2023 SUMMIT | APACHE • SkyWalking
CHINA · SHANGHAI

2023 · 上海
SkyWalking Summit

纵目 tetrate

演讲主题

吴晟

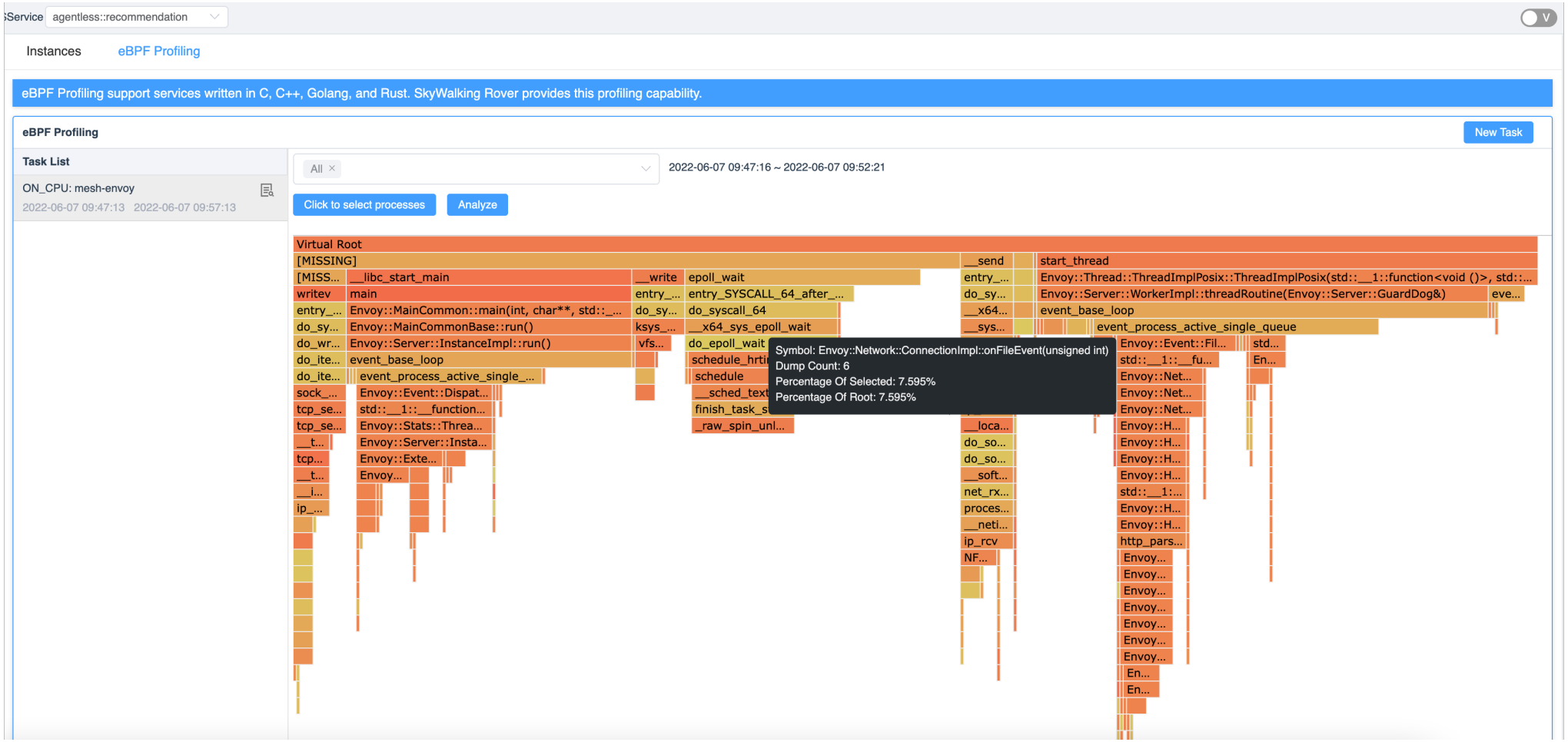
Tetrate创始工程师 SkyWalking创始人

“ SkyWalking V9 In 2023 - 5 featured releases”

