

1. VOA Capacity Cover



2. VOA Capacity Overview

vRealize Operations utilizes machine learning to understand and forecast your SDDC capacity demands. It really seems simple - the SDDC serves capacity and VMs consume the capacity.

But, managing capacity to make sure that all VMs have what they need while keeping costs down can be a balancing act.

Ideally, you want to have enough capacity to handle peak demand, but no more. And this is exactly what vRealize Operations Capacity Analysis helps you achieve.

There are three primary concerns customers have with regard to capacity. This report answers questions that customers typically ask about their own SDDC capacity.

First, how much capacity do I have and how is it being used? This section will provide overall view of capacity, what is being used and some high level information on usage trends.

Second, is there capacity that can be reclaimed to improve efficiency? In this section you will see opportunities for reclaiming compute and storage resources to help address any near-term shortages and make better use of your investment in SDDC hardware and licensing.

Third, when do I need to buy more capacity and how much more do I need? Growth happens, and sometimes it happens unexpectedly! In this section you will see how vRealize Operations provides answers to how long before you will run out of capacity and help in planning for growth.

3. VOA Report Capacity Overview

Capacity Summary

CPU Capacity
4,968 GHz

CPU Cores
2,056 Cores

Memory
39,382 GB

Disk Space
277 TB

How Much Capacity?

"How much capacity do I have?"

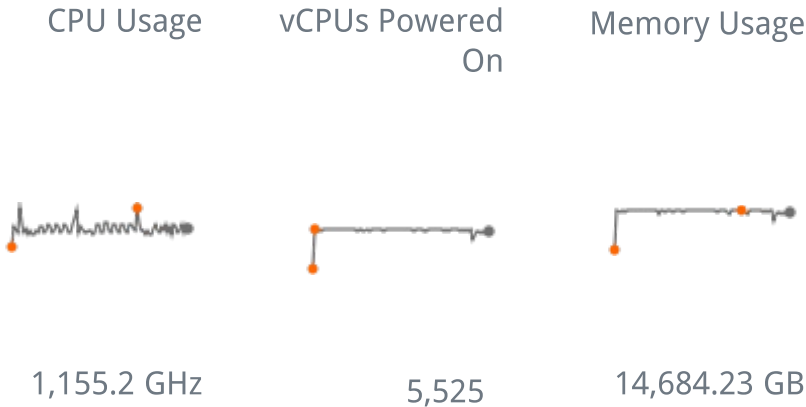
This seems like a simple question to answer but it can be challenging. Hardware gets deployed, decommissioned, reconfigured... it can be a full time job just understanding what is sitting on the datacenter floor.

This is a summary of the overall capacity in your SDDC. CPU, memory and disk storage currently available is shown above.

To the right, you can see utilization for CPU and memory with a trend line for the past 30 days.

The interactive [Utilization Overview](#) dashboard in vRealize

Compute Usage Summary



4. VOA Report Capacity Compute Consumers

Top Consumers of CPU			Top Consumers of Memory		
Name	Capacity	CPU demand	Name	Configured Memory	Memory Demand
GVAPQVF1	119.86 GHz	41.92 GHz	GVAPQSF2	256 GB	256 GB
GVAPQSF1	105.48 GHz	27.84 GHz	GVAPQSF1	256 GB	256 GB
GVAPQSF2	105.48 GHz	43.93 GHz	GVAPQVF1	240 GB	240 GB
GVAPQSP1	79.11 GHz	74.78 GHz	HOUPDAY1	96 GB	96 GB
1 - 6 of 1381 items			1 - 6 of 1151 items		

Compute Capacity Consumers

Now that you know the answer to "How much do I have?" and "How much am I using?" the next question to answer is "Who is using it?" Here you can see the top 6 virtual machines by capacity allocated.

Note that there are also columns showing how much of that allocated capacity is needed (the maximum demand over the previous 7 days).

More detail is provided in the [VM Utilization](#) dashboard.

[Demand](#) is the amount of CPU or memory a VM would LIKE to use.

This helps you understand how accurately you have sized VMs in your SDDC.

5. VOA Report Capacity Storage Consumers

Storage Consumers

Storage capacity can also be a challenge to manage, and there never seems to be enough of it! Who is using storage capacity in your SDDC and how much are they using? You can see the top consumers here.

Storage is not only used for VM guest OS and application data but for VM management as well. Snapshots are of particular concern since they can grow and consume storage in addition to causing performance problems.

vRealize Operations provides automation through [Actions](#) to find and delete old snapshots easily.

Top VMs for Disk Provisioned (GB)

Disk Space	Objects	Used (GB)	Snapshots (GB)
<div><div></div></div> 3,550	HOUSQL3	2,556.2	0
<div><div></div></div> 2,129	LDNLXPPAPAN	153.9	0
<div><div></div></div> 1,800	HOUPDAY1	1,535.8	0
<div><div></div></div> 1,750	LDNPVRNSQL1	1,092.9	0
<div><div></div></div> 1,750	EPTFILER1	1,746.4	0
<div><div></div></div> 1,713.5	GVALXPVCSA1	68.3	0
<div><div></div></div> 1,530	HOUSQL2	1,369.6	0
<div><div></div></div> 1,450	LDNLXPWSM	949	0
<div><div></div></div> 1,380	VITSCCM1	1,378.6	0
<div><div></div></div> 1,380	VITSCCM1_replica	2,422	1,065

6. VOA Report Capacity Cluster Remaining

Cluster Capacity Remaining

vRealize Operations provides two ways to understand your cluster remaining capacity; [Capacity Remaining and Time Remaining](#).

