

Steps to compute vROps usage bundled into the vCloud Service Provider Bundle - Premier Plus Edition bundle with UM 3.3.3.

Here are the original steps to report vROps. Below these you will find my interpretation along with instructions and screenshots:

- 1) *Run the Monthly Usage Report.*
- 2) *Read from the report the vCloud Service Provider Bundle - Premier Edition value. **This is value A.***
- 3) *Compute the total usage for vRealize Operation Manager as a bundle.*
 - 3.a) *For each vROps instance query vROps for VMs under its management yielding a list of VMs.*
 - 3.b) *Determine the "Premier Plus Bundle Value" based on the aggregate average monthly usage of the VMs in the list generated in step 3.a). This can be performed by computing the average billed RAM from vCenter Server on a per VM basis. **This is value B.***
- 4) *Update the report as follows:*
 - 4.a) *Update: vCloud Service Provider Bundle - Premier Edition = A-B*
 - 4.b) *Add: vCloud Service Provider Bundle - Premier Plus Edition = B*

Run the Monthly Usage Report in 3.3.3. Read from the report the Avg Capped Billed vRAM (GB) from the vCloud Service Provider Bundle – Premier Edition. This is **Value A**. You will see in the below screenshot (in my small lab) this is **5GB vRAM**.

vmware vCloud Usage Meter 3.3.3 Manage Licenses Automatic Reporting Monitor Customers Rules Reports Support Log Out

Reports

Report: Monthly Usage
 Month of: June 2016
 Per-VM Memory Cap (GB): 24

Zip

 By Email

Monthly Usage Units

Product	Unit of Measure	Units to be Reported
Site Recovery Manager	Protected VMs	0
vCloud Integration Manager	Avg Capped Billed vRAM (GB)	0
vCloud Automation Center	Managed VMs	0
vCloud Service Provider Bundle - Standard Edition	Avg Capped Billed vRAM (GB)	0
vCloud Service Provider Bundle - Premier Edition	Avg Capped Billed vRAM (GB)	5
vCloud Service Provider Bundle - Premier Plus Edition	Avg Capped Billed vRAM (GB)	0

Virtual Machines by Product Server

Product	Hostname	Version	License Key	# VMs under Management
vCenter Server	192.168.1.200	6.0.0	752TP-CRH9P-281U9-092K6-8X862	12
Total				12
Site Recovery Manager (VMs)				0
vCloud Director	192.168.1.210	9.0	HM4TH-A9K45-48RF3-0L0KM-C03J6	6
vCenter Operations Manager	192.168.1.12	6.0.2.000000		0
vCenter Operations Manager	192.168.1.205	6.1.0.000000		0
Total				6

While we are in Usage Meter. We must look at the total number of VMs Average billed RAM from vCenter on a per VM basis. To do this, we take the total number of VMs shown under vCenter Server (Virtual Machines by Product Server) and divide it by the amount of vRAM – in this example it is showing 12 VMs with 5 GB. This equates to .42GB vRAM per VM. $12 \text{ VMs} * .42 = 5\text{GB}$

The next step is to get a list of VMs from vROPs – if this list is 7 .. then take $7 * .42 = \mathbf{2.94\text{GB}}$ (**Value B**). So we basically have a total of 5GB vRAM for Premier and 2.94GB vRAM for vROPs.

We will always have a lower number of VMs in vROPs than we will in vCenter – this is because we do not count certain management VMs in vROPs.

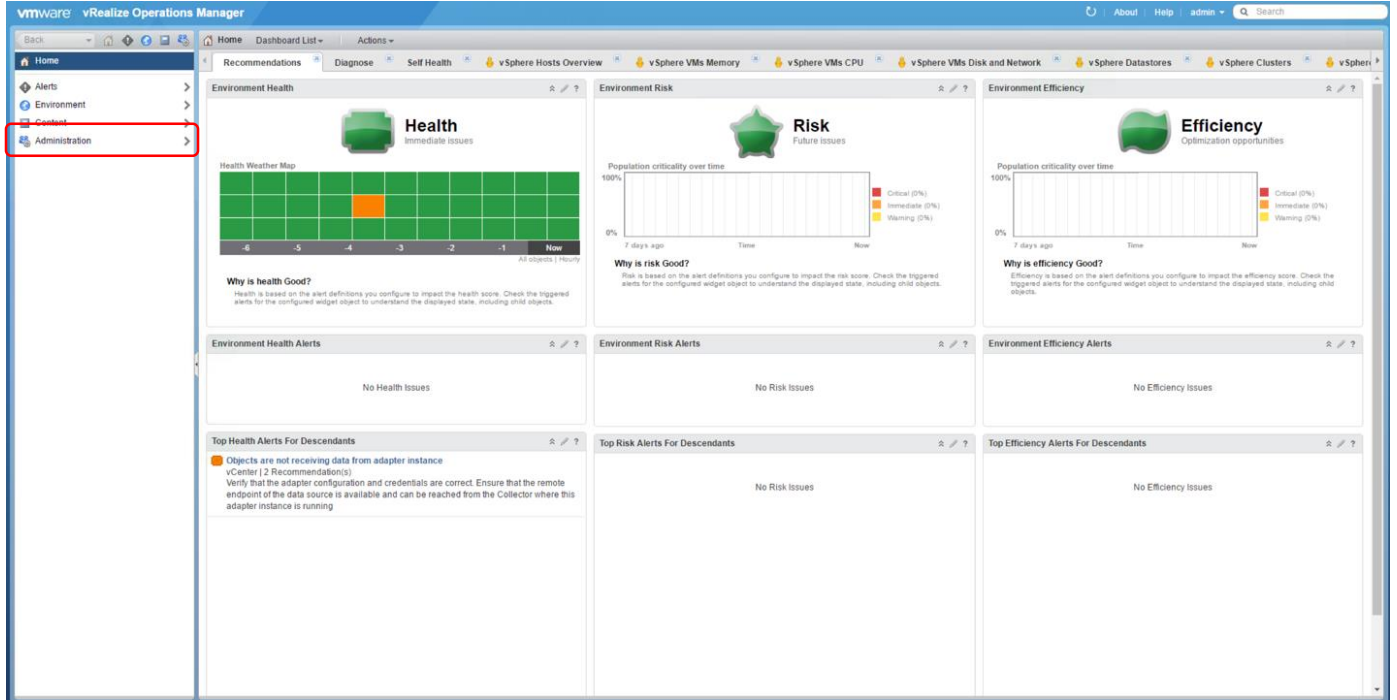
To summarize. We know how much total vRAM we used from vCenter, we now need to know how many vROPs VMs that came from. In Usage Meter – the vCenter column will show the total number of VMs deployed that month – even if it was deployed for 5 minutes. We need vROPs to show the same thing.

