# VIAVI
NITRO AIOps Inventory Management

Unified Inventory for End-to-End Visibility

With quality of service being a key differentiator, Communication Service Providers (CSPs) are only as strong as their network performance. However, networks are growing larger, more complex, and increasingly virtual, while customer expectations continue to rise.

The main challenges operators face today include:

- Siloed network systems that are vendor or domain-specific

- A lack of real-time, end-to-end visibility (360-degree view) of network resources and services

- Increased MTTR (Mean-Time-To-Repair) due to difficulty in identifying the root cause of issues

NITRO® AIOps Inventory Management addresses these challenges by consolidating multi-vendor, multi-technology, and multi-domain network data into a single, unified view. With patented VIAVI topology, operators can maintain reliable network performance and gain full situational awareness of their entire network.
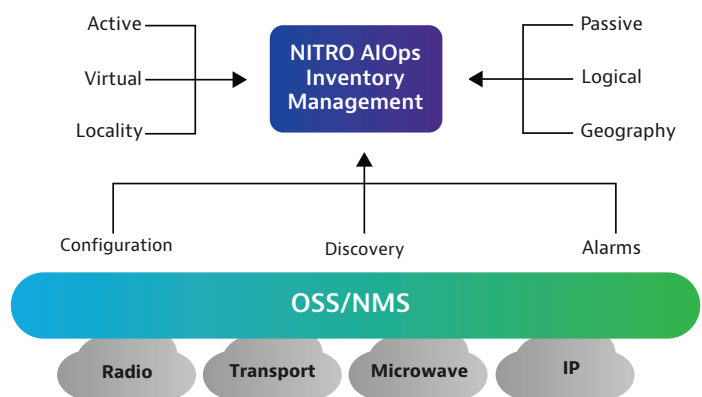
Key Use Cases

**Advanced Inventory Management Platform**

Autonomous Service Change and Configuration
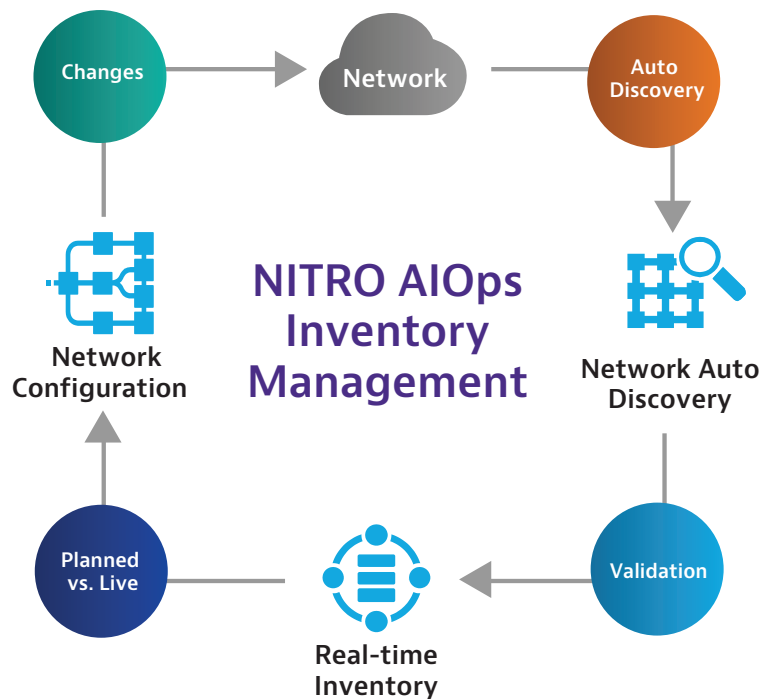
Field Support Intelligence Platform

NITRO AIOps Inventory Management topology acts as a bridge between assurance and inventory management, bringing all network parameters together in a single pane of glass and providing true end-to-end visibility of resources and services.
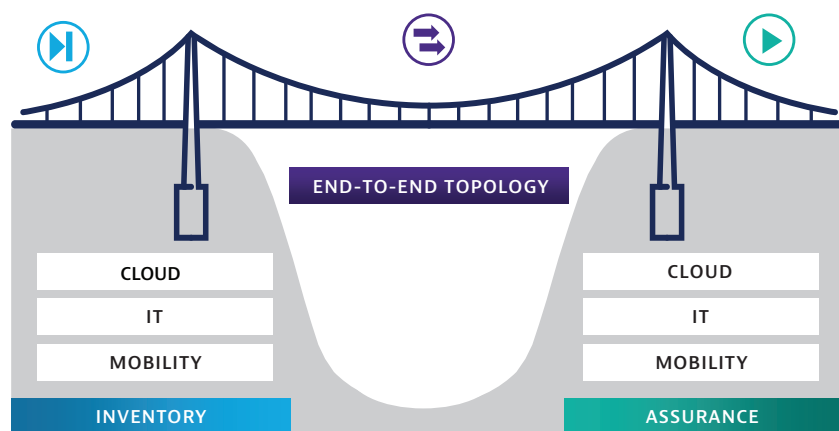
Bridging the Silos – Topology Connects the Silos

NITRO AIOps Inventory Management builds a unified data model by acquiring data from multiple sources of the network system through auto-discovery.

