

Test system Build Diary

“Big Build” Part 2 – Upgrade to 2023 R1

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

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Introduction

What is a "Build Diary"

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

Why is this being shared

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

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

Target Audience

This document is aimed at Sage X3 Certified Technical consultants. Sage 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 upgrading a multi-node 2022 R4 instance to the latest X3 patch 2023 R1.

2022 R4 – Multi-Node upgrade to 2023 R1 build diary

Objective

I want to upgrade an existing multiple VM installation from 2022 R4 to 2023 R1.

Current Architecture

Six Windows Server 2022 servers (Server names mzAD, mzDB, mzPRINT, mzWEB1, mzWEB2, mzWEB3)

Software already loaded:

Windows Server 2022

OpenJDK 1.8.0_282

Edge, Firefox and Chrome browsers

7-Zip 19.00

Sage X3 2022 R4 (Patch 32)

Windows users setup (Local users)

“x3admin” for installation and management

“X3run” for service runtime

mzWEB1

- Syracuse (12.17.0.33)
- MongoDB (4.4.12.9)
- X3 Runtime (95.2.85)
- AdxAdmin (95.2.85)
- Powershell 7.3.1

mzWEB2

- Syracuse (12.17.0.33)
- MongoDB (4.4.12.9)
- X3 Runtime (95.2.85)
- AdxAdmin (95.2.85)
- Powershell 7.3.1

mzWEB3

- Syracuse (12.17.0.33)
- MongoDB (4.4.12.9)
- X3 Runtime (95.2.85)
- AdxAdmin (95.2.85)
- Powershell 7.3.1

mzPRINT

- Elastic Search (7.16.3)
- Print Server (2.27.0.3)
- AdxAdmin (95.2.85)

mzAD

- MS AD
- Apache Load Balancer (Apache 2.4)

- X3 Console (2.56.0.19)

mzDB

- SQL Server Database (2019)
- SSMS (18.12.1)

Firewall setup

All servers are in the same MS AD domain. Firewall rules between these servers allow all traffic. Only external traffic needs to be added to the firewall rules, which should only be port 443 into the MZAD server (see notes later in this document).

Documentation to use for planning and execution of this task

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

Upgrading documentation

Latest release notes (Patch 33 in this case) https://online-help.sageerp3.com/erp/12/wp-static-content/news/en_US/ReleaseNote/RELNOTE_V12.0.33.htm

Patch readme included in “x3-patch-documents-12.0.33.zip”

Summary of steps

Planning

Consider what steps will be required for the LIVE migration so the exact same steps can be practiced and validated in the TEST upgrade. Perhaps the most important factors to consider are: Is the test system the same architecture as LIVE? How long is the downtime window for the LIVE migration?

Plan for preventing users from accessing the system, preventing batch jobs from running and preventing any external interfaces from accessing the system during the upgrade process.

Document and agree with the business what testing you need to do before handing over to the users for testing and what testing the users need to do to validate the upgrade has been successful.

Check prereqs, release notes, patch notes and any other relevant documentation to confirm which technology components are needed and what order to apply.

Upgrade steps

Upgrade technology components

- Console 2.57.0
- AdxAdmin 95.2.97
- Runtime 95.2.97
- Syracuse 12.18.0
- Print Server 2.28.0

Upgrade Sage X3 patch level

- Patch 33

Optional upgrade

- SQL Server 2022

Post upgrade

Perform any post upgrade steps.

None identified for my configuration.

Run sanity checks before handing over to selected users for more thorough validation, then hand over for user acceptance testing.

Sage X3 upgrade steps

For my upgrade, I will be shutting all X3 services down during the upgrade process and shutting down my Apache load balancer to prevent all users and any external interfaces accessing the system until I have completed the upgrade and initial testing.

The latest software can be obtained from the ISO image for patch 33, however always remember to check for later versions on the FTP site. In this case there are later updates for Syracuse since the ISO image was released, so this should be downloaded.

