Module : 11 CCNA - Automation and Programmability

1) Automation reduces human errors, minimizes downtime, and enhances the speed of network operations such as provisioning, configuration, and management, especially in complex cloud networks.
2) In traditional networks, each network device is managed independently, whereas in controller-based networks, all network devices are managed centrally through the controller.
3) Virtualization is technology that you can use to create virtual representations of servers, storage, networks, and other physical machines.
4) client-server architecture, stateless operations, cacheable (or

non-cacheable) functions, a uniform interface, a layered system, and optionally something called code-on-demand (mnemonic: NCCUSL).

5) API-based automation replaces manual, command-line instructions to configure each networking device.
6) Software-Defined Networking (SDN) is an approach to networking that uses software-based controllers or application programming interfaces (APIs) to communicate with underlying hardware infrastructure and direct traffic on a network.
7) Cisco DNA Center allows network administrators to receive advanced insights into network performance.
8) 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.