or point and object names when entering Control Basic programs.
- The features for Code Editor are now similar whether programming BACnet or KMD controllers.
- Can now open a Control Basic program from a BACnet program object.
- Before closing, Design Studio checks and displays a message if there are web pages not checked in.
- Can now add more than six time/value pairs to the weekly schedules in BACnet schedule objects.
- The Site Explorer list now automatically refreshes at an interval set in the Site Explorer Options dialog.
- Add an icon for unpublished pages  for the Site Explorer list.
- Added a calendar graphic view to the BACnet schedule object.
- Can now move trends logs between categories in the Web Trend Manager tool.
- BACStage .bac files can be opened in the Resource Manager. TotalControl .bnd files can be exported as .BAC files to the resource folder.

### **Version 3.1: Released 15 March 2010 (continued)**

#### *Software corrections*

- Changed Sign In to Log On on the Web Portal home page.
- Before deleting a folder from the Site Explorer list, the message now displays the correct number of items that will be deleted.
- When duplicating a folder in the Site Explorer list, only the name of the duplicate folder will have "Copy of" added to its name. Names of all folders and pages within the duplicated folder will have the same names as the original pages and folders.
- Objects in a Resource Manager .bnd file are now listed in the same order as the objects in Network Manager.
- In the Resource Manager, pages and folders no longer remain selected when they should not be selected.
- The Web Portal now works correctly for sites with a large number of items (approximately 50,000 or more) that include an exclude-by-user-group setting.
- E-mail alarm messages are no longer sent for KMD controllers that are not online when the KMD PDS starts.
- In the Web Portal controller names are now placed in the alarm list.
- The date in the Web Portal trend viewer is now correct for the regional setting of the computer on which Internet Explorer is running.
- Custom alarm reports now work correctly after the page is opened the first time.
- Alarms from KMD controllers will now be placed in the custom alarm report with names and mnemonics.
- Find-and-replace will now search inside of grouped elements on a graphic page.
- Find-and-replace no longer displays exception errors when pages are closed and then opened before doing the next search.
- Find-and-replace now retains the last search information.
- In the Web Portal, the list for a dropdown text box now works correctly.
- Corrected several issues with the optimization process to reuse animated graphic elements on more than one page.
- The Code Editor now has the correct model and firmware versions when editing Control Basic files opened from the File menu.
- Right-clicking on an empty area of the Site Explorer pane no longer causes an exception error.
- Refresh button added to the Code Editor to reload Control Basic programs from controllers.
- Control Basic GOTO commands now compile correctly for the FlexStat.
- The Code Editor no longer displays a message to send an error report to Microsoft for some programs that have the wrong syntax.
- Changing the filter weight property in a BACnet input object that does not support filter weight no longer causes an exception error.
- Site Explorer Check-in and Check-out buttons now refresh correctly.



