



Realtime Media Performance



实时监控, 多画面 分析解决方案

降低工作流程的复杂性 | 启用敏捷性、灵活性和变化 | 使您的工作流与您的业务保持一致

TAG 实时媒体平台

TAG实时媒体平台是一个100%基于软件的IP解决方案，允许广播公司和媒体公司跨多个分发平台监控和分析视频、音频和元数据内容。

TAG的独特方法提供了一个经过验证的高度互操作性平台，主要由两个部分组成：

TAG视频系统的**多通道监控(MCM)**解决方案是一款针对多通道视频工作流程的综合管理和监控工具。它提供了一个集中的平台，用于管理实时和录制的视频源，以及元数据、警报和其他关键数据，允许用户快速识别和解决问题。

TAG**媒体控制系统(MCS)**是一种视频和音频监控管理解决方案，允许用户监控和分析整个媒体生态系统中来自各种来源的视频源。它为用户提供了一个可定制的仪表板，使他们能够实时监控流，同时还提供了详细的报告和整个监控系统的单点管理

多通道监控(MCM)特色亮点

监控 | 探测

完全集成的探测和监测 | 接收-监控-可视化所有广播媒体格式 | 错误检测，警报，多视图工具 | 通过Zixi和SRT协议以ST 2110-20、2022-6、标准h.264 / h.265 SPTS / MPTS和JPEG-XS编码/传输的HD/UHD视频流中的多画面输出和并行HLS输出支持远程多视图、移动设备访问和灵活的安装拓扑结构 | 监控包括完整的TR-101-290套件和数百个其他内容、编码、传输和元数据方面的兴趣点

可视化 | 多画面

完全集成的多视图工具 | 高级布局编辑器 | 用户自定义，灵活的布局(最多100个窗口/布局) | 混合/匹配未压缩和压缩信号 | ST-2110超低延迟，每台服务器高输入/输出密度 | 全计数/UMD集成 | 内置冗余ST 2022-7输入/输出(两个独立的网卡部署)

实时解密

经过验证和安全的实时解密方法，监控和查看加密内容提供全面的监控和可视化。MCM利用与加密密钥管理服务器的直接和安全关系，完全无缝地解码、监控和显示内容，确保在整个生态系统中可靠地交付受保护的内容。

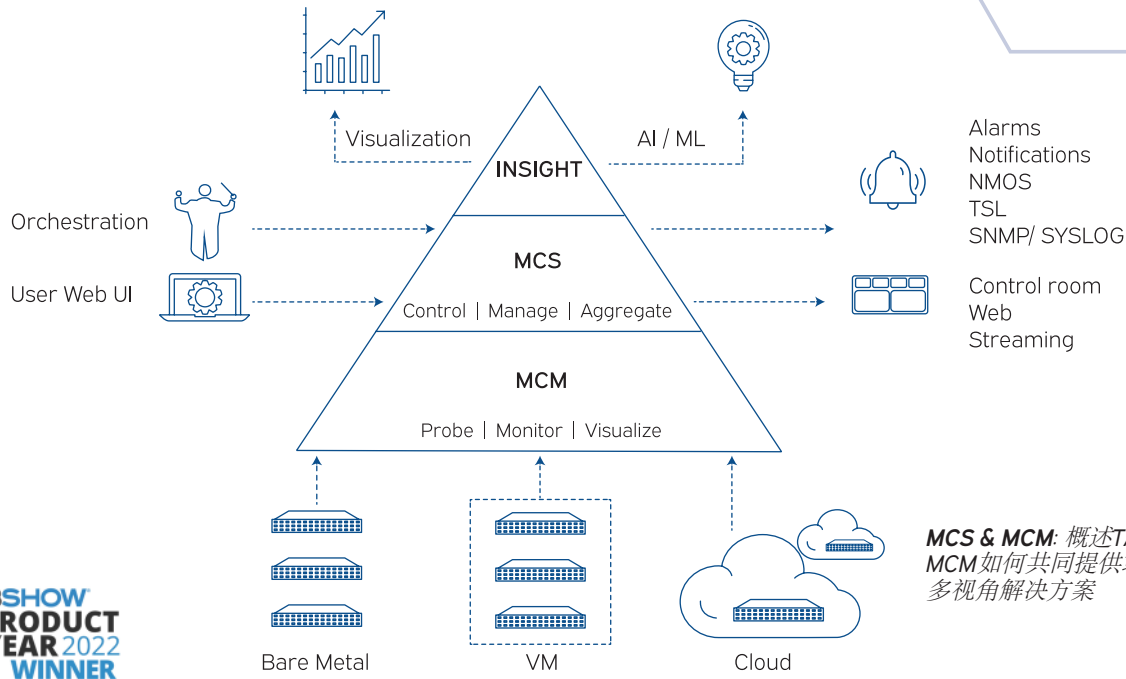
智能记录 (流媒体、OTT)

对每个源执行连续的后台记录，启用错误条件的完整事件记录。当发生错误时，MCM使用事件前记录，并将其与事件持续时间的记录与事件后尾结合起来，以提供事件发生的完整视图。该记录可以被发送到外部存储以供以后查看。

