Sage X3
Session log enhancement

Changes in 2020 R1
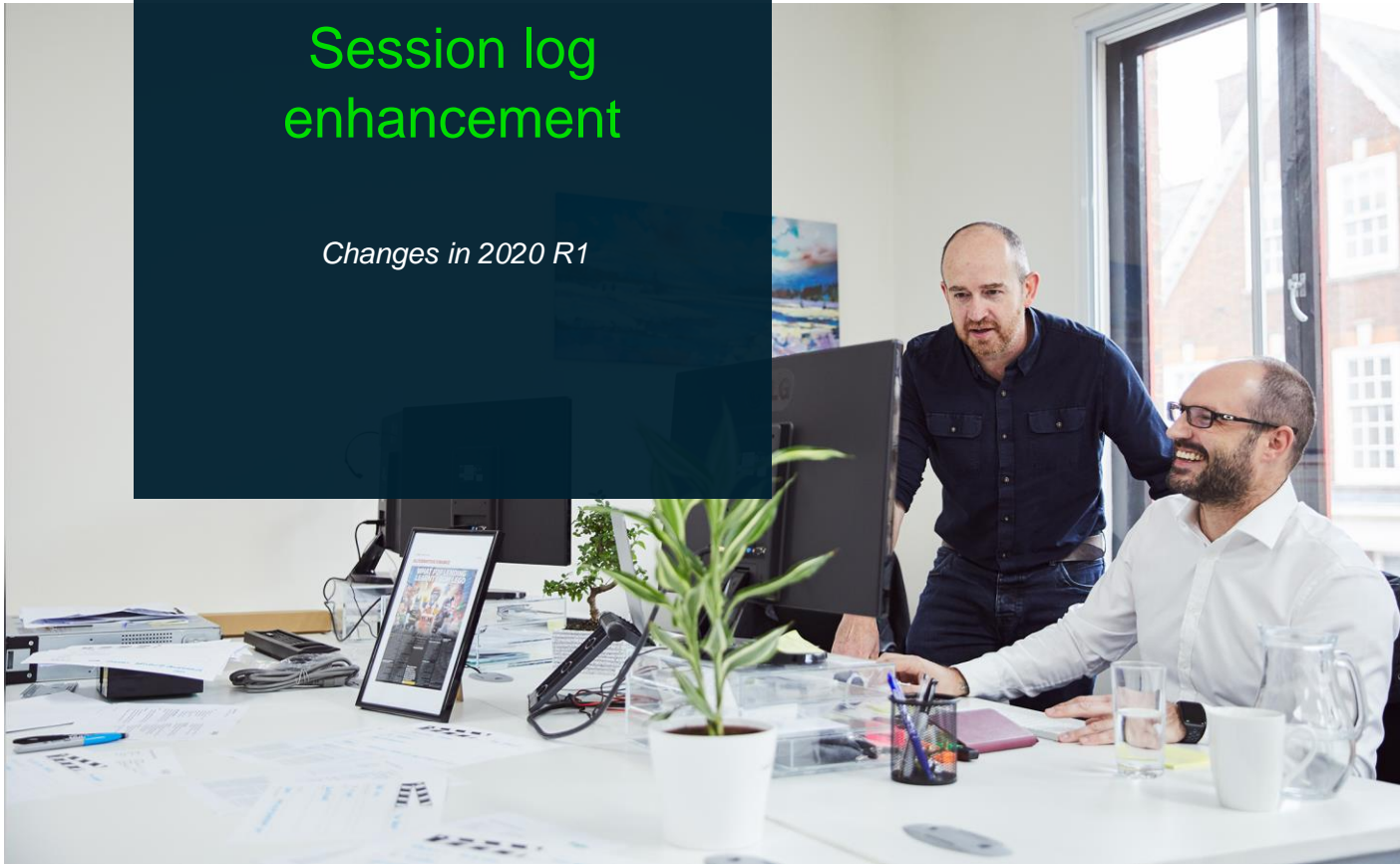
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Introduction

The connection to X3 is done through different types of sessions. All these sessions connect through the Syracuse server, and opens various processes to display data for interactive pages or get data in service mode:

- A Syracuse session is the session opened on the node.js web server. This type of session connects on an administration endpoint; Syracuse uses mongoDB database and can manage administration pages. Such sessions can run interactively or in background (to control batch tasks or web services pools).

- An X3 session corresponds to an instance of a adonix.exe process. This process executes 4GL code and connects on the database server. An X3 session is always linked to a Syracuse session, but a Syracuse session can be connected to several X3 sessions.

The X3 sessions can have several types, depending the service they provide. The most important ones are the following:

- A web page X3 session is created when a user first connects on an endpoint. It delivers data to the portal in a stateless way.

- A classic page session is created when an X3 page developed with classic technology is used. This includes all the functions not located in the Administration menu and not linked to a class and a representation.

- A batch session is created for every batch task in execution.

- A web service session is created for every pool entry to manage web service execution.

Other sessions exist (when the engine is launched from Eclipse, from the console for example), but the most important are listed above.

Before 2021 R1, we had a function that allowed to list the Syracuse sessions, and a function that allowed to list the X3 sessions. But the link between both was difficult to follow because we had two different pages.

The release 2021 R1 brings a new and better presentation of the sessions.

