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Exchange Server 2007

**Exchange Server 2007 Brings Value to Your
Messaging Environment**

White Paper

Published: November 2006

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Introduction

Organizations around the world are upgrading to Microsoft® Exchange Server 2007 to take advantage of new capabilities that improve productivity and reduce costs. Many of these organizations have accelerated their deployment plans after initial testing because of the benefits for both end users and IT staff.

Benefits from the upgrade can be grouped into three categories: protection, access to information, and operational efficiency. In each of these areas, Exchange Server 2007 has led to lower costs for the organization and improved service to end users.

Organizations have found that the cost of upgrading is lower than they expected. And new deployment and migration tools make the upgrade process faster and easier than it was with previous versions. This white paper draws on the experience of these early adopters to explain the value that Microsoft customers can expect to achieve when they upgrade to Exchange Server 2007.

Emory University is one of the early adopters of Exchange Server 2007. Samples from the business case for Emory University's upgrade will be provided throughout this paper to help illustrate the value of upgrading.

Customer Case Study: Emory University

Emory University in Atlanta, Georgia is an early adopter of Exchange Server 2007. When making the business case to upgrade from Exchange 2003, Emory looked at many factors. Some of the most important were:

- High storage costs for their present deployment
- Security requirements of Health Insurance Portability and Accountability Act (HIPAA) regulations
- End-user benefits such as calendaring and unified messaging

Throughout this white paper, these sidebars will be used to illustrate the benefits that Emory expects to achieve from their implementation.

Benefit Area	Exchange Server 2007 Improvement	Value Examples
Built-in Protection	<ul style="list-style-type: none"> • Built-in anti-spam • Forefront Security for Exchange Server and Exchange Hosted Filtering • Continuous Replication • Transport rules and message retention policies 	<ul style="list-style-type: none"> • Enable "out-of-the-box" secure installation and configuration • Provide integrated solutions for anti-spam, antivirus, secure messaging, and compliance to reduce licensing, development, and deployment costs • Reduce administration costs by managing all components from a single environment
Access to Information	<ul style="list-style-type: none"> • Exchange Unified Messaging • Enhanced mobility support • Updated Outlook Web Access • Scheduling Assistant 	<ul style="list-style-type: none"> • Extend users' productive time • Replace third-party systems for voice mail, auto attendant and corporate directory services • Reduce the cost of mobile messaging • Speed decision making and customer responses
Operational Efficiency	<ul style="list-style-type: none"> • Modular, role-based system • Exchange Management Console • Exchange Management Shell • 64-bit architecture 	<ul style="list-style-type: none"> • Flexibly install and uninstall just what is needed • Simplify administrative tasks • Automate operations through scripting • Reduce storage costs, by improving storage utilization efficiency

Built-In Protection

“One of the great features of Local Continuous Replication is that it enabled us to reconfigure our messaging environment and implement a lot of the security features without the expense of running a full-fledged cluster, which we didn’t really need.”

Will Wilson Director of Information Systems, Guardian Management LLC

Far more than a simple communication medium, messaging systems are used as a repository for critical company information and are integrated into mission-critical business processes. As messaging systems have grown in importance, organizations have been forced to deploy more resources to protect them and prevent costly business disruptions by:

- **Keeping system downtime to a minimum.** System downtime can be very costly to an organization due to lost opportunities, slow response times to customers, and lost productivity.
- **Protecting users from unwanted e-mail messages and viruses.** 90% of the e-mail messages sent to Microsoft domains are spam messages, which, if not intercepted, would severely impact mail system costs and user productivity.
- **Preventing data loss.** Any data loss is typically considered unacceptable, causing organizations to implement costly backup and restore procedures.
- **Complying with regulations specifying data retention and ethical walls.** An expanding number of companies now have retention policies and implement restrictions on employee communications either for their own business reasons or because of governmental or legal requirements. These organizations must often deploy new hardware and software to implement these controls.
- **Performing legal discovery for e-mail messages.** 24% of organizations have had employee e-mail messages subpoenaed by courts and regulators, and 15% of companies have gone to court to battle lawsuits triggered by employee e-mail messages¹.

To manage these responsibilities, messaging administrators are currently forced to increase the complexity of their environments by deploying additional hardware or adding third-party solutions. The complexity and additional solutions lead to higher maintenance, administration, licensing, and support costs.

