



SafeGuard LM 5.6 (What's new) (25-apr-2016)

The following is a list of noted fixes, enhancements and general changes to the 5.x release in no particular order.

- ******* Version 5.0 *******
- Add SIGTERM to sgpasserver and sglmsserver so that when a kill -15 is used, it will be caught.
- Fixed some message spelling errors and problems with German translations
- Add (ahk) AutoHotKey example code in the examples folder as well as a psprolib.ahk include file for definitions
- fix Linux 32 bit where the keycode generator was not in the SafeGuardManager directory
- Win8 users can have spaces in their usernames. SafeGuard LM will now replace all spaces with “-” dashes when returning, comparing or otherwise accessing the username. So if your username is John Smith, all accounts of that username within SafeGuard LM will be John-Smith. This means that if you generate a license and lock it to the username, you will need to generate the license file with a dash between any spaces in the username.
- Fix 5.0 last minute build issue where the SafeGuardManager.jar did not get updated to reflect the name change from ubu to lin. So the three apps in that directory were changed to have a _lin suffix, but the .jar was still looking for _ubu.
- Fixed problem with the Product Activation Server on Windows 8.1 where the client app would send garbage to the server because windows.h was included before winsock2.h in the client code. Switch them around and sprintf() starts working again.... Thanks MS for wasting all of our time.
- Certify Windows 8.1
- Add several new languages; Dutch, Romanian, Ukrainian, Serbian, Swedish, Danish, Slovak, Slovenian and Japanese to the client library.
- Provide a much better example of a VENDOR defined host ID in examples/c. The example shows how to create a composite host ID by combining two separate ID types into one for more control over where the software can be used.
- The software now correctly handles the case where the value of the ID= in the component line is greater than 48 bytes. (or the total component line length is greater than 256 bytes) Component lines can now be 1024 bytes in length, and host ids can be 256 bytes. This is important for users implementing vendor defined host ids.
- Display remote external IP address in the Product Activation Server log file when a client app connects to the PAS.
- Properly close the debug log file on shutdown of the Product Activation Server, if specified as an external text file when the Product Activation Server is started.
- Add “status” option to sgpautil so that you can check the status of your Product Activation server remotely.
- Various documentation updates throughout.
- Add MYSQL_PORT= to the Product Activation Server control.txt file so that you can specify the MySQL port number when running MySQL on a machine other than the machine running the Product Activation Server.
- SafeGuard LM 4.5 will be the last full release for Solaris 10.
- Fixed a problem with sgGetLastErrorString() on Ubuntu 14.04 which caused a “Stack Smashing” error under Gnome only, not under KDE.
- ******* Version 5.1 *******
- sglmd.exe now properly notifies the Windows Service Control Manager about a “sglmutil -c shutdown” and “sglmutil -c remove” so that the Control Panel->Services window will now update without having to restart the Services window to see that the service has either stopped or has been removed (Windows only)

- sgpad.exe now properly notifies the Windows Service Control Manager about a “sgpautil -c shutdown” and “sgpautil -c remove” so that the Control Panel->Services window will now update without having to restart the Services window to see that the service has either stopped or has been removed (Windows only)
- Modify how SafeGuard LM gets the MAC address on Linux in the case where eth0 is not the default interface such as on Fedora 19 and 20. The software still looks for eth0 as the first choice so as to adhere to existing licenses, but if eth0 is not present, then the first real device will be returned. (Linux only)
- When a DISABLING of a floating license occurs, display the exact reason and do not just assume it is because the license expired.
- If the data sent to either the Product Activation Server or the License Server gets corrupt when the client initially connects to the server, the connection thread was not being terminated.
- Add a restart option for both the Product Activation Server and the Floating License Manager through the sgpautil and sglmutil applications respectively.
- Add sgRestart() to the Programmers guide for the Floating License Manager
- Add sgPaRestart() to the Programmers guide for the Product Activation Server
- Properly close the debug log file in all cases for the Product Activation Server and floating license manager
- Allow the end-user to override the localization settings by setting an environment variable SG_LANGUAGE before starting the application, and setting it to any of the supported ISO 639-2 codes. Current codes are ger,eng,spa,fra,ita,tur,kor,por,deu,det,rum,ukr,srp,swe,dan,slo,slv,jpn
- Provide the ability to disable the user from overriding the language setting using sgSetAttrInt(SG_ATTR_DISABLE_LANG,1) See the ProgrammerGuide.pdf for more information.
- When the client app terminated communication with the Product Activation Server, the DISCONNECT: message in the server output did not include the username.
- Add the clients IP address to the CONNECT: message in the floating license manager. If the IP is internal to the local network, it will be the internal address. If the client is coming in from a remote network, it will be the external IP address of the remote client.
- Add actual error message when getting a “Error on accept()” call in the Product Activation Server, License Server and Proxy Server.
- Add a message to the startup of the floating license manager when the -m <max_connections> exceeds the current process “soft limit”. Increase it up to the requested or process hard limit or our own hard limit of 2048 connections, whichever is less. (excluding Windows)
- The C/C++ example in the ProgrammerGuide.pdf was incorrect and should have sent pointers for the count and current variables.
- ***** Version 5.2 *****
- Windows 8 users can start to have ' (single quotes) in their hostname. This causes a problem with the Product Activation Server when doing an INSERT INTO the SQL table. Therefore, hostnames with single quotes in them will be changed to – (dash)
- SG_UNKNOWN_ERROR definition was missing for ahk (AutoHotKey) and psprolib.vb (VB.NET) header files
- Add support to be able to easily license MetaTrader 5 scripts, Indicators, etc., by creating a psprolib.mqh header file that defines all SafeGuard definitions and functions.
- Add warning message to sglmutil/sgpautil when doing a -c restart. You must make sure that either sglmsvr or sgpasvr are being run by sglmd or sgpad respectively in order for a restart to work. Otherwise, the server will just shut down.
- Add MT5 documentation to the ProgrammerGuide.pdf, and fix various other text in the guide.
- Add MetaTrader example code under examples/metatrader
- The example listed in the ProgrammerGuide.pdf for sgPaActivate() for Python and VB.NET were missing the “customer” argument.
- Dutch (Netherlands) was incorrectly listed as SG_LANGUAGE_DET when it should be SG_LANGUAGE_DUT
- Note: All strings returned from sgGetLastErrorString() should be considered UTF-8 with possible ASCII characters imbedded. Since UTF-8 and ASCII are completely interchangeable, if you need to convert the returned strings to UTF-16, UTF-32, Unicode, etc., you can do this after retrieving the UTF-8 as an array of single byte 8-bit values with a null at the end. This can be done with the system iconv() function, or others. The english text messages are all from the ASCII character set.
- Fixed a problem in the ProgrammerGuide.pdf for node-locked Java and Python examples. Basically, you should not

