Versa AIOps Return on Investment Analysis

July 2024

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The Need for AIOps

AIOps leverages machine learning and artificial intelligence to automate the analysis and interpretation of vast amounts of data produced by modern IT environments. The goal is to ensure a higher level of operational efficiency, reduce downtime, and improve overall user experience. As businesses scale up and their digital footprints become more complex and data-intensive, the need for AIOps is becoming ever more critical.

The use of AIOps also enables businesses to shift from reactive to proactive IT operations. By utilizing machine learning algorithms, AIOps can predict potential issues before they impact service delivery or the end users, leading to significantly improved user experience. This approach helps organizations achieve operational efficiency by minimizing the number of resources dedicated to firefighting IT problems and instead allocating them to activities that bring business value.

When averaged across its active user base, Versa estimates its AIOps technology would save approximately 40% to 50% of a team's time and effort, allowing them to focus on more productive tasks. Other significant savings as well as other benefits not counted in the analysis that are driven by Versa's AIOps technology are associated with improvement of productivity of the larger employee base through reduction of Mean Time to Repair (MTTR), downtime reduction, better employee and customer satisfaction and better planning.

This analysis details real-world examples of Versa AIOps, its operational outcomes and reduced costs.

AIOps in the Versa Unified SASE Platform

Versa's portfolio of AI/ML technologies includes Versa Advanced Network Insights (VANI), User and Entity Behavior Analytics (UEBA), Verbo, and a Unified Data Lake. Together these products deliver an AIOps capability that redefines proactive network management and security.

- **Versa Advanced Network Insights (VANI)** is designed to predict and detect network patterns and behaviors. It leverages real-time predictive notifications and an anomaly detection engine that doesn't require pre-configuration to enable proactive network controls. It performs anomaly detection without setting any threshold or configuration. It also has features like alarm correlation and suppression, smart debugging, and alarm prioritization to efficiently achieve problem identification and resolution. It is anchored to an intuitive dashboard to visualize application performance and traffic patterns.

- **Versa Chatbot (Verbo)** is a Natural Language Processing (NLP) based Versa Chatbot. It facilitates easy and natural interactions for defining application, networking, and security policies. Integrated with VANI, Verbo provides a context-aware chat window for the user to express intent, eliminating operational friction found in standard CLI and GUI-based tools and lowering the learning curve required to conduct day-to-day operations.

- **Versa User and Entity Behavior Analytics (UEBA)** uses advanced machine learning engines to analyze user behavior and detect anomalies for all entities (e.g., user, device, IoT) across the infrastructure. It scores user activities based on severity and applies automatic responses to high-risk activities. It can detect anomalous user behaviors like Infrequent destinations, Impossible or superman travel, Bulk deletions, Build downloads, First access to applications, First access to subnet, Access from different devices, Custom anomalous policies, and many more.

- **Versa Unified Data Lake** is an integral part of Versa Networks' solution. It's a centralized repository that collects, stores, and consolidates vast amounts of network and security data from unified Versa sources across the enterprise network, including cloud gateways, routers, firewalls, switches, IoT devices, end user devices and internet interactions, SaaS services, private data center and cloud apps, and more. It is a single source of all data for improved security. It provides deep in-sight and behavioral analysis (user, device, application, site, network).

It combines traditionally disparate forms of data into a single, comprehensive view brought together via Versa's Unified SASE platform.

Versa AIOps Use Cases

The business environment today demands greater agility, flexibility, and security. To achieve this, many enterprises have integrated Versa AIOps into their infrastructure and workflows to deliver efficiency, operational speed and improved returns on their infrastructure investments. Common use cases include the following:

- **Troubleshooting** with a context-aware, natural language chat window. Versa's AIOps (Verbo) troubleshoots common problems and can redirect users to the appropriate setting in the management console. It is integrated with a comprehensive knowledgebase that assists IT personnel with suggested solutions, relevant documentation, and step-by-step troubleshooting guidance.

- **Anomaly detection** for all entities (e.g., users, laptops, phones, IoT devices, and more). Versa's AIOps continuously monitors network traffic, user behavior and system logs to detect unusual activities and potential security breaches. Versa's AIOps (UEBA) identifies common anomalous behaviors which include infrequent destinations, impossible travel behavior, bulk deletions and downloads, access from different devices, and custom anomaly policies. Versa's AIOps (VANI) detects infrastructure behaviors that include application performance anomalies or latency discrepancies between locations. Anomaly detection is done without setting any threshold or configuration.

- **Automated Remediation** via integration with IT service management (ITSM) tools and automation frameworks to automatically trigger remediation actions. Versa's AIOps (Verbo) can execute predefined workflows or suggest appropriate actions for IT staff, reducing manual intervention and speeding up incident resolution.

