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VMWARE vCLOUD AIR NETWORK PRODUCT USAGE GUIDE

Q3 2016

Product Usage Guide is effective for program product usage as of August 1, 2016. This VMware vCloud Air Network Program Product Usage Guide replaces all previous VSPP 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 vCloud Air Network Program (the "Products") as listed below in the VMware vCloud Air Network 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 August 1, 2016 for the applicable reporting and purchase of vCloud Air Network Products.

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Contents

Summary

The following products have been added to the VMware vCloud Air Network Program:

    1. VMware Availability for vCloud Director

The following products are placed on "Special Terms[1]" in the vCloud Air Network Program:

The products on "Special Terms" are expected to be removed from the vCAN program by the end of Q3 2016 or when their transition products are generally available in the vCloud Air Network program, whichever is later. Meanwhile, they are available for use only by vCAN partners with contracts completed prior to August 1, 2016. The new vCAN partners with contracts completed on or after August 1, 2016 should use the recommended migration option where applicable.

    1. VMware vRealize Business Enterprise Foundation Package. There is no VMware migration option; the product will continue to be supported by a 3rd party company.
    2. VMware vRealize Business Enterprise for Additional Users. There is no VMware migration option; the product will continue to be supported by a 3rd party company.

Support Overview

Support coverage provided for VMware vCloud Air Network Products is listed in this Guide for each product. Product Support renewal is automated without any required action by Service Providers or Aggregators. Product Support is automatically extended for any Service Provider with an effective contract that is not delinquent in reporting or payment as of the contract anniversary date. All support is governed by the VMware Support Policies set forth on https://www.vmware.com/support/policies/policy_index.html.

Product Lifecycle

VMware manages product availability in accordance with its Lifecycle Policies described at https://www.vmware.com/support/policies/lifecycle.html (the "Lifecycle Policies"). Unless otherwise indicated in this Guide, the vCloud Air Network Program products and services will follow VMware's general Lifecycle Policies. For the vCloud Air Network 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.

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.

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[1] Refer to the Product Lifecycle section for definition of "Special Terms".

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VMware vCloud Air Network Program Pricing Model

Service Providers currently able to license under subscription Pricing Model may utilize the following products. All products used must be reported to the Aggregator on a monthly basis. Appendix A lists the naming convention for reporting use of the products. Service Providers with valid contracts will have the products with points value listed below delivered in their license portals automatically, unless indicated otherwise.

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Product Name	Points/Month	Charged Per
Datacenter & Cloud Infrastructure:		
VMware vCloud *SP Advanced Bundle with Management & Networking*	12	1 GB Reserved RAM (based on average monthly usage)
VMware vCloud SP *Advanced Bundle with Management*	10	1 GB Reserved RAM (based on average monthly usage)
VMware vCloud SP *Advanced Bundle with Networking*	9	1 GB Reserved RAM (based on average monthly usage)
VMware vCloud SP *Advanced Bundle*	7	1 GB Reserved RAM (based on average monthly usage)
VMware vCloud SP *Standard Bundle with Management*	8	1 GB Reserved RAM (based on average monthly usage)
VMware vCloud SP *Standard Bundle with Networking*	8	1 GB Reserved RAM (based on average monthly usage)
VMware vCloud SP *Standard Bundle*	5	1 GB Reserved RAM (based on average monthly usage)
VMware vCLoud SP Premier Bundle **	7	1 GB Reserved RAM (based on average monthly usage)
VMware vCloud SP Premier Plus Bundle **	10	1 GB Reserved RAM (based on average monthly usage)
VMware vCloud SP Premier – X Bundle**	10	1 GB Reserved RAM (based on average monthly usage)
VMware vCloud SP Premier – X Plus Bundle **	13	1 GB Reserved RAM (based on average monthly usage)
Infrastructure & Operations Management:		
VMware NSX Enterprise	20	Virtual Machine
VMware NSX-V**	20	Virtual Machine
VMware NSX-MH **	25	Virtual Machine or OSI
VMware Site Recovery Manager	24	Protected Virtual Machine (VM)
VMware vCloud Availability for vCloud Director	18	Protected Virtual Machine (VM)
VMware Virtual SAN Standard	0.04	1 GB of Used Capacity
VMware Virtual SAN Advanced	0.06	1 GB of Used Capacity
VMware Virtual SAN Enterprise Add-on	0.02	1 GB of Used Capacity
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 Business Enterprise Foundation Package **	5,833	10 Users
VMware vRealize Business Enterprise for Additional Users **	1,667	5 Users
VMware vRealize Log Insight	4.5	Virtual Machine or OSI
VMware vRealize Operations Standard	2.5	Virtual Machine or OSI

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VMware vRealize Operations Advanced	6	Virtual Machine or OSI
VMware vRealize Operations Enterprise	12	Virtual Machine or OSI
Application Platform & Management:		
VMware vRealize Hyperic	15	Machine
VMware vFabric Data Director	80	2 vCPUs of provisioned vFabric Postgres Standard Edition databases
Desktop & End User Computing Products:		
VMware App Volumes Standard	4	Concurrent Connection
VMware App Volumes Advanced	7	Concurrent Connection
VMware App Volumes Enterprise	9	Concurrent Connection
VMware Horizon DaaS Bundle – RDSH Edition *	13	Total Allocated Quota for RDSH Connections
VMware Horizon DaaS Bundle – VDI Edition *	16	Total Allocated Quota for VDI Connections
VMware Desktop Disaster Recovery for Horizon DaaS Bundle(s) *	4	Total Allocated Insurance Quota for VDI and RDSH Connections per month
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 Mirage	7	Named User
VMware ThinApp Client	2	ThinApp Client
VMware ThinApp Packager	1	ThinApp Packager
VMware User Environment Manager	2	Named User
VMware Virtual SAN Standard for Desktop	2	Concurrent Connection
VMware Virtual SAN Advanced for Desktop	4	Concurrent Connection
VMware Virtual SAN Enterprise Add-on for Desktop	1	Concurrent Connection
VMware NSX Advanced for Desktop	5	Concurrent Connection
VMware NSX Enterprise for Desktop	8	Concurrent Connection
Third Party Products:		
OnAppTM for vCloud Air Network *	1.5	1 vBG Reserved RAM

* Requires special qualification process; see details on the product specific page(s).

** On special terms

Product Specific Usage Information

For purposes of this Product Usage Guide, a Hosted IT Service means the provision of services created by a Service Provider for its tenants that:

i.   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

ii.   May be accessed via the Internet, telephone or private network based.

There are two categories of Hosted IT Service architectures:

i.   **Multi-tenant:** The hosting infrastructure is hosted by Service Provider at the Service Provider's premise(s) and shared between multiple tenants.

ii.   **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 managed service at the tenant's premise(s).

For single-tenant Hosted IT Services, Service Providers may install software on systems located on a tenant's premise(s) solely to provide Hosted IT Services to that tenant, 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 tenant's site. Service Provider shall not permit tenant (or any third party agent providing service to the tenant) 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.

Licensing Specific Usage Information

The VMware vCloud Air Network Program allows for Service Providers to install and use VMware Products as part of a Hosted IT Service. Prior written approval is required from the VMware vCloud Air Network Program Office for any deviation from these installation requirements.

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Reporting Overview

Service Providers must report usage of Products to the Aggregator from which they procure the Product license entitlements using the following methods:

- The VMware vCloud Usage Meter is used to monitor the vCloud Service Provider Bundles – Standard and Premier VMware Site Recovery Manager…. Service Providers must install the vCloud Usage Meter to monitor and report usage information to their Aggregator. Separate license keys must be identified by the vCloud Usage Meter in order to meter the Cloud Test Demonstration Environment to report usage information to their Aggregator.
- VMware Site Recovery Manager (SRM) servers must be identified and linked to vCenter Servers in order to report on protected virtual machines.
- If you are using vROPs , NSX, vSAN, or vSphere Availability products, Usage Meter 3.3.3 will not measure them correctly. Please report the usage of such products manually. Refer to Appendix A for instructions.
  Note: Earlier versions of vROps were named vCOPS,if you are using vCOPs 5.x Usage Meter 3.3.3 will correctly measure vCOPs 5.x and no manual reporting is required.
- Service Providers must notify VMware of their intent to provide single-tenant Hosted IT Services, irrespective of the premise on which the licenses are deployed, and separately report single-tenant monthly usage via the VMware Business Portal. Notifications should be sent to vcan-operations@vmware.com and must include the products name(s) that will be involved with the single-tenant Hosted IT Service.
- Partners using older editions of standalone vSphere Standard, vSphere Advanced or vSphere Enterprise should report as follows: Point Value: 7 points per 1 GB Reserved RAM (based on average monthly usage) (GB = 1024 MB)
  Total points capped at 24 GB RAM per virtual machine (see Reporting and Operational Details)

The total of these submissions will be used by the Aggregator to calculate the total point usage for the month. See the VMware vCloud Air Network Program Guide for information on the Cloud Test Demonstration Environment.

For all products in this guide, unless otherwise stated, usage total consists of the total of all products used.

The Service Provider Agreement requires Service Provider 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. All data must be maintained for a minimum of 2 years.

Who to Contact for Technical Issues

For technical issues, please refer to the vCloud Usage Meter Community page at http://communities.vmware.com/community/vmtn/vcd/vcloud_usage_meter/.

For further technical assistance, please contact VMware Global Support Services at http://www.vmware.com/support/contacts/ or call:

+1 877-4VMWARE hotline (use Option 4 for Technical Support).

VCAN BUNDLES

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Legacy vCAN Bundles

The 'Legacy' vCAN bundles are being placed on Special Terms and can be referred to in Apendix D.These bundles will be available until December 31, 2016. For details regarding these bundles please see Appendix D.

Legacy Bundles include:

- VMware vCloud SP Bundle Premier
- VMware vCloud SP Bundle Premier Plus
- VMware vCloud SP Bundle Premier-X
- VMware vCloud SP Bundle Premier-X Plus

New vCAN Bundles

vCloud SP Advanced Bundle with Management & Networking

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 SLAs and capturing new revenue streams through add-on services to customers. Service Providers have the option to deploy either VMware vCloud Director or VMware Integrated OpenStack (VIO).

Point Value

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 virtual machine (see Reporting and Operational Details in Apendix B.)

Components

- VMware vRealize Operations Enterprise, including vRealize Operations Manager, vRealize Configuration Manager, vRealize Infrastructure Navigator and vRealize Hyperic
- VMware vRealize Log Insight
- VMware vCloud Connector Advanced
- VMware vSphere Enterprise Plus
- VMware vCenter Server Standard
- VMware vCloud Director OR VMware Integrated OpenStack (VIO)
- VMware NSX Enterprise

Support Included

VMware Production Level support

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VMware vCloud SP Advanced Bundle with Management

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.

Point Value: 10 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)

Components:

- VMware vRealize Operations Enterprise, including vRealize Operations Manager, vRealize Configuration Manager, vRealize Infrastructure Navigator and vRealize Hyperic
- VMware vRealize Log Insight
- VMware vCloud Connector Advanced
- VMware vSphere Enterprise Plus
- VMware vCenter Server Standard
- VMware vCloud Director
- VMware NSX Base (vCNS mode)

Support Included:
VMware Production Level support

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VMware vCloud SP Advanced Bundle with Networking

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 vCloud Director or VMware Integrated OpenStack (VIO).

Point Value: 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)

Components:
- VMware vCloud Connector Advanced
- VMware vRealize Log Insight
- VMware vSphere Enterprise Plus
- VMware vCenter Server Standard
- VMware vCloud Director OR VMware Integrated OpenStack (VIO)
- VMware NSX Advanced

Support Included:
VMware Production Level support.

VMware vCloud SP Advanced Bundle

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.

Point Value:

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)

Components:

- VMware vCloud Connector Advanced
- VMware vRealize Log Insight
- VMware vSphere Enterprise Plus
- VMware vCenter Server Standard
- VMware vCloud Director
- VMware NSX Base (vCNS mode)

Support Included:

VMware Production Level support.

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VMware vCloud SP Standard Bundle with Management

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.

Point Value: 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)

Components:

- VMware vRealize Operations Enterprise, including vRealize Operations Manager, vRealize Configuration Manager, vRealize Infrastructure Navigator and vRealize Hyperic
- VMware vRealize Log Insight
- VMware vCloud Connector Advanced
- VMware vSphere Enterprise Plus
- VMware vCenter Server Standard

Support Included:
VMware Production Level support.

VMware vCloud SP Standard Bundle with Networking

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.

Point Value: 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)

Components:

- VMware vRealize Log Insight
- VMware vCloud Connector Advanced
- VMware vSphere Enterprise Plus
- VMware vCenter Server Standard
- VMware NSX Advanced

Support Included:

VMware Production Level support.

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VMware vCloud SP Standard Bundle

The VMware vCloud SP *Standard Bundle* 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.

Point Value: 5 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)

Components:

- VMware vSphere Enterprise with vNetwork Distributed Switch enabled
  (Note: The vSphere edition on installation may display as vSphere Standard with vNetwork Distributed Switch; however, this enables the same features as vSphere Enterprise with vNetwork Distributed Switch.)
- VMware vCenter Server Standard
- VMware vCloud Director
- VMware vCenter Chargeback Manager[2]
- VMware vRealize Business for Cloud Advanced

Support Included:
VMware Production Level support.

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[2] Chargeback Manager is on "Special Terms" until December 31, 2017 when it will reach End of Support (EOS) and it will be removed from the vCAN program. Service Providers with completed contracts prior to September 2015 may request additional licenses of Chargeback Manager to be used with any new vCAN bundle, until December 31,2017. Service Providers with contracts completed after September 2015 should implement vRealize Business for Cloud Advanced.