New High-Availability Solutions Reduce Complexity and Backup Costs

Exchange Server 2007 provides a new approach to delivering a high availability messaging system. It creates a duplicate copy of the entire e-mail database that is always up to date. There are two ways to do this: Local Continuous Replication (LCR) and Cluster Continuous Replication (CCR). LCR maintains a separate copy of the e-mail database on a secondary set of disks attached to the main e-mail server. In the event of a problem such as a disk array failure, an administrator can switch to the backup database manually. CCR uses a completely separate server that can take over operations automatically in the event of a service interruption. This backup server can be hosted in a separate location to provide geographic redundancy, if required.

Using this continuous replication technology, Exchange Server 2007 customers can recover from a failure automatically. The system helps to ensure that data is not lost during the changeover because the server determines if any records are missing and updates the second copy of the database.

Delivering high availability through continuous replication is easier to implement and more cost effective than traditional Windows Single Copy Cluster solutions. Organizations choosing CCR benefit from a high availability solution with no single point of failure, no special hardware requirements, no shared storage requirements, and straightforward administration from within the Exchange environment. LCR provides an even simpler method to protect against a failure in the database storage system. “One of the great features of Local Continuous Replication is that it enabled us to reconfigure our messaging environment

¹ Workplace E-Mail, Instant Messaging & Blogging Survey, AMA & The ePolicy Institute, 2006

and implement a lot of the security features without the expense of running a full-fledged cluster, which we didn't really need," says Will Wilson Director of Information Systems Guardian Management LLC. After dismantling the cluster, Guardian was able to redeploy that hardware to support the new server roles in Exchange Server 2007.

With LCR and CCR, costs are further reduced because companies maintain a backup of their data at all times and can therefore reduce the frequency of tape backups. Microsoft IT reduced the frequency of tape backups from daily to weekly after implementing CCR with Exchange Server 2007 and expects to save five million dollars a year.² "Cluster Continuous Replication allows us to maintain our high service level agreements on lower cost hardware, removes our dependency on expensive tape backups and eliminates the single point of failure," explains Kyril Perederiy, Senior Systems Engineer, MS IT. "It's availability based on software, not dependent on hardware."

Integrated Antivirus and Anti-Spam Simplifies Administration

Exchange Server 2007 enables customers to implement a layered approach to message security. The new Edge Transport Server role provides built-in protection against unwanted messages by filtering at the network perimeter. Forefront Security for Exchange Server extends the protection built-in to Exchange Server 2007 by providing multiple layers of security and the capability to use multiple virus scanning engines to prevent viruses from reaching user mailboxes. Customers can also take advantage of Microsoft Exchange Hosted Filtering, which provides protection against spam and viruses before they reach the corporate network. With all of the protection in place, messages are scanned before they reach the corporate network, at the firewall, and during transport inside the network.

The Edge Transport Server role reduces false positives by storing personal safe sender lists. This reduces administrative time spent restoring messages and allows administrators to increase protection levels. Removing spam at the perimeter or through a hosted service also reduces network traffic and storage requirements for unwanted messages.

Compliance Management Made Easy

Exchange Server 2007 allows administrators to quickly implement corporate and regulatory compliance policies without programming through Transport Rules. These rules give administrators granular control, down to individual users or keywords, over policies regulating content, recipients, archiving, and retention. At Columbia River Bank, technicians have tested rules that prohibit communication between members of distinct distribution lists, require encrypted delivery whenever a message contains confidential information identified by text pattern matching, append a disclaimer to any message being sent externally, or include the bank's compliance personnel on the Bcc line anytime a specific phrase appears in a message.

Message retention policies help limit the amount of e-mail storage required and protect the privacy of e-mail conversations by limiting message lifetimes. Companies that have deployed Exchange Server 2007 are already reaping the benefits of the improved compliance management capabilities. As Jonathan Ruckert, managing director at Oconics, explains, "The Messaging Records Management capabilities in Microsoft Exchange Server 2007 provide us with a great way to apply e-mail retention policies and reduce inbox overload for our end users." Prior versions of Exchange had no built-in capabilities to handle these tasks.

Another area of savings is legal discovery costs for e-mail messages, which can add up quickly as administrators currently have to search mailboxes individually. Exchange Server 2007 significantly reduces these costs by enabling administrators to create queries that search across the entire environment.

Emory Saves \$50,000 on Compliance Management

To comply with HIPAA regulations Emory planned on implementing e-mail encryption with a third-party vendor. This software could have cost as much as \$100 per user for the 500 users covered by the regulations.

