

# kubernetes监控：Prometheus + Grafana

参考：<http://blog.51cto.com/kaliarch/2160569>

- 1、master/node节点环境部署
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注意：

- 1、确保kubernetes可以正常运行
- 2、至少要有有一个node节点

服务安装的yaml文件：



Grafana监控模板：



kubern...ev2.json

需要的镜像包：

```
registry.odc.sunline.cn/monitor/node-exporter  
registry.odc.sunline.cn/monitor/prometheus:v2.0.0  
registry.odc.sunline.cn/monitor/grafana:4.2.0
```

## 1、master/node节点环境部署

```
master  
gityaml  
yaml  
  
# git clone git@gitlab.odc.sunline.cn:aps/cfg/k8s-cfg.git
```

## 2、采用daemonset方式部署node-exporter组件

```
# kubectl create -f node-exporter.yaml
```

## 3、部署prometheus组件

```
# kubectl create -f k8s-prometheus-grafana/prometheus/rbac-setup.yaml  
# kubectl create -f k8s-prometheus-grafana/prometheus/configmap.yaml  
# kubectl create -f  
k8s-prometheus-grafana/prometheus/prometheus.deploy.yaml  
# kubectl create -f k8s-prometheus-grafana/prometheus/prometheus.svc.yaml
```

## 4、部署grafana组件

```
# kubectl create -f k8s-prometheus-grafana/grafana/grafana-deploy.yaml  
# kubectl create -f k8s-prometheus-grafana/grafana/grafana-svc.yaml  
# kubectl create -f k8s-prometheus-grafana/grafana/grafana-ing.yaml
```

## 5、验证

```

#
# kubectl get svc -n kube-system
NAME                                TYPE             CLUSTER-IP      EXTERNAL-IP      PORT(S)
AGE
grafana                             NodePort          10.110.194.193   <none>
3000:32185/TCP    6h    ## grafana
kube-dns                           ClusterIP         10.96.0.10       <none>
53/UDP,53/TCP     9h
kubernetes-dashboard               NodePort          10.100.79.133    <none>
443:30080/TCP     9h
node-exporter                      NodePort          10.108.80.102    <none>
9100:31672/TCP    6h    ## node-exporter
prometheus                         NodePort          10.100.166.65    <none>
9090:30013/TCP    6      ## prometheus

# kubectl get pod --all-namespaces
NAMESPACE      NAME                                READY    STATUS
RESTARTS      AGE
kube-system    etcd-master01                      1/1      Running
0              9h
kube-system    grafana-core-f796895df-cswsh      1/1      Running    0
1h    ## grafana pod
kube-system    heapster-568f8f47dc-8mk7z         1/1      Running    0
8h
kube-system    kube-apiserver-master01            1/1      Running    0
9h
kube-system    kube-controller-manager-master01   1/1      Running    0
9h
kube-system    kube-dns-79f58c65fb-q776l         3/3      Running    0
9h
kube-system    kube-flannel-ds-pdq6m              1/1      Running    3
8h
kube-system    kube-flannel-ds-wpfmt              1/1      Running    0
9h
kube-system    kube-proxy-6drqs                  1/1      Running
1              8h
kube-system    kube-proxy-k8mdd                   1/1      Running
0              9h
kube-system    kube-scheduler-master01            1/1      Running    0
9h
kube-system    kubernetes-dashboard-65c7b85b8d-2zg2c 1/1      Running    0
9h
kube-system    node-exporter-qxpcr                1/1      Running
0              6h    ## node-exporter pod
kube-system    prometheus-6cf474d5f8-hxzvs       1/1      Running    0
3h    ## prometheus pod

```

6、在web页面查看服务是否正常

prometheus访问端口30013（可在yam的配置文件中修改：prometheus. svc. yml）

grafana端口为32185（yaml配置中未指定，随机分配的一个端口，可用命令 查看分配 的端口：kubectl get svc -n kube-system ）

192.168.255.132:30013/targets

最常访问

25\_sunline-Harbor

服务架构部-Confluen...

26\_登录 - Kubernete...

