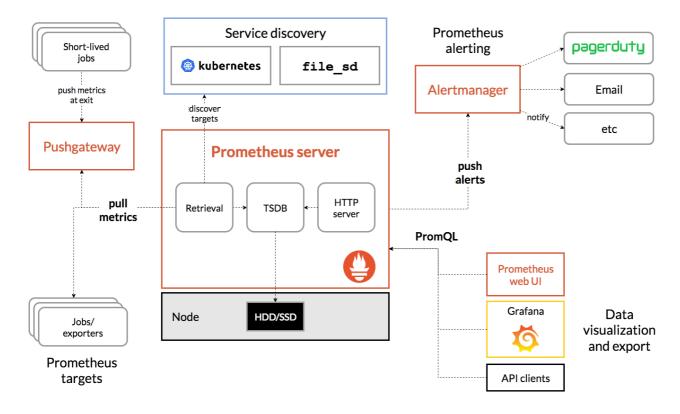
# 02.prometheus部署



### 一、自建prometheus镜像

```
go get github.com/prometheus/prometheus
cd go/src/github.com/prometheus/prometheus

wget https://github.com/prometheus/prometheus/releases/download/v2.11.1/promethe
us-2.11.1.linux-amd64.tar.gz
    tar xf prometheus-2.11.1.linux-amd64.tar.gz

mkdir -pv .build/linux-amd64
cp prometheus-2.11.1.linux-amd64/prometheus .build/linux-amd64/
cp prometheus-2.11.1.linux-amd64/promtool .build/linux-amd64/
docker build -t prometheus:v1.0 .
```



```
Step 3/19 : FROM quay.io/prometheus/busybox-${OS}-${ARCH}:latest
latest: Pulling from prometheus/busybox-linux-amd64
8e674ad76dce: Pull complete
e77d2419d1c2: Pull complete
Digest: sha256:28080a572b4140a985c6298edb40c2056408bd9286efa6604d512f1817707883
Status: Downloaded newer image for quay.io/prometheus/busybox-linux-amd64:latest
 ---> a130381627cc
Step 4/19 : LABEL maintainer="The Prometheus Authors comprometheus - developers@googlegroups.com
 ---> Running in 3c0afb5600d3
Removing intermediate container 3c0afb5600d3
 cmoving anistimentate container tooos-esoses
 ---> 02ac11e8a87a
Step 18/19 : ENTRYPOINT [ "/bin/prometheus" ]
 ---> Running in c1bce5262779
Removing intermediate container c1bce5262779
---> 9112c52c1f3e
Step 19/19 : CMD
                      [ "--config.file=/etc/prometheus/prometheus.vml".
                                                                                  "--storage.tsdb.path=/prometheus".
                                                                                                                                "--web.console.librari
es=/usr/share/prometheus/console libraries".
                                                       "--web.console.templates=/usr/share/prometheus/consoles" ]
---> Running in 89f0970935d5
Removing intermediate container 89f0970935d5
---> bef16a5ff1e4
Successfully built bef16a5ff1e4
Successfully tagged prometheus:v1.0
(base) [root@it5-prometheus-monitor prometheus]# docker images 💝 02.声音
REPOSITORY
                                                                             CREATED
prometheus
                                       v1.0
                                                          bef16a5ff1e4
                                                                             About a minute ago
                                                                                                 126MB
quay.io/prometheus/busybox-linux-amd64 latest
                                                          a130381627cc
                                                                             3 weeks ago
                                                                                                 2.68MB
(base) [root@it5-prometheus-monitor prometheus]#
                                                                                                                      SSH2 xterm □ 157x4 Ⅱ.41.5C 1 会话 + ◆ CAP NU
```