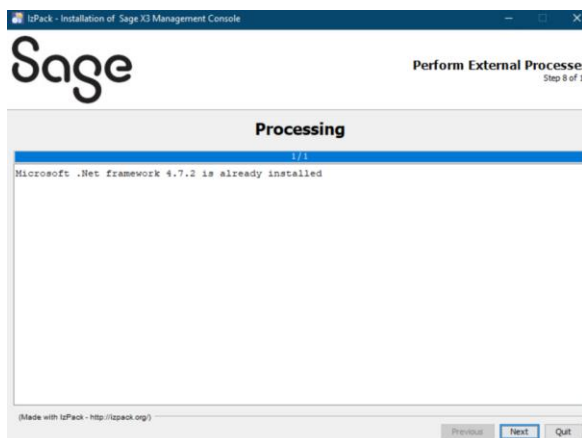
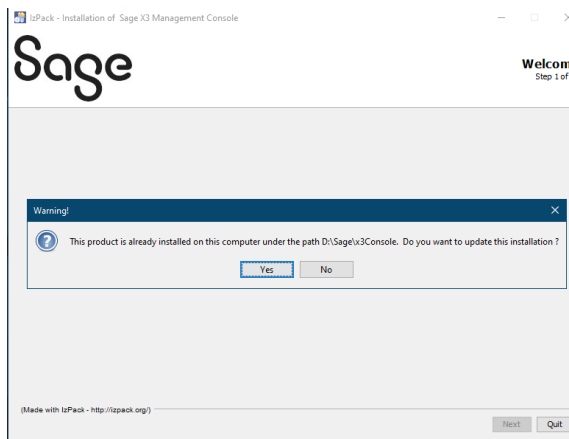
Whilst the X3 Print Server latest version is not listed as mandatory, it is recommended to also upgrade.

Windows Server 2022 is certified for patch 33. I do intend to upgrade my Windows SQL Server, but will be done at a later date (Windows 2019 is also certified for patch 33 which is the version I am already using)

Upgrade X3 Console (mzAD server)

https://online-help.sageerpx3.com/erp/12/public/prerequisites_console.html

Launch “console-2.57.0.11-win.jar“



Upgrade Application Cluster (mzWIN1, mzWIN2, mzWIN3)

Online help (

<https://online-help.sageerpx3.com/erp/12/wp-static-content/public/Application%20Cluster%20Architecture/Content/How-to%20guides/Platform/Application%20cluster%20architecture/Topic%201%20Application%20cluster%20architecture.htm>)

Additional notes when installing Application Cluster (

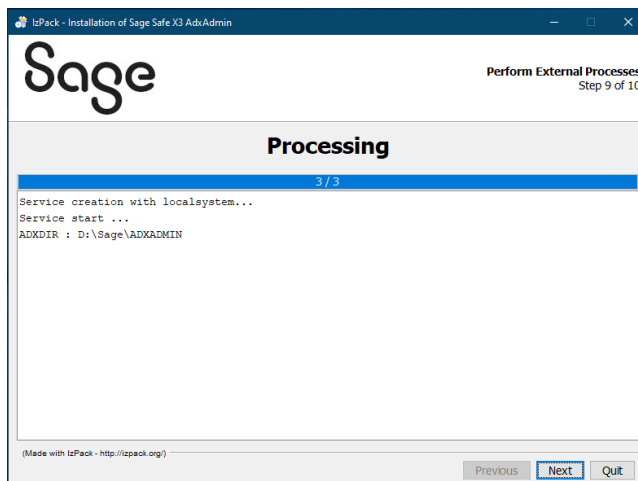
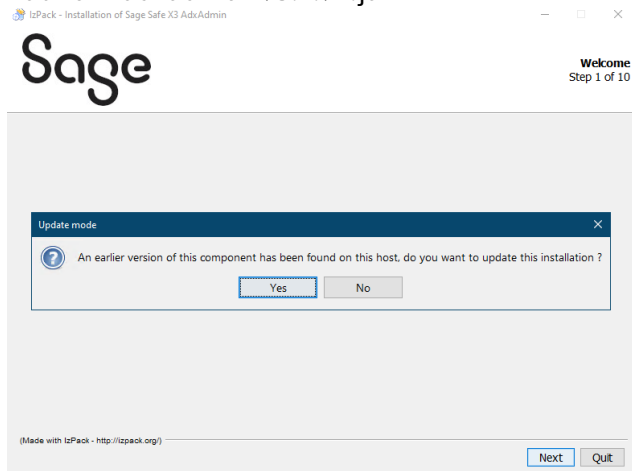
<https://support.na.sage.com/selfservice/viewdocument.do?externalId=109651>)

