

SentinelHASP®

Sentinel HASP - v.5.12
Release Notes



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About Sentinel HASP

Sentinel HASP provides software publishers with strong anti-piracy and IP protection solutions, offering unmatched flexibility in assisting you to protect your revenue and increase sales. The Sentinel HASP system prevents unauthorized use of software, protects software copyrights and intellectual property, and offers multiple licensing models.

The strength, uniqueness, and flexibility of Sentinel HASP are based on two primary principles:

- *Protect Once—Deliver Many™* — the concept of separating the software engineering and business processes.
- *Cross-Locking™* — the technology that supports the *Protect Once—Deliver Many* concept, enabling a protected application to work with a HASP HL (hardware) or a HASP SL (software) key.

All commercial decisions, package creation and license definitions are executed by product or marketing managers after the protection has been implemented.

This workflow model provides you with greater flexibility and freedom when defining new sales and licensing models, including feature-based and component licensing, evaluation, rental, floating, subscription, provisional (trial/grace), pay-per-use, and more, enabling you to focus on revenue growth.

What's New in Sentinel HASP v.5.12?

This section describes the main features introduced in this release of Sentinel HASP.

Note: Most of the user interface screens, documents and online help systems in this release were issued for v.5.10 or v.5.11, and have not been modified for v.5.12.

Enhancements for Sentinel HASP Run-Time Environment

Sentinel HASP is provided with enhanced Run-time Environment version 6.25 for Windows and Run-time Environment version 1.18 for Linux.

Note: The License Manager included in this version of the Run-time Environment uses rebranded terminology for Sentinel LDK. For more information, see the description of enhancements to the Run-time Environment in this section.

Enhancements That Were Released Earlier

This section lists additional enhancements that were released earlier for specific cases and have been incorporated in this release.

Note: Unless specified otherwise, each entry in this section relates to the Windows platform.

Business Studio Server API

Case ID	Enhancement
MKS 151038	In BSS API, a method (RemovePendingOrder) has been added to remove pending orders. This provides the flexibility to remove pending orders in various situations, such as when checking in a C2V.

Case ID	Enhancement
H15156 Case 723	BSS API – A method has been added for retrieving customer orders (GetOrdersByCustomerID)
	<p>The following new methods have been added:</p> <ul style="list-style-type: none"> • SetOrderFreeData – combines the functionality of ExcludeFeaturesFromOrder, SetOrderFreeParameters, SetOrderFreeMemorySegments • GetOrderFreeData – combines the functionality of GetOrderExcludableFeatures, GetOrderFreeParameters, GetOrderFreeMemorySegments • ProduceOrderByHaspIDFromC2V – provides method for obtaining HASP ID from a C2V file for producing an order.

Business Studio

Case ID	Enhancement
H15286 Case 817	Each Business Studio user can configure Business Studio to automatically insert customer-specific information (such as customer name) in the name of generated V2C file.
MKS 124696 Case 1340	When checking in C2V files in Business Studio, the application displays details of the c2v including the "HASP ID = haspId". You can now right-click the displayed HASP ID and copy it to the Windows clipboard. From there, you can paste it as necessary into other applications.
MKS 124698, 124697 Case 1336, 137	While creating an Update Order in Business Studio, you can now select and add multiple C2Vs in a single operation.
MKS 126193 Case 1337	A task button for duplicating an existing order is now available in the Manage Order screen in Business Studio.
MKS 151035	In Business Studio, Manage Order screen, a column has been added (Created By) that indicates the user who initiated the order.
MKS 151130	In Business Studio, Check In C2V and Key Data screen, the Status Log now includes the related Sentinel HASP user.
MKS 144679	In Business Studio, Produce HASP HL Keys screen, a new option called Format Before Burn is available. When this option is selected, Business Studio formats the HL key before burning new information to the key.
MKS 132796	When generating and saving a V2C file in Business Studio, you now have full access to the name of the file, allowing you to customize the file name as necessary.

Enforcement (Sentinel HASP Envelope)

Case ID	Enhancement
MKS 103383 Case 899	Sentinel HASP Envelope for Mac now includes the capability for a protected application to encrypt and decrypt data that is written to and read from an external file. Data files that will be delivered together with the protected application can be pre-encrypted using the Windows-based Sentinel HASP DataHASP utility.
H14597 Case634	Envelope API - Aladdin.HASP.Envelope.dll, and Aladdin.HASP.EnvelopeRuntime.dll now have strong name signing.
H14185	COM API 64-Bit + AutoCAD sample - CIR - COM API in 64bit OS including with AutoCAD sample.
Case 1073	.NET Envelope Haspdnert.dll now provides backward compatibility.
Case 961	Protect Adobe Player ActiveX and swf/flv files.
MKS 103771	.Net Envelope: Protection now fails if a method fails to be protected.

