Creating New Class of Enterprise-Cloud Services

Savvis delivers tiered cloud services, offering more agility, availability, and security, for lower operational cost.

EXECUTIVE SUMMARY

Customer Name: Savvis (a CenturyLink Company)

Industry: Service provider

Location: Global

Number of Employees: 2500

Challenge
- Develop new enterprise-class cloud solution, enabling customers to create their own virtual private data center inside multitenant environment
- Differentiate by offering tiered service options and easy self-provisioning

Solution
- Fully integrated and virtualized platform, comprising Cisco IP NGN (core WAN) and VMware hypervisor, Cisco Unified Computing System, and Cisco Nexus Switches (in the data center)
- Cisco Services for architecting, planning, designing, implementing and constantly optimizing Savvis' cloud services, accelerating and de-risking migration

Results
- For customers: better control of costs and delivery throughout application lifecycle
- For Savvis: Cloud infrastructure-as-a-Service capabilities with reduced risk, faster time to market, improved lifecycle management, better scaling, and lower operating costs

Challenge

Savvis is a worldwide leader in providing Cloud, network, and managed hosting services. The company provides outsourced solutions for enterprise customers by combining cloud technology, an extensive global IP backbone, and over 50 data centers located in the United States, Europe, and Asia. More than 2500 customers, including many of the top 100 companies in the Fortune 500, use Savvis to reduce capital expense, improve service levels, and harness the latest advances in cloud computing.

This success owes much to a strategy formed in the mid-2000s, when the company set about creating a best-in-class public Cloud offering. Savvis realized that to meet this objective, it needed to adapt and bring together its IT infrastructure into one virtualized platform capable of meeting enterprise requirements.

"Our vision was to integrate the wide area network and the data center into one virtualized quality of service-sensitive infrastructure plane, suitable for an entire enterprise application portfolio," says Bryan Doerr, chief technology officer, Savvis. "This would give enterprises unprecedented flexibility in controlling how much their applications cost and how effectively they can deliver those applications to their end users."

Savvis understood that this challenge involved managing greater network complexity, with more services riding on its Multiprotocol Label Switching (MPLS) based network infrastructure. Success was also dependant upon establishing operational excellence across the network lifecycle. Key areas identified for improvement included network design, change management, proactive monitoring, and critical issues management.

Solution

To realize this vision, Savvis decided to start with an IP Next-Generation Network (IP NGN) that was world class in both its network architecture and service delivery capabilities. In the design of the network, Savvis continued its service tradition of minimizing complexity at the customer site, focusing instead on offering virtual services, like firewalls, in the network or "cloud" as it was called even then by networking types. Savvis found the needed capabilities at Cisco.

> "Our vision was to integrate the wide area network and the data center into one virtualized quality of service-sensitive infrastructure plane, suitable for an entire enterprise application portfolio."

Bryan Doerr
Chief Technology Officer
Savvis

Later, Savvis turned its attention to the infrastructure inside the data center. In its search to find the best usage-based architecture, not only from a server and virtualization perspective, but also from a networking one, Savvis again turned to Cisco. For many years the two companies have been strategic partners, collaborating to develop innovative high performance networking, security, and application services. Savvis reviewed its plans for a quality-of-service managed customer experience, with deep security capabilities all of which were the outgrowth of years of experiences with multi-tenant platform service.

"Ultimately, we really look at our partnership with Cisco as one of the most mature that we have in the organization," says Jeff Von Deylen, senior vice president, global operations and client services, Savvis.

Recognizing a shared vision of the new data center evolution to cloud with Savvis, Cisco presented Unified Data Center, a practical framework for helping customers to consolidate, virtualize, and automate their environments and lay the foundations for cloud computing.

The shared vision of the data center was one of enterprise-class services on service provider grade infrastructure, combined with Savvis' own innovative automation, orchestration, and customer controls to build a cloud-based service that was unique to the industry: a cloud service that offers enterprise-required services, not simply compute virtualization. Cisco helped build Savvis' cloud services catalog and then built the entire Cloud infrastructure so that the Cloud services catalog would map to the Cloud architecture.

A key element of this architecture was the Cisco Unified Computing System™ (UCS). Savvis engaged early on in an extensive proof of concept on UCS, the results of which confirmed several advantages over conventional server-based solutions. The UCS trial revealed capabilities that furthered the Savvis cloud vision in ways that were unique in the industry.

To help de-risk and accelerate migration, Savvis chose to leverage Cisco's Network Optimization Service for proactive network lifecycle management, along with Focused Technical Support for operations management with focus on reducing mean time to repair (MTTR) and driving operational excellence around critical issue management.

The Cisco Services organization worked closely with Savvis architects and engineers to create a model for achieving operational excellence, based on establishing best practice in four key areas:

- New service introduction and infrastructure upgrades

- Service validation at scale prior to production

- Software lifecycle management across the IP NGN, data center, and Cloud infrastructure

- Network visibility with proactive network monitoring

- MTTR.

"Cisco Services basically became an extension on my team," says Mike Taylor, vice president of global infrastructure engineering and operations, Savvis. "We worked together to figure common test criteria and profiles for the architecture. Then we would work on bug scrubs against these profiles. At that point we would be ready for code recommendations to start testing jointly in our labs. Cisco services were with us every step of the way."
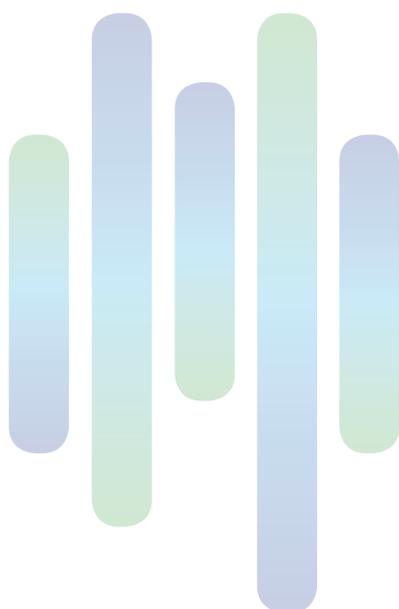
> "Ultimately, we really look at our partnership with Cisco as one of the most mature that we have in the organization."

