CLOUD SERVICE BRIEF

GPU-Accelerated Virtual Desktop Platform as a Service on SoftLayer for Media and Entertainment

Virtual Desktop Infrastructure (VDI) Highlights

Control Costs

- Shift to an opex model that reduces capital expenditures.
- Decrease reliance on expensive desktop workstations and standalone software licenses.

Increase Productivity

- Provide simultaneous, collaborative, fast access to accelerated virtual graphics processing units (GPUs).
- Gain full access to graphics applications from mobile devices.
- Reduce the need for local file copies and management, providing time for more creative iterations.

Keep Intellectual Property Secure

- Provide targeted content access to shared or dedicated resources based on your specific security requirements.

Enable IT to Keep Pace with the Business

- Modify your infrastructure and resources to meet ever-changing cyclical production needs.
- Take on new "rush" projects and spin up resources effortlessly.

The Challenge

Companies engaged in digital media activities, such as video editing, animation, photo retouching, web design, and graphics design, struggle to meet the needs of an expanding mobile workforce. As video production moves from HD to 2K to 4K resolution and beyond, the sheer size of files strains graphics workstations and storage. It also makes data access across the network an increasingly difficult and costly proposition. Distributing valuable assets between many workstations poses significant security risks. In addition, the total cost per seat for an editing, finishing, animation, and other high-end graphics applications continues to rise, as does the cost of maintaining and upgrading hardware and software.

As a result, digital media companies are seeking an alternative approach to provide better access for a wider range of creative workers and content stakeholders. They are also looking to control overall costs and protect their content or their clients' valuable media assets from damage, loss, or theft.

The Platform

SoftLayer, an IBM Company, provisions bare-metal servers featuring NVIDIA GRID GPUs and Citrix XenDesktop and Performance and Endurance block or file storage. This architecture addresses critical digital media needs with a proven platform for a complete VDI solution tailored to meet the needs of media and entertainment professionals.

This unique cloud computing environment makes full interactive graphics and video available to those who need it—wherever they happen to be—and eliminates the need for local copies of files. Valuable content remains secure inside SoftLayer's worldwide data centers and it can be moved between data centers using SoftLayer's high-speed, secure, private network.

Support Power Users with a Fully Integrated VDI Solution

Using a combination of validated best-in-class technologies from industry leaders in enterprise cloud compute and storage services, best-in-class graphics, and desktop virtualization, SoftLayer provides a complete virtual desktop architecture. The solution offers full graphics acceleration capable of supporting video editors, animators, and other power users. Desktop environments run inside the data center and only encrypted visual output and mouse, tablet, and keyboard inputs are sent over the network.

Build and Maintain a Competitive Edge

By increasing productivity, reducing or eliminating the need to copy files, and enhancing security, SoftLayer services with Citrix and NVIDIA integration make your facility more competitive and provide artists more productivity. These capabilities enable you to complete projects more quickly and deliver higher-quality content.

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NetApp Platinum Service Provider

