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# **blog Documentation**

***Release 1.0.1***

**tom tsang**

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Contents:





# CHAPTER 1

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## kubernetes

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Contents:

## 1.1 k8s install

Contents:

### 1.1.1 before install

1. 4.10

<http://blogtt.readthedocs.io/en/latest/ubuntu/update-kernel/index.html>

## 1.2 storage

### 1.2.1 nfs

192.168.31.232

### 1.2.2 ceph fs

<http://tonybai.com/2017/05/08/mount-cephfs-acrossing-nodes-in-kubernetes-cluster/>

### 1.2.3 rook

<http://dockone.io/article/2156>

## 1.2.4 ceph rbd

## 1.2.5 Glusterfs

# 1.3 cephfs

Contents:

## 1.3.1 cephfs statefulset

```
k8s-master 192.168.31.120
k8s-node1 192.168.31.119
k8s-node2 192.168.31.118

cephfs-admin 192.168.31.115
cephfs-monitor 192.168.31.114
```

k8s-node nfs-common

1

<http://www.cnblogs.com/iiiiher/p/7159810.html>

<https://github.com/kubernetes-incubator/external-storage/tree/master/nfs-client>

<https://github.com/kubernetes-incubator/external-storage> External storage plugins, provisioners, and helper libraries  
[ nfs provisioners ](<https://kubernetes.io/docs/concepts/storage/persistent-volumes/#provisioner>)

2git clone

git clone <https://github.com/kubernetes-incubator/external-storage>

cd external-storage/nfs-client/deploy/

3

<https://github.com/kubernetes-incubator/external-storage/tree/master/ceph/cephfs>

**step**

**Compile the provisioner**

<http://blogtt.readthedocs.io/en/latest/k8s/cephfs/cephfs-k8s-make-by-go-get.html>

**Make the container image and push to the registry**

docker image k8sdocker pull make image.

## Start Kubernetes local cluster

### Create a Ceph admin secret

cephfs-admin

```
ceph auth get client.admin 2>&1 |grep "key = " |awk '{print $3}' |xargs echo -n > /
↳ tmp/secret
```

k8s-master

```
kubectl create secret generic ceph-secret-admin --from-file=/tmp/secret --
↳ namespace=kube-system
```

## Start CephFS provisioner

1 deployment.yaml

```
kubectl create -f deployment.yaml
```

2 docker

```
docker run -ti -v /root/.kube:/kube -v /var/run/kubernetes:/var/run/kubernetes --
↳ privileged --net=host cephfs-provisioner /usr/local/bin/cephfs-provisioner -
↳ master=http://127.0.0.1:8080 -kubeconfig=/kube/config -id=cephfs-provisioner-1
```

1. kube

/root/admin.conf , config

```
root@km:~# cat k8.export.sh
sudo cp /etc/kubernetes/admin.conf $HOME/
sudo chown $(id -u):$(id -g) $HOME/admin.conf
export KUBECONFIG=$HOME/admin.conf
root@km:~# cp admin.conf config
root@km:~#
```

2. image

make image quay.io/external\_storage/cephfs-provisioner:latest

3. ceph-master

service

```
root@km:~/cephfs# k get svc --all-namespaces | grep default | grep kubernetes
default      kubernetes      10.96.0.1      <none>      443/TCP
↳ 71d
root@km:~/cephfs#
```

-master=https://10.96.0.1/ -master=https://10.96.0.1:443/

```
root@km:~# docker run -ti -v /root:/kube -v /var/run/kubernetes:/var/run/kubernetes
↳ --privileged --net=host quay.io/external_storage/cephfs-provisioner /usr/local/bin/
↳ cephfs-provisioner -master=https://10.96.0.1/ -kubeconfig=/kube/config -id=cephfs-
↳ provisioner-1
```

docker pv

## Create a CephFS Storage Class

Replace Ceph monitor's IP in class.yaml with your own and create storage class:

```
kubectl create -f class.yaml
```

## Create a claim

```
kubectl create -f claim.yaml
```

## Create a Pod using the claim

```
kubectl create -f test-pod.yaml
```

## delete

#### deployment.yaml, class.yaml

```
root@km:~/kubernetes.io/TUTORIALS/Stateful-Applications/v# cd external-storage/nfs-client/deploy/
root@km:~/kubernetes.io/TUTORIALS/Stateful-Applications/v# cat deployment.yaml kind: Deployment
  apiVersion: extensions/v1beta1 metadata:
```

```
    name: nfs-client-provisioner
```

```
spec: replicas: 1 strategy:
```

```
  type: Recreate
```

```
template:
```

```
  metadata:
```

```
    labels: app: nfs-client-provisioner
```

```
  spec:
```

```
    containers:
```

- name: nfs-client-provisioner image: quay.io/external\_storage/nfs-client-provisioner:latest imagePullPolicy: IfNotPresent volumeMounts:
  - name: nfs-client-root mountPath: /persistentvolumes

```
    env:
```

- name: PROVISIONER\_NAME value: fuseim.pri/ifs
- name: NFS\_SERVER value: 192.168.31.232
- name: NFS\_PATH value: /data/nfs-storage/k8s-storage/ssd

```
  volumes:
```

- name: nfs-client-root nfs:
  - server: 192.168.31.232 path: /data/nfs-storage/k8s-storage/ssd

```
root@km:~/kubernetes.io/TUTORIALS/Stateful-Applications/v# cat class.yaml apiVersion: stor-
age.k8s.io/v1beta1 kind: StorageClass metadata:
```

```
  name: managed-nfs-storage
```

```
  provisioner: fuseim.pri/ifs # or choose another name, must match deployment's env PROVI-
  SIONER_NAME' root@km:~/kubernetes.io/TUTORIALS/Stateful-Applications/v#
```

####

*deployment.yaml* [quay.io/external\\_storage/nfs-client-provisioner:latest](https://github.com/quayio/external-storage/nfs-client-provisioner) node

```
  docker pull quay.io/external_storage/nfs-client-provisioner
```

#### RBAC,

<https://github.com/kubernetes-incubator/external-storage/tree/master/nfs-client>

RBAC

```
$ kubectl create -f deploy/auth/serviceaccount.yaml serviceaccount "nfs-client-provisioner"
created $ kubectl create -f deploy/auth/clusterrole.yaml clusterrole "nfs-client-provisioner-
runner" created $ kubectl create -f deploy/auth/clusterrolebinding.yaml clusterrolebinding
"run-nfs-client-provisioner" created $ kubectl patch deployment nfs-client-provisioner -p
{'spec':{'template':{'spec':{'serviceAccount':'nfs-client-provisioner'}}}}'
```

test

```
kubectl create -f deploy/test-claim.yaml kubectl create -f deploy/test-pod.yaml
```

- check the folder and file "SUCCESS" created

```
kubectl delete -f deploy/test-pod.yaml kubectl delete -f deploy/test-claim.yaml
```

- check the folder renamed to archived-???

