



# CLOUD PROVIDER PROGRAM

## Q4 CY2020

Product Usage Guide is effective for program product usage as of November 2, 2020. This Cloud Provider Program Product Usage Guide replaces all previous VCPP Product Usage Guides or vCloud Air Network Product Usage Guides. The information provided in this Product Usage Guide applies to all of the program products and bundles that are available in the VMware Cloud Provider Program (the “Products”) as listed below in the VMware Cloud Provider Program Pricing Model, and may be updated by VMware at any time. To have access to these Products, a Service Provider must have a valid rental agreement with a VMware Aggregator as of or after July 1, 2019 for the applicable reporting and purchase of VMware Cloud Provider Program.

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## What's New CY2020 Q4

VMware Tanzu Basic is a new product, which bundles together VMware vSphere with Kubernetes and VMware Tanzu Kubernetes Grid.

The following products have been added to the VMware Cloud Provider Program:

1. [VMware Tanzu Basic](#)
2. Blue Medora True Visibility Suite, including all available editions of the product, has been renamed as VMware vRealize True Visibility Suite.
  - a. [VMware vRealize True Visibility Suite](#)
  - b. [VMware vRealize True Visibility Suite Standard](#)
  - c. [VMware vRealize True Visibility Suite Advanced](#)
  - d. [VMware vRealize True Visibility Suite Enterprise](#)

The following products have been updated in the VMware Cloud Provider Program:

1. [vCloud Usage Meter](#)
2. [VMware Cloud Provider Program Pricing Model](#)
3. [VMware vRealize Operations](#)
  - a. [VMware vRealize Operations Standard](#)
  - b. [VMware vRealize Operations Advanced](#)
  - c. [VMware vRealize Operations Enterprise](#)
4. [VMware vRealize Automation](#)
  - a. [VMware vRealize Automation Advanced](#)
  - b. [VMware vRealize Automation Enterprise](#)
5. [VMware vRealize Network Insight](#)
  - a. [VMware vRealize Network Insight Advanced](#)
  - b. [VMware vRealize Network Insight Enterprise](#)
6. [VMware vRealize Business for Cloud Advanced](#)
7. [VMware NSX](#)
8. [VMware NSX Advanced Load Balancer \(Avi Networks Load Balancer\)](#)
9. [VMware HCX](#)
10. [VMware vSAN](#)
  - a. [VMware vSAN Standard + Enterprise Add-on](#)
  - b. [VMware vSAN Advanced + Enterprise Add-on](#)
11. [VMware Cloud Foundation \(Core Based Model\)](#)
12. [VMware App Volumes](#)
13. [VMware Desktop and Application Virtualization](#)
14. [VMware Horizon Advanced](#)
15. [VMware Horizon Enterprise](#)
16. [VMware Horizon Apps](#)
17. [VMware vCloud Director Object Storage Extension \(with Cloudian Hyperstore\)](#)

The following products have been placed on “Special Terms” in the VMware Cloud Provider Program:

1. Existing partners, as of May 1, 2019 may continue to use Current bundles. Current bundles are not available to new VCPP partner contracts signed after April 30, 2019. Current bundles will be discontinued after July 31, 2021.
2. Usage Meter 3.6.X will go End-of-Life on March 31, 2021. VMware recommends Partners to migrate to latest version - UM 4.3 by that date.
3. End of Availability (EOA) of vRealize Business for Cloud was on November 1, 2019. End of General Support (EOGS) will be on December 12, 2020. VMware recommends customers transitioning to vRealize Operation Chargeback for cloud cost metering and visibility for tenants.
4. End of Availability (EOA) and End of General Support (EOGS) of vCloud Availability 2.X was on October 19, 2019. VMware recommends upgrading to vCloud Availability 3.0.
5. VMware Integrated OpenStack (VIO) 6 will reach End of Availability (EOA) and End of Support (EOS) on September 3, 2021.
6. NSX for vSphere will reach End of Availability on January 16, 2022.
7. VMware Cloud Provider Pod reached End of Availability on September 30, 2020 and will reach End of Support on December 31, 2020. As of September 30, 2020, no updates or new releases of Cloud Provider Pod are available.
8. VMware Horizon DaaS bundle has been updated from version 7.0 to 8.0/9.0
9. VMware vRealize Hyperic reached End of Availability (EOA) on July 1, 2020 and is no longer available for purchase, however, it will continue to be supported through January 31, 2021 (End of General Support).
10. Blue Medora True Visibility Suite will be End of Availability (EOA) December 31st 2020, and will be replaced by vRealize True Visibility Suite. Starting January 1, 2021 partners need to report all SKUs under vRealize True Visibility Suite.

***You can find the most current information about VMware Cloud Provider Platform Products on VMware Cloud Solutions***

VMware Cloud Solutions is dedicated to VMware Cloud Provider Platform solutions, products, and the latest information available to cloud providers and aggregators, driving the success of public and hybrid clouds. Visit VMware Cloud Solutions to find the most current information you need - technical whitepapers, VMware Cloud Architecture Toolkit, and customer case studies - in one location on an easy-to-use website. <https://cloudsolutions.vmware.com/>

## **Support Overview**

Support coverage provided for VMware Cloud Provider Program products is listed in this guide for each product. Product Support renewal is automated without any required action by Service Providers or Aggregators. Production Support is automatically extended for any Service Provider with an effective VMware Cloud Provider Program Agreement (“VMware Cloud Provider Program Agreement”) that is not delinquent in monthly reporting or payment as of the VMware Cloud Provider Program agreement anniversary date. All support is governed by the VMware Support Policies set forth on [https://www.vmware.com/support/policies/policy\\_index.html](https://www.vmware.com/support/policies/policy_index.html)

For further technical assistance, please contact VMware Global Support Services at: <http://www.vmware.com/support/contacts>, or call the hotline at 1-877-4VMWARE (use Option 4 for Technical Support).

## **Product Lifecycle**

VMware manages product availability in accordance with its Lifecycle Policies described at [Lifecycle Policies](#). Unless otherwise indicated in this guide, the VMware Cloud Provider Program products and services will follow VMware’s general Lifecycle Policies. For the VMware Cloud Provider Program, a product or service is considered on “Special Terms” when it has reached the End of Availability under the Lifecycle Policies. While a product or service is on Special Terms, Service Providers using the product or service prior to the End of Availability may continue to use (and report usage of) the product or service and request additional licenses, but usage by new Service Providers is not allowed. When a product or service has reached either the End of Support Life or the End of Technical Guidance, then all Service Providers must stop using the applicable product or service. For a complete list of the lifecycles for VMware products and services, please refer to:

<https://www.vmware.com/files/pdf/support/Product-Lifecycle-Matrix.pdf>

## **Sign up for VMware Security Advisories**

VMware takes security seriously. VMware Security Advisories notify partners and customers of known security vulnerabilities in VMware products. To receive new and updated VMware security notifications, sign up for VMware Security Advisories at VMware Security Response Center.

<https://lists.vmware.com/mailman/listinfo/security-announce>

## **Translation**

To the extent that this guide has been translated into any language besides English, the English version of the guide will prevail over any inconsistencies with a non-English version of the guide.

## VMware Cloud Provider Program Reporting Requirements

The VMware vCloud Usage Meter must be used to monitor vCloud Service Provider Bundles as well as stand-alone products. Separate license keys must be identified by the Usage Meter in order to meter the Cloud Test Demonstration Environment. In order to report the VMware Cloud Provider bundles, Service Providers must utilize the latest version of vCloud Usage Meter 4.3 or a version that is still under General Support (currently 3.6.1 with hotpatch 5 or 4.2). Older vCloud Usage Meter versions must be upgraded to a supported version in order to have accurate metering and to avoid compliance issues.

Refer to Usage Meter's supported versions and End of General Support dates here:

<https://www.vmware.com/content/dam/digitalmarketing/vmware/en/pdf/support/product-lifecycle-matrix.pdf>

Refer to Usage Meter's metering interoperability here:

[https://www.vmware.com/resources/compatibility/sim/interop\\_matrix.php#interop](https://www.vmware.com/resources/compatibility/sim/interop_matrix.php#interop)

Service Providers must report their monthly usage of products to VCPP Commerce Portal (<https://vcp.vmware.com>) using the following methods:

- Partners must deploy one or more Usage Meter appliances per Contract. If a partner is utilizing site reporting in the Commerce Portal, they must deploy one or more Usage Meter appliances per site
- Partners that utilize vSphere for hosting and Horizon View for VDI workloads must deploy the workloads in separate vCenter Servers to accurately report usage through Usage Meter and/or manual reporting
- Service Providers must deploy Demo environments on separate vCenter Servers to accurately meter their Production Hosting environments and Demo usage based on allowance.
- For automatic reporting, Service Providers must utilize vCloud Usage Insight service for aggregation of the usage data and pre-population of the data into the VCPP Commerce Portal. A service found inside of the VCPP Commerce Portal.
- For manual reporting, Service Providers must use the "Monthly Usage Report" from Usage Meter and manually aggregate and report usage.
- A copy of monthly usage report may be sent to the Aggregator based on accordance of the contract between the Aggregator and the Partner.
- VMware Site Recovery Manager (SRM) servers must be identified and linked to vCenter Servers in order to report on protected virtual machines.
- Partners using older editions of standalone vSphere Standard, vSphere Advanced or vSphere Enterprise should report usage as part of the 7pt Advanced bundle Flex Core bundle

The total of these submissions will be used by the Aggregator to calculate the total point usage for the month. See the [Partner Connect Program Guide \(https://sforce.co/2ZoTfhk\)](https://sforce.co/2ZoTfhk) for information on the Cloud Test Demonstration Environment.



## vCloud Usage Meter

For all products in this VMware Product Usage Guide, unless otherwise stated, monthly usage total consists of the total of all products used. The Service Provider Program Agreement requires Service Providers to retain certain records relating to usage. Those records include all data used for reporting, including but not limited to the Usage Meter data and reports, and manually reported points. All data is automatically archived for 3 years. When partners opt in to Usage Insight, it (Usage Insight) starts archiving the usage reports for their UMs (UM 3.6.1 and higher) as long as they are able to successfully send their usage to VMware. When reporting manually, save a screenshot of reported points in a folder. Each file should be labeled with the month reported and product name. When migrating to new versions of vCloud Usage Meter, make sure to backup data from previous versions.

Usage Meter 3.6.X will go End-of-Life on March 31, 2021. VMware recommends Partners to migrate to latest version - UM 4.3 by that date.

Partners on UM 4.3 need to opt in for Usage insight service for reporting as it is essential for UM 4.3 to function. Partners can opt-in to Usage Insight by [following this video \(https://www.youtube.com/watch?v=njT8XuVeW5s\)](https://www.youtube.com/watch?v=njT8XuVeW5s). Partner can take advantage of those troubleshooting and config features by [signing up here \(https://cloud.vmware.com/cloud-provider-metering/\)](https://cloud.vmware.com/cloud-provider-metering/).

**Note:** Service Providers must be registered users of the MyVMware.com site to download vCloud Usage Meter.

This section is a summary of the required information for the vCloud Usage Meter. The complete documentation is available on Partner Central at the following locations:

1. [Usage Meter User Guide and Release Notes](#)
2. [Usage Insight User Guide](#)
3. [Usage Meter API Guide](#)
4. [Data Guidelines](#)
5. [Metering product detection whitepaper](#)

### vCloud Usage Meter collects the following information:

1. Time at which data is collected
2. Host DNS name
3. Host RAM (physical memory)
4. vSphere license type
5. Virtual machine vCenter name (optional field for Service Providers)
6. Virtual machine host name (optional field for Service Providers)
7. vRAM (allocated virtual memory)
8. Billing vRAM (calculation based on reserved virtual memory and memory cap per virtual machine)
9. Virtual machine CPU (count of virtual CPUs)
10. Virtual machine instance UUID (universal unique identifier)
11. Virtual machine location in vSphere inventory
12. Horizon Workspace disk usage
13. Used Storage Capacity for vSAN Deployments (GB)

For more information about the data collected by Usage Meter and for the Usage Meter Guidelines, please visit: <https://sforce.co/300pm5S>

By installing vCloud Usage Meter (version 3.6 or above), you acknowledge that you will automatically send data to VMware. This data 1) confirms your installation of vCloud Usage Meter Version 3.6 or above and 2) includes Monthly Usage, Customer Usage, VM History and anonymized metering event data. All data collected will only be used for the

purpose of improving usage meter support and automation of reporting the billing data available if the partner utilizes vCloud Usage Insight Service.

### vCloud Usage Meter Billing vRAM Calculation

vCloud Usage Meter 3.6 (and higher versions) calculates billing RAM for the powered on VM by taking the greater value of:

1. Reserved RAM
2. ½ of the allocated RAM

Billed RAM is billing RAM x Time in hours. The billed RAMs are summed, converted to GB and then divided by the number of hours in the month to give the Average Billed RAM (GB) that can be found on the Monthly Usage Report.

Once the value is taken from the two calculates above, all GB above 24 will be capped at 24GB

#### Example:

*During a one 30-day calendar month, a Service Provider uses the vCloud Service Provider Bundle – Advanced Edition to configure her virtual machine with 16 vGB for 15 days and 48 vGB for the remaining 15 days. The reservation level for the virtual machine is set at 75 percent for the entire month (if no reservation is set, use 0.5 instead).*

- 15 days x 24 hours x 16 vGB x 0.75 = 4,320 vGB hours
- 15 days x 24 hours x 24 vGB (48 vGB x 0.75 but capped at 24 GB) = 8,640 vGB hours
- Total vGB hours = 12,960 vGB hours
- Total points = 12,960 vGB hours ÷ 720 hours/month x 7 points (for Advanced) = 126 points

### How Information is sent to Aggregators for Billing Purposes

Service Providers report to their Aggregators in the agreed to method between them and the Aggregator. Reports generated by the vCloud Usage Meter can be sent to Aggregators, if requested, but are not required to be sent as part of the Program Reporting requirements.

**Note:** All data is due to the Aggregator by the date specified in the Aggregator contract. Service Providers must adhere to reporting requirements that are designated in their Aggregator contract. Additionally, Service Providers must use the vCloud Usage Meter to generate their Monthly Usage Report for billing purposes and enter their monthly usage into the VCPP Commerce Portal.

### Information that is Available in the Reports

The report includes customer name, vSphere license type, if the usage is billable, and the amount of billed vRAM—including memory cap per virtual machine—consumed for the month.

Service Providers also have the ability to filter reports as follows:

1. By customer:
  - a. Names: Filter based on a single customer, multiple customers, or all customers
  - b. Country: Filter based on a single country, multiple countries, or all countries
  - c. Postal Code: Filter based on a postal code, multiple postal codes, or all postal codes
2. By license set: Filter based on one or more user-defined license sets
3. By month/year: Filter based on a single month and year as well as the option to provide a range limited to month and year

### How to Manage Customer Information

In order to prevent an excessive amount of manual data entry, the vCloud Usage Meter enables users to import and export customer lists. Users can also create, read, update, and delete customers and customer relationships to virtual machines with the vCloud Usage Meter.

vCloud Usage Meter is included, at no additional cost, in the Flex Model Core.

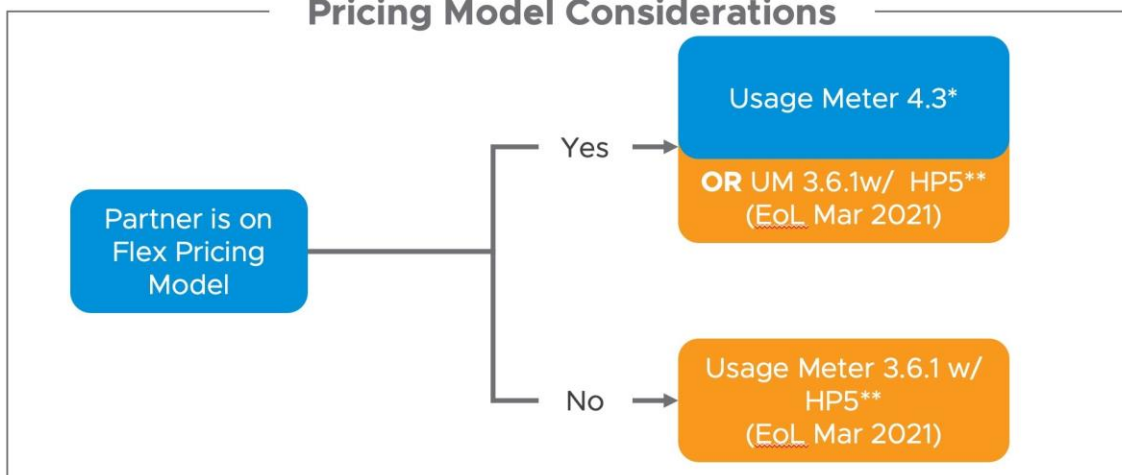
Please note that the Customer Rules feature is not available on Usage Meter 4.x and all subsequent versions of Usage Meter.

Here's a comparison between Usage Meter 3.6 and Usage Meter 4.3 in terms of products metered.

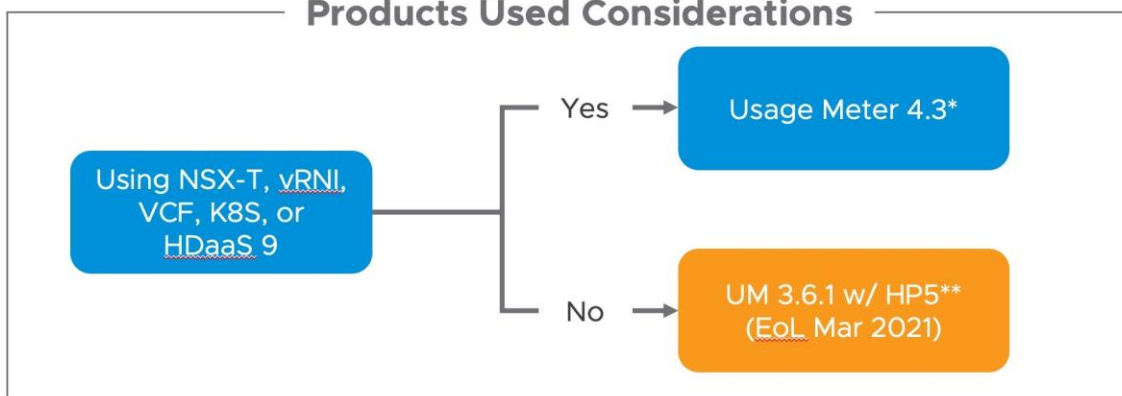
Products	UM 3.6.1 with Hot Patch 5 Note: EoGS March 31, 2021	UM 4.3
VMware vCenter Server / vSphere	✓	✓
VMware Cloud Director	✓	✓
VMware Cloud Director Availability (vCAv)	✓	✓
VMware vRealize Operations	✓	✓
VMware NSX-V	✓	✓
VMware NSX-T		✓
VMware vRealize Network Insight (vRNI)		✓
VMware Horizon DaaS	✓	✓
VMware Cloud Foundation (Core Based Pricing)		✓
VMware vSAN	✓	✓
VMware Site Recovery Manager	✓	✓
VMware vRealize Automation	✓	✓
SDDC Manager		✓
VMware Tanzu Basic		✓

Use the following schematic to make a decision on Usage meter version to be used.

### Pricing Model Considerations



### Products Used Considerations



\* UM 4.X requires partners to be on Flex Pricing Model

\*\* UM 3.6.1 is EOA, for access to the download please open a technical support ticket.

## vCloud Usage Insight

vCloud Usage Insight is a SaaS based product used for automatically filling out monthly usage reports in the Commerce Portal. The service also provides data retention for monthly usage files for Usage Meter appliances that are registered. Partners can signup and receive an invitation to onboard at <https://cloud.vmware.com/vcloud-usage-meter>

vCloud Usage Insight features can be found on the VMware Commerce Portal at <https://vcp.vmware.com>. Partners that wish to onboard into automatic reporting can follow this video to onboard into the service.  
<https://www.youtube.com/watch?v=njT8XuVeW5s>

Some features are still found on the Usage Insight service located at the Cloud Services Portal. This portal requires requesting an invitation to use. The features still found on the Cloud Services Portal version of the service include:

- View all Usage Meters mapped across all Contracts
- View timestamp of when data was last received
- Configure Usage Meter 4.3 to meter vROps Enterprise and/or NSX as Stand-alone (Per VM/OSI)
- Download copies of previous Monthly Usage Reports sent to Usage Insight

All Usage Meter registrations for Automatic Reporting and Opting into the Automatic Reporting Service is done in the Commerce Portal as outlined in the video linked above.

## VMware Professional Services and VMware General Support Services

VMware Professional Services and VMware General Support Services for Cloud Providers can be procured through authorized Aggregators. Please contact your Aggregator for details on purchasing PSO credits, Technical Account Managers, Professional Services and enhanced technical and extended support offerings.

## VMware Flex Model

VMware Flex Model delivers simplicity, flexibility and value. Flex One Core brings unification allowing both Service Providers and Cloud Providers, as applicable, the option to add-on products while eliminating complex decisions. This model promotes predictability and consistency that is built from solutions most commonly used today. With Flex One Core standardization, add-on products in Management, Metering and Billing, Networking, and Compute offer more value to you at a 7 point / month baseline.

All Service Providers currently able to license under VMware Cloud Provider Program may utilize VMware Flex Model. All products used must be reported to the Aggregator on a monthly basis. Service Providers with valid VMware Cloud Provider Agreements will have the products with points value listed below delivered in their MyVMware license portals automatically, unless indicated otherwise.

Flex Model Core* (7 points per vGB Reserved RAM per month)	
Category	Included Products
Management	VMware Cloud Director
	vRealize Log Insight
Metering/Billing	vRealize Operations Chargeback
	vCloud Usage Meter
Networking	NSX Data Center SP Base
Compute	vSphere Enterprise Plus
	vCenter Server Standard
Support	Production Level Support

The Flex Model Pricing FAQ can be found on Partner Central. If you have additional questions, please reach out to your aggregator or VMware Business Development Manager.

\* Existing partners, as of May 1, 2019 may continue to use current bundles. Current bundles are not available to new VCPP partners that joined after April 30, 2019.

VMware Flex Model Add-Ons*		
Product Name	Points/Month	Charged Per
VMware vRealize Operations Standard	1.00	1 GB Reserved RAM (based on average monthly usage)
VMware vRealize Operations Advanced	1.75	
VMware vRealize Operations Enterprise *	3.00	
VMware vRealize Automation Advanced	1.75	
VMware vRealize Automation Enterprise	2.75	
VMware vRealize Network Insight Advanced	0.75	
VMware vRealize Network Insight Enterprise	1.50	
VMware Integrated OpenStack DC edition	1.00	
VMware vRealize Suite Standard	2.00	
VMware vRealize Suite Advanced	3.50	
VMware vRealize Suite Enterprise	4.25	
VMware NSX DC SP Professional *	1.00	
VMware NSX DC SP Advanced *	3.00	
VMware NSX DC SP Enterprise Plus	4.50	
VMware SDDC Manager	1.00	
VMware HCX for Cloud Providers **	2.00	

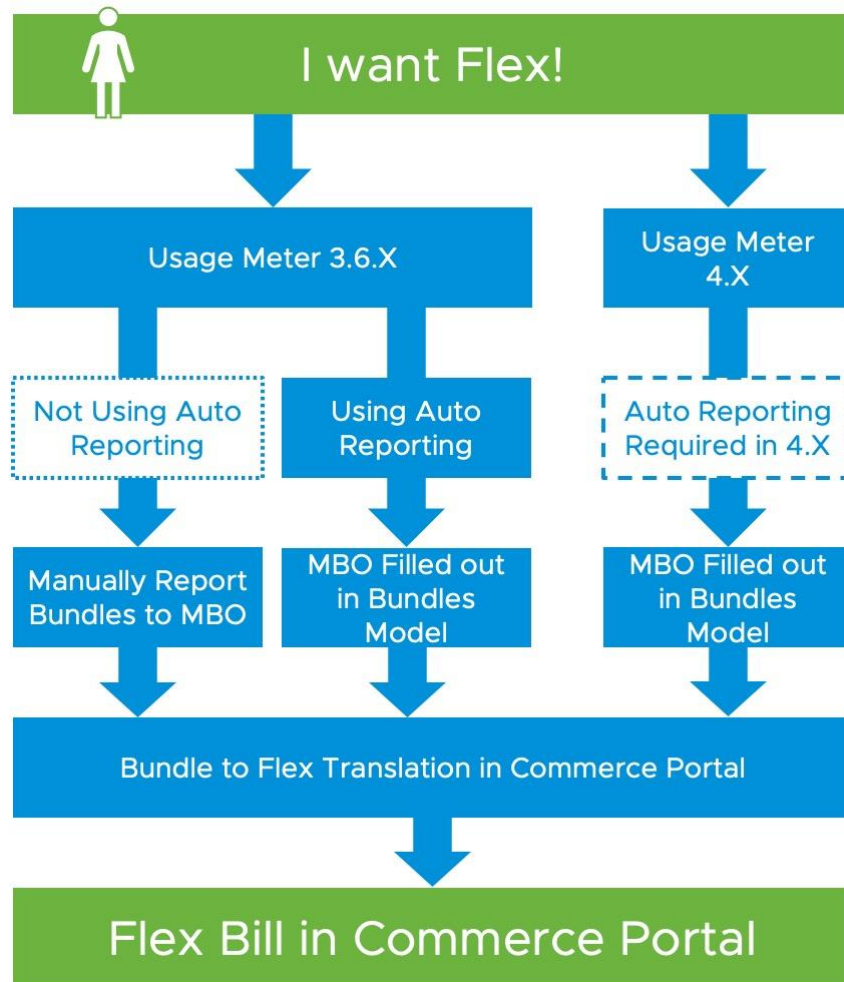
\* vRealize Operations and NSX-V add-ons are part of Bundle-to-Flex translation built into the Commerce Portal. To manually report add-on products in a monthly usage report, refer to [Appendix A](#).

\*\* VMware HCX for Cloud Providers is a restricted product and may require validation before being provided activation and software access. To learn more, please see the product page for VMware HCX for Cloud Providers.



VMWARE FLEX MODEL FOR USAGE METER

There are no changes needed to the Usage Meter instances that are deployed in your datacenter in order to adopt Flex.



VMWARE CHARGEBACK MANAGER FOR FLEX MODEL

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If you have vROps 7.5 installed, no change to metering is required in order to use vROps Chargeback Edition. If you instead use vROps version 7 or earlier for tenant facing chargeback functions only, you should not report its usage as vROps Chargeback as it is included in Flex Core at no additional cost. For Usage Meter to not include it into metering, please perform the following action: on the Usage Meter product screen, do not submit vROps credentials when prompted.

**vRealize Operations Manager**

The vrops server host/port will be auto-detected. Please accept the certificate first and type in username/password using "Edit" b

Server	Version	Product Name	Referencing vCenter Servers	User	Actions
10.199.58.106	6.7.0.000000	VMware vRealize Operations Not yet discovered	10.139.0.24		<input type="button" value="Edit"/>

**VMware Cloud Provider Program Pricing Model\***

Service Providers currently able to license under VMware Cloud Provider Program may utilize the following products. All products used must be reported to the Aggregator on a monthly basis. Service Providers with valid VMware Cloud Provider Agreements will have the products with points value listed below delivered in their MyVMware license portals automatically, unless indicated otherwise. The VMware vCloud SP Standard Bundle (5 point) has been removed from the program and is no longer available.

VMware Cloud Provider Program Service Provider Current Bundles*		
Product Name	Points/Month	Charged Per
VMware vCloud SP Advanced Bundle w/ Management & Networking*	12	1 GB Reserved RAM (based on average monthly usage)
VMware vCloud SP Advanced Bundle w/ Management*	10	
VMware vCloud SP Advanced Bundle w/ Networking*	9	
VMware vCloud SP Advanced Bundle*	7	
VMware vCloud SP Standard Bundle w/ Management*	8	
VMware vCloud SP Standard Bundle w/ Networking*	8	

\* Existing partners, as of May 1, 2019 may continue to use current bundles. Current bundles are not available to new VCPP partner contracts signed after April 30, 2019. Existing partners will be granted price protection on Bundle to Flex Translation for 36 months, starting with May 2019 reporting period.

\* If a partner has a Monthly Usage Report from Usage Meter that shows Standard Bundle. The partner needs to update the license keys used on their ESXi hosts to "vSphere Enterprise Plus". For more information on how to do this, [view this video](#).

Complete Product List	Points / Month	Charged Per
<b>Management Products</b>		
VMware Cloud Director Availability - Disaster Recovery	10	Protected Virtual Machine (VM)
VMware Cloud Director Availability - Migration	0	N/A
VMware vRealize Automation Advanced	5	Virtual Machine or OSI**
VMware vRealize Automation Enterprise	8	Virtual Machine or OSI**
VMware vRealize Business for Cloud Advanced	2	1 GB Reserved RAM (based on average monthly usage)
VMware vRealize Log Insight	4.5	Virtual Machine or OSI**
VMware vRealize Network Insight Advanced	3	Virtual Machine per month
VMware vRealize Operations Standard	2.5	Managed Virtual Machine or OSI**
VMware vRealize Operations Advanced	6	Managed Virtual Machine or OSI**
VMware vRealize Operations Enterprise	12	Managed Virtual Machine or OSI**
VMware vRealize Hyperic <sup>1</sup>	15	Machine
VMware vRealize True Visibility for vRealize Operations Standard	1.25	VM or OSI** per month
VMware vRealize True Visibility for vRealize Operations Advanced	3	VM or OSI** per month
VMware vRealize True Visibility for vRealize Operations Enterprise	6	VM or OSI** per month
<b>Networking &amp; Security Management</b>		
VMware NSX Enterprise	25	Managed Virtual Machine or OSI**
VMware NSX Advanced Load Balancer	917	Service Core per Month
<b>Storage and Availability</b>		
VMware Site Recovery Manager	24	Protected Virtual Machine (VM)
VMware vSAN Standard	0.02	GB per month for Used Capacity
VMware vSAN Advanced	0.03	GB per month for Used Capacity
VMware vSAN Standard + Enterprise Add-on	0.03	GB per month for Used Capacity
VMware vSAN Advanced + Enterprise Add-on	0.04	GB per month for Used Capacity
<b>Integrated Stack</b>		
VMware Cloud Foundation	***	Core Per Month
SDDC Manager	1	1 GB Reserved RAM (based on average monthly usage)

VMware Cloud Provider Pod*	0	
VMware Cloud Director	12	Core Per Month
<b>Desktop &amp; Application Virtualization</b>		
VMware App Volumes Standard	4	Concurrent Connection
VMware App Volumes Advanced	7	Concurrent Connection
VMware App Volumes Enterprise	9	Concurrent Connection
VMware Horizon DaaS - VDI Edition	16	Created Desktop
VMware Horizon DaaS - RDSH Edition	13	Created Session (including Application publishing)
VMware Horizon Standard	12	Concurrent Connection
VMware Horizon Advanced	19	Concurrent Connection
VMware Horizon Enterprise	28	Concurrent Connection
VMware Horizon for Linux	7	Concurrent Connection
VMware Horizon Apps Standard	11	Concurrent Connection
VMware Horizon Apps Advanced	18	Concurrent Connection
VMware ThinApp Client	2	ThinApp Client
VMware ThinApp Packager	1	ThinApp Packager
VMware Dynamic Environment Manager	2	Named User
VMware vSAN Standard for Desktop	2	Concurrent Connection
VMware vSAN Advanced for Desktop	4	Concurrent Connection
VMware vSAN Enterprise Add-on for Desktop	1	Concurrent Connection
VMware NSX Data Center Advanced for Desktop	5	Concurrent Connection
VMware NSX Data Center Enterprise for Desktop	8	Concurrent Connection
<b>Application Modernization</b>		
VMware Tanzu Basic	1	1 GB Reserved RAM (based on average monthly usage)
		CPU Core per month
<b>Third-Party Products</b>		
Caveonix RiskForesight Standard	15	VM***
Caveonix RiskForesight Extended	13.5	VM***
Caveonix RiskForesight Classic	12.8	VM***
Caveonix RiskForesight Premium	12.2	VM***

Caveonix RiskForesight Global	11.6	VM***
vCloud Director Data Domain Virtual Edition Standard	23.47	VM***
vCloud Director Data Domain Virtual Edition Extended	9.15	VM***
vCloud Director Data Domain Virtual Edition Classic	8.68	VM***
vCloud Director Data Domain Virtual Edition Premium	7.98	VM***
vCloud Director Data Domain Virtual Edition Global	7.04	VM***
vCloud Director Data Protection Suite Standard	8.87	VM***
vCloud Director Data Protection Suite Extended	3.46	VM***
vCloud Director Data Protection Suite Classic	3.28	VM***
vCloud Director Data Protection Suite Premium	3.02	VM***
vCloud Director Data Protection Suite Global	2.66	VM***

Restricted Products		
(Requires special qualification - see details on product specific pages)		
VMware vCloud SP Hyper-Converged Infrastructure Bundle	6	GB Reserved RAM per month
VMware vSAN Standard + Enterprise Add-on for Hyper-Converged Infrastructure	0.03	GB per month for Used Capacity
VMware vSAN Advanced + Enterprise Add-on for Hyper-Converged Infrastructure	0.04	GB per month for Used Capacity
VMware Horizon Advanced for Hyper-Converged Infrastructure	21	Concurrent Connection
VMware Horizon Enterprise for Hyper-Converged Infrastructure	30	Concurrent Connection
VMware Horizon DaaS Bundle – RDSH Edition	13	Created Session (including Application publishing)
VMware Horizon DaaS Bundle – VDI Edition	16	Created Desktop
VMware Desktop Disaster Recovery for Horizon DaaS Bundle(s)	4	Total Allocated Insurance Quota for VDI and RDSH Connections per month

<sup>1</sup>VMware vRealize Hyperic reached End of Availability (EOA) on July 1, 2020 and is no longer available for purchase, however, it will continue to be supported through January 31, 2021 (End of General Support). \*VMware Cloud Provider Pod will reach End of Availability on September 30, 2020 and End of Support on December 31, 2020. The capability will be transitioned to VMware Validated Design (VVD) for Cloud Providers.

\*\*OSI stands for OS Instance. This measure is used for non-VMware environments, including physical.

\*\*\* See product-specific details. Also note: Price per point for third party products VM is different to your contracted VCPP price per point

## Product Specific Usage Information

### **VMware Cloud Provider Program Specific Licensing Usage Information**

The VMware Cloud Provider Program Partner Agreement provides a VMware EULA exception for Service Providers to install and use VMware Products as part of a Hosted IT Service. Prior written approval is required from the VMware Cloud Provider Program Office for any deviation from the requirements outlined below.

VMware Cloud Provider Program partners can only leverage VMware perpetual licenses, including OEM versions, to support internal IT operations. Internal IT operations are any IT function that exclusively supports a system that is not connected, either directly or in an ancillary manner, to the partner's hosting environment. In addition, VMware perpetual licenses may not be used to support the management or operations of an environment utilized to host for unaffiliated third parties. Virtual machines running on hosts with perpetual license keys should be tagged in the vCloud Usage Meter and are not considered billable.

In the VMware Cloud Provider Program, a Hosted IT Service means the provision of services created by a Service Provider for its tenants that:

1. Provide access to compute, storage, network resources or software applications ("hosting infrastructure") from systems that are installed and operated by Service Provider among its customers; and
2. May be accessed via the Internet, telephone or private network based.

There are two categories of Hosted IT Service architectures:

- **Multi-tenant:** The hosting infrastructure is hosted by Service Provider at the Service Provider's premise(s) and shared between multiple tenants.
- **Single-tenant:** The hosting infrastructure is dedicated to a particular tenant and not shared with other tenant(s). Single-tenant Hosted IT services may be delivered by the Service Provider at their premise(s) or offered as a managed service at the tenant's premise(s).

The VMware Cloud Provider Program allows for Service Providers to install and use VMware products as part of a Hosted IT Service. "Hosted IT Services" means Service Provider's internet, telephone or private network based, subscription computing service that allows third party companies to access the processing power, computing, or software applications from systems that are installed and operated by Service Provider. Except as expressly approved by VMware in writing, Service Providers may install software only on hardware systems that are (a) owned or leased by Service Provider for its dedicated use, or owned or leased by the End User for the Service Provider's dedicated use to provide Hosted IT Services solely to the End User and (b) located either within datacenter space owned or leased by Service Provider or on an End User's premises solely to provide Hosted IT Services to the End User, provided that the Service Provider maintains day-to-day management and administrative control of the systems.

Upon request, Service Provider will promptly identify the license keys installed on the systems located at each End User site. Service Provider shall not permit End User (or any third-party agent providing service to the End User) to access, maintain, or otherwise use the software, except for the sole purpose of accessing the functionality of the software in the form of hosted IT Services in accordance with the terms of the [Partner Connect Program Guide https://sforce.co/2ZoTfhk](https://sforce.co/2ZoTfhk) ). The Service Provider is responsible for usage reporting and all obligations of the [Partner Connect Program Guide \(https://sforce.co/2ZoTfhk\)](https://sforce.co/2ZoTfhk) regardless of the physical location of the servers. Service Provider will be responsible to VMware for any unauthorized installation, use, copying or distribution of the software by the End User.

## VMware vCloud SP Bundles\*

VMware Cloud Provider Program partners can report the following bundles (refer to **Table 1**). VMware vCloud SP Standard Bundle (5 point) has been removed from the program and is no longer available.

- [VMware vCloud SP Advanced Bundle with Management & Networking](#)
- [VMware vCloud SP Advanced Bundle with Management](#)
- [VMware vCloud SP Advanced Bundle with Networking](#)
- [VMware vCloud SP Advanced Bundle](#)
- [VMware vCloud SP Standard Bundle with Management](#)
- [VMware vCloud SP Standard Bundle with Networking](#)

Features		Standard w/Networking	Standard w/Management	Advanced	Advanced w/Networking	Advanced & Management	Advanced w/Networking & Management
		8	8	7	9	10	12
Management	Points (per GB reserved vRAM/month)	8	8	7	9	10	12
	vRealize Operations Enterprise		✓			✓	✓
	vRealize Log Insight (vRLI)	✓	✓	✓	✓	✓	✓
	VMware Cloud Director (VCD)			✓	VCD or VIO**	✓	VCD or VIO**
	VMware Integrated Open Stack (VIO) **						
Networking	NSX – SP Enterprise						✓
	NSX – SP Advanced	✓			✓		
	NSX – SP Base (vCNS mode)			✓		✓	
Compute	vSphere Enterprise Plus	✓	✓	✓	✓	✓	✓
	vCenter Server Standard	✓	✓	✓	✓	✓	✓
Support	Production Level Support	✓	✓	✓	✓	✓	✓

**Table 1**

\* Existing partners, as of May 1, 2019 may continue to use current bundles. Current bundles are not available to new partner contracts signed after April 30, 2019. Current bundles will be discontinued after July 31, 2021.

\*\* VMware Integrated OpenStack (VIO) 6 will reach End of Availability (EOA) and End of Support (EOS) on September 3, 2021.



