Grafana & Prometheus

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Grafana_install

https://fanatical-dentist-b1d.notion.site/Grafana-b93a5178e6a64bad886b83fd6bdcf4ea

Enterprise

```
[grafana]
name=grafana
baseurl=https://packages.grafana.com/enterprise/rpm
repo_gpgcheck=1
enabled=1
gpgcheck=1
gpgkey=https://packages.grafana.com/gpg.key
sslverify=1
sslcacert=/etc/pki/tls/certs/ca-bundle.crt
```

OSS

```
[grafana]
name=grafana
baseurl=https://packages.grafana.com/oss/rpm
repo_gpgcheck=1
enabled=1
gpgcheck=1
gpgkey=https://packages.grafana.com/gpg.key
sslverify=1
sslcacert=/etc/pki/tls/certs/ca-bundle.crt
```

install

```
sudo yum install grafana

# install zabbix plugin
grafana-cli plugins install alexanderzobnin-zabbix-app
```

Actuator+Prometheus+Grafana監控視覺化簡介

https://www.tpisoftware.com/tpu/articleDetails/2446

pom.xml 需增加以下依賴：

```
<dependency>
  <groupId>org.springframework.boot</groupId>
  <artifactId>spring-boot-starter-actuator</artifactId>
</dependency>
<dependency>
  <groupId>io.micrometer</groupId>
  <artifactId>micrometer-registry-prometheus</artifactId>
</dependency>
```

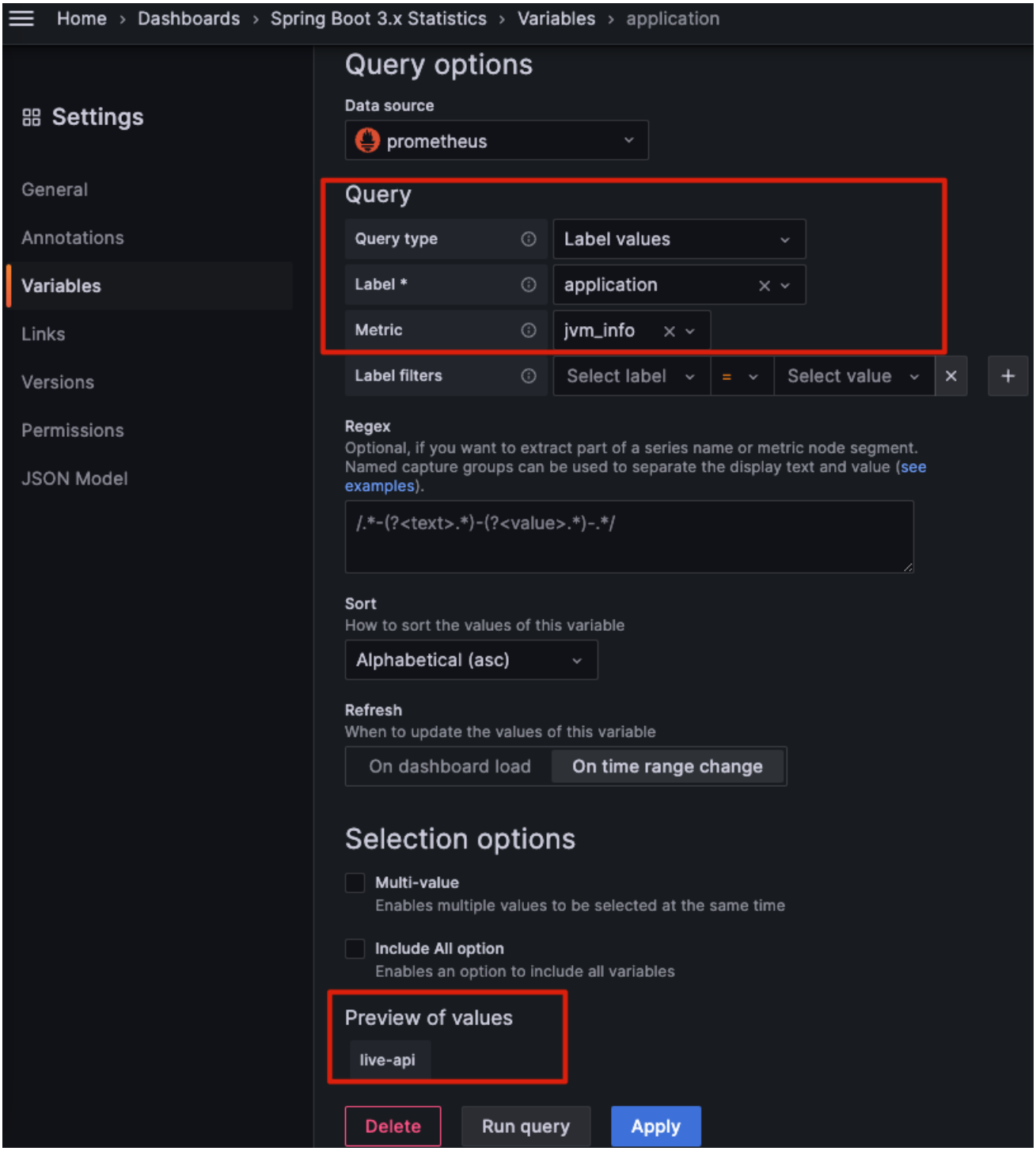
```
#management.endpoint.health.show-details=ALWAYS
#management.endpoints.web.base-path=/monitor
management.endpoints.web.exposure.include=prometheus,metrics
```

