Cloud Insights Example Tenant – Example Guide 02

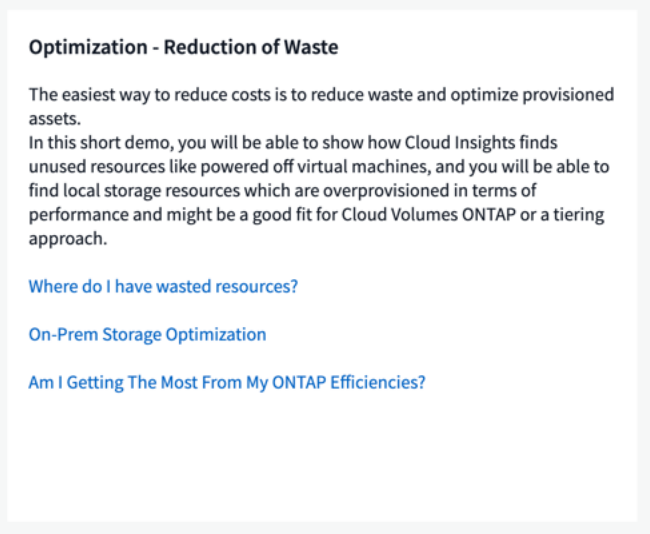
Note: this is an accompanying doc to the Cloud Insights Customer Example Tenant that you will have access to during your Cloud Insights trial. This example tenant is a live tenant that you can explore right away to see how Cloud Insights works and where you can go with Cloud Insights.

While the example tenant example environment might not match your own, it will give you an idea what an active Cloud Insights tenant is like. This is a very simple environment example, though you'll be able to accomplish much more!

Optimization (from the Home page, choose "Get Started Here!")

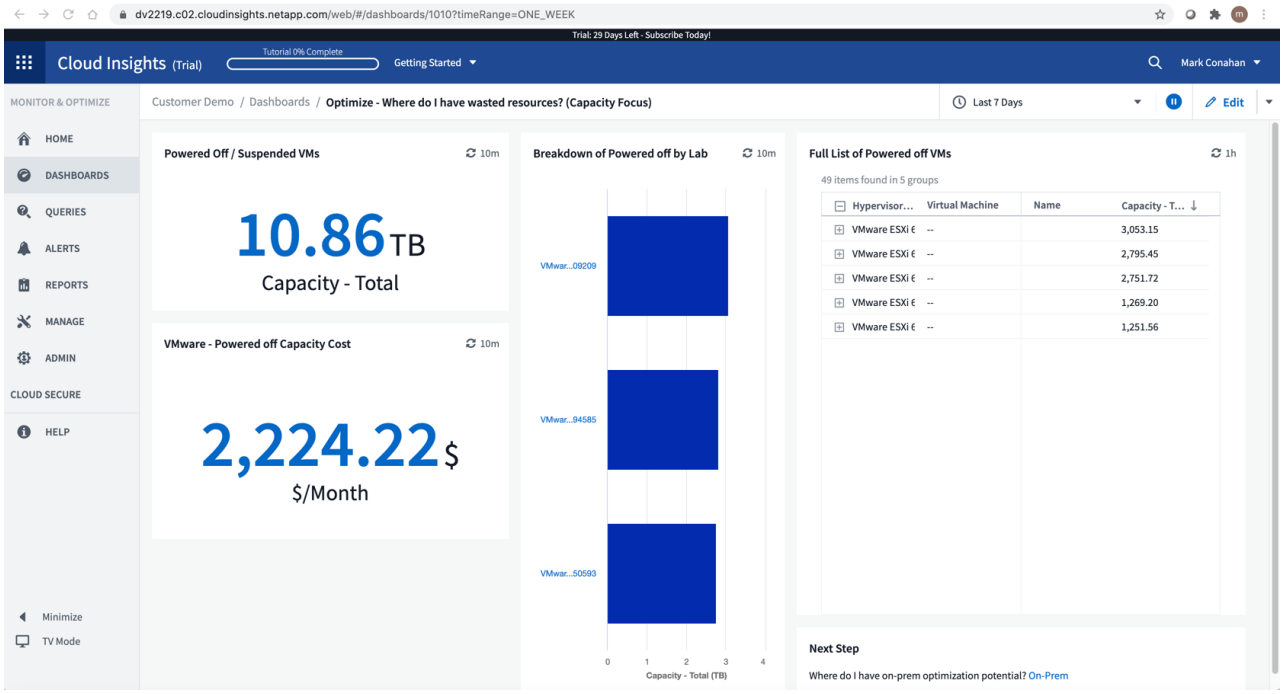
Identification of wasted capacity

On prem it's important to identify waste to make sure you aren't going to procurement and waiting for new infra when there's stuff you already have that you're not using properly, whereas in the cloud it's a direct impact in your bottom line – maybe you're the bill payer and care about this, maybe you're not but optimizing gets management off your back!



