



FABRIC V6.5.9 RELEASE NOTES

These Release Notes describe the new features in Fabric release V6.5.9 and list bugs that have been fixed since the V6.5.8 release.

Certification of this Fabric release is based on:

- Cassandra version 3.11.12 and 4.0.3.
- SQLite version 3.34.0.
- Open JDK version jdk-8u322.
- Confluent Kafka version 5.5.1.
- OrientDB - 3.1.3-tp3 & 3.2.4-tp3.
- Elasticsearch - 7.14.1 & 7.8.1.
- AWS OpenSearch - 1.3.4.

MAIN FEATURES AND IMPROVEMENTS

1. KMS

- Fabric supports integrations with AWS and GCP KMS (Key Management Service) in order to generate, encrypt and decrypt its master key. Among the advantages of using KMS is that it is backed by hardware security modules (HSM), which leverages the security level.
- When Fabric starts, it requests KMS to decrypt the master key in order to use it.
- There are 2 levels of available and supported key rotation - in Fabric as well as in KMS. Fabric supports both KMS scheduled/auto rotation or manual key rotation, as well as replacing the KMS master key ID in Fabric. Fabric supports all these options and accordingly can decrypt data that was encrypted with older KMS keys or older keys' versions.
- The KMS support is aimed at any kind of a master key usage in Fabric, such as LUI encryption and hash key masking.
- To use KMS:
 - Set the config.ini with the parameters of the relevant KMS 3rd party (either AWS or GCP).
 - Run the new **ACTIVATEKEY** Fabric command with the appropriate parameters.

2. New Population Mode

The new population mode **Delete Mode** defines the **policy regarding the deletion of the previous records** (populated prior to the current sync) **from the LU table by the current sync**. Previous Fabric versions supported the following delete modes when syncing an LUI:



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- Do not delete the previous records from the LU table.
- Truncate all records from the LU table before populating it with the new records.
- The second option enables a 'clean start' upon the sync. However, it sends a massive number of CDC messages upon the LUI sync: Fabric sends a CDC message on each of the deleted and the newly created records.
- A **new delete mode** has been added to this release in order to send CDC messages only when required, i.e., on the changed data, avoiding the sending of **unnecessary CDC messages**. On the one hand the new delete mode verifies that the LU table does not contain **redundant data** and on the other hand it deletes older/previous records (created by the earlier sync) that contain data that no longer exists for the LUI in the source.
- The **Delete Mode** property has been added to the LU table. It replaces the previous **Truncate Before Sync** LU table's property and can have the following values:
 - All - the entire LU table is truncated before the populations are executed.
 - Off - the previous records are not deleted.
 - NonUpdated - deletes previous records (created by the earlier sync) where data no longer exists for the LUI in the source.
- The Delete Mode can be set on either the LU table or the table's populations.
- Starting from this release, each newly created Broadway population flow includes a new **SyncDeleteMode** actor. It defines the delete mode of this population (set to Off by default to inherit the delete mode from the LU table). Existing flows, that don't include this actor, will not require any change and will act as if the Delete Mode is set to Off. There is no need to add the **SyncDeleteMode** actor to the existing flows, unless you need to update the population's Delete Mode.

3. Broadway

Various Improvements

- **New UI validation type:** When an actor has a mandatory input and it is empty, the validation error icon is displayed. Clicking on it, opens the message in the footer "Missing mandatory input on Actor <actor name>". This validation is not applicable for **External** input type.
- **Support Instance ID column name different from the Source DB column name:** when populating the LU Root table, Broadway population flow now supports having an LU Instance ID column name different from the Source DB column name. To utilize this feature, take the following steps:

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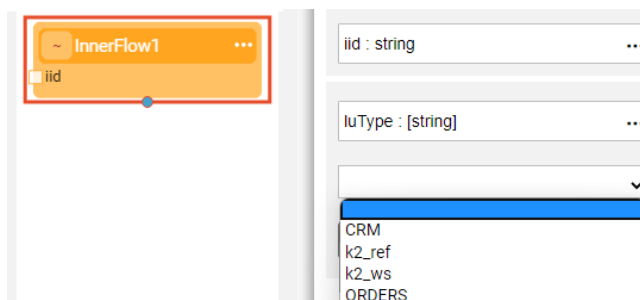
- Change the Instance ID name in the LU Root table from the Source DB column name to another name, for example, from CUSTOMER_ID to ID. Note that in this example, the population's input remains the same as the column name in the Source DB - CUSTOMER_ID.
- Update the CUSTOMER_ID column of the **DbLoad** actor, to correspond to the LU table column name. Then, map the output of the **SourceDbQuery** actor to the new input of the **DbLoad** actor.
- **'Save As Actor' enhancement:** It is now possible to populate the new actor's name, when using the 'Save As Actor' option. The default name will be prepopulated and editable, so the user can enter a different value if needed.

