

Test system Build Diary

2021 R3 (V12 patch 27) Multi-Main (Application Cluster) 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

Introduction	3
2021 R3 - Multi-Main build diary	4
Starting architecture and notes	4
Target architecture (Sage X3 2021 R3)	4
Documentation to use for planning and execution of this task	6
Initial steps.....	7
Database/Sage X3 Application/Runtime Server (Server name X3DB).....	8
Print Server installation and configuration.....	40
Finishing off tasks.....	41
Testing, testing, testing.....	48
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://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 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 the creation of a three-node new installation, with installation and configuration of three node Multi-Main (Application Cluster) for use as an internal TEST system, using software versions:

- Windows Server 2019
- SQL Server 2019
- X3 version 2021 R3

2021 R3 - Multi-Main build diary

Starting architecture and notes

Three Windows Server 2019 servers (Server names X3DB, X3WEB and X3PRT)

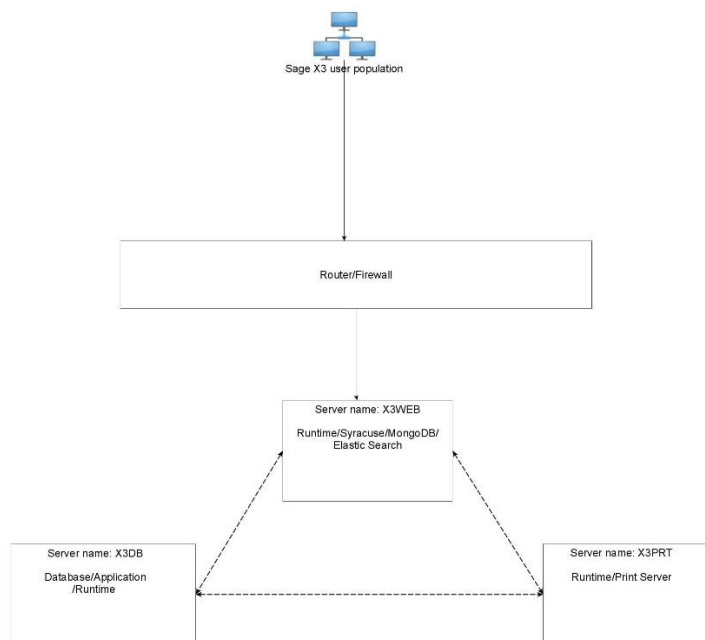
Software already loaded:

- Windows Server 2019
- OpenJDK 1.8.0_282
- Edge, Firefox and Chrome browsers
- 7-Zip 19.00

Windows users setup (Local users)

- “x3admin” for installation and management
- “X3run” for service runtime

Target architecture (Sage X3 2021 R3)



Summary of components to install, per server

Database/Sage X3 Application/Runtime Server (Server name X3DB)

- SQL Server 2019
- SQL Server Management Studio 18.8 ** *See note below*
- ADXAdmin
- Sage EM SQL Server Database Configuration
- Apache 2.4
- X3 Console
- Application
- Runtime

Sage X3 Runtime and Web Server (Server name X3WEB)

SQL Server Management Studio 18.8 **

ODBC v17

Command Line Utilities v15

ADXAdmin

Runtime

Elastic Search

MongoDB

Syracuse

Sage X3 Runtime and Print Server (Server name X3PRT)

SQL Server Management Studio 18.8 **

ODBC v17

Command Line Utilities v15

ADXAdmin

Runtime

Print Server

** Although I'm using SSMS 18.8, it is recommended to use latest version (currently 18.9.1) as described in "Microsoft® Windows - Microsoft® SQL Server 2019/2017/2016" https://online-help.sageerpx3.com/erp/12/public/prerequisites_windows-sql-server.html

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>

Pre-requisites

[http://online-help.sageerp3.com/erp/12/public/Prerequisites-\(Last-version\).html](http://online-help.sageerp3.com/erp/12/public/Prerequisites-(Last-version).html)

http://online-help.sageerp3.com/erp/12/public/prerequisites_overview.html

Installation documentation

http://online-help.sageerp3.com/erp/12/public/getting-started_sage-erp-x3-installation-procedure.html

Application Server : <https://online-help.sageerp3.com/erp/12/staticpost/installing-the-application-server/>

Console: https://online-help.sageerp3.com/erp/12/public/configuration-console_console.html

Application cluster: <https://online-help.sageerp3.com/erp/12/wp-static-content/public/Application%20Cluster%20Architecture/Default.htm>

Sage Knowledgebase articles or Blogs

Additional notes when installing Application Cluster

<https://support.na.sage.com/selfservice/viewdocument.do?externalId=109651>

Which firewall ports need to be open in a multi-node environment

<https://support.na.sage.com/selfservice/viewdocument.do?externalId=102936>

Additional notes when upgrading ElasticSearch

<https://support.na.sage.com/selfservice/viewdocument.do?externalId=99424>

New feature in 2021 R3: Multiple print server instances <https://www.sagecity.com/gb/sage-x3-uk/b/sage-x3-uk-support-insights/posts/new-feature-in-2021-r3-multiple-print-server-instances>

External sites (e.g. Microsoft, etc.)

IANA-managed Reserved Domains <https://www.iana.org/domains/reserved>

SMB: File and printer sharing ports should be open

<https://docs.microsoft.com/en-us/windows-server/storage/file-server/best-practices-analyzer/smb-open-file-sharing-ports>

Initial steps

As I am using a non-routable domain (example.com) and don't have a DNS server, so will setup the hosts file on each server

Make note of the IP addresses for the three servers. This hosts information will be merged into each servers existing "hosts" file (located in "C:\Windows\System32\drivers\etc"). I also modify the IP Address to "127.0.0.1" instead of the IP address for the server I'm on.

For example:

```
### Hosts file
10.10.10.59 X3DB X3DB.example.com
10.10.10.38 X3WEB X3WEB.example.com
10.10.10.43 X3PRT X3PRT.example.com
```

Update Firefox, Chrome and Edge to make sure I'm on the latest browser versions

Copy over latest Sage Support "Investigation Scripts"

Database/Sage X3 Application/Runtime Server (Server name X3DB)

Update hosts file

SQL Server 2019 installation

T:\Software\SQLserver2019

Mount the ISO image "en_sql_server_2019_enterprise_x64_dvd_5e1ecc6b.iso"

Run "setup.exe"

Select "New SQL Server stand-alone installation"

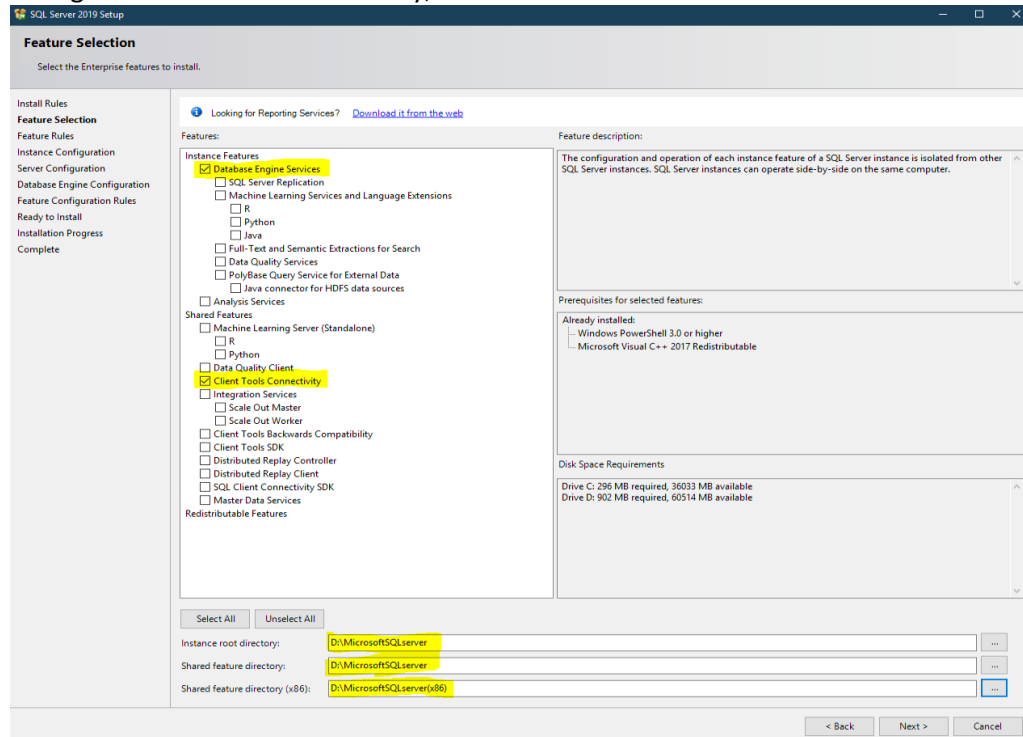
Click through product key

Selected features:

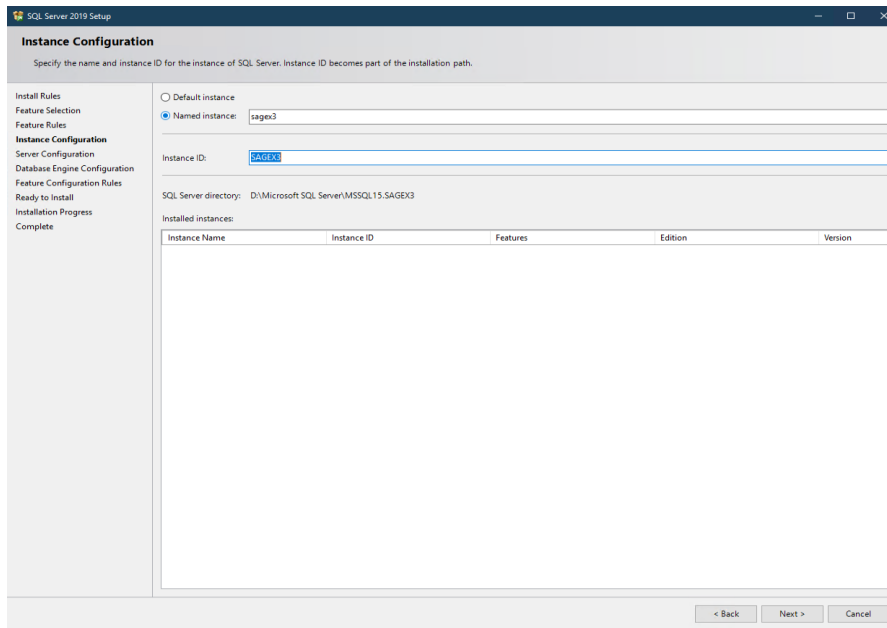
Database Engine Services

Client Tools connectivity

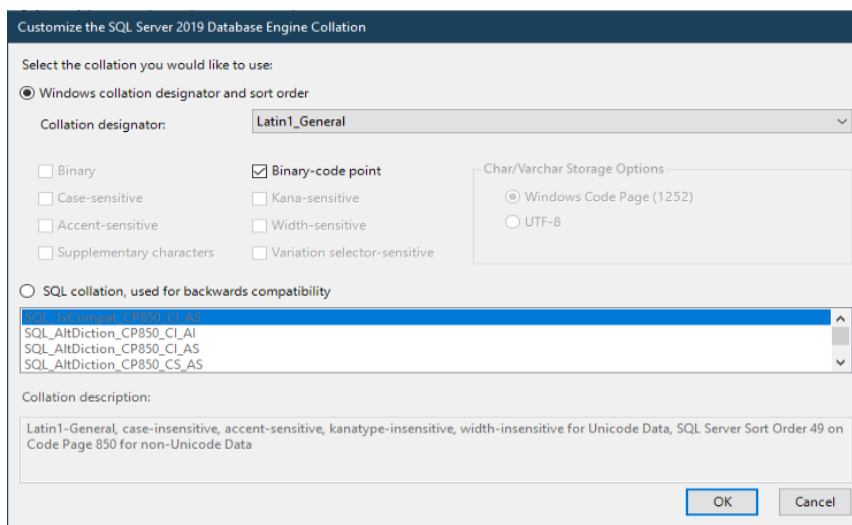
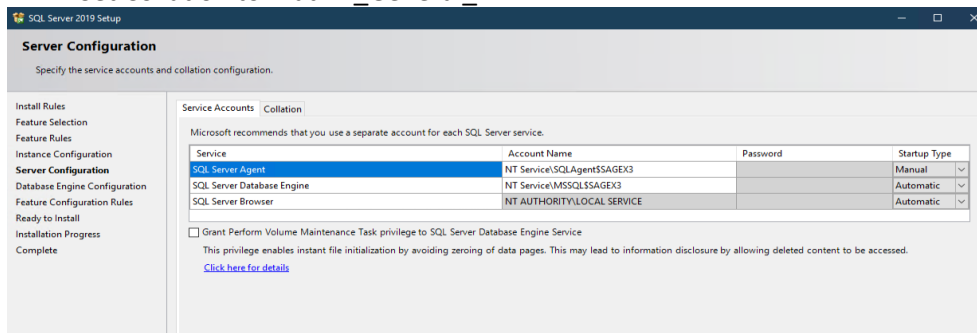
Change the Instance root directory, etc. to D:

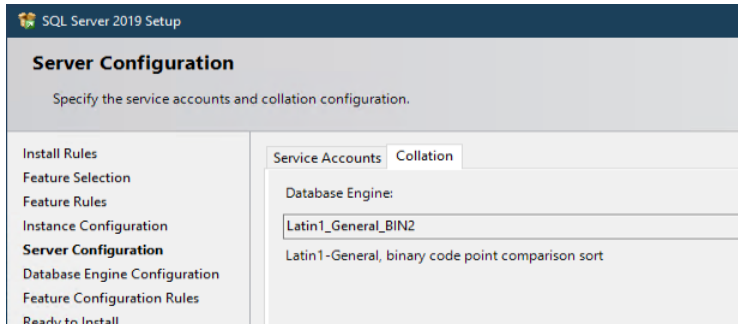


Named instance: sagex3

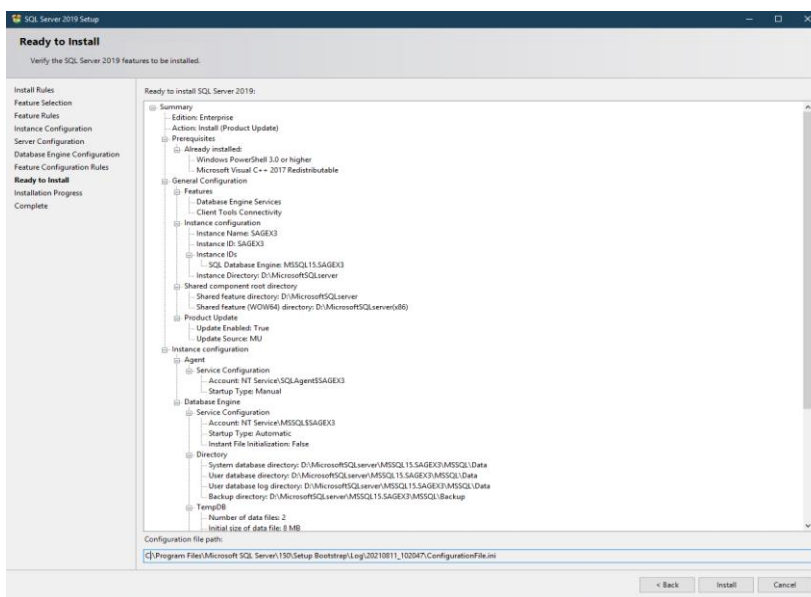
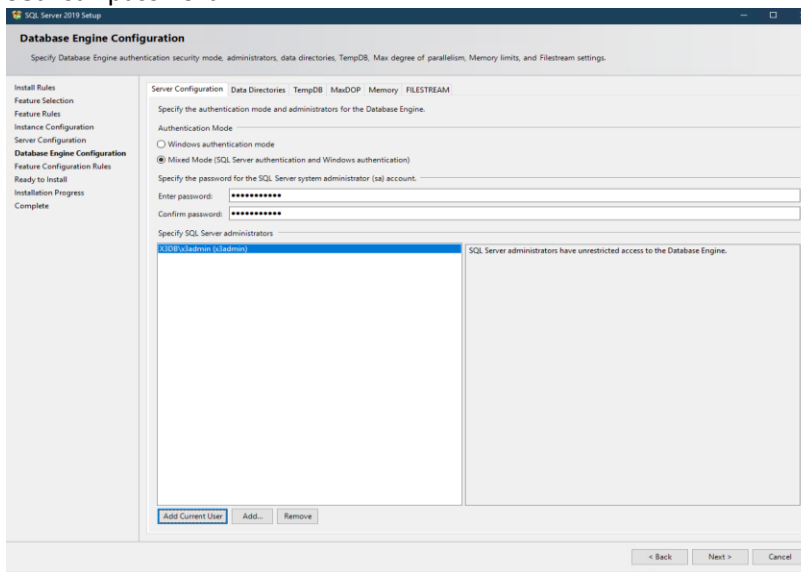