NITRO AIOps Inventory Management

Changes → Network → Auto Discovery → Network Auto Discovery → Validation → Real-time Inventory → Planned vs. Live → Network Configuration

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Benefits

- Unified view of all physical and logical network resources reducing number of legacy inventory systems

- New inventory model that integrates with legacy and hybrid networks across multiple vendor systems, enabling seamless asset discovery and lifecycle management.

- Centralized control over the network, reducing CAPEX and OPEX by eliminating data silos and serving as a single source of truth for all teams.

- Flexibility to deploy adapters to support new vendors or software releases/versions.

Key Features

- **Unified Data Model**
  - All the departments use the same inventory database, which leads to efficient data processing and, thanks to the elimination of lots of dedicated interfaces which reduces operational expenditure

- **Topology**
  - Our patented topology autodiscovers the network elements and dynamically stitches the topology providing a single unified view of the entire network at scale
  - 400+ network adapters available off-the-shelf

- **QR Code Mobile App**
  - Devices at multiple locations can be identified and updated through QR Code Mobile App which helps in effective Fixed Asset Management/Tracking which reduces field work

Customer Challenge

Increased complexity, less visibility

Communication Service Providers (CSPs) often lack real-time, accurate visibility into their networks. This is largely due to outdated systems reliant on spreadsheets and isolated, vendor-specific solutions. As networks expand, the complexity and challenges of managing them increase. To address this, CSPs are seeking to automate critical processes by tightly integrating assurance and inventory management systems, aiming to reduce costs and boost efficiency in their journey toward Zero Touch Operations.

Inventory essential for automation

Automation is not just about responding to faults or outages, but about preventing them by eliminating their root causes. However, legacy systems pose a significant barrier to achieving full automation, by lacking accurate and real-time data on telecom assets. CSPs need a modern, vendor-agnostic asset and network inventory management solution that consolidates data from multiple network sources and integrates seamlessly with other systems to support end-to-end automation.

VIAVI Solution

NITRO AIOps Inventory Management delivers a unified view of the entire network, across all technologies and layers, helping CSPs improve operational efficiency and reduce OPEX. As the core of NITRO AIOps, it serves as the central source of data and information for other key modules, including Planning and Design, Fault Management, Configuration Management, Service Quality Management, and Network Operations. All modules are built on the same inventory database, creating a strong foundation for network automation and digital transformation.

Use Case

Real-time deployment in a major operator provided:

- Deployed across five countries by a tier-1 fixed-mobile network operator in Latin America
- Managing multiple domains and supporting over 120,000 network elements
- Include Mobile Access, Transport (Transmission, IP, and Radio), Fixed Access, Core, and NFV
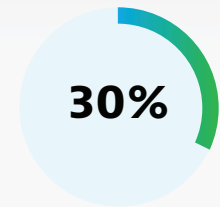
Higher Performance through Automation

99%
Inventory Accuracy

(through Auto-Discovery and Reconciliation)

100%

QR Implementation on Passive Network Elements

70%
Reduction of Site Survey

(leveraging Network Auto-Discovery)

30%

Auto Configuration and Auto Healing on Incidents and Tickets

100%
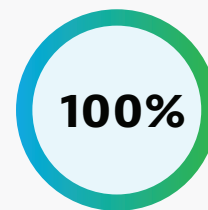
Error Free Provisioning

100%
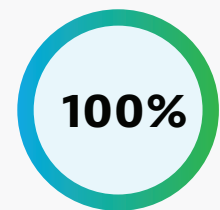
Real-Time Field Team Tracking and Live Tower Monitoring

Additional Features and Capabilities

Inventory Management

Network inventory management allows you to keep track of what network devices you have and all their relevant software and hardware.

Configuration Management

Network Configuration Management is fully integrated with the Network Auto-Discovery Framework, which automatically retrieves the current status of the network.
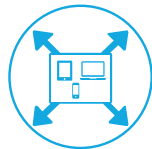
Asset Management System

The Asset Management System enables the Operations Team to manage all the assets that are present in the Network and their Aging Status as well as the Warranty Status of the Assets.

Release Management

The Release Management System enables the Operations Team to manage all the Version Releases that are currently being discovered in the Network Elements along with their Hardware/Software Licensing and Versioning Information.

End-to-End Topology

Patented End to End Topology helps in bridging the Silos currently present in the Network across multiple Domain by dynamically stitching the entire network.

License Management

License Management provides brief information about the license details for each active device based on the domain and NE type categorization

Resources and Service Catalog Management

Resource and Service Catalog Management provides a complete Closed-loop Service Fulfillment solution, which enables efficient network resource utilization and improved service definition.

Site Explorer and Field Tracking

The GIS Explorer provides the Geographical Visualization of all the Sites along with the Network Elements that are present in the Network based on the Geopositioning Information.