

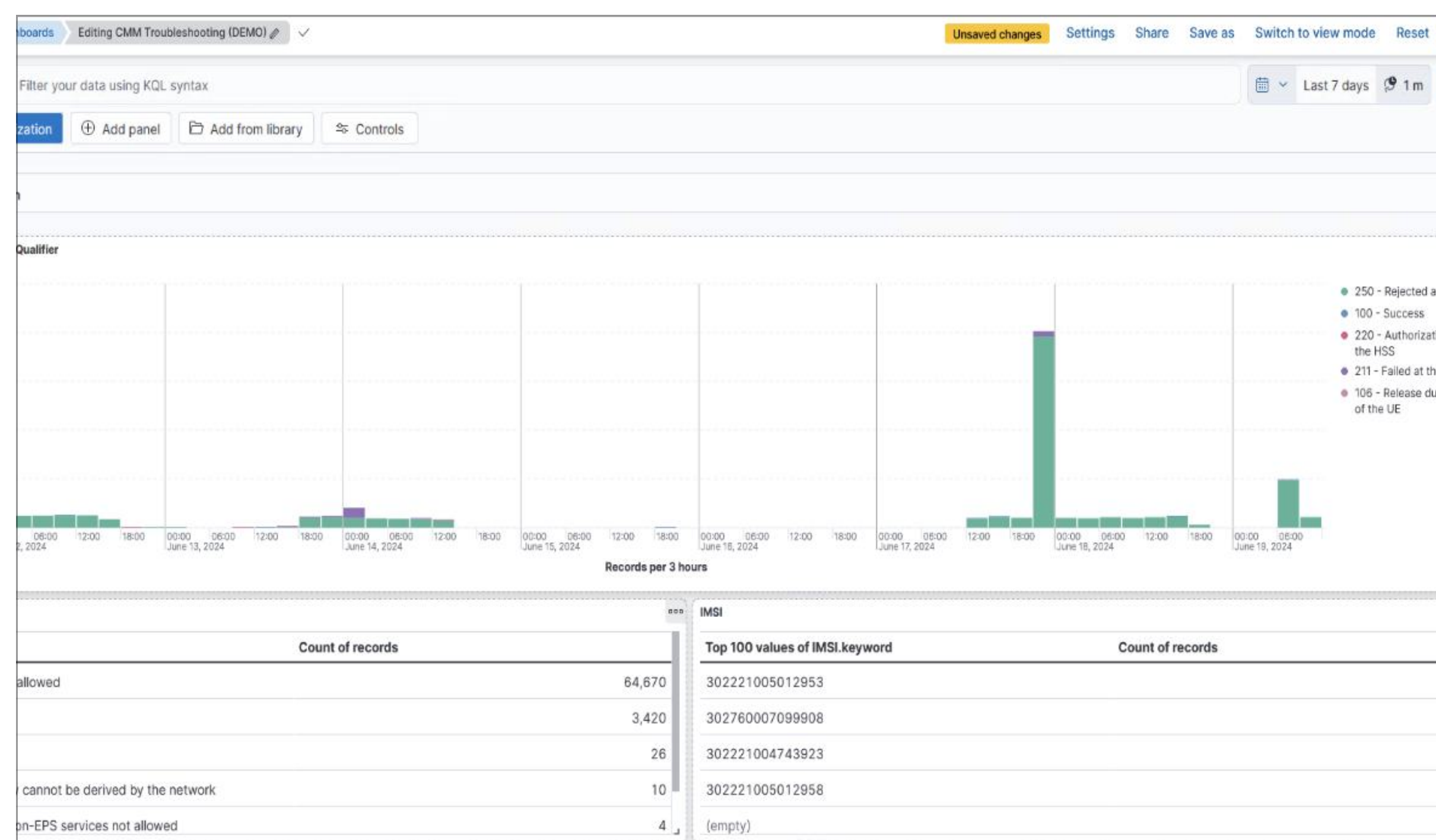
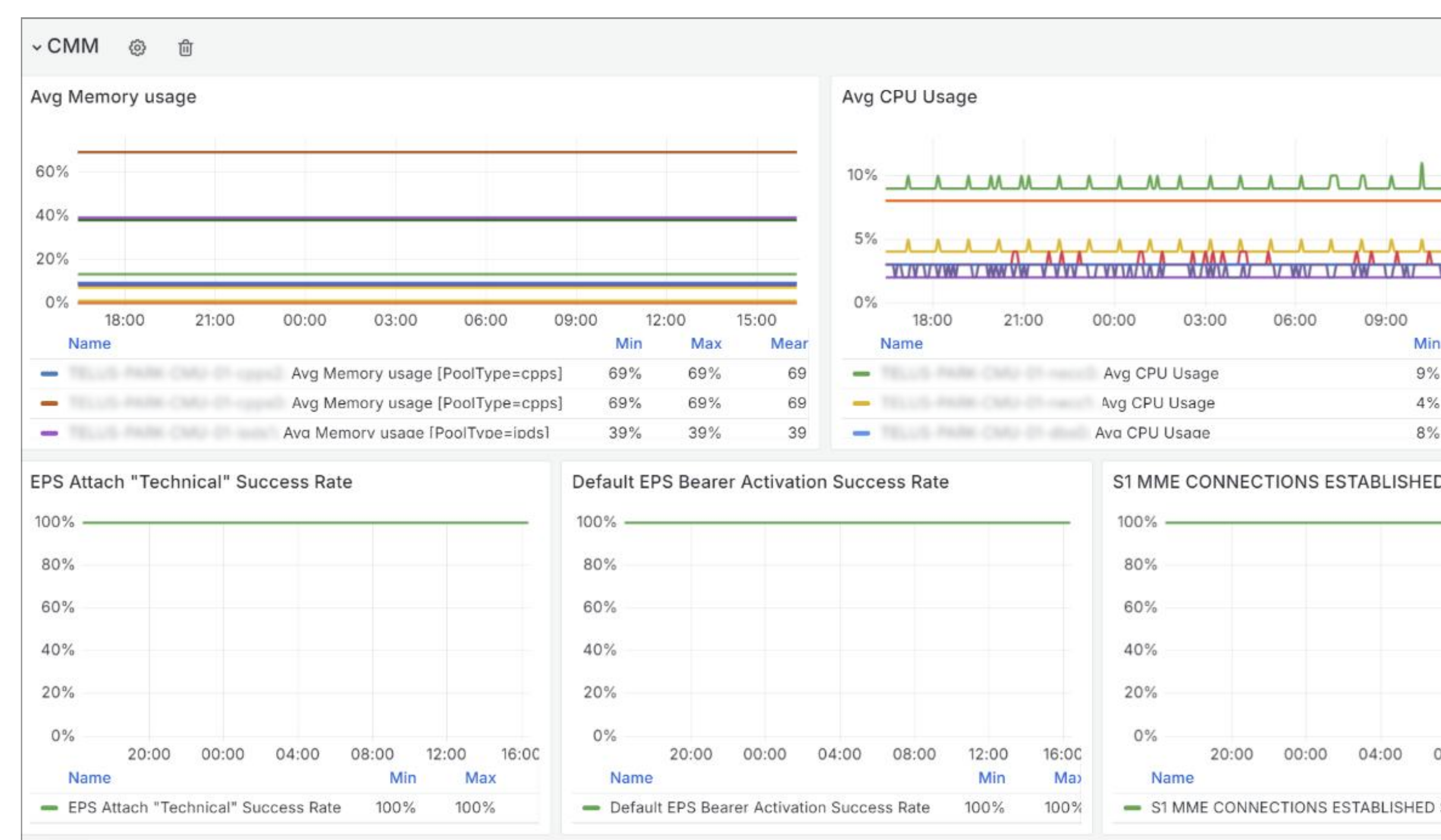