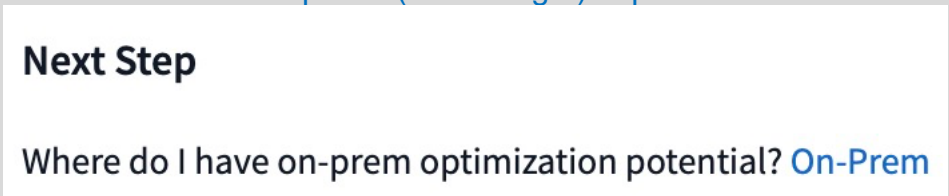
You will see the above note widget on the center of the Getting Started page. The following are some simple use case demos we prepared for you that illustrate reducing waste.

You can start the examples by clicking on this link in the widget:
"Where do I have wasted resources? (Dashboard)"

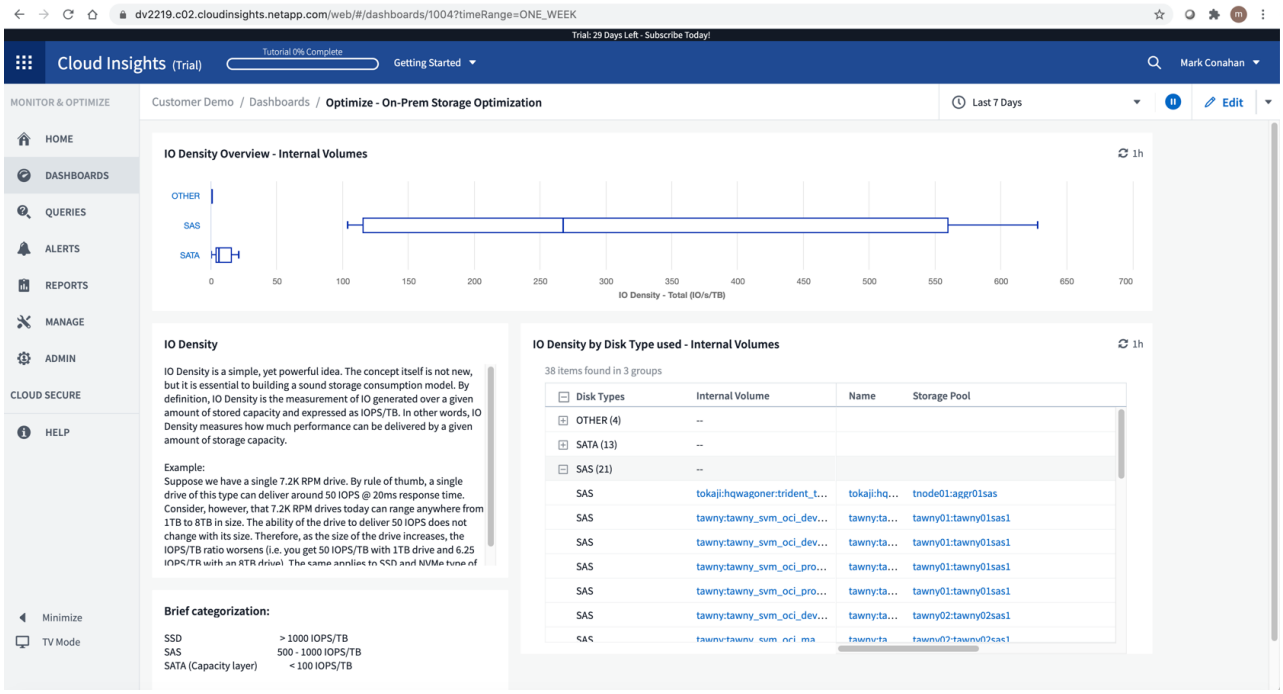


- You can see here that we've acquired stats and metrics from multiple places
    - This Example tenant is mainly based on on-prem assets, though in Cloud Insights the advantage is we see on prem and cloud in much the same way so you can manage the same; we will be expanding these with examples of AWS and Azure shortly, as waste control in hyperscalers is critical in controlling cost
- Note that powered off virtual machines are free of charge in hyperscalers, but provisioned storage is not, so you'll want to be aware of this on a daily basis
- On the right-hand side of the screen you can see a list of virtual machine hypervisor capacity that is powered off
    - We have 49 powered off VMs in 5 hypervisors in total
    - In cloud, that capacity will cost us money every day (no matter if they are turned off or not)
- As you have seen here it is very simple to get information about unused but provisioned capacity in the environment that is going to waste

