

Vultr's Dynamic Cloud Mesh: Powering Caton Technology's Global Broadcast Network

Bringing together the power of IP broadcasting and network automation.

Caton Technology is a beacon of innovation in the fast-paced world of live entertainment, where every moment counts and every pixel matters. Specializing in delivering high-quality live video over IP, Caton understands the critical importance of performance and reliability in broadcast and media. However, meeting the demands of short-term live events while navigating the complexities of global networking infrastructure presents a formidable challenge. Caton delivers about 100-200 live events annually, requiring a robust and flexible cloud solution.

That's where Vultr comes in. As part of Caton's multicloud strategy, Vultr was selected for its global reach, simplicity of use, and cost-effectiveness. Although Caton Technology uses multiple cloud providers, Vultr and another cloud provider are their primary choices. Vultr's multicloud compatibility allows Caton to integrate and scale across platforms seamlessly.

Additionally, Vultr's composable infrastructure, AI expertise, and GPU availability provide Caton with a long-term strategy to future-proof its operations in a rapidly evolving market. Significantly, as the event stream processing platforms market grew by 13.4% to \$817.4 million in 2022 (Gartner 2023), Caton needs to rely on easily scalable infrastructure.

Pioneering live video IP delivery

Caton Technology's Media XStream service is the epitome of excellence in live video delivery. It creates a real-time mesh network that ensures high-quality, reliable transmission of data streams. The autonomous AI at the network level proactively evaluates routing options, minimizing latency and avoiding congestion, thereby guaranteeing end-to-end SLAs for high-performance IP delivery.

In live entertainment, where concerts and sporting fixtures demand perfection, the pressure is on to deliver flawless broadcasts. However, the transient nature of these events, coupled with the complex ecosystem of connectivity partners, poses significant challenges. Maintaining a fixed network infrastructure across multiple locations is impractical, and relying solely on hyperscale cloud providers often falls short of meeting Caton's demanding requirements.

"With Vultr, we gain access to expertise, support, and GPU hardware ready to use anywhere in the world, not just in the US. This gives us more confidence for future AI expansion," says Michael Yang, SVP of Sales and Business Development at Caton Technology.



Industry

Media and Entertainment,
Telecommunication

About Caton Technology

Caton Technology powers global live video broadcasting with Vultr's scalable cloud infrastructure, ensuring seamless, high-quality IP delivery with ultra-low latency and unmatched reliability exceeding 99.9999%.

catontechnology.com

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Moreover, the shift from traditional distribution to contribution models adds another layer of complexity, as multiple devices contribute to the production mix in real-time. Reliable connectivity for these devices is paramount, and a solution that can adapt to changing network conditions on the fly is required.

Industries

Media & Entertainment

Caton enables broadcasters to deliver high-quality live sports and entertainment globally with seamless IP transmission.

Caton Media XStream: Ensuring ultra-low latency and real-time, high-quality data stream delivery.

Telecommunications

Caton empowers next-generation broadcasting with cutting-edge IP transport technology.

Caton Media XStream

- Advanced real-time network diagnostics and intelligent traffic optimization.
- Achieving global time synchronisation with precision of <10ms.
- Unparalleled efficiency and extreme reliability, exceeding six nines (99.9999%).

Expanding in South America with Vultr's global reach

A key advantage of Vultr for Caton Technology is its presence in South America. As a company that streams a large number of concerts from the region to a global audience, Caton benefits from Vultr's 32 data centers worldwide, ensuring low-latency, high-quality broadcasts. "In a multicloud scenario, South America data centers are important to us as we stream a lot of concerts from there globally," a Caton representative stated.

Driving innovation in media and telecommunications

Caton Technology's excellence extends across key industries. In media and entertainment, Caton broadcasts sports and entertainment live to achieve global reach through Media XStream, ensuring high-quality, real-time data stream transmission. In telecommunications, Caton powers state-of-the-art broadcasting technology with Media XStream, offering real-time network health condition diagnosis and analysis, global time synchronization of less than ten milliseconds, and unmatched efficiency and reliability exceeding six nines (99.9999%).

Building a dynamic cloud solution for global distribution

Caton Technology, a customer of Vultr, is driving a paradigm shift in global broadcast networking. By leveraging Vultr's robust cloud infrastructure, Caton can create a dynamic network that spans the globe. This network, powered by AI and optimized for performance, ensures seamless connectivity and high-quality video delivery, regardless of geographical location.

"Our AI-driven IP broadcasting service makes live, real-time, proactive network switching decisions based on the quality of service in a distributed network," says Michael Yang.

By deploying Vultr's cloud platform, Caton can enhance its broadcasting capabilities and improve overall customer experience, ensuring reliable, high-bitrate video delivery.

Moving toward private infrastructure

As Caton Technology continues to evolve, it is planning to transition its infrastructure from the public cloud to dedicated or private infrastructure. This strategic move will provide greater control, enhanced security, and improved performance for its mission-critical live broadcasting services.

Vultr's composable infrastructure and Cloud Alliance

A key advantage of Vultr's composable infrastructure is its seamless integration with partners like Console Connect. This integration enables secure, private networking through technologies like CloudRouter® and cloud mesh, which are crucial for real live event broadcasting. Private networking ensures low-latency, uninterrupted data transfer and reliable, high-bitrate video streams, essential for delivering high-quality broadcasts without delays, buffering, or disruptions, particularly in time-sensitive, live environments where public internet reliability may fluctuate.

Revolutionizing live video broadcasting with Vultr

In the dynamic world of live entertainment, where every second counts and every frame matters, Caton Technology stands at the forefront of innovation. By harnessing the power of Vultr's global cloud infrastructure, Caton has redefined the standards for live video broadcasting. Delivering broadcast-quality video streams with unparalleled reliability, Caton continues to push the boundaries of what's possible in the world of live entertainment.

Additional questions and insights

How many live events do you deliver each month or quarter or year backed by end-to-end SLAs?

About 100 - 200 live events a year.

Can you elaborate on how these SLAs ensure customer peace of mind regarding network performance?

Caton's Service Level Agreements (SLAs) guarantee reliability and consistency in network performance, addressing the critical needs of broadcasters and media companies.

Here's how Caton delivers peace of mind:

Ultra-low latency assurance: Caton Media XStream ensures end-to-end latency as low as 10 milliseconds, critical for live events and real-time broadcasts. This eliminates concerns about time lags and sync issues, even for globally distributed audiences.

Unmatched reliability: With a reliability rate exceeding 99.9999%, Caton's SLAs ensure that service disruptions are virtually eliminated. Customers can trust that their content delivery remains uninterrupted, even during high-traffic or peak event periods.

AI smart routing: The platform continuously monitors and proactively chooses the most optimal routes, mitigating packet loss, jitter, and congestion. This guarantees optimal performance without manual intervention, even in unpredictable internet conditions.

Redundancy and failover protocols: Caton's SLAs include built-in redundancy and failover capabilities to provide additional layers of security. If a route or node fails, traffic is automatically rerouted without affecting broadcast quality.

Real-time insights and control: Through the Caton Network Management System, customers receive real-time insights into their network's health, allowing them to monitor performance and resolve issues proactively.

End-to-end support: Caton's SLAs extend beyond technology to include round-the-clock technical support, ensuring any issue is promptly addressed by a team of experts.

By combining cutting-edge technology with robust SLA commitments, Caton provides broadcasters and media companies with the confidence to focus on their core goals, knowing their network performance is secure, reliable, and future-proof.



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Michael Yang,
SVP of Sales and Business Development

Get started with your
own Vultr success story.

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