



Managing Email Backup, Recovery and Migration in Exchange Environments

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Executive Summary

Small and medium sized businesses (SMBs) have unique challenges when it comes to backing up, restoring, searching or migrating their Exchange database (EDB) files. These challenges are often pricey and protracted – issues that can bring productivity to a screeching halt.

Not only is it important to backup the entire server, but it is also important to have a way to restore mailboxes and individual email messages and attachments quickly and easily. This has been a complex problem because current Exchange backup solutions don't address all requirements from complete restore of an Exchange database down to the granular recovery of an individual email message or email attachment.

Another issue for SMBs is complying with regulatory or legal demands regarding the production of email records. Searching email databases for individual messages based on specific criteria can be an incredibly time-consuming task that most small businesses can ill afford. Restoring individual databases, then painstakingly searching for keywords, messages to certain domains or recipients, messages sent on specified dates or with specified subjects can take days – or even weeks – to complete.

Finally, upgrading to a new Exchange server can frustrate IT staff with its complexity and potential for disaster. The migration process can place a heavy load on SMBs with limited IT resources.

This white paper outlines each of these issues, why they are important for SMBs to address and how to resolve them while maximizing business continuity and minimizing IT resources necessary to accomplish the demands of maintaining Exchange servers.

Why are Exchange backups difficult?

Microsoft® Exchange is one of the most popular email server solutions because it has many great features – for small and large businesses alike. But it also has a major drawback: it is very difficult to restore an Exchange server because of its complexity. There are all kinds of tricky parameters involved in restoring an Exchange server, individual mailboxes as well as the hundreds or thousands of messages contained in each mailbox.

The Exchange database is laid out in an intricate way. There are private information stores (priv.edb files) which contain the individual mailboxes and email messages, as well as public information stores (pub.edb files) which contain the shared folders and messages that all users can access. There are also accompanying files for Exchange internet access (priv.stm file). (When a message is read over the internet, it's deleted from the priv.stm database and added to the priv.edb database.) There are also log files that contain the records of changes made to the database and what is sent and received since the last backup. (During each backup, information in the log files are copied to the priv.edb database and then the log files are emptied.)

Since there are so many types of files and different types of databases contained within Exchange, it's especially difficult to recover and restore individual mailboxes and email messages. All of the files work together to create a synchronous unit, so finding and recovery specific information can be a daunting task.

Most IT administrators resolve the problem by performing two Exchange backups – a full backup of the entire database, then a second backup of individual mailboxes, often called a brick-level backup. But this can be extremely expensive and complicated. It requires twice as much storage space for your Exchange server backups and takes more than twice as long to complete. Given the time constraints required for most backups, the limited availability of Exchange servers during backup windows, this can be nearly impossible for SMBs to maintain.

As a result of these limitations, most SMBs have to make difficult choices about how they will perform Exchange backups – and how they will restore mailboxes in the event of a disaster. This means that simple, day-to-day requirements for mailbox restores or searches of mailboxes for legal or regulatory reasons are often avoided. This is not a safe and secure way to assure business continuity or data availability.

Why is it important to simplify email backup, recovery, searching and migration?

Email is an invaluable tool in today's business world. Nearly every modern business relies on email on a day-to-day basis as a normal part of doing business. When email servers are unavailable – even for a few minutes – productivity suffers. There are real-world business requirements for needing complete Exchange system recovery as well as brick-level backups of your mailboxes.

Rapid Restore of Deleted Email Messages

At one time or another, most users have accidentally deleted messages that they needed. As businesses put size limitations on individual mailboxes to curtail storage space, users naturally will delete superfluous messages. Unfortunately, this can be a recipe of problems when a user suddenly realizes she has accidentally deleted one or more important email messages.

Without a brick-level backup, IT administrators have to recover their entire Exchange database backup, search for the individual mailbox, and then restore the messages that were accidentally deleted. Since this process can take hours, many administrators are reluctant to perform a brick-level restore for just a few missing files. An administrator may tell the user to have the messages re-sent or simply do without the messages – as a way to avoid a complete recovery of the entire database.

