NoviFlow Announces Release of NoviWare 400 With Support for OpenFlow 1.5

New software provides existing NoviSwitch and OEM customers upgrade path for the most complete high-performance OpenFlow implementation available

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MONTREAL--(BUSINESS WIRE)--NoviFlow Inc., a leading provider of high-performance OpenFlow-based switching solutions, today announced the launch of its *NoviWare 400* switching software. This is the newest release in NoviFlow's industry leading high-performance OpenFlow 1.3/1.4/1.5 switching software for use in switches, WAN IP/MPLS routers, network appliances and other high-performance forwarding planes.

The software is deployed around the world in NoviFlow's NoviSwitch products and is also offered via software license to OEM and ODM switching platform suppliers. NoviWare 400 consists of all the software necessary for a pure-play OpenFlow switch, and currently supports Mellanox NP-4 and NP-5 network processors and Intel or PowerPC host CPUs.

According to Dominique Jodoin, president and CEO of NoviFlow: "Whether deployed in NoviFlow's NoviSwitch products, or integrated as part of our OEM customers' own offering, NoviWare is providing a real high-performance software solution for OpenFlow enabled switches, routers and other network appliances. We are pleased that our network processor-based switches and software are becoming key elements in the deployment of scalable, robust, and high-demand SDN, cloud, and Network Functions Virtualization (NFV) solutions."

NoviWare 400 provides the industry's broadest support of the OpenFlow 1.3 and 1.4 specifications, including all actions, instructions and match fields. It has also been extended to support key OpenFlow 1.5 features such as the highly anticipated Copy-Fields action, as well as other new features that significantly boost the performance of

OpenFlow based applications, such as a hashing function on user-defined ordered lists, MPLS payload matching and broader encapsulation/decapsulation support for layer 2 tunneling protocols.

In order to offer the Copy-Fields action to existing customers who do not have the option of using OpenFlow 1.5, NoviFlow has implemented the Copy-Field action on as an OpenFlow Experimenter action to offer SDN applications this functionality with OpenFlow 1.3, 1.4 AND 1.5 controllers.

Key features of *NoviWare 400* include:

- Implements <u>all</u> required and optional OpenFlow 1.3/1.4 match fields (41 of 41) and instructions (6 of 6) as well as 59 out of 60 actions and basic support of OF 1.5 (Copy-Fields action)

- Linux-based NoviWare host CPU software for PowerPC or Intel i7

- Multiple OpenFlow Controllers and Controller role-changes

- Support for OpenFlow pipeline processing with up to 120 flow tables, with up to 1 million wildcard match flow table entries in TCAM and up to 15 million exact match flow entries in DRAM

- OpenFlow queues and meters for implementation of QoS mechanisms

- Extensive O&M features optimized for large scale deployment of OpenFlow switches in carrier, cloud and enterprise networks

- OpenFlow Experimenter-based extensions:

    - L2-L7 matching, packet processing and flow management
    - Experimenter action for Hash on user-defined ordered list of OpenFlow fields. Can be used to load balance in Select Group (all products) and in LAG (2000 Series only) or in the copy-field action
    - Copy-Field action based on OF1.5 also supported on OF1.3 to 1.5 through OpenFlow Experimenter action
    - Experimenter MPLS payload matching
    - L2 GRE/GTP/VxLAN/MPLS tunneling protocol encapsulation/decapsulation
    - BFD Link Monitoring

Says Jodoin: "*NoviWare 400* provides a smooth path to using OpenFlow 1.5 capabilities without requiring that existing solutions be upgraded to OpenFlow 1.5 Controllers. It continues NoviFlow's proven track record of delivering the most advanced OpenFlow capabilities available in the market while protecting existing OpenFlow investments, and is being deployed with confidence in commercial networks around the world."

NoviWare 400 is shipping now. NoviFlow will demonstrate its advanced OpenFlow solutions at its booth at the <u>SDN World Congress</u> in the Hague, Netherlands, October 10th to 14th, 2016. For more information on NoviFlow high-performance OpenFlow 1.3, 1.4 and 1.5 switching products visit: <u>http://noviflow.com/products/our-products/</u>

ABOUT NOVIFLOW

NoviFlow Inc. provides high-performance OpenFlow-based switching solutions to network carriers, data center operators and enterprises seeking greater control and flexibility over their networks. NoviFlow has offices in Montreal, Sunnyvale and Seattle. For more information, visit www.noviflow.com or follow us on Twitter @NoviFlowInc.

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