
Microsoft Exchange Mailbox Backup and Recovery

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The Mailbox Agent protects individual Exchange user mailboxes by exporting them as PST files. The agent supports full, differential, copy and incremental backups of selected mailboxes. The mailboxes can be recovered by merging them back into original mailboxes or by restoring them to PST files on disk.

The Exchange Mailbox Agent is intended to protect key mailboxes. The Mailbox Agent can significantly increase the backup time because of the inherent processing overhead of Exchange.

This method does not replace Exchange Database backups, which are still required for the recovery of your entire Exchange Database. Mailbox backup supplements Exchange Database backups to enable the quick recovery of individual mailboxes when needed.

Configuration

The Mailbox Agent is disabled by default. This ensures that backups don't accidentally trigger multiple Exchange backups via the Exchange Database Agent and the Mailbox Agent. You can enable the Mailbox Agent by checking Enable Agent on its configuration page. You should specify a working directory location for Import/Export operation of mailboxes. The working location defaults to the Product "temp" directory.

Once enabled, the Administrator displays all Mailboxes under the Exchange Mailbox Agent and makes them selectable for backup.

Backing Up Mailboxes

The Backup process begins by exporting each selected mailbox as a PST file, one at a time, to the working directory. If sufficient disk space is not available for the operation in the working location, the backup fails and displays an error message. After a mailbox file is backed up, it is removed from the working directory to free up disk space. and the working directory is not backed up. You can configure the location of the working directory on the Agent's configuration page.

You can configure the Mailbox Agent to do full, copy, differential, or incremental backups of Exchange mailboxes by setting the backup job Mode.

Restoring Mailboxes

Mailboxes are recovered by restoring them to the working directory, then importing them to the Exchange Database, merging items with the original mailbox. Insufficient disk space in the working location causes the backup to fail and displays an error message. Exchange Server automatically skips the mailbox items that already exist and only restores missing items. Once mailbox items are imported to the mailbox, the temporary PST file is deleted from the working directory.

If you specify a folder name on the Agent's configuration page, the mailbox items will be recovered to this folder in the original mailbox.

Mailboxes can also be restored to a PST file on the File System. You can view the contents of the mailbox by using an Exchange client, such as Microsoft Outlook. This is useful when the Exchange Server environment is down and unable to host the mailboxes.

Mailboxes must be explicitly selected. If a user selects an entire machine for restore, the normal Exchange Mailbox Databases will be restored, but individual mailboxes will not be restored. Also, if one or more Exchange Databases are selected for recovery via the Exchange Server Agent, the restore job skips the mailboxes selected under the Mailbox Agent, as those will be restored from the Exchange Database.

Mailboxes that have been deleted from Exchange Server require you to create the mailbox in the Exchange Server before restoring the Mailbox items using the Mailbox Agent. A nonexistent mailbox cannot be restored.

Mailbox Disaster Recovery

Mailboxes will not be restored during Bare Metal Disaster Recovery. To restore mailboxes, create a new restore job after Disaster Recovery completes, and select the necessary mailboxes to recover.

Requirements

Note the following requirements for backing up and restoring Microsoft Exchange mailboxes.

Working Location

A working location must be specified on the Agent's configuration page. This location stores the temporary files generated during mailbox Import and Export operations. Free space in this location

must be at least the size of the largest Mailbox in the Exchange Server. Once each operation completes, the temporary file is automatically deleted.

“Exchange Trusted Subsystem” must have Read/Write permissions to the working directory.

The working location defaults to Product “temp” directory.

Supported Exchange Server Versions

Exchange Server 2010 SP1 is the minimum supported version.

Mailbox Permissions

An Active Directory User or a Group must be granted “Mailbox Import Export” role. Typically, running as Administrator, the product service already has necessary permissions for the mailboxes.

To manually grant this role, execute the following cmdlet in the Exchange Management Shell

```
New-ManagementRoleAssignment -Role “Mailbox Import Export” -User Domain\User
```

Where *Domain* is the Active Directory Domain name and *User* is the account granted permissions.

To grant necessary permissions to a group use:

```
New-ManagementRoleAssignment -Role "Mailbox Import Export" -Name "Import Export Mailbox Admins" -SecurityGroup "Mailbox Support"
```

PowerShell Access

If the product service is running under an account that does not have access to PowerShell, you need to specify a valid account with permission to execute PowerShell cmdlets. Typically, running as the default, Local System account, the product service automatically has access to PowerShell.

Best Practices and Performance Considerations

You should perform frequent incremental backups of Exchange mailboxes in addition to full backups. Daily incremental backups followed by weekly full backups will reduce the recovery time and the backup size. Incremental backups also enable you to conveniently specify a restore window to recover mailbox items.

Consider the case where you wish to recover a few deleted messages from your inbox after the

retention period has expired on the Exchange Server. If you know the date the original emails were sent or received, you can be back in action within seconds of running the mailbox restore. However, if you only had full backups of the mailbox, you would be forced to restore the entire mailbox, whose size could run to several gigabytes, so it would require a much longer restore time.

Backup performance is dependent on a number of factors including but not limited to:

- Mailboxes in the Exchange Server
- Count of mail items in each mailbox
- Type of Backup (Full, Copy, Differential, Incremental)
- Hardware powering the Exchange Server deployment

There are no special requirements to improve backup performance of the Mailbox Agent. However, backup performance can be optimized by selecting only essential mailboxes from the Agent and performing incremental backups on a regular basis.

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