optanix

THE OPTANIX PLATFORM: DELIVERING **AIOps**

TODAY'S IT OPERATIONS WORLD IS BECOMING MORE COMPLEX TO MANAGE AS DIGITAL TRANSFORMATION CONTINUES.

With modern resilient infrastructures, outages have become less common than performance problems (periods of delay, slowness or lack of response), which are often harder to detect, isolate and troubleshoot. There is an abundance of data available but the ability for a human to use that data has become impossible at worst and very slow at best.

Artificial intelligence for IT operations – or AIOps – takes advantage of machine learning and analysis to reduce this information overload into actionable intelligence. And by acting independently to prevent problems – or when necessary, to resolve or triage them – AIOps-based platforms are further streamlining the work required by IT operators.

The goal for IT operations remains the same as always: maximizing business service delivery to ensure a superior customer experience. AIOps-based platforms enable this by delivering in four key areas:

- **Prevention** – AIOps predicts impending problems, allowing them to be prevented

- **Speed** – AIOps provides faster recognition of critical issues with superior accuracy, resulting in the ability to find and fix problems faster

- **Efficiency** – Improvements resulting from the use of automation can continuously improve performance and cost effectiveness while providing self-healing capabilities

- **Insights** – Actionable intelligence triggered by AIOps can facilitate collaboration and decision making for both external and internal users of business services

The term AIOps originated from Gartner. They define AIOps platforms as follows:

AIOps platforms combine big data and machine learning functionality to support all primary IT operations functions through the scalable ingestion and analysis of the ever-increasing volume, variety and velocity of data generated by IT. The platform enables the concurrent use of multiple data sources, data collection methods, and analytical and presentation technologies.

The Optanix Platform does just that by using AIOps capabilities to deliver statistical analysis with more accurate incident prediction and detection, better root cause analysis, and actionable intelligence. What's more, the Optanix Platform takes that actionable intelligence and drives operational responses to maintain maximum IT business service performance.

THE OPTANIX PLATFORM

The Optanix Platform provides predictive and proactive business service assurance across hybrid infrastructures, with actionable intelligence for prioritizing and addressing problems before they impact critical business services to protect revenue, improve customer experience and reduce IT costs. It provides full-stack monitoring with end-to-end, top-to-bottom management of the IT infrastructure and services. Advanced analytics and root cause analysis proactively and predictively detect new and impending problems and quickly analyze them from multiple angles to find the true cause and provide actionable intelligence. With business service monitoring and prioritization, these root cause problems are prioritized based on the criticality of the impacted business services to

ensure the most important problems are addressed quickly. Streamlined remediation and management workflows reduce Mean Time to Repair (MTTR) through automation. Secure, multi-tenant remote access further reduces MTTR by enabling experts to rapidly solve problems.

The Optanix Platform is designed to enhance IT operations through the application of artificial intelligence. Its functionality directly adheres to the principal definition of AIOps platforms:

- As a foundation, the platform is scalable to collect, store and manage data from a wide range of sources in today's environments

- It maps complex business services and understand the relationships between components and their statistics to determine the health of the service

THE OPTANIX PLATFORM IS BUILT FOR AIOps

The Optanix Platform is designed to enhance IT operations through the application of artificial intelligence.

- It also uses advanced statistical analysis with machine learning to both detect and predict problems, perform root cause analysis to determine the actual cause of those problems, and provide actionable intelligence that operators can use to remediate them

---

Data Collection and Management
Before an AIOps platform can provide any analytics, it must first collect, store and manage vast amounts of data. The Optanix Platform monitors business services and the components that work together to enable those services, gathering and managing information end to end and top to bottom for the entire service. This information includes flow data, logs, performance metrics, events, telemetry data and more. Most information is gathered out of the box, but customizations can be done through API integrations and using Optanix's Execution Framework to gather additional data. Once gathered, the data is stored and managed in a high-performance NoSQL data lake. With Optanix's distributed architecture, it can store raw data for analysis for over a year.

