



## Test system Build Diary

### **2023 R2 (V12 patch 34) Installation**

## Disclaimer

This document is provided "as is" and is for your guidance and educational purposes only. It does not replace the Online documentation, nor is any warranty expressed nor implied for the steps described herein.

## Document Information

Author: Mike Shaw, Sage UK X3 Support Team

## Contents

Test system Build Diary.....	1
Introduction .....	3
2023 R2 - installation build diary.....	4
Objective .....	4
Starting architecture and notes.....	4
Documentation to use for planning and execution of this task.....	5
Initial steps .....	6
Installation of SQL Server 2022 .....	9
Install X3 technology components.....	17
Configure X3.....	26
Final setup and testing .....	33
Import SEED Folder .....	36
Apply any mandatory patches.....	39
Batch Server .....	40
Web Services .....	40
Printer setup .....	41
Setup SSL port 443.....	41
Additional installations .....	43
Conclusion.....	49

## 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://communityhub.sage.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 prescribe 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 ( <https://sageu.csod.com/catalog/CustomPage.aspx?id=20000242#tc> )

### 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 a fresh install of X3 2023 R2.

## 2023 R2 - installation build diary

### Objective

I want to complete a fresh installation of Sage X3 2023 R2.

### Starting architecture and notes

Single Windows Server 2022 server (Server name X3V12)

Software already loaded:

Windows Server 2022

OpenJDK 1.8 latest version

Edge, Firefox and Chrome browsers

Windows users setup (Local users)

“x3admin” for installation and management

“X3run” for service runtime

### Summary of steps

Preamble

- Install pre-req components

Install SQL Server 2022

- SQL Server 2022
- SSMS 19.2

Install X3 technology components

- MongoDB 4.4.22
- X3 Console 2.58.0
- Adxadmin 96.1.206
- SQL Server component 3.0.0
- Application 12.0.34
- Runtime 96.1.206
- Print Server 2.29.0
- Syracuse Server 12.19.0

Configure X3

Final setup and testing

Additional installations

- Install Elastic Search 8.11

Documentation to use for planning and execution of this task

[Sage Online documentation](#)

Overall V12 documentation

<http://online-help.sageerp3.com/erp/12/public/index.html>

- Prerequisites overview
- Version 12 prerequisites
- Architecture and system requirements
- Installation procedure

[Sage Knowledgebase articles or Blogs](#)

Sage X3 version 12 latest release information <https://communityhub.sage.com/gb/sage-x3/f/announcements/146573/sage-x3-version-12-november-2023>

## Initial steps

Make sure the server meets the requirements listed at [https://online-help.sageerpx3.com/erp/12/public/prerequisites\\_overview.html](https://online-help.sageerpx3.com/erp/12/public/prerequisites_overview.html)

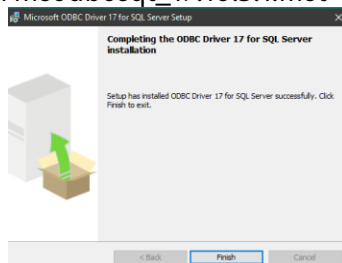
Update Firefox, Chrome, and Edge and check the versions conform to prerequisites [https://online-help.sageerpx3.com/erp/12/public/prerequisites\\_browsers.html](https://online-help.sageerpx3.com/erp/12/public/prerequisites_browsers.html)

Run Windows Update to ensure up to date on Operating System.

Check disk configuration to ensure have enough free space.

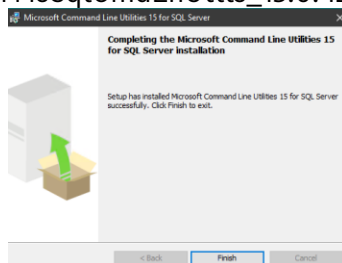
## Install ODBC

Launch msodbcsql\_17.10.5.1.msi



## Install SQL tools

Launch MsSqlCmdLnUtils\_15.0.4298.1.msi



## Install Microsoft Powershell

Latest version is recommended (64-bit).

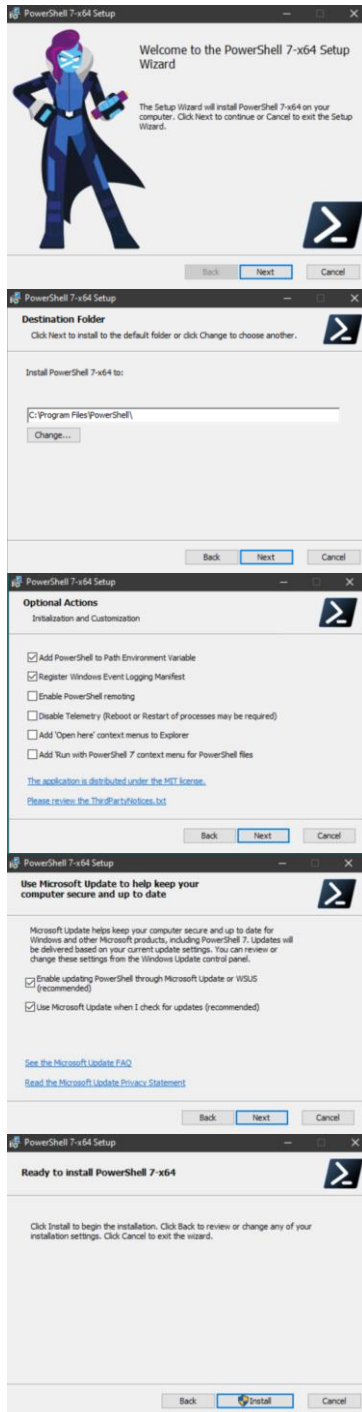
<https://learn.microsoft.com/en-us/powershell/scripting/install/installing-powershell-on-windows?view=powershell-7.4>

Download from

<https://github.com/PowerShell/PowerShell/releases/download/v7.4.0/PowerShell-7.4.0-win-x64.msi>

NOTE: the release notes ([https://online-help.sageerpx3.com/erp/12/wp-static-content/news/en\\_US/x3-release-notes/index.html#/release/en-US/2023-r2-34](https://online-help.sageerpx3.com/erp/12/wp-static-content/news/en_US/x3-release-notes/index.html#/release/en-US/2023-r2-34)) say "*The runtime and console support PowerShell 7.3.*" but the prereqs ([https://online-help.sageerpx3.com/erp/12/public/prerequisites\\_overview.html](https://online-help.sageerpx3.com/erp/12/public/prerequisites_overview.html)) state "*Microsoft PowerShell 7.2 or later*" so it is not clear if the latest Microsoft Powershell version 7.4 can be used or not. After checking, it is confirmed that Powershell 7.4 **CAN** be used.

Launch "PowerShell-7.4.0-win-x64.msi"



Pin “Powershell 7” to taskbar for easier launching. Launch and run “\$PSVersionTable”

```

PowerShell 7.4.0
PS C:\Users\lsadmin> $PSVersionTable

Name                Value
-----                -
PSVersion           7.4.0
BuildVersion        7.4.0
GitCommitId         7.4.0
OS                  Microsoft Windows [10.0.22H2]
Platform            Win32NT
PSCompatibleVersions {1.0, 2.0, 3.0, 4.0, ...}
PSRemotingProtocolVersion 2.3
SerializationVersion 1.1.0.1
WSManStackVersion   3.0
PS C:\Users\lsadmin>

```

## Install SQL Server module for powershell

Latest version is recommended. v22 or above is mandatory

<https://learn.microsoft.com/en-us/sql/powershell/download-sql-server-ps-module?view=sql-server-ver16>

See “Installing Microsoft PowerShell” section in [https://online-help.sageerpx3.com/erp/12/public/getting-started\\_sage-erp-x3-installation-procedure.html#solution](https://online-help.sageerpx3.com/erp/12/public/getting-started_sage-erp-x3-installation-procedure.html#solution)

Launch Powershell 7 as Administrator

Run “Install-Module -Name SqlServer -Scope AllUsers -force”

Then run “Get-InstalledModule -Name SqlServer” to check results

```

Administrator: C:\Program Files\PowerShell\7\pwsh.exe
PowerShell 7.4.0
PS C:\Windows\System32> Install-Module -Name SqlServer -Scope AllUsers -force
PS C:\Windows\System32> Get-InstalledModule -Name SqlServer

Version      Name      Repository      Description
-----      -
22.1.1      SqlServer  PSGallery       This module allows SQL Server developers, administrators and business intelligence professionals to automa...
PS C:\Windows\System32>

```

We can see version 22.1.1 is now installed.



## Installation of SQL Server 2022

[https://online-help.sageerpx3.com/erp/12/public/prerequisites\\_windows-sql-server.html](https://online-help.sageerpx3.com/erp/12/public/prerequisites_windows-sql-server.html)

Mount the SQL Enterprise ISO file

Execute “setup.exe“

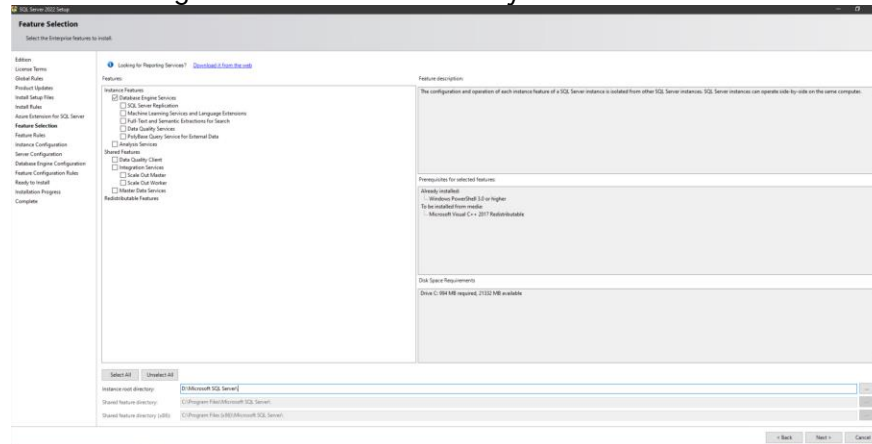
Select New SQL Server stand-alone installation

Deselect “Azure extension for SQL Server”

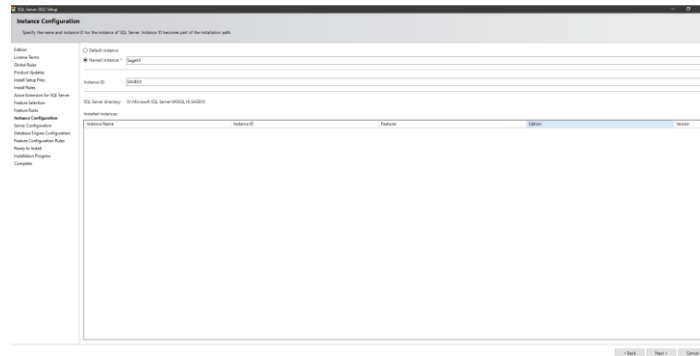
Feature selection

Only need Database Engine Services

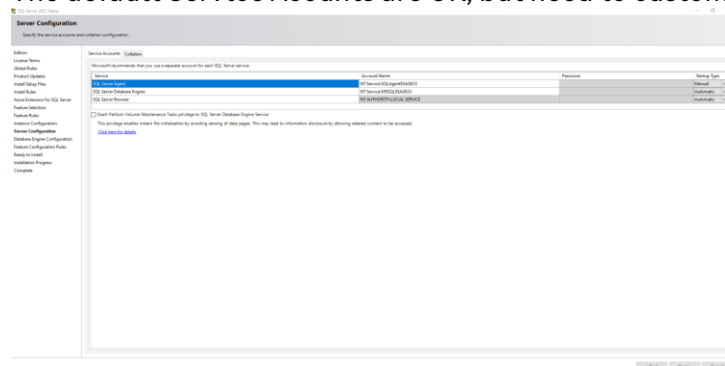
Change “Instance root directory” as needed



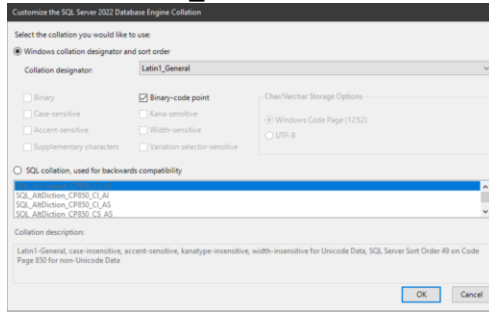
## Set Named Instance



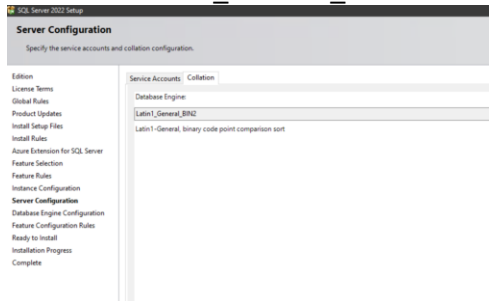
The default Service Accounts are OK, but need to customise the Collation



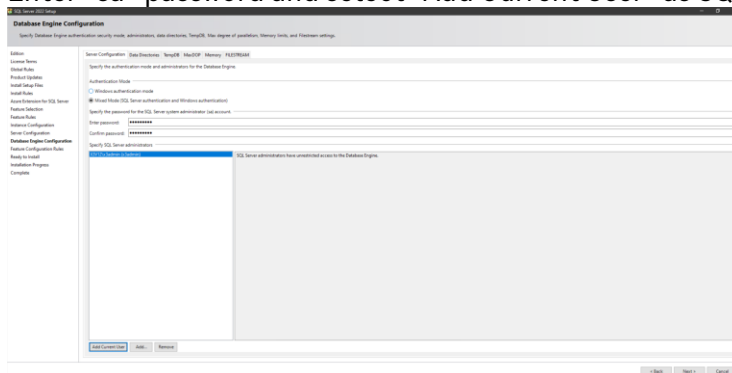
Select “Latin1\_General” and check “Binary-code point”.



