Application Brief: Network Edge Consolidation

BEST OF BREED BRANCH OFFICE CONNECTIVITY AND SECURITY

The proliferation of single-purpose devices has created a complex, expensive network edge in the distributed enterprise, branch office and campus. Today, the average branch office has some combination of router, firewall, VPN, WAN optimization, IPS, Web Filtering and more, many of which are single purpose devices. In the past decade the majority of networking vendors have convinced the world that networking must be consumed as hardware appliances, most of which are simply x86 processors with some very basic customization. With the increase in demand for virtualization in datacenters and cloud computing, those same vendors are now releasing their products as software-only networking products for virtual environments.

While Vyatta's approach to networking has always been to deliver a platform independent software-based network operating system, this new trend of decoupling hardware from software by other vendors is proof that NETWORKING IS SOFTWARE. With the exception of switching and a few specialized packet-processing requirements, the vast majority of networking runs very well on x86 servers. Today a single quad core processor from Intel can easily drive 10Gbps throughput for only 5% of what it would cost for a proprietary hardware router or firewall. See Intel Solution Brief - Integrating Services at the Edge

Combining the massive performance increases from x86 based processors and the availability of network virtual machines enables enterprises, ISPs, telecoms and clouds to significantly reduce edge network device sprawl by employing network virtual machines instead of single-purpose devices.

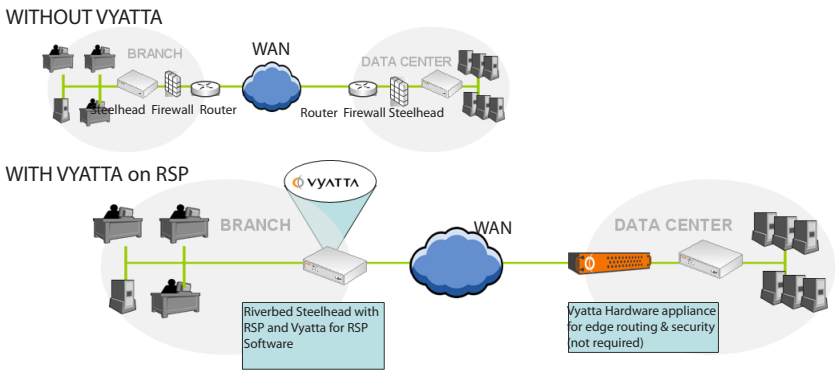
Benefits of Consolidated Edge Networking:

» Speed: Deploy software images in server racks instead of boxes, cables and ladders
» Flexibility: Move network VMs around the same way as virtualized compute loads
» Scalability: Assign more virtualized hardware resource as workload grows
» Cost-effectiveness: Multiple VMs on a server eliminates entire classes of hardware devices.
» Vendor Selection: Choose the vendor solutions that best fit your business

Vyatta For Network Consolidation

The Vyatta Network OS provides the foundation for any best-of-breed consolidated edge networking solution by offering the industry's most complete Layer 3+ virtualization optimized solution. Some real world examples of this are:

Riverbed: Riverbed has partnered with Vyatta to deliver the Vyatta Network OS on the Riverbed Services Platform (RSP), a virtualized data services platform that allows customers to deploy best-of-breed edge services in a single appliance.



NEC: Using Vyatta for connectivity, traffic management and secure remote access as well as other vendor solutions for load-balancing and additional security, NEC Networks & System Integration Corporation (NESIC)is has designed a the CNS product to deliver a high-performance, low-cost, consolidated network offering for enterprise branch deployments.

Custom Edge Networking Solutions: Vyatta virtual machines have enabled customers around the world to simplify edge networking including Tier 1 global telecoms building generation business-class CPE devices and Fortune 500 enterprises who require flexible best-of-breed edge services for their business.

intel®

"Packet processing performance on Intel® architecture has improved with recent architectural improvements and software optimizations. Software-based networking solutions like Vyatta are an excellent example of the type of networking services that Intel's next generation multi-core technology is enabling."

Ed Dylag
Segment Marketing Manager, Routers and Switches
Intel Corporation

Feature Highlights

IP Routing Protocols	» IPv4 » RIPv2 » OSPFv2 » BGPv4 » IPv6
Security	» Stateful Firewall » IPSec and SSL VPN » Intrusion Prevention » Secure Web Filtering
Hypervisor Readiness	» VMware ESX » Citrix XenServer » Redhat KVM » Xen

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