Key Features

Base vRouter Features:

Routing
- Static route
- Policy route
- OSPF v2, v3
- ISIS, ISISv6
- BGP v4, 4+, MP-BGP
- Route Policies
- Route redistribution

IP Multicast
- IGMP v1,v2,v3
- PIM-SM / PIM-SSM
- Multicast VLAN

Layer 2 & Tunneling Protocols
- VLAN – IEEE 802.1q
- QinQ – IEEE 802.1ad
- LACP
- L2TP (LAC/LNS)
- VxLAN
- GRE
- IPSec

High Availability/Redundancy
- Control Plane Hot Standby
- Data Plane Warm Standby
- Full N+1 Redundancy for PPPoE

MPLS
- MPLS (RFC-3031, RFC-3031)
- Label Edge Router (LER)
- Label Switch Router (LSR)
- LDP, LSP

Additional vCGN features:

IP Transition (NAT)
- Network & Port Address Translation (NAT / PAT)
- NAT Logging
- CGNAT (NAT44)

Additional vBNG features:

Subscriber Management
- IPoE v4, v6, dual-stack
- PPPoE v4, v6, dual-stack
- Web Authentication
- Circuit Authentication
- DHCP Option 60 & 82
- DHCP Proxy, server
- Local IP Address Pool
- Static/Dynamic IP Allocation
- Walled Garden
- Captive Portal

AAA
- RADIUS and Local AAA
- RADIUS failover/load balancing
- HTTP Redirect
- RADIUS specified Access Domain
- Public/Private RADIUS Attributes
- RADIUS Set QoS profiles and service attributes
- RADIUS COA/DMCOA
- Specify subscriber profile domain

QoS
- Traffic Classification and Remark (based on TOS, IP Precedence, DSCP, VLAN, ACL (L3/L4))
- IPv4/IPv6 ACLs
- Class/Policy Map
- Assign user QoS profile via RADIUS
- Hierarchical QOS
- Committed Access Rate (CAR)
- Priority Queuing CBWFQ
- Interface, Subscriber, Time-based QoS/ACL Policies

vRouter Benefits

- Best-in-class performance on 1RU x86 servers
  - ◊ Up to 360 Gpbs line-rate* forwarding
  - ◊ 10/25/40 GbE Interfaces
  - ◊ IPv4 RIB Capacity: 2M routes
- Perpetual License—Includes:
  - ◊ 2,000 subscribers—upgradeable to 128,000
  - ◊ 1 year of support
  - ◊ 4M CGNAT Sessions
  - ◊ Web-based GUI
- Rich Access/Aggregation feature set
  - ◊ PPPoE/IPoE, L2TP, VXLAN, QinQ{inQ}
  - ◊ AAA, Radius w/ COA
  - ◊ BGP, OSPF, ISIS external protocols
  - ◊ Dual Stack IPv4/v6
  - ◊ DiffServ, HQoS, Shaping and PBR
  - ◊ IP Multicast
  - ◊ Familiar CLI, TACACS+ and NetConf APIs
  - ◊ Powerful GUI for config and management
  - ◊ Captive Portal, Walled Garden
  - ◊ High Availability Configurations

* @256 byte packets

netElastic systems

Broadband Network Solutions

Visit our website for datasheets or to learn more.
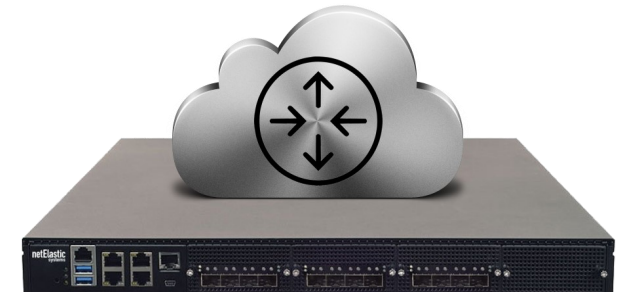
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SUBSCRIBER ACCESS SERVICES ROUTER

BROADBAND NETWORK CHALLENGES

Annual global IP traffic is expected to reach 400 Exabytes/month by 2022. Subscriber bandwidth demand is being fueled by more connected devices, cloud computing, and video streaming. Unfortunately, increasing traffic volumes are creating challenges since legacy Service Provider routers are difficult to scale and inflexible.

Built for yesterday's static internet traffic, legacy routers require costly up-front investments that don't scale with subscriber growth and recurring license and support fees that don't adapt to Service Provider cost realities. Traditional management and configuration tools are unnecessarily complex and GUIs tend to come with large licensing fees. This is especially problematic for service providers competing for RDOF or other federal offsets.

THE NETELASTIC ANSWER

netElastic's vRouters are designed to deliver unmatched performance and scalability on standard x86 servers. With an optimized data plane and patented packet processing techniques, netElastic maximizes hardware performance and enables flexible capacity expansion without restrictions.

CARRIER-GRADE PERFORMANCE

netElastic routing solutions deliver performance up to 360 Gbps on 10, 25, and 40G ports, an ideal edge solution for many growing networks and an excellent way to support FTTH deployments.

MAXIMUM FLEXIBILITY

netElastic's vRouters give you the deployment flexibility to deliver new services faster, whether you're deploying a new rural network or upgrading a large-scale metro POP. vRouters deployed as BNGs can be used for very small subscriber bases and be upgraded to support several hundred thousand subscribers per vRouter. Added components, such as media cache, or other VNFs can be added to the platform allowing a Service Provider to expand their networks without huge investments in space, power, and cooling.

LOWER COST AND A FUTURE-PROOF NETWORK

netElastic vRouters run on your standard fleet servers. This approach provides industry-leading scalability and helps service providers save up to 70% of the cost of traditional routers. Software licenses can be migrated between hardware platforms for investment protection, future-proofing this critical network component. Upgrades are a simple IT task that eliminate the need for costly spare parts and performance or port density can be enhanced with the simple addition of memory and NICs. netElastic vRouter solutions align costs with revenue, enabling service providers to start small and grow.

EASY CONFIGURATION AND MANAGEMENT

In addition to a standard CLI, netElastic vRouters support management, configuration and monitoring through NetConf APIs and/or a robust GUI which allows you to configure and manage ALL your vRouters through a single pane-of-glass. vBNG Manager monitors all interfaces, routes, peak and active subscribers, and overall system health. Easily implement complex configurations to control network and interface configurations as well as subscriber policies for rate plans, session QoS, RADIUS interfaces, and more.

PROTOCOL SUPPORT / SUBSCRIBER MANAGEMENT

netElastic vRouters support a wide range of protocols, including Access features like PPPoE, IPoE, and L2TP with subscriber traffic policing and shaping per RADIUS specified rate plans. VxLANs are supported across interfaces, and routing protocols include OSPF, BGP, and IS-IS. It supports dual-stack IPv4 and IPv6 and built-in CGNAT capability for up to 4 million sessions eliminates the high cost of separate CGNAT solutions.

A ROUTER FOR EVERY EDGE

netElastic vRouter variations include:

vBNG—a full virtual Broadband Network Gateway for Service Providers with large subscriber bases offering service tiers for fine grained control, optimized congestion management, and enhanced SLAs.

vCGN—a CGNAT router that helps service providers in their IPv6 transition by sharing public IPv4 addresses among a large population of subscribers.

vRouter—a high-performance vRouter for use in peering or transit applications

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SUMMARY

The netElastic virtual routers deliver market-leading performance, eliminate vendor lock-in and reduce total cost of ownership, allowing service providers to flexibly grow and run their network while aligning costs with revenues.

Reach out today to learn how netElastic can help you cost-effectively scale your network.