

WHITE  
PAPER

Workforce Mail™  
Empowering the  
Entire Enterprise



Providing “Deskless” Workers  
with Email Access  
and Functionality



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**Workforce Mail: Empowering the Entire Enterprise**

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**EXECUTIVE  
SUMMARY**

Most large enterprises have implemented messaging and collaboration systems to enhance productivity, enabling employees to exchange information effortlessly using email and tap into the power of the Internet to do their jobs more effectively.

Until now, however, “deskless” and non-headquarter or mobile workers—a group that represents more than half of all employees in the typical enterprise—have been left behind. That’s because many organizations have found it too costly and complex to equip this large employee group with email capabilities.

“Enterprises are looking for less expensive email seats, and service providers are looking to increase their revenue by offering additional services,” said Joyce Graff, Vice President and Research Director for Gartner, Inc., Stamford, Connecticut. “These two pressures are moving the enterprise and Internet mail markets together into a single messaging market that serves enterprises, extended enterprises, extranets and service providers with standards-based messaging decoupled from other collaboration support functions.”

To succeed in the Internet economy, organizations must empower this important group of employees by enabling them to communicate and collaborate electronically with each other, as well as with colleagues at corporate headquarters and at branch offices. This is the only way to fully leverage the knowledge, skills and experience of these valuable front-line workers.

Fortunately, new technologies and the Internet are reducing the cost and complexity of providing email functionality to large user groups. Sendmail, the leading provider of Internet business solutions, has developed a scalable, high performance email system capable of supporting hundreds of thousands of users on a single server. Because of its scalability and simplified management, Sendmail Workforce Mail™ offers organizations a low-cost, highly effective email solution for their deskless employees.

This white paper examines the importance of providing deskless workers with email, and describes the requirements for a solution that meets the needs of enterprises with large deskless workforces. In addition, it provides an overview of Sendmail Workforce Mail—running on industry-standard Intel-based HP ProLiant servers and Linux—and explains how this leading-edge solution makes it feasible and cost-effective for enterprises in a broad range of industries to extend email functionality to deskless employees.



## The Marketplace

### Ideal Market

Sendmail and HP have identified the following industries as having large populations of deskless workers:

Industry	Types of employees/workers
• Manufacturing	• Factory and warehouse workers
• Healthcare	• Nurses, some physicians, other medical personnel
• Air Transportation	• Pilots, flight attendants, ground crew
• Public	• Utilities/telecom repair crews
• Government	• Police, firefighters, repair crews, inspectors
• Retail	• Store clerks, distribution staff
• Construction	• Construction workers, delivery personnel
• Entertainment	• Theme park employees, movie theater staff

Deskless workers typically don't have access to a computer at work. And those who do must often share a workstation with other employees in locations such as break rooms, reception desks or other common workspaces. As a result, a large number of employees in many enterprises do not have convenient and timely access to essential information.



## The Business Case

### Leveraging the Value of Deskless Workers

Deskless workers are key participants in the success of the enterprise. When enabled with the proper communication and collaboration tools, these employees can:

- *Share their knowledge, ideas and insights with others in the organization*
- *Receive vital job information in a timely manner*
- *Receive corporate communications and human resource announcements*
- *Communicate essential information, such as progress reports and job status, in an efficient reliable manner*
- *Use email to communicate with human resources (i.e., vacation requests, sick time, etc.)*
- *Control corporate information from reaching Hotmail-type accounts*
- *Maintain company identity with consistent email address*

Deskless workers are front-line employees who typically have years of valuable experience. With the right tools, they can share their accumulated knowledge with other employees. Field technicians, for example, can communicate customer service issues to sales representatives to enhance sales activities. They can also share product defect information with engineering and manufacturing departments to improve product quality and reliability. Experienced store clerks can provide insight on customer reactions to improve the effectiveness of merchandise displays and marketing promotions.

Enterprises that tap the experience, skills and expertise of deskless employees benefit by expanding corporate knowledge and improving effectiveness—which ultimately enhances the bottom line.

