Qorela imc

INTER PROBE
INTELLIGENCE & ANALYTICS

QORELA IMC

Uncover the hidden truth

DATASHEET

qorela.com
info@qorela.com

qorela.com
info@qorela.com

Qorela IMC is a comprehensive platform designed to assist Law Enforcement Agencies (LEA) in identifying and analyzing data from various sources that may be connected to illegal activity.

- It operates on any network and provides a suite of tools to aid in complex investigations, acting as a Law Enforcement Monitoring Facility (LEMF) as well as a big data analytics platform leveraging powerful link analysis and visualization capabilities.
- The system is optimized for quick query processing and can handle high transaction rates, making it capable of handling the demands of large telecommunications networks.
- It is also fully compliant with European Telecommunications Standards Institute (ETSI) and 3rd Generation Partnership Project (3GPP) standards and can work with any equipment from various vendors, ensuring consistent capabilities. Additionally, it can seamlessly integrate into current multi-vendor and multi-service networks and has a granular authorization mechanism that allows for secure segregation of networks, users, and authorities.
- The platform includes investigative tools that are built on strong filtering and query capabilities, advanced link analysis functions and AI-driven automation for a quick discovery of concealed information. It is designed to be transparent and reliable, providing simplicity and speed of use for all lawful interception requirements.

INDUSTRIES

- Defence & Military
- Law enforcement

WHAT MAKES QORELA IMC UNIQUE?

- Qorela IMC is a platform for law enforcement authorities to identify and analyze data connected to illegal activity.
- It operates on any network and provides tools to aid in investigations.
- The system is optimized for fast query processing and can handle high transaction rates.
- It is compliant with European Telecommunications Standards Institute and 3rd Generation Partnership Project standards.
- It can integrate into current multi-vendor and multi-service networks and has secure authorization mechanism.
- The platform includes investigative tools and is designed to be transparent, reliable, simple and fast to use.

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KEY BENEFITS

Realtime listening:

You can tap into target's conversations in real-time as LIMS begin to send TCP packets over the network.

Speech-to-Text:

All audio data captured from network interfaces are processed packet by packet. This output is automatically transcribed into text by Qorela IMC.

Voice Biometrics:

Integrated AI capabilities enable the voice recognition. Basically, the platform makes it possible for you to identify the speaker, henceforth, search for a person's calls.

Speech diarization:

The speech can be diarized by Qorela IMC resulting in a full view of conversation on tape screen of the operator.

Translation:

Qorela IMC helps its users by its default language translation capabilities. The operator may also view the related conversation in its original language or may request a 3rd language translation on the go.

Word clouds on transcribed text:

The operator may quickly be attracted with the main issue during whole conversation via word cloud generated for each text content.

Keyword spotting:

Qorela IMC can alert its users about a specific keyword provided to the system, even while the audio is processed on its data processing pipeline.

Alert:

Qorela IMC lets its users to define alert rules (e.g. if a person calls a person that he has never been in contact) and actions can be taken throughout the system as the user demands. This feature enables users leave the PC and let the system do the checks for them.

Geofencing:

Qorela IMC can take actions on specific alerting conditions. The users can fence an area and tell the system to define new targets if any non-target enters to this specific area.

Conditional target creating:

Target's can be created if some conditions are met within the interceptions flowing into the Qorela IMC. E.g. a person that is called by a target in the system and has an IMSI starting with a specific prefix should become a target as well.

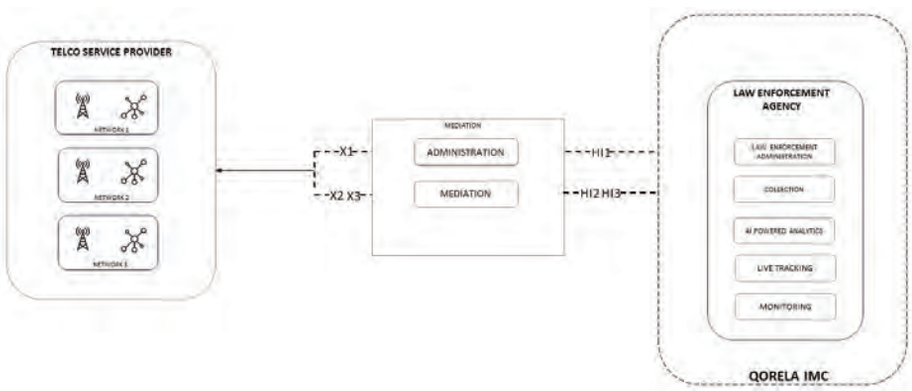
Deep analysis:

