Monitor Legacy, NGN and LTE Networks with Nexus8630 Protocol Analyzer

- Detailed mobile subscriber activity depiction
- Fully correlated cross-technology call traces
- Comprehensive analysis of network activity
- Optimized network settings via flexible KPIs
- Distributed capture with easy merging for centralized analysis
Nexus8630 is a central protocol analyzer with distributed passive probes that are continuously monitoring network access for testing of all fixed interfaces of mobile radio networks (GSM, GPRS, UMTS (HSDPA), CDMA), access networks (V5, ISDN) SS#7 networks and LTE.

Cross Technology Call Trace Correlation
While cross-technology call trace analysis capability is indispensable to maintaining quality of service in convergent networks, Nexus8630 allows instant correlation of message flows over multiple links, even across different types of interfaces and technologies (e.g. VoIP to ISUP call flows).

From a centralized location, Nexus8630 offers sophisticated and comprehensive network element monitoring and analyzing capabilities on the respective links — with no need for scheduling. It continuously monitors and depicts full call trace and protocol details, providing a very cost-effective means to secure highest quality of service for your most important subscribers.

Alternatively, Nexus8630 can be used as a portable solution, benefiting and tailored to:

- Integration test labs
- Professional service teams
- Engineering, planning, operation and operators maintenance teams

Auto-Configuration Wizard
The Nexus8630 initial setup wizard detects and configures all installed cards and interfaces automatically, including signaling channels on Abis and Iub interface cards.

Transparent Mobile Subscriber Behavior
Nexus8630 enables any mobile subscriber activity to be traced through a Radio Access network. In response to a problem report, Nexus8630 immediately provides current and historic network protocol data that corresponds to the time the problem occurred.

With just one mouse click, Nexus8630 generates ladder diagrams, providing excellent multi-technology call trace analysis and call flow visualization functionality.

VoIP to ISUP Call Flow Analysis
Watch calls progress through your network and spot the cause of a problem in an instant. Where simultaneous testing is required in GSM, GPRS, UMTS, SS7 and converged networks, Nexus8630 can accommodate all analysis needs — including error color-coding!

Instant Message Flow Correlation, Analysis & Depiction
It is no longer necessary to schedule and activate test and monitoring scenarios in the hope of the problem recurring! Nexus8630 can be deployed permanently as a multi-user centralized system, continuously providing network-wide comprehensive protocol analysis functions 24x7. When the need suddenly arises to investigate specific 3G subscriber activities, Nexus8630 is ready, offering real-time as well as historic traffic and protocol data, including lub/Gb deciphering.
Centralized Monitoring of Access Networks
Nexus8630 is a highly versatile protocol tracer that enables comprehensive analysis of message flows in the network. Traces from different sites can be easily merged together to look at the overall call in one window.

Save & Replay Audio & Video Payload
As well as analyzing the protocol details of subscribers’ activities, Nexus8630 is also able to store and replay audio and/or video payload. These audio or video data streams can be replayed in order to (subjectively) analyze the quality of the communication.

Control GSM-R Networks
Nexus8630 supports a wide range of GSM-R-specific protocols (e.g. ETCS) and track analysis to ensure the quality of the GSM-R network.

Radio Parameters of Mobile Station Conversation

Easy Drill Down from continuous CDRs to Call Problems
When continuously monitoring selected links CDRs are generated automatically giving and immediate overview about the different calls, their main characteristics and potential problems. When detecting a call with a problem drill down to all the call details is done with just one mouse click.

Key Benefits
- Centralized protocol analysis for 2G and 3G Networks
- Full call trace analysis — online & historical
  - VoIP to ISUP call analysis
  - Multi-technology & multi-vendor
- Audio & video stream payload analysis
- Unmatched flexibility for kpi counter and filters
- Self defining dynamic counters
- Easy definition of customer specific KPIs
- Wireshark Import Export
- Replay of audio and video conversation via Wireshark
- Automated configuration & passive probes
- Wide range of supported protocol decodes
- Instant correlation of message flows over different types of interfaces and technologies
- Detailed call flow depiction with ladder diagrams
- Simple, easy to use and attractive GUI features
- 24x7 surveillance capabilities
- Quick and simple installation through auto-configuration of links and interfaces
- Quick Drill Down from 24x7 CDR to the related call
- Alarming via SNMP based on user definable thresholds
- Cost-effective solution for maintaining quality of service in UMTS (including HSDPA), GSM (including GSM-R), GPRS, EDGE, CDMA / CDMA2000, NGN and other mobile and fixed networks

Nexus8630 - Put an End to Unresolved Call Drops
Get the answers to network problems and detect imperfect RAN settings quickly.
Optimize Access & Media Gateway Networks

Nexus8630 PLATFORMS

Nexus8630 Mainframe Options
Central Analyzer (or stand-alone) unit, with on- and off-line analysis, that includes the following:

- 5 slots for interface cards
- 15” LCD monitor
- PCM and Ethernet alarm monitor
- Auto configuration and scanner (providing a dynamic display of the usage of every PCM timeslot)

Nexus8630 Probe
A slim line CPCI based probe connected to the Central Analyzer through a LAN network:

- 2 slots for interface cards

Nexus8630 IP Probe
A server based probe with PCI-X Gigabit Ethernet cards for IP based traffic and protocol analysis.

- 2 Rx or 4 Rx Interface Card pluggable
- 2 slots for interface cards

Nexus8630 INTERFACE CARDS

STM-1 / OC-3 Interface (4 ports)
- Optical with 1310 nm or 1550 nm

E1/T1 PCM / ATM Interface (4 bi-directional links – 8 Rx)
- E1/T1 trunks carrying PCM traffic
- E1/T1 trunks carrying ATM/IMA traffic
- Select 75 / 120 ohm with cables and connection adaptors

Giabit Ethernet Interface (2 port – 2Rx)
- 10/100/1000 Ethernet card
- Electrical or optical systems

Nexus8630 Supported Protocols

- GSM/CDMA Decodes Package
- Lucent RSL/O&M/PCU
- Nokia RSL/O&M/PCU
- Ericsson RSL/O&M/PCU
- Siemens RSL/O&M/PCU
- Alcatel-Lucent RSL/O&M/PCU
- Huawei
- Nortel Networks Decodes Package
- CS Core Network Decodes (SS7, IN)
- GPRS Decodes Package
- Access Network Decodes Package (V5, ISDN)
- HSL Decodes Package
- SIGTRAN
- GSM-R Decodes Package
- Dynamic EDGE Package
- CDMA Base Package
- CDMA2000 Package
- WiMAX Package
- Payload Decodes
- Gb-Deciphering
- NGN-IP / VoIP
- IMA Application Package
- UMTS Decodes Package (Iub Deciphering)
- LTE Decode Package

NOTE: See protocol datasheet and technical specifications for further details.

Head Office
bitGate data systems GmbH
Nexus Telecom business unit
Tel.: +49 (0)6631 70760

Nexus Sales Partners:

North America
Ottawa, Canada
Tel: +1 (613) 224 2637

Central & Latin America
Santiago, Chile
Tel: +56 (2) 946 3102

Africa
Centurion, South Africa
Tel: +27 (12) 656 0773

South East Asia
Kuala Lumpur, Malaysia
Tel: +60 (3) 7725 2099

South Asia
Islamabad, Pakistan
Tel: +92 (51) 285 4890

Middle East
Dubai, United Arab Emirates
Tel: +971 (6) 557 3225

www.nexustelecom.com