Global nested view of Syracuse / X3 sessions

The new page displays in a list all the Syracuse sessions (*Standard* being interactive sessions, and *Batch* being batch controlling sessions). From a line, you can directly unfold the line to get the detailed list of the X3 sessions associated to the Syracuse session. You know at a glance how the sessions are linked:

- The second standard Syracuse session is associated to a first Web page X3 session (that populates the portal), and 2 classic pages opened in two different browser tabs (one associated to the function called AREQUETE, the second one associated to the function GESATB)
- The batch controlling Syracuse session is associated to 2 batch X3 sessions.

This page is automatically refreshed every 10 seconds (before, it was only refreshed when refreshing the browser page) so you can really have a real time view of the session that run.

On every X3 session, we can also see the creation date time, the last access date time and the expiration date time in GMT format. Hovering over such a date displays it in the time zone of your browser.
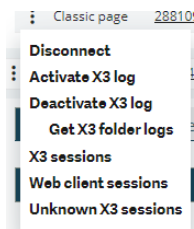
	Type	X3 Session	X3 Pid	Status	X3 host	X3 port	X3 user login	X3 locale code	Solution	Folder	Function	Soap Pool	Creation date	Last access	Expiration date	ws C
⋮	Web page	286967	13	Session created	x3_runtime	1801	admin	en-US	REPOSX3	REPOSX3			2021-01-18T07:42:00.000Z	2021-01-18T07:42:00.000Z	2021-01-18T13:52:00.907Z	
⋮	Classic page	287346	2966	Used	x3_runtime	1801	admin	en-US	REPOSX3	REPOSX3	AREQUETE		2021-01-18T09:58:57.000Z	2021-01-18T17:07:30.000Z	2021-01-18T10:19:03.899Z	
⋮	Classic page	288109	11325	Used	x3_runtime	1801	admin	en-US	REPOSX3	REPOSX3	GESATB		2021-01-18T17:06:39.000Z	2021-01-18T17:06:50.000Z	Monday, January 18, 2021 11:19:03 AM	

This allows you to identify classic pages functions that remains opened until expiration date time even if no function is opened (there is an optimization to keep these sessions as reusable for other classic pages).by clicking on the three vertical dots icons:

Classic page   28810
Disconnect
Activate X3 log
Deactivate X3 log
   Get X3 folder logs
X3 sessions
Web client sessions
Unknown X3 sessions

You can notably manage different actions (all of them might not be available depending on the type of session). The most important are the following ones:
- close a session
- access to logs when they are relevant
- jump from one view to the other
- display *Unknown X3 sessions* (see below).

Global view of X3 sessions

The global view of all the X3 sessions can also be displayed through the *X3 sessions* link (available also globally on the right action panel.:

X3 sessions   Actions ⋮

32 Results Display: 20

	Type	X3 Session	X3 Pid	Status	Session id	Soap Pool	User login	X3 host	X3 port	X3 user login	X3 locale code	Soluti...	Folder	Function	Host	Process	Pid	Endpoint	Creation date
⋮	Batch	272882	309	Session created	7d242b018807			x3_runtime	1801	admin	en-US	REPOSX3	REPOSX3		ba314f37b763		12	REPOSX3_REPOSX3	2020-11-12T17:25:37.00
⋮	Web page	272922	350	Session created	a0fc635437a6	DOCKER		x3_runtime	1801	admin	en-US	REPOSX3	REPOSX3		ba314f37b763		12	LOCALDEV	2020-11-12T17:26:23.00
⋮	Batch	273313	12	Session created	4c8a7d3fca79			x3_runtime	1801	admin	en-US	REPOSX3	REPOSX3		ba314f37b763		12	REPOSX3_REPOSX3	2020-11-13T06:51:12.00
⋮	Batch	273497	12	Session created	ac3f333b5703			x3_runtime	1801	admin	en-US	REPOSX3	REPOSX3		ba314f37b763		12	REPOSX3_REPOSX3	2020-11-13T07:11:02.00
⋮	Batch	275541	12	Session created	6a9212a70e1d			x3_runtime	1801	admin	en-US	REPOSX3	REPOSX3		7de8425cbb35		14	REPOSX3_REPOSX3	2020-11-20T11:00:05.00

Unknown X3 sessions

It might rarely happen that an X3 session remains running without having a Syracuse session attached to it. This happens in some very particular cases (VT terminals for instance) and can also happen if your session is in an endless loop (usually linked to a bad written function). These type of X3 sessions are displayed by using the *Unknown X3 session* present on every pop-up link in the different pages, and on the right panel:

Even if this doesn't happen frequently, having this additional feature allows to identify sessions that might uselessly consume CPU. The page allows to kill these sessions.

Web services session views

The same hierarchized view can also be directly displayed in real time for the sessions associated the web services. In this page, additional information has been added to allow to control how the web services are running:

- the number of web services waiting in queue for execution, and the total calls executed since the pool started are displayed.
- The number of web service calls executed by every X3 session are also displayed.

Conclusion

The new features available in Sage X3 from the 2021 R1 release will streamline and simplify the follow-up of sessions especially on servers that might manage several thousands of sessions:

- It identifies clearly the links between the sessions
- It gives a global overview of all the types of sessions
- It gives a better view on the reusable sessions
- It displays statistics about web service execution

We will continue to improve the troubleshooting tools in the future releases to simplify the support and simplify the management of the performance on customers who continue to grow and scale up.