

Design and Implementation of Hardware Accelerated VTEP in datacenter networks

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Abstract— VXLAN (Virtual eXtensible Local Area Network) is an edge-overlay model that uses L2-in-L3 tunneling protocol. It has attracted attentions for multi-tenant datacenter networks. For the deployment of VXLAN in legacy networks, networks can include VXLAN gateways which forward traffic between VXLAN and non-VXLAN environments. This paper proposes the design of VXLAN gateways which are not in servers, but in physical devices. Additionally, we show a hardware accelerated VTEP (VXLAN tunnel end point) that can connect virtual machines to VXLAN segments without software VTEPs, such as OVS (Open vSwitch) VTEPs. The performance result of the hardware accelerated VTEPs is more efficient than software VTEPs' with regard to CPU consumption and traffic throughput of servers.

Keywords— VXLAN, VTEP, datacenter



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