

# FTS Transfers

# New Efficiency Calculation

MONIT team

# Request

- Change the formula to calculate the **Efficiency**
  - It will affect only the FTS dashboard (<https://monit-grafana.cern.ch/d/000000420/fts-transfers-30-days?orgId=20>)
  - Specifically the FTS Efficiency plot
- Requested by CMS
  - Because not totally correct the current formula
    - Based on a simple Average
  - Better the weighted Average

# Calculation

The chain of queries calculates a wrong Mean

## Current – Simple average:

- ```
SELECT mean("efficiency") AS efficiency
FROM
  (SELECT mean("t_final_transfer_state_flag") AS efficiency)
[...]
```

GROUP BY time(<time>), <groups>

## Proposed – Weighted average:

- ```
SELECT sum("sum_efficiency") / sum("cnt") AS efficiency
FROM
  (SELECT sum("t_final_transfer_state_flag") AS sum_efficiency, count("file_size") AS cnt)
[...]
```

GROUP BY time(<time>), <groups>

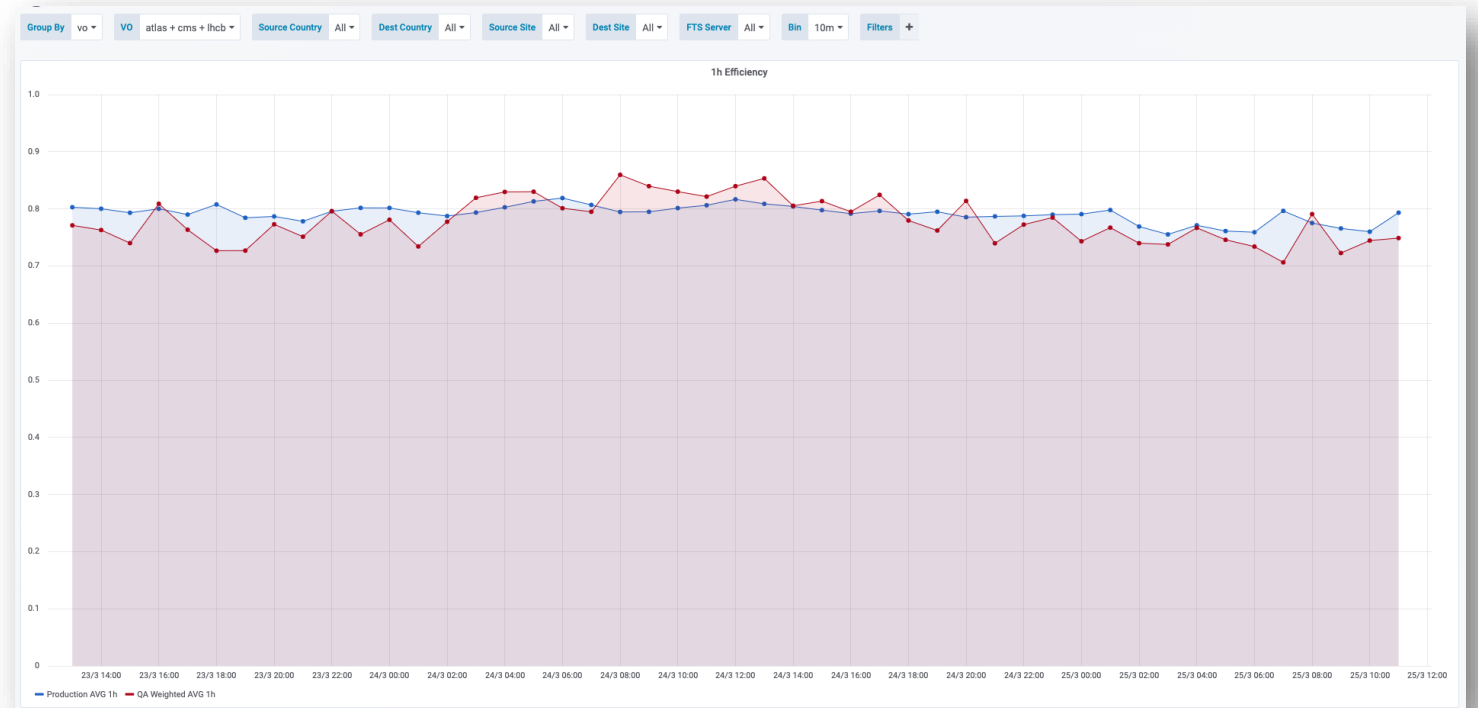
# Comparison

**Current:**

- **Simple average**

**Proposed:**

- **Weighted average**



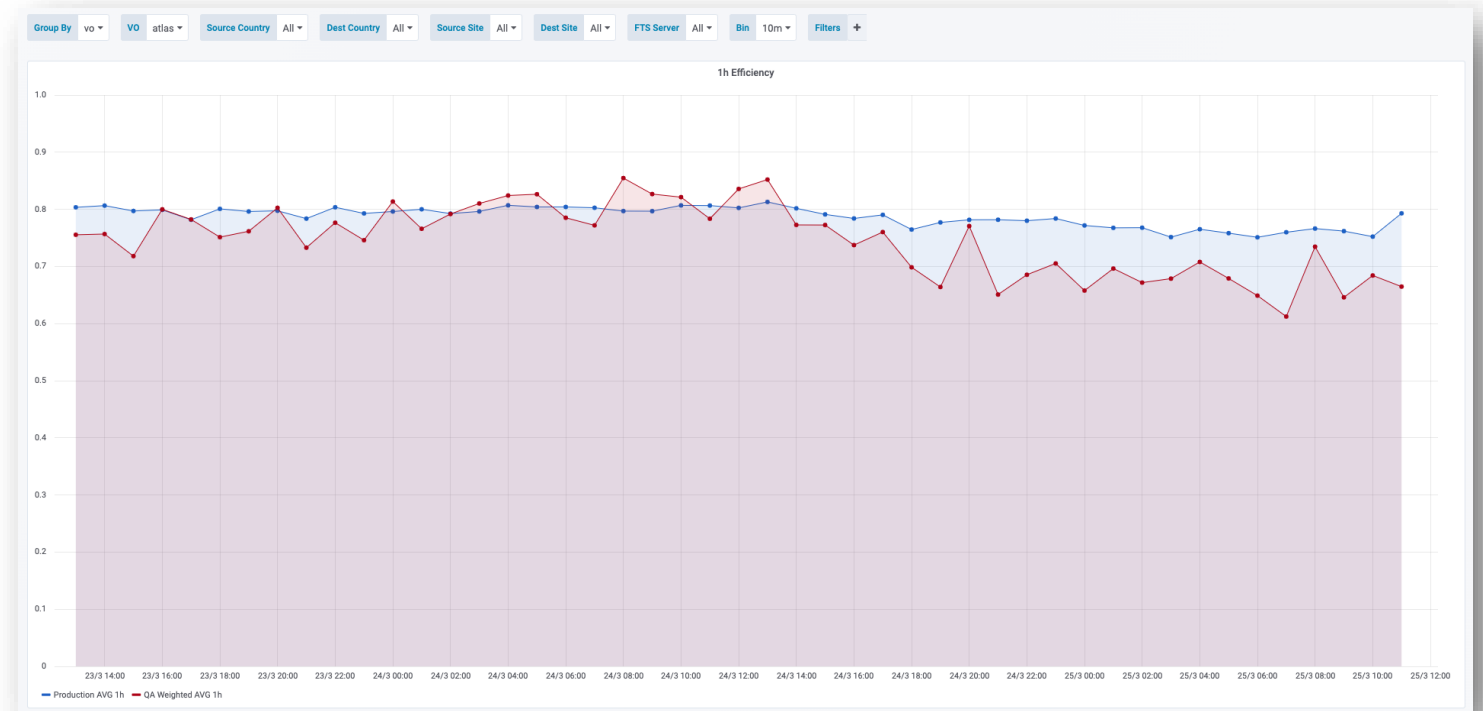
