

05.node-exporter容器部署

一、自建node-exporter镜像

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

wget https://github.com/prometheus/node_exporter/releases/download/v0.18.1/node_exporter-0.18.1.linux-amd64.tar.gz
tar xf node_exporter-0.18.1.linux-amd64.tar.gz

mkdir -pv .build/linux-amd64/
cp node_exporter-0.18.1.linux-amd64/node_exporter .build/linux-amd64/

docker build -t node_exporter:v1.0 .
```

```

1 root@it5-prometheus-mo... 2 root@it5-prometheus-monit... +
anaconda3 anaconda-ks.cfg create_key.yml fy original-ks.cfg
(base) [root@it5-prometheus-monitor ~]# go get github.com/prometheus/node_exporter
(base) [root@it5-prometheus-monitor ~]# cd go/

(base) [root@it5-prometheus-monitor node_exporter]# cd /root/
(base) [root@it5-prometheus-monitor ~]# cd go/src/github.com/prometheus/node_exporter/
(base) [root@it5-prometheus-monitor node_exporter]# ls
CHANGELOG.md CONTRIBUTING.md end-to-end-test.sh go.mod MAINTAINERS.md node_exporter.go README.md test_image.sh vendor
checkmetrics.sh Dockerfile example-rules.yml go.sum Makefile node_exporter_test.go scripts text_collector_examples VERSION
collector docs examples LICENSE Makefile.common NOTICE staticcheck.conf ttar

(base) [root@it5-prometheus-monitor node_exporter]# wget https://github.com/prometheus/node_exporter/releases/download/v0.18.1/node_exporter-0.18.1.linux-amd64.tar.gz
--2019-08-06 11:10:59-- https://github.com/prometheus/node_exporter/releases/download/v0.18.1/node_exporter-0.18.1.linux-amd64.tar.gz
Resolving github.com (github.com)... 13.250.177.223
Connecting to github.com (github.com)|13.250.177.223|:443... connected.
HTTP request sent, awaiting response... 302 Found
Location: https://github-production-release-asset-2e65be.s3.amazonaws.com/9524057/5dc5df80-86f1-11e9-924c-ef392e7300e3?X-Amz-Algorithm=AWS4-HMAC-SHA256&X-Amz-Credential=AKIAIWNJYAX4CSVEH53A%2F20190806%2Fus-east-1%2F%3%2Faws4_request&X-Amz-Date=20190806T031100Z&X-Amz-Expires=300&X-Amz-Signature=d8d2fa7145c9bb00779247d3c24f093849ef51334dec0c9cc9f5ac2758438eel6X-Amz-SignedHeaders=host&actor_id=0&response-content-disposition=attachment%3B%20filename%3Dnode_exporter-0.18.1.linux-amd64.tar.gz&response-content-type=application%2Foctet-stream [following]
--2019-08-06 11:11:00-- https://github-production-release-asset-2e65be.s3.amazonaws.com/9524057/5dc5df80-86f1-11e9-924c-ef392e7300e3?X-Amz-Algorithm=AWS4-HMAC-SHA256&X-Amz-Credential=AKIAIWNJYAX4CSVEH53A%2F20190806%2Fus-east-1%2F%3%2Faws4_request&X-Amz-Date=20190806T031100Z&X-Amz-Expires=300&X-Amz-Signature=d8d2fa7145c9bb00779247d3c24f093849ef51334dec0c9cc9f5ac2758438eel6X-Amz-SignedHeaders=host&actor_id=0&response-content-disposition=attachment%3B%20filename%3Dnode_exporter-0.18.1.linux-amd64.tar.gz&response-content-type=application%2Foctet-stream
Resolving github-production-release-asset-2e65be.s3.amazonaws.com (github-production-release-asset-2e65be.s3.amazonaws.com)... 52.216.129.43
Connecting to github-production-release-asset-2e65be.s3.amazonaws.com (github-production-release-asset-2e65be.s3.amazonaws.com)|52.216.129.43|:443... connect ed.
HTTP request sent, awaiting response... 200 OK
Length: 8083296 (7.7M) [application/octet-stream]
Saving to: 'node_exporter-0.18.1.linux-amd64.tar.gz'

