



Sentinel RMS SDK v9.6.0

RELEASE NOTES FOR MAC (32-BIT AND 64-BIT)

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Product Description

Sentinel RMS is a software licensing SDK for your application(s). It increases revenue by authorizing the use of your application(s) and offers a variety of licensing schemes to boost your product sales. It also provides tools that system administrators can use to track and manage licenses in a network.

Sentinel Cloud Licensing (SCL) add-on for RMS combined with the license enforcement features of Sentinel RMS and the entitlement management features of Sentinel EMS; makes a complete solution that provides the benefits of cloud-connected licensing to applications deployed on the customer's network or hosted online. Usage collection and reporting is the most significant advantage obtained with cloud-connected licensing.

About This Document

This document contains details about the new features, enhancements, and installation of v9.6.0 of Sentinel RMS. The last major release was Sentinel RMS v9.3.0.

What's New in this Release

This section lists down the new features included in Sentinel RMS v9.6.0 release.

Termination of Active User Sessions

In this release, the Sentinel RMS License Manager administration library has been introduced.

This library provides a set of APIs that are used to terminate active sessions for a particular user and host. Termination is performed by the end user admin by logging on (either physically or remotely) to the machine where the License Manager is installed.

For more information, refer to the [Sentinel RMS Developer's Guide](#) and [Sentinel RMS API Reference Guide](#).

Introduced 64-bit Versions of 32-bit Library and Tools for macOS

In this release, 64-bit library and tools have been introduced for macOS. This is an addition to the existing RMS catalog. To view the complete list, refer to the [Sentinel RMS Developer's Guide](#). Customers who are using 32-bit OS can continue to use the existing 32-bit RMS tools/utilities.

Notarization Support for Sentinel RMS

From macOS 10.15 (Catalina) release onwards, Apple has made notarization mandatory for software that is distributed. According to Apple, from macOS 10.15 (Catalina) release onwards, notarization is mandatory for all software. To remain compliant with Apple guidelines, we have ensured that the following components of Sentinel RMS v9.6 have passed the notarization test.

- > [License Manager](#)
- > [Shared Libraries](#)
- > [Utilities](#)

Sentinel Cloud Licensing Version 5.1

Sentinel RMS v9.6.0 supports Sentinel Cloud Licensing (SCL) v5.1.

Enhanced Time Tampering Mechanism

In Sentinel RMS v9.6 the time tampering mechanism has been enhanced for non-Windows operating systems. For more information, refer to the [Sentinel RMS Developer's Guide](#).

Extending Support for *install.rbo* File

The **install.rbo** file is available after installing Sentinel RMS v9.6 on your machine. Previously, this file was available only on Windows. To access this file, navigate to **<Install_Dir>/SentinelRMSSDK/9.6.0.0/**



NOTE For more information regarding the contents of this file, refer to the [Installed Directories](#) section in this document.

Support for License Aggregation in case of Different License Vendor Info

Under this enhancement, support for license aggregation even if licenses have different license vendor info has been introduced.

To achieve this, the following changes have been made:

- > A new attribute (**license_vendor_info**) has been made available (specify at the time of license generation).
- > Licenses will aggregate even if the values specified for these attributes are different.
- > This functionality is available from license version 19 onwards.
- > For more information on license aggregation, refer to the [Sentinel RMS SDK Developer's guide](#).

Support for License Aggregation for Cloud-Served Lease deployments

- > We have provided support for aggregate cloud-served lease licenses. This functionality is available from license version 19 onwards.
- > Prior to this release, only exclusive cloud-served lease licenses were supported.

Cleaning the Active Login Session on a License Manager

We have provided support for cleaning an active session on the License Manager for which the corresponding client does not exist anymore.

Under this enhancement, the following attributes have been added to the `sntl_licensing_login_attr` API.

| Attribute Key | Purpose |
|--|---|
| SNTL_ATTR_LOGIN_ZOMBIE_SESSION | This attribute is set to create a zombie session at login call. |
| SNTL_ATTR_LOGIN_ZOMBIE_SESSION_IDENTIFIER_MASK | This attribute is used to configure the client identifier mask for identifying the client whose session needs to be removed from the License Manager. |

For further details, refer to the [Sentinel RMS API Reference Guide](#).

Support for Higher Value of Hard Limit and Soft Limit

- > Sentinel RMS has been enhanced to support hard limit and soft limit up to 4,294,967,294 (short form: ~4B).
- > This functionality is available from Sentinel RMS v9.5.0 onwards with license version 20 (or above).
- > Existing API (traditional and unified) have been enhanced to support license hard limit up to 4,294,967,294. For more information, refer to the [Sentinel RMS API Reference guide](#).
- > New API functions have also been introduced under this enhancement. For more information, refer to the [Sentinel RMS API Reference guide](#).
- > Further, existing tools have also been enhanced to support this. For more information, refer to the [Sentinel RMS System Administrator's guide](#).



NOTE It must be noted that this high value is applicable only when hard limit is used as a quantity (not concurrency).

New Unified API Query Version

To support this enhancement, a new query version (1.1) has been introduced for the following API functions.