Globberry LTE Monitoring Solution

Affordable Carrier-Grade Monitoring for Multi-Tenant LTE Networks

About Globberry's LTE Monitoring

Managing LTE networks, particularly for private and smaller-scale operations, can often become costly and complicated due to solutions designed primarily for larger telecom operators. The Globberry LTE Monitoring solution resolves these challenges by providing a comprehensive, affordable, and intuitive monitoring system suitable for both private and public LTE network owners. It delivers carrier-grade reliability with significantly reduced complexity and cost, ensuring streamlined operations across various network scales.



The Globberry LTE Monitoring solution leverages robust, industry-proven open-source components to facilitate detailed monitoring of RAN and core network segments. The solution's built-in multitenancy, rich KPI libraries, and flexible deployment capabilities make it an ideal choice for diverse operational scenarios, from single-vendor small-scale installations to large multi-vendor networks.

The LTE Monitoring Platform

01

Unified Network Visibility

Globberry LTE Monitoring offers extensive monitoring coverage across LTE network elements, from eNodeBs to core network infrastructures. It provides clear visualization and comprehensive performance metrics through an easy-to-use dashboard, supporting quick and informed operational decision-making.

02

Multitenancy and Scalability

The solution is designed specifically for multi-tenant environments, enabling secure and efficient operations across multiple LTE networks managed by a single provider. Its scalability ensures robust performance in networks ranging from small private setups to large, multi-vendor telecom networks.

03

Integration and Customization

Featuring robust integration APIs, the solution effortlessly integrates with existing OSS/BSS infrastructures and facilitates third-party data sharing. Users can easily customize the built-in UI to visualize specific KPIs and configure alarms tailored to their unique operational requirements.

Technical Overview

01

Data Collection and KPI Aggregation

- Uses Apache NiFi to efficiently collect and transform data from eNodeBs and core network elements, handling extensive counters and alarms.
- Prometheus manages the reliable storage of data, lifecycle management of alarms, and KPI aggregation.
- Grafana provides user-friendly visualization and comprehensive reporting of KPIs.
- Pre-configured vendor-specific packages, such as Nokia RAN and Core integration, expedite deployment processes.

02

Pangolin Platform Integration

- The Pangolin platform enhances LTE monitoring by offering customizable meta-model definitions and intuitive user interfaces.
- Supports robust user authentication, secure multitenancy, and dynamic dashboard configurations.
- Comprehensive data governance with extensive API integration ensures seamless interoperability with existing telecom systems.

03

Enhanced Deployment Flexibility

- Compatible with bare-metal Linux servers, private clouds (VMWare, OpenStack, Kubernetes), and public cloud environments.
- Supports single-site and geo-redundant installations, ensuring high reliability and continuous data collection.
- Includes integrated backup, restore functionality, and internal monitoring tools for operational resilience.

Key Features and Benefits

Significant Cost Reduction

- Extensive use of open-source components eliminates costly licensing fees, substantially reducing both initial investment (CAPEX) and operational expenses (OPEX)
- Reduces network downtime through improved incident response and faster resolution times

Simplified Operations

- Unified platform for monitoring the entire LTE network infrastructure
- Intuitive dashboards provide immediate visibility into network health and performance metrics
- Enhanced efficiency in network management and troubleshooting

Flexible Deployment Options

- Suitable for installation on bare-metal Linux servers, as well as public or private cloud environments including VMWare, OpenStack, and Kubernetes
- Supports both single-site and geo-redundant configurations
- Ensures continuous data collection and high reliability

Comprehensive KPI Library (for Nokia only)

- Extensive support for more than 100 distinct KPIs
- Collection and management of over 10,000 counters from core network sites and more than 4,000 counters from eNodeB sites
- Facilitates deep insights into network performance and quality of service



