

Entrust[®] Securing Digital Identities & Information



**Securing Your
Digital Life**

Entrust Technical Integration Guide for Entrust Security Manager 7.1 SP3 and
SafeNet Luna PCI v2.2

December 2009

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Introduction

This technical integration guide provides an overview of how to integrate Entrust Security Manager with Luna PCI v2.2

The Entrust/Authority serves as the Certification Authority in an Entrust infrastructure. Although it can operate in “software” mode, it can optionally use hardware devices where cryptographic operations and key storage are performed.

Entrust Product Information

Entrust Authority

By managing the full lifecycles of certificate-based digital identities, Entrust Authority enables encryption, digital signature and authentication capabilities to be consistently, transparently applied across a broad range of applications and platforms.

Entrust Entelligence

It delivers a single security layer that can encompass an enterprise's entire set of enhanced security needs, including authentication, authorization, digital signatures and encryption, for greater accountability and privacy. Entrust Entelligence empowers employees to work efficiently, communicate effectively, and use products and services online.

Partner Product Information

Partner Name: SafeNet Inc.

Website: www.safenet-inc.com

Product Name: Luna PCI

Product Version: 2.2

Platform and Service pack: Windows Server 2003 R2 Standard 32-bit, Solaris 10 SPARC 64-bit

Luna PCI

Product description: Luna PCI is designed to protect cryptographic keys and accelerate sensitive cryptographic operations across a wide range of security applications. Luna PCI offers dedicated hardware-based key management to protect sensitive cryptographic keys from attack.

Integration Overview

Entrust Authority Security Manager serves as the Certification Authority in an Entrust infrastructure. When using it in “hardware” mode, you can use the Luna PCI hardware devices for cryptographic operations and key storage. Among the operations performed on hardware devices are:

- Secure generation of the CA signing private key
- Secure storage of the CA root key
- Signing of certificates and CRL's using the generated or imported key.

Entrust Authority utilizes the following APIs: PKCS #11 v1 and v2.

Integration Details

1. New Install Luna PCI v2.2 f/w 4.6.1 with Entrust Security Manager 7.1 SP3

Windows Server 2003 R2 Standard 32-bit, Solaris 10 SPARC 64-bit

This section describes how to integrate new installations of Entrust Authority Security Manager 7.1 SP3 with Luna PCI v2.2. Note that in the following discussion, there are two server systems, the Entrust Authority Security Manager Server, and the Luna PCI HSM Server.

Preparing the Luna PCI HSM Server

- i. Install the Luna PCI software on the Entrust/PKI server prior to the installation of Entrust software. Refer to the SafeNet Luna PCI On-line Help documentation.
- ii. Ensure that one HSM Partition is created on the Luna PCI. The HSM Partition Password/login secret will be used during the Entrust installation. Confirm that the Luna PCI HSM Partition can be accessed with the HSM Partition Password, and that CKDEMO can login to the partition.

Note: Luna PCI supports PKCS#11 V2.01

Installing Entrust Security Manager 7.1 SP3 with Luna PCI on Windows Server 2003 R2 Standard 32-bit

- i. Install Informix 9.4 UC2 for Entrust Security Manager 7.1, following Entrust documentation.
- ii. Install Entrust Security Manager 7.1, following Entrust documentation.
- iii. Run the Entrust Security Manager 7.1 Configuration Utility. At the point where you choose whether to store keys in hardware or in software, select hardware. Point to the Luna PCI library path for libcryptoki *c:\Program Files\LunaSA\Cryptoki.dll*.
- iv. Entrust Configuration Utility presents the option to use SafeNet Luna PCI hardware, with a given serial number. Select the SafeNet Luna PCI hardware.
- v. Continue with the Configuration Utility until complete.
- vi. Initialize Entrust Security Manager for the first time with Entrust Master Control. Add the passwords for Master1, Master2, Master3 and First Officer, following Entrust documentation.
- vii. Entrust Security Manager detects hardware and requests for the hardware password. Enter the HSM Partition's Partition Password/login secret that was generated at the creation of the HSM Partition. If you are using a Luna PCI with Secure Authentication & Access Control, ensure that the black PED Key is inserted in the PED.
- viii. Entrust Security Manager generates the root CA keys on the Luna PCI in the provided partition.
- ix. Entrust Security Manager performs a database backup.
- x. Entrust/PKI is now running.

Installing Entrust 7.1 SP3

- i. Login as Master1 and stop the Entrust Services.
- ii. Stop Informix
- iii. Install Informix 9.4 TC9 for Entrust Security Manager 7.1 SP3 following Entrust Documentation.
- iv. Install Entrust Security Manager 7.1 SP3, following Entrust documentation.

Installing Entrust Security Manager 7.1 SP3 with Luna PCI on Solaris 10 SPARC 64-bit

- i. Install Informix 9.4 UC9 for Entrust Security Manager 7.1 SP3, following Entrust documentation.
- ii. Install Entrust Security Manager 7.1 SP3, following Entrust documentation.
- iii. Run the Entrust Security Manager 7.1 SP3 Configuration Utility. At the point where you choose whether to store keys in hardware or in software, select hardware. Point to the Luna PCI library path for libcryptoki */usr/lib/libCryptoki2.so*.
- iv. Entrust Configuration Utility presents the option to use Luna PCI hardware, with a given serial number. Select the Luna PCI hardware.
- v. Continue with the Configuration Utility until complete.
- vi. Initialize Entrust Security Manager for the first time with Entrust Master Control. Add the passwords for Master1, Master2, Master3 and First Officer, following Entrust documentation.
- vii. Entrust Security Manager detects hardware and requests for the hardware password. Enter the HSM Partition's Partition Password/login secret that was generated at the creation of the HSM Partition. If you are using a Luna PCI with Secure Authentication & Access Control, ensure that the black PED Key is inserted in the PED.
- viii. Entrust Security Manager generates the root CA keys on the Luna PCI in the provided partition.
- ix. Entrust Security Manager performs a database backup.
- x. Entrust/PKI is now running.

System Behavior/Limitations

When running Entrust Security Manager 7.1 SP3 on a Solaris 10 SPARC 64-bit architecture, use Luna PCI v2.2 client software 32-bit as Entrust Security Manager 7.1 SP3 only understands 32-bit.

System Components

| | |
|--|---|
| CP (Critical Path) Directory Server 4.2 Informix 9.4 TC/2UC2 Informix 9.4 TC9/UC9 for Entrust Security Manager 7.1 SP3 Entrust Authority Security Manager 7.1 Entrust Authority Security Manager 7.1 SP3 Entrust Authority Security Manager Administration 7.1 Entrust Authority Security Manager Administration 7.1 SP3 Entrust Entelligence Security Provider 9.0 | Luna PCI v2.2 client software Luna PCI with firmware 4.6.1 |
|--|---|

Partner Contact Information

Sales Contact: (800) 533-3958

Support Contact: (800) 545-6608

Please check PSIC for the latest supported version information at:

<https://www.entrust.com/support/psic/index.cfm>

Additional Information

The SafeNet Luna® family of products comprises range of hardware security solutions for digital identity applications. Luna products feature true hardware key management to maintain the integrity of encryption keys. Sensitive keys are created, stored, and used exclusively within the secure confines of the Luna hardware security module (HSM) to prevent compromise.

To learn more about the safenet Luna PCI product, view the following web site link where additional product information can be found:

http://www.safenet-inc.com/Products/Data_Protection/Hardware_Security_Modules/General_Purpose_HSMs_Embedded/Luna_PCI.aspx