

A new Breed of Managed Hosting for the Cloud Computing Age

A Neovise Vendor White Paper, Prepared for SoftLayer

SOFTLAYER®

Executive Summary

Traditional managed hosting providers often suffer from issues that cause general customer dissatisfaction. These providers are often unwilling to make the necessary investment to bring their offerings to parity with industry leaders, and they sometimes rely on outdated infrastructure and architectures which fall short for virtualized and cloud computing environments. They also depend on manual processing which leads to a number of issues including higher costs, inefficiency and human errors. Most offerings are static and inflexible, regularly taking two weeks or more to deploy standard environments, and locking customers into contracts for a year or more.

SoftLayer has taken a unique and innovative approach to architecting and automating its infrastructure that lead to a number of benefits for SoftLayer Managed Hosting customers. For example, the company provides a hybrid computing environment that is seamlessly integrated across both cloud and dedicated servers. SoftLayer also enables automated control over other elements of the infrastructure, including storage and network components.

SoftLayer Managed Hosting provides expert management of the core services of any SoftLayer environment—whether dedicated, cloud or a seamlessly integrated combination of both—by a dedicated team of industry certified professionals. Core services include database, security, monitoring, backup and storage management. Customers receive a number of benefits in each of the following categories:

- **Agility** (e.g. one business day system provisioning; real time status reporting)
- **Flexibility** (e.g. terms as short as 30-days; choice of any SoftLayer infrastructure)
- **Reliability** (e.g. automated deployment and management; industry leading SLA)
- **Control** (e.g. extensive API and Customer Portal; retains self-management options)
- **Transparency** (e.g. clear and competitive pricing; full access to status information)

Neovise believes SoftLayer Managed Hosting is just what is needed for this new era of on-demand infrastructure.

Background

Virtualization and Cloud Computing

Virtualization technologies have had a significant impact on everything from infrastructure design and delivery, to monitoring and management. Server virtualization has enabled multiple applications to run on the same physical server, and network virtualization has allowed secure isolation of traffic in transit over shared network infrastructure. In addition, storage virtualization has enabled aggregation and sharing of storage infrastructure without exposing data to unauthorized users.

For hosting providers, virtualization has also driven the development of new services. Various forms of virtualization have enabled several different types of shared hosting. Offerings such as virtual private servers have given customers more economical access to hosted servers that still allow them root access.

Cloud computing is another type of hosted service with a virtualization heritage. Cloud offerings add capabilities like self-service interfaces and APIs that deliver automated control to customers. They also tend to have short-term commitments, on the order of minutes or hours, rather than months.

Dedicated versus Virtual Servers

A number of new service providers that only offer cloud-based Infrastructure-as-a-Service (IaaS) have come to market. Some of them suggest dedicated physical servers are no longer needed in an increasingly virtualized world. However, research by Neovise indicates the continued importance of the dedicated server.

Here are just a few examples:

- Database administrators still regularly choose dedicated over virtualized servers in order to achieve the highest level of performance and reliability.
- Many applications are designed to scale up rather than out. Having access to the full resources of a dedicated server is important during demand spikes.
- IT organizations have policies against running certain applications on hosted virtual servers based on their unique security standards or concerns.

Rather than eliminating the need for dedicated servers, cloud computing has produced new requirements including enhanced agility, flexibility and control. The good news is that an increasing number of cloud service providers offer **both** dedicated and virtual cloud servers. The bad news is that these services are usually separate rather than seamlessly integrated.

Understanding SoftLayer

SoftLayer® has over 26,000 customers in more than 140 countries, with about half of those based outside the United States. The company is the largest dedicated hosting provider with over 80,000 physical servers under management. SoftLayer operates 10 datacenters around the globe connected via their tier 1 global network. The company is helping set the direction for the future of cloud computing by painstakingly eliminating certain distinctions between physical and virtual infrastructure within its datacenters.

