

CLOUD PROVIDER POD RELEASE NOTES

VMware Cloud Provider Pod 1.0 | 18 October 2018
Check for additions and updates to these release notes

Release Notes Version 1.0

This Release Notes document includes details about VMware Cloud Provider Pod 1.0.

What's in the Release Notes

The release notes cover the following topics:

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About VMware Cloud Provider Pod 1.0

Cloud Provider Pod 1.0 is the initial version of VMware Cloud Provider Pod™ which allows service providers to build a public Cloud IaaS offering by VMware for a scalable, flexible, best-practice configuration. For a detailed overview of Cloud Provider Pod, see <https://www.vmware.com/products/cloud-provider-pod.html>.

Cloud Provider Pod consists of two components:

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

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:

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- 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
- 75 GB of disk space if deployed in thick mode
Thin mode requires at about 40-50 GB.

System Requirements and Installation – Management Pod

The minimum configuration requires a Management Cluster with 4 ESXi hosts and recommended vSAN all-flash storage capacity. Alternatively, the usage of NFS or iSCSI is also possible.

The hosts must be on the VMware Hardware Compatibility List for <esxiVersion>. 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)
- 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 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, LOCALDISK). No RAID configuration, just JBOD (according to the vSAN documentation).

System Requirements and Installation – Resource Pod

The minimum configuration requires at least one Resource Cluster (for tenant compute workloads) with 4 ESXi hosts and ideally vSAN all-flash storage capacity. Alternatively, usage of NFS or iSCSI is also possible and reduces the minimum required ESXi hosts to 3. The actual size can differ based on demand. The automated setup allows for up to two resource clusters each up to 64 ESXi hosts. The hosts must be on the VMware Hardware Compatibility List for <esxiVersion>. Each ESXi host must meet the following minimum requirements:

- 2 Sockets with 8 Physical Cores/16 Logical Cores and 2.0 GHz or more
- 64 GB RAM
- 2 x 10+Gbit NICs or 4 x 10+Gbit NICs

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- 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.
- 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).

System Requirements and Installation – License and General Settings

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

- vSphere 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 3.8, 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 1.0

PRODUCT	VERSION	BUILD NUMBER
VMware ESXi	6.5 Update 2	8294253
VMware vCenter Server Appliance	6.5 Update 2	8307201
VMware vCloud Director	9.1.0.1	8825802
VMware vCloud Extender	1.1.0.1	8607589
VMware vCloud Usage Meter	3.6.1 Hot Patch 1	8244445
VMware NSX for vSphere	VMware NSX Manager 6.4.1	8599035
VMware vRealize Log Insight	4.6.1	8597028

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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	3.8.0	1528874
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 <esxiVersion>. Custom ISO images are supported but must be of the same version.

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 does **NOT** support Fibre Channel (FC) backed storage.

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

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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.

- **vCloud Extender deployment**

After a successful Cloud Provider Pod deployment, you must manually set up vCloud Extender. Automatic deployment is not yet fully functional. This has no functional impact.

Workaround: None.

- **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.

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- **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, 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.

- **Passwords are predefined**

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

Workaround: You can manually replace the passwords.

- **Core based routing**

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

Workaround: Deploy NSX / SDN-based routing.

- **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.

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- **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 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.



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