Ceph编译安装及单机部署

编译安装
1. 下载源码
git clone –b v12.2.13 https://github.com/ceph/ceph
2. 依赖检查
./install–deps.sh
3. 编译安装
./do_cmake.sh
cd build
make && make install

单机部署
- 环境清理
pkill ceph–mon
pkill ceph–mgr
pkill ceph–osd
pkill radosgw

移除ceph lvm: lvremove /dev/ceph…

umount /var/lib/ceph/osd/*
rm –fr /var/lib/ceph/*
rm –fr /var/run/ceph/*
rm –fr /etc/ceph/*
rm –fr /var/log/ceph/*

- 使用ceph–deploy部署
mkdir /var/lib/ceph/osd
mkdir /var/lib/ceph/mgr
1. 创建集群
ceph–deploy new \`hostname\`
[问题]ceph–deploy new: error: hostname: node1 is not resolvable
[解决] 修改hosts,如果没改hostname不会报错

修改conf文件，设置副本数，这里是单机设置为1
osd pool default size = 1
osd pool default min size = 1
2. 创建并初始化mon
ceph–deploy ––overwrite–conf mon create–initial
[问题]admin_socket: exception getting command descriptions: [Errno 2] No such file or directory
[解决] 1.添加public_network(neither \`public_addr\` nor \`public_network\` keys are defined for monitors)
2.单节点要修改默认size=1(Some monitors have still not reached quorum)
3. 创建其他组件
ceph–deploy ––overwrite–conf mgr create \`hostname\`
ceph–deploy ––overwrite–conf admin \`hostname\`
4. 创建osd
for d in {b..d}; do ceph–deploy ––overwrite–conf osd create ––data /dev/sd$d ––bluestore \`hostname\`;done
创建一个，例如：ceph–deploy ––overwrite–conf osd create ––data /dev/nvme0n1p1 ––bluestore \`hostname\`
[问题]ceph–volume lvm create: error: GPT headers found, they must be removed on: /dev/nvme0n1p1
[解决]清理磁盘 ceph–volume lvm zap /dev/nvme0n1p1
5. rgw模式
ceph–deploy rgw create \`hostname\`
6. 创建用户
radosgw–admin user create ––uid=<your_name> ––display_name=<your_name>
radosgw–admin user info ––uid=<your_name>

- 手动部署
较为麻烦，容易出错，但是便于参数控制
1. mon
uuidgen，得到一个uuid，然后编写/etc/ceph/ceph.conf文件,根据实际填写
[global]
fsid = *caa7d5f4–c7e1–441b–9d51–cd3658d88618*
mon initial members = *$localhost*
mon host = *$ip*

mkdir /etc/ceph
mkdir –p /var/lib/ceph/bootstrap–osd

添加环境变量
export PATH=$*PATH:/root/data/ceph/build/bin*
export LD_LIBRARY_PATH=$LD_LIBRARY_PATH:./lib/

创建密钥&创建
ceph–authtool ––create–keyring /etc/ceph/ceph.mon.keyring ––gen–key –n mon. ––cap mon 'allow *'

ceph-authtool --create-keyring /etc/ceph/ceph.client.admin.keyring --gen-key -n client.admin --cap

mon 'allow *' --cap osd 'allow *' --cap mds 'allow *' --cap mgr 'allow *'
ceph-authtool --create-keyring /var/lib/ceph/bootstrap-osd/ceph.keyring --gen-key -n client.bootstrap-osd --cap mon 'profile bootstrap-osd' --cap mgr 'allow r'
ceph-authtool /etc/ceph/ceph.mon.keyring --import-keyring /etc/ceph/ceph.client.admin.keyring
ceph-authtool /etc/ceph/ceph.mon.keyring --import-keyring /var/lib/ceph/bootstrap-osd/ceph.keyring
monmaptool --create --add localhost 127.0.0.1 --fsid caa7d5f4-c7e1-441b-9d51-cd3658d88618 /etc/ceph/monmap

开启mon
mkdir -p /var/lib/ceph/mon/ceph-localhost
ceph-mon --cluster ceph --mkfs -i localhost --monmap /etc/ceph/monmap --keyring /etc/ceph/ceph.mon.keyring

2. mgr
mkdir -p /var/lib/ceph/mgr/ceph-localhost/
ceph auth get-or-create mgr.localhost mon 'allow profile mgr' osd 'allow *' mds 'allow *' -o /var/lib/ceph/mgr/ceph-localhost/keyring
ceph-mgr -i localhost --cluster ceph

3. osd
yum install pkgconf.x86_64
ceph-volume lvm create --data /dev/vdb
uuidgen
f781b4e9-3191-4925-84d8-43867fe2405e
ceph osd create f781b4e9-3191-4925-84d8-43867fe2405e 0
mkdir -p /var/lib/ceph/osd/ceph-0/
ceph auth get-or-create osd.0 osd 'allow *' mon 'allow rwx' mgr 'allow profile osd' -o /var/lib/ceph/osd/ceph-0/keyring

- 其他问题
1. 编译问题，开启debug编译
fatal error: tracing/oprequest.h: No such file or directory #include "tracing/oprequest.h" undefined reference to `OSD::HeartbeatInfo::HEARTBEAT_MAX_CONN'
未解决，有时候没有该错误

2. NameError: global name 'extend_path' is not defined
解决：pip install --upgrade ceph-deploy

3. 运行raods报错
client.4133.objecter handle_osd_map fsid 38d3bac4-847f-0000-0000-000000000000 != b8468cd8-4cab-461e-aa8e-08eedf7a4db8
解决：查看rados运行路径，可能多次编译安装存在多个rados，选择正确的rados路径，一般是/usr/bin