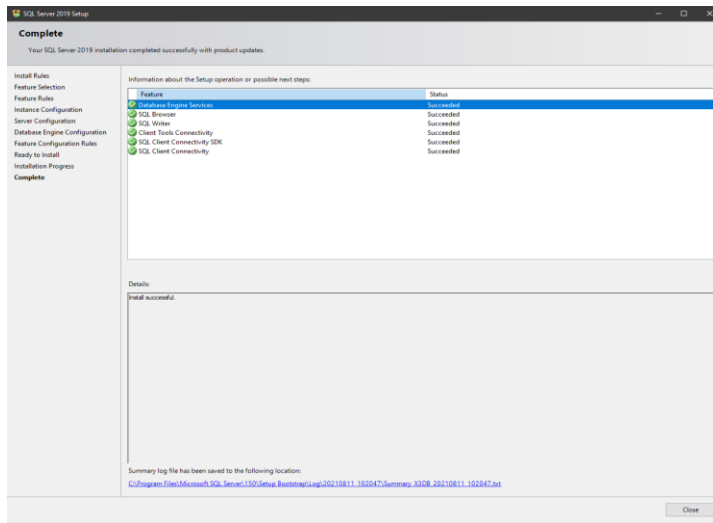
Set Collation to "Latin1_General_BIN2"





Set "mixed mode"
 Add current user
 Set "sa" password

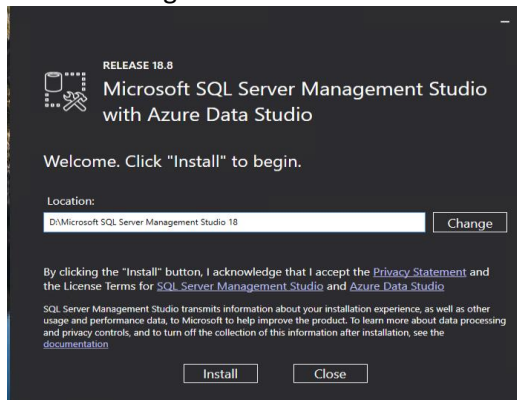




Install SQL Server Management tools (18.8)

T:\Software\SSMS18\SSMS-Setup-ENU_18.8.exe

Change drive to D:



Restart server when prompted

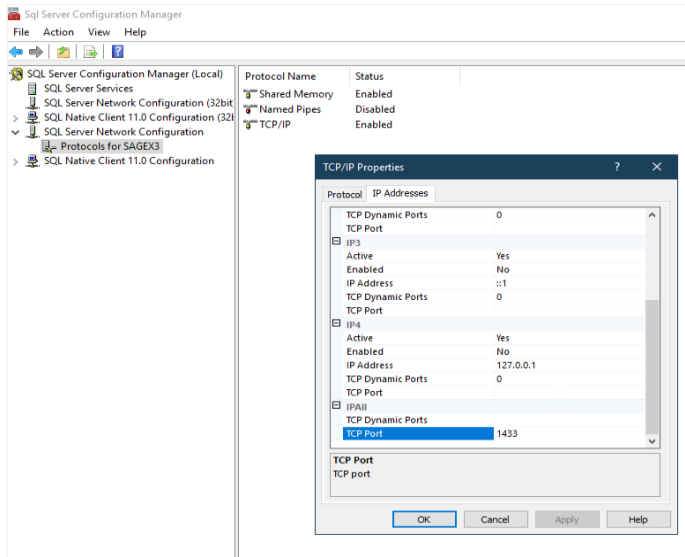
Test can connect to the database using SSMS

X3DB\SAGEX3

Windows Authentication

Pin SSMS to taskbar

Setup SQL Server to listen on specific port for TCP/IP, so can access the database through a firewall.

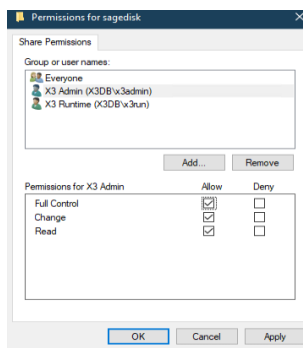
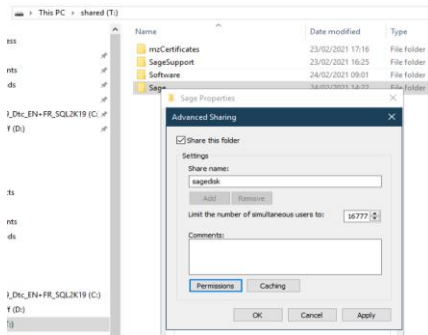


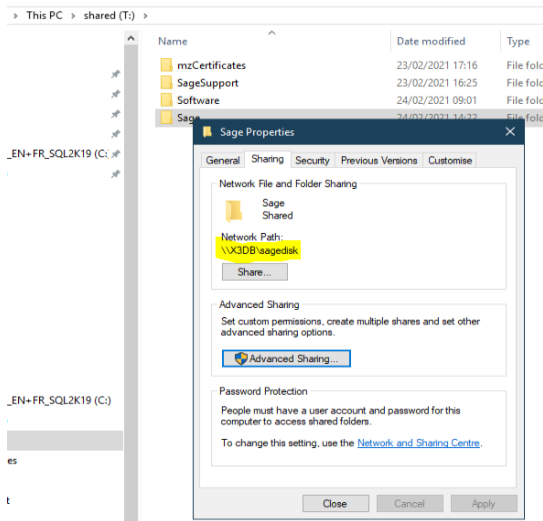
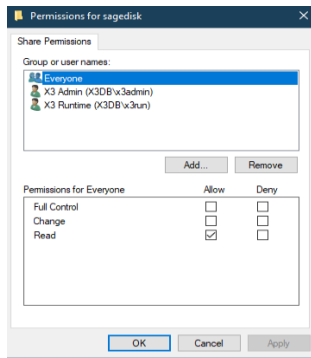
Restart SQL Server services and test can still connect via SSMS

Sage X3 preparation and installation

Create "T:\Sage" directory and setup Full control for x3run and x3admin users

Setup Windows share on T:\Sage for use as shared drive for the Sage X3 runtime servers





So my shared network location for installing Sage X3 will be “\\X3DB\sagedisk”

Download Patch 27 ISO from

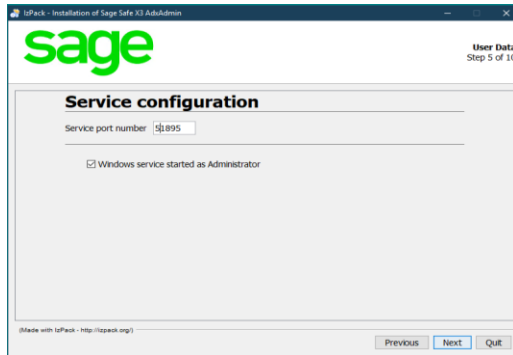
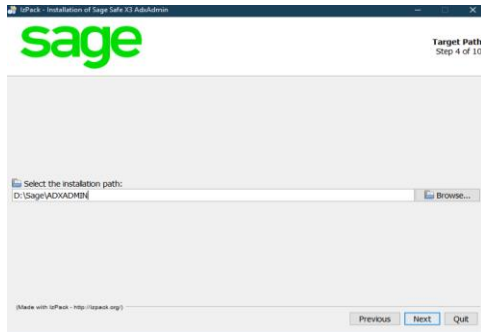
https://ukenterprisedownloads.sage.co.uk/Support/SageX3/X3V12/ISO_Images/12.0.27/ to T:\Software\ISO

Extract ZIP file and mount ISO image

Install ADXAdmin

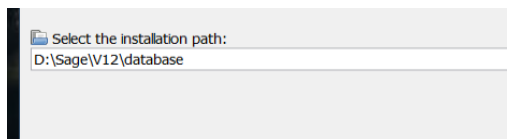
Launch “adxadmin-93.3.45.jar” from directory “E:\X3Installs\AdxAdmin”

Installing Sage software into “D:\sage” directory



Install SQL Server Database configuration

Run “db-sql-2.0.0-win.jar” from the directory “E:\X3Installs\DbSQL”



Install Apache

Extract "httpd-2.4.41-Win64-VC16.zip" from directory "T:\Software\Apache\Apache_forX3" to "D:\"

NOTE : Visual C++ Redistributable for Visual Studio 2015-2019 x64 is already installed

Edit httpd.conf to change port number being used, set servername and change SRVROOT

```
Listen 8080
ServerName X3DB
Define SRVROOT "d:/Apache24"
```

Launch Command prompt using "As administrator" and run the following:

```
cd /d D:\Apache24\bin
httpd -k install
httpd -k start
```

Test it works OK with following URL

<http://localhost:8080/>

Update registry manually using "regedt32" (otherwise Apache is missing from the drop down list in the X3 Console)

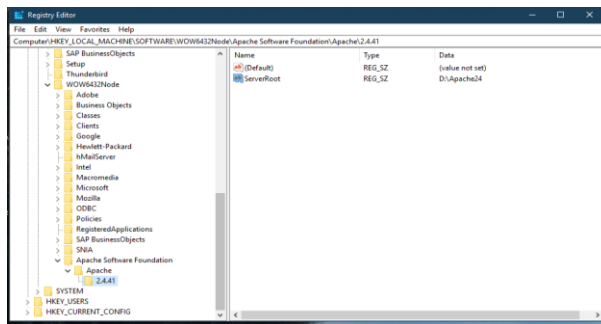
HKLM-->Software--> Wow6432Node

Create new key "Apache Software Foundation"

Create new Key below this called "Apache"

Create new key below Apache called "2.4.41" (Version number)

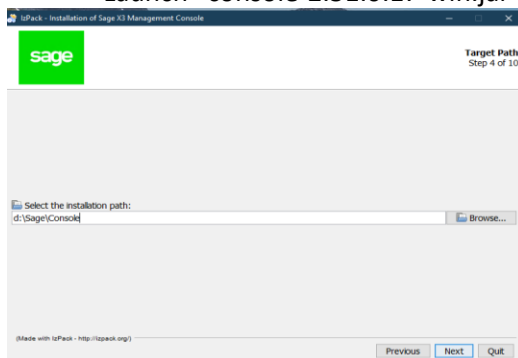
Create String Value called "ServerRoot" with value "D:\Apache24"



Install X3 Console

NOTE: .NET 4.7.2 is already installed on this image

Launch "console-2.51.0.17-win.jar" from directory "E:\X3Installs\Console"



Turn on debug logging on X3 Console

Launch X3 console

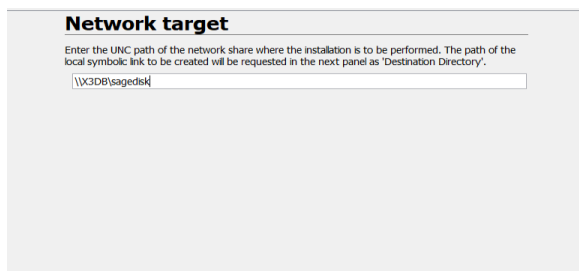
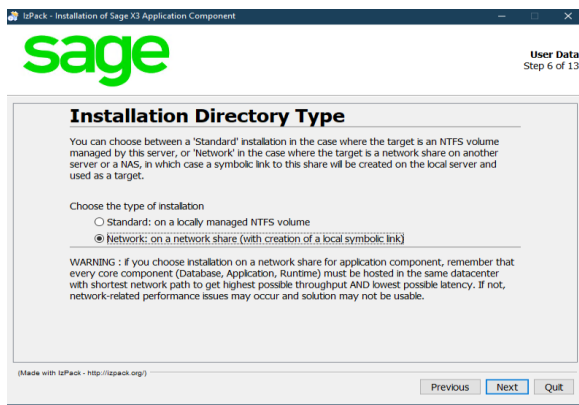
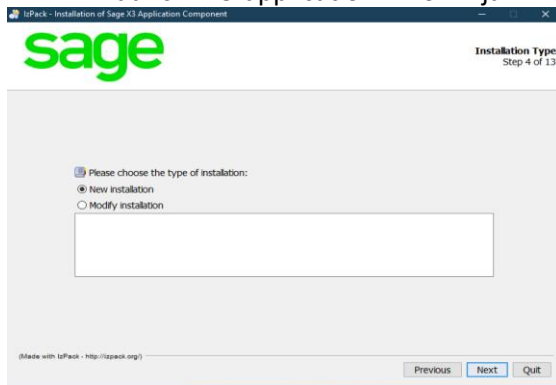
Console> Settings> Global
 config.global.debug
 Set to TRUE

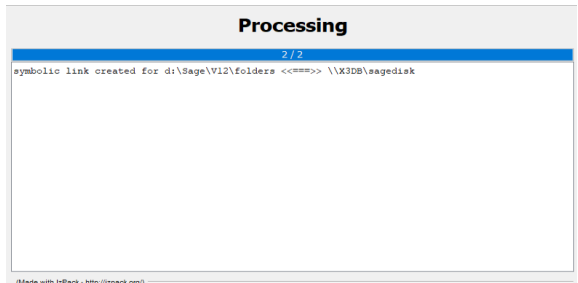
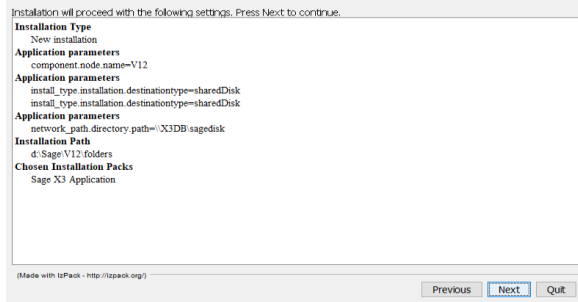
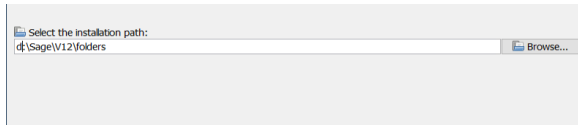
Save

Exit Console

Install Application

Launch "x3-application-12.0.27.jar" from directory "E:\X3Installs\Application"

