



iTest 4.5 – What's New

Don Nutter

29 April 2025

- New features include:
 - Updates to the Patching Process
 - “Headless” iTest Mode
 - AutomationPanel Updates
 - SolutionBuilder Updates
 - Driver Updates
 - Python Updates
 - iTest.BTS Updates

Patching Process

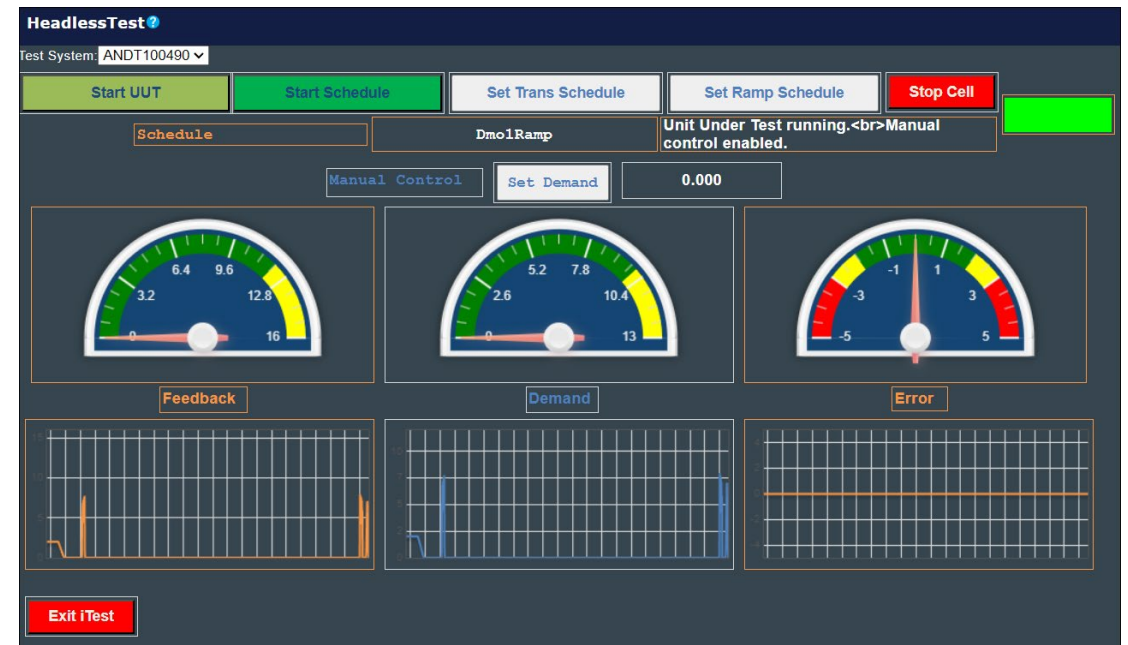
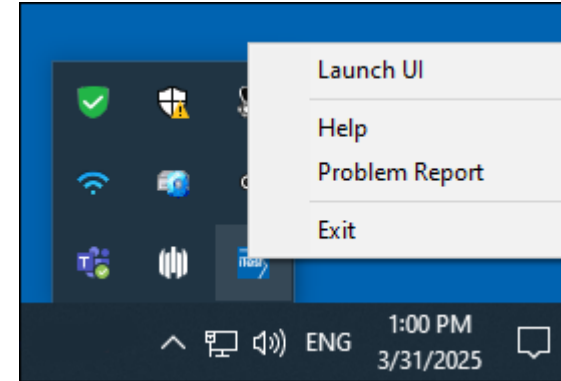
A&D Technology relies on a series of patches to add new features and address issues between version releases. Previously, the patching process utilized *PatchUpdate.exe* in order to apply patches; this tool has been deprecated.

To patch iTest, run *iTestXXSetup.exe* for the version you would like to patch, where XX is the product version (e.g., *iTest45Setup.exe*).

iTest also includes the **voSysPatchStatus** channel to determine the patch level status. This channel allows you to quickly identify if the running software versions for iTest and LabAgent are outdated.

“Headless” iTest Mode

iTest can now run in “headless” mode, where a GUI application (e.g., AutomationPanel) is not launched on startup. This allows for operators to perform testing on stations within a lab via LabCentral’s **Free-form Dashboards** feature. While iTest is running in “headless” mode, an iTest icon will display in the Windows system tray.

