NoviFlow Unleashes Terabit Scale Switching with Faucet Open Source SDN Controller, NoviWare NOS and Barefoot Tofino

World's First Deployment of Faucet with NoviFlow's NoviWare NOS and P4-Programmable Terabit Scale Forwarding Plane with Barefoot Tofino-Powered Switch at SC18

DALLAS, TEXAS, USA, November 12, 2018 /EINPresswire.com/ -- NoviFlow® Inc., a leading vendor of high-performance SDN network operating software (NOS), cybersecurity middleware and programmable network solutions, today announced that it has deployed its NoviWare NOS on Barefoot Networks' P4-programmable Barefoot Tofino™-based 6.5 Tbps switches with the Faucet open source OpenFlow controller as part of SCinet, the SC Conference's dedicated high-capacity network.

Faucet moves network control functions (like routing protocols, neighbor discovery, and switching algorithms) to vendor independent server-based software, versus traditional router or switch embedded firmware, where those functions are easy to manage, test, and extend with modern systems management best practices and tools. Faucet controls OpenFlow compatible hardware, including switches using the 6.5 Tbps Barefoot Tofino networking chip with NoviFlow's NoviWare NOS. Features of Faucet include:

- VLANs
- IPv4 and IPv6 support
- Static and BGP routing
- Flexible port and VLAN based Access Control Lists
- Port mirroring
- Vendor neutral stacking of OpenFlow switches

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> *Dominique Jodoin, President, and CEO of NoviFlow*

- Policy-based forwarding to offload processing to external   systems (E.g., 802.1x via hostapd)
- Dataplane for NFV - Offload functions such as DHCP, NTP, Firewall, and IDS
- Grafana-based dashboards for monitoring
- Prometheus integration for monitoring and instrumentation of FAUCET
- Influxdb support for time-series OpenFlow port statistics
- Comprehensive test suite

Faucet has been deployed in production around the world. Some of the sites include REANNZ, AARNet, ESnet, Victoria University of Wellington, The University of Tokyo, WIDE Project, Toulouse Internet Exchange and WAND Group Waikato University.

This year, Faucet will be deployed as part of SCinet, the dedicated high-capacity network for the SC Conference, designed and built by volunteer experts from industry, academia, and government. Planning begins more than a year in advance of each SC Conference and culminates in a high-intensity installation that, for the duration of the conference, is the fastest and most powerful network in the world. NoviFlow's NoviWare Network Operating System, the first commercially deployed SDN NOS for P4-programmable Barefoot Tofino-based Ethernet switches, will be running on Tofino-based hardware in the Faucet controlled part of SCinet. NoviWare is the SDN industry's most complete and highest performance implementation of the OpenFlow 1.3/1.4/1.5 standard for use in switches, cybersecurity solutions, WAN IP/MPLS routers, network and VNF acceleration platforms, and other high-bandwidth data plans.

"Barefoot is pleased to see NoviFlow create a high-performance forwarding plane for Faucet features using Barefoot Tofino and the Barefoot P4 Studio Software Development Environment, enabling a switching platform to meet the stringent performance requirements of SC18's SCinet," said Arkadiy Shapiro, Product Line Manager, Core Software and Solution Partnerships at Barefoot Networks. "NoviFlow's expertise in P4 and ability to leverage open source projects uniquely positions them to bring to market differentiated solutions for next-generation networks."

According to Richard Nelson, Co-chair of the Faucet Foundation: "NoviFlow, a founding member of the Faucet Foundation, is a pioneer in programmable match-action pipelines. We see the deployment in SCinet of Faucet with Tofino hardware running NoviFlow's NoviWare as an expression of confidence in the Faucet Controller, our organization, and in our efforts to foster an efficient, flexible and cost-effective Open Source SDN-controller solution."

Says Dominique Jodoin, President, and CEO of NoviFlow: "NoviFlow's participation in Faucet is part of our ongoing commitment to ensure that our products support the widest range of Open Source OpenFlow controllers, and the use cases and usage models that each one enables. This commitment to openness has played a great part in NoviFlow's products being chosen by educational institutions and national research networks around the globe including AARN, CISRO, FIU, KTH, NCSU, PSCNC, SURFNet, UNSW amongst many others. By deploying Faucet on Barefoot Tofino at SC18, NoviFlow is proving that in a world where fluid and flexible information technologies are increasingly the key to success, Faucet provides a compelling new SDN-based option for both existing and greenfield networks, with unprecedented price performance and flexibility."

The Faucet OpenFlow Controller running on NoviWare/Tofino-powered switches will be featured in the SCinet at SC18, Nov. 12-16, 2018 in Dallas, Texas.

ABOUT NOVIFLOW
NoviFlow Inc. is a leading provider of high-performance SDN Network Operating Software (NOS), Cybersecurity Middleware and Programmable Network Solutions to network carriers, data center operators, government agencies and enterprises seeking greater control, security and flexibility over their networks. NoviFlow has offices in Montreal, Boston, Sunnyvale and Seattle, and representatives in the Asia Pacific, Europe, and the Middle East. For more information, visit http://noviflow.com/. Follow NoviFlow on Twitter @NoviFlowInc.

ABOUT BAREFOOT NETWORKS
Barefoot Networks launched in 2016 after two years of developing technology that built switch silicon with a forwarding plane that is defined in software while not compromising on performance. 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. Barefoot Networks is headquartered in Silicon Valley and is backed by strategic investors

including Alibaba, Dell Technology Capital, Google Inc., Goldman Sachs Principal Strategic Investments, Hewlett Packard Pathfinder, and Tencent, and by premier venture capital firms including Andreessen Horowitz, Lightspeed, and Sequoia Capital. For more information, visit https://barefootnetworks.com/. Follow us on Twitter: @barefootnetwork.

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