Use cases



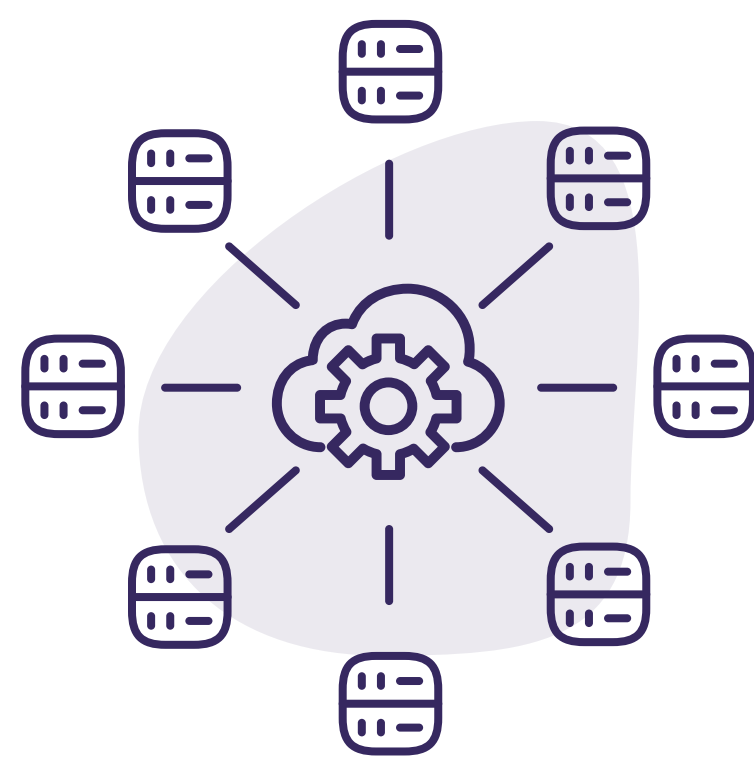
Single Vendor Small to Medium Scale Private LTE Installations

Affordable and simple solution tailored to the operational scale and budget of private network owners



Multi-Vendor Large-Scale Public Telecom Networks

Carrier-grade monitoring capabilities that effectively handle complex, large-scale operations across diverse network infrastructures



Multi-Vendor Private LTE Networks Managed by a Single Operator

Secure multitenancy and comprehensive management capabilities to facilitate efficient network operation by managed service providers

