

NITRO AIOps PON Assurance

Predict and Resolve PON Failures Before Your Subscribers Report Them

Predictive Fiber Network Operations



THE CHALLENGE

Your fiber does not talk, and subscribers cannot stop talking

Reactive PON operations is not just an operational problem. It is a business one. Every undetected fault that surfaces as a subscriber complaint is a churn risk. Every wrong-team dispatch is a wasted truck roll and a longer outage. Every hour the NOC spends triaging alarm floods without root cause is an hour not spent on anything else. For NOC Managers and Operations Directors running mature fiber networks under pressure to grow profitably with flat OPEX and flat headcount, the cost of staying reactive compounds quietly until it does not.

The problem starts with visibility. The passive network between your OLT and subscriber generates no telemetry. Splitters, distribution fiber, drop fiber: none of it alarms. When it degrades, your EMS does not know. Your NOC does not know. The first signal is a subscriber complaint, and by then you are already behind.



The Passive Layer is Invisible

Splitters and drop fiber generate no alarms.
Degradation goes undetected until subscribers call in.



Alarm Floods with No Answer

One upstream fault generates hundreds of ONT alerts.
The NOC triages manually with no correlation to a single root cause.



The Wrong Team Goes Out

Without physical fault location, the wrong crew is dispatched.
The subscriber waits twice as long.

VIAVI NITRO AIOps PON Assurance is the only PON assurance platform that predicts subscriber-impacting failures hours before they occur and resolves them up to 75% faster, scoring every element across your entire PON network, any vendor, including the ones that do not generate alarms.

Predict sooner. Resolve faster. Scale without adding headcount.

FROM DETECTION TO RESOLUTION: HOW IT WORKS

The four capabilities below are not separate modules. Each one enables the next. Detection without automation is just an alert. Automation without expertise is inconsistent. Together, they close the loop from first signal to resolved.

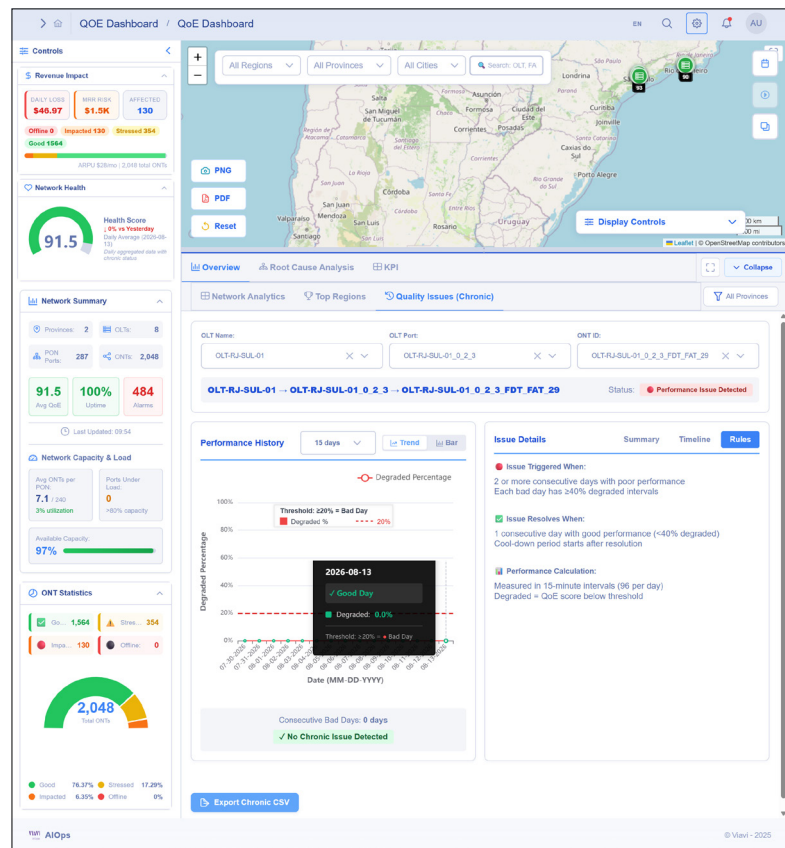
1 QoE DETECTION

The Network Is Talking. You Just Cannot Hear It.

Your EMS monitors managed devices. Splitters, distribution fiber and drop fiber sit entirely outside its view. When the passive layer starts degrading, the first thing most operators see is a wall of ONT alarms with nothing pointing to why.

VIAVI's QoE engine scores every element in the PON hierarchy continuously, including passive components that generate no alarms. A deteriorating splitter, a fiber span losing margin, an intermittent impairment quietly eroding subscriber experience: QoE sees all of it. Because it measures actual signal quality rather than waiting for a threshold breach, it surfaces the problem hours before it becomes an outage and before a single subscriber picks up the phone.