Communication and collaboration tools provide a highly efficient means of distributing corporate information as well, ensuring its timeliness and availability. Email eliminates paperwork and speeds the dissemination of corporate announcements, policies, procedures and other vital information. Additional examples include job schedules (both new and revised), work orders, manufacturing specifications, and process formulas and recipes. By making this information instantly available in electronic form, the enterprise can eliminate delays and errors that often occur when communicating by phone or paper.

Email communication also optimizes efficiency for time-sensitive business processes and services. Delivery personnel and drivers, for example, can receive instantaneous updates, directions or instructions—through mobility devices—to ensure the product arrives at the right location at the right time. Logistics workers can access time-sensitive information, such as job schedule and order changes, to stay on top of customer orders, production and shipping. And field technicians can communicate directly with headquarters from remote customer locations to the immediate information and feedback required to properly service the customer and complete the job.

50% of the  
total workforce  
has no email.



### Industry Examples

**Manufacturing** personnel can receive updates to schedules immediately, so they produce the right items at the right time. Work order status and progress reports can also be communicated electronically, providing timely and consistent sharing of information with all employees.

**Airline** employees can easily and immediately access the latest security policies and procedures, saving time, reducing costs and ensuring that employees receive essential information in a timely manner. Email access also opens the lines of communications for coordination, inquiries and feedback, and helps eliminate the delays and errors associated with the manual coordination of efforts using telephone and paper forms.

**Electric utility** workers can report on their progress toward restoring power during an outage, enabling the utility to keep customers informed as to when the problem will be resolved. By providing status reports throughout the day instead of batching them for entry at a later time, the organization saves time, cuts costs, reduces the risk of errors and enhances responsiveness.

**Retail** associates can quickly and easily access information relevant to products, inventory, store locations, sales and promotions, and other customer service activity. In addition, store employees can efficiently manage their human resources tasks, such as benefits enrollment and vacation requests, by communicating with corporate staff through online workstations in the break room or store office.

**Medical** personnel, such as nurses and emergency room staff, can retrieve, enter and send patient information immediately through handheld or mobile devices, so that this critical and timely information is available as quickly as possible throughout the hospital. This is much more efficient and productive than communicating through a single terminal or workstation. They can also access employee information online to stay on top of job changes, benefits and other organizational communication.

The rapid dissemination of, and access to, business information translates into higher employee productivity, better customer service and greater profitability. It also increases job satisfaction and employee retention, which reduces staffing costs substantially.

“Only one out of every four employees in the \$3 trillion retail/wholesale industry has email access.”

~Osterman Report

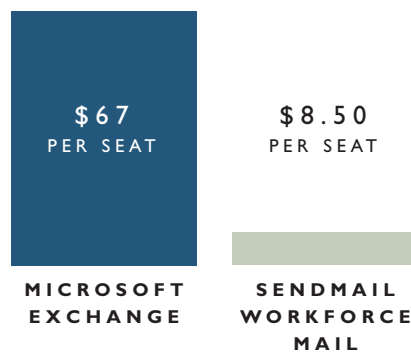


## Examination of the Solutions

### Roadblocks to Empowering the Deskless Workforce

In large enterprises, the deskless workforce can comprise tens of thousands of users. For many organizations, providing such a large number of users with traditional communication and collaboration tools has been cost-prohibitive, as these tools are expensive to deploy and manage.

#### Software Cost Per Seat



What's more, extending traditional collaboration tools such as Microsoft Exchange and Lotus Notes to deskless workers also requires the deployment of additional server hardware to support the large increase in users. And additional servers means higher purchase, deployment, maintenance and administration costs.

