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WHITE PAPER

8 crucial attributes of the ideal media network monitoring platform

Introduction

As media ecosystems have grown in complexity, the task of monitoring and managing them has become increasingly more complex and more urgent. The barriers around the well-understood broadcast industry walled garden have been dismantled as the industry has embraced IP technologies on one hand and needed to chase audiences onto mobile devices and into the SVOD arena on the other. As a result, previous traditional broadcast SLAs that were once standard, have been replaced by new agreements that operate at different failure tolerances suited to their IT/MEDIA infrastructure.

The efforts to bootstrap these systems up to broadcast standards have been huge. They have also been necessary. IP networks are increasingly used in all parts of the broadcast value chain, from acquisition through production and onto distribution. The introduction of new remote-based workflows as a direct result of the Covid-19 pandemic is only accelerating this transition, while the mass market deployment of new technologies such as 5G will add further fuel to an already combustible fire.

Effective monitoring of these rapidly evolving networks is crucial for business success. Downtimes involving blank screens or network outages leading to significant rebuffering are widely publicized and the organizations involved suffer considerable reputational damage. Effective monitoring mitigates against this by offering predictive intervention, identifying points of potential failure before they break, while also offering the key benefits of maximizing equipment uptime, an important consideration given the globally connected 24/7 media environment.

Media monitoring via Network Management Systems (NMS), is a competitive market, however, and companies looking to deploy a solution need to weigh up the pros and cons of different systems to arrive at the best fit for their own individual use cases. This paper briefly outlines 8 crucial attributes to look for in any current NMS solution. By ensuring that all these boxes are ticked, media organizations can be assured that they have the effective solution for the ongoing and future needs: an end-to-end platform that provides monitoring, management, and control in a way that is simple, powerful, and scalable.

ATTRIBUTE# 01

User friendliness

The modern workplace is one of the interlocking responsibilities where silos are rightly considered barriers to efficiency and optimization. In that spirit, any effective NMS is one that should also be able to be used by non-technical staff and be able to be accessed by anyone in the company.

Typically, this will mean presenting the large amount of data that is being collected by the solution in a browser-based interface so it can be viewed on-site and remotely. The data also needs to be presented in a way that is comprehensible to non-technical staff, making full use of graphical elements such as dashboards, maps, and diagrams.

When combined together, this helps reduce complexity for broadcasters and other media organizations by giving them a single interface with which they can swiftly ascertain the health of their network and identify any current and potential problems.

ATTRIBUTE# 02

Fast deployment

Time is money and a precious resource in short supply in today's industry. As well as being easy to use, an NMS needs to be swift to deploy no matter the size and complexity of the network. Ideally, the configuration of the monitoring solution needs to be as automatic as possible; this allows processes such as network scan and unit discovery to take place as swiftly as possible. Look for solutions that also select the appropriate driver from a built-in library, further accelerating the process. These should also be configured with automatic alerts and notifications, allowing the monitoring system to start operating immediately without any manual configuration being required.

SaaS deployments, when offered as an option, should be the speediest of all as no additional hardware is required for their operation.

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ATTRIBUTE# 03

Flexibility for TCO control

SaaS is an important option for many users as it provides the well-documented advantages of a cloud-based solution — scalability and the move towards an OPEX cost base as highlights — alongside increased visibility into TCO (Total Cost of Ownership).

The key here, whether on-prem or in the cloud, is flexibility and the ability for organizations to be able to adapt their NMS to meet the evolving needs of their networks without incurring penalties. A structured licensing system can help with this, allowing organizations to scale as and when required based on the total number of devices monitored, especially if add-ons can also be deployed when needed to provide additional functionality, increased levels of redundancy, and more.

Clear visibility into costs as exemplified by initiatives such as open driver policies mean that there are no hidden punitive financial considerations to be wary of, allowing organizations to deploy their monitoring and control with confidence.

ATTRIBUTE# 04

Fully scalable

Any NMS should be fully scalable, enabling it to serve users who operate on smaller, local infrastructures all the way up to the globe-spanning networks that interconnect and power the world's biggest media organizations. Crucially, it should be able to transition between those two states as well, growing with user needs as business evolves.

As part of the architecture that enables this, redundancy needs to be built in as well. Solutions, for example, should be built around a minimum of two separate nodes on independent hosts, either physical or virtual, to ensure complete redundancy at both the hardware and software levels. This, especially if both are run in parallel in an active/passive model, ensures seamless switching in case of problems.

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ATTRIBUTE# 05

Easy integration

The best and most able system in the world is of little use if it does not integrate into your existing infrastructure. Platforms should be open and versatile and designed with end-to-end integration as a central tenet. This ensures a vendor-agnostic approach, regardless of device-type or IP protocol, that enables the solution to be compatible with diverse equipment, networks, and brands that make up the infrastructure.

Given the growing complexity of most media workflows, NMS platforms should additionally come with API licenses enabling advanced integration with third-party systems.