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SoftLayer delivers the same cloud-like experience whether customers are using dedicated servers or virtualized CloudLayer® servers. The pricing models are not the same, but each type of server offers fully automated customer access and control through both a self-service portal and API. While some providers offer both dedicated

and cloud servers, their dedicated offerings lack the same level of automation and control. Further, these providers’ dedicated and cloud servers are not always part of the same network, whereas SoftLayer provides fully *integrated computing environments* as well as automated control over other elements of the infrastructure, including storage and network components.

Managed Hosting and Cloud Computing

Cloud or otherwise, servers need to be managed. A key consideration is *“Who should manage them?”* The answer depends on a number of factors. IT organizations of all types and sizes may benefit from managed hosting. Yet their rationale for whether to self-manage or utilize managed services can be as different as the organizations themselves.

An organization might lack the internal skills or resources to manage its own environment. Yet, even with the required expertise in place, many organizations choose managed hosting so they can apply their own staff to higher value activities centered on their core business. Some organizations find managing their own hosted servers a logical extension to what they are already doing with their on-premise servers. Others find self-management a black hole for time, resources and morale.

Just as cloud computing has not eliminated the need for dedicated servers, the need for managed hosting has not gone away with the advent of cloud computing. Instead, both services must evolve in order to keep up with the changing needs of those who choose to use them.

Issues with Traditional Managed Hosting

Managed hosting providers are not all alike. Prices, contract terms, performance, service level agreements (SLA) and every other service element may vary between providers. This suggests a couple things.

- First, some providers offer greater value than others—at least along particular dimensions. For example, one provider may offer lower prices **or** a higher performance infrastructure than others.
- Second, different providers represent different levels of value to each customer. Customer A may choose a service provider with low prices and a correspondingly weaker SLA. Customer B may choose a higher-priced provider that offers a stronger SLA.

It is clear that both service provider value and customer needs vary. There is no single managed hosting provider that best meets the needs of all customers. That said, Neovise has found there are a number of common gaps between what service providers deliver and what customers really want. Much of this divide stems from the labor-intensive nature of traditional managed hosting. While automation does exist, it has not kept pace with the needs of today's on-demand approach to IT. For instance, while cloud servers can be provisioned in minutes, it regularly takes two weeks for managed hosting environments to become available. Manual processing leads to a number of other issues including higher costs, inefficiency, human errors, inconsistent configurations and more.

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Lack of automation is not the only factor holding back the development and improvement of managed hosting. Services are often poorly designed from the beginning: “Why can't I manage certain resources while my service provider handles the rest?” Other times they don't evolve quickly enough: “Why don't you support IPv6 yet?” And don't forget punitive pricing. “Why do I have to pay for a backend network connection?”

Most managed hosting offerings are static and inflexible, involving long-term contracts that lock customers in for a year or more. They are also built around an *all or nothing* infrastructure approach. If the customer wants managed servers, they will also get storage and network management. This also implies a hands-off model for the customer. Rather than letting the customer manage what they prefer to manage, the provider locks them out.

To varying degrees, all technologies become obsolete. Managed hosting providers must continually invest to maintain the best infrastructure, tools and processes for the job. Yet many providers are relying on outdated equipment and architectures. This includes networks that are

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not tuned for new service offerings such as virtualization or the more automated and dynamic cloud computing model. Service providers sometimes choose to forget that delivery of high quality services depends greatly on high quality infrastructure. It is challenging, to say the least, to deliver on a performance or uptime SLA when the underlying infrastructure is outmoded or designed for a different age of technology.

Some aspects of managed hosting services are not tuned to deliver information to customers when they need it. Usage reports may be delivered a month or more after consumption has occurred. Pricing and billing statements often hide details within larger buckets so that the true value delivered (and the related costs) becomes incomprehensible. Basic things like infrastructure status can be even more opaque, requiring customers to make phone calls, send

email or submit forms to understand the status of a server. The service provider’s support engineers are not sending email to check server state; they are looking at live status. Why can’t you?