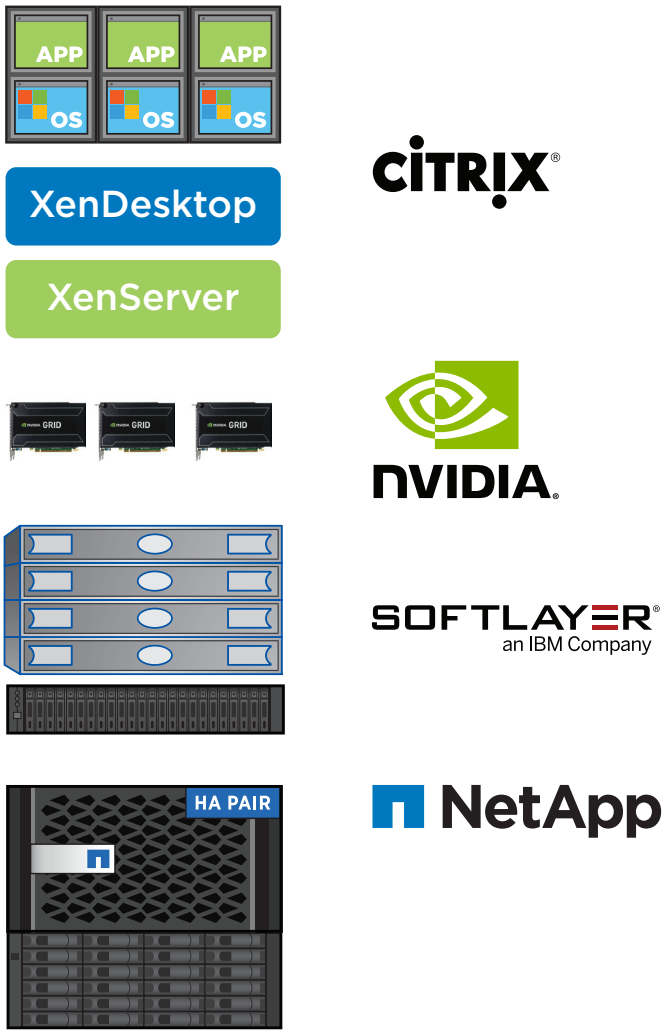

Figure 1) The proven enterprise cloud compute, graphics, and storage services delivered by SoftLayer combine leading visualization, virtual desktop, and data management technologies to drive unparalleled remote content creation, collaboration, and approval capabilities.

Control Costs

Specialized, dedicated graphics workstation hardware is an expensive resource that often is deployed and managed outside the data center. Software licenses for each individual workstation add to the overall expense.[1] As media files grow in size and projects become more complex, workstations require more computing and graphics power, more local storage, and faster network connections to move data. This situation translates to frequent and expensive upgrades.

GPU-Accelerated VDI Platform as a Service on Softlayer eliminates the expense and complexity of dedicated workstations, replacing them with a much more efficient and scalable shared resource through a cost-efficient opex model. For maximum cost efficiency you do not need to completely replace your existing workstation-based infrastructure right away. Instead, you can supplement what you have with this cloud VDI approach. As operations grow, new editors, designers, and artists will utilize the SoftLayer VDI graphics platform while existing workstations remain in place. As workstations are retired, operations can adopt this methodology and begin transitioning more people to the shared environment.

Increase Productivity

With the SoftLayer compute and storage service integrated with NVIDIA and Citrix VDI technology, editors and animators can work from any network-ready laptop, desktop, or mobile device. They can also work with purpose-built thin clients as if they were using a powerful graphics workstation. With the required interfaces, configurations with up to four high-resolution displays are supported, along with 3D mouse technology and other specialized graphics devices.

Remote workers with Internet connectivity can access their full desktop environments from anywhere with no loss of productivity. Users can leave the facility and pick up the project remotely, where they left off, on a separate desktop or laptop, because the application and the content reside in SoftLayer's cloud environment.

For reviewing work in progress, individuals can take part in a review session and release the resources to other users when finished. Similarly, if additional talent is needed on a project, you can easily allocate additional seats for editors, animators, or graphics designers. And with SoftLayer data centers in most major media hubs, content can be available around the world and around the clock.

1. Software application licenses remain the property of your organization. Every application software provider has a different licensing scheme. Talk with your software publisher about the use of site or individual licenses in cloud and virtualized environments.

SOFTLAYER PRODUCTS AND TECHNOLOGIES	NETAPP PRODUCTS AND TECHNOLOGIES	VISUALIZATION AND VIRTUALIZATION PRODUCTS AND TECHNOLOGIES
SoftLayer GPU-accelerated virtual desktop Infrastructure	FAS8060 storage	NVIDIA vGPU GRID™
Virtual and bare metal cloud compute	Clustered Data ONTAP	Citrix XenDesktop with HDX 3D Pro
Endurance storage services	API integration	
	Flash Pool™ intelligent caching	
	FlexClone® volumes	
	Flash Cache™ intelligent caching	
	Thin provisioning	
	Snapshot® copies	
	SnapMirror® software	

Table 1) Service components when using SoftLayer Endurance storage service.

SOFTLAYER PRODUCTS AND TECHNOLOGIES	NETAPP PRODUCTS AND TECHNOLOGIES	VISUALIZATION AND VIRTUALIZATION PRODUCTS AND TECHNOLOGIES
SoftLayer GPU-accelerated virtual desktop infrastructure	FAS8060 storage	NVIDIA vGPU GRID™
Bare Metal and Virtual Server Compute	Clustered Data ONTAP	Citrix XenDesktop with HDX 3D Pro
Performance storage service	API integration	
	Flash Pool™ intelligent caching	
	FlexClone® volumes	
	Deduplication	
	Thin provisioning	

Table 2) Service components when using SoftLayer Performance storage service.

