Computer Networking: Fundamentals, Models, and Security Considerations

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Abstract: *Computer networking is an emerging and fascinating field of study. A computer network allows communication and exchange of information between two or more independent computers and other devices. Computer networking is based on the related discipline of electrical engineering, computer engineering, and computer science. Nodes and Links constitute the basic building blocks of the computer network. An equipment for data communication or equipment of data terminal that connects two or more computers such as modem, router etc. can be exemplified as a network node. Links include wires, cables or free spaces of wireless networks. Working of computer networks relies on a set of defined rules or protocols. The network structure can be composed of various patterns known as network topology. Various networking models are developed that relies on various networking layers made of different protocols. In modern times, the importance of computer networks is remarkable in almost every areas including education, entertainment, business, military, healthcare, insurance, transportation and others. With so much reliance on computer networking, it becomes important to ensure a safe and secure networking system and thus network security system was developed such includes firewall, VPNs, IDS and IPS, etc*

Keywords: Computer networking

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