


# Microsoft Exchange Server Database Backup Set

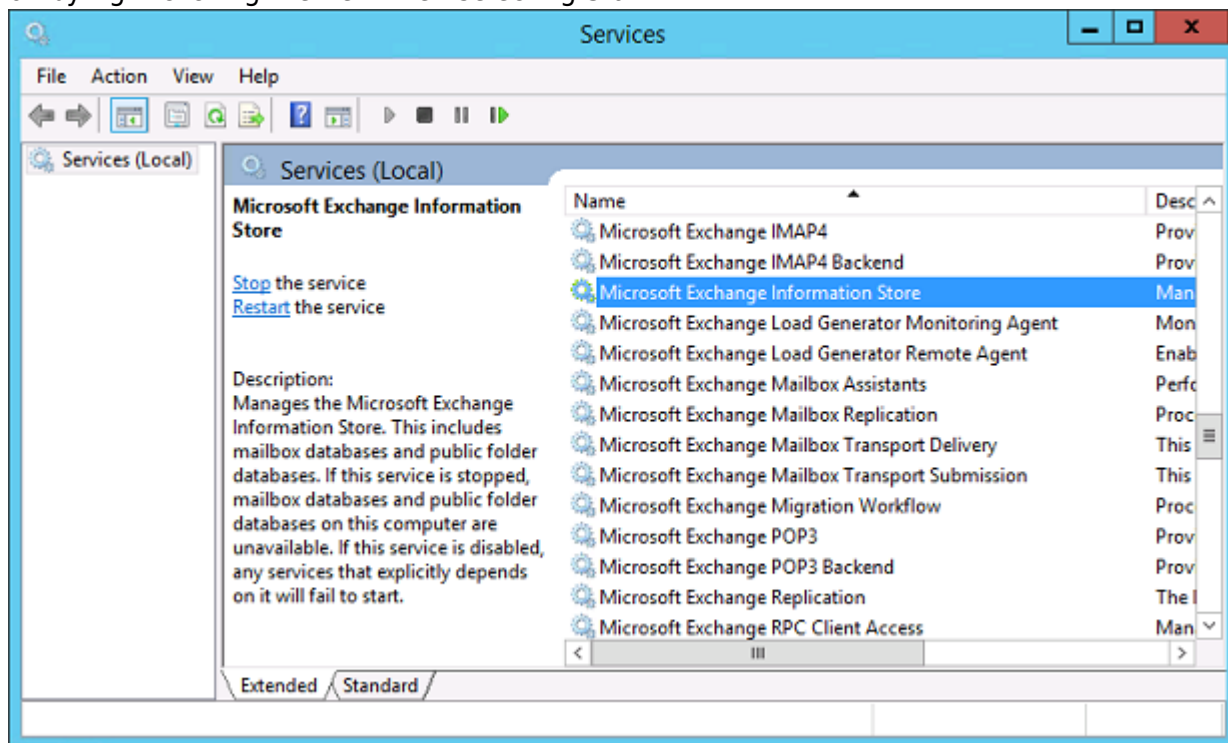
AhsayOBM comes with the MS Exchange Server Backup module for backing up Microsoft Exchange Server's full database. 

## Best Practices and Recommendations

Please ensure that the following requirements are met by the Microsoft Exchange Server:

1. The latest version of AhsayOBM is installed on the Exchange server / DAG member services. For Exchange Server 2010/2013/2016, Database Availability Group (DAG) backup option is available, please refer to Backing up Microsoft Exchange Server in Database Availability Group (DAG) for details.
2. Ensure that all MS Exchange related services have been started, particularly the MS Exchange Information Store Service.

To verify this setting, launch Services in Windows by clicking Start then typing "Services" in the search box. All Exchange related services should be started by default, in case if it is not, turn it on by right clicking the item then selecting Start.



3. AhsayOBM must be installed on the Exchange server with mailbox role.
4. Make sure the Exchange Server has been updated to the latest roll-up patch of that specific service pack.

- 5. Make sure that circular logging is disabled for all Information Store(s) or Public Folder selected for backup.
- 6. Make sure that the Microsoft Exchange Server add-on module has been enabled for your AhsayOBM user account.

The screenshot shows the 'Backup Client Settings' tab for a user profile. Under 'Backup Client', the 'AhsayOBM User' radio button is selected. In the 'Add-on Modules' section, the 'Microsoft Exchange Server' checkbox is checked and highlighted with a red box. Other modules are unchecked.

- 7. The Exchange Server 2010/2013/2016 database files are no longer stored in the temporary directory during backup. However, the VSS-based Exchange backup will still require certain amount of disk space to operate. Microsoft suggested that certain shadow copy mechanism may require free space around 100% of the original database. Refer to the following URL for more information.  
<https://docs.microsoft.com/en-us/exchange/client-developer/exchange-server-development>
- 8. Temporary Directory folder is used by AhsayOBM for storing backup set index files and any incremental or differential delta files generated during a backup job. To ensure optimal backup/restore performance, it is recommended that the folder is located on a local drive with plenty of free disk space.
- 9. Ensure that the Microsoft Exchange Writer is installed and running on the Exchange Server, and the writer state is Stable. This can be verified by running the vssadmin list writers command.