# Comparison ATLAS

**Current:**

- **Simple average**

**Proposed:**

- **Weighted average**



# Comparison ATLAS

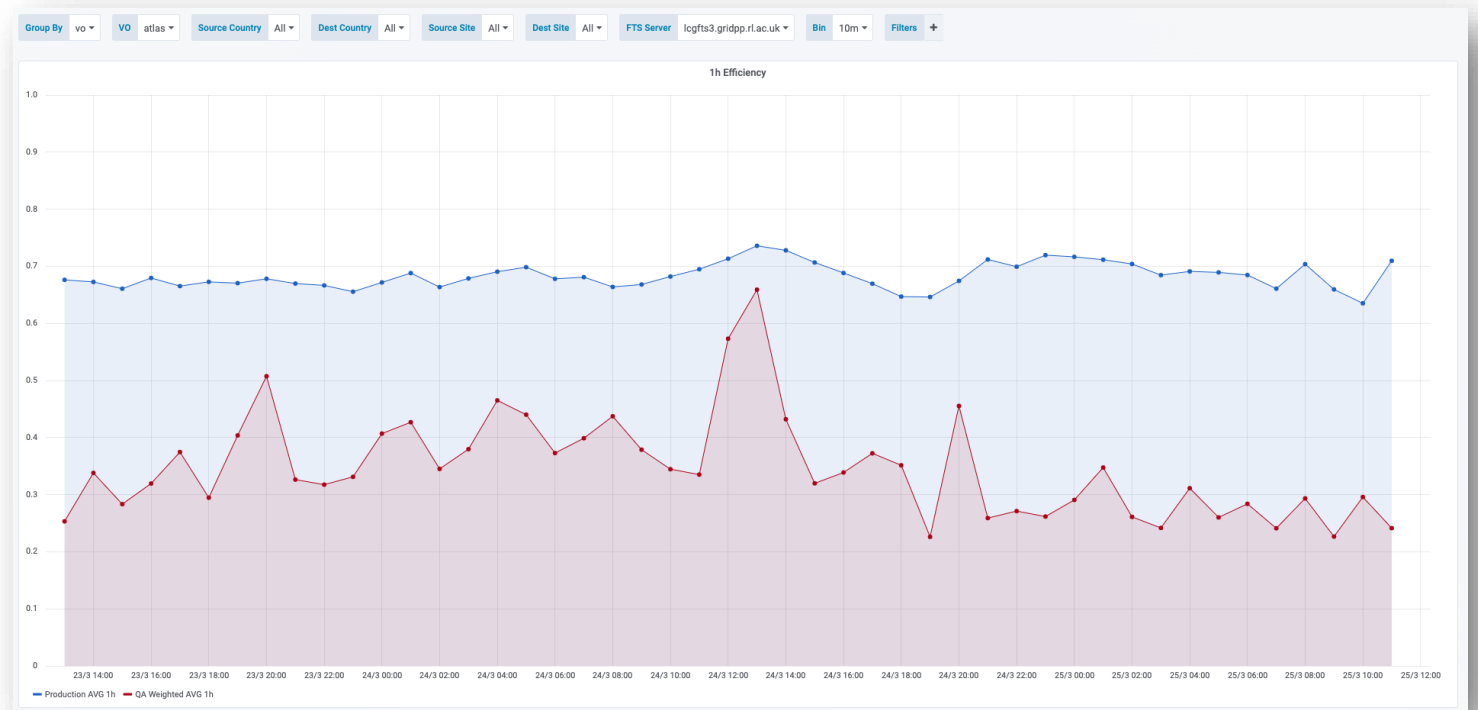
FTS server: *lcgfts3.gridpp.rl.ac.uk*

**Current:**

- **Simple average**

**Proposed:**

- **Weighted average**



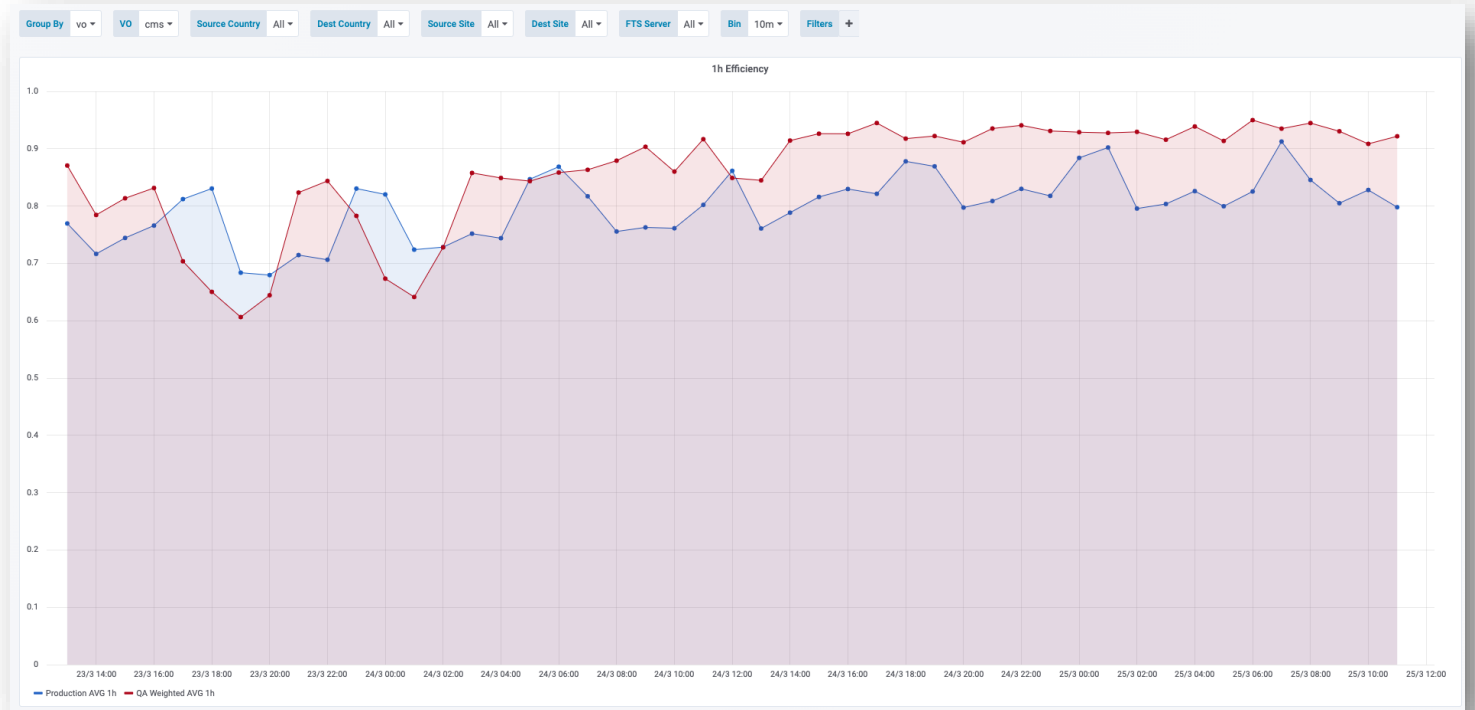
# Comparison CMS

## Current:

- **Simple average**