Prerequisites

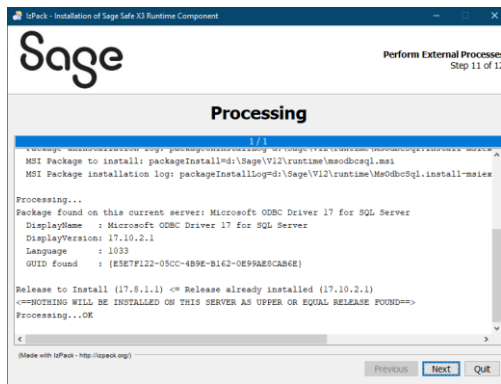
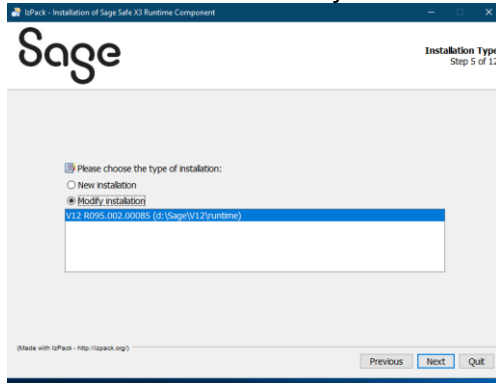
As I am upgrading from 2022 R4 I already have suitable prereqs installed.

Upgrade AdxAdmin

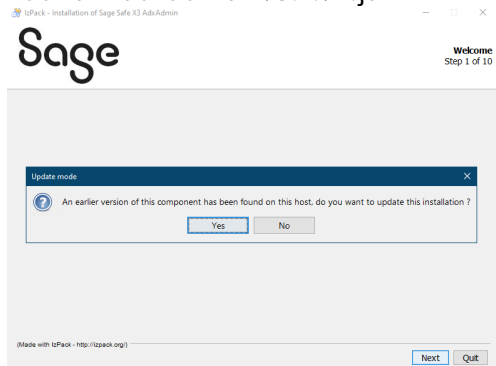
Launch “adxadmin-95.2.97.jar“

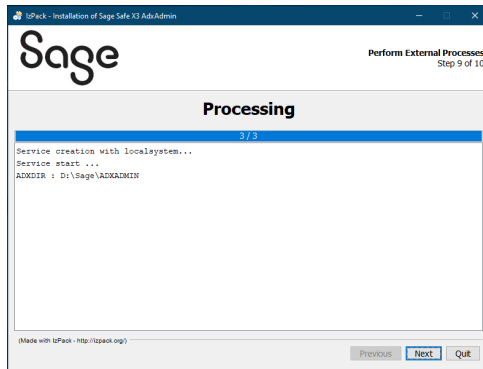


Upgrade Runtime (mzWIN1, mzWIN2, mzWIN3) Launch “runtime-95.2.97.jar“

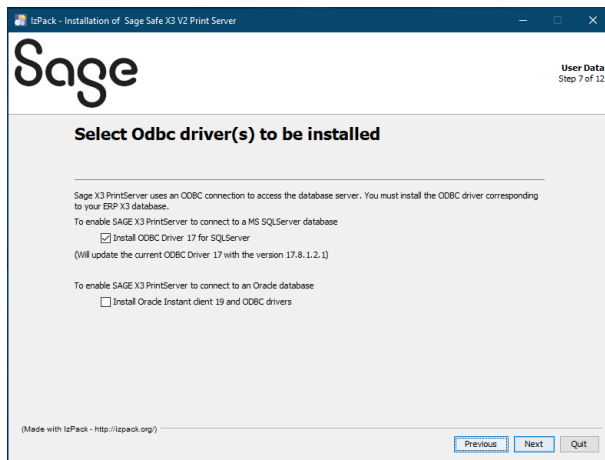
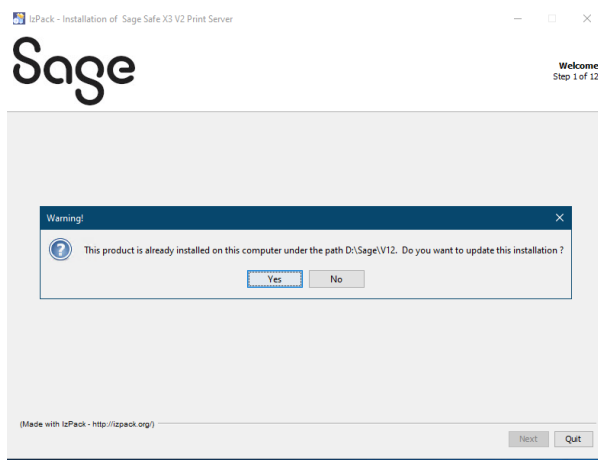


