

ADAudit Plus Migration guide

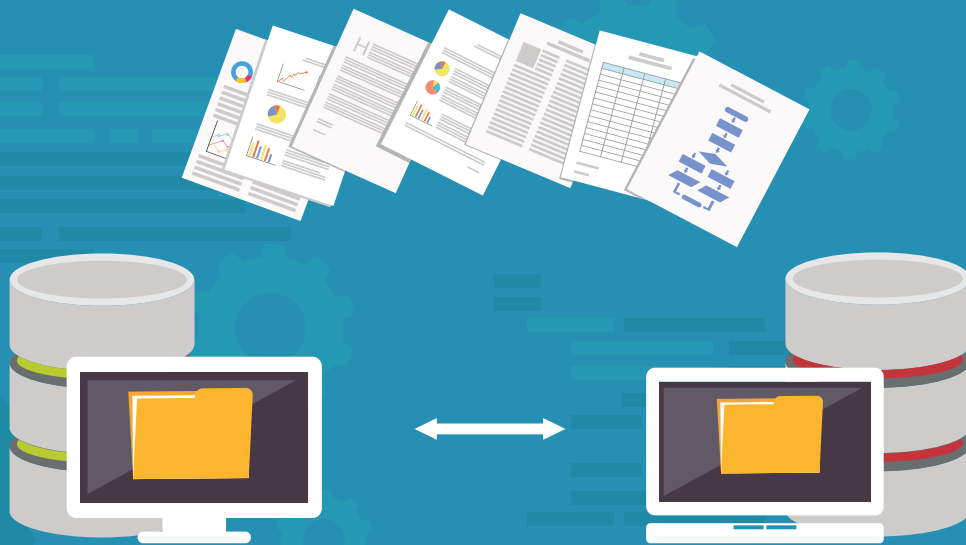


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Document summary

ADAudit Plus allows administrators to store and retrieve Windows servers' audit log data from MySQL, MS SQL, or PostgreSQL databases.

This document covers the steps to-

- Move DB and/or data from PostgreSQL/MySQL to MS SQL.
- Move DB and/or data between two different versions of MS SQL.
- Move ADAudit Plus from one server/drive to another.
- Move ADAudit Plus from 32-bit to 64-bit architecture.

PostgreSQL/MySQL to MS SQL Migration

By default, ADAudit Plus comes bundled with PostgreSQL database. To move the DB and/or data from PostgreSQL/MySQL to MS SQL, set-up the prerequisites first and then initiate movement.

The following versions of MSSQL are supported:

- SQL server 2005
- SQL server 2008
- SQL server 2008 R2
- SQL server 2012
- SQL server 2014
- SQL server 2016
- SQL server 2017

The prerequisites

1. Configuring the MS SQL server

- (i). Open the SQL Server Configuration Manager on the computer running the MS SQL instance (to which the DB and/or data is to be moved).
- (ii). In the left pane, click SQL Server Services --> Ensure that the SQL Server Browser is running.
- (iii). In the left pane, click SQL Server Network Configuration --> Select Protocols for <the given instance> --> Enable TCP/IP.

Note: The given instance refers to the MS SQL instance to which the DB and/or data is to be moved.

(iv). In the left pane, click SQL Native Client Configuration --> Select Client Protocols for <the given instance> --> Enable TCP/IP.

(v). Restart the SQL Server Service.

2. Providing permissions to the MS SQL instance

The user account associated with ADAudit Plus must have access and appropriate permissions to the MS SQL instance (to which the DB and/or data is to be moved).

Note: If SQL Server Authentication is used to move the DB and/or data, access and permissions to the MS SQL instance are automatically provided. However, when Windows Authentication is used, access and permissions have to be granted, as explained below-

(i). To grant access-

Login to Microsoft SQL Server Management Studio with a sysadmin account --> Select the server instance to which you will be migrating --> Security --> Logins. Check whether the user running ADAudit Plus is on the list-

- If the user is already listed --> Proceed to 2(ii).
- If the user is not listed, right click on Logins --> New Login --> Create a new login --> Proceed to 2(ii).

(ii). To grant permissions-

Right click on the user -> Properties -> Server Roles -> Check whether the user has sysadmin permission-

- If the user does --> Proceed to 3.
- If the user does not --> Select sysadmin in the checkbox and click OK --> Proceed to 3.

Note: To grant the user only the minimum permissions required instead of sysadmin permission, right click on the user --> Properties --> User Mapping --> Select db_datareader, db_datawriter, db_ddladmin in the checkbox and click OK.

