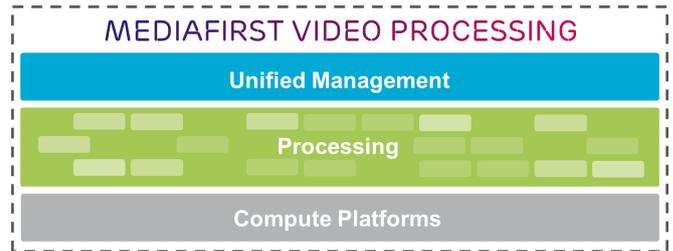# MEDIAFIRST VIDEO
PROCESSING
MANAGEMENT

MediaFirst Video Processing - Management- *the wise choice for converged headend management*

Traditional broadcast TV, broadband and mobile video services are rapidly converging, so you need a network management service that takes a holistic view of service availability and service administration. MediaFirst Video Processing Management is designed to manage multi-screen and broadcast video head-ends from a single unified interface.

Unlike most other Network Management System, which are focusing on device management and monitoring, Ericsson puts the emphasis on what truly matters in operations: Video Services. We call this new approach "Service-Oriented Monitoring".

MediaFirst Video Processing Management features a comprehensive web interface to give you a full view of your system. Each view can be customized to mirror your operations (network organization, geographic overview, data-center setup) and from here you can monitor all areas of the headend from various locations.

In order to support your growing operations, MediaFirst Video Processing Management not only supports Ericson products, but also thousands of third party equipment. Thanks to its cluster architecture of interconnected servers, the capacity can scale up as you expand the number of monitored devices. This means that you can aggregate all controls and alarms of your headend and distribution network under one integrated interface and get a single view of your entire deployment.

The failover tools maximize the availability and reliability of the headend. It can support a wide range of redundancy schemes to make sure your services stay up and running all the time.

PLATFORM HIGHLIGHTS

Service Management
Service Oriented Monitoring gives you the real time operational status of channels and provides a drill-down analysis process to solve issues per priority. The Scheduled Service Control orchestrates jobs at channel level. It controls all equipment to schedule, trigger and track job execution, even during failover.

User Interface
The User Interface is the main monitoring entry point for the operator, accessed as a web-based application or as a standalone client. It contains four main parts (header, card area, navigation pane, alarm console) designed to highlight data that are relevant for you.

The interface features four virtual screens, workspace management, real-time monitoring of devices, and is organized as a logical tree view. The user interface can be tailored for each deployment, answering each operational need specifically. New views can be created in Microsoft Visio™ and imported in the system to create custom interfaces.

Device Monitoring
MediaFirst Video Processing Management integrates the monitoring of all Ericsson products as well as more than 4000 additional third party devices.

Device monitoring covers both alarm state and performance monitoring. It supports various protocols (SNMP, SOAP, REST, telnet) to collect device information.

Service-Oriented Monitoring

Service Oriented Monitoring provides additional graphical and synthetic views allowing:

- Monitoring at service level (i.e. by channel), instead of equipment level
- Identifying service impacts to drive operational priorities
- Drill-down process from service to equipment in order to easily find impacting alarms

Redundancy Management

MediaFirst Video Processing Management manages failovers across the whole ecosystem between primary and backup devices gathered into redundancy groups (pools of primary & backup devices). Various redundancy schemes are supported depending on device type capabilities: 1+1, N+1, N+M.

The failover process is triggered upon customizable alarm conditions, and both manual and automatic modes are supported. The failover algorithms can be customized to support stepped interactive modes (enabling human control on pre-production outputs for instance).

Customizable Alarm Management

Control and flexibility is offered to the operator in order face any operations context:

- Alarm severity setting using alarms templates
- Alarms can be assigned to specific users
- Alarms can be masked (for maintenance operation purposes, device used without the need to monitor alarms…)
- Alarms can be cleared manually and comments can be added by operators, thus enabling communication when several users maintain the same platform(s).

