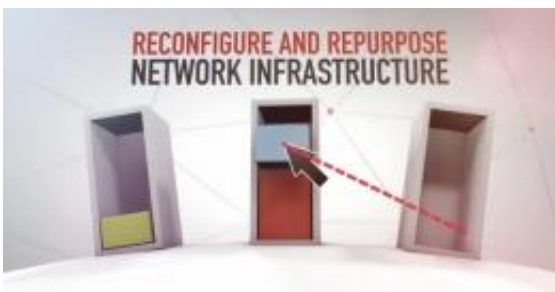# Nicira promises virtual networks will transform networking

February 6 2012, by Lisa Zyga

Operators can reconfigure a virtual network programmatically. Image credit: Nicira

(PhysOrg.com) -- For the past four years, founders of the start-up company Nicira have been developing cutting-edge software that they predict will transform the networking technology underlying the Internet. Today Nicira has debuted the software, called the Network Virtualization Platform (NVP). As its name implies, the NVP software acts as a virtual network by simulating the routers, switches, and other physical hardware used in data center networks. Yet the virtual network is completely independent of the physical network hardware. This software-defined networking means that operators can reconfigure any piece of a network programmatically rather than having to manually reconfigure the physical hardware.

Network virtualization could lead to a number of advantages. One of the

most important may be its ability to open the doors for cloud computing by eliminating the limitations imposed by the existing network, which cause insecurity and unreliability. Installing the NVP software on servers in a data center essentially provides each application with a private connection to the rest of the Internet, which keeps data more secure. Nicira has also demonstrated that the software can transfer Internet services to another data center without interruption, a move that currently requires all the hardware on the new network to be reprogrammed. This ability could be useful for companies with multiple data centers in different locations, as well as for emergency situations in which a data center loses power.

Because the NVP software simplifies network reconfiguration, it enables operators to add new applications in minutes instead of days or weeks. The simplification could also lead to innovative applications that are currently too expensive or technically impossible to produce. Overall, by using virtual networks, Nicira estimates that companies with large data centers could save tens of millions of dollars in infrastructure costs.

"Network virtualization is the biggest change to networking in 25 years," said Stephen Mullaney, Chief Executive Officer of Nicira. "NVP provides the final pivotal piece to cloud computing, the most transformational change to IT in a generation."

The NVP can be deployed on any existing network without the need to change any network hardware, and future changes to the network hardware won't disrupt the virtual network. NVP only requires an IP address, making the physical network hardware less important. Once installed, the virtual network operates completely independently of the physical network, whose main role is to forward data packets. The company explains that the concept of network virtualization decoupling an application from the network is similar to server virtualization, which decouples an application from the underlying server. Overall, the

technology enables the creation of tens of thousands of independent and secure virtual networks.

Nicira isn't the only company pursuing software-defined networking. But it has already raised $50 million in funding from venture capitalists and has several large customers, including AT&T, Deutsche Telekom, Fidelity Investments, eBay, NTT, and Rackspace. The software is commercially available on a monthly subscription-pricing model in which customers pay only for what they use.

  More information: nicira.com
via: Technology Review

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