

# Sentinel EMS

---

## RELEASE NOTES

**Issue Date:** August 2017

**Document Number:** 007-013357-001 ( Revision C)

## Disclaimer and Copyrights

---

All information herein is either public information or is the property of and owned solely by Gemalto and/or its subsidiaries who shall have and keep the sole right to file patent applications or any other kind of intellectual property protection in connection with such information.

Nothing herein shall be construed as implying or granting to you any rights, by license, grant or otherwise, under any intellectual and/or industrial property rights of or concerning any of Gemalto's information.

This document can be used for informational, non-commercial, internal and personal use only provided that:

- The copyright notice below, the confidentiality and proprietary legend and this full warning notice appear in all copies.
- This document shall not be posted on any network computer or broadcast in any media and no modification of any part of this document shall be made

Use for any other purpose is expressly prohibited and may result in severe civil and criminal liabilities.

The information contained in this document is provided "AS IS" without any warranty of any kind. Unless otherwise expressly agreed in writing, Gemalto makes no warranty as to the value or accuracy of information contained herein.

The document could include technical inaccuracies or typographical errors. Changes are periodically added to the information herein. Furthermore, Gemalto reserves the right to make any change or improvement in the specifications data, information, and the like described herein, at any time.

Gemalto hereby disclaims all warranties and conditions with regard to the information contained herein, including all implied warranties of merchantability, fitness for a particular purpose, title and non-infringement. In no event shall Gemalto be liable, whether in contract, tort or otherwise, for any indirect, special or consequential damages or any damages whatsoever including but not limited to damages resulting from loss of use, data, profits, revenues, or customers, arising out of or in connection with the use or performance of information contained in this document.

Gemalto does not and shall not warrant that this product will be resistant to all possible attacks and shall not incur, and disclaims, any liability in this respect. Even if each product is compliant with current security standards in force on the date of their design, security mechanisms' resistance necessarily evolves according to the state of the art in security and notably under the emergence of new attacks. Under no circumstances, shall Gemalto be held liable for any third party actions and in particular in case of any successful attack against systems or equipment incorporating Gemalto products. Gemalto disclaims any liability with respect to security for direct, indirect, incidental or consequential damages that result

from any use of its products. It is further stressed that independent testing and verification by the person using the product is particularly encouraged, especially in any application in which defective, incorrect or insecure functioning could result in damage to persons or property, denial of service or loss of privacy.

© 2017 Gemalto. All rights reserved. Gemalto and the Gemalto logo are trademarks and service marks of Gemalto and/or its subsidiaries and are registered in certain countries. All other trademarks and service marks, whether registered or not in specific countries, are the property of their respective owners.

**Product Version:** Sentinel EMS 4.2

**Document Number:** 007-013357-001 (Revision C)

**Release Date:** August 2017

# Content

---

Sentinel EMS 4.2 Release Notes .....	2
Product Overview .....	3
Obtaining Support .....	4
What's New in This Release? .....	5
Advisory Notes .....	13
Resolved Issues .....	14
Documentation Resources .....	17
Known Issues and Workarounds .....	18

# Sentinel EMS 4.2 Release Notes

## About this document

---

This document contains information about the latest release of the Sentinel EMS, including new features, changes to the product, and known issues and workarounds.

- "Product Overview"
- "What's New in This Release?"
- "Advisory Notes"
- "Resolved Issues"
- "Known Issues and Workarounds"

# Product Overview

Sentinel EMS is a Web-based solution that provides you with a centralized interface for all your license and entitlement management functions. It offers an easy-to-use interface for your back office systems and a variety of advanced data collection and reporting functions. It also provides a centralized license management interface for employees, customers, and partners.

