Vision TV Business Monitor

A Scalable Interactive Services Monitoring Solution

The Vision TV Business Monitor (BM) is an integrated solution designed for the management and monitoring of infrastructure interactive services and digital media. Tracking field-specific TV appliances and infrastructure that service real-time interactive applications, it provides a window into the performance of interactive business processes and equipment of the video headend.

A foundation layer is used to simultaneously safeguard and monitor the availability of equipment in the headend through management protocols such as SNMP. It provides a magnification into the availability and network status of critical application specific devices from receiver decoders, encoders, edge QAMs and splicers through to VOD servers, media clusters, and CA/DRM appliances. A payload layer provides further safeguards to handle the transmission network, video stream, transport stream and stream control protocols. This opens up video specific traffic to analysis and defect prevention. Ultimately, the full perspective is achieved through an upper service application layer that exposes the business logic - giving real-time and historical views on service transactions, assets, content ingestion/delivery, subscribers and sessions.

TV service providers are now able to proactively manage their complex interactive services environment from the headend equipment and transmission networks through to the actual business processes and transactions. Collected data are transformed into dashboards, helping operators easily digest the status of servers, network, video delivery, and business processes. BM equips operators with the tool and intelligence needed to make business-critical decisions and rectify problems before they impact customer satisfaction.

Business Process Monitoring

Business Process Monitoring (BPM) is a service application layer that taps into the business process flow to enable TV service providers to understand, manage, and improve interactive services, preventing potential revenue loss and maintain a high level of service availability. The transaction status of specified business processes are monitored in order to maintain service levels while the latency time of transactions can indicate unexpected system downgrades. BM helps to improve customer satisfaction by ensuring timely response on critical business flow.

Performance Monitoring

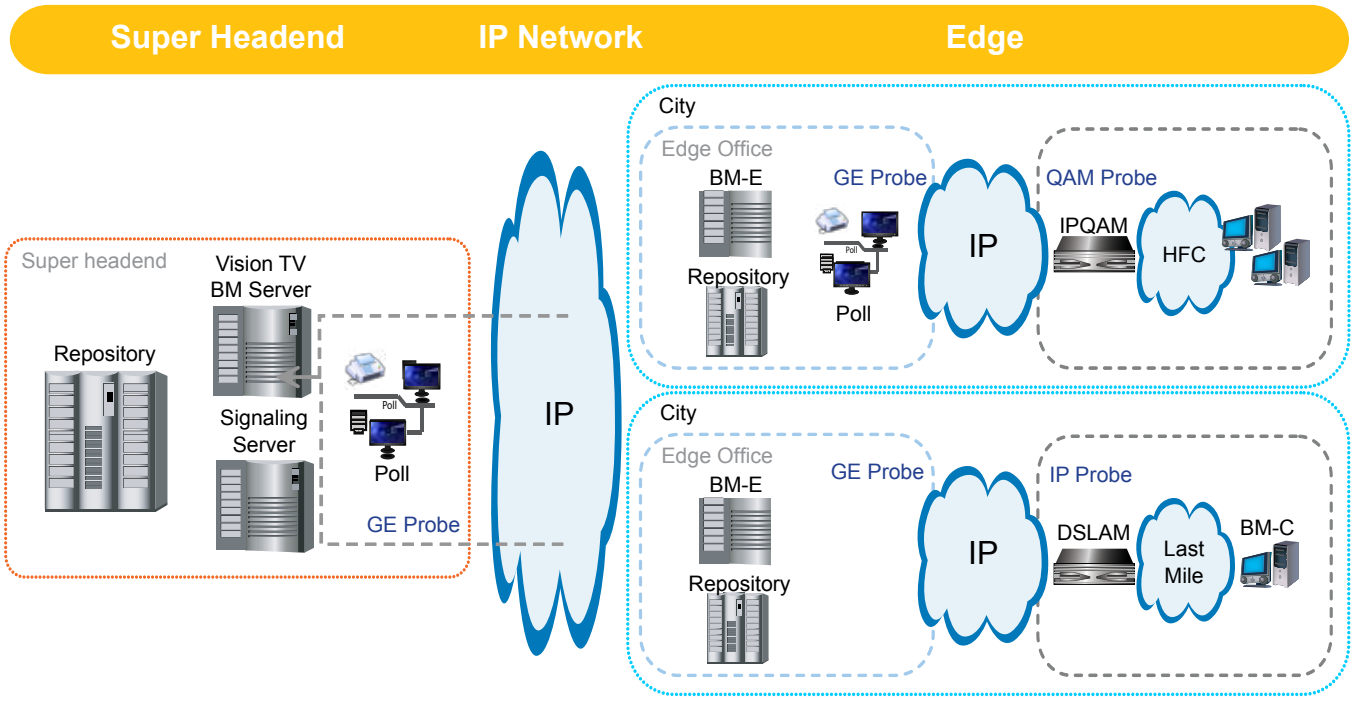
Payload layer that provides a view into the video transmission quality and monitored from headend through to the edge network. Dedicated probes are deployed for the IP network and HFC network to provide a complete view into the health of the video delivery system. Performance monitoring is achieved through VTM (Video Transportation) and RTA (Real-time Activities) modules.

