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50 Years of Growth, Innovation and Leadership

Meeting the Future with a Converged Infrastructure:
Delivering Applications for the 21st Century

A Frost & Sullivan
White Paper

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INTRODUCTION

While IT hears a lot these days about the need to move to a unified communications platform, especially around voice and video, for most organizations, email is still the most mission-critical communications application they run. In the enterprise, email remains the most efficient way to communicate globally, across time zones, languages and cultures. Along with collaboration and file-sharing platforms such as Microsoft SharePoint, which more and more employees are relying on for knowledge sharing and collaboration, email also typically serves as a de-facto repository for business-critical data, processes, projects and strategies.

But for IT, email is also one of the most difficult applications to deploy and manage in a way that guarantees performance and availability, scales as needed, and delivers on service-level agreements, all while keeping costs in check. Throw in an increasingly global, mobile and remote workforce, and the need to scale users up or down as economics and markets require, and the infrastructure headaches only increase.

Clearly, IT needs more flexibility and agility when it comes to deploying and managing the email and collaboration infrastructure. Now, thanks to new converged infrastructure technology that leverages virtualization to deliver private-cloud computing (also called “IT as a service”), forward-thinking companies are delivering key applications to their end users, quickly and effectively.

A converged infrastructure has many advantages over the alternatives, which either lock customers into a single solution from a single vendor, or, while allowing best-of-breed implementation for storage, virtualization, network and compute, force IT to work with a variety of vendors to try to solve problems, manage integration, ensure application support and deliver availability and reliability to their end users.

With a converged infrastructure, companies get a single platform containing everything they need to deliver a flexible, scalable email and collaboration system—and a single throat to choke should anything go wrong. Such systems can deliver significant cost savings: lower capital expenses, by cutting the number of servers and network switches; and lower operating expenses, by requiring less space and less power to run, and consolidating management across the system. They also help companies increase productivity, simplify administration, decrease IT overhead, and support a larger, more demanding user base. Rolling out a converged infrastructure solution takes significantly less time than assembling its components by shaving weeks off the procurement, configuration and testing process.

Furthermore, the most recent versions of Microsoft Exchange and SharePoint (2010) offer significant improvements, especially around storage (allowing for larger mailboxes) and performance. Deploying them on a converged infrastructure only enhances these improvements and will give many organizations the ROI they need to justify rolling out an update to their users.

This paper will discuss the changing nature of business and communications in today's increasingly mobile and global workplace; highlight the benefits of a converged infrastructure for delivering email and collaboration in Microsoft Exchange and SharePoint 2010; and identify what to look for in a converged infrastructure solution.

COLLABORATION AND COMMUNICATIONS FOR TODAY'S GLOBAL BUSINESS

As businesses grow increasingly global, with more employees working in locations that are different from those of their colleagues, managers and direct reports, it's important to keep them all connected, regardless of where they're located or what types of networks or devices they are on. As businesses face tough economic conditions across a worldwide marketplace, they must be able to react quickly to changing conditions and new opportunities. That requires fast access to information and expertise, ensuring that the right decisions can get made at the right time. This is especially critical in today's competitive environment, in which how well employees share data and collaborate on projects and ideas means the difference between market leadership and market failure.

With more people working from remote offices, home offices and various points along the road (including hotels and airports), and with companies eager to extend their collaboration efforts to partners and customers outside the corporate firewall, IT must manage an increasingly complex and demanding set of infrastructure requirements. For these organizations, a converged infrastructure can offer measureable lower cost of ownership, faster times to deployment, and a single point of contact for service and support.

Microsoft Exchange and SharePoint: Mission Critical

In most organizations, employees still rely on email and portals to communicate and collaborate with their colleagues, partners and customers—making Microsoft Exchange and SharePoint mission-critical applications today, and well into the future.

Indeed, for most companies, one of the top IT priorities is keeping Exchange and SharePoint up and running, and available to employees from anywhere and on any device. And yet, with the applications' growing complexity—and the growing need for more reliable and robust networks and infrastructure—managing Exchange and SharePoint has become much more challenging: Even as they need to support the applications for more users, from more places, IT is struggling to do so in a cost-effective, flexible and agile way.