A New Breed of Managed Hosting

SoftLayer is an innovator in dedicated, cloud and hybrid hosting. The company is bringing this same innovative spirit to managed hosting, delivering a new kind of managed service that mirrors and reinforces many of the attributes of cloud computing, including unique pricing models, faster access to resources, shorter time commitments, self-service and more.

Understanding SoftLayer Managed Hosting

SoftLayer Managed Hosting provides expert management of the core services of any SoftLayer environment, whether dedicated, cloud or hybrid. Management of core services—such as database, security, monitoring, backup, or storage—is performed by a dedicated team of industry-certified professionals. This team of experts works directly with customers to set up and provide ongoing management of each unique environment. They incorporate both best practices and years of experience delivering superior IT services.

<p><u>Technical Account Manager (TAM)</u></p> <p>The TAM oversees all customer requests and issues from start to finish. TAM’s ensure consistency of support by gaining a close understanding of each of their customers, including businesses needs.</p>	<p><u>Senior Systems Engineer (SSE)</u></p> <p>With platform-specific knowledge and industry best practices, SSEs blend security, performance and architecture to help customers gain the best performance and efficiency of their systems.</p>
<p><u>Senior Database Administrator (DBA)</u></p> <p>DBAs complement customer staff and become a primary resource for maximizing the total effectiveness of databases by handling performance, monitoring, growth and backup activities.</p>	<p><u>Extended Support Team</u></p> <p>SoftLayer’s full team of certified specialists (network / storage / datacenter engineers, operations specialists, change control managers etc.) is available when needed for any customer.</p>

Table 1 - Managed Hosting Team Staffing

This virtual team manages the core services around database, security, monitoring, backup and storage. As part of the on-boarding process, audits and reviews for the various services are performed in order to capture current processes and capabilities, document procedures and

response plans, and determine future goals and strategies. Here are just some of the highlights for ongoing managed hosting services:

- **Database Services** include threshold alerting on memory usage, CPU utilization, disk I/O performance, and database capacity. They also include optimization of Microsoft® SQL Server® or MySQL® Server environments.
- **Security Services** leverage best practices referenced from organizations such as The Center for Internet Security (CIS) and Microsoft®, and incorporate monthly status checks and reports to keep the security system and plan up to date.
- **Monitoring Services** are performed 24/7 and include proactive assessment of monitored data to predict and prevent system bottlenecks. Up-to-date run-books and customized remediation plans help speed recovery from unplanned events.
- **Storage Services** span high-availability storage, iSCSI SAN, or FTP/NAS. They include storage utilization monitoring and reporting, as well as storage performance monitoring, measuring dimensions such as disk I/O to minimize performance bottlenecks.
- **Backup Services** follow customer preferences for retention periods, encryption options and application-specific backups. They also use a separate network to isolate traffic and avoid impacting other activities. Optional test-recovery strategies are also available.

**More details on SoftLayer Managed Hosting can be found on the [SoftLayer website](#).*

In addition to detailed real-time performance reports through the Customer Portal, and ongoing alerts, the SoftLayer team provides monthly follow-up and review as appropriate to each service. This makes customers aware of critical trends, impending limits and the need for changes or additional capacity planning.

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SoftLayer Managed Hosting is not meant to be all things to all people. For example, the service does not cover management of applications like ERP, CRM, human resources and accounting. The service provides operating system installation and patching, but not application installation and

patching. The service is not a general purpose outsourcing offering. SoftLayer Managed Hosting is also not an expensive, sky-is-the-limit, everything plus the kitchen sink, management offering. And that is a good thing.

Why is the SoftLayer Approach Better?