Perform a thorough analysis on any exchanges of information from a suspicious person or a group in real time. Identify P2P IM app calls or identify who was with whom.

Link analysis:

Evaluate the relationships between the suspects and uncover the hidden connections via story-telling analysis modules.

HOW IT WORKS?



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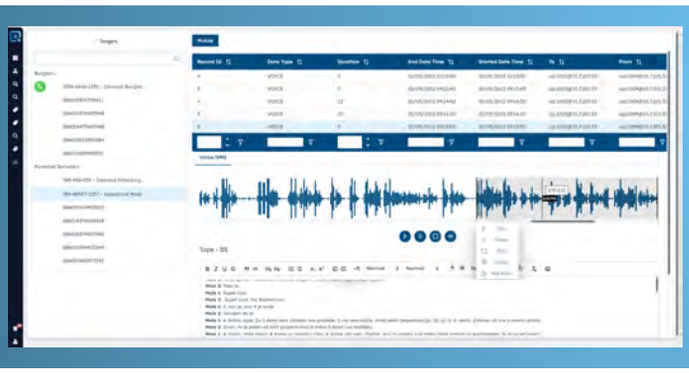

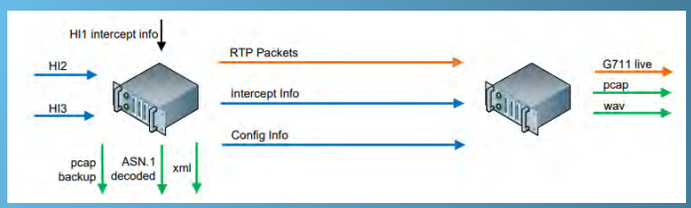

FEATURES

Electronic surveillance:

The system allows the collection and analysis of intercept related information (IRI) data and call content (CC) from GSM or satellite phones, integrated with LIMS, which is required to be set up in service providers' side, in order to monitor and observe the activities of individuals.

Artificial intelligence-supported recording:

The voice data of the conversation transferred from the call intercept systems to Qorela IMC are automatically converted from speech to text using NLP abilities; aiming to improve the performance of the personnel responsible for transcribing the conversation.

Extraction of conversation summary:

An NLP-based artificial intelligence software developed to enable the extraction of summary information from written conversations.

Live listening:

The audio of a conversation transferred from the call intercept systems to Qorela IMC is transferred to the screens of the listening operators in near-real-time and in this way, it contributes to the formation of the danger perception of the law enforcement at the moment the conversation takes place.

Cooperation and sharing:

The system provides tools and features that allow law enforcement agencies to cooperate and share information with other institutions in real-time.

Data analysis:

The system includes tools and techniques to analyze data from various sources and identify patterns and trends that may be relevant to an investigation. This function includes data mining, social network analysis and other analytical tools. The data analysis screens are designed as graph-based and has a user-friendly visual interface that can be used by users who do not have any software code knowledge. By setting up alerting conditions on specified analysis, actions can be taken throughout the system, enabling users to monitor their data status on an ongoing basis.

Data visualization:

The system provides dashboards which are made of dashboard cards as a result of sketched analysis on the system. Those dashboards can be designed in a parameterized way and can run on specified intervals in order to increase awareness on incoming data flow.

Security and privacy:

The system is designed with strong security and privacy controls to protect sensitive data and ensure that it is accessible only by authorized personnel.

IP Rendering:

MDP data may also be intercepted and ingested into Qorela IMC. Our product enables its users to do internet traffic or usage analysis, like identification of traffic anomalies, network misuse or illegal activities.