Key pain points for Exchange and SharePoint success:

- **Mailboxes and Storage:** Users require an ever-growing amount of storage for their email systems—and IT must respond, or risk system failures, as well as problems with security and compliance.

- **Reliability and Disaster Recovery:** Email is so important to most organizations that when it goes down, business comes to a halt. Five-nines reliability is the baseline; 100 percent uptime is ideal.
- **Accessibility:** With more employees working remotely (from home offices and the road), companies must ensure all users can access their email and collaboration applications on any device and via any network.

Microsoft Exchange 2010 and Microsoft SharePoint 2010 are better designed to address these needs than earlier versions, and they also now support a virtualized environment. By deploying the upgraded software in conjunction with a converged infrastructure, companies can see significant return on investment.

The Mobile, Virtual Workplace

As more and more employees work in locations that are different from those of their colleagues, managers and direct reports—as well as business partners and customers—they are creating a so-called “virtual workplace.” Whether they work from home or the road, a hotel room or a distant satellite office, Frost & Sullivan research shows that virtual workers offer significant benefits to the organization.

But few business changes have been as dramatic in the past decade as the growing number of remote and mobile workers. The impact can be felt across the enterprise, affecting the technology choices IT and end users make. IT must ensure that mobile employees can access their email and collaboration applications from anywhere, on any device, and that they have the storage they need to house not just their messages, but also data from collaboration and file-sharing applications. And in a business environment in which change is the only constant, companies must be able to scale quickly and easily to support more or fewer end users as needed. Smart companies must plan for and support this new way of working by updating their IT infrastructure accordingly.

THE BENEFITS OF A CONVERGED INFRASTRUCTURE

Communications and collaboration tools like Microsoft Exchange and SharePoint are empowering users, but new business realities mean they now require a new approach to deploying IT infrastructure. Delivering a reliable email and collaboration platform is not easy, and it requires a reliable, scalable and cost-effective infrastructure. IT must decide whether to opt for an end-to-end solution from a single, strategic vendor, or whether it makes more sense to adopt a best-of-breed approach by mixing and matching hardware and software from a variety of providers to maximum effect. The first approach guarantees interoperability and is generally easier to manage and support. But many of the individual capabilities may not compare well to their best-of-breed counterparts, and the reality is that most businesses prefer to invest in disparate solutions based on specific features or preferences.

A converged infrastructure gives IT the best of both worlds by delivering a suite of best-of-breed infrastructure components from multiple vendors in a single hardware stack. Companies work with one vendor to provision a single solution that incorporates storage, virtualization, network and compute capabilities from best-of-breed vendors in each category. They then work with that single vendor to quickly configure the system that's right for their specific needs, and the vendor pre-configures, pre-tests and pre-validates it for compatibility with the company's application and infrastructure needs. Unified, centralized management ensures IT can manage the entire platform from one location. And should anything go wrong, support is a single phone call away. And total cost of ownership goes down across the board—from the initial capital outlay to ongoing maintenance and support.

Best of all, a converged infrastructure eliminates much of the risk of a virtual environment, ensuring companies see the cost-savings and performance benefits for their mission-critical applications.

Lower TCO

Above all, converged infrastructure solutions are designed with one clear goal in mind: to lower the total cost of ownership of the system. Since all the necessary components are delivered in a single bundle, they are configured and tested as part of an integrated solution—making it much less likely that problems will arise and much easier to solve them when they do. Furthermore, virtualized solutions require significantly fewer servers and network switches than their physical counterparts, and they take up less space and use less power—all of which saves companies money up front and over time. Integrated upgrades are easy to install and manage, and with one point of contact for service and support, companies save time and money chasing the right vendor to solve any given problem.

Speed Time to Deployment

Because converged infrastructure solutions come bundled with a complete set of integrated components, and because those components have been pre-configured and tested, companies can reduce the time from order to deployment by weeks or months. That, in turn, enables rapid application deployment, which leads to a better return on investment overall.

