



Software Rights Management

**Sentinel**HASP®

Sentinel HASP – v.5.0  
**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.5.0?

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

### “HASP SRM” is Now “Sentinel HASP”

With the acquisition of Aladdin Knowledge Systems by Vector Capital, Aladdin is in the process of being integrated into SafeNet Inc. As a result, the HASP SRM product is being rebranded to Sentinel HASP. Although the rebranding process is largely completed, you will still encounter occurrences of “Aladdin” and “HASP SRM” within the Sentinel HASP product and documentation (for example, in path names on disk and in Web sites). These occurrences will be eliminated in future releases of Sentinel HASP.

### Complete Virtual Machine Support for HASP SL Protection Keys

End users can now activate and use software on a virtual machine as if it were a PC. The following sub-features are also available in Sentinel HASP:

- Clone protection – Sentinel HASP can now detect when the computer on which protected software is installed has been cloned and duplicated, whether the computer is a PC or a virtual machine. As before, you have the option of blocking Features on a virtual machine. However, by default, Sentinel HASP now makes Features accessible on virtual machines and enables clone protection for both Virtual Machines and PCs.
- Provisional licenses are now supported on virtual machines.

## Support for Sentinel HASP Envelope Under Linux and Mac 64-bit Operating Systems

Vendors can protect their 64-bit Linux and Mac OS X application with Sentinel HASP Envelope.

## Distribution Channels

Many vendors sell their products through distributors. Distributors typically require access to Sentinel HASP Business Studio™ so that they can enter and produce orders. However, in many cases a vendor may want to define Products differently for different distributors due to regional or other considerations. Furthermore, the vendor may not want to allow each distributor to access the orders entered by other distributors.

Sentinel HASP Business Studio now enables you to create an insulated Distribution Channel for each distributor. The Business Studio users assigned to a given Distribution Channel:

- can only enter and produce orders for Products associated with that Distribution Channel.
- can only access orders associated with the Distribution Channel.

This gives the vendor the freedom to define different business models for different distributors without duplication of effort in defining Products or employing multiple sets of Vendor Keys.

## Customer Service and Order Management Enhancement in Sentinel HASP Business Studio

The functionality available to customer service and order management representatives in Sentinel HASP Business Studio has been enhanced, enabling them to better analyze customer needs and provide improved and more efficient support for customers.

For customer service representatives (Customer Service role), these enhancements include:

- Display Product Key information, including order and customer information
- Activate, disable, or enable a Product Key
- Increase number of activations remaining for a Product Key

For order management representatives (Order Management role), these enhancements include:

- Get detailed license information from a C2V file
- Change the status of an order for Product Keys back to **On Hold** as long as none of the Product Keys was used to activate protected software
- Delete a Product Key order
- Edit a Product Key order

## Cancel Detached License (Re-attach of Detached License)

Sentinel HASP now allows end users to cancel detachable licenses that were accidentally detached or are no longer required on the recipient computer. The cancelled license is returned to the pool of available licenses. This can be done either as an online or offline operation. This functionality is available using Sentinel HASP Admin Control Center or the Run-time API.

## Reporting Facility

Sentinel HASP Business Studio now provides a collection of reports to help vendors enlarge revenues, improve their customer service and work more efficiently. Business Studio Reporting facility provides software vendors the ability to produce real-time reports with valuable business information. With this feature, managers can obtain data for analyzing how their software is used,



the purchasing preferences of their customers, and information for profiling prospects and existing customers. The information can also be leveraged to maximize revenues from license renewals, to up-sell existing customers, and to turn trial users into buyers.

Business Studio reports can be scheduled for automatic generation and distribution.

## Support for Additional Operating Systems

Support for the following operating systems was added to Sentinel HASP:

Operating System	Run-Time Environment	Vendor Tools
Windows 7	✓	
Windows Server 2008 R2	✓	
Windows Embedded Standard (2009)	✓	
Mac OS X 10.6 Snow Leopard	✓	✓

## Support for Windows Embedded Standard

Sentinel HASP Run-time Environment Installer Components are now supported under Windows Embedded Standard (2009).

## Additional Enhancements

The following functionality has been added to Sentinel HASP:

- Provisional licenses are now supported on Virtual Machines.
- Provisional licenses are now supported on Terminal Servers.
- The Sentinel HASP Installation Guide now provides a procedure for completely uninstalling Sentinel HASP and the Sentinel HASP database from a computer.

## Sentinel HASP Business Studio

The following enhancements were added to the Sentinel HASP Business Studio user interface:

- Business Studio now offers Express Card.
- Users can now be prompted automatically for acknowledgment when installing a V2C file.
- All Features/Products in a HASP key can now be cancelled before producing an Update to the key.
- Display license terms of in-use Products.
- Recycle multiple keys in a single operation.
- Delete or edit a Product Key order.
- Key type indicator in Product Management and Order taking.
- Select users from a list in Master Keys Notification Alerts.
- Change the status of a User to Obsolete (or restore an Obsolete user).
- Customer Service representative (Customer Services role) can add customers
- Centralized SMTP definition.
- Define Email Address attribute for Users.
- Enter a description for Users.