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VMware vCloud Service Provider Bundles Comparison

Products	Standard	Standard w/ Networking	Standard w/ Management	Advanced	Advanced w/ Networking	Advanced w/ Management	Advanced w/ Networking & Management
Points (per GB reserved vRAM / month)	**5**	**8**	**8**	**7**	**9**	**10**	**12**
Management — vRealize Operations Enterprise			✓			✓	✓
vRealize Log Insight (vRLI)		✓	✓	✓	✓	✓	✓
vCloud Director (VCD)	✓			✓	VCD *or* VIO	✓	VCD *or* VIO
VMware Integrated OpenStack (VIO)							
vCloud Connector Advanced		✓	✓	✓	✓	✓	✓
Metering — vRB for Cloud Advanced	✓						
vCenter Chargeback Manager	✓						
Networking — NSX-SP Enterprise							✓
NSX-SP Advanced		✓			✓		
NSX-SP Base (vCNS mode)				✓		✓	
Compute — vSphere Enterprise Plus		✓	✓	✓	✓	✓	✓
vSphere Enterprise with Distributed Network Switch	✓						
vCenter Server Standard	✓	✓	✓	✓	✓	✓	✓

Reporting on New Bundles

Reporting Sku	Reporting Description	Min Commit	Prior Month Usage	Utilised Units	Min Unit	Unit	Overage Sku	Overage Units	PPU	Total Points
VSPP-3600-RENT	**VSPP Monthly Rental - Minimum 3600 pts**	**3600.00**		**0**		**Point**	**VSPP-3600-1-RENT**			**3600**
Products Reported Previous Months										
VCL-STD-C	vCloud Service Provider Bundle - Standard Edition (End of Life 31DEC2016)					GB vRAM				5
VCL-PRE-C	vCloud Service Provider Bundle - Premier Edition (End of Life 31DEC2016)					GB vRAM				7
VCL-PRE-P-C	vCloud Service Provider Bundle - Premier Plus Edition (End of Life 31DEC2016)					GB vRAM				10
VCL-PRE-X-C	VMware vCloud Service Provider Bundle – Premier-X Edition (End of Life 31DEC2016)					GB vRAM				10
VCL-PRE-XP-C	VMware vCloud Service Provider Bundle – Premier-X Plus Edition (End of Life 31DEC2016)					GB vRAM				13
VCL-SP-STD-C	VMware vCloud SP Standard Bundle (*New*)					GB vRAM				5
VCL-SP-STD-NTW-C	VMware vCloud SP Standard Bundle with Networking (*New*)					GB vRAM				8
VCL-SP-STD-MGM-C	VMware vCloud SP Standard Bundle with Management (*New*)					GB vRAM				8
VCL-SP-ADV-C	VMware vCloud SP Advanced Bundle (*New*)					GB vRAM				7
VCL-SP-ADV-NTW-C	VMware vCloud SP Advanced Bundle with Networking (*New*)					GB vRAM				9
VCL-SP-ADV-MGM-C	VMware vCloud SP Advanced Bundle with Management (*New*)					GB vRAM				10
VCL-SP-ADV-NTWMGM-C	VMware vCloud SP Advanced Bundle with Networking & Management (*New*)					GB vRAM				12

If Usage Meter 3.3.3 reports Standard bundle please enter this amount in the VMware vCloud SP Standard Bundle ("New")(VCL-SP-STD-C)

If Usage Meter 3.3.3 reports Premier bundle please determine the distribution among the following new bundles and enter accordingly. For instructions on how to determine the distribution for each bundle please refer to Appendix B.

- VMware vCloud SP Standard Bundle with Networking ("New") (VCL-SP-STD-NTW-C)
- VMware vCloud SP Standard Bundle with Management ("New") (VCL-SP-MGM-C)
- VMware vCloud SP Advanced Bundle ("New") (VCL-SP-ADV-C)
- VMware vCloud SP Advanced Bundle with Networking ("New") (VCL-SP-ADV-NTW-C)
- VMware vCloud SP Advanced Bundle with Management ("New") (VCL-SP-ADV-MGM-C)
- VMware vCloud SP Advanced Bundle with Networking and Management ("New")
  (VCL-SP-ADV-NTWMGM-C)

NETWORKING AND SECURITY

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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 Enterprise

VMware NSX Enterprise automates IT workflows, bringing agility to the data center network and reducing network operating costs and complexity. It offers a fundamentally more secure data center with micro-segmentation and helps secure the data center to the highest levels, while automating IT provisioning of security. Finally, it supports networking and security across multiple domains and enables the data center network to extend across multiple sites and connect to high-throughput physical workloads. To learn more about VMware NSX visit: http://www.vmware.com/products/nsx/compare.html

Point Value: 20 points per managed virtual machine or OSI per month

Components: VMware NSX Enterprise

Reporting:

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.

VMware NSX Enterprise reporting consists of two parts:

- Monthly reporting on the vCloud Service Provider Bundle that is installed and being utilized as the basis for VMware NSX Enterprise via Usage Meter.
- Monthly reporting of VMware NSX Enteprise usage manually as Usage Meter 3.3.X does not support VMware NSX Enterprise.
- Detailed reporting steps for VMware NSX Enterprise are located in Appendix A Reporting and Operational Details

Support: VMware Production level support

VMware NSX-V[3]

VMware NSX-V brings virtualization to existing networks and transforms network operations and economics. It enables programmatic creation, provision, snapshotting, deletion and restoration of complex networks in software. The software-based approach reduces the time it takes to provision custom, multi-tier network topologies and enterprise class security services from weeks to seconds, while simplifying processes and reducing CapEx and OpEx for service providers. Through distributed security model, security profiles for each VM move with VMs and are enforced no matter where the VM is located in; thereby sharing application context across virtual and physical security platforms. The product supports VMware hypervisor only.

Point Value: 20 points per managed virtual machine or OSI per month

Components: VMware NSX-V

Reporting:

As VMware NSX-V 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-V.

VMware NSX-V reporting consists of two parts:

- Monthly reporting on the vCloud Service Provider Bundle that is installed and being utilized as the basis for VMware NSX-V via Usage Meter.
- Monthly reporting of VMware NSX-V usage manually as Usage Meter 3.3.X does not support VMware NSX-V.

Support: VMware Production level support

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[3] VMware NSX-V is placed on "special terms". Refer to the product lifecycle matrix for end of support date. Its recommended migration option is VMware NSX Enterprise at same point value.

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VMware NSX-MH[4]

VMware NSX-MH brings virtualization to existing networks and transforms network operations and economics. It enables programmatic creation, provision, snapshotting, deletion and restoration of complex networks in software. The software-based approach reduces the time it takes to provision custom, multi-tier network topologies and enterprise class security services from weeks to seconds, while simplifying processes and reducing CapEx and OpEx for service providers. Through distributed security model, security profiles for each VM move with VMs and are enforced no matter where the VM is located in; thereby sharing application context across virtual and physical security platforms. The product supports VMware and non-VMware hypervisors.

Point Value: 25 points per VM or OSI per month managed by NSX-MH. Minimum commitment of 250 VMs per month required

Components: VMware NSX-MH

Reporting:

As VMware NSX-MH 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-MH.

VMware NSX-MH reporting consists of two parts:

- Monthly reporting on the vCloud Service Provider Bundle that is installed and being utilized as the basis for VMware NSX-MH via Usage Meter.
- Monthly reporting of VMware NSX-MH usage manually as Usage Meter 3.3.X does not support VMware NSX-MH.

Support: VMware Production level support

Limitations:

This is a restricted product and only qualifying Service Providers can rent the product from VMware. Contact your local Business Development Manager or partnernetwork@vmware.com for requirements and additional details to rent the product from VMware.

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[4] NSX-MH is placed on "special terms". Refer to the compatability matrix for end of availability date. There is no migration path for NSX-MH

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STORAGE AND AVAILABILITY

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VMware Site Recovery Manager

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. To learn more about Site Recovery Manager visit: http://www.vmware.com/products/site-recovery-manager/features.html

Point Value: 24 points per protected virtual machine per month

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.

Components: VMware Site Recovery Manager Enterprise

Reporting:

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:

- Monthly reporting on the vCloud Service Provider Bundle that is installed and being utilized as the basis for SRM or Disaster Recovery on the protected side via Usage Meter.
- Monthly reporting of SRM usage – number of VMs on the protected side.
- Monthly reporting on the vCloud Service Provider Bundle that is installed and being utilized as the basis for SRM or Disaster Recovery on the recovery side via Usage Meter.

Reporting for SRM usage is done via vCenter 5 (required for SRM 5 and later.) 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.

Support Included: VMware Production level support

Limitations:

SRM 5 and later require vCenter 5 and are not compatible with older versions of vCenter. SRM is not compatible with the vSphere Essentials editions and requires vSphere Standard or above.

SRM 5 and later require replication between sites. Service Providers can use either vSphere Replication or Array-Based Replication provided by one of VMware's storage partners. In the latter case, a Storage Replication Adapter, provided by the storage vendor, is required for integration between SRM and the storage array. For a list of compatible products with available SRAs, please refer to http://www.vmware.com/pdf/srm_storage_partners.pdf. There is no automated usage reporting tool available for this product. Service Providers must gather and report all usage manually.

Service Providers are advised that vCloud Director has not been tested and is not supported for SRM.

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VMware vCloud Availability for vCloud Director v1.0

VMware vCloud Availability for vCloud Director enables vCloud Air Network Service Providers to offer solutions for disaster recovery as a service that natively support their customers' vSphere environments. This solution is based on the successful vCloud Air Disaster Recovery technology, which supports hundreds of successful customers on vCloud Air today. VMware vCloud Availability for vCloud Director enables Cloud Providers worldwide to offer their customers vSphere replication technology to replicate their critical applications, backed by the reliability, security and support that customers recognize and trust from VMware.

Point Value

18 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.

Components

- vCloud Availabilty for vCloud Director 1.0
    - Install separately:
        - vSphere Replication Cloud Service (vRCS)
        - vSphere Replication Manager (vRMS)
        - vSphere Replication Server(vRS)

- Provider Requirements:
    - vCloud Director SP (v8.10)*
    - ESX 6.0 U2
    - NSX 6.1.5
    - VCSA 6.0 U2
    - Cassandra Database (Can share with vCloud Director Metrics)

*Please note that vCloud Director SP v8.10 is required; vCloud Availability for vCloud Director does not support earlier version of vCloud Director.

- Tenant Requirements:
    - vCenter 6.0 U1
    - vSphere Replication Appliance 6.0 & 6.1*
    - ESXi 6.0 U1, 6.0, 5.5, 5.1, 5.0 (Support for MPIT & Failback)
    - vCenter 5.5U2 & 5.1
    - vSphere Replication Appliance 5.8 & 5.6
    - 5.5, 5.1, 5.0 (No Multiple Point In Time & No Automated Failback)

**Please note that the vSphere Replication appliance is needed on the tenant side in order to run vCloud Availability for vCloud Director. The vSphere Replication appliance is the same component that comes included with VMware vSphere Essentials Plus Kit and higher editions of VMware vSphere, VMware vSphere with Operations Management™ editions, as well as with VMware vCloud Suite® editions.

Reporting

vCloud Availability for vCloud Director reporting does not include any usage of vCenter Server, vSphere or vCloud Director.

Use of those products must be reported separately, in addition to the usage of the vCloud Availability for vCloud Director product.

vCloud Availability for vCloud Director disaster recovery reporting consists of:

- Monthly standalone reporting of vCloud Availability for vCloud Director usage – number of VMs and total storage consumed by the VMs on the recovery side.

In order to report usage, please follow these steps:
- Download the script from https://github.com/vmware/vcloud-availability-examples
- Run the script
- Report the usage into the business portal

Support Included

VMware Production level support

Limitations

vCloud Availability for vCloud Director requires vCloud Director 8.10.

For a complete list of compatible versions, please see the documentation for vCloud Availability for vCloud Director v1.0, at http://pubs.vmware.com/vcloud-availability-vcd-10/index.jsp.

VMware Virtual SAN

Virtual SAN is a 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 Virtual SAN Standard

Virtual SAN Standard supports hybrid SSD/HDD[5] configuration.

Point Value: 0.04 points per GB per month for Used Capacity

Components: VMware Virtual SAN Standard

Reporting:

As Virtual SAN 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 Virtual SAN Standard product.
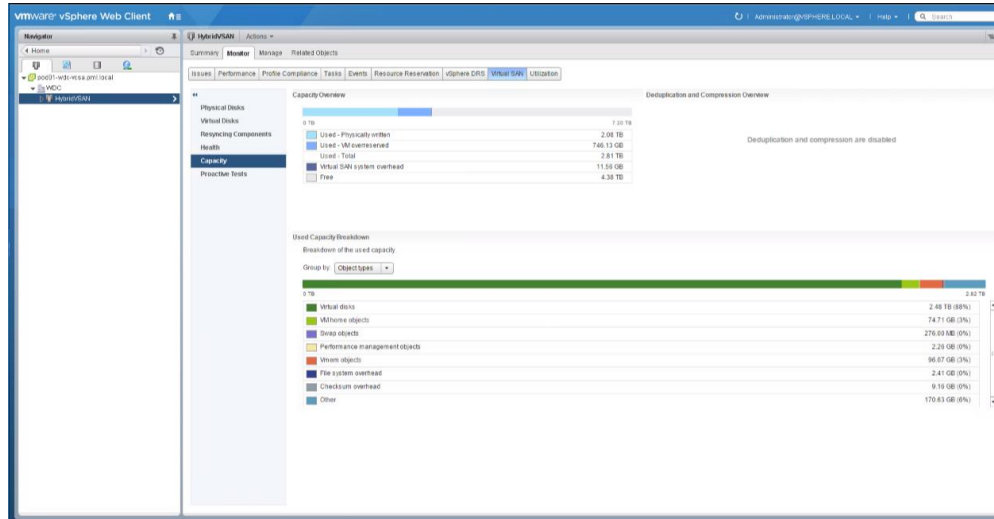
Virtual SAN Standard system reporting consists of two parts:
- Monthly reporting on the vCloud Service Provider Bundle that is installed and being utilized as the basis for Virtual SAN Standard via Usage Meter.

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[5] SSD = Solid State Drive, HDD = Hard Disk Drive

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- Monthly manual reporting of Virtual SAN Standard per Used Capacity. "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. Used Capacity must be manually reported and requires that the storage capacity not available for new allocations be extracted daily to identify the average monthly consumed capacity. Service Provider may use an API[6] provided by VMware to automate the capture of the daily usage data metric as required to report Used Capacity.