This is how we get the total number of VMs from vROPs:

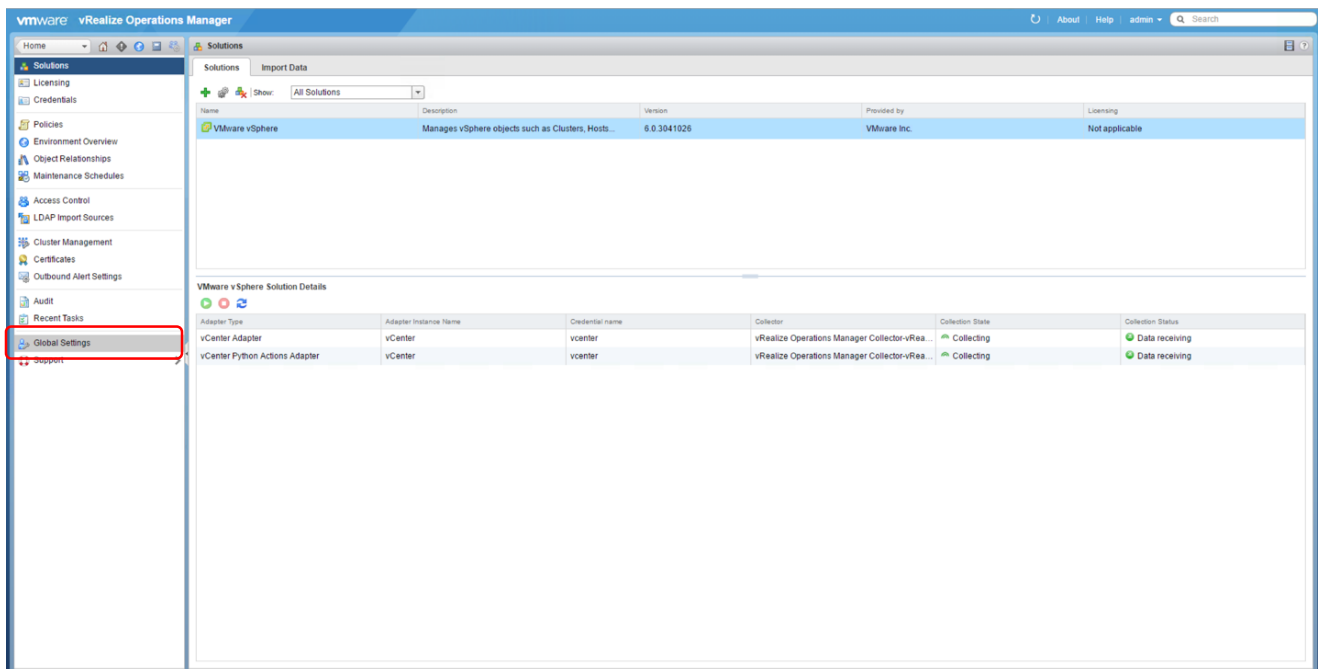
The first step we need to take is to keep 30 days worth of deleted objects data. The reason for this is as I stated above. If we have a VM that was created then deleted (as is the case in a cloud environment) we need to know this. The default vROPs keeps deleted objects data is 15

days, we are going to change this to 30 days. This will ensure when we run a report it will capture VMs that were created and deleted – we will still have these built into the aggregate.

