Understanding Software Defined Networking, Applying Data Plane Development Kit and Compute Unified Device Architecture to SDN

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Abstract: This topic aims to research and apply Software Defined Networking (SDN) technology in the necessary context of optimizing networks through the use of the Data Plane Development Kit (DPDK) to accelerate data traffic processing. Furthermore, the topic focuses on deploying Compute Unified Device Architecture (CUDA) on SDN servers to enhance computational performance. The research method combines both theory and experimentation to build an efficient SDN system. The expected result is to contribute to the development of network technology and improve data processing capabilities in the SDN environment.

Keywords: Software Defined Networking, Data Plane Development Kit, Compute Unified Device Architecture, Network Optimization, Application Deployment