The Used Capacity to each Virtual SAN cluster can be found in the vSphere Web Client UI under the "Capacity" tab as shown below. If the data center has several Virtual SAN clusters, each one will be shown:
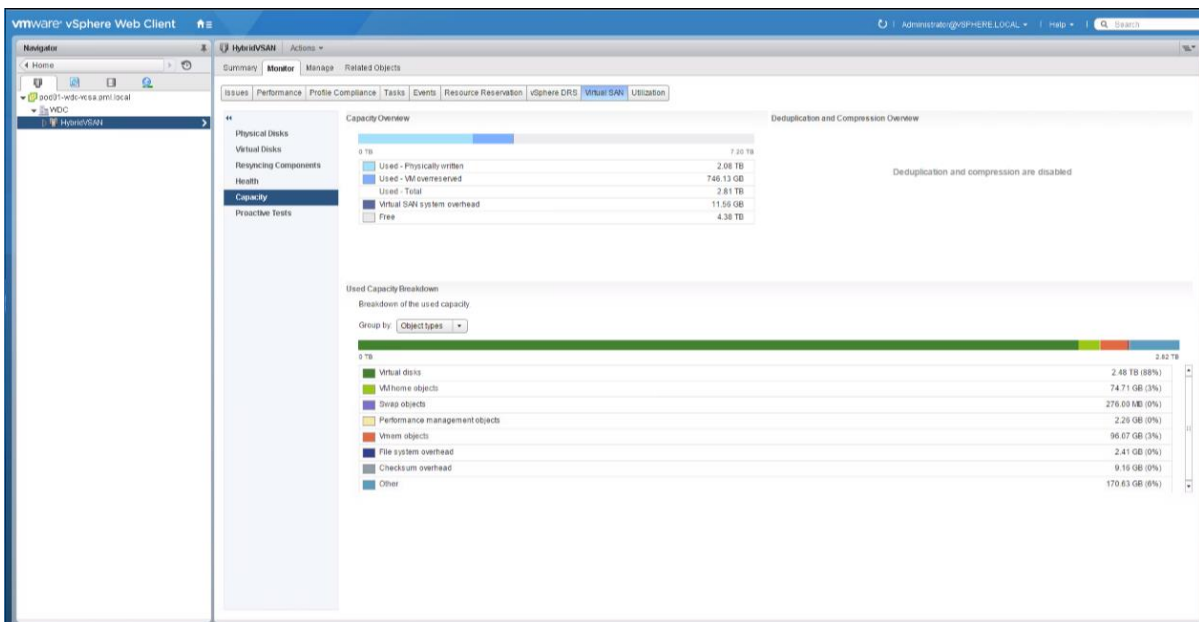
Support: VMware Production level support

Additional Information:

A hardware independent solution, Virtual SAN Standard can be deployed on a wide range of servers. Service Providers have two options for deploying Virtual SAN Standard – a) Virtual SAN 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 Virtual SAN Ready Nodes and

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[6] The **VsanSpaceUsage(vim.cluster.VsanSpaceUsage)** data object has the following two properties which vCAN partners can use to pull Virtual SAN usage information: a) **totalCapacityB** (total Virtual SAN capacity in bytes) and b) **freeCapacityB** (free Virtual SAN capacity in bytes). Subtracting b) from a) should yield the desired "Used Capacity" information for monthly reporting. For more information on this data object, refer to https://vdc-download.vmware.com/vmwb-repository/dcr-public/25511507-82e4-42f9-a657-154773432e32/d9b5a94e-cba7-4d68-b553-22d5ef777ade/doc/vim.cluster.VsanSpaceUsage.html

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supported hardware components (I/O controllers, HDDs and SSDs), refer to the VMware Compatibility Guide for Virtual SAN at: http://www.vmware.com/resources/compatibility/search.php?deviceCategory=vsan.

VMware Virtual SAN Advanced

Virtual SAN Advanced supports all-flash configuration and data efficiency features such as deduplication, compression and erasure coding, in addition to all functionalities of Virtual SAN Standard. Virtual SAN 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.

Point Value: 0.06 points per GB per month for Used Capacity

Components: VMware Virtual SAN Advanced

Reporting:

As Virtual SAN 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 Virtual SAN Advanced product.
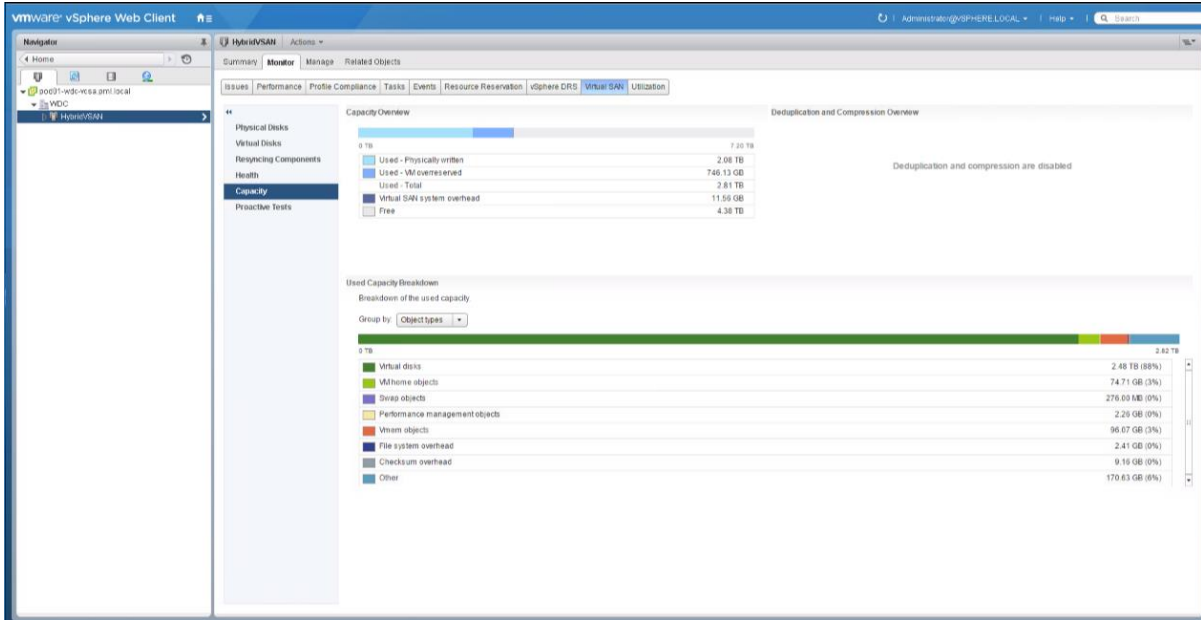
Virtual SAN Advanced system reporting consists of two parts:

- Monthly reporting on the vCloud Service Provider Bundle that is installed and being utilized as the basis for Virtual SAN Advanced via Usage Meter.
- Monthly manual reporting of Virtual SAN Advanced per Used Capacity. "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. Used Capacity must be manually reported and requires that the storage capacity not available for new allocations be extracted daily to identify the average monthly consumed capacity. Service Provider may use an API[7] provided by VMware to automate the capture of the daily usage data metric as required to report Used Capacity.

The Used Capacity to each Virtual SAN cluster can be found in the vSphere Web Client UI under the "Capacity" tab as shown below. If the data center has several Virtual SAN clusters, each one will be shown:

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[7] The **VsanSpaceUsage(vim.cluster.VsanSpaceUsage)** data object has the following two properties which vCAN partners can use to pull Virtual SAN usage information: a) **totalCapacityB** (total Virtual SAN capacity in bytes) and b) **freeCapacityB** (free Virtual SAN capacity in bytes). Subtracting b) from a) should yield the desired "Used Capacity" information for monthly reporting. For more information on this data object, refer to https://vdc-download.vmware.com/vmwb-repository/dcr-public/25511507-82e4-42f9-a657-154773432e32/d9b5a94e-cba7-4d68-b553-22d5ef777ade/doc/vim.cluster.VsanSpaceUsage.html

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Support: VMware Production level support

Additional Information:

A hardware independent solution, Virtual SAN Advanced can be deployed on a wide range of servers. Service Providers have two options for deploying Virtual SAN Advanced – a) Virtual SAN 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 Virtual SAN Ready Nodes and supported hardware components (I/O controllers, HDDs and SSDs), refer to the VMware Compatibility Guide for Virtual SAN at: http://www.vmware.com/resources/compatibility/search.php?deviceCategory=vsan.

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VMware Virtual SAN Enterprise Add-on

Virtual SAN Enterprise Add-on offers Quality of Service and Stretched Cluster features on top of Virtual SAN Standard and Virtual SAN Advanced at incremental point value. It requires vCAN partners to install and utilize Virtual SAN Standard or Virtual SAN Advanced as the basis for Virtual SAN Enterprise Add-on. 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. The Stretched Cluster allows Service Providers to create Virtual SAN 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. To learn more about Virtual SAN visit: http://www.vmware.com/products/virtual-san/compare.html

Point Value: 0.02 points per GB per month for Used Capacity

Components: VMware Virtual SAN Enterprise Add-on

Reporting:

As Virtual SAN Enterprise Add-on do not include vCenter Server, vSphere, Virtual SAN Standard or Virtual SAN Advanced licensing; all use of those products must be reported separately, in addition to the usage of the Virtual SAN Enterprise Add-on product.

Virtual SAN Enterprise Add-on system reporting consists of three parts:

- Monthly reporting on the vCloud Service Provider Bundle that is installed and being utilized as the basis for Virtual SAN Enterprise Add-on via Usage Meter.
- Monthly manual reporting on the Virtual SAN Standard or Virtual SAN Advanced that is installed and being utilized as the basis for Virtual SAN Enterprise Add-on. Refer to the Virtual SAN Standard and Virtual SAN Advanced sections for reporting requirements for those products.
- Monthly manual reporting of Virtual SAN Enterprise Add-on per Used Capacity. "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. Used Capacity must be manually reported and requires that the storage capacity not available for new allocations be extracted daily to identify the average monthly consumed capacity. Service Provider may use an API[8] provided by VMware to automate the capture of the daily usage data metric as required to report Used Capacity.

The Used Capacity to each Virtual SAN cluster can be found in the vSphere Web Client UI under the "Capacity" tab as shown below. If the data center has several Virtual SAN clusters, each one will be shown:

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[8] The **VsanSpaceUsage(vim.cluster.VsanSpaceUsage)** data object has the following two properties which vCAN partners can use to pull Virtual SAN usage information: a) **totalCapacityB** (total Virtual SAN capacity in bytes) and b) **freeCapacityB** (free Virtual SAN capacity in bytes). Subtracting b) from a) should yield the desired "Used Capacity" information for monthly reporting. For more information on this data object, refer to https://pubs.vmware.com/vsphere-60/index.jsp?topic=%2Fcom.vmware.vsan.apiref.doc%2Fvim.cluster.VsanSpaceUsage.html

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Support: VMware Production level support

Additional Information:

A hardware independent solution, Virtual SAN Enterprise Add-on can be deployed on a wide range of servers. Service Providers have two options for deploying Virtual SAN Enterprise Add-on – a) Virtual SAN 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 Virtual SAN Ready Nodes and supported hardware components (I/O controllers, HDDs and SSDs), refer to the VMware Compatibility Guide for Virtual SAN at:
http://www.vmware.com/resources/compatibility/search.php?deviceCategory=vsan.

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CLOUD MANAGEMENT PLATFORM

VMware vRealize Automation

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: http://www.vmware.com/products/vrealize-automation/

Features:

Features	Advanced	Enterprise
VMware Infrastructure Services, cloning only, VMware vRealize Orchestrator Integration	X	X
Multi-vendor, multi-cloud infrastructure and multi-vendor SW provisioning	X	X
Custom Services (XaaS), Approvals, Reclamation, Chargeback, Multi-tenancy	X	X
Application Services, Release Automation, DevOps Integration		X

Point Value:

Edition	Point Value	Metric
Advanced	5	Managed VM or OSI* per month
Enterprise	8	Managed VM or OSI* per month

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

Components: VMware vRealize Automation

Reporting:

As vRealize Automation 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 Automation (based on edition).

- Monthly reporting via Usage Meter) on the number of virtual machines or OS instances being targeted.

Support Included: VMware Production level support

VMware vRealize Business

VMware vRealize Business for Cloud Advanced

Enables service providers to gain transparency and control over the cost and quality of IT services. The product meters and track costs across key cost drivers such as compute, memory and storage. There are various ways of allocating cost and usage:

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- Rules to categorize vCenter hierarchy (by folders, tags, regular exp.)
- Manually upload a .csv file describing hierarchy
- vRealize Automation categorization
- vCloud Director categorization

Cost and usage information can be configured by tenant, Applications, etc. with drill down capabilities. Service Providers can also benchmark their own costs using the out-of-the-box (OOTB) capabilities to compare against AWS, Azure and vCloud Air. The product also has the ability to automatically populate the cost driver rate cards based on list prices and reference data.

Components: VMware vRealize Business for Cloud Advanced

VMware vRealize Business Enterprise *[1]

Enables service providers to gain transparency and control over IT costs, services and quality. In addition to Cloud Business Management and IT Financial Management capabilities, IT Service Level Management and Vendor Management capabilities enable service providers to set, track, report and analyze IT performance and value measures for all services, vendors and customers, as well as perform root cause and business impact analysis. **For feature comparison visit: http://www.vmware.com/products/vrealize-business/compare.html**

Components: VMware vRealize Business Enterprise Foundation Package or VMware vRealize Business Enterprise for Additional Users

Point Value:

Edition	Point Value	Metric
VRealize Business for Cloud Advanced	2**	1 GB Reserved RAM (based on average monthly usage) (GB = 1024 MB) Total points capped at 24 GB of Reserved RAM per virtual machine
vRealize Business Enterprise Foundation Package	5,833	10 users per month
VRealize Business Enterprise for Additional Users	1,667	5 users per month

** When purchased a la carte and used in conjunction with new vCloud SP bundles

Reporting: Monthly reporting to VMware authorized Aggregator.

vRealize Business for Cloud Advanced is included in the old vCloud SP bundles: Premier-X Plus, Premier-X, Premier Plus, Premier and Standard bundles at no additional cost. Monthly reporting (via usage meter) is provided for the vCloud Service Provider Standard and Premier bundles only. All other bundles should be reported (manually) according to the bundle reporting instructions included Appendix A. .

When used with the new vCloud SP bundles, vRealize Business for Cloud Advanced must be reported as a standalone product at the point value and metric listed above. Monthly reporting (manual) to VMware Authorized Aggregator.

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vRealize Business Enterprise₁: vRealize Business Enterprise Foundation Package must be reported (manually) in increments of ten (10) users. Additional users must be reported manually using "vRealize Business Enterprise for Additional Users" in the increment of five (5) users.