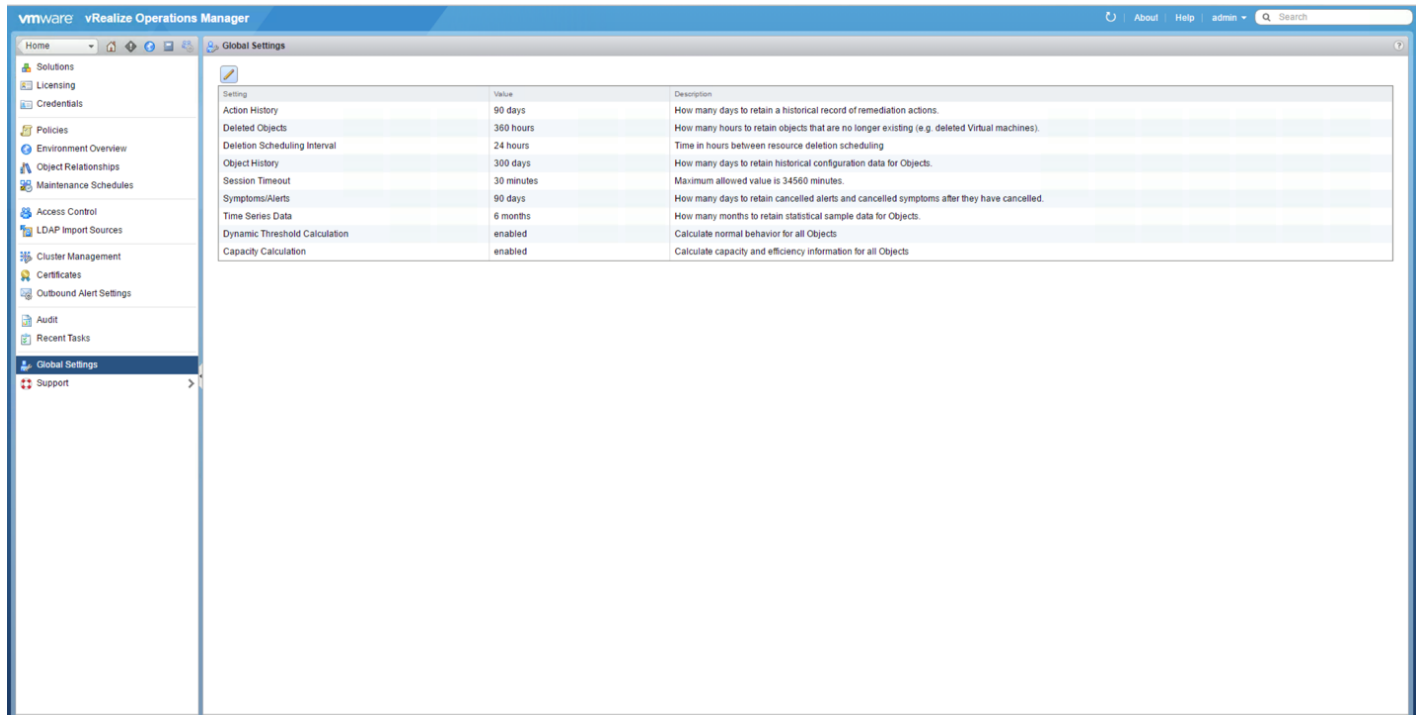
From the vROPs home page click **Administration**.



Then select **Global Settings**



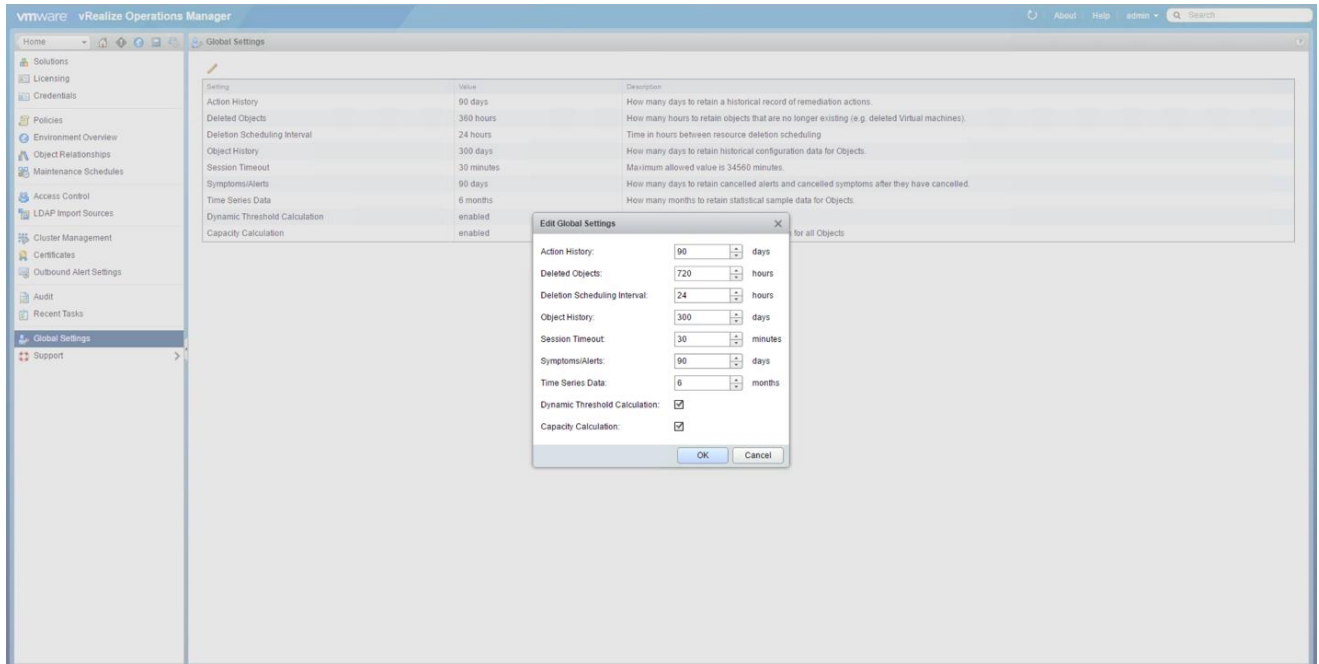
Then click the edit Global Settings button at the top right of your screen