- > `sntl_licensing_get_info`
- > `sntl_licensing_get_session_info`

New Traditional API Functions

To support this enhancement, the following traditional API functions have been introduced :

- > `VLSupdateExt2`
- > `VLDiscoverExt2`
- > `VLGetAndInstallCommuterCodeExt`
- > `VLGetLicInUseFromHandleExt`

Support for Usage Count Multiplier (UCM) attribute for `sntl_licensing_refresh_attr` API Function

Support for the UCM attribute has been extended to the `sntl_licensing_refresh_attr` API. Previously, the UCM attribute was available only with `sntl_licensing_login_attr` and `sntl_licensing_logout_attr` API functions.

Cancel Active Lease or Resume Lease

In this release, we have introduced two new functionalities, Cancel Lease and Resume Lease respectively. They are discussed in detail in the following sub-sections.



NOTE Currently, we have provide these functionalities for cloud-served lease standalone license deployment mode only.

Cancel Lease

Some of the main features are as follows:

- > Cancel Lease enables an end user to return the active lease license and free up the license on Sentinel cloud so that it can be provided to other end users.
- > After cancelation, the lease will not be renewed even if the enforcement application or machine is restarted.
- > The cancel operation acts on the complete machine. After the latest lease is returned, old lease licenses on the machine will stop working.
- > Post cancelation, all application installed on the machine will not be able to use the lease license. Further, the lease will be unusable from other apps only after force sync, auto sync, or app-context new.
- > The lease thread is suspended and SCP will not connect to cloud for a lease license.
- > Cancel lease action suspends the lease sync activity for the complete device.



NOTE Cancel lease requires connectivity with cloud back end operations in order to be successfully executed. If the machine develops a hardware failure and cannot connect with the back end, then the ISV's end customers may contact; and on trust basis the ISV may use Complete Revoke (on EMS GUI) or mark Revoke REST WS (on active activations) for the desired customer machine.



NOTE For cancel lease, 'Allow Revocation' flag should be set as true while creating the entitlement in EMS.

Enhancement in the `sntl_licensing_transfer` API

A new action (`<cancelLease></cancelLease>`) has been introduced to support this functionality. This action does not require any input parameter.

Resume Lease

Some of the main features are as follows:

- > Resume Lease is used to undo the effect of the cancel lease operation.
- > After canceling a lease license, if a user wants to use the lease license, then they must resume the lease.
- > The lease thread will be activated and SCP will connect to cloud to provide a lease license to the user.



NOTE When the resume lease is called, it will bring licenses only if the quantity is available.



NOTE Standalone persistence must be initialize before performing cancel and resume lease operations.

Enhancement in the `sntl_licensing_transfer` API

A new action (`<resumeLease></resumeLease>`) has been introduced to support this functionality. This action does not require any input parameter.

Issues Fixed in this Release

The following issues have been corrected in this release.

| Internal Tracking ID | Issue Description |
|----------------------|---|
| SM-49682 | Unable to load SLM_HYSYS_Runtime license (from license configuration file) onto the License Manager. Checksum collision causing problem during initialization of distribution criteria table. |
| SM-40831 | Error received while trying to retrieve information using lsmon and lspool utilities for redundant License Managers. |
| SM-54809 | Fix End User License Agreement (EULA) for Sentinel RMS 9.5 (library and version usage). |
| SM-54311 | Upgrade Mini XML version from 1.1 to 3.0: Remove references to LGPL in EULA. |
| SM-57423 | The memory leak issue with the VLSverifyRevocationTicketExt API has been fixed. |
| SM-57725 | Error code 210011 is returned when a commuter authorization is checked without specifying feature and version in the Unified API. |
| SM-34894 | Revocation ticket generation (using API) fails when the permission ticket is generated using more than one license. |
| SM-60971 | VLS_CALLING_ERROR (status code: 11) is received when VLSgetAndInstallCommuterCode is called using the challenge data of maximum size (30 characters). |
| SM-62337 | Error 210133 is returned when either the application runs for a long time or there are long breaks between queries. |
| SM-61970 | Daylight Saving Time is not considered while comparing cancel lease time stamp and lease birth time. |
| SM-55959 | All references of ReportDB.mdb removed from the Sentinel RMS System Administrator's Guide. |
| SM-18779 | All APIs except LSUpdate fail when the primary leader server in the redundant server pool goes down. |
| SM-59511 | Unable to fetch license using syncLicenseJobInfo API; however success message is returned. |
| SM-60967 | Scheduler shutdown signal is not reset when sntl_scp_clean API is called. |
| SM-62338 | For Java interface, error 200004 is returned when sntl_lease_demo API is called to fetch lease from cloud. |
| SM-61884 | Wrong error code is returned by sntl_licensing_get_info API when lease is in suspended state. |

| Internal Tracking ID | Issue Description |
|----------------------|--|
| SM-55476 | Move node registration with Yellow Page Server (YPS) to a separate thread to allow licensing transactions. |
| SM-64788 | File descriptor leak while fetching UUID in some cases. |

System Requirements

The following table provides the minimum hardware and software requirements for using Sentinel RMS.

| Hardware Requirements | Software Requirements |
|--|---|
| Processor: iMac | Operating Systems: > macOS 10.14 Mojave > macOS 10.15 Catalina |
| Hard Disk Space: 300 MB free hard disk space | Compilers: Apple LLVM version 7.0.2 (clang-700.1.81) |
| RAM: 512 MB RAM | Java Runtime Environment: Java SE 7, Java SE 8 |

Installation Information

This section contains important information related to the installation of Sentinel RMS SDK v9.6.0.

