# Vizrt TriCaster Vectar® with TVU MediaMesh®

Sub-Second Low-Latency Cloud Live Production for Broadcasters and Content Creators — the responsiveness of on-premises with the scale of the cloud.

## WHAT PROBLEM DOES THIS SOLVE?

As live production becomes increasingly distributed — spanning remote crews, cloud control rooms, and traditional studios — maintaining visual synchronization and low-latency contribution has remained a persistent challenge. Traditional cloud workflows introduce delays of up to two seconds, disrupting director-to-camera coordination and live decision-making.

TVU MediaMesh with Vizrt TriCaster Vectar delivers sub-700 ms end-to-end latency, enabling directors, operators, and talent to work together as if they were all on-site — from anywhere in the world.

## SOLUTION OVERVIEW

### TVU MediaMesh

Modular, cloud-first infrastructure coupling asynchronous microservices with a remote shared memory fabric for ultra-low-latency video contribution and distribution.

### Vizrt TriCaster Vectar

Software-based live production switcher providing anywhere-access to professional 4K HDR switching, graphics, audio, intercom, and collaboration via NDI®.

With TVU Partyline, distributed teams monitor and collaborate in real time. MediaMesh and TVU MediaHub deliver the low-latency transport and orchestration that enable TriCaster Vectar to operate with sub-second responsiveness across cloud, on-premises, or hybrid environments.

## HOW IT WORKS

**1** **Field Contribution via MediaMesh**
SRT streams from cameras and remote sources are ingested into MediaMesh's global shared memory fabric for ultra-low-latency transport to the cloud.

**2** **NDI Delivery to TriCaster Vectar**
MediaMesh delivers sources via NDI within the Control Room VPC, enabling real-time switching at sub-second visual confirmation latency.

**3** **Cloud Production**
TriCaster Vectar handles live switching, graphics, audio, and replay — auto-deployable via Viz Now and accessible on demand from anywhere.

**4** **Director Monitoring via RTIL & Partyline**
Directors receive program feed at ~40ms via RTIL. TVU Partyline enables real-time crew collaboration throughout the live production.

## AT A GLANCE

- Sub-Second Latency (<700ms E2E)
- Cloud & Hybrid Flexibility
- Rapid Deployment via Viz Now
- Reduced Infrastructure Costs
- Production Agility
- Broadcast-Grade Quality
- 4K & HDR Live Switching
- NDI-Native Integration
- Real-Time Crew Collaboration
- Sports, News & Entertainment

## JOINT HIGHLIGHTS

**Ultra-Low Latency**
Sub-700ms end-to-end — on-site responsiveness from anywhere.

**Cloud-Native Architecture**
Containerized microservices and shared memory built for scale.

**Flexible Deployment**
Cloud, on-premises, or hybrid — right model for every production.

**Production-Ready**
Switching, graphics, audio, intercom, and replay — all connected.

## CONTACT

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## SOLUTION USE CASES

### Remote & Distributed Live Production

Produce live sports, news, and events with teams across multiple locations while maintaining real-time responsiveness — no shared physical control room required.

### Cloud-Based Sports Production

Fast-paced live sports workflows with sub-second visual feedback for directors and operators. Ideal for high-action broadcasts where timing is critical.

### Hybrid Studio Extensions

Extend existing on-premises studios into the cloud without changing familiar production workflows or retraining operators. Preserve investment in existing infrastructure.

## WHY IT MATTERS

### Faster Time-to-Air

Deploy new cloud production workflows in days. Viz Now enables automatic provisioning of TriCaster Vectar on demand — no hardware procurement cycles.

### Elastic Scale

Spin up production capacity for major events and scale back down instantly. Pay only for what you use — reducing idle infrastructure costs between broadcasts.

### Freedom of Choice

Open APIs, NDI-native integration, and broad codec support mean no vendor lock-in. Use the tools, clouds, and workflows that best fit your operation.

### Lower Carbon Footprint

Remote production reduces the need for travel and on-site crew deployment. Optimized cloud resource usage lowers energy consumption compared to always-on hardware.
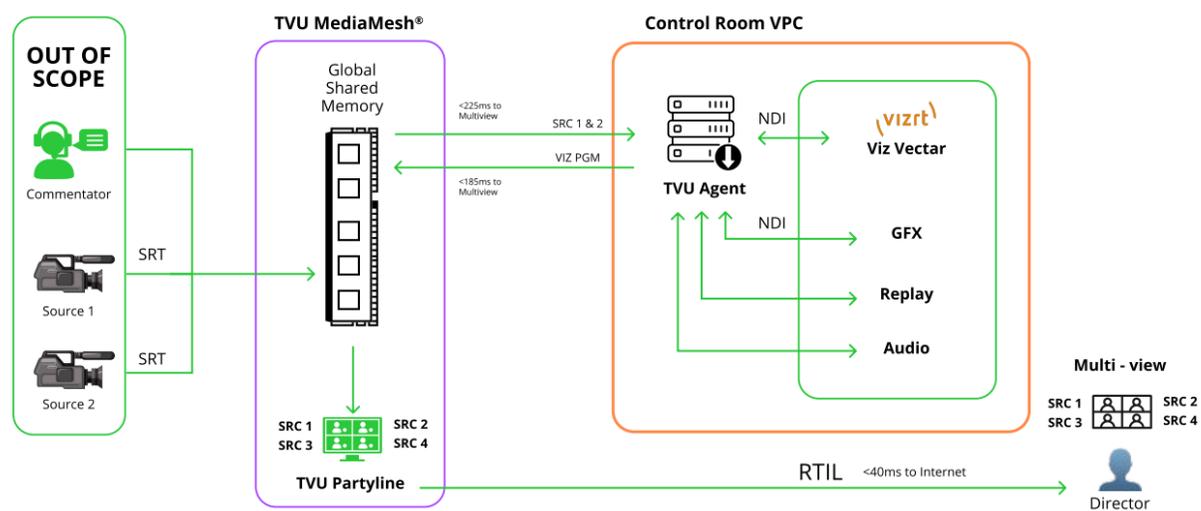
## ARCHITECTURE OVERVIEW



Fig. 1 — TVU MediaMesh® + Vizrt TriCaster Vectar® end-to-end signal flow. Commentators and sources connect via SRT; MediaMesh global shared memory routes feeds at <125ms to the cloud control room VPC where TriCaster Vectar handles production. The director receives program output via RTIL at ~40ms.

## TVU MediaMesh® - Every Feed. Everyone. Connected.

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