Google 翻译

Google

Prometheus

Alerts

Graph

Status

Help

Targets

kubernetes-apiservers (1/1 up)

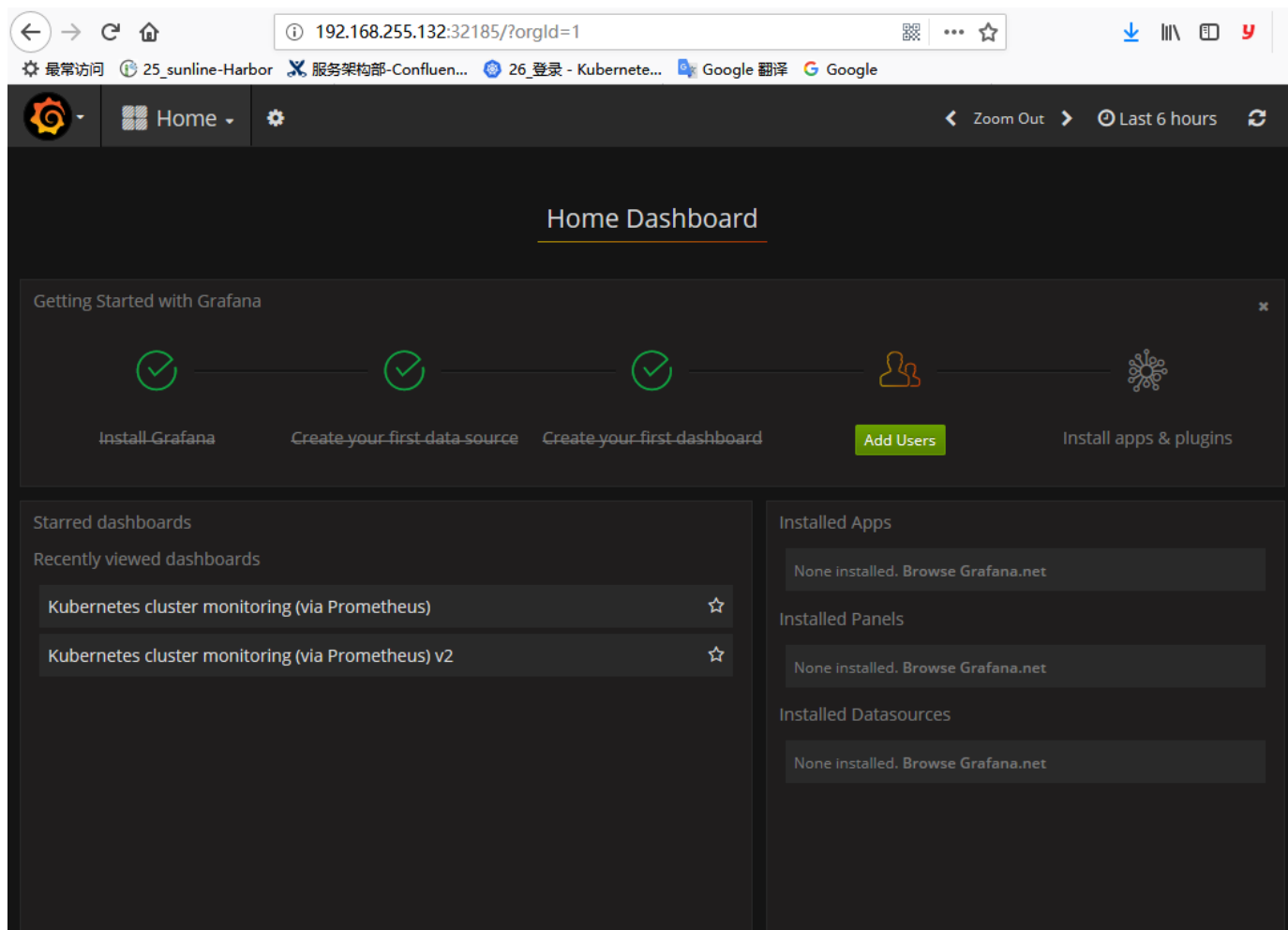
Endpoint	State	Labels	Last Scrape	Error
https://192.168.255.132:6443/metrics	UP	instance="192.168.255.132:6443"	11.878s ago	

kubernetes-cadvisor (2/2 up)