### 二、宿主机上创建volue挂载的相关目录

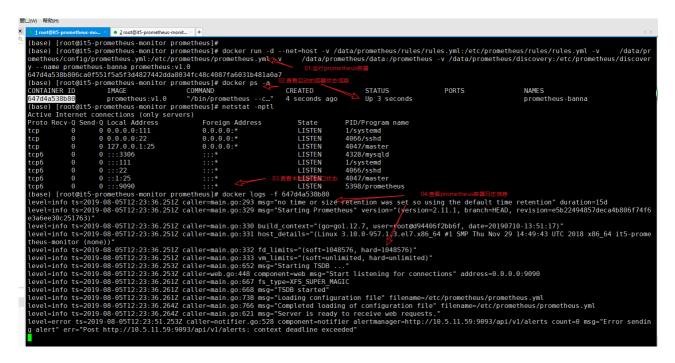
```
mkdir -pv /data/prometheus/{data,config,rules,discovery}
chmod -R 0777 /data
```

```
窗□(w) 帮助(H)
  1 root@it5-prometheus-mo...
  (base) [root@it5-prometheus-monitor prometheus]# mkdir -pv /data/prometheus/{data,config,rules,discovery}
  mkdir: created directory '/data/prometheus'
  mkdir: created directory '/data/prometheus/data'
 mkdir: created directory '/data/prometheus/config'
 mkdir: created directory '/data/prometheus/rules'
 mkdir: created directory '/data/prometheus/discovery'
  (base) [root@it5-prometheus-monitor prometheus]#
                                                    chmod -R 0777 /data
  (base) [root@it5-prometheus-monitor prometheus]# ll /
  total 20
  lrwxrwxrwx. 1 root root 7 Jan 29 2019 bin -> usr/bin
  dr-xr-xr-x. 5 root root 4096 Jul 23 05:25 boot
  drwxrwxrwx 9 root root 102 Aug 5 20:15 data
  drwxr-xr-x 18 root root 2760 Aug 5 20:05 dev
  drwxr-xr-x. 84 root root 8192 Aug 5 20:04 etc
 drwxr-xr-x. 4 root root 37 Jun 18 15:10 home
  lrwxrwxrwx. 1 root root
                            7 Jan 29 2019 lib -> usr/lib
  lrwxrwxrwx. 1 root root
                           9 Jan 29 2019 lib64 -> usr/lib64
 drwxr-xr-x. 2 root root 6 Apr 11 2018 media
  drwxr-xr-x. 2 root root
                           6 Apr 11 2018 mnt
  drwxr-xr-x. 4 root root 42 Aug 3 17:05 opt
  dr-xr-xr-x 118 root root 0 Aug 5 20:05 proc
  dr-xr-x---. 11 root root 4096 Aug 5 20:07 root
  drwxr-xr-x 28 root root 900 Aug 5 20:06 run
  lrwxrwxrwx. 1 root root
                           8 Jan 29 2019 sbin -> usr/sbin
                           6 Apr 11 2018 srv
  drwxr-xr-x. 2 root root
  dr-xr-xr-x 13 root root 0 Aug 5 20:05 sys
 drwxrwxrwt. 8 root root 195 Aug 5 20:07
  drwxr-xr-x. 13 root root 155 Jan 29 2019 usr
  drwxr-xr-x. 19 root root 267 Jun 18 14:06 var
  (base) [root@it5-prometheus-monitor prometheus]#
```

### 三、启动prometheus容器

#### 1.挂载rules的启动方式

docker run -d --net=host -v /data/prometheus/rules.yml:/etc/prometheus/rules/rules.yml -v /data/prometheus/config/prometheus.yml:/etc/prometheus/prometheus s.yml -v /data/prometheus/data:/prometheus -v /data/prometheus/discovery:/etc/prometheus/discovery --name prometheus-banna prometheus:v1.0



#### 2.不带rules的启动方式

docker run --name prometheus-banna -p 9090:9090 -d -v /data/prometheus/data:/pro
metheus -v /data/prometheus/config/prometheus.yml:/etc/prometheus/prometheus.yml pro
metheus:v1.0