When you can see a fault developing hours before impact, the team that responds can act with precision rather than urgency. That is what the next capability is built on.



QoE Dashboard: revenue impact, network health score and per-subscriber degradation status across the full PON hierarchy

2 INTEGRATED AUTOMATION

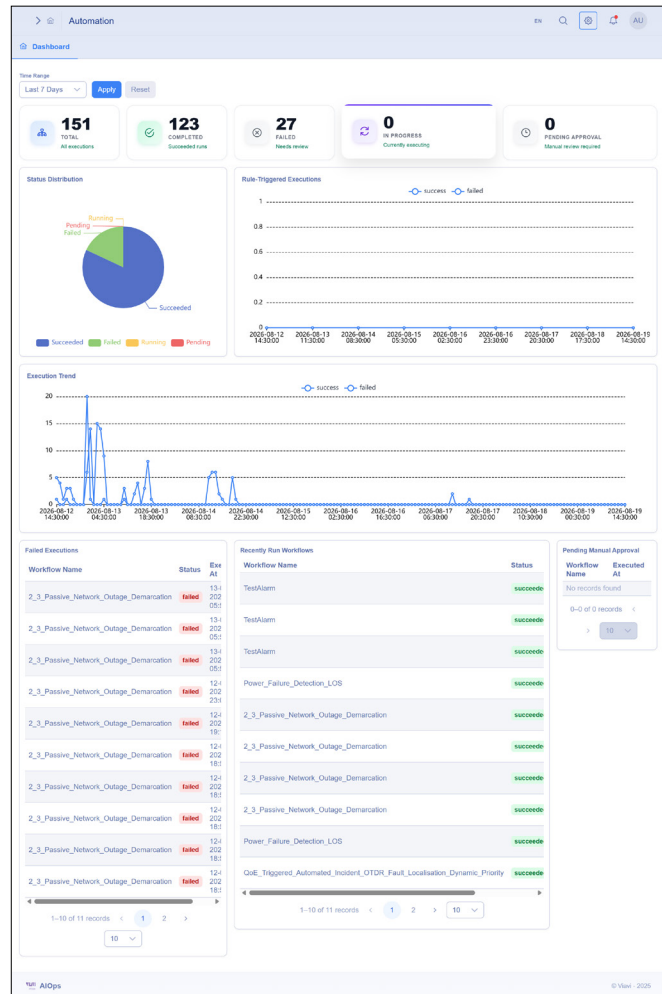
Right Team. Right Place. First Time.

A complex PON fault typically takes an experienced engineer 90 minutes moving across multiple systems before a ticket is ready to go. NITRO AIOps does that work in seconds, every time, on every shift.

When QoE flags degradation, the platform determines blast radius automatically, correlates inventory, topology, fault and performance data, and creates a fully enriched ticket without anyone touching a keyboard. For physical faults, OTDR-based fiber monitoring identifies the exact network segment and directs the right crew to the right location before anyone is dispatched. The wrong team does not go out. The ticket does not bounce. The subscriber does not wait twice as long.

Resolution times drop by 75%.

Integrates with your existing NMS and ServiceNow without replacing them.
No rip-and-replace required.



Automation Dashboard: 151 total executions with real-time workflow status, rule-triggered runs and passive network fault localization workflows

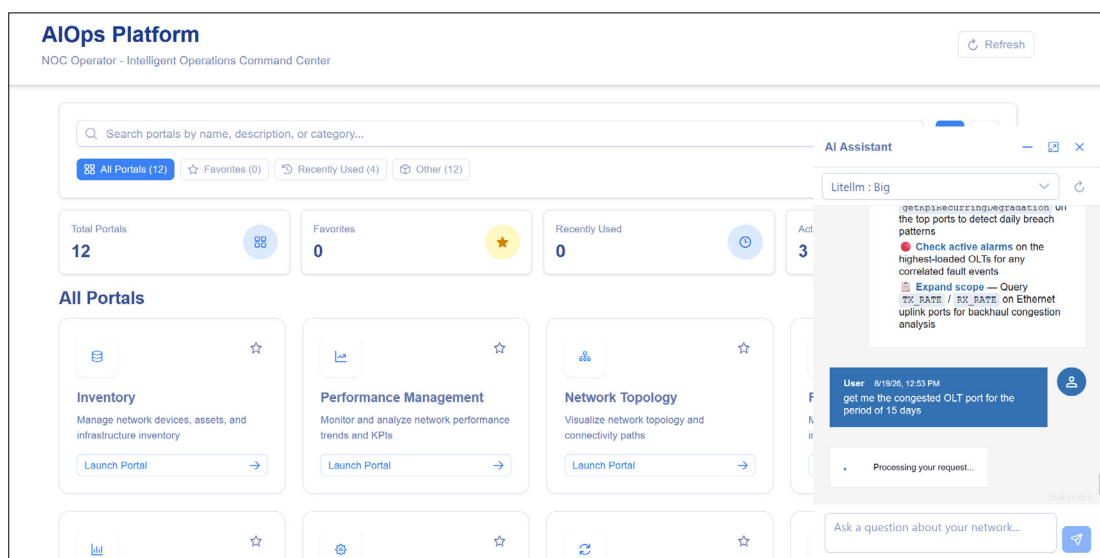
The fault is found, the ticket is written and the right crew is on their way. The next question is whether every engineer on your team has the knowledge to resolve it when they arrive.