Also, execute the below query in the database: Right click on DB --> New Query --> GRANT CONTROL ON CERTIFICATE::[ZOHO_CERT] TO [newly_created_user]

3. Enabling communication with the MS SQL server

If ADAudit Plus and the MS SQL instance are running on different computers-

(i). Download and install- SQL native client (sqlncli.msi), command line utilities (SqlCmdLnUtils.msi), and ODBC Driver (msodbcsql.msi); in the computer on which ADAudit Plus is running.

Download the above files from the respective MS SQL server feature packs-

For 2008: <https://www.microsoft.com/en-in/download/details.aspx?id=44272>

For 2012: <https://www.microsoft.com/en-us/download/details.aspx?id=50402>

For 2014: <https://www.microsoft.com/en-US/download/details.aspx?id=53164>

For 2016: <https://www.microsoft.com/en-us/download/details.aspx?id=56833>

For 2017: <https://www.microsoft.com/en-us/download/details.aspx?id=55992>

Note: Native client, command line utilities, and ODBC driver version has to be the same as the MS SQL version (to which the DB and/or data is to be moved).

(ii). Copy the following 2 files from the MS SQL server installation folder to the ADAudit Plus bin folder-

- bcp.exe- <MSSQL Installation Dir>\Tools\Binn\bcp.exe
- bcp.rll- <MSSQL Installation Dir>\Tools\Binn\Resources\1033\bcp.rll

Note: If ADAudit Plus and the MS SQL instance are running on the same computer-

Copy the following 2 files from the MS SQL server installation folder to the ADAudit Plus bin folder-

- bcp.exe- <MSSQL Installation Dir>\Tools\Binn\bcp.exe &
- bcp.rll- <MSSQL Installation Dir>\Tools\Binn\Resources\1033\bcp.rll

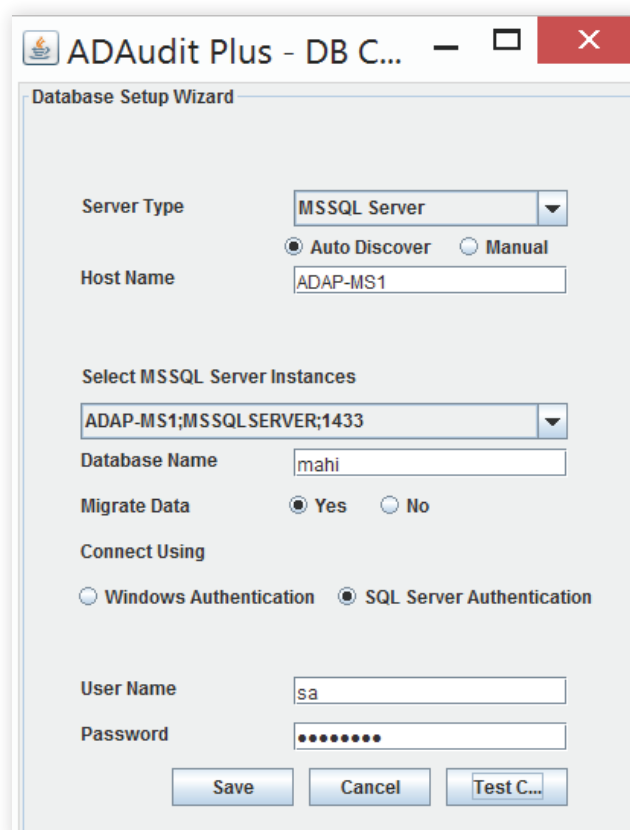
4. Opening UDP and TCP ports (applicable only if the firewall is enabled in the MS SQL Server computer)

- i. UDP port number is 1434.
- ii. To find the TCP port number, open SQL Server Configuration Manager on the computer where the MS SQL instance to which the DB and/or data is to be moved, resides. --> SQL Server Network Configuration --> Protocols for <the given instance>. Right click on TCP/IP --> Properties --> IP Addresses --> IPALL --> TCP Port Number.
- iii. Open the UDP and TCP ports under firewall settings.

5. Moving DB and/or data

- i. Stop ADAudit Plus.
- ii. Invoke <ADAudit Plus Home>\bin\ChangeDB.bat in command prompt.

Note: Make sure that the user running the command prompt is same as the one running ADAudit Plus.



iii. DB Configuration wizard will pop-up --> Select server type as MS SQL --> Select the Host Name, Instance Name, and Database Name.

iv. If you want to migrate existing data from the PostgreSQL/MySQL to MS SQL, then select Yes for the Migrate Data option. Otherwise, select No (for a new installation of ADAudit Plus).

v. Select the Authentication type.

