

docker swarm-monitor

- 基于Grafana+cAdvisor+InfluxDB实现docker swarm集群监控
cAdvisor: 收集数据, swarm做全局部署
InfluxDB: 数据存储, 选择主节点部署
Grafana: 数据展示
- 完整Grafana+cAdvisor+InfluxDB部署脚本:
swarm-monitor-stack.yml

```
version: '3'

services:
  influx:
    image: influxdb
    volumes:
      - influx:/var/lib/influxdb
    deploy:
      replicas: 1
      placement:
        constraints:
          - node.role == manager

  grafana:
    image: grafana/grafana
    ports:
      - 0.0.0.0:80:3000
    volumes:
      - grafana:/var/lib/grafana
    depends_on:
      - influx
    deploy:
      replicas: 1
      placement:
        constraints:
          - node.role == manager

  cAdvisor:
    image: google/cadvisor
    hostname: '{{.Node.Hostname}}'
    command: -logtostderr -docker_only -storage_driver=influxdb -storage_dr
```

```
iver_db=cadvisor -storage_driver_host=influx:8086
```

```
volumes:
```

- /:/rootfs:ro
- /var/run:/var/run:rw
- /sys:/sys:ro
- /var/lib/docker:/var/lib/docker:ro

```
depends_on:
```

- influx

```
deploy:
```

```
mode: global
```

```
volumes:
```

```
influx:
```

```
driver: local
```

```
grafana:
```

```
driver: local
```

- 使用已有的 grafana部署 脚本, 仅部署influx和cadvisor
swarm-monitor-stack.yml

```
version: "3.4"
```

```
services:
```

```
influx:
```

#image: influxdb 使用influxdb 暴露端口无法通, 遗留更改为tutum/influxdb镜像

```
image: tutum/influxdb:0.9
```

```
ports:
```

- "8083:8083"
- "8086:8086"

```
volumes:
```

- influx:/var/lib/influxdb

```
deploy:
```

```
replicas: 1
```

```
restart_policy:
```

```
condition: on-failure
```

```
placement:
```

```
constraints:
```

- node.role == manager

```
environment:
```

- PRE_CREATE_DB=cadvisor

```
cadvisor:
```

```

image: google/cadvisor
hostname: '{{.Node.Hostname}}'
command: -logtostderr -docker_only -storage_driver=influxdb -storage_driver_db=cadvisor -storage_driver_host=influx:8086
ports:
  - "8180:8180"
volumes:
  - /:/rootfs:ro
  - /var/run:/var/run:rw
  - /sys:/sys:ro
  - /var/lib/docker:/var/lib/docker:ro
depends_on:
  - influx
deploy:
  mode: global
volumes:
  influx:
    driver: local
  grafana:
    driver: local

```

- 在swarm主节点上运行swarm-monitor-stack.yml

`docker stack deploy -c swarm-monitor-stack.yml swarm-monitor`

```

[root@node1 docker_stack_files]# docker stack deploy -c swarm-monitor.yml swarm-monitor
Creating network swarm-monitor_default
Creating service swarm-monitor_influx
Creating service swarm-monitor_cadvisor

```

`docker stack ls`

```

List the tasks in the stack
[root@node1 docker_stack_files]# docker stack ls
NAME                SERVICES    ORCHESTRATOR
es-single            1           Swarm
eureka               2           Swarm
eureka-service       3           Swarm
mall-pms             1           Swarm
portainer            2           Swarm
swarm-monitor        2           Swarm

```

`docker stack services swarm-monitor`

```

[root@node1 docker_stack_files]# docker stack services swarm-monitor
ID                NAME                MODE                REPLICAS    IMAGE                PORTS
vh1ubfzfbd5w     swarm-monitor_cadvisor    global              4/4         google/cadvisor:latest    *:8180->8180/tcp
xkq5g8yjn3cv     swarm-monitor_influx      replicated          1/1         tutum/influxdb:0.9       *:8083->8083/tcp, *:8086->8086/tcp