Support Included: VMware Production level support

*Limitations for vRealize Business Enterprise:

vRealize Business Enterprise is a restricted product and only qualifying Service Providers can rent the product from VMware for the sole purpose of offering "vRealize Business-as-a-service" (vs. hosting the App). Only Service Providers with a valid 30,000 point or higher contract and who meet all eligibility requirements including, but not limited to, professional services engagement, partner skill set assessment, business model evaluation and ongoing financial advisory service subscription are authorized to rent the product from VMware. Qualifying Service Providers will be required to rent the Foundation Package (up to 10 users) for every individual tenant receiving "vRealize Business-as-a-service" as well as the appropriate add-on licenses for Additional Users in increments of 5 users.

Contact your local Business Development Manager or partnernetwork@vmware.com to assess eligibility and initiate the qualification process to rent the product from VMware.

₁ VMware vRealize Business is placed on "special terms". VMware will continue to provide production level technical support through September 30, 2016. There is no VMware migration option; the product will continue to be supported by a 3ʳᵈ party company. The final monthly usage report that VMware can accept is for the September 2016 usage period.

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VMware vRealize Log Insight

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, 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.

Point Value: When used with the old vCloud SP bundles, vRealize Log Insight must be reported as a standalone product at 4.5 points per managed virtual machine or OSI* per month.

vRealize Log Insight is included in the new vCloud SP bundles: Standard with Networking, Standard with Management, Advanced, Advanced with Networking, Advanced with Management and Advanced with Networking and Management bundles at no additional cost. Monthly reporting (manual) to VMware Authorized Aggregator.

*OSI stands for OS Instance, which includes any server with an IP address that generates logs, including network devices and storage arrays.

Components: VMware vRealize Log Insight

Reporting:

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.

When used as a standalone product in conjunction with the old vCloud SP bundles,

vRealize Log Insight reporting consists of two parts:

- Monthly reporting (manual) on the number of virtual machines or OS instances being monitored for logs
- Monthly reporting (via Usage Meter or manual) on the vCloud Service Provider Bundle that is installed and being utilized as the basis for vRealize Log Insight. Refer to the instructions on bundle usage reporting in Appendix A.

When used as a component of the new vCloud SP bundles, vRealize Log Insight will be included in the vCloud SP bundle usage reporting.   Refer to the instructions on bundle usage reporting in Appendix A.

Support Included: VMware Production level support

To learn more about vRealize Log Insite visit: http://www.vmware.com/products/vrealize-log-insight/

VMware vRealize Operations

VMware vRealize Operations delivers intelligent operations management across physical, virtual, and cloud infrastructures – from VMware vSphere and Hyper-V to Amazon Web Services. It correlates data from applications to storage in a unified, easy-to-use management tool that provides control over performance, capacity, and configuration, with predictive analytics driving proactive action, and policy-based automation.

Actual capabilities of vRealize Operations Manager vary by edition.

VMware vRealize Operations Standard

VMware vRealize Operations Standard is applicable to service providers who want vSphere monitoring, performance and capacity optimization.

VMware vRealize Advanced

VMware vRealize Operations Advanced is applicable to service providers who want virtual and physical infrastructures operations management capabilities including monitoring, performance, capacity and configuration management.

VMware vRealize Operations Enterprise

VMware vRealize Operations Enterprise is applicable to service providers who want hybrid cloud infrastructure operations management capabilities including OS- and application-level monitoring, performance, capacity and configuration management.

For a feature comparison visit:http://www.vmware.com/products/vrealize-operations/compare.html

Point Value:

Edition	Point Value	Metric
Standard	2.5	VM or OSI* per month
Advanced	6	VM or OSI* per month
Enterprise	12	VM or OSI* per month when used standalone

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

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Components: VMware vRealize Operations Manager

Actual capabilities of vRealize Operations Manager, vRealize Configuration Manager, vRealize Infrastructure Navigator and vRealize Hyperic vary by the edition of vRealize Operations.

vRealize Operations Standard	• VMware vRealize Operations Manager
vRealize Operations Advanced	• VMware vRealize Operations Manager • VMware vRealize Configuration Manager • VMware vRealize Infrastructure Navigator • VMware vRealize Hyperic
vRealize Operations Enterprise	• VMware vRealize Operations Manager • VMware vRealize Configuration Manager • VMware vRealize Infrastructure Navigator • VMware vRealize Hyperic

Reporting:

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.

Usage reporting instructions for vRealize Operations are included in Appendix A, both for vRealize Operations as part of a bundle, and vRealize Operations standalone.

Support Included: VMware Production level support

Additional Resources: 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" VMware vRealize Operations Guide to Third-Party Solutions" for information on vRealize Operations Management Packs:
http://www.vmware.com/files/pdf/vrealize/vmware-vrealize-operations-management-packs-wp-en.pdf

VMware vRealize Hyperic

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 dynamism and elasticity of Cloud applications. vRealize Hyperic provides visibility into the entire virtualized application stack, allows problems as soon as they occur and provides them with the information to resolve these problems. To learn more about VMware vRealize Hyperic visit: http://www.vmware.com/products/vrealize-hyperic/

Point Value: 15 points per Machine (as defined below) per month

Components: VMware vRealize Hyperic

Reporting:

"Machine" means, solely with respect to vRealize Hyperic products, as 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.

Support: VMware Production level support

Limitations:

Installation guides and supported configurations for this product should be reviewed and followed prior to installing vRealize Hyperic. The information is posted at http://support.hyperic.com. There is no automated usage reporting tool available for this product. Service Providers must gather and report all usage manually.

VMware vFabric Data Director

VMware vFabric Data Director enables Service Providers to offer Database-as-a-Service to their customers. VMware vFabric Data Director is targeted at Service Providers that want to enable enterprises to extend the efficiency and agility provided by virtualized infrastructure to the database tier. The first database supported by vFabric Data Director is vFabric Postgres Standard Edition, which is based on and fully compatible with open source PostgreSQL 9.0. Visit the Data Director product page on www.vmware.com to learn more.

Point Value: 80 points per 2 vCPUs of provisioned vFabric Postgres Standard Edition databases (based on average monthly usage)

Components Included:

- VMware vFabric Data Director
- VMware vFabric Postgres Standard Edition

Other Components Needed

- VMware vSphere Enterprise / Enterprise Plus
- VMware vCenter Server

Support Included: VMware Production Level support

Reporting:

The Service Provider can find the number of provisioned 2vCPU Postgres database licenses at any time on the Data Director licensing page. The licensing page shows both the number of VMs and the number of 2 vCPU licenses, the price applies to the number of 2vCPU licenses.

As an example, if Data Director is managing 10 2-vCPU and 5 4-vCPU Postgres databases, the license portal will show a total of 20 2-vCPU licenses being used; and the charge will be 1600 points for the month.

It is the Service Provider's responsibility to track and report this information accurately each month. Since vFabric Data Director requires vSphere and vCenter, the Service Provider must monitor and report usage for either the vCloud Service Provider Bundle in addition to the vFabric Data Director usage.

To learn more about VMware vFabric Data Director visit: http://www.vmware.com/products/vfabric-data-director/

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DESKTOP AND APPLICATION VIRTUALIZATION

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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 Standard

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.

Point Value: 4 points per concurrent connection per month

Components: VMware App Volumes Advanced and User Environment Manager

Reporting:

Service Providers must manually report to their Aggregator all App Volumes usage each month. Information on the number of concurrent connections is available through the App Volumes Manager interface via the Dashboard Primary tab shown below. 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.

Support: VMware Production level support

VMware App Volumes Advanced

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.

Point Value: 7 points per concurrent connection per month

Components:

- VMware App Volumes Advanced and User Environment Manager
- VMware ThinApp Client
- VMware ThinApp Packager
- VMware Workstation

Reporting:

Service Providers must manually report to their Aggregator all App Volumes usage each month. Information on the number of concurrent connections is available through the App Volumes Manager interface via the Dashboard Primary tab shown below. 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.

Support: VMware Production level support

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VMware App Volumes Enterprise

VMware App Volumes Enterprise is a complete enterprise application and user management solution that provides application delivery, isolation, and end-to-end monitoring for Citrix XenApp and XenDesktop environments.

Point Value: 9 points per concurrent connection per month

Components:

- VMware App Volumes Enterprise and User Environment Manager
- VMware ThinApp Client
- VMware ThinApp Packager
- VMware Workstation
- VMware vRealize Operations Adapter for Published Applications
- VMware vRealize Operations Manager for Published Applications

Reporting:

Service Providers must manually report to their Aggregator all App Volumes usage each month. Information on the number of concurrent connections is available through the App Volumes Manager interface via the Dashboard Primary tab shown below. 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.

Support: VMware Production level support

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VMware Horizon DaaS Bundles

VMware Horizon DaaS Bundle is the market leading solution providing Service Provider with a low cost, subscription-based, multi-tenant, multi-datacenter and secure Desktop-as-a-Service 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. Service Provider can provide enterprises with a fully customizable desktop service accessible via the Internet or dedicated network from any location, on any compatible device and with the same user experience as traditional on premise PCs.

VMware Horizon DaasS Bundle – RDSH Edition

VMware Horizon DaasS Bundle – RDSH Edition applies to Remote Desktop Session Host (RDSH) Desktop and Application (i.e. Terminal Services Session-based) workloads.

Point Value: 13 points per Total Allocated Quota for RDSH Connections per month

Components:

- VMware Horizon DaaS Platform which includes right to host session desktop and applications (Windows Server OS with RDSH)
- VMware ThinApp Client
- VMware ThinApp Packager
- VMware Workstation
- VMware vCenter Server for Desktop
- VMware vSphere Enterprise Plus for Desktop

Reporting:

Service Providers must manually report the total allocated quota for RDSH connections associated with the use of the Horizon DaaS Bundle – RDSH Edition to their Aggregator each month. This data shall include the aggregate total quota allocation of the Horizon DaaS Bundle – RDSH Edition as well as the name, total quota allocation, and zip code or country code for each Hosting Customers. Information on the number of total allocated quota for RDSH connections is available through the billing API in Horizon DaaS Platform. For Horizon DaaS Bundle – RDSH Edition, it is the total number of RDSH sessions allocated to all tenants based on Session Model quotas. There is no automated report that keeps track of the total allocated quota for RDSH 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.

Support: VMware Production level support

Limitations:

The Horizon DaaS Bundle – RDSH Edition is a restricted product 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 with qualification process. Contact your local Business Development Manager or partnernetwork@vmware.com on requirements and additional details to rent the product from VMware. For VMware and 3rd party component compatibility, refer to the Horizon DaaS Platform blueprint.

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VMware Horizon DaaS Bundle – VDI Edition

VMware Horizon DaaS Bundle – VDI Edition applies to VDI Desktop and Application workloads.

Point Value: 16 points per Total Allocated Quota for VDI Connections per month

Components:

- VMware Horizon DaaS Platform which includes right to host VDI desktop and applications (Windows Client OS, Windows Server OS, Linux OS)
- VMware ThinApp Client
- VMware ThinApp Packager
- VMware Workstation
- VMware vCenter Server for Desktop
- VMware vSphere Enterprise Plus for Desktop

Reporting:

Service Providers must manually report the total allocated quota for VDI connections associated with the use of the Horizon DaaS Bundle – VDI Edition to their Aggregator each month. This data shall include the aggregate total quota allocation of the Horizon DaaS Bundle – VDI Edition as well as the name, total quota allocation, and zip code or country code for each Hosting Customer. Information on the number of total allocated quota for VDI connections is available through the billing API in Horizon DaaS Platform. 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 Quotas. There is no automated report that keeps track of the total allocated quota for VDI 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.

Support: VMware Production level support

Limitations:

The Horizon DaaS Bundle – VDI Edition is a restricted product 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 with qualification process. Contact your local Business Development Manager or partnernetwork@vmware.com on requirements and additional details to rent the product from VMware. For VMware and 3rd party component compatibility, refer to the Horizon DaaS Platform blueprint.

VMware Desktop Disaster Recovery for Horizon DaaS Bundle(s)

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. It opens new opportunities for Service Providers to offer cloud-based virtual desktop and apps as insurance to enterprises that use a) on-premise physical desktop infrastructure, b) on-premise virtual desktop infrastructure or c) cloud-hosted desktop and apps for their normal business operation. 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.

Point Value: 4 points per Total Allocated Insurance Quota for VDI and RDSH Connections per month ("insurance rate")

Note:

The Desktop DR option allows partners to deploy Horizon DaaS bundle(s) in either reservation mode or active (i.e. normal) mode as follows:

1. 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.

2. 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.

3. Partner can select any mix of reserved and active desktops.

Components: VMware Desktop DR for "Horizon DaaS Bundle – VDI Edition" and "Horizon DaaS Bundle – RDSH Edition"

Reporting:

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. 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. 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 Provider¹s responsibility to track and report this information accurately each month.

Support: VMware Production level support

Limitations:

The Desktop DR for Horizon DaaS Bundle(s) is a restricted product 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 with qualification process. Contact your local Business Development Manager or partnernetwork@vmware.com on requirements and additional details to rent the product from VMware.

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VMware Horizon

VMware Horizon 7 provides a streamlined approach to delivering, protecting and managing virtual desktops (VDI) and apps while containing costs and ensuring that end users can work anytime, anywhere, across any device. To learn more about VMware Horizon visit: http://www.vmware.com/partners/service-provider/solutions/daas.html

VMware Horizon Standard

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.

Point Value: 12 points per concurrent connection per month

Components:

- VMware Horizon (includes View Manager, View Composer and Persona Management)
- VMware ThinApp Client
- VMware ThinApp Packager
- VMware Workstation
- VMware vCenter Server Desktop
- VMware vSphere Enterprise Plus for Desktop

Reporting:

Service Providers must manually report to their Aggregator all Horizon Standard usage each month. 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. VMware ThinApp Packager and VMware Workstation are for administrator use only.

Support: VMware Production level support

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VMware Horizon Advanced

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 of 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.

Point Value: 19 points per concurrent connection per month

Components

- VMware Horizon Advanced (includes View, RDS Hosted Applications, Mirage, and Identity Manager Standard Edition)
- VMware Virtual SAN Advanced for Desktop
- VMware Fusion Professional
- VMware ThinApp Client
- VMware ThinApp Packager
- VMware Workstation
- VMware vCenter Server for Desktop
- VMware vSphere Enterprise Plus for Desktop

Reporting:

Service Providers must manually report to their Aggregator all Horizon Advanced usage each month. 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. VMware ThinApp Packager and VMware Workstation are for administrator use only.

