

Adaptive Monitoring

Optimize Compute Resources with Dynamic Monitoring



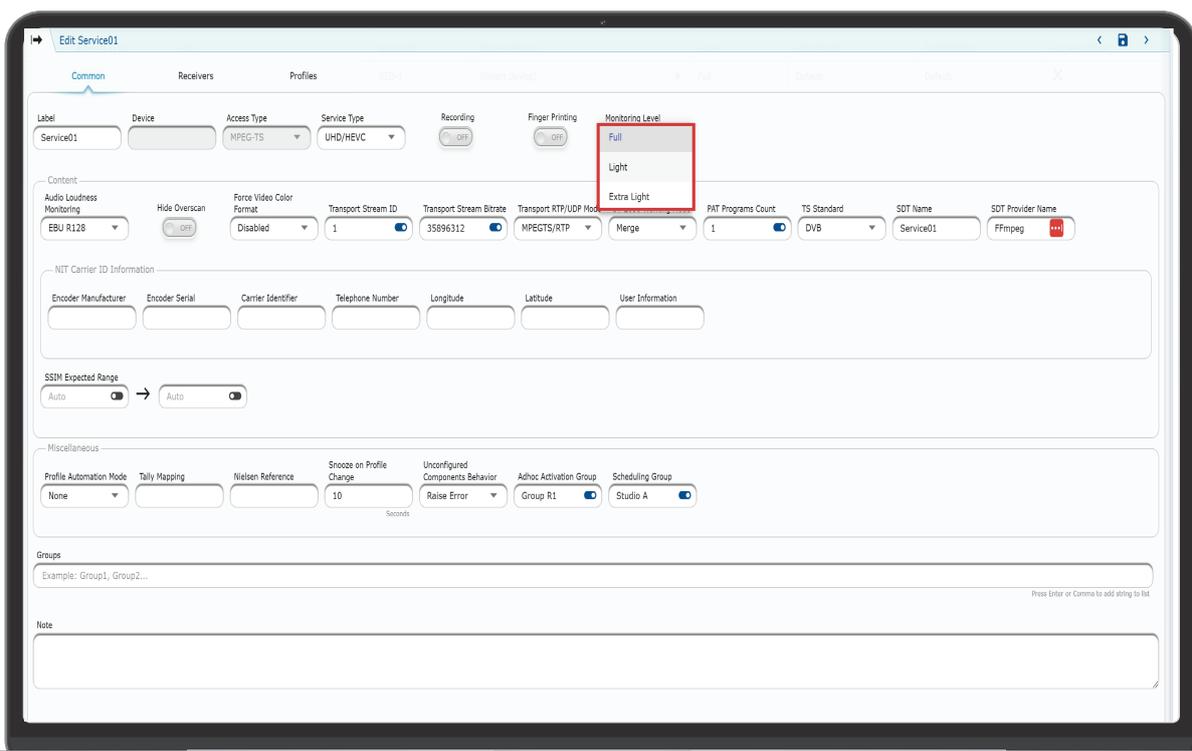
Overview

TAG Adaptive Monitoring allows you to efficiently manage your monitoring resources based on the operational priority of each stream. This feature scales your monitoring infrastructure by adjusting the intensity of stream decoding dynamically, reducing CPU load without compromising fault detection or visibility.

High-priority content can be set to Full Mode for full time decoding and visualization. Other streams can run in lighter modes, significantly reducing CPU usage.

Regardless of the monitoring mode, all streams are continuously monitored by TAG's comprehensive suite of over 500 probes for video, audio, and metadata. These probes remain active and ready to trigger alerts at all times.