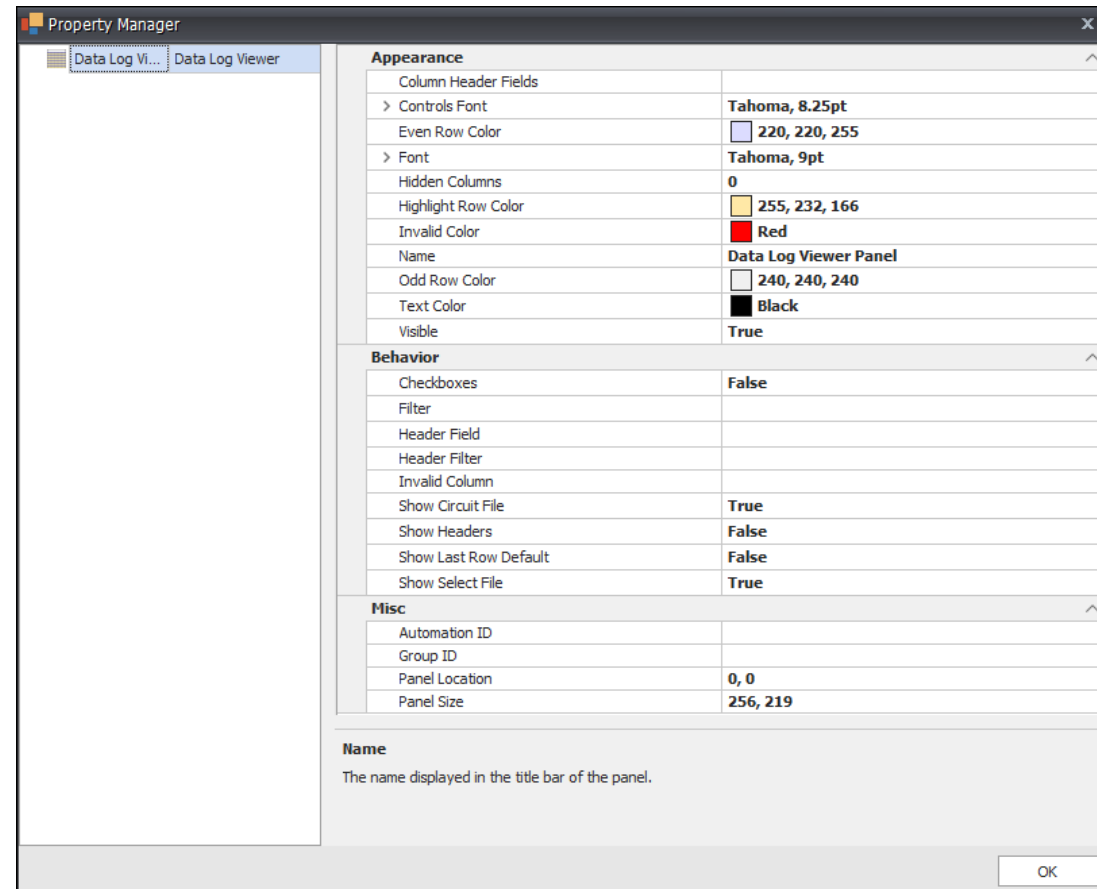


The Chart panel's configurations can be saved to a template and then loaded in DspDrv_AP for users with the proper security permissions. This feature replicates the custom saved configurations from LivePlot.

AutomationPanel: Data Log Viewer Panel

The Data Log Viewer panel now supports the following properties:

- Checkboxes
- CheckedRows
- Column Header Fields
- Controls Font
- Header Field
- Header Filter
- Invalid Color
- Invalid Column
- Show Headers
- Show Last Row Default
- Show Select File



AutomationPanel: Gauge Panel

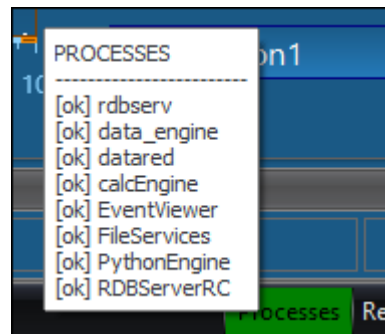
The Gauge panel now includes the **Error Color** property. This property allows you to specify the translucent color of the arc between the target and current values.



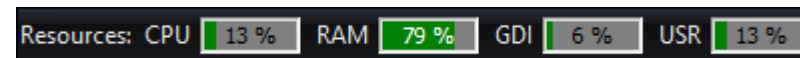
AutomationPanel: New Indicators

AutomationPanel now includes the **Show Process Indicator** and the **Show Resource Indicators** options. These options allow you to display the running state of important processes, the system CPU, memory utilization, and other resources in the status bar.

Process Indicator

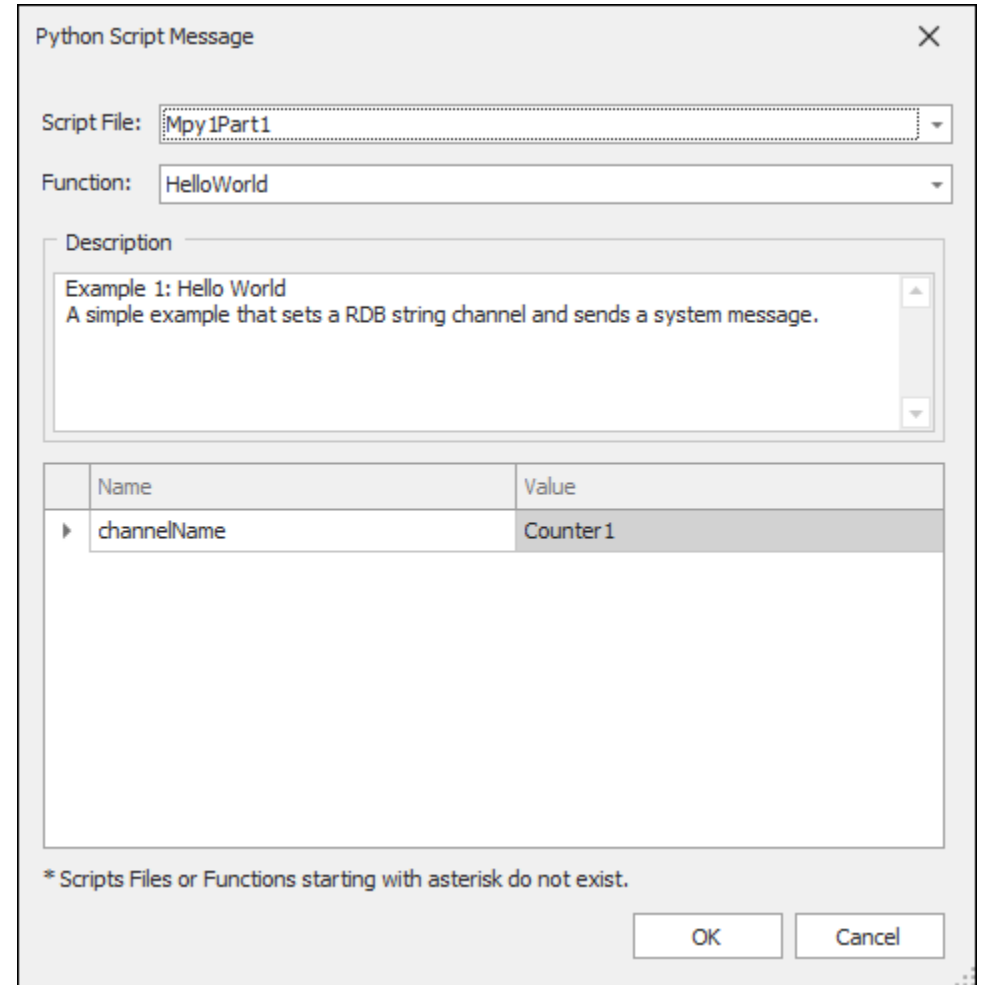


Resource Indicators



AutomationPanel: Python Script Message

Python script arguments can now be set via the Python Script Message dialog. This dialog is available for Button panels that have the **Message Type** property set to **Python Script**.



