Cisco ACI Virtual Pod Release Notes, Release 4.2(4i)

This document describes the features, bugs, and limitations for the Cisco Application Centric Infrastructure (ACI) Virtual Pod (vPod) software.

Note: Use this document in combination with the Cisco Application Policy Infrastructure Controller (APIC) Release Notes, which you can view at the following location:

http://www.cisco.com/c/en/us/support/cloud-systems-management/application-policy-infrastructure-controller-apic/tsd-products-support-series-home.html

Release notes are sometimes updated with new information about restrictions and bugs. See this website for the most recent version of this document.

Table 1 shows the online change history for this document.

Table 1: Online History Change

Date	Description
2020-04-23	Cisco ACI vPod Release 4.2(4i) became available.

Contents

This document includes the following sections:

Contents

About Cisco ACI vPod

Cisco Application Centric Infrastructure (ACI) Virtual Pod (vPod) is a software-only solution that enables you to virtually extend the Cisco ACI fabric into bare-metal cloud environments and other remote locations.

You can deploy Cisco ACI vPod wherever you have at least two servers on which you can run the ESXi hypervisor. It allows you to use Cisco ACI Virtual Edge where you do not have a physical leaf.

Cisco ACI vPod and its components–a pair of virtual spines (vSpines), a pair of virtual leafs (vLeafs), and Cisco ACI Virtual Edge–run on the ESXi hypervisor. The vSpines and vLeafs handle control plane management, and the Cisco ACI Virtual Edge handles packet forwarding, policy enforcement, and all data plane management.

Cisco ACI vPod manages a data center defined by the VMware vCenter Server. You can have up to 32 instances of Cisco ACI Virtual Edge in each Cisco ACI vPod in the remote location. You use Cisco APIC to manage Cisco ACI vPod nodes and enforce Cisco ACI policy in the virtual data center.

Cisco ACI vPod communicates with a physical, on-premises pod or multipod over an interpod network. You configure the physical pod or multipod, the interpod connection, and Cisco ACI vPod in Cisco APIC. You then use the Cisco ACI vCenter plug-in, a Python script, or PowerCLI to deploy Cisco ACI vPod component virtual machines (VMs).

Cisco ACI vPod is compatible with any server hardware listed in the *VMware Hardware Compatibility Guide* on the VMware website.

Note: When you install or configure Cisco ACI vPod, you may see Cisco ACI vPod options labeled vPod.

Cisco ACI vPod Software Compatibility

VMware vSphere Compatibility

Cisco ACI Virtual Pod Release 4.2(4i) is supported for Cisco APIC with releases 6.0, 6.5, and 6.7 of VMware vSphere.

Cisco ACI vPod and Cisco APIC Compatibility

Cisco ACI vPod Release 4.2(4i) is compatible with Cisco APIC 4.2(4i) and later versions.

See the Cisco APIC and ACI Virtual Edge Support Matrix for details.

Virtualization Compatibility Information

The Cisco ACI Virtualization Compatibility Matrix provides interoperability information for Cisco ACI components and configurations that have been tested and validated by Cisco, by Cisco partners, or both.

Compatibility and Upgrade/Downgrade Considerations

Support Matrix

The Cisco APIC and ACI Virtual Edge Support Matrix is an interactive tool that enables you to choose an APIC version and view the compatible Cisco ACI vPod, Cisco ACI Virtual Edge, vSphere, and compatible Cisco APIC versions.

New and Changed Information

Enabling Outside Communication for Cisco ACI vPod

You can improve the efficiency of a network that is extended to a remote site by configuring a Layer 3 outside network connection (L3Out) through Cisco ACI Virtual Pod (vPod) in the remote site. Previously, to connect to outside networks, Cisco ACI vPod had to use an L3Out on a physical leaf in the on-premises data center. However, you can now configure L3Out directly through a Cisco Cloud Services Router (CSR) and the Cisco ACI GOLF feature.

Usage Guidelines

Cisco ACI vPod Installation

We recommend that you install Cisco ACI vPod management components—vSpine and vLeaf pairs—on two different hosts. Deploy each pair on two separate hosts with one vSpine and one vLeaf on each host.

Each instance of Cisco ACI vPod supports two vSpines and two vLeafs—one vSpine and one vLeaf on each host.

Cisco ACI vPod management should be in a separate management cluster from any instance of Cisco ACI Virtual Edge.

Do Not Reload or Shut Down Both vLeafs or vSpines

We recommended that you do not reload or shut down both the vLeafs or vSpines at same time to avoid issues with endpoint attachment and traffic.

Limitations and Restrictions

Scalability

For Cisco ACI Virtual Edge scalability information, see the *Verified Scalability Guide for Cisco ACI* for the relevant Cisco APIC release.

Hypervisor Availability

Cisco ACI vPod is available only on the VMware ESXi hypervisor.

Cisco ACI Multi-Site Support

Cisco ACI vPod is not supported for Cisco ACI Multi-Site environments.

Cisco ACI vPod Deployment

- The server where you install Cisco ACI Virtual Edge must have an Intel Nehalem CPU or later. You also must set the cluster Enhanced vMotion Compatibility (EVC) to a Nehalem CPU or later. See the knowledge base article Enhanced vMotion Compatibility (EVC) processor support (1003212) on the VMware web site.

