Archive Server for MDaemon

Archive Server for MDaemon disaster recovery & database migration

Abstract

Archiving *MDaemon* messages may speed up your business, but you have to be aware that while working with servers, files and databases, system crashes may occur.

So you have to prepare a disaster recovery strategy for your *ASM* installation.

This document explains how to migrate/recover an *Archive Server for MDaemon* installation.

Scenarios

There are several scenarios in which you would need to restore or migrate an *Archive Server for MDaemon* installation.

1 - Reinstalling ASM after a crash

In order to fully restore the functionality of an *ASM* installation, you will need:

- A backup of the repository, in order to recover previously saved messages.
- A backup of the database, in order to recover the settings made through the administration interface (domains and users to be saved, non-retention rules, etc.) and avoid the need to repeat the archiving process.
- The characteristics of the previous installation (type of Web server, user database access credentials for *ASM,* etc.).

In version 2.2.0, *ASM* simplified the restore procedures, allowing *ASM* to be overwritten with the same version, attaching the existing database. Nonetheless, the procedures in previous versions remain valid.

Version 2.2.0 or later

a) ASM/Database/repository on the **same machine**
Recover the backups of the database and the <asm repository folder>.
Then:
1. Restore the *ASM* database.
2. Reinstall the same version of *ASM.* In the database configuration screen, specify the same name and database access credentials used in the previous installation.
3. Stop ASMd.exe.
4. Save your *ASM* database backup over the newly installed one. If you change the repository path, you'll also need to change its configuration in the *ASM* admin page.
5. Restart ASMd.exe.
6. Test your installation.

Note: if the archive is not in the default location, skip step 4.

b) Database on a **different machine**
If database is not on the same machine, and was not affected by the *ASM* crash:
1. Reinstall the same version of *ASM.* In the database configuration screen, specify the name and access credentials for the remote database.
2. Stop ASMd.exe.
3. Save the repository backup directory over the new one.
4. Restart ASMd.exe.
5. Test your installation.

Note: if the repository is not on the same machine, skip step 3 in both scenarios.

Versions earlier than 2.2.0

a) ASM/Database/repository on the **same machine**
Recover the backups of the database and the <asm repository folder>.
Then:

1. Install *ASM* from scratch (the same version that was installed before the crash). Use the same installation folder and the same settings for the database.
2. Stop ASMd.exe.
3. Restore the *ASM* database using the backup (the restoration procedure depends on the type of database and backup methods used).
4. Save your *ASM* database backup over the newly installed one. If you change the repository path, you'll also need to change its configuration in the *ASM* admin page.
5. Restart ASMd.exe.
6. Test your installation.

b) Database on a **different machine**
If database is not on the same machine, and was not affected by the *ASM* crash:

1. Detach the database from the database server (See the "ASM Database migration" chapter):
2. detach for SQL Server/MSDE
3. backup of the database and subsequent deletion for MySQL
4. Install *ASM* from scratch (the same version that was installed before the crash). Use the same installation directory and the same settings for the database.
5. Stop ASMd.exe.
6. Restore the *ASM* database using the backup (the restoration procedure depends on the type of database and backup methods used).
7. Save the repository backup directory over the new one.
8. Restart ASMd.exe.
9. Test your installation.

Note: if the archive is not in the default location, skip step 4 in both procedures.

2 - Moving the database from one server to another

See the "ASM database migration" chapter.

3 - Upgrade from MSDE to SQL Server

Both on the same machine or different ones:

1. Install SQL Server.
2. See the procedure described under Scenario 2 above, about detaching the database from MSDE and restoring it on the SQL Server. Frequently, this update will be required because the MSDE 2GB limit has been reached. If you are moving to SQL Server 2005 or SQL Server Express (which also has a built-in limit, but of 4GB), it is important that you make sure to migrate to a 2005 version to overcome the limitation.
3. Test your installation.
4. Uninstall MSDE (if it is no longer being used).

