Recommended Computing Resources

This topic provides the hardware recommendations for the Cisco SD-WAN Validator server, vEdge Cloud router server, Cisco SD-WAN Manager server, and Cisco SD-WAN Controller server. The resources required to run the Cisco SD-WAN Validator, Cisco SD-WAN Controller, and Cisco SD-WAN Manager server on the VMware vSphere ESXi or the Kernel-based Virtual Machine (KVM) server vary depending on the number of devices you deploy in the overlay network.

Note Cisco SD-WAN Manager server, Cisco SD-WAN Validator, and Cisco SD-WAN Controller have been tested on Intel server platforms.

Points to Consider

Note

- We perform scale testing with server configuration detailed in this document. You must deploy servers that fulfil the technical parameters requirements which are specified in this document. You can choose to use servers from third party vendors, which are technically equivalent to the specifications detailed in this document. However, third party servers are not qualified by Cisco. In the event of any issue, Cisco TAC can triage but Cisco will not take liability for issues arising from hardware belonging to a third party vendor.
- The performance factor varies based on your network design and configuration. Consult your Cisco Accounts team for any design-related questions.
- Cisco Catalyst SD-WAN supports the following Elastic Block Store (EBS) volume types:
  - General Purpose SSD (gp2)
  - EBS volume type (gp3) by Amazon Web Services (AWS)
  - The IOPS (Input/Output Operations Per Second) for EBS volume types is generally dictated by the cloud provider. We recommend you select the appropriate EBS volume type that aligns with the performance requirements of your Cisco Catalyst SD-WAN deployment.

Cisco Catalyst SD-WAN Manager Single Tenant

- The system that you select to run Cisco SD-WAN Manager must satisfy the storage throughput requirement to match the above performance results.
- We recommend that you use Raid 0 for best performance, since application redundancy is built into the solution
- An oversubscription of 2:1 on vCPU to pCPU (physical CPU) can be supported on Cisco SD-WAN Manager when the overlay has fewer than 250 devices.
- An oversubscription of 2:1 on vCPU to pCPU (physical CPU) is supported for Cisco SD-WAN Controller and Cisco SD-WAN Validator in all of the above deployments.
- We recommend that you use a 10-Gbps interface for production.
- For 3-node and 6-node clusters, we recommend that you use three network interfaces —one for tunnel, one for management, and one for the Cisco SD-WAN Manager cluster communication.
- Co-hosting of Cisco SD-WAN Manager instances on single server is not supported. However, Cisco SD-WAN Manager can be co-hosted with Cisco SD-WAN Controller and Cisco SD-WAN Validator instances on same server.
- If SAIE is enabled:
  - Beyond 50 GB per day up to 100 GB per day, the configuration needs a 3-node cluster. For more that 100 GB per day, configure a 6-node cluster (all sizes are per-day sizes).
- If SAIE is disabled
  - Depending on network sensitivity and deployment type, we recommend using a cluster of three Cisco SD-WAN Manager instances if you want to configure intra-cluster high availability.

Note

- The use of encrypted hard drives is not supported for on-premises deployments of Cisco Catalyst SD-WAN due to the potential impact on software performance.
- Starting from Cisco vManage Release 20.9.1, **DPI** and **Aggregated DPI** are called as **SAIE** and **Aggregated SAIE** respectively.
- Starting from Cisco vManage Release 20.6.1, you can disable Aggregated DPI statistics collection, in Cisco SD-WAN Manager select **Administration** > **Settings** > **Statistics Setting** . Click **Edit**. Scroll to find Aggregated DPI and choose **Disable All**.
- To disable DPI statistics collection, in Cisco SD-WAN Manager select **Administration** > **Settings** > **Statistics Setting** . Click **Edit**. Scroll to find DPI and choose **Disable All**.

Cisco Catalyst SD-WAN Validator Single Tenant

- The OS volume must be on a solid-state drive (SSD).

- The maximum number of DTLS session supported is 4000 per Cisco SD-WAN Validator.

Cisco Catalyst SD-WAN Controller Single Tenant

- The OS volume must be on a solid-state drive (SSD).

For information about latency requirements, see Cisco SD-WAN Manager Cluster Creation and Troubleshooting White Paper.