01

eBPF Stack

eBPF Stack Support



eBPF Network Profiling

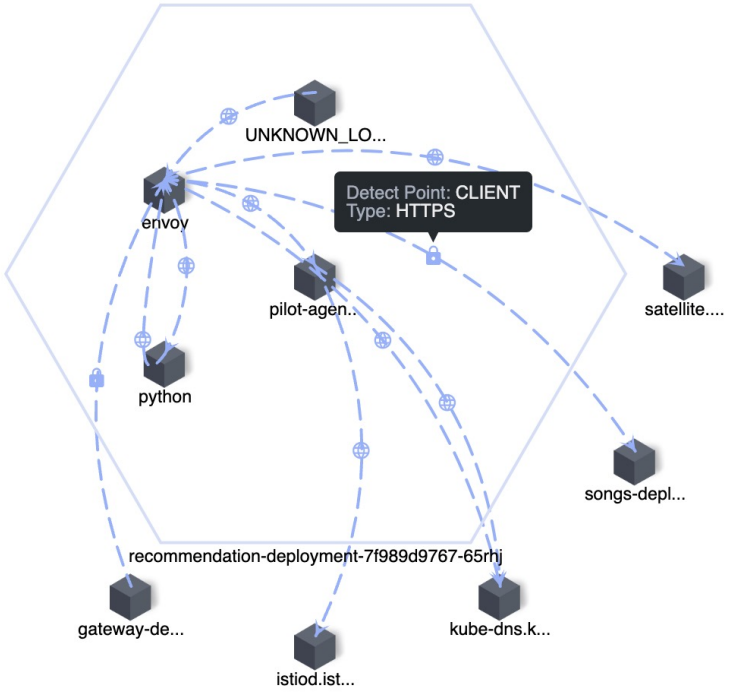
Envoy Proxy Envoy Log Network Profiling

Network Profiling

Task List

2022-08-30 16:10:08 2022-08-30 17:20:08

2022-08-30 15:37:19 2022-08-30 16:17:19



02

Ecosystem Enhancement

World Industry First – Native Go Agent

Tracing Plugins

The following plugins provide the distributed tracing capability, and the OAP backend would analyze the topology and metrics based on the tracing data.

- HTTP Server
  - `gin` : Gin tested v1.7.0 to v1.9.0.
  - `http` : Native HTTP tested go v1.17 to go v1.20.
  - `go-restfulv3` : Go-Restful tested v3.7.1 to 3.10.2.
  - `mux` : Mux tested v1.7.0 to v1.8.0.
  - `iris` : Iris tested v12.1.0 to 12.2.5.
  - `fasthttp` : FastHttp tested v1.10.0 to v1.50.0.
  - `fiber` : Fiber tested v2.49.0 to v2.50.0.
- HTTP Client
  - `http` : Native HTTP tested go v1.17 to go v1.20.
  - `fasthttp` : FastHttp tested v1.10.0 to v1.50.0.
- RPC Frameworks
  - `dubbo` : Dubbo tested v3.0.1 to v3.0.5.
  - `kratosv2` : Kratos tested v2.3.1 to v2.6.2.
  - `microv4` : Go-Micro tested v4.6.0 to v4.10.2.
  - `grpc` : gRPC tested v1.55.0 to v1.57.0.
- Database Client
  - `gorm` : GORM tested v1.22.0 to v1.25.1.
    - MySQL Driver
  - `mongo` : Mongo tested v1.11.1 to v1.11.7.
  - `sql` : Native SQL tested go v1.17 to go v1.20.
    - MySQL Driver tested v1.4.0 to v1.7.1.
- Cache Client
  - `go-redisv9` : go-redis tested v9.0.3 to v9.0.5.

Metrics Plugins

The meter plugin provides the advanced metrics collections.

- `runtimemetrics` : Native Runtime Metrics tested go v1.17 to go v1.20.

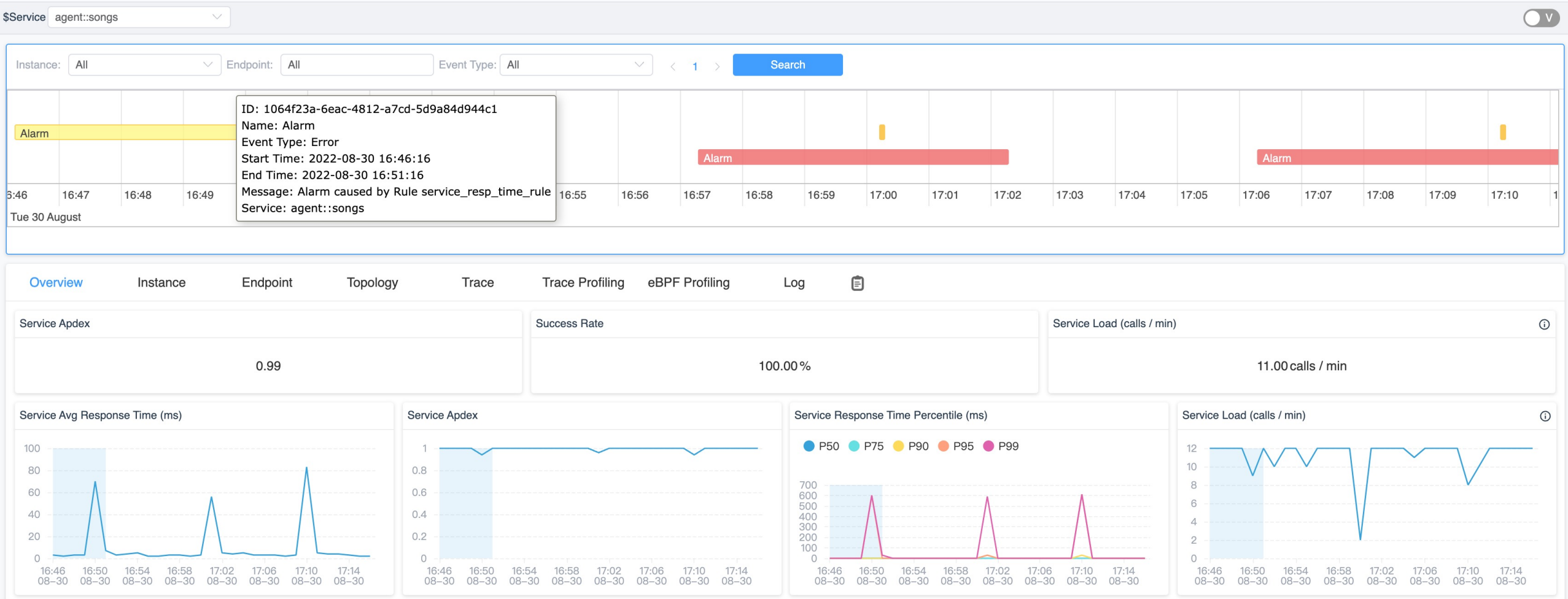
Logging Plugins

The logging plugin provides the advanced logging collections.