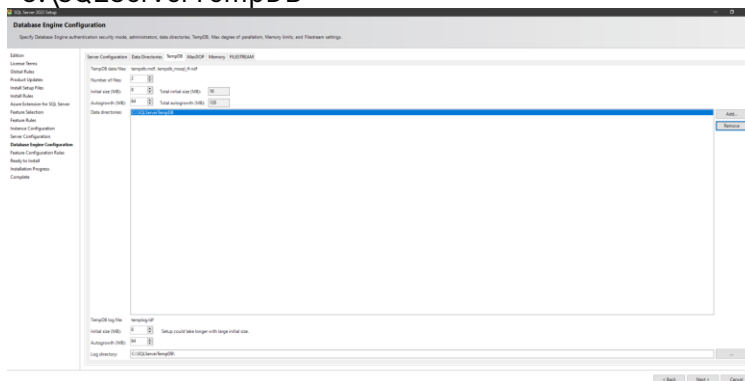
Confirm “Latin1\_General\_BIN2” is now specified.



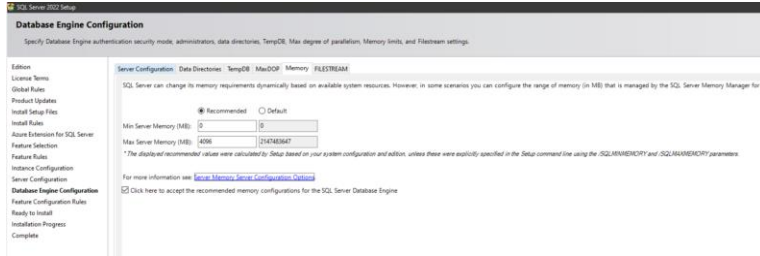
In Server Configuration you must specify “Mixed Mode”  
Enter “sa” password and select “Add Current User” as SQL administrator



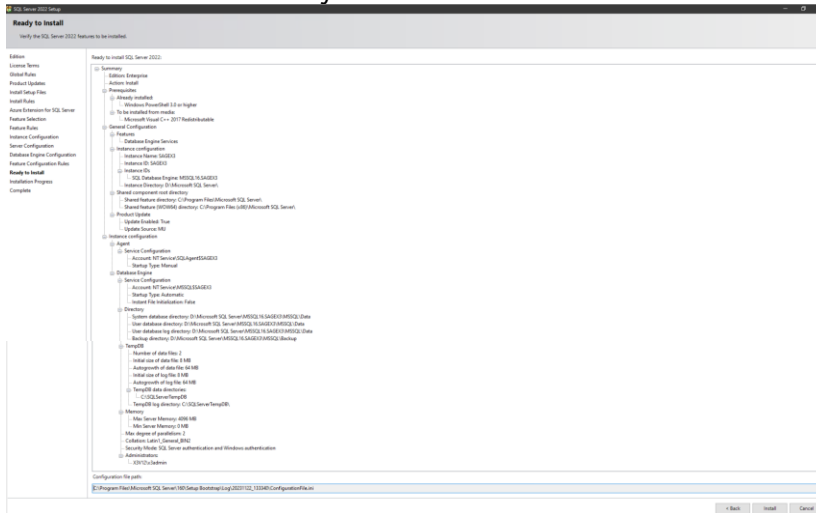
It is not required to change from default, but I will set my Temp DB location to  
“C:\SQLServerTempDB”



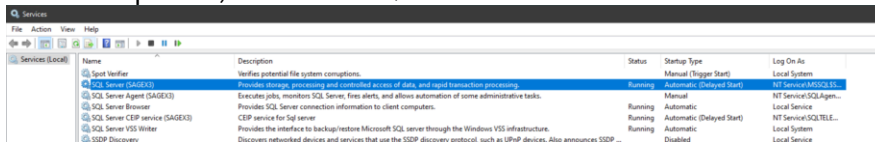
As I am running on a single server, I will limit the memory



Click "Install" once ready



Once completed, check the SQL Server services



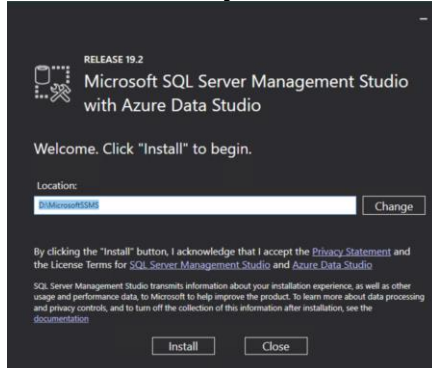
I will set the SQL Server CEIP and VSS services to manual start, as don't intend to use them.

## Installation of SSMS 19.2

NOTE: In the Prereqs online help we say "With SQL Server 2019/2022, you should use SSMS 18.x in its latest version (18.9.1 as of May 2021)." As the SSMS component is optional and independent from Sage X3 I am going to install the latest SSMS which is currently 19.2 ( <https://learn.microsoft.com/en-us/sql/ssms/release-notes-ssms?view=sql-server-ver16#current-ssms-release> ) After checking, it is confirmed that SSMS 19.2 **CAN** be used.

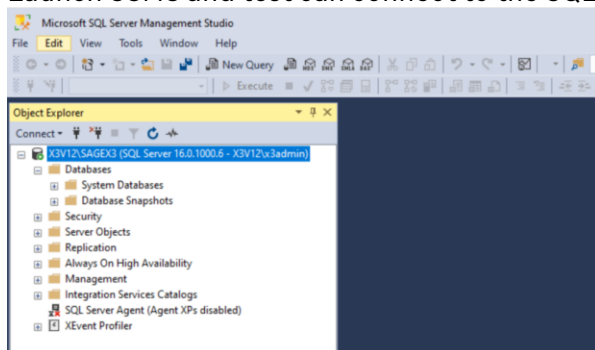
Execute " D:\Software\Microsoft\SSMS\SSMS-Setup-ENU\_19.2.exe"

Pick the directory where to install into. In my case this is "D:\MicrosoftSSMS"



Once completed, restart the server as directed

Launch SSMS and test can connect to the SQL instance



Configure SQL Server for secure connections

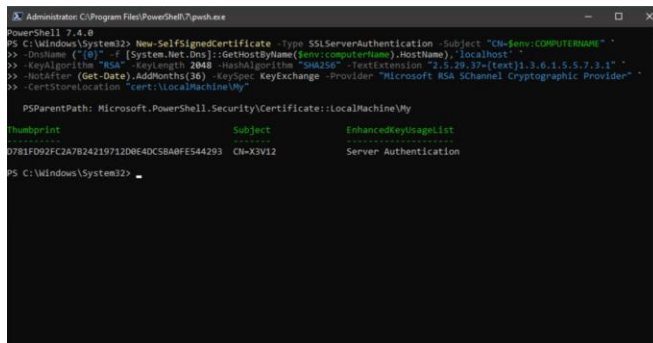
<https://communityhub.sage.com/gb/sage-x3/b/sage-x3-uk-support-insights/posts/how-can-i-secure-my-sql-server-data-using-encryption>

<https://learn.microsoft.com/en-us/sql/database-engine/configure-windows/configure-sql-server-encryption?view=sql-server-ver16>

<https://learn.microsoft.com/en-us/sql/database-engine/configure-windows/special-cases-for-encrypting-connections-sql-server?view=sql-server-ver16>

I am going to use the Microsoft instructions and use the provided Powershell script to generate a self-signed certificate.

```
New-SelfSignedCertificate -Type SSLServerAuthentication -Subject
"CN=$env:COMPUTERNAME" `
-DnsName ("{0}" -f
[System.Net.Dns]::GetHostByName($env:computerName).HostName), 'localhost'
-
-KeyAlgorithm "RSA" -KeyLength 2048 -HashAlgorithm "SHA256" -
TextExtension "2.5.29.37={text}1.3.6.1.5.5.7.3.1" `
-NotAfter (Get-Date).AddMonths(36) -KeySpec KeyExchange -Provider
"Microsoft RSA SChannel Cryptographic Provider" `
-CertStoreLocation "cert:\LocalMachine\My"
```

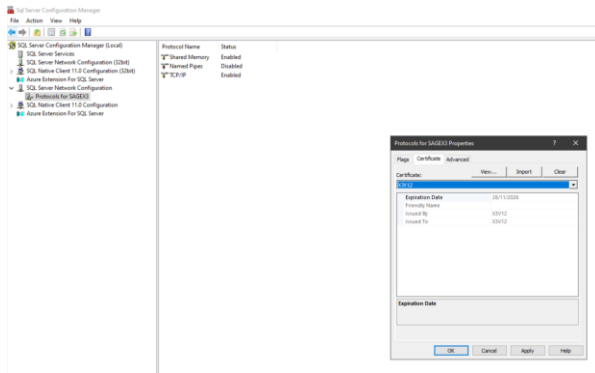


```
Administrator: C:\Program Files\PowerShell7\powershell.exe
PowerShell 7.4.0
PS C:\Windows\System32> New-SelfSignedCertificate -Type SSLServerAuthentication -Subject "CN=$env:COMPUTERNAME" `
>> -DnsName ("{0}" -f [System.Net.Dns]::GetHostByName($env:computerName).HostName), 'localhost' `
>> -KeyAlgorithm "RSA" -KeyLength 2048 -HashAlgorithm "SHA256" -TextExtension "2.5.29.37={text}1.3.6.1.5.5.7.3.1" `
>> -NotAfter (Get-Date).AddMonths(36) -KeySpec KeyExchange -Provider "Microsoft RSA SChannel Cryptographic Provider" `
>> -CertStoreLocation "cert:\LocalMachine\My"

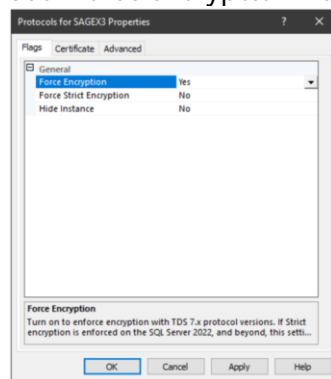
PSParentPath: Microsoft.PowerShell.Security\Certificate:\LocalMachine\My
Thumbprint Subject EnhancedKeyUsageList
-----
D781F092FC2A7B24219712D8E4DC5BA8FE544293 CN=X3V12 Server Authentication
PS C:\Windows\System32>
```

Install a certificate for a single SQL Server instance

- In SQL Server Configuration Manager, in the console pane, expand SQL Server Network Configuration.
- Right-click Protocols for <instance Name>, and then select Properties.
- Choose the Certificate tab, and then use the drop down to pick the X3V12 self-signed certificate, then click OK.



Set “Force encryption” flag to “Yes” on the “Flags” tab whilst we’re here.



Restart SQL server service for the changes to take effect.

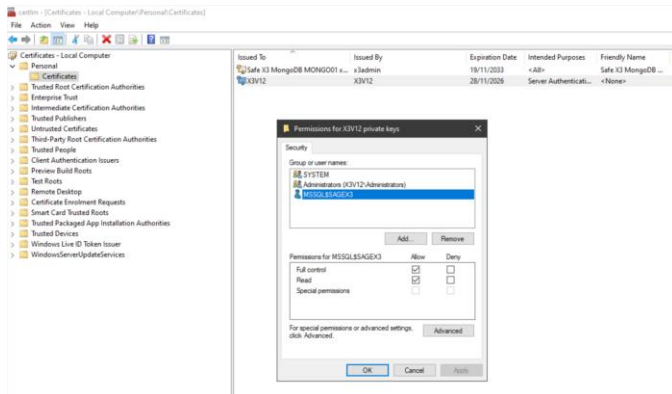
If the service does not start, don’t panic, you’ll see the following errors in the SQL Server ERRORLOG file

```
The server could not load the certificate it needs to initiate an SSL
connection. It returned the following error: 0x8009030d. Check
certificates to make sure they are valid.
```

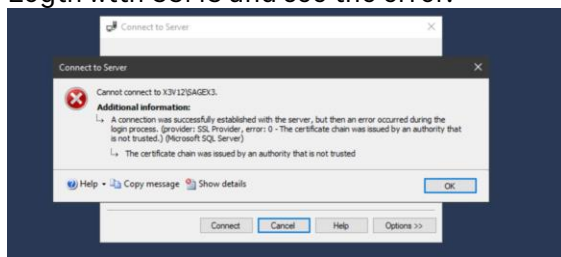
```
Found the certificate [Cert Hash(sha1) "XXXXXXXXXXXXXXXXXXXX"] in the
local computer store but the SQL Server service account does not have
access to it.
```

If this is the case, follow the following article to resolve (SQL Server account needs permission to see the certificate) <https://learn.microsoft.com/en-us/troubleshoot/sql/database-engine/startup-shutdown/event-id-33565-start-sql-server>

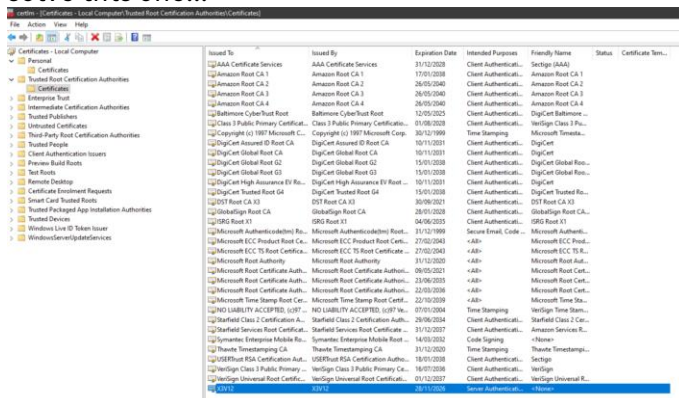
Adding the permissions in “Manage Computer Certificates” will resolve.



