SCHEDULING AND MANAGING LIVE EVENTS IN ZEN MASTER

ZEN Master includes purpose-built live events management and orchestration designed to enable efficient OU production and distribution at scale

OU / LIVE EVENT USE CASES

- Untethered remote production
- Contribution backhaul
- Partner distribution
- Live channel onboarding and re-distribution

ZEN Master is a powerful solution for live event production and distribution that have unique challenges requiring a flexible, dynamic and scalable operating environment. ZEN Master delivers powerful event scheduling, dynamic resource and route provisioning, comprehensive edge-to-edge real-time performance analysis and deep integration into an extensive partner network to support live production and distribution at scale. Zixi's software-defined approach and sophisticated workflow automation options are leveraged every day to successfully deliver thousands of live events in the world's most demanding operating environments.

OU / Live Event Operations Must Dynamically Scale

Successfully producing and delivering a single live event is complex and requires expert execution. Scaling to meet growing demand for live sports, entertainment, news and other OU events presents unique challenges:

- Complex schedules that can flexibly adapt to accommodate planned and unplanned programming changes
- Operationally complex event transitions between pre- and post-event stages that heavily rely on human intervention and can be highly disruptive to the audience
- Mixed, often unmanaged network connections with long lead times to provision access
- Inefficient and costly management of underutilized or unused resources
- Increasing use of late-binding rights and dynamic delivery contracts require agile formatting and transport options

SOLUTION: ZEN Master Live Events Manager

ZEN Master Live Events Manager and Zixi's industry proven live video orchestration tools were designed in concert with customers to simplify these challenges and equip operations teams with the ability to cost-effectively scale to meet current and future business goals around live event production and distribution. New dashboards and automation controls include:

- **Event Scheduling Dashboard** – Dynamically build, visualize and validate hundreds of schedule objects in the intuitive scheduling dashboard.
- **Event Stage Automation** – Operators define pre/post event stages, specifying event optimized custom source slates and stream behaviors that automatically apply as the event moves through these stages.
- **Bonded Contribution** – For remote production workflows, the Software-Defined Video Platform (SDVP) creates and manages continuously optimized live video routes across bonded networks.
- **Dynamic Scale** – Operators can scale on-demand, flexibly provisioning additional resources, increasing throughput and adding new delivery targets in real-time and without disruption.
- **Match Delivery Requirements** – Ultra-low latency live transcoding, content switching, program mapping and live compliance validation automatically conform inbound source streams to meet unique requirements for each target destination.
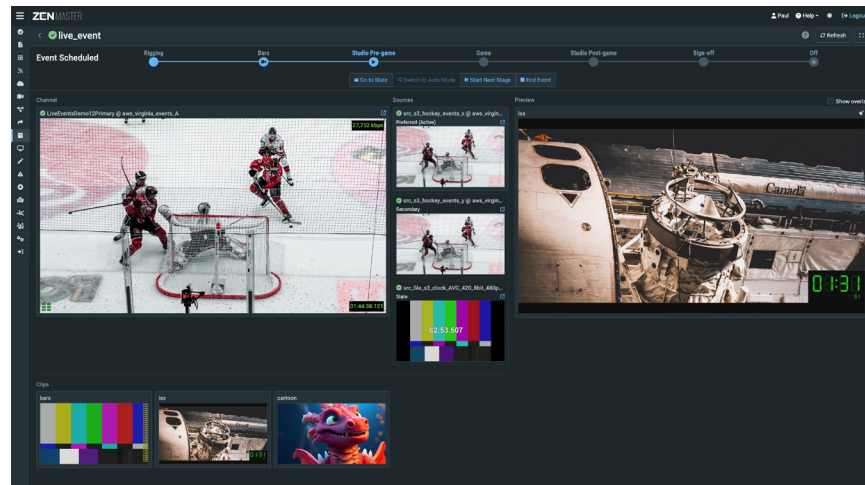
Zixi Enhancements for Live Event Operations

The SDVP has many options that enable live operations to more efficiently, effectively and reliably scale live event production and distribution.

