sector_state

April 18, 2021

1 Sector State Metrics Dashboard

1.1 Setting-up

```
[1]: %load_ext autotime

     %load_ext autoreload

     %autoreload 2
```

time: 8.84 ms (started: 2021-04-18 01:14:54 +00:00)

```
[2]: # External depences
     import pandas as pd
     import numpy as np
     import plotly.express as px

     # Move path to parent folder
     import sys
     sys.path.insert(1, '../')

     # Internal dependences
     from filecoin_metrics.connection import get_connection, get_connection_string
     from filecoin_metrics.metrics import *
```

time: 515 ms (started: 2021-04-18 01:14:54 +00:00)

```
[3]: conn_string = get_connection_string('../config/sentinel-conn-string.txt')
     connection = get_connection(conn_string)
```

time: 145 ms (started: 2021-04-18 01:14:55 +00:00)

1.2 Visualizations

Rate of missing PoST, weekly, network-wide

```
[4]: s = rate_missing_post_network_weekly(connection)
     px.bar(s, log_y=True)
```

time: 1min 51s (started: 2021-04-18 01:14:55 +00:00)

Fraction of active sectors with Missing PoST, weekly, network-wide

```
[5]: s = fraction_missing_post_network_weekly(connection)
     px.bar(s)
```

```
time: 1min 24s (started: 2021-04-18 01:16:46 +00:00)
```

Rate of missing PoST, weekly, per miner $\quad$ d = rate_missing_post_miner_weekly(connection)

Declare Fault count per miner, top 10 $\quad$ s = declare_fault_count_per_miner(connection) print(s.sort_values(ascending=False).head(10))

Declare Fault rate, weekly, network-wide

```
[6]: from filecoin_metrics.metrics import declare_fault_weekly

     s = declare_fault_weekly(connection)

     fig_df = s.reset_index()

     fig = px.bar(fig_df,
                  x='timestamp',
                  y='declare_fault_count',
                  title='Weekly Declare Fault Count',
                  log_y=True)
     fig.show()
```

```
time: 3.99 s (started: 2021-04-18 01:18:11 +00:00)
```

Rate of early termination, weekly, network-wide

```
[ ]:
```

Average termination fee, weekly, network-wide

```
[ ]:
```

1.2.1 Renewal Events

```
[7]: from filecoin_metrics.metrics import renewal_count_per_epoch

     s = renewal_count_per_epoch(connection)
     INTERVAL = '1w'

     s_count = (s.resample(INTERVAL)
                 .sum()
                 .backfill()
               )
```

```python
s_cum = (s.cumsum()
         .resample(INTERVAL)
         .median()
         .backfill()
       )

s_cum.name = 'renewal_count_cumulative'

fig_df = (pd.DataFrame([s_count, s_cum])
            .T
            .reset_index()
            .melt(id_vars=['timestamp'])
          )

fig = px.bar(fig_df,
             x='timestamp',
             y='value',
             title='Renewal Events Count',
             facet_col='variable',
             log_y=True)
fig.show()
```

time: 22.3 s (started: 2021-04-18 01:18:15 +00:00)

Renewal Gap, weekly, per miner

[7]:

time: 13.9 s (started: 2021-02-17 17:12:59 -03:00)