



Release Notes for Cisco Virtual Application Container Services, Release 5.1STV1.0

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This document describes the features, limitations, and caveats for the Cisco Virtual Application Container Services (Cisco VACS) software solution. Use this document in combination with the documents listed in the [Related Documentation](#).

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Introduction

Cisco Virtual Application Container Services (Cisco VACS) is a software solution that automates the coordinated licensing, installation, and deployment of multiple virtual services in your datacenter to enable an easy and efficient setup of virtualized applications. Cisco VACS provides a fully customizable extended application container abstraction to simplify deploying and provisioning the virtual services.

Cisco VACS allows you to define extended application container templates and to instantiate them through automated setup and provisioning of the underlying virtual components. Cisco UCS Director provides the management interface to deploy, provision, and monitor the Cisco VACS solution.

Cisco VACS leverages the features in the following virtual components to build a secure multi-tenant cloud and create application container templates:

- Cisco Nexus 1000V
- Cisco Prime Network Services Controller (PNSC)



- Cisco Cloud Services Router (CSR) 1000V
- Cisco Virtual Security Gateway (VSG)

Cisco VACS provides you with a choice of ready-to-use application container templates that define the rules for deploying a collection of virtual machines (VMs) within a private network secured by a firewall. An application container is a set of virtual services such as virtual switches, routers, firewalls, and other network devices configured in a consistent manner to deploy different workloads. When you create and instantiate an application container template, Cisco VACS deploys VMs, and configures networks, the firewall, and virtual switches, and enables quick provisioning of network and security at the virtual layer.

Key features and benefits of Cisco VACS include:

- Single workflow automation to logically isolate virtual application workloads at the virtual layer.
- VMware vSphere support for interoperability across private cloud environments.
- Consistent provisioning and orchestration experience across physical and virtual assets through Cisco UCS Director.

Limitations and Restrictions

This section describes the limitations and restrictions of Cisco VACS.

General VACS limitations

- Cisco VACS supports the following:
 - ESX versions 5.0 and later
 - vCenter versions 5.1 and later
- Clusters are not supported. You must not manage the Hosts in Clusters on the VC, as they cannot be used to install Cisco Nexus 1000V and add hosts.

As a related limitation, the compute and storage policies cannot have clusters. Hence, the container deployments will not be able to use clusters.

- The default POD must be used in UCS-D for Virtual Account and Pools definition. Cisco VACS does not support new PODs.
- The scope of Cisco VACS is limited to one Virtual Account, one PNSC, and one Cisco Nexus1000V. One virtual account cannot have more than one PNSC mapped to it.
- All the VTEPs added per host, using the Add-Host operation will be configured to be in the same subnet.
- During the add host operation, do not migrate the VSM VMs to VEM

License limitations

- Each Cisco Nexus 1000V will be licensed with 1024 licenses.
- Maximum five containers can be deployed per Cisco VACS license.
- When upgrading the license from Cisco VACS EVAL to Cisco VACS Production licenses, note the following:
 - After installing the UCS Director Production licenses, the Cisco VACS EVAL licenses are invalid.
 - After installing the UCS Director Production licenses, only the Cisco VACS Production licenses are accepted.

- After installing the Cisco VACS Production licenses, the existing Cisco Nexus 1000V which was installed with the EVAL license will not get a permanent Cisco Nexus 1000V license. After installing the Cisco VACS Production licenses, you must deploy a new Cisco Nexus 1000V switch so that it gets the permanent licenses.
- CSR 1000V deployed during the Cisco VACS EVAL licenses will come up with default licenses and a maximum throughput of 50 Mbps.
- After installing the Cisco VACS Production licenses, the existing CSR 1000V of deployed containers will not be licensed with permanent licenses automatically. If required, you must manually apply the licenses for CSR 1000V so that it gets the permanent licenses.
- After installing Cisco VACS Production license and keying the CSR Token ID, CSR 1000V which is a part of the new container deployment, will be licensed with permanent licenses with a throughput of maximum 1 Gbps.

Configuration limitations

- IP Pools Limitations:
 - The IP pools used for Management and Uplink Pools should have mandatory VLAN and Gateway fields.
 - The IP Pools used for the port-group based VM networks in Custom Containers should not have the Gateway field.
 - The broadcast and network IP addresses should not be used as the IP addresses in the pool.
- IP subnet Pool limitations:
 - The IP addresses in the subnet cannot be less than 4 and more than 1024 addresses.
- IP address limitations, when IP needs to be entered for Install actions, IP Pools and ERSPAN:
 - Do not use broadcast and network, Experimental/Use in research IP addresses.
- Cisco VACS does not automatically add the VLANs (used for the Management, Uplink, and the Workload VMs of the container) that are used by the container to the Cisco Nexus 1000V Ethernet port profiles when the container is deployed.

You must ensure that you add the correct VLAN IDs to the Ethernet Port-profiles during the Add-Host operation. If you do not add the right VLAN IDs, you must add the VLAN IDs manually to the Ethernet port-profiles mapped to the VEMs, that are being used for container deployment.
- Cisco VACS does not configure the upstream switches and routers in the physical infrastructure. Cisco VACS only configures the virtual infrastructure for PNSC, Nexus 1000V, and CSR.
- You must configure the upstream devices such that the path MTU between the VEMs should have MTU ≥ 1600 .