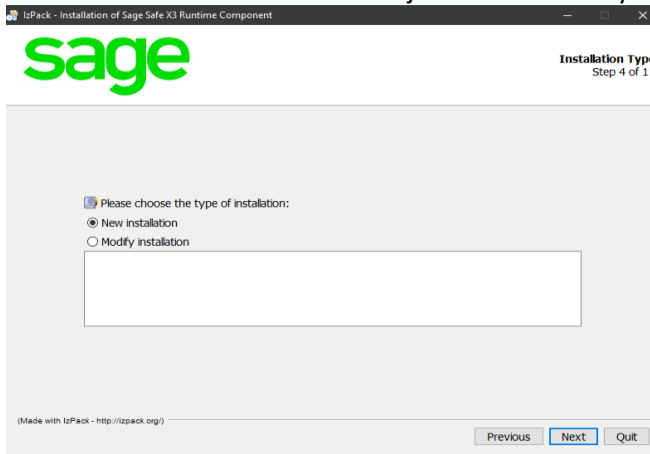


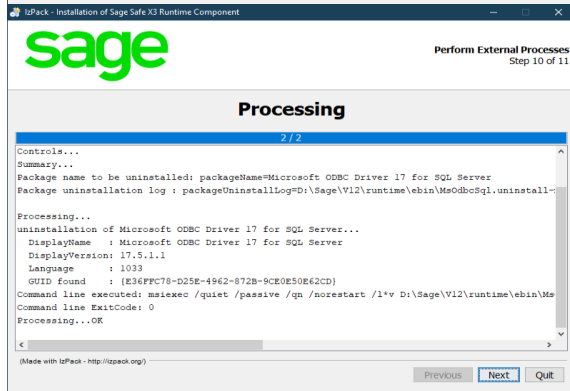
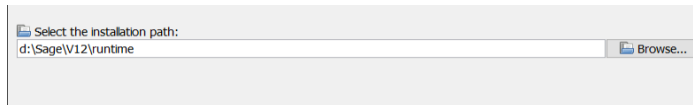
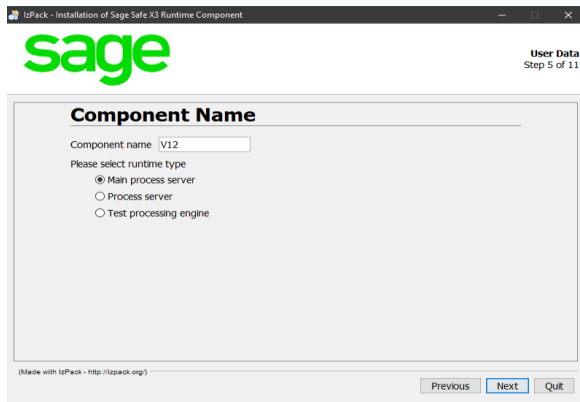


Takes around 15 minutes to complete this process

Install Runtime

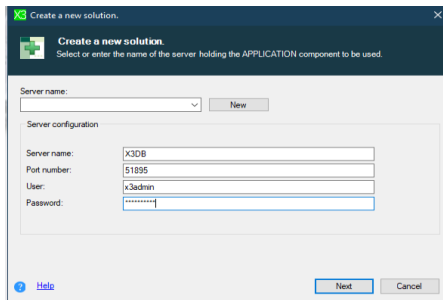
Launch “runtime-93.3.45.jar” from directory “E:\X3Installs\Runtime”

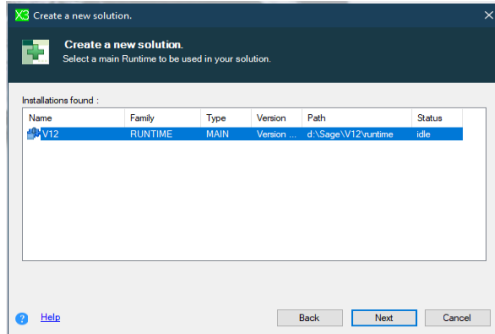
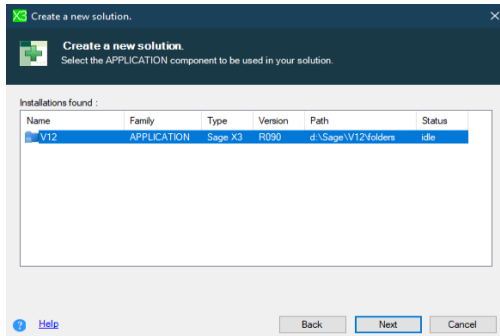




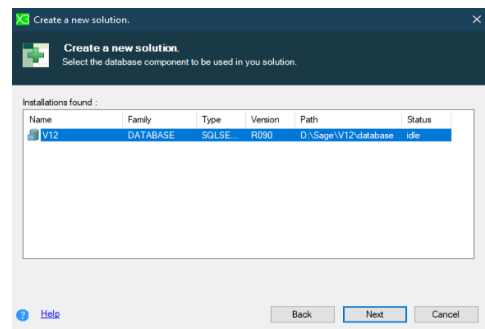
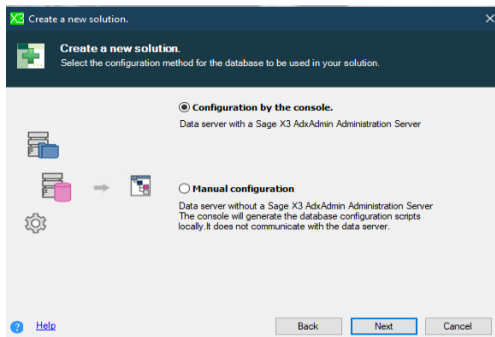
Run Sage EM console to configure the solution

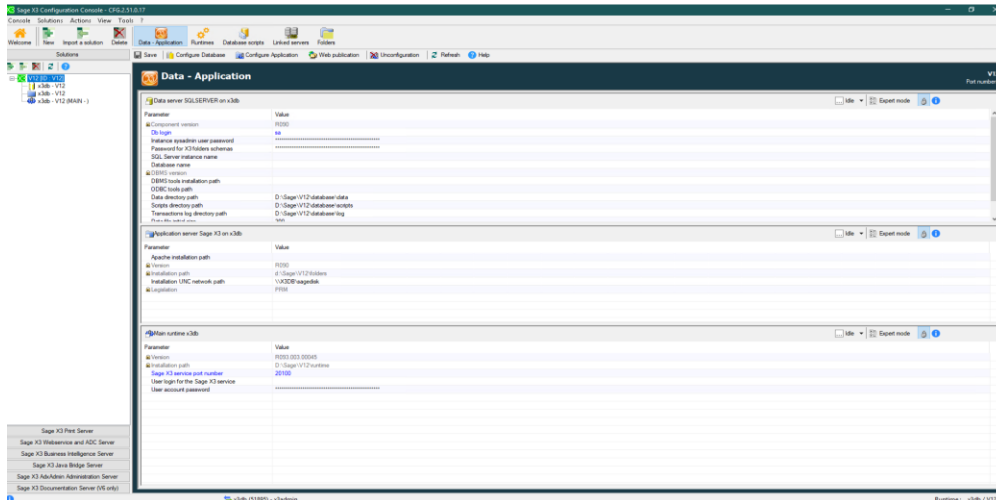
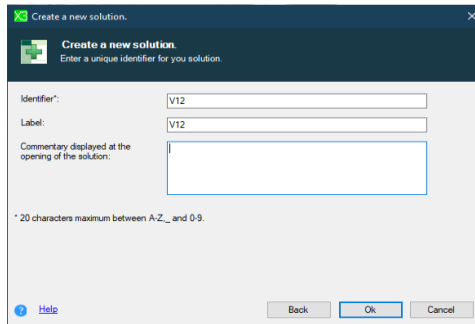
Add new solution for server name X3DB





Configure database via console





Configure database

Enter Instance sysadmin (sa) user password

Password for X3 folders schemas

SQL Server instance name = SAGEX3 (from dropdown)

Database name = sagex3

DBMS tools installation path = D:\MicrosoftSQLserver\150\Tools (from dropdown)

ODBC tools path = D:\MicrosoftSQLserver\Client SDK\ODBC\170\Tools (from dropdown)

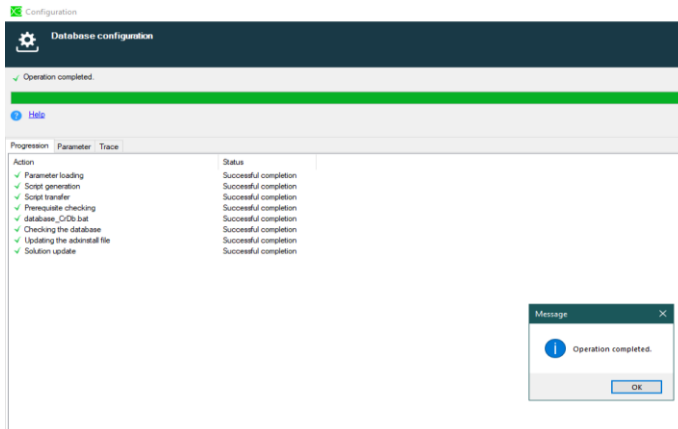
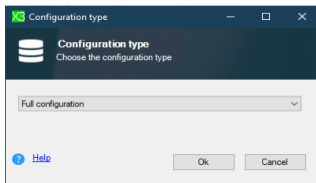
Data file initial size = 2048

Transaction log initial size = 1024

Parameter	Value
Component version	R090
Db login	sa
Instance sysadmin user password
Password for X3 folders schemas
SQL Server instance name	SAGEX3
Database name	sagex3
DBMS version	15
DBMS tools installation path	D:\MicrosoftSQLserver\150\Tools
ODBC tools path	D:\MicrosoftSQLserver\Client SDK\ODBC\170\Tools
Data directory path	D:\Sage\V12\database\data
Scripts directory path	D:\Sage\V12\database\scripts
Transactions log directory path	D:\Sage\V12\database\log
Data file initial size	2048
Transaction log file initial size	1024

Click "Save"

Click "Configure Database" to configure database server



Progression	Parameter	Trace
11/08/2021 14:01:31	INFO	-----
11/08/2021 14:01:31	INFO	- Starting the database configuration
11/08/2021 14:01:31	INFO	-----
11/08/2021 14:01:31	INFO	- Starting configuration 11/08/2021 14:01:31
11/08/2021 14:01:31	INFO	- Starting parameter loading
11/08/2021 14:01:31	INFO	- End of parameter loading
11/08/2021 14:01:31	INFO	- Starting script generation
11/08/2021 14:01:31	INFO	- Generation of the file - database_CrDb.bat
11/08/2021 14:01:31	INFO	- Generation of the file - database_CrDb.sql
11/08/2021 14:01:32	INFO	- End of script generation
11/08/2021 14:01:32	INFO	- Starting script transfers
11/08/2021 14:01:34	INFO	- Transfer of the file - D:\Sage\V12\database\scripts\database_CrDb.bat
11/08/2021 14:01:34	INFO	- Transfer of the file - D:\Sage\V12\database\scripts\database_CrDb.sql
11/08/2021 14:01:34	INFO	- End of script transfer
11/08/2021 14:01:34	INFO	- Starting prerequisite verification
11/08/2021 14:01:34	INFO	- Starting SysAdmin user checking: sa
11/08/2021 14:01:39	INFO	- SA user checking complete
11/08/2021 14:01:39	INFO	- End of prerequisite verification
11/08/2021 14:01:39	INFO	- Starting script execution
11/08/2021 14:01:39	INFO	- Execution of the script - D:\Sage\V12\database\scripts\database_CrDb.bat
11/08/2021 14:02:07	WARN	- Changed database context to 'master'
11/08/2021 14:02:07	WARN	- Please see traces: file D:\Sage\V12\database\trace\database_CrDb.log above
11/08/2021 14:02:07	INFO	- End of script execution
11/08/2021 14:02:07	INFO	- Starting the database checking
11/08/2021 14:02:11	INFO	- Checking of the database successfully completed
11/08/2021 14:02:11	INFO	- sagex3 ONLINE
11/08/2021 14:02:11	INFO	- Starting the database checking
11/08/2021 14:02:11	INFO	- Starting the update of the adminstall file
11/08/2021 14:02:14	INFO	- End of the adminstall file update
11/08/2021 14:02:14	INFO	- Starting solution update
11/08/2021 14:02:23	INFO	- End of solution update
11/08/2021 14:02:23	INFO	- End of configuration 11/08/2021 14:02:23
11/08/2021 14:02:23	INFO	-----
11/08/2021 14:02:23	INFO	- End of configuration
11/08/2021 14:02:23	INFO	-----

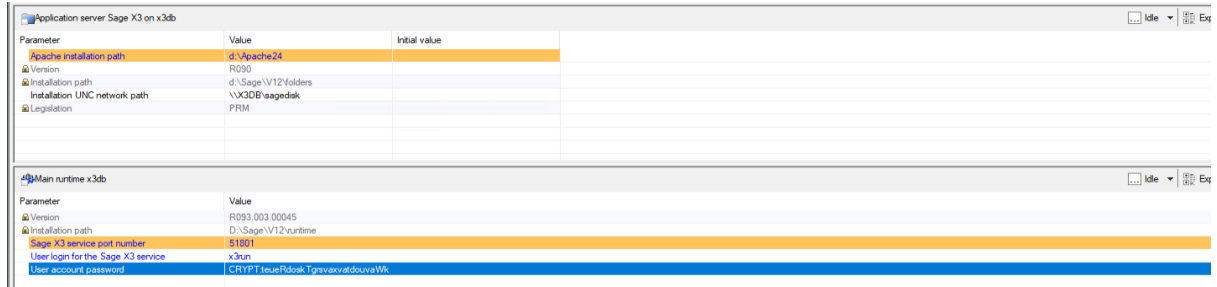
Configure Application/Runtime

Apache installation path = d:\Apache24 (wasn't in the dropdown list, so my registry tweak didn't work for some reason. Manually typed it in as a workaround)