4 - Migration from MSDE to MySQL

For this kind of migration, *ASM* has the *SQLServer2MySQL* utility, found in the ASM installation tools\SQL folder. The steps are as follows:

1. Stop the *ASM* process.
2. Create a copy of the Content Filter "ASM_rule" in MDaemon, and change it to store the messages in a temporary folder.
3. Make a backup of the *ASM* database and repository.
4. Uninstall *ASM*.
5. Install the ODBC driver for MySQL and MySQL (refer to the "System Requirements" section on the Achab web site for supported versions and installation options).
6. Run a new *ASM* installation, using the same version you want to migrate with the MySQL database.
7. Stop the *ASM* process.
8. Migrate the database with the SQLServer2MySQL utility.
9. Check that the Content Filter "ASM_rule" is active and refers to the engine>queue folder of the new installation.
10. Delete or disable the temporary Content Filter.
11. Copy the messages from the temporary folder to the ASM installation engine>queue folder.
12. Relaunch the *ASM* process.
13. Check that the application operates correctly.

5 - Migration from SQL Server to MySQL

This type of migration is not supported with any special tools. To recreate the database and repository, follow the steps given in the chapter "Repeat archiving of the repository". In this case, you will still need to repeat all the settings made earlier in the *ASM* administration area.

ACHAB
Quality Software Solutions

6 - Repeat archiving of the repository

1. Stop the "Archive Server for MDaemon" process.
2. Create a rule in the *MDaemon* content filter that copies the messages to a temporary directory, and disable the "ASM_rule".
3. Make a backup of the *ASM* repository in a folder located somewhere outside the *ASM* installation folder.
4. Uninstall *ASM* (the de-installation deletes the repository if it is located in the *ASM* installation directory).
5. Delete the *ASM* database.
6. Reinstall *ASM* using the desired database type.
7. Reconfigure the archiving policies from the *ASM* administration interface.
8. Archive previous information by copying the messages from the backup repository to the <ASM root>\engine\queue. You can use the copyfiles utility to do this (see "Utility Notes"). The utility is located under the ASM installation in the tool folder, and it copies many files scattered through a filesystem (which is the repository for *ASM*) to a single folder (*ASM* doesn't search for messages in sub-directories of the queue). You should first run a test with a few files to make sure that they are saved correctly.
9. Wait until the archiving process completes (the engine>queue directory must be emptied).
10. Re-enable the "ASM_rule" so it will recopy the messages to the <ASM root>\engine\queue folder, and disable the temporary one.
11. Move any messages in the temporary queue to the archiving queue.
12. Check that the archiving has been completed.

ASM database migration

In the procedure below it is assumed that the ASM database is named ASM_DB (installation default). **The procedure to use depends on the type of database selected (SQL Server/MSDE or MySQL).**

Step 1 - *Stop ASM*

In order to move the *ASM* database, you need to stop the *ASM* engine.

While the engine is not running, incoming file system messages will be saved in the ASM Queue folder. None of them will be lost.

Use *Start->Program->Archive Server for MDaemon->Stop Engine* to halt *ASM,* or do it from the *Control panel->Services*.

Make sure that users do not access the *ASM* web interface.

If possible, stop the web server, or simply replace the *<install folder>/html/index.htm* file with an "out of service" page.

Step 2 - *Detach the database*

SQL Server/MSDE

SQL Server 2000/2005 (and MSDE 2000) provides database detach-attach functionality to make it easier to migrate databases from one machine to another (or simply from one location to another one on the same server).

The database can be detached using the **SQL Server** *Enterprise Manager* utility (if you don't have this program, see the "Notes of MSDE users" at the end of this document):

- Select the database to be detached in the left pane, then right click and select *activities->detach database.*
- Select "Update statistic prior...". Check that there are no active connections and that the database is ready to be detached, then click "OK".

Alternatively, if you are working with SQL Server, you can make a database backup from the SQL Server *Enterprise Manager*.

MySQL

Run a database backup (copy of the data\ASM_DB folder or dump of the structure and data of the ASM_DB layout).

ACHAB
Quality Software Solutions

Step 3 - *Move database files*

SQL Server/MSDE

Provided the database name chosen during installation was ASM_DB (this is also the default when installing ASM using MSDE express setup), in SQL Server (or MSDE) the "Data" directory will contain two files:

- ASM_DB.mdf (ASM data)
- ASM_DB_log.ldf (transaction log)

Note: if you installed ASM+MSDE using express setup,the "Data" folder is: c:\program files\MSDE\MSSQL$ASM\Data.

Move these files to the machine hosting the destination database, in a folder of your choosing (you can use the SQL server default "Data" folder, but this isn't necessary).

