

GCP Assessment Report

88 VMs Analyzed

Evaluations and Opportunites for your Datacenter



Assessment Report for 88 VMs in your environment vCenter: vc.cphy.local | Cluster: 4.1-hosts | Keyword: VM | Any of Tags: Dev, Prod Power State: On | Guest OS Family: Linux Family

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vCenter: vc.cphy.local | Cluster: 4.1-hosts | Keyword: VM | Any of Tags: Dev, Prod Power State: On | Guest OS Family: Linux Family

Scope of Assessment

The CloudPhysics Observer discovered **602** virtual machines in your data centers. This report analyzes **88** of those virtual machines identified through the following set of environment filters, which were defined during the running of the assessment:

Infrastructure Scope:

vCenters: All Datacenters: All Compute Clusters: All Keywords: None Any/All of Tags: None

Virtual Machine Filters:

Power State: On Guest OS Family: Linux Family Guest OS Name: All Guest OS Bits: All

These **88** Virtual Machines were analyzed, generating cost estimates for both current On-Premises costs and Google Cloud costs, using the following configuration inputs for each:

On-Premise Settings:

Physical Host Cost: \$16,300 Cost per GB System RAM: \$24 vSphere Edition: Enterprise Plus 3rd Party Licenses per VM: \$320 Environment Details: Included Cost per kWh: \$0.105 Depreciation: **5 Years**Cost per GB Shared Storage: **\$6**Hypervisor ELA Discount: **0%**3rd Party Licenses per Host: **\$250**Avg Watts per Host: **430**Cooling:Power Ratio: **1.8:1**

GCP Settings:

GCP Datacenter Location: United States
Storage Type: Persistent Disk Storage
Match Standard Instance Only: No
No not resized below reservations: No
Instance Class: Regular
Term Length: 3 years
Uptime / Day: Not Applicable
Discount Rate: 0%

VM Rightsizing Option: 99th %-tile vCPU and Peak vRAM Usage

*Non-default settings marked in blue

NOTE: This analysis does not include ingress or egress of data since the relationship of on premise resources and bandwidth dependencies of applications cannot be known. In guest backups, remote terminal sessions, and inclusion or exclusion of dependent workloads in the cloud must be considered to estimate the network traffic requirements of the environment.



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Executive Summary

High-Level Results:

- This assessment analyzed a selected 88 VMs, currently running in VMware vSphere on premises, and compared those costs to Google Cloud Platform's Google Compute Engine.
- We have found that your organization can expect to save approximately \$58,680 per year, for a possible three year savings of up to \$228,177 in hardware infrastructure, hypervisor licensing, and management costs.
- **60** hosts that will need to be replaced prior to a vSphere 6.5 upgrade; these hosts are fine now, but they are incompatible with vSphere 6.5.
- Of the **88** VMs in scope for this assessment, **12** were running Operating Systems that were incompatible with GCP
 - # VMs running Windows Server 2003
 - # VMs running Windows 7
 - # for other Operating Systems unsupported by GCP
- You have Operating System risk in your environment. **40** VMs are running Operating Systems that are no longer supported by platform vendors, and **0** Operating systems are due to come off support in the next six months.

This Assessment was created January 18th, 2018 by **Big Reseller** exclusively for **Acme Data Corporation**.

Every data center environment has opportunities for improvement, through optimization and transformation. CloudPhysics uses data extracted from running data centers to run assessments geared to identify and highlight optimization and transformation opportunities, lowering the risk of IT projects.

This report output – culminating from one such assessment, brought to you by Google and powered by CloudPhysics – compares the costs of running workloads in the current virtual data center to the simulated costs of running those workloads in Google Cloud Platform, identifying possible cost savings opportunities and providing a clear financial analysis of the opportunity to your organization.

GCP Settings:

GCP Datacenter Location: United States
Storage Type: Persistent Disk Storage
Match Standard Instance Only: No
No not resized below reservations: No

Instance Class: Regular Term Length: 3 years Uptime / Day: Not Applicable

Discount Rate: 0%

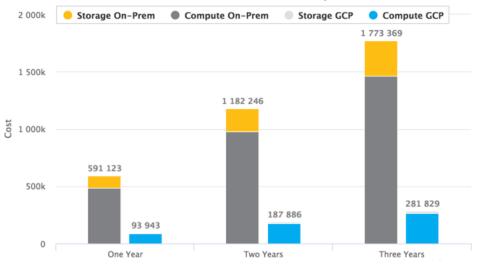
VM Rightsizing Option: 99th %-tile vCPU and Peak vRAM Usage



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Cost Comparison Summary

Total On-Premise vs GCP over 3 years



3 Year Cost Comparison **On-Premises costs:** \$411,870 GCP Costs w/Rightsizing: \$178,527 3 Year Savings: **\$233,527 (56%)**



Google Cloud Platform optimized cloud version based on your environent



Compute

\$96,237/year

\$78,531/year \$17,706/year

Storage

\$96,237/year \$78,531/year \$17,706/year

GCP Settings:

GCP Datacenter Location: United States Storage Type: Persistent Disk Storage Match Standard Instance Only: No No not resized below reservations: No

