

Infrastructure Monitoring for New-Age Troubleshooting

Quick Summary

Apica Infrastructure Monitoring provides comprehensive, real-time insights into the performance, availability, and health of your entire IT infrastructure. By monitoring servers, networks, databases, and more, Apica ensures your systems run efficiently, detects issues before they affect users, and optimizes resource utilization.

The Challenge

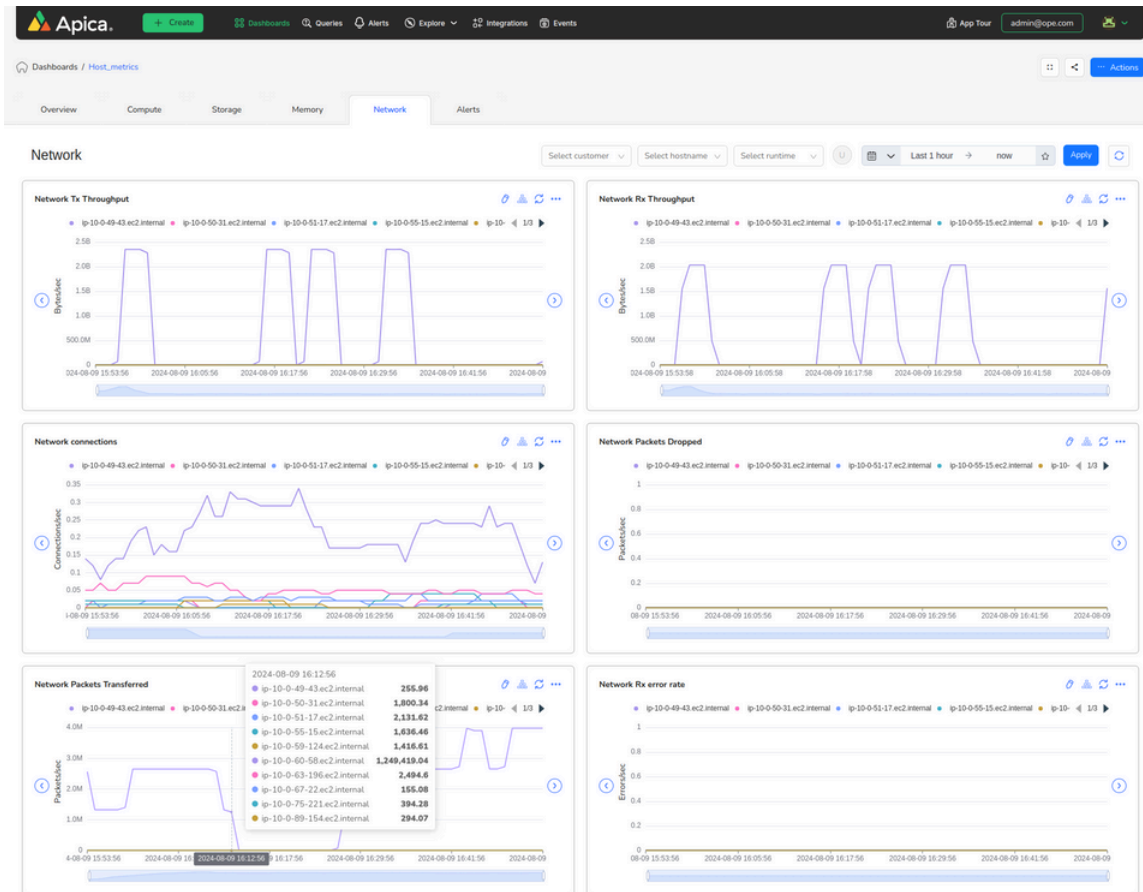
Infrastructure monitoring faces several challenges, including managing the overwhelming scope of monitoring vast networks and devices, dealing with legacy tools that can't keep up with new technologies, and handling a high signal-to-noise ratio with too many alerts. Additionally, collecting and analyzing actionable data is difficult, especially at scale across diverse infrastructure silos like storage, networks, and applications. Scalability issues arise in IoT environments, and traditional tools struggle with distributed systems. Furthermore, integrating machine learning into infrastructure brings challenges in scaling, monitoring model performance, and understanding data flow.

Major Challenges

- **Superficial Insights:** Limited visibility can hinder effective decision-making and system optimization.

Key Benefits

- **Prometheus Monitoring, Always Free:** Leverage Prometheus for reliable, no-cost infrastructure monitoring.
- **AI/ML-Based Anomaly Detection and Forecasting:** Benefit from advanced AI/ML algorithms to detect anomalies and predict potential issues.
- **Enterprise-Grade Monitoring:** Connect unlimited Prometheus instances and scale your monitoring to any object-store.
- **Grafana Dashboard Integration:** Import existing Grafana dashboards directly and visualize your data with hundreds of ready-to-use integrations.
- **Alert Spam:** Excessive alerts can overwhelm teams, making it difficult to prioritize and address critical issues.
- **Inaccurate Correlations:** Misleading performance metrics can result in ineffective troubleshooting.
- **Reactive Approach:** Waiting for issues to arise before addressing them can compromise system stability and performance.