# Obtaining Support

You can contact us using any of the following options:

- **Business Contacts**

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

<https://sentinel.gemalto.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.gemalto.com/csm?id=sentinel>

- Phone:

- AMER: 800-545-6608 (US toll free), International: +1-410-931-7520

- EMEA/APAC: <https://supportportal.gemalto.com/csm?id=sentinel>  
Click “Contact us”

- E-mail (only if you cannot submit the technical issue via the portal)

- [technical.support@gemalto.com](mailto:technical.support@gemalto.com)

- **Downloads**

To download installers and other updated components:

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

# What's New in This Release?

This section provides details about the new features and enhancements included in this release:

## License Version Handling (LVH)

---

So far Sentinel EMS only allowed customers to activate products that were defined in an entitlement. As a result you had to define each variant as a separate line item in the entitlement so that your customers could activate their preferred variant. It also constrained you to be aware of the variants required by your customers in advance so that you could create the appropriate entitlements.

License Version Handling (LVH) allows you to create a single entitlement with a parent product such that your customers can activate any of its available child variants. This is achieved by creating a parent and child relationship between multiple variants of the product that you want to sell together. Parent product is used while creating the entitlement and child products are used for activation. Each child maps to a particular variant that you would allow your customers to activate.

### Advantages of License Version Handling

- Sell a product with single or multiple variants.
- Allows customer to select a product variant at the time of activation.
- Extend your existing products with new features.
- Enables your customers to upgrade to different versions (variant) as required without creating a new entitlement.

Sentinel EMS supports creation of Parent and Child Products that are used for License Version Handling (LVH). These are also referred to as LVH Parent Products and LVH Child Products.

- **Parent** - You can create a Product of type Parent that contains a collection of Features of different License Models across enforcements. You can create multiple variants of a Parent Product.
- **Child** - A Child Product is a variant of the Parent Product where the Features included are a subset of the Features included in its Parent. The name of a Child Product must be the same as of its parent. You can create several Child Products for a Parent Product by providing the same name and a different version for each Child.



**Note:** License Version Handling(LVH) is not supported for Cloud Served deployment modes.

---

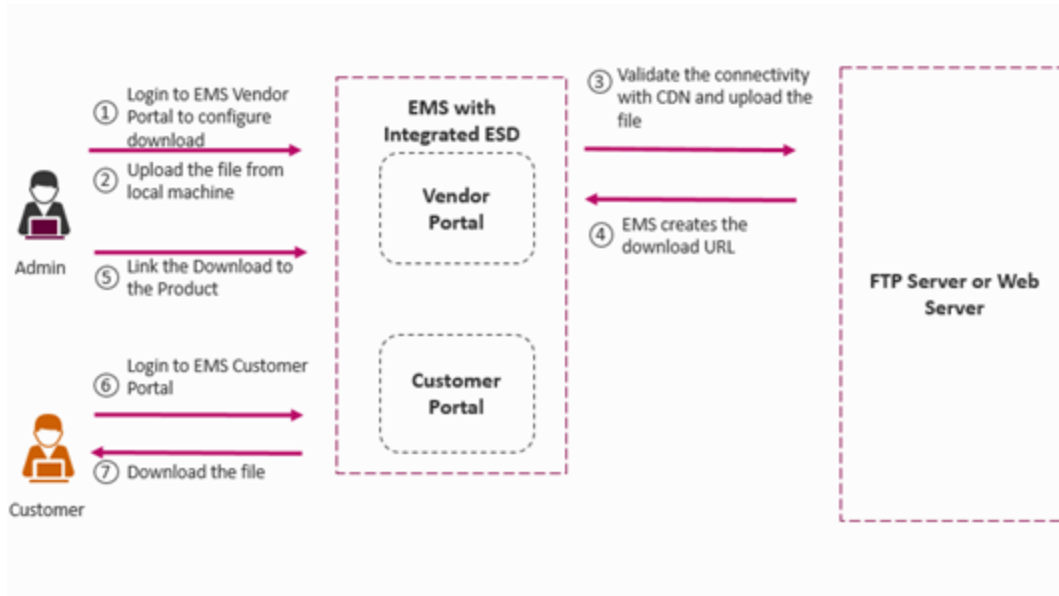
### Future Key Activations

One of the advantages of LVH is that it provides support for Future Key activations. After activation, when a new Feature (s) is added to a LVH Parent Product and subsequently to one or more of its variants, all subsequent activations of the Child Product include newly added Feature(s) as well. This allows to incrementally add and deliver new Features to the customers without generating the new Entitlements. A Future Key helps accommodate the missing Feature(s) into the license.

