Luna HSM 5.2.6

UPGRADE INSTRUCTIONS

Document part number: 007-012226-001 Revision J
Document issued on: 21 January 2015

Contents

Overview

This document describes how to upgrade your Luna SA appliance to version 5.2.6.

> **Note**   This update is mandatory for Luna SA at versions 5.2.1 or 5.2.2 or 5.2.3. It will be the only update option available for Luna SA 5.2.0 or earlier, as it fixes a Luna SA-only security vulnerability.
>
> For Luna PCI-E and Luna G5, if your system is already at 5.2.2, then there is no reason to update to 5.2.6. However, if your HSM is at at an earlier version, then 5.2.6 is the current official 5.2.x destination. Release 5.2.6 is complete, so there is no need to update to 5.2.1 or 5.2.2 first.

About Luna HSM 5.2.6

Luna HSM 5.2.6 introduces a security fix for the Luna SA appliance. For more information, see the Customer Release Notes.

The most up-to-date version of the Luna HSM 5.2.x Customer Release Notes document is at http://www.securedbysafenet.com/releasenotes/luna/crn_luna_hsm_5-2.pdf

Upgrade Paths

Luna SA 5.2.x HSMs are shipped from the factory with firmware 6.2.1, upgradable to 6.10.2.

Refer to the Luna HSM 5.2 Customer Release Notes for new features that require firmware 6.10.2, and new features that work with firmware 6.2.1.

Updating both software and firmware to newest versions

For Luna 5.2.6 update, the **only** mandatory action is to download the Luna SA Appliance Software update from the SafeNet Support Portal and apply it to any Luna SA that is currently at version 5.2.1 or 5.2.2 or 5.2.3. Firmware update is optional.

Component	From version...	To version...
Luna SA appliance software	5.1.4, 5.1.5 5.2.0, 5.2.1, 5.2.2, 5.2.3, 5.2.4, 5.2.5	5.2.6
HSM firmware	6.0.8, 6.1.6, 6.2.1 (See Note) or 6.10.1	6.10.2

Note : Luna SA – firmware 6.2.1 is the most recent FIPS-validated firmware, at time of writing.

Updating software, but retaining most recent FIPS-validated firmware

Component	From version...	To version...
Luna SA appliance software	5.1.4, 5.1.5 5.2.0, 5.2.1, 5.2.2, 5.2.3, 5.2.4, 5.2.5	5.2.6
HSM firmware	6.0.8, 6.1.6, 6.2.1 (See Note)	6.2.1 (See Note)

Note : Luna SA – firmware 6.2.1 is the most recent FIPS-validated firmware, at time of writing.

> **Note**   Customers with Luna SA 5.0.x wanting to use 6.2.1 firmware (the most recent FIPS-validated firmware, at time of writing), must upgrade to software 5.1 first, in order to obtain the firmware 6.2.1 update. After upgrading to 5.1, you can upgrade to version 5.2.6 (if you upgrade directly to 5.2.6, you miss the 6.2.1 firmware option and have only the 6.10.2 option).

Component Firmware Versions

The following table lists the supported firmware versions for the various components supported in Luna HSM 5.2.6

Component	Version
HSM firmware	6.10.2
Luna Backup HSM firmware	6.10.2
Luna G5 (for PKI bundle) firmware	6.10.2
PED II	2.5.0-3 or newer
PED IIr (Remote PED) (requires PED workstation s/w on PC) [optional]	2.5.0-3 or newer

Preparing for the Upgrade

Before attempting to upgrade to Luna HSM 5.2.6, ensure that you have satisfied the following prerequisites:

- you have the upgrade software (downloaded from the SafeNet Service Portal).

- you have the authentication credentials required to perform the upgrade.

- you have prepared your HSMs for the upgrade.

Each of these prerequisites is discussed in detail in the following sections.

