

Google Cloud VMware Engine Simulator

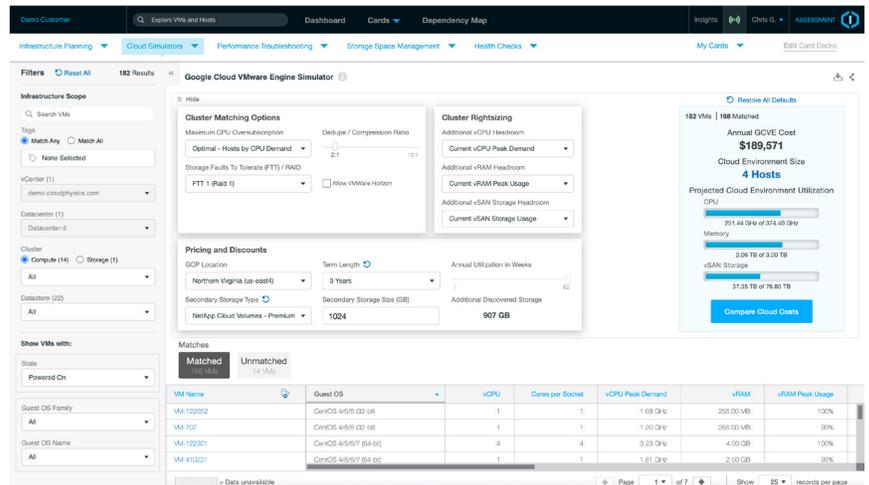
Model Google Cloud VMware Engine in seconds

CloudPhysics provides you with the information needed to decide if GCVE is right for you. Using the CloudPhysics simulator, customers can quickly find the ideal cluster size for any grouping of VMs in their current data centers modeled against the Google Cloud options. CloudPhysics allows customers to model unique Failures to Tolerate scenarios for vSAN storage as well as allowing customers to account for data redundancy and over subscription scenarios. Combined with cloud storage options, customers can quickly find an approximation of their current environment on the host shapes and geographies provide by Google. This quick modeling and financial forecasting can enhance your on-premises data center assessments and help support your financial decisions to move to the cloud.

CloudPhysics enables you to run numerous analytics across your environment to bring to light cost-saving opportunities.

Google's release of Google Cloud VMware Engine (GCVE) brings about a new era in cloud migration. With GCVE, customers can migrate VMware workloads to a native VMware environment running in Google Cloud, benefiting from Google Cloud strengths, including secure and scalable global infrastructure and leading data analytics, AI, and ML capabilities. Users will have access to the full VMware Cloud Foundation stack including ESXi, vCenter, vSAN, NSX-T and HCX.

Leverage the CloudPhysics Google Cloud VMware Engine Simulator to model and plan the placements of workloads in the Cloud. With limitations on total storage per vSAN and the number of hosts in a cluster, CloudPhysics can calculate the number of clusters and VPC's required to accommodate your GCVE environment.



VM Name	Guest OS	vCPU	Cores per Socket	vCPU Peak Demand	vSAN	vSAN Peak Usage
VM-122952	CentOS 4.5/6 (32-bit)	1	1	1.09 GHz	256.00 MB	100%
VM-707	CentOS 4.5/6 (32-bit)	1	1	1.30 GHz	256.00 MB	96%
VM-122931	CentOS 4.5/6/7 (64-bit)	4	4	3.23 GHz	4.00 GB	100%
VM-413201	CentOS 4.5/6/7 (64-bit)	1	1	1.81 GHz	2.00 GB	93%

What You Get

- Determine the cost of your environment dynamically and in real-time based on selected VMs and resources. Export these cost models for run books or cost comparison offline.
- Model workloads in GCVE based on Failures to Tolerate, capacity growth, deduplication and compression estimates, and over subscription ratios.
- Incorporate VMware Horizon planning to allow for capacity planning of Windows Desktops.
- Scale cluster size and cost based on Failures to Tolerate (FTT) and Raid options.
- Rightsize clusters for future growth by incorporating additional headroom for vCPUs, vRAM, and vSAN storage.
- Include secondary storage for large data volumes and high-performance applications on partner cloud storage solutions by the TB.
- Calculate commitment costs for On-Demand usage in weeks or commitments in 1- and 3-year terms.
- Get itemized placement data sheets on where each workload ideally fits in initial deployments across multiple clusters and VPCs.

