Elements

Proactive system health monitoring for intelligent networks

Sandvine Elements is a single viewpoint for operation and maintenance, delivering a centralized, graphical interface for key functions, including alarms, licenses, configuration, and deployment.

KEY BENEFITS

- REST API for tight integration with customer's monitoring or operations support systems
- Flexible APIs for integration with third-party VNF Managers
- Real-time health check and performance monitoring (with threshold-based alarms)
- Unified configuration tool for all Sandvine products
- HTML-based web client; requires no plugins or additional software

Elements, an integral component of the Active Network Intelligence (ANI) Portal, is Sandvine's unified tool for system and network health monitoring. It monitors any Sandvine deployment, physical or virtual, to ensure the high availability of the infrastructure, and enables real-time updates of system policies to maintain a high quality of experience (QoE) for users.

Elements empowers network operators to proactively respond to new opportunities or trends by creating and deploying network-wide service policies from a centralized graphical user interface (GUI), drastically simplifying all aspects of Sandvine operations management with granular, role-based control.

Sandvine's Elements architecture is based on lightweight microservices to deliver high-performance real-time management capabilities. By delivering real-time information, it positions operators to have precise control over their network nodes and starts them on the path to full orchestration and automation using industry standard interfaces.

KEY CAPABILITIES

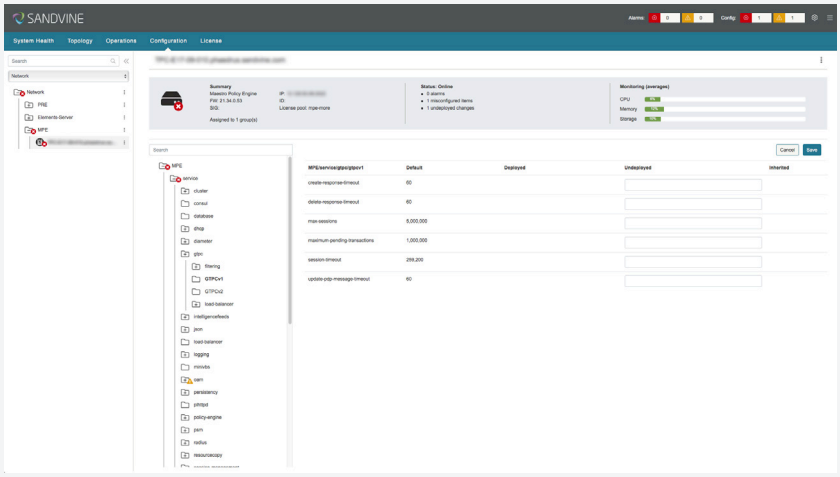
Elements supports a full range of operation and maintenance capabilities for Sandvine products, including the following services:

- **Deployment:** Dynamic configuration support for Insights, Maestro, and ActiveLogic product families, including bulk configuration changes across multiple nodes in one click
- **Configuration:** GUI for configuring Sandvine products via NETCONF/YANG protocols, with full support for hierarchical configuration groups for configuration inheritance and pre-staging as well as role-based access
- **Performance Monitoring Services:** Real-time and historical performance statistics and Key Performance Indicator (KPI) metrics for system health
- **Operational Statistics and Health Check Services:** Role-based access to configuration interface and log file commands as well as key health metrics of deployed products and network nodes
- **Alarms and Fault Management Services:** Configurable alarms and events that display real-time network node fault information
- **Inventory Service:** Real-time inventory reporting, with multiple system characteristics like system type, version, IP address, etc., for logistics and sparing control and monitoring
- **License Management Service:** Dynamic management for capacity and use case licensing, with a full entitlements inventory across all systems
- **Audit:** Capable of auditing the system for configuration inconsistencies between the configuration database and the nodev

Figure 1

Elements user interface
main views:

- System Health
- Topology
- Configuration and Deployment
- License



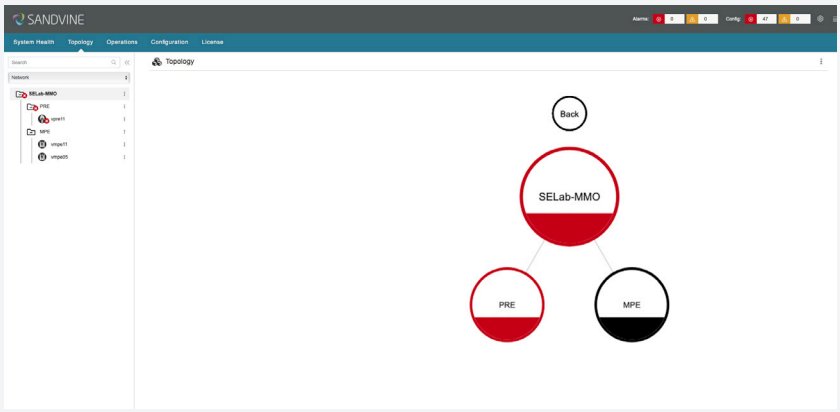


Figure 2

Configuration and deployment
services

- NETCONF/YANG support
- Full view of network element configuration and YANG model
- Configuration changes push via NETCONF or bundles
- Audit mechanism and misconfiguration detection
- Hierarchical groups for configuration templating