Rapid Recovery of Entire Mailboxes

Occasionally, IT Administrators may encounter a malicious user, such as a disgruntled employee who may be about to be fired or is planning to leave for a new job. That user may delete every message in his mailbox as a way to disrupt business. In this case, there is no way to avoid the problem, the mailbox must be recovered.

Without a brick-level backup, IT administrators must stop what they are doing to completely restore the missing mailbox and its email messages.

Swift Search of Email Archives

There are also times when a company must search messages for legal or regulatory reasons – to find specific email messages, even email attachments, that fit specific criteria: keywords, subject, who the message is sent to or from, when the message was sent.

Without a brick-level backup, companies must restore a myriad of Exchange backups one-by-one, and then painstakingly search mailboxes for specific messages. The process can be a nightmare requiring hundreds of hours to complete. Many companies facing such a task have to hire additional personnel to complete this process.

Migrating to a New Exchange Server

Upgrading to a new version of Exchange is a difficult and daunting task that can cause all kinds of problems for IT administrators. The standard procedure is to take all users off-line – say, on a Friday evening – take a complete and final backup of the old Exchange server, then take the server offline. Then using the wizards and tools provided with the Exchange server, migrate the old database to the new Exchange server. This process can take a significant amount of time and IT resources to complete, while crossing your fingers that all goes well and that there aren't any problems with log files or corruption during the migration process.

Bottom Line

It's vital to have a complete backup of your Exchange server in the event of a catastrophic failure. You cannot recover your Exchange server with only a brick-level backup approach. And due to federal and state regulatory requirements, most businesses must keep a complete backup of all email messages.

But complete backups can take hours or days to restore. With cost and time prohibitive for both types of backups, how do you provide both complete Exchange server and brick-level backup of Exchange databases?

Granular Recovery for Exchange Environments



StorageCraft® ShadowProtect® Granular Recovery for Exchange™ allows you to have the best of both types of backups, without the need to create two backups. ShadowProtect Granular Recovery for Exchange provides fast and reliable recovery, migration and simplified management of Exchange mailboxes, email messages and email attachments. IT administrators can recover individual mailboxes or multiple mailboxes directly from Exchange Server backups (EDB files) and migrate to new Exchange Servers with ease.

With ShadowProtect Granular Recovery for Exchange, administrators are able to restore entire Exchange mailboxes in the event of a disaster, or simply recover individual messages quickly and easily, without the need to restore the entire server. With an existing point-in-time ShadowProtect backup image of an Exchange server¹, IT administrators can simply access the Exchange EDB backup file contained in their backup image, navigate to the desired email files – whether it's entire mailboxes, individual email messages, or email attachments – then drag and drop the needed files to a production Exchange server or save them to a PST file. The easy-to-use interface allows administrators to move mailboxes or messages easily, or they can use the command line interface to easily batch repetitive processes like multiple copy and export, eliminating the need to perform these tasks one at a time.

In addition, ShadowProtect Granular Recovery for Exchange is a powerful search tool that eliminates the painstaking task of searching for messages that follow specific criteria. There's no need to restore an entire Exchange EDB file, administrators can search for messages directly from a mounted EDB or PST file. They can also narrow the search following precise keywords, or based on message dates, senders, recipients or subject matter.

ShadowProtect Granular Recovery for Exchange also makes migrating to a new version of Exchange an easy task. Once the new Exchange server is online, IT administrators can simply drag and drop email boxes from the old production server database to a new one. Migration takes minutes, rather than hours or days.

¹ Created using StorageCraft ShadowProtect Server™ or ShadowProtect Small Business Server™

Backup Fast, Recover Faster

ShadowProtect Granular Recovery for Exchange is designed to complement the award-winning StorageCraft ShadowProtect line of backup and disaster recovery solutions. StorageCraft ShadowProtect Server™ and StorageCraft ShadowProtect Small Business Server™ complete full backups of Exchange servers, giving administrators the ability to meet requirements of entire database recovery. By adding ShadowProtect Granular Recovery for Exchange to your existing ShadowProtect disaster recovery solutions, you have complete Exchange backup, system recovery and migration.

For more information about StorageCraft ShadowProtect Granular Recovery for Exchange, please visit www.storagecraft.co.uk/ShadowProtectGRE.