Exchange Server 2007 provided this encryption for all internal e-mail by default. No additional work was required during implementation.

² MSIT internal statistic, 2006

Messages that match the search criteria are delivered to a designated mailbox where compliance or legal personnel can easily access messages via the familiar interfaces of Outlook or Outlook Web Access. Discovery activities that previously required hours can now be done in minutes.

Improved Access to Information

“Even when our employees are away from the office, they are able to access their calendars, e-mail messages, and documents. So wherever they are and no matter what time it is, our employees have the tools they need to make decisions quickly. We operate in a fast-paced market and with [Exchange Server 2007 and Windows Mobile], we are able to send market and product information quickly between our manufacturing sites and field reps, which decreases our time-to-market.”

Yoshiyasu Iizuka, General Manager of the Information Systems Department, Nikon Corporation

Users are demanding the flexibility to access messages, schedule information, and contact data across a range of devices. In fact, more than half of all online consumers say they check their work e-mail outside the office.³ They need this capability to stay productive wherever they are. Providing this access has been a challenge for IT organizations, because they must:

- **Maintain multiple messaging systems.** Organizations typically must maintain systems for e-mail messages, voice mail, mobile messaging, and so on, that require hardware, licensing, training, and maintenance. Users have to remember multiple passwords and processes to access messages.
- **Maintain better security.** Organizations typically deploy virtual private network (VPN) systems for users to access messaging and collaboration solutions. These systems are expensive to maintain and complicate the user experience. Mobile users also cause security concerns because mobile devices, potentially containing sensitive information, are easily lost and users access e-mail and attachments on public computers can easily leave information behind.
- **Provide a consistent user experience.** Users must adapt their work processes to their locations because mobile access systems often have limited functionality.

Deployment of mobile access solutions has often been limited because of these challenges. However, businesses that don't offer a comprehensive mobile messaging solution can suffer because of delays in business processes and decision making.

Unified Messaging Simplifies the Environment and Saves on Phone Charges

Exchange Server 2007 offers new unified messaging capabilities that can reduce the IT budget and improve end-user productivity. Exchange Unified Messaging enables e-mail, fax, and voice mail messages to be delivered to a universal inbox that can be easily accessed from many devices and locations.

Columbia Sportswear is using Unified Messaging to help reduce costs and make its operations more efficient. Traveling employees must frequently check their voice mail to avoid delays in manufacturing and delivery, leading to high phone charges for the company. “Because our users can access their voice mail messages from their mailboxes, they can avoid the large long-distance phone charges that we've always had to deal with as a company,” says Mike Leeper, Windows Systems Manager at Columbia Sportswear. “It makes employees' lives easier, too. They don't have to figure out how to call the U.S. from every new country that they visit.”

Emory users expect to save nearly \$3,000,000 by reducing time spent scheduling meetings

Currently Emory uses a third-party application for calendars and scheduling meetings. Exchange Server 2007 brings all of the functionality supplied by this application, without the additional costs for licensing and maintenance. Users found that they were able to schedule meetings faster with the Scheduling Assistant, an Exchange feature supported in Outlook 2007 and Outlook Web Access. The average amount of time saved with 15 minutes per week.

³ Jupiter Research, “Mobile Data and The Enterprise Consumer: Assessing and Managing Corporate Data on Personal Devices,” June 15, 2005

Unified messaging allows organizations to consolidate their messaging infrastructure to incur lower maintenance and support costs. Many companies currently maintain multiple voice mail systems because they utilize PBXs from multiple vendors. Exchange Server 2007 allows this voice infrastructure to be centralized on a single platform with Active Directory acting as the single directory structure. “We have had to support disparate PBX and e-mail systems that couldn’t talk with each other,” explains Jared Sahleen, Senior Technology Manager at Lifetime Products. “Adding a new user meant a lot of duplicated effort. Not only did we have to set up a new mailbox in Exchange, but then we had to create a new account for the employee in the PBX system. With Exchange Server 2007, we only need to set up one mailbox.” In addition, companies can deliver integrated security policies across e-mail, fax, and voice mail systems.

Unified Messaging expected to save Emory users \$700,000

When Emory evaluated Exchange Unified Messaging within their environment users were impressed with the capabilities. Users found that it was easier to access their voice mail messages through their inbox. This was especially true for mobile users who could check their messages on e-mail enabled phones or PDAs. Emory estimates that the average user is saving 3 minutes per day from unified messaging.