Instance Class: Regular Term Length: 3 years Uptime / Day: Not Applicable

Discount Rate: 0%

VM Rightsizing Option: 99th %-tile vCPU and Peak vRAM Usage



vCenter: vc.cphy.local | Cluster: 4.1-hosts | Keyword: VM | Any of Tags: Dev, Prod Power State: On | Guest OS Family: Linux Family

Cost Comparison Details

Total Cost:

| | Resource cost a | s Configured | Rightsize using: Peak vCPU and Peak vRAM Usage | | | |
|--|-------------------------------------|--|--|--|--|--|
| On-Prem IT 88 VMs | On-Prem IT Public Cloud Total | \$137,211 \$0 \$137,211 /year | On-Prem IT Public Cloud Total | \$131,095 \$0 \$131,095 /year | | |
| Google Cloud Platform 88 VMs 88 Supported | On-Prem IT Public Cloud | \$0 \$78,531 \$78,531 /year | On-Prem IT Public Cloud Total | \$0 \$69,299 \$69,299 /year | | |

Average Cost per VM:

| | Resource cost a | s Configured | Rightsize using: | and Peak vRAM Usage |
|--|---------------------------------------|--|---------------------------------------|--|
| On-Prem IT 88 VMs | On-Prem IT Public Cloud Overall | \$1,559 \$0 \$1,559 /year | On-Prem IT Public Cloud Overall | \$1,490 \$0 \$1,490 /year |
| Google Cloud Platform 88 VMs 88 Supported | On-Prem IT Public Cloud | \$0 \$892 | On-Prem IT Public Cloud | \$0 \$787 |
| | Overall | \$892 /year | Overall | \$787 /year |

GCP Settings:

GCP Datacenter Location: United States Storage Type: Persistent Disk Storage Match Standard Instance Only: No No not resized below reservations: No Instance Class: Regular Term Length: 3 years Uptime / Day: Not Applicable

Discount Rate: 0%

VM Rightsizing Option: 99th %-tile vCPU and Peak vRAM Usage



vCenter: vc.cphy.local | Cluster: 4.1-hosts | Keyword: VM | Any of Tags: Dev, Prod Power State: On | Guest OS Family: Linux Family

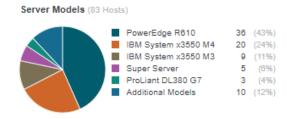
Host Inventory Summary and vSphere 6.5 EOL Considerations

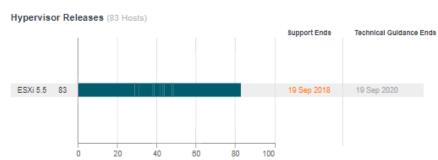
As part of the GCP migration analysis, CloudPhysics also looked for other issues in the data center that might indicate that the time is right to consider Cloud migration. For instance, **Acme Data Corporation** may need, or may soon need, to upgrade some of its hardware infrastructure.

In total, across the entire vSphere environment, Acme Data Corporation currently has:

- 12 hosts that are not in VMware's hardware compatibility list (HCL) at all; non-HCL hosts should be replaced/retired immediately, or their workloads should be ported to another environment.
- 5 hosts that are in the current HCL, but are running versions of vSphere that they do not support; hosts running vSphere versions that they do not support should be replaced/retired immediately, or their workloads should be ported to another environment.
- **60** hosts that will need to be replaced prior to a vSphere 6.5 upgrade; these hosts are fine now, but they are incompatible with vSphere 6.5.

Server infrastructure overview:





GCP Settings:

GCP Datacenter Location: United States Storage Type: Persistent Disk Storage Match Standard Instance Only: No No not resized below reservations: No Instance Class: Regular Term Length: 3 years Uptime / Day: Not Applicable Discount Rate: 0%

VM Rightsizing Option: 99th %-tile vCPU and Peak vRAM Usage



vCenter: vc.cphy.local | Cluster: 4.1-hosts | Keyword: VM | Any of Tags: Dev, Prod Power State: On | Guest OS Family: Linux Family

Operating System Summary

You have Operating System risk in your environment. **40** VMs are running Operating Systems that are no longer supported by platform vendors, and **0** Operating systems are due to come off support in the next six months.







End of Support (809 VMs)



GCP Settings:

GCP Datacenter Location: United States Storage Type: Persistent Disk Storage Match Standard Instance Only: No No not resized below reservations: No Instance Class: Regular Term Length: 3 years Uptime / Day: Not Applicable Discount Rate: 0%

VM Rightsizing Option: 99th %-tile vCPU and Peak vRAM Usage



vCenter: vc.cphy.local | Cluster: 4.1-hosts | Keyword: VM | Any of Tags: Dev, Prod Power State: On | Guest OS Family: Linux Family

Detailed Google Cloud Platform Analysis Supported Instances Matches and Associated Cost

The following table provides a details breakout of per VM cost for workloads hosted on Google Cloud Platform at various rightsized configurations. Each configuration provides the anticipated instance class as well as the annual cost of hosting the instance.

