RedisGraph 2.0 release notes

Requirements
RedisGraph v2.0.21 requires:

- Minimum Redis compatibility version (database): 5.0.7
- Minimum Redis Enterprise Software version (cluster): 5.4.11

v2.0.21 (October 2020)
This is a maintenance release for version 2.0.

Headlines:
- This release improves overall stability and provides fixes for issues found after the previous release.

Details:
- Minor enhancements:
  - #1326, #1330 Enable comments in Cypher queries.
- Bug fixes:
  - #1338 Update parser to support negative values.
  - #1319 Replace assertion with runtime error - execution plan building process is unable locate an operation suitable for a filter.
  - #1184 EXPLAIN and PROFILE are invalid clauses. They have counterpart commands GRAPH.EXPLAIN and GRAPH.PROFILE
  - #1212 Emit error on the creation of undirected edges.

v2.0.20 (September 2020)
This is a maintenance release for version 2.0.

Headlines:
- This release improves overall stability and provides fixes for issues found after the previous release.

Details:
- Minor updates:
  - #1315 RediSearch 1.8.3
  - #1276 Graph info is added to Redis crash report.
  - #1265 Debug assertion functionality.

v2.0.19 (August 2020)
This is a maintenance release for version 2.0.

Headlines:

- This release improves overall stability and provides fixes for issues found after the previous release.

Details:

- Minor updates:
  - #1229 Upgrade RediSearch dependency to 1.8.2

- Performance enhancements:
  - #1218 Enable parameters support for ID-based entity retrieval
  - #1242 Improve update logic, update RediSearch indices only once per update
  - #1226 Let RediSearch perform document deletion when replacing a document

- Bug Fixes:
  - #1223 Resolve race condition in accessing/updating attribute maps.
  - #1196 Enable RediSearch Garbage Collection

v2.0.15 (25 June 2020)

This is a maintenance release for version 2.0.

Headlines:

- This release improves overall stability and provides fixes for issues found after the previous release.

Details:

- Bug Fixes:
  - #1159 IN operator didn't result in an index array lookup with parameterised array (IN $param).

v2.0.14 (22 June 2020)

This is a maintenance release for version 2.0.

Headlines:

- This release improves overall stability and provides fixes for issues found after the previous release.

Details:

- Bug Fixes:
  - #1157 Index search not using query parameters.

v2.0.13 (15 June 2020)

This is a maintenance release for version 2.0.

Headlines:

- This release improves overall stability and provides fixes for issues found after the previous release.

Details:

- Enhancements:
v2.0.12 (May 2020)

This is a maintenance release for version 2.0.

Headlines:

- This release improves overall stability and provides fixes for issues found after the previous release.

Details:

- Enhancements:
  - #1118 Added module configuration parameters for the number of threads in OpenMP and concurrent queries.

v2.0.11 (April 2020)

This is a maintenance release for version 2.0.

Headlines:

- This release improves overall stability and provides fixes for issues found after the previous release.

Details:

- Minor Enhancements:
  - #1056 Added DISTINCT support for paths and arrays.

- Minor Bugfixes:
  - #1056 Streamlined logic for uniquing entities.
  - #1056 Enabled comparison routine for paths.

v2.0.10 (29 March 2020)

Headlines:

- This release improves overall stability and provides fixes for issues found after the previous release.

Details:

- Minor Enhancements:
  - #1035 RediSearch version 1.6.11.

- Bugfixes:
  - #1017, #1019 Algebraic expressions correctness.
  - #1020 Support parameterised SKIP and LIMIT.

v2.0.9 (19 March 2020)

Headlines:

- This release improves overall stability and provides fixes for issues found after the previous release.

Details:
Bugfixes:
  • #1028 Ensure proper placement of Index Scans when partially replacing Filter ops.

v2.0.8 (18 March 2020)
Headlines:
  • This release improves overall stability and provides fixes for issues found after the previous release.
Details:
  • Bugfixes:
    • #1023 Fix regression in checking argument counts to GRAPH endpoints.

v2.0.6 (15 March 2020)
Headlines:
  • This release improves overall stability and provides fixes for issues found after the previous release.
Details:
  • #897 GRAPH.SLOWLOG
  • #1004 Re-enable GRAPH.PROFILE
  • #917, #991, #940, #984 Memory leak fixes
  • #925 Bug fix within RediSearch
  • #1001 Bug fix label scan invalid range

v2.0.5 (23 February 2020)
Headlines:
  • This release improves overall stability and provides fixes for issues found after the previous release.
Details:
  • Enhancement:
    • #955 Switch OR,AND boolean semiring to ANY,PAIR.

