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Poster Abstract

Software Defined Networking – How it affects medicine, healthcare, and IoT

The era of technology has inspired the creation of many technologies that improve our everyday lives. The Internet of Things (IoT) is the center of all internet technologies. IoT is described as a network of physical objects or “things” that is connected to each other. These objects range from computers to smart fridges - each have the ability to connect and share data wirelessly over the internet. Developers & Engineers will often develop new technologies to increase the efficiency and security of IoT devices. Software-Defined Network (SDN) is the latest emerging technology looking to improve IoT devices and increase efficiency.

SDN has introduced a new and innovative approach to networking architecture and programming. With various SDN architectures being evaluated and compared, SDN has enlightened the use of IoT devices to push forward a smart, healthcare-oriented method to software defined health networks, management and infrastructure. By using IoT devices, our healthcare network can be improved to be more elastic when managing physical devices and provide an interface of data in regards to data collection, transmission, and improvement to develop a more flexible health surveillance application that is full of personalization.

Traditional networking architecture struggled a lot with making telesurgery possible. With software-defined networking, the quality of service that is required for vital activities that require very little end-to-end to delay for video display, minimal packet loss, low latency, and a large amount of available bandwidth, is achievable. Feats that were once thought impossible because of the inflexibility and lack of scalability of traditional networking cannot be done through SDN and 5G technology. Problem solving through optimization such as applying the cuckoo optimization algorithm to SDN, we can create models that pioneer what can be possible with networking by taking advantage of the architecture of SDN and what it is capable of.