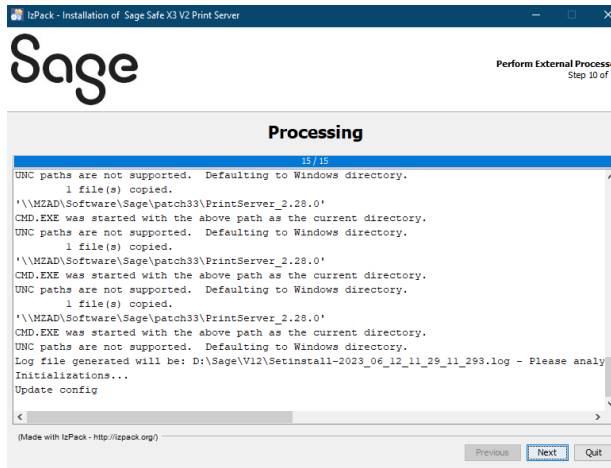
Upgrade Print Server (mzPRINT) Launch “adxadmin-95.2.97.jar“





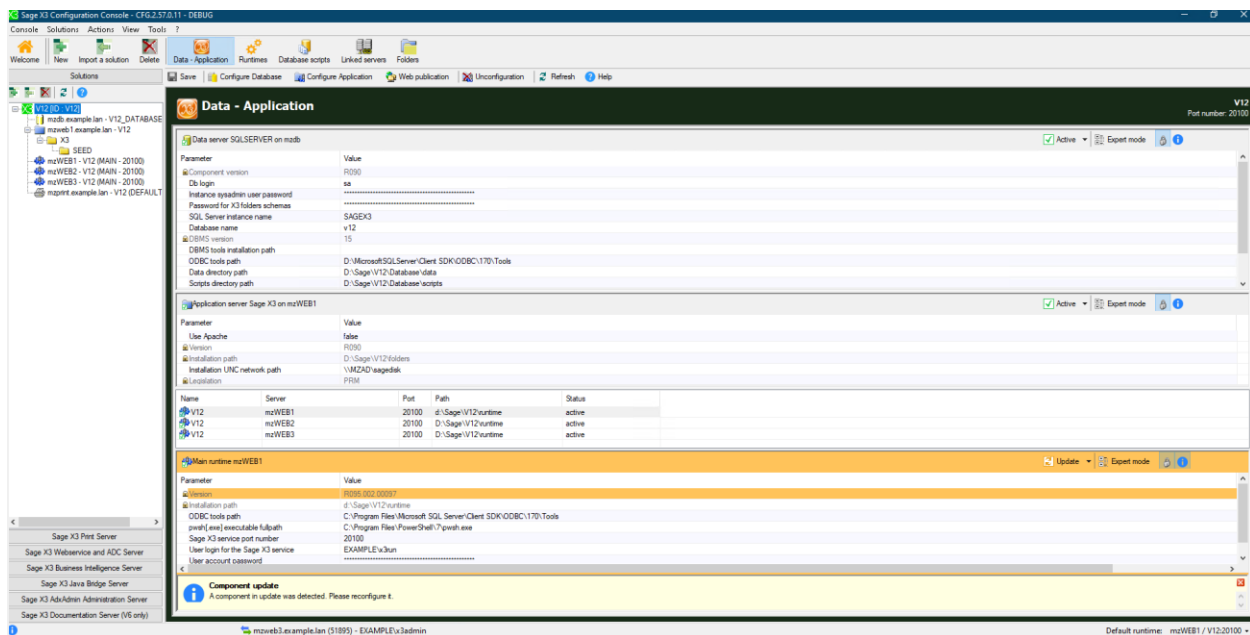
Launch “print-server-2.28.0.10-win.jar“



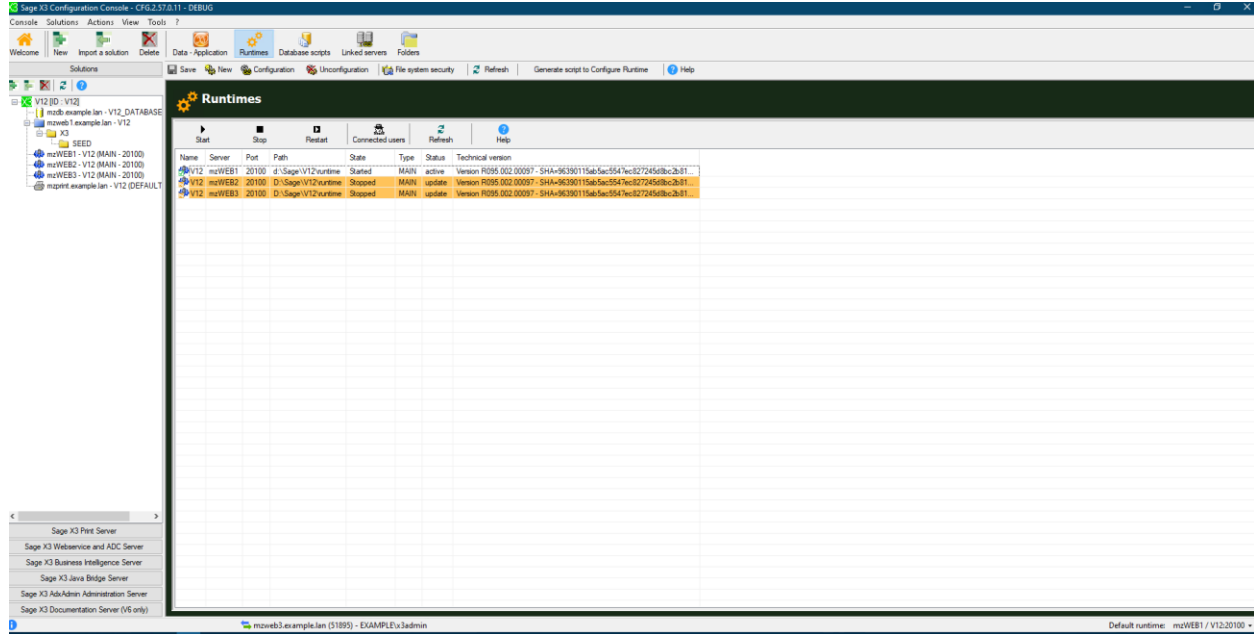


