Manticore / Craigslist call

August 19 2021

What Manticore 4.0.0 will include:

- Columnar storage support in real-time indexes
- Auto OPTIMIZE and related major locks refactoring
- ALTER ADD/DROP full-text
- Major fixes in replication
- GCC -> CLANG

Manticore 4: columnar in RT

- Columnar storage is now an essential part of Manticore Search
- All tests pass (plain/rt indexes)
- One thing in progress - `indextool --check`
- Long list of things to optimize in the columnar storage, e.g. parallelize even in a single chunk/plain index

Manticore 4: Auto OPTIMIZE

- Why: uncontrolled OPTIMIZE can cause problems
- UPDATE/REPLACE (deleting) + merging could cause inconsistencies
- Kills are now accumulated during merging
- UPDATEs are delayed during merging attrs (only attrs)
- All locks have been reviewed and refactored, visible optimizations:
  - Previously INSERT could get locked until a merge completes
  - Now INSERT can finish in background

Manticore 4: ALTER + full-text

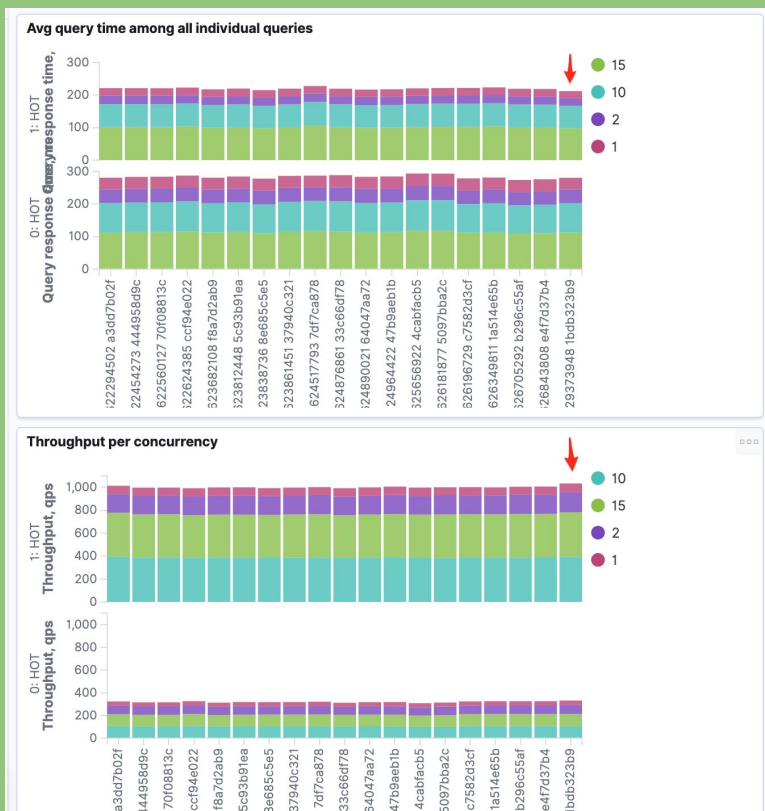- alter table XX add column FOO text;
- alter table XX drop column FOO;

