

PSA 5.0.00 Release Notes

The PSA 5.0.00 Release Note is applicable to the PSA-3000 and PVA-3000 family of test instruments.

Summary

This is the official release of PSA 5.0 software for **PSA-3000**, **PSL-3000**, and **PVA-3000** test instruments and therefore, this release renders older PSA 4.x.xx releases obsolete. All customers of these test instruments are encouraged to upgrade to PSA 5.0.00.

With PSA 5.0.00 software, there is no longer a need to retain older PSA 4.2 software. The PSA 5.0.00 release provides access to all essential resources supported under PSA 4.2 software and offers updates beyond PSA 4.2 software in areas such as PSE automated test suites. Any user scripts written in PowerShell PSA under PSA 4.2 software should be fully compatible with PSA 5.0 software with just one exception: Scripts written for **proprietary 4-Pair PSE testing** under PSA 4.x may not be compatible with PowerShell PSA 5.0.

PSA software has evolved continuously over the past 18 months from PSA version 4.2.xx with the most prominent changes including:

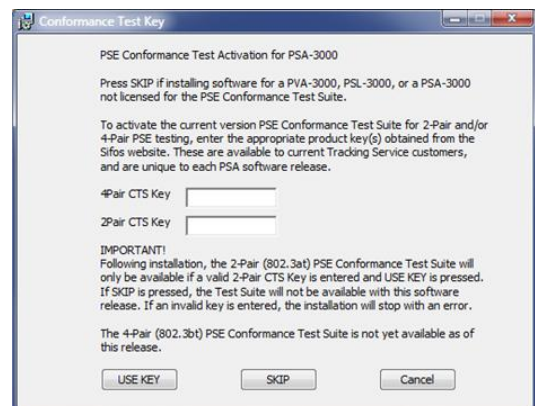
- New PSA Interactive GUI for Managing PSA-3000 and PSL-3000 instruments
- Seamless Conversion Between Testing 2-Pair and 4-Pair (802.3bt) PSE's using PSA-3000 and PSL-3000 instruments
- Heavily Revised PowerShell PSA to Support 2-Pair and 4-Pair PSE testing with Identical Command Sets

Over this 18 month period, there have been many hundreds of refinements spanning all aspects of PSA software and affecting all test instruments including PVA-3000's. The PSE Conformance Test Suite for 802.3at PSE's is currently at version 5.0.05 and has progressed beyond the final version under PSA 4.2 software (version 4.2.26). Access to this version of PSE Conformance Test is discussed under **PSE Conformance Test Suite Tracking Service** below.

PSE Conformance Test Suite Tracking Service

With this release of PSA 5.0.00 software, there is a significant change affecting all Sifos customers who have active PSE Conformance Test Suite Tracking Service contracts. Summarizing this change:

- Any customer (PSA, PSL, PVA, or combination thereof) can obtain and update to the latest PSA software version at any time, whether active on PSE Conformance Tracking Service or not.
- When the PSA 5.0.00 Windows software installer is run, it will request a Product Key for the **2-Pair** (802.3at) PSE Conformance Test Suite. Customers installing software for PVA, PSL, or PSA's that don't have the PSE Conformance Test Suite license can simply **SKIP** this entry during software installation.
- Customers who are active on PSE Conformance Test Tracking Service must enter a valid Product Key for

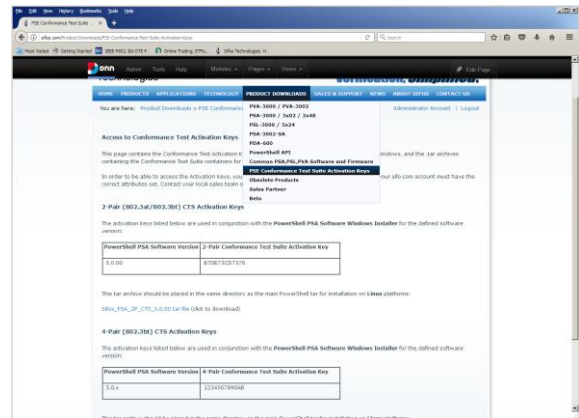


New PSA 5.0.00 Installer Dialog

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the specific release to be installed. The Product Key for that release will be available from the Sifos website on a Product Download page only accessible to customers with active Tracking Service. **The Product Key is unique to each new PSA software release.**

