

What is Cisco's new programmable switch?

Cisco has introduced a new programming feature in its Catalyst 9000 network switch.

To celebrate the new year 2017, CNN wants to broadcast live from the Caribbean royal yacht, but has a problem: Whether they are worried whether in the middle of the sea can live stream. That's the story that CIO Mike Giresi of Royal Caribbean told.

And the answer to that question is yes. The live stream process was smooth without stumbling, because of the support of Cisco's network product, the programming feature to optimize video traffic.

As one of the first to use, Royal Caribbean has found that Cisco's programming capabilities are a flexible and beneficial asset. 'There are great advantages when you look at networking as a software layer', Giresi said, 'it allows creating products based on experience and the process of delivering products to customers, accumulating. in accordance with the system '.

Cisco's latest Catalyst 9000 series of products, including 9300, 9400 and 9500, offers the most advanced programming features of any Cisco product to date, and is part of the The beginning of the network is based on software instead of intent-based network.

New switches include custom ASIC that Cisco Enterprise Switching & Wireless vice president says it will support protocols today and in the future, 'it's a testament to IoT, security and multiple fields. Other uses'. For customers like Royal Caribbean, it allows them to "embed infrastructure" into the software development process, "Giresi said.

At this week's Cisco Live event in Las Vegas, administrators and customers talked about the capabilities and benefits of a programmable network and its implications for end users.



Images of Cisco Catalyst 9000 switches

'In the past we had applications and networks. But the big change is going to be programmable, top-down, all on ASIC through the box and in the DNA center,' said Susie Wee, CRO of DevNet Central (a community of skills training, network programming) at Cisco said. DNA is Cisco's digital network architecture structure, where the company acts as the control center for network programming. Wee said that 'this will fundamentally change the way applications interact with the programmed network'.

Benefits of programmable networks

The ability to program the network components is not new. Cisco Application Centric Infrastructure (ACI), a software-centric networking platform also has these elements. In 2014, Cisco launched DevNet, the developer's network, providing integrated components and application training programs, including third party and customized applications of the programming network. Cisco network device hardware. Launching the intent-based network platform is the continuation of this trend.

The use cases are also varied, said ZK Research and blogger of Zek Kerravala of Network World. 'Not all networks are programmed by developers. Partly because of the ability of application developers to use resources from the network to improve applications'.

Kerravala believes that many applications will be built focused on the network. The application can use data from the network such as user identity, context and user behavior locations. He also mentioned the introduction of the iPhone because when it came out, the developers didn't know how to put accelerometer readings into the application, but now all apps tracked motion during the time. real. Developers will learn how to use the network to make applications better and better user experiences, Kerravala said. He also gave some examples:

1. A group needs a secure virtual private network for video calling and instead of the network administrator having to intervene, the video application automatically facilitates the network to suit the call.
2. A retailer can prioritize credit card transaction traffic compared to other store traffic to ensure customers have the fastest payment experience.
3. If the flight is postponed, the app will see which meeting is missed and automatically start the process of rescheduling the schedule.

Even with deeper capabilities, Kerravala says that the use cases for end users to program ASIC are quite limited. For example, a large credit institution with IT staff possessing the necessary skills can benefit from programming network paths and customizing the forwarding protocol in ASIC.

High-level programming capabilities can help network application and operating developers get closer, creating development-driven mindset in parallel. 'There seems to be a separation between application developers and networks. If the application has a problem, is it the developer or network's fault?' Said Jose Borgarin, Chief Innovation Officer at Altus Consulting, Cisco's partner. 'What we are trying to do is help the network operator talk to the application developer and say, we have these APIs that can help the application do some things automatically, so it will help it work. better'.

Kerravala believes that the true value of programming is the ability to automate tasks that are often manual. As a result, network operators can spend more time making strategic initiatives instead of boring tasks. The application developer will get the connection network adjusted to suit the specific needs of the application.

Kerravala has advice to network administrators: 'If you are working and you are not proud to put it in your job application, don't do it anymore, automate it'.

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