The screenshot shows the VMware vRealize Operations Manager interface. The left sidebar contains a navigation menu with the following items: Solutions, Licensing, Credentials, Policies, Environment Overview, Object Relationships, Maintenance Schedules, Access Control, LDAP Import Sources, Cluster Management, Certificates, Outbound Alert Settings, Audit, Recent Tasks, Global Settings (highlighted), and Support. The main content area is titled 'Global Settings' and contains a table with the following data:

Setting	Value	Description
Action History	90 days	How many days to retain a historical record of remediation actions.
Deleted Objects	360 hours	How many hours to retain objects that are no longer existing (e.g. deleted Virtual machines).
Deletion Scheduling Interval	24 hours	Time in hours between resource deletion scheduling
Object History	300 days	How many days to retain historical configuration data for Objects.
Session Timeout	30 minutes	Maximum allowed value is 34560 minutes.
Symptoms/Alerts	90 days	How many days to retain cancelled alerts and cancelled symptoms after they have cancelled.
Time Series Data	6 months	How many months to retain statistical sample data for Objects.
Dynamic Threshold Calculation	enabled	Calculate normal behavior for all Objects
Capacity Calculation	enabled	Calculate capacity and efficiency information for all Objects

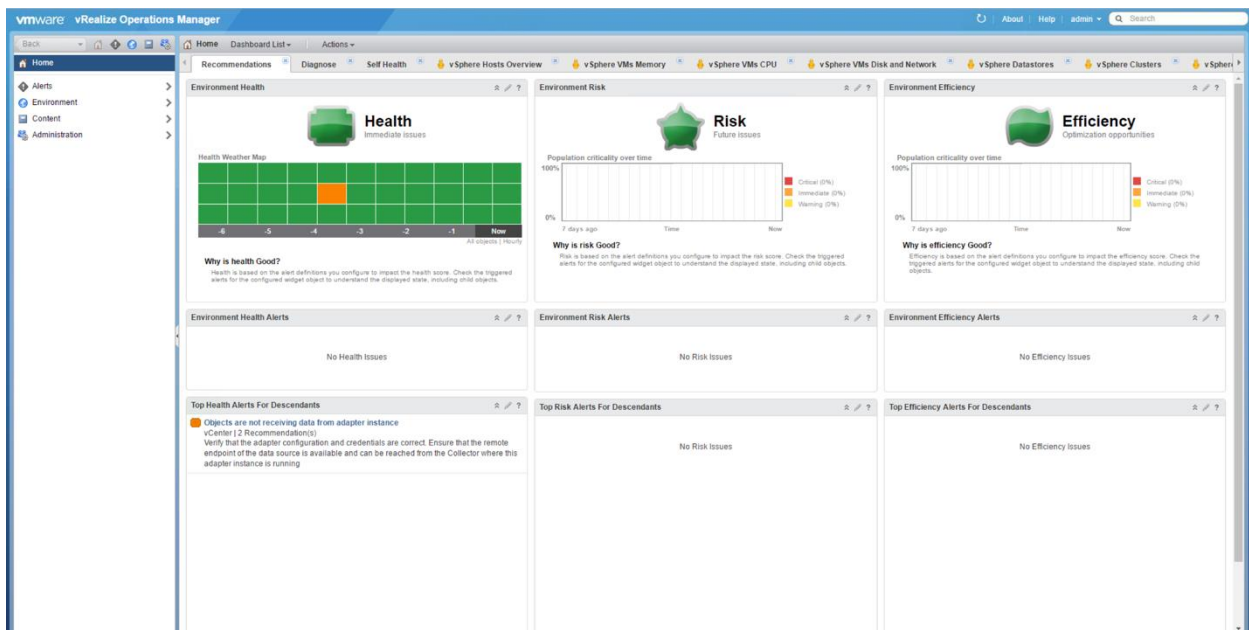
In the Deleted Objects field – change the value from 360 hours to 720 hours and click OK:



