

5 WAYS TO OPTIMIZE YOUR MULTI-CLOUD STRATEGY FOR LIVE VIDEO

As the popularity of live video streaming continues to grow, so does the demand for multi-cloud live video solutions and infrastructure to produce, originate and deliver that content. With several recent high profile cloud provider outages, video operations teams are increasingly looking to support delivery of their live programming by way of a multi-cloud strategy. To optimize your multi-cloud live video strategy there are a few key things to keep in mind.

1. Identify which live video use cases are critical to the business and invest in the infrastructure to support them



As the demand for live video streaming services increases, so does the need for a multi-cloud live video strategy. To ensure that your business can take advantage of this rapidly growing market, it is critical to identify which live video use cases are most important

to your company and invest in the infrastructure needed to support them. There are several factors that you should consider when determining which use cases are most critical.

Determine what type of content will be most engaging for your target audience. High profile live events, episodic season premieres and premium sponsored content channels unlock monetization opportunities but can be especially damaging to a brand if there are significant delays or viewer challenges experienced. With the recent high profile public cloud provider outages, video operations teams are increasingly looking to deploy multi-cloud without exploding the budget or incurring significant operational overhead. Prioritizing video channels that have the greatest impact and implementing a solution that can automate cloud provider agnostic delivery is critical to constraining costs and complexity.

Building out orchestration, configuration management, monitoring and sophisticated analytics for multi-cloud operations benefits from a layer of abstraction that can normalize operations across the distinct environments, and centralize video and infrastructure health into live operations dashboards and programmatic interfaces. Services that can seamlessly operate blended cloud infrastructure guarantee a level of redundancy and enhanced performance while reducing the operational overhead needed to successfully execute a multi-cloud strategy.

2. Diversify live video streaming solutions across multiple clouds to decrease dependence on any single cloud provider



Choose the best cloud for your specific workload and use cases by evaluating latency, availability, cost and location. Implementing cloud cost management reporting can help ensure that your live video streaming solution is not overspending. Certain cloud providers may have specific commercial relationships or technical capabilities that are advantageous, for example reduced cloud egress fees when delivering to a specific CDN or ultra-low latency mobile edge compute (MEC) regions. These are very important in modeling how your video operations teams leverage and fully benefit within a multi-cloud strategy.

By diversifying your live video streaming offerings across multiple clouds you can avoid service interruptions and ensure high quality content delivery to your viewers. With the proper orchestration solutions, you can continuously optimize video operations and maximize the unique strengths and mitigate the weaknesses of each operating environment.

3. Choose a mix of public, private and hybrid clouds based on performance requirements, data security needs and cost considerations



Multi-cloud is widely considered the best strategy for deploying premium video services, with the main benefits being increased flexibility and choice, enhanced resiliency, improved resource utilization and reduced costs. For video the three most popular clouds are AWS, Azure, and Google Cloud Platform (GCP), each with its own strengths and weaknesses. For example, AWS has more data center locations than any other cloud provider making it ideal for live streaming events with low latency.

It is common to maximize utilization of a selected public cloud provider driven by economic incentives, but this can leave video operations exposed to performance degradation and even outages. Several recent high-profile cases have led video operations teams to implement strategies that supports both the financial and technical goals. This can lead to utilization of a mix of public, private and hybrid clouds with distinct cost, performance and security considerations.

A fundamental requirement is the ability for live video routing that can seamlessly leverage geographically diverse and provider agnostic signal paths. One way to achieve this is to deploy in multiple regions across multiple clouds, orchestrating across this infrastructure to build logical stream bonding relationships that ensure continuous high-performance delivery of the streamed content even when there are major disruptions or even complete outages within a specific region or by one of the providers. For programming that is less critical, 'warm' stand-by routes can be created. With appropriate automation rules in place, live video signal can be diverted from a primary IP path to a backup path nearly instantly, resulting in minimal disruption to the viewer experience. Scale out/in rules and rich telemetry data help inform self-optimizing/self-healing networks across geographically diverse signal paths.

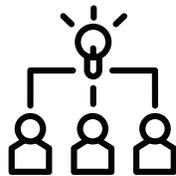
4. Leverage multi-cloud management tools to monitor performance and optimize costs across different cloud providers



As organizations increasingly adopt a multi-cloud strategy they need to be able to monitor performance and optimize costs across their different providers. While there are many management tools available, most are designed for managing a single cloud provider, however, there are several management tools that can help organizations get consolidated visibility and centralized management across their entire hybrid infrastructure. These tools provide capabilities like cost analysis and optimization, performance monitoring and resource utilization insights, all of which can help organizations save time and money on their cloud deployments.

As video services scale, it is important to have monitoring and analytics that proactively identify performance outliers and anomalous behavior which can be especially difficult due to the tremendous volume of telemetry data that must be processed. Video operations teams are already inundated with alerts and alarms and multi-cloud strategies can potentially exponentially increase the noise, resulting in overall degradation to the service. Well trained AI/ML systems that can identify leading indicators and generate predictive analytics are helpful in filtering the noise to help pinpoint specific actionable insights. Automated incident detection and root cause analysis offers significant reduction in mean-time-to-repair, a metric essential in reducing audience churn. Without intelligent monitoring you lose the transparency you need to gain early warning signs of any issues, and the ability to easily track and trace an incident to its source, something that is crucial as the cloud continues to become more complex.

5. Make sure the right team is in place with expertise in both live video streaming and cloud orchestration



The biggest challenge with multi-cloud live video is not the technology, it's getting the right team in place, you need experts who understand both live video streaming and the cloud. Invest in education and technical training to make sure your team is set up to succeed and that they can get the most out of your live video system. Selecting partners who have deep expertise implementing multi-cloud solutions that deliver mission critical high value content is key to ensuring successful deployment. Understanding what tools and services are needed, building a plan to deploy and training the video operations teams to manage the solution are keys to successfully executing a multi-cloud strategy. Based on customer interaction, Zixi estimates that over 50% will be in the process of implementing or have successfully deployed their own multi-cloud live video production, origination and distribution strategy by the end of 2022, and the pace is quickening.