Cisco ACI™ Virtual Pod

Cisco ACI™ Virtual Pod (vPod) is a software solution that extends the Cisco ACI policy model, security, and visibility into virtual workloads at remote locations without the need to deploy physical fabric switches. In this model, the physical spine and leaf functions are virtualized as vSpine and vLeaf virtual machines with the forwarding plane and policy enforcement performed by the Cisco ACI Virtual Edge running on each workload server.

With the addition of the Cisco ACI vPod solution to the Cisco ACI portfolio, customers can now extend their ACI networks to cloud providers that offer bare-metal provisioning, any remote/satellite facilities and colocation data centers. Additionally customers can now extend their ACI fabric into existing legacy networks or in any locations where they cannot deploy ACI hardware.

Cisco ACI vPod is feature-rich to meet extension of ACI policies to public clouds and remote sites. Table 1 describes some of the highlights of vPod.

Table 1. Cisco ACI Virtual Pod features

Feature	Description
Cisco ACI Policy-model extension	• Tenant • Endpoint groups • Bridge domains • VPN Routing and Forwarding (VRF)
Workload migration	Workloads can be migrated between • Main data center and remote vPods • vPod to vPod
Virtualization integration	• VMware ESXi and vSphere • Automated creation of port groups for VLAN and Virtual Extensible LAN (VXLAN) mapped to Endpoint Groups (EPGs) • VMware vMotion movement between fabric-connected hosts
Policy enforcement	Policy and contract enforcement using Cisco ACI Virtual Edge
Secure East-West traffic	Provides segmentation and distributed firewall functionality to secure east-west traffic
Security	• Permit, deny, and taboo (blocked list) lists and an application-centric allowed list policy model for securing virtual applications • EPG policy-filtering (source EPG, destination EPG, and Layer 4 ports) in the physical fabric • Secure multitenancy at scale built into the Cisco ACI fabric • Built-in distributed Layer-4 security integrated into the Cisco ACI fabric to secure east-west traffic • Security policies automated to move as workloads move in the data center
Centralized management	Use of Cisco APIC to configure, manage, and troubleshoot the Cisco ACI fabric
Upgrades	Upgrades of vPod components are performed from the APIC controller
Fault isolation	Any fault discovered in one pod (physical or virtual) is isolated from other pods

Scale

Number of vPods	6 vPods
Number of vSpines/vLeafs per vPod	4 (2 vSpines and 2 vLeafs running in high-availability mode)
Number of hosts per vPod	32
Number of VMs per host	32
Number of BDs/EPGs/VRFs extended across all vPods	1500/1500/500
Number of endpoints across all vPods	1500

Compatibility and system requirements

The Cisco ACI Virtual Pod (vPod) is supported with VMware ESXi Hypervisor release 6.0 and later.

vPod components are compatible with any server hardware listed in the VMware Hardware Compatibility List.

Each vSpine and vLeaf virtual machine requires:

- 2 virtual CPUs
- 8 GB of RAM
- 80-GB hard drive

Each Cisco ACI Virtual Edge virtual machine requires:

- 2 virtual CPUs
- 4 GB of RAM
- 8-GB hard drive

Ordering information

The following table lists Cisco ACI Virtual Pod ordering details. The Management Cluster is zero cost and ordered always as a perpetual license.

Management Cluster for vPod

SKU	Description
ACI-VPOD-MGMT=	ACI vPod virtual pod redundant management cluster software (vSpine/vLeaf + vSpine/vLeaf)

ACI Virtual Edge for vPod is licensed per server. This can be ordered as a perpetual license, or as a subscription license on a 1-year, 3-year, or 5-year term.

ACI Virtual Edge perpetual license for vPod

SKU	Description
ACI-VPOD-AVE=	ACI vPod virtual pod virtual edge software – per server

ACI Virtual Edge subscription license for vPod

There will be 1-, 3-, and 5-year options. Details will be added in the future when the subscription licenses are available.

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