

# The use of the Netcope Technologies NPC-100G acceleration board for the first 100GE NetFlow/IPFIX probe in the world

## Partner

Flowmon Networks is a leader in the field of network security and flow monitoring (NetFlow/IPFIX). Because of its high performance, scalability and easy implementation, Flowmon's solutions are being implemented by customers all around the world. Among them there are financial institutions, ISPs, data service providers, manufacturing companies and government agencies.

## Original situation

Flowmon Networks portfolio spans all the tools necessary for maintaining absolute control over network traffic. The basis of every offer are NetFlow/IPFIX probes called Flowmon Probes. These are powerful autonomous devices that monitor network traffic, create statistics of IP flows and send them to a collector to be stored and further analyzed.

In order to keep its position of a technological leader and to prepare for further business opportunities, Flowmon Networks aims to develop a new generation of NetFlow/IPFIX probes that can monitor and process traffic of 100GE high-speed networks. Every such device consists of commodity hardware, NetFlow/IPFIX exporter and a network board that captures the traffic coming to the host computer on wire-speed.

Flowmon Networks has a robust R&D department and is very experienced in terms of NetFlow/IPFIX probe development. But when it comes to network boards, the company uses OEM contracts. Because of that, it was necessary to find a reliable supplier of network boards that would be able to handle 100GE monitoring requirements.

## OEM cooperation with Netcope Technologies

Thanks to the history of successful cooperation of the two companies, Flowmon Networks contacted Netcope Technologies, a supplier of high end FPGA solutions. High criteria of the OEM contract were not easy to meet. The FPGA board had to:

- capture the traffic on a network line with 100G native Ethernet
- have PCI Express Gen 3 x16 interface that is vital for processing of 100G Ethernet wireless traffic
- provide hardware timestamps with a nanosecond accuracy
- be equipped with firmware for network traffic filtration and other functions responsible for packet capture acceleration.

Netcope Technologies managed to fully satisfy Flowmon Networks' demand for the FPGA board NPC-100G equipped with the relevant firmware and a set of modules with the required functions. Apart from aforementioned properties, the FPGA technology of the board makes it possible to implement repairs and updates of hardware functions.

## Benefits of the OEM cooperation

The top-notch expertise of Netcope Technologies in the field of FPGA technologies and a quick delivery of 100GbE network board made it possible for Flowmon to create a prototype of a probe called 100000 Pro CFP4. The prototype is able to process over 150 million of packets per second, has been successfully tested, implemented in a production environment and introduced to the market. The goal has been met and the Flowmon Probe became the first device of its kind capable of monitoring 100GE high-speed networks.

*“As our strategic supplier, the Netcope Technologies team has cooperated with us in development of the world’s first 100G probe from the very beginning. Because of that, we were able to substantially accelerate all stages of development of the project, introduce a unique product to the market and get ahead of our competitors. We highly value Netcope Technologies’ expertise in the FPGA field, but also their flexibility in development of specific components and their responsiveness,”* Pavel Minařík, CTO of Flowmon Networks evaluates the cooperation.

During the first year of the 100G Flowmon Probe on the market, the device has already been successfully implemented by several operators of core networks. While 10G Ethernet is slowly becoming outdated and 100G Ethernet is becoming the standard, Flowmon Networks registers higher demand for 100G Flowmon Probes. This innovation ensured higher profit of the company, but it also solidified company’s position of a leader on the network traffic monitoring market.

*“Netcope Technologies is a reliable supplier that will satisfy not only demands for high performance, flexibility and reliability of a given device, but also demands for excellent supplier-customer relations. All these demands were met without any problems and for that reason we’re counting on cooperation with Netcope Technologies in the future,”* adds Pavel Minařík.