Test system Build Diary

2025 R1 (12.0.37) Moving Sage X3 SQL Server database to a different server

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Disclaimer

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Document Information

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Contents

Test system Build Diary....1
Introduction....3
Architecture and setup....4
Architecture....4
Documentation to review....5
Summary of steps....6
New SQL Server installation (Host: X3B-W25STSQ22DV)....7
Initial preparation....7
Sage X3 steps (Host: X3ERPV12SQLVM)....8
Initial preparation....8
Finishing steps....21
Conclusion....24
Appendix A – script file mzRunVALFIL.cmd....25

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Introduction

What is a "Build Diary"

A Build Diary simply describes the steps taken by Sage Support to perform a task or tasks on our internal test systems. Build diaries could be created for major multi-node installations, but may also just be describing the steps taken when installing a small hotfix, or anything in-between.

Why is this being shared

It may be useful for you to see the steps we have taken to create or implement some feature or installation, as this may highlight "gotcha's", issues encountered or just give you some guidance if you are planning something similar yourself.

You could potentially use these documents as the base for your own "Workplan document" (Described in "Overview of patching X3 and supporting technologies" https://www.sagecity.com/gb/sage-x3-uk/b/sage-x3-uk-support-insights/posts/sage-x3-technical-support-tips-and-tricks---march-2021-index) when you are planning your own activities

Target Audience

This document is aimed at Sage X3 Certified Technical consultants. Sage prescribes that X3 system installation, maintenance, migrations, etc. should be performed by suitably qualified Sage X3 consultants. The prerequisite consideration would be for them to have the latest "Sage X3 Certified Technical Consultant" certification. You can read more about the Sage X3 qualifications and requirements in Sage University.

Additional things to note

- This document does NOT purport to illustrate "best practice" for the task being described
- The steps described will not necessarily be for a "perfect" task, as there may have been issues that needed to be overcome, worked around, or ignored
- The Sage internal test system has network and hardware configuration specific to Sage
- The Sage internal test system does not necessarily include a Windows Domain and has Sage sandbox specific Windows security setup, so operating system permissions are generally not discussed
- If you intend to use these notes as a guide for your own activities, use with caution and perform your own testing to ensure the described steps are suitable and identify any additional considerations that apply to your own situation
- Ensure you only install and use software you are licensed for

What does this Build Diary describe?

This build diary primarily describes the steps to move the Sage X3 SQL Server database currently on Microsoft Server to a different server also running Microsoft Server. This may be required where the database is currently on the same Server as all the Sage X3 components (Runtime, Syracuse, etc.) and you are tight on server resources (e.g. CPU and/or RAM) or want to reduce licensing costs by having less CPUs on your database server.

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Architecture and setup

Architecture

Windows hostname	Windows version
X3ERPV12SQLVM	Windows Server 2022 Standard
X3B-W25STSQ22DV	Windows Server 2025 Standard

Currently all X3 services and Microsoft SQL Server are running on X3ERPV12SQLVM. The objective is to move SQL Server from X3ERPV12SQLVM to X3B-W25STSQ22DV

Starting architecture

X3ERPV12SQLVM

- Sage X3 2025 R1 (12.0.37)
- Syracuse, MongoDb
- Application, AdxAdmin, Runtime, Print Server, X3 Console
- Microsoft SQL server

Target architecture

X3ERPV12SQLVM

- Sage X3 2025 R1 (12.0.37)
- Syracuse, MongoDb
- Application, AdxAdmin, Runtime, Print Server, X3 Console

X3B-W25STSQ22DV

- Microsoft SQL Server

NOTE: An alternative approach to the steps in this document (which would certainly be quicker) is to take across the SQL Server data files and restore on the target server, then mess around with database permissions and then sort out the X3 settings. This approach is currently delivered as a chargeable training class by the Sage Center of Excellence.

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Documentation to review

Overall V12 documentation
https://online-help.sageerpx3.com/erp/12/public/index.html

Pre-requisites
https://online-help.sageerpx3.com/erp/12/public/Prerequisites-(Last-version).html
https://online-help.sageerpx3.com/erp/12/public/prerequisites_overview.html

Installation documentation
https://online-help.sageerpx3.com/erp/12/public/getting-started_sage-erp-x3-installation-procedure.html

Which firewall ports need to be open in a multi-node environment
https://gb-kb.sage.com/portal/app/portlets/results/viewsolution.jsp?solutionid=220924260102936

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Summary of steps

Prepare new Windows Server and setup MS SQL Server on this new server.