Obtaining the Upgrade Software

All of the software and firmware required to upgrade to Luna HSM 5.2.6 is included on the Luna HSM 5.2.6 software DVD, or in the downloadable files, from the SafeNet Service Portal.

> **Note**   Authorization codes are required to install firmware. To obtain the authorization codes for your firmware, contact SafeNet Technical Support.

The following packages are included in the upgrade software:

- Luna HSM 5.2.6 Client software

- Luna SA 5.2.6 appliance software

- Luna HSM 6.10.2 firmware

- PED firmware (Refer to the **readme.txt** file included on the Luna HSM 5.2.6 software DVD or .tar file for more information)

> **Note**   The Client software is unchanged from version 5.2.1, so there is no need to re-install the LunaClient if you have a recent installation. If you are upgrading from earlier versions (5.0, 5.1, or 5.2.0), you should uninstall your existing client software and install the latest version. The Luna Customer Documentation for release 5.2.6 is the 5.2.1 documentation set, unchanged.

Required Authentication Credentials

You must be able to login to the HSM as the security officer (SO) to perform the upgrade. On PED-authenticated HSMs, you need the blue PED key(s). On password-authenticated HSMs, you need the SO password. On Luna SA, you also need to be able to login to the appliance using an admin-level account before you can login to the HSM as the SO.

To install the Luna Client software on a computer, you must have Administrator privileges, or be able to launch the installer from an "Administrator: Command Prompt".

Preparing Your HSMs for the Upgrade

Perform the following tasks to prepare your HSM for the upgrade:

1. Ensure that your client and appliance software and firmware is at a version listed in "Upgrade Paths" on page 2.

2. Connect your HSM appliance or host computer to an uninterruptible power supply (UPS), if available. Although this is not a requirement, use of a UPS is strongly recommended to ensure a successful completion of all upgrade activities.

3. Ensure that your USB devices (Luna G5, Luna Backup HSM or Luna Remote PED) are connected, using a USB cable, to the computer on which you are installing the Luna software. If the USB devices are not connected to the host computer, the USB drivers do not install successfully. This issue applies to Windows 2008 only.

4. If the Secure Recovery Key (SRK) on the HSM is enabled, it must be disabled before you can upgrade the HSM firmware. The SRK is an external split of the HSM's Master Tamper Key (MTK) that is imprinted on the purple PED key. When you disable the SRK, the SRV (Secure Recovery Vector) portion of the MTK is returned to the HSM, so that the SRV is no longer external to the HSM. It is only in this state that you can upgrade the HSM firmware. After you upgrade the firmware, you can re-enable SRK, if desired, to re-imprint a purple PED key with the SRV.

5. Backup the content of your HSM or HSM partitions to Luna SA Backup HSMs (if you have the Backup option).

6. Copy the Luna HSM 5.2.6 upgrade software package (the downloaded tar file) to the client computer and use your favorite archiving program to untar the archive.

7. Stop all applications and services that are using the HSM.

Performing the Upgrade

Depending on the product you are upgrading you would need to upgrade the appliance software, and possibly the HSM firmware., as specified in the following table:

You must upgrade the software/firmware in the following order:

1. Appliance software
2. HSM firmware

Upgrading the Luna SA Appliance Software

This is the only **mandatory** update for release 5.2.6, if your Luna SA is at version 5.2.1 or 5.2.2.

> **Note**   Upgrade the Luna SA appliance software before you upgrade the Luna SA HSM firmware. The appliance software can only be applied to the Luna SA appliance.

To upgrade the Luna SA Appliance software to Luna HSM 5.2.6

1. Copy the Luna HSM 5.2.6 appliance package file (.spkg) to the Luna SA appliance you want to upgrade:

Windows	**pscp** <path>\ **lunasa_update_5.2.6-x.spkg admin**@<LunaSA_hostname>**:**
Unix/Linux	**scp** <path>/ **lunasa_update_5.2.6-x.spkg admin**@<LunaSA_hostname>**:**

2. Stop all client applications that are connected to the Luna SA.

3. At the console, log in to the Luna SA appliance using an admin-level account (the default account is **admin**).

4. Log in to the Luna SA HSM as the HSM admin user:

   lunash :> **hsm login**

   For Luna SA with Trusted Path, the blue PED Key is required. For Luna SA with Password Authentication, you are prompted for the HSM Admin (SO) password.