| VM Name | Guest OS | On Premise | GCP As Configured | | GCP Rightsized to 99 | vDisk Capacity | |
|------------|-------------------------------------|---------------|-------------------|---------|----------------------|-------------------|---------|
| VIVI Name | Guest OS | Cost | Instance | Cost/Yr | Instance | Cost/Yr | (GB) |
| VM-101431 | Red Hat Enterprise Linux 6 (64-bit) | \$898 | n1-standard-1 | \$187 | n1-standard-1 | \$187 | 1 |
| VM-1043050 | Other 2.6.x Linux (64-bit) | \$898 | n1-standard-1 | \$187 | n1-standard-1 | \$187 | 1 |
| VM-1106428 | CentOS 4/5/6 (64-bit) | \$1,646 | n1-standard-2 | \$1,044 | n1-standard-2 | \$1,044 | 300 |
| VM-112520 | Debian GNU/Linux 6 (64-bit) | \$1,578 | n1-standard-4 | \$816 | n1-standard-2 | \$442 | 140 |
| VM-1131228 | CentOS 4/5/6 (64-bit) | \$956 | n1-standard-1 | \$723 | n1-standard-1 | \$723 | 20 |
| VM-113504 | Debian GNU/Linux 6 (64-bit) | \$1,771 | n1-standard-2 | \$1,049 | n1-standard-2 | \$1,049 | 311 |
| VM-113505 | Other Linux (64-bit) | \$956 | n1-standard-1 | \$197 | n1-standard-1 | \$197 | 20 |
| VM-113506 | Other Linux (32-bit) | \$956 | n1-standard-1 | \$197 | n1-standard-1 | \$197 | 20 |
| VM-113507 | Red Hat Enterprise Linux 6 (64-bit) | \$1,071 | n1-standard-2 | \$385 | n1-standard-1 | \$197 | 20 |
| VM-1145510 | Red Hat Enterprise Linux 5 (32-bit) | \$4,493 | n1-highmem-8 | \$3,333 | n1-highmem-8 | \$3,333 | 1050 |
| VM-115320 | SUSE Linux Enterprise 11 (64-bit) | \$1,806 | n1-standard-8 | \$2,685 | n1-highmem-2 | \$1,040 | 100 |
| VM-122301 | Other Linux (32-bit) | \$8,356 | n1-highcpu-4 | \$2,043 | n1-standard-1 | \$1,671 | 3092 |
| VM-122353 | Red Hat Enterprise Linux 6 (64-bit) | \$1,163 | n1-standard-2 | \$404 | n1-standard-2 | \$404 | 60 |
| VM-122615 | Red Hat Enterprise Linux 6 (64-bit) | \$4,898 | n1-standard-16 | \$4,711 | n1-standard-16 | \$4,711 | 1200 |
| VM-122652 | Other 2.6.x Linux (64-bit) | \$909 | n1-standard-1 | \$189 | n1-standard-1 | \$189 | 5 |
| VM-122660 | Red Hat Enterprise Linux 6 (64-bit) | \$1,321 | n1-highcpu-2 | \$870 | n1-standard-1 | \$778 | 135 |
| VM-123026 | Red Hat Enterprise Linux 6 (64-bit) | \$1,049 | n1-highcpu-2 | \$815 | n1-standard-1 | \$723 | 20 |
| VM-1238299 | Ubuntu Linux (64-bit) | \$1,138 | n1-standard-2 | \$938 | n1-standard-2 | \$938 | 80 |
| VM-1261690 | CentOS 4/5/6 (64-bit) | \$1,486 | n1-standard-2 | \$996 | n1-standard-2 | \$996 | 200 |
| VM-1294222 | Red Hat Enterprise Linux 5 (64-bit) | \$898 | n1-standard-1 | \$187 | n1-standard-1 | \$187 | 1 |
| VM-1294232 | Ubuntu Linux (64-bit) | \$898 | n1-standard-1 | \$187 | n1-standard-1 | \$187 | 1 |
| VM-1294234 | Red Hat Enterprise Linux 6 (64-bit) | \$898 | n1-standard-1 | \$187 | n1-standard-1 | \$187 | 1 |
| VM-1294236 | Ubuntu Linux (64-bit) | \$898 | n1-standard-1 | \$187 | n1-standard-1 | \$187 | 1 |
| VM-134599 | Other Linux (32-bit) | \$1,002 | n1-standard-1 | \$732 | n1-standard-1 | \$732 | 40 |
| VM-135242 | Other Linux (32-bit) | \$2,191 | n1-highmem-2 | \$1,222 | n1-highmem-2 | \$1,222 | 480 |
| VM-1358330 | Red Hat Enterprise Linux 6 (64-bit) | \$902 | n1-standard-1 | \$188 | n1-standard-1 | \$188 | 2 |
| VM-1377613 | Red Hat Enterprise Linux 6 (64-bit) | \$1,302 | n1-standard-2 | \$433 | n1-standard-1 | \$245 | 120 |
| VM-1412533 | Other Linux (32-bit) | \$3,721 | n1-standard-4 | \$1,250 | n1-highmem-2 | \$967 | 1043.53 |