be using the @ sign to find your license file with either Java, Python and PHP. Use an environment variable or build the pathname to your license file.

- Fixed documentation error for sgEnableComponentLine(), sgEnableComponent() and sgEnableAllComponents() in the Parameters section where the “target” parameter was listed as [in] (input) when indeed it should be listed as target[out] as output.
- ******* Version 5.3 *******
- Fix problem with the Product Activation Server where the paid_data table(s) were not getting populated when the customer identifier was the same as an existing record, but the os or idtype was different. The problem was in the SELECT statement.
- The product Activation Server would allow a paid node-locked customer to register software on a different machine if the component, version, idtype and customer id were the same. This is ONLY a problem if your software allows the user to enter their customer id during registration and they enter the same customer id on a separate machine. If you are generating a unique ID for each registration by using a Vendor defined host id, or something such as the MAC address, there is no risk. Again, the risk only exists if you allow your customer to enter their customer id during registration.
- The same problem existed with Paid Floating licenses
- Obtaining the IP address using sgGetAttrStr() would sometimes fail on certain operating systems because of name changes to adapter names. This has been corrected and should not occur anymore. The first active adapter that has a IP address associated with it will be returned.
- Export MYSHA256_Data() from psprolib.dll
- Update sglmsrver so as to allow for a Vendor defined host ID rather than just the ethernet address.
- Update SafeGuardManager and add “365 days” to the default possible expiration dates for floating and node-locked licenses.
- Update SafeGuardManager to allow for a Vendor defined host ID for floating licenses
- Make available the C/C++ psprolib for the following architectures with access to node-locked, floating and the Product Activation Server functionality. Mac 32 bit PPC, Mac 64 bit PPC, Linux 32 bit PPC, Solaris 32 bit Intel, Solaris 64 bit Intel, Solaris 32 bit SPARC and Solaris 64 bit SPARC processors.
- ******* Version 5.4 ***** (November, 2015)**
- pspro-ext when doing an AddAll, would only add the first valid license in the text file to the new license file
- Remove the printed header information from the pspro-ext and pspro-int applications
- Remove the printed header information from the sgpautil and sglmutil applications
- Add {-b} optional flag to sgpad for non-Windows platforms to run as a daemon in the background
- Add {-b} optional flag to sglmd for non-Windows platforms to run as a daemon in the background
- Add -c showlog to sgpautil so that you can check your PAS log file from anywhere
- Add sgPaShowlog() to the ProgrammerGuide.pdf so you can have access to the log file programmatically.
- Add sgPaShowlog() to all native language interfaces.
- Changed MYSQL_HOST= in bin/control.txt from 'localhost' to '127.0.0.1'... When installing MySQL Server using 'apt-get install' rather than downloading it from <https://www.mysql.com/downloads>, the Product Activation Server cannot connect to MySQL Server on the same machine on certain flavors of Linux.
- There have been issues with obtaining the MAC address on certain versions of Windows. Mainly Windows 7 and Windows 10. There were a couple determining factors such as NetBios not being enabled, or on Windows 7 with Virtual Adapters enabled. What was happening is the MAC address would change because these Virtual Adapters would come online in a different sequence each time the system was booted, or if NetBios was not enabled, the code would use another method that doesn't seem to work anymore at Windows 10. The new method will work exactly the same as the old method when it was working correctly. Plus, there is no need to have NetBios enabled anymore, and there is no dependency on legacy Windows systems calls that change between versions of Windows. This is a Windows issue ONLY.
- For those developers wishing to build a sglmsrver and pskeycode with the ability to work with a “vendor defined host ID”, please contact us and we will provide you with the necessary object code to rebuild these binaries.
- Changed sglmsrver output slightly to clean up some of the messages to help in the upcoming graphically charting of license usage over time. Some old messages like DENIED: have been split up into DENIED: and UNSUPPORTED: Where the denied license message is because there are no more available, and the unsupported message is when the component name is not served by the license manager or the requested component version is not available. Also the DISABLING: message has been slightly changed so that when a license has expired or can no longer be served by the license server, the message is more descriptive.

