



Apache HTTP Server 2.0.59 With Luna SA

Integration Guide

Preface

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Limitations

This document does not include the steps to set up the third-party software. The steps given in this document must be modified accordingly. Refer to Luna SA documentation for general Luna setup procedures.

Disclaimers

The foregoing integration was performed and tested only with the specific versions of equipment and software and only in the configuration indicated. If your setup matches exactly, you should expect no trouble, and Customer Support can assist with any missteps. If your setup differs, then the foregoing is merely a template and you will need to adjust the instructions to fit your situation. Customer Support will attempt to assist, but cannot guarantee success in setups that we have not tested.

Technical Support

If you encounter a problem while installing, registering or operating this product, please make sure that you have read the documentation. If you cannot resolve the issue, please contact your supplier or SafeNet support.

SafeNet support operates 24 hours a day, 7 days a week. Your level of access to this service is governed by the support plan arrangements made between SafeNet and your organization. Please consult this support plan for further information about your entitlements, including the hours when telephone support is available to you.

Technical Support Contact Information:

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Chapter 1

Introduction

This document covers the necessary information to install, configure and integrate Apache HTTP Server v2.0.59 with SafeNet Luna SA 4.3.2 Hardware Security Module (HSM).

The Luna SA HSM integrates with the Apache HTTP Server to provide significant performance improvements by off-loading cryptographic operations from the Apache HTTP Server to the Luna SA HSM. In addition, the Luna SA provides extra security by protecting and managing the server's high value SSL private key within a FIPS 140-2 certified hardware security module.

Scope

3rd Party Application Details

- Apache HTTP Server v2.0.59 for Unix

Supported Platforms

The following platforms are supported for Luna SA 1U v4.3.2:

- Red Hat Enterprise Linux 5 (64-bit)

HSMs and Firmware Version

- K5 HSM f/w 4.6.1

Library and Driver Support

- PKCS#11 v2.01 dynamic library

Distributions

- Luna SA 1U Appliance s/w v4.3.2
- Luna SA Client s/w v4.3.0 (64-bit)

Prerequisites:

Luna SA Setup:

Please refer to the **Luna SA** documentation for installation steps and details regarding to configure and setup the box on Linux systems. Before you get started ensure the following:

- Luna SA appliance a secure admin password
- Luna SA a hostname, suitable for your network
- Luna SA network parameters are set to work with your network
- Initialized the HSM on the Luna SA appliance.
- Created and exchanged certificates between the Luna SA and your "Client" system.
- Created a partition on the HSM, remember the partition password that will be later used by the Apache HTTP Server. Register the Client with the partition. And run the "vtl verify" command on the client system to display a partition from Luna SA. The general form of command is "/usr/lunasa/bin/vtl verify".
- Enabled Partition "Activation" and "Auto Activation" (Partition policy settings 22 and 23 (applies to Luna SA with Trusted Path Authentication [which is FIPS 140-2 level 3] only).

Apache v2.0.59 Setup:

Apache HTTP Server 2.0.59 installation files are provided in the Luna SA v4.3.0 product CD to carry on with the integration process. Apache HTTP Server is a separate installation, in addition to Luna SA client software.

Note: If you already have Apache installed, uninstall it before proceeding with the installation.

Chapter 2

Integration with Luna SA

RHEL 5 (64 -bit)

To configure Apache HTTP Server 2.0.59 to recognize the Luna SA 4.3.2 cryptographic device:

1. Traverse to the directory in the product CD:
/cdrom/source/apache
2. Run the install script:
sh install.sh
3. The install script copies the relevant apache configuration scripts to the Luna SA installation directory:
/usr/lunasa/apache
4. The Luna SA configuration file (/etc/Chrystoki.conf) is now configured for Apache HTTP Server.

```
Misc = {  
Apache = 1;  
}  
EngineLunaCA3 = {  
NO_NORM_FINALIZE = 0;  
NO_FORK_FINALIZE = 0;  
FORK_CHECK = 0;  
DisableDsa = 0;  
DisableRsa = 0;  
DisableRand = 0;  
EngineInit = 1:10:11;  
LibPath = /usr/lib/libCryptoki2.so;  
LibPath64 = /usr/lib/libCryptoki2_64.so;  
}
```

5. Traverse to the directory:
/usr/lunasa/apache
6. Run the configuration script to install Apache HTTP Server v2.0.59 and Openssl 0.9.8x for Luna SA with
LUNA_CONFIG_BITS=64
LUNA_CONFIG_BITS=64 ./abuild-2.0 -build
7. Traverse to the directory:
/usr/lunasa/apache/linux
8. Now open a session to the Luna SA using the **sautil64** utility under the linux folder.
./sautil64 -o -s <slot number> -i 10:11 -p <partition password>

Where:

- o -> open session
- s -> slot
- i -> application IDs
- p -> partition password

9. Under /usr/lunasa/apache, run the **abuild-2.0** script to generate keys on the Luna SA.
./abuild-2.0 -genrsa

Enter the relevant information as prompted for the keys to be generated.

10. Traverse to apache installation directory:
/usr/local/apache/conf
11. Open the apache configuration file (httpd.conf) and edit the **ServerName** field with the hostname or IP address of the server.
12. Traverse to the directory:
/usr/local/apache/conf/
13. Open the ssl configuration file (ssl.conf) and edit the Virtual Host section as below:
<Virtual Host Hostname or IP Address: 443>
14. Traverse to the directory:
/usr/local/apache/bin
15. Start the Apache HTTP Server with the **SSL** option:
./apachectl -DSSL.
Make sure you have disabled iptables or allow http/https traffic through iptables.
16. Open any browser (IE/Firefox) and access the HTTP Server:
https://<HostName or IP Address>
17. Accept the certificate.