



THE GREAT CLOUD MIGRATION

How the Cloud is Transforming the Business of Video and What this Means to You

INTRODUCTION

Transformation from traditional on-premise infrastructures to the cloud is now underway in all sectors of the video service industry, including legacy pay TV operators, pure OTT service providers and content owners/creators. This transformation—and the parallel transition from multicast to ABR video delivery—is reducing friction and cutting costs across the whole content supply chain. The cloud helps deliver a radically new economic model for the infrastructure itself, both hardware and software.

On the hardware side, video service providers can convert up front capital costs into more operating costs. By using commoditized hardware with virtualization, public cloud providers can exploit economies of scale to deliver resources more cost effectively than in-house data centers. Arumai Technologies, Inc. is playing a pivotal role in this transformation by providing infrastructure including hosting, video processing, transcoding, and encoding facilities, as well as security components from initial upload and across an encryption channel ready to stream

Private virtualized clouds run by video service providers can also exploit similar factors to cut costs. The software-as-a-service (SaaS) model converts licenses to ongoing service agreements in which operators pay just for what they use. SaaS avoids having to provision for larger numbers of customers or viewing levels than might occur.

Furthermore, the fact that the infrastructure is virtualized so that functionality is dissociated from location opens up the ecosystem to new operational benefits not previously possible. Third-party ecosystems can be connected or accessed very easily just by relocating content using pointers.

Arumai is a prime example of making it straightforward for an operator or content owner to exploit the associated rich palate of functions that only keen technologists can provide.

Bottom line, the predictability, flexibility and scalability of a cloud platform enable a “pay-for-success” model that reduces the financial risk of launching new video services when operators don’t have visibility into how many subscribers they’ll have on a month-by-month basis. by 2021, 75% of the total cloud workloads will be SAAS, up 75% from 71% in 2016, according to the Cisco Global Cloud Index.

Because of industry-wide cloud adoption, content owners, distributors and service providers are converging around a new content ecosystem connected by the cloud. And new revenue streams are being created by expanding this marketplace and reducing friction for trading within it.



But for many video service providers this is unfamiliar territory bringing new concerns that may not be well understood. This White Paper will address these concerns and show how Arumai, through its Cloud-Based Transcoding Streaming System for Media Companies, allied with its partners, can smooth the great cloud migration.

THE CASE FOR ANALYTICS

For video service providers, analytics can help ensure quality of service (QoS) and quality of experience (QoE) for their OTT offerings and analyze audience behavior to improve the whole experience and identify revenue opportunities, such as upselling or repackaging the content in novel ways. For content owners, the focus is more on determining how to extend the reach of the content, as well as deciding what content to make or acquire in the future to maximize profits.

As the amount of data needed to effectively and competitively run a video services business increases, so do concerns over both security and privacy. A proportion of the data is confidential or sensitive and governed by the growing number of regulations in different regions. Protecting this data from interception, against compromise and eavesdropping is critical not just for compliance with these regulations, but also for gaining the trust of consumers, upon which effective analytics rely absolutely.

Arumai has some unique advantages in the development of analytics for operators due to its security capabilities: System and Method for OTT Network Protection and Device Communication Across an Encryption Channel and System and Method for Encryption Channel for Delivery of OTT Streaming Video. Our “real estate” in the network and devices, our revenue security solutions offer a unique capability to gather data from secure data streams to secure data storage, as well as other infrastructure components.

CONNECTED CONTENT MARKETPLACE DISRUPTS STATUS QUO

As the entire content ecosystem embraces the cloud and associated technologies, there is a great opportunity to improve the efficiency of the end-to-end delivery process and remove obstacles that impede transparency and flow of information. Arumai is developing a federated rights management (FRM) model to take advantage of these opportunities and provide significant benefits for both operators and content owners.

FRM enables secure hierarchical distribution by offering a single point of integration for both operators and content providers. Arumai can and does encrypt and package video files at the origin point and then sell on to operators with the corresponding rights already in place. Through managing this workflow, users also can take advantage of aggregated content usage reports, along with other detailed analytics data, at the various stages of the content distribution chain. The federated rights management model component is a security umbrella, applying proven Arumai security and key/rights management to multi-tiered online video distribution. This is where the cloud-based workflow really starts to disrupt the status quo.



For operators, this model saves the cost of having to re-encode and re-encrypt the content as it is sent pre-packaged at a set of given bit rates and file formats. It also reduces friction in dealing with content owners and helps harness analytics more effectively to cut churn, boost ad sales and upsell the data itself. It simplifies workflow through centralized management and processing.

For content owners, it ultimately helps extend reach and gain more viewers by exploiting the Arumai global base of operators. It improves visibility of aggregated viewership data by removing barriers and enables them to gain insights from analytics. They also gain greater control over content with improved ability to eliminate or minimize re-encryption points, enforce rights and licensing terms digitally—all with less room for error.

The strength and appeal of FRM result from its foundation on open standards so that it can be applied to all ecosystems, even those comprising security components from other vendors. Content will be encoded typically with H.264 or H.265/HEVC codecs and formatted into Arumai's proprietary streaming video protocol, Arumai-Vision™ with Common Encryption (CENC) end to end, so there is no need ever to re-encrypt along the way. Third-party DRMs can also be applied and this is supported by the Arumai's platform, which is DRM-agnostic.

As the content industry expands and fragments it becomes harder to conduct trade in the traditional way involving direct negotiation over rights, bitrates and formats. FRM champions the creation of an automated marketplace where content discovery and negotiation, as well as transmission, all take place digitally.

CONCLUSION

Video service providers are embracing the cloud in contrasting ways and at different rates. The Arumai Cloud-Based Transcoding and Streaming System for Media Companies is designed to cater to these variations, offering a flexible cloud-based alternative to on premise systems for all its product families.

For operators and content owners it Arumai creates a secure SaaS-based workflow to extend their reach, target new market segments and attract additional customers across all screens. It can help harness the cloud's strengths, including speed to market, as well as ability to respond to trends, competitive forces and customer demands through new agile development methods. There is a big gain in elasticity and ability to exploit more efficient and flexible business models for procurement and infrastructure around SaaS.

Many functions have been available in the cloud for some time, but there has been reticence in putting the entire video delivery workflow in the cloud. However, unstoppable industry forces are moving away from traditional data centers to virtualized infrastructures incorporating a complete SaaS model. The conversation is quickly changing as the economic gains and enhanced functionality of the cloud become difficult to ignore.

ARUMAI TECHNOLOGIES, INC.



Arumai is the only leading, independent, pure play OTT products and solutions company in the industry today. Arumai's groundbreaking OTT Video Suite of products and video frame manipulation techniques, proprietary streaming systems and methods make any video content universally enjoyable in high quality on any screen, by any viewer, across any network, at any time enabling a pure play OTT products and solutions company. Arumai TranStream™ is designed to deliver millions of content streams to mobile phones/handhelds, tablets/laptops/PCs, Blu-ray Players, Game Consoles, and Smart TVs, and in every market in the world on behalf of content owners, mobile service providers, cable companies, satellite companies, telecom operators, streaming video providers. At Arumai, it is not all about money, products, or patents. It is about values! We value originality and innovation and pour our lives into making the best products on Earth to the delight of our customers. In the end result, values will win, and we hope the whole world listens.

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