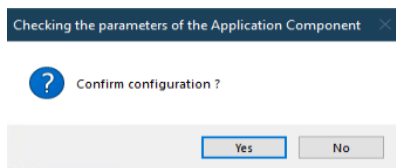
Safe X3 service port number = 51801

User login for the SAFE X3 service = x3run

User account password

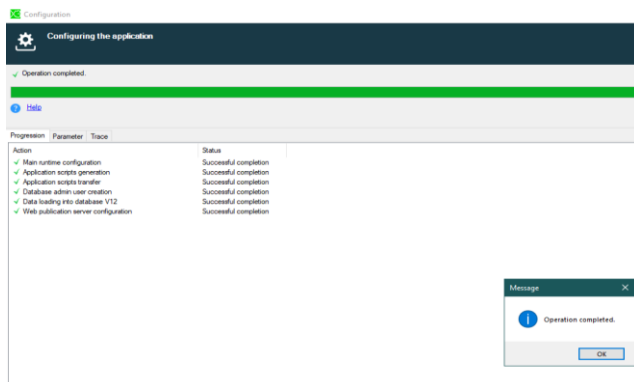


Click "Save" then "Configure Application" to configure



Takes about 15 minutes

Completed OK



Progression	Parameter	Trace
11/08/2021 14:07:24	INFO	-
11/08/2021 14:07:24	INFO	-
11/08/2021 14:07:24	INFO	- Sage Application setup 11/08/2021 14:07:24
11/08/2021 14:07:24	INFO	-
11/08/2021 14:07:24	INFO	- Starting application configuration
11/08/2021 14:07:24	INFO	-
11/08/2021 14:07:24	INFO	- "-- Sage Application setup --"
11/08/2021 14:07:24	INFO	- Application - reading adinstalls on x3db.
11/08/2021 14:07:24	INFO	- Information from adinstalls.xml on application server retrieved.
11/08/2021 14:07:24	INFO	- Ok
11/08/2021 14:07:24	INFO	- Database - reading adinstalls on x3db.
11/08/2021 14:07:24	INFO	- Information from adinstalls.xml on data server retrieved.
11/08/2021 14:07:24	INFO	- Ok
11/08/2021 14:07:24	INFO	- Information from adinstalls.xml retrieved.
11/08/2021 14:07:24	INFO	- Ok
11/08/2021 14:07:24	INFO	- Main runtime - reading adinstalls on x3db.
11/08/2021 14:07:24	INFO	- Reading Adinstalls on x3db.
11/08/2021 14:07:24	INFO	- Ok
11/08/2021 14:07:24	INFO	- Starting configuration from Runtime V12_x3db.
11/08/2021 14:07:24	INFO	- Launching main runtime configuration... (LibAdm.ConfigureMainRuntime)
11/08/2021 14:07:24	INFO	- 11/08/2021 14:07:24: INFO -
11/08/2021 14:07:24	INFO	- Sage Runtime V12 setup 11/08/2021 14:07:24
11/08/2021 14:07:24	INFO	- 11/08/2021 14:07:24: INFO -
11/08/2021 14:07:24	INFO	- Starting MAIN Runtime server configuration V12
11/08/2021 14:07:24	INFO	- 11/08/2021 14:07:24: INFO -
11/08/2021 14:07:24	INFO	- "-- Sage Runtime server setup --"
11/08/2021 14:07:24	INFO	- 11/08/2021 14:07:24: INFO -
11/08/2021 14:07:24	INFO	- Information from adinstalls.xml retrieved.
11/08/2021 14:07:24	INFO	- Ok
11/08/2021 14:07:24	INFO	- Reading solution.xml on x3db.
11/08/2021 14:07:24	INFO	- Information from solution.xml retrieved.
11/08/2021 14:07:24	INFO	- Ok
11/08/2021 14:07:24	INFO	- Starting configuration from Runtime V12_x3db
11/08/2021 14:07:29	INFO	- Stop service V12 ok on x3db. (LibAdm.StopAdxNT)
11/08/2021 14:07:29	INFO	- Check application folders on x3db
11/08/2021 14:07:29	INFO	- Directory of 'Sage\V12\folders' already exists. No action made. UNC path: \\X3DB\sage\ad.
11/08/2021 14:07:30	INFO	- Check application folders done
11/08/2021 14:07:32	INFO	- Service deletion V12_x3db ok. (LibAdm.UninstallGesSrv)
11/08/2021 14:07:33	INFO	- Services file 'C:\Windows\system32\drivers\etc\Services' updated. (LibAdm.UpdateServicesFile)
11/08/2021 14:07:33	INFO	- Ok
11/08/2021 14:07:44	INFO	- Transfer of file D:\Sage\V12\runtime\bin\env.bat_x3db ok. (LibAdm.GenEnvNT)
11/08/2021 14:07:47	INFO	- Creation and transfer of file configRuntime.json_x3db (LibAdm.configRuntime)
11/08/2021 14:07:47	INFO	- 11/08/2021 14:07:47: INFO -
11/08/2021 14:07:56	INFO	- Start registry configuration finished.
11/08/2021 14:08:05	INFO	- Creation of SqServer ODBC data source 'V12' (ODBC Driver 17 for SQL Server) on x3db ok. (LibAdm.CreateSqOdbc)
11/08/2021 14:08:05	INFO	- Starting service 'V12' on 'x3db'. (LibAdm.InstallGesSrv)
11/08/2021 14:08:12	INFO	- Runtime service 'V12' has been started
11/08/2021 14:08:12	INFO	- Test connect to 'x3db:51801' from local host X3DB - TCP connection to port 51801 OK
11/08/2021 14:08:12	INFO	- 11/08/2021 14:08:12: INFO -
11/08/2021 14:08:16	INFO	- Updating AdInstalls.xml on x3db.
11/08/2021 14:08:16	INFO	- 11/08/2021 14:08:16: INFO -
11/08/2021 14:08:16	INFO	- Ok
11/08/2021 14:08:16	INFO	- Updating solution.xml on x3db.
11/08/2021 14:08:16	INFO	- 11/08/2021 14:08:16: INFO -
11/08/2021 14:08:16	INFO	- Update of runtime component V12 in solution.xml ok.
11/08/2021 14:08:25	INFO	- File solution.xml sent on x3db.
11/08/2021 14:08:25	INFO	- 11/08/2021 14:08:25: INFO -
11/08/2021 14:08:25	INFO	- Update of solution.xml ok.
11/08/2021 14:08:25	INFO	- Ok
11/08/2021 14:08:25	INFO	- Runtime server V12 setup finished.
11/08/2021 14:08:25	INFO	- 11/08/2021 14:08:25: INFO -
11/08/2021 14:08:25	INFO	- Main runtime configuration done. (LibAdm.ConfigureMainRuntime)
11/08/2021 14:08:25	INFO	- 11/08/2021 14:08:25: INFO -
11/08/2021 14:08:25	INFO	- Runtime setup finished with status : Ok

11/08/2021 14:08:25	INFO	- Runtime setup finished with status : Ok
11/08/2021 14:08:25	INFO	- Ok
11/08/2021 14:08:25	INFO	- Creation of X3APP\I.ini done.
11/08/2021 14:08:32	INFO	- Database schema checked - user 'X3' and roles 'X3_ADX' not found (Run\VerfSchemaBaseSqServer)
11/08/2021 14:08:33	INFO	- User for folder 'X3' will be created. (LibAdm.GenerationScriptsApp\NT)
11/08/2021 14:08:34	INFO	- Directory of 'Sage\V12\folders\X3\FIL' created.
11/08/2021 14:08:37	INFO	- Creation of sage\3_Cr1br.bat done.
11/08/2021 14:08:37	INFO	- Creation of ademanfil.bat
11/08/2021 14:08:38	INFO	- Tables list from FILPLAT in main folder created. (LibAdm.GenerationScriptsApp\NT)
11/08/2021 14:08:40	INFO	- Tables list from FILPLATSYS in main folder created.
11/08/2021 14:08:43	INFO	- Creation of ademanfil.bat done.
11/08/2021 14:08:45	INFO	- File d:\Sage\V12\folders\X3\FILPLAT\X3APP\I.ini sent on application server x3db.
11/08/2021 14:08:46	INFO	- File d:\Sage\V12\folders\X3\FILPLAT\sage\3_Cr1br.bat sent on application server x3db.
11/08/2021 14:08:46	INFO	- Launching sage\3_Cr1br.bat. (LibAdm.RunCreateUserSQLManNT)
11/08/2021 14:08:49	INFO	- Execution of sage\3_Cr1br.bat done.
11/08/2021 14:08:56	INFO	- found 'X3'
11/08/2021 14:08:56	INFO	- found 'X3'
11/08/2021 14:08:56	INFO	- found 'X3'
11/08/2021 14:08:56	INFO	- Database schema X3 is available and storages are online (Run\VerfSchemaBaseSqServer)
11/08/2021 14:08:56	INFO	- Regeneration in Progress
11/08/2021 14:08:56	INFO	- Regeneration in Progress: 1 / 40
11/08/2021 14:08:56	INFO	- Regeneration in Progress: 2 / 40
11/08/2021 14:08:56	INFO	- Regeneration in Progress: 3 / 40
11/08/2021 14:08:56	INFO	- Regeneration in Progress: 4 / 40
11/08/2021 14:08:56	INFO	- Regeneration in Progress: 5 / 40
11/08/2021 14:08:56	INFO	- Regeneration in Progress: 6 / 40
11/08/2021 14:08:56	INFO	- Regeneration in Progress: 7 / 40
11/08/2021 14:08:56	INFO	- Regeneration in Progress: 8 / 40
11/08/2021 14:08:56	INFO	- Regeneration in Progress: 9 / 40
11/08/2021 14:08:56	INFO	- Regeneration in Progress: 10 / 40
11/08/2021 14:08:56	INFO	- Regeneration in Progress: 11 / 40
11/08/2021 14:08:56	INFO	- Regeneration in Progress: 12 / 40
11/08/2021 14:08:56	INFO	- Regeneration in Progress: 13 / 40
11/08/2021 14:08:56	INFO	- Regeneration in Progress: 14 / 40
11/08/2021 14:08:56	INFO	- Regeneration in Progress: 15 / 40
11/08/2021 14:08:56	INFO	- Regeneration in Progress: 16 / 40
11/08/2021 14:08:56	INFO	- Regeneration in Progress: 17 / 40
11/08/2021 14:08:56	INFO	- Regeneration in Progress: 18 / 40
11/08/2021 14:08:56	INFO	- Regeneration in Progress: 19 / 40
11/08/2021 14:08:56	INFO	- Regeneration in Progress: 20 / 40
11/08/2021 14:08:56	INFO	- Regeneration in Progress: 21 / 40
11/08/2021 14:08:56	INFO	- Regeneration in Progress: 22 / 40
11/08/2021 14:08:56	INFO	- Regeneration in Progress: 23 / 40
11/08/2021 14:08:56	INFO	- Regeneration in Progress: 24 / 40
11/08/2021 14:08:56	INFO	- Regeneration in Progress: 25 / 40
11/08/2021 14:08:56	INFO	- Regeneration in Progress: 26 / 40
11/08/2021 14:08:56	INFO	- Regeneration in Progress: 27 / 40
11/08/2021 14:08:56	INFO	- Regeneration in Progress: 28 / 40
11/08/2021 14:08:56	INFO	- Regeneration in Progress: 29 / 40
11/08/2021 14:08:56	INFO	- Regeneration in Progress: 30 / 40
11/08/2021 14:08:56	INFO	- Regeneration in Progress: 31 / 40
11/08/2021 14:08:56	INFO	- Regeneration in Progress: 32 / 40
11/08/2021 14:08:56	INFO	- Regeneration in Progress: 33 / 40
11/08/2021 14:08:56	INFO	- Regeneration in Progress: 34 / 40
11/08/2021 14:08:56	INFO	- Regeneration in Progress: 35 / 40
11/08/2021 14:08:56	INFO	- Regeneration in Progress: 36 / 40
11/08/2021 14:08:56	INFO	- Regeneration in Progress: 37 / 40
11/08/2021 14:08:56	INFO	- Regeneration in Progress: 38 / 40
11/08/2021 14:08:56	INFO	- Regeneration in Progress: 39 / 40
11/08/2021 14:08:56	INFO	- Regeneration in Progress: 40 / 40
11/08/2021 14:08:56	INFO	- Regeneration of the Index Table ...

```

Regeneration in Progress : 40 / 40      Regeneration of the Index Table ...

11/08/2021 14:09:15 - INFO - Vaffit test performed with success.
11/08/2021 14:09:15 - INFO - Database sagex3 loading...
11/08/2021 14:09:15 - INFO - 779 tables found
11/08/2021 14:09:15 - INFO - 0007/0779 tables loaded - 00% - Tables AABREV - ACLBSYS are being loaded
11/08/2021 14:09:33 - INFO - 0038/0779 tables loaded - 05% - Tables ACL0B - ADOVALGRP are being loaded
11/08/2021 14:11:56 - INFO - 0076/0779 tables loaded - 10% - Tables ADOVALHIS - ALSTRD are being loaded
11/08/2021 14:12:13 - INFO - 0114/0779 tables loaded - 15% - Tables AMAINT - APLCOMH are being loaded
11/08/2021 14:12:52 - INFO - 0152/0779 tables loaded - 20% - Tables AFLCK - ASHWMENU are being loaded
11/08/2021 14:13:54 - INFO - 0190/0779 tables loaded - 25% - Tables ASHWMET - AVIEWD are being loaded
11/08/2021 14:15:36 - INFO - 0228/0779 tables loaded - 30% - Tables AVIEWE - BP1096PRN are being loaded
11/08/2021 14:15:49 - INFO - 0266/0779 tables loaded - 35% - Tables BP1099PRN - DATEVTAX are being loaded
11/08/2021 14:16:00 - INFO - 0304/0779 tables loaded - 40% - Tables DCLVATPORT - EDISEGFIL are being loaded
11/08/2021 14:16:11 - INFO - 0342/0779 tables loaded - 44% - Tables EDISEGFIL - ESLTYPASSD are being loaded
11/08/2021 14:16:25 - INFO - 0380/0779 tables loaded - 49% - Tables ESSDOCBLB - GAPARDUM are being loaded
11/08/2021 14:16:43 - INFO - 0418/0779 tables loaded - 54% - Tables GAUTACE - HRDSCFCY6 are being loaded
11/08/2021 14:17:02 - INFO - 0456/0779 tables loaded - 59% - Tables HRDSCFCY7 - HRDSCFCY2 are being loaded
11/08/2021 14:17:12 - INFO - 0494/0779 tables loaded - 64% - Tables HRDSCFCY3 - HRTAXVAL are being loaded
11/08/2021 14:17:22 - INFO - 0532/0779 tables loaded - 69% - Tables HRTRACSTREP - PATCHPDP are being loaded
11/08/2021 14:17:37 - INFO - 0570/0779 tables loaded - 74% - Tables PATCHPDP0BJ - QLYCRDNQA are being loaded
11/08/2021 14:19:23 - INFO - 0608/0779 tables loaded - 79% - Tables RBKRUBBEL - SPRICCONF are being loaded
11/08/2021 14:19:34 - INFO - 0646/0779 tables loaded - 83% - Tables STAT - TABSGHTYP are being loaded
11/08/2021 14:19:46 - INFO - 0684/0779 tables loaded - 88% - Tables TABSIVTYP - TXSA are being loaded
11/08/2021 14:20:32 - INFO - 0722/0779 tables loaded - 93% - Tables TXSAC - AECLDBG are being loaded
11/08/2021 14:21:15 - INFO - Database sagex3 loaded in 00:12:19.0061387
11/08/2021 14:21:15 - INFO - Launching X3_misc.sql (LibAdm.LaunchMisc)
11/08/2021 14:21:20 - INFO - d:\Sage\V12\Folders\X3\FILPLAT\X3_Misc.sql executed.
11/08/2021 14:21:20 - INFO - All tables loaded into database sagex3 with no errors. (LibAdm.RunValFillMain)
11/08/2021 14:21:22 - INFO - Apache version 2.4.164 retrieved (Major: 2 Minor: 4) on x3db. (LibAdm.ConfigureHttpServer)
11/08/2021 14:21:24 - INFO - File d:\Apache24\conf\httpd.conf retrieved.
11/08/2021 14:21:24 - INFO - File httpd.conf retrieved. (VerifPrerequisiteHttpPort)
11/08/2021 14:21:26 - INFO - Httpd port number retrieved : 8080. (VerifPrerequisiteHttpPort)
11/08/2021 14:21:26 - INFO - Solution alias added to file httpd.conf. (LibAdm.ConfigureHttpServer)
11/08/2021 14:21:31 - INFO - Service Apache2.4 stopped on x3db.
11/08/2021 14:21:35 - INFO - Service Apache2.4 started on x3db
11/08/2021 14:21:35 - INFO - Apache web publication server configured with success.
11/08/2021 14:21:35 - INFO - Check the url http://x3db.8080/Admox\_V12/solution.json
11/08/2021 14:21:35 - INFO - Updating AdmInstalls.xml on x3db...
11/08/2021 14:21:38 - INFO - Update of admInstalls.xml on application server ok.
11/08/2021 14:21:38 - INFO - Ok
11/08/2021 14:21:38 - INFO - Updating solution.xml on x3db.
11/08/2021 14:21:47 - INFO - File solution.xml on application server updated.
11/08/2021 14:21:47 - INFO - Update of solution.xml on application server ok.
11/08/2021 14:21:47 - INFO - Ok
11/08/2021 14:21:47 - INFO - Application setup finished.
11/08/2021 14:21:47 - INFO - [End]
  
```

The screenshot shows the Sage X3 Configuration Console interface. The main window displays the configuration for the 'Application' on the 'x3db' data server. The configuration is organized into sections:

- Data server: SQLSERVER on x3db:**
 - Component version: R090
 - Db login: sa
 - Instance sqladmin user password: [REDACTED]
 - Password for X3 folders scheme: [REDACTED]
 - SQL Server instance name: SAGEX3
 - Database name: sagex3
 - DBMS version: 15
 - DBMS tools installation path: D:\Microsoft\SQLServer\150\Tools
 - ODBC tools path: D:\Microsoft\SQLServer\Client SDK\ODBC\170\Tools
 - Data directory path: D:\Sage\V12\database\data
 - Scripts directory path: D:\Sage\V12\database/scripts
 - Transactions log directory path: D:\Sage\V12\database/log
 - File d:\sage\www\www\www: [REDACTED]
- Application server Sage X3 on x3db:**
 - Apache installation path: d:\Apache24
 - Version: R090
 - Installation path: d:\Sage\V12\Folders
 - Installation IUC network path: V1208\www\www
 - Log location: PFSM
- Main runtime x3db:**
 - Version: R093.003.00045
 - Installation path: D:\Sage\V12\runtime
 - Sage X3 service port number: 51801
 - User login for the Sage X3 service: x3run
 - User account password: [REDACTED]

The console at the bottom shows the status: 'The console is verifying that the database has started.' and 'Runtime: x3db / V12.51801'.