—

<http://www.cnblogs.com/iiiher/p/7159810.html>

#### nginx.yaml

```
root@km:~/kubernetes.io/TUTORIALS/Stateful-Applications/v# cat nginx.yaml apiVersion:
apps/v1beta1 kind: StatefulSet metadata:
```

```
  name: web
```

```
spec: serviceName: "nginx1" replicas: 2 volumeClaimTemplates: - metadata:
```

```
  name: test annotations:
```

```
    volume.beta.kubernetes.io/storage-class: "managed-nfs-storage"
    #classname
```

```
spec: accessModes: [ "ReadWriteOnce" ] resources:
```

```
  requests: storage: 20Mi
```

**template:**

```
  metadata:
```

```
    labels: app: nginx1
```

```
  spec: containers: - name: nginx1
```

```
    image: nginx:1.7.9 volumeMounts: - mountPath: "/mnt"
```

```
    name: test
```

```
root@km:~/kubernetes.io/TUTORIALS/Stateful-Applications/v#
```

```
root@km:~/kubernetes.io/TUTORIALS/Stateful-Applications/v# k get pv NAME CAPACITY AC-
CESSMODES RECLAIMPOLICY STATUS CLAIM STORAGECLASS REASON AGE pvc-
015759e3-a268-11e7-b373-000c299a346f 20Mi RWO Delete Bound default/test-web-2 managed-nfs-
storage 28m pvc-ad14102b-a267-11e7-b373-000c299a346f 20Mi RWO Delete Bound default/test-
web-0 managed-nfs-storage 31m pvc-ae5b3771-a267-11e7-b373-000c299a346f 20Mi RWO Delete
Bound default/test-web-1 managed-nfs-storage 31m root@km:~/kubernetes.io/TUTORIALS/Stateful-
Applications/v# k get pvc NAME STATUS VOLUME CAPACITY ACCESSMODES STOR-
AGECLASS AGE test-web-0 Bound pvc-ad14102b-a267-11e7-b373-000c299a346f 20Mi RWO
managed-nfs-storage 31m test-web-1 Bound pvc-ae5b3771-a267-11e7-b373-000c299a346f 20Mi RWO
managed-nfs-storage 31m test-web-2 Bound pvc-015759e3-a268-11e7-b373-000c299a346f 20Mi
RWO managed-nfs-storage 28m root@km:~/kubernetes.io/TUTORIALS/Stateful-Applications/v# k
get storageclass NAME TYPE managed-nfs-storage fuseim.pri/ifs nfs-class kubernetes.io/fake-nfs
root@km:~/kubernetes.io/TUTORIALS/Stateful-Applications/v#
```

```
#### scale
```

```
scale nfs-server pvc
```

```
root@km:~/kubernetes.io/TUTORIALS/Stateful-Applications/v# kubectl scale statefulset web --
replicas=3
```

```
root@km:~/kubernetes.io/TUTORIALS/Stateful-Applications/v# kubectl scale statefulset web --
replicas=1
```

```
####
```

```
root@km:~/kubernetes.io/TUTORIALS/Stateful-Applications/v# k describe pv pvc-ad14102b-a267-
11e7-b373-000c299a346f Name: pvc-ad14102b-a267-11e7-b373-000c299a346f Labels: <none> An-
notations: pv.kubernetes.io/provisioned-by=fuseim.pri/ifs StorageClass: managed-nfs-storage Status:
Bound Claim: default/test-web-0 Reclaim Policy: Delete Access Modes: RWO Capacity: 20Mi Mes-
sage: Source:
```

```
    Type: NFS (an NFS mount that lasts the lifetime of a pod) Server: 192.168.31.232
    Path: /data/nfs-storage/k8s-storage/ssd/default-test-web-0-pvc-ad14102b-a267-11e7-b373-
    000c299a346f ReadOnly: false
```

```
Events: <none> root@km:~/kubernetes.io/TUTORIALS/Stateful-Applications/v#
```

```
nginx statefulset
```

```
## over
```

### 1.3.2 cephfs-k8s-make-by-go-get

```
golang 1.7 1.9.1
```

```
cd /home/jlch/ tar -xvf go1.9.2.linux-amd64.tar.gz export PATH=$PATH:/home/jlch/go/bin
```

```
go
```

```
go version
```

## GOPATH

```
mkdir gopath
export GOPATH=/home/jlch/gopath/
```

## Dockerfile

docker image

ENV CEPH\_VERSION "jewel" ENV CEPH\_VERSION "luminous"

make

```
cd /github.com/kubernetes-incubator/external-storage/ceph/cephfs/
vi Dockerfile
```

```
root@km:~/cephfs# cat ~/kubernetes.io/TUTORIALS/Stateful-Applications/cephfs-stateful/
↪external-storage/ceph/cephfs/Dockerfile
# Copyright 2017 The Kubernetes Authors.
#
# Licensed under the Apache License, Version 2.0 (the "License");
# you may not use this file except in compliance with the License.
# You may obtain a copy of the License at
#
#     http://www.apache.org/licenses/LICENSE-2.0
#
# Unless required by applicable law or agreed to in writing, software
# distributed under the License is distributed on an "AS IS" BASIS,
# WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
# See the License for the specific language governing permissions and
# limitations under the License.

FROM centos:7

ENV CEPH_VERSION "jewel"
RUN rpm -Uvh https://download.ceph.com/rpm-$CEPH_VERSION/el7/noarch/ceph-release-1-1.
↪el7.noarch.rpm && \
yum install -y epel-release && \
yum install -y ceph-common python-cephfs

COPY cephfs-provisioner /usr/local/bin/cephfs-provisioner
COPY cephfs_provisioner/cephfs_provisioner.py /usr/local/bin/cephfs_provisioner
CMD ["chmod", "o+x", "/usr/local/bin/cephfs_provisioner"]
root@km:~/cephfs#
```

## go get make

```
go get github.com/kubernetes-incubator/external-storage
cd gopath/src/
cd /github.com/kubernetes-incubator/external-storage/ceph/cephfs/
make ceph/cephfs/
```

