MIXED APPLICATION WORKLOADS ON VBLOCK SYSTEMS

Standardizing the infrastructure improves resource utilization, staff productivity, IT agility, and TCO.

Over time, the practice of building out separate infrastructures for mission critical applications has increased complexity and led to the under utilization of resources in one environment while other environments were strained. IT organizations are addressing this by standardizing their infrastructure. Many want to run mixed workloads on larger systems in order to:

• Improve overall utilization
• Reduce footprint
• Optimize staffing resources
• Leverage common data protection strategies
• Reduce TCO

Organizations running mixed application workloads enjoy significant cost benefits and improve IT agility. Utilization of server resources is much higher. Application deployment and maintenance can be simplified and standardized. Memory and cache allocation can be more dynamic. And capital and operational costs can be reduced dramatically.

Vblock™ Systems are an ideal foundation for mixed workload environments. Strict design control enables Vblock systems to meet specific performance and availability levels while tiered service profiles enable IT to allocate resources as needed to each application. Fully Automated Storage Tiering (FAST) ensures that applications are using the best storage type for their needs, resulting in better insulation between workloads and optimal performance across all workloads. VCE has validated data protection solutions that reduce storage footprint and offer a range of disaster tolerance solutions.
Why Vblock Systems are Ideal for Mixed Workloads

Vblock Systems from VCE provide an enterprise-class converged and virtualized infrastructure comprised of industry-leading network, storage, and virtualization technology. VCE performs the physical and logical build in-factory to ensure component feature interoperability and speed time to deployment. Resources are provisioned as a single infrastructure to simplify operations and improve staff productivity.

Deploying upgrades and patches typically drains IT resources and ties up test environments. With Vblock Systems, the picture changes significantly. VCE makes validated and fully regressed software releases and firmware upgrades that cover the entire system available on formal release schedules. This dramatically reduces IT risk.

Vblock Systems scale to meet changing business requirements. The system is designed to maintain balanced performance at scale so that IT can maintain SLAs even as configurations change.

VCE validates and supports data protection products that both ensure uptime and reduce storage footprint:

- **EMC RecoverPoint** uses a single management interface, provides protection for data and applications, and supports multiple physical and virtual servers and storage arrays. RecoverPoint on Vblock Systems provides continuous application data protection, data replication between EMC and non-EMC arrays, local and remote data replication, and data recovery on the same or different hosts.

- **EMC Avamar data protection and Avamar with EMC Data Domain** are supported on Vblock Systems. Avamar is extremely effective at delivering backups in less time, using fewer network resources and fewer virtual server resources than other options. When used along with Data Domain deduplication software, Avamar helps reduce network traffic and storage archive footprint.

- **EMC VPLEX** is an innovative workload mobility and business continuity solution that enables IT to easily move business applications within or between Vblock systems located in the same data center or metro area. VPLEX can also mirror business-critical data to approach zero data loss and automatically provide near-zero application recovery.

Choosing the Right Vblock System for Your Mixed Workloads

- **Vblock™ Series 300** is an agile and efficient data center-class system that features modular, scalable performance. It has a high-density, compact fabric switch; integrated fabric-based blade servers; and best-in-class unified storage. Simplified provisioning allows IT professionals to marshal resources quickly and efficiently.

- **Vblock™ Series 700** is an enterprise-class, mission-critical system for the world’s most demanding workloads and service levels. It features the best director-class fabric switch, most advanced fabric-based blade servers, and most trusted storage platform.
VCE application experts (SAP, Oracle, Microsoft, etc.) work with the client to correctly size the Vblock system to support a mixed workload environment. VCE vArchitects work with the client to collect information on workload characteristics to determine the storage, compute, and network requirements for each application. Analysis of this data enables VCE engineers to design the physical and logical build that will yield the needed scale and performance characteristics for each application to perform optimally in a production environment. This design work incorporates the expertise of VCE application specialists along with industry supported design calculation toolsets, yielding a design that is balanced in resource utilization while allowing the needed flexibility to allow future scaling of the converged infrastructure.

Mixed Workload Customer Success Stories on Vblock Systems

Pharmaceutical

A major pharmaceutical company had nearly outgrown its data center. Operations and support costs were soaring as the IT infrastructure grew in size and complexity. The firm needed a way to better manage its costs without impeding business and IT growth. By standardizing on Vblock Systems running multiple applications, IT gained a 50% increase in data center capacity without expanding its original footprint. Standardization on pre-integrated platforms with simplified provisioning made it possible for IT to increase its virtual environment without concomitant increases in staff resources.

When the company was acquired, IT was in a strong position to influence the new parent organization. Realizing that its newly acquired division had experienced so much success with Vblock systems, the parent company installed two Vblock Series 700 systems to virtualize its global operations centers and has begun planning for a rollout of Vblock systems to over 30 manufacturing sites and regional sales and marketing offices worldwide.

Service Provider

It was becoming increasingly challenging for one major service provider to support its hyper-growth curve with an inadequate and aging IT infrastructure. In its North American data center, some assets were underutilized, while others were overused — and data center space and power were at capacity. In August of 2011, the company deployed its first Vblock system to support Latin American operations. In early 2012, the company replaced its North American data center with a new facility — powered by another Vblock Series 300 system. As a result, the service provider has reduced provisioning times, decreasing time to build internal IT environments or to deliver new customer services from 30–90 days to 3–5 days.

For additional protection, IT is deploying EMC RecoverPoint remote data protection to replicate its Vblock systems located at data centers 400 miles apart. EMC Data Domain deduplication storage systems for backup and recovery also are integrated with the Vblock systems to reduce network traffic and storage footprint. With the new solution, IT is able more rapidly provision its infrastructure to stay ahead of growing demand while easily meeting the states' SLAs for top performance, availability and scalability.

HealthCare

A multi-state managed healthcare organization is using Vblock Systems to provide Government health programs with extremely high application availability and performance. The organization consolidated its infrastructure on Vblock systems, realizing a 4:1 consolidation ratio and a 25-40 percent application and storage performance boost. They are running electronic medical records (EMR), J.D. Edwards financials and human resources, TriZetto claims administration, among other applications as well as departmental-based applications and file shares.

For additional protection, IT is deploying EMC RecoverPoint remote data protection to replicate its Vblock systems located at data centers 400 miles apart. EMC Data Domain deduplication storage systems for backup and recovery also are integrated with the Vblock systems to reduce network traffic and storage footprint. With the new solution, IT is able more rapidly provision its infrastructure to stay ahead of growing demand while easily meeting the states’ SLAs for top performance, availability and scalability.