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CHALLENGES	SOLUTIONS
Limited scalability: The LEMF solution may not be able to handle high transaction rates or large amounts of data, making it difficult to keep up with the demands of a large telecommunications network.	**Scalability:** As Qorela IMC is designed on top of a distributed architecture, it is optimized for handling huge data collected from large telecommunications networks. The server farm may be easily expanded / shrunk as the customer's requirements.
Lack of compliance: The solution may not comply with ETSI/3GPP standards, making it difficult for LEAs to use the data obtained from the system in a legal context or to integrate their LEMF to a standard Lawful Interception Management System (LIMS). In this case, the solution may not be able to seamlessly integrate into existing multi-vendor and multi-service networks, making it difficult to incorporate the system into an existing/developing infrastructure. Extra development cost may be inevitable.	**Compliance:** Qorela IMC is fully compliant with ETSI/3GPP standards, ensuring easy integration of different LIMS conforming to those standards. Besides, as Qorela IMC is a fully in-house developed product, it provides seamlessly integration into existing multi-vendor and multi-service networks, even they are not compliant with communication standards.
Limited investigative capabilities: Standard solutions may not have advanced filtering and query capabilities, making it difficult to quickly identify and analyze relevant data resulting a lack of comprehensive insight gathering from agencies' existing data universe.	**Investigative capabilities:** Qorela IMC has advanced filtering and query capabilities, making it easy to quickly identify and analyze data with its 360 degrees view of whole dataset universe. This means that your data gathered from interception systems can be easily correlated and queried on a single pane of glass.
Limited link analysis: The solution may not have advanced link analysis functions that can help quickly identify concealed information.	**Link analysis:** Qorela IMC has advanced link analysis functions that can help quickly identify concealed information.
Difficulty to manage access rights: The solution may not have a sufficient authorization management system that allows for secure segregation of networks, users, and authorities which may lead to failure to meet legal regulations of the country the system operating on.	**Fine grained authorization:** Qorela IMC has a fine-grained authorization management system that allows for secure segregation of networks, users, and authorities; for only eyes who may it concern.
Lack of AI-driven automation: Standard solutions may not have AI-driven automation which can make the process of investigation time-consuming and error-prone.	**AI-driven automation:** Qorela IMC has AI-driven automation which can make the process of investigation faster and more accurate. It has advanced Speech-To-Text, voice biometrics, speech Diarization, speech summarization, optical character recognition and named entity recognition functionalities which minimizes human interaction and enhances productivity.
Lack of reliability: Standard solutions may not be reliable both in means of functioning and server failures and may not be able to meet real-world challenges in a tested and secure way.	**Reliability:** As Qorela IMC is designed as a distributed, replicated and high available platform. On Qorela IMC, it is not possible to lose any stored data or service. HI2 and HI3 interfaces are also designed in a reliable way in order not to lose any incoming session in case of a failure.
Lack of simplicity: Standard solution may be difficult to use and may require technical background of the users.	**Simplicity:** Qorela IMC is designed to be simple and easy to use, providing a single source of assistance and analysis for all lawful interception requirements. Analysis would be held by non-technical staff as those modules are designed to serve in a story-telling manner.
Lack of integrity: It would be more difficult to fuse insights gathered from LEMF and other data sources of the agencies resulting a blind spot in their analysis process.	**High capacity:** The system can handle the transaction rates produced by big telecommunications networks with thousands of concurrent targets since it can ingest several billion data records each day via its parallel data execution engine and powerful AI services.

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TECHNICAL SPECIFICATIONS

- Fully distributed with;
  - Parallel data execution engine for IRI and CC content (up to 3000 concurrent targets),
  - Distributed columnar database for structured data and distributed file system for unstructured data,
  - Concurrent execution of parallel queries over huge data,
- Web application which is accessible via web browsers from any OS platforms,
- Highly scalable platform that would expand or shrink as the customer needs,
- Ability to ingest other data sources from different systems in order to gain a full insight on your fused big data,
- High availability and redundancy guaranteed with data replication and microservices architecture as well as failover on HI2 & HI3 interfaces,
- Available both as a data source and a data storage for 3rd party external systems via provided RESTful APIs and SDK,
- Atomic authorization features in order to prevent unauthorized access on critical infrastructure and data.