Endpoint	State	Labels	Last Scrape	Error
https://kubernetes.default.svc:443/api/v1/nodes/master01/proxy/metrics/cadvisor	UP	beta_kubernetes_io_arch="amd64" beta_kubernetes_io_os="linux" instance="master01" kubernetes_io_hostname="master01" node_role_kubernetes_io_master=""	194ms ago	
https://kubernetes.default.svc:443/api/v1/nodes/node01/proxy/metrics/cadvisor	UP	beta_kubernetes_io_arch="amd64" beta_kubernetes_io_os="linux" instance="node01" kubernetes_io_hostname="node01"	414ms ago	


kubernetes-nodes (2/2 up)

Endpoint	State	Labels	Last Scrape	Error
https://kubernetes.default.svc:443/api/v1/nodes/master01/proxy/metrics	UP	beta_kubernetes_io_arch="amd64" beta_kubernetes_io_os="linux" instance="master01" kubernetes_io_hostname="master01" node_role_kubernetes_io_master=""	9.586s ago	
https://kubernetes.default.svc:443/api/v1/nodes/node01/proxy/metrics	UP	beta_kubernetes_io_arch="amd64" beta_kubernetes_io_os="linux" instance="node01" kubernetes_io_hostname="node01"	7.568s ago	



## 7、配置Grafana

url地址: prometheus的访问地址: 我这里配置的外网访问的地址, 理论上是可以配置集群IP和端口

Data Sources

Datasource updated

### Edit data source

Config

Dashboards

Name	prometheus	Default	<input checked="" type="checkbox"/>
Type	Prometheus		

#### Http settings

Url	http://192.168.255.132:30013
Access	proxy

#### Http Auth

Basic Auth	<input type="checkbox"/>	With Credentials	<input type="checkbox"/>
TLS Client Auth	<input type="checkbox"/>	With CA Cert	<input type="checkbox"/>

