Realizing the Promise of Online Media Distribution
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTRODUCTION</td>
<td>3</td>
</tr>
<tr>
<td>WEB APPLICATIONS ARE EASY PREY</td>
<td>3</td>
</tr>
<tr>
<td>THE ATTACKER’S REAL GOAL: PERSONALLY IDENTIFIABLE INFORMATION (PII)</td>
<td>3</td>
</tr>
<tr>
<td>WHO IS RESPONSIBLE</td>
<td>4</td>
</tr>
<tr>
<td>THE COST OF A BREACH</td>
<td>4</td>
</tr>
<tr>
<td>ADAPTING THE CORPORATE RISK MODEL</td>
<td>5</td>
</tr>
<tr>
<td>HOW TO CALCULATE THE POTENTIAL IMPACT OF A DATA BREACH</td>
<td>5</td>
</tr>
<tr>
<td>MITIGATION STRATEGIES</td>
<td>6</td>
</tr>
<tr>
<td>HOW AKAMAI CAN HELP</td>
<td>6</td>
</tr>
<tr>
<td>CONCLUSION</td>
<td>7</td>
</tr>
</tbody>
</table>
Introduction

As media analysts continue to quantify how and when consumers stream movies and television shows, any time spent watching people makes it clear the quantify is as simple as mobile and now. No matter the platform or device, this instantaneous consumption is no longer considered a novelty.

Indeed, consumers both expect and demand access to entertainment anytime, anywhere, at maximum resolution and delivered seamlessly.

The change in consumer behavior from purchasing films and television programs on physical media (p-media) like DVD and Blu-ray discs to electronic media (e-media) has shifted dramatically over the past five years. Indeed, video-on-demand traffic is projected to triple by 2016, reaching the equivalent of 4 billion DVDs per month crossing the Internet. Additionally, Gartner research predicts that there will be more than 1 billion network-connected devices capable of consuming media by 2015.

Of course, this shift provides both an opportunity and a challenge to content owners and distributors. On the one hand, these entities now have the ability to deliver content anywhere at anytime, which creates a tremendous economic benefit. On the other, that demand means supply must be distributed without a glitch.

One solution that promises to maximize the opportunity and lessen the challenge is a Media Warehouse where storage, processing and distribution occur in the cloud. The Media Warehouse is a virtual facility that ingests and securely stores media content, provides viewer authentication and authorization services, and delivers an impressive viewing experience to authorized consumers on any device and network connection across the globe.

The New Model of Content Preparation & Distribution

Not only does the Media Warehouse concept affect how people watch movies and television shows, it changes how distributors prepare that content for consumption.

Before a retailer is able to offer a DVD or Blu-ray disc for sale, that piece of p-media goes through a process that begins when the content owner provides access to a single-source “mezzanine” file. These mezzanines — often more than 100 gigabytes — are then sent through an authoring process to generate a number of variations: DVD or Blu-ray, widescreen or standard formats, et cetera. Once a master disc is created for each variation then individual discs are burned to establish inventory.

The steps to create e-media files can be even more complex, since in addition to the variations noted above, the authoring process needs to include variations for different user devices and, perhaps more significantly, different bit rates that are necessary to deliver maximum quality to devices connected to networks with different performance capacities — from wireless 3G and 4G/LTE to fixed-line DSL and optical fiber.

The difference in the number of masters required is striking — approximately 6 for p-media and potentially more than 100 for e-media. This adds complexity and expense to the authoring process and the distribution chain, and does not take into consideration any demands placed on the process by individual retail distributors who may have their own online delivery ecosystem.

Media Warehouse simplifies e-media delivery by reducing the number of renditions required in the authoring process because the files are stored in the cloud, made device-ready and are optimized on-demand through transcoding that addresses the specific needs of different devices and networks.

Simplifying the process and reducing the number of renditions benefits consumers, distributors and owners equally. Consumers enjoy better quality, distributors pay for a smaller set of renditions and less necessary storage capacity, and because a fewer number of mezzanine files are necessary, owners are under less risk of theft.
Rights, Storage and Playback with the Media Warehouse

The p-media experience — where a consumer purchases one copy of a disc, stores it themselves and relies on the quality of their own playback system to gauge satisfaction — is an easy one for content owners and distributors to navigate. After all, for all intents and purposes the job is done once the seal on the disc case is cracked.

The selling of entertainment via e-media, on the other hand, introduces a host of challenges for distributors, including where the content can be played, how many times and if it can be transferred. Distributors must also consider storage and caching issues, especially as consumers now expect to watch their purchase anytime, anywhere and on any device. Then, of course, playback quality must be of paramount importance.

While solutions for each challenge are becoming more readily available, many distributors must add workflows from a third party to ensure a satisfactory consumer experience. The Media Warehouse concept looks to release this stress by offering distributors a single cloud-based solution where content is stored and adapted for an ever-expanding list of devices, access rights are more easily enforced, and content is streamed via a delivery network that is spread across the globe.

The concept also promises to deliver on the most important feature every consumer — no matter the device they use, where they are geographically or what network they are on — cares about: playback quality.

In the p-media world, it is clear to all involved that the consumer is responsible for upgrading their own equipment as their budget allows. It is less clear if consumers have the same tolerance in the e-media market. Many believe that consumers expect distributors to offer better services at little to no cost.

A Media Warehouse has the ability to make the issue practically non-existent, because it will enable distributors to leverage content delivery technologies that provide a high-quality viewing experience to the widest possible audience.

Insights, Advertising & the Future with the Media Warehouse

Beyond providing consumers with an improved e-media experience, Media Warehouse provides both distributors and content owners an array of insights into consumer behavior.

Indeed, content owners can use the Media Warehouse’s analytics and statistics gathering capabilities to understand purchase and consumption behavior for any given title — by region, retailer or through a number of other collected parameters.

Distributors can also tap into that information to leverage advertising opportunities in order to defray the costs of content management.

To be sure, the Media Warehouse concept integrates a number of features and capabilities that fully leverages the power of the Internet to ease the distribution of movies and television shows. The key is the establishment of relationships between proven technology innovators and a broad base of content owners and distributors. Once founded, the potential is there for consumers to enjoy ever-improving viewing experiences, for distributors to benefit from a scale of economies and for content owners to find increased revenue opportunities.
The Akamai Position in the Media Warehouse

The Sola Media Experience portfolio makes Akamai uniquely positioned to deliver on the promise of the Media Warehouse concept.

Sola Sphere sets the foundation for a positive e-media experience by providing robust and redundant cloud storage and HTTP media delivery over 100,000 servers spread globally in more than 2,000 locations. Built on the Akamai Intelligent Platform™, Sola Sphere provides global reach, exceptional performance, scalability and reliability.

Sola Vision is a cloud-based portfolio of media workflow services. Distributors and content owners can use these services to deliver video content to a user’s device with optimal quality, protect their content by limiting access to authorized audiences, and connect the elements within the media distribution ecosystem to effectively simplify and monetize media delivery.

Sola Analytics enables behavioral analysis of audience media consumption, real-time quality-of-service monitoring and provides visibility into an individual viewer’s quality of experience.

The entire solution portfolio may be managed through Akamai’s Luna Control Center, which offers single interface simplicity to configure and manage all Akamai solutions.

Finally, content owners and distributors can leverage Akamai’s experience and unparalleled commitment to quality, performance and innovation to ensure that their brand stands above all others.

1 Cisco Visual Networking Index: Forecast and Methodology, 2011-2016

2 A Quick Look at Cloud Computing in Media, 2012; 12 April 2012, Gartner, Inc.)