**VMware vCloud SP Advanced Bundle with Management & Networking\***

<b>Description</b>	The VMware vCloud SP Advanced Bundle with Management & Networking provides the key components required to deliver an enterprise-class Cloud service together with management, automation and advanced networking capabilities. It is targeted at Service Providers who want to enable enterprises to extend their data centers to the public cloud with agility, compatibility and security in a multi-tenant infrastructure, while providing improved Service Level Agreement (“SLA”) and capturing new revenue streams through add-on services to customers. Service Providers have the option to deploy either VMware Cloud Director or VMware Integrated OpenStack (VIO)**.
<b>Point Value / Charged Per</b>	12 points per 1 GB Reserved RAM (based on average monthly usage) (GB = 1024 MB) Total points capped at 24 GB of Reserved RAM per VM (see Reporting and Operational Details in <a href="#">Appendix A</a> ).
<b>Components</b>	<ul style="list-style-type: none"> <li>• VMware vRealize Operations Enterprise, including vRealize Operations Manager and vRealize Configuration Manager (Note: Optional Management Packs providing Tenant-Facing operational information are now available on the VMware Marketplace for vCD and vROps integration <a href="https://marketplace.vmware.com">https://marketplace.vmware.com</a>)</li> <li>• VMware vRealize Log Insight</li> <li>• VMware vSphere Enterprise Plus</li> <li>• VMware vCenter Server Standard</li> <li>• VMware Cloud Director <u>OR</u> VMware Integrated OpenStack (VIO)**</li> <li>• VMware NSX Enterprise</li> </ul>
<b>Reporting</b>	Latest version of vCloud Usage Meter (UM 4.3) registered in vCloud Usage Insight will automatically pre-populate usage data in the Commerce Portal for vCloud SP Advanced Bundle with Management & Networking. For manual reporting, please rely on Monthly Usage Report of any generally available vCloud Usage Meter version. Non-supported versions of Usage Meter will result in incorrect metering and compliancy issues.
<b>Support</b>	Production Level Support

\* Existing partners, as of May 1, 2019 may continue to use current bundles. Current bundles are not available to new VCPP partner contracts signed after April 30, 2019. Current bundles will be discontinued after July 31, 2021.

\*\* VMware Integrated OpenStack (VIO) 6 will reach End of Availability (EOA) and End of Support (EOS) on September 3, 2021.

VMware vCloud SP Advanced Bundle with Management\*

<b>Description</b>	The VMware vCloud SP Advanced Bundle with Management provides the key components required to deliver an enterprise-class Cloud service together with management and automation capabilities. It is targeted at Service Providers who want to enable enterprises to extend their data centers to the public cloud with agility, compatibility and security in a multi-tenant infrastructure, while providing improved SLAs and capturing new revenue streams through add-on services to customers.
<b>Point Value / Charged Per</b>	10 points per 1 GB Reserved RAM (based on average monthly usage) (GB = 1024 MB) Total points capped at 24 GB of Reserved vRAM per VM
<b>Components</b>	<ul style="list-style-type: none"> <li>• VMware vRealize Operations Enterprise, including vRealize Operations Manager and vRealize Configuration Manager (Note: Optional Management Packs providing Tenant-Facing operational information are now available on the VMware Marketplace for vCD and vROps integration <a href="https://marketplace.vmware.com">https://marketplace.vmware.com</a> )</li> <li>• VMware vRealize Log Insight</li> <li>• VMware vSphere Enterprise Plus</li> <li>• VMware vCenter Server Standard</li> <li>• VMware Cloud Director</li> <li>• VMware NSX Base (vCNS mode)</li> </ul>
<b>Reporting</b>	Latest version of vCloud Usage Meter (UM 4.3) registered in vCloud Usage Insight will automatically pre-populate usage data in the Commerce Portal for vCloud SP Advanced Bundle with Management. For manual reporting, please rely on Monthly Usage Report of any generally available vCloud Usage Meter version. Non-supported versions of Usage Meter will result in incorrect metering and compliancy issues.
<b>Support</b>	Production Level Support

\* Existing partners, as of May 1, 2019 may continue to use current bundles. Current bundles are not available to new VCPP partner contracts signed after April 30, 2019. Current bundles will be discontinued after July 31, 2021.

**VMware vCloud SP Advanced Bundle with Networking\***

<b>Description</b>	The VMware vCloud SP Advanced Bundle with Networking provides the key components required to deliver an enterprise-class Cloud service. It is targeted at Service Providers who want to enable enterprises to extend their data centers to the public cloud with agility, compatibility and security in a multi-tenant infrastructure with robust networking capabilities. Service Providers have the option to deploy either VMware Cloud Director or VMware Integrated OpenStack (VIO)**.
<b>Point Value / Charged Per</b>	9 points per 1 GB Reserved RAM (based on average monthly usage) (GB = 1024 MB) Total points capped at 24 GB of Reserved RAM per virtual machine (see Reporting and Operational Details)
<b>Components</b>	<ul style="list-style-type: none"> <li>• VMware vRealize Log Insight</li> <li>• VMware vSphere Enterprise Plus</li> <li>• VMware vCenter Server Standard</li> <li>• VMware Cloud Director <u>OR</u> VMware Integrated OpenStack (VIO)**</li> <li>• VMware NSX Advanced</li> </ul>
<b>Reporting</b>	Latest version of vCloud Usage Meter (UM 4.3) registered in vCloud Usage Insight will automatically pre-populate usage data in the Commerce Portal for vCloud SP Advanced Bundle with Networking. For manual reporting, please rely on Monthly Usage Report of any generally available vCloud Usage Meter version. Non-supported versions of Usage Meter will result in incorrect metering and compliancy issues.
<b>Support</b>	Production Level Support

\* Existing partners, as of May 1, 2019 may continue to use current bundles. Current bundles are not available to new VCPP partner contracts signed after April 30, 2019. Current bundles will be discontinued after July 31, 2021.

\*\* VMware Integrated OpenStack (VIO) 6 will reach End of Availability (EOA) and End of Support (EOS) on September 3, 2021.

VMware vCloud SP Advanced Bundle\*

<b>Description</b>	The VMware vCloud SP Advanced Bundle provides the key components required to deliver an enterprise-class Cloud service. It is targeted at Service Providers who want to enable enterprises to extend their data centers to the public cloud with agility, compatibility and security in a multi-tenant infrastructure.
<b>Point Value / Charged Per</b>	7 points per 1 GB Reserved RAM (based on average monthly usage) (GB = 1024 MB)  Total points capped at 24 GB of Reserved RAM per virtual machine (see Reporting and Operational Details)
<b>Components</b>	<ul style="list-style-type: none"> <li>• VMware vRealize Log Insight</li> <li>• VMware vSphere Enterprise Plus</li> <li>• VMware vCenter Server Standard</li> <li>• VMware Cloud Director</li> <li>• VMware NSX Base (vCNS mode)</li> </ul>
<b>Reporting</b>	Latest version of vCloud Usage Meter (UM 4.3) registered in vCloud Usage Insight will automatically pre-populate usage data in the Commerce Portal for vCloud SP Advanced Bundle.  For manual reporting, please rely on Monthly Usage Report of any generally available vCloud Usage Meter version. Non-supported versions of Usage Meter will result in incorrect metering and compliancy issues.
<b>Support</b>	Production Level Support

\* Existing partners, as of May 1, 2019 may continue to use current bundles. Current bundles are not available to new VCPP partner contracts signed after April 30, 2019. Current bundles will be discontinued after July 31, 2021.

**VMware vCloud SP Standard Bundle with Management\***

<b>Description</b>	The VMware vCloud SP Standard Bundle with Management provides the key components required to deliver a competitive Cloud service together with management and automation capabilities. It is designed to enable organizations of all types and sizes to quickly and easily provision public cloud resources, or securely extend their internal virtualized infrastructure into the public cloud, delivering a robust, interoperable and enterprise-class experience.
<b>Point Value / Charged Per</b>	8 points per 1 GB Reserved RAM (based on average monthly usage) (GB = 1024 MB) Total points capped at 24 GB of Reserved RAM per virtual machine (see Reporting and Operational Details)
<b>Components</b>	<ul style="list-style-type: none"> <li>• VMware vRealize Operations Enterprise, including vRealize Operations Manager and vRealize Configuration Manager</li> <li>• VMware vRealize Log Insight</li> <li>• VMware vSphere Enterprise Plus</li> <li>• VMware vCenter Server Standard</li> </ul>
<b>Reporting</b>	Latest version of vCloud Usage Meter (UM 4.3) registered in vCloud Usage Insight will automatically pre-populate usage data in the Commerce Portal for vCloud SP Standard Bundle with Management. For manual reporting, please rely on Monthly Usage Report of any generally available vCloud Usage Meter version. Non-supported versions of Usage Meter will result in incorrect metering and compliance issues.
<b>Support</b>	Production Level Support

\* Existing partners, as of May 1, 2019 may continue to use current bundles. Current bundles are not available to new VCPP partner contracts signed after April 30, 2019. Current bundles will be discontinued after July 31, 2021.

VMware vCloud SP Standard Bundle with Networking\*

<b>Description</b>	The VMware vCloud SP Standard Bundle with Networking provides the key components required to deliver a competitive Cloud service. It is designed to enable organizations of all types and sizes to quickly and easily provision public cloud resources, or securely extend their internal virtualized infrastructure into the public cloud, delivering a robust, interoperable and enterprise-class experience with robust networking capabilities.
<b>Point Value / Charged Per</b>	8 points per 1 GB Reserved RAM (based on average monthly usage) (GB = 1024 MB)  Total points capped at 24 GB of Reserved RAM per virtual machine (see Reporting and Operational Details)
<b>Components</b>	<ul style="list-style-type: none"> <li>• VMware vRealize Log Insight</li> <li>• VMware vSphere Enterprise Plus</li> <li>• VMware vCenter Server Standard</li> <li>• VMware NSX Advanced</li> </ul>
<b>Reporting</b>	Latest version of vCloud Usage Meter (UM 4.3) registered in vCloud Usage Insight will automatically pre-populate usage data in the Commerce Portal for vCloud SP Standard Bundle with Networking. For manual reporting, please rely on Monthly Usage Report of any generally available vCloud Usage Meter version. Non-supported versions of Usage Meter will result in incorrect metering and compliancy issues.
<b>Support</b>	Production Level Support

\* Existing partners, as of May 1, 2019 may continue to use current bundles. Current bundles are not available to new VCPP partner contracts signed after April 30, 2019. Current bundles will be discontinued after July 31, 2021.

# MANAGEMENT PRODUCTS

## VMware Cloud Director Availability

<b>Description</b>	<p>VMware Cloud Director Availability provides unified architecture for migration and protection of VMs from on-prem to Cloud Director clouds and between different Cloud Director clouds. Previous versions to 4.0 of VMware Cloud Director Availability are using the old branding 'vCloud Availability'.*</p> <p><b>What's changing:</b></p> <p>vCloud Availability 3.x provides on-prem to Cloud DR, migration, Cloud to Cloud DR and migration in a single platform and introduce other architectural simplifications such as simplified user-interface, combined/converged RBAC portal, unified on-prem vSphere plug-in UI etc.</p> <p>VMware Cloud Director Availability 4.0 is now GA and features operational, metering, automation and service tiering capability upgrades. 4.0 makes it far easier to deploy and manage Disaster Recovery aaS and migration offerings than ever before.</p>
<b>Point Value / Charged Per</b>	<p><b>Standalone</b></p> <p><b>Disaster Recovery:</b> 10 points per protected virtual machine per month. A protected VM is any virtual machine that is replicated from the primary site to the recovery site, regardless of whether the VM is powered on or off.</p> <p><b>Migration:</b> 0 points per migration. To be counted as migration, the workload replication must be configured by using the button "New migration" from the UI or by invoking an API call that sets the replication type to migration.</p>
<b>Components</b>	<p>VMware Cloud Director Availability™</p>
<b>Reporting</b>	<p>vCloud Availability 3.x &amp; VMware Cloud Director Availability™ 4.0 reporting consists of:</p> <ul style="list-style-type: none"> <li>• The number of VMs under protection</li> <li>• The number of VMs configured for migration (no charge)</li> </ul> <p>Usage of vCloud Availability 3.x is reported using Usage Meter 3.6.1 HP5 or Usage Meter 4.3 and all instances of vCloud Availability must be configured in Usage Meter, the same is true for VMware Cloud Director Availability™ 4.0. Please note that usage should be reported to the following SKUs, regardless of the version in use:</p> <ul style="list-style-type: none"> <li>• VMV-VCAN-CA-C – VMware Cloud Director Availability – Disaster Recovery</li> <li>• VMV-VCAN-CA-MIG-C – VMware Cloud Director Availability – Migration</li> </ul> <p>vCloud Availability 3.x &amp; VMware Cloud Director Availability™ 4.0 reporting does not include any usage of vCenter Server, vSphere, or Cloud Director. Use of those products must be reported separately, in addition to the usage of the Cloud Availability for Cloud Director product.</p>
<b>Support</b>	<p>Production Level Support</p>
<b>More Information</b>	<p>For more information, go to <a href="https://www.vmware.com/products/cloud-director-availability.html">https://www.vmware.com/products/cloud-director-availability.html</a> or <a href="https://cloudsolutions.vmware.com">https://cloudsolutions.vmware.com</a></p>

\* vCloud Availability 2.x and all other older versions are End of Support (EOS) as of October 19<sup>th</sup>, 2019. Existing vCloud Availability 2.x, vCloud Availability Cloud to Cloud DR 1.5 and vCloud Extender customers should plan to migrate or upgrade to VMware Cloud Director Availability 4.0 asap. vCloud Availability 3.0 will be EOS as of April 2021, and vCloud Availability 3.5 is EOS November 2021.

## VMware Cloud Director

<b>Description</b>	VMware Cloud Director, the strategic cloud management platform for the VMware Cloud Provider Program, enables Service Providers to rapidly build and monetize cloud-scale, agile, differentiated cloud environments. Cloud Director enables services providers to deliver multi-tenant, self-service, NSX-based networking services, thus deriving additional revenue from their Cloud Director environment.
<b>Point Value / Charged Per</b>	<p><b>Current Bundles*</b></p> <p>Cloud Director is included, without additional charge, in the following bundles:</p> <ul style="list-style-type: none"> <li>• Advanced Bundle (7 points)</li> <li>• Advanced w/Networking Bundle (9 points)</li> <li>• Advanced w/Management Bundle (10 points)</li> <li>• Advanced w/Networking &amp; Management Bundle (12 points)</li> </ul> <p><b>Flex Model</b></p> <p>Cloud Director is included, without additional charge, in the Flex Core</p>
<b>Components</b>	Cloud Director
<b>Reporting</b>	Cloud Director must be used with a VMware Cloud Provider Program SP Bundle. See bundle reporting guidelines for details. The standalone option is restricted and only available for certain use cases.
<b>Support</b>	Production Level Support
<b>More Information</b>	More information is available at <a href="https://cloudsolutions.vmware.com">VMware Cloud Provider Program Cloud Director</a> or <a href="https://cloudsolutions.vmware.com">https://cloudsolutions.vmware.com</a>

\* Existing partners, as of May 1, 2019 may continue to use current bundles. Current bundles are not available to new VCPP partner contracts signed after April 30, 2019. Current bundles will be discontinued after July 31, 2021.



## VMware vRealize Automation

VMware vRealize Automation is available to VMware Cloud Provider Program Service Providers in two editions (refer to Table 2):

- vRealize Automation Advanced
- vRealize Automation Enterprise

Features/Editions	Advanced	Enterprise
<b>Points per Managed VM or OSI per Month</b>	<b>5</b>	<b>8</b>
VMware Infrastructure Services, Cloning Only, VMware vRealize Orchestrator Integration	✓	✓
Multi-Vendor, Multi-Cloud Infrastructure and Multi-Vendor SW Provisioning	✓	✓
Custom Services (XaaS), Approvals, Reclamation, Chargeback, Multi-Tenancy	✓	✓
IaaS services	✓	✓
Self-service catalog	✓	✓
Centralized policy and control	✓	✓
Resource lifecycle management	✓	✓
Resource right-sizing and reclamation	✓	✓
Extensibility with vRealize Orchestrator and ABX	✓	✓
VMware Solution Exchange support	✓	✓
XaaS (Anything as a Service)	✓	✓
Hybrid Cloud with VMware Cloud on AWS	✓	✓
Multi-tenancy (w/ dedicated infrastructure)	✓	✓
VMware Cloud Foundation integration	✓	✓
Self-service networking	✓	✓
Infrastructure as Code	✓	✓
VMware Cloud Templates	✓	✓
Application Services, Release Automation, DevOps Integration		✓
Support for multi-cloud (w/ public cloud end points)		✓
Infrastructure pipelining (w/ Code Stream)		✓
Application provisioning and management		✓
Integration with configuration management tools		✓
Kubernetes infrastructure automation		✓
Cloud agnostic templates		✓

Table 2

## VMware vRealize Automation Advanced

<b>Description</b>	<p>VMware vRealize Automation provides business agility to service providers by automating the delivery of personalized IT services to end customers. The VMware vRealize Automation, through a self-service catalog, enables end customers to request and manage a wide range of multi-vendor, multi-cloud, applications, infrastructure, and custom services. Policy-based governance assures that users receive the right size resources for a given task across the service lifecycle. To learn more about vRealize Automation visit: <a href="http://www.vmware.com/products/vrealize-automation/">http://www.vmware.com/products/vrealize-automation/</a></p>
<b>Point Value / Charged Per</b>	<p><b>Stand Alone</b> 5 Points per Managed VM or OSI per month</p> <p><b>Flex Model Add-On</b> 1.75 Points per 1 GB Reserved RAM (based on average monthly usage)</p>
<b>Components</b>	VMware vRealize Automation Advanced
<b>Reporting</b>	<p>As vRealize Automation does <u>not</u> include vCenter Server or vSphere licensing; all use of those products must be reported separately, in addition to the usage of the vRealize Automation (based on edition).</p> <p>vCloud Usage Meter UM 3.6.1 HP 5 or UM 4.3 registered in vCloud Usage Insight will automatically pre-populate usage data in the Commerce Portal for VMware vRealize Automation.</p> <p>For manual reporting, please rely on Monthly Usage Report of any generally available vCloud Usage Meter version. Non-supported versions of Usage Meter will result in incorrect metering and compliancy issues.</p>
<b>Support</b>	Production Level Support
<b>More Information</b>	<a href="https://cloudsolutions.vmware.com">https://cloudsolutions.vmware.com</a>

## VMware vRealize Automation Enterprise

<b>Description</b>	<p>VMware vRealize Automation provides business agility to service providers by automating the delivery of personalized IT services to end customers. The VMware vRealize Automation, through a self-service catalog, enables end customers to request and manage a wide range of multi-vendor, multi-cloud, applications, infrastructure, and custom services. Policy-based governance assures that users receive the right size resources for a given task across the service lifecycle. To learn more about vRealize Automation visit: <a href="http://www.vmware.com/products/vrealize-automation/">http://www.vmware.com/products/vrealize-automation/</a></p>
<b>Point Value / Charged Per</b>	<p>Current Bundles 8 Points per Managed VM or OSI per month</p> <p>Flex Model Add-On 2.75 Points per 1 GB Reserved RAM (based on average monthly usage)</p>
<b>Components</b>	VMware vRealize Automation Enterprise
<b>Reporting</b>	<p>As vRealize Automation does <u>not</u> include vCenter Server or vSphere licensing; all use of those products must be reported separately, in addition to the usage of the vRealize Automation (based on edition).</p> <p>vCloud Usage Meter UM 3.6.1 HP 5 or UM 4.3 registered in vCloud Usage Insight will automatically pre-populate usage data in the Commerce Portal for VMware vRealize Automation.</p> <p>For manual reporting, please rely on Monthly Usage Report of any generally available vCloud Usage Meter version. Non-supported versions of Usage Meter will result in incorrect metering and compliancy issues.</p>
<b>Support</b>	Production Level Support
<b>More Information</b>	<a href="https://cloudsolutions.vmware.com">https://cloudsolutions.vmware.com</a>

## VMware vRealize Business for Cloud Advanced Edition

End of Availability (EOA) of vRealize Business for Cloud was on November 1, 2019. End of General Support (EOGS) will be on December 12, 2020. VMware recommends customers transitioning to vRealize Operation Chargeback for cloud cost metering and visibility for tenants.

## VMware vRealize Log Insight

<b>Description</b>	VMware vRealize Log Insight delivers automated log management through aggregation, analytics and search, providing operational intelligence and enterprise-wide visibility in hybrid cloud environments. It collects and analyzes all types of machine-generated log data (such as application logs, network traces, configuration files, messages, and performance data and system state dumps). By using vRealize Log Insight with vRealize Operations, service providers can extend operational visibility and proactive management capabilities across their cloud. The product provides flat pricing for unlimited amounts of data per VM or OSI.
<b>Point Value / Charged Per</b>	<p><b>Stand Alone</b> 4.5 points per managed virtual machine or OSI* per month.</p> <p><b>Flex Model</b> vRealize Log Insight is included, without additional charge, in the Flex Core</p>
<b>Components</b>	VMware vRealize Log Insight
<b>Reporting</b>	<p>As vRealize Log Insight does not include vCenter Server or vSphere licensing; all use of those products must be reported separately, in addition to the usage of the vRealize Log Insight.</p> <p>When vRealize Log Insight is used as a component of the VMware Cloud Provider Program bundle, ESXi host monitoring is included in the bundle pricing for hosts using the bundles.</p> <p>When used as a component of the VMware Cloud Provider Program bundles, reporting may consist of two parts, depending on whether the log sources ingested by vRealize Log Insight are vRAM-based or non-vRAM-based.</p> <ul style="list-style-type: none"> <li>• Monthly reporting (via Usage Meter) will be provided on the VMware Cloud Provider Program bundle that is installed and being utilized as the basis for vRealize Log Insight. Refer to the instructions on bundle usage reporting in <a href="#">Appendix A</a>.</li> <li>• vRealize Log Insight usage will be included in the VMware Cloud Provider Program bundle usage reporting for logs ingested from VMware vSphere-based log sources, using bundle-based pricing and usage reporting.</li> <li>• Additional monthly manual reporting is required for the number of virtual machines or OS instances being monitored for non-vSphere- based log sources, using the standalone product pricing above.</li> </ul>
<b>Support</b>	Production Level Support
<b>More Information</b>	<p>When used with the VMware Cloud Provider Program bundles:</p> <ul style="list-style-type: none"> <li>• The vRealize Log Insight license included in the VMware Cloud Provider Program bundles is a "full" Log Insight license.</li> <li>• vRealize Log Insight is priced per "pipe" of data. This means that vRealize Log Insight may be used to ingest log files from any source in the Service Providers environment – some of those sources may be VMware vSphere-based and some may not be vSphere-based.</li> <li>• Examples of vSphere-based log sources include: VMs, vCenter Servers running on hosts using vCloud SP bundles.</li> <li>• Examples of non-vSphere-based log sources include: ESX host logging, switches/routers, ILO/iDRAC in ESX hosts, ESXi host or a firewall.</li> </ul>

	<ul style="list-style-type: none"> <li>• When reported as part of the VMware Cloud Provider Program bundles, pricing is included for the vRealize Log Insight usage within the bundle, but only for vSphere-based log sources because the bundle usage is measured by GB Reserved RAM. As such, the pricing for vRealize Log Insight covers log sources such as VMs and vCenter Servers running on hosts using vCloud SP bundles which are utilized on a per GB Reserved RAM basis.</li> <li>• However, if you are using vRealize Log Insight as part of a VMware Cloud Provider Program bundle but ingesting logs from non-vSphere-based log sources, you must report this incremental non-vSphere-based usage using the standalone product pricing at 4.5 points per managed virtual machine or OSI* per month (but only for the non-vSphere-based log sources). For OSI, we use the hostname fields of ingested events.</li> <li>• *OSI stands for Operating System Instance, which includes any server with an IP address that generates logs, including network devices and storage arrays.</li> </ul> <p>To learn more about vRealize Log Insight visit:  <a href="http://www.vmware.com/products/vrealize-log-insight">http://www.vmware.com/products/vrealize-log-insight</a> or <a href="https://cloudsolutions.vmware.com">https://cloudsolutions.vmware.com</a></p>
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\*OSI stands for Operating System Instance. This measure is used for non-VMware environments, including physical.

## VMware vRealize Network Insight

VMware vRealize Network Insight delivers intelligent operations for software-defined networking and security, optimizes network performance and availability with visibility and analytics across virtual and physical networks, and provide planning and recommendations for implementing micro-segmentation security, plus operational views to quickly and confidently manage and scale VMware NSX deployments.

### **Plan Micro-Segmentation and Deployment and Ensure Compliance**

Comprehensive net flow assessment and analysis lets you model security groups and firewall rules. vRealize Network Insight collects and analyzes network flows in real time and puts them in the context of the source and destination of the VMs and applications. Users can easily understand who is talking to whom and what flows need to be allowed or blocked. Recommendations make micro-segmentation easier to deploy and continuous monitoring keeps configurations in compliance over time.

### **Optimize Network Performance with 360 Visibility**

Get converged visibility across overlay and underlay, virtual and physical, private and public clouds. Integration with virtual (NSX) and physical layers (physical switches, routers, firewalls) connects the dots across vendors and clouds.

### **Ensure Health and Availability of NSX Deployment**

The simple search and intuitive UI lets admins and operators easily manage and troubleshoot NSX. Best practice checks guide users through their VXLAN and firewall implementation and alerts them to any pitfalls in their design and implementation of NSX.

### **Deliver Audit and Compliance**

A data center time machine tracks all changes for audit and compliance purpose. Customers can go back in time and look at historical changes and see how each change impacted the security of a virtual machine.

VMware vRealize Network Insight is available to Service Providers in two editions through Flex Model and standalone (refer to Table 3):

- vRealize Network Insight Advanced
- vRealize Network Insight Enterprise

VMware vRealize Network Insight Advanced is also available as part of the NSX Service Provider Data Center Enterprise Plus edition.

## Features/Editions

	vRNI Advanced	vRNI Enterprise
<b>Standalone Points</b> (per VM or OSI per Month)	<b>3</b>	<b>5</b>
<b>Flex Model Points</b> (per GB per Month)	<b>0.75</b>	<b>1.5</b>
Virtual Flows (VDS IPFIX, V2V, V2P)	✓	✓
NSX Firewall MicroSegmentation Planning and Operations (NSX IPFIX)	✓	✓
Application Discovery Dashboard (Names, Tags, RegEx)	✓	✓
NSX Day 2 Ops (Topology View, Health Checklist, Edge Load Balance Dashboard)	✓	✓
Visibility Across ThirdParty Switches, Routers, Firewalls and Load Balancers	✓	✓
Public APIs	✓	✓
DNS Mapping (Import Bind File)	✓	✓
NSX PCI Compliance Dashboard		✓
ServiceNow Integration for App Discovery		✓
Security Planning and Visibility for VMware Cloud on AWS		✓
Amazon Web Services (AWS)		✓
VMware Cloud™		✓
VMware Cloud on AWS Direct Connect		✓
Microsoft Azure		✓
DNS Resolution with Infoblox		✓
Physical Flows (NetFlow v7 and v9, and sFlow)		✓
Visibility for VMware Tanzu, Kubernetes and Red Hat OpenShift		✓
Network and Security Analytics (Top Talkers, Anomalies, Outlier Detection, etc.)		✓
Configurable and Extended Retention Period for Data		✓
Cisco ACI, BGP-EVPN Underlay Visibility		✓
vRealize Operations Manager™ Integration		✓

**Table 3**



VMware vRealize Network Insight Advanced

<b>Description</b>	VMware vRealize Network Insight Advanced delivers intelligent operations for software-defined networking and security, optimizes network performance and availability with visibility and analytics across virtual and physical networks, and provide planning and recommendations for implementing micro-segmentation security, plus operational views to quickly and confidently manage and scale VMware NSX deployments.
<b>Point Value / Charged Per</b>	<p><b>Standalone</b> 3 points per managed Virtual Machine (VM) per month</p> <p><b>Flex Model Add-On</b> 0.75 Points per 1 GB Reserved RAM (based on average monthly usage)</p>
<b>Components</b>	VMware vRealize Network Insight Advanced
<b>Reporting</b>	<p>Service Providers must manually report the number of virtual machines or Operating System Instances (OSIs) being monitored by vRealize Network Insight Advanced using standalone product pricing in the VMware Cloud Provider Program Commerce Portal. There is no automated report that keeps track of the number of managed VMs at this time, so it is the Service Provider's responsibility to accurately track and report this information each month.</p> <p>The number of virtual machines being monitored can be viewed in the vRealize Network Insight user interface by running a UI search query for "count of vmware vms". This is the number that should be reported to VMware.</p>
<b>Support</b>	Production Level Support
<b>More Information</b>	For more detailed product information on vRealize Network Insight Advanced go to the VMware web site: <a href="http://www.vmware.com/products/vrealize-network-insight.html">http://www.vmware.com/products/vrealize-network-insight.html</a> or <a href="https://cloudsolutions.vmware.com">https://cloudsolutions.vmware.com</a>

## VMware vRealize Network Insight Enterprise

<b>Description</b>	VMware vRealize Network Insight Enterprise delivers intelligent operations for software-defined networking and security, optimizes network performance and availability with visibility and analytics across virtual and physical networks, and provide planning and recommendations for implementing micro-segmentation security, plus operational views to quickly and confidently manage and scale VMware NSX deployments.
<b>Point Value / Charged Per</b>	<p><b>Standalone</b> 5 points per managed Virtual Machine (VM) per month</p> <p><b>Flex Model Add-On</b> 1.5 Points per 1 GB Reserved RAM (based on average monthly usage)</p>
<b>Components</b>	VMware vRealize Network Insight Enterprise
<b>Reporting</b>	<p>Service Providers must manually report the number of virtual machines or Operating System Instances (OSIs) being monitored by vRealize Network Insight Enterprise using standalone product pricing in the VMware Cloud Provider Program Commerce Portal. There is no automated report that keeps track of the number of managed VMs at this time. It is the Service Provider's responsibility to accurately track and report this information each month.</p> <p>The number of virtual machines being monitored can be viewed in the vRealize Network Insight user interface by running a UI search query for "<i>count of vmware vms</i>". This is the number that should be reported to VMware.</p>
<b>Support</b>	Production Level Support
<b>More Information</b>	For more detailed product information on vRealize Network Insight Enterprise go to the VMware web site: <a href="http://www.vmware.com/products/vrealize-network-insight.html">http://www.vmware.com/products/vrealize-network-insight.html</a> or <a href="https://cloudsolutions.vmware.com">https://cloudsolutions.vmware.com</a>

## VMware vRealize Operations

VMware vRealize Operations delivers Self-Driving operations management across physical, virtual, and cloud infrastructures – from on-premises VMware vSphere management to planning migration and capacity and what-if scenarios across VMware Cloud on AWS, Microsoft Azure, Google Cloud Platform, IBM Cloud, and more. It correlates data from enterprise applications to storage utilization in a unified, easy-to-use management console that provides actionable recommendations over performance, capacity, and configuration, with predictive analytics driving proactive action and policy-based automation.

vCenter servers that are not monitored by vCloud Usage Meter using vRealize operations will always be reported as a standalone line item on the monthly usage report. Usage of vRealize Operations is reported using vCloud Usage Meter 3.6.1 HP 5 (or) Usage Meter 4.3.

Actual capabilities of vRealize Operations Manager vary by edition. License keys for vRealize Operation 8.x will also work for vRealize Operations 7.x.

VMware vRealize Operations is available to Service Providers in four editions (refer to Table 4):

- vRealize Operations Chargeback
- vRealize Operations Standard
- vRealize Operations Advanced
- vRealize Operations Enterprise

Features/Editions	vROps Chargeback	vROps Standard	vROps Advanced	vROps Enterprise
<b>Standalone</b> Points per Managed VM or OSI per Month	N/A	2.5	6	12
<b>Flex Model</b> Points per GB per Month	Part of Flex Core	1.00	1.75	3.00
Pricing and chargeback billing for VMware Cloud Director and vCenter	✓	✓	✓	✓
Scale Out Operations Platform		✓	✓	✓
Single Sign-On		✓	✓	✓
Remote Collectors		✓	✓	✓
Visualization: Out-of-the Box Dashboards, Views, Reports, Heat Map, Performance Charts		✓	✓	✓
Performance Monitoring and Analytics		✓	✓	✓
vSphere Security and Compliance, including DISA, FISMA, ISO, CIS, PCI and HIPAA		✓	✓	✓
Real-Time Predictive Capacity Management Including Trending, Metering, Right-Sizing, Optimization		✓	✓	✓
Overall Data Center Cost Views		✓	✓	✓
What-If Scenarios for Adding / Removing VMs		✓	✓	✓
Manual Workload Optimization		✓	✓	✓

Features/Editions	vROps Chargeback	vROps Standard	vROps Advanced	vROps Enterprise
Predictive DRS and DRS management		✓	✓	✓
Guided Remediation		✓	✓	✓
vRealize Log Insight Integration		✓	✓	✓
vSAN Overview and Migration Dashboard		✓	✓	✓
Built-in High Availability (Automated Failover of Platform Nodes)			✓	✓
Customizable Dashboards, Reports and Views			✓	✓
Super Metrics, Metric Correlation, Relationship Mapping			✓	✓
Advanced APIs: Resource/Data Addition, Report Generation, etc.			✓	✓
Fine-Grained Cost Analytics for Reclamation, Planning and Public Cloud Cost Comparison			✓	✓
What-If Scenarios: - Hardware Procurement and Decommission - Adding vSAN Capacity - Migration to VMware Cloud on AWS; AWS, Azure, Google, IBM or VCPP and custom clouds			✓	✓
Custom VM Profiles			✓	✓
Multiple What-If Stacked Scenarios			✓	✓
Business and Operational-Intent Based Automated and Schedulable Workload Balancing			✓	✓
Integration with vRealize Automation for Initial and Ongoing Workload Placement			✓	✓
Host-Based Placement			✓	✓
Automated Actions			✓	✓
vSAN : Workload Balancing, Performance, Capacity/Cost management, ,Planning, Troubleshooting and Compliance			✓	✓
Monitoring of OS Resources (CPU, Disk, Memory, Network)			✓	✓
SDDC and CloudPod Health Management Pack			✓	✓
vRealize Orchestrator™ Management Pack			✓	✓
VMware Site Recovery Manager™ and vSphere Replication™ Management Packs			✓	✓
Custom Compliance Templates			✓	✓
Automated Compliance Drift Remediation			✓	✓
Service Discovery and Application Dependency Mapping			✓	✓

Features/Editions	vROps Chargeback	vROps Standard	vROps Advanced	vROps Enterprise
ServiceNow Integration			✓	✓
VMware Skyline Integration			✓	✓
VMware and Third-Party Infrastructure Management Packs: Storage, Networking, Converged/Hyper Converged as well as Non-vSphere Hypervisors			✓	✓
Kubernetes Management Pack: Monitoring for VMware Tanzu™ Kubernetes Grid™, OpenShift, Kubernetes on Amazon EC2, Azure, Google VMs and Others			✓	✓
Out-of-the-Box Discovery, Monitoring and Troubleshooting for Packaged Applications				✓
VMware Cloud on AWS: Workload Balancing, Performance, Capacity/Cost Management, Planning, Troubleshooting and Compliance			✓	✓
vRealize Automation™ Integration			✓	✓
Continuous Availability				✓
Out-of-the-Box and vRealize Network Insight Based Discovery, Monitoring and Troubleshooting for Packaged Applications				✓
Integration with CloudHealth® by VMware				✓
Multi-Cloud Monitoring via Native (AWS, Azure) and VMware Management Packs (Google Cloud Platform)				✓
VMware Care System Analytics Management Packs				✓
VMware and Third-Party Database, Middleware and Application Management Packs				✓
vRealize Network Insight Integration				✓

Table 4

## VMware vRealize Operations Chargeback

<b>Description</b>	VMware vRealize Operations Chargeback is applicable to Service Providers who want cost visibility and chargeback functions for their tenants.
<b>Point Value / Charged Per</b>	<p><b><u>Standalone/Current Bundles</u></b> Not Available</p> <p><b><u>Flex Model Core</u></b> Included at no cost</p>
<b>Components</b>	VMware vRealize Operations Manager Chargeback Edition
<b>Reporting</b>	<p>vCloud Usage meter 3.6.1(or higher versions UM 4.3) and vRealize Operations 7.5 or later versions recognize the Chargeback edition as part of the Flex core and there is no change to metering.</p> <p>If you have vRealize Operations 7.0 for tenant facing chargeback functions only, you need not report its usage as its included in Flex core. In order for vCloud Usage Meter to not include it into metering, on Usage Meter product screen, do not submit vRealize Operations credentials.</p> <p>There is no license key required for the Tenant App appliance. There is a license key required for the vRealize Operations appliance - the required license is "vRealize Operations for Chargeback Per Processor". This license will enable the Tenant App to access metrics from vRealize Operations. The vRealize Operations appliance will not be directly accessible. All configuration, management, and user access is via the Tenant App appliance. There is no cost associated with this license type when using the Flex Model.</p> <p>If you already use any other vRealize Operations license type (Standard, Advanced or Enterprise), there is no requirement to add the "vRealize Operations for Chargeback Per Processor" license. The Tenant App can be enabled based on the existing license.</p> <p>For detailed configuration instructions, see the "Using vRealize Operations Tenant App as a Service Provider" document.</p>
<b>Support</b>	Production Level Support

VMware vRealize Operations Standard

<b>Description</b>	VMware vRealize Operations Standard is applicable to Service Providers who need monitoring, performance, compliance and capacity optimization for their need enterprise applications and virtual machines.
<b>Point Value / Charged Per</b>	<p><b>Standalone</b> 2.5 points per managed VM or OSI per month</p> <p><b>Flex Model Add-On</b> 1 Point per 1 GB Reserved RAM (based on average monthly usage)</p>
<b>Components</b>	VMware vRealize Operations Manager Standard Edition
<b>Reporting</b>	<p>As vRealize Operations does not include vCenter Server or vSphere licensing; all use of those products must be reported separately, in addition to the usage of the vRealize Operations. The standalone version of vRealize Operations Standard Edition is reported based on monthly average of hourly count of VMs being managed in the month. Refer to <a href="#">Appendix A</a> for more details.</p> <p>vCenter servers using vRealize Operations will always be reported as a standalone line item on the monthly usage report, unless they are monitored by Usage Meter. vCloud Usage Meter 3.6 counts the average number of VMs for each vCenter server managed by vRealize Operations. Usage of vRealize Operations is reported using vCloud Usage Meter 3.6.1 HP 5 (or) Usage Meter 4.3.</p>
<b>Support</b>	Production Level Support
<b>More Information</b>	Get more out of vRealize Operations with third-party integrations and product extensions that enable comprehensive visibility across applications and infrastructure in one place with dashboards, reports, alerts and remediation actions. Refer to the <a href="#">VMware Marketplace</a> for information on vRealize Operations Management Packs. Additional information on vRealize Operations can be found here: <a href="https://cloudsolutions.vmware.com">https://cloudsolutions.vmware.com</a>

## VMware vRealize Operations Advanced

<b>Description</b>	VMware vRealize Operations Advanced is applicable to Service Providers who need virtual and physical infrastructure operations management capabilities including monitoring, performance, compliance and capacity optimization for their enterprise applications and virtual machines.
<b>Point Value / Charged Per</b>	<p><b>Standalone</b> 6 points per managed VM or OSI per month</p> <p><b>Flex Model Add-On</b> 1.75 Points per 1 GB Reserved RAM (based on average monthly usage)</p>
<b>Components</b>	VMware vRealize Operations Advanced Edition
<b>Reporting</b>	<p>As vRealize Operations does not include vCenter Server or vSphere licensing; all use of those products must be reported separately, in addition to the usage of the vRealize Operations. The standalone version of vRealize Operations Advanced Edition is reported based on monthly average of hourly count of VMs being managed in the month. Refer to <a href="#">Appendix A</a> for more details.</p> <p>vRealize Operations will always be reported as a standalone line item on the monthly usage report. vCloud Usage Meter 3.6 counts the average number of VMs for each vCenter server managed by vRealize Operations. Usage of vRealize Operations is reported using vCloud Usage Meter 3.6.1 HP 5 (or) Usage Meter 4.3.</p>
<b>Support</b>	Production Level Support
<b>More Information</b>	Get more out of vRealize Operations with third-party integrations and product extensions that enable comprehensive visibility across applications and infrastructure in one place with dashboards, reports, alerts and remediation actions. Refer to the <a href="#">VMware Marketplace</a> for information on vRealize Operations Management Packs. Additional information on vRealize Operations can be found here: <a href="https://cloudsolutions.vmware.com">https://cloudsolutions.vmware.com</a>



## VMware vRealize Operations Enterprise

<b>Description</b>	VMware vRealize Operations Enterprise is applicable to Service Providers who want hybrid cloud infrastructure operations management capabilities including operating system and application level monitoring, performance, compliance and capacity optimization.
<b>Point Value / Charged Per</b>	<p><b>Standalone</b> 12 points per managed VM or OSI per month.</p> <p><b>Flex Model Add On</b> 3 Points per 1 GB Reserved RAM (based on average monthly usage)</p>
<b>Components</b>	VMware vRealize Operations Enterprise Edition
<b>Reporting</b>	<p>As vRealize Operations does not include vCenter Server or vSphere licensing; all use of those products must be reported separately, in addition to the usage of the vRealize Operations. The standalone version of vRealize Operations Enterprise Edition is reported based on monthly average of hourly count of VMs being managed in the month. Refer to <a href="#">Appendix A</a> for more details.</p> <p>Non-UM-monitored vCenter servers using vRealize operations will always be reported as a standalone line item on the monthly usage report. vCloud Usage Meter 3.6 counts the average number of VMs for each vCenter server managed by vRealize Operations. Usage of vRealize Operations is reported using vCloud Usage Meter 3.6.1 HP 5 (or) Usage Meter 4.3.</p>
<b>Support</b>	Production Level Support
<b>More Information</b>	Get more out of vRealize Operations with third-party integrations and product extensions that enable comprehensive visibility across applications and infrastructure in one place with dashboards, reports, alerts and remediation actions. Refer to <a href="#">VMware Marketplace</a> for information on vRealize Operations Management Packs. Additional information on vRealize Operations can be found here: <a href="https://cloudsolutions.vmware.com">https://cloudsolutions.vmware.com</a>

## VMware vRealize Hyperic\*

<b>Description</b>	VMware vRealize Hyperic is an application management product. Through automatic discovery of infrastructure changes and handling of high volumes of metrics, vRealize Hyperic monitors the dynamics and elasticity of cloud applications. vRealize Hyperic provides visibility into the entire virtualized application stack, detects problems as soon as they occur and provides information to resolve these problems. To learn more about VMware vRealize Hyperic visit: <a href="http://www.vmware.com/products/vrealize-hyperic/">http://www.vmware.com/products/vrealize-hyperic/</a>
<b>Point Value / Charged Per</b>	<b>Standalone</b> 15 points per Machine (as defined below) per month
<b>Components</b>	VMware vRealize Hyperic
<b>Reporting</b>	“Machine” means, solely with respect to vRealize Hyperic products, a license to install and use on a server, a virtual machine or a network device. Therefore, the reporting from the Service Provider needs to be a combination of those three items gathered manually and entered monthly into the VMware Cloud Provider Program Commerce Portal.
<b>Support</b>	Production Level Support
<b>More Information</b>	Installation guides and supported configurations for this product should be reviewed and followed prior to installing vRealize Hyperic. The information is posted at <a href="http://support.hyperic.com">http://support.hyperic.com</a> . There is no automated usage reporting tool available for this product. Service Providers must gather and report all usage manually. For more details, refer to <a href="https://kb.vmware.com/s/article/78911">https://kb.vmware.com/s/article/78911</a>

\* VMware vRealize Hyperic reached End of Availability (EOA) on July 1, 2020 and is no longer available for purchase, however, it will continue to be supported through January 31, 2021 (End of General Support).

