

# Cloud Insights Example Tenant – Example Guide 01

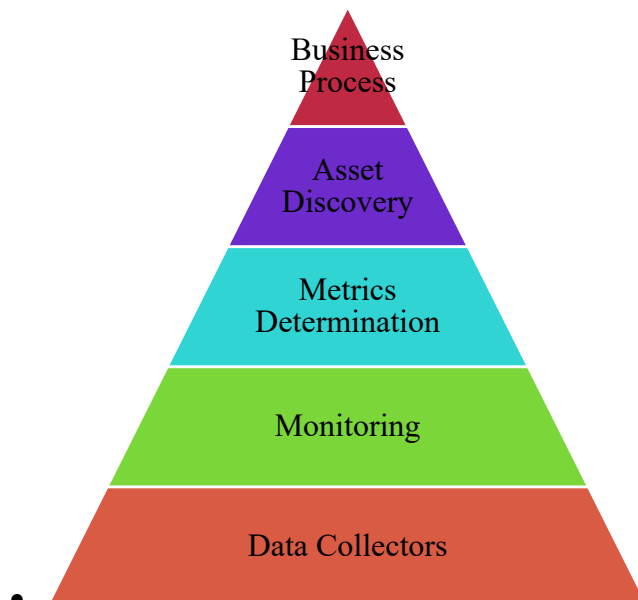
Note: this is an accompanying doc to the Cloud Insights Customer Example Tenant that you will have access to during your Cloud Insights trial. This example tenant is a live tenant that you can explore right away to see how Cloud Insights works and where you can go with Cloud Insights.

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!

## Monitoring

First let's start with some important concepts in monitoring:

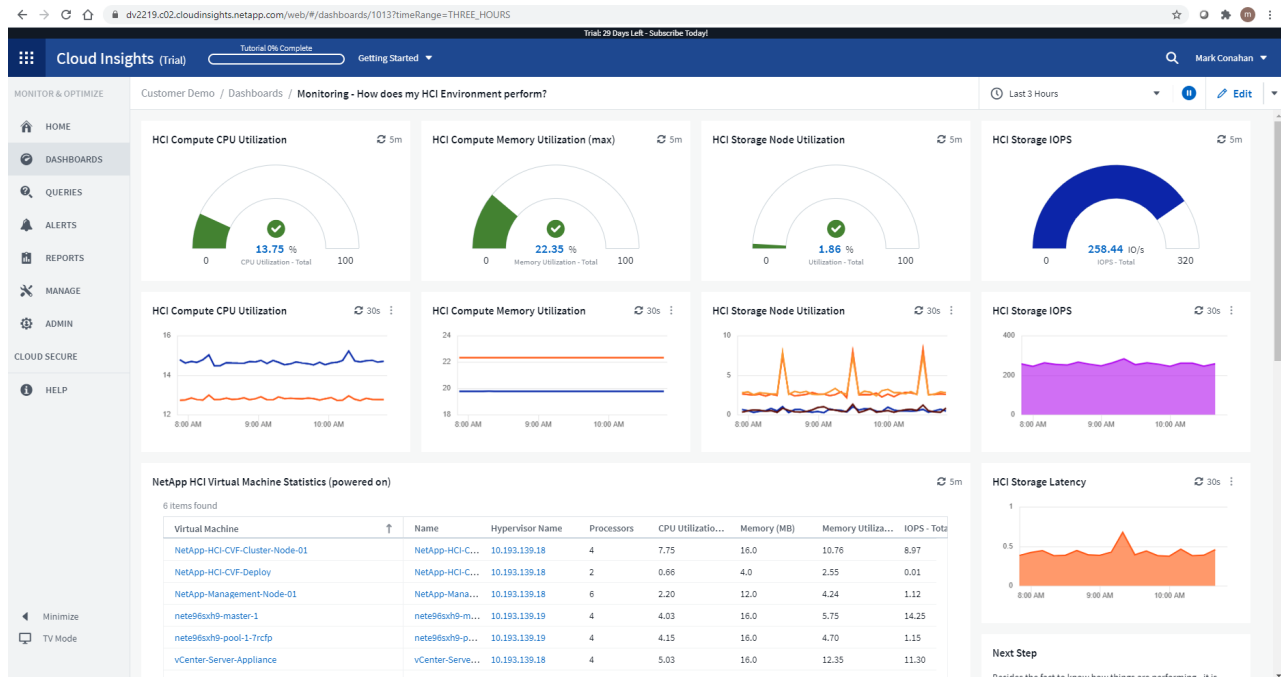
- Monitoring is an art everyone can learn – but it is important to do it in the most impactful way



