Product Datasheet

Media Protection

irdeto

Irdeto Secure Key Exchange

STUDIO-GRADE SECURITY WITH FLEXIBILITY AND SCALABILITY TO SUIT ALL OTT BUSINESS MODELS

Today's OTT service and business models are expanding in line with increasing subscriber demand for popular content, which now often includes live sports and exclusive on-demand titles.

However, many existing OTT operations may not be flexible enough to meet different security levels of content licensing requirements nor scale to the demand.

In addition, modifying existing OTT infrastructure and introducing new DRM technology can be expensive, complex and time consuming.

Irdeto Secure Key Exchange (SKE) is a rights management solution that provides appropriate security for all types of content, including premium titles and live sports. And it scales effortlessly to cope even with the peak demand typical of live content viewing.

KEY BENEFITS

- Meet studio licensing requirements with end-to-end security for all your content
- Matches operator's chosen distribution mix, whether live, linear, on-demand or even download & go, through HLS adaptive bit rate streaming, which can leverage existing infrastructure when applicable
- Supports multiple OTT business models, including subscription, transactional, freemium and ad-based
- Cost effective scaling to support large numbers of simultaneous channels and users for live TV services
- Centrally control all subscriber entitlements & profiles through a single management interface

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ROBUST SECURITY ON MOBILE DEVICES

As the content security requirements evolve with new consumption patterns, OTT service operators must demonstrate protection right through to the end-user's device, whether for streaming or download & go. Secure Key Exchange reinforces deployments to provide studio-grade protection for premium live and on-demand content.

Irdeto's exclusive whitebox and cloaking security technologies have been implemented to protect the content itself, the keys that secure it, as well as platform validation and output protection enforcement on each individual client device.

OPTIMAL SYSTEM SCALABILITY

As the OTT subscriber base grows, SKE's key rotation allows it to scale effortlessly for hundreds of simultaneous streams to support multiple live and on-demand channels. Unlike HLS default key distribution mechanism, SKE can embed the rotating decryption keys within the playlist itself thus eliminating the "key refresh" problem which can cause delays when delivering live streams to a large number of concurrent users, typically seen with the peak demand for live sports.

In fact, a number of specific features such as fast channel switching relating to embedded key support and bundling have been integrated to provide optimal end-user experience, notably to reduce any latency in service delivery.

EASY TO IMPLEMENT – CAN LEVERAGE EXISTING INFRASTRUCTURE

As a pre-packaged, end-to-end solution, SKE offers an HLS compatible solution with end-user device authentication and entitlement verification. It leverages any pre-existing investments the operator may have made in encoding and packaging infrastructure. As SKE uses standard HLS packaging, it can be integrated with existing content distribution systems and VOD catalogs, without requiring a modification of operator processes or requiring content re-packaging.

COMPREHENSIVE BUSINESS MODEL AND PACKAGING SUPPORT

In addition to typical OTT business models such as subscription, transactional or ad-based, the flexible pricing options available with SKE allow broadcasters, content owners and operators leverage their free-to-air content catalogs. SKE can enable use of a Freemium model to reach a large target base with FTA content and charge only when needed for top titles or live events. With a cost-structure that is not founded on a per-transaction basis, SKE is an attractive alternative to commercial DRMs for any OTT deployment, but especially those with limited revenue options, such as Freemium.

The full range of on demand, subscription or Pay per View (PPV) options are supported and SKE is also designed to provide an easy mapping of any existing business policies deployed by the service provider.

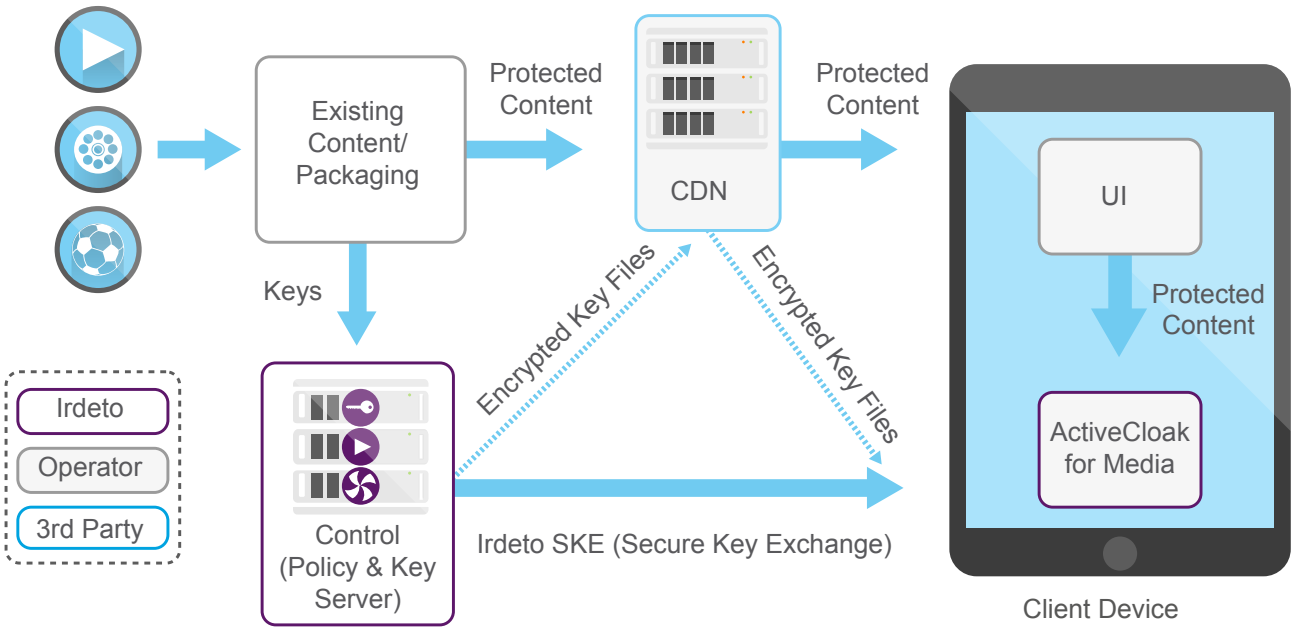

Figure 1: SKE Architecture overview

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TECHNICAL SPECIFICATIONS

Content Delivery	• HTTP Live Streaming (H.264 AAC)	**Platforms**	• iOS (current OS - 2 major)
Encryption Modes	• Clear, AES CBC, AES CBC with Irdeto secure key exchange	**Live TV Ecosystem**	• Harmonic • Envivio
Codecs	• H.264 (up to High Profile/ Level 5.1 @ 1080p) • AAC-LC Audio	**Media Players**	• iOS Native • Android secure media player
Business Policies Supported	• TVoD (rental and purchase) • SVoD (rental) • PPV (rental and purchase) • Live TV PPV (rental) • Live TV Subscription (rental) • VoD Bundles • Channel Bundles • Download & Go • Temporary and stored Licenses • Airplay and HDMI secondary screen handling	**Additional Services**	• Subtitles (Webvtt) • Close Captions (EIA-608) • Multi Language • Audio • Trick Play (play, pause, seek fwd, seek back) • Wifi/3G • Key pre-fetch • Live Key Rotation • Embedded Key delivery via CDN

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