## VMware vRealize Suite

<b>Description</b>	<p>VMware vRealize® Suite is an enterprise ready cloud management platform that helps enterprise IT teams and service providers enable developers to quickly and easily build VM and container-based applications in any private, public, or hybrid cloud with secure and consistent operations. It provides a comprehensive management for IT services on VMware vSphere® and other hypervisors, physical infrastructure, containers, OpenStack, and external clouds such as VMware Cloud™ on AWS, Azure, and Google Cloud Platform, all with a unified management experience.</p> <p>VMware vRealize Suite delivers an enterprise proven hybrid cloud management platform which includes the following products: includes the following products: vRealize Automation, vRealize Operations, vRealize Log Insight, vRealize Business for Cloud<sup>1</sup> and vRealize Lifecycle Manager. vRealize Suite is available in 3 editions</p> <ul style="list-style-type: none"> <li>• Standard</li> <li>• Advanced</li> <li>• Enterprise</li> </ul> <p>Each edition includes different products. Service Provider should refer to Compare section here <a href="https://www.vmware.com/products/vrealize-suite.html">https://www.vmware.com/products/vrealize-suite.html</a> to choose from the three vRealize Suite editions to meet their specific needs.</p>
<b>Point Value / Charged Per</b>	<p><b>Flex Model Add-On</b></p> <ul style="list-style-type: none"> <li>• vRealize Suite Standard: 2 Points per 1 GB of reserved RAM (based on average monthly usage)</li> <li>• vRealize Suite Advanced: 3.5 Points per 1 GB of reserved RAM (based on average monthly usage)</li> <li>• vRealize Suite Enterprise: 4.25 Points per 1 GB of reserved RAM (based on average monthly usage)</li> </ul>
<b>Components</b>	VMware vRealize Suite
<b>Reporting</b>	Service Providers must manually report the number of GB of reserved RAM being monitored by vRealize Suite. There is no automated report that keeps track of the number of GB of reserved RAM monitored by vRealize Suite at this time. It is the Service Provider's responsibility to accurately track and report this information each month.
<b>Support</b>	Production Level Support
<b>More Information</b>	For more detailed product information on vRealize Suite, go to the VMware web site: <a href="https://www.vmware.com/products/vrealize-suite.html">https://www.vmware.com/products/vrealize-suite.html</a> or <a href="https://cloudsolutions.vmware.com">https://cloudsolutions.vmware.com</a>

<sup>1</sup>VMware vRealize Business for Cloud reached End of Availability (EOA) and is no longer available.

## VMware vRealize True Visibility Suite

VMware vRealize True Visibility Suite provides additional value to vRealize Operations by providing Service Provider partners with advanced analysis, capacity planning, monitoring, reporting, and alerting for the entire infrastructure. True Visibility Suite provides comprehensive storage, compute, network, converged infrastructure, container, database, and application monitoring within vRealize Operations, enabling staff to monitor and troubleshoot their entire infrastructure within one tool. Actual capabilities of vRealize Operations Manager vary by edition.

VMware vRealize True Visibility Suite is available to VMware Cloud Provider Program Service Providers in three editions:

- VMware vRealize True Visibility Suite Standard
- VMware vRealize True Visibility Suite Advanced
- VMware vRealize True Visibility Suite Enterprise

## VMware vRealize True Visibility Suite Standard

<b>Description</b>	VMware vRealize True Visibility Suite Standard Edition includes access to compute layer integrations such as Cisco UCS, as well as access to Dell EMC storage monitoring for VNX, VMAX, and XtremIO.
<b>Point Value / Charged Per</b>	1.25 points per VM or OSI per month subject to normal provider tier discounts.
<b>Components</b>	VMware vRealize True Visibility Suite Standard
<b>Reporting</b>	<p>Monthly usage for True Visibility Suite should align to the corresponding monthly usage reported for vRealize Operations and should be reported in the VMware Cloud Provider Program Commerce Portal each month.</p> <p>Follow the usage reporting instructions for vRealize Operations included in <a href="#">Appendix B</a> for capturing standalone reporting for vRealize Operations. <b>Reporting for True Visibility Suite is manual and is not captured by the Usage Meter.</b></p>
<b>Support</b>	VMware Production Level support.
<b>More Information</b>	<p>Limitations:</p> <p>Service Providers must have vRealize Operations in order to use True Visibility Suite. True Visibility Suite edition may not exceed the Service Provider's vRealize Operations edition. Example: A Service Provider with vRealize Operations Standard may not use True Visibility Advanced or Enterprise.</p>

## VMware vRealize True Visibility Suite Advanced

<b>Description</b>	VMware vRealize True Visibility Suite Advanced Edition includes everything from the Standard Edition, plus additional storage, network, converged, Hyper-Converged, virtualization, and container integrations such as NetApp FAS, Cisco Nexus, F5 BIG-IP, FlexPod, Pivotal, and more
<b>Point Value / Charged Per</b>	3 points per VM or OSI per month, subject to normal provider tier discounts.
<b>Components</b>	VMware vRealize True Visibility Suite Advanced
<b>Reporting</b>	<p>Monthly usage for True Visibility Suite should align to the corresponding monthly usage reported for vRealize Operations and should be reported in the VMware Cloud Provider Program Commerce Portal each month.</p> <p>Follow the usage reporting instructions for vRealize Operations included in <a href="#">Appendix B</a> for capturing standalone reporting for vRealize Operations. <b>Reporting for True Visibility Suite is manual and is not captured by the Usage Meter.</b></p>
<b>Support</b>	VMware Production Level support.
<b>More Information</b>	<p>Limitations</p> <p>Service Providers must have vRealize Operations in order to use True Visibility Suite. True Visibility Suite edition may not exceed the Service Provider's vRealize Operations edition. Example: A Service Provider with vRealize Operations Standard may not use True Visibility Advanced or Enterprise.</p>

## VMware vRealize True Visibility Suite Enterprise

<b>Description</b>	VMware vRealize True Visibility Suite Enterprise Edition includes everything from Standard and Advanced Edition, plus database, big data, platform, and application integrations including Oracle Database, Microsoft SQL, Amazon, SAP, and more.
<b>Point Value / Charged Per</b>	6 points per VM or OSI per month, subject to normal provider tier discounts.
<b>Components</b>	VMware vRealize True Visibility Suite Enterprise
<b>Reporting</b>	<p>Monthly usage for True Visibility Suite should align to the corresponding monthly usage reported for vRealize Operations and should be reported in the VMware Cloud Provider Program Commerce Portal each month.</p> <p>Follow the usage reporting instructions for vRealize Operations included in <a href="#">Appendix B</a> for capturing standalone reporting for vRealize Operations. <b>Reporting for True Visibility Suite is manual and is not captured by the Usage Meter.</b></p>
<b>Support</b>	VMware Production Level support.
<b>More Information</b>	<p>Limitations:</p> <p>Service Providers must have vRealize Operations in order to use True Visibility Suite. True Visibility Suite edition may not exceed the Service Provider's vRealize Operations edition. Example: A Service Provider with vRealize Operations Standard may not use True Visibility Advanced or Enterprise.</p>

## VMware Integrated OpenStack Data Center Edition

<b>Description</b>	<p>VMware Integrated OpenStack is a VMware-supported OpenStack distribution that makes it easy for IT to run and manage an enterprise-grade OpenStack cloud on top of VMware infrastructure. With VMware Integrated OpenStack, you can boost developer productivity and flexibility by providing a simple, vendor-neutral OpenStack API access to VMware best-of-breed infrastructure technologies.</p> <p>VMware Integrated OpenStack is available in 2 editions, Data Center and Carrier. Only Data Center edition is available in VMware Cloud Provider Program.</p>
<b>Point Value / Charged Per</b>	<p><b>Flex Model Add-On</b> 1 Points per 1 GB Reserved RAM (based on average monthly usage)</p>
<b>Components</b>	VMware Integrated OpenStack
<b>Availability</b>	VMware Integrated OpenStack Data Center Edition will reach End of Availability (EOA) and End of Support (EOS) on September 3, 2021.
<b>Support</b>	Production Level Support
<b>More Information</b>	For more detailed product information on Integrated OpenStack, go to the VMware web site <a href="https://www.vmware.com/products/openstack.html">https://www.vmware.com/products/openstack.html</a> or <a href="https://cloudsolutions.vmware.com">https://cloudsolutions.vmware.com</a>



# NETWORKING AND SECURITY MANAGEMENT

## VMware NSX

VMware NSX is the network virtualization platform for the Software-Defined Data Center, delivering the operational model of a virtual machine for entire networks.

VMware NSX editions are available to Service Provider in two sets:

1. **Flex Model** – provides 4 editions (NSX Data Center SP Enterprise Plus, NSX Data Center SP Advanced, NSX Data Center SP Professional & NSX Data Center SP Base)
2. **Current Bundles** – provides 3 editions (NSX SP Enterprise, NSX SP Advanced & NSX SP Base)

**Flex Model** - VMware NSX Data Center is available to Service Providers in four editions:

- NSX Data Center SP Enterprise Plus (Add-on): 4.5 Points per 1 GB Reserved RAM (based on average monthly usage)
- NSX Data Center SP Advanced (Add-on): 3 Points per 1 GB Reserved RAM (based on average monthly usage)
- NSX Data Center SP Professional (Add-on): 1 Points per 1 GB Reserved RAM (based on average monthly usage)
- NSX Data Center SP Base (Part of Core): No additional cost

The new NSX Data Center SP editions are only available in Flex model. The NSX Data Center SP editions are only effective with NSX-v 6.4.1 or later and NSX-T 2.2 or later.

Note: Service Providers can download either NSX-v or NSX-T with any of the NSX editions. Please use the following product licenses for each of the editions:

- NSX-DC SP Base per Process for VCPP program only
- NSX-DC SP Advanced per Process for VCPP program only
- NSX-DC SP Professional per Processor for VCPP program only
- NSX-DC SP Enterprise+ per Processor for VCPP program only

The table 5 below shows features of different NSX Editions specific to the VMware Cloud Provider Program in Flex.

Features/Editions	NSX DC SP Base	NSX DC SP Prof. <sup>6</sup>	NSX DC SP Adv.	NSX DC SP Ent. Plus
	Part of Core	Add-on to Flex 1 Points	Add-on to Flex 3 Points	Add on to Flex 4.5 Points
Flex Points per GB per Month <sup>1</sup>				
Distributed Switching and Routing	✓	✓	✓	✓
NSX Gateway Firewall (Stateful)	✓	✓	✓	✓
NSX Gateway NAT	✓	✓	✓	✓
Software L2 Bridging to Physical Environment	✓	✓	✓	✓
Dynamic Routing with ECMP (Active-Active)	✓	✓	✓	✓
Integration with Cloud Management Platforms	✓	✓	✓	✓
IPv6 with Static Routing and Static IPv6 Allocation	✓	✓	✓	✓
VPN - L3 (IPsec VPN and SSL VPN <sup>2</sup> )	✓	✓	✓	✓
Load Balancing <sup>5</sup> (NSX Advanced LB for NSX-T)	✓	✓	✓	✓
VPN - L2 (L2VPN)		✓	✓	✓
Distributed Firewalling for VMs and Workloads Running on Bare Metal		✓	✓	✓
Integration with NSX Cloud for AWS and Azure Support <sup>3</sup>		✓	✓	✓
Integration with Distributed Firewall (Active Directory, VMware AirWatch, Endpoint Protection and Third-Party Service Insertion)			✓	✓
Container Networking and Security			✓	✓
Multi-vCenter Networking and Security			✓	✓
IPv6 with Dynamic Routing, Dynamic IPv6 Allocation and Services			✓	✓
Context-aware Micro-Segmentation (L7 Application Identification, RDSH, Protocol Analyzer)			✓	✓
Distributed FQDN Whitelisting			✓	✓
NSX Distributed IDS <sup>4</sup>			✓	✓
VRF (Tier 0 Gateway VRFs) <sup>7</sup>		✓	✓	✓
Federation				✓

Features/Editions	NSX DC SP Base	NSX DC SP Prof. <sup>6</sup>	NSX DC SP Adv.	NSX DC SP Ent. Plus
<b>NSX INTELLIGENCE</b>				
VM-toVM Traffic Flow Analysis				✓
Firewall Visibility				✓
Automated Security Policy				✓
Rule and Group Recommendation Analytics				✓
<b>vREALIZE NETWORK INSIGHT ADVANCED</b>				✓
<b>VMWARE HCX ADVANCED</b>				✓

**Table 5**

<sup>1</sup> Per 1 GB Reserved RAM (based on average monthly usage)

<sup>2</sup> SSL VPN support in the NSX Data SP Base edition is limited to SSL VPN on NSX-v only.

<sup>3</sup> NSX Cloud is not included in VCPP NSX

<sup>4</sup> NSX Distributed IDS requires an additional subscription and is not in VCPP yet.

<sup>5</sup> NSX Advanced Load Balancer is included in NSX-DC SP Base as a replacement for NSX-T load balancer

<sup>6</sup> NSX Professional is now offered at 1 Pts

<sup>7</sup> VRF-Lite is included in NSX Professional and is to be reported manually. When deploying VRF-Lite on T0, report the usage of all VMs connected to this T0/T1 as NSX DC SP Professional.

## NSX-DC Base SP and NSX Advanced Load Balancer

[With EOL for NSX for vSphere \(in January 2022\)](#) all the NSX editions now support NSX-T. With NSX-T, the native NSX load balancer is being replaced by the NSX Advanced Load Balancer (ALB) Basic Edition (from Avi Networks). The following describes how the NSX ALB Basic is offered in NSX-DC Base SP edition for VCPP SPs.

- NSX Adv LB (ALB) Basic is offered as a feature parity replacement for NSX-T LB in NSX-DC Base SP. NSX ALB Basic in NSX-DC Base SP support is restricted to features that offer parity with NSX-T LB. Advanced features such as WAF, DNS, SSL Termination, rate-limiting etc. are not supported.
- NSX ALB replacing NSX-T LB in Enterprise editions: NSX ALB is offered to the Enterprises as 1:4 with NSX Advanced and Enterprise+ licenses. For example, for 4 CPU licenses of NSX Advanced (or Enterprise +) an Enterprise customer is entitled to a single Service Core license of NSX ALB. NSBU/Avi is putting capacity limits on CPU-based licenses (in VCPP as well as in other environments) - because Avi is primarily sold on a per Service Core basis which adds significantly more capacity and capabilities compared to NSX-T LB. This mapping of 1:4 applies to all usecases of NSX ALB.
- NSX ALB replacing NSX-T LB in VCPP NSX-DC Base SP edition:
  - NSX-DC SP Base includes NSX ALB as a feature parity replacement for NSX-T LB.
  - For every 640 GB Reserved RAM of NSX DC SP Base usage, one NSX ALB Basic Edition Service Core license is included. The same 1:4 capacity limits as described for Enterprise editions, also applies to VCPP NSX-DC Base SP edition. This 1:4 capacity limit is implemented by assuming 160 GB Reserved RAM per CPU.
  - Reporting: VCPP SPs continue to report the GB Reserved RAM for NSX in the 7 point bundle. When they use ALB, they also manually report ALB usage through the script on the Avi Controller. Please see the detailed deployment and reporting section below.
  - Metering: NSX Base continued to be metered on a Reserved RAM basis; we compare the actual usage (through Avi metering mentioned above) to the entitlement (calculated based on GB Reserved RAM consumption) to determine any overage beyond the 1:4 capacity limit.
  - NSX ALB Overage and enforcement: VCPP will monitor the 1:4 capacity limits based on the Reserved RAM reported for NSX-DC Base SP edition and the Avi Service Core licenses deployed (as described above with 640 GB Reserved RAM per NSX ALB Basic Edition Service Core for VCPP). If we see significantly more usage beyond the 1:4 ratio, we will start enforcing a plan to charge for the overage. Overage is billed at the NSX ALB Enterprise edition at 917 points per Service Core per month.
- Accessing NSX Advanced ALB: The process of acquiring the binaries and licenses for NSX ALB for NSX-DC Base SP is as follows:
  - NSX ALB is included in the Flex Core (7Pt bundle) BOM as part of NSX-DC Base SP.
  - The fulfillment of NSX ALB licenses is through a one-off order process and the binaries can then be accessed through the [Avi Networks portal](#). Once Avi Networks is integrated into myvmware.com, the NSX ALB licenses and binaries can be accessed in the same manner as the current NSX licenses.
- Deploying and Reporting NSX ALB entitlement in NSX -DC SP Base
  - Day 0: Downloading NSX ALB and registering
    - i. Download image and create a new Avi Controller Cluster
      1. Download the v18.2.10 Avi Controller OVA image from <https://portal.avinetworks.com/>
      2. Setup a 3 node Avi Controller Cluster
    - ii. Report the Avi Controller Cluster UUID to VMware (Avi Networks)
      1. Obtain the Avi Controller Cluster UUID
        - a. From a web browser execute `https://<controller_ip>/api/cluster/runtime` and grab the 'cluster\_uuid' from the 'node\_info' section

Sample usage of the '/api/cluster/runtime' API to find out the Avi Controller Cluster UUID (from Linux shell)

```
curl -X POST -H "Content-Type: application/json" -k https://<controller_ip>/login --data '{"username": "admin", "password": "xxxx"}' -c avi-sessionid
```

```
export X_CSRFTOKEN=$(cat avi-sessionid | grep csrftoken | awk -F ' ' '{print $7}')
```

```
curl -b avi-sessionid -H "Content-Type: application/json" -H "X-Avi-Version: 20.1.1" -H "X-CSRFToken: $X_CSRFTOKEN" -H "Accept-Encoding: application/json" -k https://<controller_ip>/api/cluster/runtime | jq .node_info.cluster_uuid  
"cluster-c1218463-d44b-4bb0-8bc6-924eb846299d"
```

b. Send an email with the following details:

- i. To: [rphadke@vmware.com](mailto:rphadke@vmware.com) CC: [ashishsh@vmware.com](mailto:ashishsh@vmware.com), [moorery@vmware.com](mailto:moorery@vmware.com), [katpallys@vmware.com](mailto:katpallys@vmware.com)
- ii. Subject: [VCPP] Avi Basic Onboarding - <SP\_NAME>
- iii. Body: Should contain the Avi Controller Cluster UUID
- iii. VCPP/Avi will register this Avi Controller Cluster for NSX ALB Basic edition usage
- iv. Avi will generate and send the required licenses and NSX ALB Basic edition guidelines. During the first phase, paper restricted Avi Enterprise edition licenses would be given to SPs. SPs would need to honor the paper restriction and use only the allowed Basic features. Guidelines for allowed features in Avi Basic edition are available.
- v. After this step, use the licenses and start provisioning workloads on the new Avi Controller Cluster
- o Monthly Reporting of NSX ALB Basic as part of NSX-DC Base SP: In addition to reporting the NSX BASE usage in GBRAM here are the details on reporting NSX ALB Basic edition usage every month
  - i. SPs would run the `vcpp_license_usage.py` script manually every month on the Avi Controller that was setup to service NSX ALB Basic Basic edition workloads
  - ii. The script output would contain usage in Service Cores and the Avi Controller Cluster UUID
  - iii. Report the NSX ALB Basic Service Cores used and the cluster UUID in the Commerce Portal
  - iv. VMware will monitor the 1:4 capacity limits based on the 160GB of NSX Base usage per processor will allocate an entitlement for 1 NSX ALB Basic edition Service Core for every 640 GB of NSX-DC Base SP. Overages might be charged if NSX ALB Basic edition usage exceeds this mapping.

Sample usage of the `vcpp_license_usage.py` script to report monthly Avi Basic edition usage (from Avi Controller shell)

```
python3 /opt/avi/scripts/vcpp_license_usage.py --controller_ip <controller_ip> --user admin --password xxxx --startdate 2020-01-01 --enddate 2020-02-0
```

Please report this usage for the period between 2020-01-01 and 2020-02-01 on the VCPP Commerce Portal

1. Cluster UUID: cluster-c1218463-d44b-4bb0-8bc6-924eb846299d
2. Service Cores: 12

**Current Bundles\*** - VMware NSX is available to Service Providers in three editions:

- NSX SP Enterprise (standalone or bundled)
- NSX SP Advanced (bundle only)
- NSX SP Base (bundle only)

The table 6 below shows features of different NSX Editions specific to the VMware Cloud Provider Program:

Features/Editions	NSX-SP Base	NSX-SP Advanced	NSX-SP Enterprise
Points per Managed VM or OSI per Month	(not available standalone)	(not available standalone)	25
Distributed switching and routing	✓	✓	✓
NSX Edge Firewall	✓	✓	✓
NAT	✓	✓	✓
SW L2 Bridging to Physical environment	✓	✓	✓
Dynamic Routing with ECMP (Active-Active)	✓	✓	✓
Integration with vRealize and OpenStack	✓	✓	✓
NSX Edge Load Balancing	✓	✓	✓
VPN (IPsec and SSL)	✓	✓	✓
Distributed Firewalling		✓	✓
Active Directory Integrated Firewall		✓	✓
Service Insertion (3rd party integration)		✓	✓
Server Activity Monitoring		✓	✓
Multi-Site NSX Optimizations			✓
Integration with HW VTEPs			✓
Remote Gateway (L2VPN)			✓

**Table 6**

\* Existing partners, as of May 1, 2019 may continue to use current bundles. Current bundles are not available to new VCPP partner contracts signed after April 30, 2019. Current bundles will be discontinued after July 31, 2021.

## VMware NSX Enterprise

<b>Description</b>	For Service Providers needing NSX Advanced, plus networking and security features across multiple domains and data centers.
<b>Point Value / Charged Per</b>	<p><b>Stand Alone</b> <sup>1</sup> 25 Points per managed virtual machine or OSI per month</p> <p><b>Legacy Bundle</b> <sup>2</sup> 12.0 Points</p>
<b>Components</b>	VMware NSX Enterprise
<b>Reporting</b>	<p>As VMware NSX Enterprise does not include vCenter Server or vSphere licensing; all use of those products must be reported separately, in addition to the usage of VMware NSX Enterprise. Edge Services Gateway, DLR and UDLR VMs are not counted towards vRAM consumption for NSX reporting.</p> <p>There are two options for metering and reporting NSX Enterprise:</p> <ol style="list-style-type: none"> <li>1. Standalone: Monthly reporting of consumption via Usage Meter</li> <li>2. Bundled: Monthly reporting of consumption via Usage Meter</li> </ol> <p>If you have Usage Meter 3.6.1 or older: Upgrade to 4.3 and see <a href="#">Appendix A</a> for manual reporting steps</p> <p>VMware Cloud Provider Program partners are only entitled to features within their respective NSX Edition (Base, Advanced, and Enterprise). Please refer to the NSX feature matrix for a list of features that are available for each edition.</p> <ul style="list-style-type: none"> <li>• The use of NSX Enterprise standalone (standalone means not part of a VMware Cloud Provider Program bundle), or as a component of VMware Cloud Provider Program bundles, shall be reported with Usage Meter. NOTE: NSX Base and NSX Advanced must be used as part of a VMware Cloud Provider Program bundle. The only version of NSX that can be used standalone is NSX Enterprise. vCloud Usage Meter 3.6.1 will detect NSX Editions based on features.</li> <li>• When bundling NSX: Usage Meter 3.6.1 or higher versions (UM 4.3) will detect mixed editions of NSX in a single vCenter environment.</li> <li>• Reporting of NSX Edge Features: Some NSX features are deployed in the edge gateway (not on ESXi host) and will not be metered by Usage Meter unless the hosts are prepared for NSX. In this case, you must make sure hosts are prepared such that they are metered by Usage Meter. If you do not configure hosts on NSX Edge, you must manually report vRAM consumption for NSX Edge features.</li> </ul> <p><b>Note:</b> UM 4.3 supports metering and auto-reporting of NSX-T.</p>
<b>Support</b>	Production Level Support
<b>More Information</b>	<p>The standalone NSX Edge client is a virtual appliance that provides connectivity between the end customers on premises data center and the VMware Cloud Provider Program cloud. Please note that adoption of NSX at the end customers on premises data center is not a requirement to avail this functionality.</p> <p>Standalone NSX Edge clients for NSX-v 6.2.4, 6.3.0 and 6.4.0 are now available for download at no additional charge (i.e. included in VMware NSX Enterprise) under the “Drivers &amp; Tools” sections of their respective NSX releases.</p> <p>For additional information on the standalone NSX Edge gateway, please refer to <a href="#">KB 2150142</a>.</p> <p>For more information on NSX Editions, please refer to:  <a href="https://www.vmware.com/products/nsx.html">https://www.vmware.com/products/nsx.html</a> or <a href="https://cloudsolutions.vmware.com">https://cloudsolutions.vmware.com</a></p>

<sup>1</sup> Existing partners still using VMware NSX Enterprise (25 points Stand Alone or 12 points Legacy Bundle) as of April, 2018 may continue to report through October 31, 2020. However, after this date, VMware NSX Enterprise will no longer be available

<sup>2</sup> Existing partners, as of May 1, 2019 may continue to use current bundles. Current bundles are not available to new VCPP partner contracts signed after April 30, 2019. Current bundles will be discontinued after July 31, 2021.



## VMware NSX Advanced Load Balancer (Avi Networks Load Balancer)

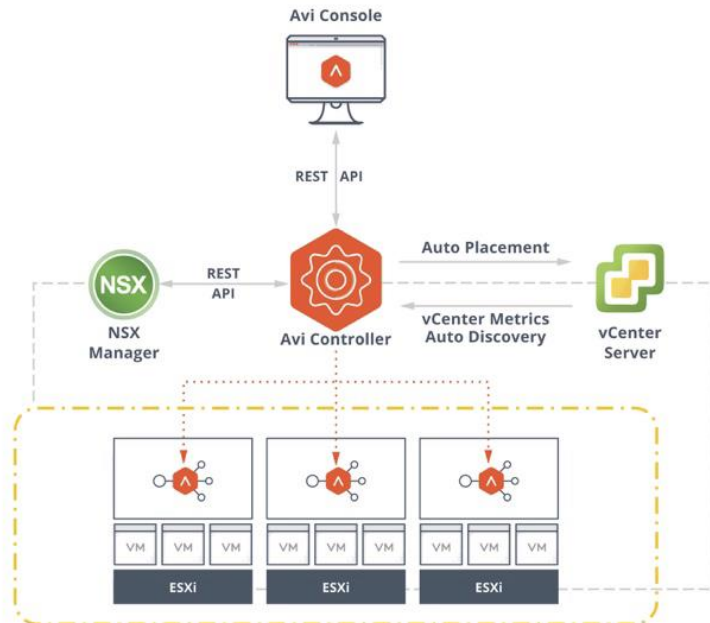
Enterprises wanting to automate L4-L7 services and enable self-service for their developers find that appliance-based load balancers slow down application rollouts, cause overprovisioning, and increase their operational costs. IT teams lack comprehensive visibility into the end-user experience and application performance. Legacy application delivery controllers (ADCs) offer little more than traffic counters; they lack analytics and insights, which makes troubleshooting application problems slow and complex. These legacy solutions also lack native integration with VMware vCenter, making it complex to deploy and manage applications, requiring manual virtual machine setup and networking configuration.

NSX Advanced Load Balancer is built on software-defined architectural principles delivering the flexibility and simplicity expected by IT and lines of business. Unlike legacy ADCs, which carry forward the disadvantages of their hardware appliances into their virtual software balancers, NSX Advanced Load Balancer separates the data and control planes to deliver application services in on-premises or cloud environments. This provides a centrally managed dynamic pool of load balancing resources for individual applications. Native integration with VMware vCenter automates configuration and deployment of application delivery, analytics, and autoscaling services.



### KEY LOAD BALANCING CAPABILITIES

- **30-second Load Balancer:** Integrates with VMware vCenter to:
  - Discover networks, pool members, and server configurations from vCenter
  - Spin up/download balancers by querying vCenter images
  - Horizontally autoscale load balancers
- **Pinpoint Analytics:** End-to-end traffic visibility delivers:
  - Real-time insights into network traffic
  - Network-DVR capabilities to record-and-replay network incidents
  - Rapid troubleshooting in under a minute
- **Multi-cloud Load Balancing:** Infrastructure-agnostic load balancing supports:
  - Multiple hypervisors in an environment
  - Multi-cloud deployments across public and private clouds
  - Distributed data plane to deploy load balancers close to applications
- **Predictive Autoscaling:** Autoscales resources to support:
  - Zero-touch scaling via rate thresholds without requiring manual configurations
  - Load balancer autoscaling on VM tier with vCenter APIs
  - Trigger autoscaling of applications based real time traffic patterns
- **Multitenancy:** Provides complete isolation to:
  - Prevent service disruptions across multiple tenants
  - Deploy load balancers per-application
  - Deploy distributed load balancers and manage centrally

## NSX Advanced Load Balancer (Avi LB) Architecture & Components



### NSX Advanced Load Balancer Components:

- Controller 
- Service Engine (VM, Container, BM) 

### Avi Load Balancer Metering and Reporting of Service Engines:

- You only pay for the Service Engines, Controllers are free
- Avi Service Engine runs as a VM in ESXi (Containers and BM are also options)
- Each Avi Service Engine consumes one or more Service Cores (vCPUs)
- Total consumption is the number of active Service Cores (highest number) for that month

<b>Description</b>	<p>VMware NSX Advanced Load Balancer for Cloud Providers offers the ability to consume NSX Advanced Load Balancer through VCPP points. Please see below for more information about the features in NSX Advanced Load Balancer.</p> <p>For more information about VMware NSX Advanced Load Balancer please refer to <a href="https://www.vmware.com/products/nsx-advanced-load-balancer.html">https://www.vmware.com/products/nsx-advanced-load-balancer.html</a></p>
<b>Point Value / Charged Per</b>	<p><b>Stand Alone</b></p> <p>917 Points per Service Core per month</p> <p>Partners consume VMware NSX Advanced Load Balancer on a per Service Core / per month basis. Please see table below for pricing information. A Service Core is a vCPU and each Service Engine can be allocated one or more Service Cores.</p>
<b>Components</b>	<p>VMware NSX Advanced Load Balancer for Cloud Providers editions include the following products</p> <ul style="list-style-type: none"> <li>• VMware NSX Advanced Load Balancer</li> </ul>
<b>Reporting</b>	<p>Service Providers must manually report points consumption based on the number of Service Cores across all Service Engines and across all Controllers.</p> <p><b>How to report NSX Advanced Load Balancer in VCPP:</b></p> <ul style="list-style-type: none"> <li>• Count the number of active Service Engine VMs deployed (as reported by each NSX Advanced Load Balancer Controller for that month)</li> <li>• Sum up the vCPUs assigned to all the Service Engine VMs. (with a Service Engine VM mapped to one or more vCPUs)</li> <li>• Report this number of vCPUs as Service Cores</li> <li>• You are billed only for this number of active Service Cores for that month</li> </ul>
<b>Support</b>	<p>Pricing reflects production level support</p>
<b>Eligibility</b>	<p>VMware NSX Advanced Load Balancer for Cloud Providers is available to all VCPP Cloud Providers.</p>
<b>More Information</b>	<p><a href="https://www.vmware.com/products/nsx-advanced-load-balancer.html">https://www.vmware.com/products/nsx-advanced-load-balancer.html</a></p>

## NSX Advanced Load Balancer Features

Features	Feature Description	NSX Advanced Load Balancer
<b>Standalone Points (per Service Core per Month)</b>		<b>917</b>
Enterprise-class load balancing	SSL termination, default gateway, GSLB, DNS, and other L4-L7 services	✓
Multi-cloud load balancing	Intelligent traffic routing across multiple sites and across private or public clouds	✓
Application performance monitoring	Monitor performance and record and replay network events like a Network DVR	✓
Predictive autoscaling	Application and load balancer scaling based on real-time traffic patterns	✓
Self-service	For app developers with REST APIs to build services into applications	✓
Cloud connectors	VMware Cloud on AWS, SDN/NFV controllers, OpenStack, AWS, GCP, Azure, Linux Server Cloud, OpenShift/Kubernetes	✓
Distributed application security fabric	Granular app insights from distributed service proxies to secure web apps in real time	✓
SSO / Client Authentication	SAML 2.0 authentication for back-end HTTP applications	✓
Automation and programmability	REST API based solution for accelerated application delivery; extending automation from networking to developers	✓
Application Analytics	Real-time telemetry from a distributed load balancing fabric that delivers millions of data points in real time	✓

Table 7

## VMware HCX

The table below shows features of different HCX Editions specific to the VMware Cloud Provider Program.