Login with SSMS and see the error:

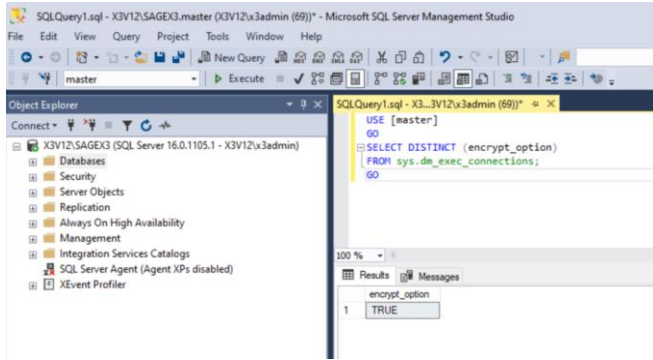


I am adding the self-signed certificate into the Trusted Root Certification Authorities store to solve this one...



Test the setup by logging in with SSMS and running the following SQL (Should return "TRUE")

```
USE [master]
GO
SELECT DISTINCT (encrypt_option)
FROM sys.dm_exec_connections;
GO
```





## Install X3 technology components

[https://online-help.sageerp3.com/erp/12/public/getting-started\\_sage-erp-x3-installation-procedure.html](https://online-help.sageerp3.com/erp/12/public/getting-started_sage-erp-x3-installation-procedure.html)

## MongoDb 4.4.22

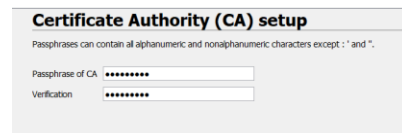
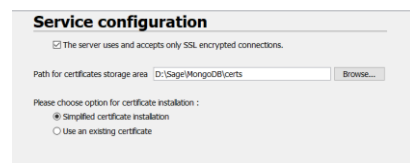
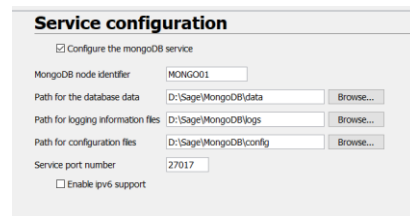
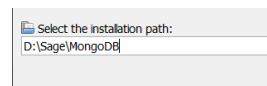
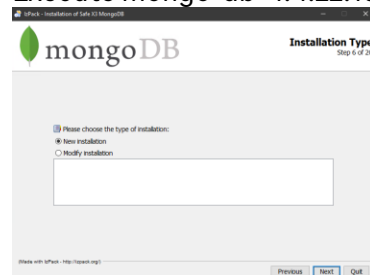
[https://online-help.sageerp3.com/erp/12/public/prerequisites\\_mongodb-on-windows.html](https://online-help.sageerp3.com/erp/12/public/prerequisites_mongodb-on-windows.html)

[https://online-help.sageerp3.com/erp/12/public/getting-started\\_MongoDB-installation-procedure.html](https://online-help.sageerp3.com/erp/12/public/getting-started_MongoDB-installation-procedure.html)

## Additional notes when upgrading to MongoDB 4.x [https://gb-](https://gb-kb.sage.com/portal/app/portlets/results/viewsolution.jsp?solutionid=220924660107620)

[kb.sage.com/portal/app/portlets/results/viewsolution.jsp?solutionid=220924660107620](https://gb-kb.sage.com/portal/app/portlets/results/viewsolution.jsp?solutionid=220924660107620)

## Execute mongo-db-4.4.22.10.jar



### Certificate data

(\*) All fields are mandatory.

Country code: GB

State/Province: Berks

City/Locality: Winnersh

Organization: Sage

Organizational unit/Team: UK

Name/Certificate Owner: x3admin

Email: x3admin@example.com

Days of validity: 3650

### Mongodb server setup

Passphrases can contain alphanumeric and nonalphanumeric characters except : ' and " .

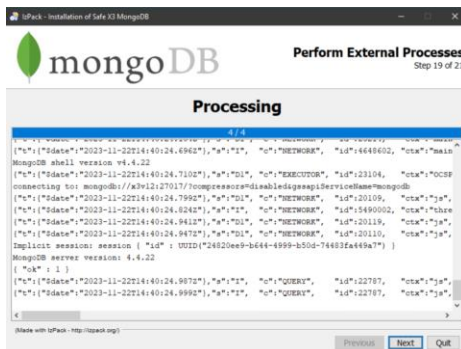
(\*) All fields are mandatory.

Please note : in order to start as a service the passphrase will be in clear text in the configuration file of the MongoDB server !

Passphrase of server: [masked]

Verification: [masked]

Host name (FQDN): x3v12



Check the output in the window for any errors. These messages also echoed to "D:\Sage\MongoDB\Install\_V4.4.22\_xxxx.log"

Check the MongoDB service is running

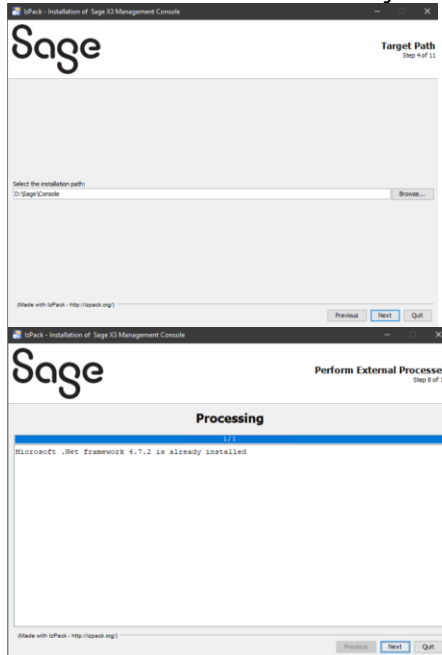
Name	Description	Status	Startup Type	Log On As
Resultant Set of Policy Provider	Provides a network service that...	Manual	Manual	Local System
Routing and Remote Access	Offers routing services to busine...	Disabled	Automatic	Local System
RPC Endpoint Mapper	Resolves RPC interfaces identifi...	Running	Automatic	Network Service
<b>Service MongoDB MONGODB</b>		Running	Automatic	Local System
Secondary Log-on	Enables starting processes under...	Manual	Manual	Local System
Secure Socket Tunneling Protocol Service	Provides support for the Secure ...	Running	Manual	Local Service

### X3 Console 2.58.0

[https://online-help.sageerp3.com/erp/12/public/prerequisites\\_console.html](https://online-help.sageerp3.com/erp/12/public/prerequisites_console.html)

Execute console-2.58.0.14-win.jar

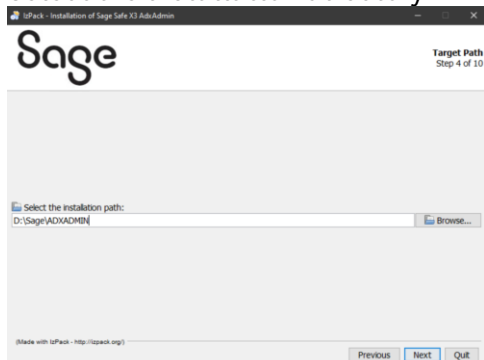
Pick the installation directory



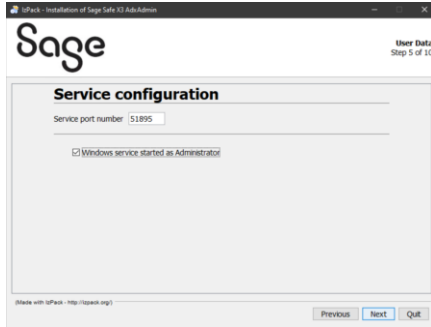
### Adxadmin 96.1.206

Execute adxadmin-96.1.206.jar

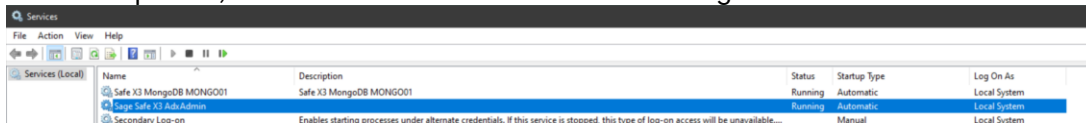
Select the installation directory



Pick the port number (I prefer to change from default of 1895 to 51895)

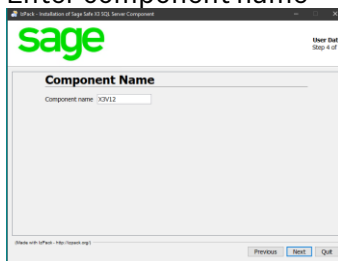


Once completed, check the AdxAdmin service is running

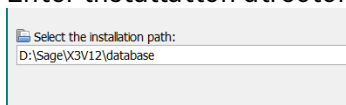


SQL Server component  
Launch db-sql-3.0.0-win.jar

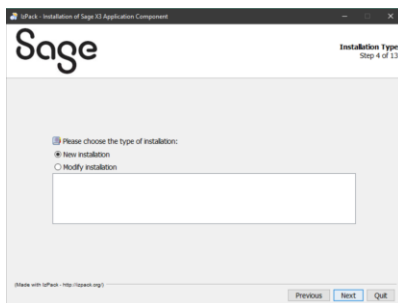
Enter component name



Enter installation directory



Application 12.0.34  
Execute x3-application-12.0.34.jar



Enter component name

**Component Name**

Component name: X3V12

As I am doing single node installation, I will select “Standard”

**Installation Directory Type**

You can choose between a “Standard” installation in the case where the target is an NTFS volume managed by this server, or “Network” in the case where the target is a network share on another server or a NAS, in which case a symbolic link to this share will be created on the local server and used as a target.

Choose the type of installation

Standard: on a locally managed NTFS volume

Network: on a network share (with creation of a local symbolic link)

**WARNING :** if you choose installation on a network share for application component, remember that every core component (Database, Application, Runtime) must be hosted in the same datacenter with shortest network path to get highest possible throughput AND lowest possible latency. If not, network-related performance issues may occur and solution may not be usable.

Enter the installation directory

Select the installation path:

D:\Sage\X3V12\Folders\

Runtime 96.1.206

[https://online-help.sageerpx3.com/erp/12/public/prerequisites\\_windows-sql-server.html](https://online-help.sageerpx3.com/erp/12/public/prerequisites_windows-sql-server.html)

Execute runtime-96.1.206.jar

Double check you have the pre-reqs installed!

Please read the following information carefully:

**Prerequisites for the SAFE X3 runtime**

Make sure you have installed the following prerequisites before you configure your runtime through the Sage X3 configuration console:

- For solutions based on Oracle:
  - Microsoft PowerShell version 7.2 minimum (Latest release recommended)
- For solutions based on Microsoft SQL Server or Azure SQL elastic pool:
  - Microsoft PowerShell version 7.2 minimum (Latest release recommended)
  - SQL Server module for PowerShell version 12.1 minimum (Latest release recommended)

Consult the [prerequisites documentation](#) for more details on how to download and install Microsoft PowerShell and other prerequisites for SAFE X3.

Installation of Sage X3 Runtime Component

**Sage** Installation Type Step 9 of 12

Please choose the type of installation:

New installation

Modify installation

Previous Next Quit

Enter component name

**Component Name**

Component name: X3V12

Please select runtime type

Main process server

Process server

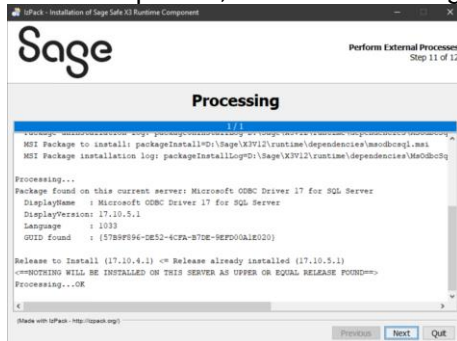
Test processing engine

Enter installation directory

Select the installation path:

D:\Sage\X3V12\runtime

Once completed, check the messages for any errors



### Print Server 2.29.0

[https://online-help.sageerp3.com/erp/12/public/prerequisites\\_print-server-on-windows.html](https://online-help.sageerp3.com/erp/12/public/prerequisites_print-server-on-windows.html)

Execute print-server-2.29.0.15-win.jar

### Enter component name

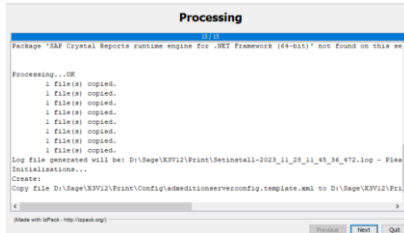
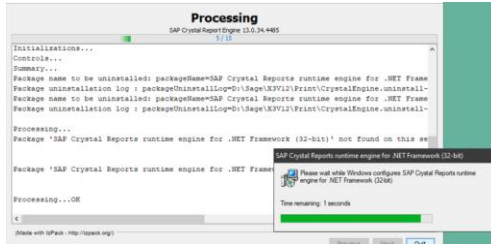
### Enter installation directory

Select the installation path:

D:\Sage\X3V12\Print

Select ODBC driver as needed (Probably not needed but I always select it!)