**Version 3.1: Released 15 March 2010 (continued)**

- The Resource manager now refreshes automatically after dragging pages within the Resource Manager list.
- Corrected the width of the time/value pair text boxes for the weekly schedule property of BACnet schedule objects.
- The weekly schedule properties in BACnet schedule objects now includes 10 time/value pairs.
- For KMD controllers, trend logs that save data with the Control Basic `TL = -1` command now works correctly.
- The shortcut menu for Automatic MAC Addressing is now wider to accommodate Windows Vista and Windows 7 requirements.
- The license status for the system monitor service now lists "Unlimited" for web seats instead of 4294967295.
- Only minutes and seconds can now be entered in the delay property for KMD output points.
- In the Web Portal, the All Points Report Schedule now clears without error.
- In the Site Explorer list, a checked out page can now be saved using Save As.
- When moving a page from the Site Explorer list to the Resource Manager, a space character no longer replaces the underscore (\_). Removed the code that was replacing space with underscore.
- Attempting to exit Design Studio when not connected to a site no longer causes an exception error.
- Runtime reports now work when the units property is set to any unit of time.
- PC trends for OPC objects now show the correct icon in the Web Portal.
- The PC trend log interval time can now be set to a period greater than 24 hours by entering 1.00:00:00 for one day.
- The automatic refresh feature for Site Explorer now works correctly.
- Reformatted the Web Portal KMD All Points report. The object name and description are displayed in the same column with the description listed inside of parentheses ().
- When using find-and-replace on graphic pages, graphic elements are no longer duplicated.
- Using find-and-replace on site pages no longer deletes graphic elements.
- Publishing to a BAC-A1616BC without a license for graphics no longer causes an error.
- The find-and-replace dialog can no longer be resized.
- Blank lines are now retained in Control Basic for improved clarity and to support existing programs.
- The Code Editor now correctly rennumbers the GOTO, GOSUB, and ON-ERROR commands.
- In BACnet notification class object, event enrollment objects are now listed in the correct numerical order.
- NetSensors can now be restored from a Resource Manager `.bnd` file.
- Pages inside of a folder moved to the resource folder with Windows Explorer are now displayed in the Resource Manager.
- Folders inside of other folders now display correctly when moved in Resource Manager. Exception errors are no longer added to the Output Window.
- Restoring a FlexStat with a `.bnd` file from the Network Manager now works correctly.

### ***Version 3.1: Released 15 March 2010 (continued)***

- After regenerating a KMD network with more controllers than permitted by the license, the Network Manager will now correctly display the offline controllers in red.
- The setting for the ASP.NET session timer is retained during installation.
- The Alarm Routing Manager tool no longer permits duplicate entries for People, Alarm Messages Delivery Details, and Classes of Alarms.
- Smart indenting now works when entering FOR, THEN, ELSE and labels (:) in Next Generation Control Basic programs. Smart indenting is not available for KMD controllers or BAC-5800, BAC-7000, BAC-7300, or BAC-7400 series controllers.
- The dialog for the Achieve Trend tool will always remain in front of Design Studio.
- Corrected a problem with Protocol Gateway Manager that listed errors in the Output Window when adding new processes.
- The Achieve Trend tool is now unavailable when Design Studio is not connected to a site.
- The site User Idle Time property is now retained during an upgrade.

### ***Version 3.0: Released 17 August 2009***

Version 3.0 is a major release that requires hardware license keys with 3.0 licenses.

#### *Enhancements and new features*

- Added a trend category to the web trend manager.
- Can now use wildcard entries for BACnet dates.
- Navigation buttons can now be linked to a specific schedule page.
- Revised the installer to automatically install the correct version of Microsoft.NET, IIS, and if required SQL 2005 Express. Users can now choose to perform either a typical or custom installation.
- Replaced individual icons in the notification area with the TotalControl Service Control Panel.
- In the Web Portal, pausing the pointer over a trend log will display the time and value for the data under the pointer.
- Can now connect to a KMD Tier 1 controller with a URL in addition to the IP address.
- In Graphics Designer added OK and Cancel buttons to dialogs that add trend logs or schedules to a navigation button.
- Improved the commands for checking pages and folders in to and out of Site Explorer.
- Shortcuts for expanding and collapsing the Site Explorer list now include Expand All, Collapse All and Export.
- Trend logs, groups, and categories can be organized in the Web Portal.
- Added a check box in the installer to place a Design Studio icon on the desktop.
- Added an export shortcut command for all of the graphic pages in a folder that is in the Site Explorer list.
- Pages duplicated in the Site Explorer list have a number appended to the name.