5. Verify that the upgrade package file that you copied is present (optional):

   lunash :> **package listfile**

6. Verify the upgrade package (optional):

lunash :> **package verify lunasa_update_5.2.6-x.spkg -authcode** <authorization_code>

The verification process requires approximately 90 seconds.

7. Install the upgrade package:

lunash :> **package update lunasa_update_5.2.6-x.spkg -authcode** <authorization_code>

The installation/upgrade process takes approximately 90 seconds. During that time, a series of messages are displayed that detail the progress of the upgrade. At the end of this process, a message "Software upgrade completed!" is displayed.

Upgrading the HSM Firmware

This update is optional for release 5.2.6.

> **Note** Upgrade the HSM firmware only after you have upgraded the appliance software. This ensures that the correct version is ready to be installed.

HSM Firmware 6.10.2 and FIPS 140-2

At the time of writing, firmware 6.2.1 (6.2.3 for Luna G5) is the latest FIPS-validated firmware. If you require FIPS-validated firmware, do not upgrade the firmware as part of this upgrade. Refer to the Customer Release Notes for more information.

To upgrade the Luna SA HSM firmware

1. Log in to the HSM as the HSM admin user if you are not already logged in.

   lunash :> **hsm login**

2. Run the firmware upgrade command. The HSM will reset when the upgrade is complete:

   lunash :> **hsm update firmware**

3. Use the **hsm show** command to verify that the firmware upgrade was successful:

   lunash :> **hsm show**

   If the upgrade was successful, the firmware version is displayed as 6.10.2.

   > **Note** If you did not reboot the appliance before upgrading the firmware (remote PED case) the following error message is displayed:
   > Error: Unable to communicate with HSM.
   >   Please run 'hsm supportInfo' and contact customer support.
   > You can ignore the error message.

4. If you disabled the SRK prior to performing the firmware upgrade, re-enable it if desired. Refer to the Luna documentation for details. If you attempted to upgrade the firmware without disabling the SRK, the firmware upgrade fails with the following error:

   ```
   Error:  'hsm update firmware' failed. (10A0B : LUNA_RET_OPERATION_RESTRICTED)
   ```

5. If you logged into the HSM using a remote PED, ensure that all client connections are terminated and then enter the following command to reboot the appliance:

   ```
   sysconf appliance reboot
   ```

Returning the HSM to Operation

After performing the upgrade, you must reactivate the HSM partitions (if applicable) and re-register the Luna client, to return the HSM to operation.

To return the HSM to operation

1. Reactivate all partitions that were activated before the upgrade (applies to Luna SA with PED Authentication).

2. Re-register the Luna SA client. Refer to the WebHelp for details.

Technical Support Information

If you have questions or need additional assistance, contact Technical Support through the listings below:

Contact method	Contact information	
Address	SafeNet, Inc. 4690 Millennium Drive Belcamp, Maryland 21017 USA	
Phone	United States	(800) 545-6608, (410) 931-7520
	Australia and New Zealand	+1 410-931-7520
	China	(86) 10 8851 9191
	France	0825 341000
	Germany	01803 7246269
	India	+1 410-931-7520
	United Kingdom	0870 7529200, +1 410 931-7520
Web	www.safenet-inc.com/Support	
Support and Downloads	www.safenet-inc.com/Support Provides access to the SafeNet Knowledge Base and quick downloads for various products.	
Technical Support Customer Portal	https://serviceportal.safenet-inc.com Existing customers with a Technical Support Customer Portal account can log in to manage incidents, get the latest software upgrades, and access the SafeNet Knowledge Base.	

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