Will install SAP Crystal Reports runtime engine (Takes a few minutes for this bit)

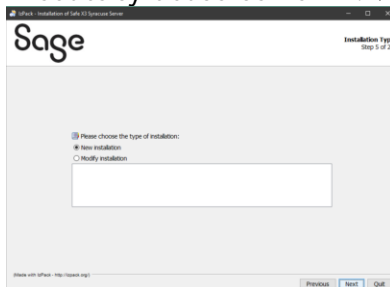


Once completed, check the messages for any errors. Messages are also written to “D:\sage\X3V12\Print” directory in the “\*.log” files

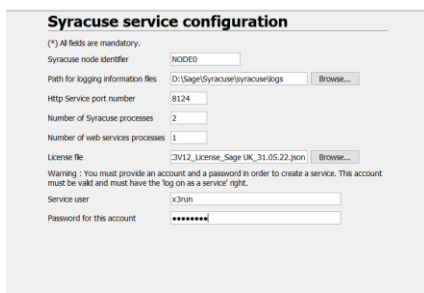
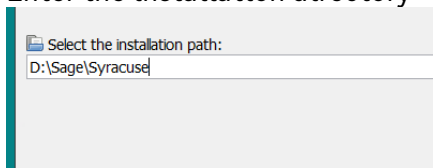
Syracuse Server 12.19.3.4 (Security hotfix version)

[https://online-help.sageerpx3.com/erp/12/public/prerequisites\\_web-syracuse-server-on-windows.html](https://online-help.sageerpx3.com/erp/12/public/prerequisites_web-syracuse-server-on-windows.html)

Execute syracuse-server-12.19.3.4.jar



Enter the installation directory



Enter the fields as required.

In this case I am doing a single node install, so can use simplified certificate installation

**Certificate management**

Path for certificates storage area: D:\Sage\Syracuse\syracuse\certs

Please choose option for certificate

Simplified certificate installation for a single server

Use an existing certificate

**Certificate Authority (CA) setup**

Passphrase can contain all printable alphanumeric and nonalphanumeric characters  
(\*) All fields are mandatory.

Passphrase of CA:

Verification:

Enter password

**Certificate data**

Country code:

State:

City:

Organization:

Organizational unit:

Name:

Email:

Days of validity:

Enter certificate data as needed

**Host setup**

Passphrase can contain all printable alphanumeric and nonalphanumeric characters

Passphrase of server:

Verification:

Name of the server (FQDN):

Destination directory for certificate tool: D:\Sage\Syracuse\syracuse\certs\_tool

Specify an X3 Runtime path and install certificates

If an X3 Runtime path is provided below then the generated certificates will be automatically installed within the X3 Runtime

X3 Runtime path: D:\sage\X3v12\untime

Specify an X3 webservices server path and instal certificates

Enter server passphrase

As my runtime is on the same server, I can also select the X3 Runtime Path so the certificate file is automatically copied

**Mongodb connection**

Please fill in the parameters of the url to connect to MongoDB

Server name (FQDN) or a member of replica set:

Service port number:

The server uses and accepts only SSL encrypted connections.

(\*) The setup may copy all required files into the directory: "D:\Sage\Syracuse\syracuse\certs"

Client certificate file (\*.cer): D:\Sage\MongoDB\certs\client.cer

Client private key file (\*.key): D:\Sage\MongoDB\certs\client.key

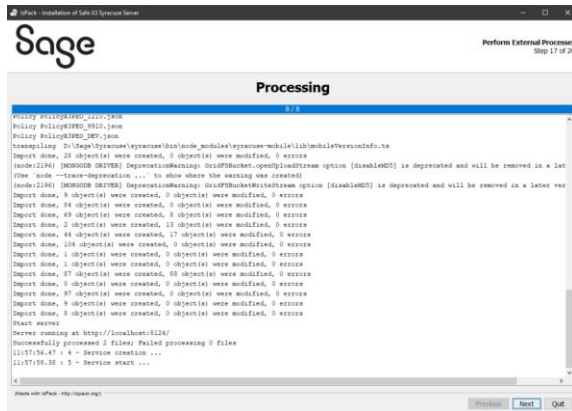
CA certificate file: D:\Sage\MongoDB\certs\ca.cer

MongoDB is setup for SSL connections only.

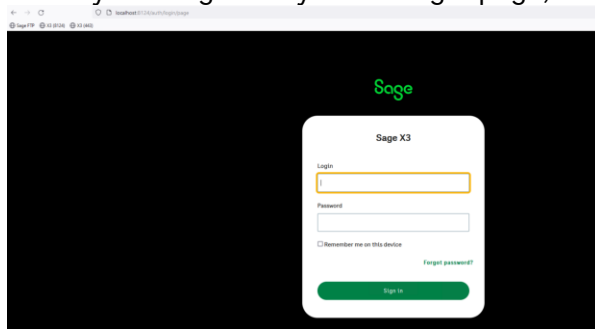
As MongoDB is already in place, I can select the client SSL certificate details from the MongoDB installation.

Once completed, check the messages for any errors (Also written into "D:\sage\Syracuse\Install\_V12.19.3\_xxxx.log")

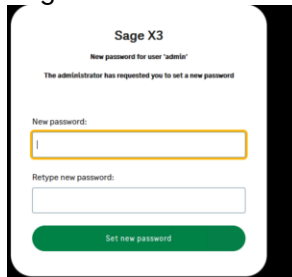




Check you can get to Syracuse login page, using URL <http://localhost:8124>



Login with user “admin” and password “admin” and enter new password

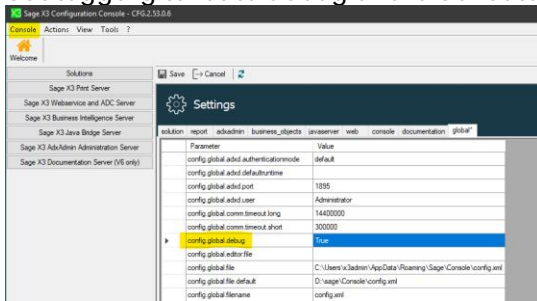


Set new password that conforms to minimum requirements.

## Configure X3

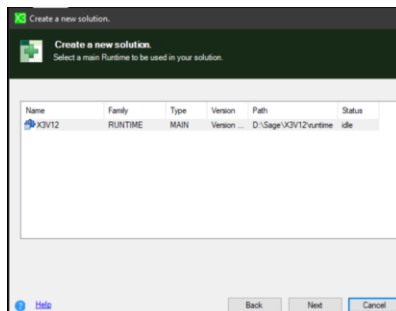
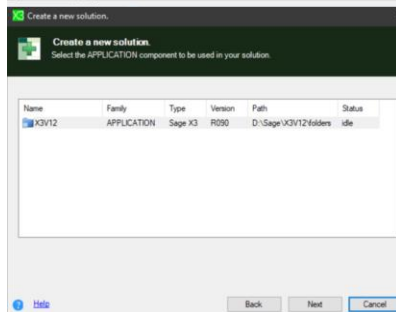
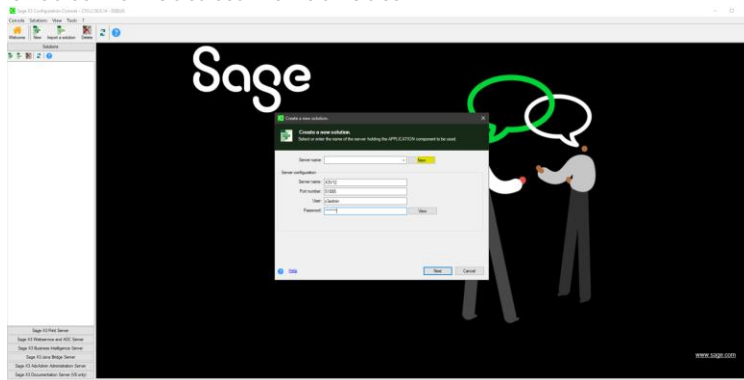
Launch the X3 console

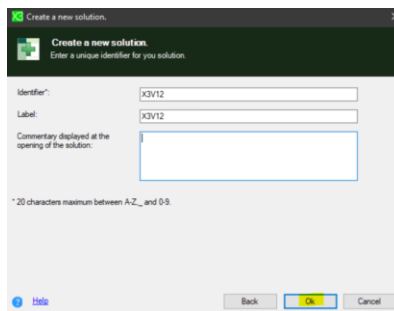
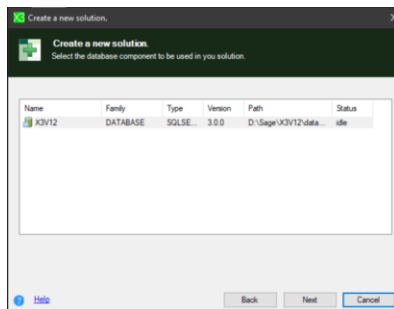
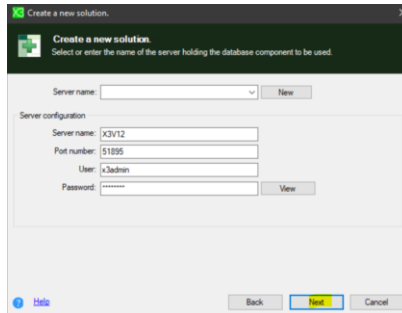
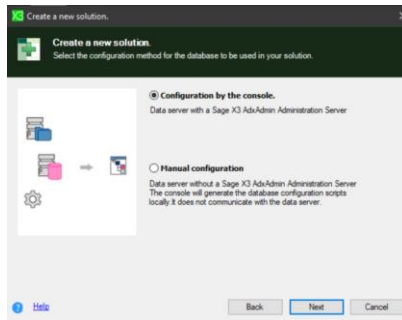
Set logging level to debug in the Console, settings



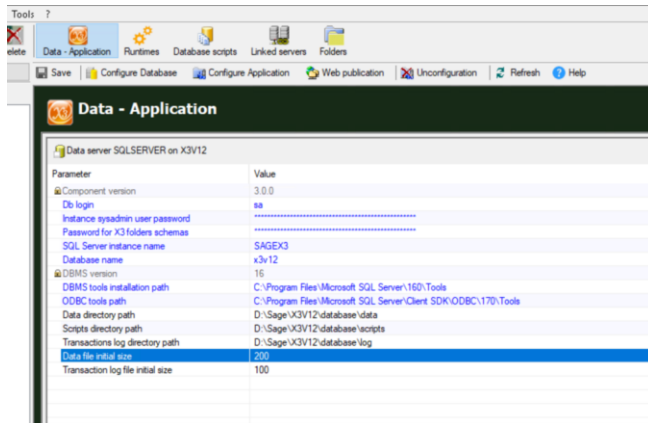
Save the change, then restart the console

Create new solution in console



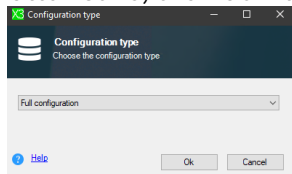


Update the Data server section

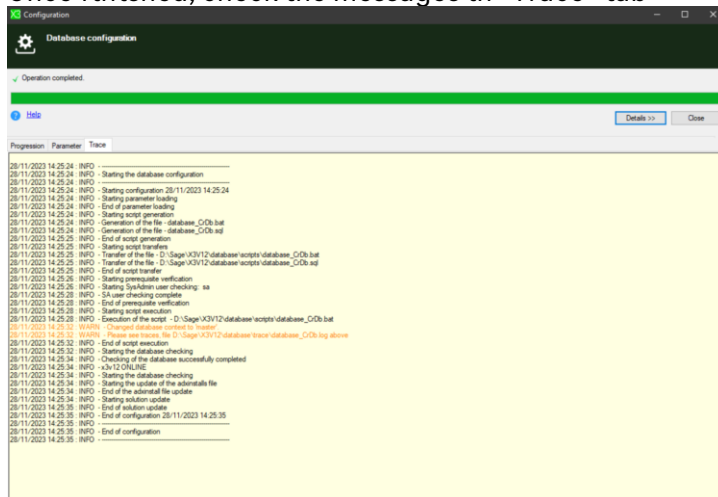


- Enter Instance sysadmin user password (as defined when installing SQL Server)
- Password for X3 folders schemas (as needed)
- SQL Server instance name, from drop down list
- Database name = x3v12
- DBMS tools installation path, from drop down list
- ODBC tools path, from drop down list

Click Save, then Configure Database



Once finished, check the messages in "Trace" tab



Configure Application section

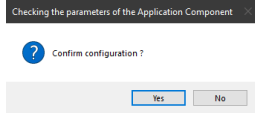
Parameter	Value	Initial value
Use Apache	False	
Apache installation path		
Version	R096	
Installation path	D:\Sage\X3V12\folders	
Legislation	FRM	