100%[=====] 8,083,296 3.07MB/s in 2.5s

2019-08-06 11:11:03 (3.07 MB/s) - 'node_exporter-0.18.1.linux-amd64.tar.gz' saved [8083296/8083296]

(base) [root@it5-prometheus-monitor node_exporter]# tar xf node_exporter-0.18.1.linux-amd64.tar.gz
(base) [root@it5-prometheus-monitor node_exporter]#

(base) [root@it5-prometheus-monitor node_exporter]# mkdir -pv .build/linux-amd64/
mkdir: created directory '.build'
mkdir: created directory '.build/linux-amd64/'
(base) [root@it5-prometheus-monitor node_exporter]# cp node_exporter-0.18.1.linux-amd64/node_exporter .build/linux-amd64/
(base) [root@it5-prometheus-monitor node_exporter]#

```

```
窗口(W) 帮助(H)
1 root@it5-prometheus-mo... 2 root@it5-prometheus-monit...
mkdir: created directory '.build/linux-amd64/'
(base) [root@it5-prometheus-monitor node_exporter]# cp node_exporter-0.18.1.linux-amd64/node_exporter .build/linux-amd64/
(base) [root@it5-prometheus-monitor node_exporter]# docker build -t node_exporter:v1.0 .
Sending build context to Docker daemon 62.19MB
Step 1/11 : ARG ARCH="amd64"
Step 2/11 : ARG OS="linux"
Step 3/11 : FROM quay.io/prometheus/busybox-${OS}-${ARCH}:glibc
glibc: Pulling from prometheus/busybox-linux-amd64
86702268dbcc: Pull complete
1f5ald653167: Pull complete
Digest: sha256:55bfa2658b01d2ef3c0df2a8389bee53c4ca1c2bb1a70258a44d3d3d577f55f2
Status: Downloaded newer image for quay.io/prometheus/busybox-linux-amd64:glibc
--> 6bf7fc538cdd
Step 4/11 : LABEL maintainer="The Prometheus Authors <prometheus-developers@googlegroups.com>"
--> Running in 0befdbc72901
Removing intermediate container 0befdbc72901
--> 3689dd8d5faf
Step 5/11 : ARG ARCH="amd64"
--> Running in ad42274b2e6c
Removing intermediate container ad42274b2e6c
--> 0d8117c8f5aa
Step 6/11 : ARG OS="linux"
--> Running in 5c286b5a0cee
```

01.build node_exporter镜像

```

Removing intermediate container 5c286b5a0cee
--> 9817c80331dc
Step 7/11 : COPY .build/${OS}-${ARCH}/node_exporter /bin/node_exporter
--> 2a73c6bc012c
Step 8/11 : EXPOSE      9100
--> Running in df7845fe0488
Removing intermediate container df7845fe0488
--> 323d60e0a52a
Step 9/11 : USER        nobody
--> Running in 7b150f1f2179
Removing intermediate container 7b150f1f2179
--> 3c9a2ccdcc78
Step 10/11 : ENTRYPOINT [ "/bin/node_exporter" ]
--> Running in 03264bd1bd3d
Removing intermediate container 03264bd1bd3d
--> ccdc30760c00
Step 11/11 : CMD [ "--collector.systemd", "--log.level=error" ]
--> Running in 752f3f8a39e5
Removing intermediate container 752f3f8a39e5
--> 8b5a29af1dd2
Successfully built 8b5a29af1dd2
Successfully tagged node_exporter:v1.0
(base) [root@it5-prometheus-monitor node_exporter]# docker images

```

01.build 镜像完成

02.查看node_exporter 镜像信息

REPOSITORY	TAG	IMAGE ID	CREATED	SIZE
node_exporter	v1.0	8b5a29af1dd2	About a minute ago	22.9MB

二、启动node-exporter容器