## Sentinel HASP Business Studio Server API

Business Studio Server API has been enhanced and now supports the following:

- Generate Provisional Licenses.
- Activate, disable, or enable a Product Key.
- Increase number of activations available.
- Get Product Key information.
- Delete a Product Key order.
- Edit a Product Key order.
- Get detailed license information from a C2V file.

## What's Changed in Sentinel HASP v.5.0?

### Change to Licensing Model – Provisional Products

Creating Provisional Products is an integral part of the process of protecting software with Sentinel HASP SL protection keys. A vendor who purchases an Activation Module license or who subscribes to Sentinel HASP Managed Services is automatically granted a license to create and distribute Provisional Products for the same period.

A vendor who only distributes software protected by Sentinel HASP HL protection keys can also take advantage of the benefits provided by creating and distributing trialware. However, in this case, the vendor must purchase a separate license from SafeNet for creating trialware. This license is typically issued for a specific amount of time.

The ability to create and distribute Provisional Products is also included in the Sentinel HASP Software Protection and Licensing Starter Kit and Developer Kit. Vendors who are experimenting with Sentinel HASP can learn first-hand about Provisional Products.

### Changes to Sentinel HASP HL Key Firmware

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.
- when a customer connects a HASP HL key with v.3.21 Firmware to a computer where v.5.0 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 to Sentinel HASP v.5.0

Customers who are currently working with HASP SRM v.4.0 or earlier should note the changes described in this section when upgrading to Sentinel HASP v.5.0.

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**Warning:** Failure to address these issues may result in loss of functionality after upgrading to Sentinel HASP v.5.0.

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- 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. Starting with v.5.0, such vendors must now purchase a license to define Provisional Products.
- After installing v.5.0, vendors must reintroduce their Master keys.
- After installing v.5.0, vendors who are working in languages other than English require new Language Packs. The required Language Packs are planned for release in March 2010.
- A new Reports facility has been added to Business Studio. 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.

### 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\Aladdin\HASP SRM\Docs\**

Document	Description
Sentinel HASP v.5.0 Installation Guide	Details the prerequisites and procedures for installing Sentinel HASP and the Sentinel HASP Business Studio Server.
Sentinel HASP v.5.0 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.
Sentinel HASP v.5.0 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"><li>• The <b>Developer Kit</b> tutorial is for vendors who wish to evaluate Sentinel HASP.</li><li>• The <b>Starter Kit</b> tutorial is for vendors who have just purchased Sentinel HASP.</li></ul>



Document	Description
<b>HASP SL v.5.0 Product Activation Tutorial</b>	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.
<b>Quick Start Guides</b>	Provides a short and simple demonstration of how you can easily protect your software using Sentinel HASP HL keys. Separate <b>Developer Kit</b> and <b>Starter Kit</b> guides are provided.
<b>Gaining a Competitive Edge with Sentinel HASP Licensing</b>	Describes a wide range of licensing strategies and models that can be implemented immediately, and can serve as the basis for elaboration and for creating new, tailor-made licensing models.
<b>Integrating Sentinel HASP Business Studio Server into Your Existing Back-Office Systems</b>	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
<b>HASP HL Drive Flash Partitioning Utility v.1.0 – User Guide</b>	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 disk-on-key functionality.
<b>Transitioning From HASP SRM v.2.x</b>	Describes how to upgrade from HASP SRM v.2.x to Sentinel HASP v.5.0
<b>Migration Guides</b>	Describe how to migrate to Sentinel HASP from: - Hardlock    - SmartKey    - Sentinel SuperPro - HASP HL    - HASP4        - Sentinel Hardware Keys
<b>Data Sheets</b>	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
<b>Sentinel HASP Business Studio</b>	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.
<b>Sentinel HASP Admin Control Center</b>	Documentation for the end user, describing the Admin Control Center and providing instructions for performing the various functions such as updating or attaching licenses.
<b>DataHASP Utility</b>	Provides the developer with a description of the DataHASP utility, used for protecting data files that are accessed by Sentinel HASP Envelope.

Online Help System	Description
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\Aladdin\HASP SRM\API\**

API	Description
Sentinel HASP 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.
Sentinel HASP 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. The page is located at <http://www.aladdin.com/hs>.

## Supported Platforms

To ensure that you have the most comprehensive and up-to-date list of supported platforms, go to: [www.aladdin.com/SRMplatformSpt](http://www.aladdin.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.5.0 that are likely to have the most significant impact on users are listed below, according to component.