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| VM-1418489 | Debian GNU/Linux 6 (64-bit) | \$3,721 | n1-standard-4 | \$1,250 | n1-highmem-2 | \$967 | 1043.53 |
|------------|-------------------------------------|----------|---------------|---------|---------------|---------|---------|
| VM-1432876 | Ubuntu Linux (64-bit) | \$902 | n1-standard-1 | \$188 | n1-standard-1 | \$188 | 2 |
| VM-1454057 | CentOS 4/5/6 (64-bit) | \$1,192 | n1-standard-2 | \$929 | n1-standard-1 | \$742 | 60 |
| VM-1454305 | Ubuntu Linux (64-bit) | \$1,192 | n1-standard-2 | \$929 | n1-standard-1 | \$742 | 60 |
| VM-1454306 | Red Hat Enterprise Linux 6 (64-bit) | \$1,192 | n1-standard-2 | \$929 | n1-standard-1 | \$742 | 60 |
| VM-1454307 | Debian GNU/Linux 6 (64-bit) | \$1,192 | n1-standard-2 | \$929 | n1-standard-1 | \$742 | 60 |
| VM-1454310 | Red Hat Enterprise Linux 6 (64-bit) | \$1,192 | n1-standard-2 | \$929 | n1-standard-1 | \$742 | 60 |
| VM-1513013 | Other Linux (32-bit) | \$1,776 | n1-standard-8 | \$1,498 | n1-highmem-4 | \$933 | 0 |
| VM-1513016 | Other Linux (32-bit) | \$1,776 | n1-standard-8 | \$1,498 | n1-highmem-4 | \$933 | 0 |
| VM-1513019 | Other Linux (32-bit) | \$1,776 | n1-standard-8 | \$1,498 | n1-highmem-4 | \$933 | 0 |
| VM-15196 | Red Hat Enterprise Linux 4 (32-bit) | \$898 | n1-standard-1 | \$187 | n1-standard-1 | \$187 | 1 |
| VM-1543064 | Red Hat Enterprise Linux 6 (64-bit) | \$902 | n1-standard-1 | \$188 | n1-standard-1 | \$188 | 2 |
| VM-1550432 | SUSE Linux Enterprise 11 (64-bit) | \$902 | n1-standard-1 | \$188 | n1-standard-1 | \$188 | 2 |
| VM-1594097 | Red Hat Enterprise Linux 6 (32-bit) | \$1,194 | n1-highcpu-2 | \$317 | n1-highcpu-2 | \$317 | 80 |
| VM-1608625 | Red Hat Enterprise Linux 6 (64-bit) | \$1,178 | n1-highcpu-2 | \$317 | n1-highcpu-2 | \$317 | 60 |
| VM-1608656 | CentOS 4/5/6 (64-bit) | \$2,440 | n1-highcpu-2 | \$317 | n1-highcpu-2 | \$317 | 620 |
| VM-184442 | Other Linux (32-bit) | \$1,410 | n1-standard-2 | \$929 | n1-standard-1 | \$742 | 80 |
| VM-196663 | Red Hat Enterprise Linux 6 (64-bit) | \$898 | n1-highcpu-2 | \$577 | n1-standard-1 | \$485 | 1 |
| VM-212149 | SUSE Linux Enterprise 11 (64-bit) | \$1,140 | n1-highcpu-4 | \$597 | n1-standard-1 | \$225 | 50 |
| VM-229409 | Red Hat Enterprise Linux 6 (64-bit) | \$1,140 | n1-standard-1 | \$187 | n1-standard-1 | \$187 | 50 |
| VM-258619 | CentOS 4/5/6 (64-bit) | \$1,140 | n1-standard-2 | \$924 | n1-standard-1 | \$737 | 50 |
| VM-258620 | Red Hat Enterprise Linux 6 (64-bit) | \$1,140 | n1-standard-2 | \$924 | n1-standard-1 | \$737 | 50 |
| VM-258621 | Red Hat Enterprise Linux 6 (64-bit) | \$1,140 | n1-standard-2 | \$924 | n1-standard-1 | \$737 | 50 |
| VM-258622 | Red Hat Enterprise Linux 6 (64-bit) | \$1,140 | n1-standard-2 | \$924 | n1-standard-1 | \$737 | 50 |
| VM-258623 | Red Hat Enterprise Linux 6 (64-bit) | \$906 | n1-standard-2 | \$924 | n1-standard-1 | \$737 | 3 |
| VM-258625 | Red Hat Enterprise Linux 6 (64-bit) | \$898 | n1-standard-2 | \$924 | n1-standard-1 | \$737 | 1 |
| VM-274300 | Other Linux (32-bit) | \$898 | n1-standard-1 | \$1,152 | n1-standard-1 | \$1,152 | 1 |
| VM-27839 | Red Hat Enterprise Linux 6 (64-bit) | \$1,486 | n1-standard-1 | \$187 | n1-standard-1 | \$187 | 200 |
| VM-27841 | Ubuntu Linux (64-bit) | \$898 | n1-standard-1 | \$187 | n1-standard-1 | \$187 | 1 |
| VM-291148 | Other 2.6.x Linux (64-bit) | \$898 | n1-standard-2 | \$471 | n1-standard-1 | \$283 | 1 |
| VM-29655 | Other Linux (32-bit) | \$898 | n1-standard-1 | \$187 | n1-standard-1 | \$187 | 1 |
| VM-29662 | Other 2.6.x Linux (64-bit) | \$979 | n1-standard-1 | \$187 | n1-standard-1 | \$187 | 30 |
| VM-29663 | Other Linux (32-bit) | \$956 | n1-standard-1 | \$187 | n1-standard-1 | \$187 | 15 |
| VM-39056 | Other Linux (32-bit) | \$1,716 | n1-standard-1 | \$727 | n1-standard-1 | \$727 | 200 |
| VM-394946 | Other Linux (32-bit) | \$10,018 | n1-standard-1 | \$1,158 | n1-standard-1 | \$1,158 | 3800 |
| VM-40218 | Other Linux (32-bit) | \$1,885 | n1-standard-4 | \$1,984 | n1-standard-2 | \$996 | 373 |
| VM-406673 | Red Hat Enterprise Linux 6 (64-bit) | \$2,467 | n1-standard-4 | \$3,712 | n1-standard-4 | \$3,712 | 400 |
| VM-444328 | CentOS 4/5/6 (64-bit) | \$1,256 | n1-standard-2 | \$554 | n1-standard-2 | \$554 | 100 |