- - It is important that you think about how you are monitoring, and you can use the above pyramid to consider what you need to gather using Cloud Insights, though sometimes you just need to be able to glance at a dashboard and know that things are good, or may need attention
  - Start at the business process – discover all the assets related to it – determine the metrics you need to understand the KPI – start monitoring this in a single dashboard

- You will notice that the data collectors are the foundation of such a pyramid, but the biggest impact is achieved by covering the business process holistically
- Think about your business needs and requirements, and work down to the infrastructure components to plan what you'll need to collect

For example, let's begin with monitoring the complete stack of something like NetApp HCI; begin by clicking the link in the "Get Started Here!" on the home page and choose the first link in the upper left hand Monitoring section:  
**How does my HCI Environment perform?**

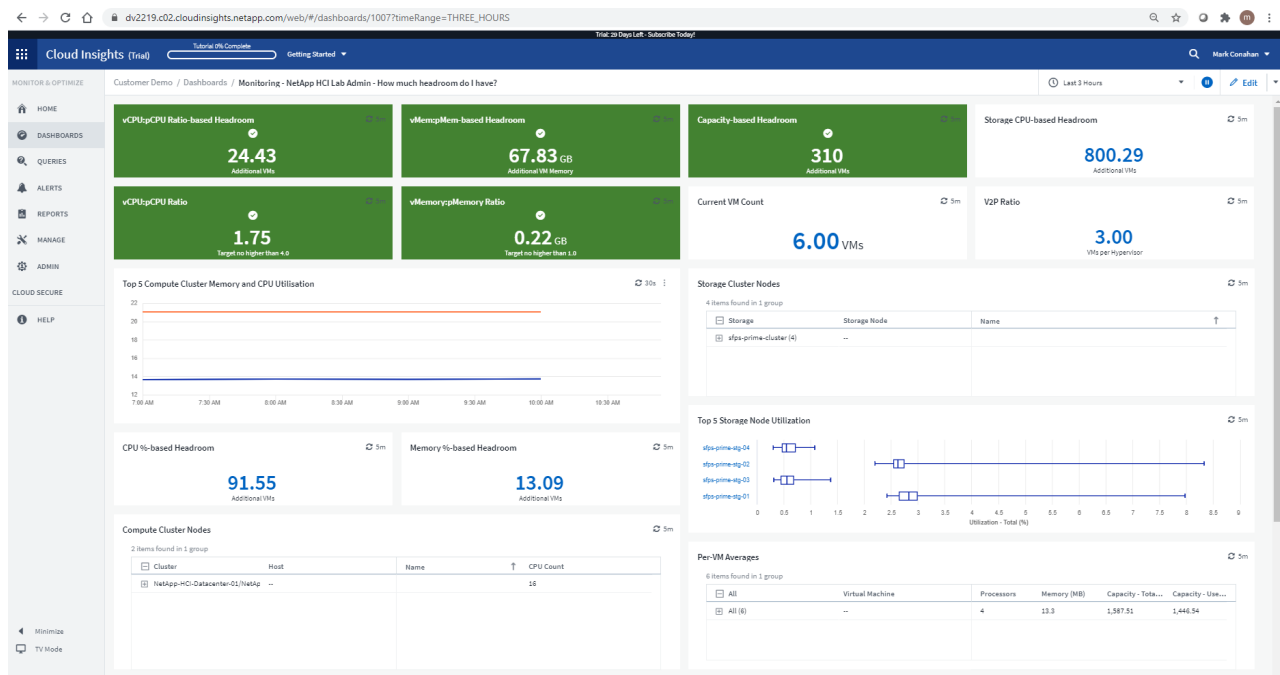


- Let's assume you are using a private cloud in this case with NetApp HCI, though a variety of HCI platforms are supported and this is representative of those too
- Getting the HCI infrastructure information that you need is easy, as you can gather both the virtual compute as well as connected storage and be able to understand what compute is connected to what storage component
- In this dashboard we are looking into the overall performance characteristics of the HCI environment
- The gauges will give you an initial and important overview – and the gauge colors should tell you if the values are acceptable or not (green, yellow, and red levels based on thresholds you define)
- The time series graphs underneath give you further information how each has changed over time, in a user definable time frame