Run-time Environment

Case ID	Enhancement
H15332 Case 963	Run-time API can now retrieve the parent key of SL detached license with hasp_get_info in the "view" parameter: Parent tag: "hasp" child tag: "parentid" Returned value will be "0" if the key is not attached. <haspformat> <hasp> <element name="parentid" /> </hasp> </haspformat>
H15334 H14441 Case 948	RTE installer operates more quickly.
H15176 Case 592	Provisional key HASP ID no longer changes when enabling disabling and restarting LM service.
MKS 119844 Case 1218	Under Mac OSX 10.7, the Run-time Environment now provides backward compatibility (HASP4 and HASP HL) .
MKS 122925 Case 714, 647	(Windows/Linux/Mac) In Admin Control Center, the length of the field "Access Restrictions" on the tab "Access from Remote Clients" has been expanded.
Case 1274	(Windows/Mac/Linux) An option has been added to disable the "Disconnect" button in Admin Control Center > Features > Sessions.

Case ID	Enhancement
Case 1180	(Windows/Mac) In Admin Control Center, you can now define individually for each machine whether offline or online detaching on that machine is allowed.
Case 1110	Runtime installer now supports Windows Home Server
Case 910	(Windows/Mac) In Admin Control Center, the user name of the recipient machine that detached the SL license has been added.
H14134	(Linux) Open SUSE 11 is now supported.
	<p>The Run-time Environment contains a number of enhancements to support Sentinel LDK (the next generation of Sentinel HASP).</p> <p>Sentinel Admin Control Center user interface and help files incorporate changes in terminology as follows:</p> <ul style="list-style-type: none"> • The Sentinel HASP product is now referred to as Sentinel LDK. • SL keys that were created with Sentinel HASP Business Studio now appear in the user interface as "SL-Legacy" keys. • References to "Sentinel EMS" in the help files are also valid for Sentinel HASP Business Studio.

VLib

Case ID	Enhancement
H14758 Case 670	(Windows/Mac) The tamper detection with activated non-time-based SL licenses has been disabled.
MKS 132847, 127900 Case 1333	<p>Detached License & Updates</p> <p>An option is now provided to define whether to update an SL key by reducing the number of seats that are already detached.</p>

Interface, Tools

Case ID	Enhancement
H14714 Case 674	Master Wizard internet connectivity can now operate through a Proxy Server.
H14211 Case 568	RunTime API support has been added for Delphi 2009 (and 2010) Compiler.
Case 1294	Drive Partition API now supports Windows 7.
Case 1299	When the Merge Module detects a newer driver version, setup will now successfully complete anyway.
CASE_989	The unique API is now placed automatically in the .Net CLR temporary location.
CASE_1056	.NET bridge API is now part of the product .
MKS 122551, 132884 Case 1308	VNC under Linux and Concurrency are now counted for each user.

Enhancements for This Release

This section lists enhancements that have been incorporated in this release.

Case ID	Enhancement
MKS 152473	(Envelope) The properties MANAGE EXCEPTIONS and REMOVE EXCEPTIONS now appear together in the list of advanced properties.

Corrections That Were Released Earlier

This section lists additional corrections that were released earlier for specific cases and have been incorporated in this release.

Note: Unless specified otherwise, each entry in this section relates to the Windows platform.

Components (Business Studio Server, BSS API)

Case ID	Problem Summary
Case 965	License Detach Failed – Error 61
Case 1009	BSS email warning seems to use only local master
Case1015	Default concurrency changed
Case 985	HASP Business Studio 5.0 bug-System.NullReferenceException
H15074 Case 857	BS application – new customer address would possibly collide with DB
H15199 Case 919	Activating a provisional product with 500 features would require 10 minutes
MKS 111300 Case 1165, 1173	BS application crash on Windows7 64-bit
MKS 121666 Case 1248	BS – SL C2V and product clone protection information
MKS 129010 Case 1007	BSS API performance for multiple concurrent users
MKS 132793 Case 1456	BSS GUI hangs on open order command
MKS 103684 H14423 Case 590 [FAPI]	Key is unusable anymore after exceed capacity [CRM #1000804]
MKS 119160 Case 1154[FAPI]	BS - activation V2C changes the HASP ID
MKS 105646 Case 713[FAPI]	BS - fails to format or recycle key
MKS 143767	Sentinel HASP is compatible with SQL 2008 R2 Express.
Case 1088	BS - wrong information for activated SL key
Case 1095	A customer has encountered error 7401 while creating a V2C/EXE update.
Case 558 [FAPI]	Business Studio Server fails to burn with Batch Code WKARG
Case 1320	BSS API SetFreeParams performance issues
Case 1364, 748	Trying to introduce V2C via hasp_update() delivers error 43
Case 1366	BSS Key Activations by Date report shows duplicated records

Enforcement (Sentinel HASP Envelope)

