AGREEYA®

Transforming
Network Operations for
a Telcom Giant with
App Development

Established in 2000, our customer is one of the largest telecommunications providers in the U.S. Headquartered in Manhattan, New York City, the organization offers a wide range of services, including wireless Internet and phone services on its networks and platforms. The telecommunication provider's 4G and 5G telephony services are leveraged by millions of North Americans, making it one of the largest providers in the space. The organization has undergone significant business growth with a significant rise in network users.

Complex KPIs Created Inefficiency in Monitoring and Resolving Network Issues

The telecommunications giant had witnessed an enormous surge in 5G users. Its existing Network Management System was proving inefficient in monitoring the performance of a vast network spanning across the North America region. The lack of an efficient device and network monitoring and analysis mechanism often caused delays in identifying and addressing the network failures. Network outages and delayed resolutions could have a damaging impact on the telecom provider's reputation and business outcomes. As a result, the telecommunications organization wanted a swift resolution to this challenge.

However, to ensure early identification and resolution, the telecom giants required a system to monitor the vast network across length and breadth of North America region and constantly monitor a complex set of KPIs. Consequently, the organization wanted to collaborate with an experienced technology partner. It sought an actionable roadmap to address ongoing issues in monitoring log files and complex KPIs to resolve network issues in real-time.

"With a rapidly growing subscriber base, our existing system faced the challenges of data and KPIs monitoring. Ensuring early network issue detection and prompt resolutions became imperative."

- Network Operations Manager, Telecom Giants
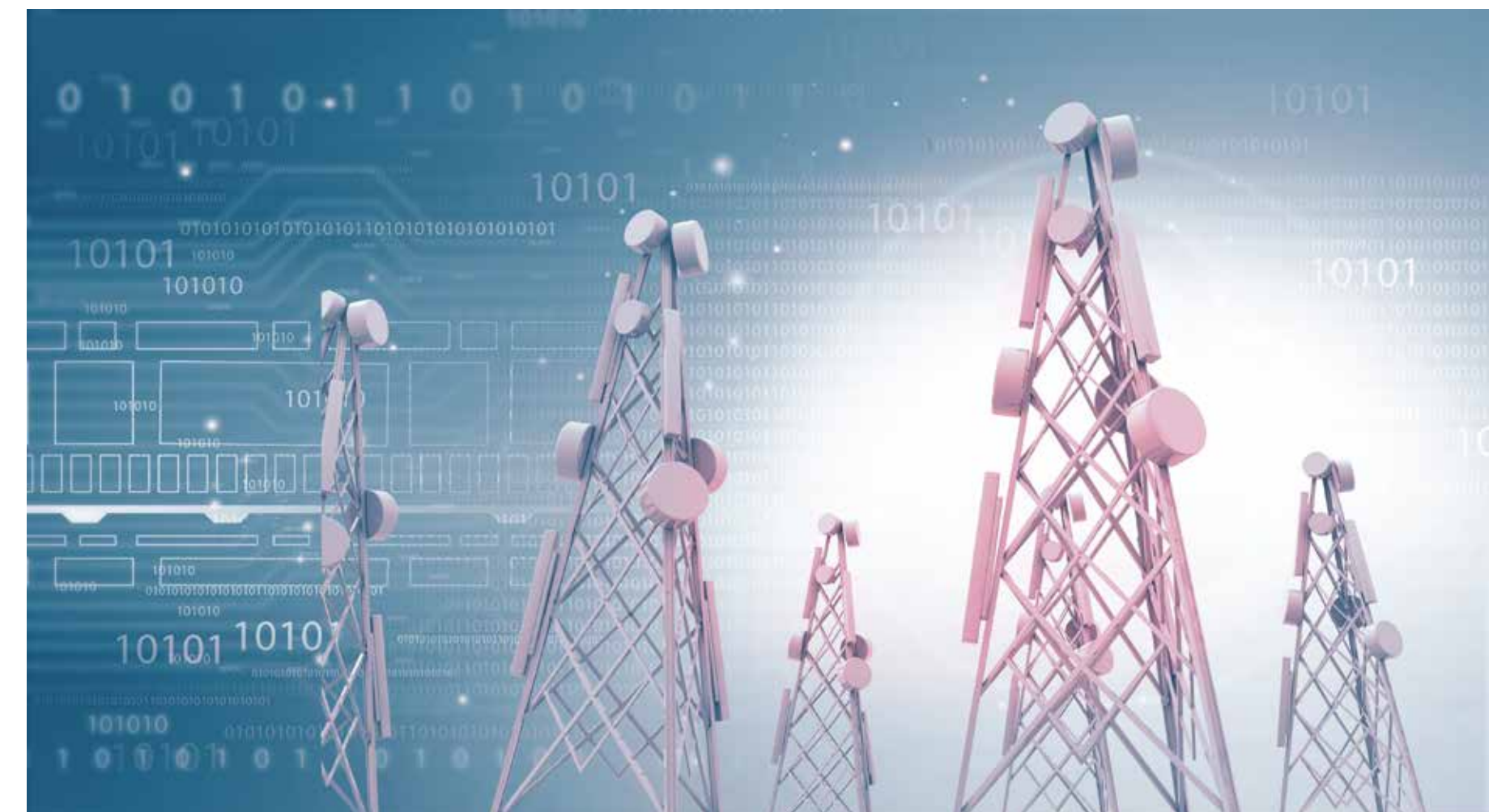
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Configuring KPIs and Enhancing Infrastructure to Resolve Network Operation Issues Promptly

