



TigerGraph

TigerGraph Server 3.4.0 was released on Dec 21st, 2021.

Security patch for Log4j CVE-2021-45105

TigerGraph 3.4.0 includes a security patch for Log4j CVE-2021-45105. See [Fixed issues](#) for details.

New - TigerGraph GraphQL Service

Along with TigerGraph Server 3.4.0, we are proudly introducing [TigerGraph GraphQL Service](#).

TigerGraph GraphQL Service allows you to make GraphQL requests to access graph data in TigerGraph. To learn more, please see [TigerGraph GraphQL Service](#).

New Features

Below is a list of new features and improvements in TigerGraph 3.4.0:

Manageability

- Added the [-lleader_option](#) to `gsq1` to display the current cluster leader.
- Added Oracle Linux 8 (OEL 8) to the [list of certified operating systems](#).
- Improved query installation process. Failure in installing a subset of the queries in a single `INSTALL QUERY` command will no longer cause all installations to abort.

Observability

- Added [endpoint POST /current-service-status](#) to report TigerGraph service status through HTTP requests.

Reliability

- Added Kafka protection to GSE to prevent message loss during high-volume data loading.

Security

- Masked AWS S3 secret from GSQL logs

Usability - GSQL

- Added support for [local container variables](#) in the GSQL Query Language.
- Relaxed GSQL local variable declaration rules. Local base type variables can now be [declared at a lower level](#) to override the value of a variable with the same name.
- Added support for declaring a [HeapAccum](#) without specifying size.
- Removed the requirement of `LIMIT` clauses when using `ORDER BY` in [SQL-like SELECT statements](#).

- Removed the limitations on the following functions in Distributed Query Mode:
 - `edgeAttribute()`
 - `neighborAttribute()`
 - `neighbor()`
 - `size()`
- Added removal methods to [ListAccum](#) and [MapAccum](#):
 - ListAccum
 - `.remove()`
 - `.removeOne()`
 - `.removeAll()`
 - MapAccum
 - `.removeKey()`

Usability - GraphStudio and Admin Portal

- Added support for [Pattern View](#) in Visual Query Builder (VQB) that allows outputting a specified subset of a visual pattern's match results.
- Added support for using a vertex or edge's primary ID in expressions if primary ID is marked as an attribute.
- Added support for [formatting number attributes](#).
- Added support for search in GSQL query list.
- Added support for search in visual pattern list.
- Added a removal tool tip and a checkbox to select all privileges in the user-defined roles interface
- Removed the deprecated `STRING COMPRESS` data type from schema design options

Fixed issues

Fixed in 3.4.0

- Upgraded log4j to 2.17.0 to resolve potential security vulnerability
- Reduced system minimum free memory requirement for transactions
- Increased the timeout limit for downloading, updating, and deleting the graph catalog
- Fixed a bug that allowed non-privileged users being able to access GSQL output files through the Admin Portal
- Increased timeout limit for file operations
- Fixed an issue that led to GSE crash when a subquery uses file variables
- Fixed issue where SmartContainer collects hardware-info more than once
- Fixed an issue that led to cluster shrinking failure when instance as over 1000 queries
- Increased timeout limit for checking Kafka broker ID
- Fixed an issue that caused certain queries to use more memory than expected
- Fixed an issue that in rare cases caused RESTPP memory leak

- Fixed an issue that occasionally caused GPE to hang when interpreter raises an exception
- Disabled proxy buffering for /gsqlserver endpoints
- Fixed an issue that led to backup and restore failures on Kubernetes deployments
- Fixed an issue with query-request memory tracking that in rare cases led to GPE segmentation fault
- Fixed an issue that caused unexpected early query return when `getAttr()` has an invalid attribute
- Fixed an issue that caused local base type variable to lose type inference after being overridden
- Fixed an issue that caused `PER` clause to return unexpected results
- Fixed an issue that produced unexpected output when a `WHERE` clause uses parentheses
- Fixed an issue that caused `v.outdegree()` to return unexpected results
- Fixed an issue that cause errors in accumulator conjunctive functions calls
- Fixed an issue in GraphStudio that led to browser crash when dealing with huge map data columns
- Fixed an issue where services don't automatically restart after updating license
- Fixed an issue with GSQL syntax checker that threw an unexpected error when a SQL-like query uses built-in functions with multiple arguments

Known Issues

Cluster expansion

If you have ever deleted a vertex or edge attribute before conducting an expansion, cluster expansion may lead to issues reading attributes of that vertex or edge type.

For details, see [Cluster Expansion](#).