Case ID	Problem Summary
Case 1028	(Java) envelop.exe application would crash on Windows7 x64
H15333 Case 943	Win32 Enveloped application - VB "Return" seemed to be ignored
Case 995	Enveloping application with win 32 and win32 with method level removes the application icon
Case 915	Envelope fw 4 .net application create issue.
H15093 Case 862	.Net enveloped DLL - the handle count would constantly increase
H14946 Case 701	Background checks were not enabled while running a .Net nested ClassLibrary1.Form1
H14410 Case 522	A specific enveloped Win64 DLL fails to unload
H14755 Case 661	Final Cut crashes while loading a plug-in protected with SRM Mac Envelope
H14376 Case 434	Cannot envelope "C:\...\vb.net (x64)\bin\hasp_demo.exe" [CRM #986560]
Case 566	Output of Enveloped .Net application is wrong under Win7-64 [CRM #995901]
Case 485, 490 H14314	A protected x64 EXE + DLL would hang once launched or would fail with error E0001
Case 341	Envelope protected files "Invalid stream". error code 6"
Case 461	Envelope x64 - during enveloping, the envelope would stop responding
Case 368	64-bit Enveloped application - unexpected results on run-time
Case 380	Win32 Enveloped DLL - runtime error E0003
Case 369, 384, 385	Error #2002 while protecting a specific .Net DLL with the HASP SRM Envelope [CRM #119852]
MKS 109622 Case 1112	Envelope & Error #135 - Cannot set thread priority
MKS 109969 Case 1000	How to improve the CMD mode Envelope.com concurrent working performance
MKS 124280, 121231 Case 1052	(Java) "Generic resister error (1310735)" during WAR file protection
MKS 12791 Case 1316	(Linux) ELF library enveloping error
Case 1022	Adding .jar file increases the size of the protected applications by a factor of 20
Case 934	Linux Envelope "Floating point exception" error
Case 631	.Net enveloped application would fail at run-time

Run-time Environment

Case ID	Problem Summary
H15018 Case 679	Unable to start Hardlock service while installing HASP SRM GUI Installer
Case797	1015060 - Enveloped application would stop responding
H15038 Case 775	A specific Enveloped + DataHASP application would fail under Win64

Case ID	Problem Summary
H14888 Case 728	LM service would fail on specific machines once connected to internet
H14853 Case 690	(Windows/Linux/Mac) HASP login scope to specified product did not work as expected.
H14681 Case 650	(Mac) HASP LMS failed when using Adobe Illustrator tools to open AI file
Case 589	Win32 Enveloped application failure on Windows 7 64-bit
CIR14409 Case 596	(Windows/Linux/Mac) Get_info was delayed 20-30 sec after execution consumption in Net key
Case 337	SRM API C++ application and multiple CLOSE_WAIT connections
H14112 Case 424	(Mac) Error 33 would occur under Mac OS X 10.6
Case 413	Provisional license on XP would fail to apply
MKS 109431 Case 1137	1041875 - CIR driver 5.99 - enveloped exe do not close properly, must be killed via Task manager
Case 1077	(Mac) Runtime v.5.95 issue with HASP HL Runtime API on PowerPC
MKS 118130 Case 1155	RuntimeInstall API - hasp_windows.dll use during installation (Linux application hangs when using legacy feature)
MKS 129527 Case 1389	Runtime Install API repair issue on 64-bit OS
Case 1284, 1384, 1394	(Mac) BSOD when machine goes in standby with HASP HL attached
MKS 133256	Bundling RTE with provisional license for Mac OS 10.7 "internal dll error"
Case 1270	Runtime API & Error 33
Case 1060	Runtime installation error on Win2k SP4
MKS 133256	Sentinel HASP RTE Installer (Mac 10.7)
MKS 132931, 127562 Case 1392	(Linux) Local USB key becomes unavailable after some time
Case 1012, 966	Client reports on major handle Leak in the HASP License Manager
Case 327	SRM SL license on XP to Vista 6.0.600 upgrade [CRM #108417]

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Case ID	Problem Summary
H15022 Case 695	(Windows/Mac) SRM 5 SL time tempering tolerance back and forth clock adjustment
Case 1335, 1334, 1360, 1404	(Windows/Mac) HASP_SCOPE_RESULTS_EMPTY due to detach after license update
Case 1292	Virtualization and Win 2008R2. When cloning the SL with client batch, the clone was not detected

Interface, Tools

Case ID	Problem Summary
MKS 108479 Case 973	COM Runtime API - LabView error on Windows 7 64-bit
H15174 Case 794	Delphi Runtime API - possible memory leak login/logout

Case ID	Problem Summary
H14444 Case 584	(Borland Runtime API) wrong references Hardlock + SRM API
Case 661 H15073	Final Cut crashes while loading a plug-in protected with SRM Mac Envelope
H15039 Case 814	Questions and a request about .net bridged API were resolved
H13827 Case 303	"Detected memory leaks!" in HASP SRM C++ Runtime API [CRM #104973]
Case 1168	HASP4 ContainerNotFound & hasp_net_windows.dll v5.10.1.17536
Case 1200	Problem of running programs in UNC paths from 64-bit OS

Corrections for This Release

This section lists corrections that have been incorporated in this release.

