nCIPHER
AN ENTRUST DATACARD COMPANY

www.ncipher.com

## nShield Container Option Pack

- Allows customers to build their containerized deployments in conjunction with an nShield HSM, for dynamic application scalability and maximum HSM utilization
- Provides a well architected containerized deployment model with associated scripts for creating application container images
- Creates images from a variety of Linux platform base templates
- Integrates with FIPS and Common Criteria certified, tamper-resistant nShield Connect hardware delivering high assurance protection for business critical cryptographic keys
- Compatible with nShield as a Service deployments

# nShield Container Option Pack

*Deploy containerized applications integrated with high-assurance nShield hardware security modules*

# nShield Container Option Pack

*Feature Overview*

## NSHIELD CONTAINER OPTION PACK

Developers working with containerized applications may not be familiar with the complexities of how to integrate with high assurance hardware security modules (HSMs). When the time from staging to production is critical you need a proven deployment model and scripts to help reduce the overall development cycle. nShield Container Option Pack (nCOP) makes it easy to build HSM support into these containerized solutions and provides a template deployment model that allows you to focus on the containerized application without having to worry about the HSM integration.

A member of the nCipher nShield family of software option packs designed to work seamlessly with our nShield Connect HSMs, nCOP enables the straightforward and secure integration of HSMs via standard interfaces to containerized applications.

The nCOP enables certified nShield HSMs to operate seamlessly within a containerized environment, allowing developers to leverage the dynamic deployment, scalability and orchestration benefits of the platform while benefiting from access to high-assurance HSMs for processing sensitive data and key material.

The nCOP provides a supported reference architecture, plus pre-packaged scripts that eliminate the development time that would otherwise be required to set up libraries for accessing HSM-protected cryptographic material from the container environment.

## HIGH LEVEL ARCHITECTURE

The nCOP provides easy access to a flexible and scalable containerized architecture that interoperates with an existing nShield HSM and Security World environment.

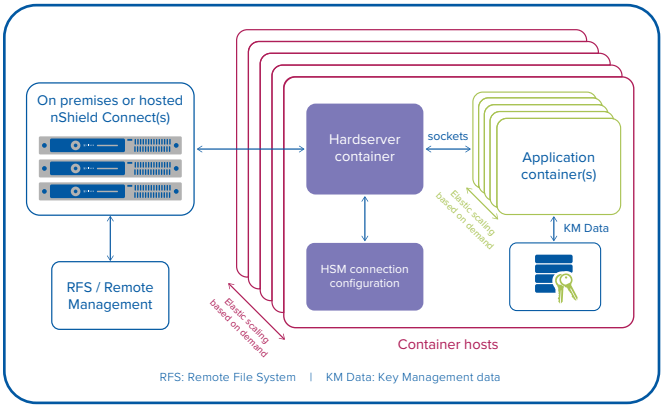


Figure 1: High level architecture of nCOP

## SPECIFICATION

- Operating system support
  - Linux distributions only
- Supported HSMs
  - Compatible with all nShield Connect HSM models
  - Compatible with nShield as a Service for cloud hosted HSM deployments
- Scalability & licensing
  - nCOP has no enforced limitation on the number of hardserver[1] or application containers, and can work with any number of container hosts (physical or virtualized server instances).
  - When used in conjunction with nShield Connect, client licenses will be required depending on the scale of deployment. The option pack includes a multiplier for calculating the number of client licenses required based on the maximum number of running application containers to be deployed. Refer to Figure 2 for guidelines on the number of client licenses required for different sized deployments.

| Number of client licenses per HSM | Maximum number of container hosts | Maximum number of application containers permitted |
|---|---|---|
| 5 | 5 | 50 |
| 10 | 10 | 100 |
| 15 | 15 | 150 |
| 20 | 20 | 200 |
| >25 | 25 | >250 Recommend purchase of enterprise client licenses |

Figure 2: Required number of client licenses per HSM based on container host and application container sizing

## LEARN MORE

To find out more how nCipher Security can deliver trust, integrity and control to your business critical information and applications, visit ncipher.com

[1] The hardserver is the daemon service component of the nCipher support software - which is responsible for secure communication with nShield devices across the network. Client components including PKCS#11 and Java libraries use sockets to interface with this process.

Search: nCipherSecurity



www.ncipher.com

nCIPHER AN ENTRUST DATACARD COMPANY