3 PON AI EXPERT

Your Best Engineer Cannot Be on Every Shift.

Institutional knowledge does not survive a handover document. The engineers who know your network deeply, who can read an alarm pattern and know which splitter to check first, are not always on duty. When they are not, that capability is simply absent.

The PON AI Expert closes that gap. Every engineer, on every shift, can ask it directly and get a response that draws from inventory, topology, fault and performance data in a single answer. Less experienced staff stop guessing and start resolving. Senior engineers stay focused on the work that genuinely needs them. Documentation, tickets and shift handover notes are generated automatically, so quality and consistency do not depend on who wrote them up at the end of a long shift.



AIOps Platform: NOC Operator Intelligent Operations Command Center with AI Assistant processing live network queries across inventory, performance and topology portals

**Detection covered. Automation running. Every shift equipped.
Now extend all of it across every vendor in your network.**

4 MULTIVENDOR OLT ASSURANCE

When Vendors Say Multivendor, Ask Which Layer They Mean.

Most assurance platforms support multiple OLT manufacturers. VIAVI is the only platform that provides a unified operational view across multivendor OLTs, the most complex and consequential layer in the PON network. Nokia, Huawei, ZTE and Calix are correlated in a single telco-grade view with normalised KPIs and consistent alarm handling across the entire plant.

For operators managing a mixed estate inherited from an acquisition, that means unified operational control from day one, without rebuilding the assurance model from scratch. For operators running an intentional multivendor strategy, it means one approach across the whole network instead of separate tools and separate specialist teams for each vendor.

NOC vendor specialist dependency drops by 33%.

Inventory view: 6,085 resources across FTTH including passive splitters, Cisco, Huawei and ZTE ONTs in a single unified operational view

Inventory view: 6,085 resources across FTTH including passive splitters, Cisco, Huawei and ZTE ONTs in a single unified operational view

Measurable Outcomes

75%	33%	Save Time	Zero
Reduction in resolution times, from first detection to initiated resolution	Reduction in NOC vendor specialist dependency	Earlier detection of passive network degradation before subscriber impact	Wrong-team dispatches when OTDR identifies the correct segment before dispatch

Based on operator deployments and platform benchmarks. Customer-specific results may vary.

Why VIAVI

Physical layer plus analytics in one platform

OLT data tells you a subscriber is degraded. It cannot tell you why or where. OTDR fiber monitoring tells you the exact segment and fault type. VIAVI provides both, natively integrated. No software-only assurance platform can replicate that. The sensor and the analytics come from the same source.

Multivendor where it actually matters

Competitors support multivendor ONTs. VIAVI supports multivendor OLTs. For operators running Nokia alongside Calix, or inheriting a mixed estate, the distinction is the difference between one assurance model and several competing ones. One view. Every vendor. No specialist team per OLT.

The NOC That Does Not Wait

Operators running profitable fiber networks do not have the largest teams. They have the ones who stopped finding out about problems from their subscribers.

The shift from reactive to predictive is an operating model decision. [VIAVI NITRO AIOps PON Assurance](#) is how operators make that move, without adding headcount, without replacing vendor investments, and without waiting for the next fault to tell them something is wrong.

Deployed, not promised

NITRO AIOps is a proven platform with live operator deployments across multiple network domains, including a Tier 1 Latin American operator that achieved the resolution time reduction cited above. PON Assurance extends that foundation to the fiber access layer. Operators are not taking a first-generation product into a critical part of their network.

First step toward autonomous FTTH operations

PON Assurance is the first high-value scenario in a broader programme toward autonomous FTTH operations, powered by the NITRO AIOps platform. The conversation this opens is not about a tool purchase. It is about an operating model decision, and it repositions the NOC from reactive to predictive.

REQUEST A DEMO

Scan QR code to learn more about VIAVI NITRO AIOps PON Assurance





viavisolutions.com

Contact Us +1 844 GO VIAVI | (+1 844 468 4284)

To reach the VIAVI office nearest you, visit viavisolutions.com/contact

© 2026 VIAVI Solutions Inc.

Product specifications and descriptions in this document are subject to change without notice.

Patented as described at viavisolutions.com/patents

nitroaiops-pon-br-nto-nse-ae
30195218 900 0926