Case ID	Problem Summary
MKS 151433 Case995	(Envelope) Protecting an application with win32 with method level throws error 721
MKS 150188	The Master Wizard dialog box would be started each time Envelope or ToolBox was started, even after the Master key was successfully introduced.
MKS 151004	(Envelope) Protecting large jar files would repetitively throw the error: "Serious Internal Engine Error"
MKS 151030 Case1052	(Envelope) When protecting a WAR file, the error "Generic resister error (1310735)" was displayed
MKS 152470	(Envelope) Remove exceptions did not work for 32bit applications
MKS 150189	(Envelope): An irrelevant message was displayed in the log when an x64 application was protected in Envelope on an x64 machine.
8475	When you attempt to integrate the Sentinel HASP Run-time Installer MSM module in your Windows Vista installation package, an irrelevant warning was displayed.
MKS 14528	On a Windows 7 platform, Sentinel HASP could not be installed under Windows XP mode.
TD13652	When the user attempted to rotate the pie chart in a Business Studio report, the application sometimes failed, displaying an access violation error.
TD 12506	Sentinel HASP communicates via TCP and UDP on port 1947. This port is IANA-registered exclusively for this purpose. At the end user site, it was necessary to configure the firewall so that communication via this port is not blocked.

Case ID	Problem Summary
TD 13951	<p>Sentinel HASP automatically updates the Firmware on HASP HL keys to the latest version (v.3.25). For more information, see “Changes to Sentinel HASP HL Key Firmware” on page 12.</p> <p>However, when the Run-time Environment is installed on a virtual machine, the Firmware update was not installed automatically. In addition, the Firmware Update V2C/EXE files provided did not reliably update the Firmware:</p> <ul style="list-style-type: none"> • if the VM is located on a Windows computer. • if the VM is located on a Mac computer using any virtual machine software other than VMware Fusion 2 or 3. <p>If the V2C file is used on one of VMs listed above, the update would fail.</p>
MKS 93464	<p>Sentinel HASP Envelope v.5.1x provides extensive enhancements for protection of Java programs. As a result, it was necessary to manually update projects for Java programs that were created before the release of version 5.10 of Envelope using the Sentinel HASP Envelope GUI.</p>
MKS 95491	<p>The current release of Sentinel HASP Envelope did not support protecting instance methods that call instance methods of the super class. Note that such methods were not detected by the Envelope and could be selected for protection by default. As a result, the protected application would trigger an <i>IllegalAccessError</i> exception during runtime.</p>
TD 11432	<p>When you run MasterHASP v.3.60 for Linux or MasterHASP v.5.0 for Mac operating systems, it was necessary to copy the generated APIs from .../Aladdin/HASP SRM [version]/API/Runtime/C to .../Aladdin/HASP SRM [version]/API/Runtime/Java</p>
TD 10905	<p>Error codes in Sentinel HASP Envelope for Mac OS have been reassigned in v.5.0. Developers who are using automated error recognition routines had to update these routines for the new error codes.</p>
MKS 152020	<p>Given that a Product contains 78 or more Features with the following license terms:</p> <ul style="list-style-type: none"> • HL only • License Type: Perpetual • Accessibility: Remote Desktop and Network • Concurrency: enabled, unlimited or up to 250 instances <p>Burning of the Product to a HASP HL Net key would fail with the message “Unable to produce HASP HL key”.</p> <p>Now it is possible to include up to 231 such Features (as documented).</p>

Corrections for This Release – Run-time Environment v.6.25

This section lists corrections to the Run-time Environment V.6.25 that have been incorporated in this release.

Case ID	Problem Summary
US126998, CASE1335	When the end user applied an update for one Product, multiple unexpected Products were added in Admin Control Center. In addition, when the ISV checked in a C2V file from the end user, duplicate Features relating to the Product were added in Business Studio.
US150843, MKS132920	Expired detached licenses would continue to be displayed in Admin Control Center for 7 days. You can now customize Admin Control Center to display these licenses for 0 to 9999 days. In the hasplm.ini file, add or locate the parameter <code>commuter_delete_days =</code> and assign it the number of days to display expired licenses. If you specify 0, an expired detachable license entry is deleted within a few minutes after it expires.
US148372, MKS142453	When a computer with an active protected application and an attached HL key was set to hibernate, and the HL key was then detached, the computer would freeze upon being restarted.
US153304, MKS152843	An error would occur when running an RTE installer that includes a Provisional Product.
MKS154755, 154375, 153944, 152449, US158710	hasplms.exe would crash, sometimes showing an Access Violation error in the system log.
MKS147694	When a modification is applied to decrease the concurrency count, it was still possible to extend the duration of detached licenses even though the number of detached licenses exceeded the maximum allowed.
MKS147644	The License Manager would lose track of the number of detached licenses for a given Product when a modification is applied to add a new detachable Feature.
US144668	Under Windows XP, a protected application that is linked with Runtime API v.5.0, and is running in Run-time Environment v.5.95 or later would fail with "Communication Error 33" after several hours of activity.

