PSA 5.4.07 Release Notes

The PSA **5.4.07** Release Note is applicable to the PSA/PSL-3000, PSL-3424, and PVA-3000 product lines.

Highlights

PSA 5.4.07 release mainly consists of a number of adaptations and refinements in both the 4-Pair and 2-Pair PSE Conformance Test Suites. Also included are some bug fixes and some enhancements in PhyView Analyzer capabilities. PSA 5.4.07 is a recommended update to all PSA-3000 and PVA-3000 testing environments.

PSE Conformance Test Suite Tracking Service

There are a new set of Product Keys required for installing PSA 5.4.07 PSE Conformance Suites.

The PSA 5.4.07 software release is not certified for EA Gen1 and Gen2 PSE conformance testing. Customers requiring that should remain with PSA version **5.4.04**.

PSA 5.4.06 Enhancements

Software Entity	Impact	Feature
4-Pair PSE Conformance Test Suite	Moderate	Detection Signal Processing Analysis: Adapted to new a PSE implementation deploying a floating voltage probe during connection check and to better discriminate detection from connection check steps. Adapted to new current probing PSE implementation that adjusts a final step current as a function of detection signature.
	Moderate	Maximum Assigned Class Analyzer: Allow 3-events for Classes 1D, 2D or 3D and set Dual Signature Maximum Class based on Requested Class if 3-Events occur when requesting one of these classes.
	Moderate	**class_err**: Enhanced the Treset section to report '-1' when a Power Up occurred and '0' if no Class Reset occurred.
	Minor	**det_range**: Adapted to work with PSE configured to 4-Pair 30W where dual class 4 signature failed to produce power-ups.
	Minor	**det_rsource**: Adapted to new PSE implementation that adjusts probe voltage in response to lower detection signatures.
	Minor	**class_response**: Added consistency check to include checking both initial power grants at power-up and maximum assigned class for both Single Signature and Dual Signature emulations are consistent. Parameter value coded to indicate which/both checks failed.
2-Pair PSE Conformance Test	Moderate	**class_time**: Added new parameter **Max_Class_123_Count**. Checks Event Counts for Classes 1, 2 and 3 and returns the maximum among those 3 classes. Parameter added to spreadsheet report template.
	Moderate	**class_err**: Enhanced **Class_lim** current measurement to recover current limiting in the range of 90.5 to 101 mA.
	Minor	**det_v**: Adapted for new current probing PSE implementation that adjusts a final step current as a function of detection

Software Entity	Impact	Feature
		signature.
	Minor	**det_rsource**: Adapted to new PSE implementation that adjusts probe voltage in response to lower detection signatures.
	Minor	**class_time**: Adapted to new PSE implementation that presented rapid falling edge glitches on class pulses.
	Minor	**class_err**: Enhanced to better measure **Class_lim** current limit on PSEs that may slowly slew class current up to the limit value.
	Minor	**class_lldp**: Moved the Link Shutdown check to be the final measurement of the test to better tolerate PSEs that are slow to reset LLDP parameters between power-ups.
Standard PSE Waveforms	Moderate	Adapted 4-pair Detect Waveform to work with PSE implementation that adjusts probe voltage in response to lower detection signatures.
	Minor	Adapted 4-pair Detect Waveform to work with PSE implementation that adjusts probe voltage in response to lower detection signatures.
	Minor	Adapted 4-pair Detect Waveform to work with new PSE implementation deploying a floating voltage probe during connection check.
	Minor	Modified 2-Pair **Overload** and **Error Delay** waveforms to prevent overloading Class 4 capable PSEs that are slow to implement Class 4 power support after power-up.
PowerShell PSA	Minor	**power_bt**: Enable event count recovery from Class 0 power-ups.
	Minor	**psa_config**: No supports recovery of serial numbers from PVA-3102 / PVA-3002 test blades.
PhyView Metering	Moderate	**pva_link_mon**: Corrected vulnerability in the Latched Status indication where it would report UP if the link was DOWN at start of the measurement.
	Minor	**pva_cals**: Adjusted user messaging when PSD 1000 calibration encounters low transmitter power on calibration partner port.
PHY Performance Test Suite	Moderate	**pva_rx_1000**: Added support for stand-alone port loopback packet flow testing of ports that support loop back of incoming traffic on the copper interface. This capability was previously supported by the 100Base-Tx and 10Base-T receiver tests.
	Minor	**pva_sequence**: Modified to assure port is in PHY connect state before running **pva_partner** during a test sequence to prevent error condition.
PVA Interactive	Moderate	Under **Help** drop down menu, added option to open (or close) a PowerShell Wish window.
	Moderate	In the **PHY Tests** tab menu, added new **Loopback** control to allow Packet Flow receiver testing on a stand-alone port that supports loop back of incoming packets on the copper side interface.

PSA 5.4.06 Bug Fixes

Software Entity	Impact	Feature
4-Pair PSE Conformance Test Suite	Minor	Classification Analyzer: Fixed a bug always set open circuit sync-up levels to a default voltage value rather than a measured value when test sequencing was run.
	Minor	Maximum Assigned Class Analyzer: Corrected Unassigned variable in processing for LLDP granting PSEs that was never exposed because test sequencing check was not working properly previously (compound bug).
	Minor	**psa_sequence_check**: Assured it would work from utilities called by tests.
2-Pair PSE Conformance Test	Minor	**det_rsource**: Corrected bug that could result in unnecessary extra measurements in scan for minimum valid signature.

PSA/PVA Firmware Versions

PSA 5.4 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 **3.1F** **PSA-3402 Controller**: ver **3.1F** **PSA-3424 Controller**: ver **3.1F** **PSA-3002 Controller**: ver **3.1F**[1]	**PSA-3202**, **PSL-3202** , **PSA-3402**: Test Port ver **4.19**, ALC ver **19**	**PSL-3424** Test Port: ver **5.04**
PSA/PSL-3102 or **PSA-3002** Test Port ver **3.2B**	**PVA-3102** Test Port ver **3.0B**	

1 PVA-3002 controller should use v3.14 unless PSA software version is 5.3.00 or later.

PSA-3202/PSL-3202/PSA-3402 ALC Version 19 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 19** that was introduced with the PSA **5.2.03** release. Any instruments that are used for 802.3bt PSE testing either now or in the future should be updated to this version if they have not already had that update.

To examine current ALC firmware version, simply open **PowerShell Tcl** or **Wish** and execute:
psa_config -alc

ALC Version 19 Update Instructions

Updating any PSA/PSL test instrument to ALC version 19 is a very simple task. However, it should be performed when the instrument is not needed for a while as it will consume 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 19 update to all PSA/PSL-3202 test ports:

After installing PSA version 5.2.03 or 5.2.04 software, open PowerShell (Wish or Tcl), connect to instrument that will be updated, and execute:

alc_updater_19

When the update is completed, look for the indication:
alc_updater_19: UPDATES COMPLETED !!!!
Ports **** Updated Successfully!