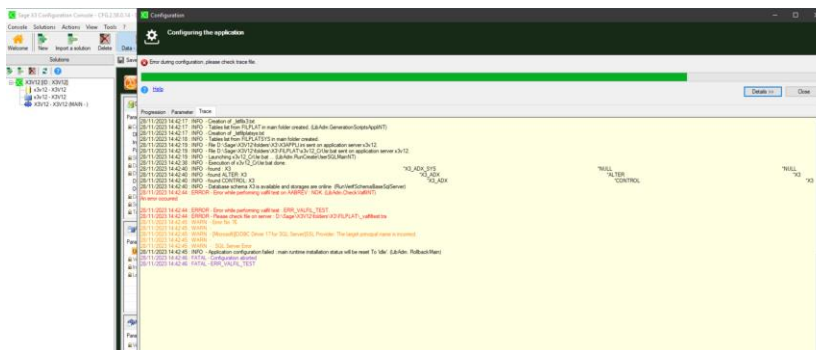
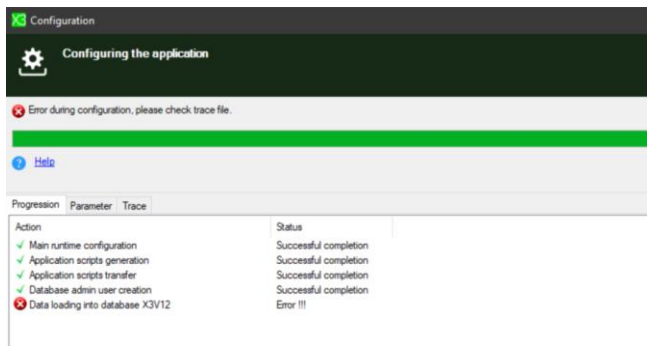
Parameter	Value	Initial value
Version	R096.001.00206	
Installation path	D:\Sage\X3V12\runtime	
pwsh[.exe] executable fullpath	C:\Program Files\PowerShell\7\pwsh.exe	
Connection Encryption	Yes	
Trust server certificate	No	
Sage X3 service port number	20100	
User login for the Sage X3 service	x3run	
User account password	CRYPTEmeGtvaXvandenotva	

- Use Apache = false
- Pwsh[.exe] executable fullpath , from dropdown list
- Connection Encryption = Yes (as I have already configured SQL server)
- Trust server certificate = No (as the certificate is a trusted CA)
- Sage X3 service port number = 20100 (default)
- User login for the Sage X3 service = x3run
- User account password = (enter x3run user password)

Click Save, then Configure Application, then “Yes” to continue



Check the messages in “Trace” tab once completed.

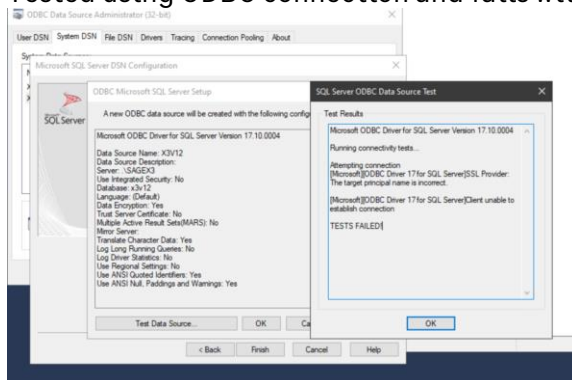


28/11/2023 14:42:40 : INFO - Database schema X3 is available and storages are online (RunVerifSchemaBaseSqlServer)  
 28/11/2023 14:42:44 : ERROR - Error while performing valfil test on AABREV : NOK. (LibAdm.CheckValfilINT)  
 An error occurred

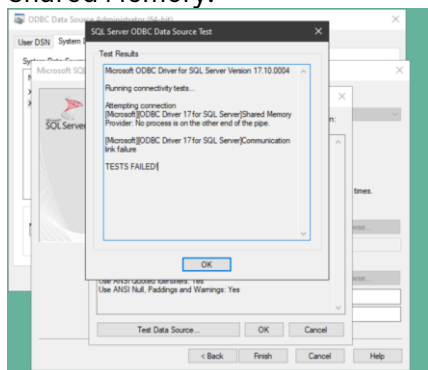
28/11/2023 14:42:44 : ERROR - Error while performing valfil test : ERR\_VALFIL\_TEST.  
 28/11/2023 14:42:44 : ERROR - Please check file on server : D:\Sage\X3V12\folders\X3\FILPLAT\\_valfiltest.ra

28/11/2023 14:42:45 : WARN - Error No 76  
 28/11/2023 14:42:45 : WARN -  
 28/11/2023 14:42:45 : WARN - [Microsoft][ODBC Driver 17 for SQL Server]SSL Provider: The target principal name is incorrect.  
 28/11/2023 14:42:45 : WARN -  
 28/11/2023 14:42:45 : WARN - : SQL Server Error  
 28/11/2023 14:42:45 : INFO - Application configuration failed : main runtime installation status will be reset To 'idle'. (LibAdm. RollbackMain)  
 28/11/2023 14:42:46 : FATAL - Configuration aborted  
 28/11/2023 14:42:46 : FATAL - ERR\_VALFIL\_TEST

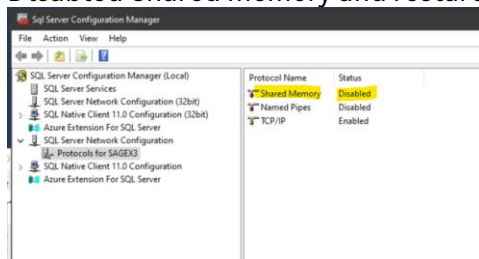
Tested using ODBC connection and fails with same error.



When I selected “Trust Server Certificate” = Yes, then it gave different error complaining about Shared Memory.



Disabled Shared memory and restarted SQL Server service



This then worked OK for ODBC connection. Subsequent testing found this error only happened if I tested with “Trust Server Certificate” = No first. If I launched ODBC and tested “Trust Server Certificate” = Yes first then it worked OK, so re-enabled Shared Memory and restarted SQL Server services.

Re-run the Application Configuration after changing “Trust server certificate = Yes”

Parameter	Value
Use Apache	false
Version	R090
Installation path	D:\Sage\X3V12\folders
Legislation	FRM

Parameter	Value
Version	R096.001.00206
Installation path	D:\Sage\X3V12\runtime
owsh[.exe] executable fullpath	C:\Program Files\PowerShell\7\powershell.exe
Connection Encryption	Yes
Trust server certificate	Yes
Sage X3 service port number	20100
User login for the Sage X3 service	admin
User account password	*****

Save, then run Configure Application and select OK to confirm.

Action	Parameter	Trace	Status
✓ Main runtime configuration			Successful completion
✓ Application scripts generation			Successful completion
✓ Application scripts transfer			Successful completion
✓ Database admin user creation			Successful completion
✓ Data loading into database X3V12			Successful completion

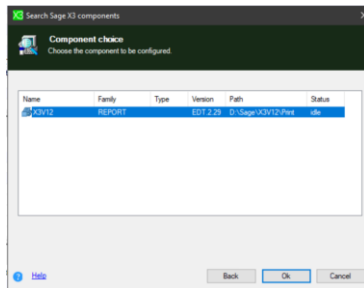
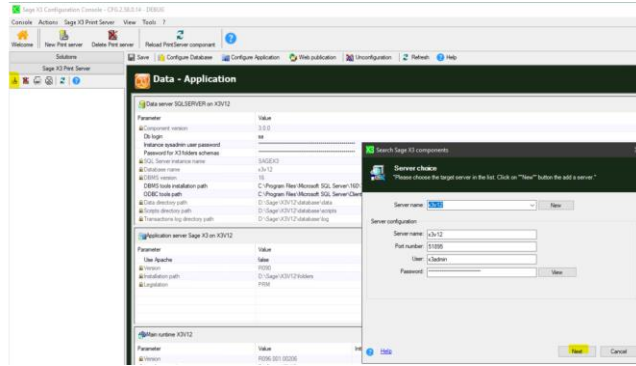
```

Progression  Parameter  Trace
Regeneration in Progress: 24 / 40
Regeneration in Progress: 25 / 40
Regeneration in Progress: 26 / 40
Regeneration in Progress: 27 / 40
Regeneration in Progress: 28 / 40
Regeneration in Progress: 30 / 40
Regeneration in Progress: 31 / 40
Regeneration in Progress: 32 / 40
Regeneration in Progress: 33 / 40
Regeneration in Progress: 34 / 40
Regeneration in Progress: 35 / 40
Regeneration in Progress: 36 / 40
Regeneration in Progress: 37 / 40
Regeneration in Progress: 38 / 40
Regeneration in Progress: 39 / 40
Regeneration in Progress: 40 / 40
Regeneration of the Index Table ...

28/11/2023 15:28:12 INFO - Valid test performed with success.
28/11/2023 15:28:12 INFO - Database x3v12 loading.
28/11/2023 15:28:12 INFO - 804 tables found
28/11/2023 15:28:12 INFO - 0000-0004 tables loaded - 00% - 40 tables AABREV - ACCOIF are being loaded
28/11/2023 15:28:35 INFO - 0040-0004 tables loaded - 05% - 40 tables ACCOINUM - AENCHAINÉ are being loaded
28/11/2023 15:31:46 INFO - 0080-0004 tables loaded - 10% - 40 tables AENTREE - AMENUSER are being loaded
28/11/2023 15:32:00 INFO - 0120-0004 tables loaded - 15% - 40 tables AMETLITI - APARWPEP are being loaded
28/11/2023 15:32:48 INFO - 0160-0004 tables loaded - 20% - 40 tables APATCH - ASHWEXPPRO are being loaded
28/11/2023 15:34:01 INFO - 0200-0004 tables loaded - 25% - 40 tables ASHWFLD - AVIEWC are being loaded
28/11/2023 15:36:11 INFO - 0240-0004 tables loaded - 30% - 40 tables AVIEWD - BP199FPRI are being loaded
28/11/2023 15:36:24 INFO - 0280-0004 tables loaded - 35% - 40 tables BP109FPRI - DATEVTAX are being loaded
28/11/2023 15:36:34 INFO - 0320-0004 tables loaded - 40% - 40 tables DECLVATPORT - EDISEGPLE are being loaded
28/11/2023 15:36:44 INFO - 0360-0004 tables loaded - 45% - 40 tables EDISTO - ESLTYPASSO are being loaded
28/11/2023 15:37:06 INFO - 0400-0004 tables loaded - 50% - 40 tables ESSOCCBLB - GAUTACED are being loaded
28/11/2023 15:37:26 INFO - 0440-0004 tables loaded - 55% - 40 tables GAUTACEF - HRDFFCY2 are being loaded
28/11/2023 15:37:46 INFO - 0480-0004 tables loaded - 60% - 40 tables HRDFFCY3 - HRDNNDOBAS are being loaded
28/11/2023 15:37:55 INFO - 0520-0004 tables loaded - 65% - 40 tables HRDNNDROR - ITMACGRRP are being loaded
28/11/2023 15:38:03 INFO - 0560-0004 tables loaded - 70% - 40 tables ITMATEG - PUMAFF are being loaded
28/11/2023 15:38:16 INFO - 0600-0004 tables loaded - 75% - 40 tables PAMJUS - RLSDONFACD are being loaded
28/11/2023 15:40:30 INFO - 0640-0004 tables loaded - 80% - 40 tables RPPTDS - TABCOEFF are being loaded
28/11/2023 15:40:40 INFO - 0680-0004 tables loaded - 85% - 40 tables TABCOSTMET - TABVATEX are being loaded
28/11/2023 15:40:51 INFO - 0720-0004 tables loaded - 90% - 40 tables TABVRESZEA - VATEENTRKE are being loaded
28/11/2023 15:41:35 INFO - 0760-0004 tables loaded - 95% - 40 tables VATEXEREA - AUPDATELINE are being loaded
28/11/2023 15:41:38 INFO - 0800-0004 tables loaded - 100% - 4 tables AUPDATEPATH - AUSRSTA are being loaded
28/11/2023 15:41:40 INFO - Database x3v12 loaded in 00:13:36.6292096
28/11/2023 15:41:41 INFO - Launching D:\Sage\X3V12\folders\X3VFLPLAT\X3_Mac.spl (.Lib-Admin LaunchMac)
28/11/2023 15:41:42 INFO - D:\Sage\X3V12\folders\X3VFLPLAT\X3_Mac.spl executed.
28/11/2023 15:41:42 INFO - All tables loaded into database x3v12 with no errors (.Lib-Admin RunVafMMan)
28/11/2023 15:41:42 INFO - Updating AdminInstalls.xml on X3V12.
28/11/2023 15:41:42 INFO - Update of adminInstalls.xml on application server ok.
28/11/2023 15:41:42 INFO - Ok
28/11/2023 15:41:42 INFO - Updating solution.xml on X3V12.
28/11/2023 15:41:42 INFO - File solution.xml on application server updated.
28/11/2023 15:41:42 INFO - Update of solution.xml on application server ok.
28/11/2023 15:41:42 INFO - Ok
28/11/2023 15:41:42 INFO - Application setup finished.
28/11/2023 15:41:42 INFO - [End]
  
```

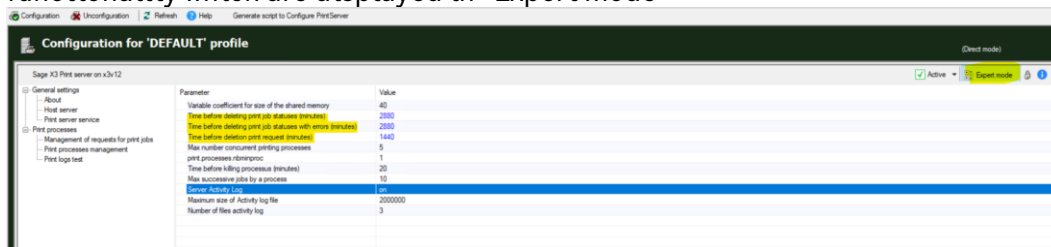
Configure Print Server

Add Print Server and pick existing connection from the drop down



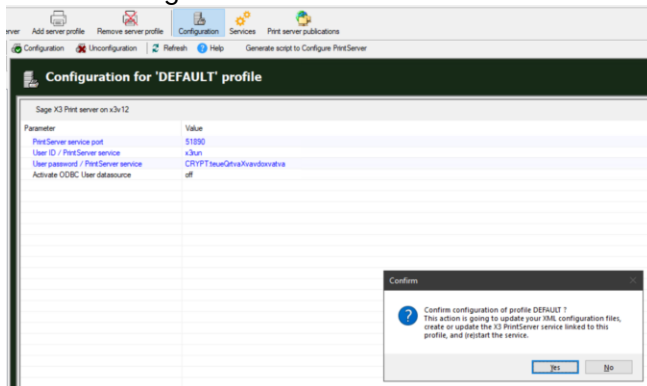
In the configuration, enter the port you wish to use. I normally change from the default 1890 to 51890. Also enter Service runtime user as “x3run” and password.

