

# How to Design a Mission-Critical Microsoft® Exchange 2007 Infrastructure from the Ground Up

As organizations migrate to Microsoft Exchange 2007, they must keep in mind that they're deploying much more than simply the next version of their e-mail system. Instead, Microsoft Exchange 2007 will often be tightly coupled with unified communications systems, provide core services for corporate instant messaging, and will be exposed through internal collaborative sites built upon Microsoft SharePoint® Server and Microsoft SQL Server®. These interwoven and highly connected systems mark a critical time at which the infrastructure supporting these systems must be well planned in order to support the needs of current and future demands.

## WHAT SHOULD YOU CONSIDER?

There are a variety of things that decision makers must consider as they plan for deploying Microsoft Exchange 2007—and beyond:

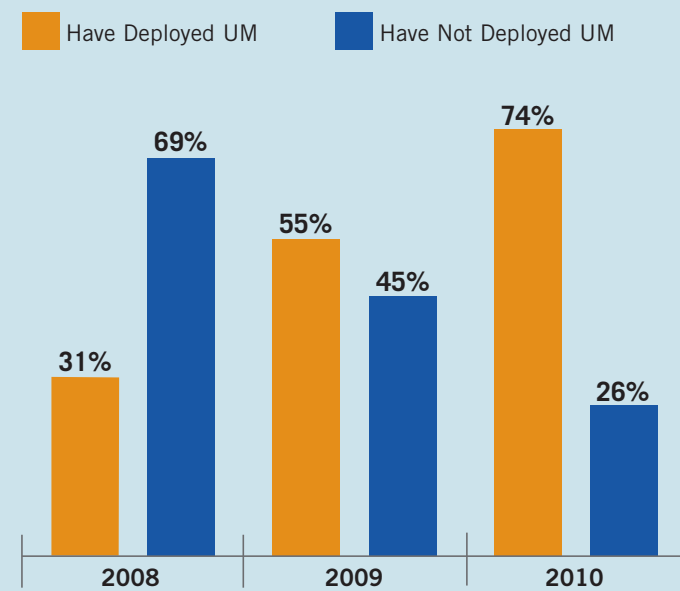
### • Performance and Scalability

The infrastructure supporting your users should be planned to not only handle the performance demands of the current set of users, but to also allow for simplified expansion in the event of planned or unplanned growth. Scalability concerns can be minimized deploying users in pre-defined building blocks on a SAN-based architecture, so that as user demands increase (such as an increase in mobile users, advanced calendaring features, public folders), the core systems don't grind to a halt.

### • Data Backup and Rapid Restores

Backing up email systems is one of the most difficult challenges an organization currently faces and the addition of voice, fax and other content in unified messaging systems will make the problem much more complicated. Backup systems must be designed to accommodate greater volumes of information and the restore speeds will be limited by the technologies selected for back-ups. Companies may choose to re-architect their current tape or disk streaming approaches and consider using next-generation snapshots and cloning technologies in order to increase backup times, shrink restore times and provide for additional recovery points.

## Organizations That Will Deploy and Will Not Deploy Unified Messaging (UM) 2008 Through 2010



SOURCE: OSTERMAN RESEARCH INC.

### • Disaster Recovery and Business Continuity

Unified messaging and unified communications will make e-mail systems based on Microsoft Exchange 2007 even more mission critical. Organizations of all sizes must deploy Microsoft Exchange 2007 with disaster recovery and business continuity in mind—even small amounts of data loss or an inability to recover messaging functionality quickly and efficiently can result in major consequences. Companies are now faced with a growing set of replication choices: they must evaluate and test how Microsoft Exchange built-in replication compares to network-based replication as well as SAN-based replication technologies.

### • Archiving for Cost Reduction

E-mail has become the plumbing of the modern enterprise and while it is almost

paradoxical, as the communications “utility” becomes more important and more pervasive; its cost must be driven as low as possible. Reducing the cost of the infrastructure focuses on a variety of things, including designing the architecture to be as efficient as possible and using the concept of storage tiering to permit the greatest level of cost savings over the long term. Companies must choose between built-in archiving solutions versus third-party solutions that can move data from expensive tiers of storage to inexpensive tiers of storage.

### • Archiving for Compliance

Archiving of electronic content is becoming dramatically more important as a result of various factors, including the new amendments to the Federal Rules of Civil Procedure, recent court rulings about the admissibility of electronic evidence, a greater focus on e-discovery and regulatory requirements to protect the confidentiality of customer data. Content archiving will become even more important—and more difficult—in a unified messaging and unified communications paradigm. Decision makers must build the next-generation infrastructure with an emphasis on content archiving—storing data for the long term and making it easily accessible for when, where and by whom it's needed.

### • Other Considerations

Microsoft Exchange 2007 and, longer term, the migration to unified communications, will carry with them the need to consider a variety of other technologies and practices. These include planning for virtualization in order to reduce power and cooling requirements and to increase the flexibility of the infrastructure. SANs must be considered as organizations grow and need predictable performance, scalability without downtime, dynamic volume expansion, LUN prioritization, and entry into game-changing technologies such as LAN-free backups, and advanced disaster recovery capabilities. A well-designed SAN also allows Microsoft Exchange servers to focus on serving their core messaging and communication services while the functions

of data protection are kept on an independent and protected infrastructure platform.

### • Take advantage of available expertise

Designing, deploying and managing a Microsoft Exchange 2007 infrastructure is a major effort—one that can consume significant internal resources, and take lots of time to complete if it's done properly. It makes sense, therefore, to leverage the expertise of others and use their experience to minimize the amount of time and resources needed to implement the new capabilities offered by unified messaging and unified communications. For example, using a team of experienced consultants that are focused on Microsoft Exchange 2007 planning and deployment, using pre-tested configurations and making use of other resources can provide significant benefits.

## PLANNING FOR THE FUTURE

It cannot be stated too strongly that deploying Exchange 2007 and unified communications technologies require considerable forethought, good planning and significant expertise in a variety of areas, including storage, backup, archiving and other infrastructure areas. Further, the planning effort for the migration should include a focus broader than just the immediate needs of unified messaging: it should take into consideration the infrastructure's support for other applications, such as data protection strategies for all of the applications that an organization supports or might support in the future.

Download the full article titled, “How to Design a Mission-Critical Microsoft® Exchange 2007 Infrastructure from the Ground Up” at [Redmondmag.com/showcase/emc/2](http://Redmondmag.com/showcase/emc/2).

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“Microsoft Exchange 2007 and unified communications technologies require considerable forethought, good planning and significant expertise.”

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