On original X3 server:

- Run SVG export for X3 folder using X3 Console but NOT using BCP option
- Run SVG export on all other folders using X3 Console using BCP option
- In X3 Console, create new solution and database using manual configuration
- Create default X3 folder in new SQL server
- Change original Sage X3 configuration files to point to new SQL Server database
- Prepare for and run SVG imports

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New SQL Server installation (Host: X3B-W25STSQ22DV)

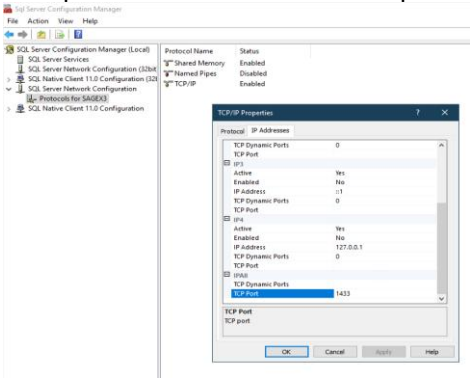
https://online-help.sageerpx3.com/erp/12/public/prerequisites_windows-sql-server.html

This server has been partially prepared for me already, so MS SQL Server itself has already been installed.

Initial preparation

Setup firewall rules as required.

Setup SQL Server to listen on specific port for TCP/IP



Restart SQL Server and SQL Browser services

I am also setting Agent, CEIP and VSS services to disabled (as I don't need them)

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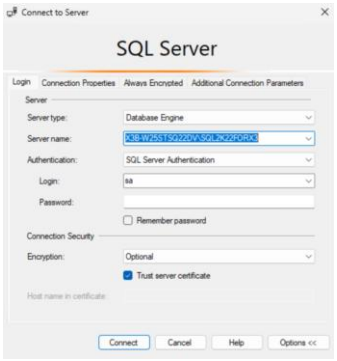
Sage X3 steps (Host: X3ERPV12SQLVM)

Initial preparation

Setup firewall rules as required.

Edit Windows “C:\Windows\System32\drivers\etc\hosts” file to ensure I can resolve IP address for the remote SQL server, also setup alias for new dummy hostname “X3TMP” pointing to localhost.

Test can connect via SSMS to the new SQL server



Prepare for and run exports on source system:

- Set batch server and SOAP Pools to NOT auto-start
- Stop Batch Server and SOAP Pools
- Stop all X3 services, except AdxAdmin (Don’t forget Jenkins service if used)
- Run SVG export for X3 folder using X3 Console but NOT using BCP option
- Run SVG export on all other folders using X3 Console with the BCP option
- Shutdown all MS SQL Server services and set to disabled

Install X3 Application component (using the same version of X3 Application as currently in use) using different solution name/location.

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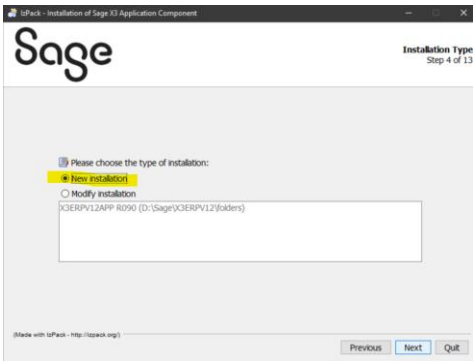

