Google Cloud VMware Engine

Contents
Solution Overview .................................................. 1
VMware vRealize Products with Google Cloud VMware Engine .................................. 2
VMware NSX Advanced Load Balancer (Formerly Avi Networks) on Google Cloud VMware Engine .......... 3
VMware SD-WAN (formerly VeloCloud) on Google Cloud VMware Engine ....................... 4
VMware Horizon on Google Cloud VMware Engine ........................................... 5
Horizon Deployment Options and Management ..................................... 5
Horizon Purchasing and Support ................................................... 6
VMware Site Recovery Manager on Google Cloud VMware Engine ................................. 6

Q. Where is Google Cloud VMware Engine generally available today?
A. The service is currently available in 12 Google Cloud regions with more added regularly.
To view the latest information on additional Google Cloud Regions supporting Google Cloud VMware Engine, please visit https://cloud.google.com/about/locations

Q. What is the pricing for the solution?
A. The service can be consumed on an hourly or monthly on-demand basis along with 1- year and 3-year reserved pricing increments.
To view current pricing, please visit https://cloud.google.com/vmware-engine/pricing

Q. How do I sign up for the service?
A. You can contact a representative to learn how to sign up for this service by contacting your sales representative at: GCVEsales@vmware.com
Or you can easily request a quote from your Google Cloud representative and spin up Google Cloud VMware Engine in about 35 minutes.

Q. Can I apply my existing Google Cloud credits toward an investment in Google Cloud VMware Engine?
A. Yes, because Google Cloud VMware Engine is a Google Cloud solution your business can apply available Google Cloud credits towards use for Google Cloud VMware Engine.

Q. Does Google Cloud offer special programs to help companies with cloud migration planning?
A. Absolutely! Google Cloud offers a Rapid Assessment and Migration Program (RAMP), inclusive of a complementary assessment, with tools to help you understand your inventory and develop a migration game plan. Google Cloud also offers committed use discounts for one- and three-year terms with monthly and prepay upfront.
To learn more about RAMP, visit: https://cloud.google.com/solutions/cloud-migration-program
For more information about committed discount programs, please contact your Google Cloud or VMware sales representative.

Solution Overview
Q. What is Google Cloud VMware Engine™?
A. Google Cloud VMware Engine is an infrastructure-as-a-service offering built on Google Cloud’s highly scalable infrastructure and VMware vSphere™, vCenter™, vSAN™, and NSX-T™. It enables a fast path to the cloud, seamlessly migrating or extending existing VMware workloads from on-premises environments to Google Cloud Platform without the cost, effort or risk of re-architecting applications or retooling operations. It is a service sold and supported by Google, working closely with VMware.

Q. What VMware products are included with this solution?
A. Customers can maintain operational consistency as they accelerate a move to the cloud with the use of familiar VMware technology and tools including the latest versions of vSphere, NSX-T, and vSAN. VMware HCX Enterprise™ is also available, for an additional fee from VMware, and is interoperable with Google Cloud VMware Engine. HCX is an application mobility platform designed for simplifying application migration, workload rebalancing and business continuity across data centers and clouds. With additional features from HCX Enterprise, customers can further simplify their migration efforts to Google Cloud Platform including support for bulk live migrations.
Q. Are there additional VMware products that have been integrated and validated for interoperability with Google Cloud and Google Cloud VMware Engine?
A. Yes, the number of VMware integrations continues to grow. This document will provide more information on the vRealize, Horizon™, SD-WAN, and NSX Advanced Load Balancer™ capabilities with Google Cloud and Google Cloud VMware Engine.

**VMware vRealize Products with Google Cloud VMware Engine**

Q. Which vRealize products and versions are tested and supported for Google Cloud VMware Engine?
A. Both vRealize on-premises software and vRealize cloud versions are tested and supported with Google Cloud VMware Engine. For vRealize software that may be deployed in on-premises datacenters, the following are the tested versions:

- vRealize Operations™ (vROps) 8.3;
- vRealize Automation (vRA) 8.3;
- vRealize Network Insight™ (vRNI) 6.1.

