# FAQ: Frequently Asked Questions about Ahsay Cloud Backup Suite 8

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**Product Version:** 

Ahsay Software: 8.1 or above

OS: All platforms

# **Description**

The following are some Frequently Asked Questions on Ahsay Cloud Backup Suite.

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### 1. Which cloud storage services are supported by AhsayCBS (Cloud Backup Suite)?

Answer) Refer to the following KB articles for the list of cloud storage services are supported by AhsayCBS:

FAQ: Ahsay Software Compatibility List (SCL) for version 8.1 or above

# 2. How do I perform a backup to a local destination then import the data onto a cloud storage destination (e.g. seed load)?

Answer) Refer to the following KB articles for detail instruction:

FAQ: How to perform backup to a local destination then import the data to a cloud storage destination?

# 3. How do I start AhsayOBM in 32bit mode (to create an Exchange mail level backup set or to start a mail level backup job)?

Answer) You can simply start AhsayOBM as you would normally (e.g. double-clicking on the desktop icon or the system tray icon), when creating a MS Exchange mail level backup set or performing a manual MS Exchange mail level backup job.

# 4. How do I start a data integrity check for backup data stored in the backup destination?

Answer) A data integrity check can only be started via the client application. Please refer to the following KB articles for details:

FAQ: How to run a Data Integrity Check for backup data stored in backup destination?

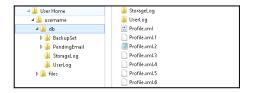
FAQ: How to run a Data Integrity Check on Linux (CLI) machine?

# 5. Backup account profiles are stored in a new format, can you explain on the new changes?

Answer) For older version of AhsayOBS such as version 6, user profile of each backup account is saved individually within the user home path of each account.

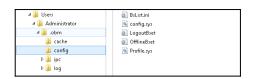
# Ahsay Online Backup Suite 6: On the backup server:

%Userhome%\username\db\Profile.xml



On the client computer, the local profile is saved as Profile.sys file within the .obm / .acb config folder at:

...\.obm\config\Profile.sys



# Ahsay Cloud Backup Suite 8:

For AhsayCBS version 8 (started since v7), user profiles of all backup accounts are

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# saved in a single users.xml file on the backup server at:

%Installhome%\conf\users.xml



This file contains the settings of <u>all</u> backup accounts, as well as settings of <u>all</u> backup sets.

On the client computer, the local profile is saved as settings.sys file within the .obm / .acb config folder at:

...\.obm\config\settings.sys



This file contain information of the corresponding backup account, backup sets' setting, and most importantly, the encryption setting of all backup sets.

# 6. Backup data are stored in new structure, can you explain on the new changes?

Answer) Compared to older version of AhsayCBS such as version 6, the indexing and file structure of backup data are enhanced.

# **Ahsay Online Backup Suite 6:**

For older version of Ahsay software, users' settings (username, password, quota), backup sets' settings, as well as backup data are stored in 2 main folders (the 'db' and 'files' folder) within the backup destination (e.g. user home, local copy destination) of each backup account:

- %backup\_destination%\%username%\db
- %backup\_destination%\%username%\files



User account and its backup sets' info are stored within the 'db' folder (as Profile.xml), while backup data are stored within the 'files' folder in the following format:

%backup destination%\%username%\files\%backupset id%\



Backup data are indexed by these 2 files, regardless of the backup data size. The index.bdb file for indexing of data within the current area, and the r-index.bdb file for indexing of data within

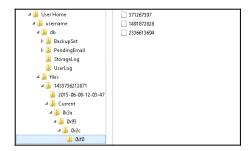
### the retention area:

- %backup destination%\%username%\files\%backupset id%\index.bdb
- %backup\_destination%\%username%\files\%backupset\_id%\r-index.bdb



Disadvantage of such indexing system is that, as all data of each account are indexed with only 2 files, the possibility of multiple processes (e.g. replication, rebuild, backup, restore) accessing the same index file increase.

Another disadvantage of the previous file structure is that, backup data are stored in a "1 to 1" format, each file is uploaded and saved as individual file within the backup destination in hashed format, regardless of the size of the file:



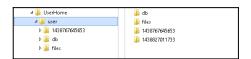
This can potentially be a problem for backup set with a huge number of files, as each file is compressed, encrypted, and uploaded individually (even for a tiny file), creating a huge overhead, that slow down a backup significantly.

### **Ahsay Cloud Backup Suite 8:**

Changes were made to the file structure in an attempt to improve the backup and restore performance.

For AhsayCBS version 8 (started since v7), multiple folders reside under the user home:

- %Userhome%\%username%\db
- %Userhome%\%username%\files
- %Userhome%\%username%\%backupset 1 id%
- %Userhome%\%username%\%backupset 2 id%
- %Userhome%\%username%\%backupset 3 id%
- ۰ ...



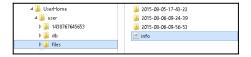
Accounts' setting and backup sets' setting are no longer saved within each account's user home path (e.g. as 'Profile.xml' in previous version). They are now saved in a single location within AhsayOBS's installation directory (refer to the previous Q & A for details). Only user logs, backup client logs, backup reports, and other individual account's information, such as account

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storage logs are saved within the 'db' folder.

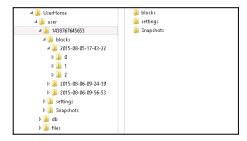
Information on backup sets' type (e.g. file, system state type ... etc.) are saved under the 'files' folder within each backup set's respective backup set ID folder, in the 'info.xml' file.

