Product Highlights

Arista vEOS Router

- Cloud-grade routing optimized for virtualized and cloud environments
- High Performance with Intel Data Plane Developer Kit (DPDK)
- Flexible universal cloud networking for any cloud, public and private
- Consistent operational model with Arista EOS® and CloudVision®
- Industry-leading programmability and automation features
- Full Access to Linux shell and tools, including cloud-native APIs
- Secure connectivity with IPSec VPNs and segmentation with Zone Segmentation Security (ZSS)

Hypervisors Supported

- VMware ESXi
- KVM

Cloud Provider Platforms

- Amazon Web Services
- Microsoft Azure
- Microsoft Azure Stack
- Google Cloud Platform

Routing Highlights

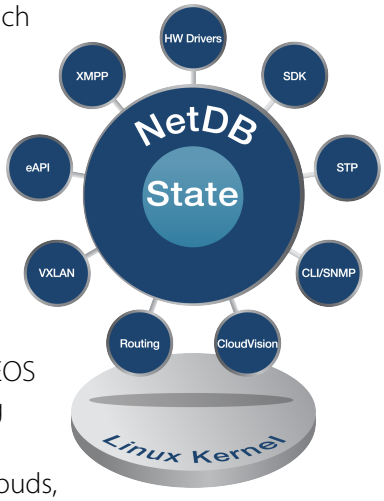
- Layer-3 routing
- Advanced Layer-3 features
- IPSec VPNs
- Network Address Translation (NAT)
- Cloud High Availability (HA)
- EOS API (eAPI) and SDK
- SNMP and sFlow

Provisioning & Monitoring

- CloudVision® turnkey automation
- Zero Touch Provisioning (ZTP)
- Template-based deployment
- Event monitoring & management
- Onboard packet capture analysis

Overview

The Arista vEOS Router is a cloud-grade, feature-rich virtual router. It empowers enterprises and cloud providers to build consistent, highly secure and scalable hybrid cloud networks across multiple clouds and multiple hypervisors.



Arista vEOS Router extends the Arista EOS software platform, already proven in the most demanding cloud networking infrastructures, from Arista's award-winning physical platforms into software-defined hybrid clouds. The Arista vEOS Router delivers an Any Cloud gateway, enhancing public cloud networking services and VPNs to interconnect customer environments in public clouds, remote locations and more.

Arista vEOS Router delivers an unmatched level of consistency across enterprise datacenters, private clouds and public clouds. It uses the same consistent Arista EOS binary as all other Arista cloud networking platforms, and is available in Microsoft Azure, Microsoft Azure Stack, Amazon Web Service (AWS), Google Cloud Platform (GCP) and other public cloud marketplaces. It is also supported on customer x86 servers running Linux and VMware hypervisors.

Arista vEOS Router fully integrates with Arista CloudVision to simplify the experience of interconnecting public and private clouds. Leveraging a network-wide approach for workload orchestration and workflow automation it provides a consistent, secure and universal approach to hybrid cloud networking. Arista's customers can reduce their operational costs and complexities by deploying Arista's hybrid cloud solution across all places in the cloud. Arista vEOS Router provides the following features and benefits:

Highly Available Architecture: Architected for high availability, vEOS Router cloud API integration ensures automated resiliency and path recovery using industry-standard Bidirectional Forwarding Detection (BFD) and Equal-cost multi-path routing (ECMP) with standard BGP or OSPF routing to detect and mitigate failures.

Cloud Grade Routing: Arista vEOS Router delivers cloud-grade routing features that extends a consistent operational model from existing datacenter to the public cloud.

DevOps, NetOps and 3rd Party Support: Arista EOS is built with programmability at every layer of the software stack for easy integration and customization. Arista vEOS Router enables the same programmatic control of the network with extensive NetOps/DevOps integration and a rich, well-structured set of APIs.

Simplified Management, Monitoring and Reporting: vEOS Router is managed through either a Command Line Interface (CLI), or via JSON/REST APIs. It also presents comprehensive telemetry and diagnostic information that can be monitored via SNMP or using real-time state streaming and CloudVision. Arista Cloud Tracer provides continuous monitoring of connectivity across the cloud and makes this information visible in CloudVision's analytics view.

vEOS Router Use Cases

Whether on premises or in the cloud, the Arista vEOS Router helps enterprise and service providers build the best possible hybrid networks without compromising on security, reliability and performance. Customers can use Arista vEOS Router and CloudVision for a myriad of use cases including but not limited to:

Secure Multi Cloud Connectivity

Today, IT teams are challenged to provide seamless connectivity not only across multiple regions within a specific cloud vendor but also across multiple cloud service providers. Arista vEOS Router, along with CloudVision, allows customers to create and manage a secure global network topology spanning multiple regions across multiple clouds.

Interconnecting VPCs/VNets in the Public Cloud

Arista vEOS Router allows you to interconnect multiple Virtual Private Clouds (VPCs) on AWS or Virtual Networks (VNets) on Azure. By leveraging rich routing features of EOS, one can interconnect multiple VPCs/VNets to create a secure global network topology.

Multi-site VPN aggregation:

The Arista vEOS Router radically simplifies branch office and datacenter designs by allowing each site to directly access applications hosted in multiple clouds without backhauling traffic through a central datacenter hub. This process increases application performance, eliminates the need for using expensive MPLS WAN circuits and avoids cloud providers per-VPN-tunnel costs.

Network Function Virtualization:

The Arista vEOS Router allows service providers, cloud operators and enterprises to achieve Network Function Virtualization (NFV), which decouples network functionality from singular point physical appliances so they can run as software on x86 servers. Feature consistency with Arista EOS software running on Arista routing and switching platforms allows vEOS Router to be configured as a virtual Route Reflector (vRR), virtual Customer Premises Equipment (vCPE), NAT device, WAN router, branch routers, secure VPN gateway, and more.

Segment Workload with Consistent Security Policy:

The Arista vEOS Router allows network admins to simplify their network security policy across multiple clouds. Application workloads can be put into different zones or segments. Within a segment there is no security policy restriction. Between segments, there is a ZERO trust model in which communication is not allowed by default, unless explicit policies are configured to allow hosts to communicate between segments. Segmentation and security policy can be managed by Arista CloudVision.

System Requirements

Arista vEOS Router can be deployed on an Arista DCA-200-VEOS physical appliance, on a standard x86 server with the below minimum requirements including a supported hypervisor OS, or on supported public clouds (AWS, Azure, and GCP).

Attributes	Requirements
Minimum Server Requirements	• Intel x86, 4 cores, 2.4GHz (min) with VT-d support • Network driver, Virtio (KVM), Vmxnet3 (ESXi), PCIe Passthrough and SR-IOV (Intel x520 and 82599) • 16 GB memory or greater
Hypervisors Supported	• KVM (RedHat Enterprise Linux version 7.0-7.5 and Ubuntu Linux versions 18.04-18.10) • VMware (ESXi version 6.0, 6.5 and 6.7)
Cloud Platforms support	• Amazon Web Services (T, C and R instance types, Enhanced Networking) • Microsoft Azure Public Cloud (Dn Standard v2 series VMs, Accelerated Networking) • Google Cloud Platform (N1-Standard VMs)
Virtual Machine	• 2 vCPUs (minimum) • 4 GB memory (minimum)

vEOS Router Physical Appliance Hub Router	Descriptions
Physical Appliance Platform Specifications for DCA-200-VEOS 	• CPU: Two Intel Xeon 10 Core, 2.2GHz • DRAM: 64GB (Two 32GB) • Hard Drives: Four 2TB SATA • Network Interfaces: 4x1G, 4x10G (2x Dual port 10G NICs), Dedicated 1G IPMI port • Power Supply: Dual, Hot-plug, Redundant Power Supplies (1+1), 550W • Power Cord: C13 to C14, PDU Style, 12A, 2 Feet (North America) • Dimensions (HxWxD): 1.68"x17.08"x25.87"(4.26cm x 43.38cm x 65.70cm) • Weight: 38.90 lbs (17.64 kg) • Remote management: iDRAC 9 Enterprise Controller
Physical Appliance Software	The DCA-200-VEOS ships with supported operating system and vEOS Router image. Purchase of subscription is required for full vEOS Router functionality.

