

Silver Peak Software for VMware® vCloud® Hybrid Service™

Accelerating data movement to the cloud

AT A GLANCE

VMware vCloud® Hybrid Service™ is a secure, dedicated hybrid cloud service operated by VMware, built on the trusted foundation of VMware vSphere®.

The service supports existing workloads and third-party applications as well as new application development, giving IT a common platform for seamlessly extending its data center to the cloud.

Silver Peak software accelerates data movement between data centers, remote offices and the cloud.

How the WAN Can Be a Bottleneck to Access Cloud Resources

As customers bring workloads to the Cloud such as packaged applications, web/e-commerce apps, backup/archiving, outsourced data center, and development/QA/test, your wide area network (WAN) connection may become a bottleneck to accessing resources located in the VMware hybrid cloud.

For packaged apps, e-commerce applications, and “follow-the-sun” test/development, multiple locations may access the Cloud from around the globe. To stretch data center resources and backup/archiving applications, point-to-point connections are increasingly common. In either of these scenarios, companies are increasingly using the Internet (VPN) to connect to the cloud due to cost and convenience advantages, and users must contend with performance challenges created by limited network bandwidth, latency and bandwidth quality.

To alleviate these issues and deliver high performance access to cloud-based applications and data, Silver Peak and VMware have partnered to offer WAN acceleration software through vCloud Hybrid Service in a virtual appliance form-factor.

vCloud Hybrid Service Highlights

VMware vCloud® Hybrid Service™ is a secure, dedicated hybrid cloud operated by VMware, and built on the trusted foundation of vSphere®. The hybrid cloud supports existing workloads and third-party applications, as well as new application development, giving you a common platform for seamlessly extending your data centers and remote offices to the cloud, and leveraging the same tools and processes you use today.

vCloud Hybrid Service isn't just compatible with your current IT investment – it is the same platform you run internally. vCloud Hybrid Service enables you to drive down your risks, costs, and disruptions, because you can write, deploy and manage applications in the cloud the same way you do in the data center today, relying on the underlying platform to provide application availability, rather than redesigning your applications to work around limitations of a new platform.

Silver Peak Software for vCloud Hybrid Service Overview

Some of the key challenges for customers using vCloud hybrid service to extend their data center to cloud include:

- **Initial data migration** – for dev/test, data center outsourcing, or the initial seeding of data for backup/archive, WAN constraints can cause data migration to take days or weeks to move virtual machines (VMs) and associated data into the cloud due to WAN constraints.
- **Ongoing data movement/replication** – whether for backup/replication or ongoing synchronization of data to the cloud, WAN performance can affect throughput in and out of vCloud Hybrid Service.

vCloud Hybrid Service Plus Silver Peak Benefits

- Speed data transfers and improve vCloud Hybrid Service application performance over distance by reducing the effects of latency
- Lower bandwidth costs and improve utilization with real-time, network-level de-duplication and compression
- Increase application responsiveness over Internet and MPLS connections to vCloud Hybrid Service by repairing lost and out-of-order packets.

- **Multi-site access to the cloud** – especially for packaged applications and e-commerce/web apps, as critical applications are migrated to vCloud Hybrid Service, geographically distributed locations will require access – many over lower quality Internet VPN connections. For these locations, WAN latency, quality, and limited bandwidth can have a significant negative impact on application performance and usability.

What Silver Peak Delivers to vCloud Hybrid Service Customers

For all of the above scenarios, Silver Peak software enables high performance and seamless vCloud Hybrid Service experiences with the following benefits:

- Minimize application performance degradation over distance by eliminating reducing the effects of latency.
- Improve efficiency and lower bandwidth charges through real-time, network-level de-duplication and compression.
- Increase responsiveness by fixing lost and out-of-order packets in real-time, and prioritizing latency-sensitive applications using Quality of Service (QoS) and traffic shaping techniques.

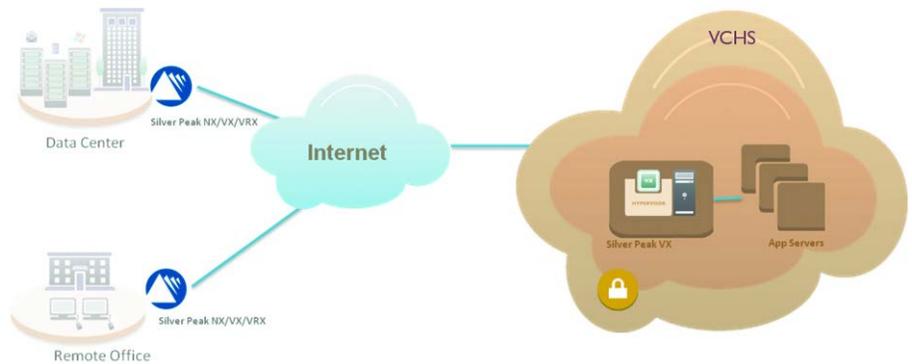
Silver Peak software improves the performance of any IP based application that runs over the WAN, from the smallest remote site to the largest data center with up to 1 gigabit-per-second (Gbps) of WAN throughput. In-house developed applications, file sharing, and latency sensitive traffic all benefit from Silver Peak's industry-leading performance regardless of application type, protocol or version. This combination of Silver Peak capabilities with vCloud Hybrid Service helps maximize performance when migrating applications and data to the cloud.

Silver Peak offers two versions of software that can be deployed on vCloud Hybrid Service:

- **VX WAN optimization software** for geographically distributed, multi-site access
- **VRX replication acceleration software** for data migration and ongoing replication/backup between a remote data center and vCloud Hybrid Service (point-to-point).

Silver Peak VX software speeds the transfer of remote office data to and from any number of remote sites, while Velocity Replication Acceleration (VRX) software is tailored for point-to-point backup and replication. The VRX software offers easy, point-and-click setup, special data views for storage administrators, and pricing to align with small, medium, and large replication requirements.

Silver Peak solutions are sized based on WAN bandwidth, and are deployed at each end of a WAN connection ("book-ended"), meaning one is required in vCloud Hybrid Service, and one is required at each site requiring accelerated access.



Silver Peak VX Models (WAN Optimization/Branch Office to Cloud)

VX-500	VX-1000	VX-2000	VX-3000	VX-5000
2 Mbps	4 Mbps	10 Mbps	20 Mbps	50 Mbps
VX-6000	VX-7000	VX-8000	VX-9000	
100 Mbps	200 Mbps	622 Mbps	1 Gbps	

Silver Peak VRX Models (Data Replication)

VRX-2	VRX-4	VRX-6	VRX-8
20 Mbps (~50 GB/hr.)	100 Mbps (~250 GB/hr.)	300 Mbps (~750 GB/hr.)	1 Gbps (~2 TB/hr.)

* Hourly data throughput based on an average of 6x data reduction.

Silver Peak and VMware vCloud Hybrid Service: Accelerating Your Path to the Cloud with Robust Performance

With a common platform and tool set consistent with your data center environment, vCloud Hybrid Service is your easiest path to the cloud, enabling you to seamlessly move workloads between the data center and the cloud and back again to meet your business needs. By adding Silver Peak WAN acceleration software, customers enjoy the flexibility and financial advantages of cloud based deployment as well as consistently high levels of workload performance, regardless of geographic location or type of connection.

To learn more about how Silver Peak and vCloud Hybrid Service can optimize your journey to the cloud, contact your Silver Peak or VMware partner or sales representative. Or, download a free trial at <http://marketplace.silver-peak.com/products.html>.