Classic Components configuration (mzAD)
https://online-help.sageerpx3.com/erp/12/public/configuration-console_console.html
 Launch X3 Console

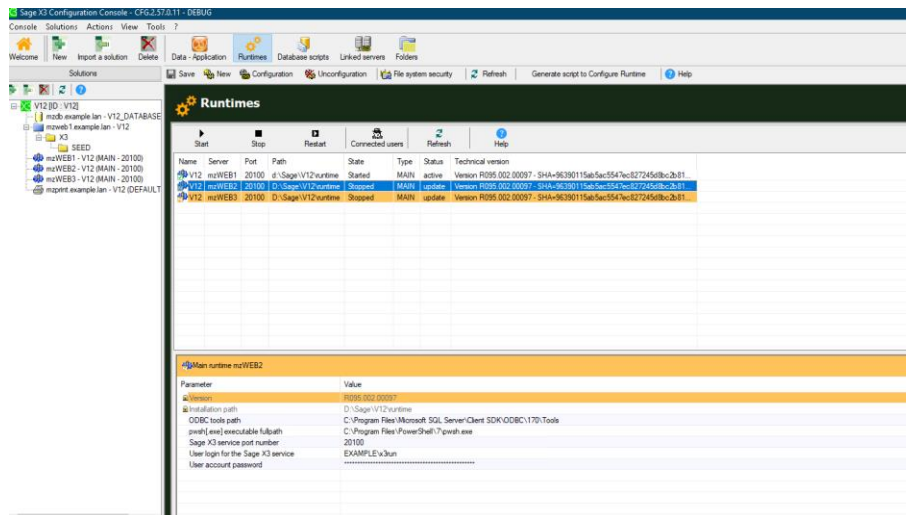
Configure Application and Runtimes
 Open the solution