## Integrated ESD

Sentinel EMS allows to manage software delivery downloads from its Electronic Software Distribution (ESD) interface which has now been enhanced to include Integrated ESD. There are two types of ESD interfaces that Sentinel EMS provides - Basic ESD and Integrated ESD. Basic ESD is an existing feature of Sentinel EMS. It is an interface to associate content download links with products.

Sentinel EMS now integrates with the CDN provider to provide an integrated experience of uploading and downloading content securely by using the EMS portal. With the integrated ESD, the EMS portal allows you to perform all tasks related to license and software delivery, hence simplifying the customer experience. A user just needs to specify the file intended for upload, tasks such as uploading the file to the ESD service and defining the file attributes are automatically taken care of by Sentinel EMS. Also, the user does not need to worry about associating a download link with a file because it is automatically generated once the file is uploaded.



The **Downloads** module, which was part of the **Configure** tab has now been moved under **Catalog**.

## Device Name Module

Device Name in Sentinel EMS is the friendly representation of the locking information of a device. You can assign a device friendly name to locking information, which can then be used to perform activation. Locking information is made up of the locking criteria and the locking value and is generally difficult to remember. Assigning a device friendly name to the locking information makes it easier to connect to the device whenever you need to activate a license for that device.

The Device Name module can be enabled during installation or by using the Modify flow post installation.

## New Device Screen in the Sentinel EMS Installer

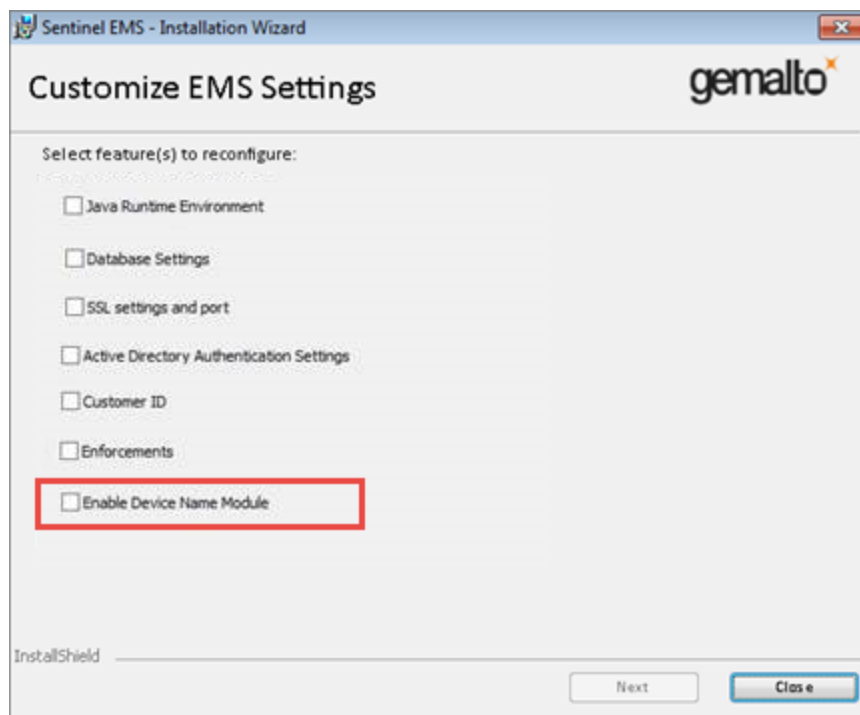
The Sentinel EMS installer now displays the screen (see below) that allows you to enable the Device Name module in Sentinel EMS. The Device screen is available in the Advance flow of the installer. Once enabled, the Device Name module for Sentinel EMS cannot be disabled. After enabling the Device Name module, you may encounter certain functionality limitations for group activations and multi-node lock activations. For details, refer to the Sentinel EMS 4.2 documentation.





Screen to Enable Device Name Module in the Advance Mode of the Installer

Sentinel EMS allows you to enable Device post installation using the Modify flow:



Screen to Enable Device Name Module using Modify Flow

For more information about the Sentinel EMS installation, refer to the latest Installation Guide.