Sage X3 Runtime and Web Server (Server name X3WEB)

Update hosts file

Update firewall rules as per “Which firewall ports need to be open in a multi-node environment”

<https://support.na.sage.com/selfservice/viewdocument.do?externalId=102936>

Also checked <https://docs.microsoft.com/en-us/windows-server/storage/file-server/best-practices-analyzer/smb-open-file-sharing-ports>

Update X3DB to allow from X3WEB

TCP 1433 (Database)

UDP 1434 (Database)

TCP 8080 (Apache)

TCP 51801 (Runtime)

TCP 139 and 445 (Windows Fileshare)

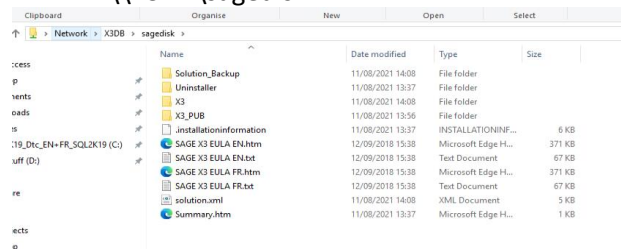
Update X3WEB to allow from X3DB

TCP 51895 (AdxAdmin)

TCP 51801 (Runtime)

Check can access shared disk

\\X3DB\sagedisk



Name	Date modified	Type	Size
Solution_Backup	11/08/2021 14:08	File folder	
Uninstaller	11/08/2021 13:37	File folder	
X3	11/08/2021 14:08	File folder	
X3_PUB	11/08/2021 13:56	File folder	
InstallationInformation	11/08/2021 13:37	INSTALLATIONINF...	6 KB
SAGE X3 EULA EN.htm	12/09/2018 15:38	Microsoft Edge H...	371 KB
SAGE X3 EULA EN.txt	12/09/2018 15:38	Text Document	67 KB
SAGE X3 EULA FR.htm	12/09/2018 15:38	Microsoft Edge H...	371 KB
SAGE X3 EULA FR.txt	12/09/2018 15:38	Text Document	67 KB
solution.xml	11/08/2021 14:08	XML Document	5 KB
Summary.htm	11/08/2021 13:37	Microsoft Edge H...	1 KB

Install SQL Server Management tools (18.8)

T:\Software\SSMS18\SSMS-Setup-ENU_18.8.exe

Change install drive to “D:\Microsoft SQL Server Management Studio 18”

Pin to taskbar

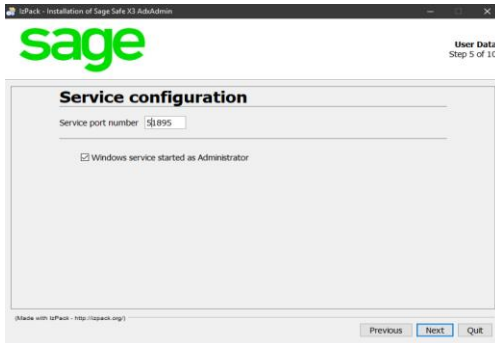
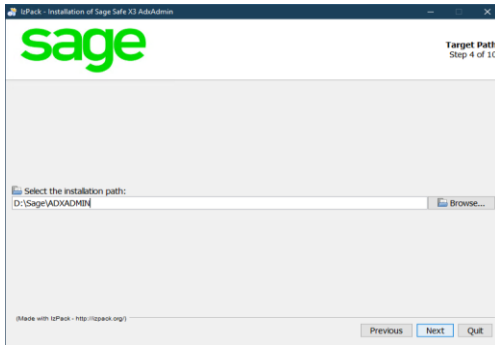
Test can connect to the database using SSMS

Server name : X3DB\SAGEX3

Login as “sa” user

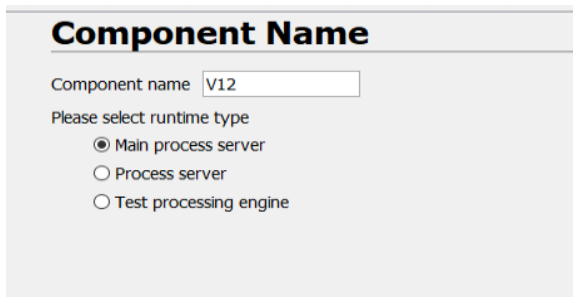
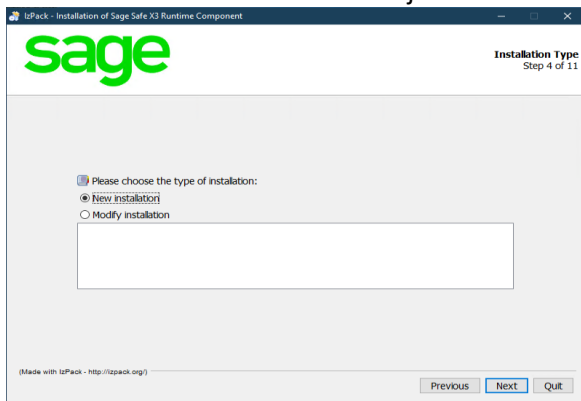
Install ADXAdmin

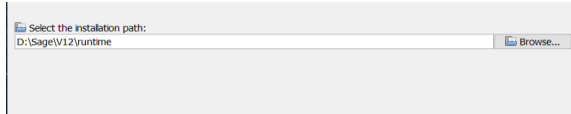
Launch “adxadmin-93.3.45.jar” from directory “E:\X3Installs\AdxAdmin”



Install Main Runtime

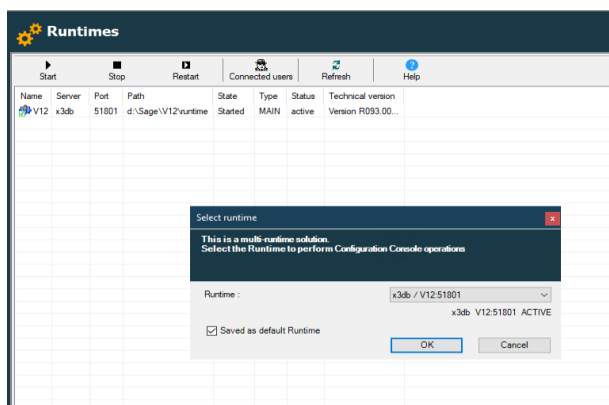
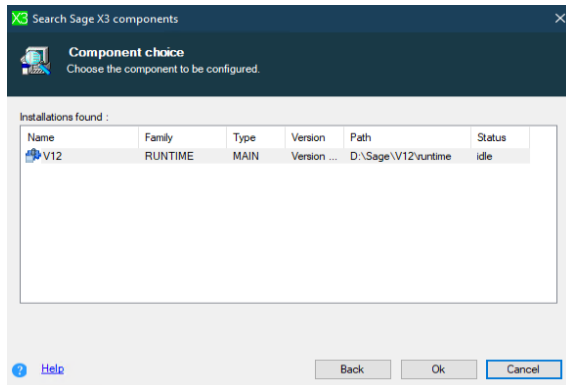
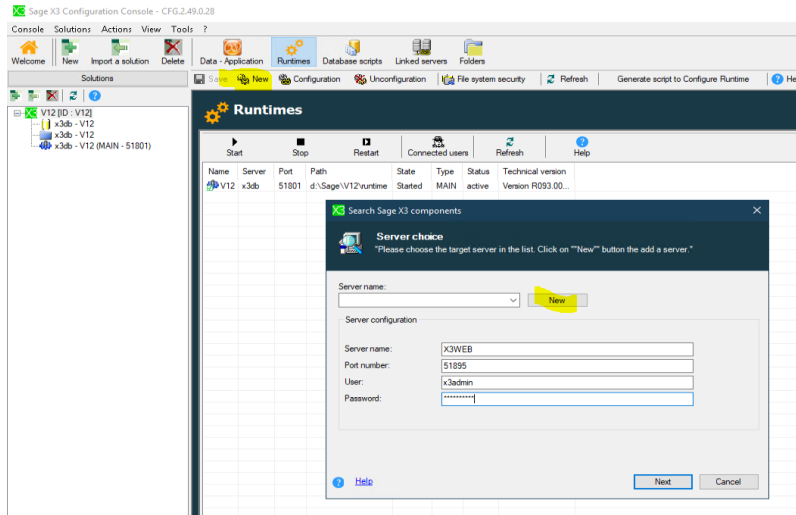
Launch "runtime-93.3.45.jar" from directory "E:\X3Installs\Runtime"





Run Sage X3 console to configure the solution

Add new Runtime for server X3WEB



Selected ODBC tool path, but nothing is shown in the drop down list. *I'd missed some of the pre-reqs!!* https://online-help.sageerp3.com/erp/12/public/prerequisites_windows-sql-server.html

Download and install the ODBC v17, then the Command Line Utilities v15

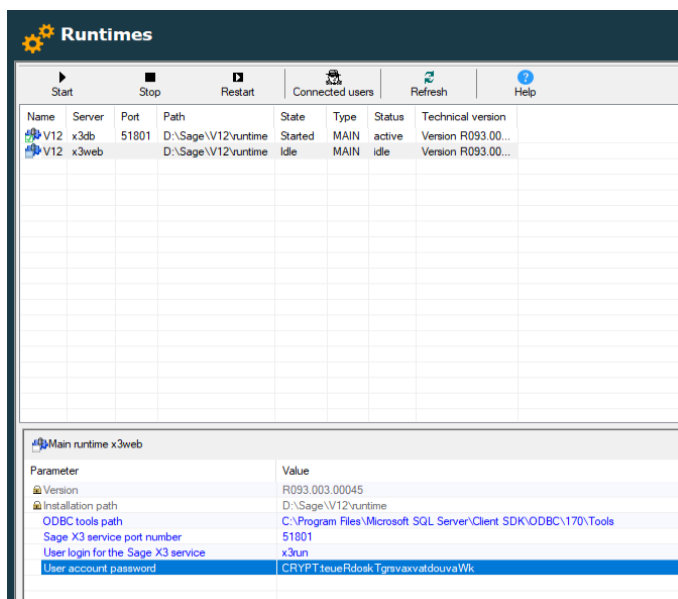
Restart server

ODBC tools path = C:\Program Files\Microsoft SQL Server\Client SDK\ODBC\170\Tools (From dropdown list)

Safe X3 service port number = 51801

User login for the SAFE X3 service = x3run

User account password



The screenshot shows the Sage Runtimes management interface. At the top, there are control buttons for Start, Stop, Restart, Connected users, Refresh, and Help. Below this is a table listing runtime services:

Name	Server	Port	Path	State	Type	Status	Technical version
V12	x3db	51801	D:\Sage\V12\runtime	Started	MAIN	active	Version R093.00...
V12	x3web		D:\Sage\V12\runtime	Idle	MAIN	idle	Version R093.00...

Below the table, the configuration panel for the selected 'Main runtime x3web' service is shown:

Parameter	Value
Version	R093.003.00045
Installation path	D:\Sage\V12\runtime
ODBC tools path	C:\Program Files\Microsoft SQL Server\Client SDK\ODBC\170\Tools
Sage X3 service port number	51801
User login for the Sage X3 service	x3run
User account password	CRYFTteueRdoskTgrvaxvatdourvaWk

Click "Configuration"

Configuration

Configuration of V12 on x3web

✓ Operation completed.

[Help](#)

Progression Parameter Trace

Action	Status
✓ Service stop	Successful completion
✓ Check folders	Successful completion
✓ Service cleaning	Successful completion
✓ Services file update	Successful completion
✓ Generation of file env.bat	Successful completion
✓ Generation of file configRuntime	Successful completion
✓ Registry update	Successful completion
✓ Sql Server ODBC data source configuration	Successful completion
✓ Service creation	Successful completion

```

Progression    Parameter    Trace
11/08/2021 15:55:53 : INFO - -----
11/08/2021 15:55:53 : INFO - Sage Runtime V12 setup 11/08/2021 15:55:53
11/08/2021 15:55:53 : INFO - Starting MAIN Runtime server configuration V12
11/08/2021 15:55:53 : INFO - Sage Runtime server setup --*
11/08/2021 15:55:53 : INFO - Reading Adxinstalls on x3web...
11/08/2021 15:55:53 : INFO - Information from adxinstalls.xml retrieved.
11/08/2021 15:55:53 : INFO - Ok
11/08/2021 15:55:53 : INFO - Reading solution.xml on x3web...
11/08/2021 15:55:53 : INFO - Database is on x3db and runtime is on x3web : distant database setup. (LibAdm.GenSolutionXml)
11/08/2021 15:55:53 : INFO - Information from solution.xml retrieved.
11/08/2021 15:55:53 : INFO - Ok
11/08/2021 15:55:53 : INFO - Starting configuration from Runtime V12, x3web :
11/08/2021 15:55:53 : INFO - Stop service V12 ok on x3web. (LibAdm.StopAdxNT)
11/08/2021 15:55:58 : INFO - Check application folders on x3web
11/08/2021 15:55:59 : INFO - Creating symbolic link to application path d:\Sage\V12\folders => \\X3DB\saagedisk. (LibAdm.CreateSharedFolder)
11/08/2021 15:56:02 : INFO - Symbolic link to application path d:\Sage\V12\folders => \\X3DB\saagedisk created
11/08/2021 15:56:02 : INFO - Check application folders done
11/08/2021 15:56:03 : INFO - Service deletion V12, x3web ok. (LibAdm.UninstallGesSrv)
11/08/2021 15:56:05 : INFO - Services file C:\Windows\system32\drivers\etc\Services updated. (LibAdm.UpdateServicesFile)
11/08/2021 15:56:05 : INFO - Transfer of file D:\Sage\V12\runtime\bin\env.bat, x3web ok. (LibAdm.GenEnvNT)
11/08/2021 15:56:08 : INFO - Creation and transfer of file configRuntime.json, x3web (LibAdm.configRuntime)
11/08/2021 15:56:08 : INFO - Starting registry update process on x3web. (LibAdm.SetupRegistry)
11/08/2021 15:56:10 : INFO - Distant registry configuration finished.
11/08/2021 15:56:18 : INFO - Creation of SqlServer ODBC data source 'V12' (ODBC Driver 17 for SQL Server) on x3web ok. (LibAdm.CreateSqlOdbc)
11/08/2021 15:56:18 : INFO - Starting service 'V12' on 'x3web'. (LibAdm.InstallGesSrv)
11/08/2021 15:56:26 : INFO - Runtime service 'V12' has been started
11/08/2021 15:56:26 : INFO - Test connect to x3web:51801 from local host X3DB : TCP connection to port 51801 OK
11/08/2021 15:56:26 : INFO - Updating Adxinstalls.xml on x3web...
11/08/2021 15:56:29 : INFO - Update of adxinstalls.xml ok.
11/08/2021 15:56:29 : INFO - Ok
11/08/2021 15:56:29 : INFO - Updating solution.xml on x3web...
11/08/2021 15:56:29 : INFO - Update of runtime component V12 in solution.xml ok.
11/08/2021 15:56:38 : INFO - File solution.xml sent on x3web.
11/08/2021 15:56:38 : INFO - Update of solution.xml ok.
11/08/2021 15:56:38 : INFO - Ok
11/08/2021 15:56:38 : INFO - Runtime server V12 setup finished.
11/08/2021 15:56:38 : INFO - [End]

```

Runtimes

Start Stop Restart Connected users Refresh Help

Name	Server	Port	Path	State	Type	Status	Technical version
V12	x3db	51801	D:\Sage\V12\runtime	Started	MAIN	active	Version R093.003.00045 - SHA=cd2e5ed8b7a88a3715770...
V12	x3web	51801	D:\Sage\V12\runtime	Started	MAIN	active	Version R093.003.00045 - SHA=cd2e5ed8b7a88a3715770...