Web-Based and Mobile Access Keeps Employees Productive and Speeds Business Processes

Exchange Server 2007 delivers a consistent user experience, whether the user is in the office, using a Web browser, or on mobile device. The consistent user interface allows users to access their data without investing time to remember additional passwords or learn new systems.

Exchange Server 2007 delivers content to a wide variety of mobile phones and personal digital assistants (PDAs) efficiently and without any additional licensing costs. It also enforces corporate policy settings on mobile devices and enables administrators to wipe content from devices that are lost or stolen. Competitive products often require additional hardware and software licenses and might not provide the level of security required. Microsoft Exchange ActiveSync® technology, which is built-in to Exchange, allows mobile devices to interact with the messaging system efficiently, making it extremely scalable. Since mobile devices can be added for licensed users⁴ with no additional licensing costs and little impact on the messaging system, organizations will be able to provide mobile e-mail access to a much wider audience than they currently do.

“Even when our employees are away from the office, they are able to access their calendars, e-mail messages, and documents. So wherever they are and no matter what time it is, our employees have the tools they need to make decisions quickly,” says Yoshiyasu Iizuka, General Manager of the Information Systems Department at Nikon Corporation. “We operate in a fast-paced market and with [Exchange Server 2007 and Windows Mobile], we are able to send market and product information quickly between our manufacturing sites and field reps, which decreases our time-to-market.”

The Over-the-Air Search capability of Exchange ActiveSync allows mobile users to query both the local device store and their entire mailbox on the Exchange server. Even though mobile devices typically store only a small fraction of the user’s e-mail messages, Over-the-Air search provides a way for the mobile user to find and retrieve information from their entire mailbox at any time. “Our lawyers have a lot of data in their inboxes, and not all of it can be stored on their mobile devices,” says Paul Lubold, Infrastructure and Operations Manager, Pennsylvania Office of Attorney General. “These [over-the-air] search capabilities will enable them to quickly find the information they need, even from their mobile devices on their way to the courthouse or office.”

Microsoft Office Outlook Web Access provides full messaging functionality from any Web browser. Users can perform all of their messaging tasks without carrying their computers with them every time they leave the office. Robbie Roberts, IT manager at Windrush Frozen Foods, says, “Outlook Web Access in Exchange Server 2007 is a terrific experience for end users with many enhancements over Exchange Server 2003. Through WebReady Document Viewing, new in Office Outlook Web Access 2007, our users can access attachments from public kiosks, even if the required application is not locally installed.

⁴ User must already be licensed with an Exchange User CAL. Organizations using other licensing methods should inquire with their Microsoft sales representative. For more information please see <http://www.microsoft.com/exchange/evaluation/editions.mspx>

More importantly, we can protect our corporate assets by ensuring no private content contained in attachments is left behind on public machines.”

Exchange Server 2007 also enables users to access files stored inside the corporate network in Microsoft Office SharePoint® Server 2007 or in file shares, without requiring a virtual private network (VPN) or “tunneled” connection. “I have many remote users that rely heavily on Outlook Web Access and need access to files and documentation outside regular business hours,” says Paul Lubold, Infrastructure and Operations Manager, Pennsylvania Office of Attorney General. “The fact that they’ll be able to do that without having to configure a VPN is a major advantage for all of us. It will definitely save us time and money, in terms of deployment and maintenance.” The files can be accessed with Microsoft Office Outlook 2007 or Office Outlook Web Access. Outlook 2007 even synchronizes with SharePoint sites to provide offline access to that content just like it provides offline access to e-mail, calendar, contacts and tasks .

With Microsoft Office Outlook® Voice Access, a feature of Exchange Unified Messaging, users can receive all of their messages from any phone. Users can even schedule meetings or search the company directory using the auto attendant. Outlook Voice Access is especially important for Axcelis because its workforce is increasingly mobile. “We have many salespeople that travel overseas to visit our fabricating plants,” says Jim Ferguson, Senior Exchange Administrator for Axcelis Technologies. “If a salesperson is sitting in an airport waiting for an e-mail and doesn’t have computer access, he or she can just call our new system and have that e-mail read back. That helps prevent uncomfortable business situations for us, such as not being able to receive customer e-mails while on the road. It makes us more responsive as a company.”

Improved Operational Efficiency

“The Exchange Management Shell in Exchange Server 2007 has helped us to automate many of our repetitive tasks such as bulk creation of a large number of new users in Active Directory and enabling their e-mail as well as fast provisioning of all e-mail services. The Exchange Management Shell will save us a significant amount of time managing our large Exchange [Server] environment.”