Some enterprises are using public messaging systems such as Hotmail and Yahoo! to extend communication to deskless workers. This approach, although low-cost, has significant drawbacks:

- *Lack of corporate control*
- *Low security for confidential exchanges*
- *Email often resides on someone else's server*
- *Minimal virus production*
- *Limited or no spam filtering, resulting in greater storage requirements*
- *Misuse of email without corporate policy*
- *Increased corporate liability*



## Solution Requirements

Enterprises require an email solution that permits easy, cost-effective, anytime-anywhere access for deskless workers. In addition, the solution must integrate the current base of knowledge workers who use existing communication and collaboration systems. To be effective, the solution should offer:

- *Extensive scalability*
- *Integration with current environment*
- *Affordability*
- *Simplified administration*
- *Extensive standards support*
- *High availability*
- *Directory foundation*
- *Broad email functionality and access control*
- *Support for web-enabled mobile access devices*

### Extensive Scalability

Larger enterprises should look for a system that supports 10,000 to 200,000 or more users on a single server. In these large-scale environments, message volume can easily reach a million messages a day, so the system should be capable of supporting this high level of traffic while still delivering fast performance. To ensure maximum scalability, the solution should take full advantage of server hardware resources such as multiprocessors and clustering.

Sendmail Workforce Mail scales to fit any size environment, from tens to hundreds of thousands of users. The highly efficient, distributed Workforce Mail architecture squeezes maximum performance out of every resource. Support for multithreading and multiprocessor enables organizations to take advantage of the extra processing power of multiprocessor servers to maintain fast performance even under heavy usage loads. Administrators can easily add servers as workload increases, without reinstalling or losing any of the configuration information and without disrupting system operation.

### Integration with Current Environment

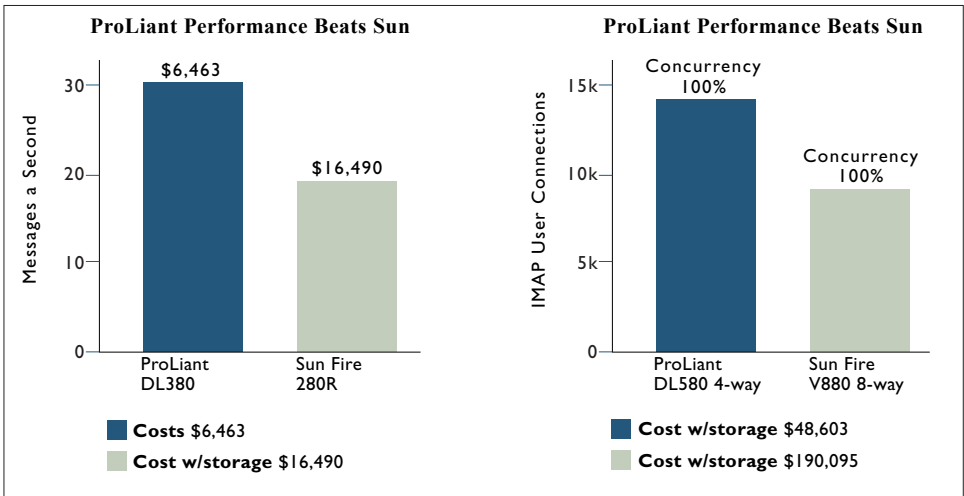
Many enterprises are already using collaboration systems for their knowledge workers, such as GroupWise, Microsoft Exchange and Lotus Notes. Sendmail Workforce Mail provides seamless integration with these systems through the Sendmail Directory Server and ties all systems into a cohesive messaging solution. Sendmail Directory Server is available on the Itanium2 for robust scalability, to ensure successful deployments for large-scale workforces. This is proven at ISPs supporting up to millions of users.



**Cost Effectiveness with High Performance**

Price/performance sensitivity is one of the top concerns for extending messaging solutions throughout the organization. Sendmail Workforce Mail—operating on industry-standard Intel-based HP ProLiant servers and Linux—makes email affordable for deskless workers by supporting far more users on fewer servers. In recent benchmarking, the Sendmail solution delivered both an 87% cost reduction and a 35% performance increase compared to other RISC-based solutions. The solution also offers unmatched scalability.