Applications

- **GraphStudio**
 - [Known Issues for GraphStudio](#)
 - The No-Code Data Migration feature is in Alpha release. Your feedback would be appreciated.
 - The No-Code Visual Query Builder is in Beta release. Your feedback would be appreciated.
- **Admin Portal**
 - [Known Issues for AdminPortal](#)

GSQL

- **Multiple (Conjunctive) Path Patterns:**
 - There are no known functional problems, but the performance has not been optimized. Your feedback would be appreciated.
- **DML type check error in V2 Syntax:**
 - GSQL will report a wrong type check error for Query block with multiple POST-ACCUM clauses and Delete/Update attribute operation.
- **Turn on GSQL HA manually when upgrading from 3.0.x**

- Users who are upgrading from 3.0.X need to manually start GSQL HA service. Please reach out to support for help with the process documented in: <https://tigergraph.freshdesk.com/a/solutions/articles/5000865072>
- **Stale data visible after Deletes using index**
 - Queries that use secondary index may still see the vertices being deleted until after the snapshots are fully rebuilt.

Release notes for previous versions

- [Release notes - TigerGraph 3.3](#)
- [Release notes - TigerGraph 3.2](#)

Compatibility with TigerGraph 3.1

The following changes were made to the built-in roles in TigerGraph's Role-based Access Control

- The built-in role `queryreader` can no longer run queries that include updates to the database.
 - To emulate the old `queryreader` role, create a role with all `queryreader` privileges, and also grant the `WRITE_DATA` privilege to the new role.
- The built-in role `admin` can no longer create users
 - To emulate the old `admin` role, create a global role with all `admin` privileges, and also grant the `WRITE_USER` privilege to the new role.
- To learn more about role management and the privileges of built-in roles, see:
 - [Role Management](#)
 - [List of Privileges](#)

Compatibility with TigerGraph 2

Major revisions (e.g., from TigerGraph 2 to TigerGraph 3) are the opportunity to deliver significant improvements. While we make every effort to maintain backward compatibility, in selected cases APIs have changed or deprecated features have been dropped, in order to advance the overall product.

Data migration: A tool is available to migrate the data in TigerGraph 2.6 to TigerGraph 3.0. Please contact TigerGraph Support for assistance.

Query and API compatibility:

- Some `gadmin` syntax has changed. Notably, `gadmin set config` is now `gadmin config set`. Please see [Managing with gadmin](#).
- Some features which were previously deprecated have been dropped. Please see [V3.0 Removal of Previously Deprecated Features](#) for a detailed list.

V3.0 Removal of Previously Deprecated Features

TigerGraph 2.x contained some features which were labeled as deprecated. These features are no longer necessary because they have been superseded already by improved approaches for using the TigerGraph platform. The new approaches

were developed because they use more consistent grammar, are more extensible, or offer higher performance. Therefore, TigerGraph 3.0 has streamlined the product by removing support for some of these deprecated features, listed below:

Data Types

See [Data Types in GSQL Language Reference](#)

Deprecated Type	Alternate Approach
REAL	Use FLOAT or DOUBLE
INT_SET	Use SET<INT>
INT_LIST	Use LIST<INT>
STRING_SET_COMPRESS	Use SET<STRING COMPRESS>
STRING_LIST_CONPRESS	Use LIST<STRING COMPRESS>
UINT_SET	Use SET<INT>
UINT32_UINT32_KV_LIST	Use MAP<UINT, UINT>
INT32_INT32_KV_LIST	Use MAP<INT, INT>
UINT32_UDT_KV_LIST	Use MAP<UINT, UDT_type>, where UDT_type is a user-defined tuple type
INT32_UDT_KV_LIST	Use MAP<INT, UDT_type>, where UDT_type is a user-defined tuple type

Syntax for Control Flow Statements

See [Control Flow Statements in GSQL Language Reference](#)

Deprecated Statement Alternate Statement

FOREACH ... DO ... DONE FOREACH... DO... END

```
FOREACH (condition) {
    FOREACH condition DO
body
    END
}
```

```
IF (condition) {
    body1
} else {
    body2
}
    END
```

```
WHILE (condition) {
    body
}
    END
```

Vertex Set Variable Declaration

See [Vertex Set Variable Declaration and Assignment](#)

If a vertex type is specified, the vertex type must be within parentheses.

Deprecated Statement**Alternate Statement**

MySet Person = ...

MySet (Person) = ...

Query, Job, and Token Management**Deprecated Operation****Alternate Operation**

CREATE JOB

CREATE LOADING JOB

Specify the job type:

RUN JOB

RUN LOADING JOB

RUN SCHEMA_CHANGE JOB

RUN GLOBAL SCHEMA_CHANGE JOB

CREATE / SHOW/ REFRESH
TOKEN

To create a token, use the REST endpoint GET /requesttoken

offline2online

The offline loading job mode was discontinued in v2.0. Do not write loading jobs using this syntax.

OutputSee [PRINT Statement in 'Output Statements and File Objects'](#)**Deprecated Syntax****Alternate Syntax**

JSON API v1

v2 has been the default JSON format since TigerGraph 1.1. No alternate JSON version will be available.

PRINT ... TO_CSV [filepath]

Define a file object, then PRINT ... TO_CSV [file_object]

Built-in Queries**Deprecated Statement****Alternate Statement**

SELECT count() FROM ...

SELECT approx_count(*) FROM ...

// count may be out of date

// same behavior as count(); may not include all the latest data updates

SELECT count(*) FROM ...

// exact, but slower than approx_count(*)

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