Install Elastic Search

Use "elasticsearch-7.9.3-windows-x86_64.zip" from directory "T:\Software\ElasticSearch"

Follow the directions in "Additional notes when upgrading ElasticSearch"

<https://support.na.sage.com/selfservice/viewdocument.do?externalId=99424>

Installed into D:\elasticsearch-7.9.3

Created and run batch file "installElastic.cmd" in T:\Software\ElasticSearch

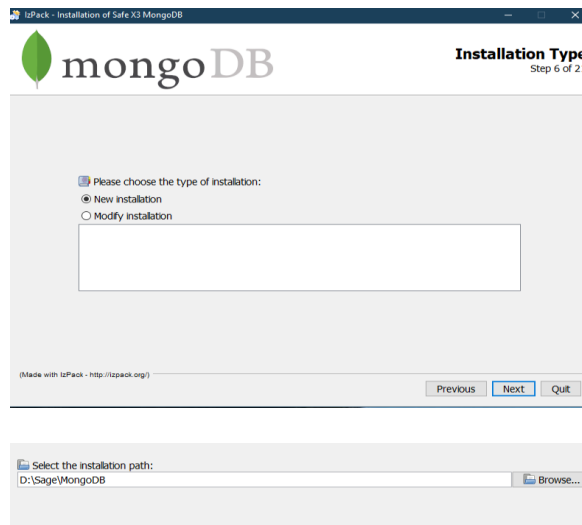
```

REM Run as administrator
REM Set the following variables to suit your environment
set "mzNewServiceName=ElasticSearch_7.9"
set "ES_HOME=D:\elasticsearch-7.9.3"
set "JAVA_HOME=C:\Program Files\Zulu\zulu-8\"
REM The following lines should not need to be changed
cd /d "%ES_HOME%\bin"
set "ES_PATH_CONF=%ES_HOME%\config"
set "ES_START_TYPE=auto"
set "SERVICE_ID=%mzNewServiceName%"
set "SERVICE_DISPLAY_NAME=%mzNewServiceName%"
set "SERVICE_DESCRIPTION=%mzNewServiceName%"
elasticsearch-service.bat install
pause

```

Install MongoDB

Use "Mongodb_4.2.12.zip" (mongo-db-4.2.12.10.jar) from directory "T:\Software\MongoDb"



Service configuration

Configure the mongoDB service

MongoDB node identifier

Path for the database data

Path for logging information files

Path for configuration files

Service port number

Enable ipv6 support

Service configuration

The server uses and accepts only SSL encrypted connections.

Path for certificates storage area

Please choose option for certificate installation :

Simplified certificate installation

Use an existing certificate

Certificate Authority (CA) setup

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

Passphrase of CA

Verification

Certificate data

(*) All fields are mandatory.

Country code

State/Province

City/Locality

Organization

Organizational unit/Team

Name/Certificate Owner

Email

Days of validity

Mongodb server setup

Passphrases can contain all 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 this MongoDB server !

Passphrase of server

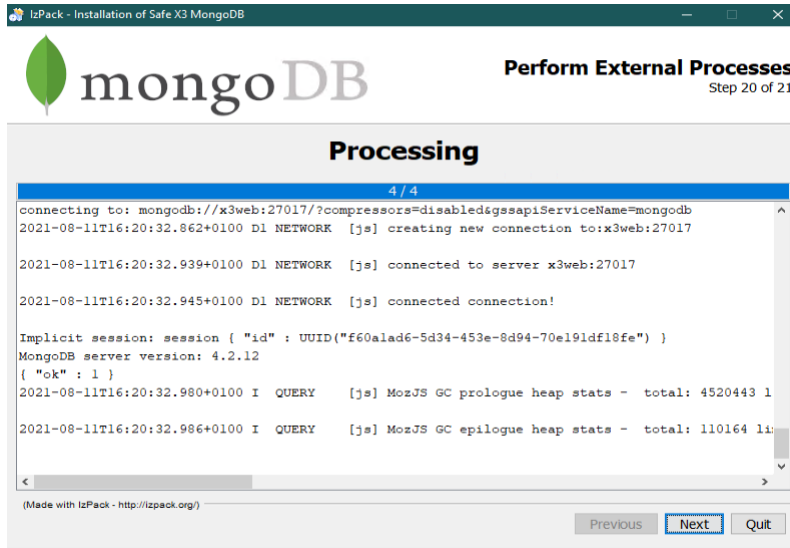
Verification

Host name (FQDN)

Service configuration

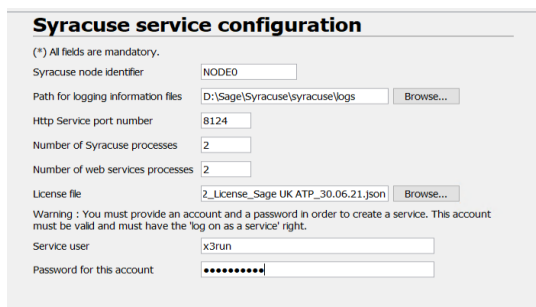
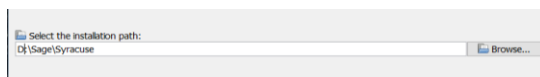
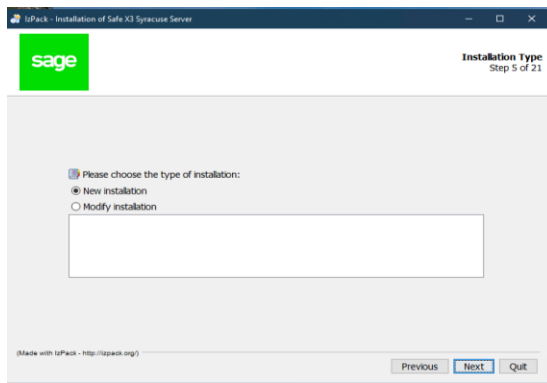
Import and initialize db with data from another instance.

Completed OK



Install Syracuse

Launch "syracuse-server-12.12.0.51.jar" from directory "E:\X3Installs\SyracuseServer"



License file located in "T:\Software\License\"

Certificate management

Path for certificates storage area

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

Certificate data

Country code

State

City

Organization

Organizational unit

Name

Email

Days of validity

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

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 this X3 Runtime

X3 Runtime path

Specify an X3 webservices server path and install certificates

Mongoddb 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 (*.crt)

Client private key file (*.key)

CA certificate file

ElasticSearch connection

Please fill in the parameters of the url to connect to ElasticSearch
(* All fields are mandatory.)

Host name

Service port number

Finished OK

Copy “x3web.pem” from X3WEB Syracuse D:\Sage\Syracuse\syracuse\certs_tools\output to X3DB runtime D:\Sage\V12\runtime\keys

Launch browser and go to Sage X3 login page <http://localhost:8124>

Login as ADMIN user

Create new X3 Solution (Administration, Administration, Endpoints, X3 Solutions)

Information

Code: V12, Description: V12, Solution name: V12, Solution root directory: [empty]

Code: V12, Friendly name: V12, The X3 solution name

Application: X3 ERP

X3 solution

Information Servers Runtimes Endpoints

Servers

Main server host: x3db, Main server port: 51801, Web server host: [empty], Web server port: 8080

Use Http proxy configuration: Certificate: [empty]

BO Server: [empty], X3 batch controller: [empty], Sage X3 Cloud Development Platform URL: [empty], XTreeM service URL: [empty], SQL service: [empty]

Enable application cluster:

Runtimes

Server host	Server port	Tags	tag exclusive	Ban timeout	Blacklisted	Auto config	Disabled
x3db	51801	X3DB	<input type="checkbox"/>		5 <input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
x3web	51801	X3WEB	<input type="checkbox"/>		5 <input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Parallel jobs by runtime during update: 6

Endpoints

Endpoints: [empty]

Save the above changes

Use the “Check all servers settings” option to confirm settings all OK

Successfully connected to x3db:51801

Successfully connected to x3web:51801

[Less](#)

Navigate to Administration, Administration, Endpoints, Endpoints
Edit “X3” endpoint and add “Super administrators” group

Endpoint v12/x3

Information Location Server parameters Administration

Information

Name: V12_X3, Description: X3

Location

Application: X3 ERP

Server parameters

X3 solution: V12, Server folder: X3, Reference folder: [empty]

Administration

Groups: Super administrators

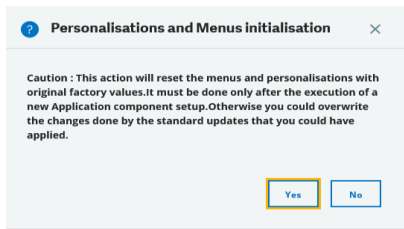
Menu profiles to roles mapping: [empty]

Roles to profession codes mapping: [empty]

Menu profile: [empty], Role: [empty], Profession code: [empty], Role: [empty]

Save

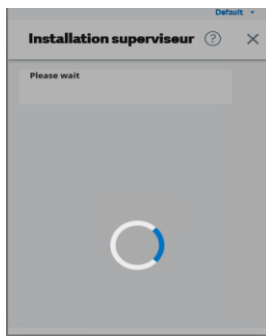
Execute the “Personalizations and Menus initialization” option (otherwise menus are missing)



Logout, login

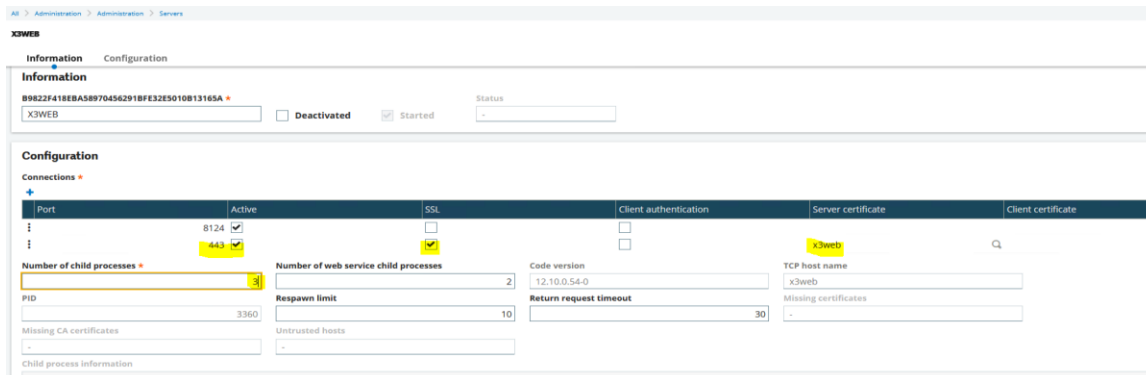
Connect to X3 folder

Launch classic function (Parameters, Users, Users) to execute the supervisor installation



Add 443 to the hosts setup (Administration, Administration, Servers, Hosts)

Keep 8124 as the first in the list



Add 443 to the firewall rules of X3WEB (all IP addresses)

Sage X3 Runtime and Print Server (Server name X3PRT)

Update hosts file

Update firewall rules as per “Which firewall ports need to be open in a multi-node environment”

<https://support.na.sage.com/selfservice/viewdocument.do?externalId=102936>

Also checked <https://docs.microsoft.com/en-us/windows-server/storage/file-server/best-practices-analyzer/smb-open-file-sharing-ports>

Update X3DB to allow from X3PRT

TCP 1433 (Database)

UDP 1434 (Database)

TCP 8080 (Apache)

TCP 51801 (Runtime)

TCP 139 and 445 (Windows Fileshare)

Update X3PRT to allow from X3DB

TCP 51895 (AdxAdmin)

TCP 51801 (Runtime)

TCP 51890 (Print Server)

TCP 51891 (Print Server)

Update X3PRT to allow from X3WEB

TCP 51801 (Runtime)

TCP 51890 (Print Server)

TCP 51891 (Print Server)

Update X3WEB to allow from X3PRT

TCP 51801 (Runtime)

TCP 51890 (Print Server)

TCP 51891 (Print Server)

Check can access shared disk

\\X3DB\sagedisk

Install SQL Server Management tools (18.8)

T:\Software\SSMS18\SSMS-Setup-ENU_18.8.exe

Change install drive to “D:\Microsoft SQL Server Management Studio 18”

Pin to taskbar

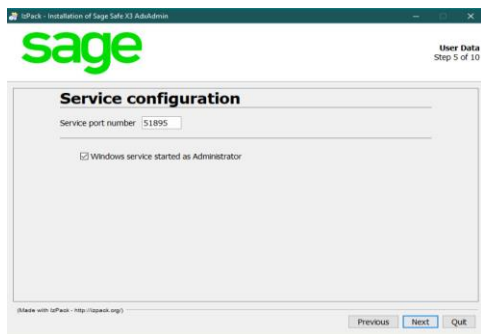
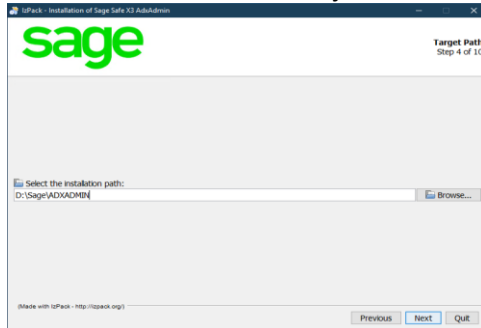
Install the ODBC v17, then the Command Line Utilities v15

Restart server

Test can connect to the database using SSMS
 Server name : X3DB\SAGEX3
 Login as “sa” user