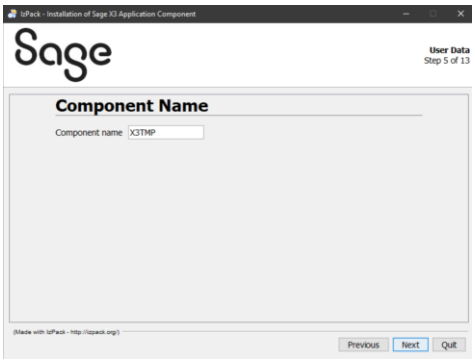

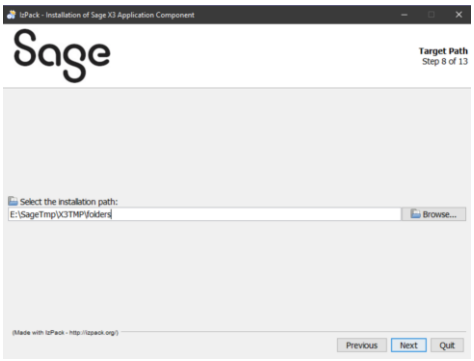

Install x3 Runtime into temporary solution/location

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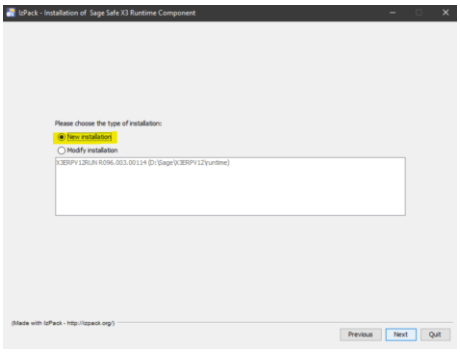
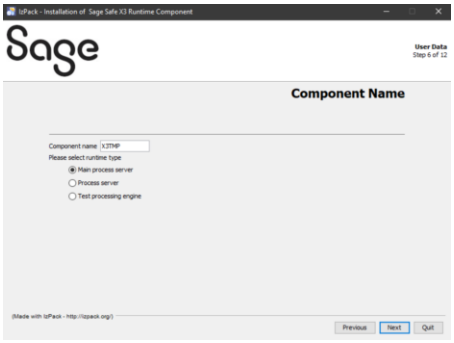
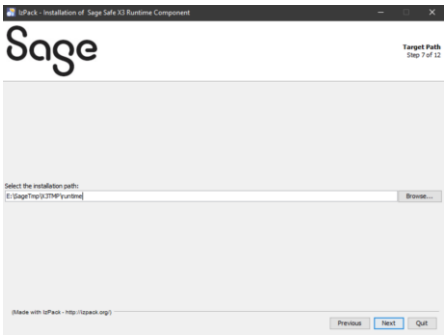
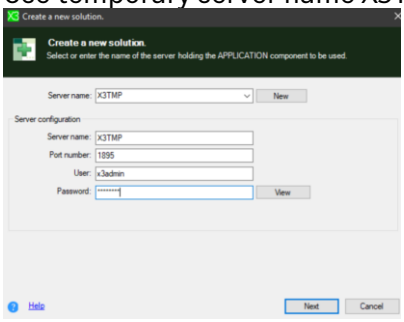






In X3 Console create new solution and create new database pointing to new SQL Server but using manual configuration.

Use temporary server name X3TMP (connect to existing AdxAdmin service)



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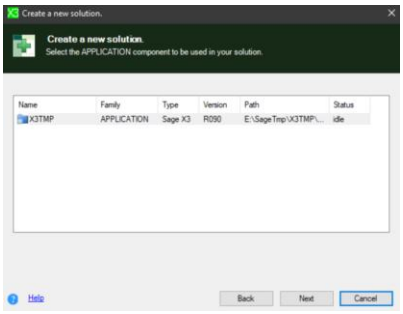

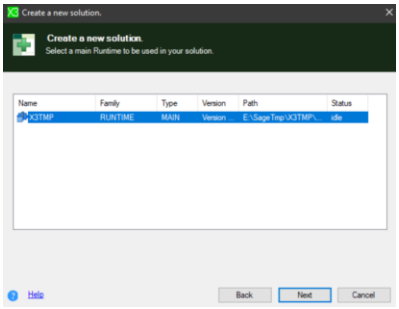

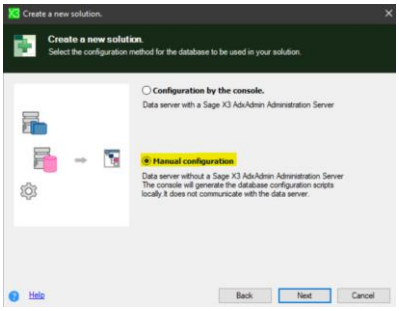

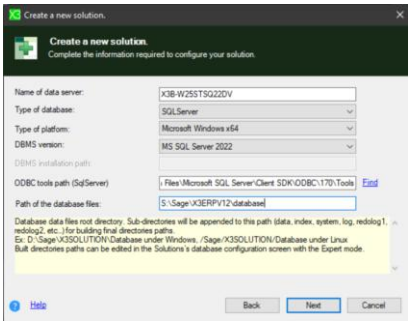

NOTE: these are the paths on the remote SQL server (Check they exist!)

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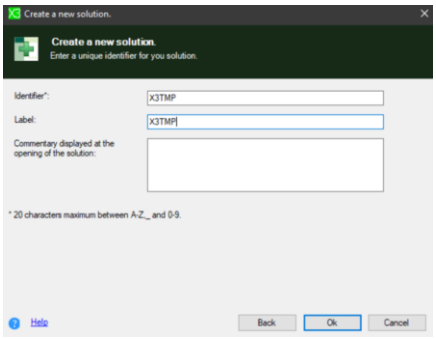
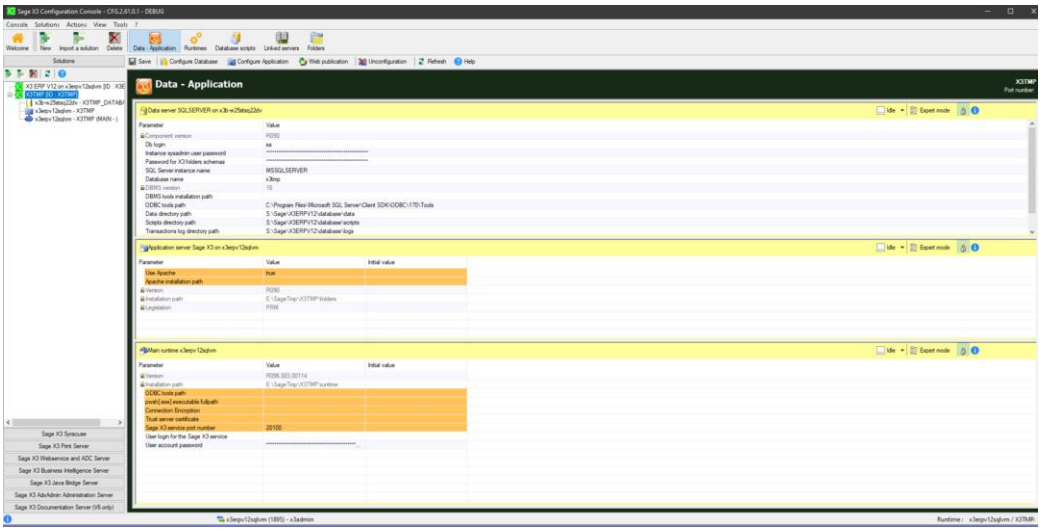




