Top Five Reasons to Deploy VersaStack Solutions

Built on Cisco UCS Integrated Infrastructure and IBM Storage Solutions

Top 5 Reasons

1. **Quick and reliable deployment:** Take the guesswork and complexity out of shared IT infrastructure with a validated solution.

2. **Management simplicity:** Scale up or out and operationally integrate your bare-metal and virtual infrastructure resources to automate previously complex, time-consuming, and manual processes.

3. **Storage efficiency and optimization:** Store up to five times more data in the same footprint with built-in storage virtualization and real-time compression.

4. **Versatility and power:** Use a single solution architecture to support your business initiatives, from analytics, private cloud, and high-performance applications to scale-out data centers and remote-office and branch-office (ROBO) deployments.

5. **Foundation for future success:** Trust a proven platform backed by an excellent single support structure and technical assistance team.

Introduction

Your business needs to be agile and efficient to capitalize on business opportunities. To meet those objectives, your IT organization must be able to pivot with the company as it changes business models and responds to dynamic demands. If your IT staff and IT infrastructure can't respond, you need to move from a traditional data center design with static resources to a flexible computing strategy that supports dynamic resource allocation and increased resource utilization. The VersaStack solution from Cisco and IBM gives you the ease, efficiency, and versatility you need to adapt your environment to whatever your users, applications, workloads, and initiatives demand.

Move from Frustration to Innovation

Rapidly changing demand and workload diversity have forced IT departments to create large sets of hardware and software components—and spend time integrating them into a workable solution. Navigating the technology maze can be enlightening and frustrating, and making sure that all the components work well together is time consuming. The VersaStack solution from Cisco and IBM takes the guesswork out of deploying platforms that deliver IT agility. You can transform your IT infrastructure from a collection of inflexible and poorly integrated systems into timely, flexible, automated, and secure application-centric infrastructure that lets you innovate at a fast pace to stay competitive.

Reason 1: Proven Solutions for Quick and Reliable Deployment

The VersaStack solution from Cisco and IBM is a Cisco UCS® Integrated Infrastructure solution that combines the Cisco Unified Computing System™ (Cisco UCS), Cisco Nexus® 9000 Series Switches, and IBM all-flash and hybrid storage systems built with IBM Spectrum Storage software. Preintegrated, validated, and supported, the solution delivers easy, efficient, and versatile IT infrastructure. Your organization can quickly and easily deploy the shared infrastructure your business needs and break down the barriers that limit agility and innovation (Figure 1).

Validated Designs

Cisco and IBM make it easy to use technology and build cost-effective data center infrastructure for any application. Verified, lab-tested architectures provide detailed design and implementation guidance that help reduce risk and guesswork by giving your architects and administrators step-by-step guidebooks for implementation. By following the guidelines in these Cisco® Validated Designs and IBM

Figure 1. VersaStack Is a Preintegrated and Validated Solution

Redbooks, you can create a VersaStack foundation that helps protect against compromise while delivering a simplified, standardized, and trusted approach for the deployment, use, and management of your infrastructure resources.

Right Platform for the Right Workload

The VersaStack solution combines decades of thought leadership, experience, and expertise from Cisco and IBM with powerful data center computing, storage, networking, mobility, collaboration, analytics, and software technology from both companies to deliver the foundation of the modern data center. Our experts work together to design, develop, test, and refine solutions that solve real business challenges. Whether you need to run your business applications locally or in a private or hybrid cloud, you can have confidence that software solutions from IBM, such as IBM WebSphere, PureApplication, and DB2 for Linux, UNIX, and Microsoft Windows will be optimized for and run best on VersaStack solutions.

Reason 2: Management Simplicity

Traditional management approaches make your IT environment difficult to use and scale. That's because an approach in which management is an afterthought results in incomplete solutions that fail to deliver unified infrastructure management. Cisco and IBM break down these barriers so that you can simplify and maintain your physical, virtual, and cloud platforms with better visibility and control.

VersaStack integrates best-in-class components and management software into a solution that is ready to use as soon as it reaches your loading dock. Automation, orchestration, and lifecycle management capabilities simplify deployment and make it easy for your IT staff to operationally integrate your bare-metal and virtual infrastructure resources to address

complex, time-consuming, manual, and compartmentalized processes.

- Cisco UCS Manager provides unified management of all system components. Using Cisco SingleConnect Technology, it controls multiple chassis and manages resources for thousands of bare-metal deployments and virtual machines.

- Cisco UCS Director unifies and automates end-to-end integrated infrastructure management processes by abstracting the complexity of devices, hypervisors, and virtual machines and automating management processes with unified and easy-to-use tools and interfaces.

