



VersaStack Solution for Data Center Scale Out

Built with Cisco UCS Integrated Infrastructure
and IBM Storwize V7000 Unified Storage



Business Innovation Relies on IT Scalability

Does your data center run in traditional siloed environments? If so, your IT department is likely spending up to 73 percent of its budget to keep your data center running.¹ With rapidly increasing data storage requirements, IT infrastructure inefficiencies, and complex troubleshooting techniques, your IT staff can have difficulty supporting business priorities and meeting service-level agreements (SLAs). When handling growth and change turns into a complex exercise in scaling and migration, supporting more workloads and getting the most out of your IT resources is difficult and expensive to achieve.

VersaStack Solution for Data Center Scale Out

Transforming your data center from siloed systems to virtual environments running on shared infrastructure can help you make better use of IT resources. The VersaStack Solution for Data Center Scale Out is a pretested and validated solution that pools your computing, network, and storage resources and allows you to easily meet demand. Based on Cisco UCS® Integrated Infrastructure, the solution combines the Cisco Unified Computing System™ (Cisco UCS), Cisco Nexus® 9000 Series Switches, IBM® Storwize V7000 Unified system, and VMware vSphere 5.5 Update 2 into a system. With a solution that is easy to scale, deploy, operate, and manage, your IT staff can quickly deliver the IT infrastructure you need and break down the barriers that limit IT scalability and innovation.

Get Easy, Efficient, and Versatile IT Scalability

When computing and storage capacity are added in an ad hoc manner, your IT staff spends a lot of time selecting, connecting, integrating, testing, and managing components. Cisco and IBM make it easy to deploy the resources you need and add more resources when you need them. Verified, lab-tested architecture provides detailed design and implementation guidance that helps reduce risk and guesswork by giving your architects

and administrators detailed guidebooks for implementation. By following the guidelines in these Cisco® Validated Designs, 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.

Accelerate Deployment

As the pace of business continues to accelerate, your VersaStack solution can grow and flex, allowing your IT staff to easily deploy, allocate, and use resources on a moment's notice. Cisco UCS Integrated Infrastructure abstracts the complexity of individual devices, hypervisors, and virtual machines and automates management processes through a unified and easy-to-use set of tools and interfaces. Automation, orchestration, and lifecycle management capabilities simplify deployment and enable your IT staff to easily integrate your IT infrastructure resources to address complex, time-consuming, manual, and compartmentalized processes. Because this intelligent system knows how objects fit together and can apply service profiles in a consistent manner, you can have confidence that the right equipment is quickly and easily provisioned for the workload that you need it to support.

Scale IT Capacity to Support Demand

You need the flexibility to add computing and storage capacity to support more workloads and users. Doing so shouldn't require fundamental changes to your solution architecture. Each layer of the VersaStack solution offers platform and resource options to scale the integrated infrastructure up or down while continuing to support the features you use and maintain best practices for connectivity. For example, you can scale your environment up if you need greater performance and capacity (adding computing, network, and storage resources individually as needed), or you can scale it out if you need multiple consistent deployments (adding integrated systems).

Optimize Storage Footprint, Capacity, and Performance

The solution uses IBM Storwize V7000 Unified storage, a virtualized, flash-memory-optimized, enterprise-class storage system that provides efficient storage infrastructure for file and block data. The system includes technologies that complement and enhance virtual environments with built-in functions such as data virtualization, real-time compression, and IBM Easy Tier, which automatically migrates data between tiers based on real-time use patterns, for extraordinary levels of performance and efficiency. In fact, Easy Tier can deliver up to 3x performance improvement with only 5 percent of flash-memory storage capacity.² Your IT staff can centrally manage storage volumes from a single point, migrate data without disruption to applications, and avoid downtime for backup, maintenance, and upgrade operations.

Scale Higher While Lowering Total Cost of Ownership

The simplicity of the VersaStack Solution for Data Center Scale Out allows you to scale your data center infrastructure and capacity in a cost-effective way. The system uses a unified fabric that results in fewer network interface cards (NICs), host bus adapters (HBAs), cables, and upstream switch ports and eliminates the need for a parallel Fibre Channel end-to-end network. Traditional chassis-resident switches are replaced by a low-cost, low-power, zero-management fabric extender that enables the entire system to scale across multiple chassis without any addition of management points. All hardware and software components are managed through unified, embedded management to improve operation efficiency. In addition, IBM Real-time Compression in Storwize V7000 Unified delivers

higher performance for compressed data than traditional systems offer for uncompressed data, enabling greater space efficiency and reduced infrastructure cost. With fewer components to buy and manage, you can scale IT at less cost.

Why Cisco and IBM?

Cisco and IBM are global IT industry leaders and have a 15-year history of demonstrated joint success, with more than 25,000 shared customers. We have experience in guiding emerging technology transitions and have the breadth and ability 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 multiple industries and segments, including healthcare, banking, public safety, energy, utilities, and retail. As a result, we can offer you what you need to achieve the vision of a modern data center that scales to perform.

For More Information

Read the Cisco Validated Design at [VersaStack for Data Center Scale Out](#).

Learn more about VersaStack at <http://www.cisco.com/go/versastack>.

¹ Gartner—Cisco IT, Data Center Cost Portfolio

² IBM Lab measurements



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