Support: VMware Production level support

VMware Horizon Enterprise

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 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.

Point Value: 28 points per concurrent connection per month

Components:
- VMware Horizon Enterprise (includes View for Windows and Linux, RDS Hosted Applications, Mirage, Identity Manager Standard Edition, vRealize Operations for Horizon Adapter, and Instant Clones)
- VMware App Volumes Enterprise and User Environment Manager
- VMware vRealize Operations for Horizon
- VMware Virtual SAN Advanced for Desktop
- VMware Fusion Professional
- VMware ThinApp Client
- VMware ThinApp Packager
- VMware Workstation
- VMware vCenter Server for Desktop
- VMware vSphere Enterprise Plus for Desktop

Reporting:
Service Providers must manually report to their Aggregator all Horizon Enterprise usage each month. 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. VMware ThinApp Packager and VMware Workstation are for administrator use only.

Support: VMware Production level support

VMware Horizon for Linux

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. All this while supporting end 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.

Point Value: 7 points per concurrent connection per month

Components:

- VMware Horizon for Linux (includes View Manager, View Composer and Persona Management) for Linux
- VMware vCenter Server Desktop
- VMware vSphere Enterprise Plus for Desktop

Reporting:

Service Providers must manually report to their Aggregator all Horizon for Linux usage each month. 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.

Support: VMware Production level support

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VMware Mirage

VMware Mirage hosted image management solution eliminates the burden for customers of running and managing their desktops in-house. Service Providers can use Mirage to provide their customers with access (through a secure Internet connection) to a fully customizable desktop and laptop from any location, or on any compatible device, with the same user experience as on traditional PCs.

Point Value: 7 points per named user per month

Components: VMware Mirage Bundle (Desktop Recovery + Repair and Image Management)

Reporting:

Service Providers must manually report to their Aggregator all Mirage usage each month. There is no automated report that keeps track of number of named users at this time, so it is the Service Provider's responsibility to track and report this information accurately each month. For every user reported, the Service Provider will be billed an incremental 7 points.

Support: VMware Production level support

Limitations: None

VMware ThinApp

VMware ThinApp Client

With ThinApp, 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.

Point Value: 2 points per ThinApp Client per month

Components: VMware ThinApp Client

Reporting: The Service Provider must manually report to their Aggregator all ThinApp Client usage each month. The maximum number of clients used in the month must be included in the report.

Support: VMware Production level support

Limitations: 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 this document shall apply to that installation. There is no automated usage reporting tool available for this product. Service Providers must gather and report all usage manually.

VMware ThinApp Packager

VMware ThinApp Packager is a tool for the administrator to help package applications into ThinApp executables.

Point Value: 1 point per ThinApp Packager per month

Components: VMware ThinApp Packager

Reporting: The Service Provider must manually report to their Aggregator all ThinApp Packager usage each month. The maximum number of Packagers used in the month must be included in the report.

Support: VMware Production level support

Limitations: 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 this document shall apply to that installation. There is no automated usage reporting tool available for this product. Service Providers must gather and report all usage manually.

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VMware User Environment Manager

VMware User 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. 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 User Environment Manager can increase workplace productivity while driving down the cost of acquisition and day-to-day desktop support and operations.

Point Value: 2 points per named user per month

Components: VMware User Environment Manager

Reporting: Service Providers must manually report to their Aggregator all User Environment Manager usage each month. 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.

Support: VMware Production level support

VMware Virtual SAN for Desktop

VMware Virtual SAN 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 Virtual SAN Standard for Desktop

Virtual SAN Standard for Desktop supports a hybrid SSD/HDD configuration. Virtual SAN Standard for Desktop is an a-la-carte option that can be used with other End User Computing products in the VMware vCloud Air Network Program.

Point Value: 2 points per concurrent connection per month

Components: VMware Virtual SAN Standard for Desktop

Reporting

Service Providers must manually report to their Aggregator all Virtual SAN for Desktop usage each month. 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. As Virtual SAN 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 Virtual SAN Standard for Desktop product.

Support Included: VMware Production Level Support

Additional Information: A hardware independent solution, Virtual SAN Standard for Desktop can be deployed on a wide range of servers. Service Providers have two options for deploying Virtual SAN Standard for Desktop – a) Virtual SAN 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 Virtual SAN Ready Nodes and supported hardware components (I/O controllers, HDDs and SSDs), refer to the VMware Compatibility Guide for Virtual SAN at: http://www.vmware.com/resources/compatibility/search.php?deviceCategory=vsan.

VMware Virtual SAN Advanced for Desktop

Virtual SAN Advanced for Desktop supports all-flash configuration and data efficiency features such as deduplication, compression and erasure coding, in addition to all functionalities of Virtual SAN Standard for Desktop. Virtual SAN 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. Virtual SAN Advanced for Desktop is an a-la-carte option that can be used with other End User Computing products in the VMware vCloud Air Network Program.

Point Value: 4 points per concurrent connection per month

Components: VMware Virtual SAN Advanced for Desktop

Reporting

Service Providers must manually report to their Aggregator all Virtual SAN Advanced for Desktop usage each month. 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. As Virtual SAN 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 Virtual SAN Advanced for Desktop product.

Support Included: VMware Production Level Support

Additional Information: A hardware independent solution, Virtual SAN Advanced for Desktop can be deployed on a wide range of servers. Service Providers have two options for deploying Virtual SAN for Desktop – a) Virtual SAN 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 Virtual SAN Ready Nodes and supported hardware components (I/O controllers, HDDs and SSDs), refer to the VMware Compatibility Guide for Virtual SAN at:
http://www.vmware.com/resources/compatibility/search.php?deviceCategory=vsan

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Virtual SAN Enterprise Add-on for Desktop

Virtual SAN Enterprise Add-on for Desktop offers Quality of Service and Stretched Cluster features on top of Virtual SAN Standard for Desktop and Virtual SAN Advanced for Desktop at incremental point value. It requires vCAN partners to install and utilize Virtual SAN Standard for Desktop or Virtual SAN Advanced for Desktop as the basis for Virtual SAN 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. The Stretched Cluster allows Service Providers to create Virtual SAN 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. Virtual SAN Enterprise Add-on for Desktop is an a-la-carte option that can be used with other End User Computing products in the VMware vCloud Air Network Program.

Point Value: 1 point per concurrent connection per month

Components: VMware Virtual SAN Enterprise Add-on for Desktop

Reporting:

Service Providers must manually report to their Aggregator all Virtual SAN Enterprise Add-on for Desktop usage each month. 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. As Virtual SAN Enterprise Add-on for Desktop does not include vCenter Server, vSphere, Virtual SAN Standard for Desktop or Virtual SAN Advanced for Desktop licensing; all use of those products must be reported separately, in addition to the usage of the Virtual SAN Enterprise Add-on for Desktop product.

Support Included: VMware Production Level Support

Additional Information:

A hardware independent solution, Virtual SAN Enterprise Add-on can be deployed on a wide range of servers. Service Providers have two options for deploying Virtual SAN Enterprise Add-on – a) Virtual SAN 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 Virtual SAN Ready Nodes and supported hardware components (I/O controllers, HDDs and SSDs), refer to the VMware Compatibility Guide for Virtual SAN at:
http://www.vmware.com/resources/compatibility/search.php?deviceCategory=vsan

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 Advanced for Desktop

VMware NSX Advanced for Dektop automates IT workflows, bringing agility to the data center network and reducing network operating costs and complexity. It offers a fundamentally more secure data center with micro-segmentation and helps secure the data center to the highest levels, while automating IT provisioning of security.

Point Value: 5 points per concurrent connection per month

Components: VMware NSX Advanced for Desktop

Reporting

Service Providers must manually report to their Aggregator all NSX Advanced for Desktop usage each month. 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. As NSX 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 Advanced for Desktop product.

Support Included: VMware Production Level Support

VMware NSX Enterprise for Desktop

VMware NSX Enterprise for Dektop automates IT workflows, bringing agility to the data center network and reducing network operating costs and complexity. It offers a fundamentally more secure data center with micro-segmentation and helps secure the data center to the highest levels, while automating IT provisioning of security. Finally, it supports networking and security across multiple domains and enables the data center network to extend across multiple sites and connect to high-throughput physical workloads.

Point Value: 8 points per concurrent connection per month

Components: VMware NSX Enterprise for Desktop

Reporting

Service Providers must manually report to their Aggregator all NSX Enterprise for Desktop usage each month. 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. As NSX 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 Enterprise for Desktop product.

Support Included: VMware Production Level Support

THIRD PARTY SOFTWARE PRODUCTS

THIRD PARTY PRODUCTS

Third Party Product Terms

VMware may make products licensed by third parties ("Third Party Products") available through the vCAN progam. 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 vCAN 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 vCAN.

OnApp^{TM} for vCloud Air Network * **(restricted product) 1.5** points per 1 vGB Reserved RAM (based on average monthly usage) (GB = 1024 MB)

Product Specific Detail

Third Party Product: OnApp^{TM} for vCloud Air Network

OnApp for vCloud Air Network is a Third Party Product made available through the vCloud Air Network Program. OnApp for vCloud Air Network provides an intuituve, robust and feature-rich way to sell cloud services for vCloud Air Network (vCAN) products. OnApp helps vCAN partners transform the functionality, usability, automation, self-service and billing capabilities of their VMware cloud environments and rapidly accelerate business growth with hybrid cloud services, delivered and managed through a unified white-label portal. For more information, visit http://onapp.com/vmware. OnApp is a trademark of OnApp Limited. The OnApp license terms are available at: https://onapp.com/legal/onapp-master-licence-agreement.

Point Value

1.5 points per 1 vGB Reserved RAM (based on average monthly usage) (GB = 1024 MB), **1000** point minimum per month commitment for usage of the OnApp product is required.

Components

- OnApp for vCloud Air Network

Reporting

vCAN partners need to manually report monthly usage (data available through the OnApp dashboard)

Support Included

For information regarding OnApp product support see: https://onapp.com/customer-support

Contact Support through Help Center, via e-mail support@onapp.com or by phone: 1-888-876-8666. Upon contacting support, customers will be provided with support entitlements and credentials for a ticketing system.

Limitations

Professional Services will be contracted directly with and billed by OnApp.

Highly Available OnApp Control Panel installation is available at an extra cost, directly contracted with and billed by OnApp.

APPENDIX A. REPORTING AND OPERATIONAL DETAILS FOR VMWARE VCLOUD SERVICE PROVIDER BUNDLES AND OTHER STAND-ALONE PRODUCTS

The information in this appendix applies to metering the usage of products and bundles in the VMware vCloud Air Network Program. Service Providers are required to keep usage data collected by the vCloud Usage Meter for a minimum period of two years.

vCloud Usage Meter is available for download as a free virtual appliance and is licensed under VMware's standard End User License Agreement (EULA): https://my.vmware.com/en/group/vmware/get-download?downloadGroup=UMSV33. VMware recommends that Service Providers use Usage Meter Version 3.3.3.

Note: Service Providers must be registered users of the My-VMware.com site in order to download the 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 Release Notes
2. Usage Meter User Guide
3. Usage Meter API Guide

Information vCloud Usage Meter Collects

The 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)

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11. Virtual machine location in vSphere inventory
12. Horizon Workspace disk usage

Collected data is stored in the vPostgres database of the virtual appliance itself.

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 usage report for billing purposes.

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.

Note: The following *italicized* sections are applicable only for users of older editions of vCloud Usage Meter. Starting with v3.2, vCloud Usage Meter calculates this data for Service Providers, so the manual steps described in *Italics* are not needed.

How Points Are Calculated on Usage Data (Applicable only when using vCloud Usage Meter version older than 3.2)

The VMware vCloud Service Provider Bundles are charged as per aggregated reserved RAM usage, and charging is done through a monthly point system where months can have the following number of days:

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1. 28-day months = 672 hours

2. 29-day months = 696 hours

3. 30-day months = 720 hours

4. 31-day months = 744 hours

The formula for calculating net points is:

Net points = (vGB hours X points per 1 GB reserved RAM) / hours per month

vGB = Virtual Gigabyte

How the Formula Works

1. Points per 1 GB reserved RAM

   a. 5 points per 1 GB Reserved RAM for VMware vCloud Service Provider Bundle – Standard Edition

   b. 7 points per 1 GB Reserved RAM for VMware vCloud Service Provider Bundle – Premier Edition

   c. 10 points per 1 GB Reserved RAM for VMware vCloud Service Provider Bundle – Premier Plus Edition

2. vGB hours are calculated with consideration of floor (minimum value) and ceiling (maximum value) values

   a. The floor value is equal to a minimum of 50 percent vRAM reservation. For example, if you set vRAM reservation below the floor value, to 35%, your usage will be metered at the minimum, viz. 50%.

   b. The ceiling value or a 24 GB cap is the maximum value that could be charged. For example, if you are consuming 1 terabyte of vGB hours, then you will only be billed for 24 GB of vGB hours.

Example

During one 30-day calendar month, a Service Provider uses the vCloud Service Provider Bundle – Premier 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.

- 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 Premier) = 126 points

The Service Provider must report the usage data provided by the vCloud Usage Meter each month to his or her Aggregator. At the individual product level, the amount reported can be rounded down to the nearest whole number.

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Follow the steps in this table to calculate what needs to be reported. This is applicable only for vCloud Usage Meter versions older than 3.2. For vCloud Usage Meter 3.2 and later, use the Monthly Product Report instead.

To report on	Steps
VMware vCloud Service Provider Bundle – Standard Edition	1. Run the License Summary Report. 2. Capture the total usage for vSphere Enterprise. 3. Apply the formula (5 points per GB reserved vRAM).
VMware vCloud Service Provider Bundle – Premier Edition	1. Run the License Summary Report. 2. Capture the total usage for vSphere Enterprise Plus. 3. Apply the formula (7 points per GB reserved vRAM).
Add-on Products	1. Run the Product Report. 2. Capture the total usage mapped to vCenter Servers under management.
VMware vCloud Service Provider Bundle – Premier Plus Edition	Refer to the instructions later in Appendix B on how to report usage for the Premier Plus Edition.
VMware vCloud Service Provider Bundle – Premier – X Edition	Refer to the instructions later in Appendix B on how to report usage for the Premier Plus Edition.
VMware vCloud Service Provider Bundle – Premier –X Plus Edition	Refer to the instructions later in Appendix B on how to report usage for the Premier Plus Edition.
VMware Infrastructure 3 individual vSphere components of the Service Provider Bundles with standalone pricing (vSphere Standard, vSphere Advanced, vSphere Enterprise)	1. Run the License Summary Report. 2. Capture the total usage for the License Server. 3. Apply the formula (7 points per GB reserved vRAM) regardless of the bundle in use.