- If the PSE Conformance Test Suite Product Key is not entered, PSA software will be installed but will not be able to run the PSE Conformance Test Suite *regardless of instrument license status*. Customers who need to run PSE Conformance Test Suite but are not active on Tracking Service will have the option to **CANCEL** the software update during installation.
- The PSA 5.0.00 software installer will also accept a Product Key for the future 802.3bt **4-Pair** PSE Conformance Test Suite. However, these keys do not yet exist and therefore should not be entered to the software installer.
- Older PSA 4.2.xx software versions will no longer be available from the PSA-3000, PSL-3000, or PVA-3000 Product Download pages.
- Linux installations of the PSE Conformance Test Suite will also work differently as described in the PSA 5.0 installation instructions for Linux.



New Product Key Download Page

PSE Conformance Test Tracking Service customers will be receiving updated literature from Sifos including the new **PSA-3000 Technical Reference Manual v5.0** and the updated **Installation Manual**.

The following tables summarize enhancements and bug fixes in PSA 5.0.00 software relative to the previous pre-release, PSA **5.0.0r**.

PSA 5.0.00 Enhancements

Software Entity	Impact	Feature
PSA Interactive 5.0	Moderate	Added new Terminate button to the Waveforms tab menu to allow in-process waveforms to be aborted immediately.
	Moderate	Added new Terminate button to the Auto-Discover dialog menu to allow in-process Auto-Discover to be aborted immediately.
	Moderate	In the 802.3at PSE Conformance Test Sequencer menu, the TERMINATE button will terminate the testing sequence immediately and open a report for all test data collected until that point.
	Moderate	In the 802.3at PSE Multi-Port Test Sequencer menu, the TERMINATE button will terminate the testing sequence almost immediately and open a report for all test data collected until that point.

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Software Entity	Impact	Feature
One-Click Waveforms (PSA Interactive 5.0)	Moderate	Improved logic governing aperture management with all Detection waveforms to assure more optimum time windows.
	Moderate	Improved filtering in Connection Check waveform to better remove glitches and other artifacts not related to Connection Check.
	Minor	Revised 4-Pair overload waveform to scan up to 1100mA when applying a 2-Pair overload to a Class 8 PD.
PowerShell PSA 5.0	Minor	Modified power_bt to block the target load current argument when specifying autoclass as the power target must be specified instead.
	Moderate	Modified the mclass ? configuration query so that it resolves the ambiguity between single signature Class 5 and dual signature Class 4D as well as single signature Class 8 and dual signature Class 5D.
	Important	Added ability for the trace_lldp_pwrup and trace_lldp_change commands to route 802.3bt protocol traces into the new reporting template for 802.3bt LLDP protocol.
	Moderate	Modified psa_set_load to enhance accuracy of the target load at the PSE interface and to produce load power that will closely match what the paverage (average power meter) command measures.
PSE Conformance Test Suite	Moderate	Added new PSE attribute, PSE_Min_4Pair_Class , that reports the minimum PD class a 4-Pair PSE will power with 4-pairs rather than 2-pairs. This attribute takes the value NONE for 2-pair PSE's a value between 1 and 5 for 4-pair PSE's. Modified psa_auto_port to automatically discover this attribute for 802.3bt PSE's that power with 4-pairs. Modified psa_pse and psa_saveConfig to load and store this new PSE attribute for every PSE.
	Minor	Revised the Type_2_Enable parameter in pwrpn_pwracap test to be derived from a current trace rather than a voltage trace. This allows a better diagnostic view when a PSE port fails this parameter.
	Minor	Refined computations for actual load powers when testing LLDP PSE support for the 22.7W and 24.5W power-ups in pwrpn_pwracap . Changes allow for small parasitic power loads and are slightly more lenient to PSE's that might otherwise remove power below Pclass .
LLDP Reporting	Important	Added a new spreadsheet report template, psa_bt_lldp_trace.xlsm , to evaluate and report on 802.3bt (single signature) LLDP protocol.