- Prometheus 快速入门教程（六）：Spring Boot Actuator 实□□用□控
  https://www.cnblogs.com/chanshuyi/p/06_prometheus_with_springboot_actuator.html
- Spring Boot 微服務應用整合Prometheus + Grafana 實現監控告警
  https://juejin.cn/post/6844904052417904653
- spring-prometheus的指標意義
  https://blog.csdn.net/ssehs/article/details/123961221
- prometheus 使用netdata 資料
  https://learn.netdata.cloud/docs/exporting-metrics/prometheus#configure-prometheus-to-scrape-netdata-metrics

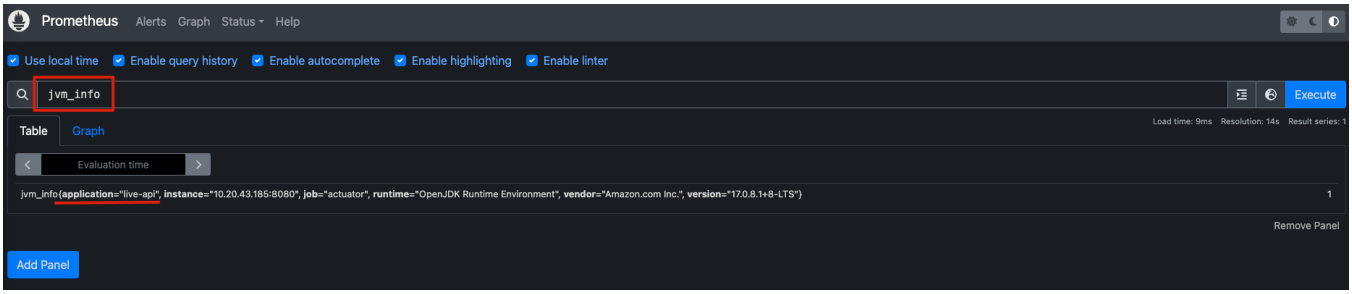
Grafana alerting

https://www.cnblogs.com/liugp/p/17003484.html

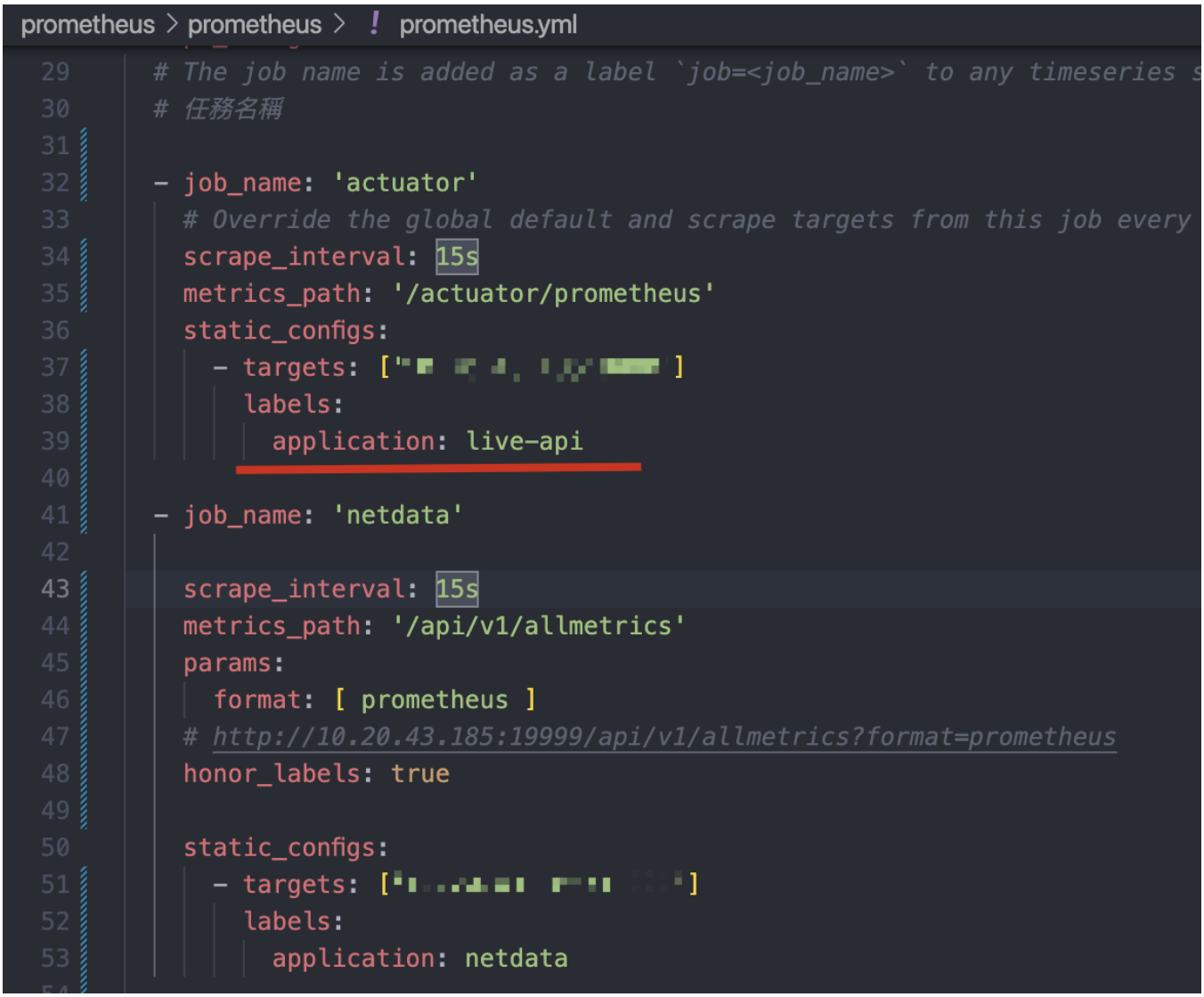
Grafana 下拉選單(prometheus)



prometheus



prometheus 設定檔，新增自訂label


prometheus > prometheus > ! prometheus.yml
The job name is added as a label `job=<job_name>` to any timeseries s
任務名稱
- job_name: 'actuator'
Override the global default and scrape targets from this job every
scrape_interval: 15s
metrics_path: '/actuator/prometheus'
static_configs:
- targets: [
labels:
application: live-api
- job_name: 'netdata'
scrape_interval: 15s
metrics_path: '/api/v1/allmetrics'
params:
format: [prometheus]
http://10.20.43.185:19999/api/v1/allmetrics?format=prometheus
honor_labels: true
static_configs:
- targets: [
labels:
application: netdata