Example:

```
C:\Users\Administrator>vssadmin list writers
vssadmin 1.1 - Volume Shadow Copy Service administrative command-line
tool
```

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Writer name: 'System Writer'

Writer Id: {e8132975-6f93-4464-a53e-1050253ae220}

Writer Instance Id: {a2f2507d-b348-493a-9685-da3f20959e9d}

State: [1] Stable

Last error: No error

Writer name: 'COM+ REGDB Writer'

Writer Id: {542da469-d3e1-473c-9f4f-7847f01fc64f}

Writer Instance Id: {60b9b261-ab81-4c4d-be0f-5d432a4dea64}

State: [1] Stable

Last error: No error

Writer name: 'ASR Writer'

Writer Id: {be000cbe-11fe-4426-9c58-531aa6355fc4}

Writer Instance Id: {1aab9829-3b91-46bc-a7f1-ae9e1123c2fe}

State: [1] Stable

Last error: No error

Writer name: 'Microsoft Exchange Writer'

Writer Id: {76felac4-15f7-4bcd-987e-8e1acb462fb7}

Writer Instance Id: {2e8409fa-1dd8-483c-ba95-5c9277be0509}

State: [1] Stable

Last error: No error

Writer name: 'IIS Metabase Writer'

Writer Id: {59b1f0cf-90ef-465f-9609-6ca8b2938366}

Writer Instance Id: {3303e28e-afae-4c99-8f1a-2ce23e6455a7}

State: [1] Stable

Last error: No error

Writer name: 'FRS Writer'

Writer Id: {d76f5a28-3092-4589-ba48-2958fb88ce29}

Writer Instance Id: {d35e3901-f9b9-4fa6-86af-36b8a4872933}

State: [1] Stable

Last error: No error

Writer name: 'Shadow Copy Optimization Writer'

Writer Id: {4dc3bdd4-ab48-4d07-adb0-3bee2926fd7f}

Writer Instance Id: {8e19e851-95ca-4c97-813d-4bc51898c7ac}

State: [1] Stable

Last error: No error

Writer name: 'WMI Writer'

Writer Id: {a6ad56c2-b509-4e6c-bb19-49d8f43532f0}

Writer Instance Id: {0619e684-14f3-495b-be59-e35fc0ec212b}

State: [1] Stable

Last error: No error

Writer name: 'BITS Writer'

```
Writer Id: {4969d978-be47-48b0-b100-f328f07ac1e0}  
Writer Instance Id: {94991e66-e5c7-47a4-a0c9-3771e4761262}  
State: [1] Stable  
Last error: No error
```

```
Writer name: 'Registry Writer'  
Writer Id: {afbab4a2-367d-4d15-a586-71dbb18f8485}  
Writer Instance Id: {73c66436-c2e8-4d46-b88a-d866617eb95d}  
State: [1] Stable  
Last error: No error
```

```
Writer name: 'NTDS'  
Writer Id: {b2014c9e-8711-4c5c-a5a9-3cf384484757}  
Writer Instance Id: {14cedc8b-4c51-4a12-85c4-8cf8aa3545b6}  
State: [1] Stable  
Last error: No error
```

```
Writer name: 'IIS Config Writer'  
Writer Id: {2a40fd15-dfca-4aa8-a654-1f8c654603f6}  
Writer Instance Id: {5939e29f-bf43-4a39-a6b7-e3a838e75e3e}  
State: [1] Stable  
Last error: No error
```

10. For Exchange server with Active Directory installed, a Windows System State backup must be performed regularly with the MS Exchange Server backup.
11. (Applicable to Microsoft Exchange Server 2013/2016 only)

If you are using Microsoft Exchange Server 2013/2016 on Windows Server 2012, please install .Net Framework 3.5 Features under Server Manager > Dashboard > Add Roles and Features Wizard > Feature Page.



