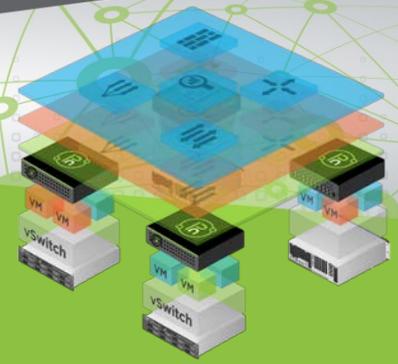# Pluribus Netvisor® Fabric Virtualization

Network Segmentation and Security

Challenges for Network Virtualization

For cloud providers and even enterprises, multi-tenancy, the ability to allow customers to have their own unique virtual network secure from others, is key. So while the utility and value of network virtualization has been proven, current implementations leave something to be desired. On the one hand, software-only approaches have proven expensive in price and in the toll they exact on host performance. Specifically, all the tunnel overhead is handled by server VMs and hosts and not the network itself.

For networking infrastructure solutions that take the network virtualization burden off the host and put it back on the network (where it belongs), they tend to be both expensive and prone to hardware lock-in (i.e. not open).

Pluribus Netvisor®

Pluribus Networks advances virtual and software-defined networking (SDN) through Netvisor, the industry's most programmable, open source-based network operating system. Netvisor is based upon the Pluribus Virtualization-Centric Fabric (VCF™) architecture, a proven approach to understanding flow, rapidly responding to business needs and securing your data.

Netvisor combines the benefits of server clustering for networking with a distributed controller fabric. The traditional CLI (Command Line Interface) is paired with fabric-wide programmability (C, RESTful API), and DevOps tools (e.g. Ansible) for agility and automation via a single point of management.

In combination with our switch hardware, Netvisor provides best-in-class switching economics. The deployment flexibility is guaranteed by Pluribus Netvisor full L2/L3 stack providing complete interoperability with the legacy networking infrastructure, allowing for easy insertion into third party deployments.

Segmentation and Security

With sophisticated network virtualization, it is now possible to segment the infrastructure for multiple purposes. This can enable multitenancy or allow a university or corporation to leverage a single network for multiple purposes, all of which can be safely walled off from each other.

Benefits

- Rapid provisioning of secure virtual networks (VNETs) with management, control and data plane isolation
- Provision in minutes per-tenant virtual routers and services with management, control, data plane isolation
- Leverages existing network – no rip-and-replace
- Complete overlay compatibility without any hypervisor lock-in
- Avoids the need to manage a separate, overlay network on top of the physical, existing network infrastructure
- Breaks down the barriers between physical and virtual
- Ability to resist large DDoS attacks
- Every VNET can be controlled and reconfigured on-the-fly: e.g. you can grow, expand and take ports in or out as needed

Features

- Virtual Networks with VLAN/subnet re-use
- Multiple Virtual Routers (HW accelerated)
- Role-based Access Management (RBAC)
- Virtual Network Services:
    - Domain Name Services (DNS)
    - PXE Server
    - Network Time Protocol (NTP) Server
    - Precision Time Protocol (PTP)
- OpenStack ML2 Neutron Plugin

About Pluribus Networks

Pluribus Networks provides fabric networking and analytics solutions which that transform existing network infrastructures from being rigid, costly and complex, into a foundation for modern digital-centric businesses. Our Virtualization-Centric Fabric (VCF™) provides unprecedented insight, agility and security providing to create the industry's only combined SDN and Network Performance Monitoring (NPM) offering.

Learn more at **www.pluribusnetworks.com** and **@pluribusnet**.