SoftLayer Managed Hosting has a number of differences and advantages relative to other managed hosting services. Understanding these important differences, along with the related

benefits, requires a closer look. The unique value proposition of SoftLayer Managed Hosting is better understood by considering its unique advantages across each of these five categories which are all critical for any type of on-demand IT, including cloud computing:

1. Agility

- Servers with operating system and basic application installs are ready within one business day of ordering, beating other providers by as much as two weeks or more.
- Real-time status and reporting provides around the clock visibility of performance, availability, consumption and more. This up-to-the-moment information enables customers to make fast decisions and take action just as quickly.

2. Flexibility

- Terms as short as 30-days eliminate expensive, long-term commitments and make managed hosting a viable option for more applications.
- SoftLayer Managed Services are available on dedicated, cloud and hybrid environments, so customers may choose any or all of them to best meet their needs.

3. Reliability

- Automated deployment and management reduces the risk of human error and inconsistent configurations, giving solutions greater standardization and reliability.
- SoftLayer backs this with a leading SLA that includes 100% uptime for both the public and private networks, as well as rapid response to alerts and hardware failures.

4. Control

- Through an extensive API, Customer Portal and underlying automation, SoftLayer puts unprecedented control of all environments—including managed environments—in the hands of customers.
- The company also allows customers to self-manage certain elements of their environment while the SoftLayer managed hosting team covers the rest.

5. Transparency

- A straightforward approach to service packaging along with highly competitive pricing lets customers understand exactly what they are getting and at what price.
- Even for environments under management, SoftLayer still provides full access to real-time reporting and other status information through the Customer Portal.

Neovise Perspective

Since launching in 2005, SoftLayer has reinvented dedicated hosting through extreme automation—putting unprecedented levels of control directly in the hands of customers. The company also brought the capabilities and benefits of cloud computing to both dedicated physical and virtualized environments. By seamlessly blending dedicated and cloud hosting, SoftLayer has given its customers industry leading choice, flexibility and power. These and other advanced capabilities—like the Customer Portal, API and Private Network—demonstrate a focused and consistent approach to innovation. So, it is not surprising that SoftLayer has created a new breed of managed hosting, adapted to the needs of the cloud computing age.

Innovation is part of SoftLayer’s culture and DNA. While managed hosting services have generally been slow to match technical advancements that support on-demand IT, SoftLayer has taken managed hosting to a new place. The term *service* used to imply slow, manual, error prone, labor-intensive management at a high price. With SoftLayer it means rapid, automated, reliable, on-demand management. SoftLayer has innovated by focusing on how things should be rather than how they’ve traditionally been done.

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Customers receive direct benefits from SoftLayer’s improvements to managed hosting. The possibility for a short-term managed hosting project is now reality. Customers are not left waiting two weeks just to get started, and contract terms as short as a month allow them to move on after project completion. Organizations supporting a major event or promotion can focus their expertise where it matters most and let SoftLayer handle the operational aspects with the greatest efficiency.

Short-term projects are not the only ones that make sense for SoftLayer Managed Hosting. Intelligent use of automation improves the economics of managed hosting, making it a viable option for more applications on an ongoing basis. Also, some businesses may even find that SoftLayer Managed Hosting makes sense for all of their applications. For example, online businesses, SaaS vendors and many ISVs will benefit from the extended operations team that adds 24/7/365 support and specialized resources to cover databases, storage, security and networking.

SoftLayer Managed Hosting has brought new levels of agility, flexibility, reliability, control and transparency to managed hosting. Since many of these benefits depend on SoftLayer’s superior automated infrastructure, it will be hard if not impossible for other hosting providers to match them. SoftLayer Managed Hosting is just what is needed for this new era of hosting.

About Neovise

Neovise delivers essential knowledge and guidance to key members of the IT community including IT leaders, IT staff, business executives, technology vendors, systems integrators, and service providers. While each of these roles has a separate focus, they all require value added information and advice in order to formulate winning strategies and make optimal decisions.

Based on decades of industry experience and ongoing market analysis, we are your trusted, independent source of *Business Driven IT Insight*[™].

For more information, visit www.neovise.com.