



ELASTICSEARCH INTERNALS

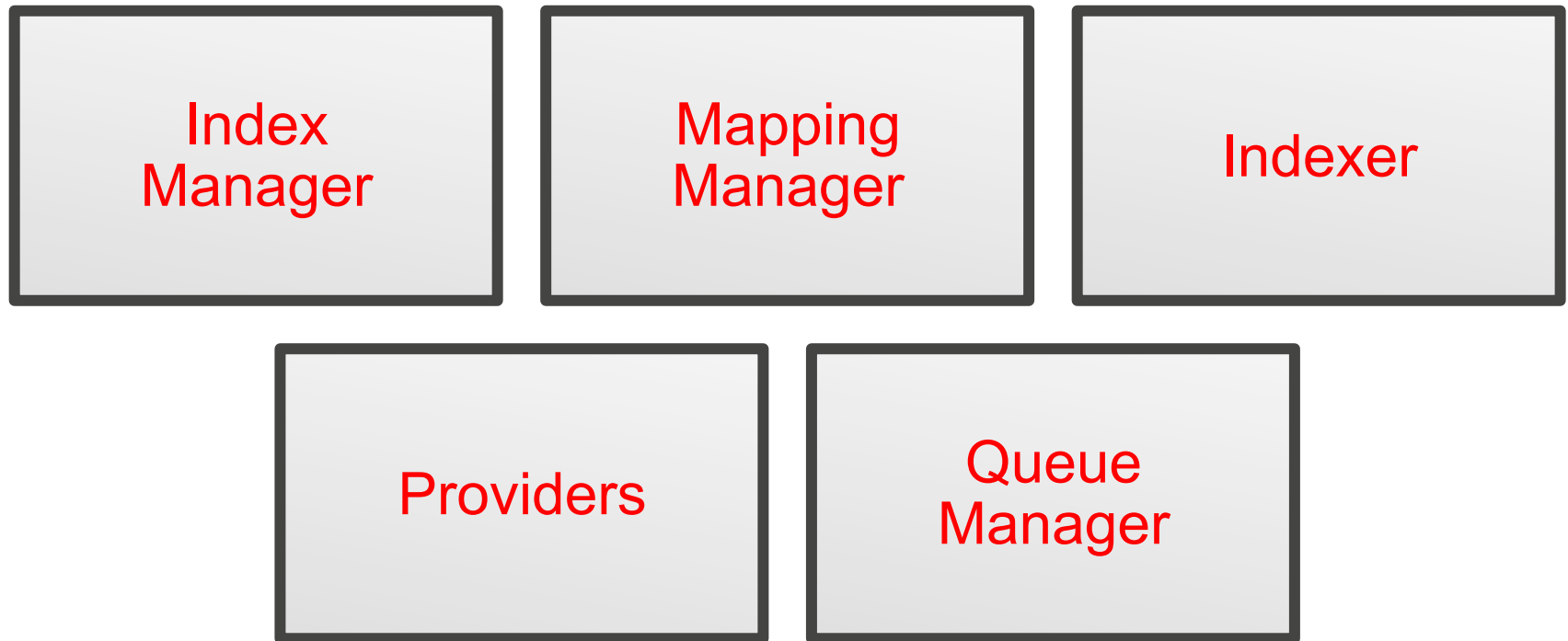
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2015
SUGARCON
CONNECTING i2i

New 7.7 framework

- Backend framework rewritten from scratch
- More pluggable and better structured
- Better hits, relevance scoring and highlighting
- Aggregation (facet) support
- Not only search centric, build for future expansion to power list views, type aheads, statistical reporting, ...

Framework



Search query requirements

- The `cross_fields` type is particularly useful with structured documents where multiple fields should match.
- For instance, when querying the `first_name` and `last_name` fields for “Will Smith”, the best match is likely to have “Will” in one field and “Smith” in the other.

MultiMatch "cross fields"

- One way of dealing with these types of queries is simply to index the first_name and last_name fields into a single full_name field (index time).
- The cross_field type tries to solve these problems at query time by taking a term-centric approach.
- It first analyzes the query string into individual terms, then looks for each term in any of the fields, as though they were one big field.

More about analyzers

- Analysis happens during both index and search. Therefore two analyzers can be configured per field:
 - index_analyzer
 - search_analyzer

Relevance scoring

- Base field boost.
- Field boost is now a float instead of fixed values.
- Applied during query execution.
- Weighted field boost based on different analyzers per field.
- Future will make use of dynamical adjustable boost rectifiers on a per user/role base.

Monitoring

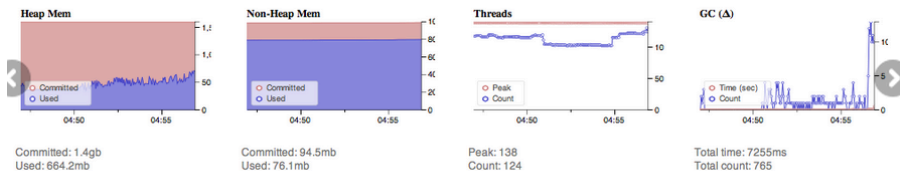
- BigDesk - <http://bigdesk.org/>
- Marvel - <https://www.elastic.co/products/marvel>



JVM

VM name: Java HotSpot(TM) 64-Bit Server VM
VM vendor: Sun Microsystems Inc.
VM version: 20.8-b03

Uptime: 73 hours, 40 minutes, 2 seconds and 725 milliseconds
Java version: 1.6.0_33
PID: 702



OS

CPU vendor: Intel
CPU model: Xeon (2666 MHz)
CPU total logical cores: 16
CPU cache: 12kb

Uptime: 721 hours, 13 minutes and 22 seconds
Refresh interval: 1000ms
Total mem: 2.9gb (3148931072 b)
Total swap: 2.9gb (3221217280 b)





Q&A

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