互操作性和符合特定标准的认证，如SMPTE ST-2110的JT-NM测试; AMWA; NMOS, TR-1001-1等等。

经验证的互操作性





MCS & MCM: 概述TAG MCS和MCM如何共同提供端到端监控和多视角解决方案

媒体控制系统(MCS)特色亮点

- Content Matching (NEW!)** Content confirmation from transmission to delivery | Error detection | Video Drift - Audio Sync | Complementary to SCTE and Decryption functions
- Penalty Box** Centralized Error Display | Unlimited Independent Penalty Boxes | Penalty Box placements in any layout
- Resource-Optimizing Adaptive Monitoring** Reduce server resource utilization up to 80%
No compromise in monitoring coverage or depth
- Big Data Aggregation** Realtime data from MCM instances/channels | Data utilization with IT visualization tools, AI/ML applications | Data aggregation/user access in Elastic Search dBase (real-time, retrospective)
- Resilient Operation** MCS deployment with full-redundancy | Guarantee Resilient operations of all system services
- End-to-end Path Awareness** Complete visibility of all sources and combined with Content Matching, the MCS can correlate end-to-end monitoring of any program chain or distribution. Multiple endpoint formats for OTT applications including decryption are supported.
- Complete System Management** Full monitoring of all individual MCM instances | Ensure operational health and robustness from one MCS instance | Provides fault tolerance, maximize availability of total system
- Deploy in Any Compute Environment** Operational in user IT datacenter environments on bare metal, VM, and cloud instances.

Zero Friction® Licensing

- ▶ One license, any function, zero obsolescence
- ▶ USB and cloud licensing mechanisms
- ▶ Fully floating and agile licenses
- ▶ Dynamic license sharing across hardware, VM and cloud
- ▶ CapEx, OpEx subscription and on-demand licensing with blended usage

Workflows

- ▶ Live Production**
Address the new IP standards and provide features the industry relies on such as ultra-low latency, Tally/UMD/Control support.
- ▶ Playout**
monitor a large number of TV channels in the workflow chain at both inputs and outputs.
- ▶ Traditional Delivery & OTT**
based on common digital distribution standards, which play a key role in fueling the digital multi-channel universe.

TAG Solution Specifications

Monitoring

- ▶ **Uncompressed:** ST 2022-6, ST 2110 with AMWA NMOS IS-04, IS-05
- ▶ **Video codecs:** MPEG2, H.264 (MPEG4), H.265 (HEVC), JPEG2000, JPEG XS, NDI
- ▶ **Resolutions:** SD, HD 720 & 1080, UHD
- ▶ **Frame rates:** 23.97, 24, 25, 50, 59.94, 60
- ▶ **Audio codecs:** PCM, AES 67, MPEG2, HE-AAC, A52, AAC (AC3, E-AC3), Dolby E, Dolby Atmos
- ▶ **Metadata:** AFD, HDR, SCTE 35/104, subtitles, captions
- ▶ **Transport:** MP2TS ST 2022-2 and ST 2022-3, RTP, RTMP push and pull, CDI (AWS), unicast and multicast
- ▶ **Internet/cloud transport:** Zixi, SRT
- ▶ **Failover:** ST 2022-7 seamless switching on uncompressed and TS
- ▶ **OTT:** HLS, MPEG-DASH, MSS, CMAF
- ▶ Automatic source input scanning
- ▶ Monitoring of all variants in OTT ladder
- ▶ **Encryption:** Verimatrix, Huawei KMS, MPEG TS DVB-BISS, Simulcrypt, Irdeto, AES-128

Probing

- ▶ Over 500 probing parameters
- ▶ **ETSI TR 101 290** priority 1, 2, 3
- ▶ **Video** freeze/black/macroblock detection
- ▶ **Audio** loudness per EBU R-128, ITU-1770, ATSC A/8
- ▶ **Configurable** Thresholds/Notification sets
- ▶ **Source** template profile-matching
- ▶ **Monitoring Flexibility:**
 - Adaptive monitoring (automated, 3 levels)
 - Monitoring by Exception
- ▶ **Notifications:** SNMP, email, API, log file
- ▶ **Logging:** external NAS/syslog
- ▶ Forensic source record to file on error with continuous pre-record for TS and OTT sources
- ▶ SCTE 104 | 35 message monitoring, logging

Multiviewer

- ▶ Multiviewer with ultra-low latency realtime monitoring and headless operation
- ▶ Up to 100 inputs (tiles) per mosaic output
- ▶ Up to 16 independent mosaic outputs/server per MCM instance
- ▶ Up to 32 independently assignable audio pairs per mosaic TS output
- ▶ Full-customizable sized tiles per mosaic
- ▶ Side-by-side splitscreen visualization
- ▶ Mosaic BG from video or image
- ▶ Audio tracks per tile: 16 | UMDs per tile: 8
- ▶ Custom tile layout configurations
- ▶ Output resolutions: SD, HD, UHD
- ▶ Output: simultaneous uncompressed, compressed (TS) and HLS with audio (up to five clients/output)
- ▶ Unicast and multicast output
- ▶ On-screen clocks and count up/down timers
- ▶ Tallies and UMD (TSL protocol, TAG API)
- ▶ Streamed JPEG thumbnails for each input
- ▶ Carousel and Penalty Box modes

Platform

- ▶ **Topology:** dedicated COTS hardware, VM and cloud (AWS, Azure)
- ▶ **Server:** dual Xeon CPU. Dell R640/R650 recommended
- ▶ **GPU:** not required
- ▶ **Storage:** none required
- ▶ **Network:** Mellanox C5/C6 series for uncompressed SMPTE ST 2022-6; -7 / ST 2110
- ▶ **OS:** Linux Ubuntu, custom configuration
- ▶ **VM:** VmWare ESXi 6/6.5
- ▶ **AWS:** c4, c5, c5n, c5dn, m6i instance types
- ▶ **Full JSON API** integration of all capabilities
- ▶ TAG MCS system manager option
- ▶ **Network capacity:** up to 4x 100GB ports / server
- ▶ **Input capacity:** up to 96 HD uncompressed sources per server
- ▶ **Scaling:** server stacking, TAG Bridge and MCS to enable large-scale systems
- ▶ PTP and NTP time synchronization
- ▶ Web-based configuration