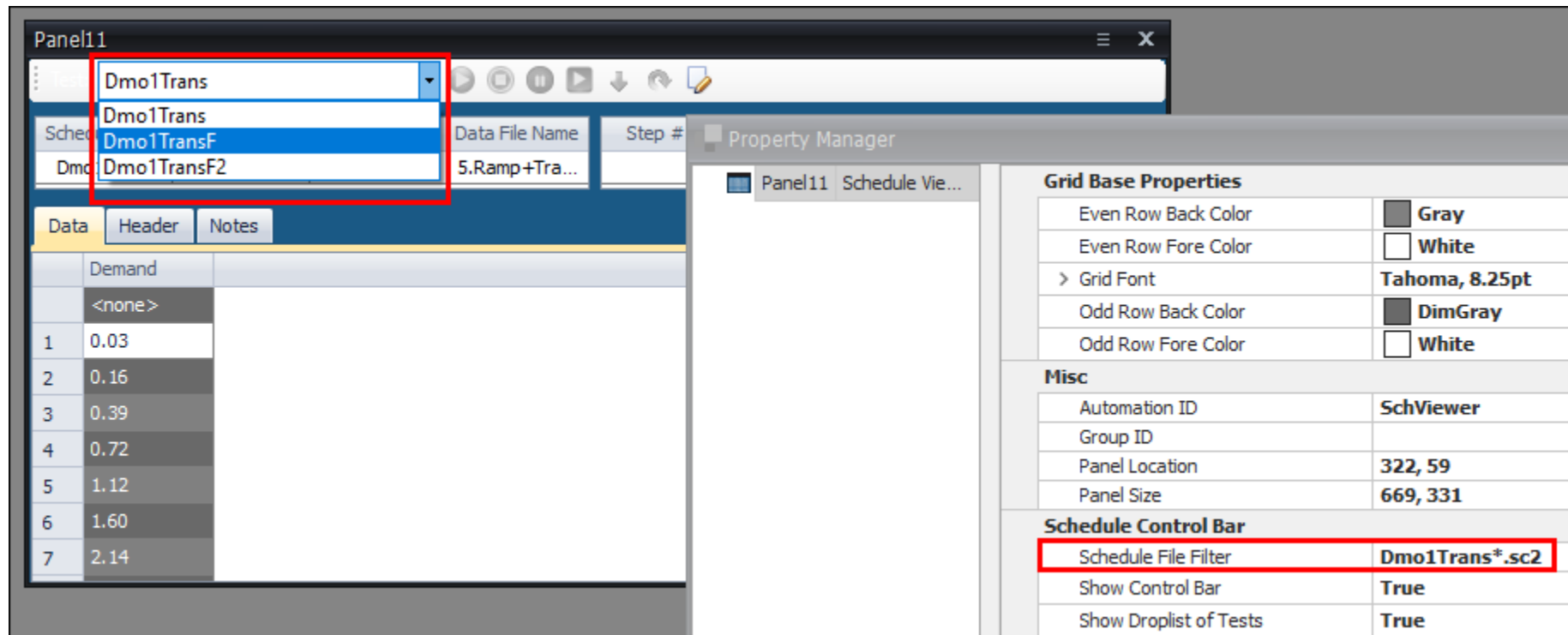
The dialog box is titled "Python Script Message" and contains the following fields and sections:

- Script File:** A dropdown menu with "Mpy1Part1" selected.
- Function:** A dropdown menu with "HelloWorld" selected.
- Description:** A text area containing the text:
Example 1: Hello World
A simple example that sets a RDB string channel and sends a system message.
- Table:** A table with two columns: "Name" and "Value". It contains one row with "channelName" and "Counter1".

Name	Value
channelName	Counter1
- Footer:** A note stating "* Scripts Files or Functions starting with asterisk do not exist." and two buttons: "OK" and "Cancel".

