Software-Defined Networking (SDN): A review

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ABSTRACT

The Internet of Everything (IoE) connects millions of machines, vehicles, nodes, smoke detectors, watches, glasses, webcams, and other devices to the internet. These entities need the proper guidance and control for expected performance. There is always a need to manage their networks for better performance properly. However, managing all these entities is not easy; it is always a big concern. All types of network architectures are getting enhanced daily, and the traditional network management process becomes more complex, especially rendering the performance during technology and entity modifications. Software-Defined Networking (SDN) is extensively used in all types of networks, especially in future network technologies (IoT, IoV, 6G, AI, etc.) to tackle such types of concerns and issues. However, as with any new phrase or paradigm, no clear description of this technology has emerged yet, which will give a complete understanding of SDN, from basic terminology to its management capabilities. The contribution of this research article is a significant step forward in understanding the basics of SDN. This research article proposes a detailed review of SDN in the form of history, overview, architecture, benefits, services, trends, application, features, and challenges.

KEYWORDS

Future technology; Real-time data capabilities; SDN applications; SDN-based management; Software-Defined Networking

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