EXECUTIVE SUMMARY

As organizations navigate through periods of economic volatility, an adaptive and agile workforce can provide a competitive advantage. Often the structure of the enterprise itself impedes how rapidly organizations are able to transform themselves and adopt new ways of working that lead to market growth and innovation. Today, leadership teams have the opportunity to move away from stand-alone and hierarchical operating models, and toward a more dynamic and networked organization by enabling an integrated workspace that fosters effective and boundary-less collaboration.

Organizations are becoming increasingly virtual—with growing numbers of mobile, remote and home-based workers—and they are looking at solutions that enable employees, teams and communities to more visibly share information and connect with each other on a global scale and across geographic and cultural boundaries. As a result, leading organizations are making enterprise social software (which includes social networking tools, wikis, blogs, profiles, advanced search functions and other collaboration capabilities) a strategic part of their IT investments to improve business collaboration.

Indeed, when it comes to collaboration, the benefits are clear: Frost & Sullivan research shows that 72 percent of companies that have deployed collaboration tools like enterprise social software (ESS) say they have experienced better performance as a result. But while organizations have an increasingly wide variety of ESS tools to choose from, they haven’t always adopted them quickly or deployed them effectively.

With ESS, user experience and performance are closely linked. As with other collaborative tools, employees expect ESS capabilities to work as seamlessly as the consumer social networks that they’re a part of. Sometimes, employees adopt ESS quickly, which impacts network and application performance and, in turn, erodes usage. But it can also work the other way around: If ESS isn’t fast and reliable, employees won’t use it—they’ll simply revert to older communications technologies that always work, but don’t necessarily offer the business benefits associated with ESS. And yet, the success of these tools (and the reason they were built the way they are) depends on mass participation: The more users, the more input, and the more effective the tool becomes.

It’s not easy to deploy collaboration technologies successfully, in a way that promotes and supports employee interaction inside and outside the organization. Enterprise social software can become a high-volume application that puts significant pressure on the enterprise network and data systems. And as it merges with unified communications and collaboration applications, ESS goes well beyond blogs and wikis, and includes real-time skills-routing, profile and social networking applications; video streaming and conferencing; team spaces and Web conferencing; and even analytics and graphing, as companies look to leverage information about who is interacting with whom, what applications and information, and when. Add the fact that many of these functions run in real time and that they propagate virally, and you have a bandwidth-, infrastructure- and network-intensive set of applications.

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In fact, because ESS spreads so quickly throughout an organization, and because users quickly grow accustomed to the technology, companies must ensure the applications they deploy can support increased user demands. As such, effectively running ESS at enterprise-wide scale requires an integrated architecture that enables the application to leverage a reliable network and secure infrastructure (including storage, servers and applications).

This paper will examine the need for organizations to take an architectural approach to enterprise social software deployments; discuss the technologies needed to support a next-generation infrastructure; and evaluate the value of an end-to-end infrastructure solution.

THE RISE OF ENTERPRISE SOCIAL SOFTWARE DEMANDS MORE THAN JUST APPLICATIONS

Comprehensive enterprise social software and collaboration platforms offer significant value, but they also pose significant challenges. Today’s networks and data centers are being tasked to support a variety of rich, bandwidth-intensive applications and services, including unified communications, real-time analytics, social graph management, activity streams, micro-blogging, wikis and social networking, as well as pervasive video sharing and streaming. They often must also support external connections to social media sites such as Facebook, Twitter and LinkedIn. And they must allow real-time applications to share bandwidth with more traditional, asynchronous business-critical applications, such as ERP and CRM.

Often, ESS ventures fail because the IT infrastructure underlying the collaborative applications can’t scale and/or handle the influx in traffic to sufficiently meet end-user expectations. But delivering a consistent and reliable user experience is fundamental to end-user adoption. Employees often get frustrated not by the applications themselves, but by performance bottlenecks that make using the new technology a hassle. This is especially true for ESS and video sharing, which require seamless performance to deliver their benefits. If users can’t get the tools to work every time, for every person, they simply won’t use them at all.

To truly enable seamless collaboration internally and externally, enterprises need a robust, highly tuned IT architecture that delivers security and performance across a variety of applications and endpoints, including mobile devices. But in many organizations, investments in IT architecture have not kept pace with application development and deployment.

In the past, IT departments simply threw more bandwidth at network and application performance issues, but that doesn’t address the need to support the multiple modes of collaboration that ESS delivers. Today, the answer is not to add more capacity, which becomes prohibitively expensive, but to deploy the flexible and on-demand IT architecture and network infrastructure necessary to deliver a superior collaborative experience.

Enterprise social software is all about driving collaboration, and successful collaboration delivers a number of benefits, including:

- Faster time to market
- Increased employee productivity
- Greater global reach
- Enhanced employee participation throughout the organization
- Better connections with partners and customers

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THE RIGHT ARCHITECTURE HELPS SUPPORT SUCCESSFUL COLLABORATION

Without a flexible and on-demand network infrastructure in place, bottlenecks will severely impact not only ESS applications, but mission-critical business applications as well. That will result in not just a poor collaboration experience, but also in lost productivity across the organization.

