Data Sheet

MISSION CRITICAL COMMUNICATONS

Solutions to actively test, monitor, troubleshoot and manage mission critical communications systems

Cyber security, quality-of-experience and quality-of-service solutions for mission critical communication systems using 3GPP-based push-to-x and mobile data services

The emergency services, power plants, offshore platforms, and the transportation industry, are just some of the organizations who depend on public and/ or private networks for their mission critical communications.

At VIAVI, we understand that maintaining a high quality of service and quality of experience in such technically complex environments is just as important as providing the service itself.

Our expertise in testing, measuring and managing quality of service (QoS) for both telecoms networks and mission critical communications systems means we can give you all the support you need.

Use our solutions to monitor your mission critical communications networks, radios and data throughput. Detect and protect against cyber-attacks, keep track of SLAs and troubleshoot communications issues, easily and quickly.

KEY FEATURES

- End-to-end systems solutions for mission critical communications running on public and/ or private networks
- Actively test your networks using our powerful and flexible Drive Tests solutions to test coverage vs. SLAs and identify interference issues
- Web-based
- Troubleshoot quickly and easily to detect and pinpoint network communication issues
- Check KPIs and SLA performance with our configurable reporting dashboard
- Detect, discover and alert on vulnerabilities and cyber-threats with our cybersecurity solutions
- 2G, 3G, 4G and 5G ready
- Suitable for group calls, video calls, chat, emergency calls, MC Data calls and more
- Generate reports, automatically and based on a predefined or custom template with an email notification feature

DASHBOARD PERFORMANCE REPORTING

Monitor and measure network KPIs, Quality of Service (QoS) and Subscriber Quality of Experience (QoE), quickly and easily

Our dashboard KPIs are based on information from all data sources, which relate to MCX, Voice, SMS, data, and other supplementary services.

These sources include the Radio Access Network, core network, IMS, MCX application servers, and the data user plane.

DASHBOARD KEY FEATURES

- Provide KPIs on multiple domains:
  - MCX application server
  - IMS
  - Core Network
  - RAN
- Calculate relevant KPIs based on transactions and message combination to evaluate the QoS experienced by subscribers
- Configure reports
- Use tables, charts, maps, and other graphical displays
- Drill down to investigate individual issues using our troubleshooting solution

TROUBLESHOOTING NETWORK ISSUES

Detect, identify and analyze issues such as spots, services, release causes, equipment, mobile types, functional scenarios and more

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Our real-time monitoring & troubleshooting solution provides a comprehensive end-to-end view of 2G, 3G, 4G & 5G Mission Critical Private Networks.

It is suitable for technicians at all levels, including troubleshooters, network operations managers, RAN and core network technicians, application services engineers, mission critical network manufacturers, and more.

TROUBLESHOOTING KEY FEATURES

- Analyze billions of xDRs in seconds
- Drill-down to protocol decoding of any message
- Conduct end-to-end call tracing
- Automatically analyze:
  - Behavior of subscriber activity
  - Behavior of technical procedures on the control and user planes
- Troubleshoot issues with the Telecom bearer and MCX services
- Root cause analysis
- Alerts on specific events

SERVICE ASSURANCE WITH DRIVE TEST

Test your network automatically or on demand

Our Drive Test solutions enable you to test network coverage against SLAs and to easily identify interference issues.

The KPIs are based on information from all data sources, which relate to MCX, Voice, SMS, data, and other supplementary services.

Test runs can be conducted as single events or as part of a regular schedule. They can be collected on demand or automatically in both manual or unattended mode.

Available as installed racks on test trains, trolleys (pictured below left) and backpacks (pictured below right).

DRIVE TEST KEY FEATURES

- Provide KPIs on multiple domains:
  - MCX application server
  - IMS
  - Core Network
  - RAN
- Calculate relevant KPIs based on transactions and message combination to evaluate the QoS experienced by subscribers
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Example MCPTT KPIs	
3GPP TS 22.179 version 14.3.0 KPIs	**Additional KPIs**
▪ MCPTT Access time (KPI 1)	▪ MCPTT identifiers
▪ End-to-end MCPTT Access time (KPI 2)	▪ Group-Broadcast Group
▪ Maximum Late call entry time (without application layer encryption) (KPI 4)	▪ MCPTT Emergency Group Call
▪ Maximum Late call entry time (with application layer encryption) (KPI 4)	▪ MCPTT Group Call
	▪ Broadcast Group
	▪ MCPTT Request
	▪ Pre-emption
	▪ Interworking with non-3GPP PTT systems: ▪ Interaction with telephony services ▪ Legacy land mobile radio / GSM-R

OT CYBERSECURITY FOR CONFIDENCE AND COMPLIANCE

Detect, discover and manage OT cybersecurity issues on your network

Mission critical networks are increasingly vulnerable to cyber-attacks, causing potential safety and service disruption issues. The resulting economic and, or reputational consequences could be disastrous.

Our secure OT cybersecurity solutions help to meet the certifications.

They can help to detect malicious operations made before a sophisticated attack such as topology scanning and failed attack attempts".

Our cybersecurity solutions also greatly improve security and help to fulfil NIS directives requirements.

They are designed to provide engineers and management with the tools to detect, discover and manage cyber-related issues in real-time, on telecoms networks and mission critical communication systems.

They are available as a standalone system or can be integrated with a customer's SIEM solution, if required.

CYBERSECURITY KEY FEATURES

- Cyber-proof solutions
- Monitor access from untrusted networks
- Audit records generated by equipment
- Protect the integrity of transmitted information
- Prohibit unnecessary ports, protocols and services
- Track unsuccessful login attempts
- Produce a report list of components
- Produce reports on unauthorized wireless devices
- Recognize changes to information during communication
- Find and resolve issues more quickly, as the alerts & playbook reduce detection delay, outage, and analysis time
- Forensics from alert dashboard
  - Attack vector identification: source and target of the attack
  - Scenario identification
  - Raw data of event(s) triggering alerts
  - Historical information
- Response in alert dashboard
  - Potential impacts available to SOC
  - Remediation guidance with ERTMS expertise

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