Features/Editions	HCX Advanced	HCX for Cloud Providers
Best-in class Encrypted Tunnel	✓	✓
High Throughput Network Extension	✓	✓
WAN Optimization	✓	✓
Legacy vSphere to modern mobility	✓	✓
Bulk Migration	✓	✓
Live Migration	✓	✓
Traffic Engineering		✓
Mobility Groups		✓
RAV (Bulk No-downtime Migration)		✓
Non-VMware to VMware migrations		✓
DR / Protection		✓
Mobility Optimized Networking		✓

**Table 8**

<b>Description</b>	<p>For Service Providers that are looking for</p> <ol style="list-style-type: none"> <li>1. Zero downtime Bulk Mobility of Enterprise Workloads</li> <li>2. No-IP change, Encrypted high-performance tunnel for migration traffic.</li> <li>3. Migrate non-VMware workloads to VMware</li> <li>4. Extend Network from Source to Target</li> <li>5. Multi-Cloud with Hybridity</li> <li>6. Hybrid DR with no IP Change.</li> </ol> <p>Read More <a href="https://cloud.vmware.com/vmware-hcx">here</a> (<a href="https://cloud.vmware.com/vmware-hcx">https://cloud.vmware.com/vmware-hcx</a>)</p>						
<b>Point Value / Charged Per</b>	<p><b>FLEX Model Add-On</b> 2.0 Points per GB of VRAM</p> <p><b>Others</b> No additional cost for HCX when included in other products like NSX DC SP Ent+, unless explicitly stated otherwise.</p>						
<b>Components and Packages of HCX</b>	<p>Currently VMware HCX comes in two Editions –</p> <ol style="list-style-type: none"> <li>1. HCX Advanced</li> <li>2. HCX for Cloud Providers (which includes HCX Advanced)</li> </ol> <p><b>Edition Availability</b></p> <table border="1" data-bbox="511 978 1276 1142"> <thead> <tr> <th>VCPP Bundles</th> <th>HCX Edition Available</th> </tr> </thead> <tbody> <tr> <td>Flex Model Add-on</td> <td>HCX for Cloud Provider</td> </tr> <tr> <td>NSX Enterprise Plus via Flex Model</td> <td>HCX Advanced is included in NSX usage</td> </tr> </tbody> </table>	VCPP Bundles	HCX Edition Available	Flex Model Add-on	HCX for Cloud Provider	NSX Enterprise Plus via Flex Model	HCX Advanced is included in NSX usage
VCPP Bundles	HCX Edition Available						
Flex Model Add-on	HCX for Cloud Provider						
NSX Enterprise Plus via Flex Model	HCX Advanced is included in NSX usage						
<b>Ordering HCX for FLEX Model</b>	<ul style="list-style-type: none"> <li>• Use One-off Order Form to get access.</li> <li>• Automated retrieval of HCX activation keys via API.</li> <li>• Applying activation keys enables HCX.</li> <li>• Activation key can be disabled via API as well.</li> </ul>						
<b>Ordering Through Others</b>	<ul style="list-style-type: none"> <li>• When HCX is bundled-in (ex. Advanced edition bundled with NSX DC SP Ent+), HCX does not require additional ordering process.</li> </ul>						
<b>Metering</b>	<ul style="list-style-type: none"> <li>• HCX is installed on the Destination and Source Landing Pads.</li> <li>• Billable vRAM of VMs only on the Destination Landing Pad.</li> <li>• All Powered-on VMs and Powered-off VMs are accounted.</li> <li>• All VMs under HCX-Enabled VCs and HCX-Enabled Tenants under VCD.</li> </ul>						
<b>Reporting</b>	<p>See page 10 for Billable vRAM definition</p> <p>HCX Manager have a 1:1 relationship with VC and VCD.</p> <p>For VC – All VMs under VC are counted for reserved RAM or allocated RAM calculation.</p> <p>For VCD – ALL VMs under the different vCD Orgs that are HCX Enabled are counted for reserved RAM or allocated RAM calculation.</p>						

	<p>Example Usage</p> <ul style="list-style-type: none"> <li>○ VM A - Powered on, 8GB RAM, Reservation Level 20%. <ul style="list-style-type: none"> <li>▪ Monthly Charge for VM A - Max (20% of 8GB RAM or 50% of 8 GB RAM) = 4GB RAM * 2 Points = 8 Points.</li> </ul> </li> <li>○ VM B - Powered on, 8GB RAM, Reservation Level 100% <ul style="list-style-type: none"> <li>▪ Monthly Charge for VM B - Max (100% of 8GB RAM or 50% of 8 GB RAM) = 8GB RAM * 2 Points = 16 Points.</li> </ul> </li> <li>○ VM C - Powered off, 8GB RAM, Reservation Level 100% <ul style="list-style-type: none"> <li>▪ Monthly Charge for VM C - Max (100% of 8GB RAM or 50% of 8 GB RAM) = 8GB RAM * 2 Points = 16 Points.</li> </ul> </li> </ul>
<p><b>Billing</b></p>	<p>Currently, it is manual. Usage will need to be manually uploaded to Billing Portal.</p>
<p><b>Support</b></p>	<p>Production Level Support</p>
<p><b>Additional Support Information</b></p>	<ul style="list-style-type: none"> <li>• Support for vCenter and VCD Destination Landing Pads.</li> <li>• Currently, VCD Support is only via Design Partnership.</li> <li>• Roadmap – CY'20 Q3/Q4 for potential wider availability.</li> <li>• Reach out to CPSBU and HCSBU for participation in Design Partnership.</li> </ul> <p><b><u>Current Limitations:</u></b></p> <p><b>1) Number of Tenants</b></p> <ul style="list-style-type: none"> <li>• HCX can support 1:1 Site Pairings between End-Customer On-premise environment and End-Customer Tenant on SP VCD instance.</li> <li>• HCX can support Max Site-Pairings up to 25 Tenants per VCD instance</li> <li>• Max of 100 Simultaneous Migrations per HCX Manager.</li> <li>• Infrastructure, Level 1 and Level 2 issues need to be handled by SP.</li> <li>• HCX can support up to a Max of 25 Service Mesh Instance. <ul style="list-style-type: none"> <li>- A Service Mesh is required for every PVDC.</li> </ul> </li> </ul> <p><b>2) Support for newer VCD features</b></p> <ul style="list-style-type: none"> <li>• HCX does not support the following <ul style="list-style-type: none"> <li>- CPoM</li> <li>- NSX-V VDR Org VDC Edge Gateway</li> <li>- NSX-T</li> </ul> </li> <li>• Flex VDCs and Compute Profiles</li> </ul>

# STORAGE AND AVAILABILITY

## VMware Site Recovery Manager

<b>Description</b>	<p>VMware Site Recovery Manager (“SRM”) is a disaster recovery solution that provides automated orchestration and non-disruptive testing of centralized recovery plans for all virtualized applications. It allows Service Providers to offer reliable, automated protection for workloads hosted on their own cloud infrastructure and being replicated to another cloud destination (DR of the cloud) or workloads running on customer premises and being replicated to the cloud infrastructure (DR to the Cloud). It integrates natively with VMware vSphere® Replication™ or with a broad range of array-based replication solutions available from all major VMware storage partners. A deployment founded on vSphere and complemented with SRM can dramatically lower the cost of DR through management and testing automation that eliminates the complexity of legacy processes, while ensuring fast and highly predictable recovery time objectives (RTO) to maintain business continuity.</p> <p>To learn more about Site Recovery Manager visit: <a href="http://www.vmware.com/products/site-recovery-manager/features.html">http://www.vmware.com/products/site-recovery-manager/features.html</a></p>
<b>Point Value / Charged Per</b>	<p>24 points per protected virtual machine per month</p> <p>A protected VM is any virtual machine that is part of an SRM protection group, regardless of whether the VM is powered on or off. A license is only required for the VM on the active site, no license is required at the failover site.</p>
<b>Components</b>	<p>VMware Site Recovery Manager Enterprise</p>
<b>Reporting</b>	<p>As SRM does not include vCenter Server or vSphere licensing, all use of those products must be reported separately, in addition to the usage of the SRM product. The vCloud Usage Meter must monitor Service Provider licensing on either the protected or failover site. Typically, Service Providers will monitor SRM licenses on the failover site when protecting a customer's private cloud resources. Site Recovery Manager or a Disaster Recovery system reporting consists of three parts:</p> <ul style="list-style-type: none"> <li>• Monthly reporting on the vCloud Service Provider Bundle that is installed and being utilized as the basis for SRM or Disaster Recovery on the <u>protected</u> side via Usage Meter.</li> <li>• Monthly reporting of SRM usage – number of VMs on the protected side via Usage Meter 4.3 with <a href="#">supported versions</a>.</li> <li>• Monthly reporting on the vCloud Service Provider Bundle that is installed and being utilized as the basis for SRM or Disaster Recovery on the <u>recovery</u> side via Usage Meter Reporting for SRM usage is done via vCenter 5 or later (required for SRM 5 and later.)</li> </ul> <p>The Service Provider needs to access the vCenter License Reporting Manager. That screen provides information on “License Capacity” as well as “Average Usage”. The Average Usage can be used as the number of virtual machines on the protected side for SRM versions not supported by the vCloud Usage Meter.</p>
<b>Support</b>	<p>VMware Production Level support</p>
<b>More Information</b>	<p>For more information, go to <a href="https://cloudsolutions.vmware.com">https://cloudsolutions.vmware.com</a> or <a href="http://www.vmware.com/products/site-recovery-manager/features.html">http://www.vmware.com/products/site-recovery-manager/features.html</a></p>



<b>Interoperability</b>	SRM / vCenter Compatibility: SRM / Storage Array interop: <a href="http://www.vmware.com/pdf/srm_storage_partners.pdf">http://www.vmware.com/pdf/srm_storage_partners.pdf</a> <u>SRM is not compatible with VMware Cloud Director. See vCloud Availability.</u>
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## VMware vSAN

VMware vSAN is a Hyper-Converged storage software that Hyper-Converged delivers immense value to datacenter storage with simple management, high performance and low cost.

vSAN is available in four editions to VMware Cloud Provider Program Service Providers:

- vSAN Standard
- vSAN Advanced
- vSAN Standard + Enterprise Add-on
- vSAN Advanced + Enterprise Add-on

The table below shows features of each edition.

Features/Editions	vSAN Standard	vSAN Advanced	vSAN Standard + Enterprise Add-On	vSAN Advanced + Enterprise Add-On
<b>Point for Server Version</b> (per GB per Month for Used Capacity)	<b>0.02</b>	<b>0.03</b>	<b>0.03</b>	<b>0.04</b>
<b>Point Value for Desktop Version</b> (per Concurrent Connection per Month)	<b>2</b>	<b>4</b>	<b>3</b>	<b>5</b>
Storage Policy-Based Management	✓	✓	✓	✓
vSAN Snapshots & Clones	✓	✓	✓	✓
Software Checksum	✓	✓	✓	✓
Rack Awareness	✓	✓	✓	✓
Replication (5 min RPO)	✓	✓	✓	✓
All-Flash Support	✓	✓	✓	✓
Block Access (iSCSI)	✓	✓	✓	✓
QoS - IOPS Limits	✓	✓	✓	✓
HTML5 User Interface	✓	✓	✓	✓
Cloud Native Storage*	✓	✓	✓	✓
Shared Witness*	✓	✓	✓	✓
Deduplication & Compression (All Flash Only)		✓		✓
RAID 5/6 Erasure Coding (All Flash Only)		✓		✓
vRealize Operations within vCenter*		✓		✓
Stretched Cluster with Local Failure Protection			✓	✓
Data-at-rest Encryption			✓	✓
Data-in-transit Encryption*			✓	✓
File Services*			✓	✓
HCI Mesh*			✓	✓

**Table 9**

\* These features need to be reported manually as Usage Meter 3.6.1 and above versions do not detect these as of today.

VMware vSAN Standard

<b>Description</b>	VMware vSAN Standard supports all-flash (SSD) and hybrid SSD/HDD configurations. To learn more about vSAN, visit: <a href="http://www.vmware.com/products/vsan.html#compare">http://www.vmware.com/products/vsan.html#compare</a>
<b>Point Value / Charged Per</b>	0.02 points per GB per month for Used Capacity
<b>Components</b>	VMware vSAN Standard
<b>Reporting</b>	<p>As vSAN Standard does not include vCenter Server or vSphere licensing; all use of those products must be reported separately, in addition to the usage of the vSAN Standard product.</p> <p>For manual reporting, please rely on Monthly Usage Report of any generally available vCloud Usage Meter version. Non-supported versions of Usage Meter will result in incorrect metering and compliancy issues.</p> <p>VMware vSAN Standard reporting consists of two parts:</p> <ul style="list-style-type: none"> <li>• Monthly reporting on the vCloud Service Provider Bundle that is installed and being utilized as the basis for vSAN Standard via Usage Meter.</li> <li>• Monthly reporting of vSAN Standard per Used Capacity via Usage Meter 3.6.1.</li> </ul> <p>NOTE: “Used Capacity” means the storage capacity consumed by vSAN Overhead (deduplication and compression metadata reservation) and all VM Objects (like VMDK, SWAP files, VMX, Snapshots, etc.) and not available for new allocations. The point values set forth above shall be reported for each GB of Used Capacity at any time during the applicable reporting period. Service Provider shall report the average amount of consumed capacity for each reporting month.</p>
<b>Support</b>	Production Level Support
<b>More Information</b>	<p>A hardware independent solution, vSAN Standard can be deployed on a wide range of servers. Service Providers have two options for deploying vSAN Standard – a) vSAN Ready Nodes (pre-validated configurations of servers) and b) a component-based hardware compatibility list that enables Service Providers to pick and choose the components they prefer.</p> <p>For the latest information on vSAN Ready Nodes and supported hardware components (I/O controllers, HDDs and SSDs), refer to the VMware Compatibility Guide for vSAN at: <a href="http://www.vmware.com/resources/compatibility/search.php?deviceCategory=vsan">http://www.vmware.com/resources/compatibility/search.php?deviceCategory=vsan</a>  <a href="https://www.vmware.com/products/vsan.html">https://www.vmware.com/products/vsan.html</a></p>

## VMware vSAN Advanced

<b>Description</b>	<p>VMware vSAN Advanced supports all-flash configuration and data efficiency features such as deduplication, compression and erasure coding, in addition to all functionalities of VMware vSAN Standard. VMware vSAN Advanced enables a two-tier all-flash architecture in which flash devices are intelligently used for both caching and data persistence to deliver high, predictable performance and sub-millisecond response times, making it ideal for tier-1 or business-critical workloads. To learn more about VMware vSAN Advanced, visit: <a href="http://www.vmware.com/products/vsan.html#compare">http://www.vmware.com/products/vsan.html#compare</a></p>
<b>Point Value / Charged Per</b>	0.03 points per GB per month for Used Capacity
<b>Components</b>	VMware vSAN Advanced
<b>Reporting</b>	<p>As vSAN Advanced does not include vCenter Server or vSphere licensing; all use of those products must be reported separately, in addition to the usage of the vSAN Advanced product.</p> <p>VMware vSAN Advanced system reporting consists of two parts:</p> <p>Monthly reporting on the vCloud Service Provider Bundle that is installed and being utilized as the basis for vSAN Advanced via Usage Meter.</p> <p>Monthly reporting of vSAN Advanced per Used Capacity via Usage Meter 3.6.1</p> <p>For manual reporting, please rely on Monthly Usage Report of any generally available vCloud Usage Meter version. Non-supported versions of Usage Meter will result in incorrect metering and compliancy issues.</p> <p>NOTE: “Used Capacity” means the storage capacity consumed by vSAN Overhead (deduplication and compression metadata reservation) and all VM Objects (like VMDK, SWAP files, VMX, Snapshots, etc.) and not available for new allocations. The point values set forth above shall be reported for each GB of Used Capacity at any time during the applicable reporting period. Service Provider shall report the average amount of consumed capacity for each reporting month.</p>
<b>Support</b>	Production Level Support
<b>More Information</b>	<p>A hardware independent solution, vSAN Advanced can be deployed on a wide range of servers. Service Providers have two options for deploying vSAN Advanced – a) vSAN Ready Nodes (pre-validated configurations of servers) and b) a component-based hardware compatibility list that enables Service Providers to pick and choose the components they prefer.</p> <p>For the latest information on vSAN Ready Nodes and supported hardware components (I/O controllers, HDDs and SSDs), refer to the VMware Compatibility Guide for vSAN at: <a href="http://www.vmware.com/resources/compatibility/search.php?deviceCategory=vsan">http://www.vmware.com/resources/compatibility/search.php?deviceCategory=vsan</a>  <a href="https://www.vmware.com/products/vsan.html">https://www.vmware.com/products/vsan.html</a></p>

VMware vSAN Standard + Enterprise Add-on

<b>Description</b>	VMware vSAN Standard supports all-flash (SSD) and hybrid SSD/HDD <sub>2</sub> configurations and is best suited for hybrid environments with per-VM storage policies. vSAN Enterprise Add-on provides support for stretched clusters with local failure protection, data-at-rest and data-in-transit encryption, file services and HCI Mesh.
<b>Point Value / Charged Per</b>	0.03 points per GB per month for Used Capacity
<b>Components</b>	VMware vSAN Standard+Enterprise Add-on
<b>Reporting</b>	<p>VMware vSAN Standard+Enterprise Add-on reporting consists of two parts:</p> <ul style="list-style-type: none"> <li>• Monthly reporting on the vCloud Service Provider Bundle that is installed and being utilized as the basis for vSAN Standard + Enterprise Add-on via Usage Meter.</li> <li>• Monthly reporting of vSAN Standard+Enterprise Add-on per Used Capacity via Usage Meter 3.6.1 HP 5 or later versions</li> </ul> <p>For manual reporting, please rely on Monthly Usage Report of any generally available vCloud Usage Meter version. Non-supported versions of Usage Meter will result in incorrect metering and compliancy issues.</p>
<b>Support</b>	Production Level Support
<b>More Information</b>	<p>A hardware independent solution, vSAN Standard+Enterprise Add-on can be deployed on a wide range of servers. Service Providers have two options for deploying vSAN Standard+Enterprise Add-on – a) vSAN Ready Nodes (pre-validated configurations of servers) and b) a component-based hardware compatibility list that enables Service Providers to pick and choose the components they prefer. For the latest information on vSAN Ready Nodes and supported hardware components (I/O controllers, HDDs and SSDs), refer to the VMware Compatibility Guide for vSAN at:</p> <p><a href="http://www.vmware.com/resources/compatibility/search.php?deviceCategory=vsan">http://www.vmware.com/resources/compatibility/search.php?deviceCategory=vsan</a>  <a href="https://www.vmware.com/products/vsan.html">https://www.vmware.com/products/vsan.html</a></p>

VMware vSAN Advanced + Enterprise Add-on

<b>Description</b>	VMware vSAN Advanced supports all-flash configurations and data efficiency features such as deduplication, compression, and erasure coding, in addition to all functionalities of vSAN Standard. vSAN Advanced enables a two-tier all-flash architecture in which flash devices are intelligently used for both caching and data persistence to deliver high, predictable performance and sub-millisecond response times, making it ideal for tier-1 or business-critical workloads. The vSAN Enterprise Add-on provides support for stretched clusters with local failure protection, data-at-rest and data-in-transit encryption, file services and HCI Mesh.
<b>Point Value / Charge per</b>	0.04 points per GB per month for Used Capacity
<b>Components</b>	VMware vSAN Advanced + Enterprise Add-on
<b>Reporting</b>	<p>VMware vSAN Advanced + Enterprise Add-on reporting consists of two parts:</p> <ul style="list-style-type: none"> <li>• Monthly reporting on the vCloud Service Provider Bundle that is installed and being utilized as the basis for vSAN Advanced + Enterprise Add-on via Usage Meter.</li> <li>• Monthly reporting of vSAN Advanced + Enterprise Add-on per Used Capacity via Usage Meter 3.6.1 HP 5 or later versions.</li> </ul> <p>For manual reporting, please rely on Monthly Usage Report of any generally available vCloud Usage Meter version. Non-supported versions of Usage Meter will result in incorrect metering and compliancy issues.</p> <p>NOTE: “Used Capacity” means the storage capacity consumed by vSAN Overhead (deduplication and compression metadata reservation) and all VM Objects (like VMDK, SWAP files, VMX, Snapshots, etc.) and not available for new allocations. The point values set forth above shall be reported for each GB of Used Capacity at any time during the applicable reporting period. Service Provider shall report the average amount of consumed capacity for each reporting month.</p>
<b>Support</b>	Production Level Support
<b>More Information</b>	<p>A hardware independent solution, vSAN Advanced + Enterprise Add-on can be deployed on a wide range of servers. Service Providers have two options for deploying vSAN Advanced + Enterprise Add-on – a) vSAN Ready Nodes (pre-validated configurations of servers) and b) a component-based hardware compatibility list that enables Service Providers to pick and choose the components they prefer. For the latest information on vSAN Ready Nodes and supported hardware components (I/O controllers, HDDs and SSDs), refer to the VMware Compatibility Guide for vSAN at:</p> <p><a href="http://www.vmware.com/resources/compatibility/search.php?deviceCategory=vsan">http://www.vmware.com/resources/compatibility/search.php?deviceCategory=vsan</a>  <a href="https://www.vmware.com/products/vsan.html">https://www.vmware.com/products/vsan.html</a></p>

## Hyper-Converged Infrastructure for VxRail Appliance

Review Table 10 (below) for Hyper-Converged Infrastructure product comparison:

Features/Editions	vCloud SP Hyper-Converged Infrastructure Bundle*	vSAN Standard + Enterprise Add-On for Hyper-Converged Infrastructure**	vSAN Advanced + Enterprise Add-On for Hyper-Converged Infrastructure**
Points per Month	6 GB Reserved RAM per month	0.03 per 1 GB of Used Capacity	0.04 per 1 GB of Used Capacity
vSphere Enterprise Plus	✓		
vCenter Server Standard	✓		
vRealize Log Insight	✓		
Storage Policy-Based Management		✓	✓
Distributed RAID		✓	✓
vSphere Distributed Switch		✓	✓
vSAN Snapshots & Clones		✓	✓
Rack Awareness		✓	✓
Replication (5min RPO)		✓	✓
All-Flash Support		✓	✓
Block Access (iSCSI)		✓	✓
Read/Write SSD Caching		✓	✓
Hybrid SSD/HDD2 configurations		✓	✓
Stretched Cluster & Nested Fault Domains		✓	✓
QoS – IOPS Limits		✓	✓
Flash Class Encryption		✓	✓
Deduplication & Compression (All Flash Only)			✓
Erasur Coding (All Flash Only)			✓

Table 10

\*Required

\*\*Choose either/or



VMware vCloud SP Bundle for Hyper-Converged Infrastructure (RESTRICTED)

<b>Description</b>	VMware vCloud SP Bundle for Hyper-Converged Infrastructure provides the compute virtualization and logging components required to deliver a vSphere-based Hyper-Converged Infrastructure solution, on authorized Dell EMC VxRail appliances only.
<b>Point Value / Charged Per</b>	6 points per 1 GB Reserved RAM per month (based on average monthly usage) (GB = 1024 MB)  Total points capped at 24 GB of Reserved RAM per virtual machine (see Reporting and Operational Details)
<b>Components</b>	<ul style="list-style-type: none"> <li>• VMware vSphere Enterprise Plus</li> <li>• VMware vCenter Server Standard</li> <li>• VMware vRealize Log Insight</li> </ul>
<b>Reporting</b>	<p>Service Providers must manually report to their Aggregator all vCloud SP Bundle for Hyper-Converged Infrastructure usage each month. Run the License Summary Report and capture the total usage for vSphere Enterprise Plus. Apply the formula (6 points per GB Reserved vRAM). <a href="#">See Reporting and Operational Details</a></p> <p>When the vCloud SP Bundle for Hyper-Converged Infrastructure is deployed on a Dell EMC VxRail Appliance, the Dell EMC VxRail Appliance also comes with vSAN Enterprise pre-installed, and pre-licensed. vSAN Enterprise usage is reported separately, in addition to the vCloud SP Bundle for Hyper-Converged Infrastructure (see <i>vSAN Standard + Enterprise Add-on for Hyper-Converged Infrastructure</i> or <i>vSAN Advanced + Enterprise Add-on for Hyper-Converged Infrastructure</i>).</p>
<b>Support</b>	Production Level Support
<b>More Information</b>	<a href="https://cloudsolutions.vmware.com">https://cloudsolutions.vmware.com</a>
<b>Limitations</b>	<p>The VMware vCloud SP Bundle Hyper-Converged Infrastructure is a “restricted” product and only qualifying Service Providers can rent the product from VMware. Only Service Providers with a valid 360 point or higher contract, and who will be deploying the software on authorized Dell EMC VxRail appliances only, are eligible to start the qualification process. Contact your local Business Development Manager or <a href="mailto:partnernetwork@vmware.com">partnernetwork@vmware.com</a> for requirements on qualification and additional details to use the product through the VMware Cloud Provider Program.</p> <p>When deployed on a Dell EMC VxRail Appliance, the following terms apply:</p> <ul style="list-style-type: none"> <li>• VxRail Appliances are sold and provided directly by a Third-Party VxRail Appliance Provider. The terms and conditions applicable to the VxRail Appliance (but not the vCloud SP Bundle for Hyper-Converged Infrastructure) are available from the VxRail Appliance Provider. The VMware end user license agreement applies to Service Provider’s use of the vCloud SP Bundle for Hyper-Converged Infrastructure, but does not apply to Service Provider’s usage of the VxRail Appliance.</li> </ul> <p>Service Provider’s use of the vCloud SP Bundle for Hyper-Converged Infrastructure is governed by VMware’s EULA located at: <a href="http://www.vmware.com/download/eula.html">http://www.vmware.com/download/eula.html</a>.</p> <p>Service Provider agrees that VMware may share Service Provider’s information (including reported usage of VxRail Appliances and vCloud SP Bundle for Hyper-Converged Infrastructure) to the VxRail Appliance Provider for purposes of providing the VxRail Appliances and vCloud SP Bundle for Hyper-Converged Infrastructure through the VMware Cloud Provider Program.</p>

VxRail Appliances are supported directly by the VxRail Appliance Provider. The support contact information is provided by the VxRail Appliance Provider. VMware does not provide support for VxRail Appliances.

The Service Provider agrees that VxRail Support will be provided for the VxRail Appliance by the VxRail Appliance Provider only to those Service Providers with a valid, active VMware Cloud Provider Program Agreement. If the VMware Cloud Provider Program Agreement is terminated, all rights to both the vCloud SP Bundle for Hyper-Converged Infrastructure and Support for the VxRail Appliance are terminated without refund.

VxRail Appliances are not provided by VMware and such appliances are therefore “AS IS” without warranty, support or indemnification from VMware. Any product warranty, support or indemnification is provided solely by the VxRail Appliance Provider.

VMware vSAN Standard + Enterprise Add-on for Hyper-Converged Infrastructure (RESTRICTED)

<b>Description</b>	VMware vSAN Standard + Enterprise Add-on for Hyper-Converged Infrastructure is designed to facilitate usage reporting for vSAN when deployed only on authorized Dell EMC VxRail appliances that ship with vSAN Enterprise licenses. VMware vSAN Standard supports all-flash (SSD) and hybrid SSD/HDD <sub>2</sub> configurations. The vSAN Enterprise Add-on provides support for Stretched Clusters and QoS Limits in vSAN 6.2 and provides support for Stretched Clusters and Nested Fault Domains, as well as Flash-Class Encryption in vSAN 6.6.
<b>Point Value / Charged Per</b>	0.03 points per GB per month for Used Capacity
<b>Components</b>	VMware vSAN Standard+VMware vSAN Enterprise Add-on for Hyper-Converged Infrastructure
<b>Reporting</b>	<p>As vSAN Standard + Enterprise Add-on for Hyper-Converged Infrastructure does not include vCenter Server or vSphere licensing, all use of those products must be reported separately using the vCloud SP Bundle for Hyper-Converged Infrastructure, in addition to the usage of vSAN Standard + Enterprise Add-on for Hyper-Converged Infrastructure.</p> <p>For manual reporting, please rely on Monthly Usage Report of any generally available vCloud Usage Meter version. Non-supported versions of Usage Meter will result in incorrect metering and compliancy issues.</p> <p>If the Service Provider is not using the space efficiency features of vSAN (e.g. Deduplication, compression, erasure coding), the usage detected by Usage Meter for vSAN Enterprise must be reported in the Commerce Portal as: vSAN Standard + Enterprise Add-on for Hyper-Converged Infrastructure.</p> <p>Reporting consists of two parts:</p> <p>Monthly reporting on the VMware vCloud SP Bundle for Hyper-Converged Infrastructure that is installed and being utilized as the basis for vSAN Standard + Enterprise Add-on for Hyper-Converged Infrastructure</p> <p>Monthly reporting of vSAN Standard + Enterprise Add-on for Hyper-Converged Infrastructure per Used Capacity</p> <p>NOTE: “Used Capacity” means the storage capacity consumed by all virtual machine disks (VMDK) and not available for new allocations. The point values set forth above shall be reported for each GB of Used Capacity at any time during the applicable reporting period. Service Provider shall report the average amount of consumed capacity for each reporting month.</p>
<b>Support</b>	Production Level Support
<b>More Information</b>	<a href="https://cloudsolutions.vmware.com/">https://cloudsolutions.vmware.com/</a>
<b>Limitations</b>	The VMware vSAN Standard + Enterprise Add-on for Hyper-Converged Infrastructure is a “restricted” product and only qualifying Service Providers can rent the product from VMware. Only Service Providers with a valid 360 point or higher contract, and whom will be deploying the software on an on authorized Dell EMC VxRail appliances only, are eligible to start the qualification process. Contact your local Business Development Manager or

partnernetwork@vmware.com for requirements on qualification, and additional details to use the product through the VMware Cloud Provider Program.

When deployed on a Dell EMC VxRail Appliance, the following terms apply:

VxRail Appliances are sold and provided directly by a Third-Party VxRail Appliance Provider. The terms and conditions applicable to the VxRail Appliance (but not the vSAN Standard + Enterprise Add-on for Hyper-Converged Infrastructure) are available from the VxRail Appliance Provider. The VMware end user license agreement applies to Service Provider's use of the vSAN Standard + Enterprise Add-on for Hyper-Converged Infrastructure but does not apply to Service Provider's usage of the VxRail Appliance. Service Provider's use of the vSAN Standard + Enterprise Add-on for Hyper-Converged Infrastructure is governed by VMware's EULA located at: <http://www.vmware.com/download/eula.html>

Service Provider agrees that VMware may share Service Provider's information (including reported usage of VxRail Appliances and vSAN Standard + Enterprise Add-on for Hyper-Converged Infrastructure) to the VxRail Appliance Provider for purposes of providing the VxRail Appliances and vSAN Standard + Enterprise Add-on for Hyper-Converged Infrastructure through the VMware Cloud Provider Program.

VxRail Appliances are supported directly by the VxRail Appliance Provider. The support contact information is provided by the VxRail Appliance Provider. VMware does not provide support for VxRail Appliances.

The Service Provider agrees that VxRail Support will be provided for the VxRail Appliance by the VxRail Appliance Provider only to those Service Providers with a valid, active VMware Cloud Provider Program Agreement. If the VMware Cloud Provider Program Agreement is terminated, all rights to both the vSAN Standard + Enterprise Add-on for Hyper-Converged Infrastructure and Support for the VxRail Appliance are terminated without refund.

VxRail Appliances are not provided by VMware and such appliances are therefore "AS IS" without warranty, support or indemnification from VMware. Any product warranty, support or indemnification is provided solely by the VxRail Appliance Provider.

VMware vSAN Advanced + Enterprise Add-on for Hyper-Converged Infrastructure (RESTRICTED)

<b>Description</b>	VMware vSAN Advanced + Enterprise Add-on for Hyper-Converged Infrastructure is designed to facilitate usage reporting for vSAN when deployed only on authorized Dell EMC VxRail appliances that ship with vSAN Enterprise licenses. VMware vSAN Advanced supports all-flash configurations and data efficiency features such as deduplication, compression, and erasure coding, in addition to all functionalities of vSAN Standard. vSAN Advanced enables a two-tier all-flash architecture in which flash devices are intelligently used for both caching and data persistence to deliver high, predictable performance and sub-millisecond response times, making it ideal for tier-1 or business-critical workloads. The vSAN Enterprise Add-on provides support for Stretched Clusters and QoS Limits in vSAN 6.2 and provides support for Stretched Clusters and Nested Fault Domains, as well as Flash-Class Encryption in vSAN 6.6.
<b>Point Value / Charged Per</b>	0.04 points per GB per month for Used Capacity
<b>Components</b>	VMware vSAN Advanced + VMware vSAN Enterprise Add-on for Hyper-Converged Infrastructure
<b>Reporting</b>	<p>As vSAN Advanced+Enterprise Add-on for Hyper-Converged Infrastructure does not include vCenter Server or vSphere licensing, all use of those products must be reported separately using the vCloud SP Bundle for Hyper-Converged Infrastructure, in addition to the usage of vSAN Advanced + Enterprise Add-on for Hyper-Converged Infrastructure.</p> <p>For manual reporting, please rely on Monthly Usage Report of any generally available vCloud Usage Meter version. Non-supported versions of Usage Meter will result in incorrect metering and compliancy issues.</p> <p>If the Service Provider is using the space efficiency features of vSAN (e.g. deduplication, compression, erasure coding), the usage detected by Usage Meter for vSAN Enterprise must be reported in the Commerce Portal as: vSAN Advanced + Enterprise Add-on for Hyper-Converged Infrastructure.</p> <p>Reporting consists of two parts:</p> <ul style="list-style-type: none"> <li>• Monthly reporting on the VMware vCloud SP Bundle for Hyper-Converged Infrastructure that is installed and being utilized as the basis for vSAN Advanced + Enterprise Add-on for Hyper-Converged Infrastructure.</li> <li>• Monthly reporting of vSAN Advanced + Enterprise Add-on for Hyper-Converged Infrastructure per Used Capacity.</li> </ul>
<b>Support</b>	Production Level Support
<b>More Information</b>	<a href="https://cloudsolutions.vmware.com/">https://cloudsolutions.vmware.com/</a>

<p><b>Limitations</b></p>	<p>The VMware vSAN Advanced + Enterprise Add-on for Hyper-Converged Infrastructure is a “restricted” product and only qualifying Service Providers can rent the product from VMware. Only Service Providers with a valid 360 point or higher contract, and who will be deploying the software on an authorized Dell EMC VxRail appliances only, are eligible to start the qualification process. Contact your local Business Development Manager or <a href="mailto:partnernetwork@vmware.com">partnernetwork@vmware.com</a> for requirements and additional details to use the product through the VMware Cloud Provider Program.</p> <p>When deployed on a Dell EMC VxRail Appliance, the following terms apply:</p> <ul style="list-style-type: none"> <li>• VxRail Appliances are sold and provided directly by a Third-Party VxRail Appliance Provider. The terms and conditions applicable to the VxRail Appliance (but not the vSAN Advanced + Enterprise Add-on for Hyper-Converged Infrastructure) are available from the VxRail Appliance Provider. The VMware end user license agreement applies to Service Provider’s use of the vSAN Advanced + Enterprise Add-on for Hyper-Converged Infrastructure, but does not apply to Service Provider’s usage of the VxRail Appliance.</li> </ul> <p>Service Providers of the vSAN Advanced + Enterprise Add-on for Hyper-Converged Infrastructure is governed by VMware’s EULA located at:  <a href="http://www.vmware.com/download/eula.html">http://www.vmware.com/download/eula.html</a></p> <ul style="list-style-type: none"> <li>• Service Provider agrees that VMware may share Service Provider’s information (including reported usage of VxRail Appliances and vSAN Advanced + Enterprise Add-on for Hyper-Converged Infrastructure) to the VxRail Appliance Provider for purposes of providing the VxRail Appliances and vSAN Advanced + Enterprise Add-on for Hyper-Converged Infrastructure through the VMware Cloud Provider Program.</li> <li>• VxRail Appliances are supported directly by the VxRail Appliance Provider. The support contact information is provided by the VxRail Appliance Provider. VMware does not provide support for VxRail Appliances.</li> </ul> <p>The Service Provider agrees that VxRail Support will be provided for the VxRail Appliance by the VxRail Appliance Provider only to those Service Providers with a valid, active VMware Cloud Provider Program Agreement. If the VMware Cloud Provider Program Agreement is terminated, all rights to both the vSAN Advanced + Enterprise Add-on for Hyper-Converged Infrastructure and Support for the VxRail Appliance are terminated without refund.</p> <ul style="list-style-type: none"> <li>• VxRail Appliances are not provided by VMware and such appliances are therefore “AS IS” without warranty, support or indemnification from VMware. Any product warranty, support or indemnification is provided solely by the VxRail Appliance Provider.</li> </ul>
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**VMware Horizon Advanced for Hyper-Converged Infrastructure (RESTRICTED)**

<b>Description</b>	VMware Horizon Advanced for Hyper-Converged Infrastructure is ideal for Cloud Providers looking to deliver virtual or remote desktops and applications through a single platform to end users – deployed on an authorized Dell EMC VxRail appliance. These desktop and application services – including RDS hosted applications, packaged applications with VMware ThinApp, SaaS applications, and even virtualized applications from Citrix – can all be accessed from one unified workspace to provide end users with all of the resources they want, at the speed they expect, with the efficiency the business demands. VMware Horizon Advanced for Hyper-Converged Infrastructure offers Service Providers all of the benefits of Horizon View Standard, and additionally extends the power of virtualization with virtual compute and virtual storage to drive down costs, enhance the user experience, and deliver greater business agility.
<b>Point Value / Charged Per</b>	21 points per concurrent connection per month
<b>Components</b>	<p>VMware Horizon Advanced (includes View, RDS Hosted Applications, and Identity Manager Standard Edition)</p> <ul style="list-style-type: none"> <li>• VMware vSAN Advanced for Desktop</li> <li>• VMware vSAN Enterprise Add-on for Desktop</li> <li>• VMware ThinApp Client</li> <li>• VMware ThinApp Packager</li> <li>• VMware Workstation</li> <li>• VMware vCenter Server for Desktop</li> <li>• VMware vSphere Enterprise Plus for Desktop</li> <li>• VMware vRealize Log Insight</li> </ul>
<b>Reporting</b>	<p>Service Providers must manually report Horizon Advanced for Hyper-Converged Infrastructure usage each month in the VMware Cloud Provider Program Commerce Portal. Information on the total number of concurrent connections is available through the Horizon Administrator Management Web UI (under View Configuration &gt; Product Licensing and Usage) as shown below. To report the Total Concurrent Connections for a given month, Service Providers shall use the Highest Count and reset the count at the end of each month.</p> <p>Alternatively, Service Providers can query the Horizon View API<sup>1</sup> and obtain the same data using the ConnectionServerHealth service. The sample PowerCLI commands to query the View Connection Server are as follows:</p> <ul style="list-style-type: none"> <li>• Open PowerCLI and run the following:</li> <li>• Import-Module VMware.VimAutomation.HorizonView</li> <li>• Establish Connection to Horizon (Connect-HVServer):</li> <li>• Connect-HVServer -server &lt;connection-server-fqdn&gt; -User &lt;username&gt; -Password &lt;password&gt; -Domain &lt;domain&gt;</li> <li>• Query Horizon for the connection statistics</li> </ul>

<sup>1</sup> The API module for Horizon requires PowerCLI 6.5 R1 and it is compatible with vSphere 5.5 and higher, and Horizon 7.0.2 and higher. For more information on Horizon View API and PowerCLI, refer to VMware EUC blog at <https://blogs.vmware.com/euc/2017/01/VMware-horizon-7-powercli-6-5.html>

	<ul style="list-style-type: none"> <li>• \$global:DefaultHVServers.ExtensionData.ConnectionServerHealth.ConnectionServerHealth_List().ConnectionData</li> </ul> <p>It is the Service Provider's responsibility to track and report the maximum concurrent connections accurately each month. VMware ThinApp Packager and VMware Workstation are for administrator use only.</p>
<b>Support</b>	Production Level Support
<b>More Information</b>	<a href="https://cloudsolutions.vmware.com/">https://cloudsolutions.vmware.com/</a>
<b>Limitations</b>	<p>The VMware Horizon Advanced for Hyper-Converged Infrastructure is a restricted product and only qualifying Service Providers can rent the product from VMware. Only Service Providers with a valid 360 point or higher contract, and whom will be deploying the software on authorized Dell EMC VxRail appliances only, are eligible to start the qualification process. Contact your local Business Development Manager or <a href="mailto:partnernetwork@vmware.com">partnernetwork@vmware.com</a> for requirements on qualification and additional details to use the product through the VMware Cloud Provider Program.</p> <p>When deployed on a Dell EMC VxRail Appliance, the following terms apply:</p> <ul style="list-style-type: none"> <li>• VxRail Appliances are sold and provided directly by a Third-Party VxRail Appliance Provider. The terms and conditions applicable to the VxRail Appliance (but not the Horizon Advanced for Hyper-Converged Infrastructure) are available from the VxRail Appliance Provider. The VMware end user license agreement applies to Service Provider's use of the Horizon Advanced for Hyper-Converged Infrastructure, but does not apply to Service Provider's usage of the VxRail Appliance.</li> </ul> <p>Service Provider's use of the Horizon Advanced for Hyper-Converged Infrastructure is governed by VMware's EULA located at: <a href="http://www.vmware.com/download/eula.html">http://www.vmware.com/download/eula.html</a>.</p> <ul style="list-style-type: none"> <li>• Service Provider agrees that VMware may share Service Provider's information (including reported usage of VxRail Appliances and Horizon Advanced for Hyper-Converged Infrastructure) to the VxRail Appliance Provider for purposes of providing the VxRail Appliances and Horizon Advanced for Hyper-Converged Infrastructure through the VMware Cloud Provider Program.</li> <li>• VxRail Appliances are supported directly by the VxRail Appliance Provider. The support contact information is provided by the VxRail Appliance Provider. VMware does not provide support for VxRail Appliances.</li> </ul> <p>The Service Provider agrees that VxRail Support will be provided for the VxRail Appliance by the VxRail Appliance Provider only to those Service Providers with a valid, active VMware Cloud Provider Program Agreement. If the VMware Cloud Provider Program Agreement is terminated, all rights to both the Horizon Advanced for Hyper-Converged Infrastructure and Support for the VxRail Appliance are terminated without refund.</p> <ul style="list-style-type: none"> <li>• VxRail Appliances are not provided by VMware and such appliances are therefore "AS IS" without warranty, support or indemnification from VMware. Any product warranty, support or indemnification is provided solely by the VxRail Appliance Provider.</li> </ul>



VMware Horizon Enterprise for Hyper-Converged Infrastructure (RESTRICTED)

<b>Description</b>	<p>VMware Horizon Enterprise for Hyper-Converged Infrastructure is ideal for Service Providers looking to automate the management and delivery of virtual or remote desktops and applications, through a single platform to end users – deployed on authorized Dell EMC VxRail appliances only. VMware Horizon Enterprise for Hyper-Converged Infrastructure offers Service Providers all of the benefits of Horizon Advanced for Hyper-Converged Infrastructure and additionally streamlines management and provisioning with advanced self-service and monitoring capabilities to reduce operating costs and provide IT organizations with the tools to be more responsive to changing business requirements. Horizon Enterprise supports RHEL, Ubuntu, CentOS and NeoKylin Linux in addition to Microsoft Windows operating system.</p>
<b>Point Value / Charged Per</b>	<p>30 points per concurrent connection per month</p>
<b>Components</b>	<p>VMware Horizon Enterprise (includes View for Windows and Linux, RDS Hosted Applications, Identity Manager Standard Edition, vRealize Operations for Horizon Adapter and Instant Clones)</p> <ul style="list-style-type: none"> <li>• VMware App Volumes Enterprise and Dynamic Environment Manager</li> <li>• VMware vSAN Advanced for Desktop</li> <li>• VMware vSAN Enterprise Add-on for Desktop</li> <li>• VMware Fusion Professional</li> <li>• VMware ThinApp Client</li> <li>• VMware ThinApp Packager</li> <li>• VMware Workstation</li> <li>• VMware vCenter Server for Desktop</li> <li>• VMware vSphere Enterprise Plus for Desktop</li> <li>• VMware vRealize Log Insight</li> </ul>
<b>Reporting</b>	<p>Service Providers must manually report Horizon Enterprise for Hyper-Converged Infrastructure usage each month in the VMware Cloud Provider Program Commerce Portal. Information on the total number of concurrent connections is available through the Horizon Administrator Management Web UI (under View Configuration &gt; Product Licensing and Usage) as shown below. To report the Total Concurrent Connections for a given month, Service Providers shall use the Highest Count and reset the count at the end of each month.</p> <p>Alternatively, Service Providers can query the Horizon View API<sup>1</sup> and obtain the same data using the ConnectionServerHealth service. The sample PowerCLI commands to query the View Connection Server are as follows:</p> <ul style="list-style-type: none"> <li>• Open PowerCLI and run the following:</li> <li>• Import-Module VMware.VimAutomation.HorizonView</li> <li>• Establish Connection to Horizon (Connect-HVServer):</li> <li>• Connect-HVServer -server &lt;connection-server-fqdn&gt; -User &lt;username&gt; -Password &lt;password&gt; -Domain &lt;domain&gt;</li> <li>• Query Horizon for the connection statistics</li> <li>• \$global:DefaultHVServers.ExtensionData.ConnectionServerHealth.ConnectionServerHealth_List().ConnectionData</li> </ul> <p>It is the Service Provider’s responsibility to track and report the maximum concurrent connections accurately each month. VMware ThinApp Packager and VMware Workstation are for administrator use only. Service Providers must manually report to their Aggregator all Horizon Enterprise for Hyper-Converged Infrastructure usage each month. Information on the total number of concurrent connections is available through the Horizon Administrator Management Web UI (under View Configuration &gt; Product Licensing and Usage) as shown</p>

	below. To report the Total Concurrent Connections for a given month, Service Providers shall use the Highest Count and reset the count at the end of each month.
<b>Support</b>	Production Level Support
<b>More Information</b>	<a href="https://cloudsolutions.vmware.com/">https://cloudsolutions.vmware.com/</a>

<sup>1</sup> The API module for Horizon requires PowerCLI 6.5 R1 and it is compatible with vSphere 5.5 and higher, and Horizon 7.0.2 and higher. For more information on Horizon View API and PowerCLI, refer to VMware EUC blog at <https://blogs.vmware.com/euc/2017/01/VMware-horizon-7-powercli-6-5.html>

# VMWARE INTEGRATED STACK

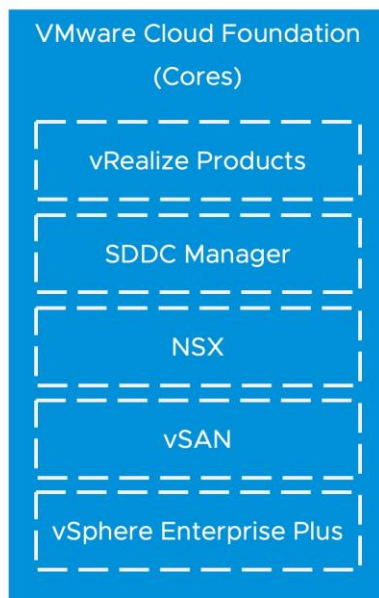
## VMware Cloud Foundation

VMware Cloud Foundation is a product that bundles vSphere, NSX, vSAN, SDDC Manager, and vRealize Suite into a single, integrated product with Day 0 automation and Day 2 Lifecycle Management.