### **Version 3.0: Released 17 August 2009 (continued)**

#### *Software corrections*

- BACnet tables are now correct for Type II and Type III thermistors.
- FlexStat schedules now correctly change between binary and analog assigned objects.
- In Windows Vista the dialog for objects that use calendars, the calendars are no longer cut off.
- Entering an apostrophe (') in a BACnet device name no longer causes an error in Design Studio.
- Corrected problems with the dynamic text box element and graphic pages when using French as the regional language.
- A schedule end time that is earlier than the start time can no longer be entered in a schedule.
- You can now drag a single `.diagram` file from the Resource Manager list to an empty site in Site Explorer.
- Submitting an invalid date to a BACnet schedule in the Web Portal no longer causes the PDS to stop running.
- Wildcards entries in calendar objects now work correctly.
- Corrected a problem with trend logs when using wildcard start and stop dates in the BAC-A1616BC.
- Corrected a problem with the Trend service that prevented FlexStat trend logs from being stored correctly in the database.
- Only the correct number of devices can be added to the recipient list in a notification class object.
- Changed *Integration* to *Protocol Gateway* in the Audit report.
- During installation, a location can now be chosen for the Utilities folder.
- The Protocol Gateway service now uses remote licensing correctly.
- Error and warning messages now remain on top of other windows or close the splash screen.
- Removed an extra parentheses ( ) in the name of several graphics library elements.
- Site names are no longer case sensitive.
- In Design Studio, deleting a user with a checked-out page no longer locks others out of the site. Any user can now open the site and check in the checked-out page.
- Can now acknowledge and archive alarms from the Web Portal with a browser that is set for Uruguay regional language settings.
- Changed the icon used to show that a graphic page has a pending update.
- Changed icons used in save dialog boxes.
- During installation on computers with Vista, installation windows now stay in front of other windows.
- Corrected a problem in the Web Portal when viewing alarm reports and from a browser that is set to Uruguay regional language settings.
- Page breaks added to the Audit report.
- When deleting alarm histories, clicking and dragging no longer selects multiple alarms.

**Version 3.0: Released 17 August 2009 (continued)**

- The dynamic text element now displays bound values when using Dynamic List colors.
- The status of a Control Basic program running in a FlexStat is now displayed correctly in the Output Window list.
- User idle time is now stored correctly in the database.
- An e-mail message of a BACnet event now correctly shows the notification as either a TC Event or a TC Alarm.
- The installation window is now wider to eliminate the horizontal scroll bar.
- Unimplemented shortcut menus have been removed from Site Explorer.
- Changed the refresh icon that is displayed when testing a graphic page animation in Design Studio.
- Corrected a problem when connecting the Trend service to the database using an IP address.
- When regenerating a BACnet network all open objects are now closed.
- Corrected several problems with KMD reports.
- The dynamic text box element colors no longer appear as transparent when published.
- The installer now checks for and makes the correct settings for ports, permissions and firewall exceptions for the SQL server.
- Corrected a problem with the hardware key that caused licensing to fail.
- Can now access pages that were checked out by a user name that is no longer in the Security Manager list.
- Can now change a folder in the Site Explorer list to checked out if there are checked out pages in the folder.
- Corrected a problem with KMD reports the erroneously listed *Description not found*.
- Corrected a problem with the All Point report for KMD Tier 2 points
- Object ID information is now placed in the alarm viewer object column.
- In the Design Studio web trend manager an OPC trend is now displayed with the PC trend icon.
- Automatic scaling for trend groups in the Web Portal now works correctly.
- When programming a FlexStat, selecting Run in the Control Basic editor no longer results in errors in the Output Window list.
- Scaling for KMD trend logs in the Web Portal is now handled the same as scaling for PC and BACnet trend logs.
- Hexadecimal values are no longer displayed in the BACnet All Point report.
- Corrected a problem when adding a site with the same name as a site in the known site list but the site is hosted on a different server.
- Active graphics pages now stay in front of other pages when closing dockable items such as Site Explorer or the Output Window.
- Corrected publishing error messages.
- Quick view in the Web Portal trend viewer module now works correctly.
- Custom banner for web pages now works correctly.

