The Nokia Virtualized Service Router Appliance (VSR-a) is a network appliance that provides a pre-configured combination of hardware and software required to quickly deploy virtualized IP/MPLS routing applications in network operator and enterprise environments. Based on the Nokia VSR (Release 19), 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.

**Key features**
- Leading hardware capabilities of the Nokia AirFrame 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

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

**Software**
- Red Hat® Enterprise Linux® (RHEL) OS
- Linux Kernel Virtual Machine (KVM) hypervisor
- Nokia VSR R16 application(s)
Technical specifications

Nokia-certified configurations for the VSR-a are based on Nokia AirFrame servers.

**SN7 system**
- Based on AirFrame (AC version NDCHW1286, DC version NDCHW1331) 1U rackmount server
- 4x 3.5-in hot-pluggable front bays
  - 2 front bays pre-equipped with a disk drive (see specifications that follow)
  - Up to 3 PCIe expansion slots
- 1 Intel® Xeon® Silver 4116 processor (CPU0)
  - 12 cores
  - 2.1 GHz
  - 16.5 MB L3 cache
- 48 GB RAM (2,133 MHz DDR4 RDIMM, 6 x 8 GB modules)
- 1 OCP LAN mezzanine card; Dual-port 10 Gb/s SFP+ Intel 82599ES
- 1 PCIe Ethernet adapter; Dual-port 10 GbE SFP+ Intel 82499ES (X520-DA2)
- 2 x 2.5-in hot-swappable disk drive SSD 240 GB (SATA, 6 Gb/s)
- TPM2.0 Module (Trusted Platform Module)
- Front I/O:
  - 2 USB 2.0 ports
- Rear I/O:
  - 2 USB 3.0 ports
  - 1 VGA port
  - 1 RS232 serial port
  - 1x 1 GE dedicated management port
  - 4x 10 GE SFP/SFP+, configurable as 100/1,000/10,000 Mb/s

**Dimensions**
(1U rack mount)
- Height: 1.7 in (43.2 mm)
- Width: 17.3 in (440 mm)
- Depth: 30.7 in (780 mm)
- Weight: 45.64 lb (20.7 kg)

**Operating environment**
- Operating temperature: 41°F to 104°F (5°C to 40°C)
- Non-operating temperature: -40°F to 158°F (-40°C to 70°C)
- Operating relative humidity: 5% to 85%
- Non-operating relative humidity: 10% to 95%

**Power supply**
- AC: 800 W AC, redundant (100-240 VAC, 50/60 Hz, AC/HVDC support)
- DC: 1100 W, redundant (-39/-72 V, 37A Max)

**System Rating**
- AC: 100-120/200-240 Vac, 50/60 Hz, 7.4/4A or 240 Vdc, 3.7 A (Per PSU inlet) for PSU:800 W
- DC: -39 V to -72 Vdc, 28 A max. (Per PSU inlet)

**Power consumption (typical values, measured under simulated loads at 21°C)**
- Loads simulated by Intel® Performance Tuning Utility
  - 30% load: 85 W
  - 100% load: 134 W

**Fans**
- 8 dual rotor fans (15+1 redundant)

**vCPU allocation**
- 11 cores for VSR

**Software licenses included**
- RHEL 7.4, including KVM
- VSR-I base package with 1 Gb/s QoS throughput
SN8 system

- Based on AirFrame (AC version NDCHW1284, DC version NDCHW1329) 1U rackmount server
  - 4x 3.5-in hot-pluggable front bays
  - 2 front bays pre-equipped with a disk drive (see specifications that follow)
  - Up to 3 PCIe expansion slots
- 1 Intel® Xeon® Platinum 8160 processor (CPU0)
  - 24 cores
  - 2.1 GHz
  - 33 MB L3 cache
- 192 GB RAM (2,133 MHz DDR4 RDIMM, 6x 32 GB modules)
- 2 x PCIe Ethernet card; Dual 100 Gb/s QSFP28 Mellanox ConnectX-5 (MCX516A-CCAT)
- 1 OCP LAN mezzanine card; dual port 10 Gb/s SFP+; Intel X527-DA2 (CPU0)
- 2 x 2.5-in hot-swappable disk drive SSD 240 GB (SATA, 6 Gb/s)
- TPM2.0 Module (Trusted Platform Module)
- Front I/O:
  - 2 USB 2.0 ports
- Rear I/O:
  - 2 USB 3.0 ports
  - 1 VGA port
  - 1 RS232 serial port
  - 1 x 1 GE dedicated management port
  - 2 x 10 GE SFP/SFP+, configurable as 100/1,000/10,000 Mb/s
  - 4 x 100 GE QSFP28, configurable as 1/10/40/100 Gb/s

Dimensions

(1U rack mount)
- Height: 1.7 in (43.2 mm)
- Width: 17.3 in (440 mm)
- Depth: 30.7 in (780 mm)
- Weight: 45.64 lb (20.7 kg)

Operating environment

- Operating temperature: 41°F to 104°F (5°C to 40°C)
- Non-operating temperature: -40°F to 158°F (-40°C to 70°C)
- Operating relative humidity: 5% to 85%
- Non-operating relative humidity: 10% to 95%

Power supply

- AC: 800 W AC, redundant (100-240 VAC, 50/60 Hz, AC/HVDC support)
- DC: 1100 W, redundant (-39/-72V, 37A Max)

System Rating

- AC: 100-120/200-240 Vac, 50/60 Hz, 7.4/4A or 240 Vdc, 3.7 A (Per PSU inlet) for PSU:800 W
- DC: -39 V - -72 Vdc, 28 A max. (Per PSU inlet)

Power consumption (typical values, measured under simulated loads at 21°C)

- Loads simulated by Intel® Performance Tuning Utility
  - 30% load: 140 W
  - 100% load: 260 W

Fans

- 8 dual rotor fans (15+1 redundant)

vCPU allocation

- 22 cores for VSR

Software licenses included

- RHEL 7.4, including KVM
- VSR-I base package with 10 Gb/s QoS throughput
Refer to the Nokia VSR data sheet and the VNF data sheets for additional system and feature specifications and standards compliance.

For the most up-to-date lists of supported VNFs and recommended configurations, contact your regional Nokia representative.

Learn more

For more information about the Nokia VSR portfolio, visit the [VSR webpage](https://www.nokia.com/).

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