As a Global Systems Integrator, AgreeYa has decades of experience in providing leading-edge technology solutions to help telecommunications organizations overcome their daunting business challenges. Additionally, AgreeYa had already helped the telecom giants ensure business growth and customer happiness with prior application development and management engagements. Based on these key factors, AgreeYa was chosen as the technology partner for the concerned project.

Upon engagement, our team of experts conducted a thorough assessment of the customer's Network Management System and held in-depth discussions with key stakeholders to understand the exact expectations. Based on the inferences gained, our team suggested the development of a Device Monitoring and Analysis Tool (DMAT). Once approved, AgreeYa's experts built the tool in the following stages:

Configuration of KPIs: Our team of experts configured the network KPIs for effective monitoring of logs, processing demands, and resolving network issues in real-time.

System Performance Monitoring: The team oversaw the performance of the entire system, enabling on-demand processing and real-time monitoring of log files.

Customization of Dashboard and Reports: Tailored dashboards were developed to represent data and generate reports efficiently. Reports available from the dashboard enabled users to drill-down data to empower better analysis.

Enhancement of On-premises Infrastructure Performance: The on-premises infrastructure received performance enhancements through activities such as migrating virtual machines from C4 Cluster to Rack6 and C5 Cluster, performing firmware upgrades, and addressing infrastructure issues.

Outlook and AWS Migration: The project involved migrating to both Outlook and AWS data. Logging solutions were implemented using Elasticsearch and Fluent Bit. Additionally, Prometheus and Grafana monitoring was set up for AWS EKS, and performance optimizations were executed by comparing processing speeds of the tool in AWS and on-premises environments.

UI/UX Design and Testing: Best user experience was ensured through AgreeYa's UI/UX design. High performance of the tool was guaranteed through rigorous testing utilizing iPerf Test Utility and FTP Speed Test. Bug fixes were implemented for network-type problems, offline file processing, and speed panel update.

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Ensuring Robust Network Performance and Addressing Scalability Needs

With the launch of the DMAT app, the customer was able to successfullt address significant business challenges related to network monitoring. Network operations team was able to easily monitor log files, analyze processing demands, and resolve network issues in real-time. The tool helped in enhancing network operations by constantly tracking the KPIs and other events that might impact the 5G and 4G networks. Other discernable benefits of the tool include:

2X reduction in network outage incidents and significant reduction in time to respond.

78% reduction in network outage complaints.

1200+ KPIs can be effectively monitored leveraging the tool.

Enables data for better network growth planning.

Delivers performance data and insights for network engineers to act upon.

Allows real-time monitoring of entire North American network through modem logs.

"AgreeYa has been a game-changer for our network operations. The comprehensive solution enabled us to monitor our extensive 4G and 5G network in real-time ensuring the optimal performance of our network."

- *Network Operations Manager, Telecom Giants*

Technology Stack

iPerf	Prometheus	Grafana	Hadoop	fluentbit	elastic	aws

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About AgreeYa

AgreeYa Solutions is a leading global provider of software, solutions and services to small, medium and global Fortune 100 organizations. Founded in 1999 and headquartered in Folsom, Calif., AgreeYa has over 2,500 professionals helping clients across U.S, India, Mexico, and Singapore. Leveraging a technology-enabled, consultative approach and diverse talent, AgreeYa offers modern workplace, smart analytics, intelligent automation, AI/ML, cloud transformation, mobility and talent management solutions to deliver digital transformation to its clients. AgreeYa has received considerable recognition including certifications like Microsoft Solutions Partner and Cloud Solutions Provider, AICPA SOC 2 Type 2, SEI CMMI and ISO 9001:2015; and awards including 'Dream Company to Work For' and 'Best Employer Brand'.

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