

Conditional Access System Optimization Service

- VAST KNOWLEDGE OF BEST PRACTICES AND EXPERIENCE IN GLOBAL PAY TV DEPLOYMENTS
- COMPREHENSIVE ASSESSMENT OF OPERATOR'S CONDITIONAL ACCESS ENVIRONMENT
- CLEAR RECOMMENDATIONS FOR SYSTEM OPTIMIZATION AND OPERATIONAL IMPROVE

EXPERTISE AND EXPERIENCE IN OPTIMIZING PAY TV CONTENT PROTECTION

The foundation of a successful pay TV operation lies in having a best-in-class conditional access system (CAS) to protect the operator's content. However, selecting a proven solution from an industry leader such as Irdeto is only the first step toward building this foundation. To maximize the value of the solution and meet its business objectives, a pay TV operator must optimize the CAS for its environment and adopt best practices in its daily operation in order to fully harness the system. These aspects are often overlooked when there is a shortage of resources, time or expertise in the operator's organization, resulting potentially in service disruption, content piracy or unplanned costs due to emergency repairs.

To help Irdeto customers maximize the delivery of the conditional access system and reduce the risk of service impact, Irdeto offers a CAS optimization service that is highly valuable for operators of all sizes and types of operation. The service ensures that the CAS is tuned to the best performance and security levels, and is ideally conducted at regular intervals as well as prior to major CAS changes. Irdeto provides the service in two steps:

Step 1: Assessment and recommendation

Perform a detailed audit of the operator's CAS usage and service requirements. Present recommendations for improvements in a system optimization assessment report (SOAR).

Step 2: Recommendation implementation

Prepare a statement of work (SOW) with the operator based on the SOAR, and implement the recommendations for the operator. This step is optional if the operator has the skill set required to do it on its own; however, Irdeto highly advises the use of Irdeto's skilled staff for executing the recommendations.

With the expertise of Irdeto's professional services team, the operator can quickly identify actionable performance and security improvements for its network. The operator can also enlist Irdeto's help for implementing the recommendations to minimize risks and time required. To ensure in-house expertise for ongoing CAS management, Irdeto offers both on-site and off-site training tailored to meet the operator's needs.

KEY BENEFITS

A POWERFUL COMBINATION OF EXPERTISE

Irdeto has the expertise to help operators best optimize their CAS:

- Head-end network design knowledge
- Irdeto CAS hardware and software configuration
- Operating system and database tuning for broadcast networks
- Bandwidth management related to conditional access (CA) messages and operation
- Security best practices and Irdeto's anti-piracy capabilities• Irdeto CA messaging and DVB standards
- Redundancy for servers and databases
- Subscriber management systems and interface protocols
- Irdeto-approved client devices (e.g. set-top boxes)

LOWERED RISKS WITH PROACTIVE OPTIMIZATION

After the audit, Irdeto provides the operator with detailed recommendations and implementation help for preventative maintenance and corrective adjustments. Such proactive optimization ensures that the system is well tuned to deliver the best service experience to subscribers, thus reducing undesirable churns. It also ensures the highest level of protection against content piracy, preventing revenue loss due to content theft.

MAXIMIZED VALUE FOR INVESTMENT

Irdeto applies its vast knowledge of best practices and experience in global pay TV deployments to help operators improve their business and maximize their return on investment:

- Make operational, policy and procedural changes based on industry best practices to realize better efficiency and effectiveness in the operator's service-delivery value chain. For example, there are ways to optimize bandwidth utilization, such as through the dual-key hierarchy of the Irdeto CAS, that can lead to savings in satellite transponder fees.
- Identify new service opportunities or business models for the operator to improve its profitability or competitiveness in the market.
- Implement security features and countermeasures such as Surf Locking to protect against piracy threats.

COMPREHENSIVE CAS OPTIMIZATION

The Irdeto CAS optimization service is conducted in two steps, with the second step being optional yet highly advisable:

STEP 1: ASSESSMENT AND RECOMMENDATION

Objectives:

- Perform a detailed audit of the operator's environment and service requirements.
- Present recommendations for improvements in a system optimization assessment report, or SOAR.

Duration:

- Five days minimum (including both on-site and off-site work)

Process:

- The Irdeto team interviews the operator's staff to assess the operator's policies, procedures and service requirements, such as current security processes and pay TV service offerings. The team also reviews any current concerns of the operator such as performance issues, security challenges, and CAS upgrade or migration plans for inclusion in the eventual recommendations.
- The Irdeto engineer(s) prepares tools such as scripts and executes them both on-site and off-site to collect environment information.
- A cross-functional team within Irdeto analyzes the information gathered and generates a system optimization assessment report for the operator. Irdeto presents the report to the operator and discusses the recommendations and implementation options.

STEP 2: RECOMMENDATION IMPLEMENTATION

Objectives:

- Prepare a statement of work, or SOW, with the operator based on the SOAR.
- Execute the SOW to implement the optimization recommendations.

Duration:

- Varies

Process:

- Irdeto prepares a statement of work proposal for the operator that includes the scope of work, estimated implementation timeline and costs for implementing the recommendations in the SOAR. Irdeto and the operator discuss the proposal and agree on the SOW.
- The Irdeto professional services team performs the work as specified in the SOW. (Tailored training can be provided as part of the SOW or separately as needed.)

SCOPE OF ASSESSMENT

Irdeto takes a comprehensive approach to assessing the operator's content protection deployment. While the scope of assessment may vary based on the operator's environment and business objectives, the main areas of focus include:

PAY TV SERVICES

Pay-TV services implemented or planned in the operator's environment, such as:

- Subscription
- Auto-expiry, pre-enablement and pre-paid cards
- Ordered or impulse pay per view (PPV)• Video on demand (VOD), push VOD
- Multi-view
- Personal (or digital) video recorder (PVR)
- High definition (HD)
- Proximity control

INFORMATION MANAGEMENT

- Smart card reporting (e.g. active versus inactive cards and sectors, card versions, profiles and patch levels)
- Subscriber management system (SMS) to cA database synchronization and integration

APPLICATION SOFTWARE

- Pay TV service configuration
- Application performance parameters
- Application interfaces, such as SMS, electronic program guide (EPG), entitlement control message (EcM) or entitlement management message (EMM) generators
- Application and database logs
- Application and database backup and storage policy and procedures
- Irdeto CAS upgrade procedure at the head-end and client side

TECHNOLOGY AND INFRASTRUCTURE

- CAS hardware and operating system configuration
- Maintainability and remote accessibility
- IP and DVB network management
- Bandwidth allocation to EMMs, EcMs, video, audio and other applications
- Network and system diagram
- Smart card and devices in inventory or distribution centers
- Client device types and models and update strategy
- Test lab system and infrastructure
- Disaster recovery plan

SECURITY ASSESSMENT

- General site security policies and procedures
- Key cycling policy (P-key, G-key, FlexiFlash)
- Anti-piracy counter measures and security threats