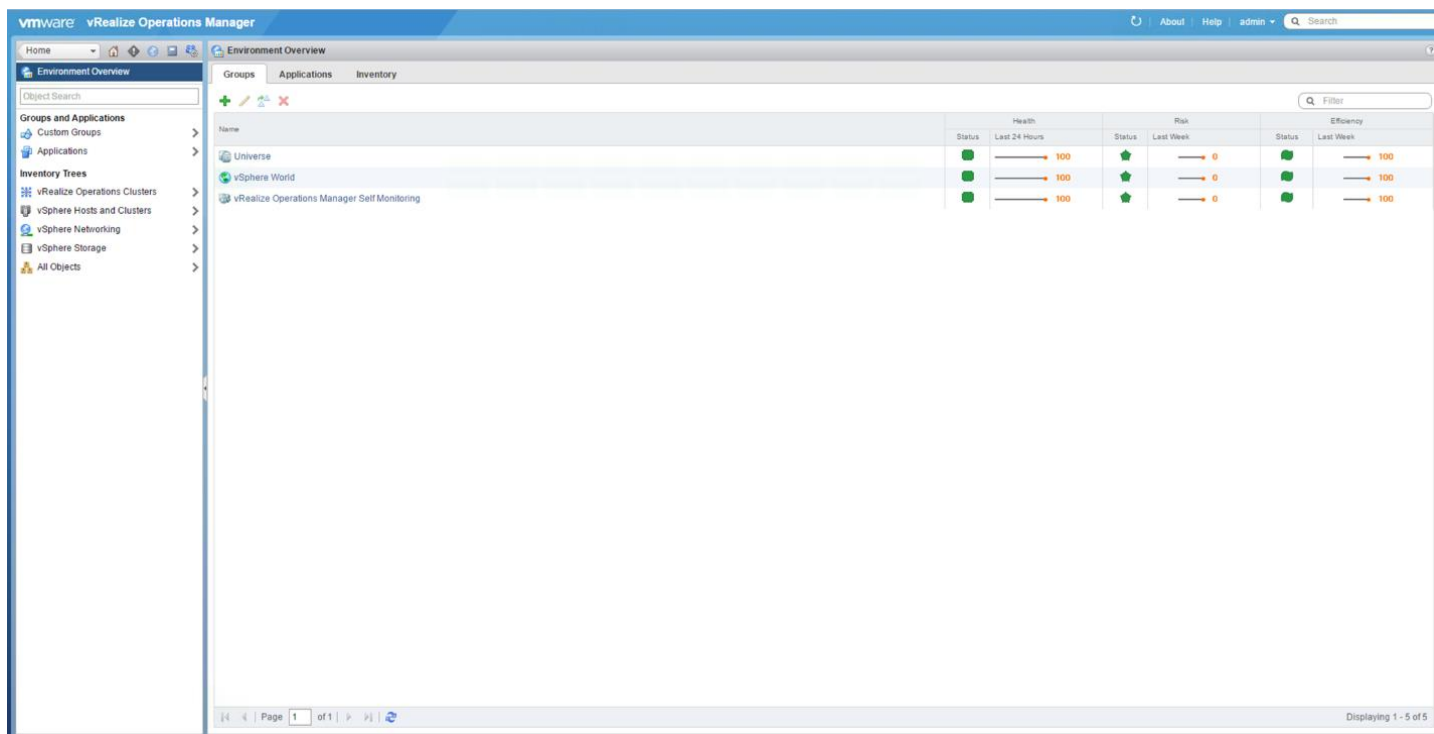
The next step is to create a View – or import a view. This view will give us a list of the VM names, and the count for each VM. The reason we are getting a listing of VMs is so the SP can remove VMs not meant to be in the list. So while we can do a VM count – there are some VMs not under vROPs management they do not pay for. We understand in large environments this can be cumbersome.

To create a new “View”:

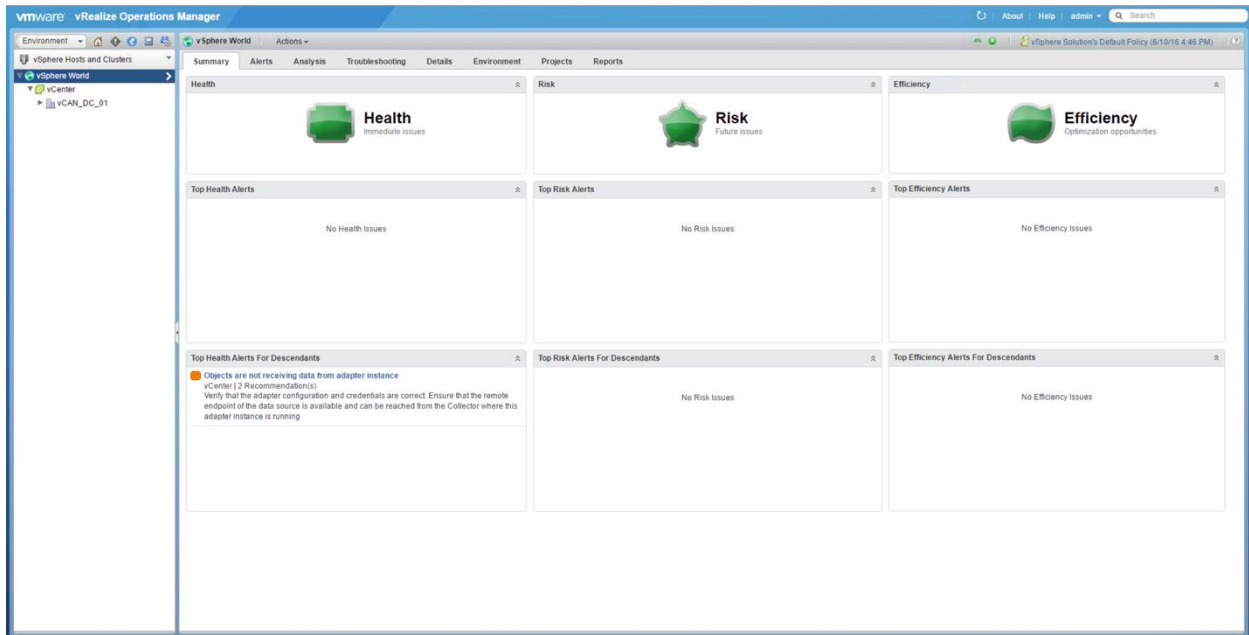
From the vROPs Home Page:



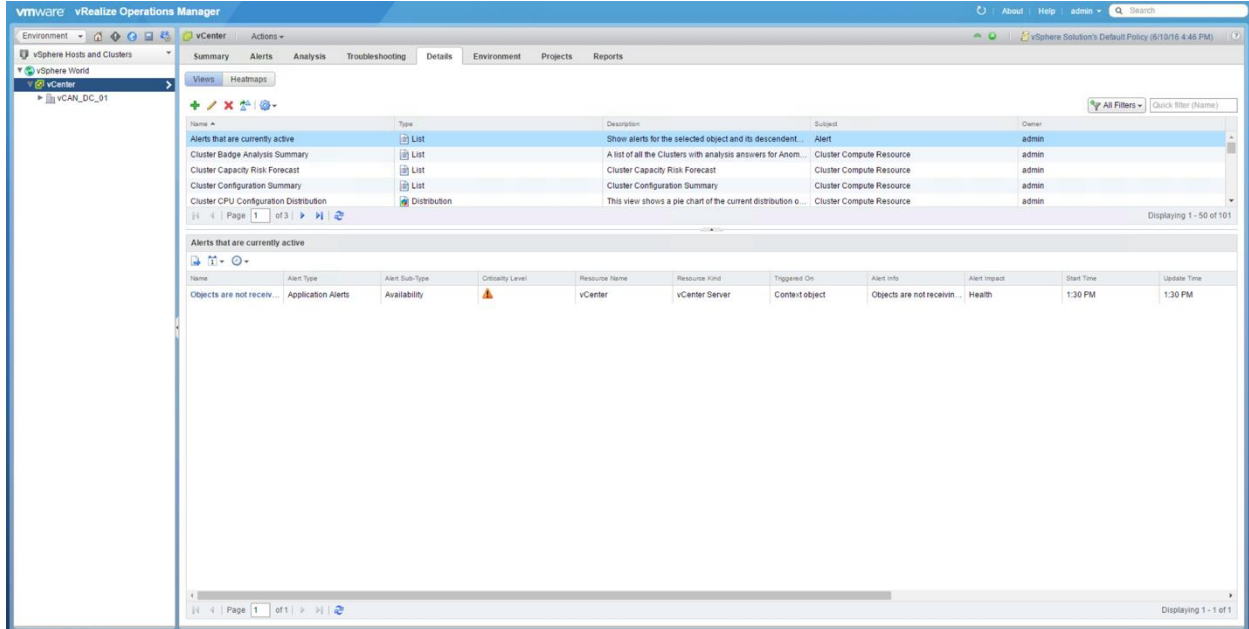
Then click on **Environment** to get to the Environment Overview Page:



Then click vSphere Hosts and Clusters from the list. Then on the next screen click the expansion arrow under vSphere World and select the vCenter Server we are running this report for. Note – this must be run for each vCenter under vROPs control.



Then click the Details Tab:



Then click the Green Plus Sign (visible in the screenshot above) to create a new View. In the Name field – enter a unique name for this View:

vCAN VM List - New View

✓ 1. Name and Description

Name:
vCAN VM List

Description:

2. Presentation

3. Subjects

4. Data

5. Visibility

Click to select how to visualize data.

What is a View? Collapse >>

A view presents collected information for an object in a certain way depending on the view type. Each type of view helps you to interpret properties, metrics, alerts, policies, and data from a different perspective.

Presentation, Subject and Data

View

Reports & Dashboards

? Get More Information

See Video

Save Cancel

Then click the Presentation tab at the bottom of the View window (note you can change the number of items that will show up per page, the default is 50)

vCAN VM List - New View

1. Name and Description

2. Presentation

List

Summary

Trend

Distribution

Text

Image

List

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

Configuration

Items per page: 50

Preview source: Sample data

Select preview source...

Column 1	Column 2	Column 3	Column 4
Object Name 1	Property Value 1	Value 1	Vi
Object Name 2	Property Value 2	Value 2	Vi
Object Name 3	Property Value 3	Value 3	Vi
Object Name 4	Property Value 4	Value 4	Vi
Object Name 5	Property Value 5	Value 5	Vi
Object Name 6	Property Value 6	Value 6	Vi
Object Name 7	Property Value 7	Value 7	Vi
Object Name 8	Property Value 8	Value 8	Vi

Page 1 of 1 | Displaying 1 - 15 of 15

Presentation

A presentation is a way the collected information for the object is presented. Each type of view helps you to interpret metrics from a different perspective.

Get More Information

3. Subjects

4. Data

5. Visibility

Click to select the subject for which the view applies.