If you have selected Windows Authentication, the credentials are automatically taken. If you have selected SQL Server Authentication, enter the corresponding credentials.

Note: If SQL Server Authentication is used to move the DB and/or data, access and permissions to the MS SQL instance are automatically provided. However, when Windows Authentication is used, access and permissions have to be granted, as explained in point 2 under pre-requisites.

vi. Click Test Connection to check whether the credentials are correct.

vii. Click Save.

The migration procedure will start and it will take a few minutes to complete. Successful migration will end with the below screen-

```
D:\ManageEngine\ADAudit Plus\bin>ChangeDB.bat

D:\ManageEngine\ADAudit Plus\bin>echo off
Given Database "mahi" is not available in SQL Server, going to create a database

Create Database Status : Successfully Executed !!!
Migrating data from POSTGRES --to--> MSSQL
DBMigration process started
Creating tables and migrating data.
[=====] 100%      871/871
Completed...
Creating table relations.
[=====] 100%      871/871
Completed...

Total no of FKs retries attempted ::: 0
Going to create FKs for tables in DatabaseSchema.conf
Running sanity test.
Running sanity test for module Persistence
[=====] 100%      50/50
Running sanity test for module MetaPersistence
[=====] 100%      14/14
Running sanity test for defined tables...
Running sanity test for Non Mickey tables...

Sanity test status :: PASSED

Generating migration summary.
MSSQL Server configured Successfully

D:\ManageEngine\ADAudit Plus\bin>
```


Migrating data between different versions of MS SQL

MS SQL server has built-in methods to migrate data from one version to another. Two of these methods are described below:

1. MS SQL DB Migration using Detach and Attach Method

Recommended for: Full DB backup, moving DB data to another drive, moving DB data between different versions of SQL server (Ex: SQL Server 2008 R2 to SQL Server 2012).

- i. Login to Microsoft SQL Server Management Studio.
- ii. Right click on the DB that you want to move (Eg: adap). Select Task --> Detach.
- iii. In the Detach DB wizard --> Select both the check boxes (Drop Connections and Update Statistics) --> Ok.
- iv. Go to the DB storage path (Ex: C:\Program Files\Microsoft SQL Server\MSSQL10_50.SQLEXPRESS\MSSQL\DATA) --> Copy the .mdf and .LDF files (Ex: adap.mdf and adap_log.LDF).
- v. Save both of the above files in a desired location.
- vi. Login to Microsoft SQL Server Management Studio.
- vii. Right click on Databases and select Task --> Attach.
- viii. In the Attach DB wizard, click Add button.
- ix. Select the .mdf file from where it has been saved --> Ok (the .LDF file will get selected automatically).
- x. Go to <ADAudit Installation>\conf folder --> Open database_params --> Change the SQL server location and DatabaseName, so that the product is pointed to the new DB.



```
database_params.conf (D:\ManageEngine\ADAudit Plus\conf) - GVIM
File Edit Tools Syntax Buffers Window Help
transaction_isolation = TRANSACTION_READ_COMMITTED
sqlgenerator = com.adventnet.db.adapter.mssql.MssqlSQLGenerator
url = jdbc:tds:sqlserver://ADAP-MS1:1433;DatabaseName=nahil
dbadapter = com.adventnet.db.adapter.mssql.MssqlDBAdapter
username = sa
exceptionsorterclassname = com.adventnet.db.adapter.mssql.MssqlExceptionSorter
maxsize = 20
drivername = net.sourceforge.jtds.jdbc.Driver
minsize = 1
password = 51159a5e127e39760b6c78679b3e6e2ae20fd89063da64372618f8963669a9e8f1d1e922
```


2. MS SQL DB Migration using Import Data Method

Recommended for: Moving particular table data from one DB to another.

- i. Login to Microsoft SQL Server Management Studio.
- ii. Right click on the DB that you want the data moved to (Ex: adap_new). Select Tasks --> Import Data.
- iii. The SQL Server Import and Export wizard opens up --> Click Next
- iv. In the Data Source wizard, that opens up, specify:
(In the Data source drop down, select SQL Server Native Client if it's not selected already.)
 - Server Name.
 - Authentication (Used to login to SSMS).
 - Database.
 - Click Next.
- v. Under the Destination wizard, enter the following:
(In the Data source drop down, select SQL Server Native Client if it's not selected already.)
 - Server Name (will get automatically detected, you can change the destination, if you want).
 - Authentication.
 - Database (will get automatically detected, you can change the destination, if you want).
 - Click Next.
- vi. Under Specify Table Copy or Query --> Choose Copy Data From One or More Tables/Views --> Next.
- vii. Under Select Source Tables and Views --> Choose the tables to be copied from source, select the tables from the left column using Edit Mappings --> Select particular table operations --> Next.
- viii. Check the Run Immediately box--> Next.
- ix. Click Finish.