- Cloud-ready infrastructure means you can consistently enforce your data center security, quality-of-service (QoS), and access-control policies in both private and public clouds, and safely extend your data center and cloud capacity, scaling your applications and adapting to changing priorities and strategies.

Reason 3: Storage Efficiency and Optimization

VersaStack solutions are built with Spectrum Storage software. This industry-leading storage virtualization solution can pool and access your new and existing storage systems, including all-flash or disk storage systems; optimize storage use; and ease data migration. Built-in IBM Easy Tier™ features automatically migrate data between storage tiers (dynamic tiering) based on real-time use patterns without disruption to applications, and you can enable compression to further increase efficiency. Together, these capabilities and storage innovations can help your IT staff improve efficiency and utilization while reducing complexity and cost.

Storage Footprint and Capacity

The virtualized, flash-optimized, enterprise-class storage systems used in VersaStack

"The technology is so much smarter than a traditional infrastructure. Features like real-time compression will allow us to reduce our storage acquisition costs by up to 50 percent."

John Buskermolen, Co-Founder and Vice President, i-Virtualize

solutions create an efficient storage infrastructure. Recognizing the complex balance of storage capacity, performance, and cost, the VersaStack solutions use IBM Real-time Compression capabilities to save up to 80 percent of disk space with no impact on system performance. Furthermore, the IBM Easy Tier feature automatically migrates data between storage tiers (dynamic tiering) based on real-time use patterns without disruption to applications. With these tools, your IT staff can optimize storage pools and avoid downtime for backup, maintenance, and upgrade operations through the use of advanced copy services such as point-in-time copy and remote replication.

High Performance

Latency-sensitive applications can take advantage of VersaStack solutions with the IBM FlashSystem V9000, an all-flash-memory array with ultra-low response times. Designed to replace Tier 1 systems with slow disk drives, FlashSystem V9000 can function as a software-defined storage layer that virtualizes all managed storage for easy access. The system accelerates I/O for critical applications through IBM FlashCore technology, which includes advanced flash-memory management features, ultra-fast write buffers, and hardware-based data offload methods, while preserving enterprise resiliency through IBM Variable Stripe RAID and other unique reliability features.

Flexible Integration with Backup, Archive, and Tape Solutions

Tape storage solutions are popular choices when companies need to control costs and protect data for the long term. With VersaStack solutions, you can add tape storage to your data center deployments to easily archive and maintain the growing volumes of unstructured data that are generated by your big data and cloud computing environments. The industry-leading IBM Spectrum Protect backup and archiving solution easily complements VersaStack and can reduce backup infrastructure costs by up to 53 percent.[1] You can choose from an extensive portfolio of tape archiving solutions, including drives, autoloaders, libraries, virtual tape systems,

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[1] Based on IBM assessments using Butterfly software.

and software solutions, making it easy to use tape drives just like you do disk drives for added simplicity. Whether you need a few tape systems or large robotic solutions, VersaStack can integrate with the products you need and help you get the most from cost-effective tape storage.

Reason 4: Versatility

Traditional IT architectures often require infrastructure modifications to support new applications and services. VersaStack provides a uniform approach to IT architecture with a well-characterized and documented shared pool of resources. With this flexible and consistent approach, you can support a variety of service-level agreements (SLAs) and business initiatives—from analytics, private cloud, and high-performance applications to scale-out data centers and remote-office and branch-office (ROBO) deployments—with a single solution architecture and unified management approach (Figure 2).

- **Application acceleration:** Whether you need to accelerate the performance of your entire data center or deploy solutions to support specific high-performance applications, the VersaStack solution for high performance can help you achieve your goals. This comprehensive all-flash enterprise storage solution with microsecond response times accelerates responses

so that your business can answer crucial business questions in less time.

- **Scale-out data centers:** VersaStack solutions let you scale and repurpose systems without having to adjust your software and networking capabilities or interrupt operations. You can scale your environment up if you need greater performance and capacity (adding computing and network resources individually as needed), or you can scale it out if you need multiple consistent deployments (adding integrated systems). You can add flash-memory capacity to support multiple applications, and you can scale out the virtualized storage system to increase the number of I/O operations per second (IOPS) and bandwidth for your applications. As a result, you can pay as you grow, and you can grow in small increments that don't break your budget.