**Version 3.0: Released 17 August 2009 (continued)**

- Corrected a problem that disabled the find and replace dialog when a graphics page was saved and either the properties pane or the graphics library pane was undocked.
- Corrected the tab order in the e-mail setup dialog.
- Corrected a problem when sending Control Basic programs. A Control Basic program that is in the editor dialog is no longer deleted if there is an error.
- Changed *Integration Process* to *Protocol Gateway processes* in an error message in the Output Window.
- The pointer changes to the hourglass icon during database migration.

**Version: 2.0.5.4 (Released only as a patch)**

- Corrected a problem with Graphics Designer pages when publishing pages wider than 999 pixels.

**Version: 2.0.5.3 (Released only as a patch)**

- The KMD PDS will now support address translation by adding F: in front of the public IP address of a Tier 1 controller.
- Corrected a problem with the license configuration for the Protocol Gateway Service.

**Version: 2.0.5.2 (Released only as a patch)**



- Corrected a publishing problem with the dynamic text box element. The element now publishes with the correct color settings.

**Version: 2.0.5.1 Released 8 May 2009**

*Features and enhancements*

- Added Protocol Gateway service to Building Services and configuration tool to Design Studio.
- Added OPC PDS to Building Services and configuration features to Design Studio.
- Added support for the BAC-10000 FlexStat series controllers.
- Added over 180 new elements to the graphics library.
- The installer now checks for and—if not present—installs Microsoft.NET 3.5.
- Time and date formats for Design Studio are now set by Windows regional time and date format settings.
- Time and date formats in the Web Portal are now set by the browser language settings.
- The `.xml` settings files are now either updated or generated during installation instead of being replaced.
- The `.xml` configuration files are now located in the Windows Documents and Settings folder.
- Added a shortcut for the Resource Manager resource folder to the Windows Start menu in the Design Studio group. The folder is now located in the Windows Documents and Settings folder.

**Version: 2.0.5.1 Released 8 May 2009 (continued)**

- When installing Design Studio from the Building Services CD, both created and updated sites are added to the Known Sites list in Design Studio. If there is only one site in the list, it will open by default.
- When upgrading versions, the Notification service uses the e-mail settings from previous installations.
- Can now run on 32-bit versions of Windows Vista Business, Vista Ultimate or Windows Server 2008.
- Runtime logs from KMD controllers now display in a tabular format in the Web Portal.
- Text and background in dynamic text boxes can now be configured to change color based on the value of the point to which it is bound.
- Added KMD System Groups to improve updating values in web pages.
- Added interprotocol points to support the KMD-5205 and KMD-5270 models licensed for the Modbus protocol.
- Added the keyword MODBUSTRANSFER to Control Basic for models KMD-5205 and KMD-5270 licensed for the Modbus protocol.
- Added default names for objects and points without a name property. Examples include KMD PID loop controllers, tables, and runtime logs.
- The license server now sends a message before disconnecting.
- Can now change the license server port in the file `config.xml`.
- Images imported with the Picture element from the Custom graphics library are now scaled the same as other elements.
- Navigation buttons now have a security group exclusion list.
- In the Web Portal, attempts to navigate to a page to which the user does not have access will display a message rather than automatically signing out the user.
- Added an option to direct each web user to a specific page when signing in to the Web Portal.
- Added time synchronization to the shortcut menus for BACnet networks in the Network Manager list.
- To reduce network traffic, COV subscriptions are now automatically created only when binding BACnet binary and multistate objects to an element on a graphics page.
- Added an audit report log to the Web Portal.
- The information icon  for Web Portal text boxes changes to yellow  when a value is entered at a BACnet priority higher than 8.
- A trend log report can now be viewed in the Web Portal.
- Alarms and events in the Web Portal alarm viewer now use the same colors as Design Studio to identify alarms (light red) and events (green).
- Names in the workspace tabs are shortened to improve readability.
- All pages within a folder in the Site Explorer list can now be published at one time to the Web Portal. Checked-out pages are skipped and added to the Output Window list.

