

Welcome to ABB Panel Builder 600 V4.5.0

These release notes contain important information about the Panel Builder 600 software. Please read this file carefully and completely. It contains the latest information and relevant documentation. The latest version of this document is available at:

<https://search.abb.com/library/Download.aspx?DocumentID=3ADR011058&Action=Launch>

Functional changes / New features	Version
PB610 Panel Builder 600: <ul style="list-style-type: none"> – Alarms <ul style="list-style-type: none"> ○ Add Date Format property in action DumpEventArchive ○ Add Touch Ack Notify sent only when the Ack is performed locally by the HMI – Behavior <ul style="list-style-type: none"> ○ Client Cache Improvement ○ Download, as project resources, specific protocol files (userdata) ○ Added Analog Camera widget – Gallery <ul style="list-style-type: none"> ○ Review and improve widget gallery – Generic <ul style="list-style-type: none"> ○ Add to project properties a flag to allow users to disable any type of popup controlled by runtime ○ openssl CVE-2022-1292 ○ Add panel model CP6607-FB – JavaScript <ul style="list-style-type: none"> ○ Added JS profiling in Runtime developer tools for deep diagnosis ○ Dialog size can be changed from JavaScript up to 1920x1080 resolution ○ Added API for Load project / Last visited project actions – MQTT <ul style="list-style-type: none"> ○ Added Tag interface to MQTT ○ Improved management of MQTT CA Certificate file ○ MQTT: Improve the accuracy of currentTimestamp to ms – Multilanguage <ul style="list-style-type: none"> ○ Possibility to associate a keypad to current language – PB4Web <ul style="list-style-type: none"> ○ PB4Web: Extend gesture area widget with possibility to execute one ○ shot actions on new events + support for gstArea widget ○ PB4Web: Added Scheduler widget in read mode ○ PB4Web: added support for widget filtering ○ PB4Web: widgets are not accepted during the Canvas widget drawing ○ PB4Web: Data Transfer action ○ PB4Web: Possibility to choose widget objects from Index Tag parameter in Indexed Tags ○ All Fonts type can be used in PB4Web 	4.5.0.501

- PB4Web: Stack widget integration
- PB4Web: Tab bar widget integration
- PB4Web: Add support to parameters feature into formula conversion
- PB4Web: login page restyled
- PB4Web: Added loaded progress bar
- PB4Web: Optimizations and performance improvements
- Option to enable/disable web runtime spinner (loading) on page change
- PB4Web: Added "logout" API called from project instance
- PB4Web: Add Epoch and ISO8601 standard as available Data Format
- Protocols
 - Added dictionary file synchronization on tag for most used protocols
 - [CDS3] Remove "full node address" option
 - [MIQE][MIQS] Increase Offset range for some CPU model
 - [S7ET][S7OP] Add support for importer TIA Portal project 17
 - [MODS] Node disable management for Server protocols
 - [MODR] Node Override for Modbus TCP Server with possibility to disable node
 - [S7DP] Add Node Override feature
 - [PROD] Not possible to set NodeOverride tag to 0
 - [MRTU] Add support for array elements direct access in Modbus RTU
 - "[S7OP] Import array of strings as separated strings - Case ID: 202200428"
 - [MODS] Node disable management for Server protocols
 - [MRTU] Reduce protocol communication gap
 - [MRTU] Add support for array elements direct access in Modbus RTU
 - [OPCU] Add possibility to auto accept server certificate from protocol editor
 - [OPCU] Improve protocol editor certificate settings
- Recipes
 - Added warning message when restore recipe fails due to not supported chars
- Remote clients
 - Added warning message when restore recipe fails due to not supported chars
- Security
 - Certificate to sign projects
 - Added FTPS secure communication
 - Enhanced password hashing method in runtime and PB
 - TLS support for PB mailing
 - Added project signature functionality to allow only certified project to run
 - Added HTTPS secure communication
 - Added timeout after wrong password for user login
 - Added CSRF (Cross-site request forgery) token as project property for web security
 - Updated openssl library

