

CS 461 - Fall 2016 - Project Abstract

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Abstract

Intel's Cloud Integrated Advanced Orchestrator (ciao) cloud orchestration platform currently uses Linux bridges and Generic Routing Encapsulation (GRE) tunnels to implement a software defined network (SDN). While the current implementation allows for scalability above typical designs, it lacks compatibility with modern tunneling protocols such as VxLAN and nvGRE. The proposed solution is to switch the implementation from Linux GRE tunnels to Open vSwitch (OVS) Tunnels and Linux bridges to Open vSwitch. This will allow Ciao to leverage packet acceleration frameworks such as the Data Plane Development Kit (DPDK) and provide needed compatibility.