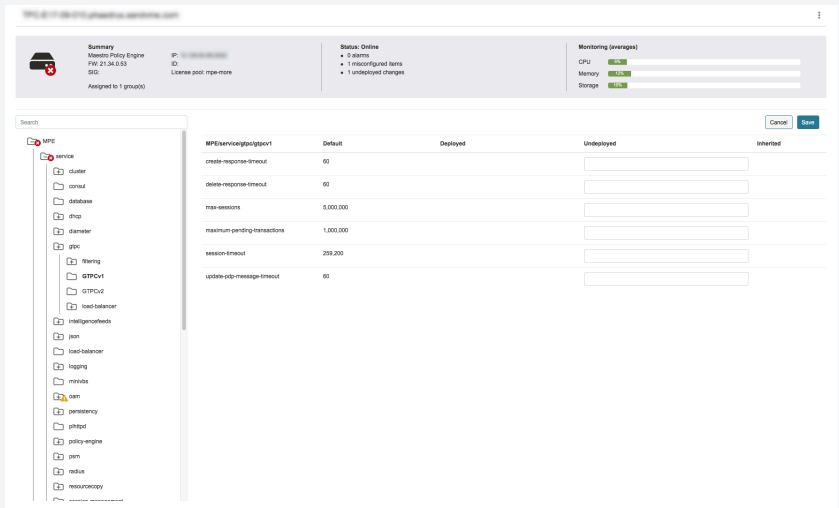
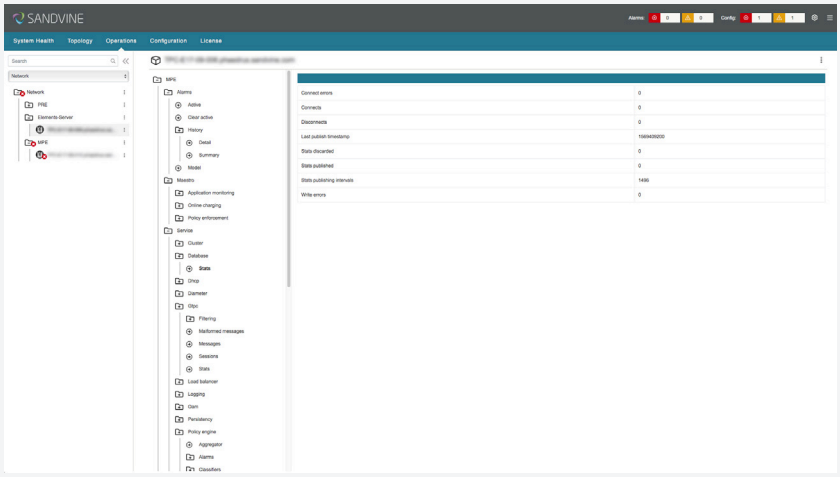
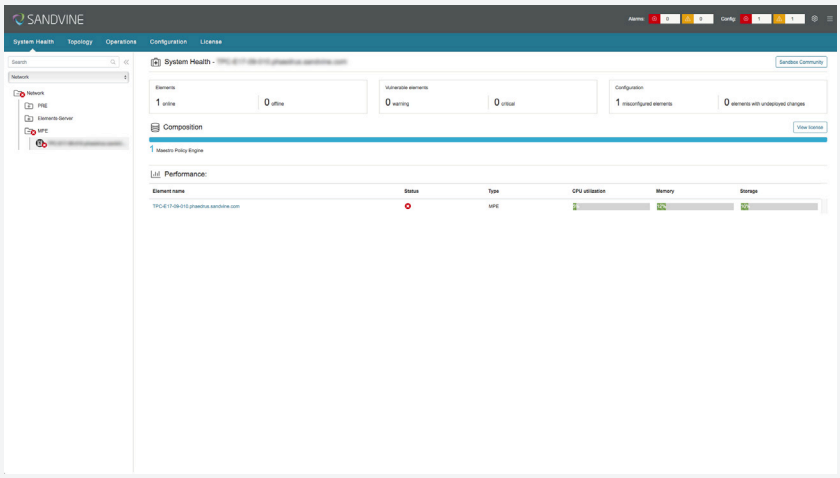


Figure 3

Alarms, Logs, and System Health

- Access to operational CLIs via web client
- Access to logs via web client
- Alarms and alarms history view
- Performance view
- CPU utilization
- RAM utilization
- Disk utilization
- Network element inventory





ABOUT SANDVINE

Sandvine helps organizations run world-class networks with Active Network Intelligence, leveraging machine learning analytics and closed-loop automation to identify and adapt to network behavior in real-time. With Sandvine, organizations have the power of a highly automated platform from a single vendor that delivers a deep understanding of their network data to drive faster, better decisions. For more information, visit **sandvine.com** or follow Sandvine on Twitter at **@Sandvine.**

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