Jeff Von Deylen
Senior Vice President, Global Operations and Client Services
Savvis

> "I don't think we could have gotten to market as fast as we did without Cisco Services. Cisco is much more than a hardware manufacturer. I look at them as a software developer and a true partner."

Mike Taylor
Vice President of Global Infrastructure Engineering and Operations
Savvis

As part of the engagement, Savvis and Cisco Services devised a governance methodology to ensure alignment with business goals, establish project priorities, and track progress across both organizations with regular reporting and review across executive management chains.

Results

Taking the UCS platform, Savvis has since created Symphony Virtual Private Data Center (VPDC), one of the industry's first enterprise-class, multi-tenant cloud solutions. This award-winning outsourcing proposition is one of only a handful of services on the market today that supports a true virtual data center concept.

Importantly, the enterprise-cloud service provides a real alternative to the current limitations of mass-market clouds. For customers, the prospect of hourly usage-based billing, with no long-term commitments, offers a tremendous potential for cost savings. Customers can also benefit from levels of performance, availability, security, and flexibility that until now were only available in dedicated IT environments. In addition, multi-tiered service profiles with policy enforcement offer support for the entire application lifecycle: test/development, quality assurance, web hosting, and enterprise mission critical applications.

Savvis expects to see greater scaling of server virtualization with lower operating expenses. As UCS blades deliver ever-increasing core and memory density, as well as Intel innovations enabling new services, Savvis will be able to increase scale and performance without added complexity or costs in terms of efficient management. This capability makes it easier and faster for Savvis to scaleup, while also lowering total cost of ownership through better server utilization.

UCS assists Savvis in operating a global cloud platform with a high level of efficiency. If there is an issue, for example, with a line card, Savvis engineers can get information straight away from the UCS Manager. Similarly, they receive automatic alerts if there is a memory problem, or if the I/O modules have an issue. Troubleshooting no longer involves sending engineers to investigate, or unplug cables. Management is all done centrally by one person.

In addition, Cisco Services has helped Savvis to unlock even greater value from its IP NGN and Cloud investment. Saving significant time on software testing has helped to accelerate time-to-market for new services. "I don't think we could have gotten to market as fast as we did without Cisco Services," says Taylor. "Cisco is much more than a hardware manufacturer. I look at them as a software developer and a true partner."

Savvis now has an 18-month software roadmap aligned with its technology and business goals. Boosted by Cisco Network Optimization Services, the provider is able to proactively monitor performance and capacity impacting metrics. Better visibility and control of network assets and lifecycle management has simplified budgeting and cash flow management.
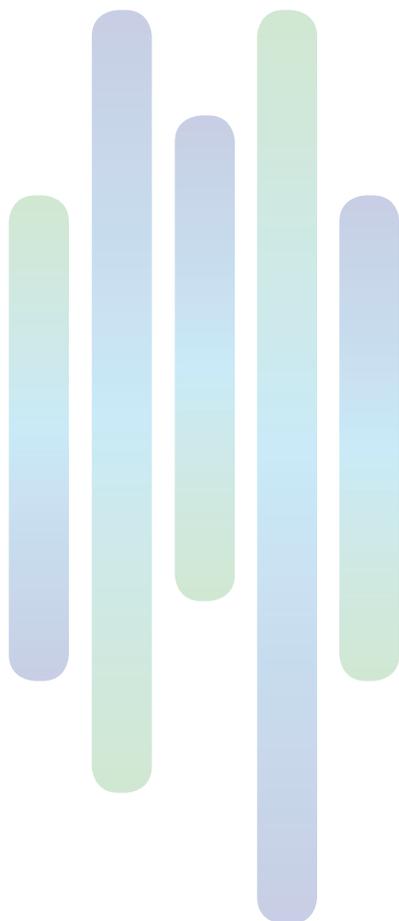
For More Information

To learn more about Cisco Unified Data Center, go to www.cisco.com/go/datacenter

For further information about Cisco Cloud Solutions, go to: www.cisco.com/go/cloud

To discover how Cisco Services can help accelerate your Cloud journey, go to: www.cisco.com/go/services

Products and Services

Compute

· Cisco UCS 5100 Series Blade Servers

· Cisco UCS 6100 Series Fabric Interconnects

Switching

· Cisco Nexus 7000 and Cisco Nexus 1000v Series Switches

· Cisco Carrier Routing System, incorporating Cisco Catalyst 6500 Series Switches and Cisco 7600 Series Routers

Virtualization

· VMware ESX 4 Hypervisor

Services

· Cisco Network Optimization Services

· Cisco Focused Technical Support

· Cisco Planning, Design, and Implementation Services

ıı|ıı|ıı
CISCO

Americas Headquarters	Asia Pacific Headquarters	Europe Headquarters
Cisco Systems, Inc.	Cisco Systems (USA) Pte. Ltd.	Cisco Systems International BV Amsterdam,
San Jose, CA	Singapore	The Netherlands

Cisco has more than 200 offices worldwide. Addresses, phone numbers, and fax numbers are listed on the Cisco Website at **www.cisco.com/go/offices.**