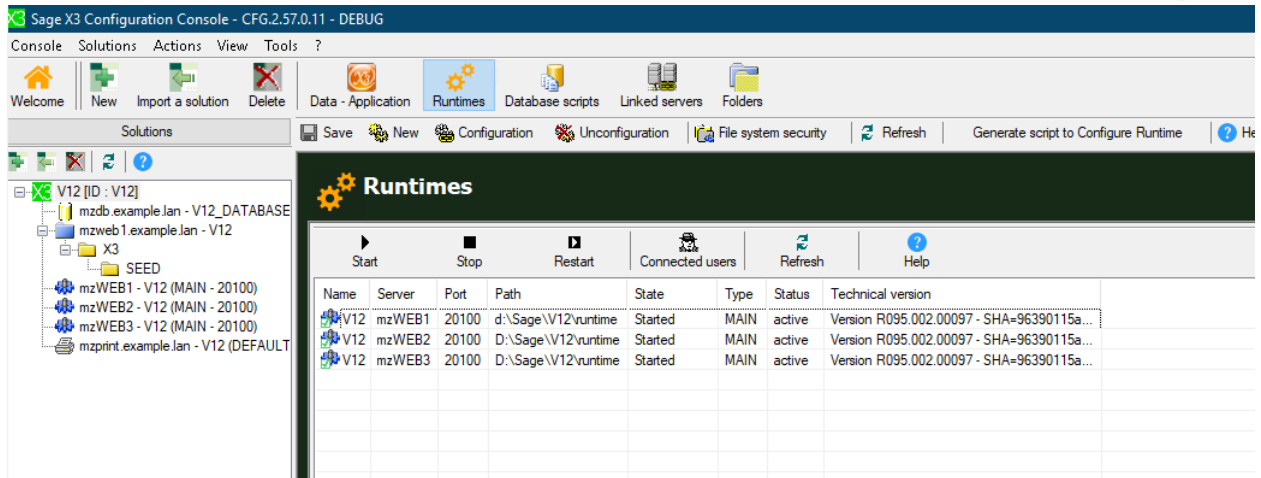
Click “Configure Application” and “yes” to continue
 Once finished, click “Runtimes”