## On-premise License String

The license string for on-premise licenses generated from Sentinel EMS or Sentinel Cloud Connect have been modified to include the following fields - Feature ID (FID) and Entitlement ID (EID).

This is controlled by the **Include EID to key (EID size must be less than 46 characters)** property available in **Administration Console > Sentinel RMS 9.2 Enforcement Properties > General Configuration**.



**Note:** The maximum character limit of EID pushed with the license string is 45 characters.

## Administration Console

The Sentinel EMS Administration Console has been modified to include the following new configuration settings:

Property	Description
<b>General Configuration</b>	
User Limit Configuration	This property controls the usage of the Component Multiplier and the License Model user limit.
Enable LVH	This property allows you to enable License Version Handling (LVH) in Sentinel EMS.
Maximum Login Attempts Before Lockout	Sentinel EMS allows a user 10 login attempts by default. The account is locked on the 11th incorrect login attempt. This property allows you to configure the number of login attempts the user should be allowed before the account is locked. The value of this property should be between 3 to 999.
Allow Activation with +/-1 Day	This property enables timezone independent activation of licenses in the span of 1 day. An ISV can create an entitlement and a customer in a separate time zone should be able to activate the license for the entitlement if the time difference between them is within 24 hours. Example: ISV creates an Entitlement for a customer on 1st of April 2017, 6:00 AM India time Customer in US can activate the Entitlement on 31st of March 2017, 9:00 PM EST
<b>License Certificate E-mail Settings</b>	
Compress License Certificate Attachments	Configure whether the license certificate email should have attachments as plain files or compressed into . zip file. By default, the property appears selected and the attachments are zipped.

Sentinel EMS also includes the following new Sentinel RMS 9.2 Cloud Add On Enforcement properties:

Field	Description
<b>Sentinel RMS 9.2 Cloud Add On Enforcement Properties</b>	
<b>Cloud Served Connected License Configuration</b>	
License Session	Helps in identifying the abandoned sessions. For example, if this value is 90 minutes, then whenever background process will run, it will

Field	Description
Timeout (mins)	check for records which are idle for over 90 mins. These sessions will be treated as abandoned sessions. Sessions will be completed by putting stop time as last refresh time. It also kills abandoned concurrent sessions and returns consumed concurrency count for abandoned concurrent sessions after clean up.
License Caching Duration(mins)	Specifies the duration for which the application caches licenses in memory. This property is valid only for features where usage limit and concurrency limit is set to unlimited for both named and unnamed licenses. (This is a Read Only property)

#### Cloud Served Lease License Configuration

Usage Timeout (mins)	For lease licenses it helps in identifying the abandoned sessions. It is used for completing a usage record corresponding an abandoned session. For the lease licenses where the last refresh time is not derived, the abandoned sessions are completed by adding value of this property in start time.
----------------------	---

The following ESD configuration properties also appear if ESD is enabled by the customer. These properties are visible in the Administration Console only for the Windows operating system.

For Linux, the ESD configuration properties are not available in the Administration Console and the process of enabling the ESD Service is done by the Gemalto Sentinel Support Team.

Field	Description
ESD URL	This property specifies the URL of the ESD Service. This URL is generated by the Gemalto Sentinel Support team and is provided to the ISV. This URL has to be updated in the Administration Console by the ISV for Windows operating system.
ESD Token	This property specifies the token to authenticate and access the ESD service. This token is also provided by the Gemalto Sentinel Support team to the ISV.

For details about the configuring using the Administration Console, refer to the latest Sentinel EMS Configuration Guide.

## Transaction History Log

The transaction information of Entitlements and Activations are logged in the audit log every time any operation (such as create, update, modify, edit, deploy, commit etc.) is performed on the entity. Sentinel EMS provides the Transaction History tab that enables you to view the transaction history of an entity (Entitlement or Activation).