Reduce Risk

As companies strive to support today's communications and collaboration applications, architectures become increasingly complex, raising the risk of failure and outages, which is especially worrisome for mission-critical applications like Microsoft Exchange and SharePoint. Relying on technology from trusted vendors with market-leading solutions can ensure that a company's infrastructure is up to the challenging task of supporting a wide array of workers on a variety of networks

and applications in a virtual environment. A converged infrastructure, in which all the components are pre-configured, tested and validated, ensures the infrastructure is properly deployed and efficiently managed, significantly reducing risk.

Improve Performance, Availability and Scalability

Private clouds based on a shared infrastructure can deliver significant economies of scale, but they must provide the necessary security to protect business-critical applications and data, as well as performance and availability to meet business expectations and service-level agreements. Converged infrastructure solutions ensure all components have been properly configured to meet those needs, and that they are then tested and validated to show that they will deliver as promised. A hardened, integrated system yields performance and security in one.

Finally, the specific design of a converged infrastructure solution should make it easy to scale a virtualization environment to support all mission-critical applications and workloads, regardless of how many users are accessing them at once or from where.

WHAT TO LOOK FOR IN A CONVERGED INFRASTRUCTURE SOLUTION

Virtualization can be a boon to today's complex IT environments, making it easier to consolidate resources and simplify deployment, management and support. But companies that decide to trust their mission-critical applications to a virtual environment must be able to deliver on service-level agreements and support all business units across the organization. Critical applications like Microsoft Exchange and SharePoint require high performance, high availability and high security, and they must be able to scale as business needs change.

V-Block Solutions from VCE Promises Significant Benefits:

- Require 90 percent fewer servers for the same job as a traditional data center
- Offer an 85 percent reduction in network switches over traditional solutions
- Require 85 percent less space than traditional servers
- Consume 85 percent less power from operation and cooling
- Holistic, bundled upgrades and patches can be deployed with zero downtime
- Pretesting prevents compatibility problems
- Seamless support network provides one point of contact and accountability
- Single-click template provisioning prevents costly human errors

Best-of-Breed Components

A converged infrastructure solution should offer integrated, best-of-breed components that support computing, networking, storage, security, virtualization and management. This ensures you get the most advanced, feature-rich and reliable technology—without the hassles of a siloed approach. With such a solution, there is no need for costly and time-consuming integration or for compromise on certain elements of the system in order to accommodate a simpler, more streamlined implementation.

Pre-Configured, Pre-Tested, Pre-Validated

Look for an integrated solution that is pre-configured to make workload balancing simple and straightforward across all components—network, computer, and storage. That will reduce or eliminate I/O system bottlenecks. To optimize performance and ensure all necessary service levels are met, the platform should also continuously and dynamically tune all aspects of the environment.

Single Point of Contact for Service and Support

With most best-of-breed infrastructures, when problems arise, each component vendor blames the others; it can be time consuming and frustrating to get the responsible party to take ownership of the issue and the solution. With a converged infrastructure, there is one point of contact for service and support; regardless of what is causing the problem, it is that vendor's job to identify and fix it, quickly and effectively.

Unified Management across Components

Make sure your converged infrastructure provider lets you automatically monitor, provision and troubleshoot across all elements of the system: compute, storage and network resources. To ensure you can respond quickly and specifically to business as well as technology needs, demand an integrated management solution that supports service catalogues, speedy resource provisioning, and efficient capacity utilization.

CONCLUSION

With an increasingly competitive, global marketplace, businesses realize that now more than ever, they must ensure their employees have access to mission-critical applications like email and collaboration—anywhere, anytime, and on any device. Virtualization can make delivery more flexible and cost effective, but companies must trust that the system they use is secure, reliable and scalable. A dynamic, adaptable converged infrastructure solution can help IT reduce the uncertainties associated with virtualizing mission-critical applications; lower total cost of ownership; respond more quickly to business needs; support Service-Level Agreements (SLAs) for even the most demanding applications; and increase efficiency, reliability and performance through integrated and automated management.

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