

## Network Intelligence FAQ

### Network Intelligence Technology Harnesses the Power of Data in Motion

#### Who is Qosmos?

Qosmos provides software and hardware platforms that identify and extract information traveling over networks in real time with unparalleled precision and depth, enabling more intelligent, precise and secure applications and services.

#### What is Network Intelligence (NI) Technology?

Network Intelligence is a sophisticated enabling technology that extracts and analyzes both the granular details and the surrounding context of data attributes as data crosses networks in real-time. It identifies the hundreds of protocols (programming syntax that synchronizes data transmission among communication servers) required for the communication transaction as well as the thousands of types of metadata surrounding the data itself. Extracted information can include the types of applications in use and, more importantly, the surrounding metadata that describes and maps communication patterns for rapid analysis of data relationships. Qosmos' unique ability to capture detailed metadata enables a global and accurate understanding of network activity.

#### What is the critical need for real-time Network Intelligence?

A detailed, real-time view of network events is crucial for a variety of business and security objectives. Capturing data in transit provides a true picture of its purpose, use and value. And in many instances, the IP network itself is the only practical location where data can be extracted. The exponential increases in the volume of data communications, growing methods to access and exploit weaknesses in networks, and the monetization of commercial transactions generated across the Internet demand built-in intelligence to enable greater precision, security and revenue capture.

#### How is Qosmos Network Intelligence technology used?

Qosmos provides customizable, pre-developed Network Intelligence "building blocks" available as a software development kit or hardware probes that easily integrate into existing and new products. They are used by Network Equipment Providers, Software Vendors and Systems Integrators to provide competitive advantage and greater precision in revenue-generating solutions, improve network visibility and add an extra layer of security that isn't readily available in commercial off-the-shelf (COTS) products.

#### What are the key features of Qosmos technology?

1. Next-generation Network Intelligence for network-dependent applications and services
  - Level 7 recognition and classification based on protocol content and meaning
  - Real-time extraction of protocol and application metadata and content
  - Visibility at protocol, application, service, user and device levels
  - Custom protocol development on demand
  - Ability for users to develop their own protocol signatures
2. The highest recognition rate of any solution on the market for precise Network Intelligence
  - 300+ network and application protocols recognized; 4,000+ metadata extracted
  - Protocol and application signatures constantly updated
3. High scalability for unbreakable performance
  - Multi-core architecture support to increase packet processing performances
  - From access to core networks, for throughputs up to 80 Gbps
4. Straightforward integration and customization capabilities for faster time to market
  - Supporting market-leading CPUs and Operating Systems, including Linux Standard Base (LSB) 3.x
  - Open and flexible architecture with standard APIs for fast integration into 3rd party solutions

### **What are some examples of use cases for Qosmos enabled solutions?**

Qosmos technology enhances a wide range of applications and services across the Telco, Enterprise and Government markets. Some examples include:

- **Content Billing:** Billing system suppliers can provide operators with a more accurate understanding of content and application usage in order to optimize billing, e.g. charging based on traffic consumed and/or according to type of content.
- **Mobile Analytics:** Vendors can give operators better knowledge of their customers' mobile data service usage with visibility at the device, user, service, and activity levels. This knowledge can be used to optimize service portfolios and design new services for additional revenue opportunities.
- **Government Cyber Security:** Qosmos Network Intelligence technology enhances situational awareness and gives cyber security specialists a complete view of network status and potential threats. This empowers governments to improve preventive measures, protect network assets in real-time, and perform more accurate post-mortem analysis when attacks occur.

### **What is the difference between Network Intelligence and Deep Packet Inspection (DPI)?**

- **Deep analysis:** Network Intelligence technology evolved from the core capabilities of DPI, which was initially developed specifically to manage and optimize networks. With Network Intelligence technology, the innovation lies in deep analysis of not only the traffic flows but also the content and the metadata as well. While DPI technology is limited to the minimum requirements of each application (i.e. detect P2P in order to shape network traffic), Network Intelligence technology can extract more detailed traffic information, as required by more sophisticated applications such as market research or cyber security.
- **Horizontal enabling technology:** Network Intelligence is an "enabling" technology that is integrated into a variety of applications and systems by third parties, rather than a standalone product. In fact, so-called "DPI vendors" may use Qosmos Network Intelligence technology to extend their existing commercial solutions to these broader uses. This OEM model keeps the technology itself "agnostic," able to be applied to any number of specialized solutions that require real-time data extraction and analysis for precise revenue capture, cyber security or usage measurement. As a result, Network Intelligence technology's uses extend from the traditional telecom market to government and enterprise markets.

### **What is the added value of "Qosmos-powered" solutions for vendors and their customers?**

By integrating Network Intelligence into applications and services, the vendor community can ensure optimal performance, maintain security and protect the profit margins of their solutions. In commercial applications, telecom and network operators can bill services exactly as used and audiences can be measured directly rather than through extrapolation. In government and enterprise applications, security breaches can be identified the instant they happen. Consistent network security can be more easily implemented and maintained across applications and government agencies or enterprises – hardening cyber security and improving response times to new cyber threats.

### **What are the advantages of Qosmos' "OEM" approach?**

It allows companies and government agencies to focus on their core capabilities and removes the time, cost and risk of trying to develop such sophisticated capabilities internally. It also preserves the confidentiality of network management, providing higher levels of security for enterprise and government IP-based services and applications.