v2.0.4 (23 February 2020)
Details:
  • Enhancement:
    • Reduce GraphBLAS size

v2.0.2 (23 February 2020)
Headlines:
  • This release improves overall stability and provides fixes for issues found after the previous release.
Improved error reporting:
- #925 RediSearch query error reporting
- #919 Added non existing entity runtime error

Enhancements:
- #942 Update GraphBLAS version (3.2.0)
- #922 Filter tree compaction
- #906 Optimize cartesian product
- #898 Granular matrix locking

Bug fixes:
- #917 #940 Resolve memory leaks
- #938 Label matrix should be fetch right before eval

v2.0 GA (2.0.1 - January 2020)

This is the General Availability (GA) release of RedisGraph 2.0 (2.0.1)!

Headlines:
- Full Text Search (FTS) enabling Graph-aided Search.
- Full graph response enabling visualisation.
- Substantial amount of Cypher coverage.
- Performance improvements of up to 4x compared to RedisGraph 1.2.

(We will blog about this release soon including performance improvements results and the link here)

Full details:

Major features
- #339 Full Graph Response. RedisGraph now allows to return Graph entities such as Nodes and Relationships. This feature also enables graph visualisation.
- #558 Indexing functionality replaced by RediSearch. This results in support for
  - compound indices
  - full text search
  - graph-aided search
- #691 RediSearch index is used with IN operator on indexed properties.
- #488 Replace flex/lemon parser with libcypher-parser.
- #574 Introduction of the array data type. This introduces significant support of Cypher as well as properties can be arrays on both nodes and relationships.
- Cypher
  - #714 MERGE can be combined with any other clause. MERGE will take into account bounded entities.
  - #786 Support for passing all supported graph data types (Node, Relationship, Array,...) as arguments to procedure calls, rather than requiring all arguments to be Strings.
  - #708 Named path support.
  - #717 count (*)
  - #730 UNION
  - #757 coalesce
  - #658 Support for COUNT DISTINCT
  - #574 with the array data support comes IN, collect, head, range, reverse, size, tail
  - #624 randomUUID()
  - #632 IS NULL and IS NOT NULL.
  - #594 Support dynamic inline properties for CREATE and MERGE patterns.
- #583 NOT Operator.
- #569 timestamp() function.
- #586 CASE WHEN (simple form).
- #582 contains function.
- #596 indegree and outdegree functions for nodes.
- #587 improved boolean logic.
- #539 Reusable entities in pattern matching.
- #668 PageRank support.
- #713 Parameterised queries support. Most client drivers are updated. This enables future performance enhancements for query caching.
- #662 Support for AOF.

Enhancements
- #752 Use GraphBLAS 3.1.1.
- #674 GRAPH. QUERY will not fail even if graph doesn’t exist.
- #613 Runtime arithmetic error handling.

Performance Improvements
- #773 Bulk deletion of relationships. Deletion of relationships within the same query will be efficiently handled by batch operations in GraphBLAS.
- #783 Better replication support. Only write queries that mutate the graph or create indices will be replicated to AOF and slaves.
- #783 Better commit flow. The Redis Global Lock and RedisGraphs’s R/W lock are released once writes are done. Fixed duplicate replications in queries with multiple write segments.
- #640 GraphBlas to support OpenMP.
- #532 #535 Counting edges of given type by reducing matrices.
- #534 #571 Query parsing and GRAPH.EXPLAIN in dedicated thread.
- #550 #555 Optimize cartesian product by reducing to join.
- #641 Cartesian products with multiple incoming streams >2 can now be optimized with "HashJoin".

Bugfixes
- #783 Master-slave replication - slaves were dropping index mutations caused by procedure calls.
- #785 Solved several major memory leaks.
- #795 The underlying graph object’s attributes were not updated on RENAME.
- #720 Validation of function calls in WITH and CREATE clauses e.g. CREATE (a {v: fake()}).
- #732, #736, #747 Detect cycles in graph and generate algebraic expression.
- #734 Fix access of uninitialised GrB_Info.
- #735 Index scans with IN filters did not compare with strings properly.
- #758 Validate that during UNION all return clauses are annotated.
- #412 Better handling for GRAPH.DELETE.
- #537 Wrong row index within expand-into, enabled few TCK tests.
- #591 Emit validation error when an alias refers to both nodes and edges.
- #606 Fix Record ID of edges held in ExpandInto op.
- #607 All ops NULL-set variables in their free routines (memory).
- #893 Preserve the children array order when replacing operations.

⚠️ Note: The version inside Redis will be 20001 or 2.0.1 in semantic versioning.

Updated: December 14, 2021