Although optional, I will also change some of the new parameters to take advantage of new functionality which are displayed in “Expert mode”



I want to keep all print jobs (printed OK or in error) for review for 2 days and have also enabled Server Activity Log.

Click “Configuration” then “Yes” to continue

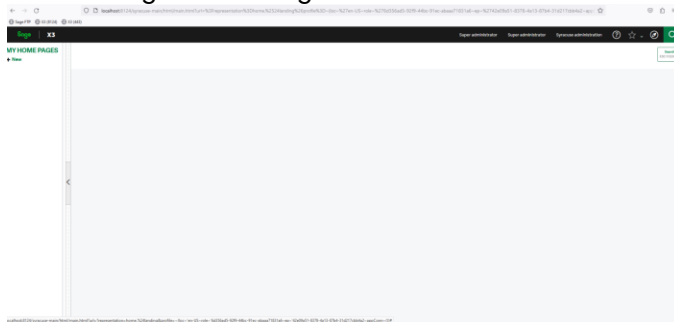


Once completed successfully, exit the X3 console



## Final setup and testing

Launch Sage X3 and login as ADMIN user



### Configure X3 Solution

Navigate to Administration, Administration, Endpoints, X3 solutions  
From the “Actions” pick “New X3 Solutions”

Enter the required information:

Code = X3V12

Description = X3 V12

Solution Name = X3V12

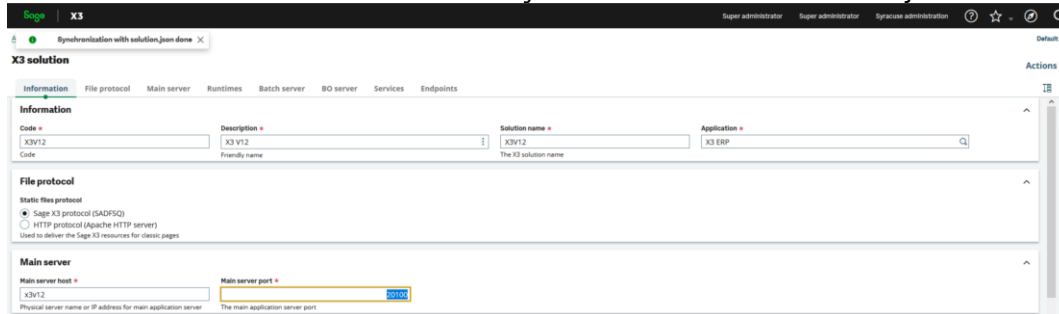
Application, from drop down list

File protocol = “Sage X3 protocol (SADFSQ)”

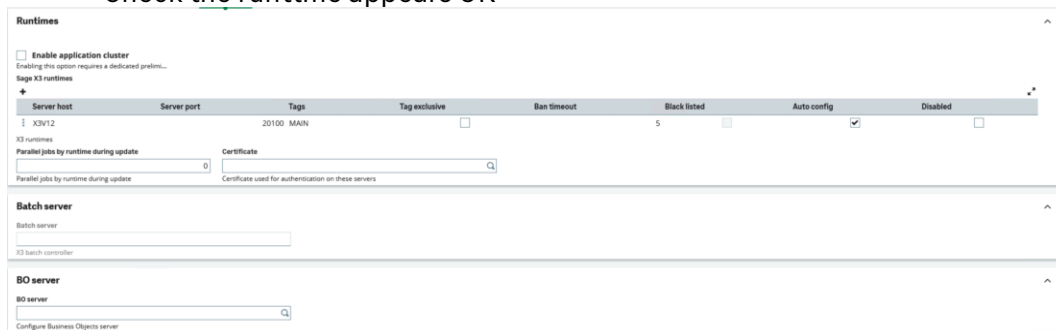
Main server host = x3v12

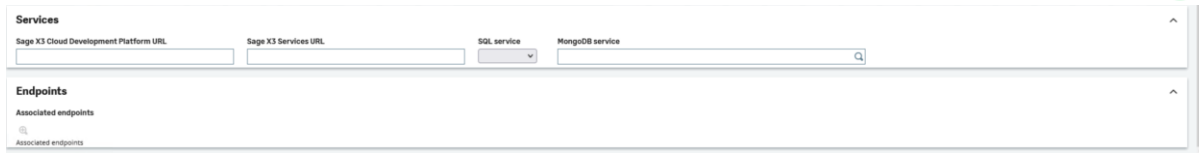
Main server port = 20100 (Defaulted)

You should see “Synchronisation with solution.json done” message



### Check the runtime appears OK

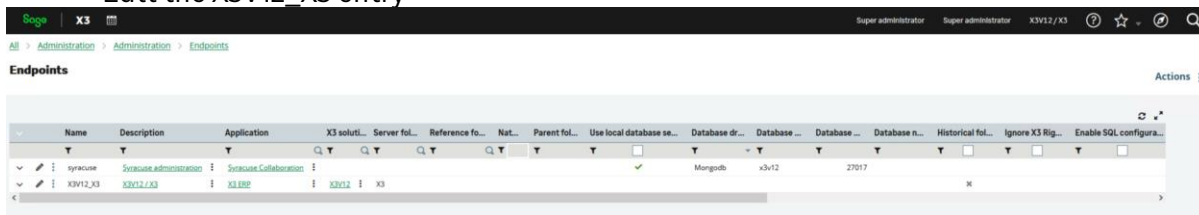




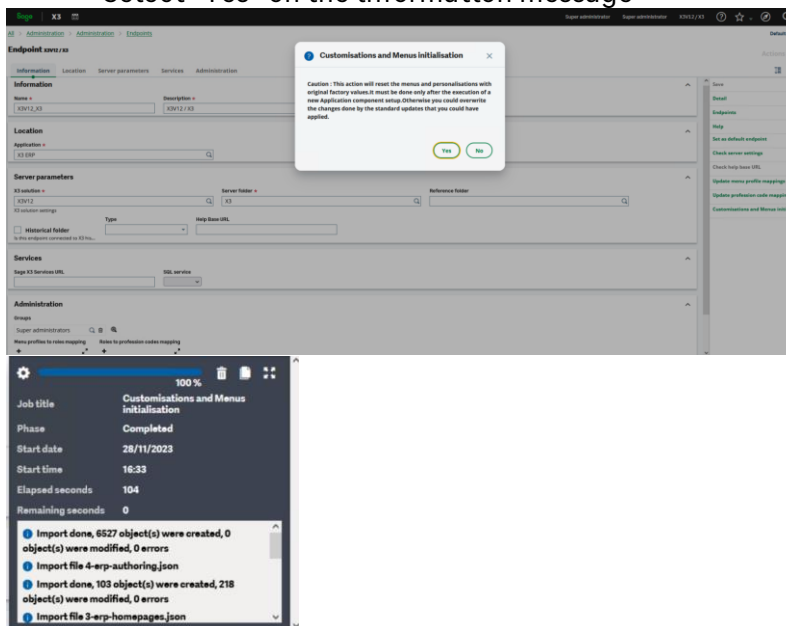
Click “Save” from the Actions button

Logout and login again  
Set user language to English (United Kingdom)

Perform personalization and menu initialization  
Navigate to Administration, Administration, Endpoints, Endpoints  
Edit the X3V12\_X3 entry



From the Actions, select “Customisations and menus initialization from X3 folder”  
Select “Yes” on the information message

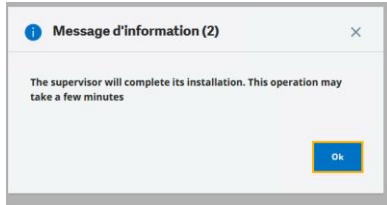


Log out of X3

### Installation of Supervisor component

Log back in as ADMIN user, make sure the X3 endpoint is selected

Navigate to Parameters, Users, Users

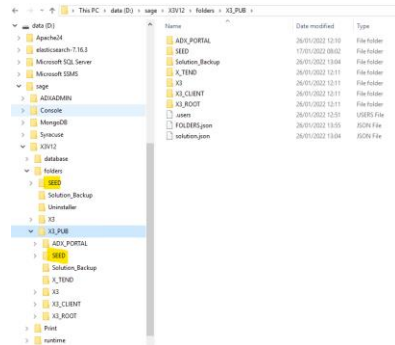


Click OK to continue  
Once completed, logout again

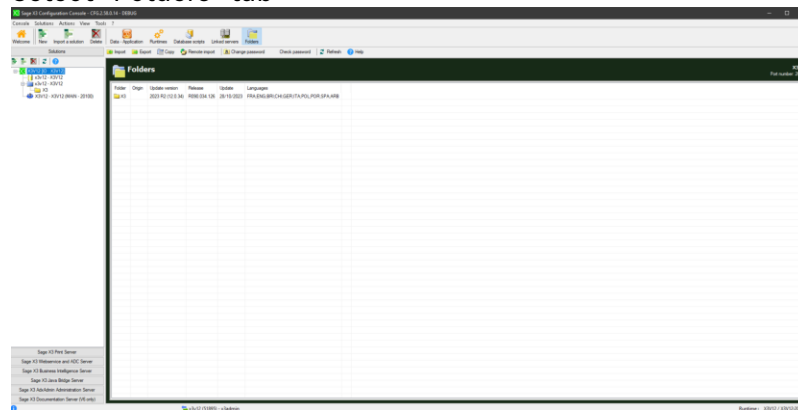
Restart the Windows Server to be sure everything starts afresh.

## Import SEED Folder

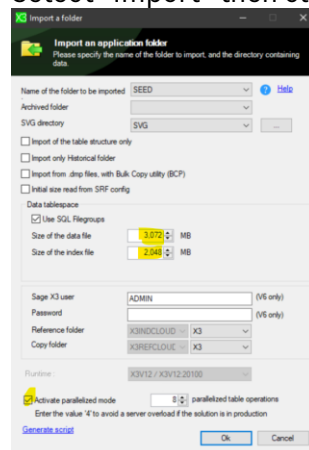
Download SEED ISO image for V12 P34 and mount the iso file “x3-seed-12.0.34.iso”  
 Extract ZIP file “x3-seed-12.0.34.zip” to “D:\sage\X3V12\folders”



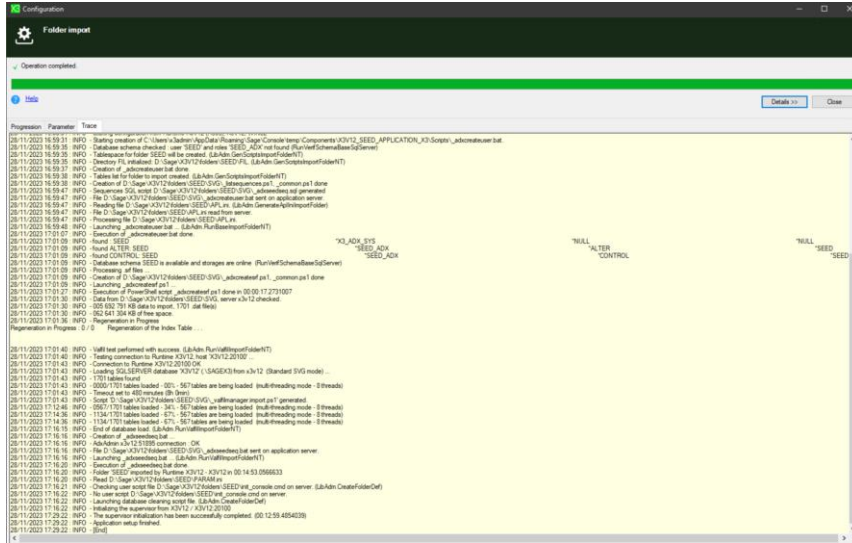
Once unzip has completed, launch X3 console  
 Select “Folders” tab



