## 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:

- 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.

<b>Q</b>		Services		- • ×
File Action View	v Help			
🗢 🏟 📅 🗐	Q 🗟 🔢 📰 🕨 🔳 🕪			
🍓 Services (Local)	Services (Local)			
	Microsoft Exchange Information Store	Name	<b>^</b>	Desc ^
		🔍 Microsoft Exch	ange IMAP4	Prov
	Stop the service Restart the service	🔍 Microsoft Exchange IMAP4 Backend		Prov
		G Microsoft Exchange Information Store		Man
		🔍 Microsoft Exch	ange Load Generator Monitoring Agent	Mon
	Description: Manages the Microsoft Exchange Information Store. This includes mailbox databases and public folder databases. If this service is stopped, mailbox databases and public folder databases on this computer are unavailable. If this service is disabled, any services that explicitly depends on it will fail to start.	🔍 Microsoft Exchange Load Generator Remote Agent		Enab
		Microsoft Exchange Mailbox Assistants		Perfc
		🌼 Microsoft Exch	ange Mailbox Replication	Proc
		🔍 Microsoft Exch	ange Mailbox Transport Delivery	This 🗏
		🔍 Microsoft Exchange Mailbox Transport Submission		This
		🔍 Microsoft Exchange Migration Workflow		Proc
		🖓 Microsoft Exchange POP3		Prov
		Microsoft Exchange POP3 Backend		Prov
		🖓 Microsoft Exchange Replication		The l
		🔍 Microsoft Exch	ange RPC Client Access	Man 🗠
		<	III	>
	Extended Standard			

- 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.

General Backup Client Settings Contact User Group		
Settings of the client backup agent for this user.		
Backup Client		
AhsayOBM User      AhsayACB User		
Add-on Modules		
Microsoft Exchange Server		
MySQL Database Server		
Lotus. Lotus Domino		
Windows System Backup		
□ 🕼 VMware Guest VM 🔻 0		
Microsoft Exchange Mailbox 0		
Continuous Data Protection		

- 6. Make sure that the Microsoft Exchange Server add-on module has been enabled for your AhsayOBM user account. Contact your backup service provider for more details.
- 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

- 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
```

```
2024/04/24 00:01
```

(C) Copyright 2001-2013 Microsoft Corp.

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: {laab9829-3b91-46bc-a7f1-ae9e1123c2fe} State: [1] Stable Last error: No error Writer name: 'Microsoft Exchange Writer' Writer Id: {76felac4-15f7-4bcd-987e-8elacb462fb7} 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.
- 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.

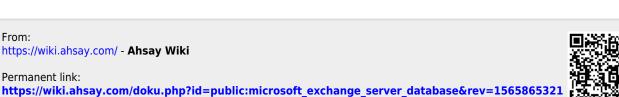
- The MS Exchange Server Backup module will protect the Exchange server at the database level. If a full system backup (for bare-metal recovery) is required, please consider setting up a MS System Backup for each DAG member server.
- 4. To back up mailbox database within an Exchange DAG, AhsayOBM is 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.

### 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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