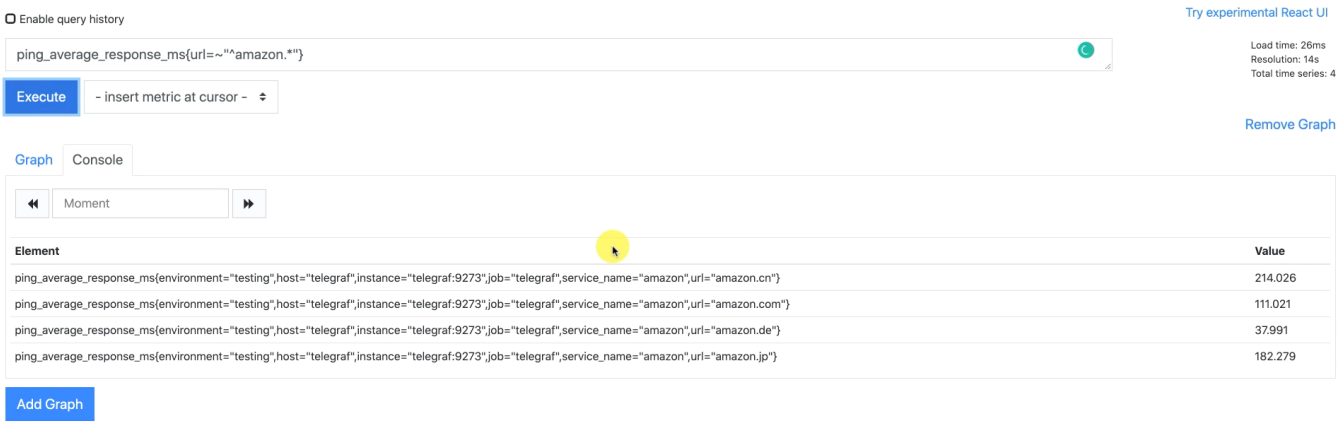
Prometheus 相關資源

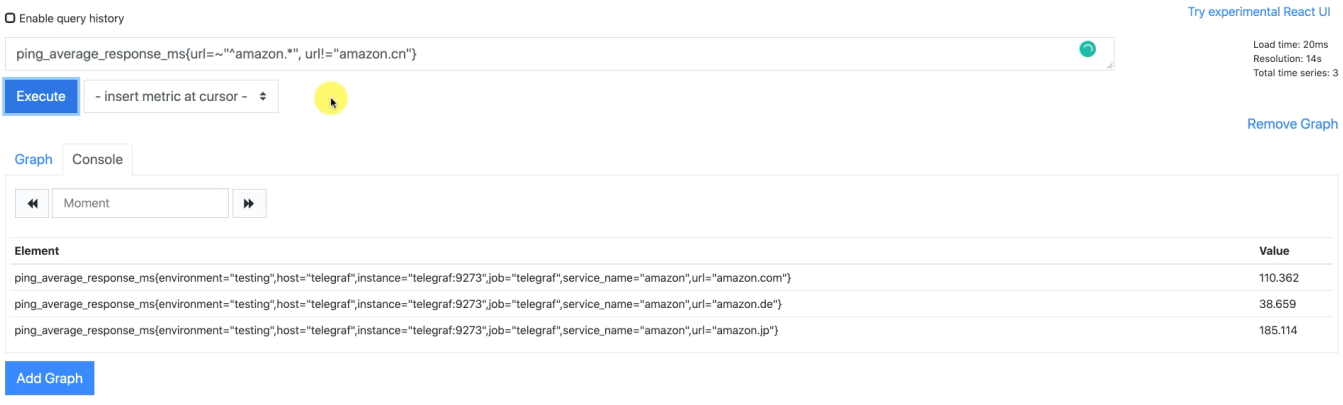
- 官方範例設定檔
- prometheus-book
- prometheus實戰