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| VM-46779 | Ubuntu Linux (64-bit) | \$898 | n1-standard-8 | \$2,829 | n1-highmem-4 | \$2,264 | 1 |
|-----------|-------------------------------------|---------|----------------|---------|---------------|---------|--------|
| VM-485503 | Red Hat Enterprise Linux 6 (64-bit) | \$3,054 | n1-standard-2 | \$948 | n1-standard-1 | \$761 | 380 |
| VM-578 | Red Hat Enterprise Linux 6 (64-bit) | \$898 | n1-standard-1 | \$187 | n1-standard-1 | \$187 | 1 |
| VM-596685 | Other Linux (64-bit) | \$898 | n1-standard-16 | \$4,317 | n1-highmem-4 | \$2,254 | 1 |
| VM-59849 | Red Hat Enterprise Linux 5 (64-bit) | \$898 | n1-standard-1 | \$187 | n1-standard-1 | \$187 | 1 |
| VM-6066 | Other Linux (32-bit) | \$1,048 | n1-standard-1 | \$187 | n1-standard-1 | \$187 | 60 |
| VM-6070 | Red Hat Enterprise Linux 6 (64-bit) | \$1,684 | n1-standard-1 | \$187 | n1-standard-1 | \$187 | 186.45 |
| VM-702 | Ubuntu Linux (64-bit) | \$1,081 | n1-standard-1 | \$216 | n1-standard-1 | \$216 | 80 |
| VM-704404 | Red Hat Enterprise Linux 6 (64-bit) | \$979 | n1-standard-4 | \$838 | n1-standard-2 | \$464 | 30 |
| VM-707 | Other Linux (32-bit) | \$1,687 | n1-standard-1 | \$225 | n1-standard-1 | \$225 | 200 |
| VM-735 | Red Hat Enterprise Linux 6 (64-bit) | \$902 | n1-standard-1 | \$201 | n1-standard-1 | \$201 | 2 |
| VM-775038 | Other Linux (32-bit) | \$1,125 | n1-highcpu-4 | \$1,793 | n1-standard-1 | \$809 | 50 |
| VM-775046 | Red Hat Enterprise Linux 6 (64-bit) | \$1,682 | n1-standard-1 | \$188 | n1-standard-1 | \$188 | 30 |
| VM-775673 | Debian GNU/Linux 6 (64-bit) | \$1,674 | n1-highcpu-2 | \$829 | n1-standard-1 | \$737 | 20 |
| VM-784 | Other 2.6.x Linux (64-bit) | \$1,026 | n1-highcpu-8 | \$1,131 | n1-standard-1 | \$201 | 31.24 |
| VM-789386 | Other Linux (32-bit) | \$1,025 | n1-highcpu-8 | \$2,266 | n1-standard-1 | \$723 | 50 |
| VM-843019 | Ubuntu Linux (64-bit) | \$1,053 | n1-standard-2 | \$915 | n1-standard-2 | \$915 | 12 |
| VM-866461 | Red Hat Enterprise Linux 6 (64-bit) | \$1,233 | n1-standard-1 | \$211 | n1-standard-1 | \$211 | 90 |
| VM-867476 | CentOS 4/5/6 (32-bit) | \$1,659 | n1-standard-2 | \$381 | n1-standard-2 | \$381 | 175 |
| VM-89783 | Ubuntu Linux (64-bit) | \$1,526 | n1-standard-2 | \$943 | n1-standard-1 | \$756 | 130 |

GCP Settings:

GCP Datacenter Location: United States Storage Type: Persistent Disk Storage Match Standard Instance Only: No No not resized below reservations: No Instance Class: Regular Term Length: 3 years Uptime / Day: Not Applicable

Discount Rate: 0%

VM Rightsizing Option: 99th %-tile vCPU and Peak vRAM Usage



vCenter: vc.cphy.local | Cluster: 4.1-hosts | Keyword: VM | Any of Tags: Dev, Prod Power State: On | Guest OS Family: Linux Family