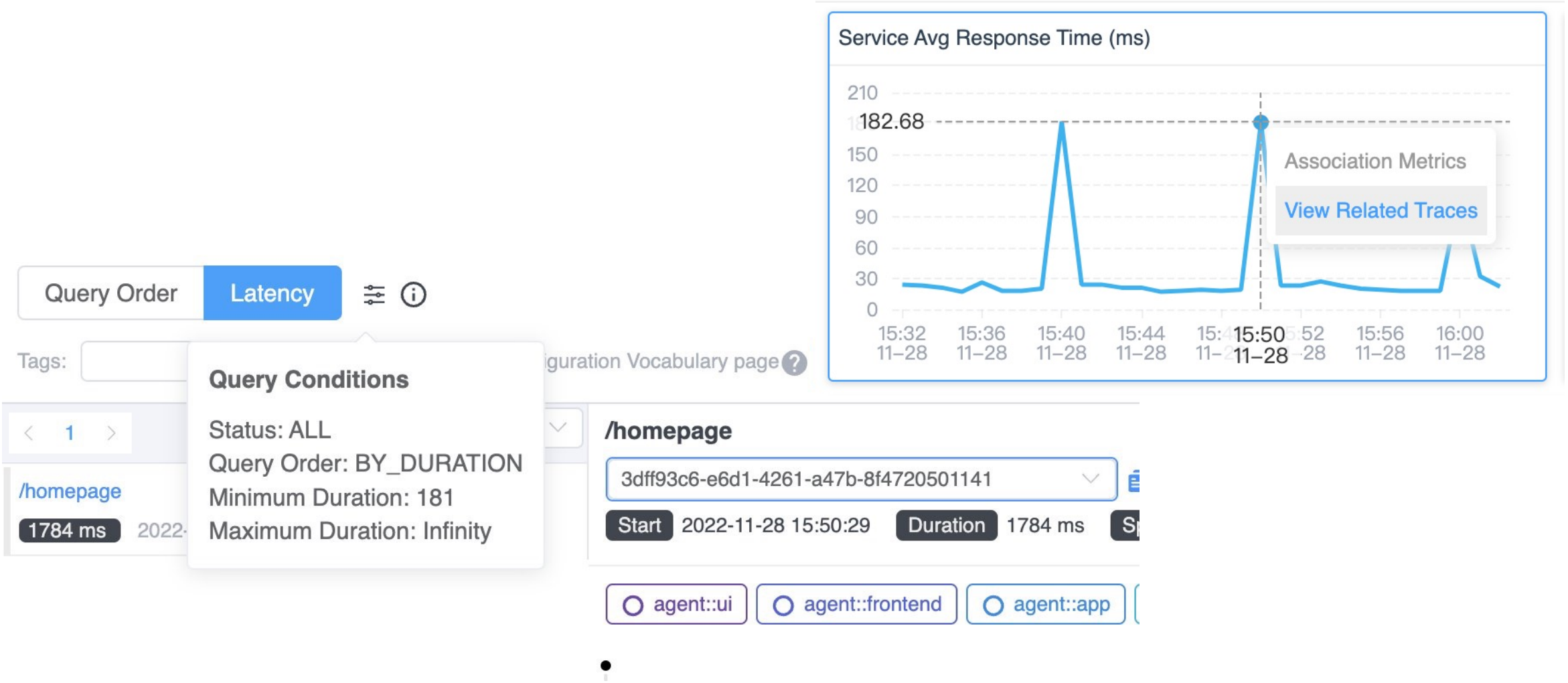
- `logrus` : Logrus tested v1.8.2 to v1.9.3.
- `zap` : Zap tested v1.17.0 to v1.24.0.