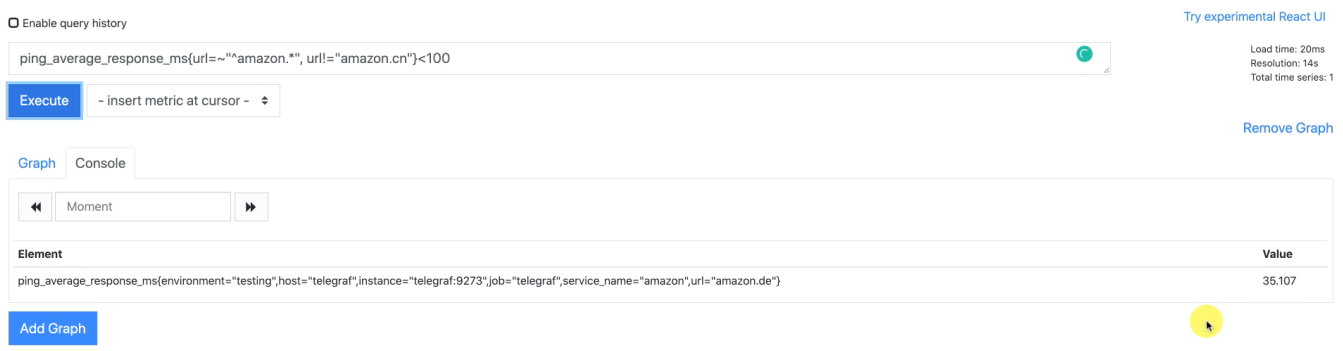
Prometheus PromQL

PROMQL BASIC QUERY

- Starts with a metric name. Like *ping_average_response_ms*
- Filter with labels, label filters support four operators
  - = equal
  - != not equal
  - =~ matches regex
  - !~ doesn't match regex