```
docker run --name node-exporter-banna -d \  
-v "/proc:/host/proc" \  
-v "/sys:/host/sys" \  
-v ":/:/rootfs" \  
-v /var/run/dbus/system_bus_socket:/var/run/dbus/system_bus_socket \  
--net=host \  
--pid="host" \  
node_exporter:v1.0 \  
--path.procfs /host/proc \  
--path.sysfs /host/sys \  
--collector.systemd \  
--collector.tcpstat \  
--collector.filesystem.ignored-mount-points "^(/sys|proc|dev|host|etc)($|/)"
```

备注：node_exporter的默认监听端口为9100


```

窗口(W) 帮助(H)
x 1 root@it5-prometheus-mo... 2 root@it5-prometheus-monit...
(base) [root@it5-prometheus-monitor node_exporter]# docker run --name node-exporter-banna -d \
-v "/proc:/host/proc" \
-v "/sys:/host/sys" \
-v "/:/rootfs" \
-v "/var/run/dbus/system_bus_socket:/var/run/dbus/system_bus_socket" \
--net=host \
--pid="host" \
node_exporter:v1.0 \
--path.procfs /host/proc \
--path.sysfs /host/sys \
--collector.systemd \
--collector.tcpstat \
--collector.filesystem.ignored-mount-points "^(/sys|proc|dev|host|etc)($|/)"
eab7ea4d4386d18c409de20ec7b0d7eaa15b186e5c410c44c67b06eb20e2f5fe
(base) [root@it5-prometheus-monitor node_exporter]# docker ps -a
CONTAINER ID        IMAGE               COMMAND             CREATED             STATUS              PORTS              NAMES
eab7ea4d4386        node_exporter:v1.0 "/bin/node_exporter ..." 4 seconds ago       Up 3 seconds        0.0.0.0:3000->3000/tcp node-exporter-banna
7b1eaad919ad        grafana:v1.0       "/run.sh"           13 minutes ago      Up 13 minutes       0.0.0.0:9093->9093/tcp grafana-banna
a5bf66e983d7        alertmanager:v1.0  "/bin/alertmanager ..." 39 minutes ago      Up 39 minutes       0.0.0.0:9093->9093/tcp alertmanager-banna
7e93c5c0103f        prometheus:v1.0    "/bin/prometheus -c ..." 15 hours ago        Up 15 hours          prometheus-banna

(base) [root@it5-prometheus-monitor node_exporter]# docker logs --tail 100 -f eab7ea4d4386
time="2019-08-06T03:17:54Z" level=info msg="Starting node_exporter (version=0.18.1, branch=HEAD, revision=3db77732e925c00b75d7404a8c46466b2ece83e)" source="node_exporter.go:156"
time="2019-08-06T03:17:54Z" level=info msg="Build context (go=go1.12.5, user=root@b50852alacha, date=20190604-16:41:18)" source="node_exporter.go:157"
time="2019-08-06T03:17:54Z" level=info msg="Enabled collectors:" source="node_exporter.go:97"
time="2019-08-06T03:17:54Z" level=info msg=" - arp" source="node_exporter.go:104"
time="2019-08-06T03:17:54Z" level=info msg=" - bcache" source="node_exporter.go:104"
time="2019-08-06T03:17:54Z" level=info msg=" - bonding" source="node_exporter.go:104"
time="2019-08-06T03:17:54Z" level=info msg=" - conntrack" source="node_exporter.go:104"
time="2019-08-06T03:17:54Z" level=info msg=" - cpu" source="node_exporter.go:104"
time="2019-08-06T03:17:54Z" level=info msg=" - cpufreq" source="node_exporter.go:104"
time="2019-08-06T03:17:54Z" level=info msg=" - diskstats" source="node_exporter.go:104"
time="2019-08-06T03:17:54Z" level=info msg=" - edac" source="node_exporter.go:104"
time="2019-08-06T03:17:54Z" level=info msg=" - entropy" source="node_exporter.go:104"
time="2019-08-06T03:17:54Z" level=info msg=" - filefd" source="node_exporter.go:104"
time="2019-08-06T03:17:54Z" level=info msg=" - filesystem" source="node_exporter.go:104"
time="2019-08-06T03:17:54Z" level=info msg=" - huami" source="node_exporter.go:104"

