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Top 10 reasons for migrating to payShield 10K now

Your payShield 9000 has almost certainly given you a long and valuable life of service and now next generation hardware is required to keep pace with payment innovation, latest security standards and to further operational efficiencies. payShield 10K is the fifth generation of our payment HSM platform since 1988 which is totally backwards compatible at the host interface to protect investments in your host applications. There are many advantages to be found with the payShield 10K and to help introduce you to the next generation in payment HSMs we have compiled a top 10 reasons to migrate now.

Reduce costs

1. Slimmer form factor

Data center space is expensive. With payShield 10K we have reduced the height of the unit to 1U which means that you can stack twice as many units in the rack than you could with payShield 9000, reducing the cost of your real estate. The unit is now longer to make it easier to get to the connectors on the rear panel and comes supplied with sliding rails to help simplify and fast track the installation process. The front panel design retains the familiar left and right key mechanisms so that you can securely lock the HSM into the rack.

2. Lower power consumption

Each watt of power a device requires increases your data center energy and cooling costs. With our new payShield 10K design we have, leveraged the latest energy-efficient components and power management techniques to lower the overall power consumption, even when operating at twice the cryptographic performance, by 40%. This undoubtedly will assist in driving down your data center electricity bill and contribute to your company reaching its "green goals".

3. Higher resilience & availability

Planned downtime is still downtime. Being forced to take an HSM offline for routine configuration tasks or to replace a faulty power supply can adversely affect the availability of your financial services infrastructure. We have improved the physical design with payShield 10K by providing dual hot swappable power supplies and fans as standard which improves MTBF by a factor of 14, delivering very high predicted uptime. As part of our mission to help keep your payShield 10K running 24 x 7, we now perform additional background monitoring of HSM system processes and application code - if problems are detected, they are rectified automatically without any intervention required by you.

Streamline operations

4. Faster firmware updates

Loading firmware usually means taking the HSM offline for several minutes. With payShield 10K the firmware update workflow process has been reduced by more than a factor of 10 while still maintaining all the necessary security checks for code authenticity and integrity. Reliability and ease of use aspects have also been improved such that if power or connectivity interruptions occur, the loading process will recover automatically to minimize the possibility that the HSM may be rendered inactive.

5. Clearer visual indicators

payShield 10K has a simple, uncluttered front panel design which displays a red warning triangle when a tamper event has occurred. It is obvious when all is well as the left handle of the front panel is illuminated in white and if the regular background health checks discover a problem the handle turns to red. To help identify which HSM in a rack may need scheduled work or attention, the operations team can now quickly direct local staff to the HSM requiring support by illuminating front and rear maintenance lights using their payShield Manager. In addition the front light illuminates the serial number of the unit, making it easier to read if required. These are just a few of the time saving features we have introduced, some inspired by customer feedback.

6. Simpler key erasure confirmation

Sometimes it is necessary to move an HSM out of a production environment to another less secure location. Under various security audit constraints the critical keys such as the live LMKs must not be present when the unit is in the new location. payShield 10K contains a dedicated key erasure confirmation light on the rear panel to provide assurance that no sensitive keys or data reside in the unit and it is safe to decommission. This enhanced approach to key erasure provides confirmation even after the unit has been powered off.

> payShield 10K is the fifth generation of the Thales payment HSM platform. It is backward compatible with the payShield 9000 to ensure investments our customers have made are protected.

Be prepared

7. Stronger tamper protection

payShield 10K has multiple levels of tamper detection which (when activated) erase keys and sensitive data in the event of an attack. A fully locked-down lid (with no ability to open without causing significant damage to the device) is also used to increase the complexity for any attacker. Attempts to gain access inside the inner security module cause the device to be permanently disabled.

8. Broader cryptographic support

To support new payment methods payShield 10K is capable of leveraging very fast hardware-based ECC processing in addition to the legacy 3DES, AES and RSA algorithms. Many of the emerging payment credential issuing use cases utilize ECC rather than RSA especially when the payment instrument is a mobile, IoT or connected device. payShield 10K is ready to be enhanced to support a much broader range of cryptographic algorithms and mechanisms as they become formalized as part of the increasing range of payment security specifications.

9. Greater maximum performance

Card payments and digital online payments are growing year on year, requiring you to constantly monitor and upgrade your processing bandwidth. payShield 10K offers significantly higher RSA and 3DES performance than its predecessors which may reduce the number of payShield devices deployed and lower your costs. This faster cryptographic engine also provides a more consistent and predictable performance across all host commands, even in situations of heavy load and when TLS-based secure communications are in use.

10. Superior service architecture

As the payments world increasingly looks towards new deployment models involving a mixture of private and public clouds, payShield 10K has been specifically designed to offer secure remote management and monitoring delivering a true 'no touch' experience. This supports multiple types of payment service offerings and offers more capabilities to run functions securely in a broader range of operating environments.

About payShield

payShield is constantly evolving to help secure your business transactions. For more information visit: www.thalesesecurity.com/products/payment-hsms.

About Thales

The people you rely on to protect your privacy rely on Thales to protect their data. When it comes to data security, organizations are faced with an increasing number of decisive moments. Whether the moment is building an encryption strategy, moving to the cloud, or meeting compliance mandates, you can rely on Thales to secure your digital transformation.

Decisive technology for decisive moments.

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