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ATTRIBUTE# 06

Modularity

One of the most obvious commonalities in the most successful recent software developments in the media industry and elsewhere is the importance of the modular approach. This allows users to assemble end-to-end workflows in a manner that suits their own business needs.

For example, media workflows are commonly decentralized between the NOC and remote locations (studios, sport events, etc). For the NMS, the ability to use multiple monitoring probes from remote locations is essential. For optimal monitoring, these probes should have the capability to handle multiple monitoring endpoints while ensuring reliable data transport to the headquarters. In case of a broken link, remote probes need the capability to store historical event data locally, ensuring it is available for further analysis.

This solution removes complexity for new deployments. It also removes the need for complex networking operations that require high-skilled IT tech while having to cope with continuous monitoring of the entire network.

ATTRIBUTE# 07

Real-time performance

Any successful NMS deployment needs to be capable of delivering real-time performance. This means users should have easy access via GUIs and dashboards to a range of data regarding individual devices in the network from live status indicators, to browsable timelines, detailed readings, and more. This needs to be integrated with a comprehensive alarm system, providing notifications of alerts once certain automatically assigned and/or user-defined thresholds are breached.

Remote access is critical to real-time operation here, and following alerts users should be able to send commands to compatible devices to trigger various actions such as reboots, configuration changes, and more.

ATTRIBUTE# 08

Operational Support System

Last, but no means least, if an NMS is to weather everything that can be thrown at it over a multi-year lifespan, it needs to have an effective Operational Support System (OSS) in place. This allows its users to run dedicated support systems such as a Ticketing Management System to simply task assignments when issues do occur anywhere in the network, allowing distributed teams to troubleshoot and tackle them efficiently and in an as timely and cost-effective manner as possible.

Bringing it all together

Monitoring & Control is an increasingly vital part of any successful media business. With the end user demand still increasing while also pivoting towards online methods of consumption, the network topographies that distribute it are only growing in complexity.

The key consideration for broadcasters and operators is that they choose a monitoring, management, and control solution / NMS that can scale alongside this growth while providing complete visibility into costs and adapting to fit their own individual use cases. While a solution does not have to tick all seven boxes listed above, the chances of successful long-term deployment increase quite notably as you progress up the scale. And a solution that matches all 8 attributes provides undoubtedly the best fit for any media business looking for agility, scale, and ease of use coupled with a powerful feature set that ensures maximum uptime with minimal failures.

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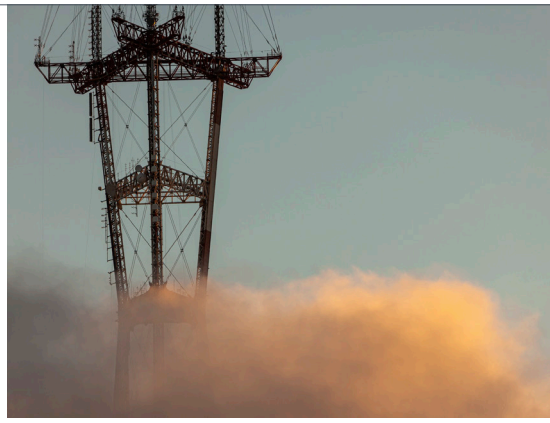
CASE STUDY

Sutro Tower, San Francisco, USA



As an example of what can be accomplished with the right NMS, the use of Kybio end-to-end monitoring and control software at Sutro Tower in San Francisco's Bay Area is a good illustration.

Sutro Tower Inc. is an infrastructure operator managing the transmission facilities for more than a dozen TV and FM stations. In 2016, the company needed a reliable monitoring software to oversee various connected devices and switches, and then, in 2019, in the context of the US TV repack program, needed to renew its system for monitoring and control of the RF infrastructure.

This has to be accomplished without any downtime and required precision, reliability, and safety.

Having already installed a predecessor of Kybio (then called WorldCast Manager) as part of the 2016 project, Sutro Tower selected Kybio for the 2019 renewal due to its vendor-agnostic philosophy and the ability to integrate all the different types of equipment and systems required into one seamless package. Kybio now manages all aspects of the Tower operation as a result, from RF presence on each antenna, to RF line pressure and flow monitoring, IT infrastructure, main power transfer switches and generator status, as well as a fleet of new RF Switch Controllers supplied by WorldCast Systems.

The ongoing nature of the business and the success of the Tower's operations means flexibility and scalability is key.

"Sutro Tower is a dynamic site, more stations are being integrated as the world progresses, and Connect is an active partner, accommodating changes and revising displays and alert notifications as desired."

RAUL VELEZ,

VICE PRESIDENT AND CHIEF OPERATING OFFICER
SUTRO TOWER INC.

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Ready to improve your media monitoring? Getting set up with Kybio is easy, takes only a few minutes, and your first 3O-days are FREE.

Request a free trial

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