**Results of Performance Testing**



**Simplified Administration and Security**

Providing a global view of user accounts, Sendmail Workforce Mail simplifies user set-up, administration and support. Administrators can use Sendmail’s browser-based interface for anytime, anywhere access via the web or command line. Changing Workforce Mail configurations on the server or the client is fast and easy, requiring no downtime.

Sendmail’s Directory Server provides a single source of consolidated information for multiple network applications, eliminating the need to synchronize changes (for example, email routing and user authentication). That means when a user changes his or her password, it is automatically changed for all applications. This saves a considerable amount of time for administrators, freeing them to work on more strategic business issues. It also eliminates the large number of password-related help desk calls that can drive up costs.

In addition, Workforce Mail protects users and information with high security features:

- Remote sending allowed only from trusted IP address ranges
- SMTP authentication before sending remote mail
- Limited or specified number of recipients to control sending of remote mail
- Anti-virus, anti-spam, archiving and keyword filter options
- Disclaimer policy and text to reduce liability



### Sendmail – The Ideal Email Solution

Sendmail’s modular architecture and basis in open Internet standards and protocols provide the flexibility to incorporate new technologies and meet unforeseen needs without compromising an organization’s existing investment. To obtain detailed recommendations for deploying Sendmail in your specific environment, contact a Sendmail sales representative.

Competition in the Internet economy is fierce. Organizations that don’t tap the full potential of all their employees—deskless and remote as well as desk-based—will find it difficult to maintain a competitive edge. Providing enterprise-wide email positions the organization for success in an extremely competitive environment, empowering employees to interact and share up-to-date and consistent information and ideas, communicate and collaborate with team members and colleagues, and manage time more effectively.

Sendmail Workforce Mail offers organizations of all types and sizes an economical, high performance approach to extending email to the deskless and remote workforce. Workforce Mail is the only solution that meets all the requirements for an enterprise-wide email system that includes deskless workers. It’s the most scalable solution available, supporting more than 200,000 users on a single server, with a directory foundation that simplifies management and enhances scalability. Workforce Mail also offers high availability, extensive standards support and support for web-enabled mobile access devices.

Workforce Mail’s broad set of email features meets the needs of not only deskless workers, but many desk-based employees as well. With Sendmail Workforce Mail, organizations can bring all employees into the collaboration zone to maximize productivity and improve overall organizational effectiveness. As a result, organizations can enhance their ability to compete in the Internet economy.

### CONCLUSION



## COMPONENTS

Sendmail Mailcenter combines all the components necessary to deploy a complete email system of any size:

***Sendmail Mobile Message Server*** – Provides Webmail and wireless access.

***Sendmail Advanced Message Server*** – A high-performance mailbox hosting and POP/IMAP access server made infinitely scalable by the inclusion of a robust, secure message access proxy.

***Sendmail Directory Service*** – Integrated directory management service for business-critical email systems.

***Sendmail Price/Performance on Linux*** – Maximum availability and superb price performance for Linux and HP ProLiant Intel-based server platforms.

***Sendmail Intelligent Inbox*** – Personal delivery filters operate before mail is delivered to individual mailboxes and are mail-reader independent, providing end-users the ability to easily choose multiple access clients, devices, sorting and notification methods.

#### Servers

- HP ProLiant DL class 2 and 4 way Xeon Servers
- HP ProLiant High Density BL “Blade” Class Servers
- HP Itanium2 Servers

#### High Availability and Management

- HP Insight Management Suite
- SteelEye LifeKeeper for Linux HA

#### Server OS's

- SuSE Linux Enterprise Server
- Red Hat Linux Advanced Server

#### Client Systems

- Compaq Evo Business Class PC (can be used as Breakroom Kiosk)
- HP XW Series Workstation with Intel Xeon
- Compaq Evo Series Notebooks with Mobile Intel Pentium (with WiFi for Hotspot access)
- Compaq iPAQ Handheld PDA for remote users with Bluetooth and WiFi (Hotspot access)
- Compaq Tablet PC for workforce members in the field



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