

# Media Services Live

Bring the TV experience online with purpose-built capabilities for reliable, scalable, high-quality live event and 24/7 live linear streaming.



Live streaming is not like broadcast. It has more challenges and requires a solution capable of handling a continuous flow of content transferred over the Internet, while consistently delivering broadcast-quality experiences to individual online viewers at scale. Providing a high-quality viewing experience, for 24/7 live linear services in particular, merits a purpose-built approach that takes reliability, scalability, and cost into consideration.

## Challenges of Moving to a 24/7 Live Linear Environment









For more than 18 years, Akamai has delivered some of the world's largest live streaming events and worked with several of the world's most popular content providers, giving us a unique vantage point for architecting our solution. A key lesson we've learned while working with our media customers transitioning to live linear OTT services is that although there is still a significant gap between streaming and TV, viewers demand an online experience that matches or exceeds that of broadcast.

Challenges of providing a live streaming service that brings the TV experience to online audiences for live events and/or 24/7 live linear programming include:

1. **Ingesting content on a 24/7 ongoing basis**, rather than just event based, while taking into account the unprovisioned nature of the Internet.
2. **Reducing live delay**, which currently averages between 30 and 60 seconds end to end across the industry, to provide a true TV experience online.
3. **Attaining broadcast-level reliability** to ensure streams are available 24/7, even when system components fail.
4. **Realizing consistent distribution** for online content across a variety of delivery channels to reach a broadly distributed audience.
5. **Efficiently monetizing** online content in an increasingly complex video ecosystem driven by rising viewer demands for a TV experience online, fragmentation of devices, and advancements in ad-blocking technologies.
6. **Monitoring stream performance** in real time to quickly mitigate or address issues that may arise.
7. **Securing content throughout the entire delivery chain** — from the point of ingestion to when it is viewed on an end-user device.
8. **Providing alternative ways** for online viewers to control and consume content.

This is why Media Services Live offers liveOrigin™ — designed to specifically bridge the gap between live streaming and broadcast. Purpose-built to overcome the challenges of providing 24/7 live linear and live streaming services, liveOrigin™ ensures content providers are able to meet the quality and performance expectations of their audiences and provide a true TV experience online.

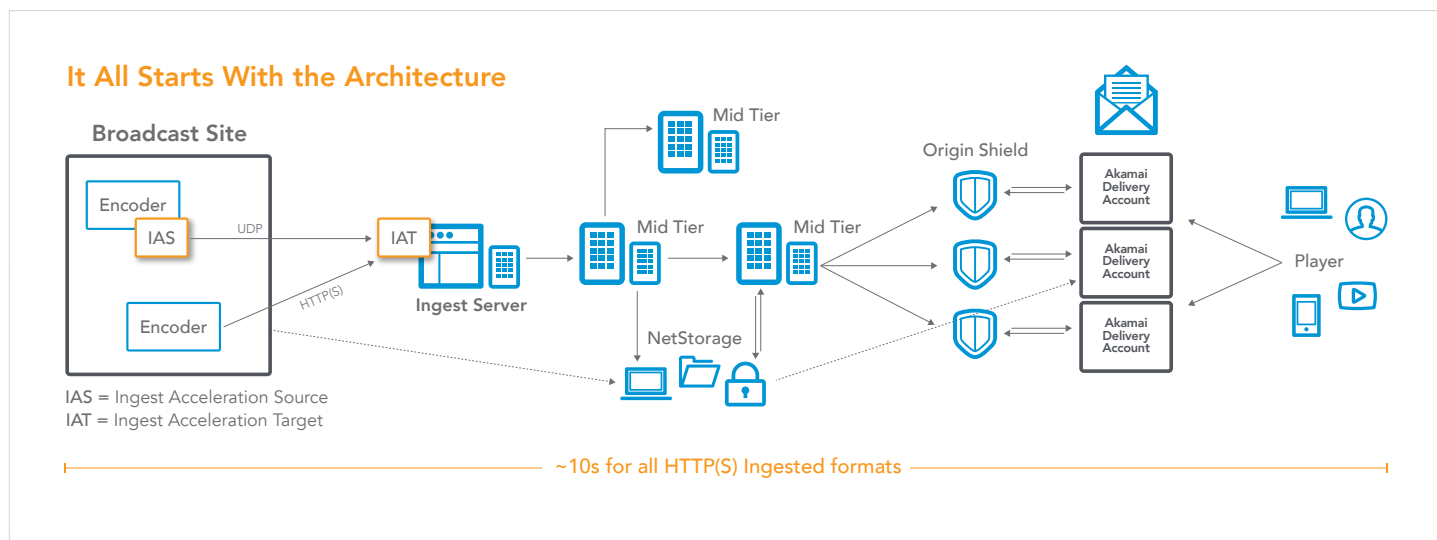
## BENEFITS TO YOUR BUSINESS:

-  **Enable reliable, robust ingestion** for 24/7 live linear streams regardless of the unpredictable nature of the Internet.
-  **Minimize delays** between broadcast and live streaming down to 1 or 2 seconds to provide broadcast-quality viewer experiences.
-  **Ensure broadcast-level reliability** so your service and content are always available for your viewers.
-  **Maximize audience reach** through a modular architecture that allows multiple delivery channels to connect to a single origin.
-  **Offer seamless, engaging viewing experiences** through serving relevant, targeted ads at scale, to effectively monetize content.
-  **Provide visibility** into first-mile performance and stream health in near-real time so that quick, relevant action can be taken as needed.
-  **Transport content securely** from encoder to viewers with end-to-end TLS encryption.
-  **Offer features and functionalities** to your viewers for content consumption at their discretion.