New Topology Layout

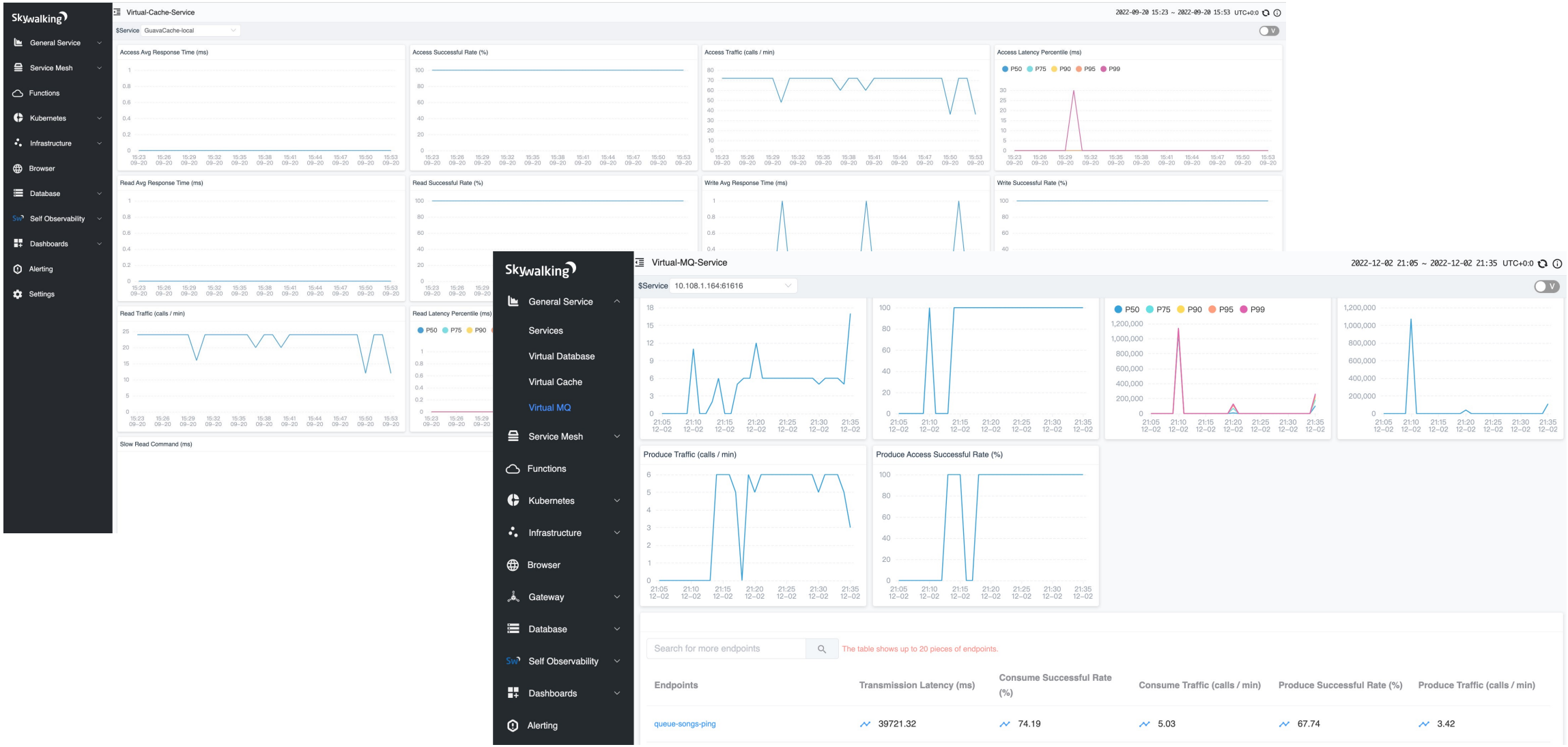
Event and Metrics Association



Trace and Metrics Association



Virtual Cache and MQ



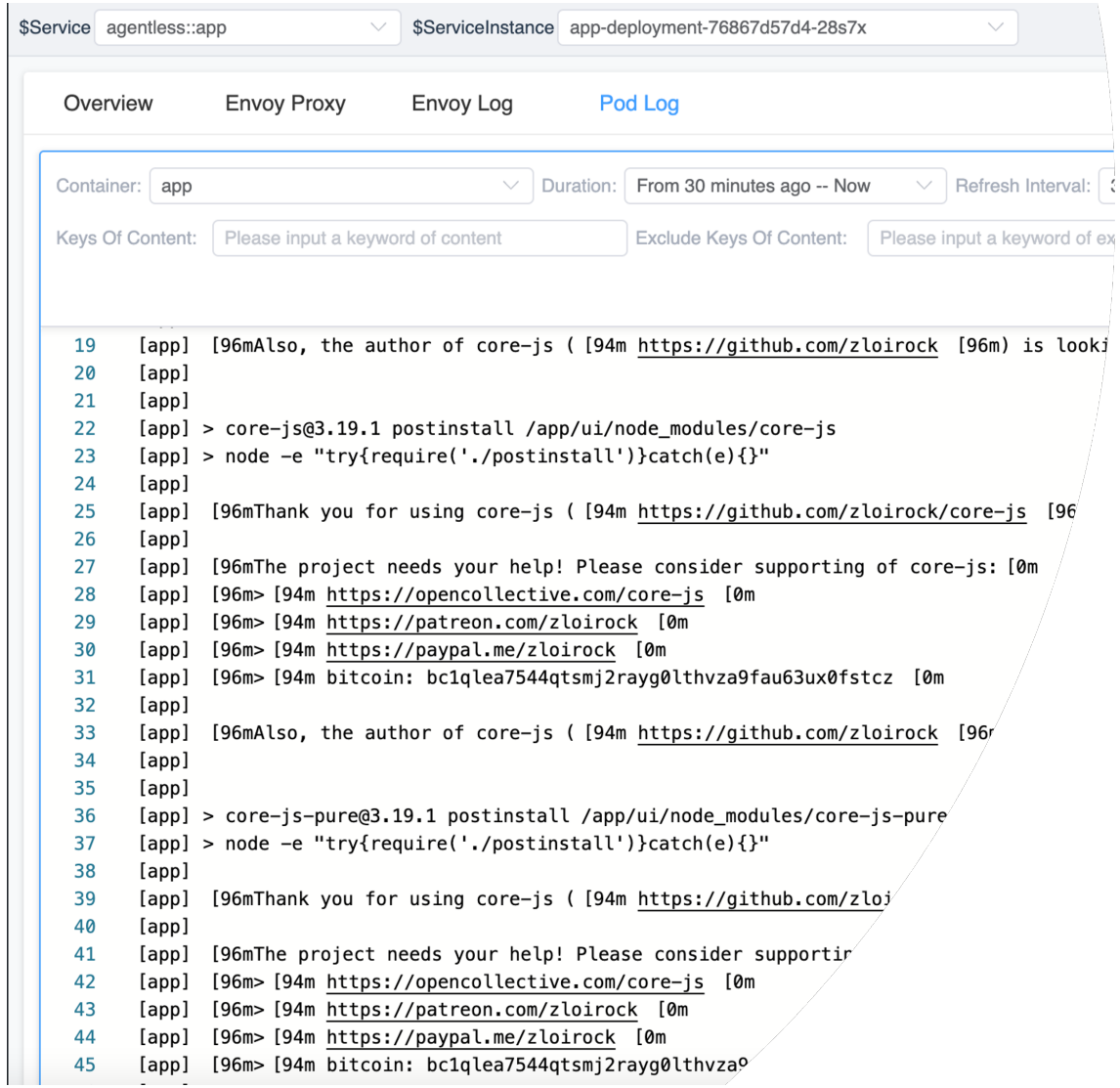
MQE And New Alerting Kernel


```yaml
rules:
  # Rule unique name, must be ended with `_rule`.
  endpoint_percent_rule:
    # A MQE expression and the root operation of the expression must be a Compare Operation.
    expression: sum((endpoint_sla / 100) < 75) >= 3
    # The length of time to evaluate the metrics
    period: 10
    # How many times of checks, the alarm keeps silence after alarm triggered, default as same as period.
    silence-period: 10
    message: Successful rate of endpoint {name} is lower than 75%
    tags:
      level: WARNING
  service_percent_rule:
    expression: sum((service_sla / 100) < 85) >= 4
    # [Optional] Default, match all services in this metrics
    include-names:
      - service_a
      - service_b
    exclude-names:
      - service_c
    period: 10
    message: Service {name} successful rate is less than 85%
  service_resp_time_percentile_rule:
    expression: sum(service_percentile{_='0,1,2,3,4'} > 1000) >= 3
    period: 10
    silence-period: 5
    message: Percentile response time of service {name} alarm in 3 minutes of last 10 minutes, due to more than one condition of p50 > 1000, p75 > 1000, p90 > 1000, p95 > 1000, p99 > 1000
  meter_service_status_code_rule:
    expression: sum(aggregate_labels(meter_status_code{_='4xx,5xx'},sum) > 10) > 3
    period: 10
    count: 3
    silence-period: 5
    message: The request number of entity {name} 4xx and 5xx status is more than expected.
    hooks:
      - "slack.custom1"
      - "pagerduty.custom1"
  comp_rule:
    expression: (avg(service_sla / 100) > 80) * (avg(service_percentile{_='0'}) > 1000) == 1
    period: 10
    message: Service {name} avg successful rate is less than 80% and P50 of avg response time is over 1000ms in last 10 minutes.
    tags:
      level: CRITICAL
    hooks:
      - "slack.default"
      - "slack.custom1"
      - "pagerduty.custom1"
```