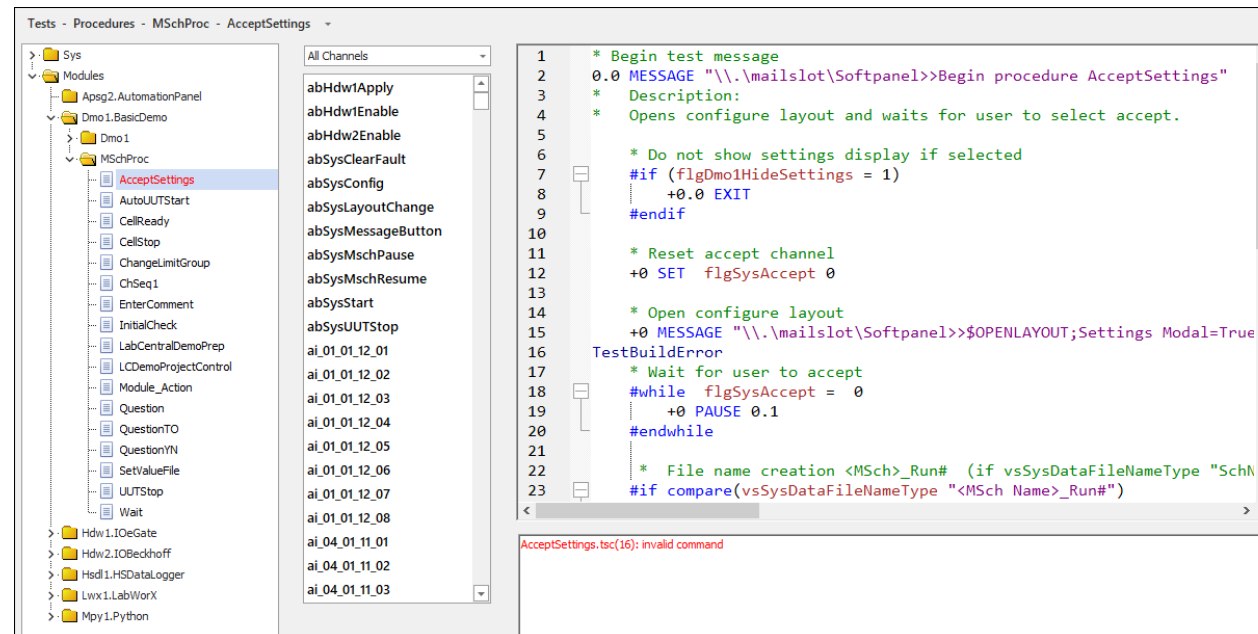
AutomationPanel: Schedule Viewer Panel

The Schedule Viewer panel now includes the **Schedule File Filter** property. This property allows you to filter the schedule files that will display in the panel's drop-down list.



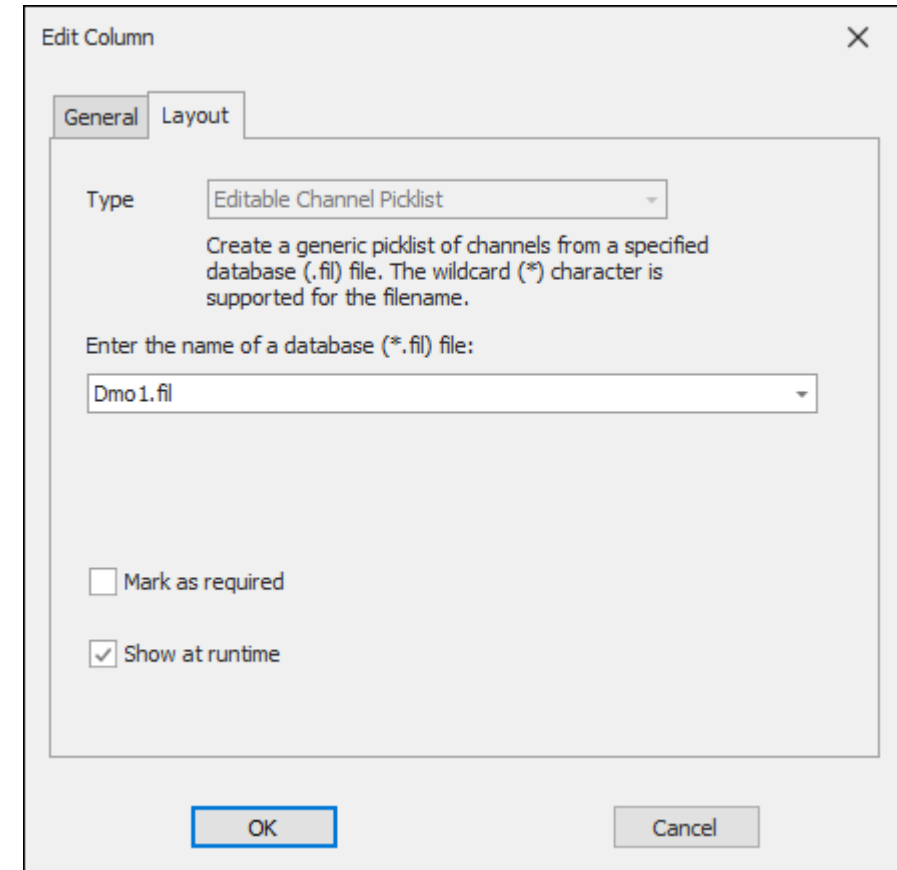
SolutionBuilder: Build Output Bar

SolutionBuilder's Procedures, Calculations, and Circuit Calculations editors now include the Build Output Bar. Any test build errors that occur after performing a build will be listed in the Build Output Bar, and the applicable filename will display in red font in the left pane of the editor.



SolutionBuilder: Editable Channel Picklist

The **Editable Channel Picklist** column type has been added as an available option for schedule columns. This column type allows you to select a channel from a pre-defined list of active channel definition files.



Edit Column

General Layout

Type: Editable Channel Picklist

Create a generic picklist of channels from a specified database (.fil) file. The wildcard (*) character is supported for the filename.

Enter the name of a database (*.fil) file:

Dmo1.fil

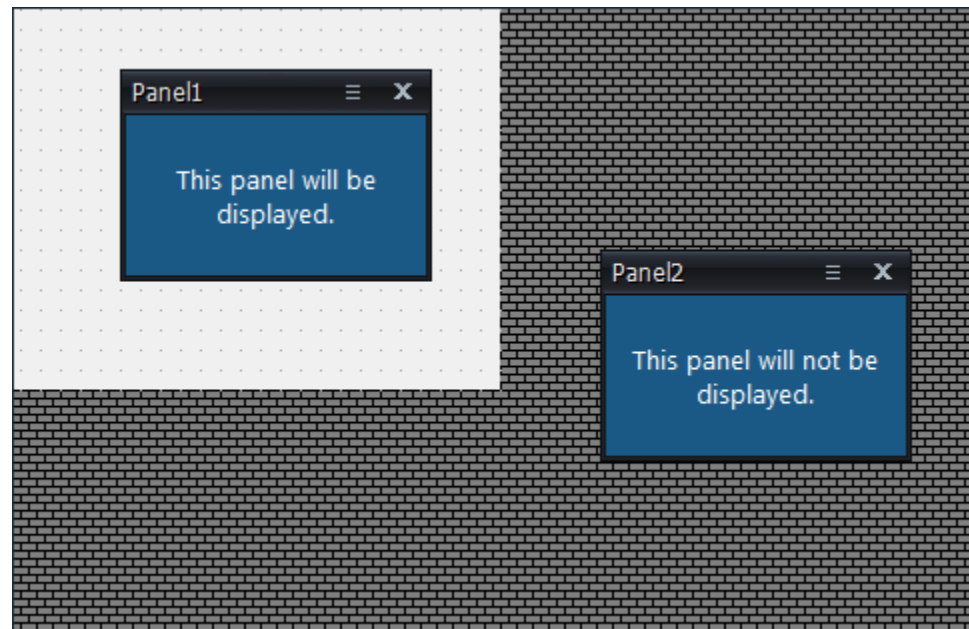
☐ Mark as required

☒ Show at runtime

OK Cancel

SolutionBuilder: Layouts Editor

SolutionBuilder's Layouts editor now displays a gray brick background to indicate which panels will not fully display in AutomationPanel. This background only appears if the **Maximum Size** of the layout has been modified.



SolutionBuilder: Limit Groups Property Sheet Editor



The Limit Groups editor now includes a property sheet editor, allowing you to quickly update the limit settings for multiple channels simultaneously.

Channels - Limit Groups - Sys - NewLimit1 ▾

▼ Sys

- DEFAULT
- Default2
- Dmo1Ex1
- *NewLimit1

	Channel	Alias	Module ID	Low Limit	Low Warning	High Warning	High Lim
1	voDmo1Err		Dmo1	-2.500000	-2.000000	2.000000	2.500000
2	voDmo1Demand		Dmo1	-2.000000	-1.000000	10.000000	10.500000
3	voDmo1LimitDemo		Dmo1	0.000000	1000.000000	7000.000000	8000.000000
4	voDmo1Feedback		Dmo1	-2.000000	-1.000000	12.000000	20.000000

Channel	
Alias	
Customer Name	
Module ID	Dmo1
Low Limit	
Low Warning	
High Warning	
High Limit	
LL Ignore Time	0.000000
LW Ignore Time	
HW Ignore Time	
HL Ignore Time	0.000000
Low Limit Action	
Low Warning Action	None
High Warning Action	
High Limit Action	
Delay Time (seconds)	0.0
Active	Active

SolutionBuilder: Log Order Lists Editor

The Log Order Lists editor now includes the **Find** right-click option, allowing you to quickly search for specific text within the log order list.

	Channel	Alias	Module ID	StdDev	Min	Max	Delta	CV	RMS	Data Q...
1	flgSysInUse	System Running Flag		☐	☐	☐	☐	☐	☐	☐
2	MasterScheduleStatus			☐	☐	☐	☐	☐	☐	☐
3	MasterScheduleRunningTime			☐	☐	☐	☐	☐	☐	☐
4	MasterScheduleStepNumber			☐	☐	☐	☐	☐	☐	☐
5	numSysSchState			☐	☐	☐	☐	☐	☐	☐
6	timSysTest			☐	☐	☐	☐	☐	☐	☐
7	numSysSchStep			☐	☐	☐	☐	☐	☐	☐
8	voDmo1Feedback		Dmo1	☐	☐	☐	☐	☐	☐	☒
9	voDmo1Demand		Dmo1	☐	☐	☐	☐	☐	☐	☐
10	voDmo1Variance	Variance Factor	Dmo1	☐	☐	☐	☐	☐	☐	☐
11	voDmo1Err		Dmo1	☐	☐	☐	☐	☐	☐	☒

Find

Find What:

☐ Match whole word only

☐ Match case

Direction

☐ Up

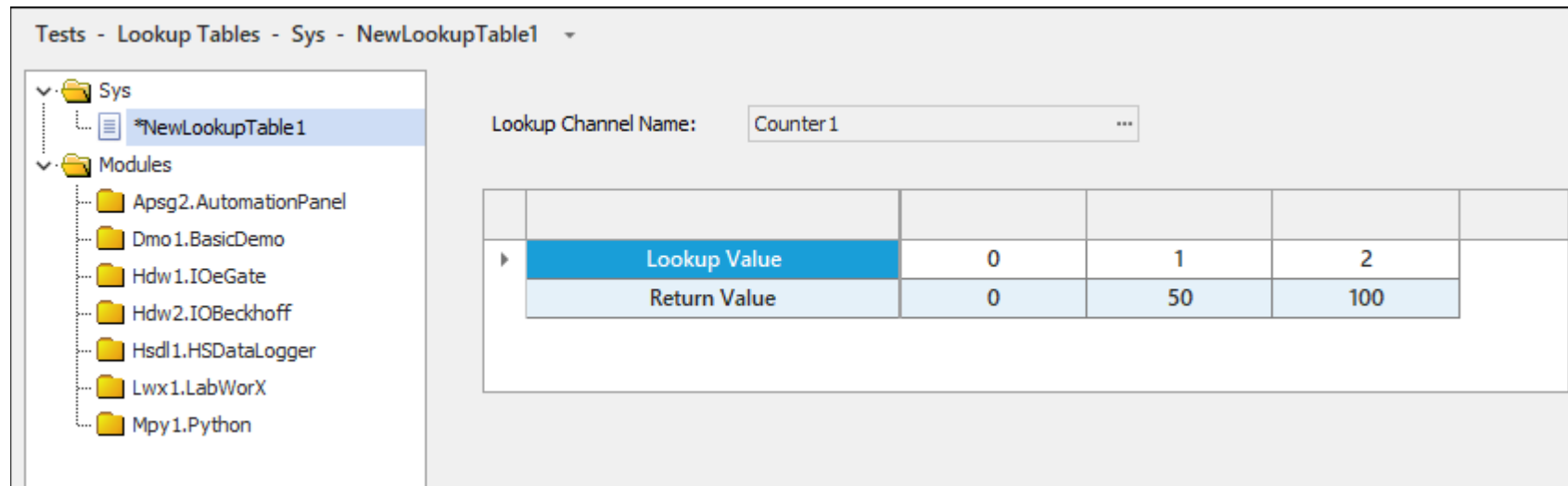
☒ Down

Find Next

Cancel

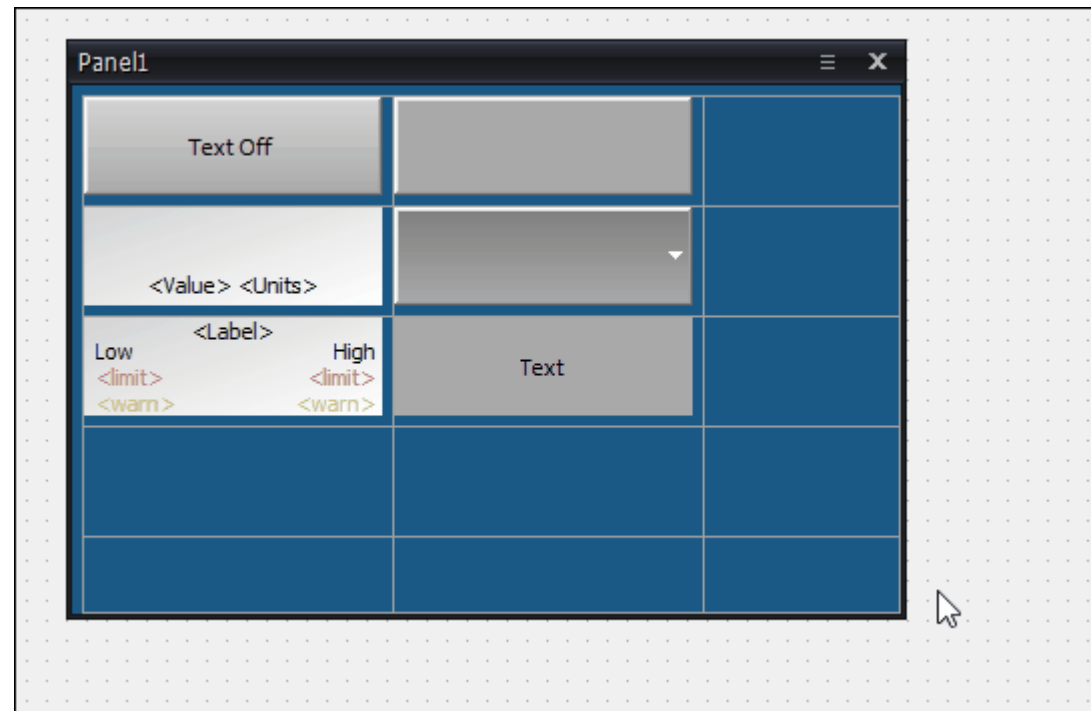
SolutionBuilder: Lookup Tables Editor

SolutionBuilder now includes the Lookup Tables editor, allowing you to manage and configure lookup tables.