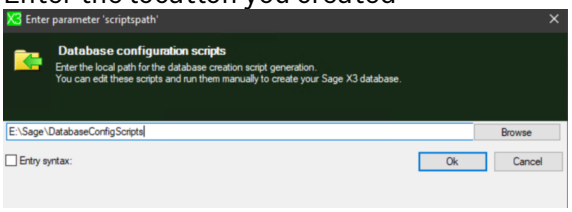
Change the database setup:

- Set “Instance sysadmin user password” same as original instance
- Set “Password for X3 folders schema” same as original instance
- Set “SQL Server instance name” as per the new database setup, for me this is the same as the original SQL server which is the easiest option
- Set “Database name” same as original instance
- Set “DBMS tools installation path” as per the remote SQL server location (Also check it exists)

SAVE

Create a directory to store the database creation scripts (“E:\Sage\DatabaseConfigScripts”)

Click “Configure database”
Enter the location you created



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Although the database is now showing as “Active” the scripts now need to be manually copied over and run on the database

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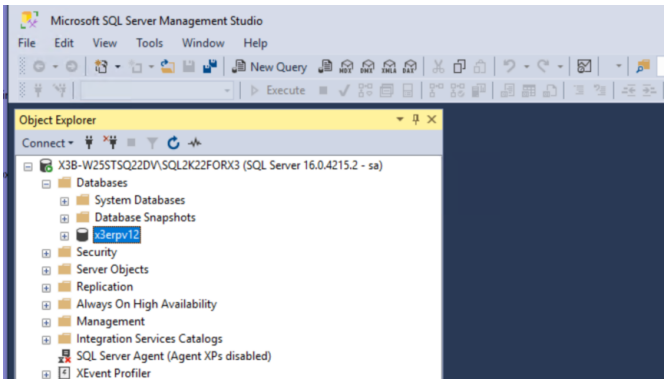
Create X3 database on new SQL Server (X3B-W25STSQ22DV)

On the new database server X3B-W25STSQ22DV, create directories:

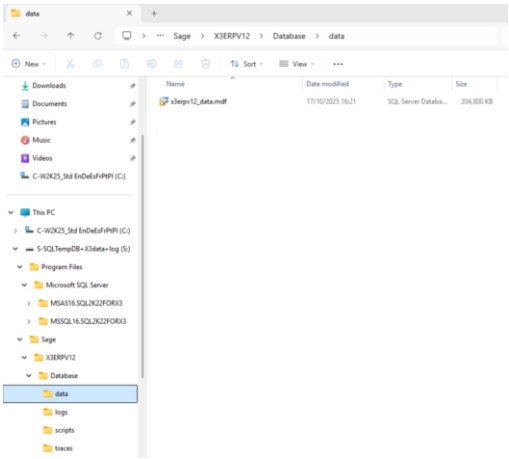
S:\Sage\X3ERPV12\Database\data
S:\Sage\ X3ERPV12\Database\logs
S:\Sage\ X3ERPV12\Database\scripts
S:\Sage\ X3ERPV12\Database\traces

Drop the X3 Console scripts into the S:\Sage\ X3ERPV12\Database\scripts directory, then execute “database_CrDb.bat”

Check the database now exists



We can see the database file in the filesystem



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Create X3 folder (Host: X3ERPV12SQLVM)

In X3 Console, configure X3TMP Application Server

Connect to X3TMP solution

In the Application Server section

Set Use Apache = False (No)

In the Main Runtime section

- ODBC tools path = C:\Program Files\Microsoft SQL Server\Client SDK\ODBC\170\Tools (From the drop down list)
- Pwsh[.exe] executable fullpath = C:\Program Files\PowerShell\7\pwsh.exe (From drop-down list)
- Connection encryption = No ***** as per new SQL server setup requirements***
- Trust Server certificate = Yes ***** as per new SQL server setup requirements***
- Sage X3 service port number = 20101 *****must change as port 20100 is already used***
- User login for the SAFE X3 service = x3run
- User account password = (as appropriate)

Click "SAVE" then "Configure Application"

Once completed, exit X3 console then stop the new "Sage X3 runtime X3TMP" service and set to "Disabled"

Change the original X3 configuration files to point to new SQL Server database

Edit the following files in the ORIGINAL solution (not the new one!)

