Meet us in Atlanta for KubeCon + CloudNativeCon North America · Nov 10-13 REGISTER TODAY

ENGLISH Sign In

THE LINUX FOUNDATION

JOIN

5 MIN READ

ONF Showcases New ONOS Release, Use Cases and Field Trials at ONS

THE LINUX FOUNDATION | 03 APRIL 2017

New ONOS release advances support for dynamic configuration of legacy devices, enhances whitebox leaf-spine fabric solution, and offers enhanced user interface

SANTA CLARA, Calif. April 3, 2017 – ONOS Project, the ONF/ON.Lab open source software-defined networking (SDN) OS for service providers, today announces availability of a new ONOS release now in operation in several new lab & field trials and to be featured in demonstrations at this week's Open Networking Summit.

ONOS® is broadening its ability to bring SDN and NFV agility to mission-critical networks. By adding support for 'incremental SDN' alongside the 'disruptive SDN' capabilities for which it has been long known, ONOS can now address an ever wider array of deployment scenarios.

- **Disruptive SDN**: Disruptive (pure-play) SDN leverages whiteboxes and relies on ONOS for real-time network control.
- **Incremental SDN**: Incremental (brown-field) SDN enables software defined configuration of legacy networking systems where the control plane remains embedded in the network devices (e.g. BGP or OSPF). ONOS can now import device-specific netconf/yang models, automatically manage these models in its distributed database, and dynamically sync and apply this configuration to the network. Should the network devices ever fall out of sync with the configuration intent in ONOS' database, ONOS will automatically bring the network back to the desired state. In this way, centralized configuration can be organized, replicated, pushed and verified on the network, enabling ONOS to support 'incremental SDN' deployments of brown-field networking equipment alongside disruptive SDN where full control is managed by ONOS in real-time.

Additionally, ONOS now includes a number of other major enhancements such as:

- **Whitebox Leaf-Spine Fabric** – the flexible datacenter fabric solution offered by ONOS has been enhanced to support IPv6 routing, vLAN tagged external interfaces and AAA endpoint authentication.
- **GUI v2.0** – an enhanced Web user interface is now included, improving usability on large-scale networks by providing regional topology views with drill-down, context sensitive help, and global search

"ONOS delivers important performance and scalability advancements that are needed for service providers and enterprises to advance SDN, said Bill Snow, chief development officer, ON.Lab. "New demos and POCs at ONS this week will bring to life how ONOS enables next-generation disaggregated IP/Optical transport network solutions, and how the dynamic configuration capabilities make it easy to add innovative new services, like L3VPN."

Additional new and improved ONOS features include:

SDN-IP enhancements

- VLAN support
- VPLS support
- IGMPv2

Whitebox Leaf-Spine Fabric

- VLAN access and trunk ports
- IPv6 dynamic routing
- Static routes (IPv4 and v6)
- DHCP relay support (IPv4 only)
- AAA support (EAPOL – 802.1x)

Southbound Enhancements

- Lumentum WaveReady support (TL1)
- Pipeline support for Nokia OLT
- RESTCONF

vRouter

- IPv6 support

Framework

- New distributed system support – consistent document tree
- LISP
- CI/CT improvements (build speed enhancements)
- High Availability (HA) enhancements

DELL - Exhibit 1053 - Page 2

Northbound Intent Interface Enhancements

- IETF ACTN – enabling management of multiple TEs as one
- Optional Guaranteed Bandwidth Allocation
- Protection Intent Support
- Shared resource modeling
- Hashing support for ECMP traffic distribution
- RESTCONF

Traffic Engineering

- Policers and bandwidth monitoring

User Interface

- Scalability improvements and regionalization support

The full list of ONOS features in the latest releases can be found here.

ONOS Use Case Example – Argela

Showcasing the power and commercial readiness of this new release, ONOS Project collaborator Argela (the research and development arm of Turk Telekom) is currently using ONOS as the network operating system for its SDN and NFV-based network infrastructure. Argela has pilot ONOS deployments at three different Turkish government institutions, in addition to Turk Telekom's intranet. The infrastructure provides extensive centralized analytics, policy management, zero touch traffic management, enhanced topology management and complete network security. ONOS is configured to allow for a multi-layer security at the user access, data, control and application layers. Argela's ONOS deployment provides protection to a vast variety of threats such as DDoS protection, intrusion detection, malware protection and network access protection.