VMware Products Reported in the vCloud Usage Meter

vCloud Usage Meter reports on the following products:

VMware vCloud Service Provider Bundle Standard, Premier
VMware vCloud Director
VMware vCenter Server
VMware Site Recovery Manager
VMware ESXI
VMware vRealize Automation

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APPENDIX B. ADJUSTING REPORTS WITH MANUALLY COLLECTED PRODUCT USAGE DATA

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

For example, environments that use Usage Meter 3.3.3 will not accurately report vRops or NSX product usage. When reporting usage as bundles, the VMs running vRops and NSX must have their usage reported in the correct bundle containing the products. When reporting product usage as standalone, a new line item must be added to the report to reflect the usage.

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.

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STANDALONE REPORTING

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 C 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 C 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 C 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

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REPORTING PRODUCT USAGE USING LEGACY BUNDLES

Manual reporting on existing bundles is determined by the answer to two questions:

- Is NSX deployed?
- Is vRops deployed?

Based on the answer to these questions a single line will be added to the monthly report.
The following flowchart helps determine the name of the bundle line.
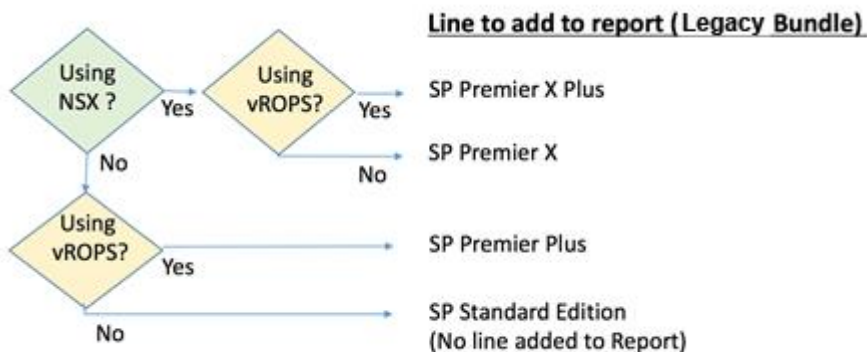
Adjusting vCloud Usage Meter Reports

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 C for instructions on obtaining these values before proceeding.

Steps to adjust vCloud Usage Meter reports

1. Using the flowchart above, 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 total count of NSX VMs by Avg Billed vRAM to compute Value B.
   - If only vRealize Operations is deployed, multiply the total count of vRealize Operations VMs by Avg Billed vRAM to compute Value B.
   - If both NSX and vRealize Operations are deployed, multiply the larger of the two values by

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Avg 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

REPORTING PRODUCT USAGE USING NEW BUNDLES

Manual reporting on new bundles is determined by the answer to three questions:
- Is NSX deployed? If so, which edition?
- Is vRealize Operations deployed?
- Is vCloud Director deployed?

Based on the answer to these questions a single line will be added to the monthly report.
The following flowchart helps \determine the name of the bundle line.

Line to add to report (New Bundle)

Using NSX ? — Yes → Using NSX SP ? — Yes → Using vROPS? — Yes → Advanced w/ Management
Using vROPS? — No → Advanced

Using NSX SP ? — No → Using NSX SP Adv? — Yes → Using vCD ? — Yes → Advanced w/ Networking
Using vCD ? — No → Standard w/ Networking

Using NSX SP Adv? — No → Using NSX SP Ent? — Yes → Using vROPS? — Yes → Advanced w/ Networking & Management
Using vROPS? — No → Advanced w/ Networking & Management

Using NSX ? — No → Using vROPS? — Yes → Standard w/ Management
Using vROPS? — No → Standard bundle (No lines added to Report)

NSX Features Comparison

	Features	Base	ADV	ENT
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	✓ [1]	✓	✓
	NSX Edge load balancing	✓	✓	✓
	Distributed load balancing [2]			✓
	Integration with HW VTEPs			✓
Security	Distributed firewalling		✓	✓
	Active Directory Integrated firewall		✓	✓
	Service insertion (3rd party integration)		✓	✓
	Server activity monitoring		✓	✓
Application Continuity	Cross vCenter NSX			✓
	Multi-Site NSX optimizations			✓
	VPN (IPSEC and SSL)	✓ [3]	✓ [3]	✓
	Remote Gateway			✓

[1] L2, L3 & NSX Edge Integration Only. No consumption of Security Groups
[2] Tech Preview with 6.2.2
[3] IPSEC VPN only

Adjusting vCloud Usage Meter Reports

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 C for instructions on obtaining these values before proceeding.

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Steps to adjust vCloud Usage Meter reports

1. Using the flowchart above 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 Avg Billed vRAM to compute Value B.
    - If only vRealize Operations is deployed, multiply the total count of vRealize Operations VMs by Avg Billed vRAM to compute Value B.
    - If both NSX and vRealize Operations are deployed, multiply the larger of the two values by Avg 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

APPENDIX C. MANUALLY COLLECTING PRODUCT USAGE DATA

The product usage data collected by vCloud Usage Meter varies based on the version of vCloud Usage Meter. Service Providers may be using a version that does not meet the total reporting requirements of all products. In such cases, Service Providers must perform manual steps to collect the additional required data and apply it as either a standalone or bundled allocation in the reports they submit.

This appendix provides information about manually collecting usage data for various products.

NOTE: vCloud Usage Meter 3.3.3 and earlier versions do not report usage for the products listed in this appendix. Service Providers using these versions must collect the data manually and apply it to their reports.

MANUALLY CALCULATING AVERAGE BILLED VRAM VALUE

Calculations to adjust monthly reports for bundles require an average vCenter vRAM value.

This section explains how to calculate the value.

1. Run the Monthly Usage Report in vCloud Usage Meter 3.3.3.
2. Note the values for the following items:
   - The **Avg Capped Billed vRAM (GB)** value for the vCloud Service Provider Bundle – Premier Edition bundle. In the example below, this value is 5GB vRAM.
   - The **Total VMs under Management** value for the vCenter Server product. In the example below, this value is 12.

3. Calculate the Average billed vRAM value for vCenter Servers. You do this by dividing the Avg Capped Billed vRAM (GB) value for the vCloud Service Provider Bundle – Premier Edition bundle by the total number of VMs under Management value (for the vCenter Server product in the **Virtual Machines by Product Server** section). In the above example, you would divide 5 GB by 12. The result is .42 GB vRAM per VM.

Use this computed value as the 'Avg GB of vRAM per VM' in all manual reporting adjustments.

MANUALLY COLLECTING USAGE DATA FOR VSAN

The Used Capacity for each Virtual SAN cluster can be found in the vSphere Web Client under the **Capacity** tab as shown below. If the data center has several Virtual SAN clusters, each one will be shown:
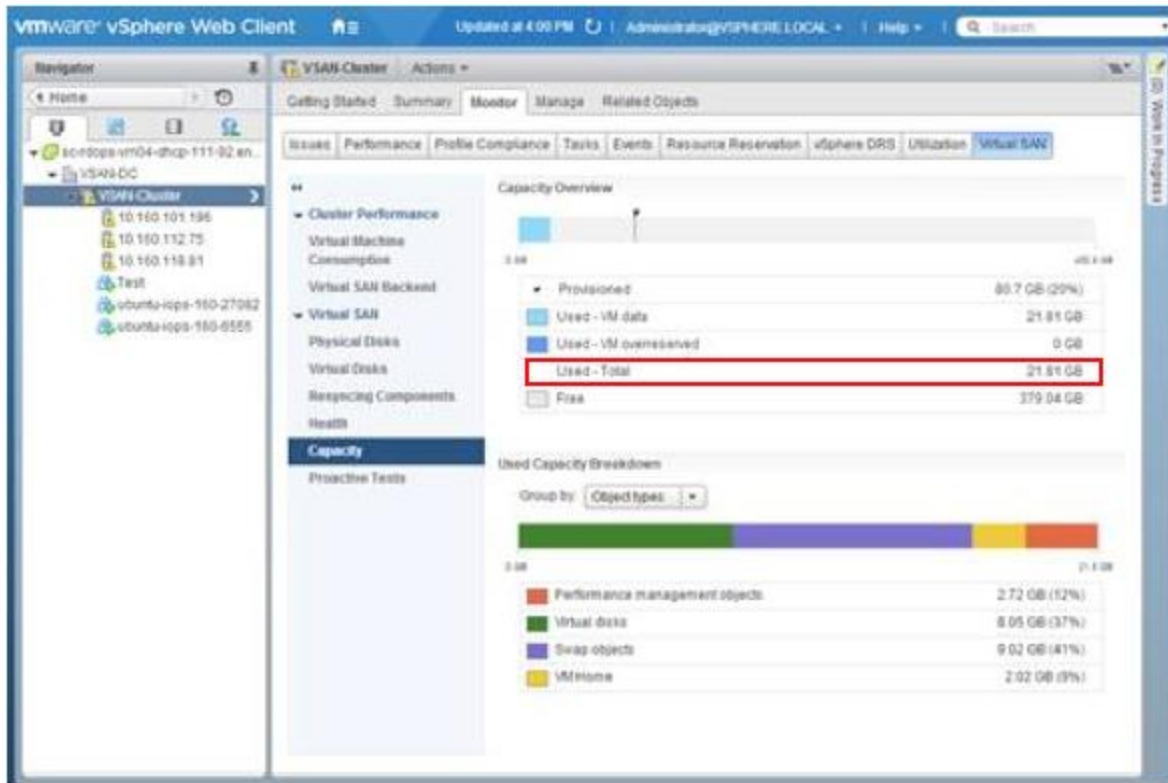
This **Used – Total** value will be used as the 'VSAN Storage Used' value per VM in all manual reporting adjustments.

Refer to Appendix B for information on adjusting monthly reports.

MANUALLY COLLECTING USAGE DATA FOR VREALIZE OPERATIONS

vRealize Operations maintains usage data in its own database.

This section explains how to create a new report in vRealize Operations and run it to retrieve the required usage data. The report provides the total number of VMs managed by vRealize Operations.

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Create a report for every vCenter Server managed by vRealize Operations.

Creating the report involves the following tasks:

- Set the time period for which deleted object data is stored to 30 days.
  By default, vRealize Operations stores deleted object data for 15 days. Changing the value to 30 days ensures proper reporting of all virtual machines for the full 30-day reporting period.
- Create and save a new View.
  A View is similar to a report. After creating and saving a View, you can run it at any time.
- Run the View to get the total number of VMs managed by vRealize Operations.

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.
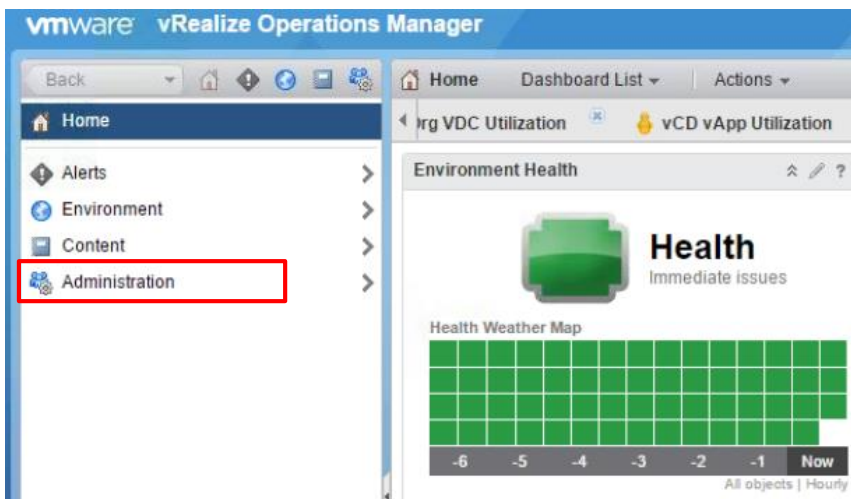
   b. In the left pane, click **Global Settings**, then click the **Edit Global Settings** icon at the top of the Global Settings page.
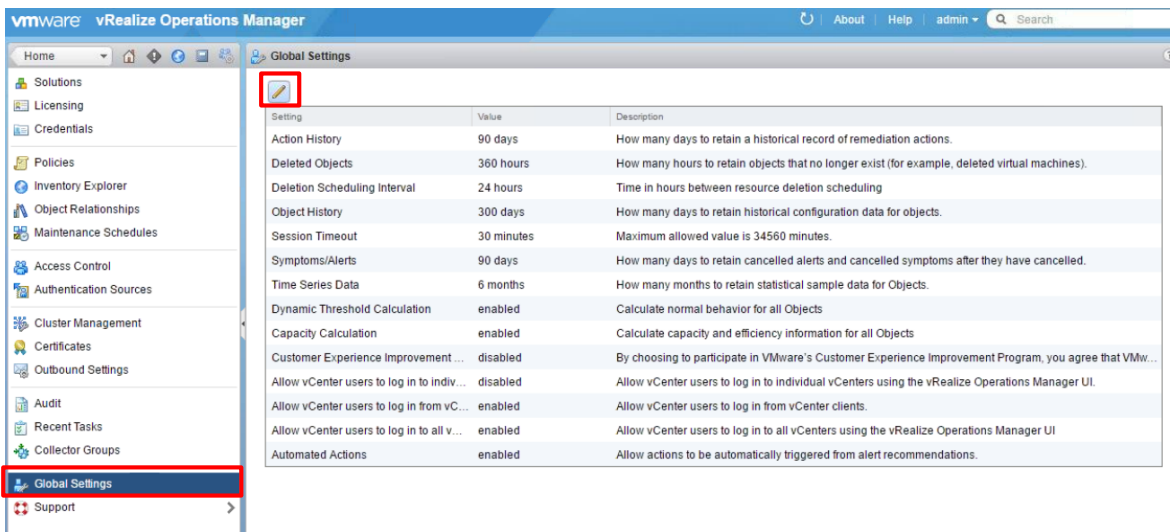
c. In the Edit Global Settings page, change the value of the **Deleted Objects** field from **360** hours to **720** hours, then click **OK**.