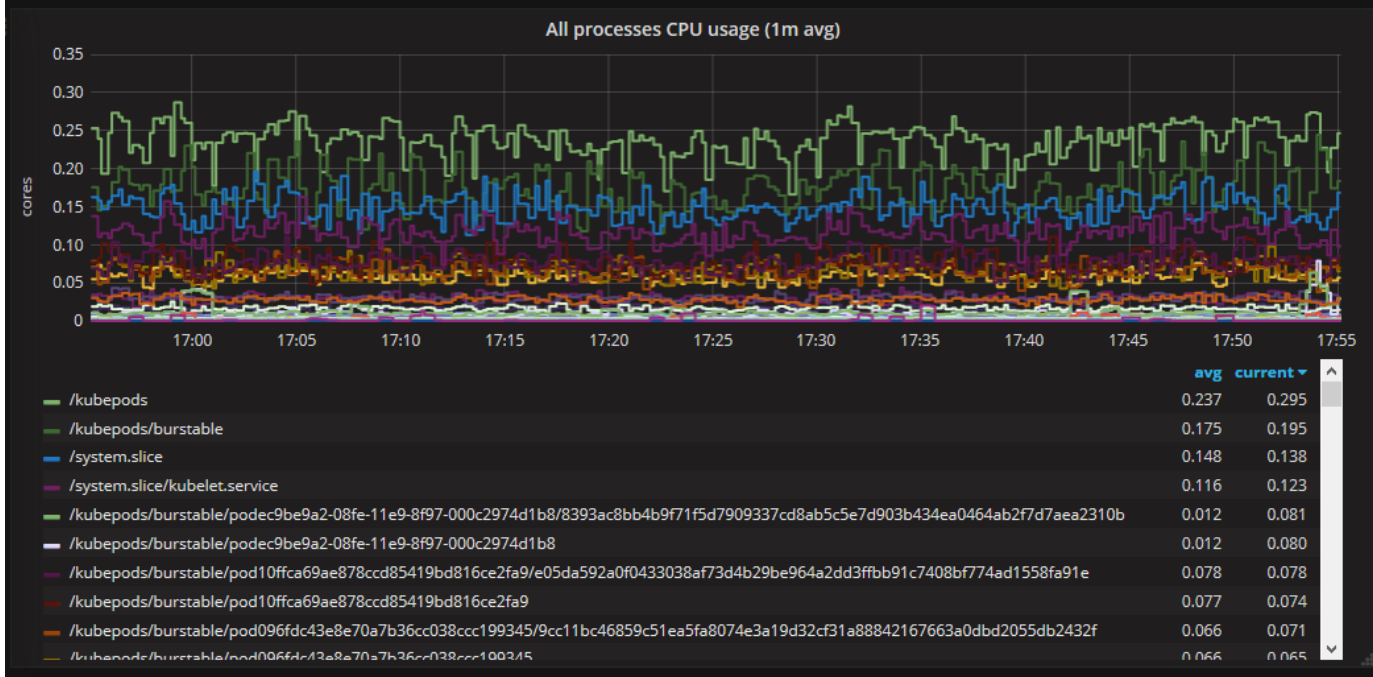
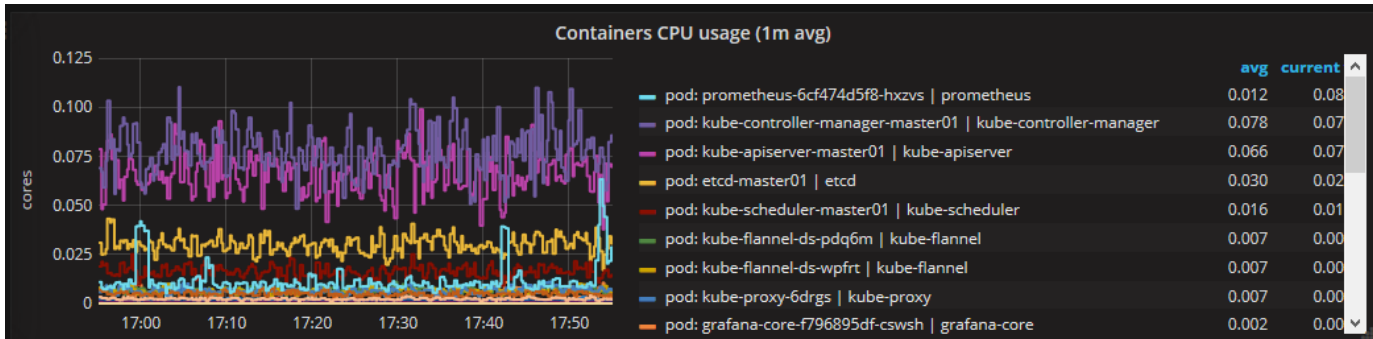
Success

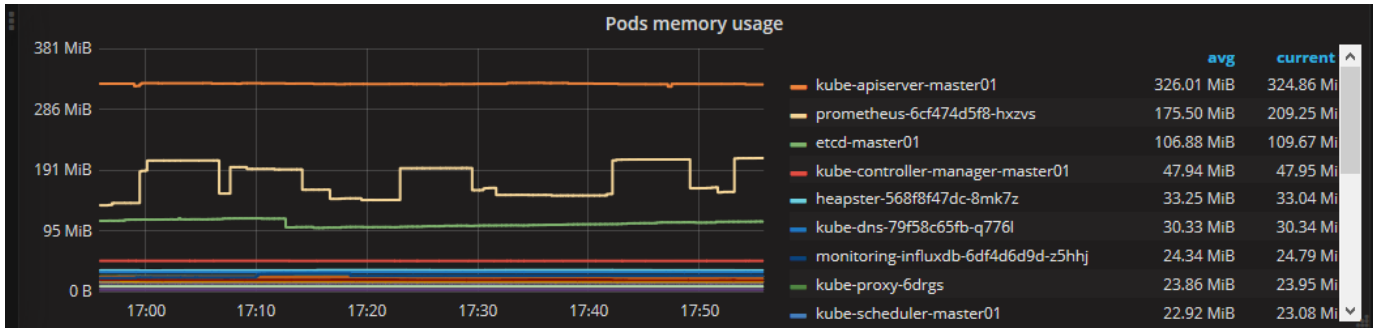
Data source is working

8、导入模板，查看监控数据









- > System services memory usage
- > Containers memory usage
- > All processes memory usage