- Change any occurrences of "X3ERPV12SQLVM" to "X3B-W25STSQ22DV" in relation to the database settings only. Also check for any occurrences of the source server IP address, which would also need to be changed if found.
- Change all occurrences of the database directories if these are different between old and new SQL servers

..\AdxAdmin\inst\adxinstalls.xml

In the section <module name="X3ERPV12SQL" family="DATABASE" type="SQLSERVER">

```
<component.database.manualconf>True</component.database.manualconf>
<component.database.servername>x3b-
w25stsq22dv</component.database.servername>
<database.adonix.dbdirtra>S:\Sage\X3ERPV12\database\traces</database.ad
onix.dbdirtra>
<database.adonix.sqldirdat>S:\Sage\X3ERPV12\database\data</database.ado
nix.sqldirdat>
<database.adonix.sqldirlog>S:\Sage\X3ERPV12\database\logs</database.ado
nix.sqldirlog>
<database.adonix.sqldirscr>S:\Sage\X3ERPV12\database\scripts</database.
adonix.sqldirscr>
```


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..\Folders\solution.xml

In the section <module name="X3ERPV12SQL" family="DATABASE" type="SQLSERVER">

```
<component.database.manualconf>True</component.database.manualconf>
<component.database.servername>x3b-
w25stsq22dv</component.database.servername>
<database.adonix.dbdirtra>S:\Sage\X3ERPV12\database\traces</database.ad
onix.dbdirtra>
<database.adonix.sqldirdat>S:\Sage\X3ERPV12\database\data</database.ado
nix.sqldirdat>
<database.adonix.sqldirlog>S:\Sage\X3ERPV12\database\logs</database.ado
nix.sqldirlog>
<database.adonix.sqldirscr>S:\Sage\X3ERPV12\database\scripts</database.
adonix.sqldirscr>
```

..\Folders\X3_PUB\solution.json

In the section "database"

```
"server": "x3b-w25stsq22dv",
```

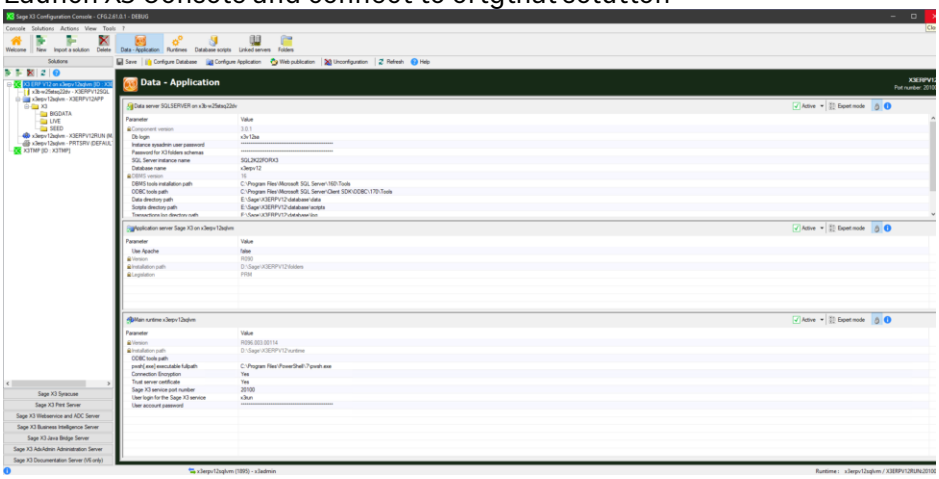
For the Print server ..\Config\adxeditionserversolutions.xml

```
<odbc base="x3erpv12" db="2" driver="" odbcencrypt="Yes"
trustservercertificate="Yes" host="x3b-w25stsq22dv"
hostnamepublic="x3b-w25stsq22dv" id="ADX_X3ERPV12"
instance="SQL2K22FORX3" port="" portpublic="" internalhost="x3b-
w25stsq22dv" />
```

Reconfigure via X3 console

Check AdxAdmin service is still running

Launch X3 Console and connect to original solution



- Add "ODBC tools path" = C:\Program Files\Microsoft SQL Server\Client SDK\ODBC\170\Tools (From dropdown list)
- Connection Encryption = No ****to match the new database setup**

