Ansible部署ceph集群

基础配置

三台环境为centos7.9，以下配置需要在每台机器上执行

配置hosts解析

```
cat >> /etc/hosts <<EOF
192.168.2.23 node1
192.168.2.24 node2
192.168.2.25 node3
EOF
```

关闭防火墙和selinux

```
systemctl stop firewalld && systemctl disable firewalld
setenforce 0 && sed -i 's/SELINUX=enforcing/SELINUX=disabled/g' /etc/selinux/config
```

分别在三个节点设置主机名

```
hostnamectl set-hostname node1
hostnamectl set-hostname node2
hostnamectl set-hostname node3
```

配置主机时间同步

```
systemctl restart chronyd.service && systemctl enable chronyd.service
```

配置免密登录

```
ssh-keygen
ssh-copy-id -i .ssh/id_rsa.pub node1
ssh-copy-id -i .ssh/id_rsa.pub node2
ssh-copy-id -i .ssh/id_rsa.pub node3
```

安装pip和ansible、git

```
yum install python-pip ansible git -y
```

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克隆存储库

这里我选择安装的是ceph nautilus版本

```
git clone https://github.com/ceph/ceph-ansible.git
cd ceph-ansible
git checkout stable-4.0
```

安装ansible依赖包

```
pip install --upgrade pip
pip install -r requirements.txt
```

修改hosts文件，添加安装的节点

```
cat >> /etc/ansible/hosts <<EOF
[mons]
node1
node2
node3

[osds]
node1
node2
node3

[mgrs]
node1

[mdss]
node1
node2
node3

[clients]
node1
node2
node3

[rgws]
node1
node2
node3

[grafana-server]
node1

EOF
```

备份group_vars下的yml文件

```
cd ceph-ansible/group_vars
for file in *;do cp $file ${file%.*};done
```

修改group_vars/all.yml配置

```
---
dummy:
mon_group_name: mons
osd_group_name: osds
rgw_group_name: rgws
mds_group_name: mdss
client_group_name: clients
mgr_group_name: mgrs
grafana_server_group_name: grafana-server
configure_firewall: False
ceph_origin: repository
ceph_origin: repository
ceph_repository: community
ceph_mirror: http://mirrors.aliyun.com/ceph
ceph_stable_key: http://mirrors.aliyun.com/ceph/keys/release.asc
ceph_stable_release: nautilus
ceph_stable_repo: "{{ ceph_mirror }}/rpm-{{ ceph_stable_release }}"
public_network: "192.168.2.0/24"
cluster_network: "192.168.2.0/24"
monitor_interface: ens33
osd_auto_discovery: true
osd_objectstore: filestore
radosgw_interface: ens33
dashboard_admin_password: asd123456
grafana_admin_password: admin
pg_autoscale_mode: True
```