Reports Transaction History

Entity Type:  Entity Identifier:

From:  To:

Text Search:

Identifier	Operation By	Transaction Date	Operation	Remarks	
7ae32faa-360b-444a-85f2-a4e8ea4679b0	admin	08/19/2017	Activation Created	Activation Created	<a href="#">View Details</a>
ba9df5e0-73af-4cde-a9dc-43450847c8e0	admin	08/19/2017	Activation Created	Activation Created	<a href="#">View Details</a>
2b6fe636-9790-48c6-9481-2a31b809ed6e	admin	08/19/2017	Activation Created	Activation Created	<a href="#">View Details</a>
24e192c2-5874-42de-a949-a58b050bc5ee	admin	08/19/2017	Entitlement updated by Activation	ba9df5e0-73af-4cde-a9dc-43450847c8e0	<a href="#">View Details</a>
24e192c2-5874-42de-a949-a58b050bc5ee	admin	08/19/2017	Entitlement updated by Activation	7ae32faa-360b-444a-85f2-a4e8ea4679b0	<a href="#">View Details</a>
24e192c2-5874-42de-a949-a58b050bc5ee	admin	08/19/2017	Entitlement updated by Activation	2b6fe636-9790-48c6-9481-2a31b809ed6e	<a href="#">View Details</a>
24e192c2-5874-42de-a949-a58b050bc5ee	admin	08/19/2017	Entitlement committed	committed	<a href="#">View Details</a>
24e192c2-5874-42de-a949-a58b050bc5ee	admin	08/19/2017	Entitlement created	created	<a href="#">View Details</a>
a8c60883-6094-4e44-91ea-ea087dfbe9e2	admin	08/18/2017	Activation Created	Activation Created	<a href="#">View Details</a>
ec1b1952-e316-43f7-8625-4bace0059de2	admin	08/18/2017	Entitlement updated by Activation	a8c60883-6094-4e44-91ea-ea087dfbe9e2	<a href="#">View Details</a>

Total Records: 12 Page 1 of 2

You can search transaction details using the following fields in the Transaction History tab:

- **Entity Type** - Specify the entity type as Entitlement or Activation. You can also leave it blank to search both.
- **Entity Identifier** - Specify the entity identifier(EID or AID).
  - EID - Entity identifier for Entitlements
  - AID - Entity identifier for Activations.
- **From** - Specify the start date to list transaction history.
- **To** - Specify the end date to search transaction history.
- **Text Search** - Specify text to search and list transaction history. The text entered can be a comment or any other entry in the audit log.

**Transactions** buttons available on the Entitlements and Activations page redirect the user to the Transaction History tab and enable the user to view transaction details for selected entitlements or activations.

## Support for Sentinel RMS v9.2

Sentinel EMS v4.2 provides support for the Sentinel RMS v9.2 enforcement. To learn more about the new features of Sentinel RMS v9.2, refer to its release notes.

## Optional Fingerprint Registration

Fingerprint Registration is now optional for non-redundant lease entitlements. For making Fingerprint Registration, optional, clear the Fingerprint Registration checkbox available in Flexible License Model.

# Web Services Introduced in This Release

This section provides a list the new web services added in this release:

New Web Service	Method	Description
<b>Web Service for Custom Attributes</b>		
/ems/v4_2/ws/customAttribute/entitlement/{entId}.ws	GET	Retrieves custom attribute details of an entity and its associated child entities. The associated child entities include Entitlement, Customer, Contact, Channel Partner, Line Item, Product Suite, Product, and Feature.
<b>Web Services for User</b>		
/ems/v4_2/ws/user.ws	GET	This Web service retrieves the list of Users against the query parameters such as userName, userId, refId, externalId, partnerId etc.
/ems/v4_2/ws/user/{userId}.ws	POST	This Web Service updates User details using User ID and User XML string as the input parameters.
<b>Web Service for License Sessions</b>		
/ems/v4_2/ws/customer/{customerId}/licenseSession.ws	GET	This Web Service retrieves the list of all license sessions using input parameters such as customerId. Currently license sessions can only be retrieved for leased licenses.
/ems/v4_2/ws/customer/{customerId}/licenseSession/{sessionId}.ws	DELETE	This Web Service can be called to free the license session specified using the given parameters such as customerId and sessionId.
<b>Web Service for Entitlement Report</b>		
ems/v4_2/ws/customer/{customerId}/entitlement.ws	GET	Web service to retrieve entitlement details against fingerprint on query parameters such as, customerId, fingerprintFriendlyName, entitlementState and so on.
<b>Web Service for Device Management</b>		
/ems/v4_2/ws/Device.ws	GET	This Web Service is used for searching device.
<b>Web Service for ESD</b>		
/ems/v4_2/ws/download/stsTokenESD.ws	GET	This Web service is used to generate a STS Token that is used for uploading a file to the file server. The STS Token generated is used to authenticate the user who is uploading the file. The validity of a STS Token is 30 minutes.
<b>Web Service for Contact</b>		
/ems/v4_2/ws/contact.ws	PUT	This Web Service is used to create a contact with the given parameters.
/ems/v4_2/ws/contact/{contactId}.ws	GET	This Web Service retrieves Contact information in form of an XML string.