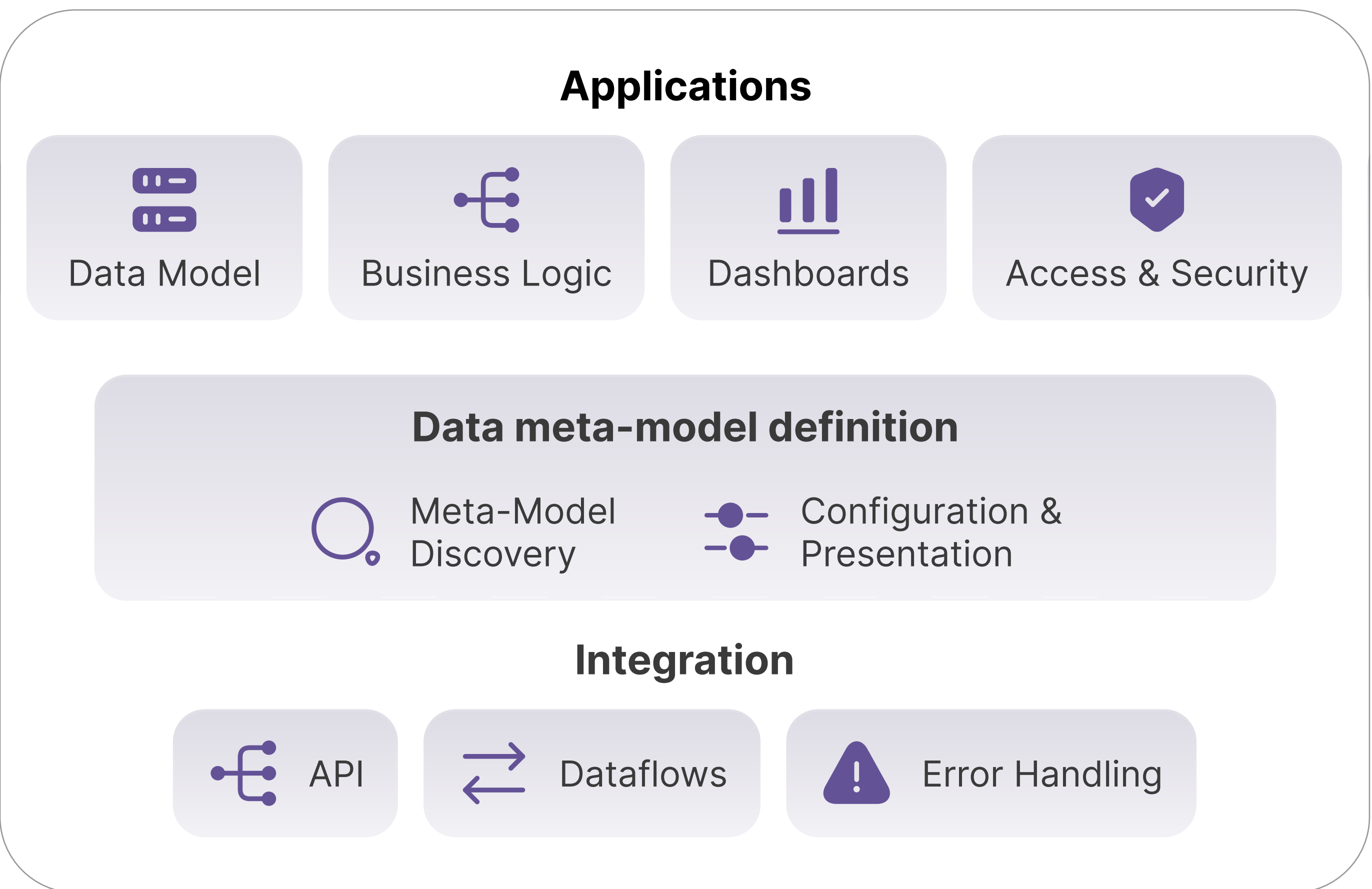
