SRT Prometheus Exporter

by ***Windrow14@Github*** and ***fujitatomoya@github***

Agenda

- Who we are?
- OSS Activity
- SRT Features
- Motivation
- Overview
- Discussion

Who are we?

- Yinzhe Wu
  - Sony China
  - Software Engineer
  - Windrow14@Github
- Tomoya Fujita
  - Sony R&D Center, US Lab
  - Senior Staff Engineer
  - fujitatomoya@Github
  - Robot Operating System Technical Steering Committee

OSS Activities

We have been working with OSS communities for a while,

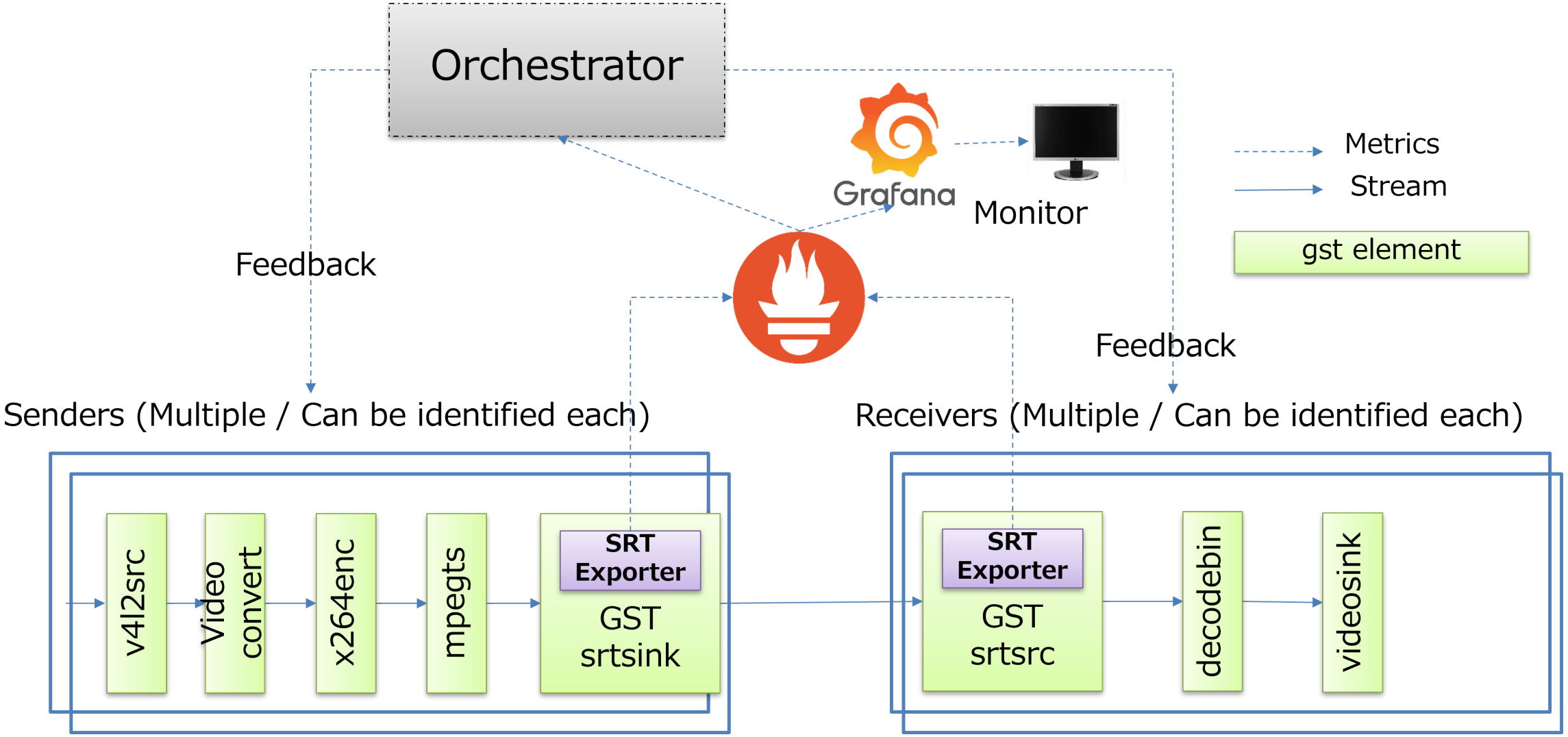
- Robot Operating System
  - Robot Operating System Technical Steering Committee
  - ROSCon 2018 Keynote Home Entertainment Robot
  - ROSCon 2019 Panel Talk Edge at Scale
  - ROS World 2021 Content Filtering Feature
  - ROSCon 2022 Keynote & Programing Committee
- Kubernetes
  - KubeCon EU 2021 Edge Day Robotics Edge Cluster System
  - Kubernetes Robotics Distributed System