Select “Import” then click OK to launch the import



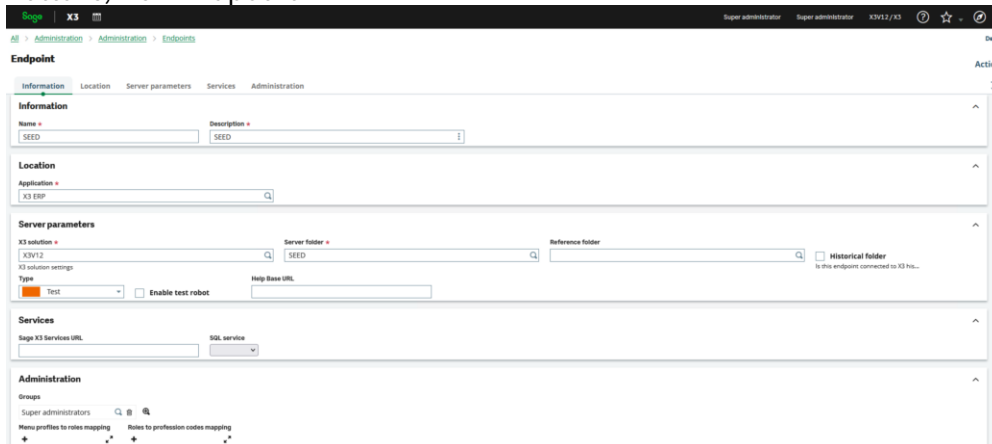
Once the import has completed, check the folder details look OK. The X3 Console log file will be located in “C:\Users\x3admin\AppData\Roaming\Sage\Console\traces\gtrace.tra” by default. (As I am doing the install as “x3admin” user)



Folder	Origin	Update version	Release	Update	Languages
SEED		2023 R2 (12.0.34)	R090.034.126	28/10/2023	FRA,ENG,ITA,POR,SPA,BRI,GER,POL,CHI,ARB,AUS
X3		2023 R2 (12.0.34)	R090.034.126	28/10/2023	FRA,ENG,BRI,CHI,GER,ITA,POL,POR,SPA,ARB

## Create SEED Endpoint in Syracuse

### Navigate to Administration, Administration, Endpoints, Endpoints Actions, New Endpoint



Save the record

Logout and login again.

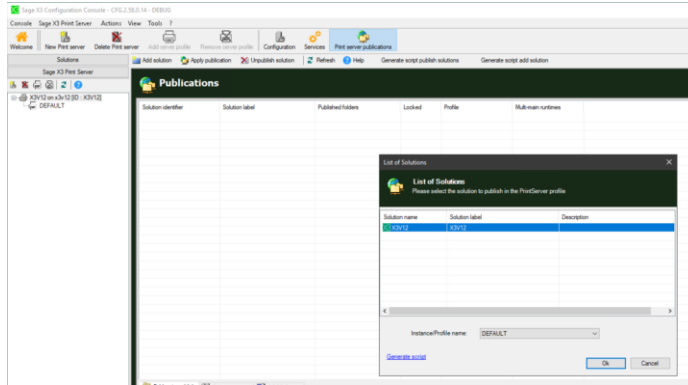
Select SEED folder and confirm looks OK

Setup SEED folder in X3 Console for Print Server

In X3 console, select Sage X3 Print Server

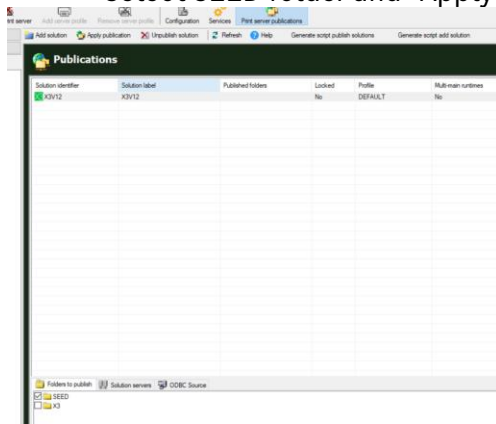
Select Print Server publications

Add solution



Click OK to continue

Select SEED folder and “Apply publication”



## Apply any mandatory patches

Check the ISO "Patches" directory. E.g. E:\X3Installs\Patch

Apply any patches in this directory.

Login to X3 as ADMIN user and connect to X3 folder

Copy "patches" directory from ISO to "D:\Sage\X3V12\folders\X3\PATCH"

Navigate to Administration, Utilities, Update, Updates

Apply XSDFILES-UBL21.zip **\*\* This is not a patch file!! Skipping this for now.**  
(Something to do with E-Invoicing I think)

Navigate to Development, Utilities, Patches, Patch Integration

Apply all the SX\_\*.dat files

**\*\* There is no documentation on these files, so skipping until I have got clarifications.**

NOTE: the documentation ([https://online-help.sageerpx3.com/erp/12/public/getting-started\\_sage-erp-x3-installation-procedure.html](https://online-help.sageerpx3.com/erp/12/public/getting-started_sage-erp-x3-installation-procedure.html)) "Applying the list of patches" section and also in the "VersionInformationNote-X3-ENG-12.0.34.html") says only to apply ZIP file in the "patch" directory using "Updates" function, however with patch 34 there is a ZIP file and also 8x \*.dat patch files which need to be applied with the "Patch integration" function. **See above highlighted notes, I am skipping this for now.**

## Batch Server

Create new user to process batch jobs “batch”. More or less a copy of ADMIN user. Copy user to all folders.

Navigate to Administration, Administration, Endpoints, Batch server  
 Edit as needed, then save the change.

Start the batch server

The screenshot shows the 'X3 batch controller' configuration page. It includes sections for Information, Activity log, X3 execution setting, Activity setting, and Runtimes. The Information section shows the controller is running. The Activity log shows recent events. The X3 execution setting section shows configuration for X3 solution, X3 runtime tags, and administrative endpoints. The Activity setting section shows search and query parameters. The Runtimes section shows a table of active runtime instances.

## Web Services

Create new user to launch SOAP pools “webservices”. More or less a copy of ADMIN user. Copy user to all folders.

Connect to SEED folder.  
 Create/Startup Web Pool.

Navigate to Administration, Administration, Web services, Classic SOAP pools configuration

Actions, New SOAP pool

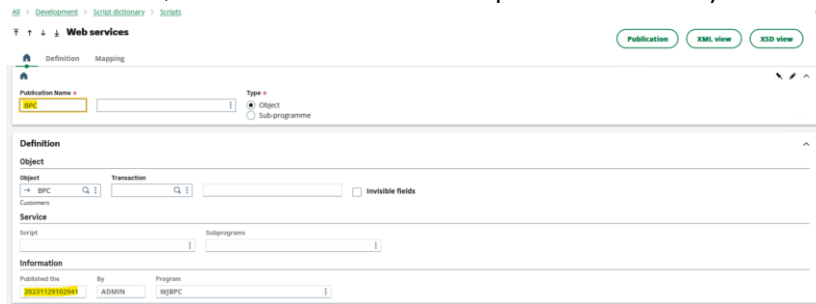
The screenshot shows the 'X3 connection' configuration page for a new SOAP pool. It includes sections for Information, X3 connection, and Channels. The Information section shows the pool is set to auto-start. The X3 connection section shows the endpoint, X3 runtime tags, and locale. The Channels section shows the maximum size, upload lifetime, and lifetime settings.

Save the record

Actions, Start/Update to startup the web pool



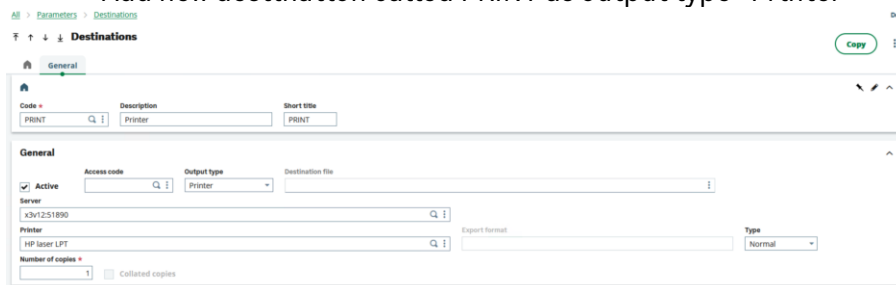
For testing purposes later on I will use the BPC object, so will publish this object now  
 Navigate to Development, Script dictionary, Scripts, Web services  
 Select the BPC publication  
 Save, then Publish. Check the publication date/time is today



## Printer setup

Check/change/delete destinations for SEED folder as per your own requirements.  
 Navigate to Parameters, Destinations, Destinations

- For each of the existing destinations, resave the record as print servers are missing.
- Add new destination called PRINT as output type “Printer”



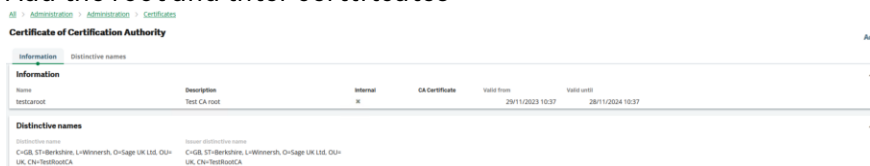
## Setup SSL port 443

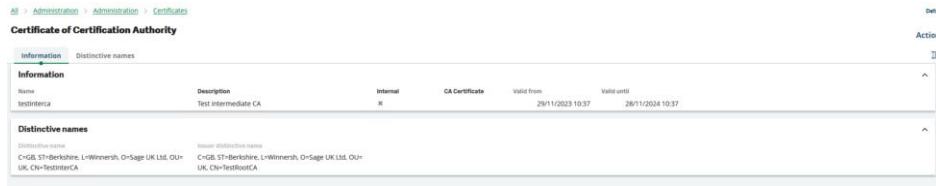
Generate the required SSL certificates by executing script  
 “D:\SageSupport\mzCertificates\SyracuseTLS\mzSyracuse\_TLS\_WildCard.cmd” (Available to Sage Business Partners via GitHub)

Navigate to Administration, Administration, Certificates, Certificates of Certification Authorities

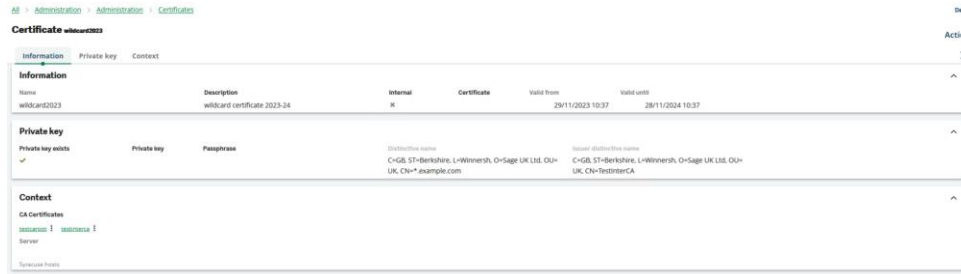
Actions, New CA certificate

Add the root and inter certificates



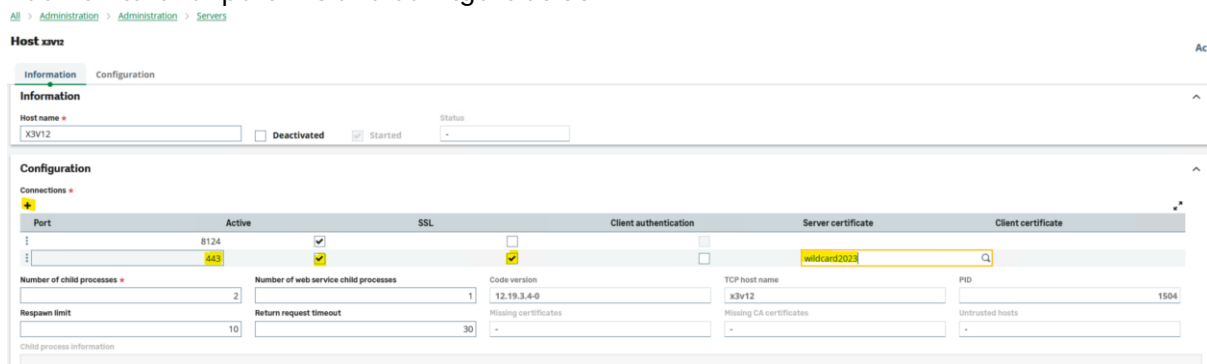


Navigate to Administration, Administration, Certificates, Certificates Actions, New certificate



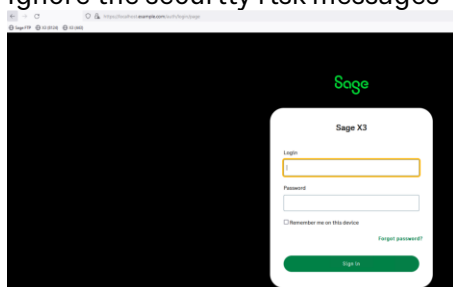
NOTE: The “Server” field should be left blank, as it’s a wildcard certificate

Navigate to Administration, Administration, Servers, Hosts  
 Edit the “X3V12” host  
 Add new line for port 443 and configure as SSL



IMPORTANT NOTE: ensure you add as a second line, leave the first line as 8124  
 Save the change  
 Logout  
 Restart Syracuse service

Connect to URL <https://localhost.example.com/>  
 Ignore the security risk messages



Make sure you can login OK

## Additional installations

### Installation of Elastic Search 8.11

**NOTES:** Elastic Search is optional from 2022 R4. Elastic Search 8 is supported since 2023 R2 and has a new configuration method.

