



FLEXIBLE NETWORKING WITH OPEN SYSTEMS

SENSELAN USES OPEN NETWORKING FOR ITS VIRTUALIZATION PLATFORM

The successful internet and hosting provider from the Sense District has a team with extensive knowledge of Linux. The Linux-based open networking platform from Cumulus was a good candidate for a pilot project as it is an ideal alternative to conventional network operating systems.

Located in Düringen, in the canton of Fribourg, Switzerland, senseLAN GmbH provides internet, TV and telephone service to around 12,000 private households and 500 business customers in the Fribourg region. In addition to these services, the company provides hosting and server housing from its own two data centers. senseLAN designed and built the data centers itself, which has given the team the freedom to select the infrastructure that best meets its needs.

PILOT PROJECT: OPEN NETWORKING

Like many comparable providers, senseLAN traditionally uses the same networking platform from a large, well-known network company. «However, we are generally very open source-savvy», says Martin Kolly, Systems Engineer at senseLAN, «and many of our servers run on Linux. We barely use Windows at all.» The team therefore possesses strong Linux expertise, including when it comes to network functions. It was thus only natural to further explore the options offered by open network operating systems along with more suitable, less expensive «white label» switching hardware. The Linux-savvy provider has followed the topic of open





networking closely. After completing the initial testing with the free Quagga Software Routing Suite, in April 2016 Martin Kolly's team decided to launch a pilot project with the open Linux-based network operating system from Cumulus Networks. The team opted for the virtualization platform, which is used to operate the mail infrastructure with its roughly 15,000 accounts as well as other internal network services, such as DHCP and virtual customer servers. «Our virtualization platform is based on CloudStack and supports virtual routers – so we were very open to the possibility of using Linux-based routing here, too.» The project was implemented in the summer of 2016. In the fall, the virtualized network infrastructure began running Cumulus Linux and two 5712-F open networking switches from Edge-Core – still officially as a pilot. However, Martin Kolly notes: «We have had consistently good experience, and the new environment has already been deployed.»



POSITIVE EXPERIENCE

For Kolly, the main advantage of the open networking platform is that the Cumulus operating system is Linux-based: «If you are already familiar with

Linux, you immediately feel at home on the new platform. It is very easy to integrate into the existing Linux environment and can be managed using the same administration and automation





tools, such as Ansible.» The configuration and monitoring are said to be very simple – one of the main reasons why Cumulus was selected.

Cost savings were also said to be a factor in the decision.

Getting started does, however, require familiarization with the details of the Cumulus scripting syntax. The staff of course had many years of experience with the conventional network infrastructure used outside the virtualization platform, and there are certainly differences. «But once the settings have been configured properly, the Cumulus-based network is very reliable.» The documentation available on the Cumulus website is also outstanding, notes Kolly. «Specific examples show the conventional configuration and compare this

» If you are already familiar with Linux, you immediately feel at home on the open networking platform from Cumulus. «

MARTIN KOLLY
System Engineer, senseLAN GmbH

with how you do it with Cumulus.» Kolly also praised the solid partnership with Boll Engineering. «We were already well-acquainted with the company and for this project, too, they offered us good advice on which products would suit us best and make the most sense.» The senseLAN team then completed the actual installation and configuration on its own.



open network operating system

Cumulus Networks was founded in 2010 by four of the five original founders of VMware. It has been available with the open network OS Cumulus Linux since 2013. The software supports layer-2, layer-3 and overlay network architectures and offers an advanced alternative to proprietary network operating systems.

Features

- Open, expandable software platform
- Supports switching with standard hardware
- Supports common Linux administration and automation tools
- Easy to use for administrators familiar with Linux
- Accommodates future needs thanks to the open source development model with compatible tools and applications



affordable switching hardware from a world class manufacturer

Edge-Core is owned by the Accton Technology Corporation, which produces network and communications solutions for major network companies. Accton's Edge-Core brand serves the growing demand for «white box» switches that can be used with open operating systems like Linux Cumulus. The product range includes numerous models with throughput rates from 1 to 40 Gbit/s and soon up to 100 Gbit/s.

Features

- No vendor lock-in
- Affordable hardware, identical to products from leading manufacturers
- High quality hardware
- Wide range of models
- Manufacturers with many years of network hardware experience



SENSELAN GMBH

senseLAN GmbH and Rega-Sense AG are regional fiber optic network providers. Together, they provide high-quality services for TV, radio, internet, telephony, hosting and server housing. Over 12,000 private households and around 500 companies use the services they provide and remain longstanding, satisfied customers. senseLAN operates its own data center and serves its customers with a 10-strong team. The company attaches great importance to direct customer contact. For this reason, customers are not served by a call center, but rather by senseLAN's own technical experts.

www.senselan.ch



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