Moving ADAudit Plus from one server/ drive to another

1. Stop the ADAudit Plus server (Start → Run → type services.msc → Stop "ManageEngine ADAudit Plus").
2. Stop the DB, Open a command prompt as an administrator Navigate to <installation dir>\ManageEngine\ADAudit Plus\bin Execute StopDB.bat
3. Remove the ADAudit Plus service, Open a command prompt as an administrator Navigate to <installation dir>\ManageEngine\ADAudit Plus\bin Execute the command : wrapper.exe -r .. \conf\wrapper.conf
- Note:** The 4th step found below, is required only for build numbers 6000 and above.
4. Remove the ADAudit Plus - DataEngine service, Open a command prompt as an administrator Navigate to <installation dir>\ManageEngine\ADAudit Plus\apps\dataengine-xnode\bin Execute the command : dataengine-xnode.bat -r
5. Copy the entire ADAudit Plus folder to the new server or drive.
6. Ensure both folder sizes are the same.
7. Open the command prompt [with Administrative privileges] <installation-directory>\ManageEngine\ADAudit Plus\bin --> Execute InstallNTService.bat.</installation-directory>
8. Open the command prompt [as an administrator]\ManageEngine\ADAudit Plus\bin → Execute initPgsql.bat.
9. If you want to start the product as service, go to Services.msc → 'ManageEngine ADAudit Plus' Service → Right click on properties → Click on 'Log on' tab and select 'This Account' → Provide the suitable credentials.

Note:

If you are using MS SQL server as your database and if the MS SQL server is running in a remote computer- Download and install SQL native client (sqlncli.msi), command line utilities (SqlCmdLnUtils.msi), and ODBC Driver (msodbcsql.msi); in the computer on which ADAudit Plus is running.

Download the above files from the respective MS SQL server feature packs-

For 2008: <https://www.microsoft.com/en-in/download/details.aspx?id=44272>

For 2012: <https://www.microsoft.com/en-us/download/details.aspx?id=50402>

For 2014: <https://www.microsoft.com/en-US/download/details.aspx?id=53164>

For 2016: <https://www.microsoft.com/en-us/download/details.aspx?id=56833>

For 2017: <https://www.microsoft.com/en-us/download/details.aspx?id=55992>

Note:

Native client, command line utilities, and ODBC driver version has to be the same as the MS SQL version (to which the DB and/or data is to be moved).

Migrating ADAudit Plus from 32-bit to 64-bit architecture

1. Check the product build number.
2. If it's not the latest build, upgrade your 32-bit version of ADAudit Plus to the latest build using the service pack below-
<https://www.manageengine.com/products/active-directory-audit/service-pack.html>
3. Install the latest 64-bit version of ADAudit Plus in a different computer. Do not start the product.
4. Stop the 32-bit installation.
5. Provide a different name for the below folders in your 32-bit installation.
 - lib • jre • bin
6. Now copy the following folders from the 64-bit build installation folder and paste it into the 32-bit installation folder.
 - lib • jre • bin
7. Go to <installation-dire>\ManageEngine\ADAudit Plus\conf folder in 32-bit installation.
8. Open product.conf file using Wordpad.
9. Change "product.processor_architecture" to 64.
- Note:** The 10th step found below, is required only for build numbers 6000 and above.
10. Copy the wrapper.conf file from the location \ManageEngine\ADAudit Plus\apps\dataengine-xnode\conf\ in 64 bit installation and replace it in the 32 bit installation.
11. Start the 32-bit installation and re-apply the license file.

ManageEngine
ADAudit Plus

ManageEngine ADAudit Plus is an IT security and compliance solution. With over 200 event-specific reports and real-time email alerts, it provides in-depth knowledge about changes effected to both the content and configuration of Active Directory, Azure AD and Windows servers. Additionally it also provides thorough access intelligence for workstations and file servers (including NetApp and EMC).

To learn more about how ADAudit Plus can help you with all your Active Directory auditing needs, please visit:

<https://www.manageengine.com/products/active-directory-audit/>

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