- Enforced default settings for user management/security
 - Added project file encryption
- Simulator
 - Added tool in Simulator to watch and simulate project tags
 - Added Online Simulator tool
- SQL
 - Added database native connectors
 - "Added table data source widget for easier connection with database query"
 - Added PostgreSQL connector as native DB connector
 - Added ODBC connector as native DB connector
 - Add Unicode Support for DB Connectors
- Tags
 - Possibility to display better view for indexed tags sets in case of long name tags
 - Add "replace" button for "Invalid Tag Reference"
 - Import/Export/Copy/Paste for Indexed Tag sets
 - Tag editor improvement, add double click selection for properties
 - Added Client system variable to support remote variable scenarios
 - Enhanced scenarios of synchronization with external Tag symbol files: choose to keep datalinks when Tags is removed externally
 - Possibility to choose widget objects from Index Tag parameter in Indexed Tags
 - Importer default selection should follow also the combo-box selection of protocols
 - "Add tag name info in read block and read datagram error in protocol error message"
 - Manage tag values with offline simulator
- Trends
 - "Added Up and Down button in Trend Data log to reorder Tags to be sampled"
 - Sampling Time datalink is available only if we have more than one tag to log
 - Add Minimum interval Time to 100 ms in trend sample when it used a Trigger Tag
 - Trend buffer import/export, clone and autofill
 - Add "Attach to" option for FileName properties of DumpTrend
 - Add Epoch and ISO8601 standard as available Data Format
- User Interface
 - Automatic offsets for retentive variables
 - Added System Settings button in Manage Target
 - Change Project Type option on right click of Device node in project tree
 - "Added possibility to choose project upload folder and quick click to open an uploaded project"

<ul style="list-style-type: none"> ○ Added Online help – Widgets <ul style="list-style-type: none"> ○ PB4Web: Table widget sorting support ○ New scatter chart widget ○ "Added 2D and 3D style to buttons to choose text behavior when button is pressed" ○ Enhanced combo box widget style capabilities ○ Added continuous index option in combo box widget ○ Enhanced Web browser widget capabilities ○ Add MJPEG Camera URL between the basic properties of IP Camera Widget ○ Added Dashboard pages ○ Added Tag bar widget ○ Added Stack widget to manage layers ○ Added new icons in widget gallery ○ Added QR code widget ○ Web Browser widget: Add save cookie and Accept-Language support ○ Provided way to load legacy widget gallery ○ Common alignments settings for all text/numeric widgets ○ Added historic and real time trend chart widgets ○ Added user gallery configurator for icon, display text and tooltip ○ Optimized layer widget communication management to activate only active layer 	
Bug corrections	Version
<ul style="list-style-type: none"> – Alarms <ul style="list-style-type: none"> ○ Alarm import file filter not effective when PB runs in French language ○ Live Tag of Multi size array generate an invalid Tag reference ○ Corrected behavior of alarms connected to array elements – Audit Trail: <ul style="list-style-type: none"> ○ Warning message appears at every Logout after Date&Time change – Behavior <ul style="list-style-type: none"> ○ Corrected behavior of HMI Client application in boot sequence ○ Initial change password not working with Client ○ Corrected performances issue when loading page with Tables ○ Page with dot in them name could not been load ○ Corrected behavior of HMI Client on login ○ Deleted false error detected by project validator on recipe widget ○ Error sending email with attachment in specific SMTP server ○ Corrected behavior on property pane which closes after specific sequence ○ Wrong page numbering on PB tabs on specific page sequence creation ○ Corrected behavior of NFC variables in specific scenario ○ Actions defined on hold key pressure are not executed 	4.5.0.501

- Improved tag selection in specific sequence from Tag Editor
- In runtime, all web files are stored in main project folder and not inside web folder
- BACnet scheduler can't read weekly boolean tag and crash with PLCtrend
- Corrected behavior of specific project causing disconnection from HMI client
- Corrected behavior on specific project tun on Simulator
- Corrected PB behavior when cutting some tags in tag editor
- Aligned differences in rendering on the HMI device or in the web using a large amount of data
- Corrected PB behavior in project conversion if project is not saved as but renamed
- Corrected data entry behavior on scaled numeric field linked to recipe selected set
- Opening an external application while holding button causes button to remain pressed
- Corrected false positive error on loading images at project opening
- Corrected unexpected behavior of runtime using specific project
- JavaScript Editor increases the distance between two consecutive rows of code under specific scenarios
- Corrected hierarchical importers behavior
- Corrected USB update behavior in specific conditions
- Corrected behavior when DBWrite Action are executed and Fast Boot is enabled
- Corrected runtime behavior on print action with specific project
- Fixed behavior while setting protocols with plc network and specific steps
- CODESYS 3.5 SP14 runtime not communicating with protocol on WCE
- Corrected behavior on second project download for specific hardware
- Fixed runtime behavior on loading a specific project
- Action "File > Save Project As" doesn't show the path of the current opened project
- Corrected disk size value displayed in project wizard for some models
- JavaScript
 - Corrected action execution on JavascriptFuncBlock on project level
- MQTT
 - MQTT timestamp is published differently for Will/Birth message and for Data Pub message
 - MQTT Interface when we open the Manage push policies, the default policy changes to OnChange
 - MQTT AlarmGroup keyword is always the same at runtime
 - MQTT TLS version is inherited from Generic Broker configuration
 - Connection to Amazon AWS not working, bad character in if_mqtt.xml file