Before installing the Sentinel RMS SDK, ensure that you have the following:

- > **Administrator Privileges:** You must have administrator privileges to successfully install all the components.
- > **Sentinel RMS SDK Serial Number:** You require a valid serial number provided by Gemalto. The installer prompts you to enter the serial number provided to you.

Installation Instructions

1. The software is packed in a .zip archive that contains notarized binaries. Extract files from the archive as follows:

```
$unzip -a RMSSDK9.6.0.0028Mac.zip
```

2. Change the directory where the installation script `INSTALL.sh` exists. Afterward, type `sh INSTALL.sh` to start the installation.
3. Accept the license agreement to proceed with the installation.
4. Enter the path of the installation directory.
5. You will be required to specify the RMS SDK serial number. This serial number is contained in the Gemalto Sentinel Order Credential e-mail and is unique for each vendor.
6. You will be required to choose whether you want to allow the License Manager to start automatically on system reboot. If you allow this configuration, you will be required to reboot. However, if you do not allow this configuration, you will need to manually start the License Manager (from the `/redistributable/licenseManager` directory) each time you reboot the system.

Installed Directories

The following directories/files are installed:

| Directory or File | Description |
|------------------------|--|
| development | Contains all the RMS libraries, header files, and source code for licensing and customization purpose. |
| manuals | Documentation for the Sentinel RMS SDK. |
| samples | Examples that illustrate the various features of Sentinel RMS. The include files, which provide the prototypes for various Sentinel RMS library functions. |
| vendorTools | Contains the utilities and files for your use. |
| redistributable | The utilities and files for your customers, including the Sentinel RMS License Manager installer. |
| install.rbo | Contains information about Sentinel RMS SDK version and serial number. |

| Directory or File | Description |
|-------------------|-------------|
| ReleaseNotes.pdf | This file. |

Sentinel RMS Documentation Resources

The following are the major documentation resources for the product.

Sentinel RMS SDK Solution Guide

This guide provides the complete overview of Gemalto's Software Monetization solution. You can use this guide to prepare a comprehensive monetization strategy prior to integrating licensing technology with your software and business processes.

> To view the online version of the latest document, [click here](#).

Sentinel RMS SDK Developer's Guide

This guide contains the complete product overview, the necessary information for licensing and distributing the applications. Useful for developers planning and implementing licensing. To access, use the following ways:

> To view the online version of the latest document, [click here](#).

Sentinel RMS SDK API Reference Guide

This guide contains details about all the API functions, including the licensing library, system initialization, and so on. Useful for developers integrating the API functions in the code. To access, use the following ways:

> To view the online version of the latest document, [click here](#).

Sentinel RMS SDK System Administrator's Guide

This guide contains details about using the system administration and License Manager configuration options. Useful for the System Administrator of the end user (on the customer site). To access, use the following ways:

> The HTML version installed on the system can be accessed using the Doc Access Page (.htm) in the Manuals directory.

> To view the online version of the latest document, [click here](#).

License Generation API Reference Guide

This guide contains details about the License Generation API functions. To access, use the following ways:

> To view the online version of the latest document, [click here](#).

SCP (Sentinel Cloud Plug-in) Installation and Configuration Guide

This guide describes the installation and configuration procedure for SCP used for cloud-served lease deployments. This is applicable for Windows, Linux, and MAC operating systems. Additionally, it describes the components included in the SCP package for serving cloud-connected deployments.

> To view the online version of the latest document, [click here](#).

Support Contacts

You can contact us using any of the following options:

Business Contacts

To find the nearest office or distributor, use the following URL:

<https://supportportal.thalesgroup.com/contact-us-sm/>

Technical Support

To obtain assistance in using Gemalto Sentinel Products, feel free to contact our technical support team:

- > Customer Support Portal (Preferred)
 - <https://supportportal.thalesgroup.com/csm?id=sentinel>
- > Support Essentials (Contact details, support plans, and policies):
 - https://supportportal.thalesgroup.com/csm?id=support_essentials
- > For Issues Related to Using the Portal:
 - portal.support.DIS@thalesgroup.com
- > Phone:
 - AMER: 800-545-6608 (US toll free)
 - International: +1-410-931-7520
 - EMEA / APAC: <https://supportportal.thalesgroup.com/csm?id=sentinel>
- > E-mail (only if having issue submitting the technical issue via portal)
technical.support@gemalto.com

Downloads

You may want to explore updated installers and other components here:

<https://sentinelcustomer.gemalto.com/sentineldownloads/>