**Version: 2.0.5.1 Released 8 May 2009 (continued)**

- The Replace dialog remains open when switching between graphic pages. Values are retained for additional searches.
- Added page information detail to Output Window messages that result from problems when publishing pages.
- During installation the user has the choice to add exceptions to the Windows firewall.
- BACstac driver settings are preserved when upgrading the BACstac driver while installing the BACnet PDS.

*Software corrections*

- Graphics Designer will no longer permit a change to multiple selected graphic elements on an open diagram page. Previously this resulted in an error.
- OPC trend logs are now correctly deleted from the web trend manager.
- Corrected a problem with web pages that had elements bound to point that are no longer online. Pages now continue to load data instead of waiting on the value from the point.
- Design Studio will now connect correctly to sites with the same name but hosted on different computers.
- A navigation button that links to a user URL now displays the path as the ToolTip.
- The Save and Open dialogs for program files now start at the last location used.
- An extra dialog was removed when saving Control Basic programs.
- Disabled trend logs are now marked as disabled with an icon in the Web Portal trend viewer.
- Reduced the precision of floating point numbers for the All Reports options for both the KMD and BACnet protocols.
- Design Studio will no longer open a corrupt `.diagram` graphics page file.
- Corrected a problem that would occasionally cause the BACnet PDS to stop when Present Value was manually changed.
- Errors reported using the View Alarm Report link in the Web Portal Alarm Viewer module are now reported as the actual error rather than a general internal error.
- Changed the time limit for opening a diagram page from a site database to 2 minutes.
- Filtering by device for a report now works correctly.
- Canceling the installation of a BACnet PDS no longer causes an unhandled exception error.
- Corrected a problem with opening shortcut menus when right-clicking an item in the Network Manager list.
- Corrected a problem with the installer that incorrectly placed SQLEXPRESS in the configuration file.
- E-mail credentials are now update correctly when upgrading versions.
- The e-mail notification default notification is set to KMC during installation.
- The KMD PDS no longer stops when the connection to a network is lost.
- Messages for the Protocol Gateway service are now added to the Output Window list.
- Corrected a problem that caused the KMD PDS to stop working when adding a new KMD network.

**Version: 2.0.5.1 Released 8 May 2009 (continued)**

- In the Web Portal the precision of the values a trend report is limited to two decimal places.
- In the Web Portal All Points report, a report can no longer be generated for a KMD PDS. Reports are generated only for the controllers in the KMD networks.
- In sites with multiple KMD networks, controllers in the Web Portal All Point report are now listed in the correct network.
- The KMD All Point Report now displays both the point name and format in the format *name (description)*.
- All configuration tabs now have scroll bars.
- Remote license settings are now correctly retained in an `.xml` file.
- The operating period for a technician key is now reset correctly when the key is removed.
- Can now set up input tables for the BAC-A1616.
- Added scroll bars to the Alarm Routing Manager tool and other configuration tabs in Design Studio.
- The timer property in a KMD program object is now enabled with a check box.
- The ToolTip for a BACnet device in the Network Manager list now includes the vendor name.
- Changed the KMD weekly schedule configuration tab to correctly display the On/Off column.
- A KMD PID loop now includes an hours selection for the repeats property.
- Verifies that the rate property for KMD PID loop is within an accepted range.
- The delay property for KMD binary output points now accepts only minutes and seconds in a mm:ss format.
- A BACnet or KMD PDS is no longer counted as a device against the number of devices in the license.
- All trend log groups now display all trend logs for the group in the Web Portal.
- When configuring a device in the Network Manager list with a device file from Resource Manager, the operator is now required to either enter a name if the device does not have a name or to correct duplicate names.
- BACnet Control Basic programs now transfer correctly from the Resource Manager to a device in the Network Manager list.
- Corrected a problem with the remote license service that permitted both remote and local connections for each license on a key.
- Invalid characters can no longer be added to BACnet multistate variables or other properties that use character strings.
- E-mail headers now use plain text.
- When updating an existing site, the database type is now correctly added to the files `SystemMonitorConfiguration.xml` and `web.config`.
- In a configuration tab for a BACnet device, the device network property is now read-only.
- The time properties in the configuration tab for a BACnet service will now accept values in hh:m:ss format.
- Corrected a problem with devices remaining licensed when a hardware key is removed.