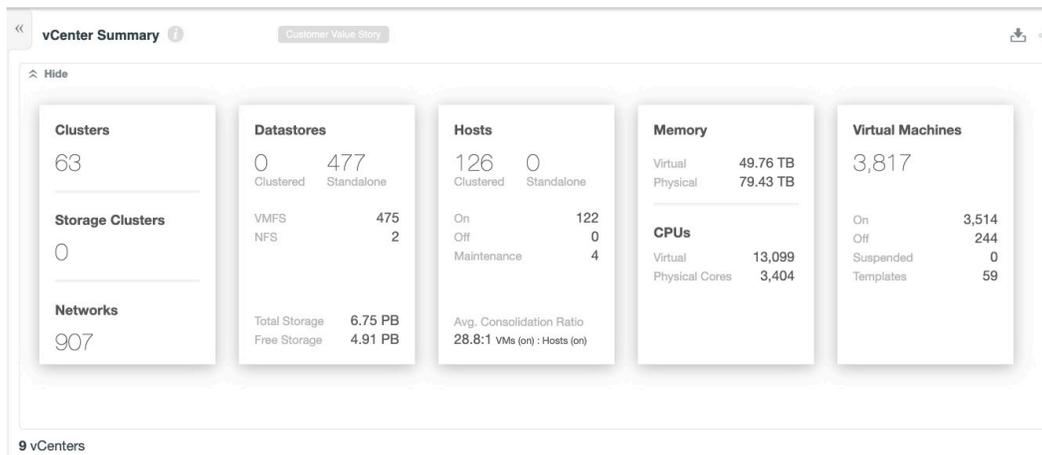
Leverage CloudPhysics to model all your GCVE Storage needs and determine if you can achieve better availability even at the same cost.

Accelerate Your Cloud Adoption

CloudPhysics brings the ability to visualize and model multiple VMware environments into Google's new GCVE solutions. With continuous streaming data and historical data kept in 20-second granularity, CloudPhysics can ensure that all VMs are modeled based on their peak usage data. Using complex bin-packing simulations, CloudPhysics quickly identifies how many hosts are required for your defined scope to ensure you always have capacity all while ensuring you never underestimate your environment size.

Once you have identified the environmental capacity and started moving your workloads to the Cloud, you can leverage CloudPhysics to monitor your GCVE solution with the addition of a CloudPhysics Observer deployed in GCVE to continue the optimization of VMs and processes. Take full advantage of VM Rightsizing to ensure that waste is eliminated on a regular basis. Never let a large VM sit idle and cost you in resources in the cloud. Take full advantage of CloudPhysics storage optimizations to reduce waste in your vSAN environment by eliminating old powered-off VMs and reclaiming thin-provisioned disk dead space on a regular basis.

Combined with the full power of CloudPhysics, your GCVE environment will remain optimized and you will have the visibility to troubleshoot services quickly across multiple clusters and VPCs.



Key Benefits

- Calculate host counts and cost of hosting workload in GCVE
- Host packing engine to determine the ideal number of servers required for current workloads
- Ability to scale up CPU, RAM, and storage to accommodate future growth
- Visibility into how differing Failures to Tolerate storage models with vSAN will impact host count and cost.
- - Historical visibility into performance and capacity changes to determine Peak usage of all resources to find constraints and identify bottlenecks on premises and provide enough resources in the cloud.
- SaaS based analytics require no compute or storage on premises
- Collaborative tools allow monitoring by customers and partners to ensure both parties are planning a cloud migration together.

Why CloudPhysics?

- 15 Minutes to insights:
 - No Software to install, no agents to deploy, no upgrades, no patches
- Deep VMware expertise:
 - Founded by VMware engineers who developed core ESX feature sets and APIs
- Highest resolution performance data:
 - We collect performance data at 20-second intervals for highest fidelity insights
- Data science delivered to you:
 - Our data scientists perform the analysis and present actionable insights through intuitive dashboards

About CloudPhysics

CloudPhysics brings the power of big data analytics and collective intelligence to VMware infrastructures of all shapes and sizes. Our SaaS-based storage analytics solution helps organizations get virtualized storage performance and capacity under control, with deep insight and data-driven answers that drive better day-to-day operational decision-making. <http://www.cloudphysics.com>.