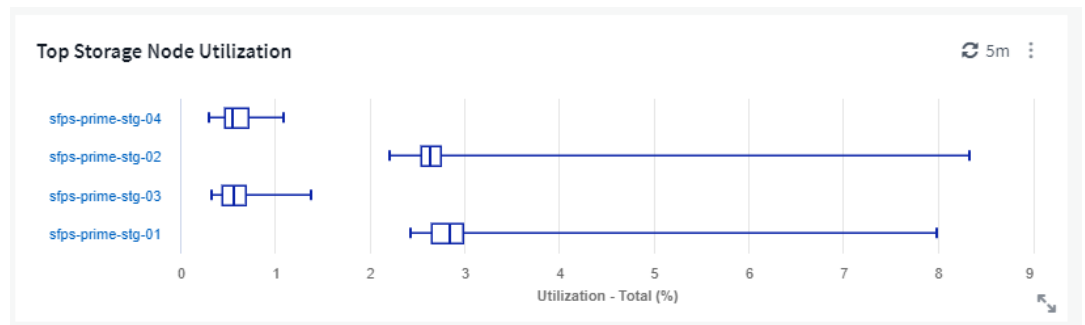
- While inspecting the current performance of your HCI stack you need to be able to answer several simple but very important questions like:
  - How many additional VMs can I put on these nodes?
  - What if I change the size of all my VMs (for example double the amount of capacity allocated, or what if the storage pool capacity is close to being exceeded)?

To answer these questions – move on to the headroom analysis page (in the Next Step – Note on the lower right of the dashboard):

NetApp HCI Lab Admin - How much headroom do I have?



- Again, the colors will tell you if all is in a good shape or not
- But let's have a closer look into some of the widgets here:
  - vCPU:pCPU Headroom
    - based on the number of vCPUs used in average per VM, and the available number of pCPU
  - vMEM:pMEM Headroom
    - same here just per vMEM and pMEM 😊
  - Capacity based Headroom
    - Uses the available capacity of the HCI storage nodes compared to the avg capacity per VM
  - Top Storage Node Utilization



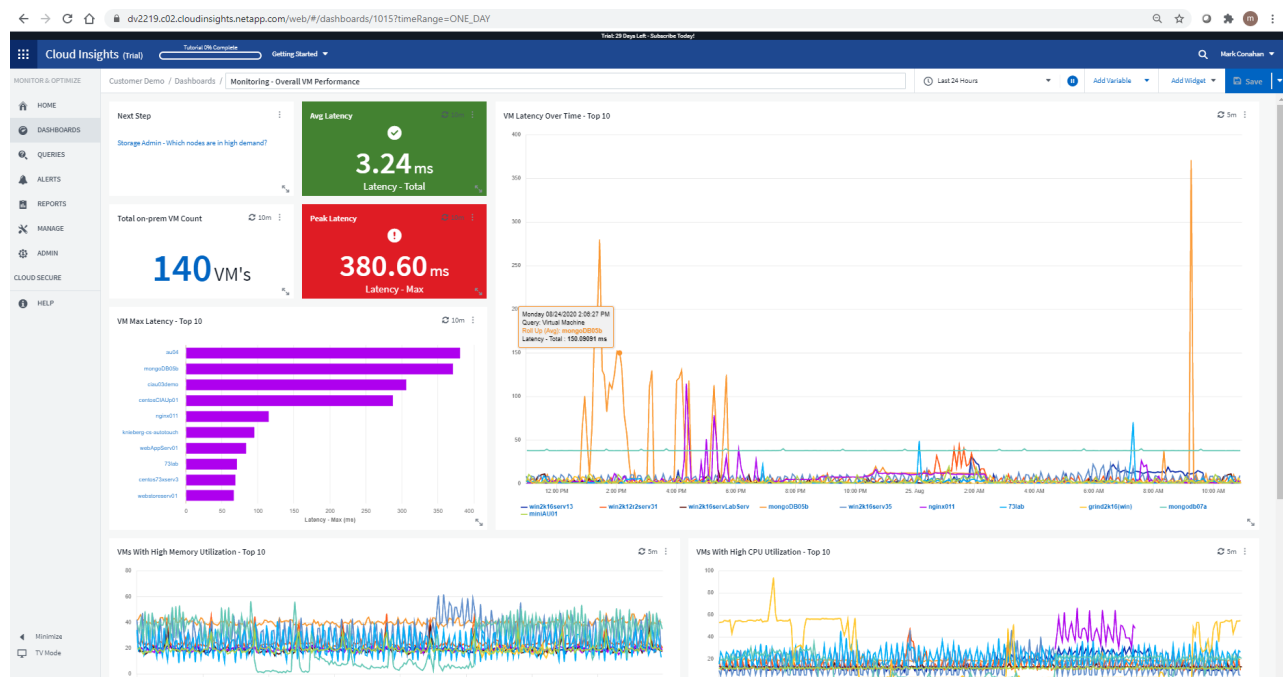
- If you mouse over a value in the widget you will see something like this:

Query: Storage Node  
 Name: **sfps-prime-stg-02**  
 Min: 2.47 %  
 Lower quartile: 2.47 %  
 Median: 2.59 %  
 Upper quartile: 2.80 %  
 Max: 2.80 %

- That explains to you how that storage node is utilized (always referencing the time period chosen at the top of the page) – some background info can be find here: <https://en.wikipedia.org/wiki/Median>

After you've had enough time covering this area, move on to the next chapter by clicking the link on the bottom right of the dashboard

( [Monitoring - Overall VM Performance](#) ). – this links to the next page in sequence as if you would have opened it from the first Get Started Here dashboard

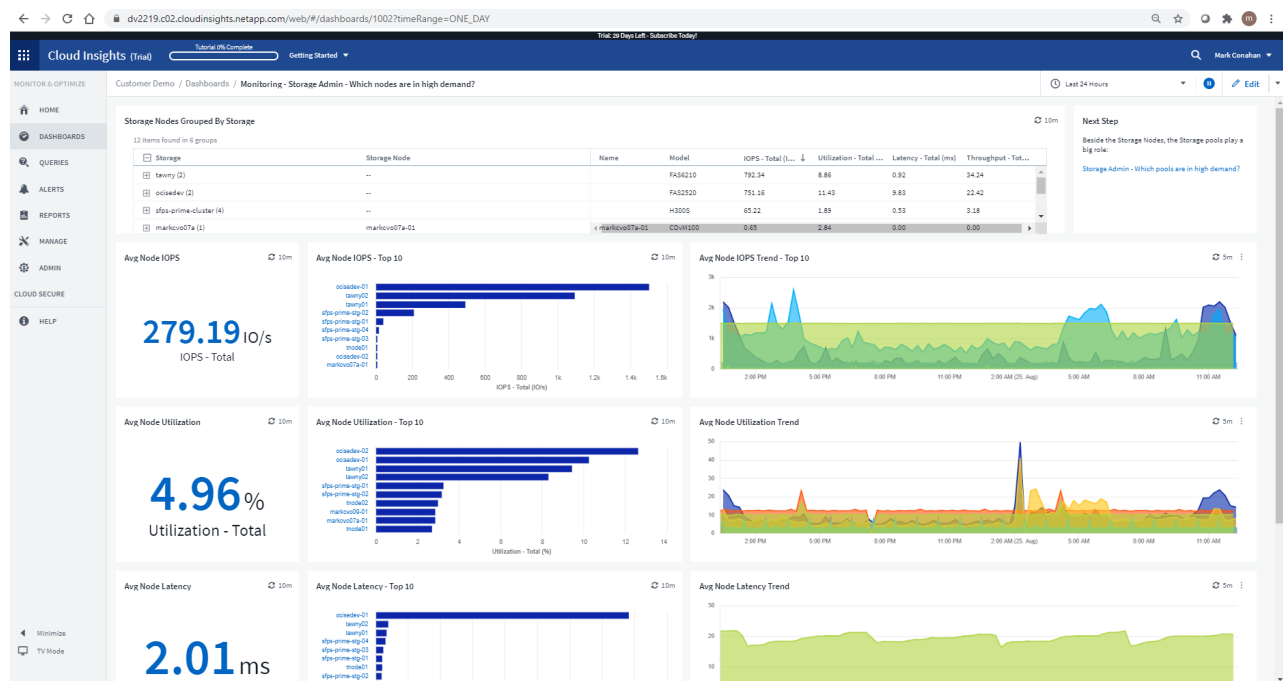


- As mentioned before – we are looking at our overall VM environment performance
- Right away we can see a mongodb VM showing enormous latency issues
- The purpose of this dashboard to give you an overview of all virtual machines running on-prem in your data centers and monitor these with all the necessary KPI you define
- This dashboard gives us the information if our virtual machines are working as expected and how they performed over the past day or week (as you define)
- This helps you to determine which assets needs further attention and where you are able to get the most from your assets, so you can assure acceptable future performance

We want now to take a further look into our storage assets, in this case Nodes

Move on by clicking this link in the top left of the Monitoring – Overall VM Performance dashboard:

Storage Admin - Which nodes are in high demand?



