

FABRIC V6.4.2 RELEASE NOTES

These Release Notes describe the new features in Fabric version 6.4.2 and lists bugs that have been fixed since version 6.4.1

Certification of this Fabric release is based on:

- Cassandra version 3.11.6 (updated package for Cassandra as a service).
- SQLite version 3.27.2.
- Open JDK version jdk-8u252.
- Confluent Kafka version 5.5.1.
- OrientDB tp3-3.1.2.
- Elastic oss-7.6.0.

MAIN FEATURES AND IMPROVEMENTS

Broadway

- **Subscribe** Actor can listen to multiple topics by using regex in the topic argument.
- The following Actors were added:
 - **SSH Actor** – Supports a new SSH interface type.
 - **NewLine** - Gets the new line constant according to available presets or the default string value for the OS on which Broadway is running.
 - **MathRound** - Rounds the input to the closest integer value. 0.5 is rounded up.
 - **MathFloor** - Rounds the input down to the closest integer.
 - **MathCeil** - Rounds the input up to the closest integer.
 - **URLParse** - Parses a URL and breaks it into its components.
 - **URLBuild** - Builds a URL out of the components. Can be used to build parts of the URL such as path or params.
 - **StringPadding** - Pads the input string using the padding argument to achieve the required length.
 - **StringPos** - Returns the position (0 based) of a substring inside a string.
- The behavior of **DbLoad/DbCreateTable/DbDelete** actors regarding schema parameters was changed as follows:
 - If the schema parameter is left empty and then the user selects a table using a DB plug-in, do not populate the schema (keep it empty).

- If the schema parameter is populated and the user selects a table which belongs to a different schema, populate the schema & table parameters with the selected values.

IIDFinder

- Removed the section [delta_kafka_producer] from iifconfig.ini and made it visible in config.ini.
- Added a new command - **delta_recycle** - that recycles transactions that failed in delta PARTITION mode and should be recycled to Kafka after deploying the fixed code. This new command supports prepared statements, so it can be executed by a batch process as well.
- When IIDFinder is in delta partition mode, priority instances are now handled in the same topic/job as other instances that are not in priority. From the user point of view, there is no need to define a new job/topic for priority instances.
 - A new field was added to the sqlite manager file (ordered.db) called **priority**. This field makes sure that iids in priority will be synced first.
 - It is possible to fine tune the SYNC_JOB_BULK_SIZE parameter in config.ini (default 500) to ensure that all instances (not only those in priority) will be synced.
 - **Number of Jobs** and **Partitioned** in priority fields were removed from IIDFinder LU schema properties.
 - PRIORITY_PARTITIONED_DELTA_JOB_AFFINITY was removed from config.ini
 - iids are marked in priority as before on the iid_info table using the PRIORITY value in the **cause** field.

Data Catalog

- Major performance improvements were done with large projects.

Jobs

- Added an optimization mechanism to ensure a better balancing of jobs within a Fabric cluster (note that this mechanism doesn't affect jobs defined with Schedule Type as **Time Interval** or **Cron**).
 - **Node.id** was enhanced to support expected and max number of consumed jobs for a given logical ID.
Example: Node1 : 2 5
In this case, for Node1, the expected number of consumed jobs is 2, and the max number of consumed jobs is 5
 - Three new parameters were added in Config.ini:

- **MIN_GIVE_UP_EXCEPTIONAL_MINUTES.** Defines the minimum time that must pass after the recommended time is reached before jobs are restarted.
- **MAX_GIVE_UP_EXCEPTIONAL_MINUTES.** Defines the maximum time that can pass after the recommended time is reached, after which jobs are restarted.
- **CLAIM_EXCEPTIONAL_INTERVAL_SEC.** If a node that is running jobs with limited affinity 'a' and has arrived at the recommended size (all slots are filled), and tries to claim a new job with the same affinity, the node must wait this many seconds before it can claim the job. This gives the opportunity for a different node with empty slots to claim this job. Default value: 60 seconds.

Miscellaneous

- A new command was added - **set user_roles**. This command returns the list of roles of the connected user. The following APIs were added accordingly:
 - `sessionUser().roles()` – returns a list of unique roles list of the session's user.
 - `sessionUser().name()` – returns the session's user name.
- Studio: added a prompt message when trying to stop Fabric.
- Upgrade Studio Java 1.8 JDK to be aligned with server version (update to 252). Will become effective only for new installations, not upgrades.
- Studio: Improved free port detection when opening a project.
- When calling a Graphit web service, the content-length was added to the HTTP header. This only works if the content length is <=10,000,000 bytes.
- A new interface type was introduced for SSH.
- **PRIORITY_PARTITIONED_DELTA_JOB_AFFINITY** and **SYNC_PROTECTION** parameter in `config.ini` have been made visible.
- When the user stops Fabric in Studio, a prompt message was added to make sure that's what the user meant.
- A new parameter was added to Masking Broadway flow to decide if k2masking keyspace should be dropped or not in order to support upgrade mode.
- It is not required to scroll up in order to debug a large graphit file in Studio.
- Added the ability to run parallel "gets" from a different LU type and to be able to run a merged query on the same session.

