Assignment 1

Dr. Perigo:

Software Defined Networking or SDN is an approach to networking that uses software-based controllers in conjunction with APIs to communicate with hardware and direct traffic on a network (1). Some reasons behind the creation of SDN include increased speed, vendor neutrality, customizability, and enhanced security when implemented correctly. While SDN is known for its open-source nature, some vendors have chosen to introduce SDN capabilities into their devices and software to enhance its functionality. In this email, I will be comparing the key components of Open SDN and commercial SDN.

Comparison of Open SDN and Commercial SDN:

Open SDN:

* Standardized and well documented (2)
* Not proprietary (2)
* Open-source community and multi-vendor interoperation (2)

Commercial SDN:

* Secure codebase due to not being open source (2)
* Quality of the software is backed by a trusted company (2)
* Guaranteed support

Key components of Open SDN and Commercial SDN:

Open SDN:

* Use protocols like OpenFlow on the data plane level to control hardware (1)
* Use open-source software online and is implemented in house

Commercial SDN:

* Creates SDN solutions for the customer
* Customer setup is reduced from support of the vendor

Overall, both Open SDN and Commercial SDN solutions are great ways to set up a network that is highly available, flexible, and cost effective. Whether to choose one over the other comes down to the experience and needs of the network engineers. Do they need a solution that has great customer support and can be configured securely in a short amount of time? This solution would lean towards Commercial SDN. Or do their needs require more customization and open-source software that can be configured from start to finish by the engineers themselves? This would lean towards the Open SDN solution. These factors must be considered when choosing Open SDN and Commercial SDN.

Best Regards,

Logan Chayet

Sources:

1. <https://www.vmware.com/topics/software-defined-networking>
2. Lecture – SDN Fundamentals-1.pdf
3. <https://www.spiceworks.com/tech/networking/articles/best-sdn-solutions/>

What is the definition of SDN: Compare Open-SDN and commercial SDN. What are the key components of Open-SDN, and how do they differ from commercial SDN?