Save Cancel

Select the Subjects tab and in the open field, type Virtual Machine – a list will auto populate and select Virtual Machine from the list.

vCAN VM List - New View

1. Name and Description

2. Presentation

3. Subjects

Virtual Machine

vCenter Adapter

Virtual Machine

Virtual Machine Folder

Preview source: Sample data

Column 1	Column 2	Column 3	Column 4
Object Name 1	Property Value 1	Value 1	Value 1
Object Name 2	Property Value 2	Value 2	Value 2
Object Name 3	Property Value 3	Value 3	Value 3
Object Name 4	Property Value 4	Value 4	Value 4
Object Name 5	Property Value 5	Value 5	Value 5
Object Name 6	Property Value 6	Value 6	Value 6
Object Name 7	Property Value 7	Value 7	Value 7
Object Name 8	Property Value 8	Value 8	Value 8

Displaying 1 - 15 of 15

4. Data

5. Visibility

Subjects

The subject is the base object type for which the view shows information.

Get More Information

Save Cancel

Click the Data tab, then click the Folder looking button (as shown in the screenshot) to switch the view:

The screenshot shows the 'vCAN VM List - New View' interface. On the left, a tree view lists various metrics under the '4. Data' section, with 'Show property metrics' highlighted. The main area displays a table of sample data with columns for Object Name, Property Value, and Value. Below the table, there are tabs for 'Data', 'Filter', and 'Summary', and a 'Show data for the last 7 Days' dropdown. The 'Data' tab is active, showing a large empty area with the instruction 'Drag the data to include in the view.' and a button to 'Select a metric or property to configure.' On the right, a 'Data' panel provides instructions on the data definition process and includes a 'Get More Information' link.

Column 1	Column 2	Column 3	Column 4
Object Name 1	Property Value 1	Value 1	Value 1
Object Name 2	Property Value 2	Value 2	Value 2
Object Name 3	Property Value 3	Value 3	Value 3
Object Name 4	Property Value 4	Value 4	Value 4
Object Name 5	Property Value 5	Value 5	Value 5
Object Name 6	Property Value 6	Value 6	Value 6
Object Name 7	Property Value 7	Value 7	Value 7
Object Name 8	Property Value 8	Value 8	Value 8

Drag the data to include in the view.

Select a metric or property to configure.

The data definition process includes adding properties, metrics, alerts, policies, or data provided by adapters to a view. These are the items by which vRealize Operations Manager collects, calculates and present the information for the view.

Get More Information

Then in the search box type the word “Name” followed by the enter key. Expand the Configuration menu and Double Click the object “Name” – or drag this into the Data window to the right. You will see the “Configuration|Name” object in the Data window once it has successfully been added.

Change the “Show Data for the last” value to 30 days.

The screenshot shows the vCAN VM List - New View interface. On the left, a navigation pane shows a tree view with 'Configuration' expanded and 'Name' selected. A search box contains the text 'Name'. The main area is divided into two panes: 'Data' and 'Configuration'. The 'Data' pane shows a table with columns 'Column 1', 'Column 2', 'Column 3', and 'Column 4'. The 'Configuration' pane shows a table with columns 'Data' and 'Configuration'. The 'Data' pane also includes a 'Show data for the last' dropdown set to '30 Days' and a 'Data' button. The 'Configuration' pane has a 'Remove' button and a message: 'Select a metric or property to configure.' On the right, a 'Data' panel contains a diagram and a 'Get More Information' link. At the bottom right, there are 'Save' and 'Cancel' buttons.

Column 1	Column 2	Column 3	Column 4
Object Name 1	Property Value 1	Value 1	Value 1
Object Name 2	Property Value 2	Value 2	Value 2
Object Name 3	Property Value 3	Value 3	Value 3
Object Name 4	Property Value 4	Value 4	Value 4
Object Name 5	Property Value 5	Value 5	Value 5
Object Name 6	Property Value 6	Value 6	Value 6
Object Name 7	Property Value 7	Value 7	Value 7
Object Name 8	Property Value 8	Value 8	Value 8

Data	Configuration
Configuration Name	Remove

In the Data Window. Click the Summary Tab and click the green plus sign. Click save.

The screenshot shows the vCAN VM List - New View interface. On the left, a navigation pane lists steps: 1. Name and Description, 2. Presentation, 3. Subjects, 4. Data, and 5. Visibility. Under '4. Data', a tree view shows 'Configuration' expanded with sub-items: Guest Fullname, Name, Summary, and Policy. The main area displays a table of virtual machines with their configuration names and property values. Below the table are navigation controls (Page 1 of 1) and a 'Summary' tab. The 'Summary' tab is active, showing a configuration panel with a green plus sign, a 'Summary' entry with a 'Remove' button, and fields for 'Summary title' (set to 'Summary') and 'Aggregation' (set to 'Average'). A 'Show advanced settings' link is also present. On the right, a 'Data' panel contains a diagram and explanatory text. At the bottom right, 'Save' and 'Cancel' buttons are visible.