MySQL

Copy the backup or dump files to a folder of your choosing on the machine to which you want to move database.

Step 4 - *Attach the ASM database to the new database server*

SQL Server/MSDE

If you have used "detach database":

- Use the *Enterprise Manager* to access the destination SQL server.
- Select the "Databases" folder in the left panel and right click.
- Choose *All Activities->Attach Database.*
- In the "Attach Database" menu, specify the path to the .mdf file (see step 3).
- Verify that both of the .mdf and .ldf files are shown in the middle pane grid.
- Leave the default value for "Attach as" and select "sa" as database owner.
- Select the *Security > Logins* section of the *Enterprise Manager* to create a new login.
- Choose a name different from the one used in the old ASM installation (typically "ASM_USER"), select the SQL authentication, insert a password, select the ASM database from the database list, click "OK" and confirm the password.
- Click on the "Yes" button if an error message (alerting on impossibility to access to the selected database by the created account and asking if you want to continue) appears. Edit created login properties, select the "Access Database" tab and flag the ASM database.
- Select again the "Database" folder, the ASM database and therefore the "Users" menu. Edit the created account and flag the "db_owner" option.

If you have used the database backup:

- Create a login for the user ASM_USER.
- Create an empty ASM_DB, and assign ASM_USER as the owner.
- Run a restore of the ASM_DB database.
- Align the SID with the stored procedure sp_change_users_login.

MySQL

In the case of backups, use the MySQL administration to restore the database. If the user is not recreated on MySQL during the restore, you must recreate the database access user manually.

In the case of a dump, restore the database from the dump files.

Step 5 - *Modify the ODBC DSN*

The *ASM* engine uses *a ODBC Data Source Name connection* to connect to the database.

The ODBC settings are stored in the *<ASM installation folder>/engine/asmd.ini* file in the ODBC section:

```
[odbc]
source=<ODBC datasource name>
user=<utente user used to connect to the database, same as step 4>
pass=< password used to connect to the database>
```

The password in the asmd.ini file can be encrypted using the command line utility ASMCustSupport.exe.

Example:

```
c:\> ASMCustSupport CRYPT achab
endecoded string (len=28): DEABF60B0C48D10C8F60AFDE
```

After modifying asmd.ini, you must also change the ODBC datasource definition using the *ODBC management tool,* found in the Control Panel (Administrative Tools).

Step 6 - *Modify the web interface access file – asm.cfg*

SQL Server/MSDE

The ASM web application uses a different "config" file to access the database. This file, *<ASM folder>/database/asm.cfg,* can be recreated using the configTool.exe utility.Procedure:

- Rename the current "asm.cfg" file "asm.cfg.old".
- Open a DOS command prompt console.
- Run configTool.exe *<ASM folder>/database/asm.cfg.*

An application pop-up will appear.

- Select "Microsoft OLE DB Provider for SQL Server" in the "Provider" Tab, then click "Next".
- Select (or type) the name of your SQL Server (the destination server).
- Provide the username and password (the same as step 5) and be sure to tick the "save password" box.
- Select your database in the drop down list and, finally, test your connection.
- If you successfully connect to the database, click "OK". Otherwise, check the information you entered.

MySQL

The ASM web application uses a different "config" file to access the database.
This file, *<ASM folder>/database/asm.ini,* is an unencrypted text file, so you can change the access information directly, entering the information for the new machine.

Step 7 - *Update registry*

ASM saves certain information about the installation in the registry that must be modified to keep the installation clean (and to launch the upgrade smoothly).
The registry entries that must be updated are found in:
HKLM\Software\Achab\Archive Server for MDaemon\Database.

Note*: dbtype = SQL Server also for MSDE*
(this parameter is for future use)

"Hostname" is the name of the instance (e.g. machine\asm).
"Password" is encrypted as in the ODBC DSN (see step 5).

Step 8 - *Restart ASM*

Avviare Start the ASM engine (using *Start->Programs->Archive Server for MDaemon->Start engine* or *Control panel->Services*) and restart the web server.

Test that the installation functions correctly.

Moving ASM from one server to another

Spostamento Moving the ASM installation and repository only. The database stays where it is.

Make a backup of the ASM directory and the repository directory.

Then:

- Migrate *MDaemon* to the new server.

