sector_state

March 14, 2021

1 Sector State Metrics Dashboard

1.1 Setting-up

[1]:
```
%load_ext autotime

%load_ext autoreload

%autoreload 2
```

```
time: 18.2 ms (started: 2021-02-26 16:03:39 -03:00)
```

[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: 2.11 s (started: 2021-02-26 16:03:39 -03:00)
```

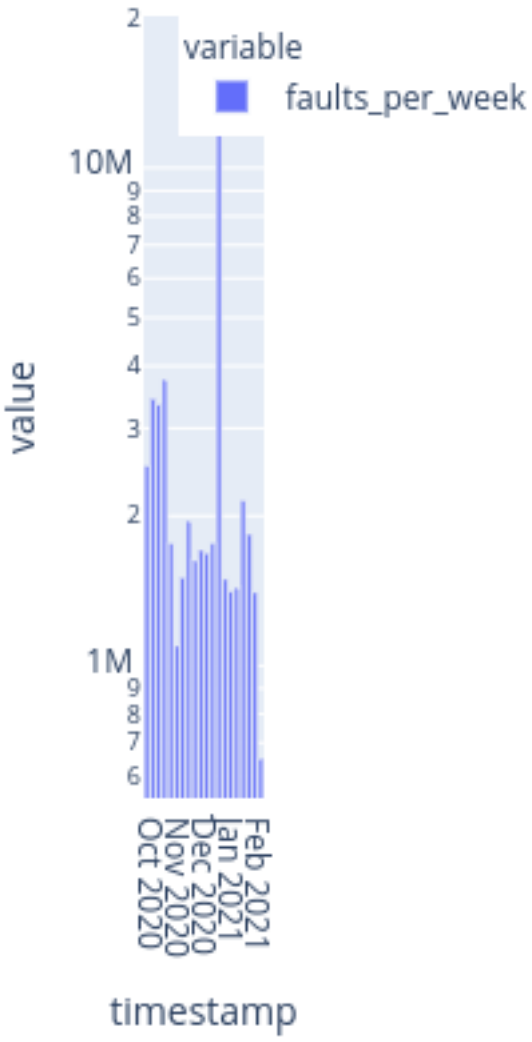
[ ]:
```
conn_string = get_connection_string('../config/sentinel-conn-string.txt')
connection = get_connection(conn_string)
```

```
time: 2.99 s (started: 2021-02-26 16:03:41 -03:00)
```

1.2 Visualizations

Rate of missing PoST, weekly, network-wide

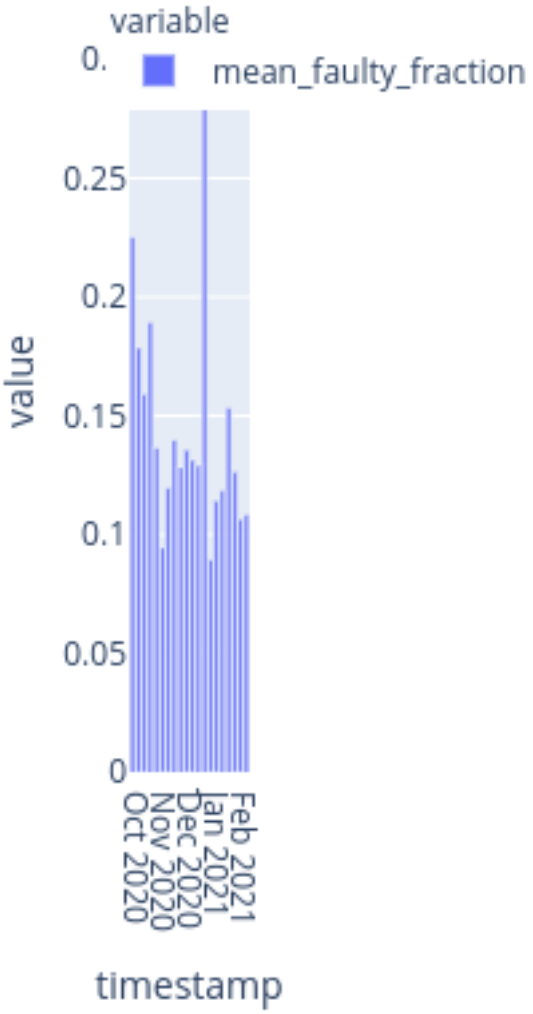
[4]:
```
s = rate_missing_post_network_weekly(connection)
px.bar(s, log_y=True)
```



time: 1min 19s (started: 2021-02-17 17:10:41 -03:00)

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

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