What's Changed in Sentinel HASP v.5.12?

- After installing v.5.12, vendors who are working in languages other than English require new Language Packs. New Language Packs for v.5.12 are planned for the end of Q3 in 2012.
- Sentinel HASP Envelope is no longer supported under Windows 2000. If you want to protect your application on a Windows 2000 platform, use Sentinel HASP Envelope from Sentinel HASP v.5.10. If necessary, you can obtain v.5.10 of Sentinel HASP Envelope from SafeNet Technical support.
- Sentinel HASP Run-time Environment v.6.25 (provided with this release) is not supported under Windows 2000. If you want to install your protected application on a Windows 2000 platform, request Run-time Environment v.6.23 from SafeNet Technical Support. Technical Support will also provide instructions on how to downgrade from Run-time Environment v.6.25 to v.6.23.

Changes to Sentinel HASP HL Key Firmware

Starting from Sentinel HASP 5.0, the HASP HL Key Firmware has been modified to support future planned security enhancements in Sentinel HASP. Sentinel HASP automatically updates the Firmware on HASP HL keys to the latest version (v.3.25). This occurs:

- when a HASP HL key with v.3.21 Firmware is present on a computer where the Run-Time Environment is being updated to v.5.0 or later.
- when a customer connects a HASP HL key with v.3.21 Firmware to a computer where v.5.0 or later of the Run-time Environment has been previously installed.

For HL key with Firmware earlier than 3.21, the customer can apply the Firmware Update V2C or EXE file provided on the Sentinel HASP Installation DVD to update the Firmware to v.3.25.

Upgrading from HASP SRM v.4.0 or earlier to Sentinel HASP v.5.12

Customers who currently work with HASP SRM v.4.0 or earlier should note the changes described in this section when upgrading to Sentinel HASP v.5.12.

Warning: Some of these issues may cause you to lose important functionality in Sentinel HASP if you do not deal with them before you upgrade to Sentinel HASP v.5.12.

- Before v.5.0, vendors who protect their software using only HASP HL Keys and do not have an Activation license for working with HASP SL Keys were nevertheless able to generate Provisional Products so that they could distribute “trialware” version of their software. For v.5.0 and later, such vendors must now purchase a license to define Provisional Products.
- After installing v.5.12, vendors must reintroduce their Master keys.
- A new Reports facility has been added to Business Studio v.5.0 and later. To work with this facility, vendors must purchase a separate license. Business Studio users who will work with this facility must be assigned a new Role – Reporting.
- Vendors who are currently working with HASP SRM v.2.x or v.3.x should be aware of significant changes in the product, in addition to the changes listed above. For more information, see the document *Transitioning From HASP SRM v.2.x*, described below under “Documents.”

Sentinel HASP Documentation

The documents and online help systems described below are provided in this release of Sentinel HASP.

Note: Most of the documents and online help systems in this section were issued for v.5.10 and have not been modified for v.5.12.

Documents

Sentinel HASP documents (PDF files) can be found:

- on the Sentinel HASP Installation DVD, under: `\Windows\Installed\Docs\`
- where Sentinel HASP is installed, under: `...\Program Files\SafeNet\Sentinel HASP\Docs\`

Document	Description
Sentinel HASP v.5.12 Supplement for Language Packs	Summarizes changes to translated documentation items that do not include the latest changes since version 5.0. This book should be used to supplement your translated documentation set. (This document is only provided as part of a language pack.)
Sentinel HASP v.5.10 Installation Guide	Details the prerequisites and procedures for installing Sentinel HASP and the Sentinel HASP Business Studio Server.
Sentinel HASP v.5.10 Software Protection and Licensing Guide	Provides in-depth information about the logic of the applications and best practices for maximizing your software protection and licensing strategies. Describes a wide range of licensing strategies and models that you can implement, and can serve as the basis for elaboration and for creating new, tailor-made licensing models.
Sentinel HASP Software Protection and Licensing Tutorials	Guide you through the basic procedures of Sentinel HASP to familiarize you with the applications and their functionality. <ul style="list-style-type: none"> • The Developer Kit tutorial is for vendors who wish to evaluate Sentinel HASP. • The Starter Kit tutorial is for vendors who have just purchased Sentinel HASP.
HASP SL v.5.10 Product Activation Tutorial	Guides you through the basic procedures of protecting a Windows application, creating a trial license, and then converting the license to a permanent license that is protected with a HASP SL key.
Quick Start Guides	Provides a short and simple demonstration of how you can easily protect your software using Sentinel HASP HL keys. Separate Developer Kit and Starter Kit guides are provided.
Gaining a Competitive Edge with Sentinel HASP Licensing	Discontinued. This has been incorporated into the <i>Sentinel HASP v.5.10 Software Protection and Licensing Guide</i> .
Integrating Sentinel HASP Business Studio Server into Your Existing Back-Office Systems	Outlines the many ways that software vendors can maximize the potential of their existing back-office systems, such as ERP, CRM, and business intelligence systems, through seamless integration with Sentinel HASP Business Studio Server
HASP HL Drive Flash Partitioning Utility v.1.0 – User Guide	Describes how to use the HASP HL Drive partitioning utility to load your HASP-protected applications and data onto the CD-ROM partition of a HASP HL Drive, and ship it to your customers. Your customer can save files to HASP HL Drive, or load additional software on it, thus utilizing the convenience of USB flash drive functionality.
Transitioning From HASP SRM v.2.x	Describes how to upgrade from HASP SRM v.2.x to Sentinel HASP v.5
Migration Guides	Describe how to migrate to Sentinel HASP from: <ul style="list-style-type: none"> - Hardlock - SmartKey - Sentinel SuperPro - HASP HL - HASP4- Sentinel Hardware Keys
Data Sheets	Provide technical information on specific components of the Sentinel HASP system.

