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Avi Technical Reference (v17.2)

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Hypervisor Support

- Amazon Web Services (AWS)
- Google Cloud Platform
- Microsoft Azure
- Nutanix Acropolis
- Nutanix (Linux Server Cloud)
- OpenStack environments: KVM
- VMware vSphere 5.5, 6.0, 6.5, and 6.7 (with Avi Vantage 17.2.12, and 18.1.2).

Note: Third party switches are not supported for VMware vSphere integration. For more information, refer to [Discontinuation of third party vSwitch program](#).

Avi Vantage only works with the following switches in a vCenter cloud:

- Standard Virtual Switch (vSwitch)
- Distributed Virtual Switch (vDS)

Bare Metal (Linux Server Cloud)

Bare-Metal Operating Systems

- Bare metal hosts running
 - OEL 6.9 (with Avi Vantage 17.2.8), 7.2, 7.3, 7.4 (with Avi Vantage 17.2.5), 7.5 (with Avi Vantage 17.2.12), and 7.6 (with Avi Vantage 17.2.15)
 - RHEL 7.2, 7.3, 7.4 (with Avi Vantage 17.2.3), 7.5 (with Avi Vantage 17.2.12), and 7.6 (with Avi Vantage 17.2.15)
 - CentOS 7.2, 7.3, (with Avi Vantage 17.2.3) CentOS 7.4, 7.5 (with Avi Vantage 17.2.12), and 7.6 (with Avi Vantage 17.2.15)
 - Ubuntu 16.04
- Bare metal hosts running these kernels:

NOTE: Linux kernel versions are not in perfectly ascending numerical order.		Avi Vantage 17.2.x Releases																
Supported Linux Kernel Versions	17.2.1	17.2.2	17.2.3	17.2.4	17.2.5	17.2.6	17.2.7	17.2.8	17.2.9	17.2.10	17.2.11	17.2.12	17.2.13	17.2.14	17.2.15	17.2.16	17.2.17	
3.10.0-514.16.1.el7.x86_64	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
3.10.0-514.el7.x86_64	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
3.10.0-514	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
3.10.0	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
3.8.13-118.10.2.el7uek.x86_64	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
3.8.13-16.2.1.el6uek.x86_64	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
3.8.13-98.7.1.el7uek.x86_64	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
3.8.13	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
4.1.12	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
4.4.0-21-generic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
4.4.0-59-generic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
4.4.0-62-generic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
4.4.0-66-generic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
4.4.0-70-generic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
4.4.0-72-generic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
4.4.0	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
3.10.0-693			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
4.1.12-94					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
4.4.0-112-generic						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
4.4.0-116-generic								✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
4.1.12-112.16.4.el7uek.x86_64								✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
4.1.12-94.5.9.el6uek.x86_64								✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
3.10.0-862												✓	✓	✓	✓	✓	✓	
4.15.0-1017-gcp													✓	✓	✓	✓	✓	
3.10.0-862.11.6.el7.x86_64														✓	✓	✓	✓	
3.10.0-862.2.3.el7.x86_64														✓	✓	✓	✓	
3.10.0-862.3.2.el7.x86_64														✓	✓	✓	✓	
3.10.0-862.3.3.el7.x86_64														✓	✓	✓	✓	
3.10.0-862.6.3.el7.x86_64														✓	✓	✓	✓	
3.10.0-862.9.1.el7.x86_64														✓	✓	✓	✓	
3.10.0-862.el7.x86_64														✓	✓	✓	✓	

Bare-Metal NICs

- For non-DPDK mode, Avi supports any server NIC.
- For DPDK mode (recommended), Avi Networks has qualified:
 - Intel NICs
 - 82599, X520, X540, X550, X552, X710, and XL710 ? all 17.2.x releases
 - XXV710 ? starting with 17.2.15
 - Mellanox NICs
 - ConnectX-4 25G and ConnectX-4 40G ? starting with 17.2.14
 - MCX4121A-ACAT ConnectX-4 Lx EN 25G NICs ? starting with 17.2.14
 - ConnectX-5 (MT27800 Family) ? starting with 17.2.15

Orchestrator Support

- Kubernetes v1.3 to v1.15
- Marathon 0.13.x, 0.14.x, 0.15.0, 0.15.1, 0.15.2, and 0.15.3
- Mesos 0.23.0, 0.23.1, 0.24.0, 0.24.1, 0.25.0, 0.26.0, 0.27.0, and 0.27.1
- Mesosphere DC/OS 1.6, 1.7, 1.8, 1.9, 1.10
- OpenShift v3
- OpenStack Version Support:
 - Havana, Icehouse, Juno, Kilo, Liberty, Mitaka, Newton, Ocata, Pike
 - Note: Avi Vantage does not support Neutron DVR mode.
 - LBaaS v2. Avi LBaaS driver (required only for OpenStack-managed LBaaS mode) must match the Avi Controller version, not less than 16.3
 - Keystone v2 and v3 (Avi Vantage 16.3 or higher required for Keystone v3)
 - Support for Keystone v3 in Avi Heat resources.
 - Avi SSL extension for OpenStack Horizon required only for OpenStack-managed LBaaS mode, adds tabs to Horizon for accessing Avi Controller (16.3 or higher)

- Neutron extension for allowed-address-pair
 - Community Distribution: Supported from Havana onwards
 - VSP Version 3.1 or higher
 - Contrail: Version 3.0.2 or higher
 - OpenContrail
- VMware vCenter 5.5, 6.0, 6.5, 6.7, vRO and vRA

SDN Solutions

- Cisco APIC Version 1.03(f) and later
- Juniper Contrail v3.0.2 and later (only for OpenStack)
- Nuage v3.1 and later (only for OpenStack)
- VMware NSX 6.2.4+

IPAM / DNS

- Avi DNS
- AWS Route 53
- Infoblox
- Microsoft Azure

Avi Vantage may be deployed in various environments with write (recommended), read, or no access integration with the virtualization orchestrator. The primary difference among these modes is the level of automation performed by Avi Vantage and the cloud orchestrator compared to the level of manual configuration required of administrators. There are no differences in hardware or system requirements among these modes. Servers being load balanced by Avi Vantage may exist within the same virtualization environment or be bare-metal, non-virtualized servers.

Avi supports the ability to manage multiple cloud environments from a single Controller cluster.