In addition, vRealize Operations Cloud™, vRealize Automation Cloud™, and vRealize Network Insight Cloud™ are all supported. The vRealize Log Insight™ software on-premises and cloud versions are currently not supported.

Q. Which versions of the VMware portfolio were tested and validated for interoperability with Google Cloud VMware Engine?
A. Applicable VMware solutions used for validation testing include vSphere Enterprise Plus and vCenter 6.7 U3 standard, vSAN 6.7, NSX-T 2.5.2, and HCX R139 Advanced. Future vRealize software releases versions, where applicable, will be tested and validated with the latest version of Google Cloud VMware Engine.

Q. What are the tested and supported customer deployment scenarios for the vRealize products?
A. The tested and supported scenarios are as follows:

- vRealize software may be deployed on-premises and used to manage Google Cloud VMware Engine as an end point.
- vRealize Cloud services may be used to manage Google Cloud VMware Engine as an end point.

Deploying vRealize software directly on Google Cloud VMware Engine is not currently a supported scenario.

Q. How do customers purchase the vRealize cloud products?
A. vROps Cloud and vRA Cloud services may be procured through the vRealize Suite subscription or the vRealize Cloud Universal credits. Customers with perpetual licenses may leverage the subscription upgrade program for a discount towards the purchase of vROps Cloud and vRA Cloud services.


Q. Why do customers choose to migrate to vRealize Cloud?
A. All customers can request a free 30-day trial of vRealize Cloud prior to making a commitment to purchase.

Q. What are the licensing implications of a customer with vRealize software migrating to vRealize Cloud?
A. For vROps and vRA, customers may leverage the Subscription Upgrade Program to move from existing perpetual licenses to vRealize Universal subscription licenses and receive a discount towards purchase of vRealize cloud services. More details on the Subscription Upgrade Program are available [here](https://cloud.google.com/network-connectivity/docs/interconnect/concepts/dedicated-overview?hl=en).

For vRealize Network Insight customers, an upgrade SKU will enable customers to receive a discount towards purchase of vRNI Cloud. More information on vRNI Cloud is available [here](https://cloud.google.com/network-connectivity/docs/interconnect/concepts/dedicated-overview?hl=en).
Q. What product related best practices guidelines are available for customers looking to migrate older on-premises vRealize versions to the latest vRealize version on-premises; or to vRealize Cloud?

A. vRealize Automation:
   • On-premises to on-Premises Upgrade:
     - A vRA migration assistant service (link below) is available for customers to move from vRA 7.0 to vRA 8.0 on-premises.
     - vRealize Automation 8 Transition Guide
   • On-premises to Cloud Upgrade:
     - A similar migration assistant service helping customers migrate from on-premises to vRA cloud is in development. Once it is available, this FAQ will be updated.

vRealize Network Insight:
• On-premises to on-premises Upgrade:
  - Upgrading from vRNI older version software to the latest version is well documented in the product release notes. A link to this document is below.
  - Upgrading vRealize Network Insight
• On-premises to Cloud Upgrade:
  - Backup and restore procedures for migrating customers from on-premises to vRA cloud is in development. Once it is available, this FAQ will be updated.
  - About Backing up and Restoring of Deployment Data

vRealize Operations:
• Procedures for migrating content from on-premises vROps to vROps Cloud are captured in the below links:
  - Managing Content
  - Importing Content

VMware NSX Advanced Load Balancer (Formerly Avi Networks) on Google Cloud VMware Engine

Q. How does NSX Advanced Load Balancer (Avi)™ enhance Google Cloud VMware Engine?

A. NSX Advanced Load Balancer Enterprise Edition provides a rich set of features with elastic scale, automation workflows and observability to help accelerate your moves to Google Cloud VMware Engine. NSX Advanced Load Balancer provides seamless and consistent application delivery in both Google Cloud VMware Engine and connected on-premises data center environments. In addition, NSX Advanced Load Balancer for Google Cloud VMware Engine provides better scalability with auto-scale capabilities, so that capacity can grow based on demand.