Business Service Topology
Mapping business service topologies is an essential step in the process of prioritizing incidents, so the most business-critical issues are addressed first, eliminating the need to prioritize issues based on tribal knowledge and best guesses. And while mapping business services is important for traditional management, it is absolutely critical for AIOps as it adds context to the data which enables AIOps platforms to analyze related data and detect patterns that matter to the business.

The Optanix Platform provides Business Impact Monitoring (BIM) through which complex service relationships are discovered or manually defined based on physical and virtual network topologies combined with application topologies

and dependencies. These topology and relationship mappings define service topologies where any performance degradation or outage of an underlying component will accurately show how the service is impacted. The platform uses this to help drive root cause analysis.

To fully understand the relationship of IT to the business, BIM allows a business topology to be layered on top of the service topologies so that SLAs can be created based on actual business key performance indicators instead of on individual IT components. This is important with today's resilient systems if you want to measure what really matters to the business.

Statistical Analysis with Incident Detection and Prediction

The Optanix Platform doesn't just collect data, it uses it to provide actionable intelligence and deliver on the promises of AIOps. It analyzes data over time and takes advantage of machine learning to automatically create statistical patterns with dynamic baselines accounting for time of day and day of week. These baselines are then used as thresholds for deviations from normal as well as trends and rates of change to detect current incidents and predict future incidents and calculate their mean time to threshold. Using deviations from normal and dynamic baselines is key to providing accurate incident detection and prediction and enabling the Optanix Platform to identify incidents quickly and avoid false positives.

All available data collected by the Optanix Platform, including performance metrics, events and more, is used in incident detection and prevention. The platform uses multi-perspective analysis, including deviations from normal, to detect incidents. After detection, the patented Root Cause Analysis (RCA) engine further analyzes them to determine the true root cause and provide actionable intelligence to the operations team.

In addition to detecting and predicting incidents, the platform takes advantage of machine learning and analysis to provide capacity management and planning. It works by determining current capacity and predicting when capacity will need to be increased or could be decreased based on trends and rate of change.

Root Cause Analysis

The Optanix Platform's patented RCA engine analyzes current and potential incidents and degradations from multiple perspectives, taking advantage of all types of top-to-bottom, end-to-end service data ingested by the platform to find why they occurred. The multi-perspective analysis takes advantage of automation to perform further troubleshooting and triage actions to quickly and accurately pinpoint the root cause and reduce false alarms.

The analysis also takes normality/abnormality, relationships and performance into account to find the true root cause of failures and performance problems, not simply what failed. This analysis is done prior to creating a ticket and significantly reduces MTTR by cutting troubleshooting time for the operator. In addition, the RCA engine maps root causes to business services and prioritizes them accordingly, allowing the operations team to address issues in order of importance to the business.

Actionable Information

Among all the important capabilities an AIOps platform can bring to your organization, its ability to provide you with actionable information may be the most valuable. Actionable information allows IT operations teams to act quickly and efficiently to remedy or avoid incidents and problems.