修改group_vars/osds.yml配置

```
devices:
  - /dev/sdb
```

修改site.yml配置

```
---
# Defines deployment design and assigns role to server groups

- hosts:
  - mons
  - osds
  - mdss
  - rgws
  #- nfss
  #- rbdmirrors
  - clients
  - mgrs
# - iscsigws
  #- iscsi-gws # for backward compatibility only!
  - grafana-server
# - rgwloadbalancers

  gather_facts: false
  any_errors_fatal: true
  become: true
```
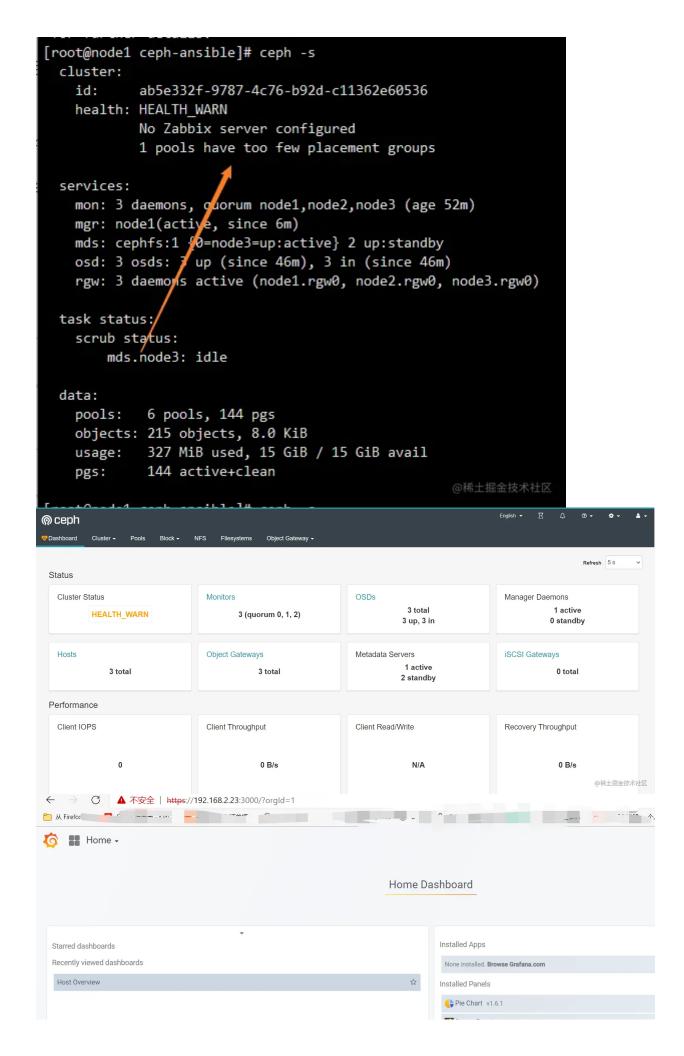
开始进行安装

剩下的交给时间吧，十分钟左右就装好了

```
ansible-playbook -i /etc/ansible/hosts site.yml
```

查看安装状态，发现有一个警告，这是因为在之前的all.yml配置没有开启允许自动调整pool中的pg数 `pg_autoscale_mode: False`，手动设置下即可

```
ceph osd pool set <pool-name> pg_autoscale_mode on
```

```
[root@node1 ceph-ansible]# ceph -s
  cluster:
    id:      ab5e332f-9787-4c76-b92d-c11362e60536
    health: HEALTH_WARN
            No Zabbix server configured
            1 pools have too few placement groups

  services:
    mon: 3 daemons, quorum node1,node2,node3 (age 52m)
    mgr: node1(active, since 6m)
    mds: cephfs:1 {0=node3=up:active} 2 up:standby
    osd: 3 osds: 3 up (since 46m), 3 in (since 46m)
    rgw: 3 daemons active (node1.rgw0, node2.rgw0, node3.rgw0)

  task status:
    scrub status:
        mds.node3: idle

  data:
    pools:   6 pools, 144 pgs
    objects: 215 objects, 8.0 KiB
    usage:   327 MiB used, 15 GiB / 15 GiB avail
    pgs:     144 active+clean
```

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ceph

English ▾

❤ Dashboard Cluster ▾ Pools Block ▾ NFS Filesystems Object Gateway ▾

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Status

Cluster Status	Monitors	OSDs	Manager Daemons
HEALTH_WARN	3 (quorum 0, 1, 2)	3 total 3 up, 3 in	1 active 0 standby

Hosts	Object Gateways	Metadata Servers	iSCSI Gateways
3 total	3 total	1 active 2 standby	0 total

Performance

Client IOPS	Client Throughput	Client Read/Write	Recovery Throughput
0	0 B/s	N/A	0 B/s

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← → C ⚠ 不安全 | https://192.168.2.23:3000/?orgId=1

📁 从 Firefox

⚙ 🔲 Home ▾

Home Dashboard

Starred dashboards

Recently viewed dashboards

Host Overview ☆

Installed Apps

None installed. **Browse Grafana.com**

Installed Panels

Pie Chart v1.6.1

Status Panel v1.0.10

Installed Datasources

None installed. **Browse Grafana.com**   @稀土掘金技术社区

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