

Monitoring and Troubleshooting Pipelines

As an XNAT Administrator, there are times when it is helpful to know what processes are running, who is running them, and if they have been running far longer than expected. This can both affect and be affected by overall system performance. It is also a good idea to ensure that any planned service interruptions are as minimally disruptive to your users' work as possible.

There are a few ways to monitor and track pipeline processing in XNAT.

Monitoring Pipeline and User Workflows in the Admin UI

Go to **Administer > More > View All Workflows** in the top navigation. This will display a very large data table consisting of every user workflow entry that XNAT has logged.

Search 1 x

<< first < prev 1 2 3 next > last >> 200 1 of 3 Pgs (598 Rows) Reload Options

Workflow ID	pipeline_name	launch_time	status	current_step_id	Job ID	Userfullname	Session
1	Configure new feature.	2016-12-22 21:58:32.821	Complete			Admin Admin	
2	Configure new feature.	2016-12-22 21:58:33.716	Complete			Admin Admin	
3	Configure new feature.	2016-12-22 21:58:33.887	Complete			Admin Admin	
4	Configure new feature.	2016-12-22 21:58:33.947	Complete			Admin Admin	
5	Configure new feature.	2016-12-22 21:58:34.011	Complete			Admin Admin	
6	Configure new feature.	2016-12-22 21:58:34.127	Complete			Admin Admin	
7	Initialized archive specifications.	2016-12-23 18:12:27.646	Complete			Admin Admin	
8	Added Project	2016-12-23 18:12:59.202	Complete			Admin Admin	
9	Initialized permissions	2016-12-23 18:12:59.253	Complete			Admin Admin	
10	Initialized permissions	2016-12-23 18:12:59.265	Complete			Admin Admin	
11	Initialized permissions	2016-12-23 18:12:59.589	Complete			Admin Admin	
13	Initialized permissions	2016-12-23 18:12:59.821	Complete			Admin Admin	
14	Initialized permissions	2016-12-23 18:13:00.038	Complete			Admin Admin	
15	Upload Spreadsheet	2016-12-26 16:38:43.762	Complete			Admin Admin	
16	Upload Spreadsheet	2016-12-26 16:38:44.129	Complete			Admin Admin	
17	Upload Spreadsheet	2016-12-26 16:38:44.251	Complete			Admin Admin	
18	Upload Spreadsheet	2016-12-26 16:38:44.409	Complete			Admin Admin	
19	Upload Spreadsheet	2016-12-26 16:38:44.517	Complete			Admin Admin	
20	Upload Spreadsheet	2016-12-26 16:38:44.608	Complete			Admin Admin	

This data table is powered by a stored search that is automatically generated by XNAT. You can right-click on the **pipeline_name** column to set a filter for specific pipelines, and/or click on the **Userfullname** column to set a filter on a specific user. You can also save these modified data tables out as separate stored searches for future reference.

Any pipeline that is still running will have a status of "Running".

Monitoring All User Activity in the Admin UI

Go to **Administer > More > Summary** in the top navigation. This will display a modal with a series of usage reports in it. You can toggle the timeframe of these reports with the selectors at the top of the modal window.

From: 1 week ago to NOW Update

New Projects

	Date Created	Creator	Investigator	ID	Name	Secondary ID	Description
0	2016-12-23 18:12:59.203	Admin Admin		TEST	Test Project	Test	
1	2016-12-26 16:49:54.067	Admin Admin		TEST2	Test Project 2	Test 2	
2	2016-12-27 23:50:46.074	Admin Admin		SHARE	Shared Project Test	Shared Project	
3	2016-12-28 16:27:30.449	Admin Admin		CENTRAL_OASIS_LONG	OASIS Longitudinal Studies	OASIS_LONG	The Open Access Series of Imaging Studies (OASIS) ...
4	2016-12-28 16:50:40.702	Admin Admin	Marcus	CENTRAL_OASIS_CS	Oasis Cross- Sectional Studies	OASIS_CS	See www.oasis- brains.org for details.

New Investigators

	Date	Name	Institution	Email
0	2016-12-28 16:50:40.702	Dan Marcus	Washington University	dmarcus@wustl.edu
1	2016-12-28 16:50:40.702	Randy Buckner	Washington University	rbuckner@artsci.wustl.edu


Pipelines

	Pipeline	status	count
0	Added Project	Complete	3
1	Added registered pipeline	Complete	2


In this summary window, there is a summary of user workflows titled "Pipelines" that has a count of successful and failed runs.

Debugging Stalled or Failed Pipelines

From your command line, SSH into your XNAT and go to **PIPELINE_HOME/logs**. This directory contains timestamped log files which can be used to troubleshoot pipeline runs.

 By default, PIPELINE_HOME is set to /data/xnat/pipeline.

Additionally, two files in the XNAT logs directory (**XNAT_HOME/logs**) may be useful in diagnosing pipeline issues: **launch.log** and **pipeline.log**.

 By default, XNAT_HOME is set to /xnat/data/home. Therefore, your pipeline launch log files would be located at /data/xnat/home/logs/launch.log and /data/xnat/home/logs/pipeline.log

Any pipeline that is launched through XNAT will have its command line launch string added to **launch.log**, while **pipeline.log** only contains the launch string for failing pipeline executions. One important difference is that the (alias token secret) password for the admin account used to run the pipeline is hidden in the **launch.log** copy of the string. To figure out the cause of the pipeline failure, copy and run this statement from your ssh terminal as the tomcat user.



If your pipeline has stalled instead of failing, you may only have the password-less launch string in launch.log. If you need the full launch command, you can access the password for the alias token in the xhbm_alias_token database table.