Petr Grachev, CIO, SOK Group

Managing a messaging environment has traditionally involved significant time and effort. Even small organizations often have a dedicated staff member for messaging; and large organizations may have dozens. Administration labor costs are typically more than 65 percent of the total cost of managing a messaging system⁵. The reasons for the high management costs include:

- **Complexity of the messaging system.** E-mail and calendaring systems are often integrated with multiple third-party applications such as voice mail, archiving, and mobile delivery.
- **Complicated user interfaces.** Rather than having a single graphical environment with command line capabilities, many systems have a variety of management tools with separate user interfaces and varying degrees of automation capabilities.
- **Mission-Critical nature.** Downtime is not acceptable at most organizations, leading to complicated backup systems and additional staffing requirements.

Exchange Server 2007 brings extensive changes to the management environment that reduce the cost of administration by simplifying hardware requirements, reducing the need for third-party applications, and providing better management tools.

Exchange Management Console Simplifies Common Tasks

Administrative tasks can be performed with either the Exchange Management Console or the Exchange Management Shell. The console provides a convenient graphical interface that guides administrators through common tasks. Administrators using the Exchange Management Console have been impressed by the many time-saving changes. For instance, creating a mailbox required 10 clicks in Exchange Server 2003 but only 3 clicks in Exchange Server 2007. “Managing the databases in my storage groups is incredibly simple in Exchange Server 2007,” notes Steve Gould, network administrator, APA – The Engineered Wood Association. “It only takes a few seconds to create a new storage group, or to move a mailbox database from one storage group to another, or to put users in different storage groups. There’s just nothing to it at all.”

Simplified Management Console tasks estimated to save 750 hours per year

Emory runs a very lean IT operation so any operational efficiency is greatly appreciated by the Exchange administrators. Emory expects their administrators to be able to save time on patches and updates and on client migration. These benefits should save nearly 750 hours per year.

Exchange Management Shell Enables Automation

The Exchange Management Shell is a command line interface based on Windows PowerShell. It provides administrators full control over the system, allowing them to automate routine and repetitive tasks. “The Exchange Management Shell in Exchange Server 2007 has helped us to automate many of our repetitive tasks such as bulk creation of a large number of new users in Active Directory and enabling their e-mail as well as fast provisioning of all e-mail services,” explains Petr Grachev, CIO, SOK Group.

⁵ Osterman Research, Messaging in the SMB market 2005–2008

“The Exchange Management Shell will save us a significant amount of time managing our large Exchange [Server] environment.”

Reducing Complexity Lowers Costs

Exchange Server 2007 also reduces administration costs because the upgrade typically results in a less complex messaging environment. Exchange Server 2007 provides many new capabilities that enhance the end-user experience and reduce costs. For example, voice mail systems currently require significant administrative time that can be reduced by incorporating the capabilities into the Exchange Server environment. Other areas that are more easily managed in one environment are antivirus capabilities, archiving, and mobile e-mail delivery.

Emory expects to reduce storage costs by 50%

The 64-bit architecture of Exchange Server 2007 will allow Emory to reduce storage costs by 50% for ongoing storage needs. “With Exchange Server 2007, we think we will double the number of users per server,” explains John Ellis, director of client technology services at Emory. “I’m expecting to cut our storage and other back-end costs in half.”

Low Cost of Upgrading

“The installation and configuration process is much easier, quicker, and integrated in Exchange Server 2007 than in 2003 or 2000. Installation was very simple. The entire process, from the moment I launched the installer to the point where I could log on, probably took half an hour.”

Steve Gould, network administrator, APA – The Engineered Wood Association

Organizations deploying Exchange Server 2007 have found that upgrading their messaging environment has taken much less effort than expected. Even with the addition of so much new functionality, such as unified messaging and antivirus capabilities, the installation process is straightforward.

Less Effort for Deployment Reduces Costs

Exchange Server 2007 has been designed to make upgrading as simple and efficient as possible. The software is deployed as a system of five modular server roles, each performing specific functions. Only the components required for a specific role are installed when that role is selected by the administrator. This specialization makes the installation process faster and easier than in prior versions. “An infrastructure that includes edge server roles and core server roles allows you to install only the services that are necessary to each server... You get better performance from the system because you're not running a lot of unnecessary services,” explains Conrad Maiorino, senior deployment engineer for emerging technologies, New York City Department of Information Technology and Telecommunications.