**Version: 2.0.5.1 Released 8 May 2009 (continued)**

- Darkened the present value text for the BACnet calendar object.
- Values for Type II and II thermistor tables now load automatically.
- The Description column in a report for KMD controllers remains empty for points that do not have descriptions. Previously "Description not found" was listed in the report.
- The default values for Type II and Type III thermistors now load correctly to device tables. This includes the advanced application controllers and the BAC-A1616.
- Alarm routing messages are now active only for supported event enrollment objects.
- PC trends now start correctly after the computer restarts.
- Corrected a problem with the KMD PDS that incorrectly reported that the number of devices has exceeded the license.
- When renaming an alarm class or user in Alarm Routing Manager, the item remains selected when editing is finished.
- Corrected problems seen when editing schedules in the Alarm Routing Delivery Details dialog.
- In the Web Portal, the page for continuing or canceling a manual snapshot has been reworded.
- Alarm reports in the Web Portal alarm viewer now sort correctly.
- Corrected the options list for the KMD Manual reports list. Options now include choices other than All Devices.
- The name of the user that acknowledged an alarm in the Web Portal is now stored in the database.
- Filtering now works correctly for KMD reports.
- Alarms from BACnet and KMD controllers now use the custom message text as the e-mail subject. If there is no custom message text the routing information is used for the subject.
- Dragging a page from the Site Explore list will no longer appear to bind to anything but a navigation button.
- Control Basic objects can now be restored from the Resource Manager pane even if they are set to read-only status.
- The linear gauge text color now displays correctly in the Web Portal.
- Can now view trend log data for the legacy KMD Tier 2 controllers (KMD-5500, KMD-6000 and KMD-6900 series controllers).
- The alarm count now displays correctly in the Web Portal.
- BACnet trend log objects now reference the correct event enrollment object.
- When copying several elements at one time and then pasting them to a page, the elements now remain the correct size.

**Version: 2.0.3.x**

*New features and functions*

- Enhanced regional date and time formats.

**Version: 2.0.3.x (continued)**

- You can now specify an alternate path to an external database when upgrading trend log data from versions earlier than 1.8. This is for databases with millions of rows of trend data that do not have enough disk space.
- Added support for the BAC-10000 series (FlexStat) controllers.
- Added Filter Weight to the KMD input configuration tab.

*Software corrections*

- The delete key now works correctly when editing a program configuration tab.
- You can now specify a network level broadcast by putting an asterisk \* into the MAC address field of a notification class recipient.
- Tooltips added to the Out of Service check boxes as a reminder that the present value is decoupled.
- Corrected a problem with notification class objects. Only valid network numbers can now be entered in Network when the Network and Mac option is selected.
- Changed device backup so that offline devices are skipped.
- PC trend logs from OPC objects now use the default log interval of 00:15:00.
- The Building Service installer will now stop installation of the web components if IIS is not installed on the computer.
- Corrected a problem that caused the BACnet PDS to stop responding during device discovery.
- Corrected a problem that caused the BACnet PDS to stop responding under some conditions when writing property.
- Improved handling of schedules for KMC BACnet BAC-5800, BAC-7000, BAC-7300, BAC-7400 series controllers.
- Icons showing the analog or binary state of KMD inputs, outputs and variables are now correct.
- Will now correctly back up a KMD-5800 or KMD-7000 series controller by dragging them from the Network Manager list to Resource Manager.
- BACnet Control Basic programs now transfer correctly from Resource Manager to devices in the Network Manager list.
- The .bnd and .kmd template files are now installed in Resource Manager as read-only files.
- Can now set up input tables in the BAC-A1616 Building Controller.
- Notification service now attempts to establish subscriptions after the first failed attempt to connect to a BACnet PDS.
- A BACnet PDS no longer counts against the number of licenses in a key.
- Corrected problems with the utilities ReadKeys and UpdateKey.
- BACnet PDS no longer stops when handling a large number of COV subscriptions.