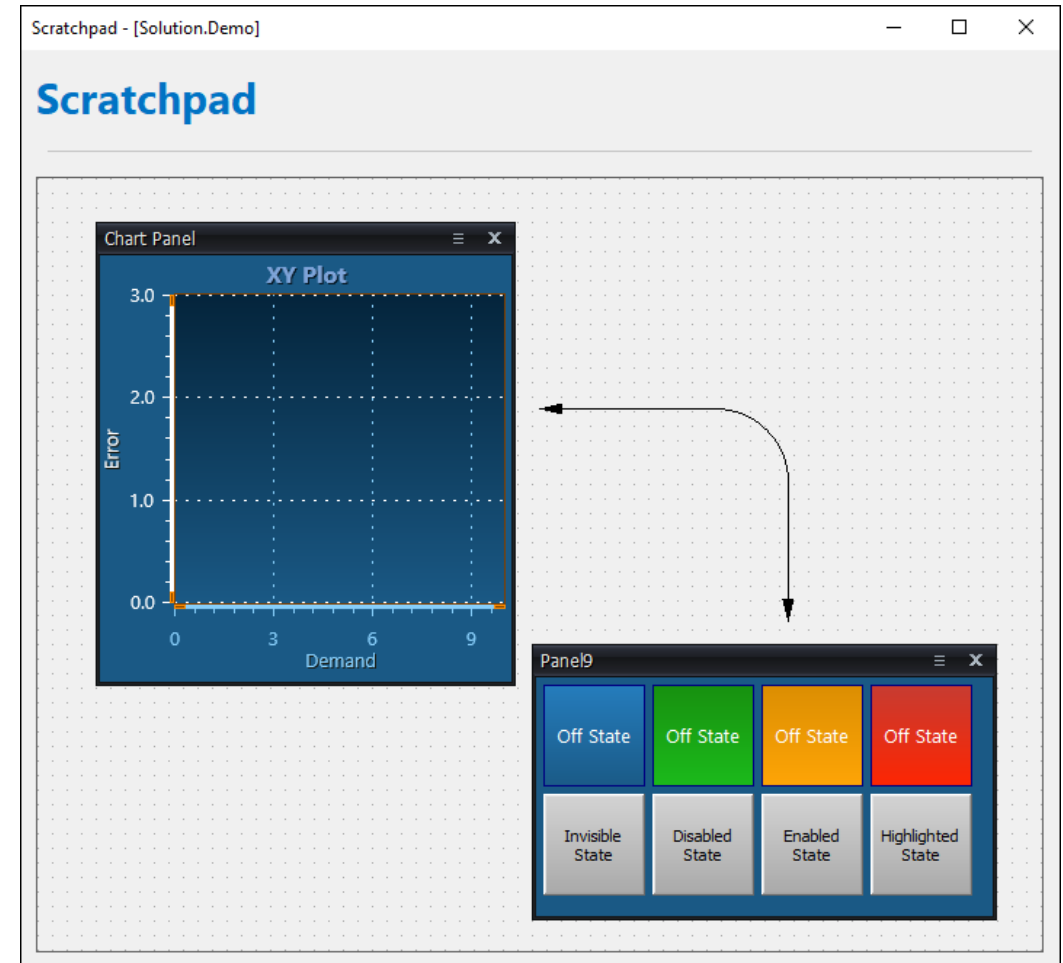
SolutionBuilder: Reordering Tiles

SolutionBuilder's Layouts editor now allows you to reorder tiles directly in a Tile panel via keyboard shortcuts and drag-and-drop. This feature is only available if the **Layout Type** is set to Table for the Tile panel.



SolutionBuilder: Scratchpad

SolutionBuilder's Layouts and Toolbars editors now include the **Show Scratchpad** right-click option. The Scratchpad provides a floating layout, where you can copy/paste panels from various layouts to temporarily store before using the panels in another layout or toolbar.



- **New drivers:**
 - AC2000Cycler
 - MelsecDriver
 - OPC UA
 - RotoTest
- **AKEngine:**
 - The max polling rate for the AKEngine driver has been increased for smoother high-speed updates.
- **AndBalance:**
 - The AndBalance driver now includes the **Overload Monitor Channel**, which allows you to monitor the overload condition.

- **AvlIndicomAutomation:**

- The AvlIndicomAutomation driver log is now recreated on every launch in order to avoid multi-GB file growth.

- **Chamber Driver:**

- The Chamber driver now supports the **Weiss ASCII 2** chamber type.

- **ChromaCycler:**

- The ChromaCycler now supports Chroma 17010H battery cyclers.

- **ElektroCycler:**

- The ElektroCycler now supports ElektroAutomatik BT20000 cyclers. In addition, Wireshark captures will stop on the first timeout error, and timeout errors will be recorded to the blackbox log file.

- **EtherCAT Driver:**

- The EtherCAT driver now supports up to 6 instances and 2000 Hz mode on INtime systems. In addition, the **Process Priority** and **IP Address** settings are now included in the driver log. The process priority setting now defaults to Realtime.

- **Modbus Driver:**

- The Modbus driver now supports up to 8 instances.

- **OPC Driver:**

- The OPC driver now supports the following mailslot messages: **CreateViewTagsFile**, **SetChan**, **SetTag**, **SetTagStr**, and **ReadFromCache**.

- **VideoCapture Driver:**

- The VideoCapture driver now supports up to 8 instances.

- **XCPMaster Driver:**

- The XCPMaster now includes CCP download support, big-endian ECUs, robust DTO decode without processor-info calls, and ValueCAN4-Industrial on HS2 bus support.

- When launching iTest, iTest will now check if there are any Python packages in the `$SUPPORTDIR\PythonPackages` folder that do not currently exist in the `$SYSTEMDIR\PythonPackages` folder. If iTest finds any of these “missing” packages, then it will automatically run PythonEngine to install these packages before continuing to launch.
- The following Python packages have been added:
 - pynput-1.7.7-py2.py3-none-any.whl
 - pikepdf-9.1.1-cp311-cp311-win_amd64.whl
 - lxml-5.2.2-cp311-cp311-win_amd64.whl
 - Deprecated-1.2.14-py2.py3-none-any.whl
 - wrapt-1.16.0-cp311-cp311-win_amd64.whl
 - packaging-24.1-py3-none-any.whl
 - pillow-10.4.0-cp311-cp311-win_amd64.whl
 - pypdf-4.3.0-py3-none-any.whl
 - pdfkit-1.0.0-py3-none-any.whl

iTest.BTS: Parameters Editor

SolutionBuilder's Parameters editor now includes the **LL Ignore Time** and **HL Ignore Time** columns. These columns can be used to configure the ignore times for user-defined parameters.

Parameters ▾

	Circuit Parameter	...	...	...	...	...	...	...	...	Logged	Limits	Low Limit	High Limit	LL Ignore Time ▾	HL Ignore Time	Alias
	AhStorage25Pct	St...	Ah	...	☐	☒	☐	☐	☐	☐	☒			5.0		AhStorage25Pct
	vCellMaxMeas	M...	V	...	☒	☒	☐	☐	☒	☒	☒	-999999	vCellHiLim	0.5	0.5	vCellMaxMeas
	Voltage	B...	V	...	☒	☐	☐	☐	☒	☒	☒	VoltageLoLim	VoltageHiLim	0.5	0.5	Voltage
	Power	P...	W	...	☐	☐	☐	☐	☒	☒	☒	PowerLoLim	PowerHiLim	0.5	0.5	Power
	Current	B...	A	...	☒	☐	☐	☐	☒	☒	☒	CurrentLoLim	CurrentHiLim	0.5	0.5	Current
	vCellMinMeas	M...	V	...	☒	☒	☐	☐	☒	☒	☒	vCellLoLim	999999	0	0	vCellMinMeas
	mVCellDeltaMeas	V...	mV	...	☐	☒	☐	☐	☒	☒	☒	-999999	mVCellDelta...	0	0	mVCellDeltaMeas
	tdBattChamber	C...	°C	1.0	☒	☐	☐	☐	☐	☐	☒	-999999	tdBattCham...	0	2	tCellChamberDelta

iTest.BTS: RecoveredDataTool

The RecoveredDataTool has been created to help process data files found in *RecoveredData* folders and merge those files into the project data log.