Q. How does NSX Advanced Load Balancer (Avi) integrate with Google Cloud VMware Engine?

A. NSX Advanced Load Balancer integrates as an attached load balancing solution, with communication between the Avi Controller, NSX-T Manager and vCenter with Google Cloud VMware Engine and the on-premises data center. Communication takes place between the Avi Controller, the NSX-T Manager. This integration enables NSX Advanced Load Balancer to deploy and manage Service Engines automatically based on demand, providing for an elastic, automated approach to load balancing.

Q. Where is NSX Advanced Load Balancer (Avi) installed in a Google Cloud VMware Engine environment?

A. The Avi Controller resides in the customer environment, either within the Google Cloud VMware Engine or on-premises data center. Other NSX Advanced Load Balancer components (Service Engines) run in VMs in the Google Cloud VMware Engine SDDC.

Q. Who sells and supports NSX Advanced Load Balancer with Google Cloud VMware Engine?

A. VMware and its partners sell NSX Advanced Load Balancer with Google Cloud VMware Engine. VMware provides support directly to customers.

Q. What are the use cases for NSX Advanced Load Balancer in Google Cloud VMware Engine?

A. Avi facilitates application delivery in Google Cloud VMware Engine for use cases such as:
  • Lift and Shift: Customers familiar with NSX Advanced Load Balancer in their private data centers can move applications to Google Cloud VMware Engine and preserve the same load balancing features and capabilities in the public cloud.
  • Data Center Extension: NSX Advanced Load Balancer can provide consistent load balancing, Global Server Load Balancing (GSLB) and Web Application Firewall (WAF) for customer applications hosted across on-premises and Google Cloud VMware Engine environments.
  • Disaster Recovery: NSX Advanced Load Balancer supports BC/DR scenarios for application availability with load balancing and GSLB features.

Q. Which NSX Advanced Load Balancer (Avi) editions are supported on Google Cloud VMware Engine?

A. NSX Advanced Load Balancer Enterprise Edition is supported on Google Cloud VMware Engine. NSX Advanced Load Balancer Enterprise Edition is a full-featured load balancing, GSLB, and WAF solution available for multi-cloud and hybrid cloud environments including VMware vCenter, Google Cloud Platform, and Google Cloud VMware Engine.
Q. Can customers use their existing perpetual licenses towards NSX Advanced Load Balancer with Google Cloud VMware Engine (BYOL)?
A. NSX Advanced Load Balancer perpetual licenses may be used when deploying Google Cloud VMware Engine for the purposes of data center migration or extension and disaster recovery.

Q. Is there a free trial period for NSX Advanced Load Balancer?
A. All customers can utilize a free 30-day trial of NSX Advanced Load Balancer prior to making a commitment to purchase. The trial license is included in the Avi Controller by default. Please contact your VMware sales representative for more details.

Q. How is NSX Advanced Load Balancer (Avi) licensed and packaged on Google Cloud VMware Engine?
A. NSX Advanced Load Balancer is licensed based on Service Cores (vCPUs consumed by the Avi data-path VMs, i.e., Service Engines). For example, two Service Engines of two vCPUs each would require 4 Service Core licenses. The Avi Controller is not licensed separately and is part of the Enterprise license.

VMware SD-WAN (formerly VeloCloud) on Google Cloud VMware Engine

Q. What is VMware SD-WAN™?
A. VMware SD-WAN, as a part of VMware SASE solution, delivers rich experience when users in branch, campus and remote working locations access their workloads in Google Cloud VMware Engine. The solution provides optimal, reliable, and efficient access for these users via the nearest VMware SASE Point of Presence (PoP) to the front door of Google Cloud. The connectivity between the SD-WAN Gateway at the SASE PoP and the Cloud Router is done using the centralized VMware SD-WAN Orchestrator. This connectivity leverages BGP peering over IPSec tunnel for dynamic reachability between users and Google Cloud.