New Web Service	Method	Description
/ems/v4_2/ws/contact/{contactId}.ws	POST	This Web Service updates the details of a contact.
/ems/v4_2/ws/searchContact.ws	GET	This Web Service retrieves the list of contacts against the query parameters.
/ems/v4_2/ws/contact/{contactId}.ws	DELETE	This Web Service deletes a contact based on the given parameters.

For more information about the web services listed here, refer to the latest Sentinel EMS Web Services Guide.



**Note:** All Web services of version V11 will not be supported in Sentinel EMS v4.1 (and higher).

# Advisory Notes

When you upgrade to Sentinel EMS 4.2, the installer automatically merges new relevant messages with your *messages.properties* file.

## Merging the *messages.properties* Files Manually

---

With every release of Sentinel EMS some new messages have been introduced in the *messages.properties* file. These messages are used as labels or resource keys in the Sentinel EMS portal. You need to manually merge the *messages.properties* files if your Sentinel EMS installation supports multiple languages (for example, English and German).

To merge *messages.properties* files:

1. Open the file `%EMSSERVER_HOME%\webapps\ems\web-inf\classes\patch_messages.properties`. This file lists all messages added after EMS 2.0.0 in a sequential manner.
2. Confirm the last version of Sentinel EMS on your machine. Copy all messages added after that. For example, if your last version of EMS was 2.5 then you need to copy all messages starting from EMS 2.5 till the last line of the file.
3. Paste the messages copied in step 2 at the end of the file *messages.properties*. This file is available at `%EMSSERVER_HOME%\webapps\ems\web-inf\classes\`.
4. If you have previously applied a language pack then you need to paste the messages copied in step 2 at the end of the language-specific properties file. Then translate the copied messages to the desired language. The path for any such file is `%EMSSERVER_HOME%\webapps\ems\web-inf\classes\{locale}\messages_{locale}.properties`.

For example, if German language pack is previously applied, then you can locate the file at `%EMSSERVER_HOME%\webapps\ems\web-inf\classes\de\messages_de.properties`.

- 
- Message labels were introduced after Sentinel EMS 2.0 release and are maintained in the *patch\_messages.properties*.
  - If you have applied any language pack, you need to update the language pack files (for example, *messages\_de.properties* for German) manually for the new messages.
-

# Resolved Issues

In this release, the following problems have been corrected:

Ref.	Problem Description
SM-12875	Issue in revocation for Split/Transfer operation.
SM-12862	Error in sending License Certificate with multiple licenses.
SM-12662	Third-Party License Certificate is not displayed properly.
SM-12345	Error found in documentation for translating Sentinel EMS User Interface.
SM-11944	Entitlement update though Web service throws an error.
SM-11766	Feature page is not working as expected in EMS 4.1 for non-admin users with restricted access to Namespaces.
SM-11737	Running On-Demand Notifications.
SM-11344	Spelling mistake in Activation XSD.
SM-11261	Import Feature fields in CSV/Doc doesn't match.
SM-10961	Error occurs when viewing feature attributes in Sentinel EMS.
SM-10721	SSL Handshake Failure while connecting to AD server
SM-10653	EMS should allow duplicate 'Product Name + Version' combinations for different Namespaces.
SM-10442	Increase the width for EID in the Sentinel EMS Customer Portal.
SM-10232	Search is not functioning properly in the Activation page for Locking Code / Finger Print and Channel Partner.
SM-9601	getEntitlementDetailsById.xml returns activationAllowed=false.
SM-9541	Description inconsistency in the Installation Guide.
SM-9494	Batch Entitlements does not work if an Entitlement type custom attribute is present.
SM-9379	searchEntitlements.xml output missing the <status> element.
SM-9198	Missing error code 1175 in EMS 4.1
SM-8623	Few Web Service permissions are not mentioned in the EMS 4.1 Documentation.
SM-8574	Search Contacts/Customers Web service does not return custom attributes.



