

# Tungsten Replicator Master Class

Intermediate: Filter Like a Pro!

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# Topics

In this short course, we will discuss filtering:

- Recap replication stages and pipelines
- Look at available filters
- Example configurations and use cases
- Enabling filters
- Custom filters

# The Replicator

# Tungsten Replicator Stages

## Extractor

Each stage passes through:

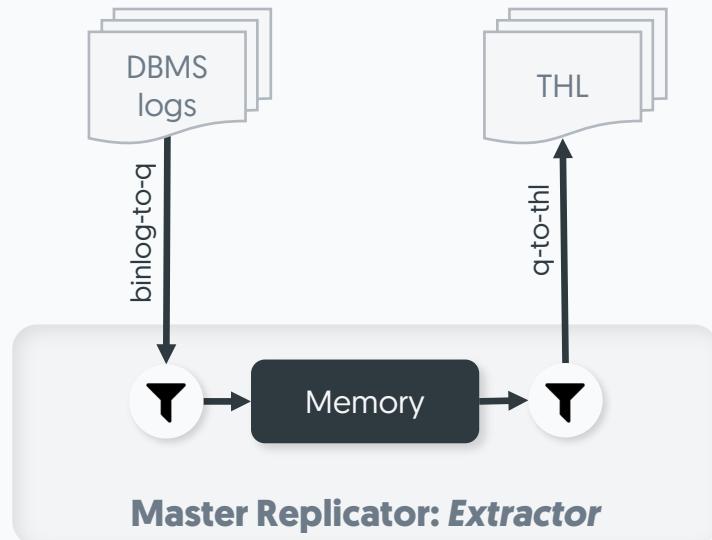


binlog-to-q

Handles extraction of transactions from binary log and places into in-memory queue

q-to-thl

Takes transactions from in-memory queue and writes down to disk into thl log file



# Tungsten Replicator Stages

## Applier

### remote-to-thl

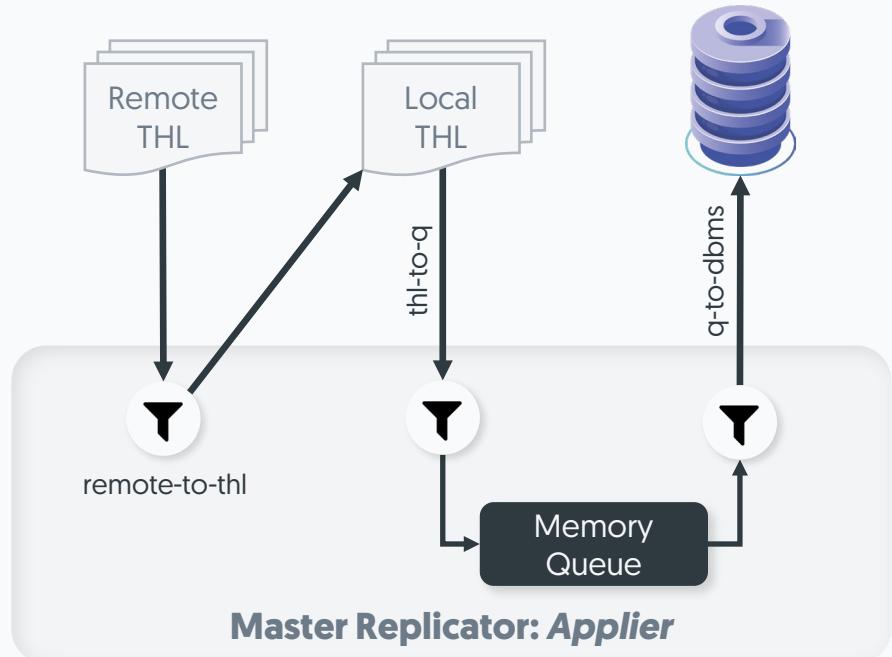
Streams thl log files across network socket, from configured source. Writes out THL to local disk.

### thl-to-q

Reads transactions from thl and places into in-memory queue

### q-to-dbms

Reads transactions from in-memory queue and writes out to target database



# Filtering

# Filtering

- Remove THL entries
  - For example, filter by schema/table name
  - Filter by data
  - Filter by type (statement, row, DDL, DML)
- Change Content
  - Remove a row or column
  - Change the contents of rows – for example string formats, or
  - Change the datatypes of rows – for example, an Int into Float, SET types into strings, or date types
  - Data Masking (Coming soon)
- Add Data
  - Introduce entirely new transactions
  - Insert new data
  - Duplicate data into other tables

# colnames

- Adds column names to THL
- Essential for Heterogeneous Environments and pre-requisite for some filters
- Can increase size of THL on disk
- No config required, just enable at binlog-to-q stage

# replicate

- Filters out at schema or table level
- .do = Only replicates objects listed
- .ignore = Replicates everything except objects listed
- Can be applied at extract or apply stage
  - Think carefully! If filter at extract – gone forever! But will reduce THL on disk

# dropcolumn

- Filters out at column level
- Apply at Extract or Apply stage
- Requires colnames filter!
- Requires additional JSON configuration file

# droprow

- Filters out data at row level
- Apply at Extract or Apply stage
- Requires colnames filter!
- Requires additional JSON configuration file

## rename

- Remaps object names between source/target
- Remaps Schema, Table and even columns
- Requires colnames filter for column remapping
- Require additional CSV configuration file

## rowadddbname

- Adds a new column to THL containing schema name
- Useful for Fan-In topologies
- Requires colnames filter

# Custom Filters

- You can write your own filters!
  - JavaScript
  - Full templates and examples available online
  - <https://www.continuent.com/resources/docs/latest/tr/filters-javascript.html>
- Full information along with a list of all available filters in our documentation:
  - <https://www.continuent.com/resources/docs/latest/tr/filters.html>

# Summary

What we have learnt today:

- Reviewed replication stages and pipelines
- Looked at available filters
- Viewed configurations and use cases
- How to enable filters
- Custom filters

# Thank you for listening

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