Q. Is SD-WAN or SASE sold by VMware or by Google?
A. SD-WAN and SASE solutions will be sold and supported by VMware and current VMware partners. We are working on having SD-WAN transactable on Google paper in the future.

Q. What Google Cloud VMware Engine customer issues does VMware SD-WAN solve?
A. Connecting a distributed workspace to the enterprise network that now lives in the cloud and/or on-premises poses great challenges. VMware SD-WAN offers a reliable, scalable, highly available, and secure connectivity method to the Google Cloud Platform and Google Cloud VMware Engine workloads and provides the optimized network needed for assured application performance.

Q. What are the use cases for VMware SD-WAN and Google Cloud VMware Engine?
A. VMware SD-WAN provides reliable, scalable, highly available, and secure connectivity to both your Google Cloud VMware Engine and on-premises data centers.

- Virtual Desktop Infrastructure (VDI): VMware SD-WAN ensures that the users working from home or anywhere all get that same increased and consistent experience when going over the internet by prioritizing virtual desktop traffic over other traffic and provides expanded WAN bandwidth by bonding all available links.

- Data center expansion and/or consolidation: In the case of unplanned projects, seasonal spikes or temporary events requiring additional resources to be spun up in Google Cloud VMware Engine. The VMware SD-WAN Gateways can be deployed worldwide, with high availability to meet increased network loads.

- Enterprise network extension: In the event the Google Cloud VMware Engine SDCC cannot be deployed in a region where the users are, it may be beneficial to extend SD-WAN from the branches to the SD-WAN Gateway nearest to the Google Cloud VMware Engine. The SD-WAN Gateways will then provide connectivity with the Google Cloud network.

Q. Where do I find more information about Google Cloud VMware Engine and VMware SD-WAN?
A. Details about VMware SASE and VMware SD-WAN can be found here.

Q. How do I reach out to VMware SD-WAN direct sellers?
A. SD-WAN Sales team can be reached at: velo-sales@vmware.com

Q. What is the value to customers of VMware SD-WAN?
A. Connecting a distributed workspace to the enterprise network that now live in the cloud and/or on-premises poses great challenges. VMware SD-WAN offers a reliable, scalable, highly available and secure connectivity method to Google Cloud and Google Cloud VMware Engine workloads and provides the optimized network needed for assured application performance.
Q. Where do I find more information regarding Pricing and Packaging of SD-WAN?
A. Details on Pricing and Packaging can be found [here](#).

Q. What version of the VMware SD-WAN edges are tested and supported for Google Cloud VMware Engine?
A. VMware SD-WAN Gateways and Orchestrators running version 4.3.0 and newer are supported.

Q. In what Google Cloud VMware Engine VMware platform versions has the VMware SD-WAN products been tested on?
A. The VMware SD-WAN Edges and Gateways are not deployed in the Google Cloud VMware Engine SDDC stack itself but rather in native Google Cloud. There is no dependency on vSphere, vSAN, and NSX versions in the Google Cloud VMware Engine nor the on-premises data center.

VMware Horizon on Google Cloud VMware Engine

Q. What is VMware Horizon™?
A. VMware Horizon enables a digital workspace with the efficient delivery of virtual desktops and applications, from on-premises to the cloud, with an unmatched end-user experience. It offers an agile, cloud-ready infrastructure that adapts to change, modernizes desktop operations for best-in-class management, and provides end to end security to keep data secure while seamlessly integrating with the VMware technology ecosystem to build a complete digital foundation.

