VCE VxRACK™ SYSTEM 1000 SERIES

KEEP PACE WITH ANY RATE OF BUSINESS GROWTH, WITH HYPER-CONVERGED INFRASTRUCTURE

Deploying and managing enterprise applications became much easier when VCE pioneered converged infrastructure. Using Vblock® Systems, enterprises and service providers can deploy enterprise-scale infrastructure in weeks, not months. Availability improves. Risk decreases. And management is much simpler.

But for some applications—especially those that start small and then scale up rapidly—hyper-converged infrastructure can be an alternative. For example, a service provider might want to start with a pilot and then scale after validating demand. An enterprise might not be able to confidently predict application growth, especially for third-platform applications like social and mobile computing, big data, and cloud. It's difficult to know if data volume will grow twofold or tenfold—and over one year or one month. Overestimating the rate of growth is costly. Underestimating can be even more costly if it means you can't meet SLAs, or new business initiatives have to wait.

Until recently, matching variable business growth with the right-size infrastructure was difficult. Applications that started out small were most often deployed in infrastructure silos. That led to high data center space, power, and cooling costs. The resulting operational silos increased management overhead and risk.

Introducing VCE VxRack System: First Solution in Our Hyper-Converged Infrastructure Portfolio

Now you can extend the benefits of converged infrastructure to applications and workloads that start small, even if you don't know how fast and large they'll grow. The solution is VCE hyper-converged infrastructure. Start with just the right number of nodes for the business need—especially tier-2 mixed workloads, third-platform applications, and anything as-a-service. As your environment grows, add up to hundreds of nodes, scaling from a couple of terabytes to multiple petabytes. VCE hyper-converged infrastructure provides many of the benefits of converged infrastructure while enabling a pay-as-you-grow consumption model.

Our first hyper-converged infrastructure product is the VCE VxRack™ System 1032. It combines EMC ScaleIO software on servers with an integrated 10 GB network Switches. EMC ScaleIO is a software-based storage virtualization technology that aggregates all of the server's direct-attached storage (DAS) disks into a shared pool of block storage. The VCE VxRack™ System 1000 series supports multiple hypervisors and non-virtualized bare-metal deployments—whichever works best in your environment. EMC end-to-end data protection secures all applications and data inside the chassis. And the VCE VxRack System 1000 series can participate in the VCE Vscale™ Architecture and scale with it, allowing consistent operations and management throughout the data center.

Grow Flexibly: Add Storage and Compute, or Just Storage

EMC ScaleIO software makes it easy to scale the VxRack System 1032. Each rack can contain storage and compute, or just storage only node types. If a growing application needs more storage only, for example, provision software-based storage using EMC ScaleIO. The ability to configure just the right amount of each resource makes hyper-converged infrastructure highly efficient. And the integrated 10 GB network switches keep the network from limiting growth.

Like VCE converged infrastructure, the VCE VxRack System1000 series comes with VCE industry-best customer experience. Time-consuming design reviews are unnecessary because the VCE VxRack 1000 System series is engineered and delivered as one entity—ready for your application.

Four Use Cases

Choose the VCE VxRack System 1000 series for enterprise applications that will start small and rapidly grow to any scale—even extreme web scale. Popular use cases include enterprise mixed workloads, everything-as-a-service (XaaS) for enterprises and service providers, and certain third-platform applications.

Enterprise Mixed Workloads

The tier-1 enterprise applications you use to operate the business—ERP, CRM, OLTP, OLAP, and databases—require infrastructure that is highly available, resilient, and high performing. VCE Vblock Systems are best suited for these tier-1 applications. In comparison, tier-2 workloads, such as dev/test, private cloud, and user files, need less stringent resiliency, but the ability to scale in smaller increments.

If you've already deployed a VCE Vblock System for tier-1 workloads, you have two options for enterprise tier-2 mixed workloads. One is to consolidate them on your existing Vblock System. The new option is to move these workloads to VCE VxRack 1000 Systems. The systems are highly scalable because on-demand resource pools are available to any application workload that needs them. That's especially useful if:

- Workloads vary seasonally

- SAP benchmarks vary widely

- The business is involved in mergers or acquisitions

You can deploy multiple tier-2 applications on a VCE VxRack System. As workload grows, just add new racks. You can add storage and compute or just storage—whatever your application requires. This flexibility increases utilization. And if workload contracts, you can repurpose the nodes for other workloads.

Everything as a Service (XaaS) for Enterprises

IT teams are shifting to the "as-a-service" (aaS) consumption model. Enterprise users appreciate this model because they can start using applications right away instead of waiting through a lengthy server purchase and provisioning process. Development teams like infrastructure-as-a-service (IaaS) and platform-as-a-service (PaaS) because they can almost instantaneously start their dev/test activities. Users like SaaS because they can instantaneously consume applications. IT teams like the as-a-service model because IT is seen as enabling the business instead of slowing it down.