#### 3.在线热加载配置

curl -X POST "http://localhost:9090/-/reload"

```
1 root@it5-prometheus-mo...

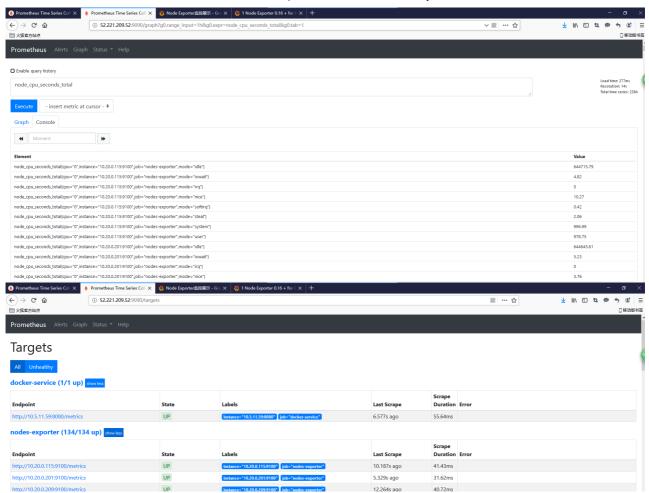
    2 root@it5-prometheus-monit... * +

(base) [root@it5-prometheus-monitor prometheus]# curl -X POST "http://localhost:9090/-/reload
(base) [root@it5-prometheus-monitor prometheus]# curl -X POST "http://localhost:9090/-/reload"
(base) [root@it5-prometheus-monitor prometheus]# docker logs --tail 100 -f 588b1a3e8b65
Error: No such container: 588b1a3e8b65
(base) [root@it5-prometheus-monitor prometheus]# docker ps -a
  1 root@it5-prometheus-mo... × • 2 root@it5-prometheus-monit... × +
  (base) [root@it5-prometheus-monitor prometheus]# docker ps -a
  CONTAINER ID
                                         COMMAND
                                                                  CREATED
                                                                                      STATUS
                                                                                                                              NAMES
  7e93c5c0103f
                     prometheus:v1.0
                                         "/bin/prometheus --c..." 27 seconds ago
                                                                                      Up 26 seconds
                                                                                                                              prometheus-banna
  (base) [root@it5-prometheus-monitor prometheus]# docker logs --tail 100 -f 7e93c5c0103f
  level=warn ts=2019-08-05T12:32:50.115Z caller=main.go:282 deprecation_notice="'storage.tsdb.retention' flag is deprecated use 'storage.tsdb.retention.time' i
  level=info ts=2019-08-05T12:32:50.116Z caller=main.go:329 msg="Starting Prometheus" version=(version=2.11.1, branch=HEAD, revision=e5b22494857deca4b806f74f6
  e3a6ee30c251763)'
  level=info ts=2019-08-05T12:32:50.116Z caller=main.go:330 build context="(go=go1.12.7, user=root@d94406f2bb6f, date=20190710-13:51:17)"
  level=info ts=2019-08-05T12:32:50.116Z caller=main.go:331 host details="(Linux 3.10.0-957.1.3.el7.x86 64 #1 SMP Thu Nov 29 14:49:43 UTC 2018 x86 64 it5-prome
  theus-monitor (none))"
  level=info ts=2019-08-05T12:32:50.116Z caller=main.go:332 fd limits="(soft=1048576, hard=1048576)"
  level=info ts=2019-08-05T12:32:50.116Z caller=main.go:333 vm limits="(soft=unlimited, hard=unlimited)"
  level=info ts=2019-08-05T12:32:50.117Z caller=main.go:652 msg="Starting TSDB ..."
  level=info ts=2019-08-05T12:32:50.117Z caller=web.go:448 component=web msg="Start listening for connections" address=0.0.0.0:9090
  level=info ts=2019-08-05T12:32:50.127Z caller=main.go:667 fs type=XFS SUPER MAGIC
  level=info ts=2019-08-05T12:32:50.127Z caller=main.go:668 msg="TSDB started"
  level=info ts=2019-08-05T12:32:50.127Z caller=main.go:738 msg="Loading configuration file" filename=/etc/prometheus/prometheus.yml
  level=info ts=2019-08-05T12:32:50.131Z caller=main.go:766 msg="Completed loading of configuration file" filename=/etc/prometheus/prometheus yπl
  level=info ts=2019-08-05T12:32:50.131Z caller=main.go:621 msg="Server is ready to receive web requests.
  level=info ts=2019-08-05T12:33:02.365Z caller=main.go:738 msg="Loading configuration file" filename=/etc/prometheus/prometheus.yml