Horizon offers these key benefits:

- **Hybrid cloud delivery, management, and scale** – Efficiently deploy and easily scale virtual desktops and apps across private and public clouds, all managed from a single control plane.
- **Modernized management simplifies and speeds deployments** – Modernize management with the deployment of full-featured, personalized virtual desktops and apps in seconds by leveraging Instant Clone, VMware App Volumes, and VMware Dynamic Environment Manager. These leading-edge technologies simplify and centralize management, save time, and reduce costs, while providing the customization and personalization required by end-users.
- **End-to-end security from a trusted partner** – Secure delivery of virtual desktops and apps to protect your network and data center—powered with intrinsic security built into your VMware infrastructure.
- **Unique integration with VMware technology** – Leverage VMware’s virtualization heritage and SDDC and digital workspace leadership for Horizon management, networking, security, and user experience benefits.
- **Best digital workspace experience** – Extend the best digital workspace experience to all apps and use cases, including remote, multimedia and collaboration.

For more information, check out the [VMware Horizon FAQ](#).

Horizon Deployment Options and Management

Q. Which version of Horizon is supported in Google Cloud VMware Engine?
A. Starting with Horizon 2006 on the Horizon 8 release train or Horizon 7.13 on the Horizon 7 release train, Horizon can be deployed on Google Cloud VMware Engine (Google Cloud VMware Engine).

Q. Are there best practices available to help deploy Horizon on Google Cloud VMware Engine?
A. Yes. Information is available in the [Google Cloud VMware Engine Horizon Deployment Options](#) or from your VMware representative.

Q. Does Horizon on Google Cloud VMware Engine have feature parity with the use of VMware Horizon on-premises or on other public clouds?
A. For up-to-date support information, please see [KB Article 81922](#).

Q. Can I use VMware ThinApp™ in Horizon on Google Cloud VMware Engine?
A. Yes, but it is not included in the Horizon Subscription and must be purchased separately.

Q. Can I migrate my existing desktops and apps to Google Cloud VMware Engine or operate a hybrid environment that consists of on-premises and Google Cloud VMware Engine-based Horizon workloads?
A. Yes. Since Horizon is the same whether it’s running on-premises or in Google Cloud VMware Engine, you can use the same machine images, application packages, and processes you currently use. You’re able to seamlessly link on-premises and Google Cloud VMware Engine-based environments together for a migration or as part of a modern, scalable, hybrid remote work solution!
Q. Can Horizon be deployed as a standalone environment within Google Cloud VMware Engine?
A. Yes. You’re free to migrate, operate a hybrid environment, or deploy a standalone Horizon pod directly into Google Cloud VMware Engine.

Q. Are GPU-based workloads supported in Horizon on Google Cloud VMware Engine?
A. Not at this time, as there is not a GPU-enabled Google Cloud VMware Engine instance available.

Q. Does Google manage the Horizon Environment?
A. No. Google Cloud VMware Engine is owned and managed by Google, but Horizon is a workload that runs on Google Cloud VMware Engine. As such, the customer is responsible for deploying, managing, updating, and configuring the Horizon infrastructure as well as the desktops and applications.

Horizon Purchasing and Support

Q. How is Horizon on Google Cloud VMware Engine licensed?
A. A Horizon subscription license is required to use Horizon on Google Cloud VMware Engine, which can be acquired through VMware partners or VMware directly. Public Sector customers have the option to use the Horizon term license on Google Cloud VMware Engine. To use Google Cloud VMware Engine, you must have an active Google Cloud subscription with the Google Cloud VMware Engine service.

For more information, check out the VMware Horizon FAQ.

Q. What if I currently have a perpetual Horizon license?
A. You will need to upgrade your license to a Horizon subscription license via the Horizon Subscription Upgrade Program or to a Horizon term license.

Please contact your VMware representative for more information.

Q. How do I purchase VMware Horizon?
A. VMware Horizon is available through VMware sales reps, authorized VMware resellers and desktop competency partners, or through the VMware Store. For more information, visit https://www.vmware.com/go/horizon.

Q. Who do I call for Google Cloud VMware Engine support?
A. Google Cloud VMware Engine is fully supported by VMware, but because it’s a Google Cloud service you should contact your Google support team. Google will work with VMware as needed to address any issues.

Q. Who do I call for Horizon support?
A. Since Horizon is managed by the customer, even on Google Cloud VMware Engine, customers should contact VMware support or VMware partners for assistance.