```
time: 55.8 s (started: 2021-02-17 17:12:01 -03:00)
```

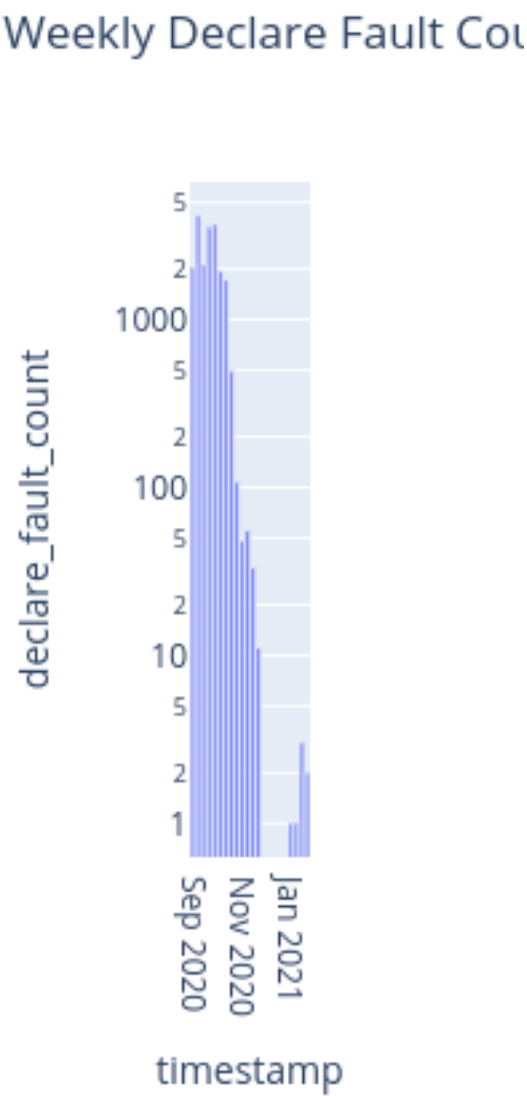
Rate of missing PoST, weekly, per miner d = rate_missing_post_miner_weekly(connection)

Declare Fault count per miner, top 10 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: 1.02 s (started: 2021-02-17 17:12:57 -03:00)
```

Rate of early termination, weekly, network-wide

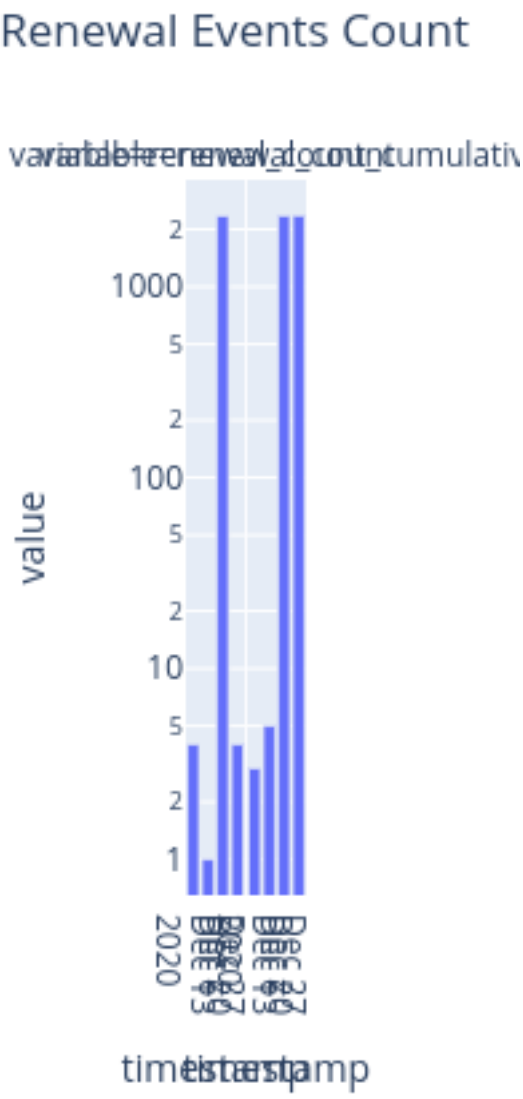
[ ]:

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()
          )

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

Renewal Gap, weekly, per miner

[7]:

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