- **ROBO deployments:** With VersaStack, you can easily deliver business applications to your ROBO and point-
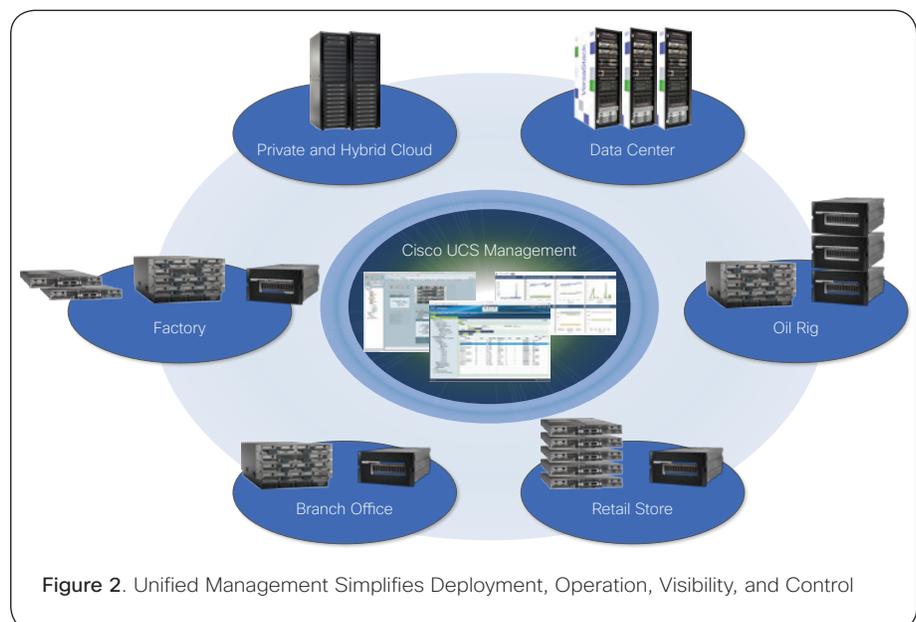

Figure 2. Unified Management Simplifies Deployment, Operation, Visibility, and Control

of-sale (PoS) locations and small IT environments. The solution provides powerful, flexible servers and storage systems that don't need raised floors so you can better use your floor space. Using Cisco UCS management, you can extend your management capabilities to multiple domains within and outside your data center, across multiple facilities, and across locations. As a result, your remote and branch offices can be managed centrally, consistently, and efficiently.

- **Private and hybrid cloud deployments:** VersaStack with Cisco UCS Director offers everything your organization needs to deploy infrastructure as a service (IaaS) so you can deploy new cloud applications and repatriate your public cloud workloads. Your users simply request IT resources through an easy-to-use self-service portal, and the system provisions the underlying infrastructure resources. Your applications run more efficiently within, between, and beyond data center boundaries, and your IT organization evolves to IT as a service (ITaaS) to accelerate IT delivery and reduce business risk.

- **More choice and flexibility:** You need to get the types of IT resources you need and easily scale your computing and storage resources up and out. You also need assurance that the technologies are tested, certified, and supported. Cisco and IBM have established a large partner ecosystem of software vendors so that

you can access optimized solutions covering the entire operational lifecycle. Collaboration and validation with partners gives you access to new technologies while helping your IT staff integrate innovation with your IT processes and business applications at low risk.

Reason 5: Foundation for Future Success

IBM and Cisco recognize that your IT infrastructure connects your business to the people that matter most: your users, customers, and suppliers. We continue to innovate our long-standing Global Services Alliance partnership so that you can have confidence that the IT technology you rely on is backed by comprehensive support. You can take advantage of a single point of contact through the Cisco Technical Assistance Center (TAC): a team of experts who provide troubleshooting support, advance hardware replacement options, and extensive self-help along with smart capabilities that can help your IT staff be more efficient. Cisco experts work with IBM Global Technical Services to deliver end-to-end problem escalation and resolution, onsite support, and the power of the collective expertise of both companies.

Conclusion

Cisco and IBM are global IT industry leaders and have a 15-year history of demonstrated joint success, with more than 25,000

> *"VersaStack stood out from competing options as it combines proven technology from two vendors with unparalleled track records."*
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> *Jonathan Cox, Director of IT Services, Medicat*

shared customers. We have experience in guiding emerging technology transitions and have the breadth and capability to deliver innovative, validated solutions while helping your organization reduce risk. Cisco and IBM together provide global delivery capabilities and deep industry expertise along with current technology offerings in data center computing, networking, mobility, collaboration, analytics, and the Internet of Things (IoT). Our solution portfolio is based on client-specific needs and strategies across industries and segments, including healthcare, banking, public safety, energy, utilities, and retail. We offer you what you need to achieve the vision of a modern data center that delivers IT and business agility.

For More Information

- Learn more about VersaStack at http://www.ibm.com/versastack and http://www.cisco.com/go/versastack.

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