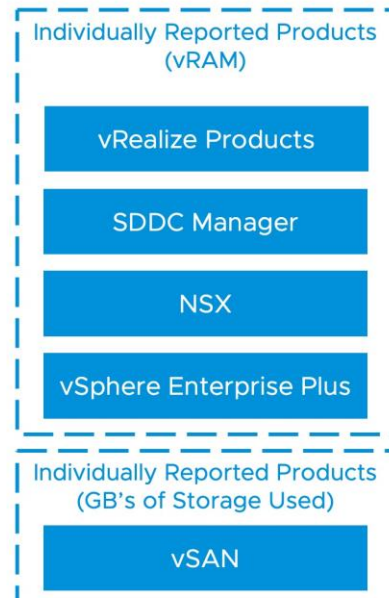
VMware Cloud Foundation is available in two pricing strategies:

- **Physical Cores**
  - Based on the count of Physical Cores from hosts that are actively running workloads, including all Management and Workload Domain hosts.
  - Core model bundles all of the products into a single line item
  - vRealize Suite Enterprise included in VCF Advanced and Enterprise editions
  - vRealize products available in Per VM pricing for VCF Standard
  
- **vRAM Reserved**
  - Based on reporting each of the products individually.
    - vSphere, NSX, and SDDC Manager are each available through vRAM based licensing
    - vSAN available based on GB's of Storage Used
  - Available as a Build-Your-Own VCF Edition
  - NSX and vSAN utilize feature based metering from Usage Meter

### Cores Based Pricing



### vRAM Pricing Model



- \* The use of the Core and vRAM pricing model does not include VMware Tanzu Basic. That will be made available separately from VMware Cloud Foundation (Core Based model) or SDDC Manager on vRAM.
- \* VCF requires deploying vSAN in the Management domain, as well as NSX Managers for the Management and workload domains.

## VMware Cloud Foundation (Core Based Model)

<b>Description</b>	<p>VMware Cloud Foundation for Cloud Providers offers the ability to consume VMware Cloud Foundation through VCPP points. VMware Cloud Foundation for Cloud Providers is offered at three levels: Basic, Standard, and Enterprise. Please see below for more information about the editions.</p> <p>VMware recommends, but does not require Professional Services for deploying VCF: VCF Deploy Service (Standard SOW for 3.7 or later), plus additional services applicable for the specific Cloud Provider.</p> <p>For more information about VMware Cloud Foundation please refer to <a href="https://www.vmware.com/products/cloud-foundation.html">https://www.vmware.com/products/cloud-foundation.html</a></p>
<b>Point Value / Charged Per</b>	<p>Partners consume VMware Cloud Foundation bundles on a per core / per month basis. Please contact your VMware Business Development Manager or Aggregator for pricing information for each bundle.</p>
<b>Components</b>	<p>VMware Cloud Foundation for Cloud Providers editions include the following products</p> <ul style="list-style-type: none"> <li>• VMware vSphere Enterprise Plus</li> <li>• vCenter Server Standard</li> <li>• VMware SDDC Manager</li> <li>• VMware NSX Professional, Advanced, or Enterprise+ (based on VCF Edition)</li> <li>• vSAN Advanced or Enterprise (based on VCF Edition)</li> <li>• vRealize Network Insight Advanced or Enterprise (Based on VCF Edition)</li> <li>• vRealize Suite Enterprise (available with VCF Advanced and Enterprise)</li> </ul>
<b>Reporting</b>	<p>Service Providers must use UM 4.3 to report points consumed by VMware Cloud Foundation for Cloud Providers environment.</p>
<b>Support</b>	<p>Pricing reflects production level support</p>
<b>How to Acquire</b>	<p>Licensing for VCF is available by combining SDDC Manager, vSphere, NSX, and vSAN licenses, all available today for partners my.vmware entitlement accounts. Partners looking to utilize the a single VCF license key that enables all of the products can ask for it to be added through the one-off order form on the VMware Commerce Portal.</p>
<b>More Information</b>	<p><a href="https://www.vmware.com/products/cloud-foundation.html">https://www.vmware.com/products/cloud-foundation.html</a></p>

VMware Cloud Foundation Editions	VCF Standard	VCF Advanced	VCF Enterprise	VCF Standard without vSAN*	VCF Advanced without vSAN*	VCF Enterprise without vSAN*
vSphere Enterprise Plus	✓	✓	✓	✓	✓	✓
SDDC Manager	✓	✓	✓	✓	✓	✓
vSAN Advanced	✓	✓				
vSAN Enterprise			✓			
NSX DC SP Advanced	✓	✓		✓	✓	
NSX DC SP Enterprise Plus			✓			✓
vRNI Advanced		✓			✓	
vRNI Enterprise			✓			✓
vRealize Suite Enterprise		✓	✓		✓	✓

**Table 11**

\* VCF Editions without vSAN are only available for Workload domains. When deploying VCF, the Management Domain requires the use of vSAN.

VMware Cloud Director - Stand-Alone (Core Based Model)

<b>Description</b>	VMware Cloud Director, the strategic cloud management platform for the VMware Cloud Provider Program, enables Service Providers to rapidly build and monetize cloud-scale, agile, differentiated cloud environments. Cloud Director enables services providers to deliver multi-tenant, self-service, NSX-based networking services, thus deriving additional revenue from their VMware Cloud Director environment.
<b>Point Value / Charged Per</b>	12 points per core per month
<b>Components</b>	VMware Cloud Director
<b>Reporting</b>	<p>Service Providers must manually report points consumption based on the number of physical cores across all hosts running VMs under management by Cloud Director for Cloud Providers environment.</p> <p>HOW TO REPORT:</p> <ul style="list-style-type: none"> <li>• Calculate the number of physical cores across all hosts that are running VMs under management by Cloud Director.</li> <li>• Report the number of cores in the Commerce Portal</li> </ul> <p>Report against the SKU associated with the VMware Cloud Director Stand-Alone.</p>
<b>Support</b>	Production Level Support
<b>How to Acquire</b>	VMware Cloud Director Stand-Alone is provided to partners upon request as part of the one-off-order for VMware Cloud Foundation.
<b>More Information</b>	More information is available at VMware Cloud Provider Program Cloud Director or <a href="https://cloudsolutions.vmware.com">https://cloudsolutions.vmware.com</a>

## VMware SDDC Manager

<b>Description</b>	VMware SDDC Manager is used for deploying the entire VMware Cloud Foundation product. This product is available only with Flex Pricing Model. This specific offering for Cloud Providers is used to provide VCF through the Flex Pricing Model. SDDC Manager on Flex Pricing Model allows Partners to meter and report each component of the VMware Cloud Foundation product on a per product and edition basis. This includes using feature based metering for vSAN and NSX as is done with Flex Pricing Model and Usage Meter.
<b>Point Value / Charged Per</b>	1.00 Points per 1 GB Reserved RAM (based on average monthly usage) Total points capped at 24 GB of Reserved RAM per virtual machine (see Reporting and Operational Details)
<b>Components</b>	<ul style="list-style-type: none"> <li>• Cloud Builder</li> <li>• SDDC Manager</li> </ul>
<b>Reporting</b>	<p>Service Providers must manually report usage for SDDC Manager based on total number of vSphere related Units from the vCenters Deployed by SDDC Manager. This includes both the Management Domain and any Workload Domains that are deployed.</p> <p>It is recommended that partners should deploy a separate Usage Meter agent for any VMware Cloud Foundation deployments that will utilize the SDDC Manager reporting against the vRAM model. Partners can decide on a per vCenter basis if the vCenter reports SDDC Manager on vRAM or if all components report under a Core Based VCF edition.</p> <p>HOW TO REPORT:</p> <ul style="list-style-type: none"> <li>• Using latest version of Usage Meter 4.3, aggregate all vSphere related bundles that appear on the Monthly Usage Report.</li> <li>• Report the aggregated number of vSphere Units in the Commerce Portal under the SDDC Manager line item.</li> </ul>
<b>Support</b>	Production Level Support
<b>How to Acquire</b>	VMware SDDC Manager licenses are available for all partners in their my.vmware entitlement accounts. The SDDC Manager SKU is available for all partners on their monthly report. No restrictions are applied for partners looking to adopt SDDC Manager or VCF.
<b>More Information</b>	More information is available at or <a href="https://cloudsolutions.vmware.com">https://cloudsolutions.vmware.com</a>



VMware Cloud Provider Pod

<b>Description</b>	<p>Cloud Provider Pod comes in only one edition. It allows Cloud Providers to automatically deploy a new Cloud Provider environment based on Cloud Director.</p> <p>Cloud Provider Pod is a self-contained package that includes all software components needed to deploy a full Cloud Provider Stack consistent with VVD for Cloud Providers. It works in conjunction with Cloud Provider Pod Designer to customize the environment based on user input.</p>
<b>Availability</b>	<p>VMware Cloud Provider Pod reached End of Availability on September 30, 2020 and will reach End of Support on December 31, 2020. Effective as of September 30, 2020 there are no updates or new releases of Cloud Provider Pod.</p> <p>The capability will be transitioned to VMware Validated Design (VVD) for Cloud Providers. Guidance is available here for VCF <a href="https://bit.ly/3031crI">https://bit.ly/3031crI</a> And here for additional Cloud Director on VCF: <a href="https://bit.ly/3forScG">https://bit.ly/3forScG</a></p>
<b>Point Value / Charged Per</b>	<p>No cost</p>
<b>Components</b>	<p>Cloud Provider Pod</p>
<b>Reporting</b>	<p>Cloud Provider Pod is not subject to reporting or billing at this time.</p>
<b>Support</b>	<p>Production Level Support</p>
<b>More Information</b>	<p>More information is available at <a href="https://cloudsolutions.vmware.com">https://cloudsolutions.vmware.com</a></p>

# DESKTOP AND APPLICATION VIRTUALIZATION

## VMware App Volumes

VMware App Volumes is a portfolio of integrated application and user management solutions for VMware Horizon, Citrix XenApp and XenDesktop, and RDSH virtual environments. These solutions take desktop and application environments to the next level by providing faster application delivery, unified application and user management, while reducing IT costs by up to 70%. To learn more about VMware App Volumes visit: <http://www.vmware.com/products/appvolumes/>

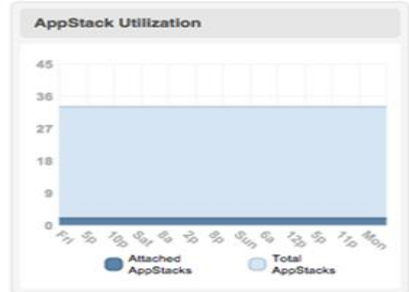
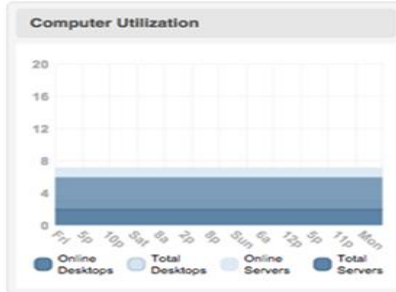
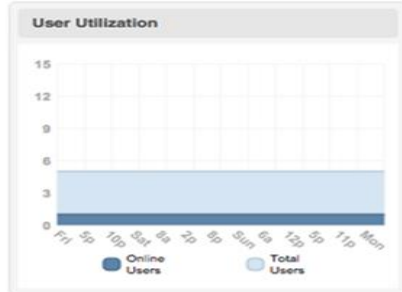
VMware App Volumes is available to service providers in two editions (refer to Table 12):

- App Volumes Standard
- App Volumes Advanced

Features	Standard	Advanced
<b>Point Value</b> (per Concurrent Connection per Month)	<b>4</b>	<b>7</b>
VMware App Volumes Standard & Dynamic Environment Manager	✓	✓
VMware ThinApp Client		✓
VMware ThinApp Packager		✓
VMware Workstation		✓
VMware vRealize Operations Adaptor for Published Applications		
VMware vRealize Operations Manager for Published Applications		

Table 12

Licensed to: Everything License (new version)		Perpetual
User Licenses: 5 of 1000		(1% utilization)
Terminal User Licenses: 4 of 1000		(0% utilization)
Desktop Licenses: 1 of 1000		(0% utilization)
Server Licenses: 0 of 1000		(0% utilization)



## VMware App Volumes Standard

<b>Description</b>	VMware App Volumes Standard is an application and user management solution for small and medium tenants with virtual environments powered by Horizon, Citrix XenApp and XenDesktop, and RDSH.
<b>Point Value / Charged Per</b>	4 points per concurrent connection per month
<b>Components</b>	VMware App Volumes Standard and Dynamic Environment Manager
<b>Reporting</b>	Service Providers must manually report App Volumes Standard usage each month in the VMware Cloud Provider Program Commerce Portal. Information on the number of concurrent connections is available through the App Volumes Manager interface via the Dashboard Primary tab shown above. To report number of concurrent connections for a given month, Service Providers shall use maximum "Online Users" in the "User Utilization" chart and/or maximum "Online Desktops" and "Online Servers" in the "Computer Utilization" chart depending on what they attach AppStack to – i.e. user, machine, or both. An AppStack is a virtual disk containing applications, disks, and folders. There is no automated report that keeps track of the maximum concurrent connections at this time, so it is the Service Provider's responsibility to track and report this information accurately each month.
<b>Support</b>	Production Level Support
<b>More Information</b>	<a href="https://www.vmware.com/products/appvolumes.html">https://www.vmware.com/products/appvolumes.html</a> or <a href="https://cloudsolutions.vmware.com/">https://cloudsolutions.vmware.com/</a>

## VMware App Volumes Advanced

<b>Description</b>	VMware App Volumes Advanced is an integrated application and user management solution for enterprise customers with virtual environments powered by Horizon, Citrix XenApp and XenDesktop, and RDSH.
<b>Point Value / Charged Per</b>	7 points per concurrent connection per month
<b>Components</b>	<ul style="list-style-type: none"> <li>• VMware App Volumes Advanced and Dynamic Environment Manager</li> <li>• VMware ThinApp Client</li> <li>• VMware ThinApp Packager</li> <li>• VMware Workstation</li> </ul>
<b>Reporting</b>	Service Providers must manually report VMware App Volumes Advanced in the VMware Cloud Provider Program Commerce Portal. Information on the number of concurrent connections is available through the App Volumes Manager interface via the Dashboard Primary tab shown above. To report number of concurrent connections for a given month, Service Providers shall use maximum “Online Users” in the “User Utilization” chart and/or maximum “Online Desktops” and “Online Servers” in the “Computer Utilization” chart depending on what they attach AppStack to – i.e. user, machine, or both. An AppStack is a virtual disk containing applications, disks, and folders. There is no automated report that keeps track of the maximum concurrent connections at this time, so it is the Service Provider’s responsibility to track and report this information accurately each month. ThinApp Packager and Workstation are for administrator use only.
<b>Support</b>	Production Level Support
<b>More Information</b>	<a href="https://www.vmware.com/products/appvolumes.html">https://www.vmware.com/products/appvolumes.html</a> or <a href="https://cloudsolutions.vmware.com/">https://cloudsolutions.vmware.com/</a>

## VMware Desktop and Application Virtualization

VMware desktop and application virtualization solutions provide service providers with a new approach to deliver, protect, and manage Windows or Linux virtualized desktops and applications, while containing costs and ensuring end users can work anytime, anywhere across any device. For more details on Horizon Universal Licensing, refer to [Appendix B](#). Review Table 13 for features details.

Features/ Editions	Horizon DaaS		Horizon 8 Editions			Horizon 8 Apps		Horizon for Linux
	RDSH Edition	VDI Edition	Standard	Advanced	Enterprise	Standard	Advanced	
Points per Month	13 per Created RDS Session	16 per Created Desktop	12 per Concurrent Connection	19 per Concurrent Connection	28 per Concurrent Connection	11 per Concurrent Connection	18 per Concurrent Connection	7 per Concurrent Connection
VDI (Windows Desktops)		✓	✓	✓	✓			
VDI (RDS Sessions)	✓	✓		✓	✓			
VDI (Linux Desktops)					✓			✓
Published Apps	✓	✓		✓	✓	✓	✓	
View Manager			✓	✓	✓	✓	✓	✓
View Composer			- (*)	- (*)	- (*)			- (*)
Persona			- (*)	- (*)	- (*)			- (*)
ThinApp			✓	✓	✓	✓	✓	
VMware Workstation / Fusion			✓	✓	✓	✓	✓	
vCenter for Desktop	✓	✓	✓	✓	✓	✓	✓	✓
vSphere Ent plus for Desktop	✓	✓	✓	✓	✓	✓	✓	✓
Workspace ONE Access – On Premise Edition	✓	✓		✓	✓	✓	✓	
vSAN Adv. For Desktop				- (*)	- (*)			
vRealize Operations for Horizon					- (*)			
App Volumes					✓		✓	
DEM Standard			✓	✓				
DEM Enterprise	✓	✓			✓	✓	✓	
Instant Clones	✓	✓	✓	✓	✓		✓	

**Table 13** (\*) : Changed with the Horizon 8 product bundles.

## VMware Horizon DaaS

VMware Horizon DaaS is the market leading solution providing Service Provider with a low cost, subscription-based, multi-tenant, and secure Desktop-as-a-Service (DaaS) platform solution. Designed to address enterprise-class scale, the solution also provides simplicity and ease-of-use from large to small customers. Horizon DaaS Bundle allows enterprises to create or extend their Virtual Desktop Infrastructure (VDI) footprint without increasing the financial burden of infrastructure management and ownership. Horizon DaaS certified Service Providers can provide enterprises with a fully customizable desktop service accessible via the Internet or via dedicated networks from any location, on any compatible device and with the same user experience as traditional on premises PCs.

There are two Horizon DaaS Bundles available to VMware Cloud Provider Program Service Providers:

- VMware Horizon Bundle for 8.0/9.0 – VDI Edition
- VMware Horizon Bundle for 8.0/9.0 – RDSH Edition

VMware Horizon DaaS Bundles for 8.0 / 9.0

<b>Description</b>	<p><b>VDI Edition:</b> VDI Edition applies to VDI Desktop workloads and includes the RDSH Edition rights.  <b>RDSH Edition:</b> RDSH Edition applies to Remote Desktop Session Host (RDSH) Desktop and Application (i.e. Terminal Services Session-based) workloads.</p>
<b>Point Value / Charged Per</b>	<p><b>VDI Edition:</b> 16 points per created desktop per month  <b>RDSH Edition:</b> 13 points per created desktop or application session per month</p>
<b>Components (BOM)</b>	<ul style="list-style-type: none"> <li>• VMware Horizon DaaS Platform which includes right to host VDI desktop and applications (Windows Client OS, Windows Server OS)</li> <li>• Workspace ONE Access – On Premise Edition</li> <li>• VMware vCenter Server for Desktop</li> <li>• VMware vSphere Enterprise Plus for Desktop</li> <li>• VMware Dynamic Environment Manager</li> </ul>
<b>Reporting</b>	<p><b>Horizon DaaS 8.0:</b>  Manual reporting: Log into Service Center as Super Admin for each Horizon DaaS datacenter in place.</p> <ul style="list-style-type: none"> <li>• In the main menu, select the ‘configuration tab, then select “standard capacity’.</li> <li>• Ensure you are in the ‘Desktop Capacity &amp; Model Definition’ option, then select ‘Download Usage Report’</li> <li>• From the downloaded .CSV file for each datacenter, the follow metrics should be extracted:</li> <li>• VDI Edition consumption: Sum of all <u>desktop</u> VMs created (column: No. of VMs)</li> <li>• RDSH Edition: Sum of all sessions created (Column: Total Sessions)</li> <li>• Manually enter the sums for VDI and RDSH edition above in the correct fields in Commerce Portal.</li> </ul> <p><b>Horizon DaaS 9.0:</b>  Monthly reporting of Horizon DaaS 9.0 per Created Desktop (VDI Edition) and per Created Desktop or Application Session (RDSH Edition) via Usage Meter 4.3. Latest version of Usage Meter registered in Usage Insight will automatically pre-populate usage data in the Commerce Portal for Horizon DaaS 9.0.</p> <p>For manual reporting, please follow collection and reporting as shown for Horizon DaaS 8.0. If reporting both Horizon DaaS 8.0 and 9.0, manually collect the usage for Horizon DaaS 8.0, log into Commerce Portal and add that usage to the Horizon DaaS 9.0 usage that is pre-populated in both VDI and RDSH edition fields.</p> <p>Non-supported versions of Usage Meter will result in incorrect or incomplete metering and compliancy issues.</p> <p>Automatic Reporting using vCloud Usage Meter is supported with Horizon DaaS version 9.0. For more details refer to <a href="https://cloud.vmware.com/cloud-provider-metering">https://cloud.vmware.com/cloud-provider-metering</a></p>
<b>Support</b>	<p>Production Level Support. GSS will answer SP support request. (Pricing reflects prod level support)</p>
<b>More Information</b>	<p><a href="https://www.vmware.com/products/daas-vspp.html">https://www.vmware.com/products/daas-vspp.html</a> or <a href="https://cloudsolutions.vmware.com/">https://cloudsolutions.vmware.com/</a></p> <p>The Horizon DaaS Bundle are restricted products and only Qualifying Service Providers can rent the product from VMware. Only Service Providers with a valid 10,800 point or higher contract are eligible to start the qualification process, and there is also a required PSO engagement with a</p>



standard SOW to obtain a production grade deployment. Contact your local Business Development Manager or [partnernetwork@vmware.com](mailto:partnernetwork@vmware.com) for additional details on how to use the product through the VMware Cloud Provider Program. For VMware and 3<sup>rd</sup> party component compatibility, refer to the Horizon DaaS Service Provider administration documentation: <https://docs.vmware.com/en/VMware-Horizon-DaaS/index.html>

## VMware Desktop Disaster Recovery for Horizon DaaS Bundle(s)

<b>Description</b>	<p>VMware Desktop Disaster Recovery (DR) for Horizon DaaS Bundle(s) enables Service Providers to easily protect their tenants' business and ensure workforce continuity with cloud-hosted desktops and apps at a fraction of the cost.</p> <p>It opens new opportunities for Service Providers to offer cloud-based virtual desktop and apps as insurance to enterprises that use:</p> <ul style="list-style-type: none"> <li>• on premises physical desktop infrastructure</li> <li>• on premises virtual desktop infrastructure or,</li> <li>• cloud-hosted desktop and apps for their normal business operation</li> </ul> <p>In the event of a disaster, Service Providers can get tenant users up and running quickly with the speed of the cloud and predictable cloud economics. Tenants can be productive instantly, from any device, anywhere, with a secure workspace connected to corporate resources.</p>
<b>Point Value / Charged Per</b>	<p>4 points per Total Allocated Insurance Quota for VDI and RDSH Connections per month ("insurance rate")</p> <p>The Desktop DR option allows partners to deploy Horizon DaaS bundle(s) in either reservation mode or active (i.e. normal) mode as follows:</p> <ul style="list-style-type: none"> <li>• Partner offers desktop "reservation" capacity and pays "insurance rate" to VMware. Desktop reservation capacity gives the tenant the right to take the reserved desktop capacity out of standby for a disaster event.</li> <li>• When tenants declare a disaster, partner "activates" desktops and reports "regular rate" of Horizon DaaS Bundle(s) to VMware during the disaster period with a minimum monthly commitment. For information on "regular rate" for VDI and RDSH Editions of VMware Horizon DaaS Bundle(s), refer to the "VMware Horizon DaaS Bundle – VDI Edition" and "VMware Horizon DaaS Bundle – RDSH Edition" sections respectively.</li> <li>• Partner can select any mix of reserved and active desktops.</li> </ul>
<b>Components</b>	<p>VMware Desktop DR for "Horizon DaaS Bundle – VDI Edition" and "Horizon DaaS Bundle – RDSH Edition"</p>
<b>Reporting</b>	<p>For reserved cloud-hosted desktops and apps, Service Providers must manually report the total allocated insurance quota for VDI and RDSH connections associated with the use of the "Horizon DaaS Bundle – VDI Edition" and "Horizon DaaS Bundle – RDSH Edition" respectively to their Aggregator each month.</p> <p>This data shall include the aggregate total insurance quota allocation of the "Horizon DaaS Bundle – VDI Edition" and "Horizon DaaS Bundle – RDSH Edition" as well as the name, total insurance quota allocation, and zip code or country code for each Hosting Customer. For "Horizon DaaS Bundle – VDI Edition", it is the total number of VMs that can be powered on for all tenants based on Desktop Model insurance quotas.</p> <p>For "Horizon DaaS Bundle – RDSH Edition", it is the total number of RDSH sessions allocated to all tenants based on Session Model insurance quotas. There is no automated report that keeps track of the total insurance allocated quota for VDI or RDSH connections at this time, so it is the Service Provider's responsibility to track and report this information accurately each month.</p>
<b>Support</b>	<p>Production Level Support</p>
<b>More Information</b>	<p>The Desktop DR for Horizon DaaS Bundle(s) is a restricted product and only qualifying Service Providers can use the product from VMware. Only Service Providers with a valid 10,800 point or higher contract are eligible to start with qualification process. Contact your local Business Development Manager or <a href="mailto:partnernetwork@vmware.com">partnernetwork@vmware.com</a> on requirements and additional details to use the product through the VMware Cloud Provider Program. Also see: <a href="https://cloudsolutions.vmware.com/">https://cloudsolutions.vmware.com/</a></p>

## VMware Horizon

VMware Horizon is a solution that simplifies the management and delivery of virtual desktops and apps on-premises, in the cloud, or in a hybrid or multi-cloud configuration through a single platform to end-users. By leveraging complete workspace environment management and optimized for the software-defined data center, Horizon helps IT control, manage, and protect all of the Windows resources end users want, at the speed they expect, with the efficiency business demands. To learn more about VMware Horizon visit: <https://www.vmware.com/products/horizon.html>.

VMware Horizon is available to VMware Cloud Provider Service Providers in four editions:

- VMware Horizon Standard
- VMware Horizon Advanced
- VMware Horizon Enterprise
- VMware Horizon for Linux

Manual Reporting for Horizon Screenshot:

The screenshot shows the VMware Horizon 7 Administrator interface. The left sidebar contains navigation options like Sessions, Inventory, Monitoring, and Policies. The main area is titled 'Licensing and Usage'. Under 'Licensing', there is an 'Edit License...' button and a list of license details: License Key (H100A-XXXXX-XXXXX-XXXXX-C554C), License expiration (Never), Desktop license (Enabled), Application Remoting license (Enabled), View Composer license (Enabled), Instant Clone license (Enabled), and Usage Model (Concurrent User). Below this is the 'Usage' section, which is highlighted with a red box. It contains two buttons: 'Reset Highest Count' and 'Reset Named Users Count'. A table below shows usage statistics:

Session Mode	Current	Highest
Total Concurrent Connections	0	3
Total Named Users	0	1000
Detailed Connection Breakdown		
Total Remote	0	3
Active - full virtual machines	0	3
Active - linked clone	0	1
Active - other machine sources	0	0
Active - applications	0	0

## VMware Horizon Standard

<b>Description</b>	VMware Horizon Standard is an ideal solution to deliver simple powerful Virtual Desktop Infrastructure (VDI) with great user experience. VMware Horizon Standard hosted desktops eliminate the burden for customers of running and managing their desktops in-house. Service Providers can use VMware Horizon Standard to provide their customers with access (through a secure Internet connection) to a fully customizable desktop from any location, or on any compatible device, with the same user experience as on traditional PCs.
<b>Point Value / Charged Per</b>	12 points per concurrent connection per month
<b>Components</b>	<ul style="list-style-type: none"> <li>• VMware Horizon (includes View for Windows and Instant Clones)</li> <li>• VMware Dynamic Environment Manager Standard</li> <li>• VMware ThinApp Client</li> <li>• VMware ThinApp Packager</li> <li>• VMware Fusion Professional / VMware Workstation</li> <li>• VMware vCenter Server for Desktop</li> <li>• VMware vSphere Enterprise Plus for Desktop</li> </ul>
<b>Reporting</b>	<p>Service Providers must manually report Horizon Standard usage each month in the VMware Cloud Provider Program Commerce Portal. Information on the total number of concurrent connections is available through the Horizon Administrator Management Web UI (under View Configuration &gt; Product Licensing and Usage) as shown above. To report the Total Concurrent Connections for a given month, Service Providers shall use the Highest Count and reset the count at the end of each month.</p> <p>Alternatively, Service Providers can query the Horizon View API<sup>2</sup> and obtain the same data using the ConnectionServerHealth service. The sample PowerCLI commands to query the View Connection Server are as follows:</p> <ul style="list-style-type: none"> <li>• Open PowerCLI and run the following:             <ul style="list-style-type: none"> <li>○ Import-Module VMware.VimAutomation.HorizonView</li> </ul> </li> <li>• Establish Connection to Horizon (Connect-HVServer):             <ul style="list-style-type: none"> <li>○ Connect-HVServer -server &lt;connection-server-fqdn&gt; -User &lt;username&gt; -Password &lt;password&gt; -Domain &lt;domain&gt;</li> </ul> </li> <li>• Query Horizon for the connection statistics             <ul style="list-style-type: none"> <li>○ \$global:DefaultHVServers.ExtensionData.ConnectionServerHealth.ConnectionServerHealth_List().ConnectionData</li> </ul> </li> </ul> <p>It is the Service Provider's responsibility to track and report the maximum concurrent connections accurately each month. VMware ThinApp Packager and VMware Workstation are for administrator use only.</p>
<b>Support</b>	Production Level Support
<b>More Information</b>	<a href="https://www.vmware.com/products/horizon.html">https://www.vmware.com/products/horizon.html</a> or <a href="https://cloudsolutions.vmware.com/">https://cloudsolutions.vmware.com/</a>

<sup>2</sup> The API module for Horizon requires PowerCLI 6.5 R1 and it is compatible with vSphere 5.5 and higher, and Horizon 7.0.2 and higher. For more information on Horizon View API and PowerCLI, refer to VMware EUC blog at <https://blogs.vmware.com/euc/2017/01/VMware-horizon-7-powercli-6-5.html>

## VMware Horizon Advanced

<b>Description</b>	VMware Horizon Advanced is ideal for customers looking to deliver virtual or remote desktops and applications through a single platform to end users. These desktop and application services – including RDS hosted applications, packaged applications with VMware ThinApp, SaaS applications, and even virtualized applications from Citrix – can all be accessed from one unified workspace to provide end users with all of the resources they want, at the speed they expect, with the efficiency business demands. VMware Horizon Advanced offers customers all the benefits of the Horizon View Standard and additionally extends the power of virtualization with virtual compute and virtual storage to drive down costs, enhance the user experience, and deliver greater business agility.
<b>Point Value / Charged Per</b>	19 points per concurrent connection per month
<b>Components</b>	<ul style="list-style-type: none"> <li>• VMware Horizon Advanced (includes View for Windows, RDS Hosted Applications, and Instant Clones)</li> <li>• VMware Dynamic Environment Manager Standard Edition</li> <li>• VMware Workspace ONE Access on-prem edition</li> <li>• VMware ThinApp Client</li> <li>• VMware ThinApp Packager</li> <li>• VMware Fusion Professional / VMware Workstation</li> <li>• VMware vCenter Server for Desktop</li> <li>• VMware vSphere Enterprise Plus for Desktop</li> </ul>
<b>Reporting</b>	<p>Service Providers must manually report Horizon Advanced usage each month in the VMware Cloud Provider Program Commerce Portal. Information on the total number of concurrent connections is available through the Horizon Administrator Management Web UI (under View Configuration &gt; Product Licensing and Usage) as shown above. To report the Total Concurrent Connections for a given month, Service Providers shall use the Highest Count and reset the count at the end of each month.</p> <p>Alternatively, Service Providers can query the Horizon View API<sup>2</sup> and obtain the same data using the ConnectionServerHealth service. The sample PowerCLI commands to query the View Connection Server are as follows:</p> <ul style="list-style-type: none"> <li>• Open PowerCLI and run the following:             <ul style="list-style-type: none"> <li>○ Import-Module VMware.VimAutomation.HorizonView</li> </ul> </li> <li>• Establish Connection to Horizon (Connect-HVServer):             <ul style="list-style-type: none"> <li>○ Connect-HVServer -server &lt;connection-server-fqdn&gt; -User &lt;username&gt; -Password &lt;password&gt; -Domain &lt;domain&gt;</li> </ul> </li> <li>• Query Horizon for the connection statistics             <ul style="list-style-type: none"> <li>○ \$global:DefaultHVServers.ExtensionData.ConnectionServerHealth.ConnectionServerHealth_List().ConnectionData</li> </ul> </li> </ul> <p>It is the Service Provider's responsibility to track and report the maximum concurrent connections accurately each month. VMware ThinApp Packager and VMware Workstation are for administrator use only.</p>
<b>Support</b>	Production Level Support
<b>More Information</b>	<a href="https://www.vmware.com/products/horizon.html">https://www.vmware.com/products/horizon.html</a> or <a href="https://cloudsolutions.vmware.com/">https://cloudsolutions.vmware.com/</a>

<sup>2</sup> The API module for Horizon requires PowerCLI 6.5 R1 and it is compatible with vSphere 5.5 and higher, and Horizon 7.0.2 and higher. For more information, refer to VMware EUC blog at <https://blogs.vmware.com/euc/2017/01/VMware-horizon-7-powercli-6-5.html>

## VMware Horizon Enterprise

<b>Description</b>	VMware Horizon Enterprise is ideal for customers looking to automate the management and delivery of virtual or remote desktops and applications, through a single platform to end users. VMware Horizon Enterprise offers customers all of the benefits of the Horizon Advanced and additionally streamlines management and provisioning with advanced self-service capabilities to reduce operating costs and provide IT organizations with the tools to be more responsive to changing business requirements. Horizon Enterprise supports RHEL, Ubuntu, CentOS and NeoKylin Linux in addition to Microsoft Windows operating system.
<b>Point Value / Charged Per</b>	28 points per concurrent connection per month
<b>Components</b>	<ul style="list-style-type: none"> <li>• VMware Horizon Enterprise (includes View for Windows and Linux, RDS Hosted Applications, and Instant Clones)</li> <li>• VMware App Volumes Advanced</li> <li>• VMware Dynamic Environment Manager Enterprise Edition</li> <li>• VMware Workspace ONE Access on-prem edition</li> <li>• VMware ThinApp Client</li> <li>• VMware ThinApp Packager</li> <li>• VMware Fusion Professional / VMware Workstation</li> <li>• VMware vCenter Server for Desktop</li> <li>• VMware vSphere Enterprise Plus for Desktop</li> </ul>
<b>Reporting</b>	<p>Service Providers must manually report Horizon Enterprise usage each month in the VMware Cloud Provider Program Commerce Portal. Information on the total number of concurrent connections is available through the Horizon Administrator Management Web UI (under View Configuration &gt; Product Licensing and Usage) as shown above. To report the Total Concurrent Connections for a given month, Service Providers shall use the Highest Count and reset the count at the end of each month.</p> <p>Alternatively, Service Providers can query the Horizon View API<sup>2</sup> and obtain the same data using the ConnectionServerHealth service. The sample PowerCLI commands to query the View Connection Server are as follows:</p> <ul style="list-style-type: none"> <li>• Open PowerCLI and run the following:             <ul style="list-style-type: none"> <li>○ Import-Module VMware.VimAutomation.HorizonView</li> </ul> </li> <li>• Establish Connection to Horizon (Connect-HVServer):             <ul style="list-style-type: none"> <li>○ Connect-HVServer -server &lt;connection-server-fqdn&gt; -User &lt;username&gt; - Password &lt;password&gt; -Domain &lt;domain&gt;</li> </ul> </li> <li>• Query Horizon for the connection statistics             <ul style="list-style-type: none"> <li>○ \$global:DefaultHVServers.ExtensionData.ConnectionServerHealth.ConnectionServerHealth_List().ConnectionData</li> </ul> </li> </ul> <p>It is the Service Provider's responsibility to track and report the maximum concurrent connections accurately each month. VMware ThinApp Packager and VMware Workstation are for administrator use only.</p>
<b>Support</b>	Production Level Support
<b>More Information</b>	<a href="https://www.vmware.com/products/horizon.html">https://www.vmware.com/products/horizon.html</a> or <a href="https://cloudsolutions.vmware.com/">https://cloudsolutions.vmware.com/</a>

<sup>2</sup> The API module for Horizon requires PowerCLI 6.5 R1 and it is compatible with vSphere 5.5 and higher, and Horizon 7.0.2 and higher. For more information, refer to VMware EUC blog at <https://blogs.vmware.com/euc/2017/01/VMware-horizon-7-powercli-6-5.html>

## VMware Horizon for Linux

<b>Description</b>	VMware Horizon for Linux extends the benefits of VDI to Linux users. Providing centralized, secure and simplified management for Linux desktops, Horizon for Linux allows organizations to help reduce their capital expenditures, eliminate Microsoft desktop licensing costs and save on day-to-day operational expenses. In addition, VMware Horizon for Linux support send users with easy access to Linux applications and the same great user experience across devices and locations. Horizon for Linux supports RHEL, Ubuntu, CentOS and NeoKylin operating systems.
<b>Point Value / Charged Per</b>	7 points per concurrent connection per month
<b>Components</b>	VMware Horizon for Linux (includes View Manager) VMware vCenter Server Desktop VMware vSphere Enterprise Plus for Desktop
<b>Reporting</b>	<p>Service Providers must manually report Horizon for Linux usage each month in the VMware Cloud Provider Program Commerce Portal. Information on the total number of concurrent connections is available through the Horizon Administrator Management Web UI (under View Configuration &gt; Product Licensing and Usage) as shown above. To report the Total Concurrent Connections for a given month, Service Providers shall use the Highest Count and reset the count at the end of each month.</p> <p>Alternatively, Service Providers can query the Horizon View API<sup>2</sup> and obtain the same data using the ConnectionServerHealth service. The sample PowerCLI commands to query the View Connection Server are as follows:</p> <ul style="list-style-type: none"> <li>• Open PowerCLI and run the following: <ul style="list-style-type: none"> <li>◦ Import-Module VMware.VimAutomation.HorizonView</li> </ul> </li> <li>• Establish Connection to Horizon (Connect-HVServer): <ul style="list-style-type: none"> <li>◦ Connect-HVServer -server &lt;connection-server-fqdn&gt; -User &lt;username&gt; - Password &lt;password&gt; -Domain &lt;domain&gt;</li> </ul> </li> <li>• Query Horizon for the connection statistics <ul style="list-style-type: none"> <li>◦ \$global:DefaultHVServers.ExtensionData.ConnectionServerHealth.ConnectionServerHealth_List().ConnectionData</li> </ul> </li> </ul> <p>It is the Service Provider's responsibility to track and report the maximum concurrent connections accurately each month. VMware ThinApp Packager and VMware Workstation are for administrator use only.</p>
<b>Support</b>	Production Level Support
<b>More Information</b>	<a href="https://www.vmware.com/products/horizon.html">https://www.vmware.com/products/horizon.html</a> or <a href="https://cloudsolutions.vmware.com/">https://cloudsolutions.vmware.com/</a>

<sup>2</sup> The API module for Horizon requires PowerCLI 6.5 R1 and it is compatible with vSphere 5.5 and higher, and Horizon 7.0.2 and higher. For more information on Horizon View API and PowerCLI, refer to VMware EUC blog at <https://blogs.vmware.com/euc/2017/01/VMware-horizon-7-powercli-6-5.html>

## VMware Horizon Apps

VMware Horizon Apps enables Service Providers to deliver virtual apps securely to any device, anywhere with centralized management and rich, adaptive user experience. It improves end users' productivity with quick and easy access to their Windows applications alongside SaaS applications, and mobile applications through a single unified digital workspace. Based on VMware Horizon, it is a great choice for customers who need published applications (i.e. Remote Desktop Services – RDS) but don't need VDI desktops. Refer to Table 9 for feature details. To learn more about VMware Horizon visit: <http://www.vmware.com/products/horizon-apps.html>.

