



CASE STUDY

Microland enhanced IT performance for a Global Telecom Equipment Manufacturer with full-stack observability and proactive incident management

Overview

The client, being a Global Telecommunication Equipment Manufacturer, Software, and Service Provider, was supporting its Telecom Service Provider (TSP) customers to deliver highly performant and reliable mobile and broadband services to their billions of customers globally through four business-critical applications. The client was facing performance and visibility issues with its business-critical applications due to siloed monitoring and management. Microland implemented its Intelligeni Observe platform to bring integrated monitoring observability to provide real-time visibility and insights into application performance.

Challenges

The client's IT environment is comprised of four business applications that were offered to its telecom customers. The business applications were used by its customers to deliver mobile and broadband services and hence the performance, reliability, and availability of these applications were critical to deliver these services.

Although the applications had interdependencies on each other for various features, each application, its monitoring, and management were owned by a different team. These applications were monitored and managed in a siloed manner via different solutions, including Prometheus, Grafana, Elastic, Kibana, log-based metrics and events, and a customer-built monitoring stack.

Due to this siloed monitoring and management of business applications, the client was facing the following challenges concerning the monitoring and observability of these applications

- When users reported service-related problems or incidents, identifying the specific application and its underlying causes was challenging. The absence of a comprehensive, end-to-end integrated view of service health was due to the lack of visibility into dependencies among different application components.
- To address any issue in the overall service, the support team had to look into individual siloed monitoring solutions. These solutions were independently configured and did not have an overall view. This made it difficult to diagnose interdependent issues across applications.
- There was no visibility of the deployment architecture of all the applications for the operational engineers. This led to higher diagnosis times during issue resolutions.
- There was no proactive inference from application logs. Logs were not centralized which led to higher diagnosis times during issue resolutions.

Microland was engaged by the client to provide a unified health view and observability solution to improve the application performance.

Solution

Based on the problem statement, Microland conducted workshops with application architects to understand the application architectures, dependencies, and existing monitoring systems. Based on the workshops with the client teams, Microland analyzed and designed a solution based on the Intelligeni Observe platform focusing on centralized and integrated monitoring and observability.

The following solution was implemented:

- Intelligeni Observer was provisioned with the Core on cloud and Edge component within the client environment.
- As a pre-cursor, all application logs were centralized and transformed into a standardized format. Based on the historical log data, error and issue patterns were identified. These formed the basis for setting up log alert rules to generate real-time log alerts. Log alerts were ingested in Intelligeni Observe.
- Integration packs were created concerning all the monitoring sources corresponding to the applications. This included tools like Prometheus, Grafana, Elastic, Kibana, and the client's custom monitoring stack. Alerts from all monitoring sources were ingested in Intelligeni Observe either via a pull mechanism (API based) or push mechanism (webhook based).
- All the application components and dependencies were discovered based on the monitoring sources. Any gaps were addressed based on further discussions with application architects. Accurate dependencies across all the application components were mapped through Intelligeni's knowledge graph feature. Alerts were correlated across monitoring sources based on the dependency mapping by the knowledge graph.
- Real-time application architecture visibility was made available to the operational engineers based on automated discovery and workshops with application teams.
- Health scores of the overall service delivered via the applications were provided with a drill down to specific problem areas and root causes.

Value Delivered

The implementation of Intelligeni Observe with centralized log monitoring, integrations with multiple monitoring sources, knowledge graph creation, and alert creation helped the client achieve the following:



reduction in the meantime to detect through proactive log monitoring and health score degradation monitoring



reduction in incident resolution costs through quicker diagnosis, real-time application dependency view, and alert correlation

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