Cisco Controller Strategy

Q. What is Cisco's data center controller strategy?

A. Our data center strategy is based on Cisco's vision for application-centric infrastructure (ACI). At the core of the vision is a common policy framework for automating and managing networks. This framework will be implemented with the Cisco® Application Policy Infrastructure Controller (APIC). As introduced this week at Cisco Live Milan, we are extending the Cisco APIC across the enterprise with the new Cisco APIC Enterprise Module for the WAN and access layer. Additionally, we are extending Cisco APIC for service provider applications as noted in this document.

Q. How does the Cisco Extensible Network Controller (XNC) fit into the strategy? Do we have two data center controllers?

A. Cisco XNC was our reference implementation, encompassing our work with OpenDaylight. We will continue to provide support to existing customers, but Cisco's focus remains on working with leading infrastructure vendors to standardize controller-based provisioning and management including Cisco APIC. Cisco APIC is designed to increase policy access for both northbound and southbound ecosystems. Through OpenDaylight we are working with industry and customer partners on standardization and harmonization of industry efforts.

Q. Will Cisco continue to support OpenFlow?

A. We continue to work with the OpenFlow community through OpenDaylight and to provide OpenFlow support.

Q. How does APIC apply to Access and WAN?

A. Cisco has a common architecture and APIs for APIC in the data center and APIC in the Access and WAN. In support of this common architecture, work is underway for both the policy model and the policy APIs to help ensure consistent policy implementation end-to-end across the network. Over time, further commonality is expected, with common applications using those APIs. To reinforce this intention of architectural commonality and consistency, Cisco APIC Enterprise Module was launched in January 2014.

Q. Why are there different underlying engines for Cisco APIC and the Cisco APIC Enterprise Module? Do you expect to converge these engines?

A. The use of two underlying engines provides flexibility to handle the differing needs of the data center and enterprise networks. The challenges of the data center, such as east-west traffic, low latency, high bandwidth, and the demands of the orchestration and virtualization layers, are unique. Enterprise networks also have unique requirements in their support for large-scale access networks, the global WAN, traditional infrastructure, and north-south traffic.

Q. How is Cisco providing investment protection?

A. Cisco has a long history of investment protection. We intend to help ensure that our Cisco Nexus® 2000 Series Fabric Extenders and Cisco Nexus 7000 Series Switches customers are protected in this transition. We have already shared some of those details, including support for the Cisco Nexus 2000 and 7000 Series, and will be sharing details about other platforms as the architecture evolves.

Q. How does the strategy address service providers and network functions virtualization (NFV)?

A. NFV and cloud orchestration technology includes a Cisco APIC Virtual Topology Module (APIC-VTM), similar to the Cisco APIC Enterprise Module. This module extends service provider offerings with NFV service chaining, and it extends the advantages of the use of Cisco APIC policy language with ACI products. Cisco APIC-VTM is not a product but an extension of Cisco APIC into NFV and service-chaining solutions. OpenDaylight is also a critical part of the strategy for SDN and NFV solutions because it is used as an application platform for Cisco Quantum™ WAN Orchestration (our WAN orchestration solution) and for cloud orchestration infrastructure.

Q. When will Cisco APIC be available?

A. Cisco APIC for the data center is scheduled for general availability in Q2CY14. The Cisco APIC Enterprise Module is expected to be available in Q2CY14.

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Printed in USA C67-731005-00 02/14