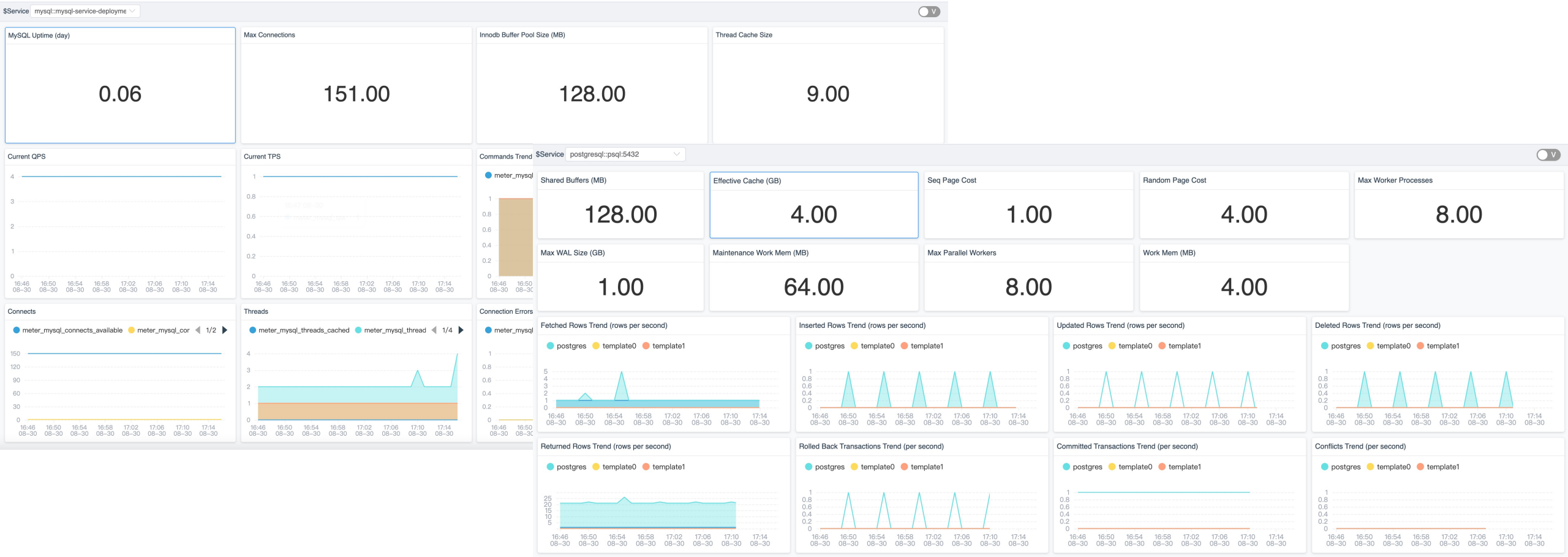
03

Infra and Cloud Datasources

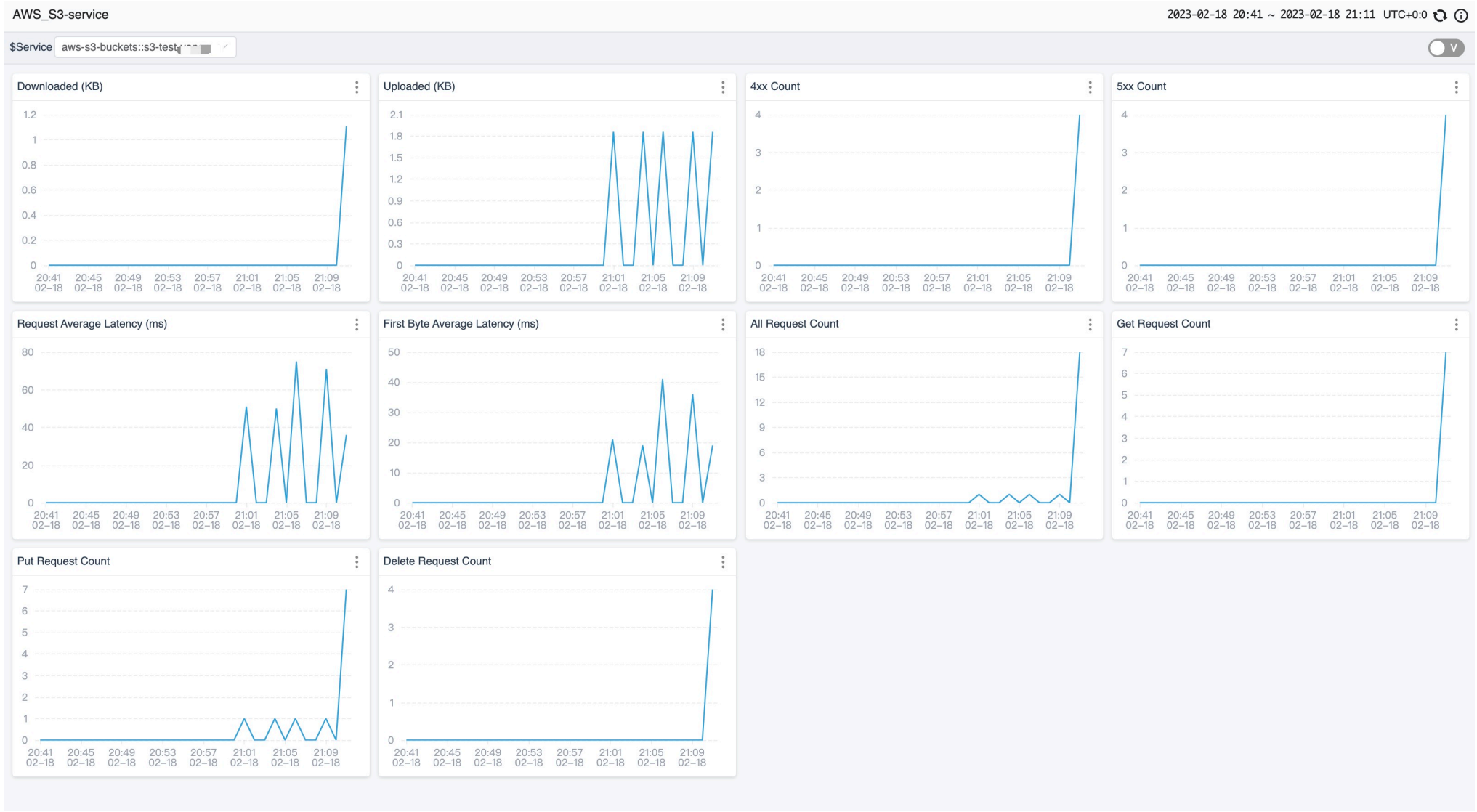
On-demand Logs



MySQL/PostgreSQL/Elasticsearch



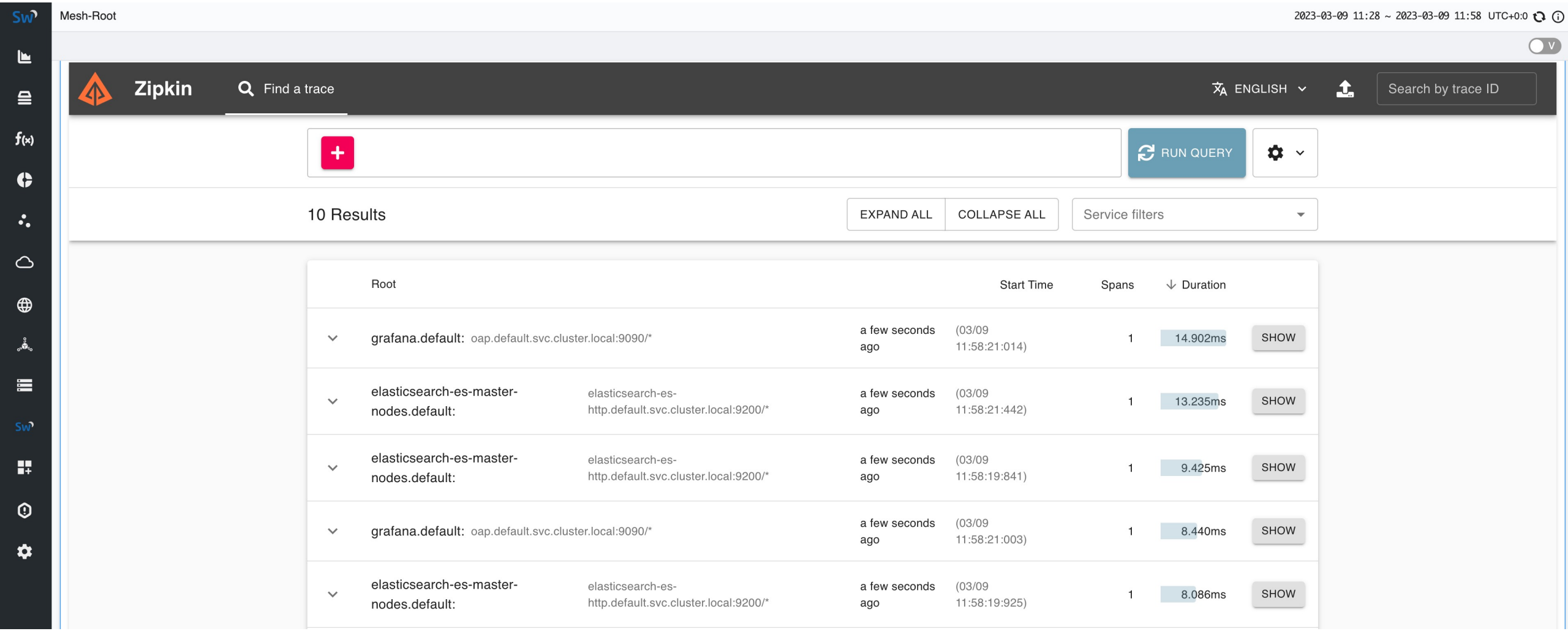
AWS Infra – S3, EKS, DynamoDB



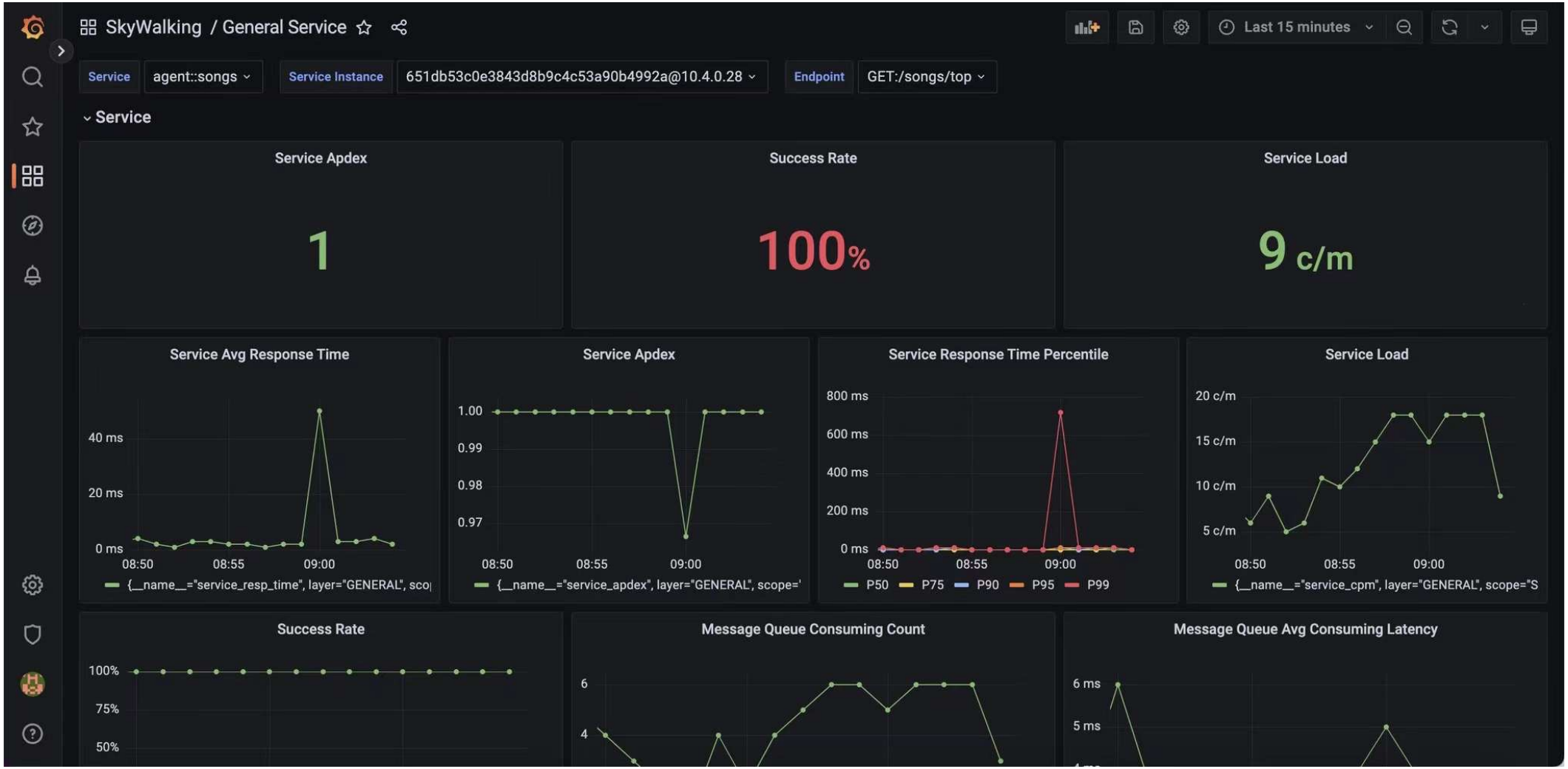
04