New actors

- **SyncDeleteMode** actor defines the population's Delete Mode that can be set to:
 - Off (default) - the Delete Mode is taken from the LU table's properties.
 - All - truncate all previous records from the LU table.
 - NonUpdated - deletes previous records (created by the earlier sync) where data no longer exists for the LUI in the source.
 - This actor is applicable for population flows only.
- **NullValue** actor that returns an empty value (null). The purpose of this actor is to improve the flow usability (readability). This actor acts the same as Const with no value defined.

Modified actors

- **LuFunction** actor now allows to open the LU function from the actor's properties tab.
- **InnerFlow, InnerFlowAsync** actors can now display a specific input argument plugin, if such plugin is being used by the inner flow.



4. Fabric Commands

- **REF_CANCEL** command is a new Fabric command that triggers a Reference/Common table sync activity cancellation.
 - If the Reference sync is in the middle of extracting data from the source, the command will cancel this activity.



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- All enqueued sync activities for the selected table will be cancelled as well, and Kafka offset will be promoted accordingly.
- **BATCH** command can now be executed on a CommonDB table as a source, providing an SQL that defines the IID subset.
- **SET** command now displays only the values of settings that are different from their defaults. SYNC mode and the list of GLOBALS remain displayed as of now, unchanged.
- **DESCRIBE SCHEMA** command can now show the LU views as well. Additionally, DESCRIBE VIEW command provides the details of LU views, including column names and types.
- **LIST BF** command can now display the remarks of the flow's input and output parameters, when the command is run in a single flow mode, using the syntax:
 - LIST BF LU_NAME=< LU name> FLOW=<flow name>

5. iidFinder

- A new set of methods was exposed by an existing iidFinder API that replace manual access to *k2staging.k_<LU>_iid_info* table. Each method performs one of the following tasks:
 - Set an instance as excluded providing a reason (cause).
 - Return the exclusion cause.
 - Set an instance as priority.
 - Return true if an instance was deleted.
 - Return true if an instance was excluded.
 - Return true if an instance was set as priority.

6. Miscellaneous

- **Data Explorer** now shows all timestamps including milliseconds – start sync time, end sync time, etc.
- **GraphIt** now allows to override its return status using the setStatus() function – when running in a debug mode.
- **Session maximum absolute timeout** – the maximum duration of an active session until the user is forced to re-authenticate and establish a new session.
 - WEB_SESSION_MAX_DURATION=0 (0 means no limit, default value).
 - This setting defines an absolute timeout, regardless of a session inactivity, which is already supported and is set to 15 idle minutes:
WEB_SESSION_EXPIRATION_TIME_OUT=15
- The **search** interface now works with two providers: AWS OpenSearch and Elasticsearch (default). The Search provider is defined in config.ini.



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RESOLVED ISSUES

- Issue: Correct visualization of field transformations in Broadway and in GraphIt:
 - When 2 source columns are concatenated into 1 target column, both connections are depicted in the Catalog.
 - When a field in a source query has an alias, the Catalog depicts the connection between the original source field and the target.
- Issue: BROADWAY method can now be revoked from the role permissions via Web Admin. The issue is now fixed.
- Issue: Storage Transition – issues found in this functionality are now resolved.
- Ticket 29605 – audit mechanism enhancement, in order to populate the session ID correctly in k2audit table.
- Ticket 29015 – when the outputs of two actors are connected to the same port, and the second actor is disabled, the disabled actor sends an empty output and overrides the value. The problem is now fixed.
- Ticket 29646 – GraphIt Fields are ‘hidden’ when saving GraphIt with parent minimized. The problem is now fixed.
- Ticket 29439 – GraphIt UI doesn’t show the right panel. The problem is now fixed.
- Ticket 30038 – reference consumption is very slow, ref_status is always with backlog. The problem is now fixed.
- Ticket 30765 – LS Actor doesn’t return the output date fields correctly. The problem is now fixed.
- Ticket 30955 – Authentication error in Web Admin after doing reset drop on Fabric and trying to re-login. The problem is now fixed.
- Ticket 26882 - Broadway editor does not save the flow after modification with hot keys. The problem is now fixed.
- Ticket 30039 – Studio deletes annotations added by implementer. The problem is now fixed.
- Ticket 28637 – Broadway Inner flow run results error isn't cleared after successful run from the Outer flow. The problem is now fixed.
- Ticket 30746 – Defect in statistics MDB cache count. The problem is now fixed.