Documentation

[https://online-help.sageerpx3.com/erp/12/public/prerequisites\\_elastic-search.html](https://online-help.sageerpx3.com/erp/12/public/prerequisites_elastic-search.html)

<https://www.elastic.co/downloads/elasticsearch>

<https://www.elastic.co/guide/en/elasticsearch/reference/current/index.html>

Additional notes when upgrading Elasticsearch (<https://kb.sage.com/portal/app/portlets/results/viewsolution.jsp?solutionid=225924850099424>)

I decided to use the ZIP file method.

Unzip “D:\Software\ElasticSearch\elasticsearch-8.11.1-windows-x86\_64.zip” into “D:\” which writes the extracted files into “D:\elasticsearch-8.11.1”

Create text file “D:\Software\ElasticSearch\ElasticInstall.cmd”

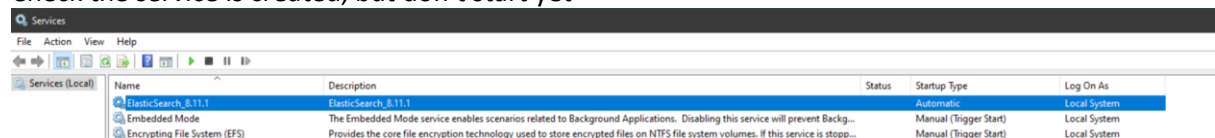
```

REM Set the following variables to suit your environment
set "mzNewServiceName=ElasticSearch_8.11.1"
set "ES_HOME=D:\ElasticSearch-8.11.1"
set "ES_JAVA_HOME=%ES_HOME%\jdk"
REM set "ES_JAVA_OPTS="-Xms512m -Xmx512m""
REM The following lines should not need to be changed
cd /d "%ES_HOME%\bin"
set "ES_START_TYPE=auto"
set "SERVICE_ID=%mzNewServiceName%"
set "SERVICE_DISPLAY_NAME=%mzNewServiceName%"
set "SERVICE_DESCRIPTION=%mzNewServiceName%"
REM goto resetPass
REM goto manage
:installElastic
elasticsearch-service.bat install
goto end
:resetPass
elasticsearch-reset-password -u elastic
goto end
:manage
elasticsearch-service.bat manager %mzNewServiceName%
:end
pause

```

Execute the script using the “Run as administrator” option

Check the service is created, but don’t start yet



As I am running a single node configuration as a TEST server, I do not need to make any changes to the Elastic Search configuration. For LIVE or multi-node instances, additional configuration will be required.

Start the ElasticSearch service

Re-generate password for “elastic” user

I have setup my script so I can run “elasticsearch-reset-password” easily

```
Administrator Command Prompt
D:\Software\ElasticSearch>REM set "ES_JAVA_OPTS=-Xms12m -Xmx12m"
D:\Software\ElasticSearch>REM The following lines should not need to be changed
D:\Software\ElasticSearch>cd /d "D:\ElasticSearch-8.11.1\bin"
D:\elasticsearch-8.11.1\bin>set "ES_START_TYPE=auto"
D:\elasticsearch-8.11.1\bin>set "SERVICE_ID=ElasticSearch_8.11.1"
D:\elasticsearch-8.11.1\bin>set "SERVICE_DISPLAY_NAME=ElasticSearch_8.11.1"
D:\elasticsearch-8.11.1\bin>set "SERVICE_DESCRIPTION=ElasticSearch_8.11.1"
D:\elasticsearch-8.11.1\bin>goto resetPass
D:\elasticsearch-8.11.1\bin>elasticsearch-reset-password -u elastic
warning: ignoring JAVA_HOME=D:\OpenJDK\zulu8.74.0.17-ca-jdk8.0.392-win_x64; using ES_JAVA_HOME
This tool will reset the password of the [elastic] user to an autogenerated value.
The password will be printed in the console.
Please confirm that you would like to continue [y/N]y

Password for the [elastic] user successfully reset.
New value: d5W6eQ7Xp6Fnr99Yv6R8B
D:\elasticsearch-8.11.1\bin>
D:\elasticsearch-8.11.1\bin>
D:\elasticsearch-8.11.1\bin>
```

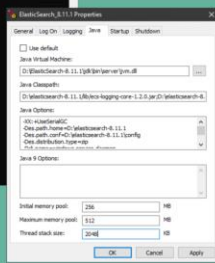
Configure JVM heap sizes, as discussed in

<https://www.elastic.co/guide/en/elasticsearch/reference/8.11/important-settings.html#heap-size-settings> as the default is 4GB on my Windows Server

Execute “elasticsearch-service.bat manager” CMD after adjusting the script again.

In the “Java” tab, set the “Initial memory pool” and “Maximum memory pool” as needed:

```
Administrator Command Prompt
C:\Windows\system32>REM set the following variables to suit your environment
C:\Windows\system32>set "WbModServiceName=ElasticSearch_8.11.1"
C:\Windows\system32>set "ES_HOME=D:\elasticsearch-8.11.1"
C:\Windows\system32>set "ES_JAVA_HOME=D:\elasticsearch-8.11.1\jdk"
C:\Windows\system32>REM set "ES_JAVA_OPTS=-Xms12m -Xmx12m"
C:\Windows\system32>REM The following lines should not need to be changed
C:\Windows\system32>cd /d "D:\elasticsearch-8.11.1\bin"
D:\elasticsearch-8.11.1\bin>set "ES_START_TYPE=auto"
D:\elasticsearch-8.11.1\bin>set "SERVICE_ID=ElasticSearch_8.11.1"
D:\elasticsearch-8.11.1\bin>set "SERVICE_DISPLAY_NAME=ElasticSearch_8.11.1"
D:\elasticsearch-8.11.1\bin>REM goto resetPass
D:\elasticsearch-8.11.1\bin>goto manage
D:\elasticsearch-8.11.1\bin>elasticsearch-service.bat manager ElasticSearch_8.11.1
warning: ignoring JAVA_HOME=D:\OpenJDK\zulu8.74.0.17-ca-jdk8.0.392-win_x64; using ES_JAVA_HOME
```



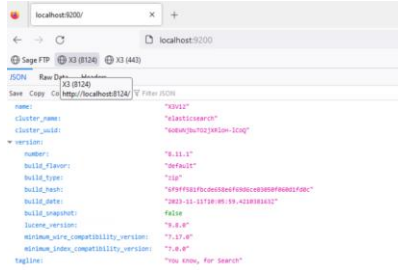
You must also set the parameters in “jvm.options” located in directory “D:\elasticsearch-8.11.1\config”

```
D:\elasticsearch-8.11.1\config>jvm.options
19
20
21 *****
22 ## IMPORTANT: JVM heap size
23 *****
24 ## The heap size is automatically configured by Elasticsearch
25 ## based on the available memory in your system and the roles
26 ## each node is configured to fulfill. If specifying heap size
27 ## required, it should be done through a file in jvm.options.d,
28 ## which should be named with _options suffix, and the min and
29 ## max should be set to the same value. For example, to set the
30 ## heap to 4 GB, create a new file in the jvm.options.d
31 ## directory containing these lines:
32 ##
33 ## -Xms4g
34 ## -Xmx4g
35 ## -Xms256m
36 ## -Xmx256m
37 ## See https://www.elastic.co/guide/en/elasticsearch/reference/8.11/heap-size.html
38 ## for more information
39 ##
```

Restart the Elastic Search service

Check the elasticsearch.log to confirm the new parameters have been picked up

Check Elastic Search is responding with the URL <http://localhost:9200>  
Enter username "elastic" and appropriate password



Secure using <https://www.elastic.co/guide/en/elasticsearch/reference/current/manually-configure-security.html>

### Setup basic security

I used the following script to generate the required certificates.

```

REM Set the following variables to suit your environment
set "mzNewServiceName=ElasticSearch_8.11.1"
set "ES_HOME=D:\ElasticSearch-8.11.1"
set "ES_JAVA_HOME=%ES_HOME%\jdk"
set "ES_PATH_CONF=%ES_HOME%\config"
set "PATH=%ES_HOME%\bin;%PATH%"
REM
REM Do the work
REM
rem goto createServerCert
rem goto moveFile
rem goto clientTLS
:createCA
REM Create CA
call elasticsearch-certutil ca
:createServerCert
REM Create server certificate for inter-cluster validation
call elasticsearch-certutil cert --ca D:\elasticsearch-8.11.1\elastic-
stack-ca.p12
:moveFile
robocopy D:\elasticsearch-8.11.1 %ES_PATH_CONF% elastic-
certificates.p12 /mov /r:2 /w:5 /v
REM
:clientTLS
REM Create certificate for client connections
elasticsearch-certutil http
:end
Pause

```

### Update elasticsearch.yml

```

cluster.name: cluster1
node.name: node-1
# TLS setup
xpack.security.transport.ssl.enabled: true
xpack.security.transport.ssl.verification_mode: certificate
xpack.security.transport.ssl.client_authentication: required
xpack.security.transport.ssl.keystore.path: elastic-certificates.p12
xpack.security.transport.ssl.truststore.path: elastic-certificates.p12

```

At this point, can restart Elastic Search service and test can still connect to the <http://localhost:9200/> URL.

### Setup secured HTTPS for all traffic

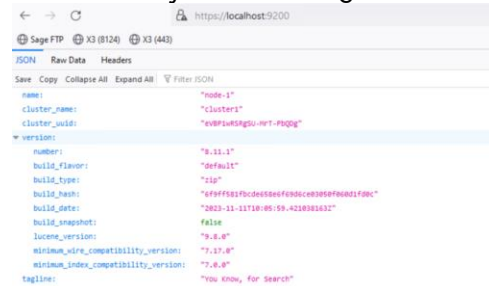
Generate the certificate for the client connections using the above script.

Update elasticsearch.yml to add the following lines:

```
xpack.security.http.ssl.enabled: true
xpack.security.http.ssl.keystore.path: "http.p12"
```

Copy “http.p12” to the “%ES\_HOME%\config” directory

Restart Elastic Search service and test can connect to the <https://localhost:9200/> URL. (Ignore the “Security risk” message due to “Unknown issuer”)



```
{
  "name": "node-1",
  "cluster_name": "cluster1",
  "cluster_uuid": "e09fwt8t8gu-wt-PSQig",
  "version": {
    "number": "8.11.1",
    "build_flavor": "default",
    "build_type": "zip",
    "build_hash": "699f582f3cd858e5f8d3ce808e9e0a2f0e",
    "build_date": "2023-11-11T10:05:59-02003013Z",
    "build_snapshot": false,
    "lucene_version": "9.8.0",
    "max_java_compatibility_version": "7.17.0",
    "max_index_compatibility_version": "7.0.0"
  },
  "tagline": "You know, for search"
}
```

## Configure X3 for Elastic Search

First I need to extract the CA certificate from D:\elasticsearch-8.11.1\elastic-stack-ca.p12 and load into X3.

- Open the elastic-stack-ca.p12 file and navigate to the certificate, then export as Base-64 encoded file
- Navigate to Administration, Administration, Certificates, Certificates of Certification Authorities
- Create new CA certificate for the Elastic Search CA

Administration > Administration > Certificates

**Certificate of Certification Authority**

Information		Distinctive names			
<b>Information</b>					
Name	Description	Internal	CA Certificate	Valid from	Valid until
elasticca	Elastic Search CA	X		29/11/2023 15:28	28/11/2026 15:28
<b>Distinctive names</b>					
Distinctive name	Source distinctive name				
CN=Elastic Certificate Tool Autogenerated CA	CN=Elastic Certificate Tool Autogenerated CA				

Navigate to Administration, Usage, Search, Search server settings

There is a default setup assuming Elastic Search version 8 is running on the localhost using port 9200 and with no authentication or TLS enabled... so I need to change these settings.

Administration > Usage > Search

**Search settings**

Version Connection TLS authentication User authentication Setting

Version: version 8

Connection: On-premise server, Host: localhost, Port: 9200, Proxy:  Enable security

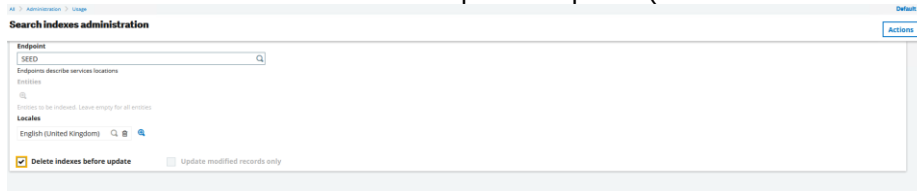
TLS authentication: CA certificate of search server:  Client certificate:   Set if required for authentication by search server

User authentication: Authentication mode: Basic, User: , Password: , Certificate:

Setting: Request timeout (ms): 30000, Index name prefix:

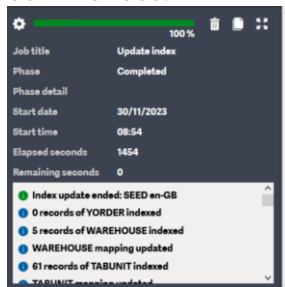
## Update Elastic Search Index

Navigate to Administration, Usage, Search, Search Index Management  
Check the “Delete indexes before update” option (as this is the first run)



Actions, Update Index

Once completed successfully, shutdown Windows and take a final backup before testing commences.





## Conclusion

This "Build diary" document shows the steps taken to install a new Windows server for testing the latest version of Sage X3, along with any supporting technologies required. This setup is only suitable for TEST instances.