- **Intelligent alerting** by eliminating unwanted information in infrastructure data, by correlating and prioritizing critical incidents. Versa's AIOps VANI can analyse an unprecedented volume of system logs, monitoring data, and performance metrics to detect and prioritize critical incidents. It only presents the most relevant cause of an alarm to provide the focal point to begin your investigation/debugging.

- **Network prediction and capacity planning:** Versa's AIOps (VANI) can analyse telemetry to identify patterns and anomalies that predict network capacity, appliance capacity and application behaviour analysis. Proactive alarms and recommendations are generated by Versa's AIOps (VANI). Network behaviour analysis helps in decision making, E.g., which region to upgrade first, how much bandwidth to provision at a new branch, etc.

By predicting such events in advance, it helps optimize maintenance schedules, reduce downtime, and prevent failures. Versa's AIOps (VANI) can analyse historical data and usage patterns to forecast future resource demands. By predicting capacity requirements, it helps organizations plan infrastructure upgrades, optimize resource allocation, and ensure scalability to meet evolving business needs.

- **Knowledgebase:** Versa's AIOps (Verbo) has comprehensive knowledge base that has been built over a history of analysed support tickets, documentation, etc. and assists IT support personnel with solutions, relevant documentation, and step-by-step troubleshooting guidance.

- **Performance optimization:** Versa's AIOps (VANI) analyses operational data to identify areas of inefficiency or bottlenecks. By optimizing resource allocation, load balancing, and configuration settings, it helps improve system performance, responsiveness, and scalability.

Case Study for Versa AIOps

Versa's AIOps has been adopted across its customer base. In this analysis we take a dual approach:

- We use the aggregate support tickets data for a representative sample of customers.
- We compare and contrast it against the support tickets data by the customers who have adopted Versa's AIOps technology. We use this data to estimate the savings for each category of tickets. We use this estimate against the first category of users to estimate real world saving.

The Category of Support Tickets and estimated savings as per the experience of customers and Versa's TAC team when solving cases for customers who have adopted AI/ML technology is:

Ticket Category	Example	Estimated Efficiency due to AI/ML Technology
Troubleshooting	Configuration mistakes	70%
Anomaly detection and automated remediation	Application experience issues	70%
Intelligent Alerting	Underlay issues, CPE Memory/CPU high issues	30%
Network prediction and capacity planning	Overload of underlay, issues due to network upgrades	50%
Knowledgebase	Questions for specific features	70%

These are then weighted based on the proportion of tickets that are associated with each category.

Ticket Category	% of tickets/time spent on each
Troubleshooting	25%
Anomaly Detection and Automated remediation	12%
Intelligent Alerting	9%
Network Prediction and capacity planning	10%
Knowledgebase	12%
Other category tickets (License Requests, RMA, Feature requests etc.)	32%

From this analysis, 68% of tickets would benefit from having AIOps implemented in the network.

Averaged across the population set, 40% to 50% of personnel time and effort would be reduced, allowing them to focus on more productive tasks. Other significant savings would include improved productivity through reduced Mean Time to Repair (MTTR), downtime reduction, better employee and customer satisfaction and better planning. All the above metrics ultimately add up to a single goal - - Total Cost of Ownership reduction.

Severa examples highlight the operational benefits:

- **Example 1:** In one example, a customer raised a ticket with the issue that DIA packets were dropped intermittently. The DIA link appeared to be healthy (Good Versa Link Rank) d. However, Versa AIOps observed that the Monitor was misconfigured, causing an unnecessary switch to a different circuit. This avoided the need for joint troubleshooting sessions with Versa experts.

- **Example 2:** A customer lost connectivity between Director and Analytics because the certificate expired, which resulted in loss of connectivity. Versa AIOps identified the issue by automated troubleshooting.

- **Example 3:** A customer started noticing user experience degradation. Versa AIOps found that the customer had limited WAN bandwidth and one of the users was over utilizing bandwidth using a UDP application, which caused all other users to experience degradation. AIOps was able detect and push a per user policer QoS configuration to avoid over utilization of bandwidth by one or more users.

- **Example 4:** A customer had an issue where they experienced frequent connectivity issues to the WAN. AIOps detected that they had duplicate IPs on the WAN. This caused ARP resolution issues for the upstream router and eventually frequent connectivity flaps. AIOps was able to detect the duplicate IPs in the network and notify the customer about the issue. This avoids lengthy troubleshooting for hours to find the root cause of the issue.

- **Example 5:** A customer reported an issue where application performance for a specific application had degraded. This was a private application hosted in the customer data center. The issue was reported from multiple sites accessing the same application. AIOps was able to identify the application performance issue and notify administrator.

Other customer use cases include the following:

- Get recommendations of optimal configuration for QoS queues
- Identify modifications to configurations and changes to application policies to maximize application performance.
- Use predictive analytics to extrapolate future traffic patterns and capacity planning, forecast bandwidth consumption, predict service degradation, and prevent outages across the network and cloud applications.

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