Scheduled Service Control

Scheduled Service Control (SSC) enables the operator to perform automation and orchestration of jobs at service (or channel) level. For example, for each service, the operator can schedule:

- Service black-out
- Live recording of a service / profile to a file
- Logo insertion in a service
- Or other interactions can be scripted and scheduled using programmatic APIs based on XML templates.

Dashboards and Reports

There is a wide range of reporting capabilities that can apply at different levels: system, service, element or Business.

Reports are generated from the events history and can be immediately displayed in the GUI. Source data can also be exported into a CSV file for further consolidation.

Report templates can be configured for recurring activities: Default templates include: Activity report, Activity summary report, Equipment status report, and Service level report

Platform Configurations

Platform configurations are designed to address all kind of dimensioning with different critical levels:

- *Stand-alone Configuration*: This configuration consists of a single node solution, and addresses entry dimensioning conditions.
- *Redundancy*: Each server can be secured with a 1+1 redundancy scheme, including a full synchronization of data and failover mechanisms.
- *Cluster Configuration*: The Cluster configuration aggregates several servers seamlessly to support scalability requirements

Configuration App

Configuration App is included which reduces the provisioning complexity and improves the time of installation and extension of ecosystems. It includes the flowing features:

- Auto discovery of devices
- Connectivity configuration
- Redundancy configuration

Northbound interface

A Northbound interface is exposed to enable higher level umbrella Network Management Systems to:

- Receive Alarms and Events (by SNMP, with filtering capabilities)
- Control system actions (e.g. to manage Redundancy actions) over a SOAP Interface

SPECIFICATIONS

Monitoring

Equipment Monitoring
End to End headend equipment alarm and events management.

Trap and poll data collection.

Alarm levels customization through templates.

Alarm database advanced filtering.

Service-Oriented Monitoring
Monitoring at Service Level (Channel and Output type). Drill Down analysis process from service impact to impacting alarm identification.

Communication Protocols
UDP, TCP/IP, REST, SOAP, HTTP, SNMP v1/2/3, Telnet, XML

Trending
Configurable trending on monitored KPI

Reports & Dashboards
Graphical reports in GUI, exportable data to CSV format. Default and customizable reports.

Redundancy Management Communication

Schemes
1+1, N+M device redundancy schemes

Failover modes
Manual or Automated based on alarm severity. Custom algorithm for stepped interactive execution.

Priority Management
Encoder priority management for N+M scheme

User Interface

Access
Web-based UI. Single access point across a cluster.

Views
Main Views: Device, Rack, Connectivity, Redundancy Groups, Alarm Console

Service Oriented Monitoring Views: Synthetic and Graphical Views for Services, Service Chain, All Equipment and Equipment Details

Logical Organization of Views: Hierarchical tree of equipment and sub-views

Various Layouts: 4 virtual screens, tab layout, multiple card layout

Security
Groups and User profiles and rights management

Notifications
Alarm notification to email and mobile (configurable criteria)

Supported Devices

Ericsson
MediaFirst Video Processing Encoding, Stream Processing and Packager

Third Party
IRD, ASI Matrix, IP Switches, Mux, Modulators. Large catalog of pre-integrated devices (contact Ericsson for complete list of over 500 vendors)

Device Detection
Automatic device detection by network scan

North Bound Interface

Alarm Forwarding
SNMP trap to third-party hypervisor. Configurable sending criteria (severity, device…)

Control Interface
SOAP control interface for third-party control (e.g. for failover triggering)

Scheduling

Service Scheduling
Scheduling of jobs per service from GUI

Job Types
Logo insertion, Record, Blackout

Control API
SOAP API to trigger and control jobs from external server

Compatible Hardware Platforms

Ericsson Appliances
Ericsson G5 1010 (1RU, redundant power supply, 4 Gb NIC, Intel processor,32 GB RAM, RAID disk)

Software Edition
Qualified with guaranteed performance on HP BladeSystem (HP BL460c blades, C3000 and C7000 enclosures)

Scalability
Clustering with multiple MediaFirst Video Processing Management nodes. Single Monitoring and Administration Access Point

Redundancy
1+1 redundancy for each Node. Internal heartbeat with Automatic switch-over