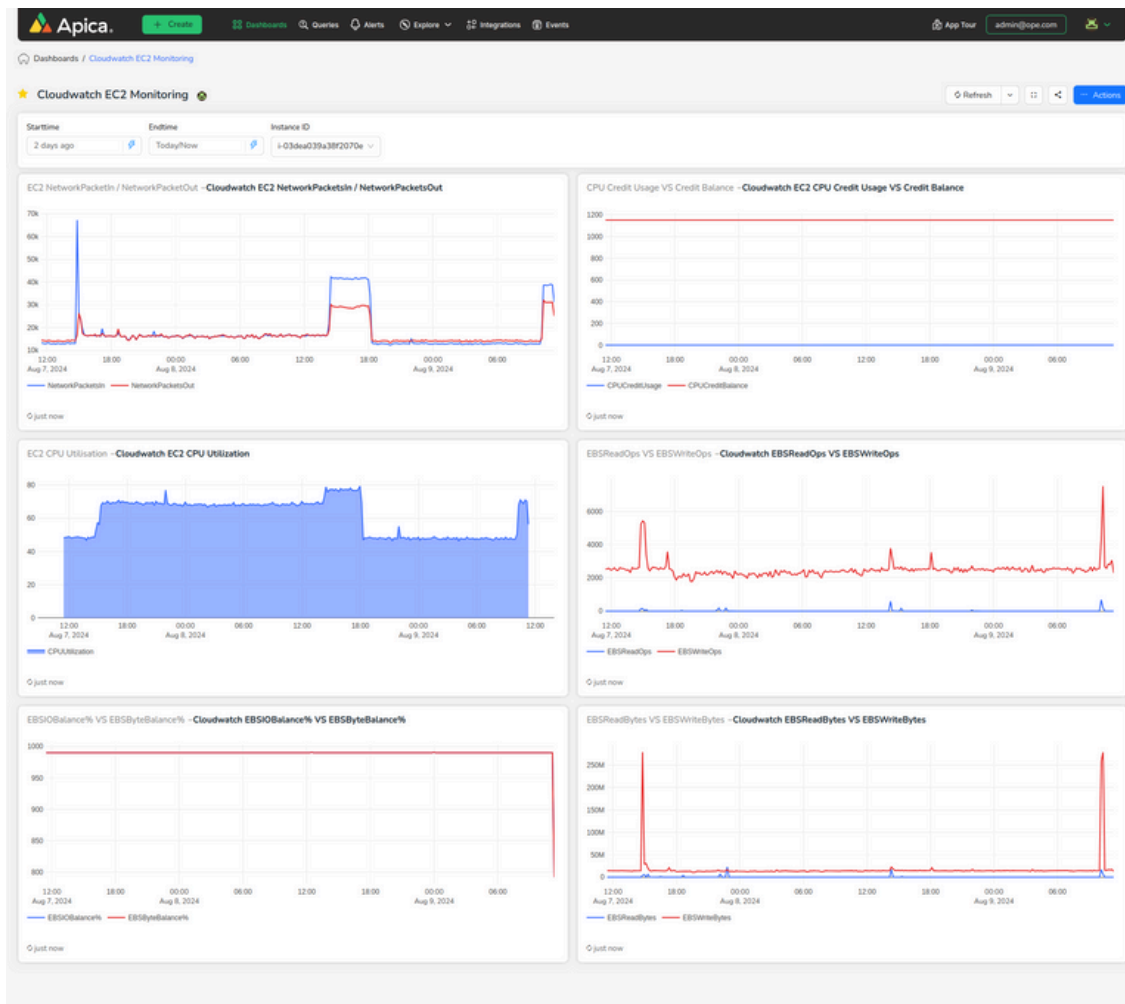
Key Features

- **Powerful Querying:** Utilize advanced querying with metrics, label filters, custom parameters, and PromQL-compatible functions to uncover detailed data insights.
- **Data Fortification:** Secure your data and govern access using your existing identity and authentication rules.
- **Real-Time Monitoring Dashboards:** Fully customizable, flexible dashboards provide real-time visibility into your applications and infrastructure.
- **Share and Embed Dashboards:** Easily share dashboards with read-only access through shareable URLs, or embed visualizations wherever needed.
- **Versatile Visualization Options:** Choose from a variety of charts, graphs, and faceted search views to best represent your data insights.
- **Powerful Alerting:** Configure alerts based on PromQL query results to reduce alert noise and send notifications to multiple destinations, including email, Slack, PagerDuty, and more.
- **Additional Data Sources:** Integrate all your data sources across applications and infrastructure into one platform with built-in connectors and existing aggregators.
- **Hybrid Data Source Visualizations:** Visualize data from multiple sources in a single dashboard for a holistic, interoperable view of your infrastructure.