## Best Practices and Recommendations for Exchange Server in Data Availability Group (DAG) only

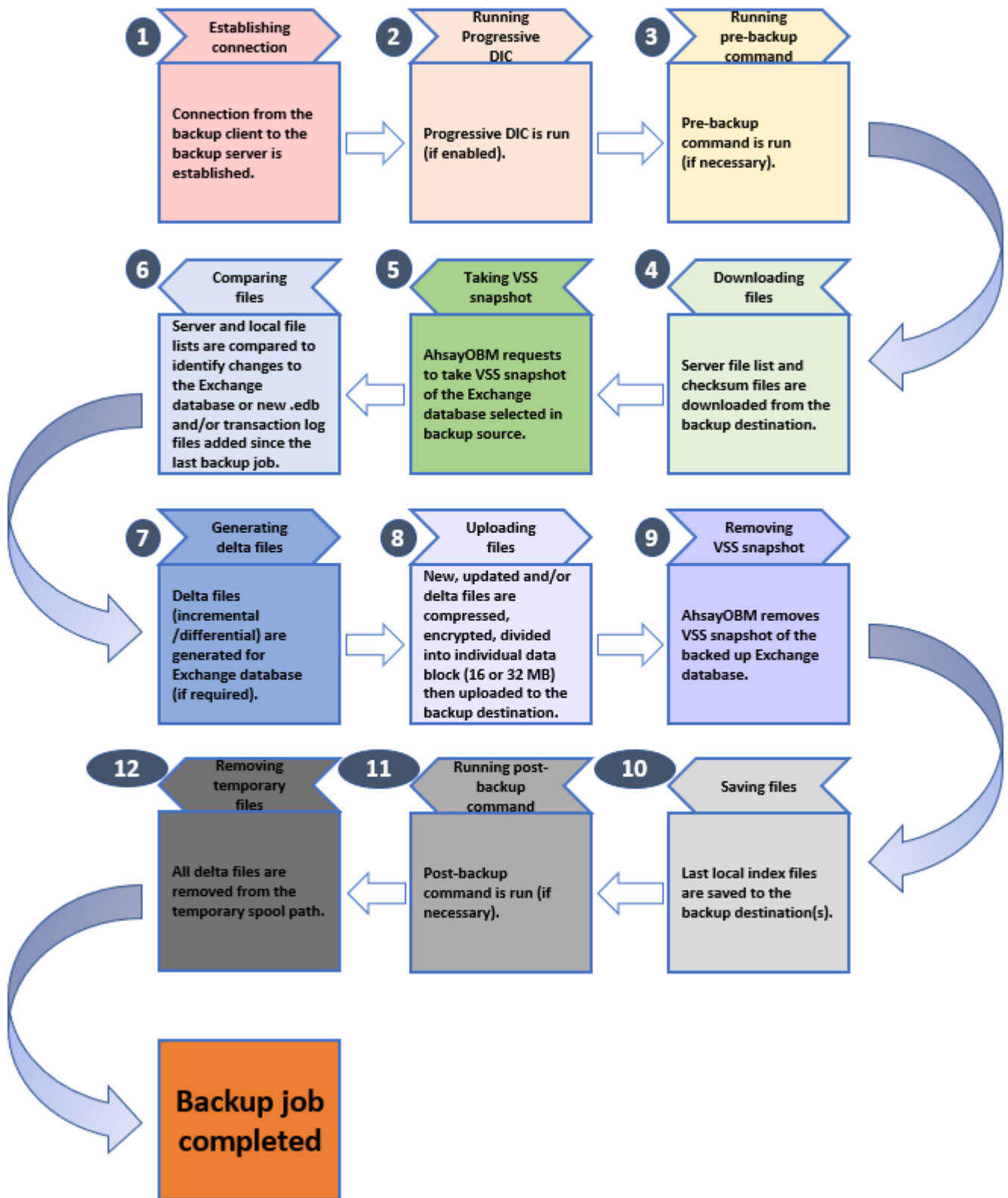
1. System State backup must be performed regularly for the domain controller of the Exchange DAG setup.
2. Scheduled backup is required if you choose to back up with DAG option, as AhsayOBM on all DAG members will base on the scheduled backup time to start backups on individual DAG member at the same time.

A DAG backup cycle is considered complete only when scheduled backup on all DAG members have been carried out. An email report will be generated when a complete DAG backup cycle has taken place.

Please keep in mind that manual backup will only be considered as individual mail-level backup, and therefore will not be counted as part of the DAG backup cycle.

3. The MS Exchange Server Backup module will protect the Exchange server at the database level. If a full system backup (for bare-metal recovery) is required, please consider setting up a MS System Backup for each DAG member server.
4. To back up mailbox database within an Exchange DAG, AhsayOBM is required to be installed on each DAG member with mailbox role (e.g. servers that are hosting the mailbox databases). It is not necessary to install AhsayOBM on Exchange server with CAS (Client Access Server) role only.

## Overview of Backup Process



## Documentation

- [Microsoft Exchange Server Database Backup and Restore Guide](#)

## Issues

- “Cannot start shadow copy, reason =The writer operation failed because of an error that might recur if another shadow copy is created. (VSS\_E\_WRITERERROR\_NONRETRYABLE)”
- VSS\_E\_FLUSH\_WRITES\_TIMEOUT (MS Exchange server backup)
- Incorrect error message 'Another backup job is still running' is displayed (MS Exchange server backup)
- MS Exchange server backup job cannot run to completion (for backup set with backup schedule disabled)
- Invalid backup source displayed for Exchange 2007 server backup set upgraded from version 6 to 7
- [MigrateV6Index.migrateIndex] Failed to migrate v6 index (MS Exchange DAG server backup set upgraded from version 6 to 7)
- [MigrateV6Index.migrateMultiHostIndices] Failed to deserialize v6 index (MS Exchange DAG mail level backup set upgraded from version 6 to 7)

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