Nokia Virtualized Service Router Appliance

Release 26

The Nokia Virtualized Service Router Appliance (VSR-a) is a network appliance that provides a preconfigured combination of hardware and software required to quickly deploy virtualized IP/MPLS routing applications in telecommunications providers, AI and cloud providers, and mission-critical enterprise network environments.

Overview

Based on the Nokia VSR, the VSR-a enables accelerated service introduction of Nokia's industry-leading IP routing virtualized network functions (VNFs) while simplifying and minimizing related operational complexities.

VSR appliance

Features

- Leverages hardware capabilities of the HPE ProLiant DL Server portfolio
- Software capabilities of the widely deployed Nokia Service Router Operating System (SR OS)
- Industry-leading VNF performance
- Resiliency and robustness
- Advanced element and VNF management capabilities
- Same CLI and configuration options as for physical and virtualized service routers

Benefits

- Rapid service introduction
- Lower service rollout risks
- Flexible deployment options
- Easy interoperability
- Support from one global support team

Technical specifications

Software

- Red Hat® Enterprise Linux® (RHEL) OS
- Linux Kernel-based Virtual Machine (KVM) hypervisor
- Nokia VSR applications

VSR-a HN7 system configuration

- Based on HPE ProLiant DL360 Gen11 1U rackmount server
- Processor: 1 Intel® Xeon® Silver 4410Y processor
  - 12 cores
  - 2.0 GHz
  - 30 MB L3 cache
- Memory: 64 GB RAM (DDR5-3200, 2 x 32 GB)

- Adapters: 3x MLX MCX631102 1/10G 2p SFP28 (slot 1, 2, OCP)
- 2 x 2.5-in hot-swappable disk drive SSD 480 GB (SATA)
- TPM (Trusted Platform Module) 2.0
- Front I/O:
  - 1 iLO service port
  - 1 USB 3.0 port
- Rear I/O:
  - 2 USB 3.0 ports
  - 1 VGA port
  - 1 iLO management port
  - 1 x 1/10GE management port
  - 5 x 1/10GE SFP/SFP+ configurable as 1,000/10,000 Mb/s

Pluggable optics options

- NVIDIA MLX ConnectX-6 Lx EN NICs
  - SFP+ 10GE SR
  - SFP+ 10GE LR
  - SFP GE SX
  - SFP GE BASE-T RJ45

Dimensions and weight

- Height: 4.29 cm (1.69 in)
- Width: 43.46 cm (17.11 in)
- Rack depth: 74.19 cm (29.21 in)
- Weight: 16.7 kg (36.82 lb)

Operating environment

- Operating temperature: 10°C to 35°C (50°F to 95°F)
- Non-operating temperature: -30°C to 60°C (-22°F to 140°F)
- Operating relative humidity: 8% to 90%
- Non-operating relative humidity: 5% to 95%

Power supply

- AC: 1000 W, redundant (100 to 240 VAC, 50/60 Hz, AC/HVDC support)
- DC: 1600 W, redundant (-40/-72 V DC, 44A max)

Power consumption

- Loads simulated by HPE Power Advisor
- 30% utilization: 214 W
- 100% utilization: 410 W

vCPU allocation

- 22 vCPUs for the VSR

Software included

- One host OS RHEL 8.8 subscription
- SR OS software for VSR Release 24.10
- VSR-a installation scripts
- VSR-a base license with minimum 1 Gb/s QoS throughput for Route Reflector only, or 10 Gb/s QoS for other functions must be purchased separately from the VSR-a

VSR-a HN8 system configuration

- Based on HPE ProLiant DL360 Gen11 1U rackmount server
- Processor: 1 Intel Xeon Gold 6438N processor
  - 32 cores
  - 2.0 GHz
  - 60 MB Layer 3 cache
- Memory: 128 GB RAM (DDR5-3200, 4x32 GB)
- Cards: 1 OCP LAN mezzanine card; dual-port 1/10 Gb/s SFP+; NVIDIA MLX ConnectX-6 Lx EN
- Adapters: 2 PCIe Ethernet adapters; 2 x HPE IB HDR100/EN 100 GB 2 port QSFP56/NVIDIA® Mellanox® ConnectX®-6 Dx (MCX6)
- 2 x 2.5-in hot-swappable disk drive SSD 480 GB (SATA)
- TPM 2.0

- Front I/O:
  - 1 iLO service port
  - 1 USB 3.0 port
- Rear I/O:
  - 2 USB 3.0 ports
  - 1 VGA port
  - 1 x 1/10GE management port
  - 1 x 1/10GE SFP/SFP+ configurable as 1,000/10,000 Mb/s
  - 4 x 100GE QSFP28 configurable as 25/100 Gb/s

Pluggable optics options

- NVIDIA MLX ConnectX-6 Lx EN NIC:
  - SFP+ 10GE SR
  - SFP+ 10GE LR
  - SFP GE SX
  - SFP GE BASE-T RJ45
- NVIDIA Mellanox Network Adapter MCX6 DX NIC:
  - QSFP28 100GBASE-SR4
  - QSFP28 100GBASE-LR4
  - QSFP+ 40G SR4
  - SFP28 25GE SR LC
  - QSFP28 to SFP28 Adapter

Dimensions and weight

- Height: 4.29 cm (1.69 in)
- Width: 43.46 cm (17.11 in)
- Rack depth: 74.19 cm (29.21 in)
- Weight: 17.1 kg (37.7 lb)

Operating environment

- Operating temperature: 10°C to 35°C (50°F to 95°F)
- Non-operating temperature: -30°C to 60°C (-22°F to 140°F)
- Operating relative humidity: 8% to 90%
- Non-operating relative humidity: 5% to 95%

Power supply

- AC: 1000 W, redundant (100 to 240 VAC, 50/60 Hz, AC/HVDC support)
- DC: 1600 W, redundant (-40/-72 V, 44A max)

Power consumption

- Loads simulated by HPE Power Advisor
- 30% utilization: 305 W
- 100% utilization: 619 W

vCPU allocation

- 62 vCPUs for the VSR

Software included

- One host OS RHEL 8.8 subscription
- SR OS software for VSR Release 24.10
- VSR-a installation scripts
- VSR-a base license with minimum 10 Gb/s QoS throughput must be purchased separately from the appliance

Learn more

For more information about the Nokia VSR portfolio, visit the VSR web page.

Refer to the Nokia VSR data sheet and product documentation for additional system and feature specifications as well as information about VNF support and standards compliance.

NOKIA

About Nokia

At Nokia, we create technology that helps the world act together.

As a B2B technology innovation leader, we are pioneering networks that sense, think and act by leveraging our work across mobile, fixed and cloud networks. In addition, we create value with intellectual property and long-term research, led by the award-winning Nokia Bell Labs.

With truly open architectures that seamlessly integrate into any ecosystem, our high-performance networks create new opportunities for monetization and scale. Service providers, enterprises and partners worldwide trust Nokia to deliver secure, reliable and sustainable networks today – and work with us to create the digital services and applications of the future.

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