SAVE

Click "Application" to reconfigure

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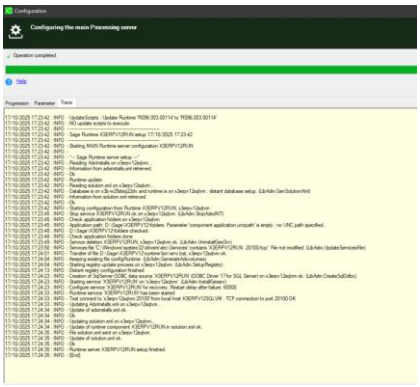
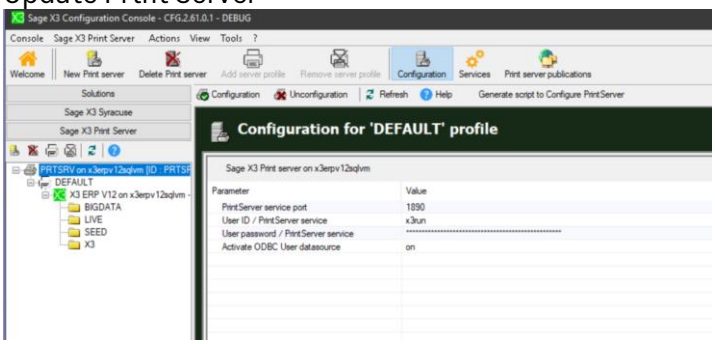
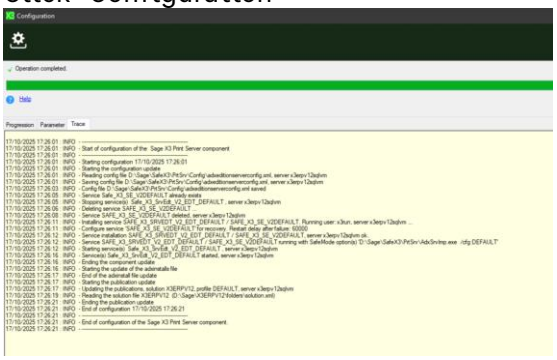


Update Print Server

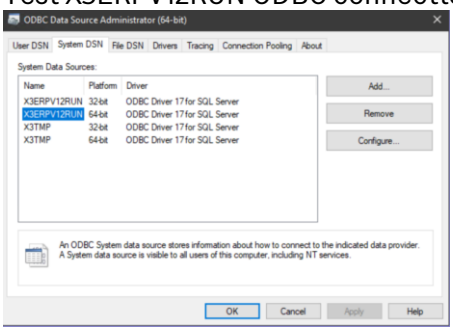


Click “Configuration”



Shutdown all X3 services

Test X3ERPV12RUN ODBC connections to confirm they can connect to the new SQL database OK



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Startup only Runtime, MongoDb and Syracuse services

Import X3 folder

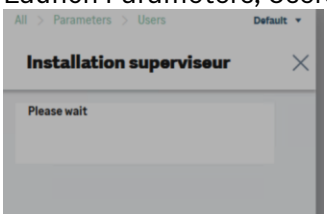
Remove the “ASYSS*.*” files from the “..\Folders\X3\SVG” directory.

Run the “mzRunVALFIL.cmd” script to create any missing tables in X3 folder. (See Appendix)

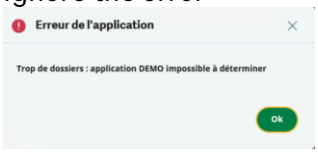
Log as ADMIN and connect to X3 folder.

Make sure Batch Server and SOAP pools are stopped.

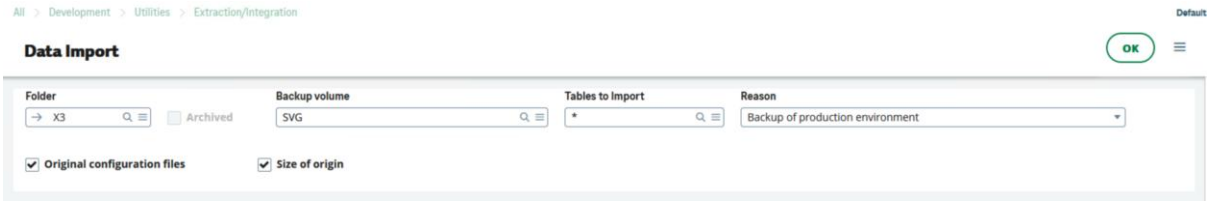
Launch Parameters, Users, Users (GESAUS) to invoke the supervisor initialization process.



Ignore the error



Run the Development, Utilities, Extraction/Integration, Data Import (DOSINTEG) SVG import for all tables in the X3 folder.



Logout and restart all X3 Services.