```

- influx创建数据 cAdvisor, 创建默认账号密码admin/admin

`docker exec `docker ps | grep -i influx | awk '{print $1}'` influx -execute 'CREATE DATABASE cadvisor'`

或者进入容器创建

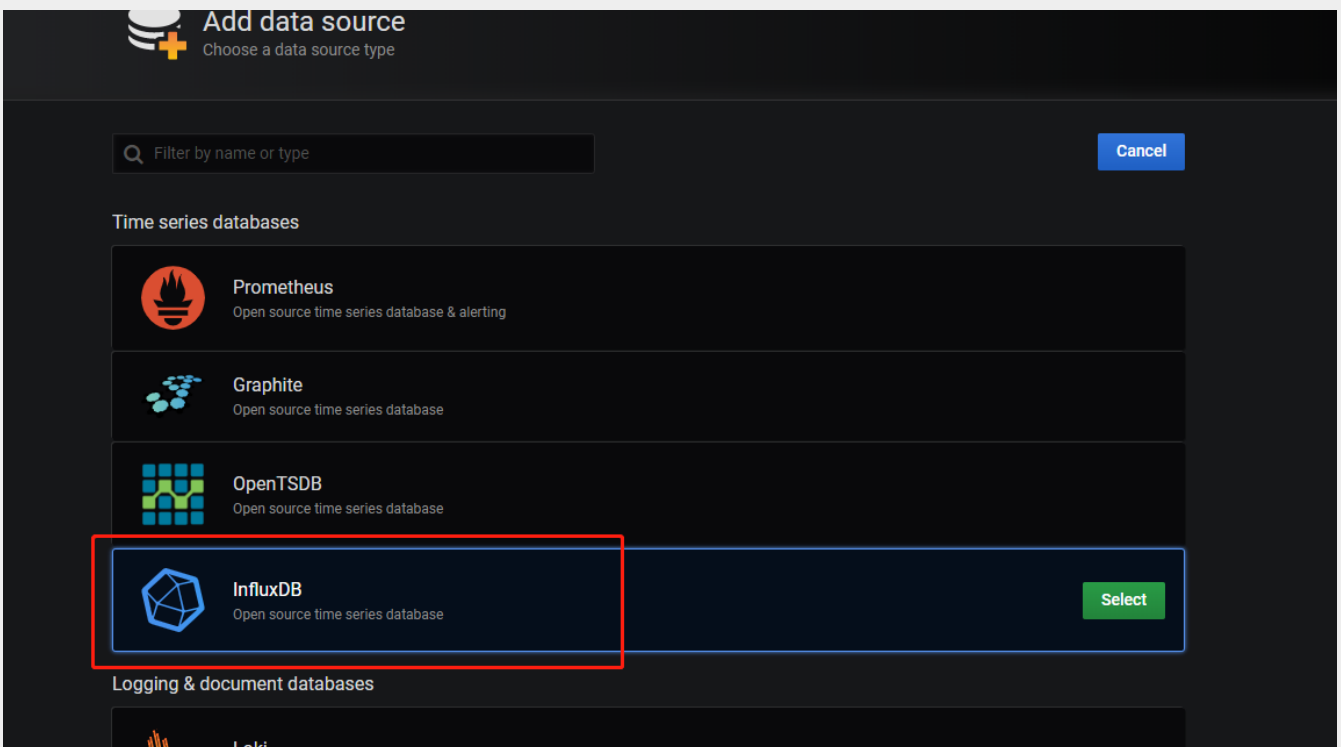
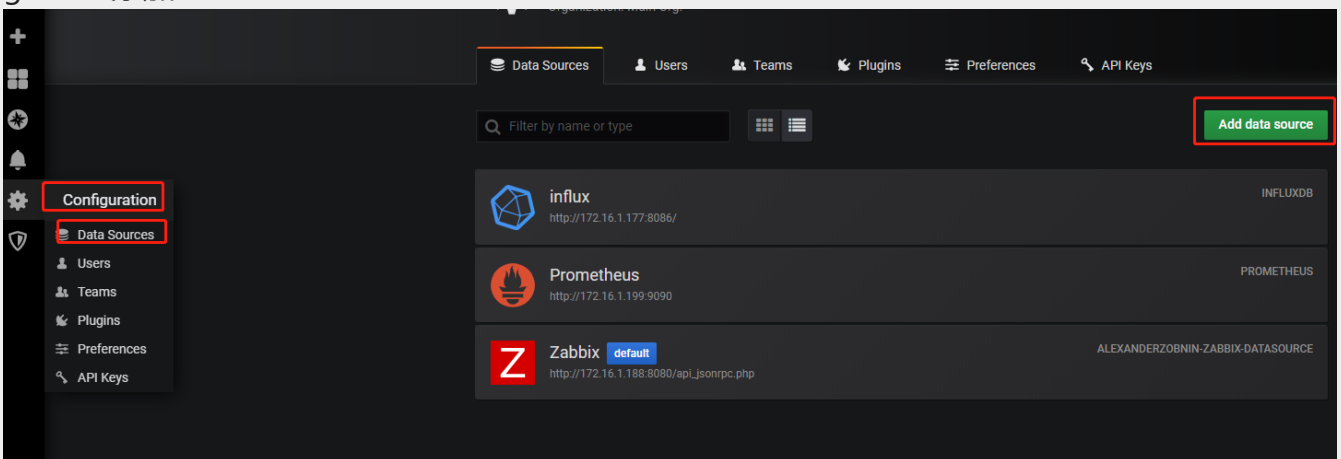
`docker exec -it influx容器ID /bin/bash`

```
[root@node1 docker_stack_files]# docker exec -it ee4f89310c50 /bin/bash
root@ee4f89310c50:/# influx
Visit https://enterprise.influxdata.com to register for updates, InfluxDB server management, and monitoring.
Connected to http://localhost:8086 version 0.9.6.1
InfluxDB shell 0.9.6.1
> CREATE DATABASE cadvisor;
ERR: database already exists
Warning: It is possible this error is due to not setting a database.
Please set a database with the command "use <database>".
> show databases;
name: databases
-----
name
cadvisor
_internal

> show users;
user      admin

> exit
root@ee4f89310c50:/# quit
bash: quit: command not found
root@ee4f89310c50:/# exit
```

