NoviFlow to Deliver World's Highest-Performance SDN Switch Solution

Leveraging Barefoot Networks' Programmable Forwarding Plane Technology

THE HAGUE, NETHERLANDS, October 10, 2017 /EINPresswire.com/ -- NoviFlow's NoviWareTM NOS Combined with Barefoot's TofinoTM 6.5Tb/s Ethernet Switch ASIC Offer Network Operators, Cloud Service Providers, and Enterprises Unprecedented Performance in a Truly Scalable, Fully Programmable, Match-Action Forwarding Plane Solution ---

NoviFlow Inc., a leading vendor of high-performance SDN programmable switching and routing solutions, announced today that its NoviWare NOS will now support Barefoot Networks' 6.5Tb/s Tofino switch, the world's fastest and P4-programmable switch chip.

Barefoot's technology has lifted the forwarding plane logic from hardware up into software, enabling software developers to code packet processing behavior in P4 and run it at line rate on Tofino. NoviFlow's industry-leading NoviWare NOS takes advantage of this paradigm-shift, implementing a fully programmable and extensible match-action pipeline that exposes the advanced capabilities of Barefoot's Tofino switch chip to controllers and applications running open standards including OpenFlow, gRPC, P4 Runtime.

Barefoot is enabling users of its technology to design, develop and deploy custom forwarding plane functionality into their networks. Network equipment and software vendors can now address previously unmet needs of their customers by enabling functions such as Layer 4 Load Balancing, DDoS protection, Detailed per-packet visibility at nanosecond precision using In-band Network Telemetry, etc. full visibility into the network using In-band Network Telemetry (INT).

NoviWare is NoviFlow's high-performance Network Operating System (NOS) that maps forwarding planes to control and provisioning APIs including OpenFlow, gRPC, P4 Runtime, for use in SDN deployments. NoviWare provides the industry's broadest support of the OpenFlow specification, including all OpenFlow 1.3 and 1.4 actions, instructions and match fields, and key OpenFlow 1.5 features. NoviWare was designed to offer unprecedented flexibility and performance in setting up and programming match-action pipelines. It is perfectly architected to make full use of Tofino's Protocol Independent Switch Architecture (PISA) via Barefoot's powerful CapilanoTM Software Development Environment (SDE) and the P4 language.

The Tofino-based NoviWare solution:
_ Enhances Tofino's capabilities with NoviWare's extensive feature set and support of open standard

APIs such as OpenFlow, gRPC, SNMP, CLI, for maximum programmability and easy integration with the current installed base;
_ Enables existing SDN applications running on standard OpenFlow controllers such as ONOS, ODL, RYU and others, to leverage Tofino class networking solutions with little or no modification;
_ Brings the benefits of SDN to a whole new market: high-performance spine/core networks, enabling the deployment of enterprise-wide SDN solutions running NoviWare;
_ Enables network operators, data center operators, and enterprises to modify and add functionality to the forwarding plane by changing programs in the field thereby slashing service delivery costs, management complexity, and time-to-market;
_ Is price competitive with fixed-function ASIC-based forwarding planes, but offers a much richer set of capabilities and superior programmability.

The NoviSwitch/NoviWare programmable match-action pipeline architecture was specifically designed to simultaneously support, in a single device, multiple network services including switching, routing, service chaining, streaming telemetry, firewalling, and load balancing.

"Barefoot is excited to deliver the much-desired benefits of its technology to new markets by working with NoviFlow," said Craig Barrat, CEO of Barefoot Networks. "NoviWare's extensible and scalable architecture, combined with Tofino's performance and programmability, enable users to deploy best-in-class solutions for switching, routing, visibility and middle-box functions into their networks."

Dominique Jodoin, President and CEO of NoviFlow, explained, "NoviWare and Tofino were made for each other. The alliance between Barefoot and NoviFlow provides a compelling new programmable match-action packet pipeline with unprecedented price-performance, extending the radical CAPEX and OPEX benefits of SDN beyond the network's edge and into the spine and core. NoviWare running on Tofino as well as Network Processors provides a single uniform Open Standard-based forwarding plane interface for the entire network, finally delivering the programmable network that Tier 1 carriers, network infrastructure providers, and enterprises have been waiting for. NoviFlow is honored to collaborate with such a distinguished partner as Barefoot Networks to offer unprecedented features and performance at reduced costs."

NoviWare on Tofino, taken together with NoviFlow's existing NoviWare on NPU based solutions, provide a single common NOS interface that can address network users' entire networks, from access points, to gateways, to aggregation, to spine and core. NoviWare also provides a consistent and market-tested interface for network applications such as Cybersecurity, NFV, Cloud-based services, the IoT, 5G, and others yet to be conceived.

NoviFlow's NoviWare running on Barefoot's Tofino will be demonstrating live in NoviFlow's booth (#A10) at the SDN and NFV World Congress on October 10-13, 2017 in The Hague, Netherlands. We invite all interested parties to come by and see the world's highest-performance SDN/OpenFlow switching solution!

ABOUT NOVIFLOW
NoviFlow Inc. provides open standard-based high-performance SDN networking solutions to network operators, data center operators and enterprises seeking greater performance, flexibility, cost-efficiency, and security over their networks. NoviFlow has offices in Montreal, Sunnyvale and Seattle, and representatives in Asia Pacific, Europe and the Middle East. For more information, please visit http://noviflow.com/. Follow NoviFlow on Twitter @NoviFlowInc.

ABOUT BAREFOOT NETWORKS
Barefoot Networks launched in 2016 after two years of developing technology for building not only the fastest switches but also ones that allow the forwarding plane to be defined in software. By enabling

organizations to define the network forwarding plane in software, Barefoot empowers network owners and their infrastructure partners to design, optimize, and innovate to meet their specific requirements and gain competitive advantage. In combining the P4 programming language with fast programmable switches, Barefoot has also created an ecosystem for compilers, tools, and P4 programs to make P4 accessible to anybody. Backed by Google Inc., Goldman Sachs Principal Strategic Investments, Alibaba, Tencent, and by premier venture capital firms Sequoia Capital, Lightspeed Venture Partners, and Andreessen Horowitz, Barefoot Networks is headquartered in Silicon Valley. For more information, visit http://www.barefootnetworks.com. Follow us on Twitter: @barefootnetwork. Follow us on Facebook https://www.facebook.com/barefootnetworks

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