

# Open19 and Cumulus Linux

INCREASE EFFICIENCY WITH A FULLY INTEROPERABLE NETWORK STACK

Cumulus Linux is the first and only network operating system to support Open19

## Open19

Built on the principles of openness, Open19, a project spearheaded by LinkedIn, focuses on bringing easily adaptable, customizable and economical specifications to server hardware using a common form factor. Customers can now build and expand their data centers using Brick Cage, a passive mechanical cage that fits in any EIA 19-inch rack, allowing increased interoperability. Brick Cage comes in 12RU or 8RU form-factors with 2RU modularity.

Standardizing compute, storage and networking solutions in a 19-inch rack with defined form factor (2RU or smaller), standardized power distribution and network connectivity will lower cost per rack with linear power and data growth.

As a standardized open solution, Open19 promises 3 to 5 times faster rack level integration, which will result in reduced time to market.

## Cumulus Linux

Cumulus Linux is the only network operating system that allows customers to affordably build and efficiently operate their networks like the world's largest data center operators — completely unlocking vertical network stacks. With a host of features, Cumulus Linux allows customers to build a highly scalable, flexible and modern data center.

Cumulus Linux enables customers to build a highly scalable network. With a completely open architecture that is built for the automation age, customers can use their existing open source or commercial automation tools, as well as others, to improve efficiency and multiply the amount of switches per operator.

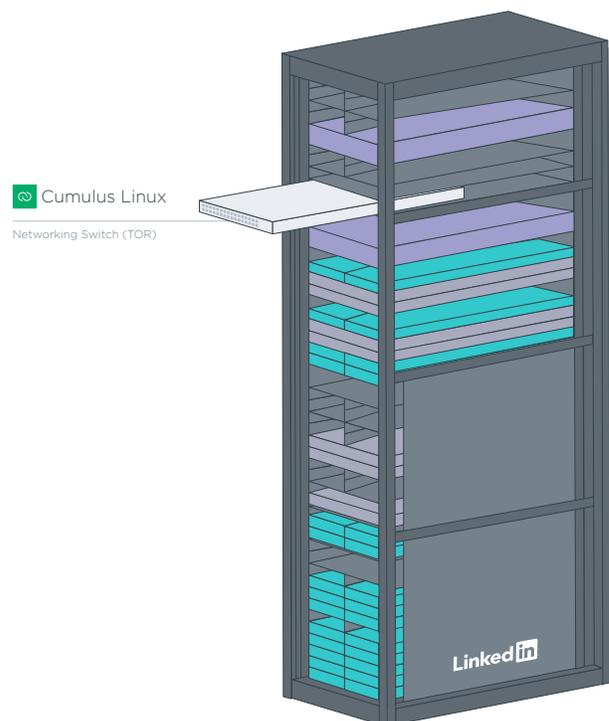
With Linux as the API, new applications can be developed and integrated rapidly, enabling innovation cycles on par with software and application cycles. This helps to achieve operational efficiency and reduce costs.

A few key features include:

- **Network Command Line Utility:** a rich and easy to use command line for easy network configuration and operation
- **OSPF + BGP Unnumbered:** Simplify automation by no longer depending on unique IP addresses
- **Ethernet Virtual Private Networks (EVPN):** Configure a controller-free, scalable and interoperable, end-to-end, control-plane solution for VXLAN tunnels
- **Snapshot and Rollback of the entire system** to eliminate the risk from system upgrades

## Joint solution

Cumulus Linux is the first and only open network operating system to support the Open19 switch. With common benefits of ease of adoption and customization, while maximizing economics, Open19 and Cumulus Linux are helping customers receive the benefits of web-scale networking while standardizing on EIA 19-inch rack to increase interoperability.



Open19 offers a dual switch — 50G for data path and 1/10G for management. With a 12V input and no power supply, the switch plugs right into Brick Cage. Based on Broadwell-DE CPU and BMC, the switch offers 8x100G uplinks or local switching ports.

Together Open19 and Cumulus Networks deliver the first open standard framework allowing customers to choose the best hardware and software elements that are interchangeable in any rack environment. The joint solution benefits include:

- **3 to 5 times faster rack level integration due to modular design that is efficient to install**
- **Reduced time to production by up to 95%**
- **Increased interoperability by leveraging common elements within the rack, including power and cabling**
- **Reduced TCO by up to 50% with both open standard hardware and automation-ready Cumulus Linux**
- **Reduced power consumption with 12V distributed power supply for each Brick Cage**

## Challenges addressed

Web-scale principles promote flexibility, choice and openness throughout the stack. This gives customers increased innovation, reduced TCO and increased disaggregated supply chain options. While more suppliers mean more options, it also adds to interoperability challenges.

With a focus on increased standardization and interoperability, the joint Open19 and Cumulus Linux solution eliminates the guesswork for data center architects and operators. By following the given standards for rack, power and cabling installation, the deployment has been simplified — reducing time to market.

The lack of hardware interoperability has also been addressed by following E19 19-inch rack standards and fitting all rack elements into Brick Cages.

## Conclusion

Adopting Open19 with Cumulus Linux, the only open network operating system in the program, allows customers to reduce their time to market, standardize physical and software elements, reduce power consumption and lower TCO.

With an automation-ready platform, Cumulus Linux helps unify the data center and increase operational efficiency.

## Get started!

- **Try out Cumulus Linux technology with Cumulus VX:**  
[cumulusnetworks.com/vx](https://cumulusnetworks.com/vx)
- **Download the latest version of Cumulus Linux:**  
[cumulusnetworks.com/downloads](https://cumulusnetworks.com/downloads)
- **Learn about Open19:**  
[open19.org](https://open19.org)

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### ABOUT CUMULUS NETWORKS®

Cumulus Networks is leading the transformation of bringing web-scale networking to enterprise cloud. Its network switch, Cumulus Linux, is the only solution that allows you to affordably build and efficiently operate your network like the world's largest data center operators, unlocking vertical network stacks. By allowing operators to use standard hardware components, Cumulus Linux 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](https://cumulusnetworks.com) or follow [@cumulusnetworks](https://twitter.com/cumulusnetworks).

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