ir.deto
Building a Secure Future.™

IRDETO KEYS & CREDENTIALS

A vendor-neutral, managed security service that gives operators control over their technology choices without adding to their operational workload

In a fast-moving industry, pay TV operators need to ensure current and future business plans are not held back by limited technology options. But the long-term security contracts typically signed with conditional access vendors often do just that - locking operators into relationships with their partner's narrow range of chipset and set-top box (STB) suppliers. Dependence on this type of monolithic security solution not only takes critical choices out of the operator's hands, it diminishes their control over current and future strategic business decisions.

VENDOR LOCK-IN STIFLES AGILITY AND COST CONTROL

A locked-in ecosystem can leave operators frustrated by lack of access to exciting new functionality and features that are already available from other vendors. Even the largest operators can find they have little influence on timescales for developing or deploying these advances. This hinders their ability to bring new services to market and can cause them to fall behind their competitors. It also reduces the effectiveness of long-term planning: without direct control over the design and architecture of the STB platform, how can an operator be sure it will meet their current and future business needs? In short, it can feel as though the CA vendor is dictating the operator's business strategy.

The ability to obtain best value is also diminished because competitive tendering is impossible. For a new platform build, an operator would ideally request qualified bids from multiple vendors to maintain healthy competition and keep total cost of ownership (TCO) low. But with a limited range of suppliers available for each technology within the CA vendor's ecosystem, they simply have no bargaining power.

BREAKING FREE OF VENDOR LOCK-IN

For all of these reasons, operators worldwide are increasingly motivated to find alternatives to traditional security vendor relationships. As they invest in a new generation of managed STBs, they seek to implement modular architectures that allow rapid access to new technology and innovation at a competitive price.

One way to achieve this type of flexibility is for an operator to "go it alone," working directly with each of their system on chip (SoC) suppliers and OEMs to gain control of the keys in the chipset – the fundamental root of trust. Operators who have tried this approach have rapidly realized the complexity of the task. They must manage each key or security asset through its entire lifecycle, as well as supporting security upgrades at all points in the management ecosystem down to each device on the network. The operational overheads are enormous and beyond the existing core competencies of any pay TV operator. Everything from the negotiation of commercials; NDAs; workflows and processes with each vendor, to the set up and running of secure facilities, takes time, expertise and a lot of investment.

OFFLOADING THE EFFORT TO AN INDEPENDENT TRUST AUTHORITY

Irdeto Keys & Credentials, a solution in the Irdeto 360 Security portfolio, provides a best-of-both-worlds alternative, giving control back to the operator without incurring any additional inconvenience. With this managed service, operators have total control over their service platform, but rely on Irdeto as an independent trust authority to administer the various security assets and technologies of a multivendor system on their behalf. And because Keys & Credentials is fully vendor-agnostic, operators have free reign to select the technologies of their choice. Some of the world's largest pay TV operators are already using this service to help them gain flexibility and competitiveness. They mix-and-match suppliers while offloading the day to day administration of security assets so they can focus on their core competencies of subscriber retention and acquisition.

KEY BENEFITS

Take a stress-free shortcut to new technology

By giving operators a free choice to mix-and-match security, chipset or STB providers, Irdeto Keys & Credentials enables them to select technology vendors who are market-ready with exciting new functionality, instead of waiting for an existing supplier to catch-up. This improves time to market for new features that are attractive to both new and existing subscribers. And because the day-to-day complexity is outsourced to Irdeto's experts, the managed STBs can be updated in the field without additional operational overhead, even in a complex multivendor ecosystem.

Future-proof a new breed of set-top boxes

Operators who are investing in a new generation of STBs want to be sure they are flexible enough to adapt as business needs change in both the medium and long term. Selecting Irdeto Keys & Credentials allows operators to specify a unique, modular architecture for their STB. With an Irdeto-managed root of trust in the SoC, the operator has built-in flexibility to activate new technologies and services with no dependency on the incumbent CA vendor. This could include adding a new DRM technology, a public key infrastructure (PKI), or third-party services such as Netflix or TiVo. They can also switch-out existing suppliers, if required - even the CA vendor - without the expense and upheaval of replacing their STB population.

Leverage competition to drive down costs

When an operator has full choice over their suppliers, they can cultivate a more competitive bidding process for each new service offering. This ensures the operator gets best value for money in all its procurement processes. Employing an expert third party to perform resource-intensive security management tasks as an end-to-end managed service is also highly cost effective option when compared to the investment in facilities, staff and expertise required to take on these tasks in-house.

MANAGING COMPLEXITY TO DELIVER VALUE AND CONTROL

To take control of service platform design and vendor selection, an operator also needs to take on management of the security elements that underpin that platform's individual features and functions. Central to this is controlling the keys in the device, a highly specialized field, requiring deep expertise and experience. There are multiple workflows to be managed between the SoC foundry, STB production and activation of services in the subscriber's home. Such tasks are far outside the core expertise of even the largest pay TV operator.

By contrast, Irdeto has decades of content security experience managing exactly this type of workflow. This makes us ideally suited to be an independent trust authority, offering Irdeto Keys & Credentials, the pay TV industry's first vendor-agnostic, end-to-end managed security service.

Operators are able to outsource the complexity of security management, including:

1. Provisioning multiple types of security assets.
2. Ensuring smooth interactions with numerous ecosystem operators.
3. Managing the end-to-end lifecycle of diverse security assets, from production to renewal, update or revocation.
4. Accommodating the variations in security processes across different types of devices.

