Overview

The Arista CloudEOS™ Router VM is a cloud-grade, feature-rich, multi-cloud and multi-hypervisor virtual router that empowers enterprises and cloud providers to build consistent, highly secure and scalable multi-cloud networks. Already proven in the most demanding public cloud infrastructures, CloudEOS Router VM (CloudEOS-VR) extends the Arista EOS platform from Arista’s award-winning physical switching and routing platforms into the virtualized cloud environment.

The Arista CloudEOS Router VM delivers a multi-cloud gateway, with advanced routing and security features like Cloud Network Private Segments, BGP EVPN, IPsec, NAT, Dynamic Path Selection and In-band Network Telemetry. It is available on Amazon Web Service (AWS), Microsoft Azure, Google Cloud Platform and other public clouds via their commercial marketplaces. It is also supported on customer equipment running Linux and VMware hypervisors.

Arista CloudEOS Router provides the following features and benefits:

Declarative Provisioning and Deployment: enables one-touch provisioning and deployment of cloud networks through Terraform automation. Customers can choose a desired network architecture from Arista’s Terraform templates repository and can customize the Arista templates to best suit their own environment. Once provisioned, cloud networks automatically join existing customer private clouds via a secure channel, ready to deliver traffic reliably and securely within and between clouds.

Dynamic Path Selection and In-band Path Telemetry: CloudEOS Router can auto-discover all the logical paths between cloud regions over every transport path. The paths can be secured with IPsec encryption and CloudEOS measures network latency, jitter, bandwidth, and drop rates to determine the best path(s) for each application. If multiple best paths exist, traffic is load balanced on a per flow basis. This allows customers to scale their network capacity up and down to meet application needs while maintaining optimal service levels.

Cloud Network Private Segments: VXLAN and IPsec based Virtual Private Networks (VPNs) spanning cloud regions and providers enable secure, globally isolated, and consistent security policy across every cloud.

High Available Architecture: cloud API integration ensures automated resiliency and path recovery using industry-standard Bidirectional Forwarding Detection (BFD) with standard BGP or OSPF routing to detect and mitigate failures.

Simplified Management, Monitoring and Reporting: CloudEOS Router is managed through a Command Line Interface (CLI), APIs or CloudVision to present comprehensive real-time telemetry information and configuration consistency. Arista CloudEOS delivers an unmatched level of consistency across enterprise data centers, campus, and public clouds. Arista’s customers can now reduce their operational costs and complexities by deploying Arista’s multi-cloud architecture.
Arista CloudEOS Router VM I Specifications

System Requirements:

Arista CloudEOS Router VM can be deployed on Arista physical appliance, standard x86 servers with below minimum requirements and and is listed in major public cloud marketplaces for hourly or BYOL consumption (AWS, Azure, GCP).

<table>
<thead>
<tr>
<th>Attributes</th>
<th>Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum Server Requirements</td>
<td>• Intel x86</td>
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<tr>
<td></td>
<td>• 4 cores running at 2.4GHz or greater</td>
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<tr>
<td></td>
<td>• 16 GB memory</td>
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<tr>
<td></td>
<td>• Intel VT-d support</td>
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<td></td>
<td>• For SR-IOV based deployment, the NICs need to be SR-IOV capable</td>
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<tr>
<td>Hypervisor Support</td>
<td>• KVM (RedHat Enterprise Linux version 7.0-7.4)</td>
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<td></td>
<td>• VMware (ESXi version 5.5, 6.0 and 6.5)</td>
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<tr>
<td>Public Cloud Platforms Support</td>
<td>• Amazon Web Services (C5 instance types, Enhanced Networking)</td>
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<td></td>
<td>• Microsoft Azure Public Cloud (Dv2 series, Accelerated Networking)</td>
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<tr>
<td></td>
<td>• Google Cloud Platform (N1-Standard VMs)</td>
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<tr>
<td>Virtual Machine</td>
<td>• 2 vCPUs</td>
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<td></td>
<td>• 4 GB memory</td>
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</tbody>
</table>

Arista CloudEOS Router Appliance (below) provides a dedicated hardware platform to deploy CloudEOS at cloud edge and on-premises locations. Multiple instances can be launched on the platform for increased bandwidth and scale.

