

Main page
Recent changes
Server admin log (Prod)
Server admin log
(RelEng)
Deployments
SRE/Operations Help

Cloud VPS & Toolforge

Cloud VPS documentation

Incident status

Toolforge documentation

Request Cloud VPS

Server admin log (Cloud VPS)

Tools

What links here Related changes Special pages Permanent link Page information Cite this page

Print/export

Create a book
Download as PDF
Printable version

Page Discussion

Read View source

View history

Search Wikitech

Q

Toolforge webservices are in the final stages of migrating to the toolforge.org domain.

Please help us clean up older documentation referring to tools.wmflabs.org!

Incident documentation/20180226-WikibaseQualityConstraints

< Incident documentation

Contents [hide]

- 1 Summary
- 2 Timeline
- 3 Conclusions
- 4 Actionables

Summary

When caching of constraint check results was enabled on Wikidata, some API requests would trigger SQL queries on the page, revision and text tables without any WHERE clause. This resulted in extremely high server load of general-purpose replica servers in s8.

Timeline

All times in UTC.

- 14:22 zeljkof deploys 413724 to mwdebug1002 as part of SWAT.
- 14:22-14:26 Lucas Werkmeister (Lucas_WMDE) tests the change on Wikidata. It seems to work as expected successive calls of wbcheckconstraints on the same entity are much faster, since the result is read from cache.
- 14:27 Lucas Werkmeister (Lucas_WMDE) reports back to zeljkof and confirms the change is ready to deploy.
- $\bullet\,$ 14:28 <code>zeljkof</code> deploys the change. Server admin log entries during this time
- 14:28 eth0 traffic on db1109 immediately begins to grow, crossing 600 Mbps within the next ten minutes (the normal level is around 50 Mbps) see Grafana . db1092 and db1104 are also affected. CPU load, number of running processes, and disk I/O also increase accordingly. However, according to jynus, "the slowdown was slow to buildup, so it was not detected by monitoring immediately".
- 17:24 marostegui and jynus comment on phabricator:T184812, pointing to the massive spike in Wikidata replicas (Grafana ☑).
- 17:34 jynus "deploying new query killer to db1109". Server admin log entries during this time
- 17:41 Chad deploys a revert of the config change (414720). log entry (stashbot failed to log this and some other messages around that time to wiki)
- 17:41 eth0 traffic, CPU load etc. begin to drop again (Grafana ☑).
- 17:41 jynus "I am going to kill [queries?] [a]gain to see they don't come back"
- 17:44 eth0 traffic, CPU load etc. back to normal levels (Grafana].
- 17:45 jynus "things seem under control"

Conclusions

Due to a logic bug (phabricator:T188384), WikibaseQualityConstraints' CachingResultsBuilder asked Wikibase' WikiPageEntityMetaDataLookup for the latest revision information of an empty list of entities. The WikiPageEntityMetaDataLookup had a special safeguard (added in 294340) for this case to avoid costly queries, adding a condition "0". However, Database::selectSQLText actually turns this condition into a query with no WHERE clause (instead of something like WHERE FALSE, which WikiPageEntityMetaDataLookup probably intended). WikibaseQualityConstraints should pay more attention to special cases when requesting entity IDs (empty list, long list); Wikibase should make sure that safeguards actually work as intended; and core should not let simple programming errors result in completely unlimited queries.

It is also problematic that the incident apparently went undetected for almost three hours, even though it was visible in Grafana within minutes of deployment, but I don't know why this was possible, or what should have prevented it.

Actionables

- WikibaseQualityConstraints: only filter for result statuses after collecting metadata. phab:T188384
- WikibaseQualityConstraints: don't pass an empty list of entity IDs to the
 WikiPageEntityMetaDataAccessor . phab:T188311
- WikibaseQualityConstraints: don't pass overly *long* lists of entity IDs there, either. phab:T188312
- WikibaseQualityConstraints + Wikibase: don't join page, revision and text when we just need page.page_latest.phab:T188381
- Wikibase: fix the safeguard for an empty list of conditions in WikiPageEntityMetaDataLookup . phab:T188313
- core: only \$conds = [] should result in a missing WHERE clause, not any other value that is empty according to the PHP empty function. phab:T188314
- monitoring: detect high server load earlier jynus "a prometheus alert would be nice" phab:T188317

Category: Incident documentation

This page was last edited on 19 October 2018, at 11:53.

Text is available under the Creative Commons Attribution-ShareAlike License; additional terms may apply. See Terms of Use for details.

Privacy policy About

Disclaimers Code of Conduct Developers Statistics Cookie statement Mobile view

Wikitech