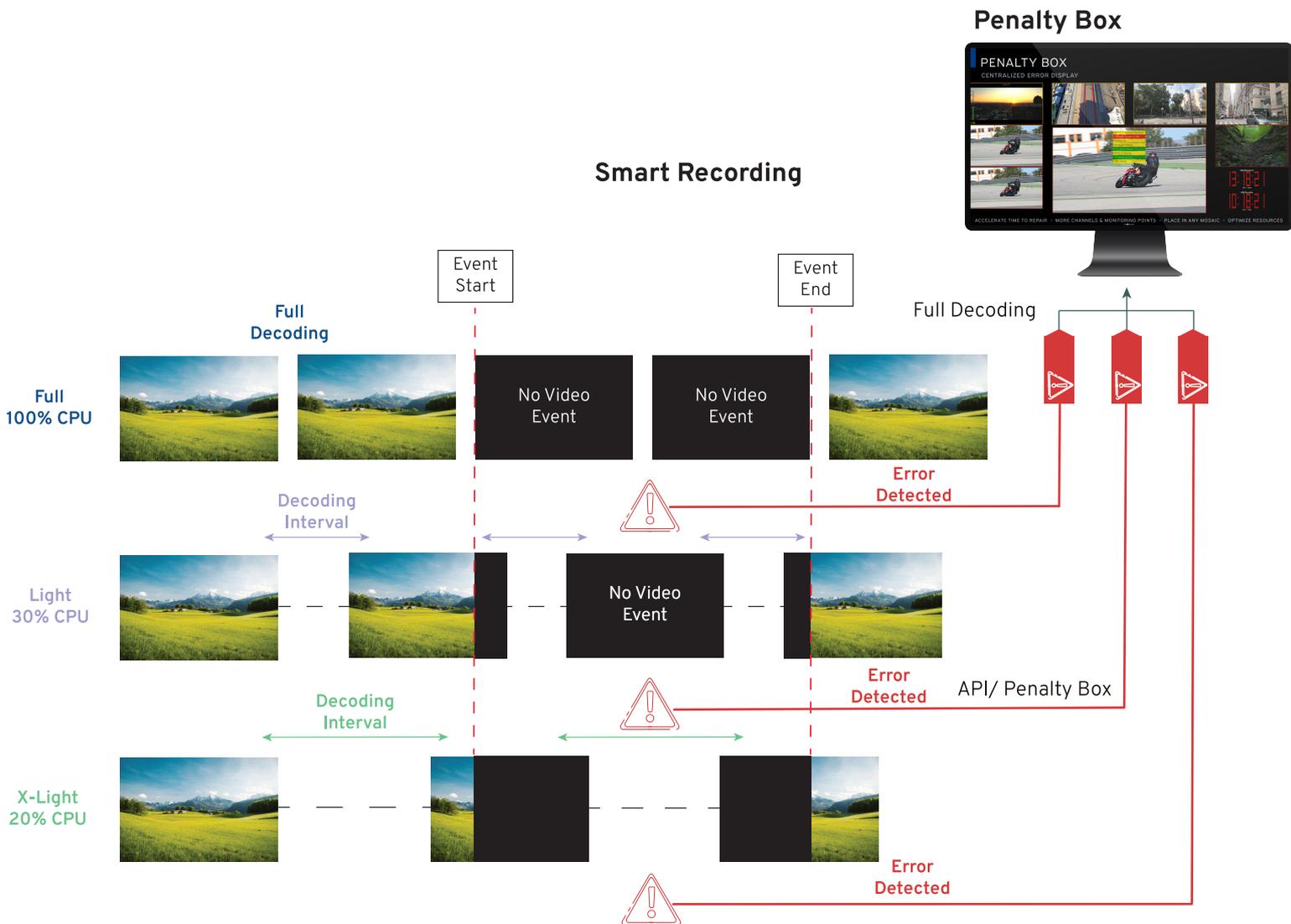
Adaptive Monitoring is included with all TAG deployments and supports all protocols and workflows, including ST 2110, MPEG-TS, HLS, DASH, Zixi, and SRT, across cloud, hybrid, and on-prem environments.



Adaptive Monitoring Modes

Operators configure each stream with a monitoring mode based on business priority or technical need:

- ▶ **Full Mode** – Continuous decode, real-time probe sampling, and multiview visualization.
- ▶ **Light Mode** – Partial decode with reduced sample frequency (~30% CPU usage).
- ▶ **Extra-Light Mode** – Minimal decode with low sampling frequency (~20% CPU usage).



Operational Advantages

- ▶ **Significant Resource Savings:** Optimize compute resources allocation without compromising quality.
- ▶ **Complete Confidence:** Full error detection and coverage.
- ▶ **Automated Escalation and Visualization:** Stream errors trigger promotion to Full Mode, alarm for operator attention in realtime and full stream visualization.
- ▶ **Zero Friction®:** Fully included in standard deployments of the Realtime Media Platform.



Adaptive Monitoring combined with Penalty Box shown here brings the problematic stream into view at Full decoding mode. Smart Recording feature can also enhance monitoring and root-cause analysis

Feature Highlights

- › **Operational efficiency based on stream priority:** Operators can control the monitoring footprint of each stream individually. High-priority streams receive continuous decode and realtime probing, while others run in lighter modes to conserve resources – all without losing access to full error detection.
- › **No compromise on monitoring coverage:** TAG’s full library of over 500 probes – including freeze, black video, SCTE triggers, loudness, metadata errors, and more – remains enabled on every stream, regardless of assigned mode. Light and Extra-Light modes simply reduce the frequency at which data is sampled and decoded for evaluation.
- › **Automatic escalation when issues are detected:** Any configured probe can trigger an immediate promotion to Full Mode. Faulty streams can then be visualized in a dedicated Penalty Box tile and optionally captured with Smart Recording, allowing teams to respond quickly and with full context.
- › **Applies to any format, any environment:** Adaptive Monitoring supports all formats and workflows – from live uncompressed ST 2110 and contribution feeds to ABR OTT streams like HLS and DASH. Deployment flexibility includes on-premises, cloudnative, or hybrid infrastructures.
- › **Seamless integration with APIs and dashboards:** All Adaptive Monitoring metrics, mode transitions, and stream statuses are available via TAG’s RESTful API, Redis, and Kafka outputs. Integrate with external dashboards like Grafana, Kibana, or custom NMS systems for full situational awareness.



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