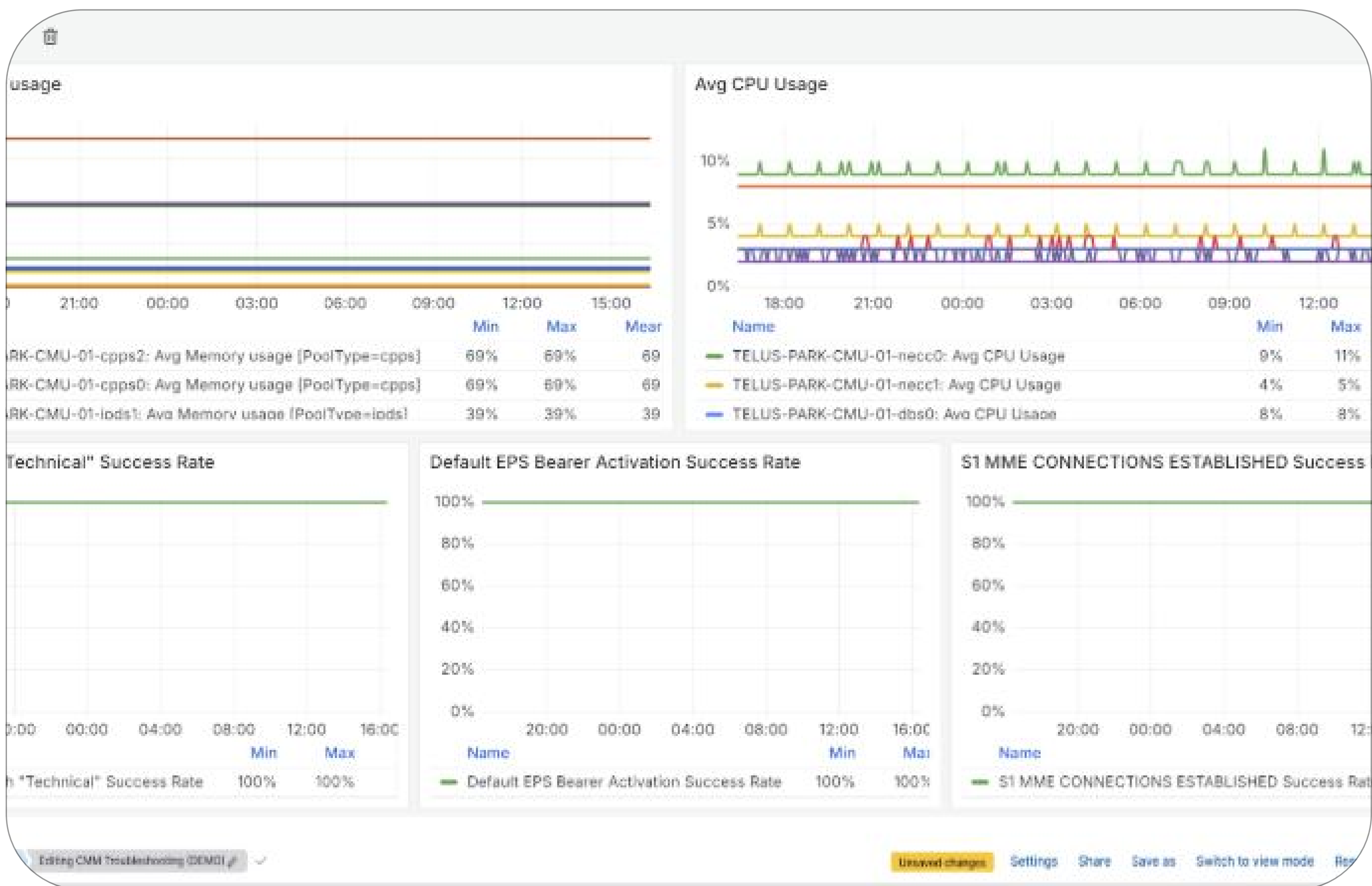
Functional Overview