An end-to-end managed security service

Irdeto Keys & Credentials offers operators:

- Comprehensive management of complex, highly technical security processes specific to each chosen technology.
- Coordination with all technology suppliers, OEMs and licensing authorities using pre-established, proven workflows.
- Support for all security keys and certificates throughout the full lifecycle of initial production, provisioning, renewal/updating and revocation.
- Dedicated team of security technology experts working in highly secure, state-of-the-art facilities.

In Irdeto's pre-integrated ecosystem, agreements and processes are already established with many of the licensing authorities, OEMs and chipset providers. This gives operators a wide array of ready-to-deploy choices without costly and lengthy integration projects.

Lifecycle of security assets

Produce

Provision

Update

Revoke
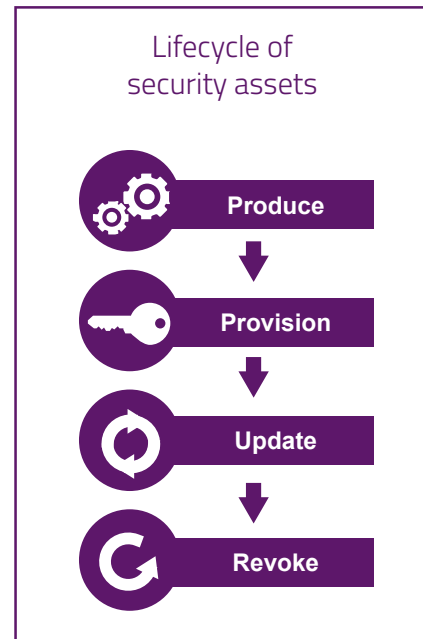
Outsourcing complexity

Irdeto Keys & Credentials ensures that operators maintain ownership and control over all crucial security assets while offloading the complexity of managing the various security processes and workflows. Irdeto experts manage the full lifecycle of key and security assets as well as interfacing with the associated ecosystem of suppliers.

As part of the service, Irdeto integrates the operator's security asset management system into the workflows of SoC suppliers and OEMs. This ensures the secure generation, provisioning, revocation and renewal of all operator-owned and third-party-supplied security keys and certificates. Irdeto also performs the monitoring and reporting required to track the performance of all processes across the supply chain. Core security assets are provisioned in the factory. Others can be delivered to the operator for provisioning in the field, or securely provisioned by Irdeto directly to the device in the subscriber's home via the Cloud Provisioning service.
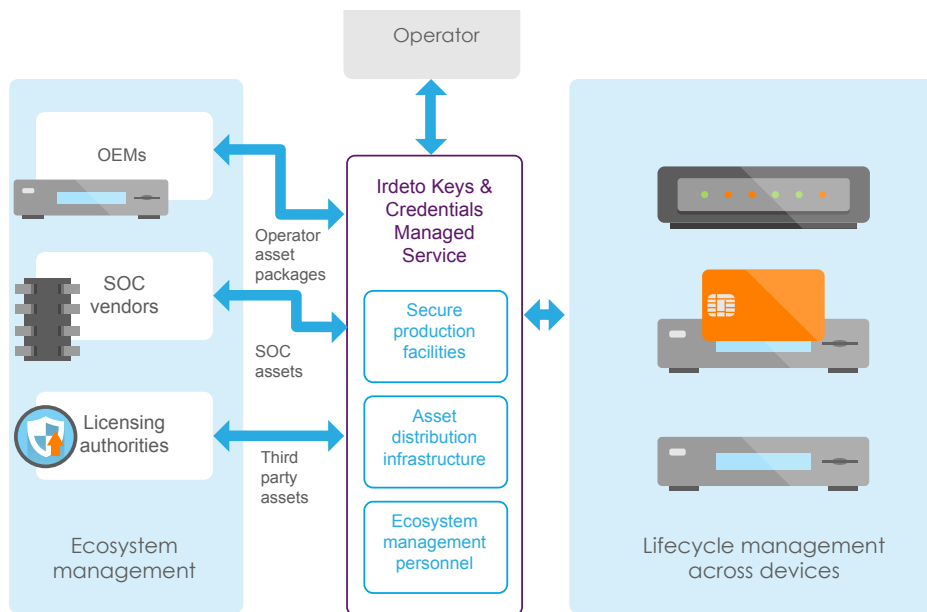
Figure 1: The complexities of a multi-vendor ecosystem are outsourced to Irdeto as an independent trust authority

Keys & Credentials is a world-class, next-generation security management system. All activities are carried out within dedicated, high-security, ISO 27001-compliant facilities using advanced cryptography. These are staffed by a team of CISSP-certified security professionals with expertise in service provider operations.

Keys & Credentials allows operators to benefit from the efficiencies of a shared-cost infrastructure, with the assurance that each company's security requirements and its vendor relationships are supported and managed to their unique specifications. There is full dissociation from all cryptographic operations for other Irdeto customers.

SUMMARY

Irdeto Keys & Credentials is the pay TV industry's first vendor-agnostic, fully managed security service. It gives operators control and choice over the technology in their STB platform, without adding to their operational overheads.

Leading MSOs in North America and Europe are already seeing the benefits of this service, outsourcing all the complexity of producing, provisioning, updating and revoking security assets to the independent experts at Irdeto.

Operators benefit from a great choice of vendors, a faster time to market for attractive new services and increased bargaining power for a lower total cost of ownership. They can also make long term strategic decisions in the full knowledge that the technology installed in subscriber homes can be updated easily as their business needs develop.

Irdeto 360 Security is an end-to-end, pre-integrated solution that meets even the most stringent security requirements, enabling operators and content owners to offer premium media services, such as 4K UHD VOD, live sports and early release window movies. It provides unparalleled breadth and depth to meet changing security needs, from content protection, to piracy control and cybercrime prevention, to key management by a trusted authority. Its proven success comes from the combined power of innovative technology, a diverse team of experts and a global network to deliver best security practices.