**Version: 2.0.2.x (Limited release)**

*New features and functions*


**Version: 2.0.2.x (Limited release) (continued)**

- Added regional date and time formats.
- Added calibration for BAC-A1616BC Building Controller input objects.
- Added Device Type selection for BAC-A1616BC Building Controller.
- Added KMD controller device templates to Resource Manager.
- When multiple configuration tasks are running, clicking Cancel now stops all of them rather than just the current task.
- Changed defaults for graphics pages. Max Staleness is now 15 seconds and Refresh is now 20 seconds.
- E-mail passwords are now encrypted when stored.
- Inactive users are now automatically logged off.
- User passwords can be set up with expiration dates.
- KMD Variable with date time unit to give DateTime to client.
- Added the scale data type to the BACnet accumulator configuration tab.
- Added support for creating objects by dragging them from the Resource Manager list to the Network Manager list.
- Added handling for single Unicode strings (not arrays) in BACnet devices.
- Added handling for read-only .bnd and .kmd files in Resource Manager.

**Software corrections**

- All data is now moved correctly when transferring a complete device or controller to or from the Resource Manager.
- Entering non-numeric characters for schedules now results in an error message rather than an exception error.
- Removed COV Property from a graphic elements binding info.
- Can now use find-and-replace to search for multiple elements on a graphics page.
- Binding a graphic element to BACnet object with a present value of NAN (not a number) no longer produces an exception error.
- The names for KMD points are now added to the Network Manager list when a new network is added.
- Double-clicking a folder in the Resource Manager list will now expand to reveal the contents of the folder.
- The navigation button no longer shifts position when publishing a page to the Web Portal.
- When deleting time values in KMD weekly schedules, the time is now deleted in both Design Studio and the schedule in the Web Portal.
- Changing a BACnet input object in the Resource Manager by right-clicking the object and then choosing Convert To Accumulator from the shortcut menu no longer results in an exception error.
- A graphic page deleted from the Site Explorer list is now removed also from the published pages in the Web Portal.
- BACnet priorities are now relinquished correctly in a configuration page that was opened by dragging an object from the Network Manager list to an open configuration page.

**Version: 2.0.2.x (Limited release) (continued)**

- Corrected a problem with BACnet device object configuration tab that prevented some objects from being edited and saved.
- A BACnet schedule object configuration tab can now be updated by dragging a schedule object from the Network Manager list to the open configuration tab.
- Corrected a problem that caused an exception error when typing dates in BACnet exception schedules.
- Design Studio is now limited from creating more than six calendar entries for the BAC-A1616BC Building Controller.
- Code Editor now correctly refreshes a Control Basic program that was opened from a KMD controller.
- Can no longer edit a Control Basic program for a controller that is off-line or not licensed.
- Changed the LED graphic element defaults. An LED will now appear to be On when bound to an active non-inverted binary object or digital point.
- Corrected a problem with the Web Portal that prematurely logged out users.
- Increased number of variables for the KMD-5205 and KMD-5270 from 128 to 256.
- Corrected the sequence for the **UP ARROW** and **DOWN ARROW** keys when using the Trend Log configuration tab.
- In the Network Manager list the BACnet device icon now indicates correctly when a device goes offline and then returns to an online state.
- Control Basic (.cb) and diagram (.diagram) files now open correctly when double-clicked in the Resource Manager list.
- Corrected an exception error created when dragging a KMD point from the Resource Manager list to an element on a graphics page.
- The Design Studio pointer now changes to the hourglass  while opening a site.
- Changed the lockout time for Design Studio and Building Services from five minutes to one minute. Design Studio or a building service can now be restarted one minute after removing and replacing a technician key in the computer hosting the license server.
- Fixed Accumulator Scale control to display proper scale data type.
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- Folders in Resource Manager can now be renamed correctly.
- Binding information for BACnet objects bound to graphics page items no longer includes the BACnet network number.
- Erroneous error messages are no longer placed in the Output Window list when changing either KMD input or output points from analog to binary.
- Resource Manager no longer lists duplicate pages after dragging a site from the Site Manager list.
- Can now drag a site from the Site Explorer list to the Resource Manager pane.
- The configuration tab for BACnet Trend Log properties now expands correctly.