  level=info ts=2019-08-05T12:33:02.368Z caller=main.go:766 msg="Completed loading of configuration file" filename=/etc/prometheus/prometheus/syml
  level=info ts=2019-08-05T12:33:03.286Z caller=main.go:738 msg="Loading configuration file" filename=/etc/prometheus/prometheus.yml
  level=info ts=2019-08-05T12:33:03.289Z caller=main.go:766 msg="Completed loading of configuration file" filename=/etc/prometheus/prometheus.yml
  level=info ts=2019-08-05T12:33:03.582Z caller=main.go:738 msg="Loading configuration file" filename=/etc/prometheus/prometheus.yml
  level=info ts=2019-08-05T12:33:03.584Z caller=main.go:766 msg="Completed loading of configuration file" filename=/etc/prometheus/prometheus.yml
  level=info ts=2019-08-05T12:33:03.798Z caller=main.go:738 msg="Loading configuration file" filename=/etc/prometheus/prometheus.yml
  level=info ts=2019-08-05T12:33:03.804Z caller=main.go:766 msg="Completed loading of configuration file" filename=/etc/prometheus/prometheus.yml
  level=info ts=2019-08-05T12:33:04.021Z caller=main.go:738 msg="Loading configuration file" filename=/etc/prometheus/prometheus.yml
  level=info ts=2019-08-05T12:33:04.023Z caller=main.go:766 msg="Completed loading of configuration file" filename=/etc/prometheus/prometheus.yml
  level=info ts=2019-08-05T12:33:04.245Z caller=main.go:738 msg="Loading configuration file" filename=/etc/prometheus/prometheus.yml
  level=info ts=2019-08-05T12:33:04.247Z caller=main.go:766 msg="Completed loading of configuration file" filename=/etc/prometheus/prometheus.yml
  level=info ts=2019-08-05T12:33:04.461Z caller=main.go:738 msg="Loading configuration file" filename=/etc/prometheus/prometheus.yml
 level=info ts=2019-08-05T12:33:04.464Z caller=main.go:766 msg="Completed loading of configuration file" filename=/etc/prometheus/prometheus.yml
  level=error ts=2019-08-05T12:33:05.118Z caller=notifier.go:528 component=notifier alertmanager=http://10.5.11.59:9093/api/v1/alerts count=0 msg="Error sendin
  g alert" err="Post http://10.5.11.59:9093/api/v1/alerts: context deadline exceeded"
                                                                                                                                             🗲 英 🤈 🙂 🎐 📟 🐁 😭
  level=info ts=2019-08-05T12:33:05.405Z caller=main.go:738 msg="Loading configuration file" filename=/etc/prometheus/prometheus.yml
 level=info ts=2019-08-05T12:33:05.408Z caller=main.go:766 msg="Completed loading of configuration file" filename=/etc/prometheus/prometheus.yml
 level=error ts=2019-08-05T12:33:20.118Z caller=notifier.go:528 component=notifier alertmanager=http://10.5.11.59:9093/api/yl/alerts count=0 msg="Error sendin
 g alert" err="Post http://10.5.11.59:9093/api/v1/alerts: context deadline exceeded"
```

## 四、WEB界面访问

http://IP:9090

#prometheus默认监听端口为9090



http://10.20.0.24:9100/metrics	UP	instance="10.20.0.24:9100" job="nodes-exporter"	9.756s ago	40.99ms
http://10.20.0.46:9100/metrics	UP	instance="10.20.0.46:9100" job="nodes-exporter"	1.233s ago	41.02ms
http://10.20.0.51:9100/metrics	UP	instance="10.20.0.51:9100" job="nodes-exporter"	10.889s ago	41.87ms
http://10.20.1.110:9100/metrics	UP	instance="10.20.1.110:9100" job="nodes-exporter"	6.546s ago	41ms
http://10.20.1.111:9100/metrics	UP	instance="10.20.1.111:9100" [job="nodes-exporter"]	5.801s ago	40.29ms
http://10.20.1.121:9100/metrics	UP	instance="10.20.1.121:9100"   iob="nodes-exporter"	4.705s ago	33.73ms