

Video over Software Defined Networking

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Supporting end-to-end quality of service (QoS) for video applications requires the network to select optimum path among multiple paths to improve application performance. Multiple network paths from source to destination may be available but due to current network high coupling design identifying alternate paths is difficult. Network architecture, like Integrated services (IntServ), install a single path from source to destination which may not be optimum path for the application. Furthermore, it is an arduous task for video application developers to request service from IntServ. This paper provides three contributions to research on providing end-to-end QoS for video applications. First, it presents video over software defined networking (VSDN) - an architecture that is capable of making optimum path selection utilizing a global network view. Second, it describes the VSDN protocol used by video application developers to request service from VSDN enabled networks. Third, it presents the results of implementing a prototype of VSDN and quantitatively evaluates its behavior. The results show that VSDN has a linear-message complexity.

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