The Optanix Platform provides actionable information to IT operations teams and streamlines workflows through automation. It performs business impact analysis on complex business service relationships, such as resiliency, performance and single points of failure, and uses that analysis to provide operators with a prioritized list of alerts based on true impact to the business and to show them exactly what that impact is.
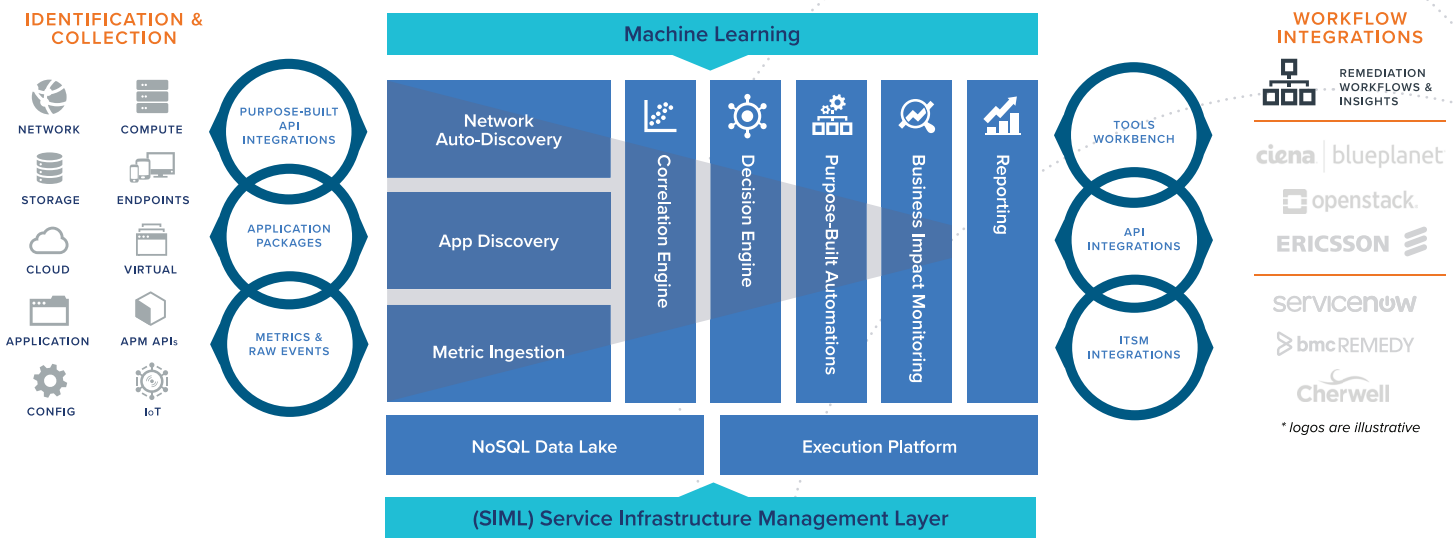
The platform takes advantage of automation to perform triage and ensure the appropriate specialists are alerted to issues and provided with the information needed to take corrective action — eliminating the need for a human to be involved in the triage. Additional automation makes it possible for specialists to quickly address issues by enabling them to be automatically directed to the devices or systems where corrective actions must be made via one click, further streamlining the repair process.

THE OPTANIX PLATFORM DELIVERS THE VALUE OF AIOPS

The Optanix Platform goes beyond aggregating information, it employs logic and has the 'machine' use the data automatically to operationalize your technology investment. It begins by collecting and managing historical and streaming data for the entire business service, top to bottom and end to end. Context is applied to that data by mapping business services and identifying the complex relationships of all IT components and systems that play a role in delivering those services.

The collected data is analyzed and correlated to automatically detect patterns, create dynamic thresholds and make predictions based on machine learning. Anomalies are detected when there are deviations from normal or when analysis shows a deviation is coming, and these anomalies are tied to business services and prioritized based on their impact. An accurate root cause is then determined and triage is performed using automated troubleshooting capabilities.

The result is actionable information, delivered to the appropriate IT operations specialists and enabling them to quickly and efficiently address issues and prevent problems. Without the machine learning and automation provided by the Optanix Platform, this level of service would not be achievable.

IDENTIFICATION & COLLECTION

NETWORK COMPUTE
STORAGE ENDPOINTS
CLOUD VIRTUAL
APPLICATION APM APIs
CONFIG IoT

PURPOSE-BUILT API INTEGRATIONS
APPLICATION PACKAGES
METRICS & RAW EVENTS

Machine Learning

Network Auto-Discovery
App Discovery
Metric Ingestion

Correlation Engine
Decision Engine
Purpose-Built Automations
Business Impact Monitoring
Reporting

NoSQL Data Lake
Execution Platform

(SIML) Service Infrastructure Management Layer

TOOLS WORKBENCH
API INTEGRATIONS
ITSM INTEGRATIONS

WORKFLOW INTEGRATIONS

REMEDIATION WORKFLOWS & INSIGHTS

ciena | blueplanet
openstack.
ERICSSON
servicenow
bmc REMEDY
Cherwell

logos are illustrative

The Optanix Platform architecture delivers on the value of AIOps with reduced noise, anomaly detection, incident prediction/prevention, true root cause analysis, business service prioritization and actionable information for optimal service performance and availability

Optanix, One Penn Plaza, Suite 3310, New York, NY 10119

+1-212-736-6500 info@optanix.com **optanix.com**

optanix