- ******* Version 5.5 ***** (February, 2016)**
- Added the ability to have the license server create a CSV file so that your customers can use this to create charts of license usage over time using such things as Google Sheets. See [LicenseManagerGuide.pdf](#) for more info.
- Fixed a problem with the DEMO version of SafeGuard LM timing out prematurely.
- Fix a problem with the floating license manager when the user overrides the max_connections to something larger than 512 concurrent users. The issue has been resolved and the new hard limit of concurrent users connected to the server is 2048
- An issue when a process checked out more than one of the same component, which is fine, but the license server would not check them all in if the {max_connections} was set to a number below the total number of components that were checked out by the same process and the process terminated unexpectedly. This has been resolved. Normally, no one would ever encounter this.
- Components with the same name and different version numbers can be in any order in the floating license file. Before, they had to be in ascending order.
- On OS X, sgGetAttrStr(SG_ATTR_EXE_PATH,..) would return the pathname of the running executable with a ././exename. The ././ is valid, but undesirable. So now it returns the absolute path without any dot notation. _NSGetExecutablePath() was to blame.
- Add a new function sgShowServerDetail() for floating licenses. This function will return all sorts of fun things from the license server regarding currently checked out licenses. Things like thread_id's, socket descriptors, process names, PID's, IP addresses, hostname, etc., of the client apps checking out licenses and more. Its main purpose is to return all the actual currently checked out licenses by name, version, user, host, etc. This is perfect for a realtime status of current license server status. The overhead is very low, so it can be called as often as desired, but I would keep it above 1 second intervals. See the [ProgrammerGuide.pdf](#) for more details.
- Add sgShowServerDetail() to all language interfaces.
- Remove obsolete SafeGuardUser application.
- Make the Java API a Java “package” com.persistentsecurity.safeguardlm
- Increase the maximum components served by the license server from 64 to 256
- Change class name from psprolib to PSProLibProxy for language interfaces that have to specify a class name
- fix minor documentation error on sgEnableComponentLine()
- Let the demo license server work with the “any” host id. The limit of one connection is still there.
- The Avast anti-virus software was giving a false positive on sgpad.exe. We worked with them and they fixed their software so that it will not report this anymore (Windows only)
- ******* Version 5.6 ***** (April, 2016)**
- Under rare circumstances after a call to sgPaActivate() that a subsequent sg*() call fails, the error message that is returned from sgGetLastErrorString() would contain the hostname of the PAS rather than the proper object such as the component name of the subsequent function call.
- Fixed a logic error in examples/*/PASnodelocked.* This logic error doesn't affect the examples, but if the example code were to be copied and used in production, it could cause issues.
- The sgEnableComponent() and sgEnableComponentLine() was limiting the Host ID to 32 bytes. So anyone using a Vendor defined host ID longer than 32 bytes would be a problem.
- Print the full date/time when the license server is terminated with a CTL-C or kill -15 in front of the Server shutting down... message
- Add a “license generation” section to the [DeveloperGuide.pdf](#)
- Add a complete FORTRAN interface to the standard C/C++ psprolib library. This is for all platforms. We used gfortran to do all the testing.
- Add FORTRAN documentation to the [ProgrammerGuide.pdf](#)
- Add FORTRAN example code
- FORTRAN developers on Windows can ONLY use the dynamic version of psprolib.dll
- Modified the PASnodelocked and PASfloating examples so that it is easier to understand the relationship between the client app and the PAS when obtaining a paid license. The example code will use the “email” address as the unique identifier to identify a paid customer. It could be anything such as a sales invoice number. If you wish to test this with the examples, you will need to populate the appropriate paid_node or paid_float table with a record and “[bob@example.com](#)” as the “cust” column since “[bob@example.com](#)” is the fake email address used in the example code.

- Upgrade PHP API to 5.6.17 on OS X and Linux

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Copyright (c) 2000-2001, Aaron D. Gifford – for an excellent implementation of SHA256

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