Online Help Systems – User Interfaces

The documentation described in the table that follows can be accessed from the user interface for the relevant Sentinel HASP component.

Online Help System	Description
Sentinel HASP Admin Control Center	Documentation for the end user, describing the Admin Control Center and providing instructions for performing the various functions such as updating or attaching licenses.
Sentinel HASP Business Studio	Provides the Sentinel HASP user with detailed directions on how to handle setting up license entities and how to handle orders, production, and support for HASP HL and SL keys.
DataHASP Utility	Provides the developer with a description of the DataHASP utility, used for protecting data files that are accessed by Sentinel HASP Envelope.
Sentinel HASP Envelope (Separate versions for Windows and for Mac)	Describes how to employ Sentinel HASP Envelope to automatically wrap your programs with a protective shield. The application provides advanced protection features to enhance the overall level of security of your software.
Sentinel HASP ToolBox	Provides the developer with an easy-to-use interface for the Sentinel HASP Run-time API. Using Sentinel HASP ToolBox, the developer can evaluate the individual functions that make up the Sentinel HASP Run-time API, and their parameter requirements.

Online Help Systems – Sentinel HASP APIs

Documentation (CHM files) for the Sentinel HASP APIs described below can be found:

- on the Sentinel HASP Installation DVD, under: **\Windows\Installed\API**
- where Sentinel HASP is installed, under: **...\Program Files\SafeNet\Sentinel HASP\API**

Sentinel HASP API	Description
Activation API Reference	Together with various Sentinel HASP Run-time Environment API functions, this API assists the developer in communicating with the Sentinel HASP Business Studio Server.
Run-time API Reference	Provides the developer with an interface to use the functionality available in the Sentinel HASP Run-time Environment.
Run-time COM API	Provides the developer with access to Sentinel HASP Run-time Environment functionality, through an interface written for the Microsoft Component Object Model (COM).
Run-time Installer API	Provides the developer with an interface for integrating installation of the Run-time Environment into the installation of the vendor's protected application.
Business Studio Server API	Provides the developer with an interface for integrating Business Studio functionality into the vendor's existing back-office systems.

Software and Documentation Updates

SafeNet recommends that you frequently visit the [Sentinel HASP downloads page](#) to ensure that you have the most recent versions of Sentinel HASP software and documentation, and for documentation in other languages.

Supported Platforms

To ensure that you have the most comprehensive and up-to-date list of supported platforms, go to: www3.safenet-inc.com/SRMplatformSpt

General Information

Sentinel HASP Vendor Keys

When you purchase Sentinel HASP, you are provided with two Sentinel HASP Vendor keys—the Sentinel HASP Master key and the Sentinel HASP Developer key.

The Sentinel HASP Developer key is used by your software engineers in conjunction with the Sentinel HASP protection tools to protect your software and data files.

The Sentinel HASP Master key is used in conjunction with Sentinel HASP Business Studio and is attached to the Business Studio Server. The key is used by your production staff to create licenses and lock them to Sentinel HASP protection keys, to write specific data to the memory of a Sentinel HASP protection key, and to update licenses already deployed in the field.

Every Business Studio Server computer must have a Sentinel HASP Master key connected. If you have installed the Activation components on a separate server from that on which the Management components are installed, you must ensure that each instance of the Activation server has a Sentinel HASP Master key connected that contains your SafeNet licenses.

Sentinel HASP Installation

- You cannot combine different versions of Sentinel HASP Business Studio and Sentinel HASP Business Studio Server on the same computer.
- It is recommended that when you specify a server name, you use the machine name and not the IP address—unless the IP address of the server is fixed.
- When Sentinel HASP is being installed on a terminal server, an “After Installation” message may be displayed, prompting you to click **Next** after installation. This message can be ignored. Click **Cancel** in the message to close the dialog box.

