CCNA ASSIGNMENT 5

Q.1 Explain How Automation Impacts Network Management.

ANS. Network World is developing rapidly. With these developments, network requirements has increased and new methodologies are also developed to overcome this improvement. One of the Technologies that help network World about this is Network Automation. In this lesson, we will explain How Network Automation Impacts Network Management. With Network Automation, various Network Management activities are done such as network management, testing, deployment, configuration and various network operations.

With Network Automation, complex network duties for example configurations can be done automatically. As you know, network engineers likes configurations. But for a large network, router/switch configurations can be difficult. To overcome this issue, Network Automation is used and this makes network engineres' role easier.

Currently, a high ratio of company use Network Automation at least for one area. According to Kentik Survey in Cisco Live 2019, the rates of the companies that use at least one Automation Program is %85. Different Automation tools are used by these companies. Some of the Automation tools are most popular. For example, the ratio of companies that uses a

Configuration Automation Tool is %53 according to survey of network analytic company, Kentik. Beside Configuration Automation, Policy Management Automation is the second most used automation program type with ratio %40. The third one is Workload Management Automation Programs with the ratio %33.

Q.2 Compare Traditional network with Controller based networking.

ANS. In a controller-based network architecture, the controller needs to communicate to the networking devices. In most network drawings and architecture drawings, those network devices typically sit below the controller

Traditional network refers to the old conventional way of networking which uses fixed and dedicated hardware devices such as routers and switches to control network traffic. Inability to scale and network security and Performance are the major concern now a days in the current growing business situation so that SDN is taking control to traditional network. Traditional network is static and based on hardware network appliances.

Traditional network architecture was used by many companies till recent years but now a days due to its drawbacks Software Defined Network has been developed and in coming years it will be used more.

Q.3 Explain Virtualization.

ANS. Virtualization is the process of operating a virtual computer. Software used in virtualization enables you to run virtual systems, hardware, and applications on a single machine. Most frequently, it is utilized to run various operating systems, including Windows and Linux, on a single device.

Q.4 Describe Characteristics of REST-based API.

ANS. A RESTful API is an architectural style for an application program interface (API) that uses HTTP requests to access and use data. That data can be used to GET, PUT, POST and DELETE data types, which refers to the reading, updating, creating and deleting of operations concerning resources.

Q.5 Explain DNA Center.

ANS. DNA-Center is a totally open and extensible platform that contains multi-vendor software development kits that allow interaction with network equipment from other vendors. It can also integrate with other management tools through its API structure.

Q.6 Explain SDN.

ANS. With SDN, network operators or engineers can modify and control the traffic from the centralized controller without

touching the individual routers and switches on the network. It can also do the dynamic implementation of the initial configuration by using plug-and-play provisioning.