Capacity remaining answers the question ["How many more VMs will fit?"](#) and is the amount of CPU, memory and disk storage remaining after serving the demand of virtual machines. The chart on the left shows up to 6 clusters in your SDDC with the lowest remaining capacity.

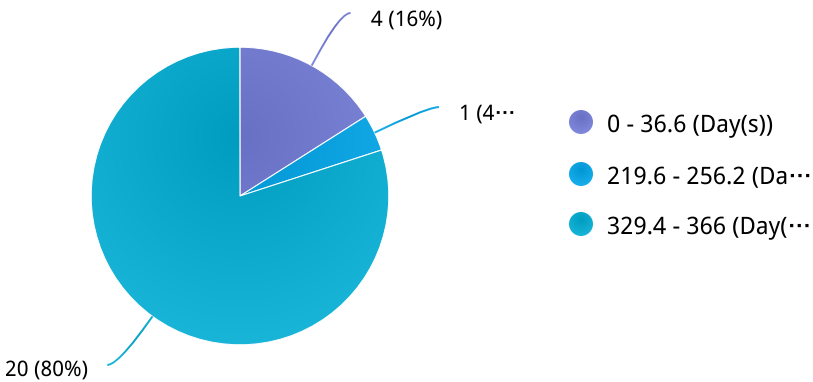
Time remaining answers ["How long before I need to add resources?"](#) and is shown in the distribution pie chart. It provides a forecast of how much longer a cluster can continue to serve VM demand based on trending.

Clusters With Lowest Remaining Capacity

Capacity Remaining Percentage	Objects
0	LDN_Stretched_Cluster
0	ABJ_Cluster
0	JNB_Cluster
0	MOS_DR_Cluster
4.3	HOU_Stretched_Cluster
4.9	SIN_Stretched_Cluster

Cluster Time Remaining

Clusters Time Remaining



7. VOA Report Capacity Cluster Balance

Resource Balance

One way to address capacity management is to make sure that your SDDC resources are being efficiently used.

vRealize Operations works with [vSphere's Distributed Resource Scheduler \(DRS\)](#) feature to improve efficiency by placing VMs within clusters to make sure they are being served well.

In addition, [Workload Balance](#) in vRealize Operations can move VMs between clusters to achieve better resource balance. Think of this as the host or head waiter in a restaurant who manages seating.

Below is the "seating chart" for your SDDC and helps you visualize how busy the tables are for better seating... which, by the way, [can be done automatically](#) by vRealize Operations on a scheduled basis.

Capacity Utilization

Cluster Compute Resource

3 Underutilized

Optimal 10

Overutilized 12

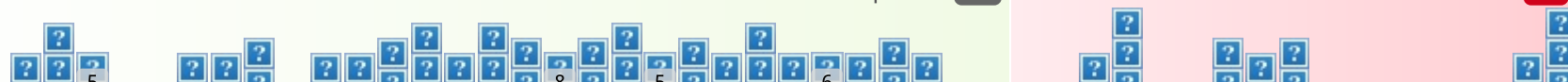


Host System

20 Underutilized

Optimal 41

Overutilized 15



8. VOA Report Capacity Reclaimable

Reclaiming Resources

While adding additional resources to address capacity needs is an option, you may wish to reclaim unused resources from existing VMs.

Resources can be tied up in [powered-off, idle and oversized VMs](#).

[Snapshots and VM templates](#) can also add to disk storage waste.

vRealize Operations analyzes your SDDC to find resources that are not being used so that you can reclaim them for allocation to new VMs or as part of a cost savings effort.

Be sure to check out the [Capacity tab](#) in vRealize Operations for more detail about improving efficiency.

Overall Reclamation Opportunity

	Total
vCPUs	37 vCPUs
Disk Space	13,391.99 GB
Memory	46.96 GB
VMs	171
Savings	0

1 - 5 of 5 items

Top 3 Datacenters based on Potential Savings

Potential Savings	Objects	vCPU	Disk Space (GB)	Memory (KB)
0	Dubai	0	0	0
0	Lagos	0	0	0
0	Bogota	1	70	1,075,956.5

9. VOA Report Capacity What If

What-If Analysis

What-If Analysis

New Scenario

Add Workload



Use this scenario for expanding or adding an application. Determine if the new VMs will fit into your environment.

[SELECT](#)

Add Capacity



Add to capacity from your environment. Determine how much hardware to purchase and consider different cloud options.

[SELECT](#)

Migrate



When decommissioning hardware, determine where to move the workloads.

[SELECT](#)

How Much Do I Need?

Need help planning for the future or providing estimates for projected new workloads? How about figuring out how much new hardware to add? Or are you interested in migrating to public cloud?

The [What-If Analysis](#) feature of vRealize Operations (shown in this screen capture) gets you accurate information for planning and budgeting for new initiatives or meeting demands for growth and lowering cost.