Nokia

5G-ready AI-enabled Operational Analytics

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Network complexity and technologies have outgrown the ability to manually manage & operate networks

Today's wireless networks face new demands which are further impacted by emerging 5G capabilities. The associated use cases require a new operations paradigm to meet diverse requirements and service level agreements that necessitate the implementation of automation and AI.

CHALLENGES

Carriers are facing increased OPEX pressures requiring them to demand more from the existing workforce of their network operations teams. Although network complexity has increased, operational headcount has largely remained static or even declined. Combined with 5G evolution and the emergence of Internet of Things, Carriers must manage, operate and optimize their network without increasing headcount expenses.

IDEAL SOLUTION

A network optimized and operated by leveraging AI-enabled analytics can significantly increase the level of task automation.
By harnessing AI and to augment human decision-making, carriers can multiply the effectiveness of existing headcount.
Carriers can also leverage network slicing for more modular operations to meet diverse Quality of Service requirements.

DESIRED OUTCOMES

Optimize and automate the network with Nokia's 5G-ready AI-enabled Operational Analytics. Leverage the power of the Azure cloud for rapid scalability and reach to collect and process large amounts of data, and combine this with decades of deep telco analytical expertise, to create automated network operational insights and actionable results.

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5G-ready AI-enabled Operational Analytics

Analytics, Virtualization and Automation (AVA) by Nokia Cognitive Services (NCS) through partnership with Microsoft Azure, allows Carriers to realize immediate cost savings while simultaneously transforming operations for the demands of new 5G applications. 5G demands a new operations paradigm to meet diverse user requirements and SLAs; using artificial intelligence and the power of the cloud, AVA on Azure solves the problem.

AVA on Azure

Offered as a service, Nokia's AVA on Azure allows Carriers to move out of private data centers and securely, efficiently, and at scale, manage their networks using AI-enabled automation. Leveraging decades of telecom network knowledge and Bell Labs insights, Nokia has automated data collection and used machine learning to optimize networks.

Industry-proven

30+ field proven uses cases through decades of deep telco expertise, developed by data scientists in our Cognitive Collaboration Hub

DevOps approach and Open Ecosystem to reduce time-to-market and 3rd party integration

Cognitive analytics and AI, enriching forensic analysis and machine learning to provide timely, granular insights

Nokia's AVA solution, deployed today and yielding results for many customers

Integrated with Azure

Nokia's AVA integrated with Microsoft Azure cloud based Infrastructure and Platform as-a-service

Leveraging Azure's security management and operations toolkit to provide extremely secure remote data processing

Automatic data extraction and data ingestion processes capable of processing billions of data points a day

Nokia's 5G-ready AI-enabled Operational Analytics integrated with Microsoft Azure "AVA on Azure"

Accelerate your Network Operations Digital Transformation with Nokia's Cogitive Services (NCS), field proven use cases and results now powered on Microsoft Azure

Proven Use Cases:

Operational efficiency
- Automate decision-making
- Reduce Operations workload
- Reduce service truck rolls
- Increase Network Availability
- Reduce site visits
- Faster resolution/restore time

Network analytics
- Optimize Network Performance
- Increase Network Utilization
- Manage Business driven network densification
- Fast and surgical forecast of network capacity

Subscriber experience
- Increase content consumption
- Enable new business model implementation w OTTs
- Drive end user related investments based on customer value
- Reduce customer complaints and churn

Mobility analytics
- Transportation planning and optimization
- City planning to meet needs of residents' and authorities'
- Retail: Improve market coverage and performance
- Crowd movement based evolutionary services

Transformation
- People/processes/tools assessment and benchmarking
- Consulting to recommend transformation levers
- Long term assurance of network & service quality

Hutchison 3 Indonesia balances CAPEX and performance through Spectral Performance Management

"AI will help us manage increasing complexity and make smarter decisions – to improve network performance for our subscribers"

- Desmond Cheung, CTO, Hutchison 3 Indonesia

Increase in Spectral Efficiency

Using the Spectral Performance Management service from Nokia's 5G-ready AI-enabled Operational Analytics, Hutchison 3 Indonesia increased its spectral efficiency by 17%. Based on decades of network knowledge, a methodology comprised of geo-tagging using machine learning provided significant performance increase without a CAPEX increase in new sites or hardware.

Time saving with Automated Processing

The automation of collecting billions of device data every day along with the collecting of network performance and fault data was the start. Automated analysis processes then fed Machine Learning algorithms, resulting in 60% savings in time.

More Accurate Capacity Planning

Granular insights and automated recommendations allow Hutchison 3 Indonesia to plan more accurately and increase the return on network investments.

Partner with Nokia to extend Azure's reach and accelerate your Network Operations Digital Transformation

For more detailed information and use case examples please visit:

https://www.nokia.com/networks/services/analytics-and-ai-services/

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