- Only one Cisco ACI Virtual Edge per host is supported.
- Removing Cisco ACI Virtual Edge or the ESXi host from the VMware vCenter and then adding it back in is not supported. If you do that, Cisco ACI Virtual Edge loses password, infra VLAN, IP address, and other key configurations. You should instead delete the original Cisco ACI Virtual Edge and deploy a new one.
- After you deploy Cisco ACI Virtual Edge, if the Cisco ACI Virtual Edge VM is moved across VMware vCenter, all the configurations that you made during deployment are lost.
- We recommend that you install Cisco ACI vPod vSpines and vLeafs on a dedicated VMware cluster.

Management Interface IP Address

If you configure a management interface IP address, the Cisco ACI vPod vSpines and vLeafs must have IPv4 addresses.

VMware vSphere vMotion Support

Cisco ACI vPod vSpines and vLeafs are not supported for VMware vSphere vMotion.

Note: After you migrate VMs using cross-data center VMware vMotion in the same VMware vCenter, you may find a stale VM entry under the source DVS. This stale entry can cause problems, such as host removal failure. The workaround for this problem is to enable "Start monitoring port state" on the vNetwork DVS. See the KB topic "Refreshing port state information for a vNetwork Distributed Virtual Switch" on the VMware Web site for instructions.

Remote Leaf

Remote leaf is not supported for Cisco ACI vPod in this release.

VLAN Pool Deletion

The deletion of VLAN pools that are associated to a VMM domain is not supported. You can add a new range of VLANs to the VLAN pool whenever it is required.

Features Not Supported for Cisco ACI Virtual Edge when It Is Part of Cisco ACI vPod

Cisco ACI Virtual Edge is not supported for the following features when it is part of Cisco ACI vPod:

- VMware vSphere Proactive HA
- SPAN and ERSPAN
- Subnets configured under EPGs

WAN Traffic Stops when Both vLeafs Are Powered Off

When both vLeafs are powered off, continuous WAN traffic stops. There are no WAN routes on vSpine Council of Oracles Protocol (COOP), and learned WAN endpoints on Cisco ACI Virtual Edge are removed.

Bridge Domain or VRF Deletion Not Supported with EPG Association

If you want to delete the bridge domain or VRF or change the association, first ensure that there are no EPGs associated with the bridge domain or that any associated EPGs do not contain any endpoints. Otherwise, you may encounter connectivity problems.

Bugs

Using the Bug Search Tool

Use the Bug Search tool to search for a specific bug or to search for all bugs in a release.

1. Go to http://tools.cisco.com/bugsearch.
2. At the Log In screen, enter your registered Cisco.com username and password; then, click Log In. The Bug Search page opens.
   Note: If you do not have a Cisco.com username and password, you can register for them at http://tools.cisco.com/RPF/register/register.do.
3. To search for a specific bug, enter the bug ID in the Search For field and press Return.
4. To search for bugs in the current release:
   a. In the Search For field, enter a problem, feature, or a product name and press Return. (Leave the other fields empty.)
   b. When the search results are displayed, use the filter tools to find the types of bugs you are looking for. You can search for bugs by modified date, status, severity, and so forth.
5. To export the results to a spreadsheet, click the Export Results to Excel link.

Open Bugs

Table 2 lists the open bugs for Cisco ACI vPod for the 4.2(4i) release:

Table 2: Open bugs

Bug ID	Headline
CSCvq37865	Physical spine drops redirected traffic when L4-L7 device is on a physical pod and provider and consumer endpoints are in a vPod
CSCvq76451	Keep microsegmented and base EPGs in same bridge domain for Cisco ACI Virtual Edge when it is part of Cisco ACI vPod
CSCvk75907	Traffic loss for 40 seconds on flood traffic upon designated Cisco ACI Virtual Edge failover.

Known Behaviors

Cisco ACI vPod vSpines Do Not Support OpFlex

Cisco ACI vPod virtual spines (vSpines) currently do not support the use of OpFlex to communicate certain control plane configurations for Cisco ACI vPod GOLF to work. So certain trigger operations result in the removal of WAN routes on vSpines from the GOLF router. Such operations include deletion or addition of a Layer 3 outside network connection (L3Out) EPG and the deletion or addition of a VRF.

A soft BGP reset on the GOLF router (CSR, ASR) is required for routes to be advertised again from GOLF side.

VMware vMotion can Result in Traffic Loss when Using Cisco ASAv

Using VMware vMotion can result in up to 2 minutes of traffic loss after failover when using Cisco Adaptive Security Virtual Appliance (ASAv). The issue can occur when you use ASAv as a service device in high availability (HA) mode with policy-based redirect (PBR) and the active and standby devices switch roles because of a failover.

You can avoid this problem by not using VMware vMotion to migrate the standby device when the roles are switched. If the device needs to be migrated, force a failover so that the primary device becomes active, and then initiate VMware vMotion.

Fault Tolerance Failover Leads to loss of traffic

When failover occurs, the VM is moved to a new Cisco ACI Virtual Edge when it is part of Cisco ACI vPod. Other data VMS try to communicate with the original Cisco ACI Virtual Edge. Traffic recovers when the learned entry times out after 5 minutes.

Documentation

Related Documentation for Cisco APIC

Cisco APIC documentation is available at the following URL:

http://www.cisco.com/c/en/us/support/cloud-systems-management/application-policy-infrastructure-controller-apic/tsd-products-support-series-home.html

Cisco APIC documentation includes the *Cisco ACI Virtualization Guide*, which provides detailed information about Distributed Firewall with Cisco ACI.

Documentation Feedback

To provide technical feedback on this document or report an error or omission, please send your comments to avs-docfeedback@cisco.com. We appreciate your feedback.

Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, using the Cisco Bug Search Tool (BST), submitting a service request, and gathering additional information, see *What's New in Cisco Product Documentation* at: http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html.

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