192.168.2.99/docs/prometeheus/prometeheus-1bdq5kt78us47

```

01.启动node_exporter容器

02.查看node_exporter容器镜像启动状态

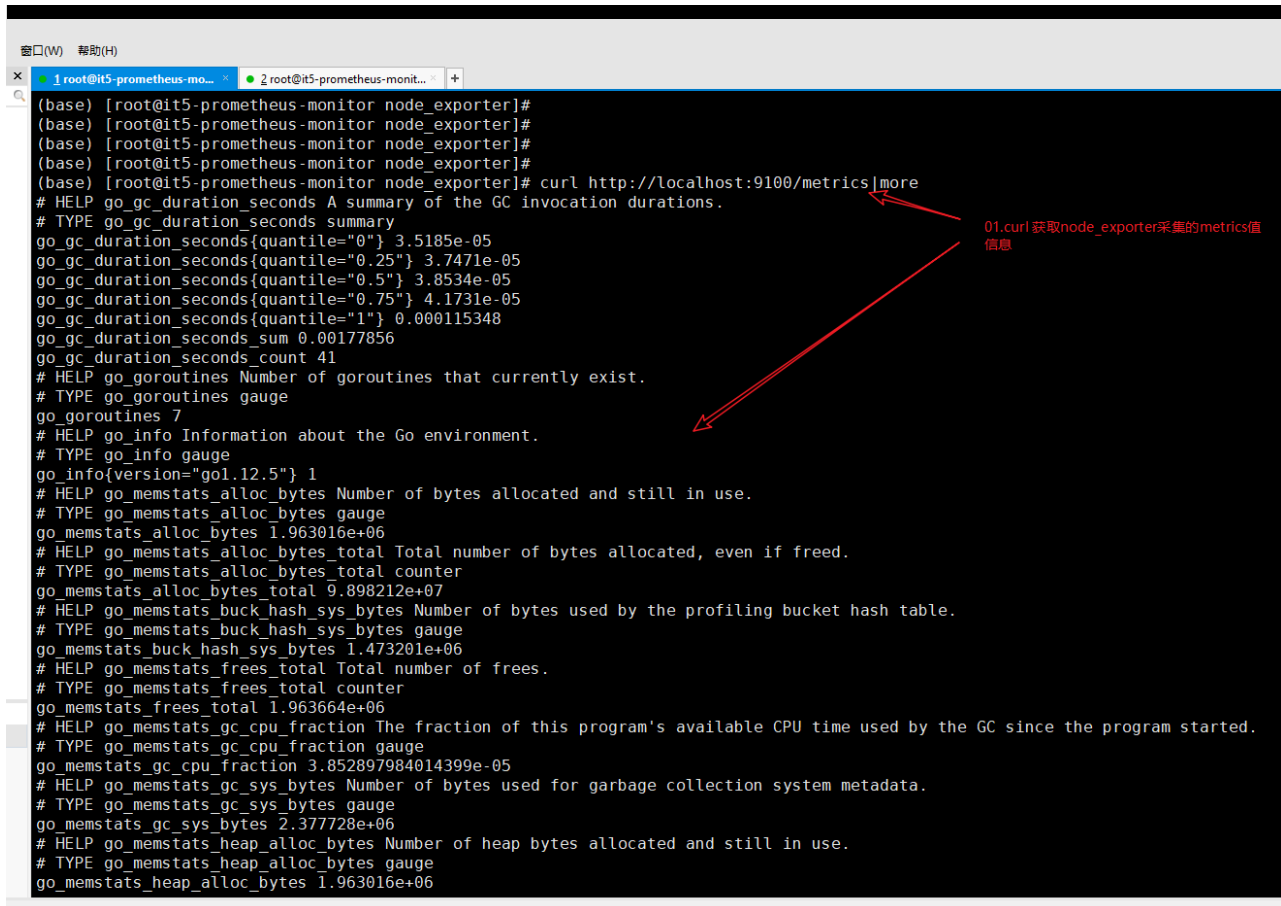
03.查看node_exporter容器日志

01.node_exporter监听端口