VMware Horizon Apps is available to VMware Cloud Provider Program Service Providers in two editions:

- VMware Horizon Apps Standard
- VMware Horizon Apps Advanced



## VMware Horizon Apps Standard

<b>Description</b>	VMware Horizon Apps Standard offers reliable and secure published applications delivery with tools and features that simplify management and provide a great user experience.
<b>Point Value / Charged Per</b>	11 points per concurrent connection per month
<b>Components</b>	<ul style="list-style-type: none"> <li>• VMware Horizon Apps Standard (includes RDS Hosted Applications but not Instant Clones)</li> <li>• VMware Dynamic Environment Manager Enterprise Edition</li> <li>• VMware Workspace ONE Access on-prem edition</li> <li>• VMware ThinApp Client</li> <li>• VMware ThinApp Packager</li> <li>• VMware Fusion Professional / VMware Workstation</li> <li>• VMware vCenter Server for Desktop</li> <li>• VMware vSphere Enterprise Plus for Desktop</li> </ul>
<b>Reporting</b>	<p>Service Providers must manually report Horizon Apps Standard usage each month in the VMware Cloud Provider Program Commerce Portal. Information on the total number of concurrent connections is available through the Horizon Administrator Management Web UI (under View Configuration &gt; Product Licensing and Usage) as shown above. To report the Total Concurrent Connections for a given month, Service Providers shall use the Highest Count and reset the count at the end of each month.</p> <p>Alternatively, Service Providers can query the Horizon View API and obtain the same data using the ConnectionServerHealth service. The sample PowerCLI commands to query the View Connection Server are as follows:</p> <ul style="list-style-type: none"> <li>• Open PowerCLI and run the following:             <ul style="list-style-type: none"> <li>◦ Import-Module VMware.VimAutomation.HorizonView</li> </ul> </li> <li>• Establish Connection to Horizon (Connect-HVServer):             <ul style="list-style-type: none"> <li>◦ Connect-HVServer -server &lt;connection-server-fqdn&gt; -User &lt;username&gt; - Password &lt;password&gt; -Domain &lt;domain&gt;</li> </ul> </li> <li>• Query Horizon for the connection statistics             <ul style="list-style-type: none"> <li>◦ \$global:DefaultHVServers.ExtensionData.ConnectionServerHealth.ConnectionServerHealth_List().ConnectionData</li> </ul> </li> </ul> <p>It is the Service Provider's responsibility to track and report the maximum concurrent connections accurately each month. VMware ThinApp Packager and VMware Workstation are for administrator use only.</p>
<b>Support</b>	Production Level Support
<b>More Information</b>	<a href="https://www.vmware.com/products/horizon-apps.html">https://www.vmware.com/products/horizon-apps.html</a> or <a href="https://cloudsolutions.vmware.com/">https://cloudsolutions.vmware.com/</a>

## VMware Horizon Apps Advanced

<b>Description</b>	VMware Horizon Apps Advanced includes everything in Horizon Apps Standard and further raises the bar with just-in-time app delivery powered by VMware's Instant Clone technology and complete application lifecycle management powered by VMware App Volumes. It brings speed, scale, savings, and simplicity to app delivery, while enabling access to apps on any device, anywhere.
<b>Point Value / Charged Per</b>	18 points per concurrent connection per month
<b>Components</b>	<ul style="list-style-type: none"> <li>• VMware Horizon Apps Advanced (includes RDS Hosted Applications and Instant Clones)</li> <li>• VMware App Volumes Advanced</li> <li>• VMware Dynamic Environment Manager Enterprise Edition</li> <li>• VMware Workspace ONE Access on-prem edition</li> <li>• VMware ThinApp Client</li> <li>• VMware ThinApp Packager</li> <li>• VMware Fusion Professional / VMware Workstation</li> <li>• VMware vCenter Server for Desktop</li> <li>• VMware vSphere Enterprise Plus for Desktop</li> </ul>
<b>Reporting</b>	<p>Service Providers must manually report Horizon Apps Standard usage each month in the VMware Cloud Provider Program Commerce Portal. Information on the total number of concurrent connections is available through the Horizon Administrator Management Web UI (under View Configuration &gt; Product Licensing and Usage) as shown above. To report the Total Concurrent Connections for a given month, Service Providers shall use the Highest Count and reset the count at the end of each month.</p> <p>Alternatively, Service Providers can query the Horizon View API<sup>1</sup> and obtain the same data using the ConnectionServerHealth service. The sample PowerCLI commands to query the View Connection Server are as follows:</p> <ul style="list-style-type: none"> <li>• Open PowerCLI and run the following: <ul style="list-style-type: none"> <li>○ Import-Module VMware.VimAutomation.HorizonView</li> </ul> </li> <li>• Establish Connection to Horizon (Connect-HVServer): <ul style="list-style-type: none"> <li>○ Connect-HVServer -server &lt;connection-server-fqdn&gt; -User &lt;username&gt; - Password &lt;password&gt; -Domain &lt;domain&gt;</li> </ul> </li> <li>• Query Horizon for the connection statistics <ul style="list-style-type: none"> <li>○ \$global:DefaultHVServers.ExtensionData.ConnectionServerHealth.ConnectionServerHealth_List().ConnectionData</li> </ul> </li> </ul> <p>It is the Service Provider's responsibility to track and report the maximum concurrent connections accurately each month. VMware ThinApp Packager and VMware Workstation are for administrator use only.</p>
<b>Support</b>	Production Level Support
<b>More Information</b>	<a href="https://www.vmware.com/products/horizon-apps.html">https://www.vmware.com/products/horizon-apps.html</a> or <a href="https://cloudsolutions.vmware.com/">https://cloudsolutions.vmware.com/</a>

<sup>1</sup>The API module for Horizon requires PowerCLI 6.5 R1 and it is compatible with vSphere 5.5 and higher, and Horizon 7.0.2 and higher. For more information on Horizon View API and PowerCLI, refer to VMware EUC blog at <https://blogs.vmware.com/euc/2017/01/VMware-horizon-7-powercli-6-5.html>

VMware ThinApp Client

<b>Description</b>	With ThinApp Client, an entire application and its settings can be packaged into a single executable that Service Providers can deploy to a range of Windows operating environments on either a physical desktop or a virtual machine. The applications are isolated from each other and the Operating System to ensure there are no application-to-application conflicts or application-to-operating system conflicts. This solution fits into any environment and allows Service Providers to help customers run legacy and new applications side by side. For example, older applications on Windows XP can be packaged and deployed by the Service Provider on Windows 7.
<b>Point Value / Charged Per</b>	2 points per ThinApp Client per month
<b>Components</b>	VMware ThinApp Client
<b>Reporting</b>	The Service Provider must manually report ThinApp Client usage each month in the VMware Cloud Provider Program Commerce Portal. The maximum number of clients used in the month must be included in the report.
<b>Support</b>	Production Level Support
<b>More Information</b>	<a href="https://www.vmware.com/products/thinapp.html">https://www.vmware.com/products/thinapp.html</a> or <a href="https://cloudsolutions.vmware.com/">https://cloudsolutions.vmware.com/</a> ThinApp Client does not include the ThinApp Packager or Workstation. Service Providers will need to install and report usage for at least one seat of VMware Horizon View Standard Edition or VMware Horizon DaaS Bundle(s) in order to use ThinApp Client licenses. All the limitations of Horizon View Standard Edition or VMware Horizon DaaS Bundle(s) listed in the VMware Cloud Provider Program Product Usage Guide shall apply to that installation.

## VMware ThinApp Packager

<b>Description</b>	VMware ThinApp Packager is a tool for the administrator to help package applications into ThinApp executables.
<b>Point Value / Charged Per</b>	1 point per ThinApp Packager per month
<b>Components</b>	VMware ThinApp Packager
<b>Reporting</b>	The Service Provider must manually report ThinApp Packager usage each month in the VMware Cloud Provider Program Commerce Portal. The maximum number of Packagers used in the month must be included in the report.
<b>Support</b>	Production Level Support
<b>More Information</b>	<p><a href="https://www.vmware.com/products/thinapp.htm">https://www.vmware.com/products/thinapp.htm</a> or <a href="https://cloudsolutions.vmware.com/">https://cloudsolutions.vmware.com/</a></p> <p>ThinApp Packager is for administrator use only and does not include the ThinApp Client or Workstation. Service Providers will need to install and report usage for at least one seat of VMware Horizon View Standard Edition or VMware Horizon DaaS Bundle(s) in order to use ThinApp Packager licenses. All the limitations of Horizon View Standard Edition or VMware Horizon DaaS Bundle(s) listed in the VMware Cloud Provider Program Product Usage Guide shall apply to that installation.</p>

**VMware Dynamic Environment Manager**

<b>Description</b>	<p>VMware Dynamic Environment Manager offers personalization and dynamic policy configuration across any virtual, physical and cloud-based environment. It simplifies end-user profile management by providing organizations with a single and scalable solution that leverages existing infrastructure. Service Providers can simply map infrastructure (including networks and printer mappings) and dynamically set policies for end users to securely support more use cases.</p> <p>With this solution, end users can also enjoy quick access to their Windows workspace and applications, with a personalized and consistent experience across devices and locations. The net effect – organizations leveraging Dynamic Environment Manager can increase workplace productivity while driving down the cost of acquisition and day-to-day desktop support and operations.</p>
<b>Point Value / Charged Per</b>	2 points per named user per month
<b>Components</b>	VMware Dynamic Environment Manager
<b>Reporting</b>	<p>Service Providers must manually report Dynamic Environment Manager usage each month in the VMware Cloud Provider Program Commerce Portal. There is no automated report that keeps track of the maximum named users at this time, so it is the Service Provider’s responsibility to track and report this information accurately each month.</p>
<b>Support</b>	Production Level Support
<b>More Information</b>	<p><a href="https://www.vmware.com/products/user-environment-manager.html">https://www.vmware.com/products/user-environment-manager.html</a> or  <a href="https://cloudsolutions.vmware.com/">https://cloudsolutions.vmware.com/</a></p>

## VMware vSAN for Desktop

VMware vSAN for Desktop is the software-defined storage platform that powers VMware Hyper-Converged Software solutions and delivers one of the industry's best storage value with simple management, high performance, low cost and a robust roadmap intended to support any app, at any scale.

VMware vSAN for Desktop is available to VMware Cloud Provider Program Service Providers in two editions, and an add-on:

- VMware vSAN Standard for Desktop
- VMware vSAN Advanced for Desktop
- VMware vSAN Enterprise Add-on for Desktop

## VMware vSAN Standard for Desktop

<b>Description</b>	VMware vSAN Standard for Desktop supports both All-Flash and a hybrid SSD/HDD configuration. vSAN Standard for Desktop is an a-la-carte option that can be used with other End User Computing products in the VMware Cloud Provider Program.
<b>Point Value / Charged Per</b>	2 points per concurrent connection per month
<b>Components</b>	VMware vSAN Standard for Desktop
<b>Reporting</b>	<p>Service Providers must manually report vSAN Standard for Desktop usage each month in the VMware Cloud Provider Program Commerce Portal. Information on the number of concurrent connections is available through the vCenter Server virtual machine count.</p> <p>There is no automated report that keeps track of the maximum concurrent connections at this time, so it is the Service Provider's responsibility to track and report this information accurately each month. As vSAN Standard for Desktop does not include vCenter Server for Desktop or vSphere for Desktop licensing; all use of those products must be reported separately, in addition to the usage of the vSAN Standard for Desktop product.</p>
<b>Support</b>	Production Level Support
<b>More Information</b>	<p>A hardware independent solution, vSAN Standard for Desktop can be deployed on a wide range of servers. Service Providers have two options for deploying vSAN Standard for Desktop – a) vSAN Ready Nodes (pre-validated configurations of servers) and b) a component-based hardware compatibility list that enables Service Providers to pick and choose the components they prefer.</p> <p>For the latest information on vSAN Ready Nodes and supported hardware components (I/O controllers, HDDs and SSDs), refer to the VMware Compatibility Guide for vSAN at: <a href="https://bit.ly/2C4763D">https://bit.ly/2C4763D</a></p> <p>Also see: <a href="https://cloudsolutions.vmware.com/">https://cloudsolutions.vmware.com/</a></p>

## VMware vSAN Advanced for Desktop

<b>Description</b>	<p>VMware vSAN Advanced for Desktop supports all-flash configuration and data efficiency features such as deduplication, compression and erasure coding, in addition to all functionalities of vSAN Standard for Desktop. vSAN Advanced for Desktop enables a two-tier all-flash architecture in which flash devices are intelligently used for both caching and data persistence to deliver high, predictable performance and sub-millisecond response times, making it ideal for tier-1 or business-critical workloads.</p> <p>vSAN Advanced for Desktop is an a-la-carte option that can be used with other End User Computing products in the VMware Cloud Provider Program.</p>
<b>Point Value / Charged Per</b>	4 points per concurrent connection per month
<b>Components</b>	VMware vSAN Advanced for Desktop
<b>Reporting</b>	<p>Service Providers must manually report vSAN Advanced for Desktop usage each month in the VMware Cloud Provider Program Commerce Portal. Information on the number of concurrent connections is available through the vCenter Server virtual machine count. There is no automated report that keeps track of the maximum concurrent connections at this time, so it is the Service Provider's responsibility to track and report this information accurately each month.</p> <p>As vSAN Advanced for Desktop does not include vCenter Server for Desktop or vSphere for Desktop licensing; all use of those products must be reported separately, in addition to the usage of the vSAN Advanced for Desktop product.</p>
<b>Support</b>	Production Level Support
<b>More Information</b>	<p>A hardware independent solution, vSAN Advanced for Desktop can be deployed on a wide range of servers. Service Providers have two options for deploying vSAN for Desktop – a) vSAN Ready Nodes (pre-validated configurations of servers) and b) a component-based hardware compatibility list that enables Service Providers to pick and choose the components they prefer. For the latest information on vSAN Ready Nodes and supported hardware components (I/O controllers, HDDs and SSDs), refer to the VMware Compatibility Guide for vSAN at: <a href="https://bit.ly/2C4763D">https://bit.ly/2C4763D</a></p> <p>Also see: <a href="https://cloudsolutions.vmware.com/">https://cloudsolutions.vmware.com/</a></p>



VMware vSAN Enterprise Add-on for Desktop

<b>Description</b>	<p>VMware vSAN Enterprise Add-on for Desktop offers Quality of Service and Stretched Cluster features on top of vSAN Standard for Desktop and vSAN Advanced for Desktop at incremental point value. It requires VMware Cloud Provider Program partners to install and utilize vSAN Standard for Desktop or vSAN Advanced for Desktop as the basis for vSAN Enterprise Add-on for Desktop. The Quality of Service control allows Service Providers to set up IOPS limit per VM to ensure mission-critical applications receive the necessary service level agreements.</p> <p>The Stretched Cluster allows Service Providers to create vSAN cluster between two geographically separate sites, synchronously replicating data between sites. It enables Service Providers to offer enterprise-level availability where an entire site failure can be tolerated, with zero Recovery Point Objective (RPO) and 99.999% uptime. vSAN Enterprise Add-on for Desktop is an a-la-carte option that can be used with other End User Computing products in the VMware Cloud Provider Program.</p>
<b>Point Value / Charged Per</b>	1 point per concurrent connection per month
<b>Components</b>	VMware vSAN Enterprise Add-on for Desktop
<b>Reporting</b>	<p>Service Providers must manually report vSAN Enterprise Add-on for Desktop usage on top of vSAN Standard for Desktop or vSAN Advanced for Desktop each month in the VMware Cloud Provider Program Commerce Portal.</p> <p>The manually reported concurrent connections of vSAN Enterprise Add-on for Desktop shall match the concurrent connections of vSAN Standard for Desktop or vSAN Advanced for Desktop. Information on the number of concurrent connections is available through the vCenter Server virtual machine count. There is no automated report that keeps track of the maximum concurrent connections at this time, so it is the Service Provider's responsibility to track and report this information accurately each month.</p> <p>As vSAN Enterprise Add-on for Desktop does not include vCenter Server, vSphere, vSAN Standard for Desktop or vSAN Advanced for Desktop licensing; all use of those products must be reported separately, in addition to the usage of the vSAN Enterprise Add-on for Desktop product.</p>
<b>Support</b>	Production Level Support
<b>More Information</b>	<p>A hardware independent solution, vSAN Enterprise Add-on can be deployed on a wide range of servers. Service Providers have two options for deploying vSAN Enterprise Add-on – a) vSAN Ready Nodes (pre-validated configurations of servers) and b) a component-based hardware compatibility list that enables Service Providers to pick and choose the components they prefer.</p> <p>For the latest information on vSAN Ready Nodes and supported hardware components (I/O controllers, HDDs and SSDs), refer to the VMware Compatibility Guide for vSAN at: <a href="https://bit.ly/2C4763D">https://bit.ly/2C4763D</a></p> <p>Also see: <a href="https://cloudsolutions.vmware.com/">https://cloudsolutions.vmware.com/</a></p>

## VMware NSX for Desktop

VMware NSX is the network virtualization platform for the Software-Defined Data Center, delivering the operational model of a virtual machine for entire networks.

VMware NSX for Desktop is available to VMware Cloud Provider Program Service Providers in two editions:

- VMware NSX Data Center Advanced for Desktop
- VMware NSX Data Center Enterprise Plus for Desktop

**VMware NSX Data Center Advanced for Desktop**

<b>Description</b>	VMware NSX Data Center Advanced for Desktops is the network virtualization platform for Horizon, XenApp, and XenDesktop environments
<b>Point Value / Charged Per</b>	5 points per concurrent connection per month
<b>Components</b>	VMware NSX Data Center Advanced for Desktop
<b>Reporting</b>	<p>Service Providers must manually report NSX Data Center Advanced for Desktop usage each month in the VMware Cloud Provider Program Commerce Portal. Information on the number of concurrent connections is available through the vCenter Server virtual machine count.</p> <p>There is no automated report that keeps track of the maximum concurrent connections at this time, so it is the Service Provider's responsibility to track and report this information accurately each month. As NSX Data Center Advanced for Desktop does not include vCenter Server for Desktop or vSphere for Desktop licensing; all use of those products must be reported separately, in addition to the usage of the NSX Data Center Advanced for Desktop product.</p>
<b>Support</b>	Production Level Support
<b>More Information</b>	<a href="https://www.vmware.com/products/horizon/horizon-nsx.html">https://www.vmware.com/products/horizon/horizon-nsx.html</a> or <a href="https://cloudsolutions.vmware.com/">https://cloudsolutions.vmware.com/</a>

VMware NSX Data Center Enterprise for Desktop \*

<b>Description</b>	<p>VMware NSX Data Center Advanced for Desktops is the network virtualization platform for Horizon, XenApp, and XenDesktop environments across multiple data centers. Additionally, it includes:</p> <ul style="list-style-type: none"> <li>• Multi-site NSX optimizations</li> <li>• VPN (IPsec and SSL) Remote Gateway</li> <li>• Integration with hardware VTEPs</li> </ul>
<b>Point Value / Charged Per</b>	8 points per concurrent connection per month
<b>Components</b>	VMware NSX Data Center Enterprise for Desktop
<b>Reporting</b>	<p>Service Providers must manually report NSX Data Center Enterprise for Desktop usage each month in the VMware Cloud Provider Program Commerce Portal. Information on the number of concurrent connections is available through the vCenter Server virtual machine count.</p> <p>There is no automated report that keeps track of the maximum concurrent connections currently, so it is the Service Provider's responsibility to track and report this information accurately each month.</p> <p>As NSX Data Center Enterprise for Desktop does not include vCenter Server for Desktop or vSphere for Desktop licensing; all use of those products must be reported separately, in addition to the usage of the NSX Data Center Enterprise for Desktop product.</p>
<b>Support</b>	Production Level Support
<b>More Information</b>	<a href="https://www.vmware.com/products/horizon/horizon-nsx.html">https://www.vmware.com/products/horizon/horizon-nsx.html</a> or <a href="https://cloudsolutions.vmware.com/">https://cloudsolutions.vmware.com/</a>

\* Existing partners, as of May 1, 2019 may continue to use current bundles. Current bundles are not available to new VCPP partner contracts signed after April 30, 2019. Current bundles will be discontinued after July 31, 2021.

# APPLICATION MODERNIZATION

## VMware Tanzu Basic

Description	<p>Some enterprises started their cloud native journey with simple, containerized off-the-shelf (COTS) workloads. If you want to run COTS workloads on-premises as part of your vSphere footprint, Tanzu Basic is the most affordable and accessible edition. There is no need to invest in a heavyweight, proprietary container platform; Tanzu Basic offers the cleanest Kubernetes-based container management on vSphere, period. It also transforms vSphere by allowing you to run VMs and containers side by side while providing developers self-service access to resources via Kubernetes APIs. Tanzu Basic can be licensed as a bundle with vSphere 7 Ent+ or as an add-on to be deployed on vSphere 6.7u3.</p>
Point Value / Charged Per	<p>Available as a Flex model add-on</p> <p>vRAM metric: 1 point per 1 GB Reserved RAM per month (based on average monthly usage). (GB = 1024 MB; Total points capped at 24 GB of Reserved vRAM per VM). Minimum vRAM: 512 GB billable per month</p> <p>Core metric: 8 points per CPU core per month. Minimum number of CPU cores: 64 per month. Per Core Billing can only be used when a Partner is using a VCF Core based environment</p> <p>Note: vSphere w/Tanzu managed VMs are all VMs in vSphere Supervisor Namespaces* and include VMs created by vSphere Tanzu service, control plane nodes i.e. master nodes, and worker nodes of Kubernetes clusters created by vSphere Tanzu Kubernetes Grid service, and vSphere Pods.</p> <p>* <a href="https://docs.vmware.com/en/VMware-vSphere/7.0/vmware-vsphere-with-kubernetes/GUID-177C23C4-ED81-4ADD-89A2-61654C18201B.html">https://docs.vmware.com/en/VMware-vSphere/7.0/vmware-vsphere-with-kubernetes/GUID-177C23C4-ED81-4ADD-89A2-61654C18201B.html</a>.</p> <p>In virtualized or hypervisor (VM) environments, a CPU Core is a single physical computational unit of the Processor which may be presented as one or more vCPUs.</p>
Contract	<p>A new, 12-month, non-cancellable rental contract is required which VMware Tanzu Basic usage contributes to, and requires an independent minimum monthly consumption; Billing starts in the month of purchase</p>
Components	<p>TKG service in vSphere 7; also referred to as vSphere w/ Tanzu or vSphere Add-on for Kubernetes</p> <p>TKG multi-cloud; was referred to as TKG</p>
Reporting	<p>Usage Meter 4.3 meters vSphere with Tanzu. If using an earlier versions, here are the instructions to manually meter consumption:</p> <p>Metering vSphere with Tanzu</p>

	<p>vRAM metric: Use vSphere Client or Managed Object Browser to navigate to the Namespace resource pool in a supervisor host cluster and compute the average billable vRAM of the VMs in it. Do this for all Namespace resource pools across all vSphere deployments.</p> <p>Core metric: Compute the number of physical cores across all hosts that are running at least one vSphere with Tanzu managed VM. Report the aggregate value to Commerce Portal on a monthly basis.</p> <p>Metering TKG multi-cloud</p> <p>Identify all powered-on control plane and worker node VMs that make up all TKG K8s clusters · Determine the vRAM/vCPUs configured for each node VM</p> <p>For VCF core-based or if hyperthreading is not enabled, core count is vCPU count. Otherwise core count is half vCPU count.</p> <p>This value is number of cores consumed (A)</p> <p>Compute (A) above for a ESXi host cluster</p> <p>Find total number of physical cores in this ESXi host cluster (B) including hosts used for HA</p> <p>The core count for this ESXi host cluster = MIN (A, B)</p> <p>Repeat for all ESXi host clusters</p> <p>Report aggregate billable vRAM/core count to Commerce Portal monthly</p> <p>Tanzu Basic does not include vSphere and other products, which must be reported separately. Management components are metered based on vRAM just like vCenter Server is when deployed in a VM</p>
Support	VMware Production Level support
Eligibility	VMware Tanzu Basic is a restricted product at this time and only qualifying Service Providers can rent the product from VMware. Contact your local Business Development Manager or Aggregator for requirements and additional details to use the product through the VMware Cloud Provider Program
Datasheet	<a href="https://d1fto35gqcffzn.cloudfront.net/tanzu/VMware-Tanzu-Basic-Solution-Brief.pdf">https://d1fto35gqcffzn.cloudfront.net/tanzu/VMware-Tanzu-Basic-Solution-Brief.pdf</a>

VMware Tanzu Kubernetes Grid Plus (TKG+)

<b>Description</b>	<p>VMware Tanzu Kubernetes Grid Plus, informally known as TKG+, is an add-on to Tanzu Kubernetes Grid. Tanzu Kubernetes Grid Plus provides an extended support matrix of open source applications that is larger than the list of applications that Tanzu Kubernetes Grid provides. If you have Tanzu Kubernetes Grid Plus, the VMware Tanzu Support team can assist you with setting up this wider range of supported applications. For information about the additional support that VMware Tanzu Kubernetes Grid Plus provides, see Tanzu Kubernetes Grid and Tanzu Kubernetes Grid Plus Supported Technology Matrix (<a href="https://kb.vmware.com/s/article/78173">https://kb.vmware.com/s/article/78173</a>).</p> <p>To learn more about TKG+, visit <a href="https://tanzu.vmware.com/kubernetes-grid">https://tanzu.vmware.com/kubernetes-grid</a></p>
<b>Point Value / Charged Per</b>	<p>24 points per CPU Core per month            Minimum number of CPU Cores: 32 per month</p> <p>In virtualized or hypervisor (VM) environments, a CPU Core is a single physical computational unit of the Processor which may be presented as one or more vCPUs.</p>
<b>Contract</b>	<p>A new, 12-month, non-cancellable rental contract is required which TKG+ usage contributes to, and requires an independent minimum monthly consumption; Billing starts in the month of subscription</p>
<b>Components</b>	<p>VMware TKG+</p>
<b>Reporting</b>	<p>Consumption must be manually metered as follows until Usage Metering is supported</p> <ul style="list-style-type: none"> <li>• Find cores consumed           <ul style="list-style-type: none"> <li>○ Identify each control plane and worker node VMs that make up all TKG+ K8s clusters</li> <li>○ Determine the vCPUs configured for each node VM. Sum the vCPUs configured.</li> <li>○ If hyperthreading is not enabled, number of cores is number of vCPUs. Otherwise number of cores is half the number of vCPUs.</li> <li>○ This value is <i>number of cores consumed (A)</i></li> </ul> </li> <li>• If deployed on non-vSphere e.g. native AWS, (A) above, is your core count</li> <li>• If deployed on vSphere,           <ul style="list-style-type: none"> <li>○ Compute (A) above for each ESXi host cluster</li> <li>○ Find <i>total number of cores in this ESXi host cluster (B)</i> including hosts used for HA</li> <li>○ The core count for this ESXi host cluster = MIN (A, B)</li> <li>○ Repeat for all ESXi host clusters</li> </ul> </li> <li>• Report aggregate core count to Commerce Portal monthly</li> </ul> <p>TKG does not include vSphere and other products, which must be reported separately. TKG management components are metered based on vRAM just like vCenter Server is when deployed in a VM</p>
<b>Support</b>	<p>VMware Production Level support</p>
<b>Eligibility</b>	<p>VMware TKG is a restricted product at this time and only qualifying Service Providers can rent the product from VMware. Contact your local Business Development Manager or aggregator on requirements and additional details to use the product through the VMware Cloud Provider Program</p>

<b>Datasheet</b>	<p><a href="https://pivotalcontent.s3.amazonaws.com/tanzu/VMware-Tanzu-Datasheet.pdf">https://pivotalcontent.s3.amazonaws.com/tanzu/VMware-Tanzu-Datasheet.pdf</a> <a href="https://docs.vmware.com/en/VMware-Tanzu-Kubernetes-Grid/index.html">https://docs.vmware.com/en/VMware-Tanzu-Kubernetes-Grid/index.html</a> <a href="https://docs.vmware.com/en/VMware-Tanzu-Kubernetes-Grid/1.1/vmware-tanzu-kubernetes-grid-11/GUID-index.html">https://docs.vmware.com/en/VMware-Tanzu-Kubernetes-Grid/1.1/vmware-tanzu-kubernetes-grid-11/GUID-index.html</a></p>
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# THIRD-PARTY SOFTWARE

## Third-Party Product Terms

VMware may make products licensed by third parties (“Third-Party Products”) available through the VMware Cloud Provider Program. The VMware end user license agreement does not apply to Third-Party Products. VMware does not provide support for Third-Party Products.

Third-Party Products are provided by VMware “AS IS” but may include warranty, support or indemnification from the Third- Party Product Provider. VMware hereby disclaims any warranty, support or indemnification obligations for Third-Party Products. Use of a Third-Party Product should be reported as if it were a VMware product under the VMware Cloud Provider Program.

By ordering Third-Party Products from VMware, Service Providers agree that VMware may share their information (including reported usage) with the Third-Party Product Provider for purposes of providing the Third-Party Product through VMware Cloud Provider Program.

## Blue Medora True Visibility for vRealize Operations

Blue Medora True Visibility Suite will be End of Availability (EOA) December 31st 2020, and will be replaced by vRealize True Visibility Suite. Starting January 1<sup>st</sup> 2021 partners need to report all SKUs under vRealize True Visibility Suite.

## OnApp for vCloud Director

<b>Description</b>	OnApp is a self-service multi-tenant cloud management portal for VMware vCloud Director. It adds a range of enhanced orchestration, provisioning, billing and multi-cloud automation capabilities to VMware vCloud Director via an intuitive white label UI. For more information, visit <a href="http://onapp.com/vmware">http://onapp.com/vmware</a> .
<b>Point Value / Charged Per</b>	1.5 points per 1 vGB Reserved RAM (based on average monthly usage) (GB = 1024 MB), with a 1000 point minimum per-month commitment for usage of the OnApp product.
<b>Components</b>	OnApp for VMware vCloud Director
<b>Reporting</b>	VMware Cloud Provider Program partners need to manually report monthly usage in the VMware Cloud Provider Program Business Portal. Usage data is available through a dashboard provided by OnApp.
<b>Support</b>	OnApp for VMware vCloud Director includes 24x7x365 access to support through <a href="https://help.onapp.com">https://help.onapp.com</a> , via email to <a href="mailto:support@onapp.com">support@onapp.com</a> and by telephone to 1-888-876-8666. Upon contacting support, customers will be provided with support entitlements and credentials for a ticketing system.
<b>More Information</b>	OnApp offers a range of Professional Services to assist VCPP members. These are contracted directly with and billed by OnApp. Options include High Availability OnApp Control Panel installation, training, certification and migration. These services are available at an additional cost, and directly contracted with and billed by OnApp. OnApp license terms are available at <a href="https://onapp.com/legal">https://onapp.com/legal</a> . OnApp is a trademark of OnApp Limited.

## OnApp for vCloud Director + NSX-V

<b>Description</b>	OnApp is a self-service multi-tenant cloud management portal for VMware vCloud Director. It adds a range of enhanced orchestration, provisioning, billing and multi-cloud automation capabilities to VMware vCloud Director via an intuitive white label UI. The NSX-V version also brings SDN into the same portal, enabling the provisioning of NSX-based VPN, NAT, Load Balancer and Firewall services along with cloud. For more information, visit <a href="http://onapp.com/vmware">http://onapp.com/vmware</a> .
<b>Point Value / Charged Per</b>	3 points per 1 vGB Reserved RAM (based on average monthly usage) (GB = 1024 MB), with a 1000 point minimum per-month commitment for usage of the OnApp product.
<b>Components</b>	OnApp for vCloud Director + NSX-V
<b>Reporting</b>	VMware Cloud Provider Program partners need to manually report monthly usage in the VMware Cloud Provider Program Business Portal. Usage data is available through a dashboard provided by OnApp.
<b>Support</b>	OnApp for VMware vCloud Director includes 24x7x365 access to support through <a href="https://help.onapp.com">https://help.onapp.com</a> , via email to <a href="mailto:support@onapp.com">support@onapp.com</a> and by telephone to 1-888-876-8666. Upon contacting support, customers will be provided with support entitlements and credentials for a ticketing system.
<b>More Information</b>	OnApp offers a range of Professional Services to assist VCPP members. These are contracted directly with and billed by OnApp. Options include High Availability OnApp Control Panel installation, training, certification and migration. These services are available at an additional cost, and directly contracted with and billed by OnApp. OnApp license terms are available at <a href="https://onapp.com/legal">https://onapp.com/legal</a> . OnApp is a trademark of OnApp Limited.

## OnApp for vCenter

<b>Description</b>	OnApp enables vCenter environments to be used as a secure, self-service multi-tenant public cloud. OnApp adds a range of enhanced orchestration, provisioning, billing and multi-cloud automation capabilities to VMware vCenter, via an intuitive white-label UI. For more information, visit <a href="http://onapp.com/vmware">http://onapp.com/vmware</a> .
<b>Point Value / Charged Per</b>	7.5 points per VM managed by OnApp, with a 1000 point minimum per-month commitment for usage of the OnApp product.
<b>Components</b>	OnApp for vCenter
<b>Reporting</b>	VMware Cloud Provider Program partners need to manually report monthly usage in the VMware Cloud Provider Program Business Portal. Usage data is available through a dashboard provided by OnApp.
<b>Support</b>	OnApp for VMware vCloud Director includes 24x7x365 access to support through <a href="https://help.onapp.com">https://help.onapp.com</a> , via email to <a href="mailto:support@onapp.com">support@onapp.com</a> and by telephone to 1-888-876-8666. Upon contacting support, customers will be provided with support entitlements and credentials for a ticketing system.
<b>More Information</b>	OnApp offers a range of Professional Services to assist VCPP members. These are contracted directly with and billed by OnApp. Options include High Availability OnApp Control Panel installation, training, certification and migration. These services are available at an additional cost, and directly contracted with and billed by OnApp. OnApp license terms are available at <a href="https://onapp.com/legal">https://onapp.com/legal</a> . OnApp is a trademark of OnApp Limited.