Better Observability Integration

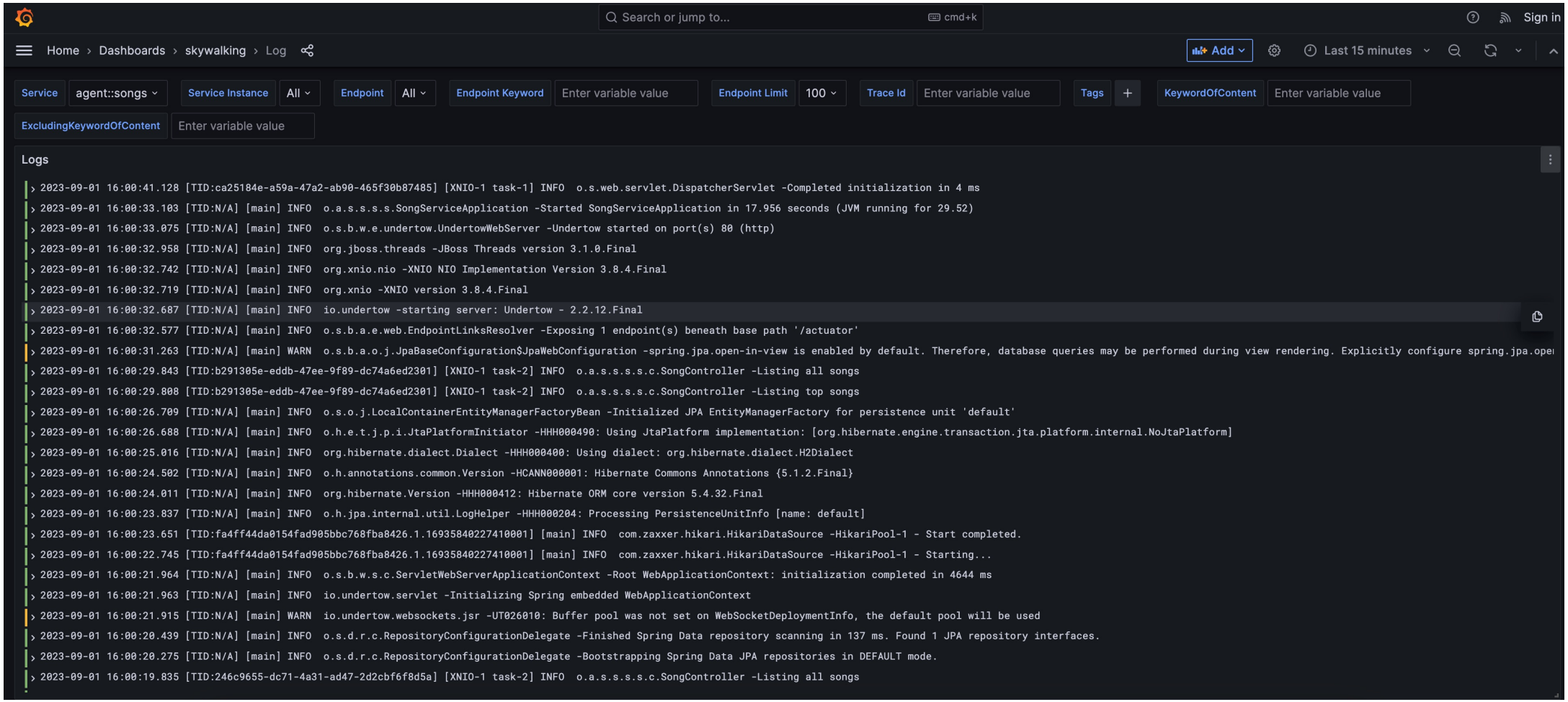
Zipkin Alternative Server and Lens UI



PromQL and Grafana Support



Loki LogQL and Grafana Support



05

What Should We Expect in 2024?

BanyanDB Available For Scale Testing

- Releases
  - 0.4 Standalone Mode First Time Available
  - 0.5 Cluster Mode First Time Available
- Plans
  - 0.6 First Completed Feature Version
  - 0.7 – 0.9 Bug Fix, Stability and Performance

Q&A

欢迎提问交流

（仅限2位提问）

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感谢您的观看

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