<table>
<thead>
<tr>
<th>CloudEOS Router Appliance</th>
<th>Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Appliance Platform</td>
<td>• CPU: Two Intel Xeon 10 Core, 2.2GHz</td>
</tr>
<tr>
<td>Specifications for DCA-200-VEOS</td>
<td>• DRAM: 64GB (Two 32GB)</td>
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<td></td>
<td>• Hard Drives: 3.2TB (Four 2TB SATA)</td>
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<td></td>
<td>• Network Interfaces: 4x1G, 4x10G (2x Dual port 10G NIC with PCI-Passthrough and SR-IOV), Dedicated IPMI port</td>
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<td></td>
<td>• Power Supply: Dual, Hot-plug, Redundant Power Supplies (1+1), 550W</td>
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<td></td>
<td>• Power Cord: C13 to C14, PDU Style, 12A, 2 Feet (North America)</td>
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<td></td>
<td>• Dimensions (HxWxD): 1.75”x19”x24” (4.45cm x 48.26cm x 60.96cm)</td>
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<td></td>
<td>• Weight: 46.5 lbs (21.1 kg)</td>
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<td></td>
<td>• Remote management: iDRAC controller (with web UI) and IPMI</td>
</tr>
<tr>
<td>Physical Appliance Software</td>
<td>The DCA-200-VEOS ships with supported operating system and CloudEOS Router image.</td>
</tr>
</tbody>
</table>
Layer-3 Routing Features
- Routing Protocols: OSPFv2, BGPv4, IS-IS, and RIPv2
- Dynamic Path Selection
- In-band Path Telemetry
- Equal-Cost Multi-Path Routing (ECMP)
- Virtual Router Redundancy Protocol (VRRP)
- Route Reflector (BGP RR AF IPv4)
- Network Address Translation (NAT)
- Generic Routing Encapsulation (GRE)
- Bidirectional Forwarding Detection (BFD)
- 802.1AB Link Layer Discovery Protocol
- Quality of Service (QoS)

Security Features
- IPSec VPNs
- Ingress/Egress ACLs using L3, L4 fields
- ACL Logging and Counters
- Port-based DOS Protection (PDP)
- Role Based Access Control (RBAC)
- TACACS+, RADIUS Auth., Authorization and Accounting
- AWS Key Authentication for Management Interface

VXLAN Features
- VXLAN Routing
- BGP L3 EVPN (Type 5) v4

Advanced Monitoring and Provisioning
- Zero Touch Provisioning (ZTP)
- Integrated packet capture/analysis (tcpdump/libpcap)
- GREenSPAN (GRE SPAN)
- IPFIX

Extensibility
- Advanced Event Management (AEM)
  - CLI Scheduler
  - Event Manager
  - Event Monitor
- Linux Tools
  - Bash shell access and scripting
  - RPM support
- 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 2011 TCP-MIB
- RFC 2010 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-CONFIG-MAN-MIB
- ARISTA-ACL-MIB
- User configurable custom OIDs

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

*Contact Arista to verify availability of these features on your cloud platform.

Please note that system requirements and features supported on CloudEOS 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:
Arista CloudEOS Router - VM Ordering Information*

CloudEOS Router VM is available as a BYOL software subscription via the following subscription offerings:

<table>
<thead>
<tr>
<th>Product Number</th>
<th>Product Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SS-CLOUDEOS-VR-CV-1G-B-1M</td>
<td>CloudEOS Router for VM/Cloud Software Subscription License for 1-Month for up to 1Gbps throughput, includes dynamic routing features (BGP, OSPF, NAT, VXLAN/EVPN), IPSec encryption, A-care SW Support, and 1-Month CloudVision for a single CloudEOS instance</td>
</tr>
<tr>
<td>SS-CLOUDEOS-VR-CV-10G-B-1M</td>
<td>CloudEOS Router for VM/Cloud Software Subscription License for 1-Month for up to 10Gbps throughput, includes dynamic routing features (BGP, OSPF, NAT, VXLAN/EVPN), IPSec encryption, A-care SW Support, and 1-Month CloudVision for a single CloudEOS instance</td>
</tr>
</tbody>
</table>

*PAYG subscription in public cloud marketplaces is available at hourly / annual rates based on number of cores.

Physical Appliance

CloudEOS Router Physical Appliance is available via the following offerings:

<table>
<thead>
<tr>
<th>Product Number</th>
<th>Product Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DCA-200-VEOS</td>
<td>1 unit vEOS/CloudEOS Physical Appliance, Model 200. vEOS/CloudEOS subscription license not included.</td>
</tr>
<tr>
<td>SVC-DCA-200-VEOS-NBD</td>
<td>1 Month A-Care Software &amp; NBD Hardware Replacement/Same Day Ship for DCA-200-VEOS Appliance</td>
</tr>
</tbody>
</table>

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](http://www.arista.com/en/service)

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