Manually validate the 7 views that had errored on the SVG import

- ADICADX
- APACKDEPSV
- AVIEWFLD
- AVIEWIND
- AVIEWTAB
- AVVTEXTRA
- AVWTEXTRA

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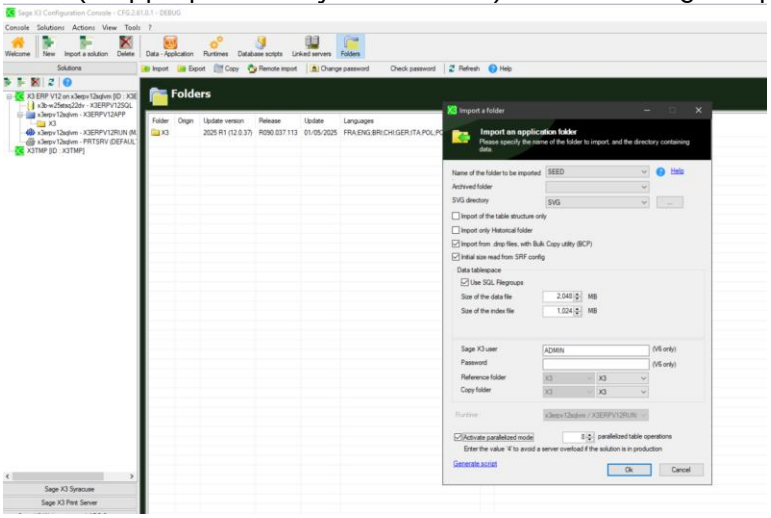
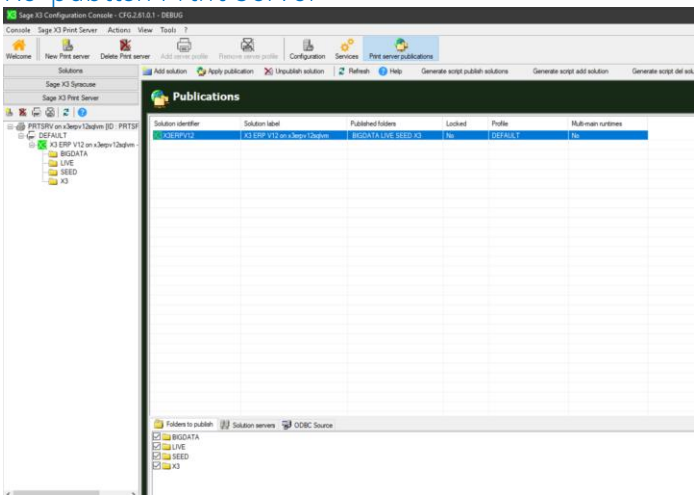
Import SVGs for all other child folders from X3 console

NOTE: You may wish to consider switching database “Recovery model” to SIMPLE instead of FULL (if appropriate for your instance) whilst running this process.



Re-publish Print Server



Apply publication

Logout and stop all X3 Services

Restart services (check they are set to Automatic start, if required)

Restart Batch Server and SOAP Pools, setting to auto-start if required

Restart Accounting Tasks if required

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Test everything

Complete end-end testing for all relevant business flows.

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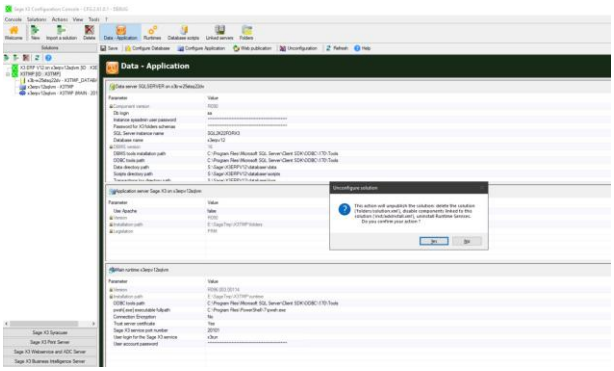
Finishing steps

On the original server, we can now remove the Sage X3 “X3TMP” solution and the old SQL Server database components.