## Proposed:

- **Weighted average**



# Comparison CMS

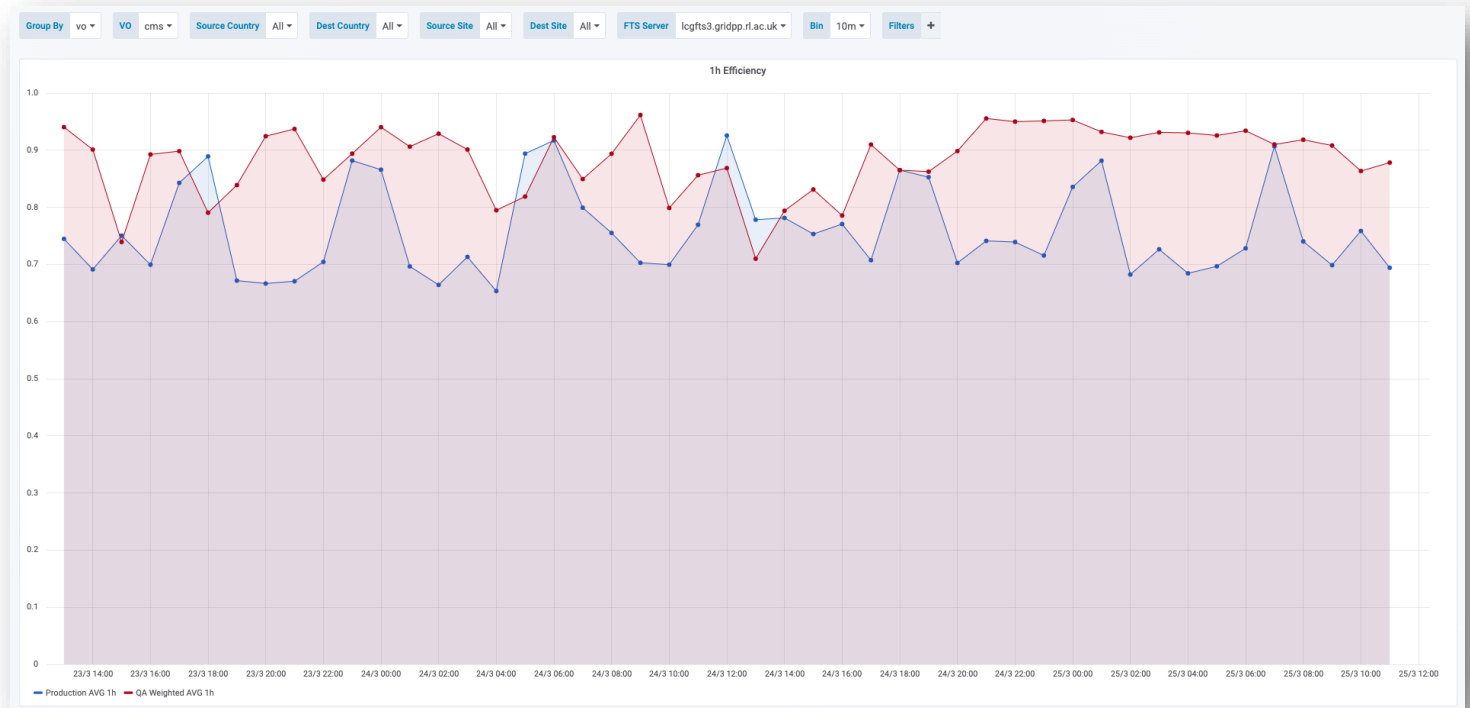
FTS server: *lcgfts3.gridpp.rl.ac.uk*

## Current:

- **Simple average**

## Proposed:

- **Weighted average**





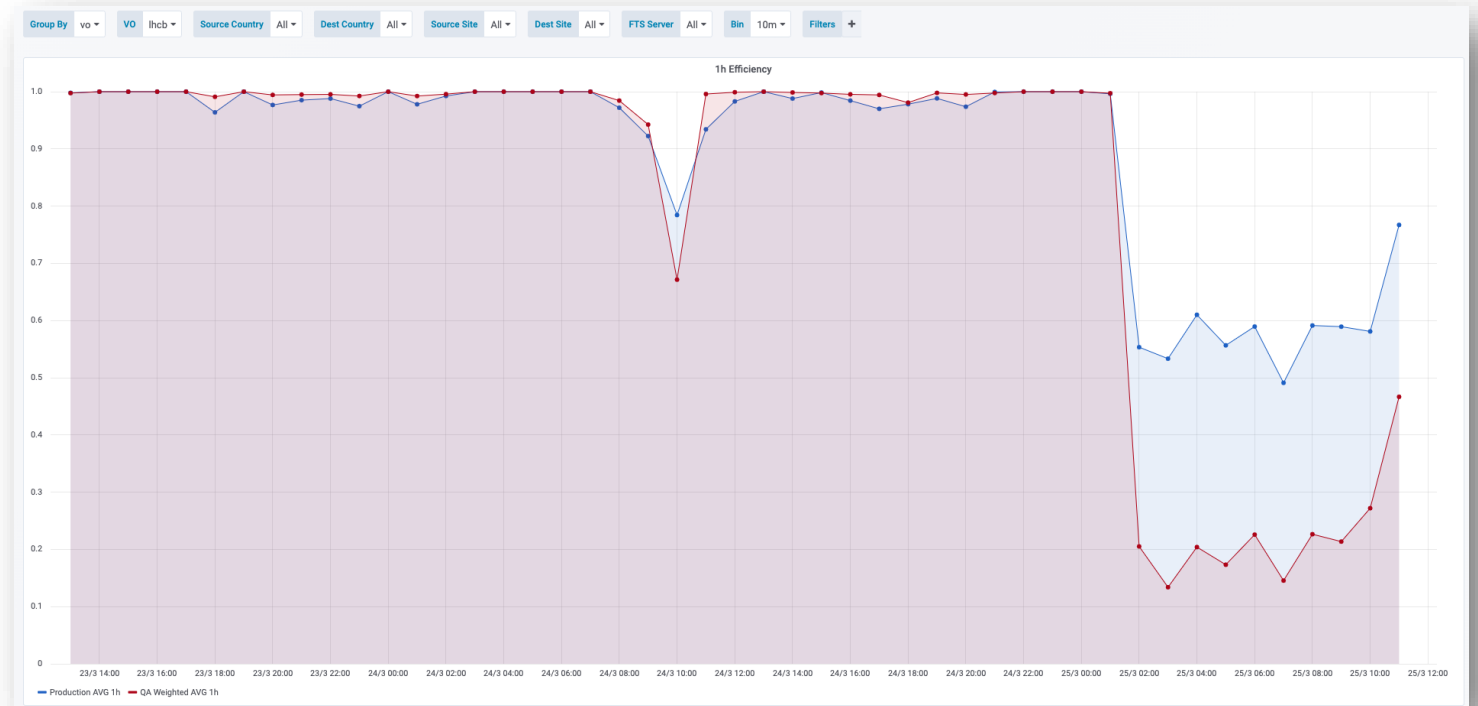
# Comparison LHCb

**Current:**

- **Simple average**

**Proposed:**

- **Weighted average**