A flexible IT infrastructure will be able to scale up or down as needed, depending on usage and application demands. To deliver that seamless end-user experience, it will be able to ensure that applications are receiving the right amount of bandwidth and computing resources, with the right policies in place, and the right prioritization.

Solutions architects, infrastructure planners, and IT managers must consider the following issues when deploying an ESS platform:

- Extended memory technology: As video and social analytics become pervasive, and more and more content gets delivered and stored, memory capacity becomes increasingly important.

- Centralized provisioning and management: Centralizing these components to better manage them across the platform automatically reduces the number of specific and manual tasks associated with provisioning and management.

- Application monitoring: Real-time and non-real-time monitoring is necessary to identify the differing traffic on the network.

- Load balancing: This becomes more dynamic as services and applications become more demanding.

- Wan optimization and bandwidth management: These are necessary to ensure traffic is properly prioritized, allowing the most important applications (and, in some cases, users) first crack at the network.

- Low latency: As voice and video are delivered alongside other applications, latency becomes an issue; maintaining low levels is critical for acceptable performance.

- Security, governance, compliance: As collaboration grows inside and outside the organization, involving partners and customers as well as employees, it’s important to maintain the necessary policies to ensure compliance, and to protect information inside and outside the company. Since social technologies give everyone a “voice,” work and data become more transparent—and, potentially, more at risk.

Using the right mix of network infrastructure and data center components, companies can support a variety of real-time and asynchronous applications, all running in unison, and without creating any friction for application traffic. That will reduce or eliminate jitter, latency and application downtime, and optimize resource utilization. The result is a more seamless and cost-effective performance.
**END-TO-END SOLUTIONS DELIVER PERFORMANCE**

As employees take advantage of ESS, they require next-generation networks and infrastructure services that can support a variety of workloads. This is especially true of today's comprehensive, integrated ESS suites, in which many programs are running simultaneously on the enterprise network and the end-user's desktop and/or mobile devices—a marked break from the point solutions of yesterday.

As companies deploy a mix of software and endpoints, often from a mix of vendors, they must consider that adding multiple vendors and products to the equation only increases the complexity. Today's collaboration platforms are complex enough; adding the need to assess, evaluate, properly deploy and manage a variety of components from a variety of vendors is cumbersome, costly and, often, unnecessary.

Today, enterprises must leverage their IT investments to deliver a clear competitive advantage. That requires a flexible, on-demand infrastructure that enables a rich collaborative experience and ultimately adds to an enterprise's bottom line. When thinking about a collaboration platform that fits a given business's needs and requirements, it's important to evaluate comprehensive solutions that will grow as the business grows. Enterprises should work with vendors that have a long-term collaboration vision, and that understand and offer the underlying infrastructure needed to support it.

A well-architected solution that spans applications and network infrastructure benefits everyone. It helps deliver a seamless experience for end-users, while giving architects and IT managers the value of easy deployment and management. Integrated, end-to-end solutions generally run more smoothly and better support advanced applications like ESS; they also give IT managers one point of contact for all support.

**CONCLUSION**

Today's enterprise networks and infrastructure must be able to handle the content and data-intensive traffic that results from the use of ESS to deliver a seamless experience, without jitter or latency, while continuing to run mission-critical business applications. Yet even as they are running richer, bandwidth-intensive applications on their networks, companies are not upgrading their legacy infrastructures to meet the needs of advanced collaboration. Traditional network infrastructure wasn't designed to run complex, social networking and real-time applications, and standard management tools weren't designed to handle the bandwidth requirements of rich collaboration applications.

Solving this problem requires a highly scalable, flexible and on-demand network infrastructure comprising many components, including network and bandwidth optimization, real-time application monitoring, and traffic prioritization. The success of an enterprise-wide collaborative experience hinges on many factors, including change management and organizational readiness. But it also requires a concurrent improvement in network infrastructure and performance to ensure the applications work as they should.

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**Best Platform Practices for Effective ESS**

- **Assess the overall network infrastructure:** Understanding that today's rich collaboration platforms will struggle to scale on legacy infrastructure in a seamless manner is the first step to success.

- **Collaborate across groups:** As infrastructure environments become increasingly converged, it's essential that application, infrastructure, and network architects work together to ensure they all agree on requirements. The decision-making process must take security, applications, network, storage, and virtualization into consideration as well.

- **Evaluate vendors:** The collaboration market is inundated with point solutions, but to take full advantage of the benefits of collaboration, companies should consider an end-to-end architected solution that takes into consideration all requirements for a comprehensive and seamless experience. Integrated platform vendor support for open standards will enable any needed integration with existing point solutions, unified communications, content and document management systems, and other business and transactional systems.
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For information regarding permission, write:
Frost & Sullivan
331 E. Evelyn Ave. Suite 100
Mountain View, CA 94041