### 1.3.3 cephfs-k8s make

make

```

root@km:~/kubernetes.io/TUTORIALS/Stateful-Applications/cephfs-stateful# cd external-
↳storage/ceph/cephfs/
root@km:~/kubernetes.io/TUTORIALS/Stateful-Applications/cephfs-stateful/external-
↳storage/ceph/cephfs# ls
cephfs_provisioner cephfs-provisioner.go ceph-secret-admin.yaml CHANGELOG.md
↳claim.yaml class.yaml configmap.yaml deployment.yaml Dockerfile local-start.sh
↳ Makefile OWNERS README.md test-pod.yaml
root@km:~/kubernetes.io/TUTORIALS/Stateful-Applications/cephfs-stateful/external-
↳storage/ceph/cephfs# make
CGO_ENABLED=0 GOOS=linux go build -a -ldflags '-extldflags "-static"' -o cephfs-
↳provisioner cephfs-provisioner.go
cephfs-provisioner.go:28:2: cannot find package "github.com/golang/glog" in any of:
    /usr/lib/go-1.8/src/github.com/golang/glog (from $GOROOT)
    /root/go/src/github.com/golang/glog (from $GOPATH)
cephfs-provisioner.go:29:2: cannot find package "github.com/kubernetes-incubator/
↳external-storage/lib/controller" in any of:
    /usr/lib/go-1.8/src/github.com/kubernetes-incubator/external-storage/
↳lib/controller (from $GOROOT)
    /root/go/src/github.com/kubernetes-incubator/external-storage/lib/
↳controller (from $GOPATH)
cephfs-provisioner.go:30:2: cannot find package "k8s.io/api/core/v1" in any of:
    /usr/lib/go-1.8/src/k8s.io/api/core/v1 (from $GOROOT)
    /root/go/src/k8s.io/api/core/v1 (from $GOPATH)
cephfs-provisioner.go:31:2: cannot find package "k8s.io/apimachinery/pkg/apis/meta/v1
↳" in any of:
    /usr/lib/go-1.8/src/k8s.io/apimachinery/pkg/apis/meta/v1 (from
↳$GOROOT)
    /root/go/src/k8s.io/apimachinery/pkg/apis/meta/v1 (from $GOPATH)
cephfs-provisioner.go:32:2: cannot find package "k8s.io/apimachinery/pkg/util/uuid"
↳in any of:
    /usr/lib/go-1.8/src/k8s.io/apimachinery/pkg/util/uuid (from $GOROOT)
    /root/go/src/k8s.io/apimachinery/pkg/util/uuid (from $GOPATH)
cephfs-provisioner.go:33:2: cannot find package "k8s.io/apimachinery/pkg/util/wait"
↳in any of:
    /usr/lib/go-1.8/src/k8s.io/apimachinery/pkg/util/wait (from $GOROOT)
    /root/go/src/k8s.io/apimachinery/pkg/util/wait (from $GOPATH)
cephfs-provisioner.go:34:2: cannot find package "k8s.io/client-go/kubernetes" in any
↳of:
    /usr/lib/go-1.8/src/k8s.io/client-go/kubernetes (from $GOROOT)
    /root/go/src/k8s.io/client-go/kubernetes (from $GOPATH)
cephfs-provisioner.go:35:2: cannot find package "k8s.io/client-go/rest" in any of:
    /usr/lib/go-1.8/src/k8s.io/client-go/rest (from $GOROOT)
    /root/go/src/k8s.io/client-go/rest (from $GOPATH)
cephfs-provisioner.go:36:2: cannot find package "k8s.io/client-go/tools/clientcmd" in
↳any of:
    /usr/lib/go-1.8/src/k8s.io/client-go/tools/clientcmd (from $GOROOT)
    /root/go/src/k8s.io/client-go/tools/clientcmd (from $GOPATH)
cephfs-provisioner.go:37:2: cannot find package "k8s.io/kubernetes/pkg/api/v1/helper"
↳in any of:
    /usr/lib/go-1.8/src/k8s.io/kubernetes/pkg/api/v1/helper (from $GOROOT)
    /root/go/src/k8s.io/kubernetes/pkg/api/v1/helper (from $GOPATH)
Makefile:27: recipe for target 'all' failed
make: *** [all] Error 1
root@km:~/kubernetes.io/TUTORIALS/Stateful-Applications/cephfs-stateful/external-
↳storage/ceph/cephfs#

```



## go, GOPATH

```
root@km:~/kubernetes.io/TUTORIALS/Stateful-Applications/cephfs-stateful/external-
↳storage/ceph/cephfs# which go
/usr/bin/go
root@km:~/kubernetes.io/TUTORIALS/Stateful-Applications/cephfs-stateful/external-
↳storage/ceph/cephfs# echo $GOPATH

root@km:~/kubernetes.io/TUTORIALS/Stateful-Applications/cephfs-stateful/external-
↳storage/ceph/cephfs#
```

## go

```
root@km:~# cd kubernetes
root@km:~/kubernetes# ls
api      BUILD.bazel  cluster  code-of-conduct.md  docs      federation  hack
↳LICENSE  Makefile      OWNERS      pkg      README.md  SUPPORT.md
↳third_party  Vagrantfile  WORKSPACE
build  CHANGELOG.md  cmd      CONTRIBUTING.md      examples  Godeps      labels.yaml
↳logo      Makefile.generated_files  OWNERS_ALIASES  plugin  staging      test
↳translations  vendor
root@km:~/kubernetes#
```

## client-go:

```
root@km:~/kubernetes# ls -lR > ls-lr
root@km:~/kubernetes# cat ls-lr | grep client-go
drwxr-xr-x 17 root root 4096 Aug 29 18:47 client-go
drwxr-xr-x 5 root root 4096 Aug 29 18:47 client-go
...
...
./staging/src/k8s.io/client-go:
./staging/src/k8s.io/client-go/discovery:
./staging/src/k8s.io/client-go/discovery/cached:
./staging/src/k8s.io/client-go/discovery/fake:
./staging/src/k8s.io/client-go/dynamic:
./staging/src/k8s.io/client-go/dynamic/fake:
./staging/src/k8s.io/client-go/examples:
...
...
lrwxrwxrwx 1 root root 34 Aug 29 18:47 client-go -> ../../staging/src/k8s.io/client-
↳go
root@km:~/kubernetes#
```

```
root@km:~/kubernetes# cd staging/
root@km:~/kubernetes/staging# ls
BUILD  godeps-json-updater.go  OWNERS  pkg  prime-apimachinery.sh  README.md  src
root@km:~/kubernetes/staging# cd src
root@km:~/kubernetes/staging/src# ls
github.com  golang.org  gopkg.in  k8s.io
root@km:~/kubernetes/staging/src# cd k8s.io/
root@km:~/kubernetes/staging/src/k8s.io# ls
api  apiextensions-apiserver  apimachinery  apiserver  client-go  code-generator
↳kube-aggregator  kube-openapi  kubernetes  metrics  sample-apiserver
root@km:~/kubernetes/staging/src/k8s.io# pwd
/root/kubernetes/staging/src/k8s.io
root@km:~/kubernetes/staging/src/k8s.io#
```

