

### Introducing Thales Advanced Solutions Group

Drawing on decades of global experience, Thales Advanced Solutions Group (ASG) consultants can help you accelerate the deployment and optimise your investment in Thales solutions.

Thales ASG offer unmatched knowledge about Thales hardware security modules (HSMs), which provide powerful best-in-class cryptographic capabilities that can be closely integrated with your business solutions via industry standard APIs. Thales HSMs integrate seamlessly with many COTS products to support encryption and authentication services required by financial and secure manufacturing industries.

Thales ASG provides design, development, training and deployment services globally to Thales customers.

### Maximise Your ROI

Thales ASG consultants provide comprehensive development services around a wide range of technologies to help integrate encryption into your infrastructure. We can work with you in architecture and key management design, custom development, application review, development advice, ongoing custom development support and much more. Our team contains cross-disciplinary consultants, system architects, project managers and highly experienced developers who have a deep understanding of Thales solutions and best practices for encryption and key management.

*“Thales’s proven track record of delivering best-in-class cryptographic hardware security and key management will benefit our developers and the larger ecosystem by enabling a new generation of IoT products and applications to enter the market with enhanced privacy and services” - Curtis Sasaki, VP Ecosystems, Samsung Electronics*

### Custom Development

Thales ASG consultants can develop custom solutions to meet your specific needs. We will work with your team to gather requirements, validate designs and create bespoke solutions that integrate with your applications. We can adapt our development methodologies to suit your needs including Agile. Custom solutions are unit tested before delivery to ensure quality of design is carried through to delivery.

### CodeSafe



Thales nShield CodeSafe technology allows you to move critical parts of your application inside the secure confines of the HSM tamper-resistant boundary. Moving sensitive application logic inside the HSM removes risk of exposure of secrets in the memory of host side applications. CodeSafe development requires intimate knowledge of the internal capabilities of the HSM, and how keys are generated, protected and used. ASG consultants are amongst the most experienced CodeSafe developers in the world. We can develop both the CodeSafe software and high level host side libraries that make it simple to integrate CodeSafe functionality into the heart of your applications.

### PayShield Customisations

Today, Thales payShield HSMs are the most widely deployed payment HSM in the world; the payShield host interface is the payments industry de facto standard. PayShield HSMs support a rich and varied command set that is used in credit/debit card, mobile and other payment processing solutions. Sometimes, customers need custom commands that support unique requests, key management and proprietary cryptography that aren't part of the core command set. ASG is ready to help and can help design, implement and deliver custom payShield commands.

### Peace of Mind Extended Warranty

All custom solutions come with standard 90 days warranty giving your team time to integrate custom developments into your infrastructure. With Custom Code Solution Support (CCSS), you can extend support with fixed price annual contracts. CCSS is recommended for custom solutions that form integral parts of a mission critical infrastructure. This is in addition to the standard comprehensive support services you have with standard Thales products.

## Expert Developer Support

Thales ASG not only develop world-class custom solutions, we can also help customers answer intricate questions around cryptographic algorithms, encryption solution development and integration. Expert developer support allows your developers to get the help they need when they need it. We can offer advice and support around HSMs, application encryption and tokenization, key management, developer toolkits and APIs to help your team get the most from Thales solutions.



## Case Studies

- > **Financial Services** Thales ASG custom developments underpin financial services worldwide, from retail and corporate banking to payments and equities. Solutions include custom cryptography, access and authorisation control, key management, at-rest and in-motion encryption. nShield and payShield solutions underpin NG Interbank Payment Schemes, Faster Payments, Cheque Imaging and more.
- > **Secure Manufacturing** High tech manufacturers protect production line systems through secure key and certificate injection and firmware signing, all using HSMs to guard key management. Thales ASG has worked with a number of market leaders to secure digital rights and production facilities, protecting both company IP and consumers from counterfeits and unauthorised changes.
- > **Smart Metering** The smart metering industry heavily depends on best in class high performance cryptographic services. Thales ASG has worked closely with key players in the industry around the globe and built suites of APIs and CodeSafe applications to support national standards covering manufacturing and in-situ operation.
- > **Scale-out Key Management** Thales ASG has delivered bespoke solutions to help customers super-scale key management to support millions of keys all protected by nShield HSMs accessible from both Java and PKCS#11 interfaces.
- > **Advanced payShield Interfaces** The PayShield host command interface is widely used in payment systems but for customers with payment processing systems built on Java technology, this is not an easy integration to achieve. Thales ASG has worked with several customers to develop advanced interfaces:
  - > payShield Java adapters expose the processing capabilities of payShield HSMs through the Java Cryptographic Extension (JCE).
  - > payShield Web Services provide REST/SOAP-based Web Services, supporting load balancing, unified key management and open APIs easily integrated with message frameworks.
- > **Crypto Currency** Thales ASG has implemented cryptocurrency algorithms using nShield HSMs and CodeSafe to protect digital wallets.

## Thales ASG Partnership

You can work with Thales ASG in whatever way best meets your needs. As experts in Thales products, we can complete your custom integration from start to finish, or provide advice and knowledge transfer, working alongside your team to add capacity for critical projects. However you choose to work with us, you can be assured of expert professional help that shortens development cycles, raises your team's security awareness, and ensures that you receive the best possible return on your investment in security solutions. [Contact Thales](#) to learn more.

Visit us at

[www.thalesecurity.com](http://www.thalesecurity.com)  
to learn how our advanced data security solutions and services deliver trust wherever information is created shared or stored.

Follow us on:

