Overview of patching X3 and supporting technologies

Mike Shaw

24/03/2021

Contents

sage

◉ **Plan**

   Audit target system

   Updating your workplan document

   Backup/Backout strategies

◉ **Test**

   Apply patches and document

◉ **Apply**

   Apply patches and document

◉ **Final thoughts**

Plan

Audit target systems

sage

For both LIVE and TEST systems, review and document:

- System architecture/setup

  - Multi-Node, Load balancer, Firewall rules, Anti-Virus, Runtime account access, other passwords as needed (e.g. CA/Server SSL certificate passphrases)

- X3 patch level and Technology Stack versions

  - Including JDK, Apache and SQL Server versions

- Run the post patch smoke/sanity tests

  - to ensure they work before you patch anything!

- Check log files (be familiar with any current "odd" messages)

  - Syracuse, MongoDB, Batch Server, Windows Event Viewer

Updating your workplan document

Check and add to your planning document

- Review Sage documentation to understand recommended procedure, pre-reqs and optional components

    - Patch readme

    - Prerequisites Overview http://online-help.sageerpx3.com/erp/12/public/prerequisites_overview.html

    - Sage Support pages https://www.sagecity.com/gb/sage-x3-uk/f/sage-x3-uk-announcements-news-and-alerts "Sage X3 latest patches"

    - Online help> Whats new> Release notes http://online-help.sageerpx3.com/erp/12/wp-static-content/news/en_US/ReleaseNote/RELNOTE_V12.0.25.htm

    - Online help> How to> Technical> Architecture and system requirements http://online-help.sageerpx3.com/erp/12/wp-static-content/whitepapers/en_US/technical/Architecture%20and%20system%20requirements/Content/How-to%20guides/Platform/Architecture%20guide/Topic%201%20Architecture%20and%20system%20requirements.htm

Updating your workplan document

- For each component you are updating, check for Sage Knowledgebase or Blog articles that may highlight known issues or provide assistance, for example:

  – Additional notes when upgrading ElasticSearch
    https://support.na.sage.com/selfservice/viewdocument.do?externalId=99424

  – Additional notes when upgrading to MongoDB 4.x
    https://support.na.sage.com/selfservice/viewdocument.do?externalId=107620

  – https://www.sagecity.com/support_communities/sage_erp_x3/b/sageerp_x3_product_support_blog/posts/conquering-the-obstacle-of-mongodb-4-2-upgrade-a-guide-for-upgrading-mongodb-to-4-2-for-sage-x3

  – Additional notes when installing Application Cluster
    https://support.na.sage.com/selfservice/viewdocument.do?externalId=109651

Updating your workplan document

sage

- If not doing a full X3 Technology upgrade, ensure cross compatibility with the other components

  - Example 1: You want to just upgrade X3 Runtime… is this compatible with AdxAdmin and Syracuse versions you already have?   What about the X3 patch level?

    - Latest X3 Console and companion AdxAdmin version should be considered pre-req to any classic component upgrade

    - Recommend you upgrade Syracuse also

    - It is NOT recommended to push Runtime to a higher version than the X3 patch level it was released with, unless it's a specific hotfix for that patch level. See https://www.sagecity.com/gb/sage-x3-uk/b/sage-x3-uk-support-insights/posts/patching-the-sage-x3-runtime-component-in-isolation for more information

  - Example 2: you are upgrading just Syracuse, do you also need to upgrade MongoDB, is it certified for the Application Patch level?

    - Check the correlating X3 patch readme for recommended/mandatory upgrades. Also see https://www.sagecity.com/gb/sage-x3-uk/b/sage-x3-uk-support-insights/posts/need-to-update-the-sage-x3-syracuse-component- for additional hints

Updating your workplan document

- V11: Patchfinder can also give some guidance:

Updating your workplan document

Other things to note:

- All X3 technology components (V7 to V12) are cumulative, so you only need to apply the latest technology patch for that component.   There is no such thing as a "HotFix", every Technology component patch Sage provides is a full installation image.

