

# CLOUD PROVIDER POD RELEASE NOTES

VMware Cloud Provider Pod 1.0.1 | 20 November 2018  
Check for additions and updates to these release notes

## Release Notes Version 1.0.1

This Release Notes document includes release details about VMware Cloud Provider Pod 1.0.1.

## What's in the Release Notes

The release notes cover the following topics:

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## What's New in This Release

Cloud Provider Pod 1.0.1 is the first patch release of Cloud Provider Pod 1.0 that enables service providers to build a public Cloud IaaS offering using VMware products for a scalable, flexible best-practice configuration.

Cloud Provider Pod consists of 3 components:

- Cloud Provider Pod Designer (Cloud)
- Cloud Provider Pod Document Generator (Cloud)
- Cloud Provider Pod Deployer (On-Premises)

Version changes:

- VMware vSphere ESXi includes security patch (VMSA-2018-0027)
- VMware NSX-V updated to 6.4.3
- VMware vCloud Director updated to 9.1.0.2
- VMware vRealize Network Insight updated to 3.9

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Newly added:

- VMware vRealize Operations Manager – Cloud Pod Management Pack (<https://marketplace.vmware.com/vsx/solutions/vrealize-operations-manager-management-pack-for-vmware-cloud-provider-pod?ref=search>)

You can find further details about the architecture and components in the document package that is uniquely created based on the input that you provide in the Cloud Provider Pod Designer.

## System Requirements and Installation

### System Requirements and Installation - Deployer

The Cloud Provider Pod Deployer is installed locally as a virtual machine, so you must ensure that your system meets certain requirements.

The VMware Cloud Provider Pod - Initiator is provided as an ephemeral virtual appliance, which can be hosted on a physical VMware ESXi™ host (which is the preferred deployment method), VMware Workstation™, or VMware Fusion®. The virtual appliance has the following requirements:

- 64-bit CPU with Intel-VT or AMD-V feature set
- 4 vCPUs available for a virtual machine  
Provide more for a physical host.
- 8 GB of RAM available for a virtual machine  
Provide more for a physical host.
- Support to run a virtual machine hardware version 13 or later, VMware ESXi 5.5 and later, VMware Fusion 6.x and later, VMware Workstation Pro or Player 10.x and later
- 128 GB of disk space if deployed in thick mode.  
Thin Mode requires more than 64 GB.

### System Requirements and Installation – Management Pod

The minimum configuration requires a Management Cluster with 4 ESXi hosts and vSAN all-flash storage capacity. Alternatively, you can also use NFS or iSCSI.

The hosts must be on the VMware Hardware Compatibility List for ESXi 6.5 Update 2.

Each host must meet the following minimum requirements:

- 2 Sockets with 8 physical cores/16 logical cores and 2.0 GHz or more
- 192 GB RAM (128 GB RAM if deployed without any optional products)

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- 2 x 10+Gbit NICs or 4 x 10+Gbit NICs
  - The primary and secondary (as backup) NICs must be setup for PXE-boot. This must be setup with an access VLAN. Additional networks must be provided as trunk VLANs.
  - Record the MAC Address of the PXE boot device of each host before creating a configuration file.
- 20 TB storage capacity

If you plan to use vSAN, the primary disk 0/0/0 on each host must be a boot device (SATADOM, USB, LOCALDISK). No RAID configuration, just JBOD (according to the vSAN documentation).

## System Requirements and Installation – Resource Pod

The minimum configuration requires a minimum one Resource Cluster (for tenant compute workloads) with four hosts and ideally VSAN All-Flash storage capacity, alternative NFS or iSCSI is possible and reduce minimum required hosts to three. So actual size can differ based on demand. The automated setup allows for up to two resource clusters each up to 64 hosts. The host needs to be on the VMware Hardware Compatibility List for ESXi 6.5U2 (Build 8294253).