Click on the Next Step Link (bottom right) to proceed

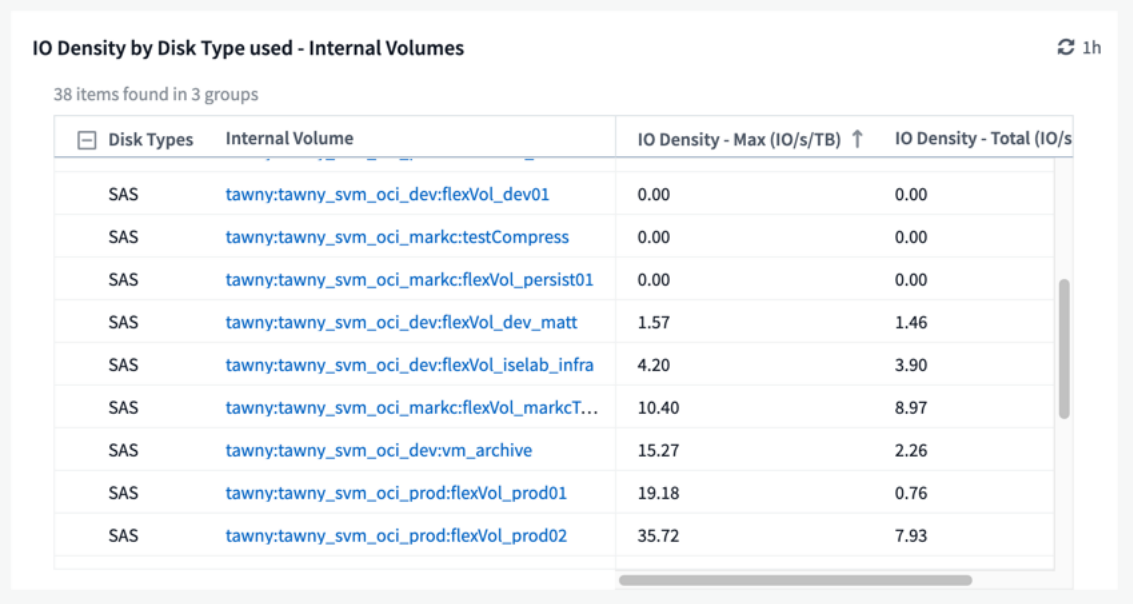


On-Prem Storage Optimization



- Cloud Insights can also be used to optimize your on-prem environment
- Let's have a look into your ONTAP – Volumes
- As you likely already know, there are different performance classes of disks or SSD & NVMe based storage solutions available. IO Density is an easy way to categorize workloads as well as performance tiers of volumes.
- In this dashboard you see a holistic overview of all (excluding root) volumes of our ONTAP systems in our environment
- As you can see some are more heavily used than others.
- To optimize your tiering it is recommended to have a look at what is called IO Density
    - The list shows all volumes – let's pick the SAS layer

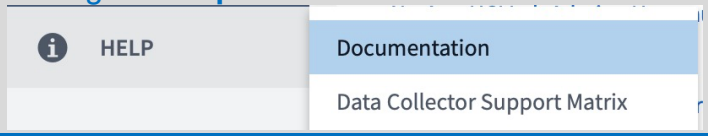
- As you can see as soon as I open the group many of the volumes here are barely used (you can sort the columns by Max IO Density):



Disk Types	Internal Volume	IO Density - Max (IO/s/TB)	IO Density - Total (IO/s
SAS	tawny:tawny_svm_oci_dev:flexVol_dev01	0.00	0.00
SAS	tawny:tawny_svm_oci_markc:testCompress	0.00	0.00
SAS	tawny:tawny_svm_oci_markc:flexVol_persist01	0.00	0.00
SAS	tawny:tawny_svm_oci_dev:flexVol_dev_matt	1.57	1.46
SAS	tawny:tawny_svm_oci_dev:flexVol_iselab_infra	4.20	3.90
SAS	tawny:tawny_svm_oci_markc:flexVol_markcT...	10.40	8.97
SAS	tawny:tawny_svm_oci_dev:vm_archive	15.27	2.26
SAS	tawny:tawny_svm_oci_prod:flexVol_prod01	19.18	0.76
SAS	tawny:tawny_svm_oci_prod:flexVol_prod02	35.72	7.93

- The average IO Density and the peak IO Density is below 100 IO/TB – so they might be a good fit to be migrated to a sata or even a S3 type tier

Remember at any time, you can view the online Cloud Insights documentation by clicking the **Help->Documentation** link from the side menu:



This concludes the second section of the Cloud Insights Customer Example Tenant Example Guide - Optimization