With the modular server role architecture and rich set of deployment tools to assist from planning through to users' migration into production, time to deployment is significantly reduced. The setup wizard for Exchange Server 2007 goes beyond installing the product; it uses smart defaults and custom inputs to ensure the proper configuration. In addition to the wizard, a command-line experience is now available for automating server provisioning; this includes not only installation but post-installation configuration as well. Along the way, the integrated Exchange Server Best Practices Analyzer provides configuration guidance.

“The installation and configuration process is much easier, quicker, and integrated in Exchange Server 2007 than in 2003 or 2000. Installation was very simple,” notes Steve Gould, network administrator, APA – The Engineered Wood Association. “The entire process, from the moment I launched the installer to the point where I could log on, probably took half an hour.”

The new Autodiscover feature makes configuring Outlook 2007 to connect with Exchange Server 2007 easier than ever before. If the user is connected to the corporate network their Outlook 2007 client automatically connects to the correct Exchange server and creates a profile – no user configuration is required. Even if a user is not logged on to the corporate network (for example if they using Outlook Anywhere), they still only need their user name, e-mail address, and password. Autodiscover spares users and IT helpdesk staff from manual configuration or setup scripts and the corresponding lost time and expense resulting from helpdesk calls.

More Deployment Cost-Cutting Considerations

The move to Exchange Server 2007 requires 64-bit hardware as well as Windows Server™ 2003 x64 Edition⁶ as the server operating system. Many customers find that hardware purchased in the last few years is already x64, so new hardware may not be required.

⁶ <http://www.microsoft.com/x64>

Some of the new features, such as Forefront Security for Exchange Server, require user licenses in addition to the Standard CAL. However, Exchange Server 2007 has an Enterprise CAL⁷ that provides a cost-effective way to access all of the advanced features, including:

- Unified Messaging
- Messaging Records Management
- Per-User Journaling
- Exchange Hosted Filtering
- Forefront Security for Exchange Server

⁷ <http://www.microsoft.com/exchange/evaluation/editions.mspx>

Conclusion

Organizations that have deployed Exchange Server 2007 have experienced rapid payback on their investments. Benefits can be measured through IT cost reductions and improved user productivity.

The upgrade to Exchange Server 2007 allows IT organizations to reduce costs in many areas. One area is the third-party hardware and software required for their messaging environments. Some systems that can be consolidated are:

- E-mail Security
- Journaling and archiving
- Mobile e-mail delivery
- Voice mail and Unified Messaging systems
- Antivirus and anti-spam software
- VPN software to access e-mail messages and file shares

Using Exchange Server for these capabilities will result in lower costs for licensing, hardware maintenance, and administration. The low cost of the Enterprise CAL is especially attractive when compared to licensing similar functionality using multiple third party solutions..

The 64-bit architecture of Exchange Server 2007 leads to further cost savings. Organizations can reduce the hardware required to support their users and can lower storage system costs.

Users benefit from improved mobile access. With Unified Messaging, end users get a single, convenient inbox in which to check and respond to all types of messages, whether e-mail, voice mail, or fax. Users can even check their messages over the phone. With the capabilities offered by Exchange Server 2007, end users experience an immediate increase in productivity.

Exchange Server 2007 is a dependable messaging infrastructure that saves your organization money by reducing infrastructure costs and increasing productivity. It delivers the latest tools that IT organizations and end users need to communicate and collaborate any time, anywhere.

Emory Expects Substantial Benefits From Exchange Server 2007	
Built-in Protection	<ul style="list-style-type: none"> • Compliance features meet HIPAA requirements out-of-the-box, driving savings on solution development • Multi-mailbox search will reduce discovery costs
Access to Information	<ul style="list-style-type: none"> • Unified Messaging is expected to reduce time checking and responding to messages leading to annual savings of more than \$700,000 • Improved search functionality is expected to save users more than \$1.2 million annually • Scheduling Assistant is expected to save meeting organizers nearly \$3 million annually
Operational Efficiency	<ul style="list-style-type: none"> • The Exchange Management Console improvements should save more than 750 hours per year on administrative tasks • Emory expects to double the number of users per server after moving to 64-bit servers • Reduced I/O requirements should lead to a 50 percent reduction in storage costs • AutoDiscover expected to reduce Outlook configuration help desk calls by 25-50 percent



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