Known Issues

The known issues from Sentinel HASP v.5.12 that are likely to have the most significant impact on users are listed below, according to component.

Sentinel HASP Installation

Ref	Issue
TD 9318	If you are installing an updated version of Sentinel HASP Business Studio Server (not the entire Sentinel HASP Vendor Suite), and the installer detects an earlier version of HASP SRM Vendor Suite on your computer, all components of the earlier (full) version will be uninstalled.

Ref	Issue
MKS 100477	<p>When you install Sentinel HASP 5.10 or later, and choose to use an existing SQL Server, the installation wizard does not enable you to browse for an existing SQL Server instance.</p> <p>Workaround: During the installation procedure:</p> <ol style="list-style-type: none"> 1. In the screen "Select the SQL server and the security credentials," in the SQL Server Name field, enter only the host name (full computer name) of the computer where SQL Server is installed. You can enter "(local)" if you are installing Sentinel HASP on the same computer as the SQL Server. 2. In the SQL User Name and SQL Password fields, enter the SQL user name (default: sa) and password that you specified when installing SQL Server. Click Next. 3. In the screen "Specify a name for your Business Studio Database," select Create a new database. Click Next.
MKS 153728	<p>When configuring Vendor Tools to log in to the Business Studio Server through a proxy server, you cannot use a SOCKS4 proxy server. For more information, see "Configuring Vendor Tools to Log in Through a Proxy Server" in the Sentinel HASP Installation Guide.</p>

Sentinel HASP Business Studio

Ref	Issue
TD14650	<p>Report Chart Module does not support Unicode. Non-Latin characters are displayed unintelligibly. Be sure to follow the instructions in the <i>Sentinel HASP Installation Guide</i> for installing a TrueType font that contains the required characters.</p>
87012	<p>Installation of Sentinel HASP components (Business Studio Server and Vendor Suite) requires temporary free disk space, in addition to the space occupied on disk by actual software. If the required free space is not available, the installation process may enter an endless loop.</p> <p>Workaround: SafeNet recommends that you ensure that the computer where you install Sentinel HASP has at least double the amount of free space required by the components to be installed. For example: A full installation of Sentinel HASP requires 1.8 GB of disk space. Ensure that at least 3.6 GB of free disk space is available before starting the installation process. The additional space used by the installation process is released at the end of the process.</p>

Sentinel HASP Business Studio Server API

Ref	Issue
Case 736	<p>The Sentinel HASP database has been optimized with the addition of SQL indexes in order to improve performance of queries performed using Business Studio Server API. However, the optimized performance is not applied for sites that upgrade from v.5.0 to v.5.1x. Customers who upgrade from 5.0 and who require this enhancement should contact Technical Support.</p>

Sentinel HASP Samples

Ref	Issue
MKS 156426	<p>Coding samples for C, C++, C# and VB.Net demonstrate the use of hasp_rehost, although this functionality is not supported for Sentinel HASP v.5.12.</p> <p>Samples for the hasp_rehost function should be ignored.</p>

Sentinel HASP Run-time Environment

Ref	Issue
TD14827	<p>Given the following situation:</p> <ul style="list-style-type: none">• A Product is protected by a HASP SL protection key and allows concurrency.• The number of concurrent users is the maximum allowed. <p>Additional users attempting to access the protected software receive the message “Access denied” instead of the message “Too many users.”</p>
MKS 99350	<p>On the Mac OS 10.6 Server with 64-bit kernel extension: The Run-time C samples (static, shared, Xcode static and shared) sometimes stop responding after displaying the copyright notice.</p> <p>Workaround: Install the latest operating systems updates (10.6.4 or later) from Apple.</p> <p>Note: If the precompiled Run-time sample binaries do not function properly (they do not respond when executed), recompile the binaries with Xcode or GCC.</p>
MKS159048	<p>A user who converts an MBR disk to dynamic or vice-versa must reboot the computer before installing the Run-time Environment.</p>
	<p>When you install the Run-time Environment v.6.25, the following compatibility issues may arise:</p> <ul style="list-style-type: none">• Run-time Environment may be incorrectly reported as a virus by Control Guard Agent version 4.0.0.27. If this occurs, update to a later version of Control Guard Agent.• Run-time Environment may be incorrectly reported as a virus by SkyRecon StormShield Agent version 5.6. If this occurs, contact SkyRecon support to determine if a fix is available.

