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

# Incident documentation/20140919-s1

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## Summary

At approx 2014-09-19 08:50:00 enwiki experienced a site outage. The apparent order of events was:

1. Three edits made to a template:

[https://en.wikipedia.org/w/index.php?title=Template:Redirect\\_template&action=history](https://en.wikipedia.org/w/index.php?title=Template:Redirect_template&action=history)

2. Jobrunner write activity[1] from wikiadmin user on enwiki master increased substantially, with cirrus in the spotlight:

<https://logstash.wikimedia.org/#/dashboard/elasticsearch/LinksUpdate%20issues>

Binlog showed substantial LinksUpdate hits (it is often in the top 10, but blends in with similar numbers to other traffic):

```
905809 LinksUpdate::incrTableUpdate
359301 LinksUpdate::updateLinksTimestamp
9372 Title::invalidateCache
8728 FlaggableWikiPage::clearStableVersion
8099 User::invalidateCache
5753 Revision::insertOn
4692 ArticleCompileProcessor::save
4607 `heartbeat`.`heartbeat`
4404 FlaggedRevs::clearStableOnlyDeps
3261 CheckUserHooks::updateCheckUserData
3257 SiteStatsUpdate::tryDBUpdateInternal
3185 RecentChange::save
```

The job activity occurred in waves with periods of very heavy writes, then minutes of nothing.

3. enwiki slaves started to experience intermittent replication lag. The main offender was:

```
DELETE /* LinksUpdate::incrTableUpdate
```

4. Surges of wikiuser DB connections to slaves began appearing after each write surge above in #2. These hit max\_connections on all slaves simultaneously, and apaches went critical. Note that there were no slow queries involved; just an order of magnitude more connections and queries than normal.

5. Significant numbers of wikiadmin connections sat in SELECT MASTER\_POS\_WAIT due to #3, which reduced the available connections for #4.

6. We killed masses of wikiadmin and wikiuser sleeping connections to make way for new ones.

7. We stopped jobrunners.

8. Things recovered.

## Observations and questions:

1. Batching the LinksUpdate DELETE and UPDATE queries would help with replag.

2. The storm of wikiuser traffic after the jobs was due to cache invalidation and presumably a lot of duplicated effort? Could that be mitigated in another layer above the DBs?

3. Can we throttle jobrunners more, or make them smarter in these situations?

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