Ref.	Problem Description
SM-8446	There is a grammatical error in one of EMS error messages.
SM-8098	Issue with EMS 4.1 Import CSV for Feature.
SM-8071	Page not found error after session timeout.
SM-8053	Unable to scroll through Reports under Reports tab in Sentinel EMS.
SM-7986	Product update using Import Data hangs other import processes.
SM-7165	Web service for searching Activations with lockingCode.
SM-7144	'Key hold-time' field should be placed in Network Term Section in documentation.
SM-7138	Change documentation terms for Time Tampering Grace period.
SM-7137	Search vendor list item - (v4_1/ws/download/vendorList/listItem.ws)", the HTTP method is written as 'GET1'. This suppose to be 'GET' in Web services guide.
SM-7134	Change documentation terms for Time Tampering Grace period
SM-6690	Trial Standalone License for 'Unlimited' Trial duration generates error.
SM-6614	Incorrect Customer portal URL is sent in Entitlement Certificate if EMS is running on HTTPS.
SM-6562	'New' operation in transaction history is not used in Entitlement XSD.
SM-6531	Named User Management tab disappears after a couple of seconds.
SM-6530	On clicking Named User Management tab, the Tools tab disappears
SM-6529	When a new customer (not having any entitlement) logs in to the Customer Portal the Named User Management Tab is displayed.
SM-6410	The <sendnotification> element is compulsory in XML while using the create and complete activation web service.
SM-6403	The regular expression in custom attributes is not evaluated correctly and the data in the form is saved with all the fields blank.
SM-6391	Error generated when an activated test entitlement is deleted.
SM-6125	License Certificate Save To File is not working in case of keyEncodingType=b64.
SM-6109	Documentation: Missing error codes for Create and Complete Activation REST Web Service.
SM-6063	Advanced search in Activations tab issue with 'To' date.
SM-5580	Version ambiguity occurs when creating an Entitlement using Web Service.

Ref.	Problem Description
SM-5576	'Licensing Attributes' field is not displayed properly in listed scenarios.
SM-5492	EMS Installation Guide - Feedback Items
SM-5360	Technote required for EMS 4.2
SM-5149	Unsorted license attributes in Sentinel EMS 4.1.1xx.
SM-4940	Lookup field in custom report throws an error.
SM-4915	Incorrect error thrown while trying to login using a disabled entitlement.
SM-4766	Node locked licenses possibly get converted into partial licenses.
SM-4418	Incorrect enforcement engine version can be given.
SM-3503	There is sorting issue in product listing in EMS 4.1.
SM-2998	Expectation is that EMS will not allow symbols to be entered that are not allowed in Customer Name.
SM-1370	Unable to set multiple partners via Split and Transfer Web Service.
SM-1369	Issues while providing a non-existing emailId at the time of activation.
SM-1254	'Force Revoke' feature ended with 'The revocation request failed- null' error.
SM-747	'Search License Model' was removed from emsWSDemo 4.1.
SM-732	Sentine EMS Enterprise 4.0 DB schema
SM-728	Test entitlements. When testing product and License model configuration by generating a test entitlement, the product configuration is locked. No changes to products or features can be made once a test entitlement has been generated and activated.
SM-724	Flexible license model allows options it should not.
SM-707	Help Button tooltip is not present in Customer Portal with EID Login but is present with the User ID login.
EMSENT-14146	Schema defines tag as <name> while actual message contains <Name>
EMSENT-13944	Empty revocation notification email was sent by EMS 4.0.152
EMSENT-13941	Error generated during activation with v31_activation.ws and the attributes are not be forwarded with the WebService during activation.
EMSENT-13940	Truncated Spanish login button in EMS 4.0.153 ISV Portal.
EMSENT-11932	EMS 4.0 API- Search Products returns non related items.