Sentinel HASP Envelope for Windows Platforms

General

Ref	Issue
MKS 93877	<p>(For Windows Vista and Windows 7) In the event that the error “Serious internal engine error (65535)” is displayed, make sure that you have write permission for the specified output directories and that the output directory is not protected by Windows UAC.</p>
MKS 159322	<p>Release notes for version 5.11 and 6.0 failed to state that Envelope is no longer supported on Windows 2000 platforms. For more information, see “What’s Changed in Sentinel HASP v.5.12?” on page 12.</p>

Java

Ref	Issue
TD 11043	<p>To protect JAR files using Sentinel HASP Envelope on Windows 2008 Server 64-bit computers, you must have the Win32 Java Run-time Environment (JRE) installed, even if you already have the Windows x64 JRE installed. Alternatively, ensure that the path to the Windows x64 JRE is included in the system path variables.</p>

Ref	Issue
MKS 91963 (Case 20)	<p>When a (vendor) developer attempts to create a shared object file that links to the Sentinel HASP shared object file libhasp_linux_batchCode.so, error messages similar to the following are displayed:</p> <pre> user@host: ~/Desktop/API/Runtime/Java/source> ./build_linux_x64.sh Building HASP Java native library /usr/lib64/gcc/x86_64-suse-linux/4.3/../../../../x86_64-suse-linux/bin/ld: HASPJava.o: relocation R_X86_64_32 against `a local symbol' can not be used when making a shared object; recompile with -fPIC HASPJava.o: could not read symbols: Bad value collect2: ld returned 1 exit status </pre> <p>This problem occurs because the Sentinel HASP Run-time API was not compiled to allow position-independent code generation (using the -fPIC flag).</p> <p>Workaround: You can obtain a version of the Sentinel HASP Run-time API that was compiled with the -fPIC flag. For more information, contact Technical Support.</p>
MKS 94373	<p>One of the optional behaviors in Envelope for protecting JEE applications is to halt the thread if the protected JEE application fails to detect a Sentinel HASP protection key. This behavior is controlled by the advanced protection property SUSPEND_THREADS. However, the protection mechanism also halts all threads from all third-party application running in the same Java Virtual Machine instance (JVM) on the Tomcat server. (Note that each Tomcat server only starts a single JVM instance.) Therefore, when protecting JEE applications in Envelope, the default value for the SUSPEND_THREADS property is currently set to False (although the documentation states that it is set to True). If you attempt to set the value for this property to True, a warning message is displayed.</p>
MKS 95269	<p>The current release of Sentinel HASP Envelope does not support protection of Java paint methods, but it allows you to select them in the user interface. As a result, the protected program may cause a deadlock when it executes a protected paint method at runtime with no HASP key connected. To prevent this issue from occurring, you can deselect all paint methods. Note that paint methods do not usually contain application logic; therefore, deselecting them typically has no impact on security. As an alternative, you can select console output for messages by enabling stderr output instead of windows in the Advanced settings panel.</p>
MKS 99869	<p>A protected JAR/WAR archive that contains Unicode characters in its path or name will not operate under the native operating system. Although there is small chance that the archive will run (depending on the type of Unicode characters that are used), in most cases the application will not run and will display an error message. (This problem does not occur on systems that use MUI for localization.)</p> <p>Workaround: Install the Tomcat server in a path whose name contains only ASCII characters. Ensure that the name of the WAR archive contains only ASCII characters.</p>
MKS 100213	<p>The number of instances of a protected application that can run in a network environment may exceed the number of concurrent instances allowed by the license terms.</p> <p>Workaround: In the protected application, call a Run-time API function to open a permanent session to the Feature for which concurrency is restricted.</p>

.NET

Ref	Issue
TD 14699	<p>A problem exists in the way protected .NET applications consume concurrency (seats). A protected application for which Periodic background checks is enabled in Sentinel HASP Envelope consumes one seat as long as the application is active. (By default, Periodic background checks is enabled.) If the application also uses a protected method, the protected method also consumes a license for a very short time when it is called. As a result, if a maximum concurrency is specified, the number of instances of the protected application that can run concurrently is one less than the maximum concurrency. For example, if the maximum concurrency is five, only four instances of the application are able to run concurrency.</p> <p>Workaround: In Business Studio, add one to maximum concurrency allowed for protected .NET applications.</p>
MKS 89873	<p>If a base class is selected to be obfuscated and a derived class is not set to be obfuscated, the derived class will not find the base class. Therefore, if you select a base class for obfuscation, you must also select any derived class for obfuscation.</p>

Sentinel HASP Envelope for Mac OS X

Ref	Issue
TD 11416	<p>In certain instances, a protected Mach-O binary may have a different owner and permissions than it had prior to protection with Sentinel HASP Envelope. This is caused because Sentinel HASP Envelope designates the current user (that is, the user applying the protection) as the owner of the newly-created files.</p>
MKS 132292	<p>After Envelope is used to protect the sample “Bounce” application provided on the Installation DVD, the protected application may fail under OS X 10.7.3 and display the message “Internal error”. This issue has not been seen with other applications. To test Sentinel HASP Envelope under this version of OS X, you can use any application other than “Bounce”.</p>

Contact Details

For assistance, or to report problems, contact your local [SafeNet representative](#), or create a support call at <http://www.safenet-inc.com/technicalsupport.aspx>.