Unsupported VMs because of **Unsupported Guest OS**

| VM Name | Guest OS | On Premise Cost |
|------------|-------------------------------------|--------------------|
| VM-101431 | Red Hat Enterprise Linux 6 (64-bit) | \$898 |
| VM-1043050 | Other 2.6.x Linux (64-bit) | \$898 |
| VM-1106428 | CentOS 4/5/6 (64-bit) | \$1,646 |
| VM-112520 | Debian GNU/Linux 6 (64-bit) | \$1,578 |
| VM-1131228 | CentOS 4/5/6 (64-bit) | \$956 |
| VM-113504 | Debian GNU/Linux 6 (64-bit) | \$1,771 |
| VM-113505 | Other Linux (64-bit) | \$956 |
| VM-113506 | Other Linux (32-bit) | \$956 |
| VM-113507 | Red Hat Enterprise Linux 6 (64-bit) | \$1,071 |
| VM-1145510 | Red Hat Enterprise Linux 5 (32-bit) | \$4,493 |
| VM-115320 | SUSE Linux Enterprise 11 (64-bit) | \$1,806 |

GCP Settings:

GCP Datacenter Location: United States Storage Type: Persistent Disk Storage Match Standard Instance Only: No No not resized below reservations: No Instance Class: Regular Term Length: 3 years Uptime / Day: Not Applicable

Discount Rate: 0%

VM Rightsizing Option: 99th %-tile vCPU and Peak vRAM Usage



vCenter: vc.cphy.local | Cluster: 4.1-hosts | Keyword: VM | Any of Tags: Dev, Prod Power State: On | Guest OS Family: Linux Family

Appendix A: vCenter Summary for entire environment





| Hosts 82 1 Clustered Stand | alone |
|--|--------------|
| On Off Maintenance | 82 0 1 |
| Avg. Consolidation R 8.1:1 VMs (an): Hast | |

| Memory | |
|------------------------------|---------------------|
| Virtual Physical | 7.98 TB 14.40 TB |
| CPUs Virtual Physical | 2283 1288 |

| Virtual Machine | es |
|-----------------|-----|
| On | 664 |
| Off | 143 |
| Suspended | 0 |
| Templates | 2 |



Assessment Report for 88 VMs in your environment vCenter: vc.cphy.local | Cluster: 4.1-hosts | Keyword: VM | Any of Tags: Dev, Prod Power State: On | Guest OS Family: Linux Family

Appendix B: Detailed On-Premise Analysis Current Cost per VM

| VM Name | Guest OS | VM Cost / Year (\$) | vCPU | vCPU 99th %-ile Usage (%) | vRAM (GB) | vRAM Peak Usage (%) | vDisk Capacity (GB) |
|------------|-------------------------------------|---------------------|------|---------------------------------|--------------|------------------------|------------------------|
| VM-40218 | Red Hat Enterprise Linux 6 (64-bit) | \$1,716 | 4 | 5 | 8 | 98 | 200 |
| VM-444328 | Other 2.6.x Linux (64-bit) | \$1,885 | 2 | 77 | 4 | 97 | 373 |
| VM-1377613 | CentOS 4/5/6 (64-bit) | \$1,302 | 2 | 3 | 4 | 100 | 120 |
| VM-1432876 | Debian GNU/Linux 6 (64-bit) | \$902 | 1 | 1 | 0.25 | 97 | 2 |
| VM-122301 | CentOS 4/5/6 (64-bit) | \$8,356 | 4 | 4 | 4 | 100 | 3092 |
| VM-1358330 | Debian GNU/Linux 6 (64-bit) | \$902 | 1 | 1 | 0.25 | 100 | 2 |
| VM-784 | Other Linux (64-bit) | \$1,682 | 8 | 10 | 2 | 100 | 30 |
| VM-1294236 | Other Linux (32-bit) | \$898 | 1 | 1 | 0.13 | 98 | 1 |
| VM-115320 | Red Hat Enterprise Linux 6 (64-bit) | \$1,806 | 6 | 1 | 24 | 45 | 100 |
| VM-123026 | Red Hat Enterprise Linux 5 (32-bit) | \$1,049 | 2 | 43 | 1 | 98 | 20 |
| VM-394946 | SUSE Linux Enterprise 11 (64-bit) | \$956 | 1 | 1 | 3.52 | 99 | 15 |
| VM-229409 | Other Linux (32-bit) | \$898 | 1 | 1 | 0.13 | 97 | 1 |
| VM-258622 | Red Hat Enterprise Linux 6 (64-bit) | \$1,140 | 2 | 2 | 4 | 94 | 50 |
| VM-98700 | Red Hat Enterprise Linux 6 (64-bit) | \$1,526 | 4 | 9 | 4 | 97 | 130 |
| VM-113507 | Other 2.6.x Linux (64-bit) | \$1,071 | 2 | 2 | 4 | 92 | 20 |
| VM-1454310 | Red Hat Enterprise Linux 6 (64-bit) | \$1,192 | 2 | 1 | 8 | 32 | 60 |
| VM-775038 | Red Hat Enterprise Linux 6 (64-bit) | \$1,687 | 4 | 0 | 4 | 97 | 200 |
| VM-1594097 | Ubuntu Linux (64-bit) | \$1,194 | 2 | 71 | 2 | 100 | 80 |
| VM-1513019 | CentOS 4/5/6 (64-bit) | \$1,776 | 8 | 17 | 24 | 100 | 0 |
| VM-89783 | Red Hat Enterprise Linux 5 (64-bit) | \$1,233 | 2 | 35 | 4 | 94 | 90 |
| VM-1608656 | Ubuntu Linux (64-bit) | \$1,194 | 2 | | 2 | | 80 |
| VM-1238299 | Red Hat Enterprise Linux 6 (64-bit) | \$1,138 | 1 | 15 | 8 | 99 | 80 |
| VM-212149 | Ubuntu Linux (64-bit) | \$1,410 | 4 | 5 | 4 | 98 | 80 |
| VM-29663 | Other Linux (32-bit) | \$898 | 1 | 12 | 0.13 | 91 | 1 |
| VM-1043050 | Other Linux (32-bit) | \$898 | 1 | 1 | 0.13 | 94 | 12001 |
| VM-122615 | Red Hat Enterprise Linux 6 (64-bit) | \$4,898 | 8 | 35 | 72 | 100 | |