```

(base) [root@it5-prometheus-monitor node_exporter]# netstat -nptl
Active Internet connections (only servers)
Proto Recv-Q Send-Q Local Address           Foreign Address         State       PID/Program name
tcp        0      0 0.0.0.0:111             0.0.0.0:*               LISTEN      1/systemd
tcp        0      0 0.0.0.0:22              0.0.0.0:*               LISTEN      4066/sshd
tcp        0      0 0.0.0.0:125             0.0.0.0:*               LISTEN      4047/master
tcp6       0      0 :::3306                 :::*                   LISTEN      4328/mysqld
tcp6       0      0 :::9100                 :::*                   LISTEN      19724/node_exporter
tcp6       0      0 :::111                  :::*                   LISTEN      1/systemd
tcp6       0      0 :::22                   :::*                   LISTEN      4066/sshd
tcp6       0      0 :::3000                 :::*                   LISTEN      19138/docker-proxy
tcp6       0      0 :::1:25                 :::*                   LISTEN      4047/master
tcp6       0      0 :::9090                 :::*                   LISTEN      6045/prometheus
tcp6       0      0 :::9093                 :::*                   LISTEN      9104/docker-proxy

```



```
(base) [root@it5-prometheus-monitor node_exporter]#
(base) [root@it5-prometheus-monitor node_exporter]#
(base) [root@it5-prometheus-monitor node_exporter]#
(base) [root@it5-prometheus-monitor node_exporter]#
(base) [root@it5-prometheus-monitor node_exporter]# curl http://localhost:9100/metrics|more
# HELP go_gc_duration_seconds A summary of the GC invocation durations.
# TYPE go_gc_duration_seconds summary
go_gc_duration_seconds{quantile="0"} 3.5185e-05
go_gc_duration_seconds{quantile="0.25"} 3.7471e-05
go_gc_duration_seconds{quantile="0.5"} 3.8534e-05
go_gc_duration_seconds{quantile="0.75"} 4.1731e-05
go_gc_duration_seconds{quantile="1"} 0.000115348
go_gc_duration_seconds_sum 0.00177856
go_gc_duration_seconds_count 41
# HELP go_goroutines Number of goroutines that currently exist.
# TYPE go_goroutines gauge
go_goroutines 7
# HELP go_info Information about the Go environment.
# TYPE go_info gauge
go_info{version="go1.12.5"} 1
# HELP go_memstats_alloc_bytes Number of bytes allocated and still in use.
# TYPE go_memstats_alloc_bytes gauge
go_memstats_alloc_bytes 1.963016e+06
# HELP go_memstats_alloc_bytes_total Total number of bytes allocated, even if freed.
# TYPE go_memstats_alloc_bytes_total counter
go_memstats_alloc_bytes_total 9.898212e+07
# HELP go_memstats_buck_hash_sys_bytes Number of bytes used by the profiling bucket hash table.
# TYPE go_memstats_buck_hash_sys_bytes gauge
go_memstats_buck_hash_sys_bytes 1.473201e+06
# HELP go_memstats_frees_total Total number of frees.
# TYPE go_memstats_frees_total counter
go_memstats_frees_total 1.963664e+06
# HELP go_memstats_gc_cpu_fraction The fraction of this program's available CPU time used by the GC since the program started.
# TYPE go_memstats_gc_cpu_fraction gauge
go_memstats_gc_cpu_fraction 3.852897984014399e-05
# HELP go_memstats_gc_sys_bytes Number of bytes used for garbage collection system metadata.
# TYPE go_memstats_gc_sys_bytes gauge
go_memstats_gc_sys_bytes 2.377728e+06
# HELP go_memstats_heap_alloc_bytes Number of heap bytes allocated and still in use.
# TYPE go_memstats_heap_alloc_bytes gauge
go_memstats_heap_alloc_bytes 1.963016e+06
```

01.curl 获取node_exporter采集的metrics值 信息

