Database Meeting 2022-08-17

Date

17 Aug 2022

Attendees

- Igor Gaponenko Andy Hanushevsky Fabrice Jammes Andy Salnikov Joanne Bogart

Notes from the previous meeting (2 weeks ago, before PCW2022):

- Database meeting 2022-08-03

Discussion items

Discussed	Item	Who	Notes
✅	Project news	Fritz Mueller	LSST has a new system commissioning manager: https://www.linkedin.com/in/anastasia-alexov-a4808549/details/experience/ DM JTM in Chile will happen on March 13, 2023. Join Status reviews will be happening on September 14, and 15 at SLAC.

✅	NCSA USDF, IDF	team	Fritz Mueller:
			
			- NCSA shutdown has been extended through the end of this week to address a problem with some files lost during file migration to SLAC
			- some issues with storage at SLAC
			
			Igor Gaponenko asked a question regarding the possibility of modernizing `bbcp`. Andy Hanushevsky responded that the new tool should get a better architecture to allow
			
			- better memory management
			- compression & encryption
			
			Igor Gaponenko: Qserv setup on the temporary (loaner) hardware:
			
			- 6 equally configured nodes
			- 32 cores/64 threads: AMD EPYC 7543
			- 256 GB of RAM
			- 12 TB of NVMe (4 disks configured as RAID0)
			- A snapshot of the `large6` Qserv was made at NCSA in May 2022. The snapshot will be used for setting up Qserv
			- The preliminary plan is to install Qserv using the "igor" mode with 5 workers only (one node will be running Qserv master services (`czar`, `czar`'s database, XROOTD redirector, Replication Controller, Replication Worker Registry, and the Replication database). We may afford to lose one worker snapshot (out of 6 available) since the source Qserv was being run at the `replication_level=2`.
			
			Fritz Mueller on the extended use of this instance:
			
			- this Qserv may be used for serving DP02 and other catalogs before we'll get the permanent hardware (there is the ongoing procurement process for a batch of the first 15 nodes.
			
			Igor Gaponenko: developing Qserv on the VM in IDF
			
			- Spun up the VM of 8 vCPUs, 64 GB of RAM, and 80 GB of the "balanced" disk (HDD plus memory-based filesystem)
			- The VM runs `CentOS7`.
			- Setup the environment (Docker, Docker compose, and a bunch of the missing Python3 modules)
			- `XRootD` doesn't work on `CentOS9`. All services crash
			  - Igor Gaponenko will figure out how to retain the core files in the `docker-compose` based environment and work with Andy Hanushevsky on the crash.
			  - Andy Hanushevsky has suggested upgrading `XRootD` to a version `5.5` that supports `CentOS9`. This version will be available end of this month (August). Though 5.4.3 should also work.

✅	DP02	Fritz Mueller	Fritz Mueller on `ForcedSourceOnDiaObject` : - the new version of the table has passed the Q&A - Fritz Mueller is going to extend TAP to make the table visible through the service. See details in the PR; - https://github.com/lsst/sdm_schemas/pull/86 Fritz Mueller on the new version of the truth tables: - the tables are deployed and tested in `qserv-int` - we should wait before Colin Slater finishes Q&A-ing the tables - after that Igor Gaponenko will deploy the tables in `qserv-prod` ... unless there will be any issues with the tables. There are 3 still issues with Qserv that need to be addressed and deployed in IDF: - Case sensitivity (the directory columns of the `RefMatch` the table should be treated by Qserv as case insensitive) - The connection timeout issue of 8 hours still exists. `mysql-proxy` is suspected. Or maybe in the front-end MariaDB - Cancel queries when the client connection goes off (due to the timeout?) Andy Salnikov on the disconnects: - The `Control-C` is intercepted by `mysql` and the latter is opening a separate connection to `KILL <id>` for the relevant. - we may need to fix `mysql-proxy` to detect (client disconnects) and cancel the queries. The proxy may allow specifying user callbacks for handling such disconnects. Fritz Mueller: eventually we need to replace this aging proxy with a better one. This is one of the high-priority architectural improvements for the "new" Qserv. At some point, we will have an in-person dedicated discussion on the subject between Fritz Mueller, Andy Salnikov, John Gates, and Igor Gaponenko.
⛔	`qserv-operator`, `qserv-ingest`	Fabrice Jammes	Any news?
⛔	`Obscore` whole-visit s_regions	Gregory Dubois-Felsmann , Andy Salnikov	

Action items

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