- **get**, **getf** and **use** commands were enhanced to support this ability. A new optional parameter was added, called **with parallel**. This is a Boolean parameter whose value can be true or false [false is the default]. For example:
`get A.1,B.2 with parallel=true.`
- A new parameter was added to config.ini called PARALLEL_GET_POOL_SIZE to limit the number of parallel “gets” on the session.

RESOLVED ISSUES

Miscellaneous

- Ticket 19862, trigger function that calls a Broadway flow using a graphit actor is not working properly.
- Ticket 20894, async_trx is not released from the session after a commit.
- Fixed **revoke** command to support a prepared statement.
- Studio: If the project is under a folder and its name contains a dot, templates files do not show up under the context menu.
- Description for MAX_SAVE_MEMORY_USAGE parameter in config.ini was changed because its default value is 500MB.
- Ticket 20916, Web-Service code should be able to do anything that admin can (including create users) - given the right permissions.
- Ticket 21153, default value for COMMONS_SNAP_TABLE parameter in config.ini was set to 806400 seconds (1 week).
- When exceeding the LUI sync timeout, a message should indicate the value of the sync timeout in seconds instead of milliseconds.
- getf(?) does not support input parameters in integer format.
- Ticket 21234, **override a shared global** on the environment level was not working properly.

Broadway

- **Redo** functionality did not work in some extreme scenarios.
- When creating a new Actor, remarks appear with null as default.
- Define the **stage name** was mandatory.
- Data Inspection – long keys are not presented properly.
- Keep the correct order of stages after a split.
- A Broadway Actor within a **stage** couldn't be dragged to the first location.
- Parallel number indication disappears when changing the name of a **stage**.

- Ctrl+S does not work properly when trying to save a new Actor inherited from **constTable** Actor.
- When deleting a **stage** while focusing on the remark or input parameter, remark or input parameter still appears on the screen.
- When a parent ID has a NULL value, a generic exception is issued without indicating what the precise problem is or in what column it appears.
- Allow renaming **stage** or Actor in case of split **stages**.
- Customtooltip is visible when Actor is collapsed and breakpoint is set on the **stage**.
- Using **get verb** in the httpjson actor with payload was considered as post automatically. This behavior was changed to throw an exception that payload can't be provided when using **get verb**.
- Ticket 21216, the Kafka **publish** Actor removes NULL entries from Map.
- Ticket 21105, When using a condition inside a loop, state remains according to the first iteration.
- Cassandra Loader does not load all the data when used by loader JDBC interface.

IIDFinder

- Ticket 20858, offset is updated even for an instance which failed after the first try.
- Ticket 20979, After sending two insert transactions to a 3rd level and 2 level tables that go to Orphans, another insert transaction is sent which is a parent to 2nd level transaction, which should also trigger the two orphans to be moved to delta topic by the Orphans job. But only the 2nd transaction to the 2nd level table moved from orphan to delta by the Orphans job and deleted from Orphans, while the 1st transaction to the 3rd level table stays in Orphans.
- Ticket 20974, Orphan records are not deleted after GET and LUI update.
- Orphan Job does not fetch a grandchild row to delta.
- Tickets 20830 & 20834, ParentCacheManager - fix sql parsing for columns with 'as'.
- Partition delta, second "get" fails when jobs are down.
- Partition delta, fix null point exception in some extreme cases.
- Ticket 21015, Partitioned delta job doesn't start after second deploy.
- Ticket 21017, in case of LCK, the cache tables are not deleting when the link is removed.
- Ticket 21093, solo records are not moved to delta in two quid fields scenario.
- When trying to generate an iidFinder.xml file in Studio for reference tables, if some iid Finder columns are empty, a null point exception appears.

- Ticket 21116, IIDFinder doesn't use cluster Id for common tables.
- Ticket 21122, remove the population vs iidFinder tables counts validation during the sync process.
- iidFinder.xml is generated incorrectly in Studio, all tables are generated on the same level, LU schema structure is not taken into consideration.
- Ticket 21068, Getting null pointer in the next get on the same session after "exclusive lock" error.
- Getting null point exception when processing a message when an entry in a child table exists but not in the cache.

Data Catalog

- Override.catalog is not working well when adding two new links to the same existing node.
- Move Use to Uses in Legend/Properties on Data Catalog application.
- Link from API to table/column is now presented as USES link type.