Secondary indexes

- Beta is ready, but with limitations:
  - **float is not supported**
  - **Only one attribute is supported (i.e. A = 1 and B = 1 is not supported yet)**
  - **> / < are not supported**
- Fixing minor compilation issues
- Further plans: performance testing, get rid of the limitations
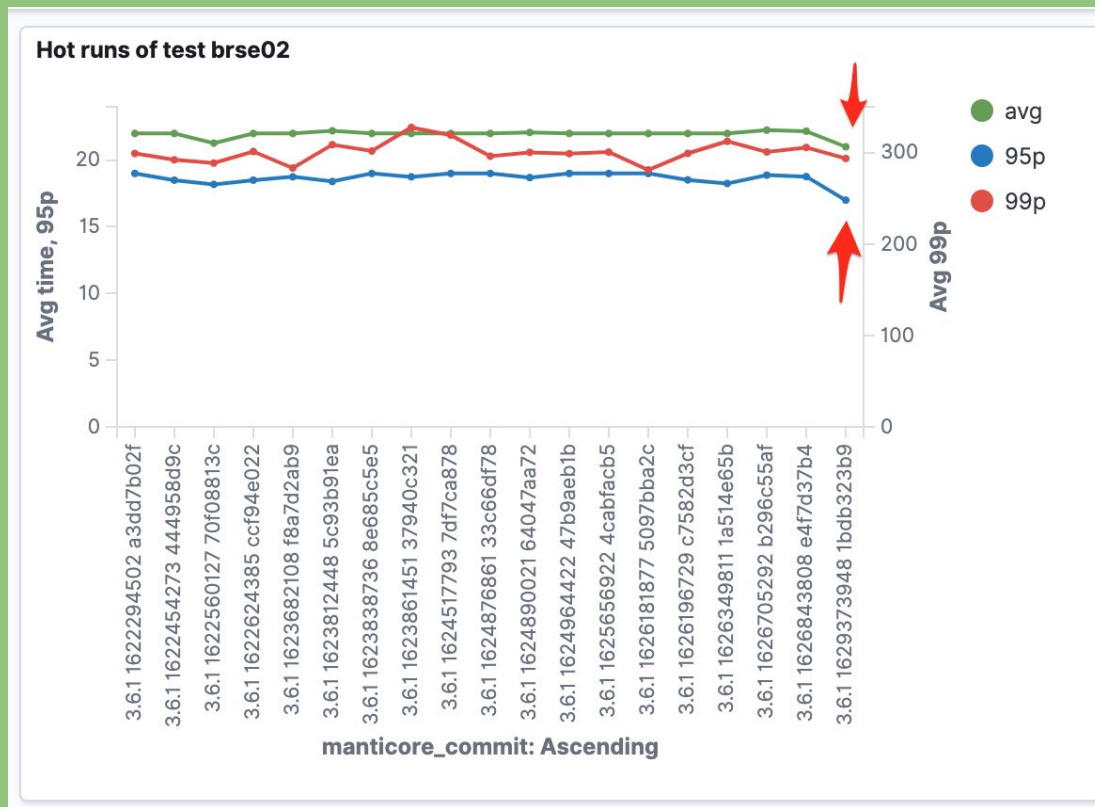- Not sure if we'll make it to 4.0.0

Bug fixes

- Few major fixes in replication (could cause index corruption during syncing and slow SST)
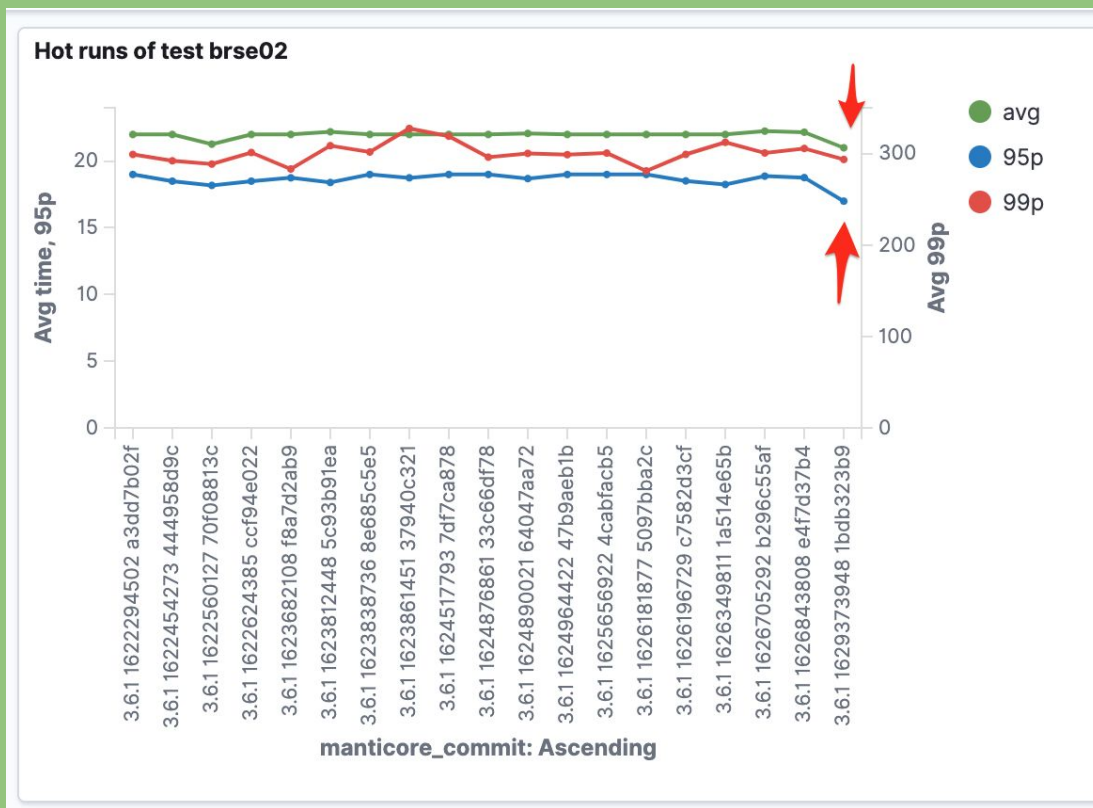- 16 bugs/crashes fixed in total