- grafana添加influxDB





Data Sources / influx

Type: InfluxDB

Settings

填写influx

Name



influx

Default



HTTP

URL



http:// 8086/

Access

Server (default)



[Help](#)

Whitelisted Cookies



Add Name

Add

Auth

Basic auth



With Credentials



TLS Client Auth



With CA Cert



Skip TLS Verify



Forward OAuth Identity



InfluxDB Details

Database

cadvisor

User

admin

Password

configured

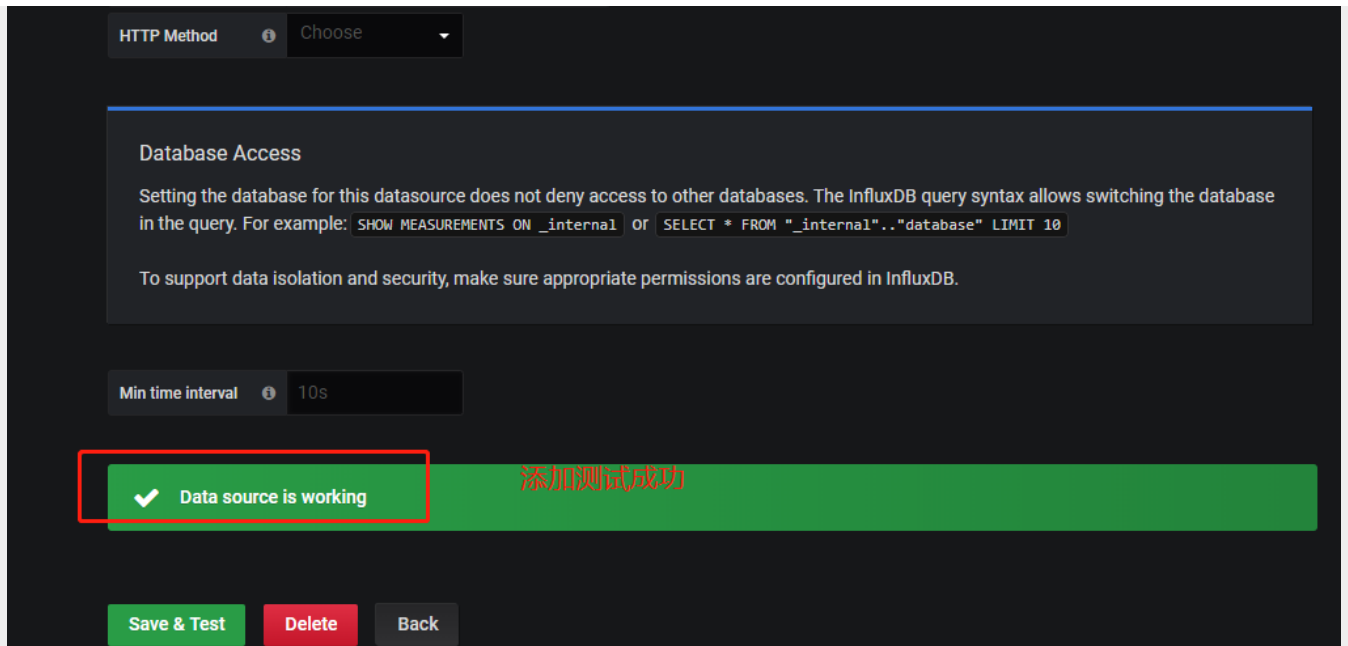
reset

HTTP Method

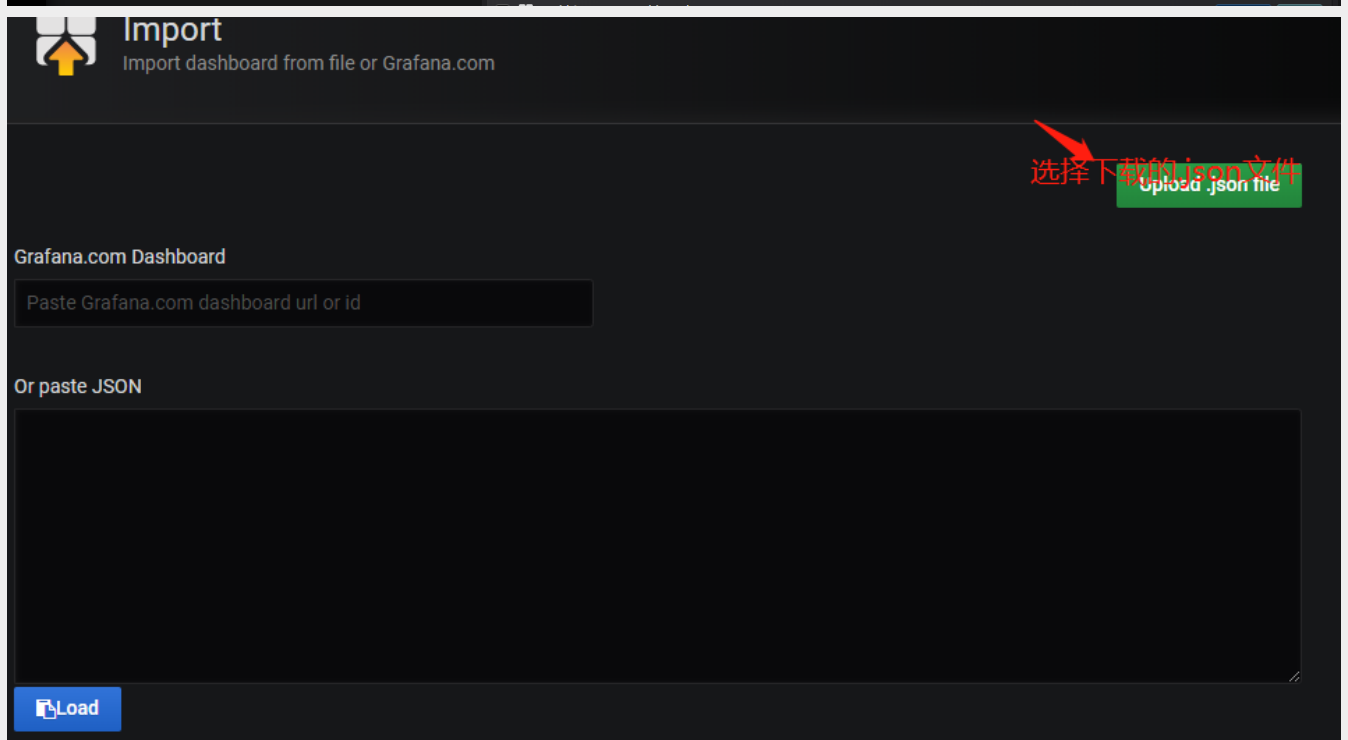