Data Collection, Storage, and Aggregation

- Utilizes Apache NiFi for efficient data collection and transformation
- Prometheus provides robust storage solutions, KPI aggregation, and alarm lifecycle management
- Grafana delivers user-friendly KPI visualization and reporting
- Vendor-specific integration packages streamline the onboarding process, such as Nokia RAN + Core integrations

Pangolin Platform

- Provides customizable meta-model and user interface definitions
- Manages user authentication, multitenancy, and dashboard configurations
- Supports robust data governance and external API integrations

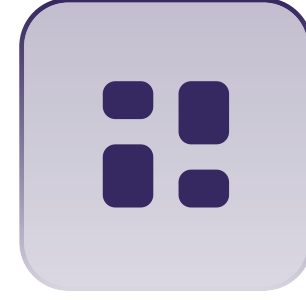


Our Supplementary Services



Consulting

Professional guidance for evaluating existing LTE solutions and strategic integration planning within current OSS/BSS frameworks



Implementation

Comprehensive support from initial solution design to user acceptance testing, complete integration, and seamless data migration



Support

Extensive operational maintenance and dedicated second-level technical support, including 24/7 availability for critical issues

“ With Globberry LTE Monitoring, network management becomes intuitive and efficient, enhancing operational accuracy, responsiveness, and overall network reliability. ”

About Globberry

Globberry is a specialized global provider of broadband network, mobile core, and private wireless solutions. Serving major telecom providers like Vodafone, Veon, Kyivstar, and Telus, we combine technical expertise, personalized service, and flexible, cost-effective solutions to meet the unique needs of our clients.

For more information, please visit <https://globberry.com> to request your complimentary demonstration of how Globberry LTE Monitoring Solution helps operators simplify and optimize network monitoring, reduce operational costs, and effectively manage LTE network environments, as well as to learn more about the solution and its applications.



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