Container and container related limitations

- The container add on operations such as Add, Delete VMs, configure SNAT and ERSPAN, and power off and power on cannot be executed in parallel. You must wait for the current task to be completed before you proceed with the next task.
- You must not cancel the Service Request of any of the Container Add-on operations, such as Add, Delete VMs, configure SNAT and ERSPAN, and power off and power on.
- Resubmission of the failed Service Requests of the container and the container Add-on operations is blocked.

- Rollback of Container Add-on operations is not supported. You must use the UI specific to the add on operation to the rollback that Add-on operation The user must use the UI specific to that Add-on operation to rollback.

Scale limitations:

With appropriate infrastructure requirements related to vCPU/Memory/HD needed for each container:

- Number of Containers - 50
- Number of VMs per container - 20
- Number of VMs per host - 50
- Number of containers that can be deployed in parallel - 4

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. This web-based tool provides you with access to the Cisco bug tracking system, which maintains information about bugs and vulnerabilities in this product and other Cisco hardware and software products.

For more information about the Cisco Bug Search Tool, see the [Bug Search Tool Help & FAQ](#).

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- Step 1** Go to <https://tools.cisco.com/bugsearch/>.
- Step 2** In the Log In screen, enter your registered Cisco.com username and password, and then click **Log In**. The Bug Search page opens.
-  **Note** You must have a Cisco.com account to log in and access the Cisco Bug Search Tool. If you do not have one, you can register for it at <http://tools.cisco.com/RPF/register/register.do>.
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- Step 3** To search for a specific bug, enter the bug ID in the Search For field and press **Return**.
- Step 4** To search for bugs in the current release:
- In the Search For field, enter a problem, feature, or a product name and press **Enter**. (Leave the other fields empty.)
 - 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 status, severity, modified date, and so forth.



Tip To export the results to a spreadsheet, click the **Export Results to Excel** link.

Caveats

The following are descriptions of the open caveats in Cisco VACS. The bug ID links you to the [Cisco Bug Search Tool](#).

Table 1 *Open Caveats*

Bug ID	Headline
CSCuo18467	If the policy/template name includes an invalid character, the container deployment fails.
CSCup67995	Randomly generated VSG admin password should be the same for the primary and secondary VSG.
CSCuq41045	Although the delete VM workflow has been successfully completed, the VM exists.
CSCuq51124	When a container status is power off, the ERSPAN and SNAT configurations are now allowed.
CSCur06478	If there is a failure when the container service request is rolled back or a container is deleted, the resubmission of the rollback service request fails.
CSCur16949	In Add-Host operation, port-groups created during the container deployments are displayed. They should not be used for VMs migrated during the Add-Host operation.
CSCur23286	When there is more than one VM network and if the VM network definition order in the template is such that port-group based networks are not the last, and they are followed by VLAN based networks, the Nexus1000V port-profiles and the CSR's VLAN interfaces are not configured correctly
CSCur28606	VLANs created for the container are not added automatically to the uplink port-profile. It should be done manually, if not done earlier during the Add-Host operation.
CSCur34596	The validation text for the password and shared secret should be modified on the GUI.
CSCur34625	Broadcast address validation should be done on install PNSC.
CSCuo95017	When the workload VM includes a logical interface such as "virb0" in Linux, the ERSPAN feature does not work.

Table 1 **Open Caveats**

Bug ID	Headline
CSCuq03552	When you delete a container, the CSR 1000V is also deleted. However, the licenses that were held by the deleted CSR 1000V are not removed.
CSCur38175	Although the licenses are available, the deployment of the last container fails.

Related Documentation

This section lists the documents used with Cisco VACS and available on Cisco.com at the following URL:

[Cisco Virtual Application Container Services documentation](#)

General Information

Cisco Virtual Application Container Services Release Notes

Installation

Cisco Virtual Application Container Services Installation Guide

Configuration

Cisco Virtual Application Container Services Configuration Guide

User Information

Cisco Virtual Application Container Services Self-Service Portal User Guide

Cisco Nexus 1000V Documentation

[Cisco Nexus 1000V for VMware vSphere Documentation](#)

Cisco Prime Network Services Controller Documentation

[Cisco Prime Network Services Controller](#)

Cisco Cloud Services Router 1000V Documentation

[Cloud Services Router 1000V Documentation](#)

Cisco Virtual Security Gateway Documentation

[Cisco Virtual Security Gateway Documentation](#)

Cisco UCS Director Documentation

[UCS Director Documentation](#)

Documentation Feedback

To provide technical feedback on this document or report an error or omission, please send your comments to:

- nexus1k-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/c/en/us/td/docs/general/whatsnew/whatsnew.html>.

Subscribe to *What's New in Cisco Product Documentation*, which lists all new and revised Cisco technical documentation, as an RSS feed and deliver content directly to your desktop using a reader application. The RSS feeds are a free service.

This document is to be used in conjunction with the documents listed in the “[Related Documentation](#)” section.

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