Keep Intellectual Property Secure

Recent data breaches focused new light on the importance of securing content for the media and entertainment industry. The best way to reduce risk is to make sure that content remains securely stored in a secure centralized location and decrease the number of outside copies created for various postproduction workflows. SoftLayer provides an audit trail from within the customer portal to track all activity related to the customer's account. From the customer portal, you can even drill down to the serial number of the designated hard drives to enable data security. In addition, SoftLayer uses Department of Defense standard processes to wipe data from decommissioned servers.

SoftLayer deploys Intel Trusted Execution Technology (TXT) to its cloud compute service. Intel TXT is a trust mechanism that is part of the Xeon processor enabling administrators to place workloads on trusted pools of hardware on premise or in the cloud.

Critical content remains centralized, minimizing the chance of unauthorized access. Workers engaged in editing, animation, color correction, photo retouching, and other creative activities no longer need to make copies of the files. If a file is copied, it remains within the confines of a SoftLayer data center and the transfer between SoftLayer data centers occurs rapidly over high-speed secure network connections.

Enable IT to Keep Pace with the Business

No matter how carefully you plan, unforeseen needs and opportunities can require increased resources. Whether it is in an existing facility or a new location, new SoftLayer infrastructure can be up and running in less time and with less effort to increase productivity and profits. This capability provides a distinct advantage in situations in which time is of the essence.

The SoftLayer architecture is designed to quickly scale and increase or decrease resources on a daily or monthly basis as your requirements change. Do you need more storage? You can easily scale storage capacity and performance. Do you need more compute horsepower or graphics performance? Simply add more compute and NVIDIA GRID cards to the infrastructure configuration.

Related Services

SoftLayer Virtual Servers

Enable near-instant access to compute and storage resources with SoftLayer virtual servers. You can deploy virtual servers rapidly and on a temporary basis while preserving all the features and capabilities of the NetApp® Data ONTAP® operating system. You get higher capacity and improved performance with qualified expertise to guide you based on your application and workload.

SoftLayer Bare-Metal Servers

Bare-metal servers provide the ultimate in optimized isolation, performance, and flexibility of an operating system or a hypervisor. Bare-metal compute is available instantly and for as short a time as an hour.

SoftLayer Performance Storage

Precisely match your application performance to the right ratio of IOPS, capacity, and cost with SoftLayer Performance Storage. With complete visibility into your environment, you can be sure your data is where you need it to be, while also having the ability to fine-tune performance to fit changing application requirements.

Learn more about SoftLayer Performance Storage.

SoftLayer Endurance Storage

This hybrid flash storage as a service enables provisioning of block and file storage devices on demand and around the globe. You can leverage the financial flexibility and scalability of the hyperscale cloud with the manageability, scalability, and durability that only SoftLayer can provide. You select from three service levels to support a variety of workloads. Because it combines optimized performance levels with integrated data protection and mobility this storage is the ideal cloud storage service for enterprise customers.

Learn more about SoftLayer Endurance Storage.

NetApp Private Storage for SoftLayer

For organizations that cannot store their data or their clients' data in the cloud because of data sovereignty laws or compliance regulations, NetApp offers NetApp Private Storage (NPS) for SoftLayer. Customer owned, NetApp storage devices are housed in a secure, single tenant cage within an Equinix data center. Using this approach, companies gain the benefits of SoftLayer bare-metal, virtual-servers and graphics resources, while. maintaining complete control of their data. NPS for SoftLayer systems are connected to SoftLayer compute through SoftLayer's high-speed, secure Data Link networking connections within the Equinix Cloud Exchange architecture.

Learn more about NetApp Private Storage for SoftLayer.

Get Started Today

- Learn more about SoftLayer cloud services.
- Learn more about NetApp data fabric and NetApp Private Storage (NPS) for SoftLayer
- Learn more about NVIDIA GRID.
- Learn more about Citrix XenDesktop with HDX 3D Pro.

About SoftLayer

SoftLayer, an IBM Company, operates a global cloud infrastructure platform built for Internet scale. With 100,000 devices under management; 27 global data centers (40+ by mid-2015); and a global footprint of network points of presence, SoftLayer provides infrastructure as a service to leading-edge customers ranging from web startups to global enterprises. SoftLayer's modular architecture provides unparalleled performance and control, with a full-featured API and sophisticated automation controlling a flexible unified platform that seamlessly spans physical and virtual devices, and a worldwide network for secure, low-latency communications.

For more information, visit softlayer.com or call 1 866 398 7638.

About NetApp

Leading organizations worldwide count on NetApp for software, systems and services to manage and store their data. Customers value our teamwork, expertise and passion for helping them succeed now and into the future.

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