- Install *ASM* on the new server (no new database installation required; use the same *ASM* installation).

- Use the same installation folder, and provide the access credentials for the old database.

- To connect to the database, specify the database on the original server. Then create a database with a different name, such as *ASM_DB_temp*. (Do not use the same username/password used in the original installation).

- Stop ASMd.exe on the new server.

- Go to *<ASM folder>/database/*

   If you are using MSDE or SQL Server:
   o Rename "asm.cfg" as "asm.cfg.old".
   o Open a DOS command prompt console.
   o Run *<ASM folder>/tool/configTool.exe <ASM folder>/database/asm.cfg.;* you'll see a pop-up.
   o Select "Microsoft OLE DB Provider for SQL Server" in the "Provider" Tab, then press the "Next" button.
   o Select (or type) the name of the original SQL Server.
   o Specify a username and password and be sure to select the "save password" checkbox.
   o Select your database (the original one) in the menu and test the connection.
   o If you connect successfully, click "OK"; otherwise check the username/password.

   If you are using MySQL:
   o Make a copy of the "asm.ini" file and name it "asm.ini.old".
   o Open the original file and change the following settings:
      – database= enter the original database name
      – hostname = enter the IP address of the original database server
      – Enter the username and password used to connect to the old database.
      – Specify the port number used by MySQL.
   o Save the file.

- Move the backup repository to the new installation.

- Delete the "ASM_DB_temp" database and remove the old installation of *Archive Server for MDaemon.*

  The *ASM* engine uses a ODBC Data Source Name connection to connect to the database.

  The ODBC connection settings are stored in the *<ASM installation folder>/engine/asmd.ini* file in the ODBC section:

  ```
  [odbc]
  source=<ODBC datasource name>
  user=<user to connect to the database>
  pass=<password used to connect to the database>
  ```

- Complete in the "user" and "pass" fields with the credentials used in the original connection to the database.

  The password stored in the "asmd.ini" file can be encrypted using the *ASMCustSupport.exe* software from the command line.
  Example:

  ```
  c:\> ASMCustSupport CRYPT achab
  endecoded string (len=28): DEABF60B0C48D10C8F60AFDE
  ```

  After modifying the "asmd.ini" file, you also need to change the ODBC connection using the ODBC management tool in the Control Panel (Administrative Tools) so that it points to the original database.

- Restart ASMd.exe on the new server.

- Test your installation.

Notes

Notes for MSDE users

If SQL Server *Enterprise Manager* is not available (for example if the user has MSDE only), attach and detach can be accomplished using a free MSDE management tool, which can be downloaded from:
http://www.asql.biz/DbaMgr/DownLoad2k.shtm

or directly from the osql command line utility. See also:
http://databasejournal.com/features/mssql/article.php/2224361

Notes on utility tools

E' possibile scaricare ASMCustSupport.exe e configTool.exe dal sito web di Achab al seguente indirizzo:
http://www.achab.com/prod/intern.cfm/13/181/45
Le utility sono in formato zip.

Utilizzo di copyfiles:
- Aprire un prompt dei comandi.
- Spostarsi nella cartella tools dell'installazione di *ASM.*
- Eseguire il comando copyfiles con i parametri opportuni.

Sintassi del comando copyfiles:
copyfiles [/s] <source folder> <destination folder> [<extension>] [-p <password>]

/s -> must be specified if the files to be copied are saved in sub-folders in the source directory
<extension> -> extension of the files to be copied
<destination folder> -> full path of the engine>queue folder of the *ASM* installation
-p <password> -> password used to encrypt the archived messages (only required if encryption was used)

The length of the copy process will depend on the number and size of files to be copied..

Warning

After restoring the database on the machine, it may be necessary to run *query analyzer* and run the stored procedure *"sp_change_users_login 'update_one', '<login>', '<login>'"* in order to align the security IDs of the various items.

Achab S.r.l.

Piazza Cinque Giornate, 4
20129 Milano
Italy

Telephone: +39 02 54108204
Fax: +39 02 5461894

For further informations about *Archive Server for MDaemon*,
visit the Web pages:
http://www.achab.com/asm

For further informations about Achab, its products and services,
visit the Web site:
http://www.achab.com

For sales and marketing related questions, contact Achab at:
sales@achab.com

For technical support requests, contact Achab at:
support@achab.com