

Exchange Server 2010

New Email Archiving Capabilities

Starting with Microsoft Exchange Server 2010, administrators can choose between two scenarios ensuring email archiving that complies with legal requirements:

- Scenario 1: User mailbox “Personal Archive“
- Scenario 2: Using an external archiving solution

This document is meant to assist IT professionals in choosing the archiving scenario which is best suited for their company.

Scenario 1: User Mailbox “Personal Archive“

For each user mailbox, Microsoft Exchange Server 2010 provides the opportunity to create an additional mailbox “Personal Archive” into which emails can be moved either manually or automatically¹. An appropriate configuration of Exchange Server guarantees that, within the corresponding retention periods, emails cannot be deleted from Exchange Server. Provided that all configuration parameters are set correctly, companies are able to accomplish e-mail archiving that complies with legal requirements.

Applying this scenario results in the several requirements for the IT infrastructure, including:

- **Storage capacity:** Depending on the retention policies configured, emails typically remain in the archive for up to ten years. In consequence, the storage capacity needed can increase dramatically and has to be made available accordingly. In addition, you have to take into consideration that, since Exchange 2010 does no longer offer single instance storage (SIS), identical emails and file attachments are stored multiple times. In comparison with previous Exchange versions, this makes the memory capacity requirements about 20 to 50 percent higher².
Example: 70 users x 2.5 GB/year x 10 years = 1.75 Terabyte Exchange DB
- **Backup:** By using personal archives with their corresponding retention policies, the size of the Exchange store can reach a multiple of its earlier size within just a short time. Therefore, companies should be sure to use a backup strategy which is able to handle this increase in volume. Important factors in this context are the storage capacities as well as the time window available for backup.
- **File recovery:** Because the amount of data to be restored significantly increases in direct relation to the factors mentioned above, a considerably higher overhead (e.g. expenditure of time) must be allocated to the recovery. The resulting downtimes must be reduced according to company size, data volume and acceptable downtime by implementing a suitable policy for redundant data storage.

¹ <http://technet.microsoft.com/en-us/library/dd979795.aspx>

² <http://exchangeserverpro.com/what-is-the-real-effect-of-removing-single-instance-storage-in-exchange-server-2010>

- **Redundancy:** Downtimes acceptable to a company during backup and recovery can quickly be exceeded by the increasing amounts of data. Microsoft recommends using *Database Availability Groups* (DAG)³, which require Windows Failover Cluster technology (included in Windows Server 2008 Enterprise Edition).
- **Licenses:** For every Exchange user whose emails are to be archived, an Exchange Enterprise CAL has to be purchased in addition to the Standard CAL. According to Microsoft, volume licenses for Office 2010 Professional Plus are required as well⁴.
- **Administration:** Because the configurations of the personal archives and especially the policies have far-reaching and sometimes irreversible consequences, IT administrators are urged to seek a preliminary consultation or training before implementation.

Conclusion

While this scenario offers the best possible integration of the archiving functionality into Microsoft Exchange Server and Outlook, high demands are made on the IT infrastructure.

Companies must carefully consider if they can meet these additional requirements and if they are willing to deal with the corresponding overhead. Typically, this is more applicable to larger corporations with the appropriate base contracts and budgets.

Scenario 2: Using an External Archiving Solution

Like its predecessors, Exchange Server 2010 includes a seamless interface for external email archiving solutions. Several solutions are on the market, including hardware, software and SaaS products.

The statements made in the following scenario are based on the assumption that the software product *MailStore Server* is used for legally compliant email archiving of Exchange Server 2010.

A typical configuration of the archiving process guarantees that emails are copied to the external archive immediately upon sending and receiving ensuring that archiving is complete and tamper-proof. In addition, already archived emails are deleted from the user mailboxes after a certain amount of time, resulting in a reduced workload of Exchange Server. With a special add-in, Microsoft Outlook users are still able access the archived emails.

Applying this scenario results in the following requirements for the company's IT infrastructure:

- **Storage Capacity:** The storage capacity assigned to Exchange Server can be held on a permanently low level because old emails are not stored in the Exchange store but in an external archive. Although storage capacity must be allocated to the external archive as well, significant cost advantages can be achieved:
 - Because the archive can be divided into any number of storage groups (e.g. one per quarter or month), premium storage space must be provided only for the current storage group. Other storage groups can, once they have been backed up, be moved to more cost-effective storage media and made read-only.
 - *Single Instance-Storage* (SIS) significantly reduces the effective storage requirements of the archive because identical emails and file attachments are stored only once.

³ <http://technet.microsoft.com/en-us/library/dd638137.aspx>

⁴ <http://www.microsoft.com/exchange/2010/en/us/licensing.aspx#ExCal>

- **Backup:** Because the size of the Exchange store remains on a permanently low level, no additional requirements apply to the backup of Exchange Server. From the archive itself, only the current storage group must be included in the running backup procedure (see above). The architecture of the storage groups is optimized for incremental backup using any backup software.
- **Redundancy:** During an outage of Exchange Server, all emails remain available to the users through the archive. This reduces the negative effects of the given downtimes.
- **Licenses:** For Exchange Server, no additional licensing is needed to use an external archiving solution. However, MailStore Server user licenses have to be purchased (starting at \$9 per user)
- **Administration:** The installation and administration of MailStore Server can be performed autonomously even by small businesses. Because MailStore Server does not make any changes to Exchange Server at any time, no particular risks have to be considered.

Conclusion

Although this way of archiving requires using an additional software solution, the demands on the IT infrastructure are reduced significantly. Especially for small and medium-sized businesses with limited resources, this can be an important decision criterion.