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**.
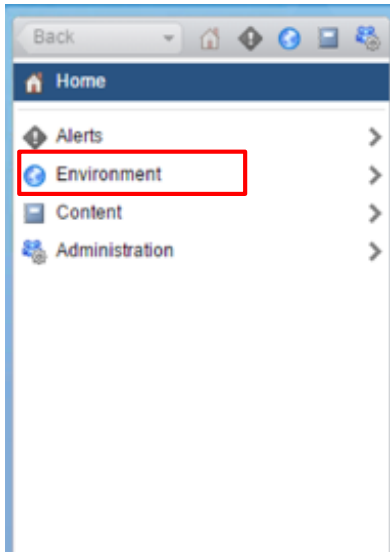
c.   Click **vSphere Hosts and Clusters** under **Inventory Trees.**

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.

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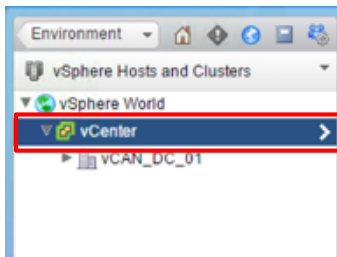
e. Click the **Details** tab, then click the **Create View** icon at the top of the Views page.
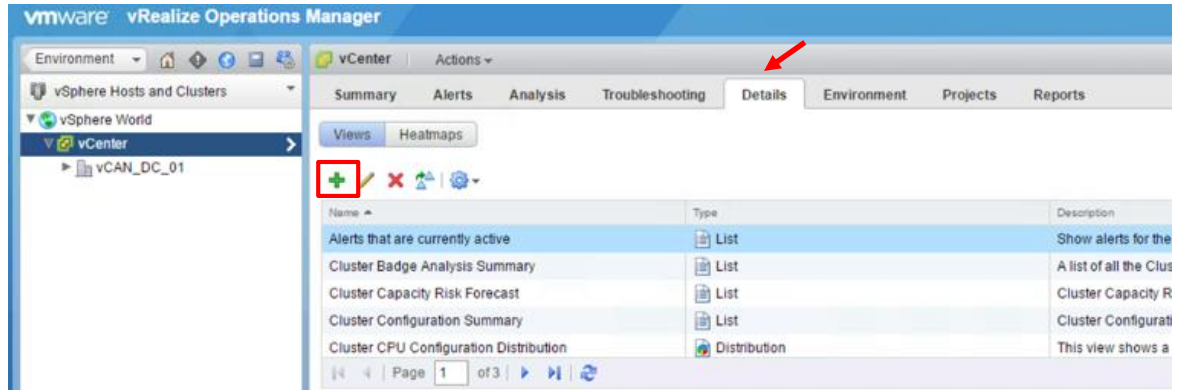
f. In the New View page, enter a unique name for the View.
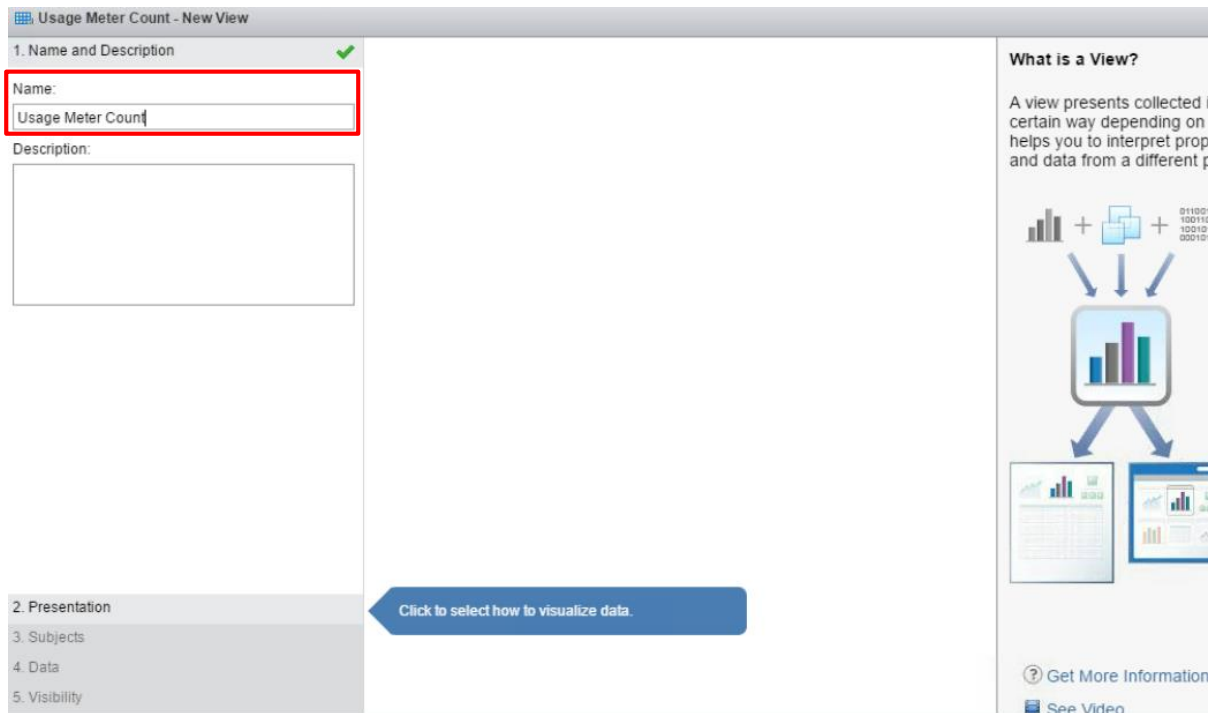
g. Click **Presentation** at the bottom of the New View page, then click **List**.
h. Under **Configuration**, you can modify the number of items displayed per page.

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

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

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 **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.

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.
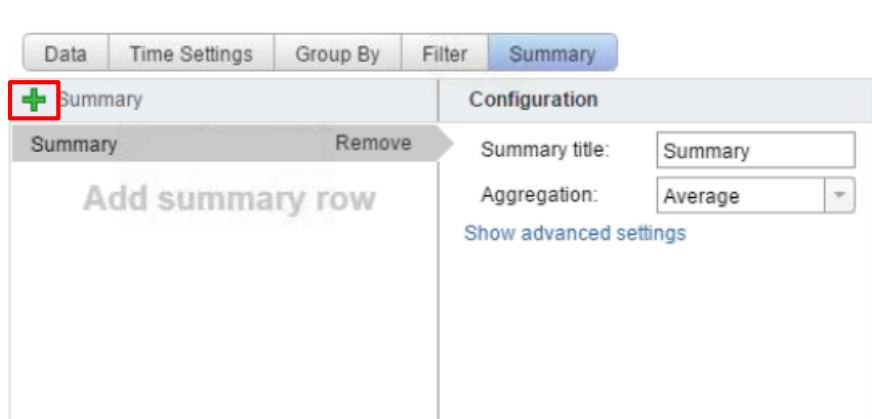
o. Click **Save**.
The View is displayed. From the list of VMs in the View, count only those VMs that are managed by vRealize Operations. Do not use the total number of VMs in the list as it may include other VMs.
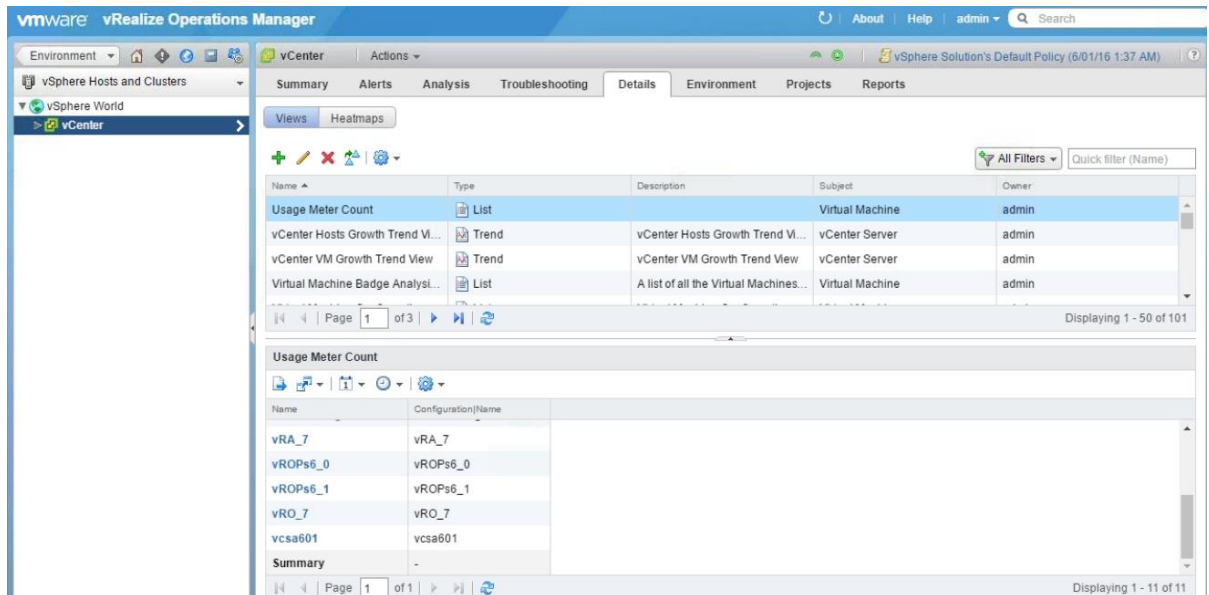
4. Run the View at any time from the **Details** tab of the **Environment – vSphere Hosts & Clusters - vCenter** page by clicking the View name. From the list of VMs that is displayed, count only those VMs that are managed by vRealize Operations.

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

Refer to Appendix B for information on adjusting monthly reports.

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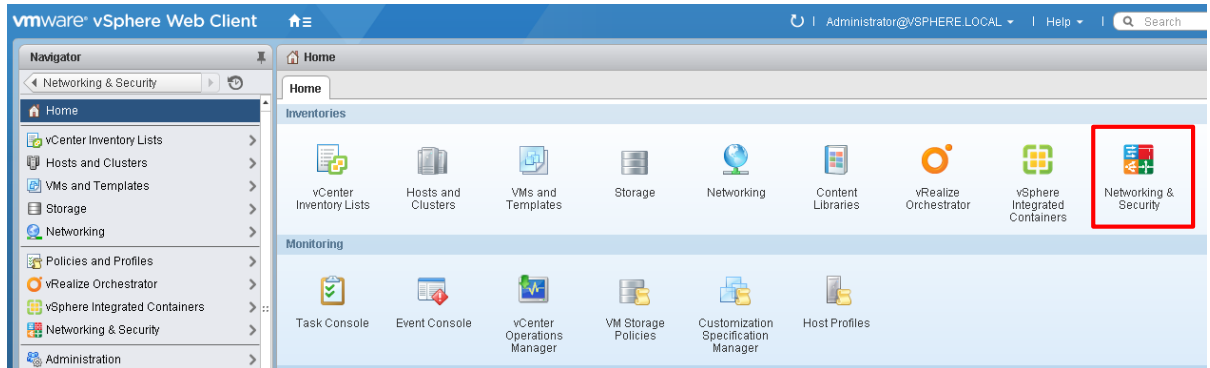
3. In the Navigator pane on the left, under **Networking & Security**, click **Installation**, then select the **Host Preparation** tab.
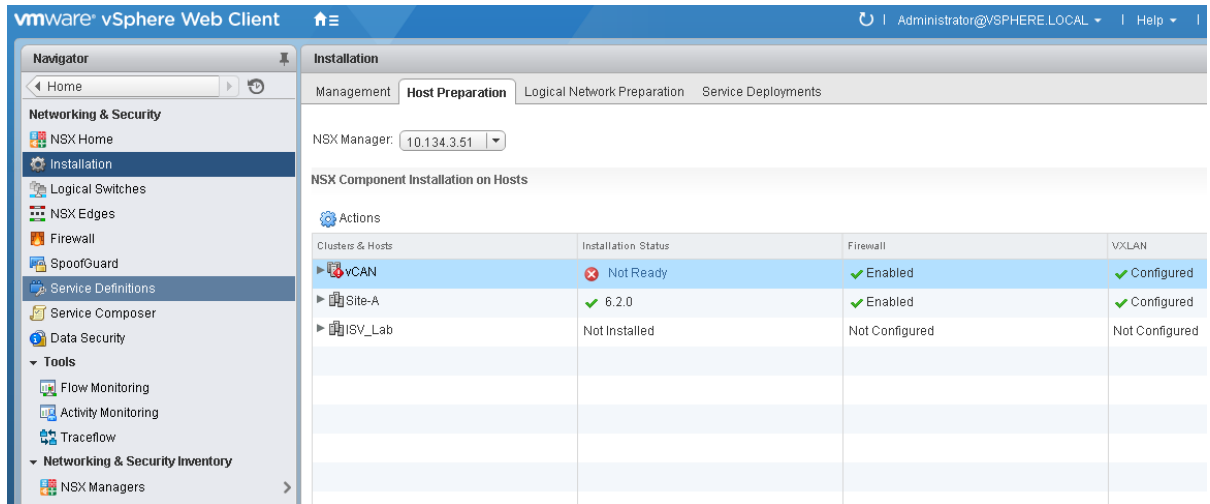

4. Make a note of the hosts that have NSX installed.
5. In the Navigator pane, click **Home** to return to the vSphere Web Client Home page.
6. In the Navigator pane, click **vCenter Inventory Lists**, then click **Virtual Machines**.