%Userhome%\%username%\files\%backupset\_id%\info.xml



Backup data and encryption settings of a backup set are now stored within the corresponding backup set ID folder:

- %backup destination%\%backupset id%\blocks
- %backup\_destination%\%backupset\_id%\settings
- %backup\_destination%\%backupset\_id%\Snapshots

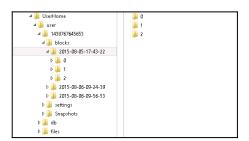


### Note:

%backup\_destination% can be AhsayOBS server's user home, a local storage, or a cloud storage destination.

The 'blocks' folder contain backed up data of the backup set:

- %backup destination%\%backupset id%\blocks\YYYY-MM-DD-hh-mm-ss\0
- %backup destination%\%backupset id%\blocks\YYYY-MM-DD-hh-mm-ss\1
- %backup destination%\%backupset id%\blocks\YYYY-MM-DD-hh-mm-ss\2
- o ...



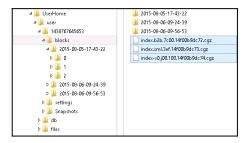
A new folder is created for each backup job according to its start time (YYYY-MM-DD-hh-mm-ss), under the 'blocks' folder. All files backed up by that job will be stored under that particular folder.

For changes that occurs on the client computer (e.g. moved files, updated files), files are not moved within the backup destination (e.g. AhsayOBS, local destination, cloud service destination) across different directories, across the 'Current' and 'Retention' directories as in the

previous file structure. Instead, the index files would be updated to reflect the changes, reducing the I/O operation on the backup destination.

Backup data are indexed with the following files (compressed):

- %backup destination%\%backupset id%\blocks\index.b2b.\*.cgz
- %backup\_destination%\%backupset\_id%\blocks\index.xml.\*.cgz
- %backup destination%\%backupset id%\blocks\index-s0\*.cgz



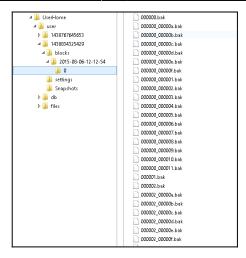
### Where:

- index.b2b.\*.cgz is the actual index file
- index.xml.\*.cgz is a file containing information of the index file
- index-s0\*.cgz is a temporary file

Data uploaded by the backup client to the backup destination are stored in the following format:

- %backup destination%\%backupset\_id%\blocks\YYYY-MM-DD-hh-mm-ss\0\000000.bak
- %backup destination%\%backupset id%\blocks\YYYY-MM-DD-hh-mmss\0\000000 000001.bak
- %backup destination%\%backupset id%\blocks\YYYY-MM-DD-hh-mmss\0\000000 000002.bak
- %backup destination%\%backupset id%\blocks\YYYY-MM-DD-hh-mmss\0\000000 000003.bak
- %backup destination%\%backupset id%\blocks\YYYY-MM-DD-hh-mm-ss\1\010000.bak
- %backup destination%\%backupset id%\blocks\YYYY-MM-DD-hh-mmss\1\010000 000001.bak
- %backup destination%\%backupset id%\blocks\YYYY-MM-DD-hh-mmss\1\010000\_000002.bak

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When the number of block files within '0' reaches 8192, a new folder is created (folder name increment of 1), restricting the maximum number of files within each folder.

Regarding the structure of:

```
000000.bak
000000_000001.bak
000000_000002.bak
000000_000003.bak
...
000001.bak
000002.bak
```

Source files that are 16 MB or smaller are 'combined' into a single 16 MB 'block' file before they are transferred to the backup destination (e.g. AhsayOBS, local destination, cloud service destination), reducing the overhead during the upload.

This also reduces the number of files in the backup destination.

Source files that are <u>larger than</u> 16 MB will be split up into multiple 32 MB 'block' files when transferred to the backup destination.

For example, a file with size of 100 MB would be split up into 4 'block' files:

```
000000.bak - 32 MB
000000_000001.bak - 32 MB
000000_000002.bak - 32 MB
000000_000003.bak - 4 MB
```

#### Note:

For AhsayOBM installation on NAS

- Source files that are <u>8 MB or smaller</u> are 'combined' into a single 8 MB 'block' file when they are transferred to the backup destination
- Source files that are <u>larger than</u> 8 MB will be split up into multiple 8 MB 'block' files when they are transferred to the backup destination

An advantage of this design is that, for an upload that was interrupted by temporarily network issue, only the individual 'block' file would be re-uploaded (block which failed to upload), instead of the entire file.

The 'settings' folder contain the encryption settings of the backup set (if the Encryption Recovery option is enabled by the backup user).



While, the 'Snapshots' folder is there for the replication module. If replication is enabled, during RESYNC or REPLAY mode, changes to the account will be saved in the 'Snapshots' folder, to be replicated.

# 7. Can backup accounts of version 6.x be migrated to version 8.1 or above?

Answer) AhsayCBS version 8 support migration of version 6 backup accounts and backup set, version 6 AhsayOBM / AhsayACB clients can still connects to version 8 AhsayCBS for backup (only best effort support).

The data structure of existing backed up can be migrated to the file format of AhsayCBS version 8

# 8. Which version of Java is bundled with AhsayCBS (Cloud Backup Suite)?

Answer) AhsayCBS is bundled with OpenIDK version 1.8 181-13.

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