RecoveredDataTool

This tool helps combine recovered data files with your project output file. The time it takes to process will depend on the number and size of .dat files in the recovery folder.

Recovered data folder:

Project output file:

List of .dat files from the recovered data folder.

Recovered File Name	Starting Timestamp	Ending Timestamp

List of combined .dat files from the recovered data

Recovered File Name (combined)	Starting Timestamp	Ending Timestamp

Merge the selected files with the project output file.

Miscellaneous Features

- The following INI settings have been added:

Setting	Location	Description
MaxPanelsPerLayout	Powertek.ini	This setting specifies the maximum number of panels that can be in a layout.

- The **ArraySum** VCL function has been added. This function can be used to calculate the sum for a subset of values located between two indexes in an array.

Deprecated Features

The following features have been deprecated:

- **DLBAxisMixEmptyUnits:**

- The DLBAxisMixEmptyUnits *config.ini* setting has been deprecated. The Data Log Browser now utilizes the **Axis Mix Empty Units** property to determine if channels with the same units can be moved onto the same Y-axis.

- **Visual Studio Code Debugger: VCL**

- The extension for Visual Studio Code that allows for editing and debugging VCL procedures has been deprecated.

iTest to OS Compatibility Matrix

iTest to OS Compatibility	Windows	Test Automation													
		iTest 4.5	iTest 4.4	iTest 4.3	iTest 4.2	iTest 4.1	iTest 4.0	iTest 3.9	iTest 3.8	iTest 3.7	iTest 3.6	iTest 3.5	iTest 3.4	iTest 3.2	iTest pre 3.2
GUI OS	Windows 11 Pro	✓	✓	✓	✓	X	X	X	X	X	X	X	X	X	X
	Windows 10 Pro	✓	✓	✓	✓	✓	✓	✓	✓	✓	X	X	X	X	X
	Win 7 Pro 64bit	X	X	X	X	X	✓	✓	✓	✓	✓	✓	✓	X	X
	Windows XP	X	X	X	X	X	X	X	X	X	X	X	✓	✓	✓
RTOS	Xenomai	✓	✓	✓	✓	✓	✓	✓	X	X	X	X	X	X	X
	INtime 7.X	✓	✓	✓	X	X	X	X	X	X	X	X	X	X	X
	INtime 6.3	✓	✓	✓	✓	✓	✓	✓	✓	✓	X	X	X	X	X
	INtime 5.2	X	X	X	X	X	✓	✓	✓	✓	✓	✓	X	X	X
	INtime 4.2	X	X	X	X	X	✓	✓	✓	✓	✓	✓	✓	X	X
	INtime 3.13	X	X	X	X	X	X	✓	✓	✓	✓	✓	✓	✓	X
	VxWorks (VM4500)	X	X	X	X	X	X	X	X	X	X	✓	✓	✓	✓
Legend															
Supported									✓						
Not Compatible									X						

OS to RTOS Compatibility Matrix

OS to RTOS Compatibility	Windows	RTOS				
		INtime 7.X	INtime 6.X	INtime 5.2	INtime 4.2	INtime 3.13
Host OS	Windows 11 Pro	✓	X	X	X	X
	Windows 10 Pro	X	✓	X	X	X
	Win 7 Pro 64bit	X	✓	✓	✓	X
	Windows XP	X	○	○	○	✓
Legend						
Supported				✓		
Not Compatible				X		
Unsupported but should work				○		

RTOS to PC Compatibility Matrix

RTOS to PC Compatibility	Windows	RTOS				
		INtime 7.X	INtime 6.X	INtime 5.2	INtime 4.2	INtime 3.13
PC	HP 1HU (Quad core)	X	X	✓	X	X
	Dell 1HU	X	✓	○	○	○
	Lite RT (Quad Core)	X	✓	✓	○	○
	Advantec i7 (6th gen Quad core)	X	✓	X	X	X
	Advantec i7 (3rd gen Quad core)	X	X	X	✓	X
	Advantec Core Duo (Dual Core)	X	X	X	X	✓
	SuperLogics 2U i7 (12th gen 12 Core)	✓	✓	X	X	X
Legend						
Supported				✓		
Not Compatible				X		
Unsupported but should work				○		

Product Life Cycle Matrix

Product Version	Year																	
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
iTest 2.3	✓	✓	✓	○	○	○	○	○	X	X	X	X	X	X	X	X	X	X
iTest 3.0	-	-	✓	✓	○	○	○	○	X	X	X	X	X	X	X	X	X	X
iTest 3.1	-	-	-	✓	✓	✓	○	○	○	X	X	X	X	X	X	X	X	X
iTest 3.2	-	-	-	-	✓	✓	✓	○	○	○	X	X	X	X	X	X	X	X
iTest 3.4	-	-	-	-	-	-	✓	✓	○	○	○	X	X	X	X	X	X	X
iTest 3.5	-	-	-	-	-	-	-	✓	✓	○	○	○	X	X	X	X	X	X
iTest 3.6	-	-	-	-	-	-	-	-	✓	✓	○	○	○	X	X	X	X	X
iTest 3.7	-	-	-	-	-	-	-	-	-	✓	✓	○	○	○	X	X	X	X
iTest 3.8	-	-	-	-	-	-	-	-	-	-	✓	✓	○	○	○	X	X	X
iTest 3.9	-	-	-	-	-	-	-	-	-	-	-	✓	✓	○	○	○	X	X
iTest 4.0	-	-	-	-	-	-	-	-	-	-	-	-	✓	✓	○	○	○	X
iTest 4.1	-	-	-	-	-	-	-	-	-	-	-	-	-	✓	✓	○	○	○
iTest 4.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✓	✓	○	○
iTest 4.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✓	✓	○
iTest 4.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✓	✓
iTest 4.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✓
Legend																		
Current Version											✓							
Bugfix Only											○							
Not Supported											X							
Not Available											-							