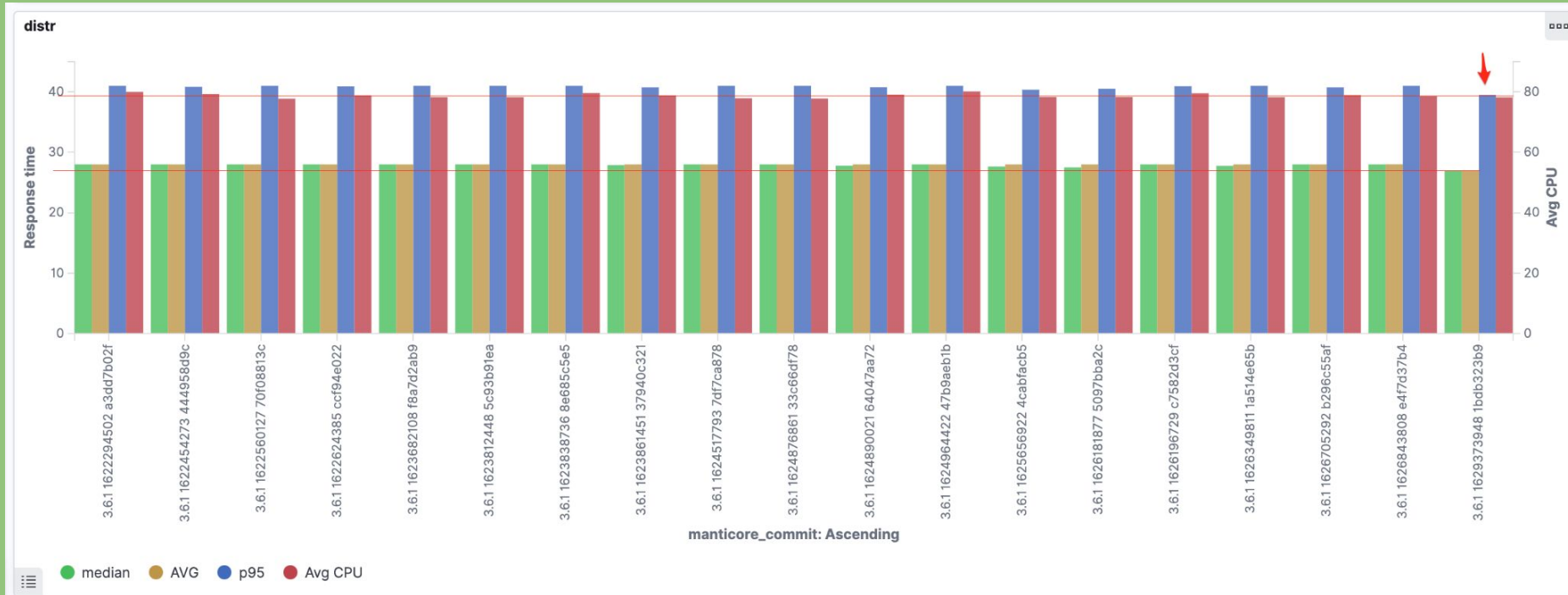# CLANG gives few % better performance

CLANG gives few % better performance

Hot runs of test brse02

CLANG gives few % better performance

CLANG gives few % lower resource consumption

Other projects

- Manticore Helm chart - https://github.com/manticoresoftware/manticoresearch-helm
- Manticore Prometheus Exporter - https://github.com/manticoresoftware/manticoresearch-prometheus

Questions and answers

- Still waiting for a wish list from Craigslist:
  - Integration with PMM
  - Read/write access for listeners, long term - smth like GRANT
  - article about locks (selects vs writes) in 3.6.0 vs 4.0.0: index level / chunk level