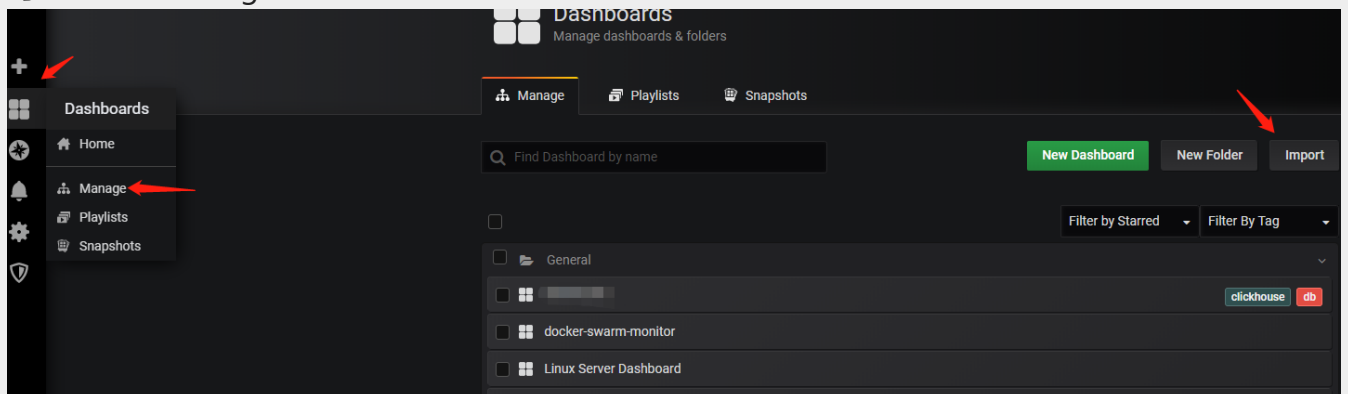


Choose





- 导入 docker-swarm-monitor的dashboard.json
[下载链接](#)
- 导入 dashboard grafana





Import

Import dashboard from file or Grafana.com

Options

Name	swarm-monitor	名称随意取	✓
Folder	General		
Unique identifier (uid)	auto-generated		change
influx	influx		✓

选择创建好的influx数据源，数据源名称要和json文件对应

Import

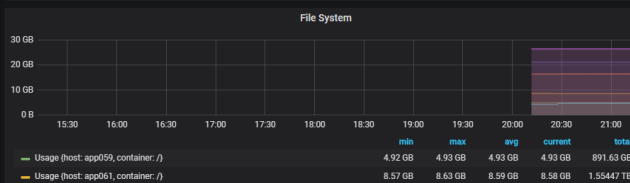
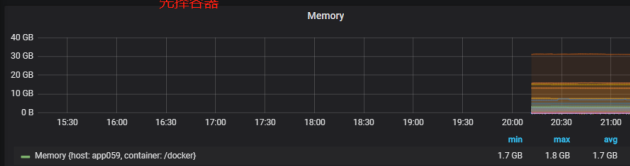
Cancel

docker-swarm-monitor

选择主机节点

Host All Container /

先选容器



监控面板

