VIAVI
VIAVI Solutions

Brochure

NITRO AIOps

Cloud-Native, End-to-End Service Assurance

The VIAVI NITRO® cloud-native Artificial Intelligence for Network Operations (AIOps) portfolio helps CSPs, DSPs, ISPs, Utilities, and Enterprises accelerate their digital OSS transformation journey by evolving their legacy network operations center (NOC) to a dark NOC. The NITRO AIOps End-to-End Service Assurance solution enables the breaking down of silos across network domains to provide a vendor agnostic and holistic view of the entire network – end-to-end. With real-time monitoring, NITRO AIOps Service Assurance enables root cause identification of Customer Experience (CX) -impacting issues enabling proactive problem resolution.

| Network Intelligence | Auto Discovery and End-to-End Network Service Topology | Service Assurance and Analytics (Telco, Cloud & IT) | Zero Touch Operations & Closed Loop Monitoring | AI-driven Capacity Forecasting and Anomaly Detection | Application Performance Monitoring & Observability | Field Operations Management & Tower Mobile App |

NOC/SOC Applications

| Performance Assurance | | Fault Management & AIOps | | Intelligent Correlation | | Inventory Management | | Configuration Management | |

NITRO AIOps Service Assurance

Network & Service Assurance	Service Quality Management	Deduplication & Enrichment	Noise Filtering	Cross Domain Correlation	Customer Experience Analytics	Physical & Virtual Inventory	Resource Catalog Management	Configuration Change Management	Configuration Delta Analysis
Cross Domain Correlation	Root Cause Analysis	Event & Alarm Analysis	Incident Classification	Probe Correlation	PM, FM, CM Correlation	Auto Discovery & Reconciliation	Service / Resource Provisioning	Configuration Backup & Restore	Golden Configuration Comparison

| End-to-End Topology | | AI/ML Analytics | | Automation & Orchestration | | IP Address Management | | Observability/ Application Monitoring | |

Single Pane of Glass	E2E Service Topology	Forecasting & Capacity Planning	Anomaly Detection	End-to-End Automation	Zero Touch Provisioning	Single Holistic View	Rogue IP Detection	App, Flow, & Kubernetes Monitoring	Log Analytics & Forensics
MW Route Path Analysis	Traffic Pattern Analysis	Data Science Work Bench	What-If Simulation	Parameter Comparison & Analysis	Closed Loop Automation	IPv4 Management	IPv6 Management	Autonomous SOC	Infra Layer Observability

Data Sources

Performance Counters	Alarms	Logs	Traces	Inventory	Customer Experience	License Data
KQI	Events	Metrics	Configuration	Network Probes	Revenue Data	Ticket Information

Interface Protocols

| SNMP v2c, v3 | CORBA | ODBC, RPC, RMI | FTP | SFTP | Rest API | Telemetry | Kafka Streaming | NETCONF | RESTCONF | Custom Interfaces |

Domains

| Radio | Microwave | Open RAN | IP Mobility | IP Enterprise | Firewall | DWDM | Core RAN | Core-CS, PS | FTTH | IN/VAS | Fixed Line |

Environment

| Physical Servers | IoT | Ericsson VNF | Nokia VNF | Cisco VNF | Huawei VNF | Azure Cloud | Google Cloud | Amazon Web Services | Docker + Kubernetes |

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AI for Network Operations (AIOps) Portfolio and Coverage
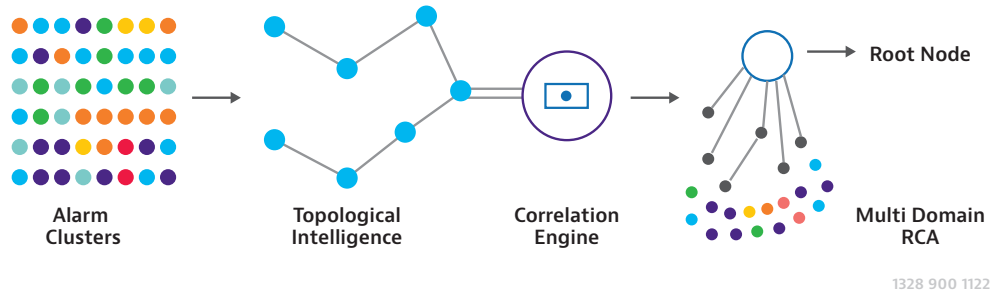
NITRO AIOps Service Assurance

