6WIND Announces Virtual Switch Acceleration Software Solution for Intel® Open Network Platform

Live demonstration at Intel Developer Forum showcases critical technology for cost-effective deployments of Network Functions Virtualization (NFV)

PARIS, September 9, 2013 — 6WIND, the gold standard for data plane processing in software-defined networks, today announced support for Intel® Open Network Platform (Intel® ONP) within its 6WINDGate™ networking software solution that provides up to 10x acceleration for virtual switches. Optimized for use in Network Functions Virtualization (NFV) deployments and cloud data centers, this solution addresses critical scalability challenges faced by service providers. A founding member of the recently-announced CloudNFV™ initiative, 6WIND is demonstrating this solution, together with Intel, Ixia and Red Hat, in its booth number 849 at Intel Developer Forum in San Francisco, CA from September 10th through 12th.

When used to accelerate the standard open-source Open vSwitch (OVS) software for NFV applications, 6WINDGate delivers an improvement of at least 3x in VM density when compared to the standard OVS implementations. The precise gain depends on the number of VMs per server and the required bandwidth per VM. The increase in VM density leads to a corresponding decrease in service provider CAPEX and OPEX. This improvement is achieved with no changes required to OVS itself, or to the VNF applications, enabling 6WINDGate to be seamlessly installed into existing software environments. 6WINDGate is also fully compatible with the OpenFlow protocol that is increasingly used in cloud and NFV networks.

“The 6WINDGate networking software solves critical performance and scalability challenges for virtual switches running on the Intel® Open Network Platform,” said Eric Carmès, CEO of 6WIND. “While accelerating the baseline switching functions by up to 10x, it also delivers high performance for secure tunneling protocols such as IPsec, GRE, NVGRE, VLAN and VxLAN. This enables telecom and cloud service providers to achieve significant CAPEX and OPEX improvements which are not possible without data plane acceleration.”
“Intel® Open Network Platform prescribes efficient connectivity for high-performance systems such as cloud data centers and rack scale architectures,” said Rene Torres, Software Defined Networking Division, Communications and Storage Infrastructure Group, Intel. “This software-defined networking (SDN)-optimized platform provides a flexible and powerful solution that supports enhanced features critical for today’s data center switching environments.”

The 6WINDGate OVS solution is fully compatible with the Intel® Open Network Platform, facilitating the rapid adoption of Intel® ONP in performance-critical applications such as NFV and cloud data centers. 6WINDGate’s support for Intel® ONP includes the implementation of optimized drivers for Intel® QuickAssist Technology in the newest Intel® Communications Chipset 89xx platform. Through support for Intel QuickAssist Technology, 6WINDGate delivers 40Gbps of IPsec throughput using only four CPU threads, whereas a pure software solution requires eight threads, which increases the availability of processor resources for running applications rather than security functions.

High performance is critical for the virtual switches used in NFV deployments, because these switches are required to support high-bandwidth network traffic to Virtual Network Functions (VNFs) instantiated in large numbers of Virtual Machines (VMs). When a networking function is virtualized, service providers expect the resulting VNF to deliver comparable performance to the physical version, so the virtual switch must support high-bandwidth traffic for the VNF. Also, the number of VMs per server, or VM density, must be maximized to ensure that NFV deployments are cost-effective when compared with traditional physical network infrastructure.

“6WIND provides key data plane networking technology for CloudNFV because the virtual switch is a key contributor to overall system-level performance,” said Tom Nolle, President of CIMI Corporation and the architect and facilitator of CloudNFV. “In any network-intensive server application, data path performance can make or break the business case, and 6WIND’s accelerated OVS solution provides an important boost to the density of Virtual Networking Functions in CloudNFV, and to virtual routing/switching applications in the cloud.”

6WIND’s demonstration at Intel Developer Forum features the standard open-source OVS running on Red Hat® Enterprise Linux® on a HP DL380 server with two Intel® Xeon® processors. The 6WINDGate-accelerated OVS is controlled by a Big Switch Floodlight controller using OpenFlow protocols and utilizes an Ixia traffic generator to provide ten 10Gbps full-duplex traffic streams. As measured on this platform, the 6WINDGate-accelerated OVS switches traffic to achieve a rate of over 60Mpps, providing an up to 10x improvement compared to a non-accelerated OVS.

“We are pleased that 6WIND is using our traffic generator in their demonstration at IDF,” said Michael Haugh, Sr. Manager Market Development at Ixia. “Ixia is widely used in the development and testing of high-performance, OpenFlow-compatible networking products
because of its industry leading IxNetwork solution, which provides intelligent flow grouping as well as flexible ingress/egress tracking per flow. 6WIND is addressing a unique challenge by increasing the performance of OVS and reducing the performance trade-off of a software-based switch. As experts in high-performance networking, 6WIND has used our products for many years.”

The 6WINDGate solution for virtual switch acceleration is available now. For more information please visit http://www.6wind.com.

About 6WIND

6WIND provides the only commercial software solution that solves network performance challenges for OEMs delivering advanced networking functions in mobile infrastructure equipment, networking appliances and data center networking. The company’s 6WINDGate™ networking software is optimized for cost-effective hardware based on industry-standard multicore processors, enabling rich Software Defined Networking (SDN) services and Network-as-a-Service capabilities that monetize services such as bandwidth, QoS and security. 6WIND delivers sustainable competitive advantages to both service providers and network equipment manufacturers. A privately owned company, 6WIND is based near Paris, France with regional offices in China, Japan, South Korea and the United States. For more information, visit http://www.6wind.com.

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