   All the virtual machines in your vCenter Server instance are listed.
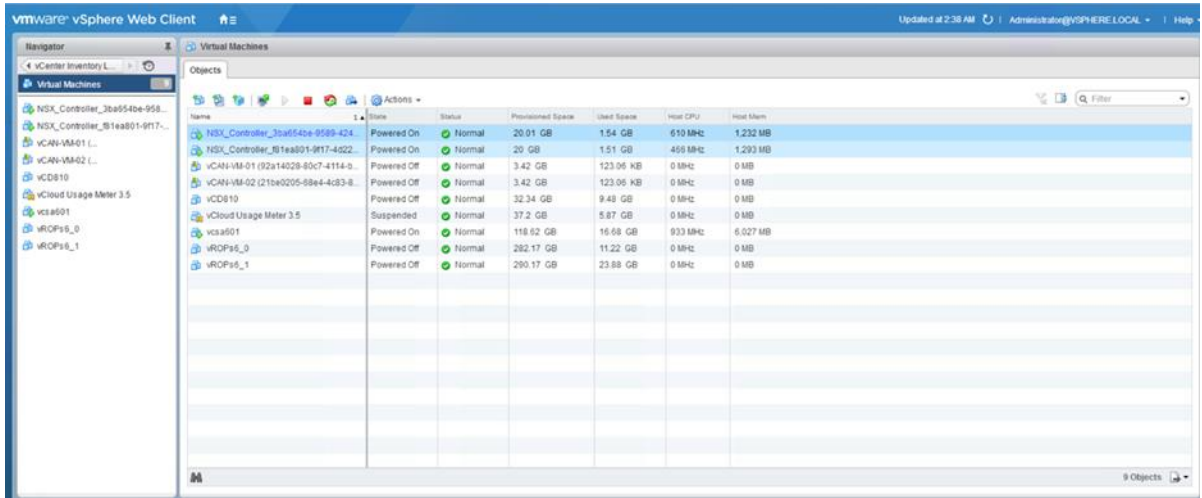
7. Click the Export List icon at the bottom-right of the page to export the list of VMs.
8. In the Export List Contents pop-up window, select the following items:
    *   **Name**
    *   **State**
    *   **Host**
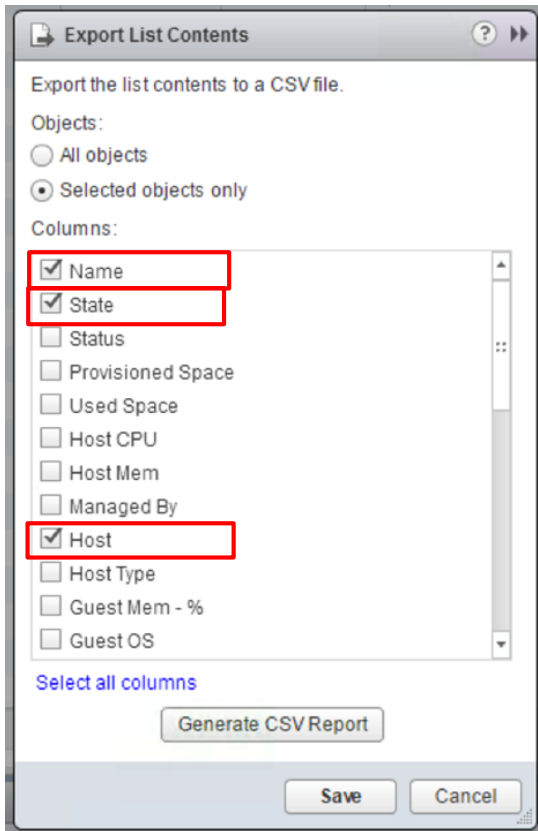
9. Click **Generate CSV Report**.
10. Sort the report by host name and count the number of VMs on each host that has NSX installed.

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The total number of VMs running NSX is used while manually adjusting monthly reports for bundles or standalone product usage.

Refer to Appendix B for information on adjusting monthly reports.

MANUALLY COLLECTING USAGE DATA FOR vCLOUD AVAILABILITY

Usage Meter 3.3.3 does not currently report usage for vCloud Availability.

A Python script is used to automate the retrieval of usage data for vCloud Availability. A link to the script is available on the vCloud Availability Product page on Partner Central.

https://github.com/vmware/vcloud-availability-examples

Service Providers are required to execute the script once each reporting period, as close to the end of the billing period as possible. Each execution of the script returns a point-in-time listing of protected VMs' vCPU and vStorage usage by Organization.

Sample Execution

$ python gen_usage_report.py administrator password 10.158.13.158

'Tenant1Org': {'ReplicatedVMs': 6, 'TotalOrganizationReplicationSize': 210},

'Tenant2Org': {'ReplicatedVMs': 25, 'TotalOrganizationReplicationSize': 800},

The output contains a list of Organizations using vCloud Availability. For each Organization, three values are output:

- The Organization name
- A total count of protected VMs in the Organization
- The total storage used by the protected VMs in the Organization in Bytes

For example, in the sample execution above, the first Organization name is Tenant1Org, the total count of protected VMs in Tenant1Org is 6, and the total storage used by protected VMs in Tenant1Org is 210.

These three values are used in reporting standalone use for each Organization using vCloud Availability.

Apendix D. Legacy vCAN Bundles

VMWARE VCLOUD SERVICE PROVIDER BUNDLE – PREMIER-X PLUS EDITION

The VMware vCloud Service Provider Bundle – Premier-X Plus Edition provides the key components required to deliver an enterprise-class Cloud service together with management, automation and advanced networking capabilities. The VMware vCloud Service Provider Bundle – Premier-X Plus Edition 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. Service Providers have the option to deploy either VMware vCloud Director or VMware Integrated OpenStack (VIO).

Point Value

13 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)

Components

- VMware vRealize Operations Enterprise, including vRealize Operations Manager, vRealize Configuration Manager, vRealize Infrastructure Navigator and vRealize Hyperic
- VMware vCloud Connector Advanced
- VMware vSphere Enterprise Plus
- VMware vCenter Server Standard
- VMware vCloud Director OR VMware Integrated OpenStack (VIO)
- VMware vCenter Chargeback Manager[9]
- VMware vRealize Business for Cloud Advanced
- VMware NSX-V, which includes logical VPN, logical load balancing and logical switching

Support Included

VMware Production Level support

VMWARE VCLOUD SERVICE PROVIDER BUNDLE – PREMIER-X EDITION

The VMware vCloud Service Provider Bundle – Premier-X Edition provides the key components required to deliver an enterprise-class Cloud service. The VMware vCloud Service Provider Bundle – Premier-X Edition is targeted at Service Providers who want to enable enterprises to extend their data centers to the public cloud with

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[9] Chargeback Manager is on "Special Terms" until December 2017 when it will reach End of Support (EOS) and it will be removed from the vCAN program. Service Providers with completed contracts prior to September 2015 may request additional licenses of Chargeback Manager until December 2017. Service Providers with contracts completed after September 2015 should implement vRealize Business for Cloud Advanced.

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agility, compatibility and security in a multi-tenant infrastructure with robust networking capabilities. Service Providers have the option to deploy either VMware vCloud Director or VMware Integrated OpenStack (VIO).

Point Value

10 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)

Components

- VMware vCloud Connector Advanced
- VMware vSphere Enterprise Plus
- VMware vCenter Server Standard
- VMware vCloud Director OR VMware Integrated OpenStack (VIO)
- VMware NSX-V, which include logical VPN, logical load balancing and logical switching
- VMware vCenter Chargeback Manager[10]
- VMware vRealize Business for Cloud Advanced

Support Included

VMware Production Level support

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[10] Chargeback Manager is on "Special Terms" until December 2017 when it will reach End of Support (EOS) and it will be removed from the vCAN program. Service Providers with completed contracts prior to September 1, 2015 may request additional licenses of Chargeback Manager until December 2017. Service Providers with contracts completed after September 1, 2015 should implement vRealize Business for Cloud Advanced.

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VMWARE VCLOUD SERVICE PROVIDER BUNDLE - PREMIER PLUS EDITION

The VMware vCloud Service Provider Bundle – Premier Plus Edition provides the key components required to deliver an enterprise-class Cloud service together with management and automation capabilities. The VMware vCloud Service Provider Bundle - Premier Plus Edition 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.

Point Value

10 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)

Components

- VMware vRealize Operations Enterprise, including vRealize Operations Manager, vRealize Configuration Manager, vRealize Infrastructure Navigator and vRealize Hyperic
- VMware vCloud Connector Advanced
- VMware vSphere Enterprise Plus
- VMware vCenter Server Standard
- VMware vCloud Director
- VMware vCenter Chargeback Manager[11]
- VMware vRealize Business for Cloud Advanced
- VMware vCloud Networking and Security, which includes VPN, load balancing and high availability firewall features
- VMware vCloud Usage Meter

Support Included

VMware Production Level support. If you require support for the vCloud Usage Meter please contact VMware Global Support Services.

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[11] Chargeback Manager is on "Special Terms" until December 2017 when it will reach End of Support (EOS) and it will be removed from the vCAN program. Service Providers with completed contracts prior to September 2015 may request additional licenses of Chargeback Manager until December 2017.. Service Providers with contracts completed after September 2015 should implement vRealize Business for Cloud Advanced.

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VMWARE VCLOUD SERVICE PROVIDER BUNDLE – PREMIER EDITION

The VMware vCloud Service Provider Bundle - Premier Edition provides the key components required to deliver an enterprise-class Cloud service. The VMware vCloud Service Provider Bundle - Premier Edition 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.

Point Value

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)

Components

- VMware vCloud Connector Advanced
- VMware vSphere Enterprise Plus
- VMware vCenter Server Standard
- VMware vCloud Director
- VMware vCloud Networking and Security, which includes VPN, load balancing and High Availability Firewall features
- VMware vCenter Chargeback Manager[12]
- VMware vRealize Business for Cloud Advanced
- VMware vCloud Usage Meter

Support Included

VMware Production Level support. If you require support for the vCloud Usage Metermailto:, please contact VMware Global Support Services., please contact VMware Global Support Services.

VCLOUD SERVICE PROVIDER BUNDLE – STANDARD EDITION

The VMware vCloud Service Provider Bundle - Standard Edition provides the key components required to deliver a competitive Cloud service. The VMware vCloud Service Provider Bundle - Standard Edition 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.

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[12] Chargeback Manager is on "Special Terms" until December 2017 when it will reach End of Support (EOS) and it will be removed from the vCAN program. Service Providers with completed contracts prior to September 2015 may request additional licenses of Chargeback Manager until December 2017.. Service Providers with contracts completed after September 2015 should implement vRealize Business for Cloud Advanced.

Point Value

5 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)

Components

- VMware vSphere Enterprise with vNetwork Distributed Switch enabled
  (Note: The vSphere edition on installation may display as vSphere Standard with vNetwork Distributed Switch; however, this enables the same features as vSphere Enterprise with vNetwork Distributed Switch.)
- VMware vCenter Server Standard
- VMware vCloud Director
- VMware vCenter Chargeback Manager[13]
- VMware vRealize Business for Cloud Advanced
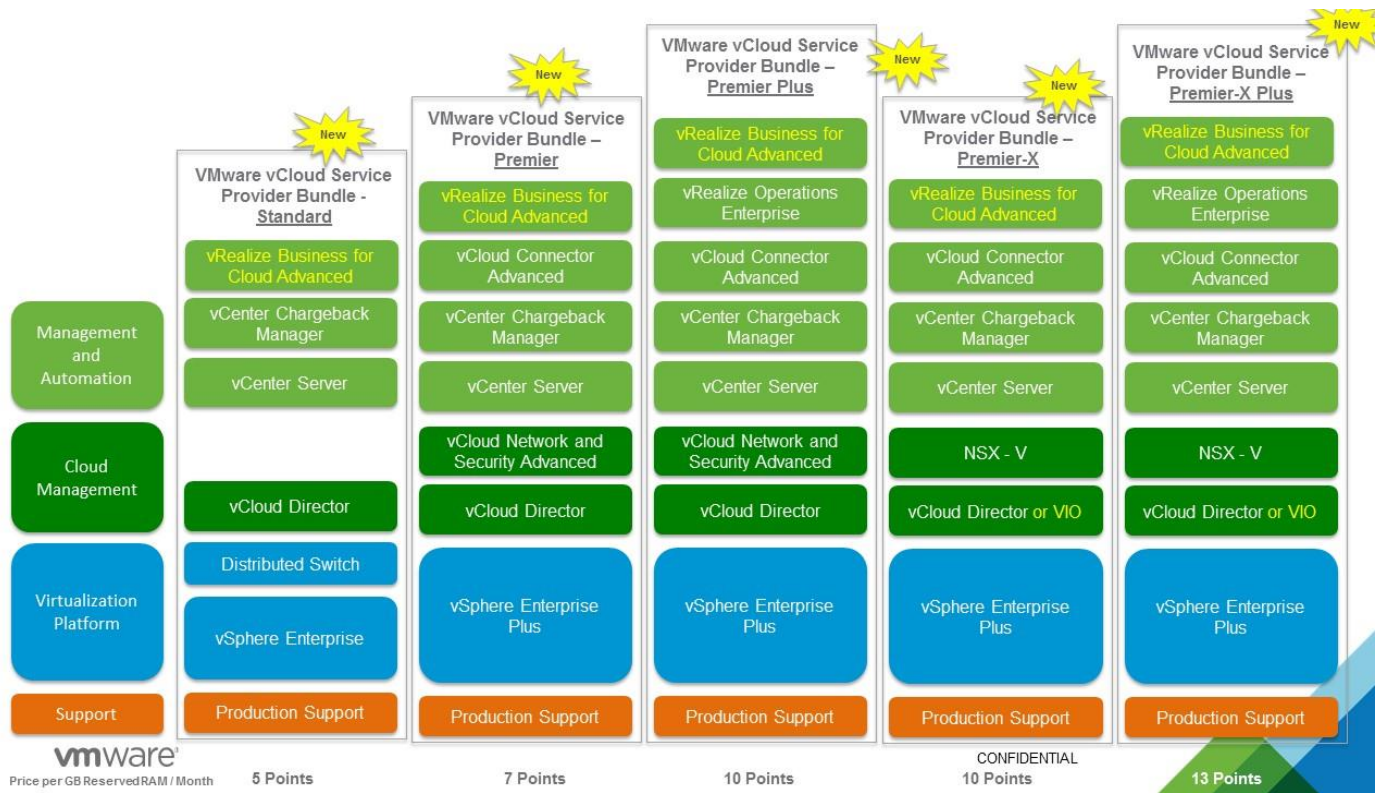- VMware vCloud Usage Meter

Support Included

VMware Production Level support. If you require support for the vCloud Usage Metermailto:, please contact VMware Global Support Services., please contact VMware Global Support Services.

VMware vCloud Service Provider Bundles Comparison

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[13]Chargeback Manager is on "Special Terms" until December 2017 when it will reach End of Support (EOS) and it will be removed from the vCAN program. Service Providers with completed contracts prior to September 2015 may request additional licenses of Chargeback Manager until December 2017.Service Providers with contracts completed after September 2015 should implement vRealize Business for Cloud Advanced.

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