vCenter: vc.cphy.local | Cluster: 4.1-hosts | Keyword: VM | Any of Tags: Dev, Prod Power State: On | Guest OS Family: Linux Family

| | | 1 | | I | | | |
|------------|-------------------------------------|----------|----|----|------|-----|------|
| VM-134599 | Red Hat Enterprise Linux 6 (64-bit) | \$1,002 | 1 | 6 | 2 | 94 | 40 |
| VM-735 | Other Linux (32-bit) | \$979 | 1 | 1 | 2 | 45 | 30 |
| VM-1543064 | Debian GNU/Linux 6 (64-bit) | \$902 | 1 | 0 | 0.25 | 98 | 2 |
| VM-112520 | Ubuntu Linux (64-bit) | \$1,578 | 4 | 33 | 8 | 99 | 140 |
| VM-1513016 | CentOS 4/5/6 (64-bit) | \$1,776 | 8 | 18 | 24 | 100 | 0 |
| VM-867476 | Ubuntu Linux (64-bit) | \$1,053 | 2 | 73 | 4 | 96 | 12 |
| VM-258623 | Red Hat Enterprise Linux 6 (64-bit) | \$1,140 | 2 | 1 | 4 | 91 | 50 |
| VM-1550432 | Debian GNU/Linux 6 (64-bit) | \$902 | 1 | 1 | 0.25 | 100 | 2 |
| VM-789386 | Red Hat Enterprise Linux 6 (64-bit) | \$1,674 | 8 | 0 | 4 | 94 | 20 |
| VM-1294222 | Other Linux (32-bit) | \$898 | 1 | 1 | 0.13 | 96 | 1 |
| VM-6066 | Other Linux (32-bit) | \$898 | 1 | 4 | 0.13 | 90 | 1 |
| VM-29662 | Other Linux (32-bit) | \$898 | 1 | 0 | 0.13 | 100 | 1 |
| VM-485503 | Red Hat Enterprise Linux 4 (32-bit) | \$1,256 | 2 | 8 | 4 | 100 | 100 |
| VM-258619 | Red Hat Enterprise Linux 6 (64-bit) | \$1,140 | 2 | 2 | 4 | 95 | 50 |
| VM-274300 | SUSE Linux Enterprise 11 (64-bit) | \$906 | 1 | 0 | 0.59 | 84 | 3 |
| VM-113504 | Red Hat Enterprise Linux 6 (32-bit) | \$1,771 | 2 | 73 | 8 | 95 | 311 |
| VM-596685 | Red Hat Enterprise Linux 6 (64-bit) | \$3,054 | 12 | 18 | 24 | 100 | 380 |
| VM-122652 | CentOS 4/5/6 (64-bit) | \$909 | 1 | 11 | 0.25 | 93 | 5 |
| VM-59849 | Other Linux (32-bit) | \$898 | 1 | 1 | 0.13 | 97 | 1 |
| VM-258620 | Red Hat Enterprise Linux 6 (64-bit) | \$1,140 | 2 | 2 | 4 | 97 | 50 |
| VM-1145510 | SUSE Linux Enterprise 11 (64-bit) | \$4,493 | 8 | 47 | 64 | 99 | 1050 |
| VM-258625 | Red Hat Enterprise Linux 6 (64-bit) | \$1,140 | 2 | 1 | 4 | 94 | 50 |
| VM-866461 | CentOS 4/5/6 (64-bit) | \$1,025 | 1 | 2 | 2 | 52 | 50 |
| VM-1454057 | Red Hat Enterprise Linux 6 (64-bit) | \$1,192 | 2 | 1 | 8 | 42 | 60 |
| VM-406673 | Red Hat Enterprise Linux 6 (64-bit) | \$10,018 | 4 | 99 | 8 | 98 | 3800 |
| VM-1261690 | Red Hat Enterprise Linux 6 (64-bit) | \$1,486 | 2 | 51 | 4 | 95 | 200 |
| VM-1131228 | Red Hat Enterprise Linux 6 (64-bit) | \$956 | 1 | 1 | 2 | 94 | 20 |
| VM-46779 | Red Hat Enterprise Linux 6 (64-bit) | \$2,467 | 6 | 61 | 20 | 99 | 400 |
| VM-27839 | Other Linux (32-bit) | \$898 | 1 | 1 | 0.13 | 95 | 1 |
| VM-135242 | Red Hat Enterprise Linux 6 (64-bit) | \$2,191 | 2 | 10 | 12 | 100 | 480 |