SRT Differentiating Features

- Reliability
- Latency Window
- Timestamp Based Packet Delivery
- Too-Late Packet Drop
- Fast Retransmit
- Bidirectional Transmission Queues
- ***Statistics (HERE !!!)***
- Access Control (Stream ID)

Motivation

- Statistics / Metrics / Tracing data is being necessary and important for cloud infrastructure to keep the system maintained.
- Once it comes to edge, these data will be required to maintain the whole services and systems for orchestration.
- Dynamic application re-deployment / parameter re-adjustment will be required to keep the service. (Circulatory Functioning System and Application.)



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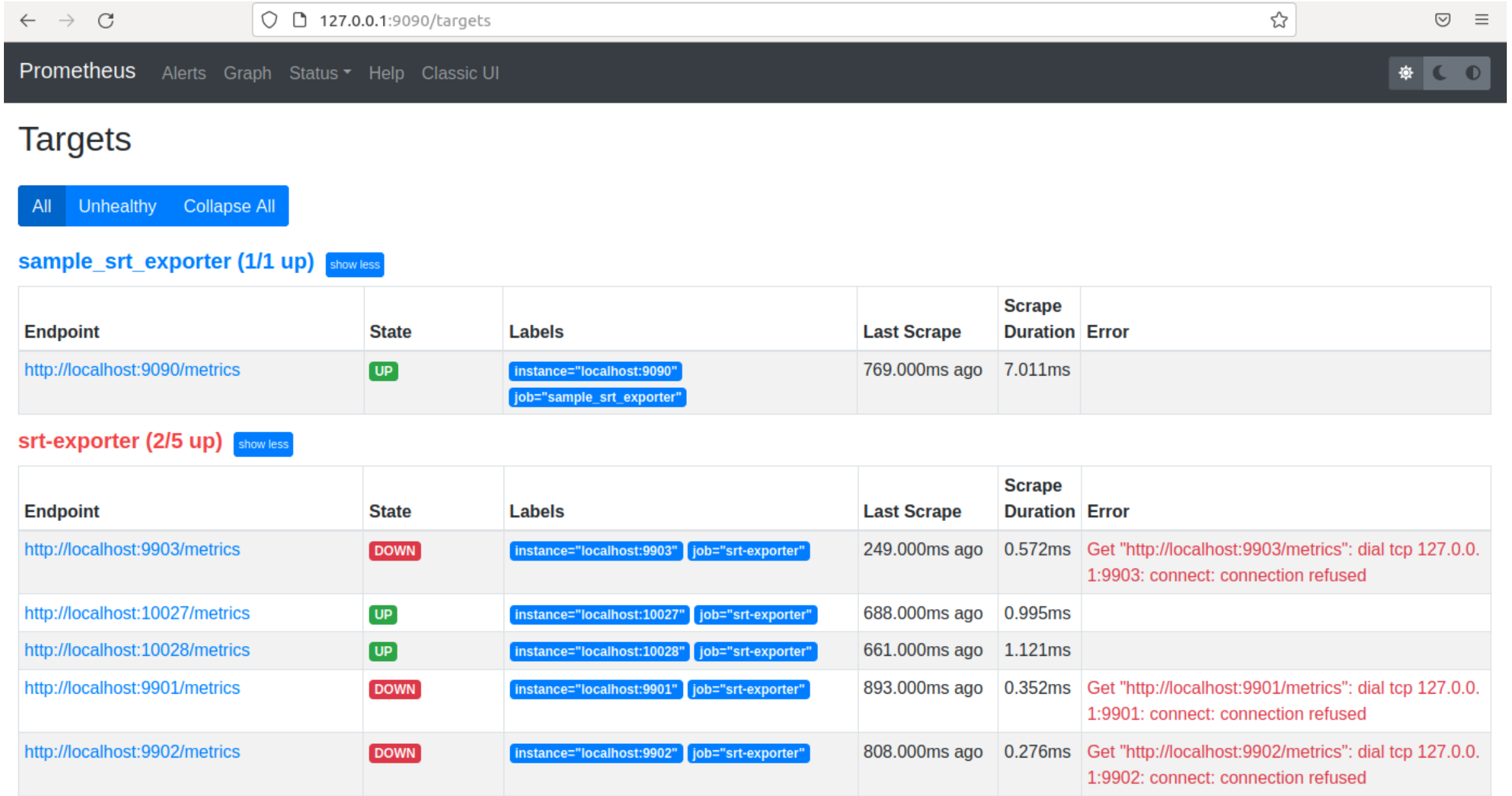