Virtual Machine	Configuration Name	Property Value
Virtual Machine 1	Configuration 1	Property Value 1
Virtual Machine 2	Configuration 2	Property Value 2
Virtual Machine 3	Configuration 3	Property Value 3
Virtual Machine 4	Configuration 4	Property Value 4
Virtual Machine 5	Configuration 5	Property Value 5
Virtual Machine 6	Configuration 6	Property Value 6
Virtual Machine 7	Configuration 7	Property Value 7
Virtual Machine 8	Configuration 8	Property Value 8

Summary Configuration

Summary title: Summary

Aggregation: Average

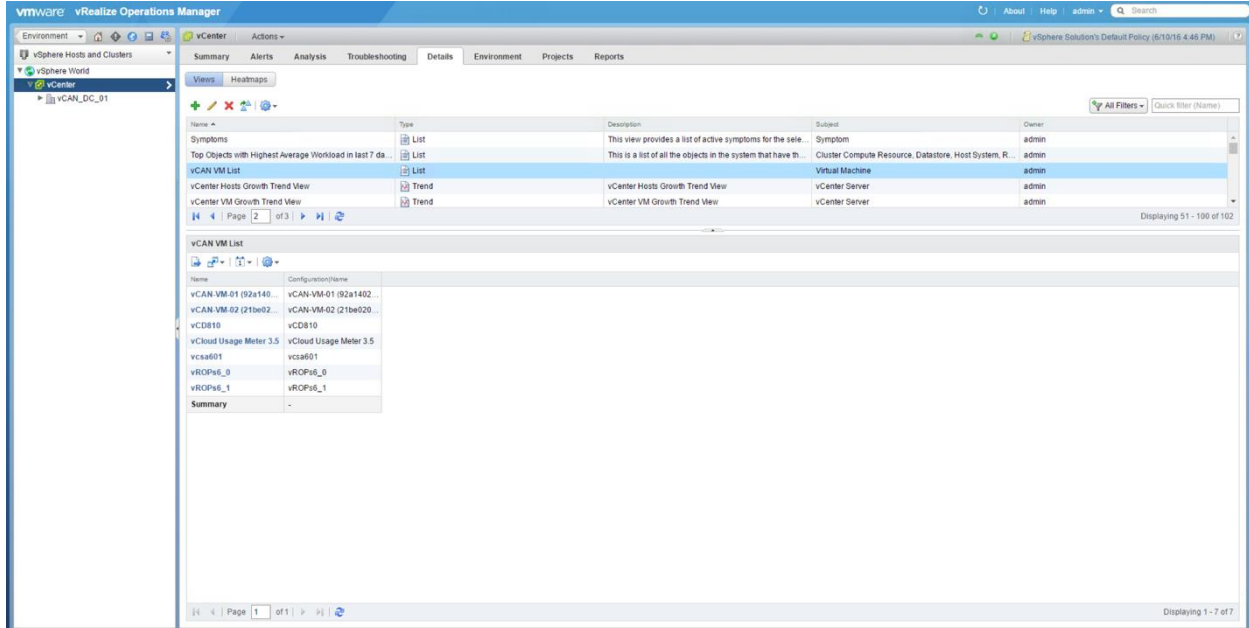
Show advanced settings

OPTIONAL STEP, you can test your “View” by clicking the Select Preview Source at the top of the window and selecting vSphere World and you will see your data at the top of the window. This will show you a listing of the VMs in the environment.

The screenshot shows the 'vCAN VM List - New View' window. On the left, a navigation pane lists categories: 1. Name and Description, 2. Presentation, 3. Subjects, 4. Data, and 5. Visibility. Under '4. Data', 'Virtual Machine' is selected. Below this is a search box for 'Name' and a tree view under 'Configuration' with 'Name' selected. The main area features a table with columns 'Name' and 'Configuration|Name'. The table lists several VMs and usage meters. Below the table is a pagination bar showing 'Page 1 of 1' and 'Displaying 1 - 7 of 7'. A 'Summary' tab is active, showing a 'Summary' row with a 'Remove' button and a 'Configuration' section with fields for 'Summary title' (set to 'Summary') and 'Aggregation' (set to 'Average'). A 'Data' tab is also visible. On the right, a 'Data' panel contains a text description of the data definition process and a diagram showing a data flow from a source to a chart. At the bottom right, there are 'Save' and 'Cancel' buttons.

Name	Configuration Name
vCAN-VM-01 (92a140...	vCAN-VM-01 (92a1402...
vCAN-VM-02 (21be02...	vCAN-VM-02 (21be020...
vCD810	vCD810
vCloud Usage Meter 3.5	vCloud Usage Meter 3.5
vcsa601	vcsa601
vROPS6_0	vROPS6_0
vROPS6_1	vROPS6_1
Summary	-

Once you have saved the View. You can run it by clicking on it from the Details Tab of the Environment | vSphere Hosts and Clusters | vCenter screen. You will see a VM count at the bottom right of the screen, however the SP must count the number of VMs under vROPs management report on these using our formula. Important – these steps only give a VM listing so the SP can come up with a final VM count for reporting. This View can be run at any time.



The next steps are to follow the formula to come up with the final number. (See formula on page 1)

Steps to compute vROps usage standalone with UM 3.3.3.

- 1) For each vROps instance
 - 1.a) query vROps for the number of VMs under its management yielding a list of VMs.
(See above how to create a list of VMs running vROps)
 - 1.b) add a line item to the monthly usage report as follows:
vRealize Operations Manager <IP address of instance> <Version> <VM count from 1.a>