## GOPATH

```
root@km:~/kubernetes/staging# export GOPATH=/root/kubernetes/staging
root@km:~/kubernetes/staging# echo $GOPATH
/root/kubernetes/staging
root@km:~/kubernetes/staging#
```

### go get

```
root@km:~/kubernetes/staging# cd ~/kubernetes.io/TUTORIALS/Stateful-Applications/
↪cephfs-stateful/external-storage/ceph/cephfs
root@km:~/kubernetes.io/TUTORIALS/Stateful-Applications/cephfs-stateful/external-
↪storage/ceph/cephfs# make
CGO_ENABLED=0 GOOS=linux go build -a -ldflags '-extldflags "-static"' -o cephfs-
↪provisioner cephfs-provisioner.go
/root/kubernetes/staging/src/k8s.io/client-go/discovery/discovery_client.go:26:2:
↪cannot find package "github.com/emicklei/go-restful-swagger12" in any of:
    /usr/lib/go-1.8/src/github.com/emicklei/go-restful-swagger12 (from
↪$GOROOT)
    /root/kubernetes/staging/src/github.com/emicklei/go-restful-swagger12
↪(from $GOPATH)
/root/kubernetes/staging/src/k8s.io/client-go/discovery/discovery_client.go:27:2:
↪cannot find package "github.com/golang/protobuf/proto" in any of:
    /usr/lib/go-1.8/src/github.com/golang/protobuf/proto (from $GOROOT)
    /root/kubernetes/staging/src/github.com/golang/protobuf/proto (from
↪$GOPATH)
/root/kubernetes/staging/src/k8s.io/client-go/discovery/discovery_client.go:28:2:
↪cannot find package "github.com/googleapis/gnostic/OpenAPIv2" in any of:
    /usr/lib/go-1.8/src/github.com/googleapis/gnostic/OpenAPIv2 (from
↪$GOROOT)
    /root/kubernetes/staging/src/github.com/googleapis/gnostic/OpenAPIv2
↪(from $GOPATH)
/root/kubernetes/staging/src/k8s.io/client-go/tools/clientcmd/auth_loaders.go:26:2:
↪cannot find package "github.com/howeyc/gopass" in any of:
    /usr/lib/go-1.8/src/github.com/howeyc/gopass (from $GOROOT)
    /root/kubernetes/staging/src/github.com/howeyc/gopass (from $GOPATH)
/root/kubernetes/staging/src/k8s.io/client-go/tools/clientcmd/client_config.go:28:2:
↪cannot find package "github.com/indario/mergo" in any of:
    /usr/lib/go-1.8/src/github.com/indario/mergo (from $GOROOT)
    /root/kubernetes/staging/src/github.com/indario/mergo (from $GOPATH)
/root/kubernetes/staging/src/k8s.io/client-go/util/flowcontrol/throttle.go:22:2:
↪cannot find package "github.com/juju/ratelimit" in any of:
    /usr/lib/go-1.8/src/github.com/juju/ratelimit (from $GOROOT)
    /root/kubernetes/staging/src/github.com/juju/ratelimit (from $GOPATH)
cephfs-provisioner.go:29:2: cannot find package "github.com/kubernetes-incubator/
↪external-storage/lib/controller" in any of:
    /usr/lib/go-1.8/src/github.com/kubernetes-incubator/external-storage/
↪lib/controller (from $GOROOT)
    /root/kubernetes/staging/src/github.com/kubernetes-incubator/external-
↪storage/lib/controller (from $GOPATH)
/root/kubernetes/staging/src/k8s.io/apimachinery/pkg/util/uuid/uuid.go:22:2: cannot
↪find package "github.com/pborman/uuid" in any of:
    /usr/lib/go-1.8/src/github.com/pborman/uuid (from $GOROOT)
    /root/kubernetes/staging/src/github.com/pborman/uuid (from $GOPATH)
Makefile:27: recipe for target 'all' failed
make: *** [all] Error 1
root@km:~/kubernetes.io/TUTORIALS/Stateful-Applications/cephfs-stateful/external-
↪storage/ceph/cephfs# go get github.com/emicklei/go-restful-swagger12
```

```

root@km:~/kubernetes.io/TUTORIALS/Stateful-Applications/cephfs-stateful/external-
↳storage/ceph/cephfs# go get github.com/golang/protobuf/proto
root@km:~/kubernetes.io/TUTORIALS/Stateful-Applications/cephfs-stateful/external-
↳storage/ceph/cephfs# go get github.com/googleapis/gnostic/OpenAPIv2
root@km:~/kubernetes.io/TUTORIALS/Stateful-Applications/cephfs-stateful/external-
↳storage/ceph/cephfs# go get github.com/howeyc/gopass
package golang.org/x/crypto/ssh/terminal: unrecognized import path "golang.org/x/
↳crypto/ssh/terminal" (https fetch: Get https://golang.org/x/crypto/ssh/terminal?go-
↳get=1: dial tcp 216.239.37.1:443: i/o timeout)
root@km:~/kubernetes.io/TUTORIALS/Stateful-Applications/cephfs-stateful/external-
↳storage/ceph/cephfs#

```

<https://golang.org/x/crypto/ssh/terminal> FQ

github.com, crypto, go, golang/crypto, url,

terminal, GOPATH /root/kubernetes/staging/ ,

```

root@km:~#
root@km:~# cd kubernetes/staging/
root@km:~/kubernetes/staging# ls
BUILD godeps-json-updater.go OWNERS pkg prime-apimachinery.sh README.md src
root@km:~/kubernetes/staging# cd src
root@km:~/kubernetes/staging/src# ls
github.com golang.org gopkg.in k8s.io
root@km:~/kubernetes/staging/src# cd golang.org/
root@km:~/kubernetes/staging/src/golang.org# ls
x
root@km:~/kubernetes/staging/src/golang.org# cd x
root@km:~/kubernetes/staging/src/golang.org/x# ls
net text
root@km:~/kubernetes/staging/src/golang.org/x#