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Software Entity	Impact	Feature
PVA Interactive	Moderate	In the PHY Tests tab menu, the Stop Sequence terminate the testing sequence immediately and open a report for all test data collected until that point.

PSA 5.0.00 Bug Fixes

Software Entity	Impact	Feature
PSA Interactive 5.0	Important	Corrected problem where Auto-Discover, when a Type-1 or Type-2 PSE is selected, would not discover the MPS method.
	Minor	Corrected issue where selecting a Type-2 PSE would disable but not clear the Autoclass checkbox selection
PowerShell PSA 5.0	Moderate	Corrected a defect that would prevent a final power adjust when a 4-pair PSE powered just 2-pairs with Alt-B pairset.
	Moderate	Corrected problems with the <code>psa_emulate_pd</code> command when processing multi-cast port arguments, particularly N,99 and 99,N. In certain instances, target port could change to a single port rather than the multi-cast port.
	Minor	Corrected an error that could develop in <code>power_bt</code> occurring when LLDP emulated power-ups use the <code>ad</code> option (rather than <code>force</code> option)
	Minor	Modified LLDP packet generation when using the 802.3bt protocol to always set the legacy 802.3at type to Type 2. Previously would set Class 1-3 to Type 1.

PSA/PVA Firmware Versions

PSA 5.0 software requires certain minimum versions of PSA/PSL test port firmware. The following versions are the current versions for each product. Sifos recommends updating firmware to these.

PSA-3000 Controller: ver 3.17	PSA-3202, PSL-3202 , PSA-3402:
PSA-3402 Controller: ver 3.17	Test Port ver 4.12 , ALC ver 16
PSA/PSL-3102 or PSA-3002	PVA-3102
Test Port ver 3.29	Test Port ver 3.0B

PSA-3202/PSL-3202/PSA-3402 ALC Version 16 Update

The ALC firmware within a PSA-3202/PSL-3202/PSA-3402 is a vital element affecting the instrument's ability to reliably emulate all **802.3bt** PD's and to test **802.3bt** PSE's under a wide variety of conditions. The current version of ALC firmware is **version 16**. Any instruments that are used for 802.3bt PSE testing either now or in the future must be updated to this version.

To examine current ALC firmware version, simply open **PowerShell Tcl** or **Wish** and execute the command:

```
psa_config -alc
```

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ALC Update Instructions

Updating any PSA/PSL test instrument to ALC version 16 is a very simple task. However, it should be performed when the instrument is not needed for a while as it may take from 3 to 10 minutes PER TEST PORT to complete. It is recommended to simply run this update overnight from a PC that is not busy performing other tasks.

To perform the ALC version 16 update to all PSA/PSL-3202 test ports:

Obtain the .zip file [ALCv16.zip](#) from the Sifos Installation CD Firmware directory or from the PSA/PSL-3000 download page at www.sifos.com. Unzip (install) the 3 files in [ALCv16.zip](#) to:

PC OS	PSA Software Release	Installation Directory
Windows 10, 8, 7, Vista	PSA 4.2	C:\Users\Public\Sifos\PSA1200\Contrib\
	PSA 5.0	C:\Users\Public\Sifos\PSA3000\Contrib\
Windows Xp	PSA 4.2	C:\Program Files\Sifos\PSA1200\Contrib\
	PSA 5.0	C:\Program Files\Sifos\PSA3000\Contrib\

Open PowerShell (Wish or Tcl), connect to instrument that will be updated, and execute:

alc_updater_16

When the update is completed, look for the indication:

alc_updater_16: UPDATES COMPLETED !!!!

Ports ** Updated Successfully!**