PROTEI Develops Layer 7 / DPI Packet Processing Platform in Less Than 6 Months

Accelerating time to market to deliver the most advanced DPI-enabled policy enforcement system by integrating off-the-shelf DPI engine from the Qosmos division of Enea.

π PROTEI

Overview

The Need

- Ready to use APIs to inject Layer7 / DPI capability into a network appliance providing policy enforcement, traffic charging and value-added traffic management

- DPI technology should be suitable for fixed and mobile broadband networks, including LTE and IP networks

The Solution

- PROTEI embedded Qosmos ixEngine® into PROTEI DPI, a packet processing platform, in less than 6 months

- The appliance, based on Intel® DPDK , is able to identify all traffic flows in real-time and apply policies at 80 Gbps on a single chassis

The Benefits

- Faster time to market and faster time to revenue for PROTEI

- PROTEI R&D team can focus on their core expertise in policy enforcement while relying on Qosmos for accurate and always up-to-date packet analysis

- By embedding the most efficient and reliable DPI engine on the market, PROTEI's strengths are reinforced making the company more competitive

PROTEI is one of Russia´s leading providers of fixed and mobile telecom solutions. The company specializes in creating solutions that take full advantage of the most advanced technologies available to supply more than 300 customers in over 26 countries, serving 170 million subscribers worldwide.

PROTEI has a culture of staying at the forefront of technology and therefore selected the industry leading DPI engine to develop cutting-edge solutions for its customers.

Integrating Qosmos' off-the-shelf DPI engine enabled PROTEI to boost innovation with a cost-effective approach, staying ahead of the competition in a highly competitive market. The modularity of Qosmos ixEngine® enabled PROTEI to develop solutions that could be tailored to fit the operators' business requirements.

Accelerating the Product Development Cycle

PROTEI realized that developing DPI capability internally necessitates considerable internal R&D resources, detracts from core business and poses a number of additional problems in terms of organizational efficiency and culture. More importantly, the complex connections and speed of change within the network infrastructure itself requires expertise in communication protocols that only a specialist can provide. In other words, developing a DPI engine internally would have taken years and this was not compatible with the pace of technology innovation required by a leader such as PROTEI.

For PROTEI, business success goes hand in hand with fast time to market, which in turn depends on development time. By using proven Qosmos DPI middleware, PROTEI development teams can stay focused on bringing new solutions to market more rapidly, and to more predictable development roadmaps in the face of the ever-changing traffic environment. Qosmos' Software Development Kit is designed for developers to accelerate integration. Accompanied by Qosmos support and maintenance services, this allowed PROTEI to release a new product in less than 6 months.

Qosmos has very close relationships with technology suppliers such as Intel®, which has led to the pre-integration of ixEngine APIs with different ecosystem technologies. This enabled PROTEI to reduce the time required to integrate the DPI engine to less than 4 weeks, including the support of the multicore CPU architecture selected by PROTEI, and pre-integrated support of packet acquisition technologies such as Intel® Data Plane Development Kit (DPDK) and Napatech cards.

Strong Partnership, Cost Effective Approach

Qosmos acts as an extension to PROTEI's R&D department, with the same level of collaboration and responsiveness that would be expected from an internal team.

Thanks to a tight partnership with Qosmos, PROTEI does not have to deal with the drawbacks of developing DPI capability internally: no need to invest in extensive DPI expertise, no need to maintain protocol signatures internally, no risk of unpredictable return on investment. By using of-the-shelf DPI software from Qosmos, PROTEI is able to control the cost and roadmap of DPI, making it easier to optimize product P&L.

Integration of Qosmos DPI Engine into the PROTEI Solution
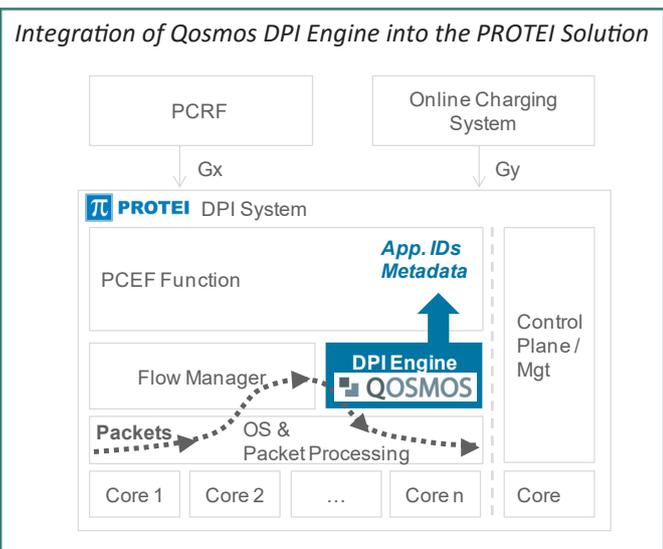
Qosmos sustains PROTEI's current technology options (Intel® based Architecture) and will support the company in their future strategic roadmap choices. Qosmos DPI engine will continue to support all leading CPU platforms for maximum flexibility in multicore technology.

Staying Ahead of the Technology Curve

PROTEI's goal is to deliver best in class technology to its customers, and Qosmos ixEngine enables the company to honor and augment this promise.

By providing the ability to identify nearly all protocols and applications on fixed an mobile networks, including LTE networks, Qosmos ixEngine has proven its position as the most accurate IP flow parsing technology on the market. In addition, the ability of Qosmos DPI engine goes beyond flow classification to also extract metadata from the traffic: this gives PROTEI the opportunity to provide a value-added service platform.

Carrier Grade DPI to Support Business Critical Applications

The PROTEI solution is a key element in their operator customers' business critical processes such as charging and quality of service assurance. Because the DPI engine is at the core of the system, it has to deliver the high quality standards required by carrier grade systems.

Qosmos ixEngine is the recognized leader in parsing accuracy and reliability. Not only does Qosmos provide the widest range of layer 7 protocol and application decoders, but also implements the most advanced techniques to resolve a flow with no false positives and virtually no false negatives. This includes full protocol parsing, the ability to support advanced network behavior like encryption, tunneling, http proxy and http pipelining.

Scaling Up to 80 Gbps Per System

PROTEI leverages Qosmos expertise in multi-core support capabilities. The software typically handles up to 4 Gbps of traffic per core on Intel® Architecture. Optimized symmetric multiprocessing (SMP) supports scalability up to 96 cores. PROTEI takes advantage of Qosmos ixEngine's high performance under heavy metadata extraction loads to deliver advanced features at line rate.

Leveraging DPI Across Different Use Cases

The PROTEI solution is not only key to charging and regulating bandwidth consumption, it is also a value-added service platform allowing operators to support a variety of use cases such as:

- Redirecting subscribers to partner's resources
- Collecting statistical data about subscribers' preferences to make advertising campaigns more effective
- Performing URL blacklisting
- Detecting and filtering malware

PROTEI was able to develop a number of features based on the Qosmos DPI software. Furthermore, the thousands of application metadata provided by Qosmos will enable developers to build new capabilities requiring detailed flow intelligence, including:

- Detailed subscriber behavior analysis
- Quality of experience monitoring per application
- Detection of advanced cyber threats

Qosmos DPI engine with metadata extraction provides PROTEI with the perfect tool for differentiation and to leverage the company's close understanding of today's and tomorrow's operator requirements.

Find out more on the Qosmos website!