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## Purpose-Built for LIVE

By embracing the challenges our customers face, Akamai's unique, purpose-built capabilities, known as liveOrigin™, were designed to specifically overcome the challenges of providing 24/7 live linear experiences at broadcast quality. Media Services Live focuses on our customers' most important asset — their live content. Our modular architecture, which is compatible with Adaptive Media Delivery, combines reliable, scalable ingestion and origination with high-performance delivery of live video content.






## Key Capabilities Offered with liveOrigin™

Our liveOrigin™ solution offers purpose-built capabilities that operate in concert to provide unmatched reliability, scale, and quality to bring the TV experience to your online audience at scale. These capabilities include:

- ☆ **Ingest Acceleration:** Akamai has integrated proprietary acceleration technology within a highly distributed ingestion network. While mapping technology matches encoders to optimal entry points to route content, UDP-based acceleration improves the performance and throughput of ingestion. These capabilities add an additional level of robustness to overall contribution and improve the quality of the live feed even in cases of packet loss.
- 🕒 **Low-Latency Support:** To reduce the delay between online and live linear broadcast, liveOrigin™ has been designed to reliably handle small fragments of low-latency video for HTTP-based streaming (HLS/HDS/DASH/CMAF). Akamai supports 10-second end-to-end latency (1-2 seconds behind broadcast) reliably and at scale to provide a true TV experience for online audiences.
- 🔄 **Self-Healing Network:** One of Akamai's core principles is based on eliminating single points of failure throughout our solutions. liveOrigin™ replicates content to multiple locations and dynamically assigns encoders to optimal entry points in order to ensure 24/7 reliability and availability of your service.
- 👥 **One-to-Many (Cross-Account) Delivery:** Content providers need to efficiently and flexibly distribute their content across multiple delivery channels. liveOrigin™ allows for multiple Akamai delivery accounts to easily access content from a single origin to simplify broader distribution of content across a variety of channels.
- 💰 **Dynamic Ad Insertion:** Highly scalable server-side stitching provides a seamless viewing experience in combination with platform-agnostic middleware enables consistency in deployment to client devices and flexibility to integrate with all major ad decisioning servers and ad exchanges. Viewer-level targeting improves monetization opportunities through delivery of relevant ad content, while ensuring live content is never lost through support for early return breaks and start-stream failover capabilities for live, live linear, and on demand (only available with Adaptive Media Delivery integration) use cases.

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-  **End-to-End Transport Layer Security (TLS) Support:** Akamai has added the ability to receive content over a TLS session from the encoder and maintain the delivery between components in the Akamai network (and out to end users) so that the content is transported securely end to end.
-  **First-Mile Reports:** Server-side monitoring and reporting capabilities provide visibility into live stream performance, bitrates being ingested, fluctuations over the past hour, packet loss, latency, errors, etc. Content distributors gain near-real-time insight into first-mile performance of live feeds to help support operational decision making and to take relevant action when necessary.
-  **DVR and Archive:** By providing DVR and archive functionality, it becomes possible to offer alternative viewing experiences, including “live rewind,” for the end user.

### The Akamai Ecosystem

Akamai makes the Internet fast, reliable, and secure. Our comprehensive solutions are built on the globally distributed Akamai Intelligent Platform™, managed through the unified, customizable Luna Control Center for visibility and control, and supported by Professional Services experts who get you up and running easily and inspire innovation as your strategies evolve.

liveOrigin™ includes access to all of Akamai’s live video origin and workflow features for live streaming — ingestion, archiving, and supported output formats — and includes the following features: Ingestion, REST APIs, Basic Archive, Ingest Acceleration, Low-Latency Streaming, End-to-End Streaming TLS Support, First-Mile Reporting, and Media Acceleration. Required Akamai products: Adaptive Media Delivery and NetStorage.

Akamai reserves the right to require that Customer make certain technical configuration changes, which may impact links, URLs, or embedded Adobe Flash, Microsoft Silverlight, and/or Apple iPhone/iPad files deployed by Customer. Akamai will provide Customer with reasonable advance notification of any such required changes. Customer will be solely responsible for any possible disruption of the service resulting from its failure to comply with the requested changes. Customer grants Akamai permission and license to alter, modify, reformat, archive, transmit, cache, strip metadata, and otherwise manipulate live videos for which liveOrigin™ is leveraged and indemnifies Akamai from any losses associated with performing these licensed actions on behalf of Customer.



As the world's largest and most trusted cloud delivery platform, Akamai makes it easier for its customers to provide the best and most secure digital experiences on any device, anytime, anywhere. Akamai’s massively distributed platform is unparalleled in scale with over 200,000 servers across 130 countries, giving customers superior performance and threat protection. Akamai’s portfolio of web and mobile performance, cloud security, enterprise access, and video delivery solutions are supported by exceptional customer service and 24/7 monitoring. To learn why the top financial institutions, e-commerce leaders, media & entertainment providers, and government organizations trust Akamai please visit [www.akamai.com](http://www.akamai.com), [blogs.akamai.com](http://blogs.akamai.com), or [@Akamai](https://twitter.com/Akamai) on Twitter. You can find our global contact information at [www.akamai.com/locations](http://www.akamai.com/locations), or call 877-425-2624. Published 04/18.