



## VCE CONVERGED INFRASTRUCTURE SOLUTIONS WITH INTEGRATED DATA PROTECTION

The correct protection for any service level.

VCE Converged Solutions offer a robust set of capabilities to support data protection requirements, with Backup/Recovery, Replication, Archive, Business Continuity, and Application Mobility for mission-critical environments.

### Solutions include:

- EMC Avamar
- EMC Data Domain
- EMC RecoverPoint
- EMC VPLEX

### One size does not fit all

Your business has tiers of applications and data. The protection needs of those application and data across a spectrum—starting with basic low cost daily backup, and ranging up to zero data loss with zero downtime. Along the spectrum, compliance requirements must also be met.

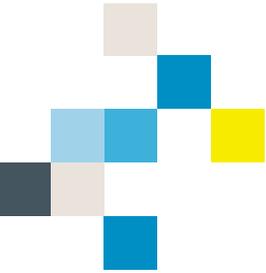
VCE believes customers are best served with a family of products that deliver precisely the right level of protection for each business need. VCE further believes that customers need a way to deploy and scale data protection in a manner that reduces overhead, time, cost, and risk. To meet these needs, VCE developed the concept of integrated data protection.

### Integration Defined

Legacy data protection “bolted-on” to a new consolidated infrastructure may work, but it is not optimum. A complete consolidated infrastructure includes truly integrated data protection. It starts with architecting a best practice solution that is designed to scale. The data protection system is then fully assembled in the VCE factory, into VCE cabinets.

The data protection components are directly connected to the consolidated infrastructure network and the network is configured before they ever leave the factory. True integration also means customers receive support for the consolidated infrastructure AND the data protection with just single phone call support.

VCE™ Integrated Data Protection offers a flexible family of solutions to allow a choice of streamlined backup and recovery, data replication, business continuity, and workload mobility to deliver reliable, predictable, and cost-effective availability for VCE Consolidated Infrastructure platforms. In other words: The right level of data protection for each service-level need.



### **EMC Data Protection for VCE Systems is Simple, Complete, and Flexible**

- **Simple**—VCE supplies the precise level of data protection needed, backed by responsive, expert support. This reduces your administrative burdens and frees IT personnel for more strategic tasks.
- **Complete**—End-to-end solutions ranging from basic backup and recovery to business continuity are integrated and validated by VCE in controlled environments prior to delivery. This ensures timely, optimum functionality and performance of the data protection for each business application.
- **Flexible**—Manage risk by choosing from cost-effective daily backups, or continuous data replication with flexible rollback options to better align with desired recovery time objectives and Recovery Point objectives (RTO, RPO), or zero-data-loss business continuity for applications that demand continuous availability.

This makes VCE Integrated Data Protection ideal for any organization that is, or has made the transition from disparate servers, network, and storage to a VCE Consolidated Infrastructure.

### **Backup, Archive And Recovery**

VCE provides optimized VMware backup, archive, and recovery. The optimized solutions deliver: Increased scalability, reduce costs, and lower complexity, when compared to legacy backup solutions.

The VCE backup system is built upon the industries best of breed products: EMC Avamar and EMC Data Domain.

### **EMC Avamar plus Data Domain—**

Avamar easily and efficiently manages the backups while Data Domain easily and efficiently deduplicates and stores the backups. The result is a backup data storage footprint that averages 10x to 30x smaller than traditional backup, along with industry-leading high reliability and unmatched scalability.

The results

- Reduce backup times by 90 percent
- Speed recoveries by 30x
- Up to 27x more scalable than the nearest competitor
- Average seven month payback
- 10-30x reduction in required backup storage
- Up to 99 percent reduction in required bandwidth
- Up to 81 percent reduction in time spent on backup administration

### **Operational Recovery, Disaster Recovery, and Migrations**

Operational recovery from an application crash should be efficient and pain-free. Migration of applications and data from a legacy server to a new consolidated infrastructure should be easy. The ability to recover from a site disaster should be proven and low risk. **EMC RecoverPoint** and **EMC RecoverPoint for Virtual Machines** are the right products for comprehensive replication capabilities.

EMC RecoverPoint provides complete replication functionality at the disk volume level. EMC RecoverPoint for Virtual Machines provides complete replication functionality of entire VMware servers (VMDK level replication). Together, with VCE's integration into the Consolidated Infrastructure, these provide the confidence to deliver the recovery services expected.

- Deliver zero data loss with local continuous data protection, and/or synchronous replication to a second site.
- Minimize data loss with asynchronous replications to a second site with unlimited distance.
- Simplified testing of disaster recovery.
- Ability to roll back protected applications to any point in time.
- Ensure recovery consistency for interdependent applications spanning multiple VMware ESXi clusters.
- Minimize the amount of bandwidth required for replication.

## Continuous Availability And Mobility

### EMC VPLEX

EMC VPLEX is a unique virtual storage technology that enables mission-critical applications to remain up and running during a variety of scenarios that would otherwise cause planned or unplanned downtime scenarios. VPLEX delivers data mobility and availability across arrays and sites.

VPLEX permits painless, non-disruptive data movement, taking technologies like VMware and other clusters that were built assuming a single storage instance and enabling them to function across arrays and across distance.

VPLEX also provides easy migrations, workload re-balancing, and dynamic upgrades of storage arrays. Users readily appreciate the ease of using vMotion and DRS to rebalance workloads between arrays without the complexity and time requirements of Storage vMotion and Storage DRS, and the ability to non-disruptively upgrade during normal business hours.

VPLEX enables the ability to do workload balancing or application migrations across multiple VCE Systems and across regional data centers, with zero downtime during a workload transfer.

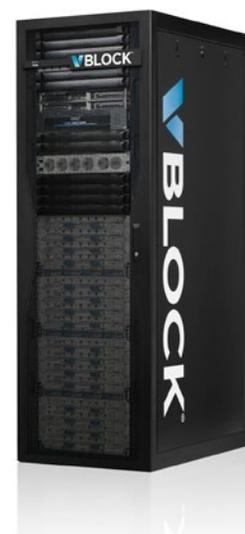
### VCE Experience

VCE is a leading innovator of intelligent converged infrastructure systems. Customers rely on VCE Systems for the fastest deployment of data center infrastructure. VCE Systems are engineered to deliver the highest performance, operational simplicity, and scalability for the lowest TCO.

Every System is a true converged infrastructure—each is engineered, manufactured, managed, supported, and sustained as ONE product and includes integrated data protection:

- VCE's integration of data protection includes Professional Services to deliver a fully operational solution in the shortest possible time frame. Much of the configuration work traditionally performed at the customer site is done at the VCE factory.

- VCE Systems are standardized architecture based on best-in-breed technologies.
- Every VCE System is pre-integrated, tested, and validated in a VCE factory environment, and delivered within 45 days as a prepackaged solution, operational within hours of arrival.
- System Management with VCE Vision™ Intelligent Operations is pre-installed on all VCE Systems, providing a near real-time perspective of your system as a single object—to simplify managing system configurations and overall system health.
- VCE Systems are sustained with life cycle system reassurance. VCE supplies the latest Release Certification Matrix (RCM)—based on pre-testing of a wide array of upgrades and patches—to ensure optimum system performance across every hardware and software component.
- VCE engineering expertise delivers application optimization. VCE continually tests a range of customer applications and use cases that have been configured according to industry best practices—to ensure optimum application and workload performance.



EMC Converged  
Platforms 

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