Each host needs fulfill the following technical minimum requirements:

- 2 sockets with 8 physical cores/16 logical cores and 2.0 GHz or above
- 64 GB RAM
- 2 x 10+Gbit NICs or 4 x 10+Gbit NICs
  - The primary and secondary (as backup) NIC needs to be setup for PXE boot. This needs to be setup with an Access VLAN. Additional networks need to be provided as trunk VLANs.
  - The MAC Address of each hosts PXE boot device needs to be recorded before a configuration file can be created.
- At least 4 TB of storage capacity

If you plan to use vSAN, the primary disk 0/0/0/ on each host must be a boot device (SATADOM, USB, or LOCALDISK). No RAID configuration, just JBOD (according to the vSAN documentation).

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## System Requirements and Installation – License and Generic Settings

You must have license keys for the following products before the configuration file can be created:

- ESXi 6.5
- vCenter Server 6.5
- vSAN 6.6 Enterprise, if selected
- NSX 6.4
- vCloud Director 9.x
- vRealize Log Insight 4.6
- vRealize Network Insight 3.9, if selected
- vRealize Operations Manager 7.0, if selected

Each VMware Cloud Provider Pod requires to be run inside its custom subdomain, for example pod1.demo.vmware.com. Host names are then created within that subdomain. For the initial installation we will host an internal DNS Server which can be replaced by a custom one.

You can find further information about the planning and preparation of the Cloud Provider Pod usage in the documents, that are created based on the input that you provide in the Cloud Provider Pod Designer. These documents are created by using the Cloud Provider Pod Document Generator and delivered by email.

## Product Versions Deployed with VMware Cloud Provider Pod

PRODUCT	VERSION	BUILD NUMBER
VMware ESXi	6.5 Update 2	10719125
VMware vCenter Server Appliance	6.5 Update 2	8307201
VMware vCloud Director	9.1.0.2	10585452
VMware vCloud Extender	1.1.0.1	8607589

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VMware vCloud Usage Meter	3.6.1 Hot Patch 1	8244445
VMware NSX for vSphere	VMware NSX Manager 6.4.3	9927516
VMware vRealize Log Insight	4.6.1	8597028
Content Pack for vCloud Director	Latest version as available within vRealize Log Insight	
Content Pack for NSX	Latest version as available within vRealize Log Insight	
VMware vRealize Network Insight	3.9.0	1536339775
VMware vRealize Operations Manager	7.0	10098133
VMware vRealize Operations Manager Tenant App for vCloud Director	2.0.0	10119879
VMware vRealize Orchestrator	7.4.0	8074344

## Compatibility

All solutions used within the Cloud Provider Pod are compatible based on the VMware Product Interoperability Matrices.

The hardware used for the Cloud Provider Pod deployment must be included in the VMware Hardware Compatibility List for ESXi 6.5 Update 2. Custom ISO images are supported but must be of the same version.

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The current version of Cloud Provider Pod supports vSAN, iSCSI, and NFS as persistent storage technologies.

For vSAN, all-flash devices are required. Hybrid mode is **NOT** supported. The usage of vSAN requires devices and components compatible with the Hardware Compatibility List for vSAN version 6.6.1.

Cloud Provider Pod 1.0.1 does **NOT** support Fibre Channel (FC) backed storage.

Cloud Provider Pod 1.0.1 requires the generation of a new `configData.cfg` (upload into Cloud Provider Pod Designer and regeneration of files is sufficient), and the usage of the newest package downloaded with the design documents.

## Resolved Issues

- **WF31 – Attach and Configure vCloud Director fails (with NFS or iSCSI)**

An issue with storage policies prevents WF 31 from completion.

This issue is resolved in this release. Cloud Provider Pod now creates a Storage Policy for NFS and iSCSI.

- **vCloud Extender Deployment might fail**

The automated deployment and configuration of vCloud Extender fails under certain circumstances, such as invalid password or specific network configurations.

This issue is resolved in this release.

- **NSX deployment might fail with filesystem issues**

In rare cases, the NSX Manager shows file system issues and causes the Cloud Provider Pod deployment failure.

This issue is resolved in this release with NSX 6.4.3.

- **Passwords are hardcoded**

Passwords for PostgreSQL database, vCloud Director keystore, and the Cassandra database are predefined and not auto replaced.

