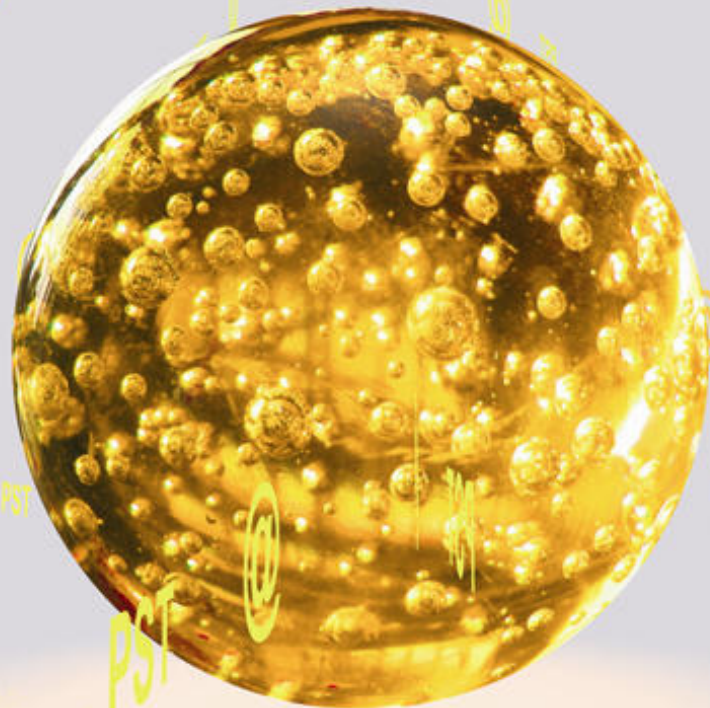


PAM for EXCHANGE email archiving at its best

Whitepaper

Microsoft Exchange Server 2007
Migration Guidelines



CONTENT

This paper sets out guidelines for upgrading your Microsoft® Exchange Server environment from 2000/2003 to the latest 2007 edition.

It is designed for system administrators and IT managers to aid in the decision making process of upgrading to the Exchange Server 2007 environment. It is not a comprehensive walkthrough of the Exchange 2007 implementation and should not be treated as an installation manual.

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Benefits of Migrating

Email messaging security improvements: anti-spam, anti-virus and anti-phishing

Improved email performance for end users

Centralized, efficient exchange environment

Fewer servers and hardware to manage

Exchange 2007's added compliancy features

Exchange 2007's added disaster recovery and HA features

Unified Messaging technology

Initial Considerations

The following pointers are some preliminary thoughts before planning to upgrade to a new exchange environment. Firstly, the organizations I.T infrastructure should be stable enough to withstand a migration; if there is any doubt in the current set-up then consult external assistance from MS Exchange Specialists.

- Plan on buying new server hardware (depending on your migration strategy) because Exchange 2007 normally installs onto new servers.
- It is not possible to migrate from Exchange version 5.5 straight to 2007, one must upgrade to 2000 or 2003 beforehand.
- Exchange 2007 only functions on 64-bit processor and 64-bit operating system servers whereas 2003 runs on 64-bit hardware but 32-bit operating system.

This is due to the rising memory capacity required of the exchange server database; the database growth has been fuelled by several factors including enforced regulations to hold information for longer periods of time, widespread internet connections and spam. With larger databases needed, there is a need for larger memory capacity to maintain appropriate system performance rates.

System Requirements: Hardware

- Minimum of 1GB RAM (2GB recommended)
- 1GB disk space on installation drive
- 200MB disk space on system drive
- NTFS file system
- Windows Server 2003
- It may not be necessary to replace each of your current Exchange 2003 servers with new hardware depending on your strategy and architecture. If you have a new server running 64-bit processor and 32-bit code then one can perform a rolling migration by installing Exchange 2007 onto a new server and migrating one 2003 server onto it. After that, reformatting the migrated 2003 server and installing Exchange 2007 and Windows Operating System 2007 onto the 2003 server.

Tip Server consolidation will save license fee costs

There are no constraints on the size of the database as with previous exchange versions

- There are no constraints on the size of the database as with previous exchange versions.
- With the suitable infrastructure in-place one can consolidate existing servers to just a few Exchange 2007 servers. New hardware remains a necessity but license fee costs are lessened.

System Requirements: Software

- MS Windows Server 2003 SP1 & R3 supported
- MS .NET Framework 2.0
- MMC 3.0

Planning the Migration

An analysis of the current status of the exchange environment including both business and technical system implementers is recommended. How advantageous the future exchange set-up will be to the company is an important question and tasks such as a cost benefit analysis are strongly advised to ensure the migration will be valuable.

Preparation:

- Plan how the new server will integrate into the existing exchange environment before any implementation.
- Have a rollback strategy in-case of a system failure during installation.
- Exchange 2007 modifies the Active Directory schema therefore best practice is to make a full system backup of the domain controllers before installation.
- Perform a health check on the Active Directory before migration.
- More planning of the future exchange environment is required when migrating to 2007 because the server roles have been altered.
- Fewer servers, more databases and more centralized infrastructure 'will help the manageability of the environment.
- Network connection speeds and compatibility require inspection.
- Windows environment version compatibility.
- Check domain and forest model: single or multiple?
- Study the current and projected server topology.
- Hub transport and edge transport rules as well as mailbox server rules need consideration
- Check mailboxes, distribution lists and Active Directory
- Explore client access applications: any mobile users?
- How has backup and recovery been taken into account?
- Perform a risk management study
- Do any internal policies affect the migration?