- Since PU9 patch 5 and V11 patch 3, Syracuse component has been decoupled from the X3 patch level. The latest Syracuse fixes have specific minimum X3 application patch levels, as announced in the news article https://www.sagecity.com/gb/sage-x3-uk/f/sage-x3-uk-announcements-news-and-alerts/167282/alert-v11-syracuse-11-25-1-2-and-pu9-syracuse-9-22-7-52

- Since V12 patch 20, the X3 patches are themselves cumulative. It is also mandatory to use **Administration, Updates** to apply these patches

    – X3 2019 R5 Release & 2019 R5 Update (Patch 12.0.20) https://support.na.sage.com/selfservice/viewdocument.do?externalId=102571

Backup/Backout strategies

For both the TEST system and LIVE system:

- Ensure you understand and have checked the system backup processes

    – What is backed up, when and how?

    – Are the backups ever tested? How long does it take to restore?

    – Are all the X3 servers in multi-node setup backed up?

- What are your check points and what would you need to restore if you need to abort

    – e.g. Install Technology components, then test before proceeding

- What is your time window for completing and returning the system to users

    – Remember to consider how long it would take to restore for your cut-off

    – Also build in time for you to complete your smoke/sanity testing

Test

Apply patches and document on TEST system

sage

Run through your workplan on the TEST system, updating your workplan as you go

- Have a recent copy of LIVE folder data to ensure realistic test

- Ensure you have full backups just before you start, also make separate copies of files such as Syracuse/MongoDB/Elastic Search config files and SSL certificates

- Don't forget to shutdown relevant X3 services, e.g. Batch Server, SOAP pools, Print Server, ADC server, any external interfaces such as V1 or Datalinx, etc. when required

- May be useful to take screen shots of every screen requiring input, and the resulting screens at the end (expected output) to add to your workplan document

- Take note of timings for each major step

- What to do if there are problems?

  – Ideally, fix and continue, then re-do the whole test after restoring TEST system

- Be prepared to run multiple iterations of the test upgrade if needed

Apply

Apply patches and document on LIVE system

sage

Run through your workplan on the LIVE system, updating your workplan as you go

- Ensure you have full backups just before you start, also make separate copies of files such as Syracuse/MongoDB/Elastic Search config files and SSL certificates

- Know your deadline for Go/No-Go decision

    – Ensure you have relevant business user contact details

- Don't forget to shutdown relevant X3 services, e.g. Batch Server, SOAP pools, Print Server, ADC server, any external interfaces such as V1 or Datalinx, etc. when required

- May be useful to take screen shots of every screen requiring input, and the resulting screens at the end (expected output) to add to your workplan document

- Take note of timings for each major step

- What to do if there are problems?

    – Fix, mitigate or abandon upgrade?

Final thoughts

When to use this process

sage

Should I go through such a detailed process as suggested in this document for any/every update, even if it's just one small hotfix?

- The objective is to document a repeatable process you know will work when applied to the live environment.

- You may already have the information discussed, and some steps are trivial, so the same process could be followed for any/every update – albeit "smaller" updates would have smaller workplan.

- Also gives you an audit of activities performed if you need to get help for any problems encountered, or if you need to provide post upgrade documentation and installation handovers to your internal team, or the customer

Smoke Testing

According to Wikipedia, Smoke Testing "*is **preliminary** testing to reveal simple failures severe enough to, for example, reject a prospective software release*"

My interpretation, in a X3 context, is to run tests that try out all the X3 components. For example, a simple smoke test suite may comprise of the following activities:

1. Make sure you can login using Edge, Firefox and Chrome browsers, navigate about and launch a classic page
2. Login as UKADMIN user and check Bookmarks and Custom Locale are there and working
3. Print out to screen and printer
4. Update Excel add-in (if needed) and check it works OK
5. Check Web Service pools are started and can be stopped/restarted
6. Send in a Web Service load (e.g. with SoapUI)
7. Check batch jobs are still running and processing, check Accounting Tasks are running, check batch jobs can print
8. Business Processes (landing pages) can be seen and used, particularly any non-default ones
9. Manually run LDAP synchronisation (if being used), make sure users have all attributes still there and no new classic users are created
10. Check OAuth2, or SAML2 authenticated users can login OK (where used)
11. Check Graphical Requester works OK
12. Check Elastic Search works

Summary

sage

◎ **Plan**

 Audit target system

 Updating your workplan document

 Backup/Backout strategies

◎ **Test**

 Apply patches and document

◎ **Apply**

 Apply patches and document

◎ **Final thoughts**

Thank you