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Module 11 CCNA -Automation and Programmability

1. **Explain How Automation Impacts Network Management**

* Automated systems can quickly identify and address security issues, reducing the risk of a network breach. protecting data and systems.

1. **Compare Traditional network with Controller based**

**Networking**

* In traditional networks, each network device is managed independently, whereas in controller-based networks, all network devices are managed centrally through the controller.

1. **Explain Virtualization**

* Virtualization is a process that allows a computer to share its hardware resources with multiple digitally separated environments. such as memory, processing power, and storage.

1. **Describe Characteristics of REST-based API**

* REST APIs are independent of the technology used.

**5. Explain methods of Automation**

* Automation in networking refers to the ability to perform network management tasks automatically without human intervention. It aims to streamline operations.

**6. Explain SDN**

* SDN stands for Software-Defined Networking. It is an approach to designing, building, and managing networks that separates the network's control plane from the forwarding plane.

**7. Explain DNA Center**

* Cisco DNA Center is typically deployed in enterprise environments where managing and securing large-scale networks is critical. It provides scalability, visibility, and control over the network infrastructure.

**8. Explain SD-Access and SD-WAN**

* While SD-Access is used to change the architecture of LAN networks, SD-WAN creates next-generation wide area networks with significant automation capabilities instead of MPLS/VPLS.