Tip Before migrating, perform a detailed exchange environment analysis

High level system information should be collected including server topology diagrams, back-end and front-end infrastructure, proposed affects on other system software and hardware devices. The preparation notes above are a good start to planning the migration but a complete, comprehensive exchange environment checklist will guarantee all the necessary information is possessed.

Archive before Migration

Moving an entire organizations email system onto a different platform can be a time consuming and risky procedure especially in a multi faceted system. Losing valuable corporate messages is an unimaginable I.T failure for a migration therefore actions to prevent this potential consequence should be considered and archiving is the ideal option.

Archiving before the migration drastically lessens the workload as only the message shortcut is stored on the exchange server and consequently the only data involved in the migration. The email message including attachments is already stored safely in storage media ready to be connected to the new exchange server.

Archiving before migration significantly reduces the information store by as much as 80% which reduces time and cost to the migration process. It also improves the dependability of the new exchange server and decreases the chance of possible security breaches.

An extra advantage to archiving before migration is the opportunity to provide instantly accessible emails in the new exchange environment to the end user and if necessary those messages can be fully restored to the new exchange server. The users only have to wait for the new server to be installed and not for the time consuming process of migrating the mailboxes.

Performing the Migration

Key Installations:

- Follow the wizard: install .NET 2.0, MMC 3.0 and install shell
- Replace the front-end servers with 2007's client access servers
- Replace Bridgehead servers with hub transport servers
- Build mailbox server role systems
- Add hub and edge transport rules

Migration Strategies

Full Migration:

There are many options available to upgrade the exchange environment; firstly the full migration is a complete upgrade from an older exchange version or other mail server to Exchange 2007 changing all the original configurations. This is an effective strategy for testing the new exchange version in the new surroundings without affecting any users. The downside is the cost of new hardware and the task of manually moving mailboxes.

Intermediate Migration:

A transitional upgrade is when new Exchange 2007 servers are added to the existing set-up and the mailboxes are migrated from there. This upgrade can also be possible using the existing servers providing they fit the Exchange 2007 requirements. The strategy requires a lot of configuration of directories and databases which is labour demanding and prone to human error but saves the cost of spending for new hardware.

Phased Migration:

A phased strategy runs two parallel exchange environments besides each other and mailboxes are gradually migrated onto the new structure. Ideal for larger organizations and enterprise wide migration conversions because the process is gradual and does not disrupt the end user. Old servers can be redeployed saving hardware costs but the major difficulty is maintaining the two exchange environments side by side without error.

In the phased solution, Exchange 2007 is deployed in the new environment and synchronized with the existing environment. Deploying Outlook (2007 is recommended) is the next step (if it is not already installed) and connecting to third party system products also. Creating a cooperative setting for the exchange environments to run simultaneously in is the key objective. All exchange applications such as tasks, calendar, directories and public folders must be synchronized so any changes made are mirrored in the original source.

Tip Continually assess the migration process and the exchange environment.

Many more migration strategies are plausible and should be taken into consideration before embarking on the project. Each exchange environment has a distinctive set-up and is usually managed by singular administrators. To build or upgrade a successful new exchange environment requires an adaptable strategy and careful planning. The common goal for all migrations is to have as little disruption to the end user as possible.

Migrating Mailboxes

Tip Test the migration process by working by moving a couple of mailboxes to begin with. Do not move them all at once.

From the Exchange Server 2007, open Exchange Management Console and go to Recipient Configuration then Mailbox. This will show every mailbox in the exchange server organization. Making search filters is possible for larger organizations with large exchange server architectures to view only the server you wish to migrate.

Migrate immediately or set scheduling times for the migration of mailboxes so as not to disrupt user productivity or interrupt system backup times. It can be a time consuming process and very human error prone if dealing with a large number of mailboxes.

Connecting Users:

One of the final tasks is connecting users to their mailboxes in the new exchange set-up and ensuring they retain their original Outlook settings. All applications should be up to date and mails targeted only to the new exchange server and the users new mailbox.

Tip Migrate a few mailboxes at a time to avoid slowing system performance.

The main problem with linking users to their mailbox is letting Outlook know the position of it. It is recommended that you install Outlook 2007 before the migration. In the exchange environment there is no need to manually enter each user's name and which exchange server they are using because Outlook automatically extracts the information from Active Directory.

The amount of information being migrated from corporate mail servers is unprecedented. Not only email messages but calendars, public folders, tasks and notes all combine to make the migration a far harder task if this data is not archived beforehand.

MS Exchange 2007 Routing (Summary)

An overview of the typical routing of an email in a new Exchange Server 2007 setting:

Messages from SMTP servers hit the edge transport server first, when a message is sent to the corporate network. It is the first line of protection for the corporate network and also where the initial rules are assigned to the message header, subject and body to determine its route. The hub transport server is the next stage where corporate policy regulations control the message through the organization. Pre-set conditions manage the direction and general outcome of the message. From here the message moves to the mailbox server and finally the client application which can be internal or externally (mobile device, OWA etc.) routed.