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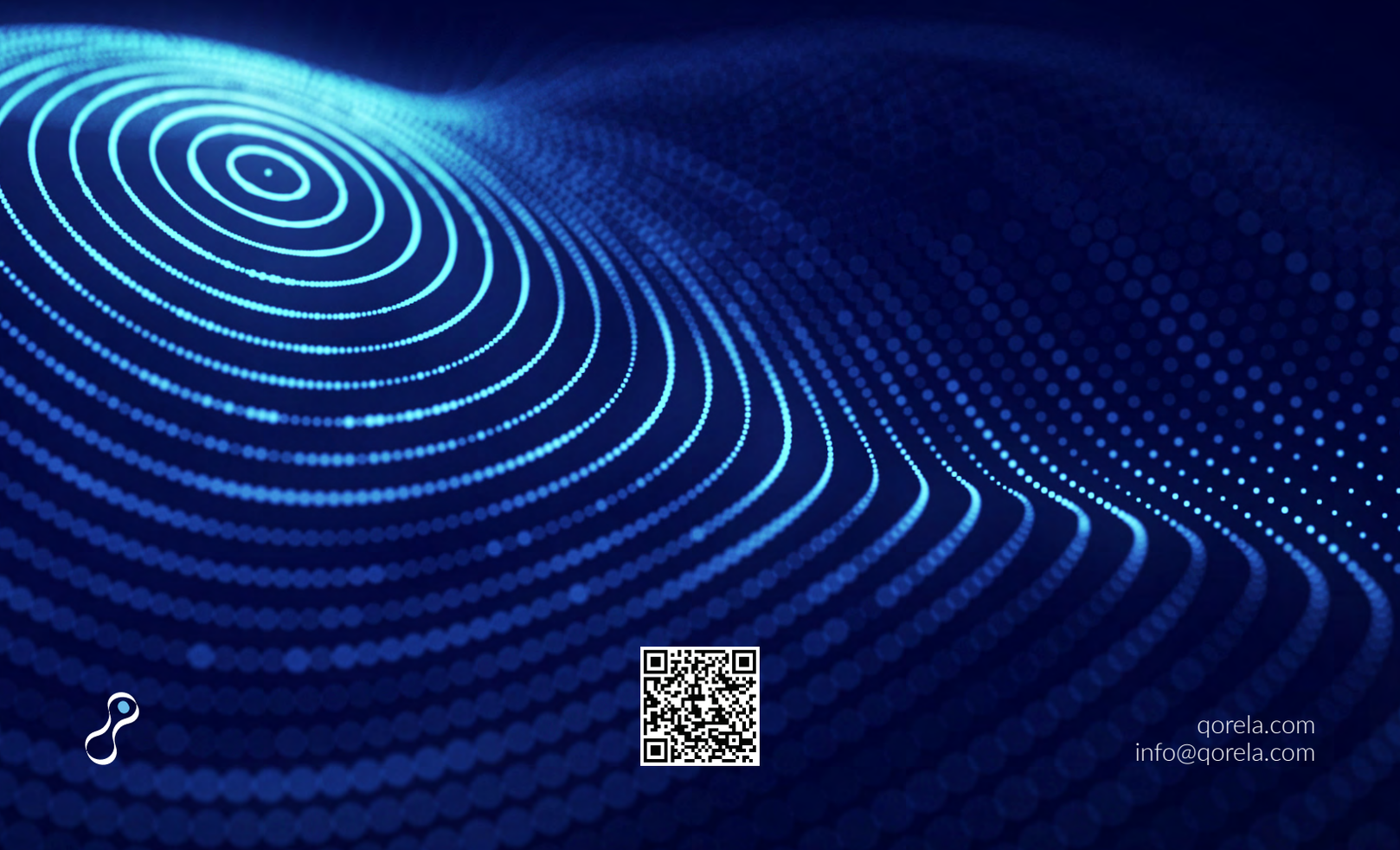

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