Q. Is there a free trial available?
A. Yes. You can register for a 90-day free trial of the VMware Horizon, which will allow you to deploy VMware Horizon in any environment, including Google Cloud VMware Engine.

VMware Site Recovery Manager (SRM) on Google Cloud VMware Engine

Q. What types of customer situations or use cases does SRM on Google Cloud VMware Engine address?
A. SRM on Google Cloud VMware Engine is ideal when an existing (or new) SRM customer requests hybrid cloud support and is not looking to adopt DRaaS (Disaster Recovery as a Service) solutions such as VMware Site Recovery (VSR) and VMware Cloud Disaster Recovery (VCDR). For more information about other VMware Disaster Recovery Solutions, visit VMware DRaaS.

Q. Who sells and supports VMware SRM term licenses on Google Cloud VMware Engine?
A. VMware sells the Site Recovery Manager (SRM) on Google Cloud VMware Engine on term license using VMware’s own sales motions, including its channels, to customers. VMware will provide support for the SRM license directly to customers. Please contact your VMware sales representative or GCVEsales@vmware.com to learn more.
Q. What protection configurations does Site Recovery Manager on Google Cloud VMware Engine support?
A. Site Recovery Manager on Google Cloud VMware Engine can protect (1) workloads running in an on-premises data center to a Google Cloud VMware Engine node; (2) workloads running on a Google Cloud VMware Engine node to an on-premises data center and (3) between different Google Cloud VMware Engine nodes, except for cross-cloud configurations.

Other Google Cloud VMware Engine nodes may be added in the future, but cross-cloud protection configurations may not be supported. Refer to the Site Recovery Manager FAQ for the latest listing of hyperscaler clouds SDDCs that can be used with the Site Recovery Manager for Hyperscalers license.

Note that the Site Recovery Manager on Google Cloud VMware Engine term license cannot be used to protect workloads between on-premises data centers only—a separate Site Recovery Manager perpetual license is required.

Q. How can customers obtain Site Recovery Manager for Google Cloud VMware Engine evaluation licenses?
A. Customers can use the Site Recovery Manager on Google Cloud VMware Engine evaluation licenses on the Site Recovery Manager evaluation site. After the 60-day evaluation period, and for production use, customers will have to purchase the Site Recovery Manager for on Google Cloud VMware Engine term license. The evaluation licenses can be replaced with a term license and Site Recovery Manager will continue to work non-disruptively through this evaluation to production conversion process. Host nodes will need to be obtained directly from Google Cloud through the standard mechanisms they may offer (e.g. trial, on demand, etc).

Q. What is the purchase model for SRM on Google Cloud VMware Engine term licenses?
A. SRM on Google Cloud VMware Engine is available as a prepaid 1 and 3-year term license only and is licensed on a per protected VM basis in packs of 25 VMs.

Q. What are the key features included in the SRM on Google Cloud VMware Engine license?
A. The Site Recovery Manager on Google Cloud VMware Engine license is available in an enterprise edition. It is customer-managed and has the same features as the VMware Site Recovery Manager enterprise edition. Refer to https://www.vmware.com/products/site-recovery-manager.html for further detail.

Q. Can customers use their existing SRM perpetual licenses on Google Cloud VMware Engine?
A. No. Existing SRM perpetual licenses cannot be used on public clouds. A customer who uses SRM on Google Cloud VMware Engine cannot “Bring Your Own (SRM) Licenses.” A net new subscription for Google Cloud VMware Engine is required.

Q. Is there an upgrade program available for customers who want to trade in their existing SRM perpetual licenses and get a credit towards the purchase of the SRM for Google Cloud VMware Engine term licenses?
A. No, there’s currently no official upgrade program for the SRM on Google Cloud VMware Engine license where customers on active SnS can trade in existing SRM perpetual licenses for a one-time credit towards a subscription purchase. If a customer requires financial consideration for their existing licenses, please work with your VMware sales representative to address customer-specific discount/pricing requests.