- MQTT: Value received does not update the tag if tagName keyword is not present in topic
- MQTT with multiple tags in payload published wrongly when on timer is Used
- Corrected MQTT connection behavior with Google IoT Core broker
- Corrected MQTT behavior when using TLS without certificates
- MQTT: Runtime HMI cannot publish to Amazon AWS Broker due to plugin missing
- PB4Web
 - PB4Web: Improve error message in case of incorrect web agent
 - PB4Web: GridLayout on web page generates an error
 - PB4Web: Indexed alias not working when in case array tag is attached using index tag
 - PB4Web: Scheduler action ShowDialog is not executed
 - PB4Web: Improved view on Multistate frames
 - PB4Web: SetTimeout action is not executed in template
 - PB4Web: Shape with reduced opacity (0.7) generates a shadow on the label above
 - PB4Web: Scheduler that executes a JS action is not performed on web project
 - PB4Web: Table widget Filter does not work with Columns that support Multilanguage
 - PB4Web: DataTransfer not working between client variables and Tag
 - PB4Web: Indexed tags in a dialog stop to work if we open a second dialog
 - PB4Web: Mozilla Firefox cannot operate with touch
 - PB4Web: corrected performances issues on access to Filter Table widget
 - PB4Web: Toggle action on widget property does not work correctly
 - PB4Web: SetTrendView does not work if Max/Min are set to 0
 - JM4Wweb: corrected behavior on project.getGroup() action
 - PB4Web: Error message appears when TableWgt page is loaded
 - Runtime positioning on web dialog does not work properly
 - PB4Web: Corrected group visibility behavior
 - PB4Web: Actions not executed in dialog pages
 - PB4Web: Non-modal dialog on web pages behave as modal but is not noted on validator
 - PB4Web: Error Message when load the Home Page after first time
 - PB4Web: Table's Rows disappear when filter is complex
 - PB4Web: Indexed tags are not initialized at the first opening of dialog
 - PB4Web: Corrected error after dbQuery
 - PB4Web: adjusted visualization of specific widgets
 - PB4Web: Non-Modal dialog not working on web pages
 - PB4Web: Embeddable Font is not exported in web client

- PB4Web: Audit View returns warning if Page Duration is set to All
- PB4Web: Corrected behavior of Show/Hide with Rows filter in table widget
- PB4Web: Table's filter is not applied when the number of rows is higher than 500
- PB4Web: Error when we load Home Page after a setLanguage action
- Aligned DbResponse behavior from web and native
- PB4Web: specific project remains on loading and shows an error
- PB4Web: Indexed tags not working when used from dialog pages
- PB4Web: Web pages not loading on a specific project
- PB4Web: Load page is not executed when a non-modal Dialog is opened
- PB4Web: at first loading of Pages and Dialogs, they will refresh twice
- PB4Web: Delay of loading data on Table Page
- PB4Web: Javascript query separator cannot be distinguished from same char inside results
- PB4Web: Corrected Table Filter behavior with specific field value
- PB4Web: corrected behavior when closing dialog causing screen freeze
- PB4Web - Access to different panels web pages trough port forwarding causes alternate disconnection
- Accessing web page of a project results in stuck visualization
- Grid layout vertical scroll is not working on web pages
- [PB4Web] Momentary button stays pressed when web page is used from Mobile device
- Fixed initial password is broken in PB4Web
- Color palette doesn't work on the property background of web pages
- Protocol
 - [MODS] Corrected serial data exchange in WCE targets
 - [MODR] Adjusted behavior on node 0 inserting, to be applied only for UDP connections
 - [BACN] max segments accepted error if device doesn't handle segments
 - [OPCU] Error while importing from Wago PFC200 (message in the header too large)
 - [ETIP] Write string data from recipe does not write String LEN value
 - [OPCU] Data type imported as null
 - [CDS3] Device loses connection with CODESYS Workbench under certain conditions
 - [CAND] Import of DBC file does not take care of Mux info start in frame
 - [S7ET] Communication failed with CP1542SP Slot 2
 - [ABBE] Tag Import erroneously from PLC file with tab/space character in the Tag Name