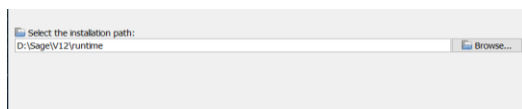
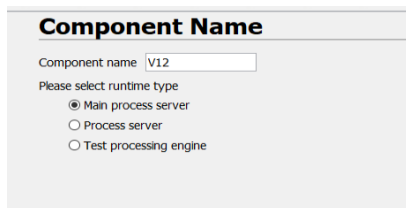
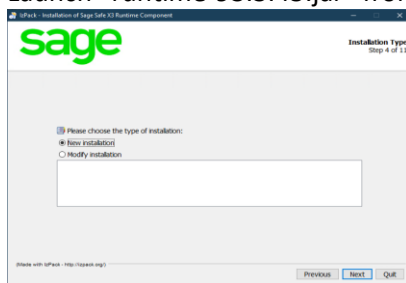
Install ADXAdmin

Launch “adxadmin-93.3.45.jar” from directory “E:\X3Installs\AdxAdmin”



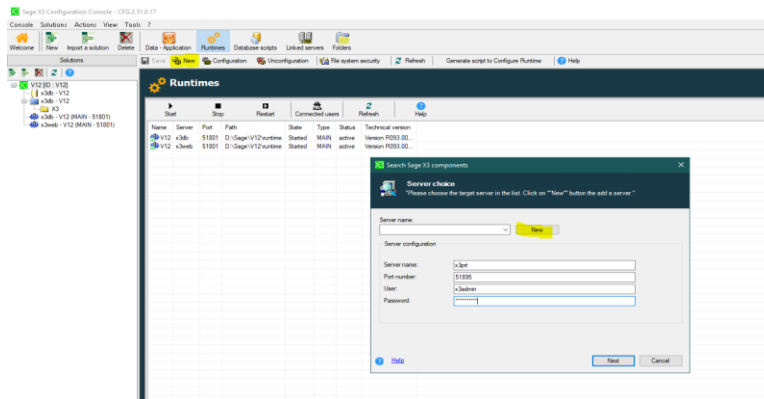
Install Main Runtime

Launch “runtime-93.3.45.jar” from directory “E:\X3Installs\Runtime”



Configure runtime in X3 console

Add X3PRT in “Runtimes”

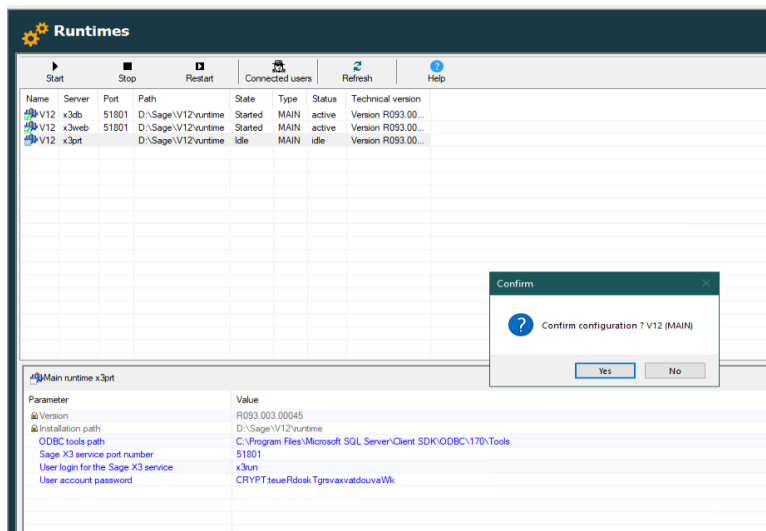


ODBC tools path: C:\Program Files\Microsoft SQL Server\Client SDK\ODBC\170\Tools (from dropdown)

Port number: 51801

User login: x3run

Click “Configuration”



Configuration of V12 on x3prt

Service creation

[Help](#)

Progression	Parameter	Trace
✓ Service stop		Successful completion
✓ Check folders		Successful completion
✓ Service cleaning		Successful completion
✓ Services file update		Successful completion
✓ Generation of file env.bat		Successful completion
✓ Generation of file configRuntime		Successful completion
✓ Registry update		Successful completion
✓ Sql Server ODBC data source configuration		Successful completion
✓ Service creation		Successful completion

Progression	Parameter	Trace
11/08/2021 17:32:01	INFO	-----
11/08/2021 17:32:01	INFO	- Sage Runtime V12 setup 11/08/2021 17:32:01
11/08/2021 17:32:01	INFO	-----
11/08/2021 17:32:01	INFO	- Starting MAIN Runtime server configuration V12
11/08/2021 17:32:01	INFO	- *
11/08/2021 17:32:01	INFO	- Reading AdxInstalls on x3prt...
11/08/2021 17:32:01	INFO	- Information from adxinstalls.xml retrieved.
11/08/2021 17:32:01	INFO	- Ok
11/08/2021 17:32:01	INFO	- Reading solution.xml on x3prt...
11/08/2021 17:32:01	INFO	- Database is on x3db and runtime is on x3prt : distant database setup. (LibAdm.GenSolutionXml)
11/08/2021 17:32:01	INFO	- Information from solution.xml retrieved.
11/08/2021 17:32:01	INFO	- Ok
11/08/2021 17:32:06	INFO	- Starting configuration from Runtime V12, x3prt :
11/08/2021 17:32:06	INFO	- Stop service V12 ok on x3prt. (LibAdm.StopAdxNT)
11/08/2021 17:32:06	INFO	- Check application folders on x3prt
11/08/2021 17:32:07	INFO	- Creating symbolic link to application path d:\Sage\V12\folders => \\X3DB\saagedlink. (LibAdm.CreateSharedFolder)
11/08/2021 17:32:10	INFO	- Symbolic link to application path d:\Sage\V12\folders => \\X3DB\saagedlink created
11/08/2021 17:32:10	INFO	- Check application folders done
11/08/2021 17:32:11	INFO	- Service deletion V12, x3prt ok. (LibAdm.UninstallGesSrv)
11/08/2021 17:32:12	INFO	- Services file C:\Windows\system32\drivers\etc\Services updated. (LibAdm.UpdateServicesFile)
11/08/2021 17:32:21	INFO	- Transfer of file D:\Sage\V12\runtime\bin\env.bat, x3prt ok. (LibAdm.GenEnvNT)
11/08/2021 17:32:24	INFO	- Creation and transfer of file configRuntime.json, x3prt (LibAdm.configRuntime)
11/08/2021 17:32:24	INFO	- Starting registry update process on x3prt. (LibAdm.SetupRegistry)
11/08/2021 17:32:32	INFO	- Distant registry configuration finished.
11/08/2021 17:32:40	INFO	- Creation of SqlServer ODBC data source 'V12' (ODBC Driver 17 for SQL Server) on x3prt ok. (LibAdm.CreateSqlOdbc)
11/08/2021 17:32:40	INFO	- Starting service 'V12' on 'x3prt'. (LibAdm.InstallGessrv)
11/08/2021 17:32:48	INFO	- Runtime service 'V12' has been started
11/08/2021 17:32:48	INFO	- Test connect to 'x3prt:51801' from local host X3DB : TCP connection to port 51801 OK
11/08/2021 17:32:48	INFO	- Updating AdxInstalls.xml on x3prt...
11/08/2021 17:32:51	INFO	- Update of adxinstalls.xml ok.
11/08/2021 17:32:51	INFO	- Ok
11/08/2021 17:32:51	INFO	- Updating solution.xml on x3prt...
11/08/2021 17:32:51	INFO	- Update of runtime component V12 in solution.xml ok.
11/08/2021 17:33:00	INFO	- File solution.xml sent on x3prt.
11/08/2021 17:33:00	INFO	- Update of solution.xml ok.
11/08/2021 17:33:00	INFO	- Ok
11/08/2021 17:33:00	INFO	- Runtime server V12 setup finished.
11/08/2021 17:33:00	INFO	- [End]

Runtimes

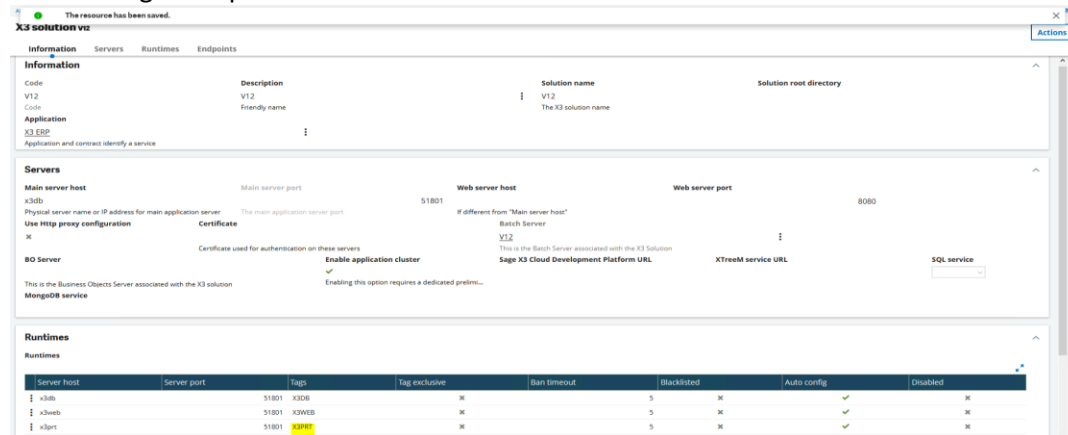
Name	Server	Port	Path	State	Type	Status	Technical version
V12	x3db	51801	D:\Sage\V12\runtime	Started	MAIN	active	Version R093.003.00045 - SHA=cd2e5ed8b7a88a3715770ed230f5a73d2e9e2318
V12	x3web	51801	D:\Sage\V12\runtime	Started	MAIN	active	Version R093.003.00045 - SHA=cd2e5ed8b7a88a3715770ed230f5a73d2e9e2318
V12	x3prt	51801	D:\Sage\V12\runtime	Started	MAIN	active	Version R093.003.00045 - SHA=cd2e5ed8b7a88a3715770ed230f5a73d2e9e2318

Add runtime to X3 solution

Administration, Administration, Endpoints, X3 Solutions

Click “Synchronize runtimes”

Add the Tag for x3prt



Run the “Check all server settings” test



Copy “x3web.pem” file from “D:\Sage\Syracuse\syracuse\certs_tools\output” to “D:\Sage\V12\runtime\keys” directory on X3PRT server

Re-start Syracuse service

[Print Server installation and configuration](#)

Follow the Blog article “New feature in 2021 R3: Multiple print server instances”

<https://www.sagecity.com/gb/sage-x3-uk/b/sage-x3-uk-support-insights/posts/new-feature-in-2021-r3-multiple-print-server-instances>

Finishing off tasks

Setup SEED folder

On X3DB server:

Mount SEED ISO image

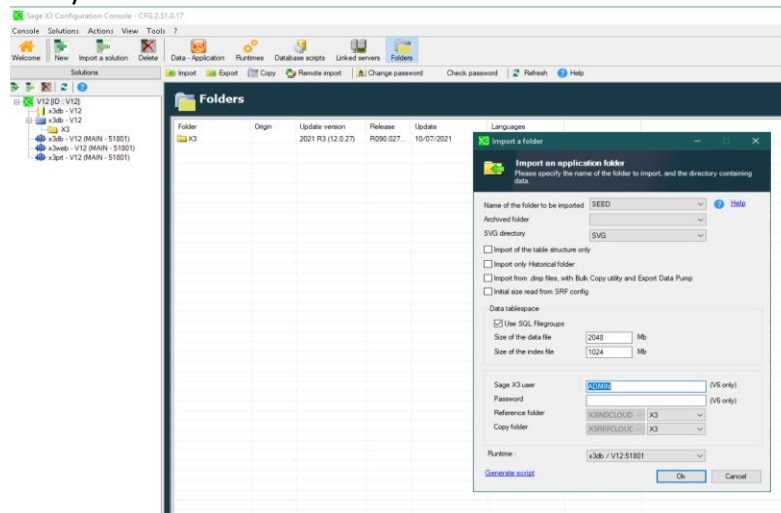
Open archive “E:\Seed\x3-seed-12.0.27.zip” in 7-zip

Extract archive to “T:\Sage”

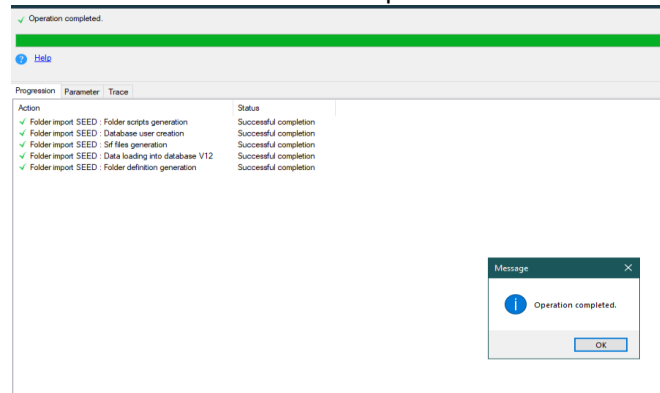
Import SEED in X3 Management Console

Select solution and click the folders icon

Click Import, select the SEED folder from the drop-down list and make sure that SVG is set as the data directory