```

crypto, golang github.com

```

root@km:~/kubernetes/staging/src/golang.org/x# git clone https://github.com/golang/
↳crypto.git
Cloning into 'crypto'...
remote: Counting objects: 3889, done.
remote: Compressing objects: 100% (22/22), done.
remote: Total 3889 (delta 6), reused 18 (delta 4), pack-reused 3863
Receiving objects: 100% (3889/3889), 2.82 MiB | 44.00 KiB/s, done.
Resolving deltas: 100% (2469/2469), done.
Checking connectivity... done.
root@km:~/kubernetes/staging/src/golang.org/x# ls
crypto net text
root@km:~/kubernetes/staging/src/golang.org/x#

```

golang

terminal go get

```

root@km:~/kubernetes.io/TUTORIALS/Stateful-Applications/cephfs-stateful/external-
↳storage/ceph/cephfs# go get github.com/kubernetes-incubator/external-storage/lib/
↳controller
root@km:~/kubernetes.io/TUTORIALS/Stateful-Applications/cephfs-stateful/external-
↳storage/ceph/cephfs# make
CGO_ENABLED=0 GOOS=linux go build -a -ldflags '-extldflags "-static"' -o cephfs-
↳provisioner cephfs-provisioner.go

```

```
# command-line-arguments
./cephfs-provisioner.go:65: cannot use cephFSProvisioner literal (type
↳ *cephFSProvisioner) as type controller.Provisioner in return argument:
    *cephFSProvisioner does not implement controller.Provisioner (wrong
↳ type for Delete method)
    have Delete(*"k8s.io/api/core/v1".PersistentVolume)
↳ error
    want Delete(*"github.com/kubernetes-incubator/
↳ external-storage/vendor/k8s.io/api/core/v1".PersistentVolume) error
./cephfs-provisioner.go:69: cannot use cephFSProvisioner literal (type
↳ *cephFSProvisioner) as type controller.Provisioner in assignment:
    *cephFSProvisioner does not implement controller.Provisioner (wrong
↳ type for Delete method)
    have Delete(*"k8s.io/api/core/v1".PersistentVolume)
↳ error
    want Delete(*"github.com/kubernetes-incubator/
↳ external-storage/vendor/k8s.io/api/core/v1".PersistentVolume) error
./cephfs-provisioner.go:134: cannot use options.PersistentVolumeReclaimPolicy (type
↳ "github.com/kubernetes-incubator/external-storage/vendor/k8s.io/api/core/v1".
↳ PersistentVolumeReclaimPolicy) as type "k8s.io
    /api/core/
↳ v1".PersistentVolumeReclaimPolicy in field value
./cephfs-provisioner.go:135: cannot use options.PVC.Spec.AccessModes (type []"github.
↳ com/kubernetes-incubator/external-storage/vendor/k8s.io/api/core/v1".
↳ PersistentVolumeAccessMode) as type []"k8s.io/api/core
    e/v1
↳ ".PersistentVolumeAccessMode in field value
./cephfs-provisioner.go:137: cannot use "k8s.io/api/core/v1".ResourceName("k8s.io/api/
↳ core/v1".ResourceStorage) (type "k8s.io/api/core/v1".ResourceName) as type "github.
↳ com/kubernetes-incubator/external-stor
    age/vendor/k8s.io/
↳ api/core/v1".ResourceName in map index
./cephfs-provisioner.go:137: cannot use options.PVC.Spec.Resources.Requests["k8s.io/
↳ api/core/v1".ResourceName("k8s.io/api/core/v1".ResourceStorage)] (type "github.com/
↳ kubernetes-incubator/external-storage/ve
    ndor/k8s.io/
↳ apimachinery/pkg/api/resource".Quantity) as type "k8s.io/apimachinery/pkg/api/
↳ resource".Quantity in map value
./cephfs-provisioner.go:147: cannot use "k8s.io/api/core/v1".CephFSVolumeSource
↳ literal (type *"k8s.io/api/core/v1".CephFSVolumeSource) as type *"k8s.io/api/core/v1
    ue
↳ ".CephFSPersistentVolumeSource in field val
./cephfs-provisioner.go:318: cannot use clientset (type *"k8s.io/client-go/kubernetes
↳ ".Clientset) as type "github.com/kubernetes-incubator/external-storage/vendor/k8s.
↳ io/client-go/kubernetes".Interface in ar
    gument to
↳ controller.NewProvisionController:
    *"k8s.io/client-go/kubernetes".Clientset does not implement "github.
↳ com/kubernetes-incubator/external-storage/vendor/k8s.io/client-go/kubernetes".
↳ Interface (wrong type for Admissionregistration metho
    d)
    have Admissionregistration() "k8s.io/client-go/
↳ kubernetes/typed/admissionregistration/v1alpha1".
↳ AdmissionregistrationV1alpha1Interface
    want Admissionregistration() "github.com/kubernetes-
↳ incubator/external-storage/vendor/k8s.io/client-go/kubernetes/typed/
↳ admissionregistration/v1alpha1".AdmissionregistrationV1alpha1Interface
Makefile:27: recipe for target 'all' failed
make: *** [all] Error 2
root@km:~/kubernetes.io/TUTORIALS/Stateful-Applications/cephfs-stateful/external-
↳ storage/ceph/cephfs#
```

```
root@km:~/kubernetes.io/TUTORIALS/Stateful-Applications/cephfs-stateful/external-
↳ storage# ln -s ~/kubernetes.io/TUTORIALS/Stateful-Applications/cephfs-stateful/
↳ external-storage/lib build/src/github.com/kubernetes-incubator/external-storage/
```

```

root@km:~/kubernetes.io/TUTORIALS/Stateful-Applications/cephfs-stateful/external-
↳storage# make ceph/cephfs
cd ceph/cephfs; \
make container
make[1]: Entering directory '/root/kubernetes.io/TUTORIALS/Stateful-Applications/
↳cephfs-stateful/external-storage/ceph/cephfs'
CGO_ENABLED=0 GOOS=linux go build -a -ldflags '-extldflags "-static"' -o cephfs-
↳provisioner cephfs-provisioner.go
docker build -t quay.io/external_storage/cephfs-provisioner:latest .
Sending build context to Docker daemon 36.23MB
Step 1/6 : FROM centos:7
7: Pulling from library/centos
d9aaf4d82f24: Pull complete
Digest: sha256:eba772bac22c86d7d6e72421b4700c3f894ab6e35475a34014ff8de74c10872e
Status: Downloaded newer image for centos:7
---> 196e0ce0c9fb
Step 2/6 : ENV CEPH_VERSION "jewel"
---> Running in c48e286ca165
---> e9689ae3f521
Removing intermediate container c48e286ca165
Step 3/6 : RUN rpm -Uvh https://download.ceph.com/rpm-$CEPH_VERSION/el7/noarch/ceph-
↳release-1-1.el7.noarch.rpm && yum install -y epel-release && yum install -y
↳ceph-common python-cephfs
---> Running in 69640c268019
warning: /var/tmp/rpm-tmp.6mAWB0: Header V4 RSA/SHA256 Signature, key ID 460f3994:
↳NOKEY
Retrieving https://download.ceph.com/rpm-jewel/el7/noarch/ceph-release-1-1.el7.noarch.
↳rpm
Preparing... #####
Updating / installing... #####
ceph-release-1-1.el7 #####
Loaded plugins: fastestmirror, ovl
Determining fastest mirrors
 * base: mirrors.cn99.com
 * extras: mirrors.cn99.com
 * updates: mirrors.cn99.com

userspace-rcu.x86_64 0:0.7.16-1.el7
....
...
... #
Complete!
---> 21cae91539c0
Removing intermediate container b1c88201e72b
Step 4/6 : COPY cephfs-provisioner /usr/local/bin/cephfs-provisioner
---> 73664d0eca7a
Removing intermediate container c076e6de19f0
Step 5/6 : COPY cephfs_provisioner/cephfs_provisioner.py /usr/local/bin/cephfs_
↳provisioner
---> 25bc4c6da1d1
Removing intermediate container 0eba40388f99
Step 6/6 : CMD chmod o+x /usr/local/bin/cephfs_provisioner
---> Running in 5bf6e5fbc6e1
---> 262cba7e52ed
Removing intermediate container 5bf6e5fbc6e1
Successfully built 262cba7e52ed
Successfully tagged quay.io/external_storage/cephfs-provisioner:latest