Extensive Integration

Apica Infrastructure Monitoring integrates seamlessly with critical systems, offering comprehensive visibility across your IT environment:

- **Kubernetes (K8s) Monitoring:** Monitor the performance and resource utilization of your Kubernetes clusters, ensuring the smooth operation of containerized applications.
- **AWS CloudWatch Integration:** Track and manage AWS resources effectively by collecting and analyzing metrics, logs, and events from your AWS environment.
- **Host Monitoring (Linux, Windows, K8s Hosts):** Monitor key metrics across Linux, Windows, and Kubernetes hosts to maintain the health and performance of your infrastructure.
- **Powered by OpenTelemetry:** Leverage OpenTelemetry for unified telemetry data collection, providing a comprehensive view of your infrastructure's performance.



Architecture

- Run on any Kubernetes environment, on-premise, or on the public cloud.
- Built with a microservices architecture, and cloud-native principles.
- Scales from a laptop to hundreds of nodes.
- 200+ data integrations via standardized protocols, push agents, pull integrations, and custom data collectors.
- Deployment options:
 - Available as a SaaS or self-hosted option.
 - OVA is available for virtualized infrastructure for small-scale deployments.
- Patented InstaStore technology for streaming data into any object storage for long-term retention and reverse ETL.
- Support for Push data:
 - Open-Source agents such as OpenTelemetry, Fluentbit, Fluentd, Logstash, Filebeats, Vector
 - Syslog compatible push clients, Syslog-ng, and Rsyslog
 - Syslog RFC support for RFC3164, RFC5424, RFC5425, RFC 6587.
- Support for pulling data via built-in plugins such as Oracle Integration Pub/Sub, Kafka, and S3 compatible storage, among others.
- Ability to launch custom push/pull data integrations by launching user-created docker microservices in the telemetry pipeline.
- Live tailing of data for telemetry streams.
- Powerful rule engine for building the precise pipeline that meets your data needs.

Open-Source Support

- Built-in support for OTel collector, Fluent-bit, Telegraf, and other open-source agents.
- Extensible and compatible with multiple observability platforms, due to support for open-source protocols and technologies.

Product Features

- Advanced Dashboarding:
 - Fully customizable, real-time monitoring dashboards
 - Data Explorer dashboards give a feature to go back in time for a particular widget
 - Drag-and-drop interface for easy dashboard creation
 - Wide range of visualization options (charts, graphs, heatmaps, etc.)
 - Template variables for dynamic dashboards
 - Dashboard sharing and embedding capabilities
 - AI/ML-based anomaly detection in dashboards
- Comprehensive Alerting System based on top of the query layer:
 - Multi-condition alert rules
 - Multiple notification channels (email, Slack, PagerDuty, webhooks, etc.)
 - Alert history and analytics
- Prometheus Ecosystem Support:
 - Native support for Prometheus metrics and PromQL
 - Long-term storage for Prometheus metrics
 - High-cardinality metrics handling
 - Federation and hierarchical view of multiple Prometheus instances
- Infrastructure Monitoring:
 - Server monitoring (CPU, memory, disk, network)
 - Container and Kubernetes monitoring
 - Cloud service monitoring (AWS, Azure, GCP)
 - Network device monitoring, and many more.
- Integrations:
 - Wide range of pre-built integrations with popular open-source tools and services.

Working with Data

- Data Collection:
 - Supports pull and push-based methods from various data sources and formats (e.g., Prometheus, OpenMetrics, JSON)
 - Compatible with multiple open-source agents
- Data Processing:
 - Real-time processing and aggregation
 - Data transformation and enrichment
- Data Exploration:
 - Advanced query builder with autocomplete
 - Ad-hoc metric exploration and correlation
 - Browsing metric metadata and labels
- Data Visualization:
 - Various visualization types (line, bar, gauge, table, etc.)
 - Custom panel plugins for specialized views
- Data Analysis:
 - Built-in analytics functions (sum, count, rate, increase, histogram_quantile, etc.)
 - Integrates external data sources in dashboards (SQL databases, APIs, etc.)

Security and Compliance

- SSO via SAML and LDAP.
- Support for HTTPS and TLS connections.
- Zero-trust architecture for agent management means no host passwords are needed.
- Role-based access control for telemetry data access and management.
- SOC2 Type2 and ISO27001 compliant.



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OpenTelemetry Support

- Ingest data from OpenTelemetry collector, compatible with OpenTracing for legacy compatibility.
- Both core and contrib OpenTelemetry collector distributions are supported.
- Support for custom collector builds.
- Open Agent Management Protocol (OpAMP) is a core technology for fleet management capabilities.

Data Types

- Time Series Metrics: Support for Gauge, Counter, Histogram, and Summary metrics.
- Logs:
 - Unstructured and structured log data
 - Log parsing and metric extraction from logs
- Traces:
 - Distributed tracing data (compatible with OpenTelemetry)
 - Trace sampling and aggregation
- Synthetic Monitoring Data:
 - Uptime and performance metrics from synthetic checks
 - Browser and API test results

Contact us today to schedule a demo. Or reach out to sales@apica.io