This issue is resolved in this release. The passwords are now also set during the initial deployment based on the provided data and configuration sheet.

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## Known Issues

- **NFS 4.1 requires non-SDN based routing**

In case that you use NFS 4.1, non-SDN based routing is required. In Cloud Provider Pod 1.0, the automatic deployment of non-SDN based routing is unavailable.

Workaround: Integrate datastores by using NFS 3 and select SDN-based routing in the Cloud Provider Pod Designer.

- **Deployment of the Cloud Provider Pod Initiator might fail if a vSAN datastore has been used as an underlying storage**

Deployment of the Cloud Provider Pod Initiator might fail if a vSAN datastore has been used as an underlying storage

Workaround: If the underlying storage for the Cloud Provider Pod Initiator appliance is vSAN, you must apply an advanced setting to all hosts that are part of the vSAN cluster before deployment. Connect to the ESXi shell and run the following command:

```
esxcli system settings advanced set -o /VSAN/FakeSCSIReservations -i 1
```

You can revert the setting when the initiator is removed from the infrastructure.

- **Deployment of servers configured with UEFI boot might fail**

In rare scenarios, the deployment of ESXi might fail if UEFI has been selected as the booting option.

Workaround: Use legacy boot for servers that do not properly install ESXi with the automated configuration by the Cloud Provider Pod Deployer.

- **vRealize Network Insight deployment**

In rare cases, after a successful Cloud Provider Pod deployment, vRealize Network Insight is not correctly set up.

Workaround: You must set up all vCenter Server instances and NSX Manager instances manually within vRealize Network Insight.

- **OVA deployments might fail (NSX, vRealize Operations, vRealize Log Insight, or vRealize Network Insight)**

- In rare cases, the deployment of OVA files might fail with file system or application issues. This issue is acknowledged, but so far not reproducible.

Workaround: Restart the deployment.

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- **vRealize Operations Manager requires manual interaction after a successful deployment**

After a successful Cloud Provider Pod deployment, you must manually follow the wizard during the first login to vRealize Operations Manager. Even though the wizard must be followed, all relevant configurations are in place. This has no functional impact.

Workaround: None.

- **vRealize Operations Manager Tenant App deployment**

After a successful Cloud Provider Pod deployment, you must manually deploy and setup the vRealize Operations Manager. Automatic deployment is not yet fully functional. This has no functional impact.

Workaround: None.

- **Certificates are not replaced**

Internal system certificates, such as the certificates for vCenter Server, ESXi, NSX, vRealize Operations Manager, vRealize Insight, and vRealize Log Insight are not replaced in this release. Only certificate replacement of the customer-facing vCloud Director certificate is supported.

Workaround: You can manually replace the certificates.

- **DNS server records are not replaced**

In Cloud Provider Pod 1.0.1, the temporary DNS pointing towards the Cloud Provider Pod Install virtual machine is not replaced with the configure DNS servers.

Workaround: You can manually change the DNS server records.

- **Core based routing**

Non-SDN (NSX)-based routing is not part of Cloud Provider Pod 1.0.

Workaround: Deploy NSX / SDN-based routing.



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- **VMware Validated Design-based design**

VMware Validated Design-based design options are not fully automated. Currently, only the custom Advanced Design is fully automated.

Workaround: Use the Advanced Designer.

- **Second availability zone**

Generated design documents and automated deployment do not work with Second availability zone configured.

Workaround: None.

- **4 NIC configuration**

Some diagrams in the generated documentation might not represent the 4 NIC configuration but show 2 NICs instead. The Cloud Provider Pod Deployer will still deploy a correct 4 NIC configuration.

Workaround: None.

- **No LACP/LAG support**

VMware Cloud Provider Pod 1.0.1 does not support LACP/LAG due to conflicts with PXE-boot and other configurations.

Workaround: Do not setup channel aggregation on the physical switches before deployment.

- **vSAN in Resource Pod – Default Policy used in vCloud Director**

VMware Cloud Provider Pod might use the Default Policy setup with vSAN in the provider virtual data center instead of using the Cloud Provider Pod created policy.

Workaround: You must manually reconfigure the provider virtual data center.



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