Influx Issue and solutions

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Part 4: Plan for development

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The issue

- Influxdb has a limit on the number of different values a tag can have
  - Our monitoring system generates entries with 2 tags
    - partition_id
    - source_id
      - <partition>.<app>.<module>[.<subelement>]

- The limit (100k) has been reached on the current table used for operation
  - incoming messages with a new tag value are discarded
  - Therefore we start having missing points in the dashboards

- The issues comes from a particular metric
  - TPChannelInfo
  - That is constructed in such a way that every channel has it's own different source_id
  - Even if very few metrics are published, the amount of points of multiple runs and channels piled up

Immediate actions

- this maximum is for us to set, the default 100k can be changed or even removed
  - But all the available documentation suggest that increasing that number can have an impact on performance

- Last week we increased that limit to 120k
  - This should buy some time to complete the new release and test

- I also made 2 PRs to change the metric and its publication
  - Now (from v4.4.0) it will publish the channel as an entry in the structure, not as a tag
  - THe plots will not be as nice but I think it's a small price to pay

Plan for the protodune 2 run

- Discussing with Wes, we made a requirements due to the protodune run
  - We would like the data of the monitoring of the run, to be all available in the same table
  - So that people can access the monitoring of the whole run

- My recommendation is that once v4.4.0 is release, we switch to a new table of influxdb
  - And we restore the maximum to 100k

- This should give us plenty of new tags for all possible tests

- Possibility of using influxdb v2
  - That has a default of 1M tags
    - We suspect they made some improvements behind the scenes
  - But Experts are suggesting that at this point is best to wait until the release of v3 to avoid transitioning twice in a short amount of time
  - Pat can comment more on both items

Impact on monitoring revamp v > 5.1

- The existence of that limit will change slightly what we will do for the new monitoring system
  - The tags of the entries will not be redundant

- Tags
  - session
  - app
  - element
    - in the form <module>[.<subelement>]

- In this way we get rid of the multiplicative factor due redundant information in the tags

- I will probably change slightly the OpMonEntry definition (the protobuf schema) to reflect this