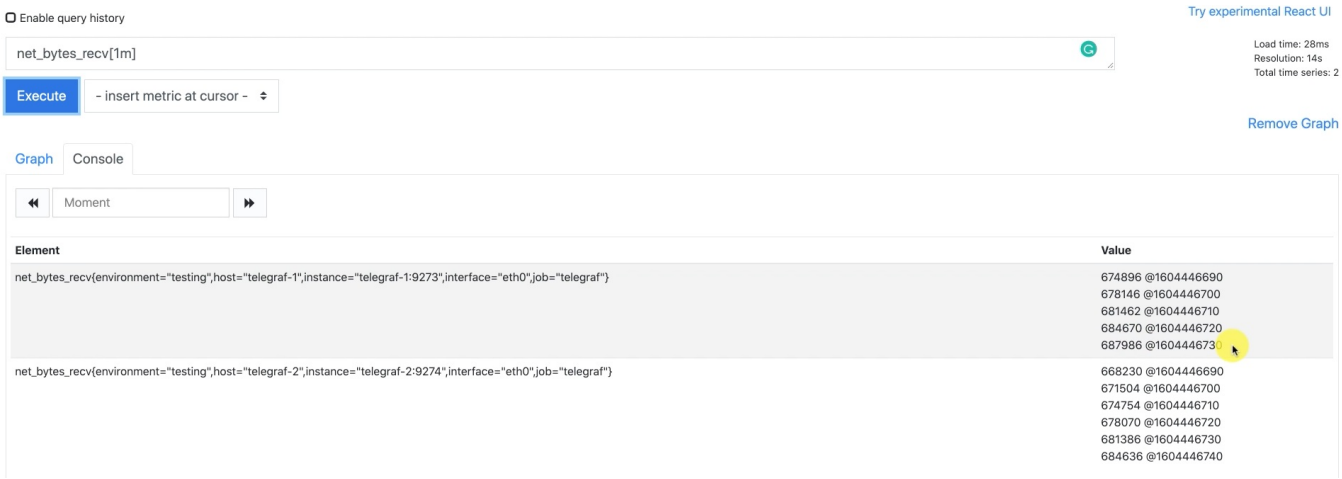


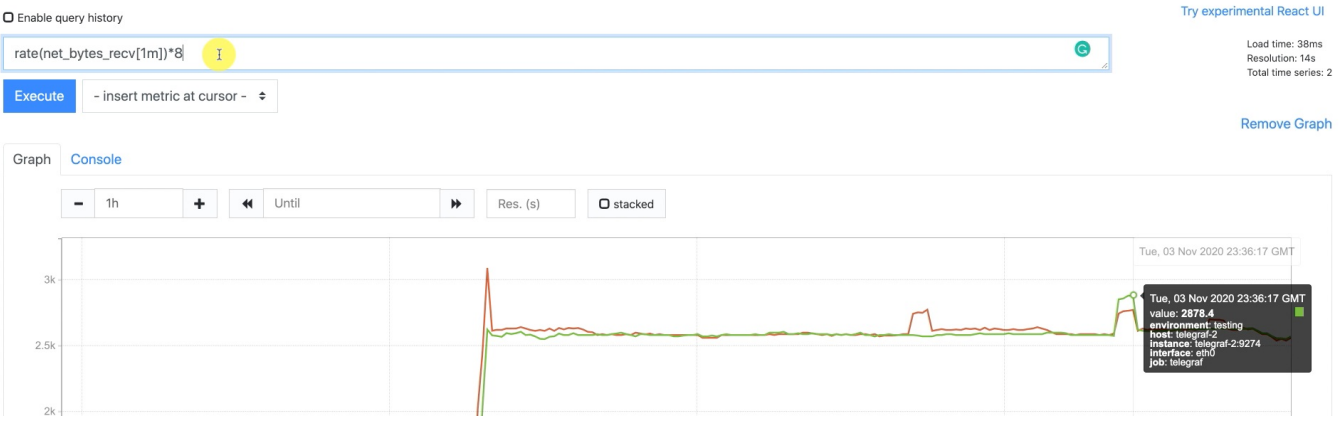


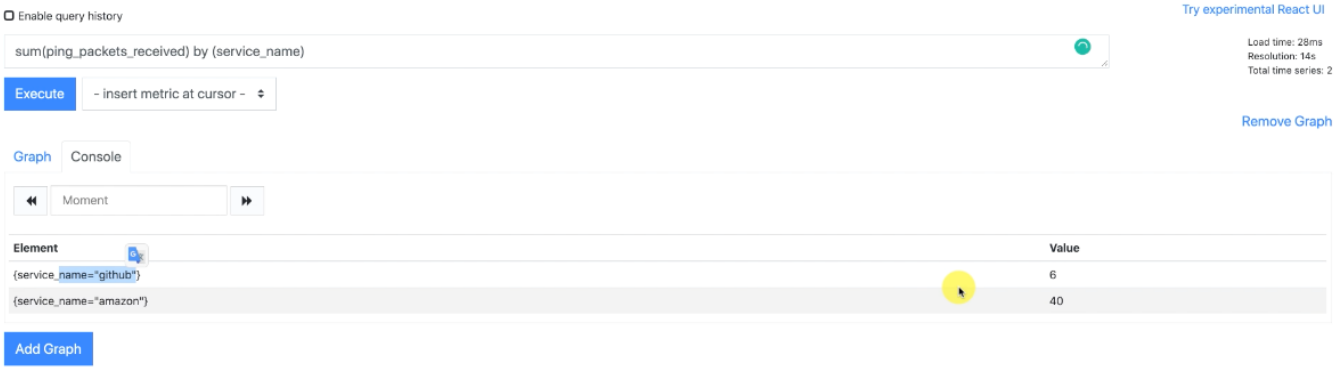


RANGE VECTOR & INSTANT VECTOR

- Range vector selector: http_requests_total{job="prometheus"}[5m]
- Instant vector selector: http_requests_total{job="prometheus",group="canary"}