# Comparison LHCb

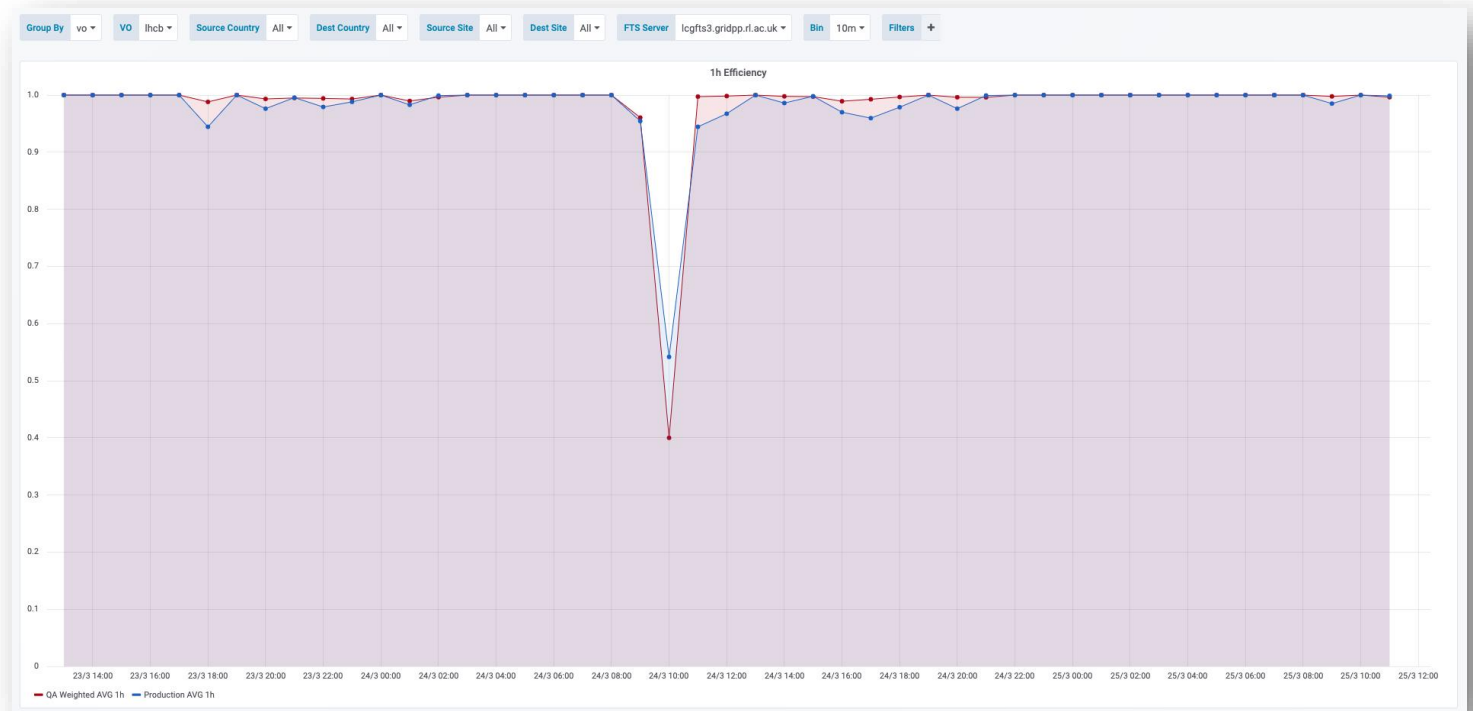
FTS server: *lcgfts3.gridpp.rl.ac.uk*

**Current:**

- **Simple average**

**Proposed:**

- **Weighted average**



# Outcome

- The change will be applied only if all the VOs agree
- If agreed by everyone:
  - The new calculation will be applied only for fresh data

# Questions ?