Service and Resources Monitoring

Foundation layer where service and resources monitoring is carried out at the headend BM server. Thresholds are specified and if in an event of failure, the system will send out notification by e-mail or SMS. BM can monitor specific digital media components, such as IPQAMs and video servers, and is able to track their unique characteristics rather than treating them merely as common network devices. Resources monitoring is implemented through the SNR (System and Network Resources) module.

Product Overview

System Architecture



Major Components

Business Monitor Server (BM-S)

Maintains a centralized repository to keep track of business process events, handles SNMP GETs and TRAPs, receives and consolidates data from probes.

Business Monitor Edge Collector (BM-E)

Acts as a data collector for distributed deployment, it helps manage huge dispersed heterogeneous networks, polls monitored devices from various locations and consolidates data at the centralized repository.

Business Client Collector (BM-C)

Acts as a data collector embedded to the client device, typically the set-top-box (STB).

GE Probes

Monitors the video transmission from headend to IP network and from IP network to HFC, it detects if there is any video quality downgrade when transmitting through the network.

IP Probes

Monitors the video transmission quality after IPQAM, it detects unexpected downgrade in the frequency signal.

Key Features

Platform Modules

Dedicated modules cater to the monitoring requirements of each area of the infrastructure. From the health of the digital TV ecosystem (TVE) and view of the business processes with TVE and BPM to the real-time activities and end-to-end monitoring of the video transport with the RTA and VTM modules. Platform modules co-ordinate the events and alerts to the dashboard to present an all-in-one critical summary.

Business Process Monitoring

Conducts transaction monitoring on critical business processes specific to interactive digital media services such as movie access, purchase, subscriptions, video storage or streaming transactions.

TV Ecosystem Monitoring

Proactively monitors parameters based on the type of digital media equipment. Tracks the port alarms, and input/output channels in the case of edge QAMs. Or, it tracks the SD/HD streams, ingestion availability, and disk/network usage in the case of a video server.

Video Transport Monitoring

Proactive monitoring on the video transmission to help identify the problems at the headend, transmission networks such as GE network, 10GE network, and HFC network (IPQAM) and provides real-time key information such as transport stream metrics: data loss, CC errors, PID bit rates, outages.

Real-time Activities Monitoring

Conducts proactive monitoring and provides real-time display of key statistical and status information from devices, network, resource utilization to connection and response times.

Service and Resources Monitoring

BM is also able to monitor the status of popular network services such as Oracle, MySQL, FTP, HTTP, SSH, NTP, JBoss, DNS and so on.

Standard Features

Alarms and Notifications

Supports alarm generation on vital parameters. Configurable support for E-mail, SMS, and pop-up alerts.

Problem Diagnosis

Provides pictorial representation of network & server information to debug headend server or network issues. It helps proactively capture, report, and act on events that may impact your network performance.

Reporting

Out-of-the-box reports that are customizable ensure that information is reported in a manner that is most apt for your organization. Real-time reports show network availability, network utilization, throughput, CPU usage, packet loss, disk utilization, memory used, and error rate.

Web-based User Interface

A web-based user interface is provided for remote.

Scalability

Supports centralized and distributed deployment. Number of BM collectors and probes are configurable to suit the customer's environment.

Beyond Entertainment & Experience

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