Grafana_Promethues docker-compose

```
version: '3.3'

volumes:
  prometheus_data: {}
  grafana_data: {}

networks:
  monitoring:
    driver: bridge

services:
  prometheus:
    image: prom/prometheus
    container_name: prometheus
    restart: always
    volumes:
      - /etc/localtime:/etc/localtime:ro
      - ./prometheus/:/etc/prometheus/
      - prometheus_data:/prometheus
    command:
      - '--config.file=/etc/prometheus/prometheus.yml'
      - '--storage.tsdb.path=/prometheus'
      - '--web.console.libraries=/usr/share/prometheus/console_libraries'
      - '--web.console.templates=/usr/share/prometheus/consoles'
    networks:
      - monitoring
    # links:
    #   - alertmanager
    #   - node_exporter
    expose:
      - '9090'
    ports:
      - 9090:9090

  # alertmanager:
  #   image: prom/alertmanager
  #   container_name: alertmanager
  #   restart: always
  #   volumes:
  #     - /etc/localtime:/etc/localtime:ro
  #     - ./alertmanager/:/etc/alertmanager/
  #   command:
  #     - '--config.file=/etc/alertmanager/config.yml'
  #     - '--storage.path=/alertmanager'
  #   networks:
  #     - monitoring
  #   expose:
  #     - '9093'
  #   ports:
  #     - 9099:9093

  # node_exporter 為了能夠采集到主機的運行指標如CPU, 內存，磁盤
  # node_exporter:
  #   image: prom/node-exporter:v0.18.0
  #   container_name: node_exporter
  #   restart: always
  #   volumes:
  #     - /etc/localtime:/etc/localtime:ro
  #     - /proc:/host/proc:ro
  #     - /sys:/host/sys:ro
  #     - /:/rootfs:ro
```

```
  #   command:
  #     - '--path.procfs=/host/proc'
  #     - '--path.sysfs=/host/sys'
  #     - --collector.filesystem.ignored-mount-points
  #     -
"^/(sys|proc|dev|host|etc|rootfs/var/lib/docker/containers|rootfs/var/lib/docker/overlay2|rootfs/run/docker/netns|rootfs/var/lib/docker/aufs
($$|/)"
  #   networks:
  #     - monitoring
  #   expose:
  #     - '9100'

  grafana:
    image: grafana/grafana
    user: "472"
    container_name: grafana
    restart: always
    environment:
      GF_SECURITY_ADMIN_PASSWORD: admin
    volumes:
      - /etc/localtime:/etc/localtime:ro
      - ./grafana/grafana_data:/var/lib/grafana
      - ./grafana/provisioning/:/etc/grafana/provisioning/
    # env_file:
    #   - ./grafana/config.monitoring
    networks:
      - monitoring
    links:
      - prometheus
    ports:
      - 3000:3000
    depends_on:
      - prometheus
```

```
version: "3.7"
services:
    db:
        image: postgres:13.2-alpine
        restart: always
        environment:
            POSTGRES_DB: postgres
            POSTGRES_USER: postgres #postgres
            POSTGRES_PASSWORD: 12345678 #1234
            PGDATA: /var/lib/postgresql/data
        volumes:
            - ./data/db:/var/lib/postgresql/data
        ports:
            - "5432:5432"
    # pgadmin:
    #     image: dpage/pgadmin4:latest
    #     restart: always
    #     environment:
    #         PGADMIN_DEFAULT_EMAIL: admin@fmt.com.tw #xxx@gmail
    #         PGADMIN_DEFAULT_PASSWORD: 12345678 #abcd
    #         PGADMIN_LISTEN_PORT: 80
    #     ports:
    #         - "5433:80"
    #     volumes:
    #         - ./data/pgadmin-data:/var/lib/pgadmin
    #         - ./data/upload:/tmp/upload
    #     links:
    #         - "db:pgsql-server"
volumes:
    db-data:
    pgadmin-data:
```