Enable network operation teams to proactively identify and resolve CX-impacting network problems and ensure quality service delivery

- Identify critical metrics for bottlenecks that affect Quality of Service (QoS)
- Proactively plan network capacity
- Forecast Network Faults
- Analyze and predict network traffic

A One-Stop Solution

VIAVI NITRO AIOps visualizes, automates, and optimizes digital experiences as well as service and network quality across hybrid telco and IT networks by integrating real-time assurance with closed-loop automation and analytics driven by artificial intelligence/machine learning.

Powered by a topology, assurance and analytics suite of applications, NITRO AIOps governs the digital experience as well as service and network quality with intelligence that monitors, detects and heals by leveraging local orchestrators, driving digital transformation initiatives towards autonomic network management.

Alarm Clusters → Topological Intelligence → Correlation Engine → Multi Domain RCA / Root Node

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Teams	Benefit	Value
• Network Operations	• Proactive alerting system	• Improved operational efficiency
• Field Operations	• Collaborative space for operators	• Faster alarm triage
• Customer Care	• Automated process workflow trigger at the edge	

Product Features

NITRO AIOps is available as a cloud service on public, hybrid, and private clouds.

Network Performance Monitoring

Monitor your network with 1000+ KPIs along with intuitive dashboards, instant alerts, and intelligent reporting

End-to-End Network Topology

Automated end-to-end, multi-layer, multi-vendor, multi-domain topology with end-to-end visualization and management

Network Configuration Manager

Integrated with the Network Auto-Discovery Framework which automatically retrieves the current status of the network

Workflow Automation

Orchestrate and automate network fault troubleshooting steps and ongoing maintenance tasks with ease using a rule-based workflow engine

Anomaly Detection

Detect and rectify abnormal patterns in the network automatically through AI algorithms

Application Performance Management

Monitor application performance across physical, virtual, and cloud environments to ensure mission-critical business apps meet end-user expectations
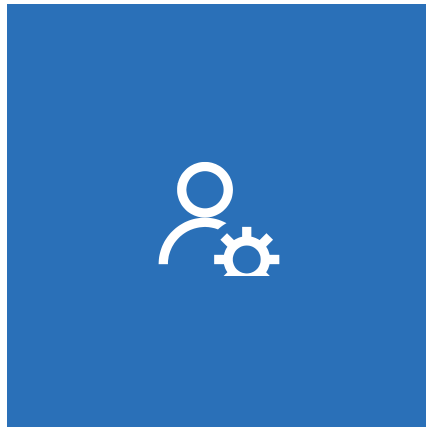
GIS and Network Topology Visualizer

Understand the bigger picture by visualizing how the overall network infrastructure is organized

Proven Success Cases – Focus: CSPs

Empowering Fault Management

Through automated service quality management, customer experience impacting failures and the probable root cause of network failures can be identified and rectified, thereby reducing resources required to support the network leading to overall OPEX reduction

Improved Capacity Planning

Planning the network capacity is very crucial, especially on special occasions. NITRO AIOps forecasting prediction algorithms give an idea to capacity planning teams as to the reduction or addition needed based on observed data

Automated Network Orchestration

Repeatable activities can be automated using the root cause analysis (RCA) workflow feature which, in turn, increases the efficiency of the network avoiding manual intervention and potential associated human errors

Customer	Problem	Solution	Benefit
East African Operator	High handoff and drop rates impacting customer experience	Identified capacity issues in Mw VoLTE network elements	Improvement in customer experience identified via an audit
Middle East Operator	High roamer issues observed in the network	AIOps Service Assurance observed high GGSN reject failures in particular roamers	Roamer issues were reduced with improved customer experience
North American Operator	No single system to view the performance of all network elements	Provided end-to-end analytics of the entire network	Single pane of glass enterprise customer performance views