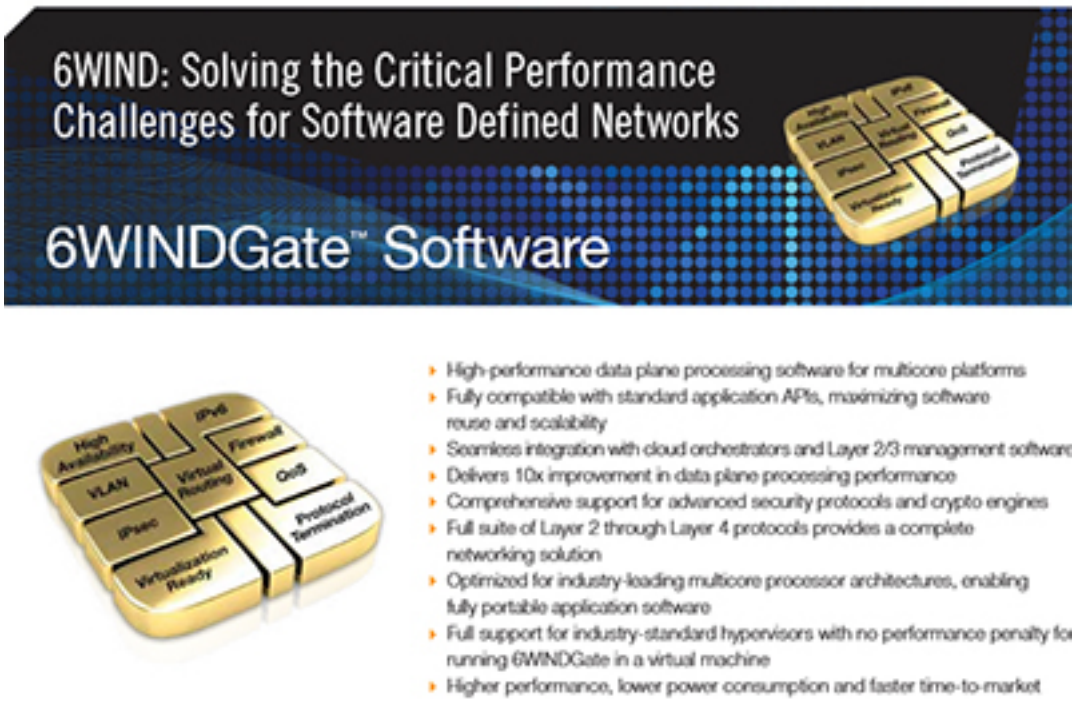
Virtual-switch acceleration software serves Intel Open Network Platform



6WIND 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 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'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.

The 6WINDGate solution for virtual switch acceleration is available now. For more information please visit http://www.6wind.com [1].

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[1] http://www.6wind.com/?utm_source=PRIDF090913&utm_medium=PR&utm_campaign=NFV