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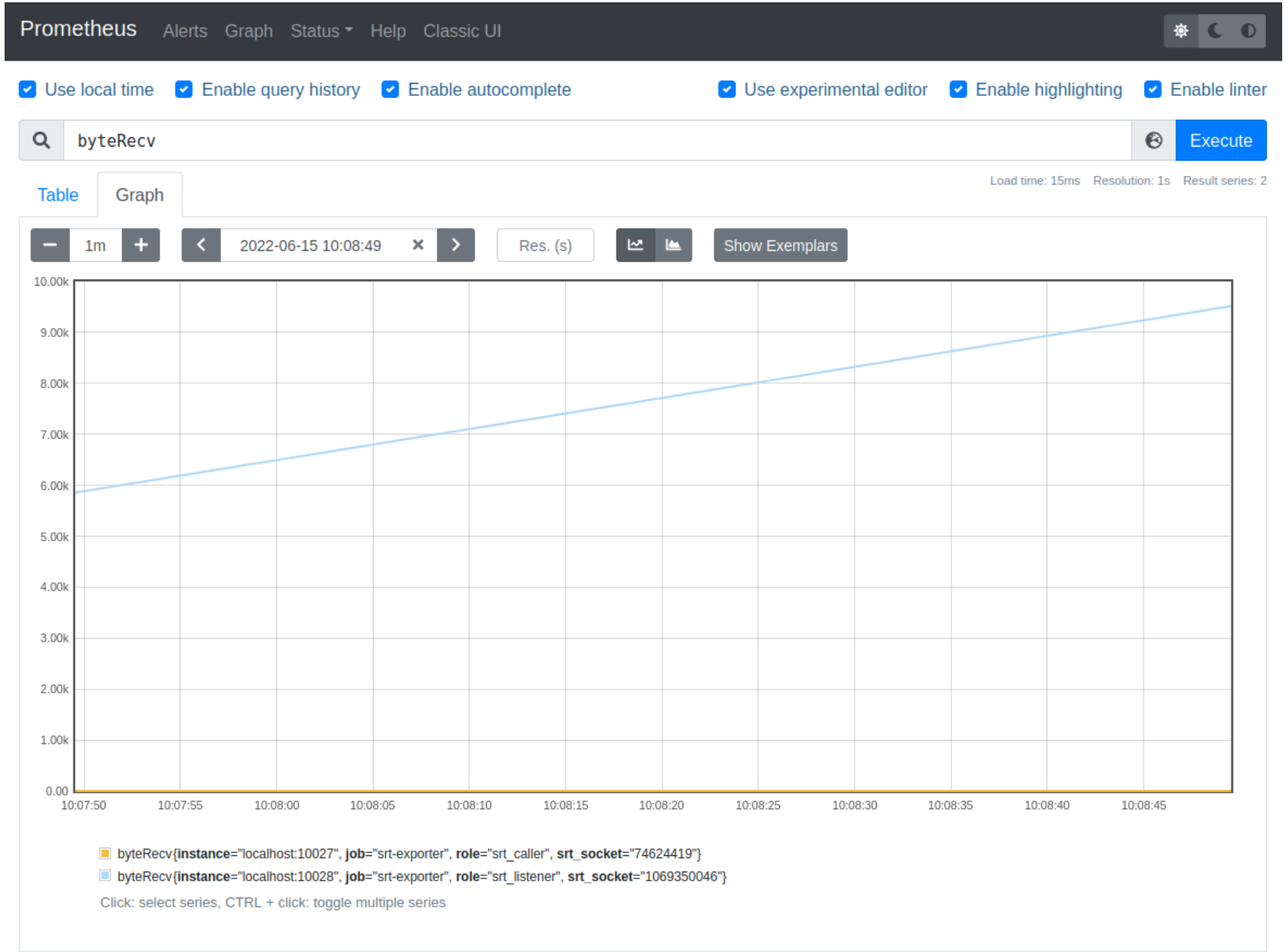

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- SRT Prometheus Exporter
  - Single Shared Library
  - Depends: https://github.com/Haivision/srt (statistics APIs)
  - Description: calling SRT Statistics APIs internally based on SRT socket, it will expose the statistics via http. Prometheus server can scrape the statistics and deal with monitor and alerting.
- Gstreamer SRT src/sink property
  - Patch has been developed
  - Depends: https://github.com/GStreamer/gst-plugins-bad/tree/master/ext/srt
  - Description: adding extra property for exporter enable/disable flag, port range, socket identification.

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What we want to discuss?

- Anyone interested?
- Can we maintain this library as SRT community?
- More use cases, feature requests and feedback.
- Anything else?

we are open to discuss on any possibility !!! Thanks!