

Qosmos ixMachine LI Edition

Lawful Interception Probe for IP Communications



Product: Lawful Interception

Probe

Applications: Lawful Interception,
Data Retention

Users: LI Solution Vendors,
Law Enforcement Agencies,
Systems Integrators

Key features: Identification of
targets and interception of IP
communications

For more info:

[www.qosmos.com/products/
qosmos-ixmachine-li](http://www.qosmos.com/products/qosmos-ixmachine-li)

Qosmos ixMachine LI Edition has been specifically designed to meet the technological challenges of **Lawful Interception** with support for increasingly complex communication protocols.

Versatile: Accurately identify targets across all Internet applications, virtual IDs, and physical locations.

Laser Sharp: Identify targets and intercept flows based on real-time parsing of the complex grammar of network flows.

Standards - compliant: Compliant with ETSI standard for the HI2 and HI3 interfaces.

Beyond standards: Intercept emails within an SMTP session; intercept Webmails, IM and non-standard communication channels; intercept across multiple applications, physical locations, terminals and Web identities.

Fits your LI solutions: Passive probe designed for seamless integration with mediation device and management systems.

Interception Modes

Full IP traffic intercept based on AAA triggers (ETSI TS 102232-3)

- Intercept all IP traffic for a given target
- Set triggers on DHCP, Radius, Diameter metadata

Full IP traffic interception based on Virtual ID triggers

- Intercept all target traffic from a physical access point (IP address, IMSI, etc.)
- Identify targets across all their virtual identifiers (e.g. a Webmail login or an email address)
- Track target across applications, virtual IDs and locations

Email Interception (ETSI TS 102232-2)

- Intercept entire SMTP session or a specific email within an SMTP session
- Set triggers on any emailing identifier: sender address, receiver address, login etc

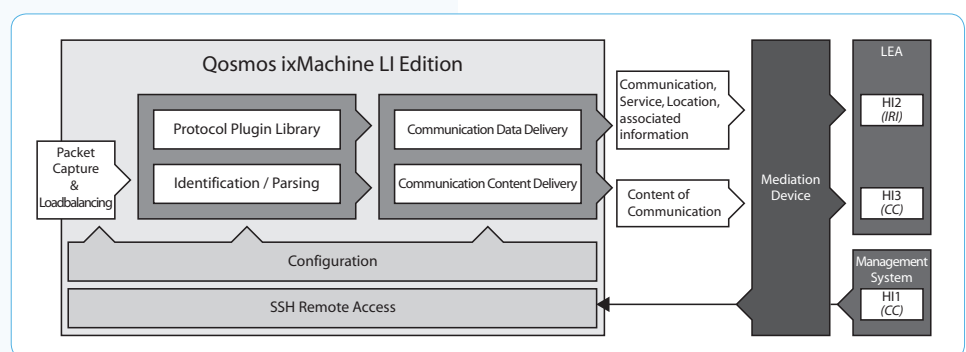
VoIP interception (ETSI TS 102232-5)

- Intercept VoIP traffic
- Set triggers on any SIP identifier: IMSI, etc.

Non-standard service interception

- Intercept traffic of IP services such as IM, Webmail etc.
- Set triggers on service(s) identifiers

Qosmos ixM LI Edition has been designed to interface seamlessly with third-party Lawful Interception systems.



Features

Traffic flow parsing

- 100% reliability of interception: no false positives. Dynamic parsing of flows according to protocol grammar (unlike static pattern matching)
- No use of TCP/UDP ports for classification: protocols identification based on syntactic and semantic analysis
- Stateful correlation of flows into sessions and applications

Triggers and Identification

ixMachine LI Edition Probes parse traffic in real time, identifying all traffic attributes (sender, receiver, caller, called party, login etc.) necessary to pinpoint a target.

- Identification of targets with authentication information
 - Identification of virtual IDs
- Probes are configured through the HI1 interface.

Virtual ID Manager

The Virtual ID Manager correlates the virtual identities of a person when using IP communication applications (e.g. username) with the network identification (e.g. IP address). This enables tracking of a target across all Web identities and physical locations.

Interception of communication content

ixMachine LI Edition probes can be configured to fit the exact requirements of the LEA.

- Interception of all IP traffic for a given trigger
- Selective interception of traffic (e.g. Email, Webmail, Instant Messaging, VoIP, etc.)
- Compatible with the X3 interface to feed mediation device with all communication content required by the HI3 interface

Depending on LEA objectives and system architecture, probes can intercept all the IP traffic or specific parts of the traffic (e.g. Email traffic, VoIP traffic, etc).

Intercept Related Information (IRI) delivery

Leveraging a portfolio of 4 000 traffic attributes – far beyond traditional probes – ixMachine LI Edition identifies and delivers in real time all communication, service and location associated information required to feed the HI2 interface.

Data retention

The real-time parsing of each flow – whether intercepted or not – delivers fine-grained communication records to meet regulatory data retention requirements. Communication records may include VoIP, email, Webmail, Instant Messaging, file transfer, P2P and other IP-based applications.

Hardware or software probe

ixMachine LI Edition

- Hardware probe for intercepting traffic up to core network speeds

ixMOS LI Edition

- Qosmos firmware (including interception software and OS) that can be installed on COTS hardware

ixMachine LI Edition Soft Probe

- Qosmos software for Linux distribution

Scalable solution

ixMachine LI Edition probe architecture enables interception of very large quantity of targets.

The number of rules set has no significant impact on performance. The multi-gigabit surveillance capacity of the ixMachine LI Edition allows users to manage millions of concurrent sessions and hundreds of thousands of rules.

Protocol Tools

Protocol Plugin Library

The widest and deepest protocol and application knowledge on the market allows LEAs to intercept any traffic including the latest Webmails or regional IP-based communications:

- Over 300 protocols and applications recognized
- Instant Messaging: Skype, MSN, Gtalk, etc.
- Webmails: Gmail, Hotmail, YahooMail, etc.
- VoIP: H323, SIP, MGCP, etc.
- Mobile telephony: WAP, GTP, etc.
- Network: TCP/IP, DNS, DHCP, Radius etc.
- Peer-to-Peer: eMule, BitTorrent, etc.
- Others: online gaming, business applications, etc.

Protocol Watch Service

- Protocol evolutions are monitored to enable fast response and updates to evolving and new protocols
- On-demand addition of new or customized protocol plugins to the library

Tunnel Management

ixMachine LI Edition automatically parses tunneled traffic to enable lawful interception even when flows are encapsulated. Major tunnels such as GTP, GRE, L2TP and others are all supported natively.

Protocol Plugin SDK

Allows users to create their own specific protocol plugins and integrate them in the ixM LI Edition.

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