ONOS Activities at Open Networking Summit

Thanks to ONOS partners and collaborators, ONF is demonstrating several new ONOS field trials, use cases and commercial deployments at ONS this week.

The ONOS Mini Summit will show how organizations use ONOS to meet their business needs through technical sessions and hands-on design workshops on application development, multi-domain environments, security, system testing, global SDN deployment and service models. More details on ONF's ONOS Mini Summit and CORD Mini Summit are available here.

ONOS will also be featured in the **SDN & NFV Solutions Showcase (S3)** exhibit area with live demos on Dynamic Configuration and Packet-optical solutions made possible by contributions from ONOS members Calient, Ciena, CoAdna, Fujitsu, Lumentum, NEC, NTT Communications, OpLink and Polatis.

The rapidly growing, diverse ONOS community comprises a core engineering team at ONF/ON.Lab, as well as developers from service providers, vendors, research and educational networks spanning many industries. Future ONOS releases will focus on further development of dynamic configuration with NETCONF and RESTCONF models and services, virtualization, codebase

disaggregation, and extending intent-based interfaces. This work is driven by collaboration among the ONOS Brigades, smaller teams focused on specific features that will ship in upcoming versions of ONOS.

Additional Resources

- Download and Test ONOS
- ONOS Roadmap
- Join ONOS Project
- ONOS Newsroom and Events

About ON.Lab
Open Networking Lab (ON.Lab) has created the leading open source platforms CORD® (Central Office Re-architected as a Datacenter) and ONOS® (Open Network Operating System (ONOS) for service providers. Founded by SDN's inventors and leaders to foster an open source community to realize the full potential of SDN, ON.Lab brings innovative ideas from leading edge research and delivers high-quality open source platforms on which members of its ecosystem can build solutions. For further information, visit http://onlab.us/.

About ONF

The Open Networking Foundation (ONF), the recognized leader and standard bearer for SDN. Launched in 2011, the ONF has successfully taken Software Defined Networking (SDN) from obscurity to the universally accepted vision for next generation networking.

The ONF is led by a board including representation from leading operators including AT&T, Google, NTT Communications, SK Telecom and Verizon. The merger of ONF and ON.Lab is expected to be complete in late 2017. For further information visit http://www.opennetworking.org/.

About The Linux Foundation

The Linux Foundation is the world's leading home for collaboration on open source software, hardware, standards, and data. Linux Foundation projects are critical to the world's infrastructure including Linux, Kubernetes, Node.js, ONAP, OpenChain, OpenSSF, OpenStack, PyTorch, RISC-V, SPDX, Zephyr, and more. The Linux Foundation is focused on leveraging best practices and addressing the needs of contributors, users, and solution providers to create sustainable models for open collaboration. For more information, please visit us at linuxfoundation.org.

For a list of trademarks of The Linux Foundation, please see its trademark usage page:

linuxfoundation.org/trademark-usage. Linux is a registered trademark of Linus Torvalds.

Stay Connected with the Linux Foundation

First name

Last name

Email*

By submitting this form you are consenting to receive marketing emails about news, events, and training from the Linux Foundation. You can unsubscribe at any time by following the "Subscription Center" link included within such communications. For information on our privacy practices and commitment to protecting your privacy, please review our Privacy Policy. We do not sell your contact information to third parties.

SUBMIT

THE LINUX FOUNDATION

ABOUT THE LINUX FOUNDATION

The Linux Foundation provides a neutral, trusted hub for developers to code, manage, and scale open technology projects.

About the LF

Leadership

Careers

Corporate Members

Inclusion & Accessibility

- PROJECTS
- NEWSROOM
- LF RESEARCH
- LFX PLATFORM
- RESOURCES
- LF EVENTS
- LF EDUCATION

Copyright © 2025 The Linux Foundation®. All rights reserved. The Linux Foundation has registered trademarks and uses trademarks. For more information, including terms of

Contact Us

Store

use, privacy policy, and trademark usage, please see our Policies page. Privacy Policy | Trademark Usage

DELL - Exhibit 1053 - Page 6