- [BACN] Communication error with specific BACnet device
- [IR5L] IRC5 Linux protocol not starting in PB 4.5
- [MODR] Server does not answer in TCP mode with Node ID 0
- [ETIP] Communication error when reading multidimensional arrays of structures
- [ABBE] Tag Import erronealy from plc file with tab/space character in the Tag Name
- [MRTU] Reduce protocol communication gap - Case ID: 202200810
- [MODR] Tags defined in Modbus TCP Server has inappropriate ID in Tag URL
- [ETIP] Communication error when reading multidimensional arrays of structures
- [IR5L] IRC5 Linux protocol not starting in PB 4.5
- [MODR] Server does not answer in TCP mode with Node ID 0
- [MODR] HMI runtime crashes with modbus server if malformed packets are sent
- [BACN] Communication error with customer BACnet device
- [BACN] max segments accepted error if device doesn't handle segments
- [CDS3] Device loses connection with Codesys Workbanch under certain conditions
- [ETIP] Write string data from recipe does not write String LEN value
- [ETIP] Tags related with the servo drives are not imported- Int64 types added
- [IR5L] ABB IR5L boolean Tag not working anymore
- [MODR] Tags defined in Modbus TCP Server has inappropriate ID in Tag URL
- [MODR] Runtime crashes when sending request with random long strings(Introduce issue)
- [MODR] Node Override for Modbus TCP Server with possibility to disable node
- [MODS] Different behavior between UN30 and UN31
- [OPCU] Display App Uri Validation not correct
- Recipes
 - Corrected behavior when recipe download is executed on string tags
 - Corrected behavior when recipe download is executed on string with special chars
 - Recipe Field displays wrong data on screen
 - Writing more char in string recipe elements following elements is overwritten
 - HMI executes more and redundant write data in plc when a Tag array is used in Recipe
- Scheduler
 - Sunrise and Sunset wrong hour during summer time
- Security
 - Login after Change Password in Login Page does keep the Permission of the User Logged before
 - User forced to change initial password after editing another user credentials

- Group home page changed when changing FTP/HTTP settings
- Corrected behavior when accessing to USB and SD via FTP on specific hardware
- Always ask for the encryption password when it is needed
- HMI runtime crashes with modbus server if malformed packets are sent
- Simulator
 - Simulator is not closing when PB closed
- SQL
 - dbReadRecipes action returns Element not found on high size recipes
 - Database query with Nchar and Nvarchar will not be returned properly
 - Aligned DbResponse behavior from web and native
- Tags
 - Scaled array with fixed point does not write value properly
 - PB does not save Interfaces tag group selection
 - Tag editor Scaling problems when entering scaling factors with decimal point
 - Usage of double array resets connection (device offline)
- Trends
 - [BACN] Corrected Simulator behavior using BACNetTrends
 - Corrected PLC Trend behavior in showing curves
- Widget
 - PB4Web: property Sorting for Alarm History Table does not work
 - PB4Web: Group column in Alarm History widget is not shown
 - Reviewed not working RSS feeds widgets
 - TextTableFilter widget apply filter "0" when field is empty
 - Trend table duration not working properly when we set 4 weeks / ALL
 - Network configuration is not applied when the interface is with an AutoIP
 - Improved Pinch event management on Scatter Chart widget
 - Browser widget scrollbars does not work
 - Corrected behavior when scrolling GridLayout causing performances issues
 - Corrected PB behavior on continuous index flag of combobox widget
 - ComboBox doesn't show communication error icon and show wrong element with index data
 - Fixed behavior of IC Camera widget image polling
 - Reviewed minor icon graphic in new widget gallery
 - Corrected visualization issues on a custom alarm table
 - Boolean BACnet scheduler does not work properly
 - Table filter formula does not work at first time
 - Web browser widget keyboard is not working with the runtime
 - Chart Widget's gesture event shows curves frozen
 - Combobox widget with empty data property

<ul style="list-style-type: none"> ○ Table widget with filter does not deactivate tags when filter changes ○ Web Generation error when we just drag and drop the Tab widget ○ Custom Style property is not exposed for "TabBarWgt" by default for style == Custom ○ Datalink initialization issue first layer stack widget ○ Wgt javascript variables does not work properly inside stack widget in custom widget ○ Data read for new chart widget is not stopped when page is changed ○ The Chart widget trigger a user.notice pblauncher: QFont::setPixelSize: Pixel size <= 0 (0) ○ PB hangs while resize new gallery trend widgets ○ PB crashes when User Gallery folder is changed ○ Delay while open the PB in pc with new gallery ○ Layer widgets are not visible if we insert more than 3 nested stack widget ○ Text Editor widget save file without extension and does not recognize them in browse 	
Known issues	Version
<ul style="list-style-type: none"> • ABB Modbus RTU protocol with Model ABB AC31 Series 90 not working: bugfix in preparation and available in the next version • Missing error message: It is not possible to download a Runtime version lower than V4.5.0.x to a panel with BSP V1.3.x 	4.5.0.501