Orchestration, Scheduling & Event Management

- **ZEN Master schedule management dashboards help organizations build and visualize event schedules.**
  - Pre-Live Slating automates publishing a slated version of the live event prior to the event to ensure end-to-end delivery, validate infrastructure and begin warming caches.
  - Live Event Operations views to organize in-window live events, simplifies management of dozens of concurrent live event channels and enables operator intervention as needed to switch event windowing, for example to extend a live event program.
  - Post-Live Slating automates publishing a slated 'after event' feed to gracefully switch the audience from the live event to post-event content.
- **Dynamic provisioning events, resources and routes**
  - Spin up additional throughput, processing infrastructure and delivery targets on-demand in ZEN Master
  - Maximize bandwidth and resilience with bonded live video routes across geographically diverse signal paths
  - Sequenced hitless failover ensures continuous uninterrupted event delivery
- **Live event channels are continuously monitored**
  - Extensive real-time network performance telemetry
  - Content quality monitoring including ePSNR and eVMAF perceptual quality analysis
  - Live audio/video impairment detection
  - Customizable alerting based on event stages
  - Zixi Blast Radius presents intuitive channel diagrams overlaid with live impact analysis

ZIXI SDVP BENEFITS

- **Orchestration** – Architect and securely deploy workflows across diverse cloud platforms, global regions and private networks
- **Telemetry** – Extend visibility to endpoints downstream with Zixi protected multicast
- **Interoperability** – 17+ protocols, 200+ integrated partners, open standard transmission options
- **Scalability** – The Zixi Broadcaster software is multi-threaded, so high throughput can be achieved 6Gb+
- **Security** – DTLS connection security, AES content encryption, SSO and password protected
- **Virtualization** – Bridge remote media facilities to maximize value of diversely deployed resources and tools
- **Zixi Sequential Hitless Failover** – Zixi patented hitless failover is extension and improvement of SMPTE 2022-7 with industry leading packet sequence alignment algorithm
- **Bonding** – Zixi dynamically and intelligently manages fluctuating bandwidth, packet loss, and latency differences of individual connections in real-time, to choose the optimal path to route IP packets
- **Low Latency** – Zixi manages latency as an adjustable parameter and automatically drives latency down while achieving desired QoS

Flexibly Scale Live Events with ZaaS

Zixi-as-a-Service (ZaaS) is a complete solution inclusive of a high-performance video cloud infrastructure that can greatly speed up implementation and onboarding times, significantly reduce costs and deliver exceptional value.

Full SDVP Solution Benefits PLUS Video Optimized Cloud Infrastructure
ZaaS combines the power of the SDVP with the flexibility and scale of the cloud. ZaaS unlocks global event remote production without sacrificing production quality or exploding costs.

Video Optimized Cloud
Provision cloud ingress, processing and distribution resources on Zixi's managed cloud infrastructure purpose built for efficiently delivering live video

Lowest Cloud Egress Costs
Produce, collaborate on and deliver more video while saving significantly over traditional cloud egress rates.

Multi-Cloud Redundancy for Premium Events
Seamlessly combine ZaaS with other 3rd party cloud provider infrastructure leveraging the SDVP to orchestrate delivery with hitless failover across regions.

ABOUT ZIXI

Zixi provides a cloud based and on-premise Software-Defined Video Platform enabling the management, orchestration, monitoring, and delivery of broadcast-quality live and live linear video over any IP network, protocol, cloud provider or edge devices to broadcasters, enterprises, over-the-top video providers, and mobile service providers around the world. Over 14+ years, the Zixi Enabled Network (ZEN) of partners has grown to over 300 OEM and service providers with whom Zixi serves well over 700 customers representing most of the top media brands around the world with 20,000+ channels delivered daily. www.zixi.com | sales@zixi.com