**Version: 2.0.2.x (Limited release) (continued)**

- Elements bound to KMD points and BACnet objects now use the mnemonic for BACnet objects and KMD points as the default ToolTip.
- Corrected the order in which the **TAB** key selects fields in the Web Trend Manager.
- Corrected a problem with COV subscriptions in the BAC-A1616BC Building Controller. If only the out-of-service flag changed, Present Value would report an unrecognized data type.
- Corrected a problem with BACnet schedules that always set the effective date at 2047.
- Fixed KMD variables icon.
- When right-clicking an item in the Network Manager list, there is now an Expand All command in the shortcut menu.
- Configuration tabs for points and objects now have an Expand All button.

**Version: 2.0.0.x**

*New Features and functions*

- The installer program now converts sites from version 1.3 and later to version 2.0.
- Improved Resource Manager support for KMD controllers.
- A hardware license key for Building Services can now be hosted on a remote computer.
- Added an expiration message for technician keys.
- Added Design Studio to the available options when installing Building Services.

*Software corrections*

- Corrected a problem in the Web Portal with trend logs that are hyperlink targets from another page. Trend logs would not display after changing the time span and clicking Update Chart.
- Design Studio no longer closes unexpectedly when trying to delete an object from the Database Trend Configurations list in the Web Trend Manager.
- Corrected a problem that caused an unhandled exception error when using find-and-replace for bound BACnet objects.
- The navigation button no longer shifts position when a graphics page is published to the Web Portal.
- After publishing a page to the Web Portal, Design Studio now remains the active program.
- Trend logs from binary objects now scale correctly in the Web Portal.
- Trend logs no longer display in the Web Portal after they are removed from a trend group in Design Studio.
- The color for the linear gauge animation element now displays correctly in the Web Portal.
- Trend logs from KMD controllers now refresh correctly in the Web Portal.
- Corrected a problem that caused an unhandled exception error when editing a PC trend.
- Corrected a problem that caused an unhandled exception error when attempting to open an already open configuration tab by right-clicking the object and choosing Configuration from the shortcut menu.

**Version: 2.0.0.x (continued)**

- Replaced the icon in the Design Studio About dialog.
- Splash screen now lists the expiration date of tech keys.
- Improved search function when searching for KMC controllers on graphic pages.
- Programs for KMD controllers will now run correctly when restored from the Resource Manager.
- Corrected a problem with the Remote License Server failing to start in some configurations.

**Version: 1.8.1**

*New Features and functions*

- Changed licensing from software keys a USB hardware keys.
- Added splash screen when Design Studio starts.
- Installer will upgrade version 1.6 and 1.7 to version 1.8.
- Add basic Resource Manager support for KMD controllers.
- Can now link from a navigation button to specific trend charts.

*Software corrections*

- Corrected a problem that caused an unhandled exception error when a graphics page is published to a BAC-A1616BC Building Controller before a page being published to the web is complete.
- Gauges and interactive controls now display correctly on BAC-A1616BC Building Controller web pages.
- Links to pages in the BAC-A1616BC Building Controller now work correctly.
- After publishing a graphics page Design Studio no longer disappears behind other applications.
- Removed unnecessary levels in the folder structure when publishing to a BAC-A1616 Building Controller.
- Checks are now made in Design Studio to verify that the type and unit properties for all reference objects in a schedule match.

**Previous versions**

Versions earlier than 1.8 were limited release versions for field testing.