Layer-3 Routing Features

- Routing Protocols: OSPFv2, BGPv4, and IS-IS
- Equal-Cost Multi-Path Routing (ECMP)
- Bidirectional Forwarding Detection (BFD)
- Virtual Router Redundancy Protocol (VRRP)
- Cloud HA (API-based)
- Route Reflector (BGP RR AF IPv4)
- Network Address Translation (NAT)
- Generic Routing Encapsulation (GRE)
- 802.1AB Link Layer Discovery Protocol
- Quality of Service (QoS)

Security Features

- IPSec VPN (IKE v1/v2, AES 128/256, SHA1/2)
- Zone Segmentation Security (ZSS)
- Ingress/Egress ACLs using L3, L4 fields
- ACL Logging and Counters
- Role Based Access Control (RBAC)
- TACACS+, RADIUS Auth., Authorization and Accounting
- AWS Key Authentication for Management Interface

Advanced Monitoring and Provisioning

- Zero Touch Provisioning (ZTP)
- Integrated packet capture/analysis (tcpdump/libpcap)
- RFC 3176 sFlow

Extensibility

- Advanced Event Management (AEM)
  - CLI Scheduler
  - Event Manager
  - Event Monitor
- Linux Tools
  - Bash shell access and scripting
  - RPM support
  - Custom kernel modules
- DevOps/NetOps Tool Support
  - CloudVision
  - Ansible/Chef/Puppet/Salt
  - ServiceNow
- Programmatic access to network-wide state
  - Python
  - C++
  - Go

SNMP MIBs

- RFC 4750 OSPF-MIB
- RFC 4273 BGP4-MIB
- RFC 3635 EtherLike-MIB
- RFC 3418 SNMPv2-MIB
- RFC 2864 IF-INVERTED-STACK-MIB
- RFC 2863 IF-MIB
- RFC 2790 HOST-RESOURCES-MIB
- RFC 2096 IP-FORWARD-MIB
- RFC 2013 UDP-MIB
- RFC 2012 TCP-MIB
- RFC 2011 IP-MIB
- RFC 6353 SNMP-TLS-TM-MIB
- RFC 5591 SNMP-TSM-MIB
- VRRPV2-MIB
- RFC 2787 VRRPv2MIB
- LLDP-MIB
- LLDP-EXT-DOT1/3-MIB
- HOST-RESOURCES-MIB
- ENTITY-STATE-MIB
- ENTITY-MIB
- ARISTA-VRF-MIB
- ARISTA-SW-IP-FORWARD-MIB
- ARISTA-SNMP-TRANSPORTS-MIB
- ARISTA-SMI-MIB
- ARISTA-QUEUE-MIB
- ARISTA-PRODUCTS-MIB
- ARISTA-PFC-MIB
- ARISTA-IF-MIB
- ARISTA-DAEMON-MIB
- ARISTA-CONFIG-MAN-MIB
- ARISTA-CONFIG-COPY-MIB
- ARISTA-BGPV4V2-MIB
- ARISTA-ACL-MIB
- User configurable custom OIDs

SNMP TRAPs

- Authentication Failure trap, linkUp, LinkDown, coldStart, nsNotifyRestart, entConfigChange, entStateOperEnabled, entStateOperDisabled, VRRP, OSPF, and BGP supported.
- Additional event traps and log messages can be generated through AEM and eAPI scripting.

Please note that system requirements and features supported on vEOS Router are different than on vEOS-lab, which is a software product intended only for simulation and testing purposes. Refer to vEOS-lab datasheet for further details:
https://www.arista.com/assets/data/pdf/Datasheets/vEOS_Datasheet.pdf

Arista vEOS Router Ordering Information

vEOS Router software is available as a subscription via the following offerings:

Product Number	Product Description
SS-VEOSR-IPSEC-500M-1M	vEOS Router SW Subscription License for a single vEOS instance for 1-Month for up to 500Mbps throughput. Includes base routing features, IPSec encryption and SW support
SS-VEOSR-IPSEC-1G-1M	vEOS Router SW Subscription License for a single vEOS instance for 1-Month for up to 1Gbps throughput. Includes base routing features, IPSec encryption and SW support
SS-VEOSR-IPSEC-10G-1M	vEOS Router SW Subscription License for a single vEOS instance for 1-Month for up to 10Gbps throughput. Includes base routing features, IPSec encryption and SW support

vEOS Router Physical Appliance is available via the following offerings:

Product Number	Product Description
DCA-200-VEOS	1 unit vEOS Physical Appliance, Model 200. vEOS subscription license not included.
SVC-DCA-200-VEOS-NBD	1 Month A-Care Software & NBD Hardware Replacement/Same Day Ship for DCA-200-VEOS Appliance

Service and Support

Arista A-Care service offerings are available to provide you with world-class support when you need it. A-Care service offerings provide coverage for all Arista products including CloudVision. For more details see: http://www.arista.com/en/service

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