vCenter: vc.cphy.local | Cluster: 4.1-hosts | Keyword: VM | Any of Tags: Dev, Prod Power State: On | Guest OS Family: Linux Family

| VM-92543 | Ubuntu Linux (64-bit) | \$1,659 | 4 | 29 | 8 | 99 | 175 |
|------------|-------------------------------------|---------|---|----|------|-----|---------|
| VM-113505 | Other 2.6.x Linux (64-bit) | \$956 | 1 | 2 | 2 | 25 | 20 |
| VM-6070 | Other Linux (32-bit) | \$898 | 1 | 2 | 0.13 | 90 | 1 |
| VM-291148 | Other 2.6.x Linux (64-bit) | \$1,486 | 2 | 3 | 4 | 89 | 200 |
| VM-29655 | Other Linux (32-bit) | \$898 | 1 | 12 | 0.13 | 99 | 1 |
| VM-702 | Other Linux (32-bit) | \$1,048 | 1 | 1 | 2 | 74 | 60 |
| VM-27841 | Other Linux (32-bit) | \$898 | 1 | 1 | 0.13 | 93 | 1 |
| VM-578 | Other Linux (32-bit) | \$898 | 1 | 1 | 0.13 | 100 | 1 |
| VM-1106428 | Red Hat Enterprise Linux 6 (64-bit) | \$1,646 | 1 | 44 | 8 | 100 | 300 |
| VM-1513013 | CentOS 4/5/6 (64-bit) | \$1,776 | 8 | 17 | 24 | 100 | 0 |
| VM-1412533 | Ubuntu Linux (64-bit) | \$3,721 | 4 | 5 | 16 | 100 | 1043.53 |
| VM-775673 | Red Hat Enterprise Linux 6 (64-bit) | \$1,125 | 2 | 0 | 2 | 93 | 50 |
| VM-1454305 | Red Hat Enterprise Linux 6 (64-bit) | \$1,192 | 2 | 0 | 8 | 30 | 60 |
| VM-122353 | Other Linux (64-bit) | \$1,163 | 2 | 53 | 4 | 93 | 60 |
| VM-184442 | Red Hat Enterprise Linux 5 (64-bit) | \$1,178 | 2 | 3 | 6 | 67 | 60 |
| VM-15196 | Other Linux (32-bit) | \$898 | 1 | 6 | 0.13 | 99 | 1 |
| | | | | | | | |
| VM-843019 | Red Hat Enterprise Linux 6 (64-bit) | \$1,026 | 1 | 50 | 8 | 98 | 31.24 |
| VM-1418489 | Ubuntu Linux (64-bit) | \$3,721 | 4 | 12 | 16 | 100 | 1043.53 |
| VM-122660 | Red Hat Enterprise Linux 6 (64-bit) | \$1,321 | 2 | 9 | 2 | 100 | 135 |
| VM-1294234 | Other Linux (32-bit) | \$898 | 1 | 1 | 0.13 | 95 | 1 |
| VM-39056 | Red Hat Enterprise Linux 6 (64-bit) | \$979 | 1 | 8 | 2 | 100 | 30 |
| VM-1294232 | Other Linux (32-bit) | \$898 | 1 | 1 | 0.13 | 97 | 1 |
| VM-1454307 | Red Hat Enterprise Linux 6 (64-bit) | \$1,192 | 2 | 0 | 8 | 33 | 60 |
| VM-775046 | Debian GNU/Linux 6 (64-bit) | \$902 | 1 | 3 | 0.25 | 100 | 2 |
| VM-113506 | Other 2.6.x Linux (64-bit) | \$956 | 1 | 86 | 2 | 95 | 20 |
| VM-101431 | Other Linux (32-bit) | \$898 | 1 | 3 | 0.13 | 90 | 1 |
| VM-1608625 | Ubuntu Linux (64-bit) | \$1,194 | 2 | | 2 | | 80 |
| VM-1454306 | Red Hat Enterprise Linux 6 (64-bit) | \$1,192 | 2 | 0 | 8 | 34 | 60 |
| VM-707 | CentOS 4/5/6 (32-bit) | \$1,081 | 1 | 2 | 0.25 | 99 | 80 |
| VM-704404 | Ubuntu Linux (64-bit) | \$1,684 | 4 | 19 | 7.81 | 92 | 186.45 |
| VM-258621 | Red Hat Enterprise Linux 6 (64-bit) | \$1,140 | 2 | 2 | 4 | 97 | 50 |