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## **Mellanox Announces First Major Production Deployment of Linux Kernel-Based Open Ethernet Switch**

*NGENIX, a European Cloud Service Provider, Deploys Spectrum-Based Switch Based on Open Source Linux Switchdev Driver*

SUNNYVALE, Calif. & YOKNEAM, Israel--(BUSINESS WIRE)-- Mellanox Technologies, Ltd. (NASDAQ:MLNX), a leading supplier of high-performance, end-to-end smart interconnect solutions for data center servers and storage systems, today announced that NGENIX, a subsidiary of Rostelecom, a leading Russian telecom provider, has deployed a 100Gb/s Ethernet Spectrum switch based on the Linux Switchdev driver to support their next generation content distribution network service. This is the first major deployment of an open Ethernet switch based on the Switchdev driver that has been accepted and is available as open source as part of the Linux kernel. The combination of Mellanox's high performance and field-proven Spectrum switch systems running an open, standard Linux distribution provides NGENIX with unified Linux interfaces across data center entities, servers and switches alike, with no compromise on performance.

"We were looking for a truly open solution to power our next generation 100GbE network," said Dmitry Krikov, CTO at NGENIX. "The choice was clear. Not only was the Mellanox Spectrum-based switch the only truly open, Linux kernel-based solution, but also allows us to use a single infrastructure to manage, authorize and monitor our entire network. In addition, it's proving to be very cost-effective in terms of price-performance."

"We are pleased to be working with NGENIX to enhance their network performance," said Dror Goldenberg, vice president of software architecture at Mellanox Technologies. "Mellanox Spectrum Open-Ethernet switch platforms support a variety of operating systems, such as MLNX-OS, Cumulus Linux, and any standard Linux operating system using an upstream Switchdev Linux driver. This provides customers with the freedom to choose the solution which best fits their needs without compromising on performance. With the market's growing demand for fully open, standard solutions for network switches, we expect the deployment of more Spectrum-based Linux switches into production networks in the near future."

Web giants and network operators alike have been calling for a common API to swap Ethernet switches in and out of networks as easily as a new server. As a pioneer in network disaggregation, Mellanox Technologies has been a major contributor to enabling the infrastructure of the open source Switchdev model. The Switchdev driver runs as part of the standard kernel, and thus enables downstream Linux OS distributions and off-the-shelf Linux-based applications to operate the switch. The driver abstracts proprietary ASIC application programming interfaces (APIs) with standard Linux APIs for the switch data plane configuration. The key advantage of Switchdev for network administrators and software developers is an open source driver that doesn't rely on any vendor-specific binary packages, with a well-known, well-documented and open data plane abstraction that is native to Linux.

Working closely with the Linux community, Mellanox is constantly adding features and capabilities to the Linux Switchdev driver. This makes Mellanox one of the top contributors of new Linux kernel code overall, and particularly within the Linux network stack.

This week, at the NetDev 2.2 conference in South Korea, Mellanox will present the Switchdev driver offload of the Linux TC Flower Classifier (which implements match-action functionality) to a Spectrum-based Ethernet switch. This enables IT managers to implement policy-based network management using standard Linux applications, such as the Open vSwitch, while taking advantage of the Spectrum switch high-speed performance and large scale forwarding tables.

"Switchdev is the vision that Cumulus Linux has embraced, promoted and implemented in the Linux networking model for the data center," said Shrijeet Mukherjee, vice president engineering, Cumulus Networks. "We are pleased with the progress that Mellanox is making around Switchdev, which benefits the whole community and helps establish a standard model."

"We are excited by the opportunity to expand Linux deployments beyond servers to the data center switches, created by the Linux kernel Switchdev driver for Mellanox Spectrum switch systems," said Alexey Smirnov, CEO at BaseALT. "This allows us to become a one-stop-shop supplier of software for the entire data center, as the same Linux operating system and applications may now run on both servers and network switches."

The Linux kernel Switchdev driver is available for all Mellanox Spectrum SN2000 switch systems, as well as Mellanox

Spectrum switch ASIC. Mellanox Spectrum 100GbE switching and routing element introduces the world's lowest latency and the lowest power consumption in the market. The SN2000 portfolio is available in a variety of port and speed configurations (10/25/40/50/100GbE), including the SN2100, the highest density, half-width 16-port non-blocking 100GbE switch. The driver will also be available for Spectrum-2, the next generation 6.4Tb/s switch ASIC and the SN3000 switch systems using it. Both are expected to be available in 2018.

### Supporting Resources:

- | Learn more about the [Spectrum Linux Switch](#)
- | Explore the [Spectrum SN2000 Series](#)
- | Find out all about the [Spectrum SN3000 Series](#)
- | Follow Mellanox on [Twitter](#), [Facebook](#), [Google+](#), [LinkedIn](#), and [YouTube](#)
- | [Join the Mellanox Community](#)

### About Mellanox

Mellanox Technologies (NASDAQ: MLNX) is a leading supplier of end-to-end InfiniBand and Ethernet smart interconnect solutions and services for servers and storage. Mellanox interconnect solutions increase data center efficiency by providing the highest throughput and lowest latency, delivering data faster to applications and unlocking system performance capability. Mellanox offers a choice of fast interconnect products: adapters, switches, software and silicon that accelerate application runtime and maximize business results for a wide range of markets including high performance computing, enterprise data centers, Web 2.0, cloud, storage and financial services. More information is available at: [www.mellanox.com](http://www.mellanox.com).

### About Cumulus Networks

Cumulus Networks is leading the transformation of bringing web-scale networking to enterprise cloud. As the only systems solution that fully unlocks the vertical network stacks of the modern data center, Cumulus Linux allows companies of all sizes to affordably build and efficiently operate their networks just like the world's largest data centers. By allowing operators to use standard hardware components, Cumulus Networks offers unprecedented operational speed and agility, at the industry's most competitive cost. Cumulus Networks has received venture funding from Andreessen Horowitz, Battery Ventures, Sequoia Capital, Peter Wagner and four of the original VMware founders.

For more information visit [cumulusnetworks.com](http://cumulusnetworks.com) or follow @cumulusnetworks.

### About NGENIX

NGENIX is a major cloud service provider in Russia and CIS. NGENIX distributed cloud platform is designed for multiscreen UHD video delivery, whole web site acceleration, and web applications security. The platform spans all major telecommunication centers in Russia and CIS and provides unsurpassed coverage of the Russian-speaking Internet audience. According to Cedexis, NGENIX has the fastest CDN service in Russia. Founded in 2007, NGENIX is a subsidiary of Rostelecom Group since 2015. More information is available at: <http://www.ngenix.net/en>

### About BaseALT

BaseALT Ltd. develops and deploys free software. It produces different types of Linux distributions for the public sector, state corporations and businesses of any scale. There are desktop distributions for home and office computers and for corporate servers, universal distributions that include a wide variety of development tools and documentation and distributions specialized for educational institutions. By using the systems, companies can create and maintain a full-feature traditional, cloud or hybrid IT infrastructure, including a directory service, collaborative software, as well as virtualization and clusterization tools, according to BaseALT.

The operating systems are being created based on the free software repository Sisyphus, one of the world's largest independent free software repositories. As of today, BaseALT is providing Sisyphus with technical infrastructure, as well as developing its technology and porting the repository to new hardware architectures.

BaseALT actively cooperates with integrators, software and hardware manufacturers. Official site: [www.basealt.ru](http://www.basealt.ru)

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