Caveonix RiskForesight Solution for VMware Cloud Provider Program

Product Level	Min Monthly Volume (VMs)	Point Value / VM*	Components
Standard	100	15	RiskForesight™ for VMware Cloud Provider Program
Extended	1,000	13.5	RiskForesight™ for VMware Cloud Provider Program
Classic	3,000	12.8	RiskForesight™ for VMware Cloud Provider Program
Premium	10,000	12.2	RiskForesight™ for VMware Cloud Provider Program
Global	15,000	11.6	RiskForesight™ for VMware Cloud Provider Program

<b>Description</b>	<p>Caveonix RiskForesight™ is the first multi-tenant Cyber Risk &amp; Compliance Management platform for the hybrid cloud, enabling Service Providers to offer workload protection services to their customers. The RiskForesight hybrid cloud workload protection platform (Hybrid CWPP), has been designed from ground-up to be a multi-tenant solution. It provides proactive workload protection from risks due to Cyberthreats as well as regulatory Compliance issues.</p> <p>RiskForesight provides real-time visibility into what is running in the customer's hybrid cloud. RiskForesight integrates into the Service Providers cloud orchestration platform based on VMware Cloud technology stack such as vCD, NSX, vCenter, vRA, vSphere, VMC on AWS, as well as the hyperscale public clouds. RiskForesight is a ready to deploy solution for Cloud Service Providers, Managed Service Providers, Managed Security Service Providers, and IT System Integrators.</p>
<b>Reporting</b>	<p>VMware Cloud Provider Program partners need to manually report monthly usage in the VMware Cloud Provider Program Commerce Portal. Individual Tenant monthly usage data is made available through the Caveonix RiskForesight product.</p>
<b>Support</b>	<p>Sales Support can be reached by Phone- 833.462.2836 or <a href="mailto:VCP_Sales@caveonix.com">mailto:VCP_Sales@caveonix.com</a></p> <p>Customer Support can be reached by <a href="mailto:Support@Caveonix.com">mailto:Support@Caveonix.com</a></p>

<b>More Information</b>	<p>Caveonix is licensed by VM managed/monitored. Volume discounts are included in the pricing. Billing is in VCPP points as per the commitment tier SKU in the table above. For example the lowest value of 100 VM is 15Pts per VM = a minimum commit of \$1500 per month. Any volume over 100 VM is charged at 15 pts per VM per month, until the next tier is hit or becomes a cheaper option. Discounts are not available for the points employed to purchase this product and listed rates do not include international currency rate modification.</p> <p>Price to partner = Greater of Monthly Min or Actual * Pt/tier * Currency List Price.</p> <p>1 pt = \$1.00 (or VCPP local currency equivalent).</p> <p>The current order process includes the following stages:</p> <ol style="list-style-type: none"> <li>1. Cloud Provider decides on minimum capacity commit level</li> <li>2. Cloud Provider signs TPP (Third Party Products) online addendum</li> <li>3. Aggregator issues their own quote to Cloud Provider</li> <li>4. Aggregator creates Caveonix contract in VCPP Commerce Portal</li> <li>5. VCAN-Operations validates TPP and approves contract for booking</li> <li>6. Caveonix contacts and “enables” Cloud Provider – Software, License fulfilment</li> </ol> <p>Professional Services will be contracted directly with and billed by Caveonix.</p> <ul style="list-style-type: none"> <li>• <a href="https://marketplace.vmware.com/vsx/search/RiskForesight">https://marketplace.vmware.com/vsx/search/RiskForesight</a></li> <li>• <a href="https://www.caveonix.com">https://www.caveonix.com</a></li> </ul>
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\*Note: Price per point for third party products VM is different to your contracted VCPP price per point

vCloud Director Data Protection Solution

Product Level	Minimum Volume (VMs)	Point Value / VM*	Components
Standard	100	3.19	Data Protection Suite (DPS)
Extended	500	3.02	Data Protection Suite (DPS)
Classic	2,000	2.84	Data Protection Suite (DPS)
Premium	5,000	2.75	Data Protection Suite (DPS)
Global	10,000	2.66	Data Protection Suite (DPS)

<b>Description</b>	<p>vCloud Director Data Protection enables VMware Cloud Provider Partners to offer backup-as-a-service with self-service recovery to their end-user customers (tenants). Powered by Dell EMC Data Protection Suite (DPS), it provides high performance backup while minimizing the cost-to-serve.</p> <p>The DPS SKU in VCPP includes only the following:</p> <ul style="list-style-type: none"> <li>• Avamar Virtual Edition</li> <li>• Data Protection Search</li> <li>• Data Protection Advisor</li> <li>• Data Protection Central</li> </ul>
<b>Reporting</b>	vCloud Director Data Protection reporting is manual. For additional information on reporting, please see <a href="#">Appendix B</a>
<b>Support</b>	Production Level Support provided directly by Dell EMC
<b>More Information</b>	<ul style="list-style-type: none"> <li>• VMware Cloud Director v9.10 or above is required. Older versions are not currently supported</li> <li>• Backup-as-a-service, when purchased without protection storage can be used in combination with Data Domain hardware appliances or Data Domain Virtual Edition purchased separately.</li> </ul> <p>Dell Data Protection for vCloud Director is licensed by VM. Volume discounts are included in the pricing. Billing is in VCPP points as per the commitment tier SKU in the table above. For example the lowest value of 100 VM is 3.19Pts per VM = a minimum commit of \$319 per month. Any volume over 100 VM is charged the same rate unless a new tier is committed to. Discounts are not available for the points employed to purchase this product and listed rates do not include international currency rate modification.</p> <p>Price to partner = Greater of Monthly Min or Actual * Pt/tier * Currency List Price            1 pt = \$1.00 (or VCPP local currency equivalent)</p> <p>To learn more about vCloud Director Data Protection visit:  <a href="https://www.dellemc.com/en-us/collaterals/unauth/offering-overview-documents/products/data-protection/data-protection-for-vmware-cloud-providers.pdf">https://www.dellemc.com/en-us/collaterals/unauth/offering-overview-documents/products/data-protection/data-protection-for-vmware-cloud-providers.pdf</a></p>

\*Note: Price per point for third party products VM is different to your contracted VCPP price per point



vCloud Director Data Domain Virtual Solution

Product Level	Minimum Volume (VMs)	Point Value / VM*	Components
Standard	100	8.45	Data Protection Suite (DPS) and Data Domain Virtual Edition (DDVE)
Extended	500	7.98	Data Protection Suite (DPS) and Data Domain Virtual Edition (DDVE)
Classic	2,000	7.51	Data Protection Suite (DPS) and Data Domain Virtual Edition (DDVE)
Premium	5,000	7.28	Data Protection Suite (DPS) and Data Domain Virtual Edition (DDVE)
Global	10,000	7.04	Data Protection Suite (DPS) and Data Domain Virtual Edition (DDVE)

<b>Description</b>	vCloud Director Data Protection enables VMware Cloud Provider Partners to offer backup-as-a-service with self-service recovery to their end-user customers (tenants). Powered by Dell EMC Data Protection Suite (DPS) and Data Domain Virtual Edition (DDVE), it provides high performance backup while minimizing the cost-to-serve.
<b>Support</b>	Production Level Support provided directly by Dell EMC
<b>More Information</b>	<ul style="list-style-type: none"> <li>• VMware Cloud Director v9, v10 or above is required. Older versions are not currently supported</li> <li>• Backup-as-a-service, when purchased without protection storage can be used in combination with Data Domain hardware appliances or Data Domain Virtual Edition purchased separately.</li> </ul> <p>Dell Data Protection for vCloud Director is licensed by capacity in use. Volume discounts are included in the pricing. Billing is in VCPP points as per the commitment tier SKU in the table above. For example the lowest value of 100 VM is 8.45Pts per VM = a minimum commit of \$845 per month. Any volume over 100 VM is charged the same rate unless a new tier is committed to. Discounts are not available for the points employed to purchase this product and listed rates do not include international currency rate modification.</p> <p>Price to partner = Greater of Monthly Min or Actual * Pt/tier * Currency List Price            1 pt = \$1.00 (or VCPP local currency equivalent)</p> <p>To learn more about vCloud Director Data Protection visit:  <a href="https://www.dellemc.com/en-us/collaterals/unauth/offering-overview-documents/products/data-protection/data-protection-for-vmware-cloud-providers.pdf">https://www.dellemc.com/en-us/collaterals/unauth/offering-overview-documents/products/data-protection/data-protection-for-vmware-cloud-providers.pdf</a></p>

\*Note: Price per point for third party products VM is different to your contracted VCPP price per point

VMware vCloud Director Object Storage Extension (with Clouidian Hyperstore)

Product Level	Min Monthly Volume ( in TB)	VCPP Points (per TB/month)
VCAN-CLD-OBJ-STR-TIER1	200	11.3*
VCAN-CLD-OBJ-STR-TIER2	1,000	8.8*
VCAN-CLD-OBJ-STR-TIER3	5,000	7.4*
VCAN-CLD-OBJ-STR-TIER4	10,000	5.6*
VCAN-CLD-OBJ-STR-TIER5	15,000	5.1*

<b>Description</b>	<p>VMware Object Storage for vCloud Director is an integrated storage platform that lets service providers deploy and manage S3-compatible storage within their services environment. Powered by Clouidian, the solution leverages in-house, heterogeneous storage media, and includes native management integration with VMware Cloud Director via the VMware Object Storage Extension (vOSE). For service providers, this solution supports services such as Storage-as-a-Service, Backup-as-a-Service, WORM Object Lock security, and software development. Employing the S3 API, the de facto language of the cloud, this solution enables high-value storage services across virtually all industry groups..</p>
<b>Reporting</b>	<p>vCloud Director Data Protection reporting is manual. To generate the report, Service Providers will leverage Clouidian’s Smart Support Feature that provides system usage and status information. Smart Support employs proactive analysis and alerts to help the Clouidian Support team maximize system uptime and performance.</p> <p>Service Provider will have to enable Smart Support on Clouidian’s system to be able to report usage. If enabled, system logs are generated once per day and sent to Clouidian Support. Communication is one-way only. No additional information may be requested. Data is sent only via https protocol through port 443. No user object data is either transmitted or accessible via Smart Support.</p> <p>Smart Support is configured to communicate only with a specific end point hosted by Clouidian Support. Users can further limit this by configuring a firewall to permit port 443 communication only between the Clouidian system and the Clouidian Support.</p> <p>Clouidian will generate a month-end report based on the data from Smart Support system. This monthly usage report will then be used for reporting in VCPP Commerce Portal.</p> <p>During the first billing period the minimum point commitment will be deferred and Service Provider will be charged actual usage. The minimum point commitment will be enforced from the next billing period. The first billing period is defined as the first month the contract becomes active regardless which day of the month. The grace period allows Service Provider to be billed for actual usage in the first month, even if the minimum point commitment is not met.</p>
<b>Pricing</b>	<p>Price to partner = Greater of Monthly Min or Actual TB * Pt/tier * Currency List Price.</p> <p>1 pt = \$1.00 (or VCPP local currency equivalent).</p>
<b>Support</b>	<p>Support services provided by Clouidian are included. Support is not available via VCPP Global Support Services. Clouidian will supply partners with production level support details</p>
<b>More Information</b>	<p>For Clouidian Cloud Director management integration, VMware Cloud Director v9.5 and above is required. For deployments that do not include VMware Cloud Director, the Clouidian solution may also be managed via the Clouidian Management Console.</p>

Object Storage for vCloud Director is licensed by capacity in use. Volume discounts are included in the pricing. Billing is in VCPP points as per the commitment tier SKU in the table above. For example the lowest value of 200TB is 11.3 pts per TB/mo = a minimum commit of \$2,260.00 per month. Any volume over 200TB is charged the same rate unless a new tier is committed to. Discounts are not available for the points employed to purchase this product and listed rates do not include international currency rate modification.

(This flow is temporary, subject to change.)

The current order process includes the following stages;

1. Cloud Provider decides on minimum capacity commit level (lowest commit level is 200TBs p/month).
2. Cloud Provider signs TPP (Third Party Products) online addendum
3. Aggregator issues their own quote to Cloud Provider
4. Aggregator creates Cloudian contract in VCPP Commerce Portal
5. VCAN-Services validates TPP and approves contract for booking
6. Cloudian contacts and "enables" Cloud Provider – Software, License fulfilment

To learn more about vCloud Director Object Storage with Cloudian visit:

<https://docs.vmware.com/en/VMware-vCloud-Director-Object-Storage-Extension/index.html>

<https://cloudian.com/vmware/>

Take advantage of a 45 day 100TB free trial

[https://cloudian.com/free-trial/?utm\\_source=adwords&utm\\_campaign=brand-emea](https://cloudian.com/free-trial/?utm_source=adwords&utm_campaign=brand-emea)

\* Product levels listed below are reflective of corresponding volume discounts. No additional discounts are applicable beyond what is already reflected in SKUs/product levels. For Cloudian contract 1 pt = \$1.00 (or VCPP local currency equivalent).

## Appendix A

### ADJUSTING REPORTS WITH MANUALLY COLLECTED PRODUCT USAGE DATA

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Depending on the products used by Service Providers, monthly reports may need to be manually adjusted to accurately report all required data.

This appendix explains how to adjust reports to place product usage into the correct bundle or standalone line items.

Two different approaches are used to adjust a monthly report with manually collected data.

- If the product usage will be reported standalone, then a simple count of VMs running the products is required. The billed GB usage is removed from the bundle reported by vCloud Usage Meter and added to the report as a new standalone line item.
- However, if the product usage will be reported as part of a bundle, then a more complex process is followed. The total Memory Allocation for all VMs running the product must be subtracted from the 'Reported Bundle' and added to a bundle that includes the product.

To reduce reporting complexity, rather than retrieving the actual vRAM reserved by each VM running a product, an Average Billed vRAM value is used as the memory billed for each VM.

A manual adjustment could lead to a future engagement through Partner's Aggregator/Cloud Provider Manager or VMware Compliance team to validate the reason for this manual adjustment of existing numbers. General guidance is that at least all metered products and consumption needs to get reported. Additionally, all VCPP consumed products, which are not yet supported by Usage Meter need to get reported, as well. If the Usage Meter readings seem incorrect, Partners should review the configuration of Usage Meter or open a ticket with VMware Support.

## REPORTING FLEX PRICING MODEL

### Bundle Translation:

The Flex Pricing Model is reported in the Commerce Portal through Bundle-to-Flex translation. Partners that have transitioned to the Flex Pricing Model will input their usage on the first page of the monthly report in the bundle format and the Commerce Portal will translate the bundles to Flex Core and Add-On usage.

Current Bundles		In Flex Model		Comments
Name	Points	Equivalent	Points	
Advanced	7	Core	7	No change
Standard w/ Networking	8	Core + NSX-DC Prof.	7 + 1 = 8	No change
Standard w/ Management	8	Core + vROps Ent	7 + 3 = 10	Discount 2 Pt*
Advanced w/ Networking	9	Core + NSX-DC Prof.	7 + 1 = 8	Reduced Price
Advanced w/ Management	10	Core + vROps Ent	7 + 3 = 10	No Change
Advanced w/ Networking & Management	12	Core + vROps Ent + NSX-DC Adv.	7 + 3 + 3 = 13	Discount 1 Pt*

### Manually Reporting Flex Add-Ons:

Use of additional Flex Add-Ons can be reported under the standalone section of the monthly report.

- If a partner wishes to report a different add-on, (ex. – NSX DC Enterprise+ instead of NSX DC Advanced through bundle translation), the partner should report the units from the original bundle as Advanced Bundle, and add the same unit count to the accompanying Add-On.
- If a partner wishes to report usage for an add-on not tied to a previous bundle, the partner needs to calculate the Unit count associated with the usage and add it to the accompanying SKU in the Flex Add-On Standalone section of the monthly report.

## STANDALONE REPORTING

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### Reporting product usage as standalone entries for NSX or vRealize Operations

Add new line entries to the monthly report for each standalone product reported (NSX or vRealize Operations). For each product:

1. Determine the count of VMs running the product (See [Appendix](#) for details)
2. Add a line item to the monthly usage report as follows: Product Name <IP address of instance> <Version> <VM count >

### Reporting product usage as standalone entries for Virtual SAN

Add a new line entry to the monthly report for Virtual SAN storage usage.

For each product:

1. Determine the Virtual SAN Used storage capacity in GB (See [Appendix](#) for details)
2. Add a line item to the monthly usage report as follows: Product Name <Version> <GB >

### Reporting product usage as standalone entries for vCloud Availability

Add a new line entry to the monthly report for vCloud Availability usage.

For each product:

1. Determine the vCPU and vStorage used by vCloud Availability (See [Appendix](#) for details)
2. Add an additional line item to the monthly usage report for each Organization with VMs protected by vCloud Availability in the following format:  
Organization Name, CountOfProtectedVMs, TotalStorageUsedByVMsInBytes

## REPORTING PRODUCT USAGE USING VMWARE CLOUD PROVIDER PROGRAM BUNDLES\*

Manual reporting on VMware Cloud Provider Program bundles is determined by the answer to three questions:

- Is NSX deployed? If so, which edition?
- Is vRealize Operations deployed?
- Is VMware Cloud Director deployed?

Based on the answer to these questions a single line will be added to the monthly report. See the following tables for more information:

### NSX Features Comparison\*

		vCNS Mode		
Features		NSX-SP Base	NSX-SP Advanced	NSX-SP Enterprise
Automation	Distributed switching and routing	✓	✓	✓
	NSX Edge firewall	✓	✓	✓
	NAT	✓	✓	✓
	SW L2 bridging to physical environment		✓	✓
	Dynamic routing with ECMP (Active-active)		✓	✓
	Integration with vRealize and OpenStack	✓ <sup>1</sup>	✓	✓
	NSX Edge load balancing	✓	✓	✓
	Distributed load balancing <sup>2</sup>			✓
Security	Integration with HW VTEPs			✓
	Distributed firewalling		✓	✓
	Active Directory Integrated firewall		✓	✓
	Service insertion (3 <sup>rd</sup> party integration)		✓	✓
App Continuity	Server activity monitoring		✓	✓
	Cross vCenter NSX			✓
	Multi-Site NSX optimizations			✓
	VPN (IPSEC and SSL)	✓	✓	✓
	Remote Gateway			✓

vmware Notes: 1. L2, L3 & NSX Edge Integration Only. No consumption of Security Groups 2. Tech Preview with 6.2.2

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\* Existing partners, as of May 1, 2019 may continue to use current bundles. Current bundles are not available to new VCPP partner contracts signed after April 30, 2019. Current bundles will be discontinued after July 31, 2021.

## NSX DC SP Features Comparison

	NSX DC SP Base	NSX DC SP Professional	NSX DC SP Advanced	NSX DC SP Enterprise Plus
	<i>Agility and automation of the network</i>	<i>Standard, plus a fundamentally more secure data center</i>	<i>Standard, plus a fundamentally more secure data center</i>	<i>Advanced, plus networking and security across multiple domains</i>
Distributed switching and routing	✓	✓	✓	✓
NSX Edge firewall	✓	✓	✓	✓
NSX Edge NAT	✓	✓	✓	✓
SW L2 bridging to Physical Environments	✓	✓	✓	✓
Dynamic routing with ECMP (Active-active)	✓	✓	✓	✓
Integration with Cloud Management Platforms <sup>1</sup>	✓	✓	✓	✓
Distributed firewalling for VMs and workloads running on Bare Metal		✓	✓	✓
VPN (L2 and L3)	✓	✓	✓	✓
Integration with NSX Cloud <sup>2</sup> for AWS and Azure Support		✓	✓	✓
NSX Edge Load Balancing	✓	✓	✓	✓
Integration with Distributed Firewall (Active Directory, VMware AirWatch and Third-party Service insertion)			✓	✓
Container Networking and Security			✓	✓
Multisite Networking and Security			✓	✓
IPv6			✓	✓
Context-Aware Micro-Segmentation (Application Identification, RDSH)				✓
URL Filtering				✓
+vRealize Network Insight Advanced				✓
Traffic (IPFIX) Visibility and Monitoring				✓
Firewall Planning and Management				✓
NSX Operations and Troubleshooting				✓
+NSX Hybrid Connect Advanced				✓
Large-Scale Workload Migration				✓
WAN Optimization for Workload Migration				✓
Traffic and Load Management Across Multiple Links				✓

<sup>1</sup> L2, L3, and NSX Edge integration only. No consumption of security groups.

<sup>2</sup> NSX Cloud subscription required for public cloud workloads

✓ Different from NSBU Editions

**\* NOTE:** NSX Cloud is not included in VCPP NSX



## ADJUSTING VCLLOUD USAGE METER REPORTS

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Completing the steps in this section requires two or three values depending on whether both NSX and vRealize Operations are deployed.

- A count of VMs running vRealize Operations
- A count of VMs running NSX
- A value that represents the Avg. Billed vRAM.

Refer to [Appendix A](#) for instructions on obtaining these values before proceeding.

## STEPS TO ADJUST VCLLOUD USAGE METER REPORTS

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1. Select the products in use and determine the type of bundle to be added to the report.
2. Run the Monthly Usage Report.
3. Read from the report the vCloud Service Provider Bundle - Premier Edition GB value. This is **Value A**.
4. Determine **Value B** –
  - If only NSX is deployed, multiply the total count of NSX VMs by average billed vRAM to compute Value B.
  - If only vRealize Operations is deployed, multiply the total count of vRealize Operations VMs by average billed vRAM to compute Value B.
  - If both NSX and vRealize Operations are deployed, multiply the larger of the two values by average billed vRAM to compute Value B.
5. Update the report as follows:
  - a. Update: vCloud Service Provider Bundle - Premier Edition = A-B
  - b. Add: vCloud Service Provider Bundle - **Bundle Name From Flowchart** = B

## STEPS TO ADJUST VCLLOUD USAGE METER REPORTS FOR MIXED EDITIONS OF NSX

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To report mixed editions of NSX you will need to first run your Usage Meter report. The report will indicate the bundle with the highest level of NSX used. To report multiple editions of NSX you will need to subtract usage for the lower point bundle from the bundle that is indicated on your Usage Meter report and manually report for the lower bundle. The sum of the two bundles should equal the amount of usage indicated on the UM report.

For Example: If your Usage Meter report indicates that you used 100 vRAM of the new VMware Cloud Provider Program Advanced with Networking and Management Bundle and you would like to report usage of both NSX Enterprise and NSX advanced you would need to do the following:

1. Determine the VMs that are using NSX Advanced Features and the VMs that are using the NSX Enterprise Features.
2. Deduct the Average vRAM for the VMs using NSX Advanced from the amount of vRAM indicated on the UM Report for the New Advanced with Networking and Management Bundle. For example, if you are using 50GB of vRAM of NSX advanced features deduct 50GB of vRAM from the New Advanced with Networking and Management Bundle.
3. Report the deducted vRAM amount under the new VMware Cloud Provider Program Advanced with Networking Bundle and report the remainder of the vRAM under the new VMware Cloud Provider Program Advanced with Networking and Management Bundle. Note the sum of vRAM for the two bundles should equal the vRAM indicated on your UM report for the New Advanced with Networking and Management Bundle. In this example you would report 50GB of vRAM to the New Advanced with Networking Bundle and 50GB of vRAM to the New Advanced with Networking and Management Bundle.

## Appendix B

### MANUAL METERING DELL DATA PROTECTION FOR VCLLOUD DIRECTOR

vCloud Director Data Protection reporting is manual. The number of protected VMs can be queried via REST API in the following way:

1. Get the list of tenant organizations

GET: /api/org

```
<OrgList href="https://cncd-av-vm-235-85.ccoe.lab.emc.com/api/org/" >
  <Org href="https://cncd-av-vm-235-85.ccoe.lab.emc.com/api/org/a93c9db9-7471-3192-8d09-a8f7eeda85f9"
  name="System" />
  <Org href="https://cncd-av-vm-235-85.ccoe.lab.emc.com/api/org/c0bd6ecb-c51f-4e81-ab21-f113d4443b31"
  name="rita2" />
  <Org href="https://cncd-av-vm-235-85.ccoe.lab.emc.com/api/org/c349cae2-ce44-43ab-8306-4279cb134dff"
  name="rita1" />
</OrgList>
```

2. For each tenant organization, get the list of vDCs

GET: /api/admin/org/{{org-id}}

```
<AdminOrg name="rita1" id="urn:vcloud:org:c349cae2-ce44-43ab-8306-4279cb134dff" href="https://cncd-av-vm-235-85.ccoe.lab.emc.com/api/admin/org/c349cae2-ce44-43ab-8306-4279cb134dff" >
  <Vdcs>
    <Vdc href="https://cncd-av-vm-235-85.ccoe.lab.emc.com/api/vdc/6dc11ff9-33fe-4625-93c9-2af625b19ff6" name="coke-vdc-1" />
    <Vdc href="https://cncd-av-vm-235-85.ccoe.lab.emc.com/api/vdc/553daf05-c8b3-4058-a27a-b18c164dd761" name="pepsi-vdc-2" />
    <Vdc href="https://cncd-av-vm-235-85.ccoe.lab.emc.com/api/vdc/d6837471-b688-4ac9-8cc2-122ee38451bc" name="vdc33" />
  </Vdcs>
</AdminOrg>
```

3. For each vDC, get the "Protection Overview"

GET: /api/admin/extension/vdc/{{vdc-id}}/protectionOverview

```
<VdcOverview name="coke-vdc-1" totalVms="5" totalStorage="82678120448" unprotectedVms="3"unprotectedStorage="65498251264">
  <PolicyRef href="https://cncd-av-vm-235-85.ccoe.lab.emc.com/api/admin/extension/vdc/6dc11ff9-33fe-4625-93c9-2af625b19ff6/BackupPolicy/1647d2d6-eaf5-4a40-a43d-bff6e203d461" name="ondemand-vdc1"
  quotaValue="549755813888" quotaUsage="17179869184" protectedVms="2"
  protectedStorage="17179869184"/>
</VdcOverview>
```

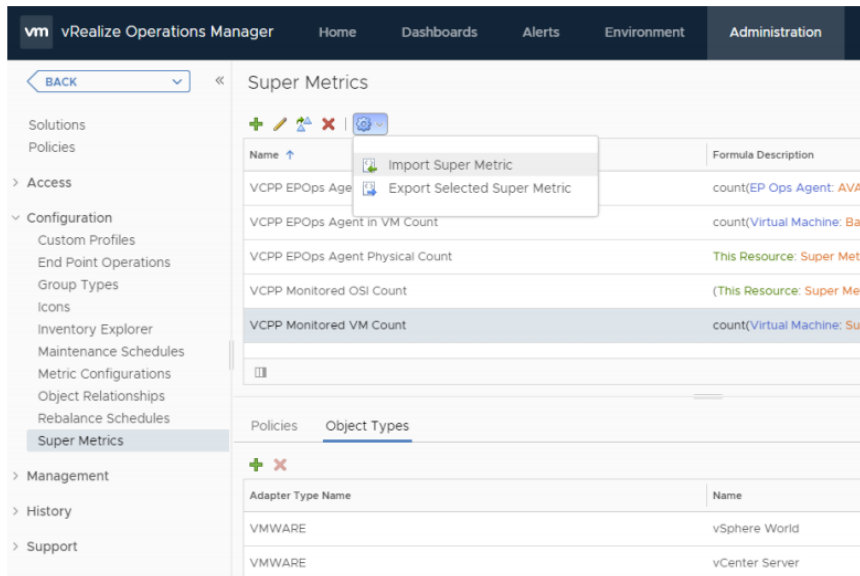
The number of protected VMs can be derived at the vDC level by subtracting unprotectedVms from totalVms.

Report the usage into the VMware Cloud Provider Commerce Portal.

## MANUAL METERING WITH VREALIZE OPERATIONS REPORTS

### Metering Configuration

Metering requires the use of super metrics and a report to perform the necessary calculations. The steps in this section show how to import preconfigured super metrics and reports to automate metering and reporting.

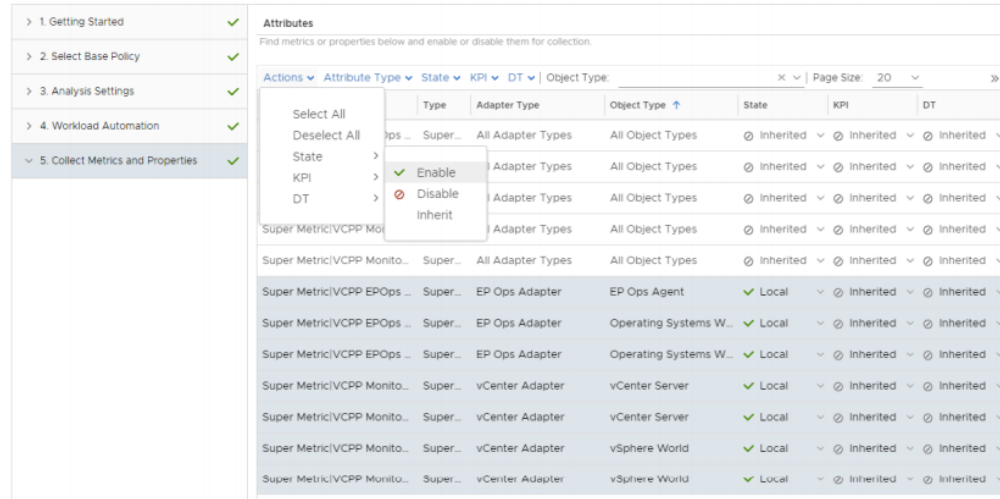


1. Import all super metric configuration files defined in [Appendix C: Super Metric Definitions](#).
2. Set the Object Type for each super metric as shown in the following table.

Super Metric	Adapter Type	Object Type
VCPPEPOps Agent in VM Count	EP Ops Adapter	EP Ops Agent
VCPPEPOps Agent Count	EP Ops Adapter	Operating Systems World
VCPPEPOps Agent Physical Count	EP Ops Adapter	Operating Systems World
VCPPEPOps Monitored OSI Count	VMWARE	vCenter Server
VCPPEPOps Monitored OSI Count	VMWARE	vSphere World
VCPPEPOps Monitored VM Count	VMWARE	vCenter Server
VCPPEPOps Monitored VM Count	VMWARE	vSphere World

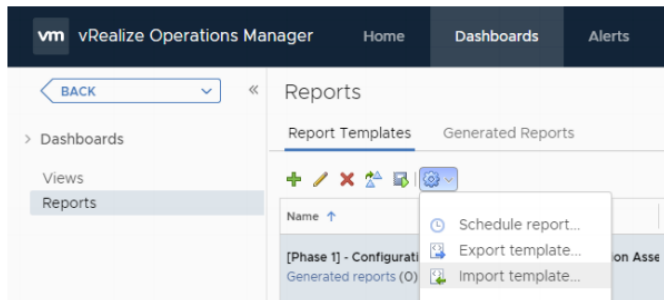
3. Enable super metrics in the policy editor for highlighted object types as shown in the following figure.

Edit Monitoring Policy



4. Navigate to Dashboards / Reports.

5. Import the report template defined in [Appendix C: Report Template](#).



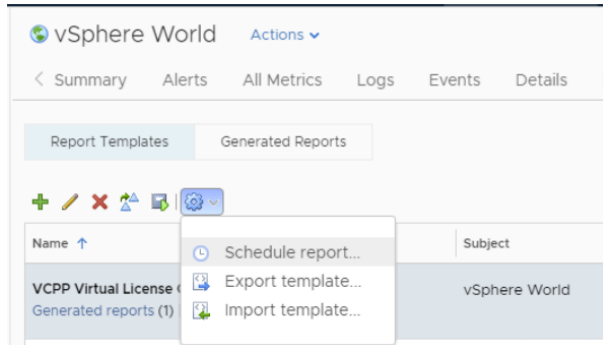
**Reporting Configuration**

Reports can be scheduled within vRealize Operations to automate the reporting process. The following steps show how to send the reports through email on a scheduled basis:

1. Navigate to vSphere World Object.
2. Select the Reports tab.
3. Select the VCPP Virtual License Count report.
4. Click Schedule report.
5. Configure the schedule to send email monthly.

**\*Note**

While this illustrates sending a global report, the same process applies to reporting for Tenant usage. Instead of selecting vSphere World Object, select the object that represents a Tenant when scheduling the report.



**1. VCPP Virtual License Counts**

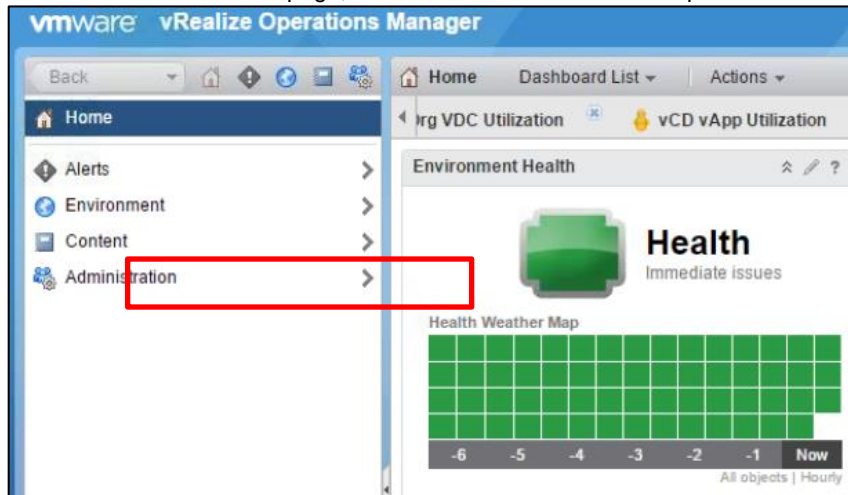
Name	Month	Average OSI
vSphere World	June 2017	116.27
vSphere World	July 2017	116.51
vSphere World	August 2017	113

**References:**

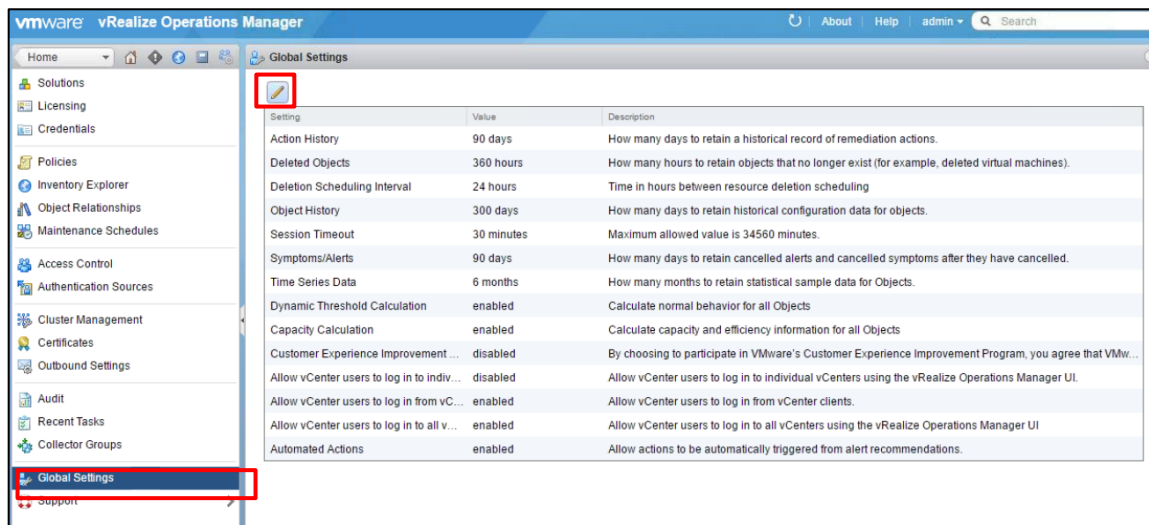
Document Title	Link or URL
<i>VMware vCloud Architecture Toolkit for Service Providers</i>	<a href="https://www.vmware.com/solutions/cloud-computing/vcat-sp.html">https://www.vmware.com/solutions/cloud-computing/vcat-sp.html</a>
<i>vCloud Architecture Toolkit (vCAT) Blog</i>	<a href="https://blogs.vmware.com/vcat/">https://blogs.vmware.com/vcat/</a>
<i>Multitenant Use of VMware vRealize Operations as a Service</i>	<a href="https://www.vmware.com/content/dam/digitalmarketing/vmware/en/pdf/vcat/vmware-multitenant-vrealize-operations-as-a-service.pdf">https://www.vmware.com/content/dam/digitalmarketing/vmware/en/pdf/vcat/vmware-multitenant-vrealize-operations-as-a-service.pdf</a>
<i>vRealize Operations Manager Sizing Guidelines (2093783)</i>	<a href="https://kb.vmware.com/kb/2093783">https://kb.vmware.com/kb/2093783</a>

## CREATING A REPORT IN VREALIZE OPERATIONS MANAGER

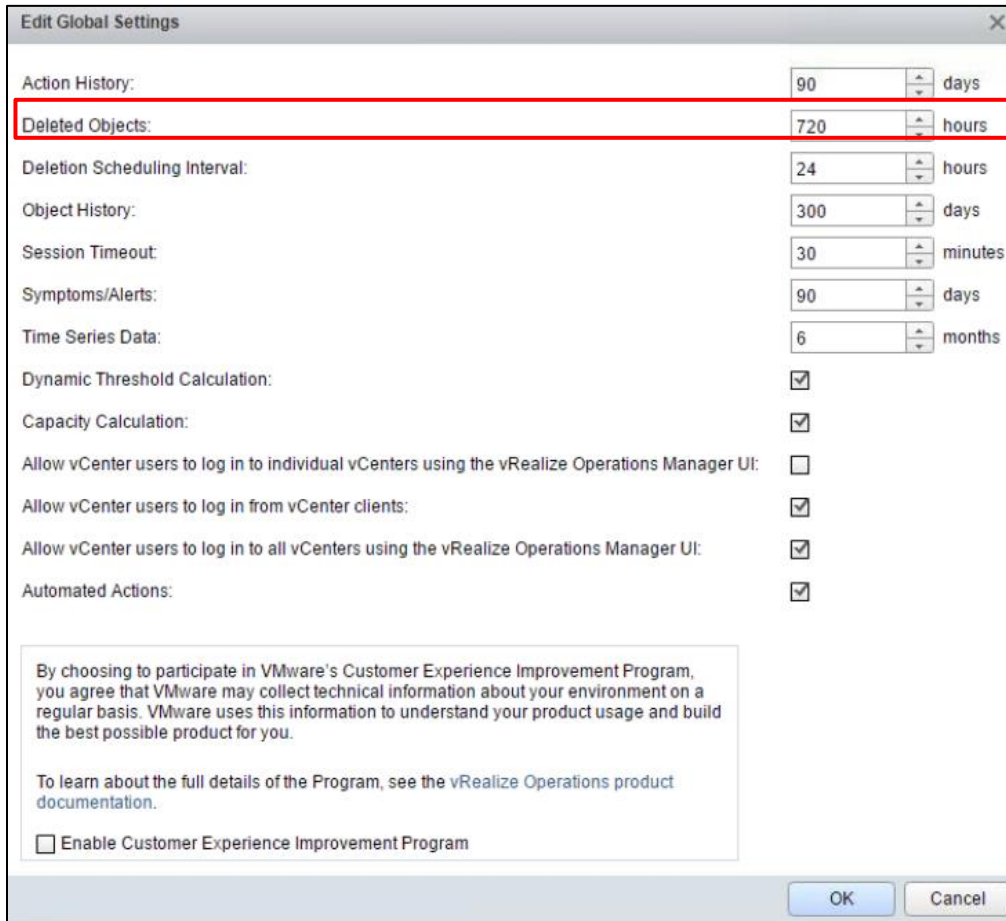
1. Log in to vRealize Operations Manager.
2. Set the time period for storing deleted object data to 30 days.
  - a. In the Home page, click **Administration** in the left pane.



- a.
  - b. In the left pane, click **Global Settings**, then click the **Edit Global Settings** icon at the top of the Global Settings page.



- c. In the Edit Global Settings page, change the value of the **Deleted Objects** field from **360** hours to **720** hours, then click **OK**.



**Edit Global Settings**

Action History:	90	days
<b>Deleted Objects:</b>	<b>720</b>	<b>hours</b>
Deletion Scheduling Interval:	24	hours
Object History:	300	days
Session Timeout:	30	minutes
Symptoms/Alerts:	90	days
Time Series Data:	6	months
Dynamic Threshold Calculation:	<input checked="" type="checkbox"/>	
Capacity Calculation:	<input checked="" type="checkbox"/>	
Allow vCenter users to log in to individual vCenters using the vRealize Operations Manager UI:	<input type="checkbox"/>	
Allow vCenter users to log in from vCenter clients:	<input checked="" type="checkbox"/>	
Allow vCenter users to log in to all vCenters using the vRealize Operations Manager UI:	<input checked="" type="checkbox"/>	
Automated Actions:	<input checked="" type="checkbox"/>	

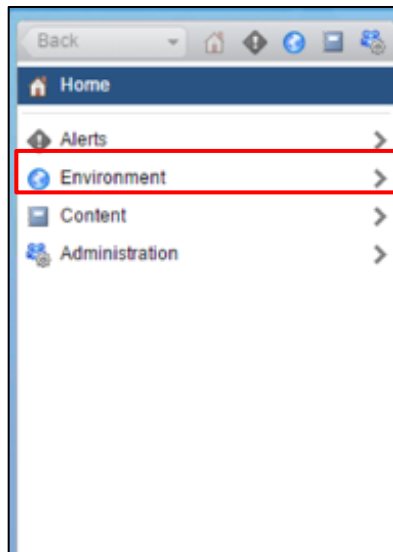
By choosing to participate in VMware's Customer Experience Improvement Program, you agree that VMware may collect technical information about your environment on a regular basis. VMware uses this information to understand your product usage and build the best possible product for you.

To learn about the full details of the Program, see the [vRealize Operations product documentation](#).

Enable Customer Experience Improvement Program

OK Cancel

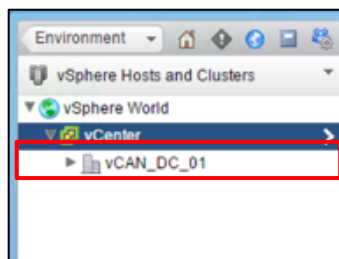
3. Create a new View to obtain the list of VMs managed by vRealize Operations.
  - a. In the left pane, click **Home** to go to the vRealize Operations Manager Home page.
  - b. In the left pane, click **Environment**.



c. Click vSphere Hosts and Clusters under Inventory Trees.