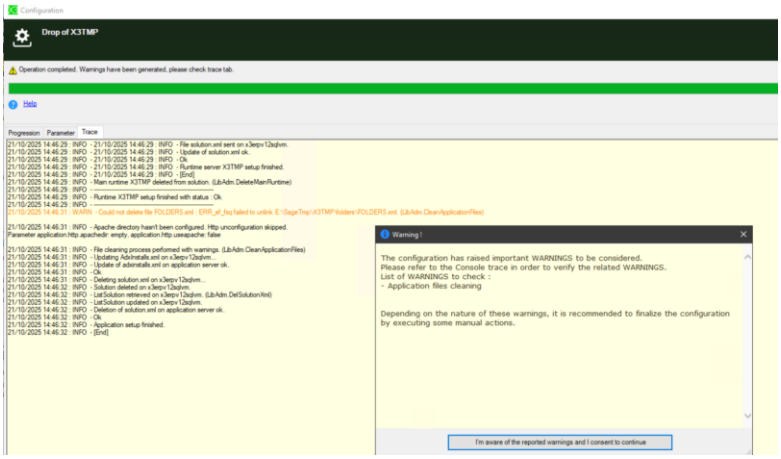
X3 Console

Select X3TMP solution

Unconfiguration



YES



Control Panel, Programs and Features

Uninstall runtime and Application

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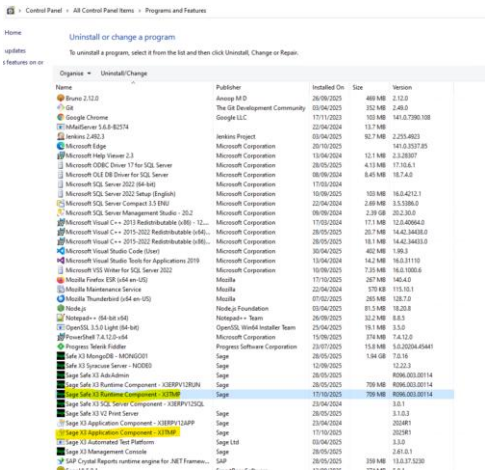
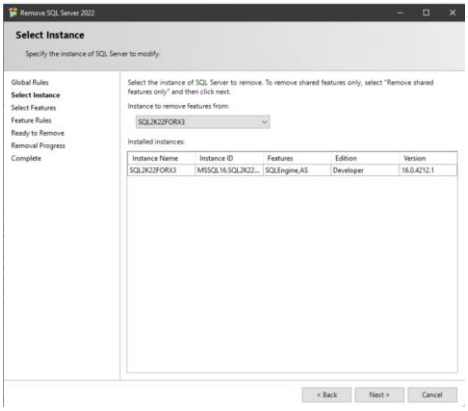
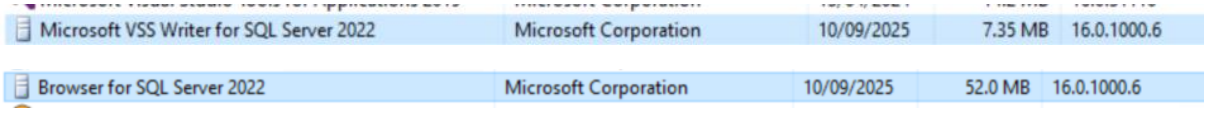


Uninstall Microsoft SQL Server components

Remove



Also uninstall



Manually remove the database files

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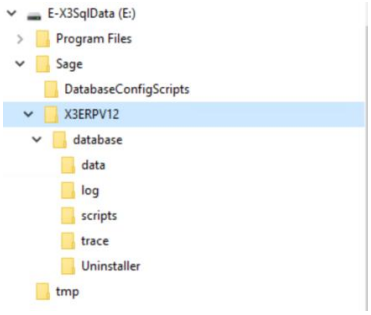

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Conclusion

This “Build diary” document provides the steps taken on our TEST servers to move the Sage X3 database to a different server.

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Appendix A – script file mzRunVALFIL.cmd

```
REM ################################################
REM ######          START OF SCRIPT            ######
REM ################################################
REM ##   Filename: mzRunVALFIL.cmd
REM ##   Updated : 23 October 2025
REM ##   Author  : Mike Shaw (Sage UK, X3 Support)
REM ################################################
REM ##  Run this script on your Sage X3 Server, as
REM ##  directed by Sage Support
REM ##
REM ##   This script is provided "as-is" and is
REM ##   intended for educational purposes only.
REM ##   No warranty is expressed or implied.
REM ##   Use at your own risk!
REM ################################################
@echo off
cls
REM
REM    This script will recreate missing X3 folder tables/views from SVG
backup
REM
set "mzBASE_DIR=%~dp0%"
REM ################################################
REM ##    START OF SITE SPECIFIC VARIABLES        ###
set "mzSAGE_HOME=D:\Sage\X3ERPV12"
REM
REM         5=SQL SERVER  3=ORACLE
REM set "mzDATABASE=3"
set "mzDATABASE=5"
REM
REM ##    END OF SITE SPECIFIC VARIABLES          ###
REM ################################################
rem  Set environment
call %mzSAGE_HOME%\runtime\bin\env.bat
cd /d %mzSAGE_HOME%\folders\X3\SVG
rem   Do the work
for /r %%f in (*.dat) do (
      echo %%~nf
      valfil X3 %%~nf
)
pause
cd %mzBASE_DIR%
:end
echo  Finished
REM
REM    END OF SCRIPT
REM
```


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