The VCE VxRack System 1000 series is well suited for XaaS. Start with the right-size rack to meet today's demands instead of trying to predict demand months or years from now. As demand grows, scale up to thousands of nodes. If demand contracts, repurpose the nodes for other services. Scale storage and compute together or independently.

You can also get your entire cloud stack from the EMC Federation. Solutions include VMware vSphere, VMware vRealize Suite, EMC data protection services, and EMC Federation Enterprise Hybrid Cloud (EHC). When users visit a self-service portal to request servers and storage, VMware vRealize provisions them automatically, using resources from your private cloud or third-party clouds.

The VCE Experience

- **Agility.** Receive your VCE VxRack System 1000 series within 45 days of your order. Typically, you can begin using it in production within a week. For deployment, work with VCE or any of global qualified partners. Standardized, proven processes accelerate time-to-production and time-to-value.

- **Less Complexity, Lower Risk.** The VCE VxRack System 1000 series is preengineered, pretested and prevalidated in the VCE factory. This speeds up deployment and reduces risk.

- **Life Cycle System Assurance.** The VCE Experience applies to all VCE converged and hyper-converged infrastructure. The VCE Release Certification Matrix (RCM) simplifies software release planning and configuration management across all hardware and software platforms.

Third-Platform Applications

Third-platform applications—social, mobile, big data analytics, and cloud—often start small and quickly grow to extreme scale. Predicting how large and quickly they'll grow is difficult, and mistakes in sizing can be costly.

Using VCE VxRack System 1000 series, you can pay for just the infrastructure you need to start—perhaps just a few nodes. As demand grows, keep pace by adding nodes, achieving extreme scale if needed. The 10 GB network switches inside the VCE VxRack system eliminates the network bottleneck that limits the scale of other hyper-converged infrastructure solutions.

The ability to scale in any-size increments is especially useful for big-data applications. As file and unstructured data continues to pour into your data lake, accommodate it by adding nodes with EMC ScaleIO software-defined storage.

XaaS from Service Providers

When selecting cloud service providers, customers consider costs as well as service-level agreements (SLAs). Popular SLAs include how soon infrastructure will be ready after a request, availability, performance, data security and privacy, and disaster recovery capabilities. Delivering industry-leading SLAs at a competitive cost can be challenging, especially for small pilots intended to gauge interest in a planned service.

Using VCE VxRack System 1000 series, service providers can introduce new cloud services with enterprise-grade services in a small footprint. As demand grows, the hyper-converged infrastructure can expand rapidly to support thousands or even millions of users. The pay-as-you-go consumption model fosters innovation: service providers can test out new services with a smaller upfront investment and then scale the infrastructure in step with service uptake.

VCE Converged and Hyper-Converged Infrastructure Portfolio

VCE Converged Infrastructure

VCE pioneered converged infrastructure with our VCE Vblock Systems, now part of the VCE Vscale Architecture. This modular, scale-out architecture supports a wide variety of second- and third-platform applications that have different scale requirements. All VCE systems connected to the VCE Vscale™ Fabric can create and share dynamic resource pools. Products in the VCE converged infrastructure family include Vblock Systems, VxBlock™ Systems, VCE Vscale™ Blocks, and VCE™ Technology Extensions.

VCE Hyper-Converged Infrastructure

VCE hyper-converged infrastructure complements VCE converged infrastructure by supporting different use cases and consumption models. VCE VxRack System 1000 series is the first offering in our hyper-converged infrastructure family. These systems are ideal for applications that grow unpredictably. Like VCE converged infrastructure, VxRack 1000 Systems can participate in the VCE Vscale Architecture.

Enterprise-Grade Services

VCE hyper-converged infrastructure includes enterprise-grade services from EMC Federation. These services provide data replication and protection, high availability, fast performance, and optimized ROI.

For More Information

To learn more about VCE VxRack 1000 Systems and Vscale Architecture, visit www.vce.com.

ABOUT VCE

VCE accelerates the adoption of converged infrastructure and cloud-based computing models that dramatically reduce the cost of IT while improving time to market for enterprises and service providers globally. Through its leading Vblock Systems, VCE delivers the industry's only true converged infrastructure, leveraging Cisco compute and network technology, EMC storage and data protection, and VMware virtualization and virtualization management. VCE solutions are available through an extensive partner network and cover horizontal applications, vertical industry offerings and application development environments, enabling customers to focus on business innovation instead of integrating, validating and managing IT infrastructure.

For more information, go to vce.com.