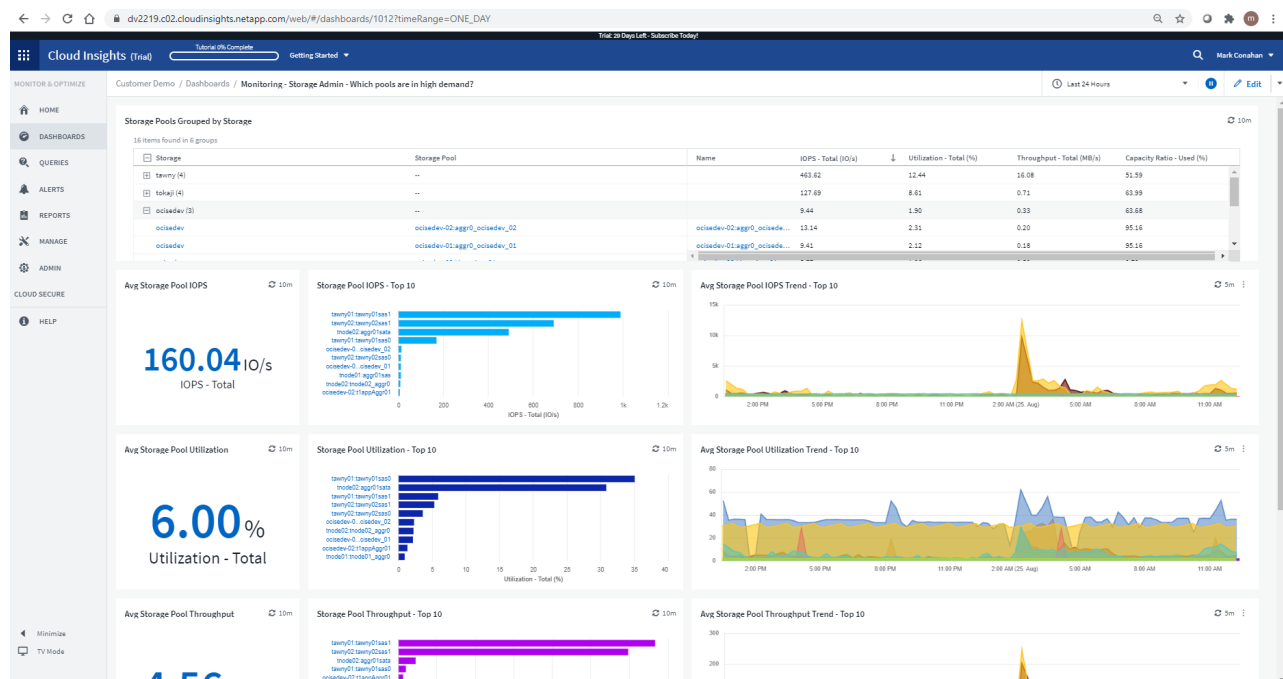
- Similar to the previous dashboard, this one now gives you the ability to analyze the underlying storage systems and their performance

Take some time and become familiar with the information presented here

- The main purpose is to see at a glance, which Storage Nodes are in high demand and how you can plan moving workloads from one to the other
- The next dashboard gives you an even deeper understanding while looking at the Storage Pools

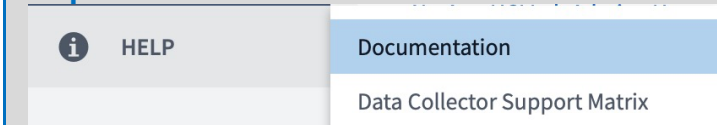
Click this link on the upper right of the dashboard:

Storage Admin - Which pools are in high demand?



- Similar to the previous dashboard – this one gives you more information on the health and utilization of the different Storage Pools in the environment (or aggregates in NetApp terminology)

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



This concludes the first section of the Cloud Insights Customer Example Tenant Example Guide - Monitoring