Select each of the other runtimes in turn, then click “Configuration” to update

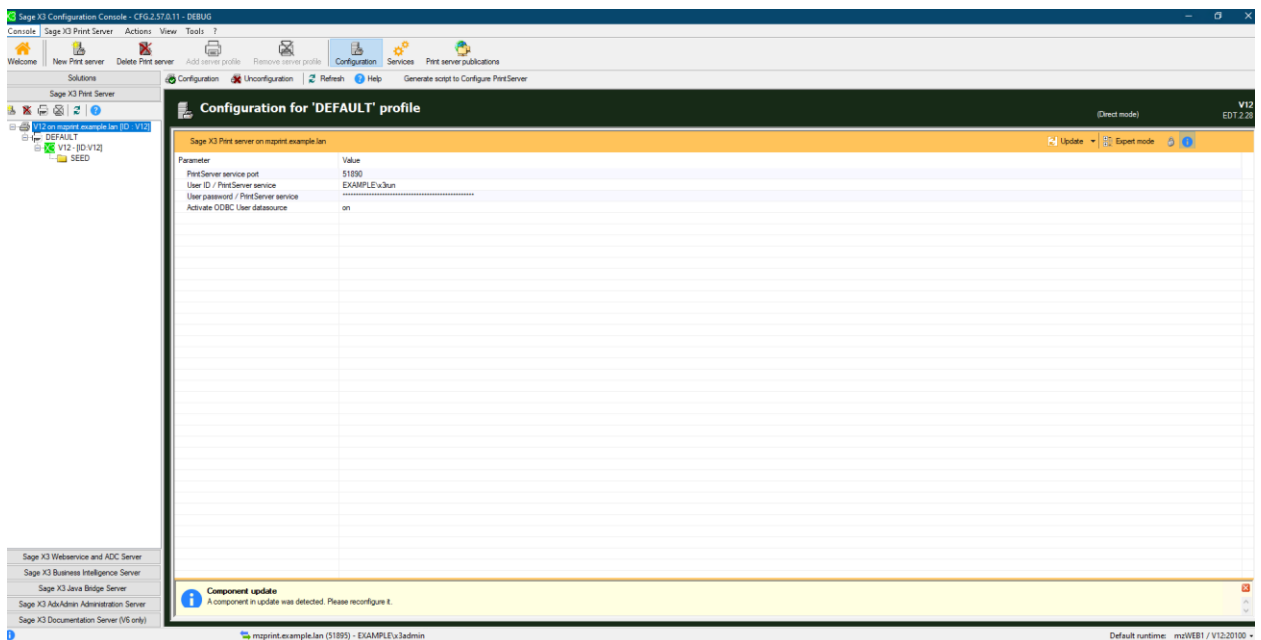


Once finished all runtimes should be started and no longer showing in orange



Configure Print Server

Open up the Sage X3 Print Server section

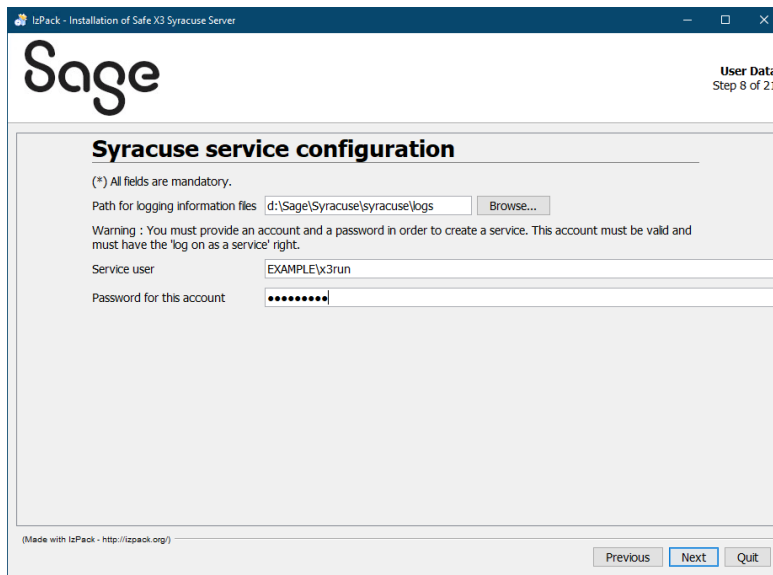
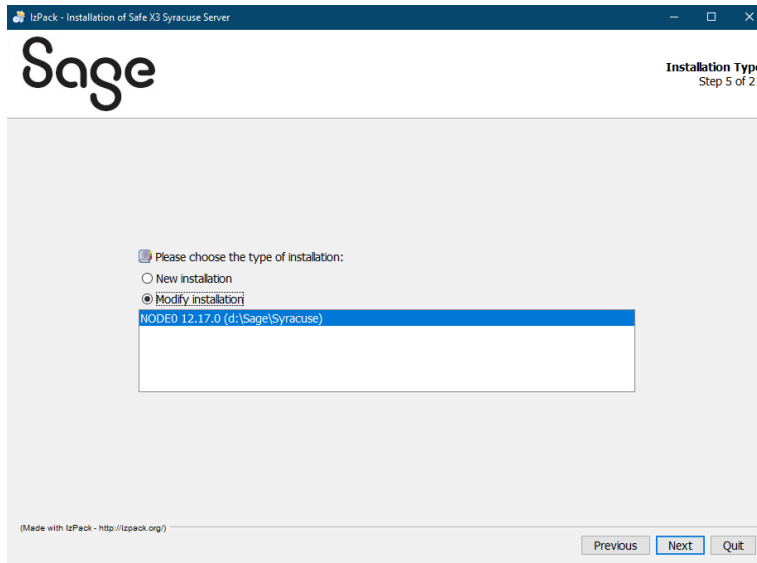


Click "Configuration" to reconfigure

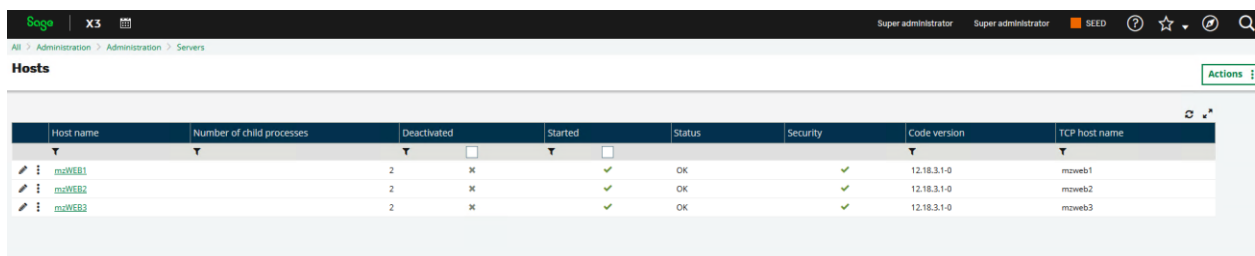
Upgrade Syracuse (mzWEB1, mzWEB2, mzWEB3)

Check the MongoDB services are running. (MongoDB does not need to be upgraded)

Launch "syracuse-server-12.18.3.1.jar"



Once all Syracuse hosts have been updated, login to X3 and check in Administration, Servers, Hosts. All hosts should show as running and with the same version.