```

```
docker tag quay.io/external_storage/cephfs-provisioner:latest quay.io/external_
↪storage/cephfs-provisioner:latest
make[1]: Leaving directory '/root/kubernetes.io/TUTORIALS/Stateful-Applications/
↪cephfs-stateful/external-storage/ceph/cephfs'
root@km:~/kubernetes.io/TUTORIALS/Stateful-Applications/cephfs-stateful/external-
↪storage#
```

docker image quay.io/external\_storage/cephfs-provisioner:latest

```
root@km:~/kubernetes.io/TUTORIALS/Stateful-Applications/cephfs-stateful/external-
↪storage# docker images
REPOSITORY                                TAG                                IMAGE ID
↪
↪      CREATED              SIZE
quay.io/external_storage/cephfs-provisioner  latest                            ↪
↪262cba7e52ed              5 minutes ago                    485MB
gcr.io/google-samples/hello-frontend        1.0                              ↪
↪d8ca9fb857d9              3 weeks ago                      183MB
```

make

---

docker image

vi Dockerfile

```
root@km:~/cephfs# cat ~/kubernetes.io/TUTORIALS/Stateful-Applications/cephfs-stateful/
↪external-storage/ceph/cephfs/Dockerfile
# Copyright 2017 The Kubernetes Authors.
#
# Licensed under the Apache License, Version 2.0 (the "License");
# you may not use this file except in compliance with the License.
# You may obtain a copy of the License at
#
#     http://www.apache.org/licenses/LICENSE-2.0
#
# Unless required by applicable law or agreed to in writing, software
# distributed under the License is distributed on an "AS IS" BASIS,
# WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
# See the License for the specific language governing permissions and
# limitations under the License.

FROM centos:7

ENV CEPH_VERSION "jewel"
RUN rpm -Uvh https://download.ceph.com/rpm-$CEPH_VERSION/el7/noarch/ceph-release-1-1.
↪el7.noarch.rpm && \
yum install -y epel-release && \
yum install -y ceph-common python-cephfs

COPY cephfs-provisioner /usr/local/bin/cephfs-provisioner
COPY cephfs_provisioner/cephfs_provisioner.py /usr/local/bin/cephfs_provisioner
CMD ["chmod", "o+x", "/usr/local/bin/cephfs_provisioner"]
root@km:~/cephfs#
```

ENV CEPH\_VERSION “jewel” ENV CEPH\_VERSION “luminous”

make

---

## 1.4 k8s source

<https://jimmysong.io/posts/kubernetes-material-share/>

<https://github.com/ramitsurana/awesome-kubernetes>





Contents:

### 2.1 fat tools

Contents:

#### 2.1.1 keyboards

**keyboards**

#

# <http://accord1key.com/>

#### 2.1.2 platform

„ <https://www.zhihu.com/question/52589498>

**open source**

<http://www.abuquant.com/>

**QUANTAXIS**

<http://www.yutiansut.com/> <https://github.com/yutiansut/quantaxis>

## Hikyuu Quant Framework

Hikyuu Quant FrameworkC++/Python

<http://hikyuu.org/>

## RQAlpha

[http://rqalpha.io/zh\\_CN/latest/](http://rqalpha.io/zh_CN/latest/)

<https://www.ricequant.com/>

[http://rqalpha.io/zh\\_CN/latest/intro/overview.html](http://rqalpha.io/zh_CN/latest/intro/overview.html)

## nodequant

<https://github.com/tomtsang/nodequant>

<http://36kr.com/p/5044349.html>

Uquant ^^^^^^^^^^^^^^^

<http://q.datayes.com/>

## Ricequant

<https://www.ricequant.com/>

## JoinQuant

<https://www.joinquant.com/>

## bigquant

<https://bigquant.com/>

## windquant

<https://www.windquant.com/>

## Quantopian

<https://www.quantopian.com/>

Quantopian67QuantStartquantiacsalgotrading101autotradingwealth-lab

### 2.1.3 data-source

[https://item.taobao.com/item.htm?spm=a1z09.2.0.0.9a57e5b01JhGJ&id=526374544492&\\_u=n693m14dcd40](https://item.taobao.com/item.htm?spm=a1z09.2.0.0.9a57e5b01JhGJ&id=526374544492&_u=n693m14dcd40) [https://item.taobao.com/item.htm?spm=a1z09.2.0.0.9a57e5b01JhGJ&id=45766656988&\\_u=n693m14c3cf](https://item.taobao.com/item.htm?spm=a1z09.2.0.0.9a57e5b01JhGJ&id=45766656988&_u=n693m14c3cf)

## 2.2 workers

Contents:

### 2.2.1 recruiting talents



Contents:

## 3.1 systemd

Contents:

### 3.1.1 daemon-reload

\*.service,systemctl daemon-reload

```
[root@mariadb-node-0 zabbix]# vi /usr/lib/systemd/system/zabbix-agent.service
[root@mariadb-node-0 zabbix]# systemctl daemon-reload
[root@mariadb-node-0 zabbix]# systemctl stop zabbix-agent.service
[root@mariadb-node-0 zabbix]# systemctl start zabbix-agent.service
[root@mariadb-node-0 zabbix]# systemctl status zabbix-agent.service
zabbix-agent.service - Zabbix Agent
   Loaded: loaded (/usr/lib/systemd/system/zabbix-agent.service; disabled; vendor_
   ↳ preset: disabled)
   Active: active (running) since 2017-10-10 10:39:08 CST; 2s ago
   Process: 149998 ExecStart=/usr/sbin/zabbix_agentd -c $CONFFILE (code=exited,
   ↳ status=0/SUCCESS)
   Main PID: 150001 (zabbix_agentd)
   Memory: 2.5M
   CGroup: /system.slice/zabbix-agent.service
           -150001 /usr/sbin/zabbix_agentd -c /etc/zabbix/zabbix_agentd.conf
           -150002 /usr/sbin/zabbix_agentd: collector [idle 1 sec]
           -150003 /usr/sbin/zabbix_agentd: listener #1 [waiting for connection]
           -150004 /usr/sbin/zabbix_agentd: listener #2 [waiting for connection]
           -150005 /usr/sbin/zabbix_agentd: listener #3 [waiting for connection]
           -150006 /usr/sbin/zabbix_agentd: active checks #1 [idle 1 sec]
```

```
10 10 10:39:08 mariadb-node-0 systemd[1]: Starting Zabbix Agent...
10 10 10:39:08 mariadb-node-0 systemd[1]: PID file /run/zabbix/zabbix_agentd.pid not
↳readable (yet?) after start.
10 10 10:39:08 mariadb-node-0 systemd[1]: zabbix-agent.service: Supervising process
↳150001 which is not our child. We'll...exits.
10 10 10:39:08 mariadb-node-0 systemd[1]: Started Zabbix Agent.
10 10 10:39:09 mariadb-node-0 python[150008]: SELinux is preventing /usr/sbin/zabbix_
↳agentd from using the setrlimit acc...ocess.

***** Plugin catchall (100.
↳confidence) suggests *****...
Hint: Some lines were ellipsized, use -l to show in full.
[root@mariadb-node-0 zabbix]#
```

## 3.2 grep

Contents:

### 3.2.1 substitute

#### reference

<http://linux.it.net.cn/e/shell/2015/0102/11241.html>

<http://www.cnblogs.com/qz78292959/archive/2012/03/08/2385080.html>

<http://blog.csdn.net/lzyuixin/article/details/7638979>

<http://wiki.jikexueyuan.com/project/shell-learning/sed-search-and-replace.html>

#### command

```
grep "https://api-cm.zhangtl.com/" -rl package.json | xargs sed -i 's/https:\\\\api-
↳cm.zhangtl.com\\\\/http:\\\\10.10.15.181:8000\\\\/g'
grep "192.168.31.99" -rl ./ | xargs sed -i "s/192.168.31.99/192.168.31.105/g"
grep "192.168.31.105" -rl ./ | xargs sed -i "s/192.168.31.105/192.168.31.99/g"
```

## 3.3 linux

Contents:

### 3.3.1 telnet

<http://www.linuxidc.com/Linux/2016-01/127983.htm>

.CentOSTelnet

```
rpm -qa | grep telnet
telnet-0.17-48.el6.x86_64
telnet-server-0.17-48.el6.x86_64
```

telnet xinetd xinetd

```
rpm -qa | grep xinetd
xinetd-2.3.14-39.el6_4.x86_64
```

yum

```
yum install xinetd telnet telnet-server -y
```

## 3.4 mount

Contents:

### 3.4.1 mount

, mount .

192.168.31.197, mount , 192.168.31.232 nfs , , , 192.168.31.197 , .

ls /home/jlch/

”

, , device, , ..

```
load average, cpu, top , . ps aux (, mount, )
```

, , mount, Mount umount .

## 3.5 firewall

Contents:

### 3.5.1 firewall

```
sudo firewall-cmd --permanent --add-port=7890/tcp; sudo firewall-cmd --reload; sudo ↵
↵firewall-cmd --permanent --list-port
```

## 3.6 snapd

Contents:

### 3.6.1 snapd

ubuntu

192.168.31.197 , snapd gdm3 , /var/log/syslog , , .... , , /var/log/syslog , 3 , , .

```
systemctl status gdm3
systemctl stop gdm3
systemctl disable gdm3
systemctl status snapd
systemctl stop snapd
systemctl disable snapd
systemctl stop haproxy
systemctl disable haproxy
```

## 3.7 fsck

Contents:

### 3.7.1 fsck

```
vsphere ubuntu
ubuntu busybox, /dev/***/ubuntu-***-root
fsck /dev/***/ubuntu-*-root y,y,y,**...
exit
ubuntu
```

## 3.8 linux shell

Contents:

### 3.8.1 ping ip

ping, IP

```
#!/bin/bash

# ping, IP
for siteip in $(seq 1 254)
do
    site="192.168.1.${siteip}"
    ping -c1 -W1 ${site} &> /dev/null
    if [ "$?" == "0" ]; then
        echo "$site is UP"
    else
        echo "$site is DOWN"
    fi
done
```



Contents:

## 4.1 redis-cluster

Contents:

### 4.1.1 redis-cluster-install-by-rpm

<http://rpmfind.net/> <http://rpmfind.net/linux/rpm2html/search.php?query=redis&submit=Search+...> [http://rpmfind.net/linux/RPM/remi/enterprise/7/x86\\_64/redis-4.0.2-1.el7.remi.x86\\_64.html](http://rpmfind.net/linux/RPM/remi/enterprise/7/x86_64/redis-4.0.2-1.el7.remi.x86_64.html)

<https://pkgs.org/download/redis> [https://centos.pkgs.org/7/remi-x86\\_64/redis-4.0.2-1.el7.remi.x86\\_64.rpm.html](https://centos.pkgs.org/7/remi-x86_64/redis-4.0.2-1.el7.remi.x86_64.rpm.html)

— fedora

<http://rpmfind.net/linux/rpm2html/search.php?query=redis&submit=Search+...&system=&arch=>