# Documentation Resources

Refer to the following resources for Sentinel EMS documentation.

Document	What's in it?
Release Notes (this document)	Provides information about the new features and known issues in this release.
Installation Guide	Provides detailed information about the system requirements, environment variables, and installation steps.
User's Guide	Provides details about the features available in Sentinel EMS and the steps to perform various tasks using the portal.
Configuration Guide	Provides information about administering and customizing the Sentinel EMS. It also provides the database schema of Sentinel EMS.
Web Services Guide	Provides details about the Web service components exposed to facilitate integration of Sentinel EMS with external CRM and ERP systems.
Getting Started Guide - Sentinel EMS Web Services	Provides a scenario and workflow where the user will log in and create entities such as Features, Products, and Entitlements based on parameters defined in the scenario using Sentinel EMS Web services.
Acknowledgments	Contains acknowledgments for the third-party software used.

# Known Issues and Workarounds

Given below are the known issues in this release:

- Multiple Channel Partner support causes a break in Jasper reports.
- After changing the Tomcat port from HTTP (8080) to HTTPS (8443), it takes some time to update the shortcuts to launch Sentinel EMS portal from the Start menu or through the browser. For immediate results, you can restart the machine.
- Some files and folders present at `%EMS_HOME%\webapps\ems\WEB-INF`, may not be deleted after you uninstall Sentinel EMS. You need to delete these manually if required.
- In case of a conflict after upgrade, you need to map the backup (of Sentinel EMS prior version) and current locations to resolve the conflict manually. Refer to the Upgrade section in the *Installation Guide* for details.
- On a machine with a localized operating system, installation of Sentinel EMS in a directory whose name contains localized characters fails. The workaround for this is to install Sentinel EMS in a directory whose name does not contain localized characters.
- Pop-up windows in Sentinel EMS cannot be moved or dragged in Microsoft Internet Explorer 9.
- Localized characters and special characters are not accepted by the installer while accepting Database information for SQL Server.
- Changing the password for an Active Directory user, enables the user to log in using both the new as well as the old password.
- Running reports without a filter for a large number of Entitlements (more than 40000), may cause 'Java heap memory' error.
- For Windows 8 and Windows Server 2012 (64 bit), the Internet Explorer runs in two modes, the Desktop mode and the Metro mode. User needs to disable the protected mode of Metro mode of Internet Explorer to run Sentinel EMS.
- In case of upgrade, shortcuts may not work if upgrade is from 2.0.X/2.5 to 2.9. Therefore, it is recommended that you restart the machine.
- For Active Directory, the users should be present anywhere inside the parent organizational Unit (including all child organizational units under the parent).
- If a Child Product is directly added to an Entitlement, the Enforcement Extension attributes set during the product creation are not reflected in the Entitlement or Activation, instead it reflects the default values from the License Model.
- The environment variable `EMSSERVER_HOME`, takes a few minutes to get activated for:
  - Modification of the configuration settings.
  - Modification post upgrade.

Therefore, it is recommended that for immediate results, you restart the machine.

- Entitlement is disabled on commit, if the 'Allow Activation' check box is not selected.
- The Modify Entitlement using Entitlement XML web service is not functional for users logged in as Channel Partners.
- Increase script timeout of web browser if page appears unresponsive when handling huge data sets.
- Licensing attributes of License Models are not displayed during the process of adding product to an entitlement.

- Attribute sequence displayed in Entitlement details is different from the sequence that appears in the Create Entitlement window.
- A product cannot be edited nor it can be added to an entitlement if two or more features are associated to it using the web service, 'Associate Features With a Product'.
- Features using Flexible license model and features using other RMS license models cannot be added to the same Product.
- For Cloud served entitlements, the base entitlement cannot be deployed if split and/or transfer transaction is performed over it.
- While installing Sentinel EMS, the installer might not be able to detect the RMS dlls even if Sentinel RMS is already installed on the system. For such a scenario, the RMS dlls need to be uploaded using the Admin console.