I normally take a full cold backup at this point, before proceeding with the X3 patch.

Upgrade X3 patch level

In Administration, Utilities, Update, Updates load the “x3-patch-12.0.33.zip” and save, then “Apply Update”

The screenshot shows the Sage X3 Administration interface. The top navigation bar includes the Sage logo, 'X3', and user information. The main content area is titled 'Updates' and has tabs for 'Update', 'Apply to', 'Result status', and 'Apply state'. The 'Update' tab is selected, showing a form to upload a file (x3-patch-12.0.33.zip) and a table of updates. The 'Apply to' section is also visible, showing the 'X3 root endpoint' and 'X3 folders'.

Update to	Update from	Control
✓ R090.020.000	R090.019	✓
✓ R090.021.000	R090.020.000	✓
✓ R090.022.000	R090.021.000	✓
✓ R090.023.000	R090.022.000	✓
✓ R090.024.054	R090.023.000	✓
✓ R090.025.061	R090.024.054	✓
✓ R090.026.063	R090.025.061	✓
✓ R090.027.055	R090.026.063	✓
✓ R090.028.065	R090.027.055	✓
✓ R090.029.058	R090.028.065	✓
✓ R090.030.062	R090.029.058	✓
✓ R090.031.055	R090.030.062	✓
✓ R090.032.067	R090.031.055	✓
✓ R090.033.115	R090.032.067	✓

Name	Parent	Version	Updated	Status	Integration	Generation	Log	Detailed status	Legislations
✓ X3		90.32.67	15/10/2022						ANG,ARE,AUS,AUT,BEL,BHR,BRA,BRI,CAN,CHL,DNK,FRG,GER,IRL,ITA,POL,POR,SALL,SPA,SWI,USA,ZAF
✓ SEED	X3	90.32.67	26/05/2023						ANG,ARE,AUS,AUT,BEL,BHR,BRI,CAN,CHL,DNK,FRG,GER,IRL,ITA,POL,POR,SALL,SPA,SWI,USA,ZAF

Once completed, check the screen shows everything as “Success”. Check the logs as a precaution.

Sage | X3 | Super administrator | Super administrator | SEED

All > Administration > Utilities > Update

Updates

Update	Apply to	Result status	Apply state
✓ R090.028.063			R090.028.061
✓ R090.027.055			R090.028.063
✓ R090.028.065			R090.027.055
✓ R090.029.058			R090.028.065
✓ R090.030.062			R090.029.058
✓ R090.031.055			R090.030.062
✓ R090.032.067			R090.031.055
✓ R090.033.115			R090.032.067

Apply to

X3 root endpoint
V12 / X3
Endpoints describe services locations

X3 folders

Name	Parent	Version	Updated	Status	Integration	Generation	Log	Detailed status	Legislations
✓ X3		90.32.67	15/10/2022	Success	Success	Success			ANG,ARE,AUS,AUT,BEL,BHR,BR,CAN,CHI,DNK,FR,GER,IRL,ITA,POL,POR,SAL,SPA,SWI,USA,ZAF
✓ SEED	X3	90.32.67	26/05/2023	Success	Success	Success			ANG,ARE,AUS,AUT,BEL,BHR,BR,CAN,CHI,DNK,FR,GER,IRL,ITA,POL,POR,SAL,SPA,SWI,USA,ZAF

Result status

Status	Integration status	Generation status	Detailed status
Success	Success	Success	Update successful

Apply state

Applied	Application Datetime	Scheduled	Schedule date / time	Expiry datetime
✓	12/06/2023 16:00	X		

I also check the versions in Administration, Utilities, Update, About to confirm they all reflect the expected values

Sage | X3

All > Administration > Utilities > Update

Technical information

Web server version
12.18.3.1-0

Endpoints
Dataset
V12_X3
SEED

About

Product

Application	Release	Version
	2023 R1 (12.0.33)	90.33.115

Server

Runtime
95.2.97

Technical information

Connection

Solution
V12
Http address

Process server	Application server
mzWEB2.example.lan	mzWEB2.example.lan
Folder X3	Service 20100

Testing

I am now ready to commence my testing to ensure everything works as expected with the new version.

Conclusion

This "Build diary" document provides the steps I took on my internal servers to upgrade from 2022 R4 to 2023 R1.