### Sentinel HASP Installation

Ref	Issue
14528	On a Windows 7 platform, Sentinel HASP cannot be installed under Windows XP mode.
12870	During installation of the Sentinel HASP Business Studio Server, if you select <b>Custom Installation</b> , and then specify that either the <b>Management</b> or <b>Activation</b> option is not to be installed on this computer, you may have to wait a short time before the selection is implemented.
12996	When installing the Business Studio Server API as a Web Service, depending on the operating system of the computer on which the API is to be installed, if you have installed IIS 7, configuration is required to enable compatibility with the IIS 6 metabase. <b>Windows 2008 Server:</b> Go to the <b>Application Server and Web Server (IIS) roles</b> , and select <b>IIS 6 Metabase Compatibility</b> . <b>Windows Vista:</b> Under <b>Programs &amp; Features</b> , go to <b>IIS &gt; Web Management Tools &gt; IIS 6 Management Compatibility</b> and select <b>IIS Metabase &amp; IIS 6 Configuration Compatibility</b> .
9318	If you are installing an updated version of Sentinel HASP Business Studio Server (not the

Ref	Issue
	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.

## Sentinel HASP Run-time Installer

Ref	Issue
8475	<p>When you attempt to integrate the Sentinel HASP Run-time Installer MSM module in your Windows Vista installation package, a warning may be displayed. This is a known issue for the Installer, and the message can be ignored. For more information about this issue, go to the following URL:</p> <p><a href="http://kb.acresso.com/selfservice/microsites/search.do?cmd=displayKC&amp;docType=kc&amp;externalId=Q107955&amp;sliceId=1&amp;docTypeID=DT_ERRDOC_1_1&amp;dialogID=32936292&amp;statId=0%200%2032934272">http://kb.acresso.com/selfservice/microsites/search.do?cmd=displayKC&amp;docType=kc&amp;externalId=Q107955&amp;sliceId=1&amp;docTypeID=DT_ERRDOC_1_1&amp;dialogID=32936292&amp;statId=0%200%2032934272</a></p>

## Sentinel HASP Business Studio

Ref	Issue
14650	Report Chart Module does not support Unicode. Non-Latin characters are displayed unintelligibly. Be sure to follow the instructions for installing a TrueType font that contains the required characters.
13652	When attempting to rotate the pie chart in a Business Studio report, the application sometimes fails, displaying an access violation error. This is caused by outdated video card drivers. To resolve this problem, download the current drivers for your video card.

## Sentinel HASP Run-time Environment

Ref	Issue
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 77.</p> <p>However, when the Run-time Environment is installed on a virtual machine, the Firmware update is not installed automatically. In addition, the Firmware Update V2C/EXE files provided will not reliably update the Firmware:</p> <ul style="list-style-type: none"> <li>• if the VM is located on a Windows computer.</li> <li>• if the VM is located on a Mac computer using any virtual machine software <i>other than</i> VMWare Fusion 2 or 3.</li> </ul> <p>If the V2C file is used on one of VMs listed above, the update will fail. The visible symptoms of this problem are:</p> <ul style="list-style-type: none"> <li>• The HL key blinks continually.</li> <li>• In the Admin Control Center, HASP Keys page, the HASP HL key is listed with the value <b>0.0</b> in the <b>Version</b> column.</li> <li>• The protected software will not detect the presence of the HL key.</li> </ul> <p><b>Workaround:</b> Connect the HASP HL key to a computer where the Run-time Environment is installed under the native operating system as described in “Changes to Sentinel HASP HL Key Firmware” on page 77. After the Firmware on the HL key has been updated to version 3.25, return the HL key to the original computer where the virtual machine is located.</p>

Ref	Issue
12506	Sentinel HASP communicates via TCP and UDP on socket 1947. This socket is IANA-registered exclusively for this purpose. At the end user site, the firewall must be configured so that communication via this socket is not blocked.

## Sentinel HASP Envelope for Windows Platforms

### Java

Ref	Issue
11043	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 variables.

### .NET

Ref	Issue
14699	<p>A problem exists in the way protected .NET applications consume concurrency (seats). A protected application for which <b>Periodic background checks</b> is enabled in Sentinel HASP Envelope consumes one seat as long as the application is active. (By default, <b>Periodic background checks</b> 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 concurrently.</p> <p>Workaround: In Business Studio, add one to maximum concurrency allowed for protected .NET applications.</p>

## Sentinel HASP Envelope for Mac OS X

Ref	Issue
11416	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.
10929	You cannot run protected PPC binaries on Intel Mac x64 and Intel 10.4.11 operating systems.
10905	Error codes in Sentinel HASP Envelope for Mac OS have been reassigned in v.5.0. Developers who are using automated error recognition routines must update these routines for the new error codes.



## Sentinel HASP MasterHASP Utility

Ref	Issue
11432	When you run MasterHASP v.3.60 for Linux or MasterHASP v.5.0 for Mac operating systems, you must copy the generated APIs from .../Aladdin/HASP SRM [version]/API/Runtime/C to .../Aladdin/HASP SRM [version]/API/Runtime/Java

## Contact Details

For assistance, or to report problems, contact your local [SafeNet representative](#), or create a support call [here](#).