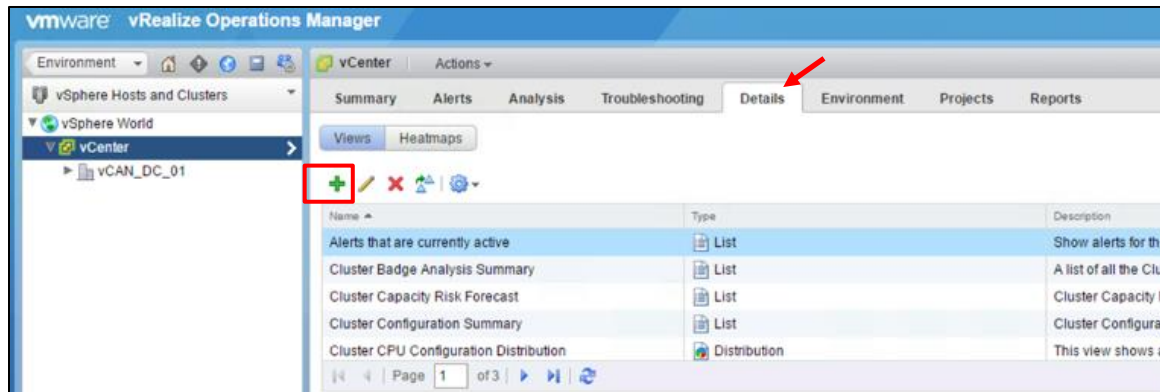


d. Expand **vSphere World** and select the vCenter Server for which you want to create the report.  
**Note:** You must create a report for every vCenter Server under vRealize Operations management.

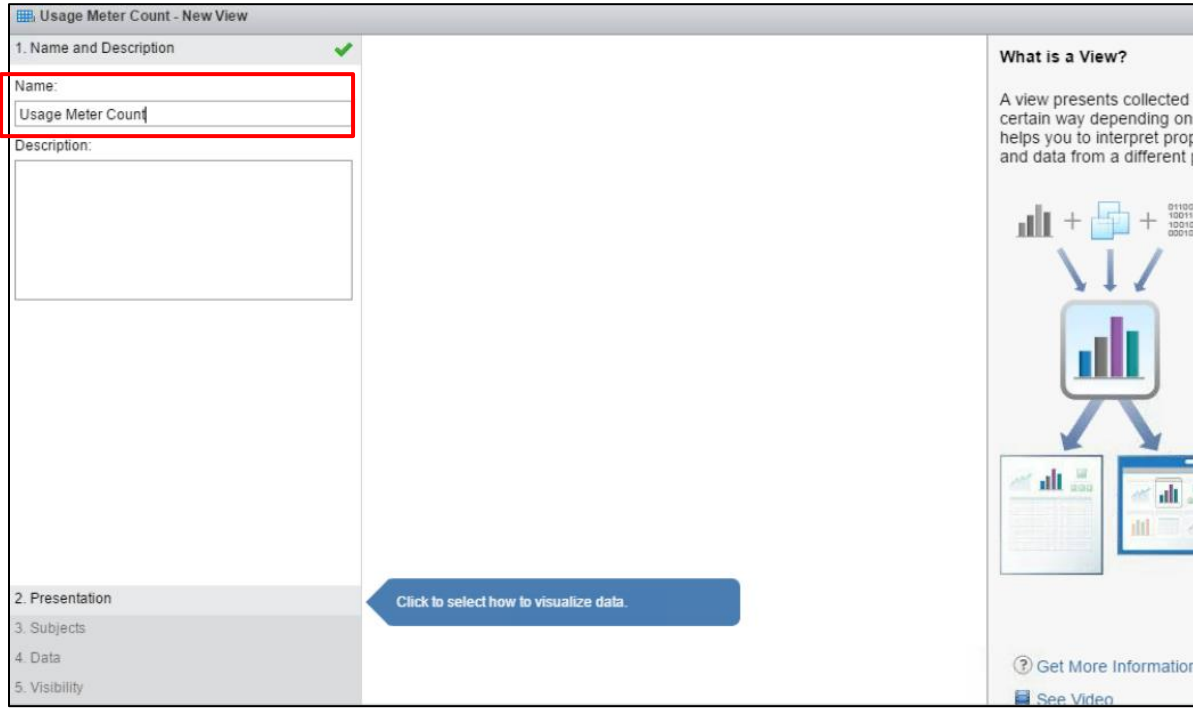


e. Click the **Details** tab, then click the **Create View** icon at the top of the Views page.





f. In the New View page, enter a unique name for the View.



- g. Click **Presentation** at the bottom of the New View page, then click **List**.
- h. Under **Configuration**, you can modify the number of items displayed per page.

**Usage Meter Count - New View**

1. Name and Description ✓  
2. Presentation ✓

Preview source: Sample data | Select preview source...

Column 1	Column 2	Column 3	Column 4
Object Name 1	Property Value 1	Value 1	Value 1
Object Name 2	Property Value 2	Value 2	Value 2
Object Name 3	Property Value 3	Value 3	Value 3
Object Name 4	Property Value 4	Value 4	Value 4
Object Name 5	Property Value 5	Value 5	Value 5
Object Name 6	Property Value 6	Value 6	Value 6
Object Name 7	Property Value 7	Value 7	Value 7

Page 1 of 1 | Displaying 1 - 15 of 15

**List**  
List views provide tabular data about specific objects in the monitored environment that correspond to the selected view.

**Configuration**  
Items per page: 50

3. Subjects  
4. Data  
5. Visibility ✓

Click to select the subject for which the view applies.

- i. Click **Subjects** and type Virtual Machine in the text field. From the drop-down list that appears, select **Virtual Machine**.

**Usage Meter Count - New View**

1. Name and Description ✓  
2. Presentation ✓  
3. Subjects

virtual machine

- ▼ vCloud Adapter
  - vCloud **Virtual Machine**
- ▼ vCenter Adapter
  - Virtual Machine**
  - Virtual Machine Folder

j. Click **Data**, then click the **Metrics** drop-down list and select **Properties**.

The screenshot shows the 'Usage Meter Count - New View' interface. On the left, a sidebar lists steps: 1. Name and Description, 2. Presentation, 3. Subjects, 4. Data (selected), and 5. Visibility. Under '4. Data', a dropdown menu is open with 'Properties' selected. Below this, a list of categories is visible: Configuration, CPU, Datastore I/O, Guest File System stats, Memory, Network I/O, Runtime, Summary, vRealize Operations Manager Generated Proper, and Policy. The main area shows a 'Preview source' dropdown set to 'Sample data'. Below this is a table with 4 columns and 7 rows of sample data. At the bottom, there are tabs for 'Data', 'Time Settings', 'Group By', 'Filter', and 'Summary'. The 'Data' tab is active, showing a 'Data' pane with the instruction 'Drag the data to include in the view.' and a 'Configuration' pane with an arrow pointing left and the instruction 'Select a metric or property to configure.'

Column 1	Column 2	Column 3	Column 4
Object Name 1	Property Value 1	Value 1	Value 1
Object Name 2	Property Value 2	Value 2	Value 2
Object Name 3	Property Value 3	Value 3	Value 3
Object Name 4	Property Value 4	Value 4	Value 4
Object Name 5	Property Value 5	Value 5	Value 5
Object Name 6	Property Value 6	Value 6	Value 6
Object Name 7	Property Value 7	Value 7	Value 7

**Note:** In vRealize Operations 6.0, this step is different. Instead of clicking the **Metrics** drop-down list, you need to click the folder icon under the **Select data for** field. The search box appears. Then proceed to the next step.

k. In the search box next to **Properties**, type Name, then press **Enter**.

l. Expand the **Configuration** menu and drag the **Name** object into the **Data** window on the right.

The screenshot shows the 'Usage Meter Count - New View' configuration interface. On the left, the 'Configuration' tree is expanded, and the 'Name' object is selected. A red arrow indicates the drag-and-drop action. The right pane shows the 'Data' window with 'Configuration|Name' added. The configuration options for this data source are:


- Metric name: Configuration|Na...
- Metric label: Configuration|Nar
- Sort order: None
- Transformation: Last

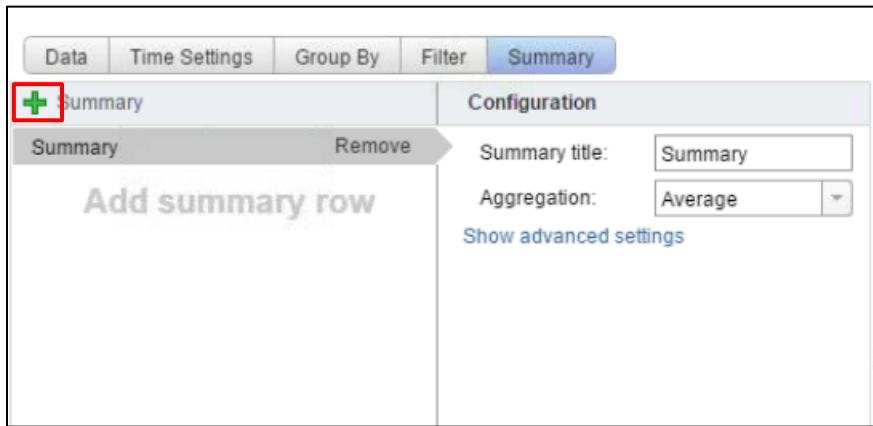
The **Data** window displays **Configuration|Name** when the Name object has been added successfully.

m. Click the **Time Settings** tab and change the **Relative Date Range** field from 7 days to 30 days.

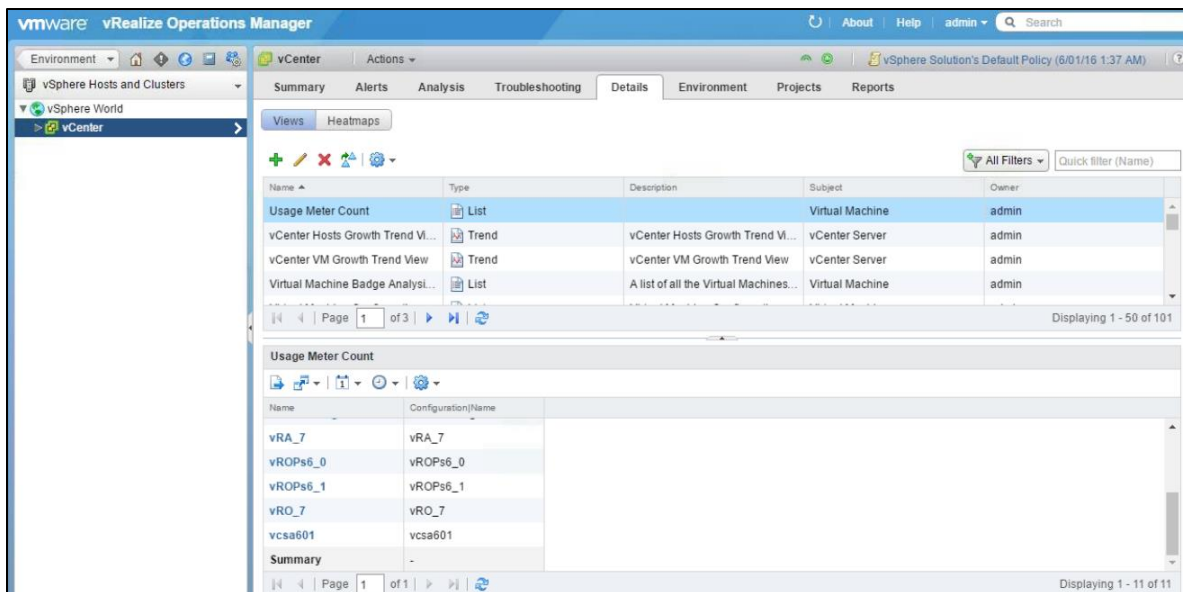
The screenshot shows the 'Configure Time Range for Data' dialog box. The 'Time Settings' tab is selected. The 'Relative Date Range' option is chosen, and the 'Last 30 Days' field is highlighted with a red box. The 'Specific Date Range' option is also visible but not selected.

**Note:** In vRealize Operations 6.0, this step is different. Instead of clicking the **Time Settings** tab, you set the time range for the View in the **Show data for last <number>** field. This field appears just above the tabs.

- n. Click the **Summary** tab, then click the  icon. You do not need to modify any of the fields that appear.



- o. Click **Save**.  
The View is displayed. From the list of VMs in the View, count only those VMs that are managed by vRealize Operations. Do not use the total number of VMs in the list as it may include other VMs.



- 4. Run the View at any time from the **Details** tab of the **Environment – vSphere Hosts & Clusters - vCenter** page by clicking the View name. From the list of VMs that is displayed, count only those VMs that are managed by vRealize Operations.

The VM count value is used when manually adjusting monthly reports for bundles or standalone use.

Refer to [Appendix A](#) for information on adjusting monthly reports.

## MANUALLY COLLECTING USAGE DATA FOR VSAN

The following process shows what vSAN usage API and property values should be used as well as how to cross-check this usage property against the vCenter UI for manual reporting or for reconciliation purposes.

### CASE 1: vSAN cluster with deduplication

#### API and Collection Sample

API and Property	Collection Sample from the UM Appliance
queryClusterData EfficiencyCapacity State API;  getPhysicalCapacityUsed Property	<pre>Collection_col_208_meter.json:{"\$schema":"vsan-usage-v1","productId":2,"moref":"domain-c1007","vsanFeatures":["BASE","DEDUPLICATION"],"usedCapacityBytes":23034494976,"edition":"vsan.enterprisePlus.cpuPackageCoreLimited","clusterId":"domain-c1007","licenseName":"vSAN Enterprise Plus","type":"ClusterComputeResource","productName":"VMware VSAN","licenseKey":"N42J2-8J055-089N1-0V3U6-1MGL2","productVersion":"7.0","clusterName":"KFVa4nnwdzL1","isEvaluationLicense":true,"time":1602782696836,"category":"VcAddon_VSAN_Collector","collectionId":208,"productType":"vCenter","vclId":2}</pre>

#### How to check usage against vCenter UI and verify with Cluster History Report

In the above collection sample, the usedCapacityBytes [23034494976 Bytes](#) = usedCapacityinGB [21.45254 GB](#)

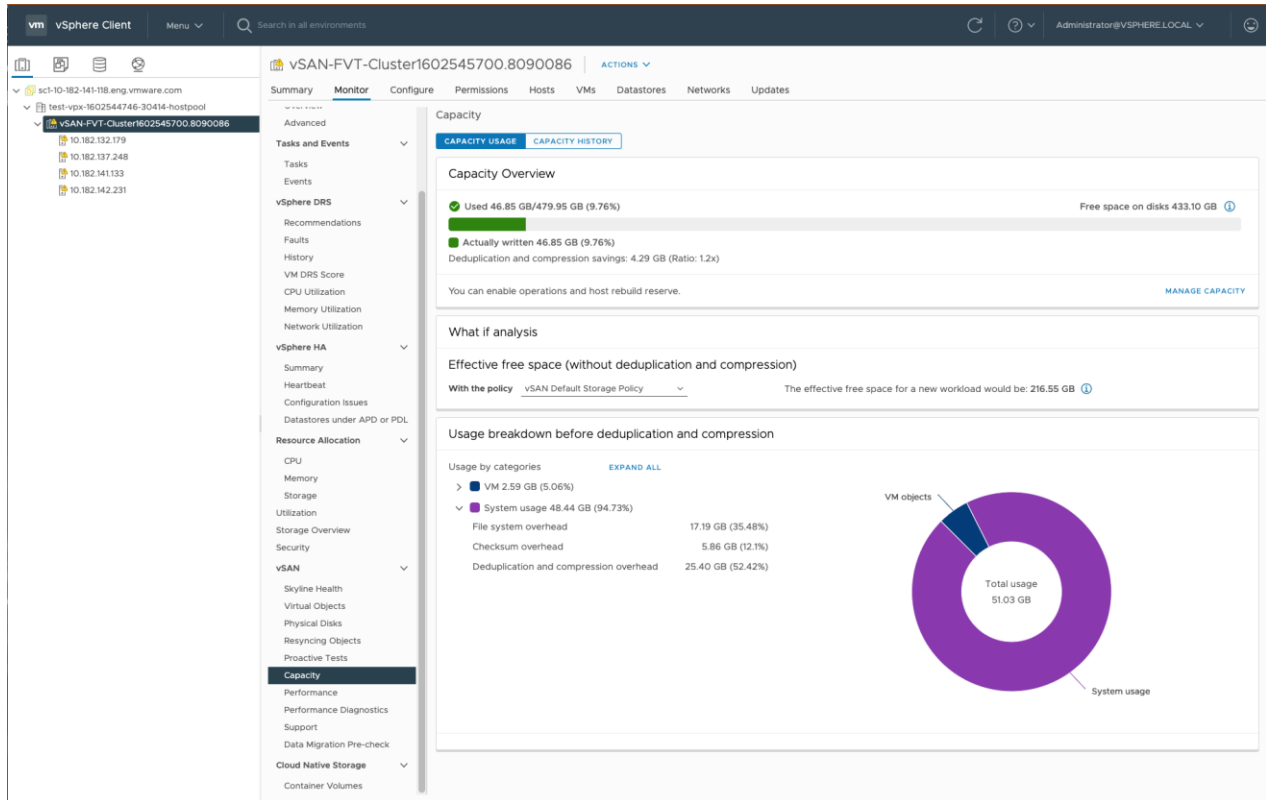
Using the vCenter UI, click on the cluster name on the left hand side menu, then click vSAN Monitor Tab → click on Capacity Section as shown in the vCenter screenshot below.

To calculate the metered usage capacity from the vCenter UI for this case (cluster with deduplication feature) do the following:

Metered Usage Capacity (in GB) = Capacity Overview:Used GB - Usage Breakdown before Deduplication and Compression:Deduplication and Compression Overhead

[21.45 GB](#) = [46.85 GB](#) - [25.40 GB](#)

In the cluster history report, you will see this usage value in MB (instead of GB) i.e. [21.45 GB](#) will show up as [21967.406 MB](#) (i.e. [23034494976/\(1024 \\* 1024\)](#))



Note: vCenter UI usage value in GB is rounded off values. Whereas in the UM Appliance collection, you will see the value in Bytes and precise (not rounded).

### CASE 2: vSAN cluster without deduplication

#### API and Collection Sample

API and Property	Collection Sample from the UM Appliance
vsanQuerySpaceUsage API; getSpaceOverview.getUsedB Property	<pre>Collection_col_211_meter.json:{"\$schema":"vsan-usage-v1","productId":3,"moref":"domain-c1010","vsanFeatures":["BASE","STRETCHED_CLUSTER"],"usedCapacityBytes":2776629248,"edition":"vsan.enterprisePlus.cpuPackageCoreLimited","clusterId":"domain-c1010","licenseName":"vSAN Enterprise Plus","type":"ClusterComputeResource","productName":"VMware VSAN","licenseKey":"N42J2-8J055-089N1-0V3U6-1MGL2","productVersion":"7.0","clusterName":"lh75S9ULliYV","isEvaluationLicense":true,"time":1602782698388,"category":"VcAddon_VSAN_Collector","collectionId":211,"productType":"vCenter","vcId":3}</pre>

## How to check usage against vCenter UI and Cluster History Report

In the above collection sample with NO DEDUPLICATION, the usedCapacityBytes **2776629248 Bytes** = usedCapacityinGB **2.5859375 GB**

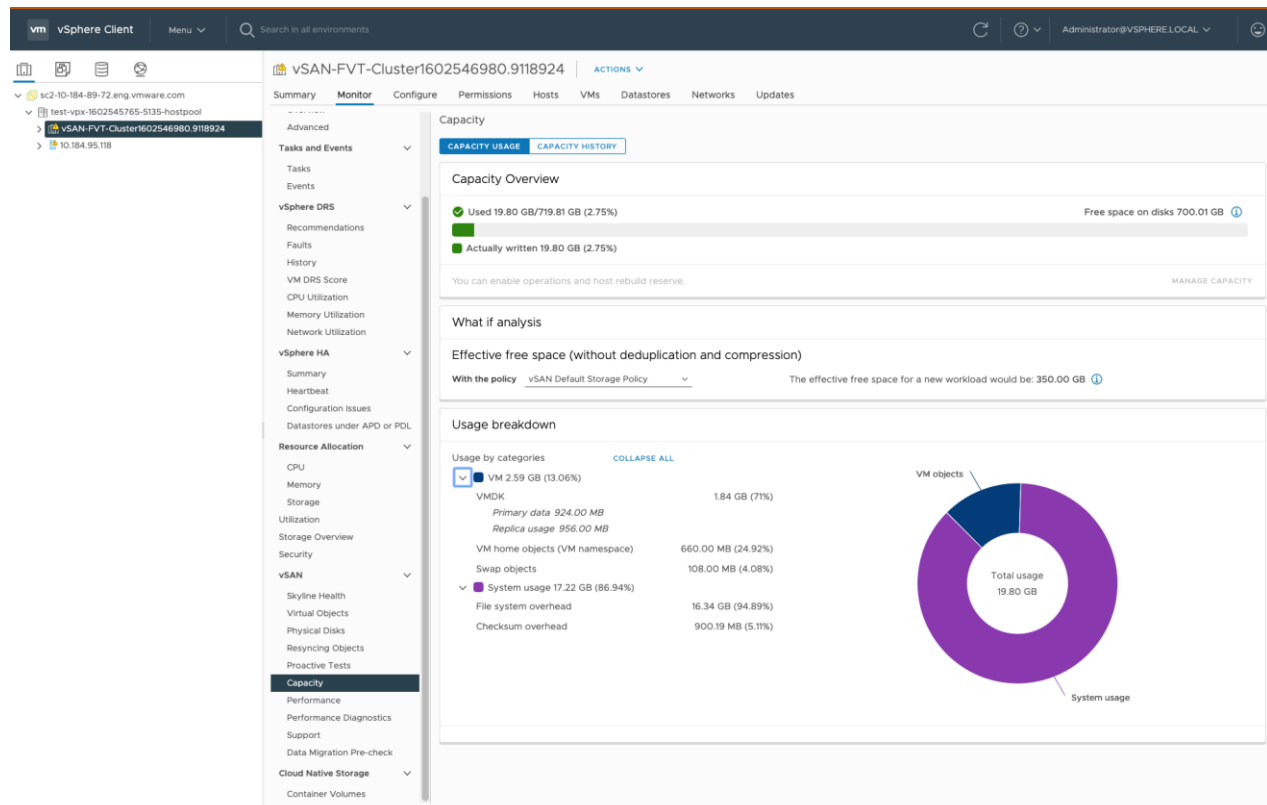
Using the vCenter UI, click on the cluster name on the left hand side menu, then click vSAN Monitor Tab → click on Capacity Section as shown in the vCenter screenshot below,

To calculate the metered usage capacity from the vCenter UI for this case (cluster without deduplication feature) do the following:

Metered Usage Capacity (in GB) = Capacity Overview:Used GB - (SUM of all System Overheads from Usage Breakdown:System Usage breakdown)

**2.5859 (rounded to 2.59) GB = 19.80 GB - (16.34 GB + 900.19 MB)**

In the cluster history report, you will see this usage value in MB (instead of GB) i.e. **2.5859 GB will show up as 2648 MB** (i.e.  $2776629248 / (1024 * 1024)$ )



Refer to [Appendix A](#), for information on adjusting monthly reports.



## MANUALLY COLLECTING USAGE DATA FOR NSX

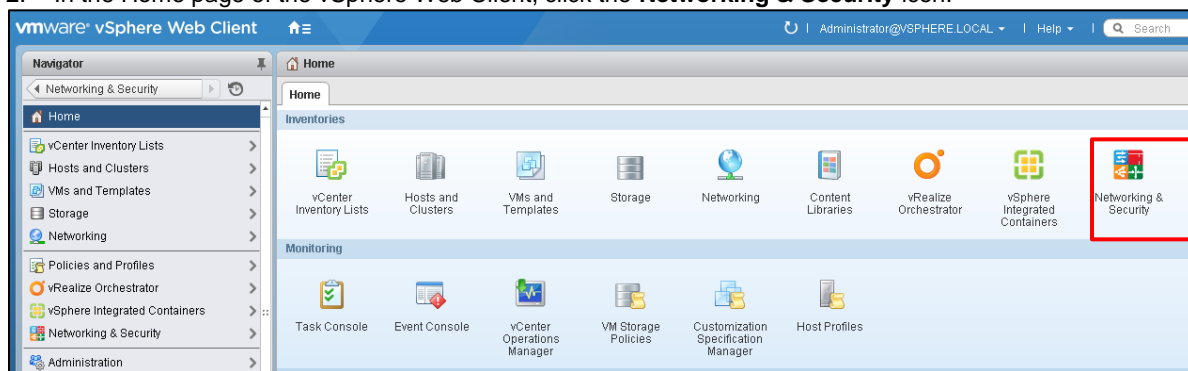
To collect NSX usage data, determine the number of VMs in your vCenter Server instance that use NSX.

Collecting this information involves the following tasks:

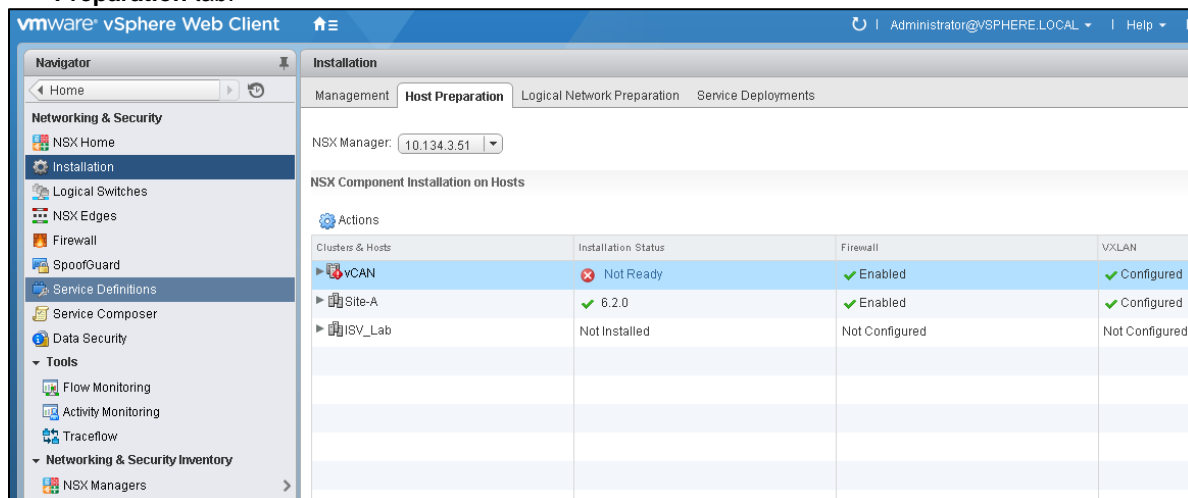
- Determine the hosts that have NSX installed.
- Export a list of all the VMs in the vCenter Server.
- From the list, count the number of VMs on each host that has NSX installed.

### Collect NSX Usage Data

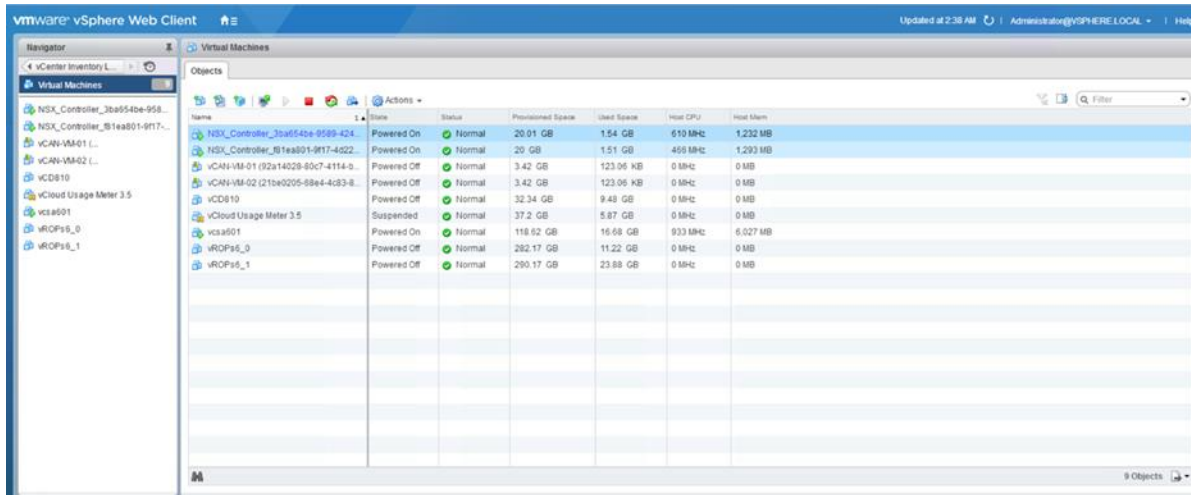
1. Use a browser to log into the vSphere Web Client.
2. In the Home page of the vSphere Web Client, click the **Networking & Security** icon.




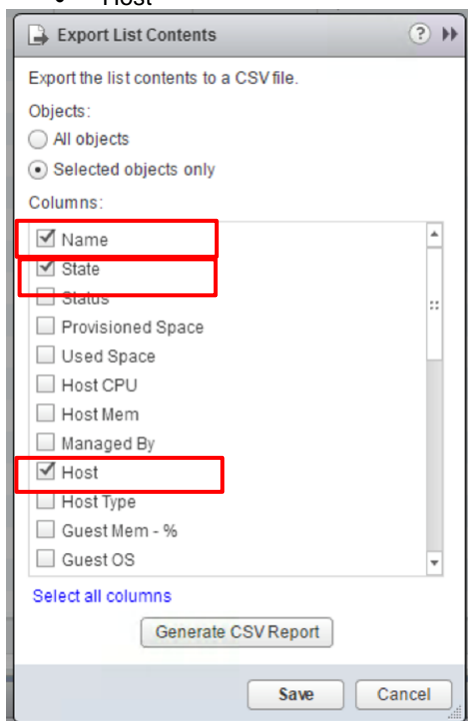
3. In the Navigator pane on the left, under **Networking & Security**, click **Installation**, then select the **Host Preparation** tab.



4. Make a note of the hosts that have NSX installed.
5. In the Navigator pane, click **Home** to return to the vSphere Web Client Home page.
6. In the Navigator pane, click **vCenter Inventory Lists**, then click **Virtual Machines**. All the virtual machines in your vCenter Server instance are listed.



7. Click the Export List icon  at the bottom-right of the page to export the list of VMs.
8. In the Export List Contents pop-up window, select the following items:
  - Name
  - State
  - Host



9. Click Generate CSV Report.
10. Sort the report by host name and count the number of VMs on each host that has NSX installed.

The total number of VMs running NSX is used while manually adjusting monthly reports for bundles or standalone product usage. Refer to [Appendix A](#), for information on adjusting monthly reports.

## HORIZON UNIVERSAL LICENSES

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As per the recent changes to the Product Guide (see below), customers are allowed to use Horizon Universal (or Horizon Subscription) Licenses to license Horizon in a Public Cloud. They cannot bring the vSphere/vCenter/vSAN/NSX licenses to a VCPP provider (or any public cloud provider) datacenter, thus they can use HUL/HSL to license Horizon, but the Cloud Provider must bring the SDDC licensing.

- While the customer is allowed to do so, it does not compel the Cloud Provider/VCPP partner to allow it. To avoid loss of revenue, the partner may still require the customer to acquire the licenses from them (either via Desktop MSP or using their VCPP Horizon bundles).
- If a partner does not want to have any responsibility for the Horizon environment, they may choose to allow the customer to bring their own Horizon license via HUL/HSL, but SDDC licenses would still be required from the CSP for the underlying infrastructure. In this case, the customer would own everything about the Horizon environment above the SDDC, including the support relationship with VMware.

Here are the specific recent changes in the Product Guide, which is located at <https://www.vmware.com/download/eula/product-guides.html> that apply to General Licensing

1. VMware has updated the Product Guide to preclude end users from bringing vSphere, vSAN, NSX and SDDC Manager to Public Cloud.  
**“Public Cloud Provider”** means a service provider or public cloud compute provider that provides Public Cloud Services to its end customers.
2. **Restrictions on Use with Public Cloud Services.** Customer must not allow Third Party Agents to access, deploy, use or operate the Software on Public Cloud Services.  
**“Public Cloud Services”** means computing infrastructure and platform services (such as compute resources, storage capabilities, databases or virtual machines and other computing infrastructure and platforms services) that a third party makes available for rent to customers and makes accessible via the public internet.
3. All EUC products with the exception of HUL are restricted from a BYOL perspective.
4. Public Cloud Infrastructure Customer must not use or install the Software on Public Cloud Infrastructure.  
**“Public Cloud Infrastructure”** means infrastructure computing services whereby the provider makes necessary resources, such as hardware, software and other supporting infrastructure available for rent to customers (whether accessible by customers or not), and on which customers may install applications

**VREALIZE OPERATIONS SUPER METRIC DEFINITIONS**

## VCPP EPOps Agent in VM Count

Save this code as sm\_VCPP EPOps Agent in VM Count.json.

```
{
  "390c24b2-154e-455e-be78-799bfb8607fa": {
    "resourceKinds": [
      {
        "resourceKindKey": "EP Ops Agent",
        "adapterKindKey": "EP Ops Adapter"
      }
    ],
    "name": "VCPP EPOps Agent in VM Count",
    "formula": "count({adaptype=VMWARE, objecttype=VirtualMachine, metric=badge|
health, depth=-2})",
    "description": ""
  }
}
```

## VCPP EPOps Agent Physical Count

Save this code as sm\_VCPP EPOps Agent Physical Count.json.

```
{
  "d68f866b-804e-41de-8d61-b97fbc22c9ae": {
    "resourceKinds": [
      {
        "resourceKindKey": "Operating Systems World",
        "adapterKindKey": "EP Ops Adapter"
      }
    ],
    "name": "VCPP EPOps Agent Physical Count",
    "formula": "${this, metric=Super Metric|sm_70c1ae5d-1fdf-49d6-9e50-94878931ab57} -
sum({adaptype=EP Ops Adapter, objecttype=EP Ops Agent, metric=Super Metric|
```

```
sm_390c24b2-154e-455e-be78-799bfb8607fa, depth=100}"),
  "description": ""
}
}
```

## VCPP EPOps Agent Count

Save this code as sm\_VCPP EPOps Agent Count.json.

```
{
  "70c1ae5d-1fdf-49d6-9e50-94878931ab57": {
    "resourceKinds": [
      {
        "resourceKindKey": "Operating Systems World",
        "adapterKindKey": "EP Ops Adapter"
      }
    ],
    "name": "VCPP EPOps Agent Count",
    "formula": "count({adaptype=EP Ops Adapter, objecttype=EP Ops Agent,
metric=AVAILABILITY|ResourceAvailability, depth=100})",
    "description": ""
  }
}
```

## VCPP Monitored OSI Count

Save this code as sm\_VCPP Monitored OSI Count.json.

```
{
  "ea33ba48-3a9d-4be3-9c98-e227e102c4b2": {
    "resourceKinds": [
      {
        "resourceKindKey": "VMware Adapter Instance",
        "adapterKindKey": "VMWARE"
      },
      {
        "resourceKindKey": "vSphere World",
        "adapterKindKey": "VMWARE"
      }
    ],
  }
}
```

```

    "name": "VCPD Monitored OSI Count",
    "formula": "(${this, metric=Super Metric|sm_8a7bd06e-ae7a-4b8a-83d8-691be8976eb5}
> 0) ? (${this, metric=Super Metric|sm_8a7bd06e-ae7a-4b8a-83d8-691be8976eb5}) : ($
{this, metric=summary|total_number_hosts})",
    "description": ""
  }
}

```

## VCPD Monitored VM Count

Save this code as VCPD Virtual License Counts.xml.

```

{
  "8a7bd06e-ae7a-4b8a-83d8-691be8976eb5": {
    "resourceKinds": [
      {
        "resourceKindKey": "VMware Adapter Instance",
        "adapterKindKey": "VMWARE"
      },
      {
        "resourceKindKey": "vSphere World",
        "adapterKindKey": "VMWARE"
      }
    ],
    "name": "VCPD Monitored VM Count",
    "formula": "count(${adapertype=VMWARE, objecttype=VirtualMachine, metric=sys|
poweredOn, depth=100, where=\"==1\"})",
    "description": ""
  }
}

```

## VREALIZE OPERATIONS REPORT TEMPLATE

# VCPP Virtual License Counts

Save this code as VCPP Virtual License Counts.xml.

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<Content>
  <Views>
    <ViewDef id="0ae95462-fc46-4d04-b13a-a10b1fff21ef">
      <Title>VCPP Virtual License Counts</Title>
      <Description/>
      <SubjectType adapterKind="VMWARE" resourceKind="vSphere World"
type="descendant"/>
      <SubjectType adapterKind="VMWARE" resourceKind="vSphere World"
type="self"/>
      <Usage>dashboard</Usage>
      <Usage>report</Usage>
      <Usage>details</Usage>
      <Usage>content</Usage>
      <Controls>
        <Control id="time-interval-selector_id_26" type="time-interval-
selector" visible="false">
          <Property name="advancedTimeMode" value="false"/>
          <Property name="unit" value="YEARS"/>
          <Property name="count" value="1"/>
        </Control>
        <Control id="attributes-selector_id_27" type="attributes-selector"
visible="false">
          <Property name="attributeInfos">
            <List>
              <Item>
                <Value>
                  <Property name="objectType" value="RESOURCE"/>
                  <Property name="attributeKey" value="Interval Breakdown"/>
                  <Property name="id" value="extModel1219-1"/>
                  <Property name="rollUpCount" value="0"/>
                  <Property name="isTimeSegment" value="true"/>
                  <Property name="breakdownBy" value="MONTHS"/>
                  <Property name="startingOnUnit" value="WEEKS"/>
                  <Property name="startingOnCount" value="1"/>
                  <Property name="displayName" value="Month"/>
                </Value>
              </Item>
            </List>
          </Property>
        </Control>
      </Controls>
    </ViewDef>
  </Views>
</Content>
```

```

        <Item>
<Value>
  <Property name="objectType" value="RESOURCE"/>
  <Property name="attributeKey" value="Super Metric|sm_ea33ba48-3a9d-4be3-9c98-
e227e102c4b2"/>
  <Property name="id" value="extModel1219-2"/>
  <Property name="isStringAttribute" value="false"/>
  <Property name="adapterKind" value="VMWARE"/>
  <Property name="resourceKind" value="vSphere World"/>
  <Property name="rollUpType" value="NONE"/>
  <Property name="rollUpCount" value="0"/>
  <Property name="transformations">
    <List>
      <Item value="AVG"/>
    </List>
  </Property>
  <Property name="isProperty" value="false"/>
  <Property name="displayName" value="Average OSI"/>
</Value>
      </Item>
    </List>
  </Property>
</Control>
  <Control id="pagination-control_id_28" type="pagination-control"
visible="true">
    <Property name="start" value="0"/>
    <Property name="size" value="50"/>
  </Control>
</Controls>
  <DataProviders>
    <DataProvider dataType="list-view" id="list-view_id_25"/>
  </DataProviders>
  <Presentation type="list"/>
</ViewDef>
</Views>
<Reports>
  <ReportDef id="49d16c84-d1bf-4057-b209-e2d4145b3a33">
    <Title>VCP Virtual License Counts</Title>
    <Description/>
    <SubjectType adapterKind="VMWARE" resourceKind="vSphere World"
type="descendant"/>
    <SubjectType adapterKind="VMWARE" resourceKind="vSphere World"
type="self"/>
    <Sections>

```



```
<Section>
  <ContentType>CoverPage</ContentType>
  <ContentKey>COVER_PAGE</ContentKey>
</Section>
<Section>
  <ContentType>View</ContentType>
  <ContentKey>0ae95462-fc46-4d04-b13a-a10b1fff21ef</ContentKey>
  <ContentOrientation>Portrait</ContentOrientation>
</Section>
</Sections>
<Settings>
  <ShowPageFooter>>false</ShowPageFooter>
  <OutputFormat>pdf</OutputFormat>
  <OutputFormat>csv</OutputFormat>
</Settings>
</ReportDef>
</Reports>
</Content>
```



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