Takes about 30 minutes to complete



Progression	Parameter	Trace
12/08/2021 12:09:22	INFO	- 609,569,295 KB data to import, 1659.dat file(s)
12/08/2021 12:09:31	INFO	- Regeneration in Progress
		Regeneration in Progress : 1 / 17
		Regeneration in Progress : 2 / 17
		Regeneration in Progress : 3 / 17
		Regeneration in Progress : 4 / 17
		Regeneration in Progress : 5 / 17
		Regeneration in Progress : 6 / 17
		Regeneration in Progress : 7 / 17
		Regeneration in Progress : 8 / 17
		Regeneration in Progress : 9 / 17
		Regeneration in Progress : 10 / 17
		Regeneration in Progress : 11 / 17
		Regeneration in Progress : 12 / 17
		Regeneration in Progress : 13 / 17
		Regeneration in Progress : 14 / 17
		Regeneration in Progress : 15 / 17
		Regeneration in Progress : 16 / 17
		Regeneration in Progress : 17 / 17
		Regeneration of the Index Table . . .
12/08/2021 12:09:40	INFO	- Valfil test performed with success. (LibAdm.RunValfilImportFolderNT)
12/08/2021 12:09:40	INFO	- Testing connection to Runtime V12, host 'x3db:51801' ...
12/08/2021 12:09:43	INFO	- Connection to Runtime x3db:51801 OK
12/08/2021 12:09:43	INFO	- Loading database 'V12' from x3db (Standard SVG mode) ...
12/08/2021 12:09:43	INFO	- 1659 tables found
12/08/2021 12:09:43	INFO	- 0000/1659 tables loaded - 00% - Tables ABANK - AGRPCPY are being loaded
12/08/2021 12:13:22	INFO	- 0082/1659 tables loaded - 05% - Tables AGRPCY - AREPORTV are being loaded
12/08/2021 12:15:36	INFO	- 0164/1659 tables loaded - 10% - Tables AREPORTX - BALAGEEOY are being loaded
12/08/2021 12:18:30	INFO	- 0246/1659 tables loaded - 15% - Tables BALANA - BSIINVDIO are being loaded
12/08/2021 12:18:54	INFO	- 0328/1659 tables loaded - 20% - Tables BSIINVDIOD - CDFPAR are being loaded
12/08/2021 12:19:20	INFO	- 0410/1659 tables loaded - 25% - Tables CDIADSP - CUNSESSION are being loaded
12/08/2021 12:19:48	INFO	- 0492/1659 tables loaded - 30% - Tables DADCPY - EDIFRM are being loaded
12/08/2021 12:20:12	INFO	- 0574/1659 tables loaded - 35% - Tables EDIMSG - ESLSALTYPD are being loaded
12/08/2021 12:20:38	INFO	- 0656/1659 tables loaded - 40% - Tables ESLTYPASS - GCCEPYMPRT are being loaded
12/08/2021 12:21:25	INFO	- 0738/1659 tables loaded - 45% - Tables GCLCACEPAR - HONPRV are being loaded
12/08/2021 12:21:50	INFO	- 0820/1659 tables loaded - 50% - Tables HOROITM - MARASSREP are being loaded
12/08/2021 12:22:29	INFO	- 0902/1659 tables loaded - 55% - Tables MARDEF - OPPORSBB are being loaded
12/08/2021 12:22:57	INFO	- 0984/1659 tables loaded - 60% - Tables OPPORSTA - PJMCNSVTETM2 are being loaded
12/08/2021 12:23:26	INFO	- 1066/1659 tables loaded - 65% - Tables PJMCNSVTETMP - PRETURN are being loaded
12/08/2021 12:25:15	INFO	- 1148/1659 tables loaded - 70% - Tables PRETURN - SAFTPTTMP1 are being loaded
12/08/2021 12:25:36	INFO	- 1230/1659 tables loaded - 75% - Tables SAITRS - SNPTSCLNK are being loaded
12/08/2021 12:25:59	INFO	- 1312/1659 tables loaded - 80% - Tables SNPTSKOPE - STOPREW are being loaded
12/08/2021 12:27:08	INFO	- 1394/1659 tables loaded - 85% - Tables STOQLYD - TABROUALT are being loaded
12/08/2021 12:27:31	INFO	- 1476/1659 tables loaded - 89% - Tables TABROUND - TMPPAYTOT are being loaded
12/08/2021 12:27:52	INFO	- 1558/1659 tables loaded - 94% - Tables TMPPLNFAS - WIPWSTTMP are being loaded
12/08/2021 12:28:34	INFO	- End of database load. (LibAdm.RunValfilImportFolderNT)
12/08/2021 12:28:34	INFO	- Writing _adxseedseq.bat ... (LibAdm.RunValfilImportFolderNT)
12/08/2021 12:28:35	INFO	- AdxAdmin x3db:51895 connection : OK
12/08/2021 12:28:35	INFO	- File d:\Sage\V12\folders\SEED\SVG_adxseedseq.bat sent on application server.
12/08/2021 12:28:35	INFO	- Launching _adxseedseq.bat ... (LibAdm.RunValfilImportFolderNT)
12/08/2021 12:28:38	INFO	- Execution of _adxseedseq.bat done.
12/08/2021 12:28:38	INFO	- Folder 'SEED' imported by Runtime V12 in 00:19:19.4102513
12/08/2021 12:28:45	INFO	- Checking user script file d:\Sage\V12\folders\SEED\init_console.cmd on server. (LibAdm.CreateFolderDef)
12/08/2021 12:28:46	INFO	- No User script d:\Sage\V12\folders\SEED\init_console.cmd on server.
12/08/2021 12:28:46	INFO	- Launching database cleaning script file. (LibAdm.CreateFolderDef)
12/08/2021 12:28:47	INFO	- Initializing the supervisor from x3db / V12:51801
12/08/2021 12:37:28	INFO	- The supervisor initialization has been successfully completed. (00:08:41.0944296)
12/08/2021 12:37:28	INFO	- Application setup finished.
12/08/2021 12:37:28	INFO	- [End]

Switch to X3WEB server and login as ADMIN user

Define endpoint for the SEED folder

Administration, Administration, Endpoints, Endpoints

All > Administration > Administration > Endpoints

Endpoint

Information Location Server parameters Administration

Information

Name * SEED Description * SEED

Location

Application * X3 ERP

Application and contract identify a service

Server parameters

X3 solution * V12 Server folder * SEED Reference folder

X3 solution settings

Historical folder Is this endpoint connected to a hist... Type: Production Help Base URL

Administration

Groups

Super administrators

Menu profiles to roles mapping Roles to profession codes mapping

Menu profile Role Profession code Role

No data to display No data to display

Associate X3 menu profiles with roles Associate roles with X3 profession codes

Logout, login and connect to SEED folder to check results

Apply mandatory patches

Mount 12.0.27 ISO

Check for patches in E:\X3Installs\Patch

HotFix_12.0.27.zip exists and needs to be applied

Apply patch via Administration, Utilities, Update, Updates

New update

Upload HotFix_12.0.27.zip

Select X3 as folder to apply to

Save

The resource has been saved.

Updates

Update Apply to folders Result

Update	Name	Description	Version	Upgrades list	releaseNote
	HotFix_12.0.27	HOTFIX Patches	R090.027.055	<ul style="list-style-type: none"> Update to: R090.027.055 Update from: R090.027.055 Control 	

Apply to folders

Root endpoint

Folders to update

Name	Parent	Legislations	Version	Updated	Maintenance	Integration	Generation	Status	Detailed status	Log
X3		ANG,ARE,AUS,AUT,BEL,BHR,BRA,BRI,CAN,CHL,DNK,FRA,GER,IRL,ITA,POL,POR,SAL,SPA,SWI,USA,ZAF	90.27.55	10/07/2021						
SEED	X3	ANG,ARE,AUS,AUT,BEL,BHR,BRI,CAN,CHL,DNK,FRA,GER,IRL,ITA,POL,POR,SAL,SPA,SWI,USA,ZAF	90.27.55	10/07/2021						

Result

Applied	Status	Integration status	Generation status	Detailed status

Application Datetime Scheduled Schedule datetime Expiry datetime

Select "Apply Update" and check results

Completes in around 2 minutes

Name	Parent	Legislations	Version	Updated	Maintenance	Integration	Generation	Status	Detailed status	Log
X3		ANG,ARE,AUS,AUT,BEL,BHR,BRA,BRI,CAN,CHL,DNK,FRA,GER,IRL,ITA,POL,POR,SAU,SPA,SWI,USA,ZAF	90.27.55	10/07/2021		success	success	success		
SEED	X3	ANG,ARE,AUS,AUT,BEL,BHR,BRI,CAN,CHL,DNK,FRA,GER,IRL,ITA,POL,POR,SAU,SPA,SWI,USA,ZAF	90.27.55	10/07/2021		success	success	success		

Setup user for batch server and change batch server to use this user

Create role "batch" using ERPFULL badge

Create group "batch" linked to "batch" role and with "SEED" and "X3" endpoints

Create user "batch" linked to group "batch"

Create folder user "batch" for X3 and SEED folders, copied from ADMIN

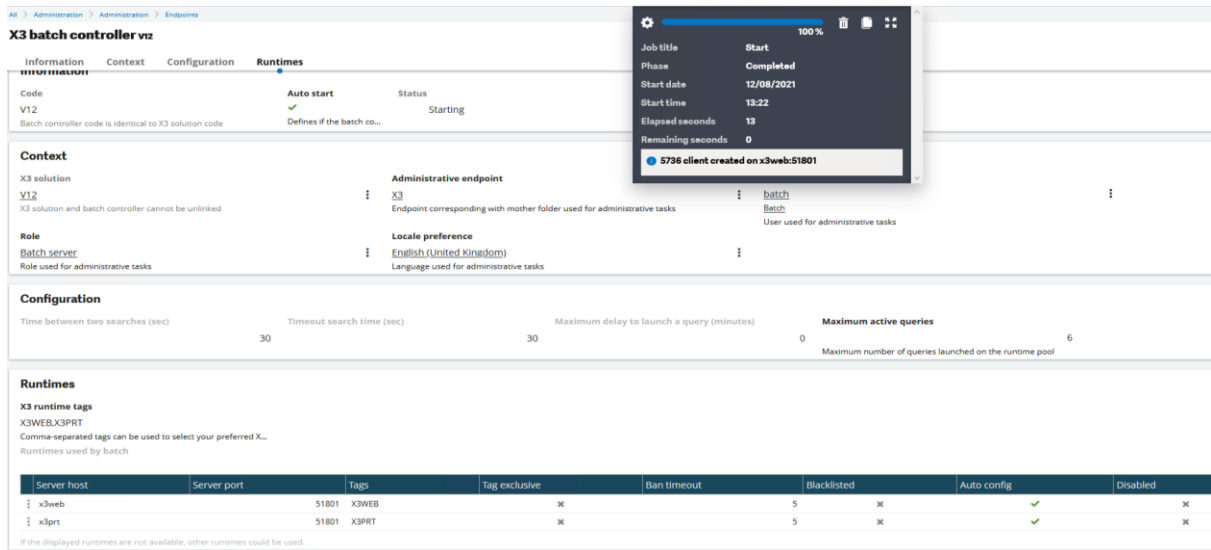
Administration, Administration, Endpoints, Batch server

Set Auto Start

Change the user, Role and Locale and set the number of queries for the runtimes

NOTE: I am restricting the batch server to only use two out of the three runtime servers using the "X3 runtime tags"

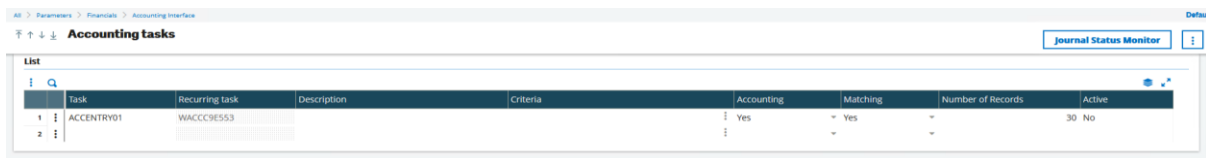
Startup the Batch Server



Check Accounting Tasks for the SEED folder

Connect to SEED folder

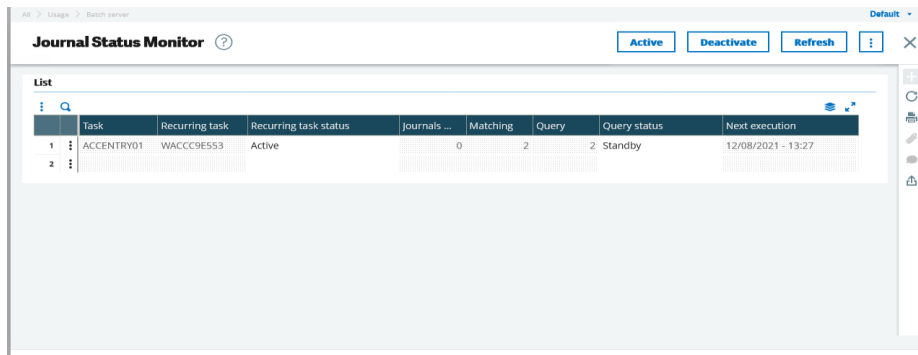
Check setup via Parameters, Financials, Accounting Interface, Accounting Tasks



Navigate to Usage, Batch Server, Accounting Tasks

Click "Active" button and Start the Accounting Tasks

Click "Refresh" button to confirm status "Active" and a number is allocated to "Query"



Usage, Batch Server, Query Management

Should see the task running

Query management

Query Refresh Log

Requests

Number	Folder	Task Code	Language	User	Date	Time	One User	Status	End Time	End date	Task Type	Script	Server
1	SEED	ACCBATCH1	FRA	ADMIN	12/08/21	13:28	No	Standby		12/08/21	Processing	BATCHCPT	
2	SEED	ACCBATCH1	FRA	ADMIN	12/08/21	13:27	No	Finished	13:27:15	12/08/21	Processing	BATCHCPT	X3PRT

Setup user for use with Web Services

Create role “webserver” using ERPFULL badge

Create group “webserver” linked to “webserver” role and with “SEED” endpoint

Create user “webserver” linked to group “webserver”

Create folder user “WEBSV” for SEED folder, copied from ADMIN

Setup SOAP Classic Pool for SEED folder

Navigate to Administration, Administration, Web Services, Classic SOAP pools configuration.

New SOAP pool

Soap pool configuration: wsseed

Information X3 connection Channels

Information

Alias: WSSEED Auto start Stopped manually

X3 connection

Endpoint: SEED X3 runtime tags: X3DBLX3PRT Locale: English (United Kingdom)

User: webserver

Channels

Maximum size: 6 Initialisation size: 2 Unused timeout (mn): 20 Life timeout (mn): 720

Host	Port	Process	Pid	Status	Endpoint	User login	Locale	Last action	Action By	Ws Queue	Ws Count
No data to display											

NOTE: I am restricting the SOAP Pool to only use two out of the three runtime servers using the “X3 runtime tags”

Start the web pool

Soap pool configuration: wsseed

Information X3 connection Channels

Information

Alias: WSSEED Auto start Stopped manually

X3 connection

Endpoint: SEED X3 runtime tags: X3DBLX3PRT Locale: English (United Kingdom)

User: webserver

Channels

Maximum size: 6 Initialisation size: 2 Unused timeout (mn): 20 Life timeout (mn): 720

Host	Port	Process	Pid	Status	Endpoint	User login	Locale	Last action	Action By	Ws Queue	Ws Count
X3WEB	0	W1	4292	Started	SEED	webserver	en-GB	Manual start	admin	0	0

Job title: [X3WEB-0 W0 680] pool started
 Phase: Completed
 Start date: 12/08/2021
 Start time: 13:39
 Elapsed seconds: 11
 Remaining seconds: 0

X3 Session	X3 Pid	Status	X3 host	X3 port	X3 user login	X3 locale code	Solution	Folder	Web Service	Log	Creation date	Last access	Expiry date	Ws Count
5d	4480	Available	x3prt	51801	webserver	en-GB	V12	SEED			2021-08-12T12:39:57.757Z	2021-08-12T12:39:57.757Z	2021-08-12T13:00:02.226Z	0
5z	5964	Available	x3db	51801	webserver	en-GB	V12	SEED			2021-08-12T12:40:02.480Z	2021-08-12T12:40:02.480Z	2021-08-12T13:00:05.206Z	0

Update search index (Elastic Search) and check works OK

- Connect to SEED folder
- Go to Administration, Usage, Search Index Management
- Select Delete index before update
- Click Update index

Takes about 20 minutes to complete

Once finished, check can do a search - e.g. search for text "Customer" should return some data:

The screenshot shows the Sage X3 search interface. The search term is 'customer'. The results are divided into two main sections: 'FUNCTIONS (107)' and 'DATA (98)'. The 'FUNCTIONS' section lists various system functions related to customers, such as 'BP CUSTOMER', 'GEBBPC', 'GESTBV', 'RVEN008', and 'Manage Customers'. The 'DATA' section displays a list of customer accounts with details like account code (e.g., BEG-290000, BEG-400000, BEI-290000, BEI-400000, BEM-290000, BEM-400000, FRA-411000), account type (Accounts), and translatability. A 'FILTERS FOR DATA' sidebar on the right allows filtering by type, including Accounts (49), Statistical parameters (32), Dimensions (8), Dimension defaults (2), Function Profile (2), Users (7), Statistical triggers (1), and Charge code (1).

Testing, testing, testing

Complete your testing, ensuring the Runtime load balancing is working as expected, include some failover scenarios such as one or multiple runtime nodes failing.

Conclusion

This “Build diary” document provides a three-server installation for informal testing, primarily aimed at the Multi-Main runtime functionality