### step

ruby, gem

<http://blogtt.readthedocs.io/en/latest/ruby/ruby-install/ruby%20install%20by%20rpm.html#ruby>

gem install redis

<http://blogtt.readthedocs.io/en/latest/ruby/gem-install/gem-install-redis.html>

redis

```
systemctl status redis
systemctl start redis
systemctl status redis
```

```
redis-cli
systemctl stop redis
```

redis-cluster

factor

```
cd by-source/
ls
cd redis-deploy-conf/
ls
./redis-deploy-ip-port-passwd.sh 127.0.0.1 7000 wudang
./redis-deploy-ip-port-passwd.sh 127.0.0.1 7001 wudang
./redis-deploy-ip-port-passwd.sh 127.0.0.1 7002 wudang
./redis-deploy-ip-port-passwd.sh 127.0.0.1 7003 wudang
./redis-deploy-ip-port-passwd.sh 127.0.0.1 7004 wudang
./redis-deploy-ip-port-passwd.sh 127.0.0.1 7005 wudang
ls
ls /usr/lib/systemd/system/redis*
cat /usr/lib/systemd/system/redis.service
/usr/bin/redis-server node-7000/redis.conf &
/usr/bin/redis-server node-7001/redis.conf &
/usr/bin/redis-server node-7002/redis.conf &
/usr/bin/redis-server node-7003/redis.conf &
/usr/bin/redis-server node-7004/redis.conf &
/usr/bin/redis-server node-7005/redis.conf &
./redis-trib.rb create --replicas 1 127.0.0.1:7000 127.0.0.1:7001 127.0.0.1:7002 127.
↪0.0.1:7003 127.0.0.1:7004 127.0.0.1:7005
```

## 4.1.2 redis-cluster-del-key

key slot IP:Port,

**cluster**

```
[jlch@check ~]$ redis-cli -h 192.168.31.166 -p 7000 -a wudang -c cluster nodes
```

**key slot**

```
[jlch@check ~]$ redis-cli -h 192.168.31.166 -p 7000 -a wudang -c cluster keyslot_
↪600000
```

**key**

```
[jlch@check ~]$ redis-cli -h 192.168.31.168 -p 7004 -a wudang -c get 600000
[jlch@check ~]$ redis-cli -h 192.168.31.168 -p 7004 -a wudang -c del 600000
```

<http://blog.csdn.net/badyting/article/details/76176824>

```
cat redis-cluster-del.sh
#!/bin/bash
echo "start"
redis_list=("127.0.0.1:6379" "127.0.0.1:6380")
for info in ${redis_list[@]}
do
    echo ":$info"
    ip=`echo $info | cut -d \: -f 1`
    port=`echo $info | cut -d \: -f 2`
    # -a password
    cat key.txt | xargs -t -n1 redis-cli -h $ip -p $port -c del
done
echo "game over"
```

### 4.1.3 redis-cluster conf requirepass

line1

env

```
192.168.31.166:7100
192.168.31.166:7101
192.168.31.167:7102
192.168.31.167:7103
192.168.31.168:7104
192.168.31.168:7105
```

reference

<http://blog.csdn.net/daiyudong2020/article/details/51674169>

step

, .

### 4.1.4 redis-cluster-requirepass-auth

redis-cluster-requirepass-auth *AUTH wudang*

reference

[http://www.yiibai.com/redis/connection\\_auth.html](http://www.yiibai.com/redis/connection_auth.html) <http://bbs.csdn.net/topics/391824759?page=1>

```
[jlch@check ~]$ redis-cli -h 192.168.31.166 -p 7000 -a wudang -c
192.168.31.166:7000> AUTH wudang
(error) ERR Client sent AUTH, but no password is set
192.168.31.166:7000> CONFIG SET requirepass "wudang"
OK
192.168.31.166:7000> AUTH wudang
OK
192.168.31.166:7000>
```

### 4.1.5 redis-cli -c -p port

<http://www.cnblogs.com/gossip/p/5993922.html>

```
cluster info
cluster nodes node
```

```
cluster meet <ip> <port> ip port
cluster forget <node_id> node_id
cluster replicate <node_id> node_id
cluster saveconfig
```

(slot)

```
cluster addslots <slot> [slot ...] slot assign
cluster delslots <slot> [slot ...]
cluster flushslots
cluster setslot <slot> node <node_id> slot node_id >
cluster setslot <slot> migrating <node_id> slot node_id
cluster setslot <slot> importing <node_id> node_id slot
cluster setslot <slot> stable slot import migrate
```

```
cluster keyslot <key> key
cluster countkeysinslot <slot> slot
cluster getkeysinslot <slot> <count> count slot
```

### 4.1.6 redis sentinel

<https://redis.io/topics/sentinel>

cluster ,

cluster,

### 4.1.7 redis conf

[https://gitee.com/tomt/tom\\_research\\_shell\\_a](https://gitee.com/tomt/tom_research_shell_a)

---

## Framework Benchmarks

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Contents:

### 5.1 Web Framework Benchmarks

Contents:

#### 5.1.1 Web Framework Benchmarks

Web Framework Benchmarks

<http://www.techempower.com/whatwedo.html>

<http://www.techempower.com/benchmarks/>

<http://www.techempower.com/benchmarks/#section=data-r14&hw=ph&test=update>

web language



Contents:

## 6.1 nginx-install

Contents:

### 6.1.1 nginx install ubuntu

ubuntu16.04 install ubuntu

```
cd
wget http://nginx.org/keys/nginx_signing.key
sudo apt-key add nginx_signing.key

jlch@ceph-client:~$ cat /etc/apt/sources.list.d/nginx.list
deb http://nginx.org/packages/debian/ xenial nginx
deb-src http://nginx.org/packages/debian/ xenial nginx

echo "deb http://nginx.org/packages/debian/ xenial nginx
deb-src http://nginx.org/packages/debian/ xenial nginx" > /etc/apt/sources.list.d/
↪nginx.list

sudo apt-get update
sudo apt install nginx -y
```

## 6.2 nginx conf

Contents:

## 6.2.1 nginx-conf-server\_name

nginx

server\_name

```
[tom@jlch_web_001 ~]$ cd /etc/nginx/conf.d/
[tom@jlch_web_001 conf.d]$ ls
jiaolongchuhai.conf  mjiaolongchuhai.conf  zhangtl.conf
[tom@jlch_web_001 conf.d]$ cat zhangtl.conf
server {
    listen      80;
    server_name www.zhangtl.com www.zhangtl.cn;
    root        /home/jlch/zhangtl;
    index index.html index.htm;

    location / {

    }

    error_page  404                /404.html;
    location = /40x.html {

    }

    error_page  500 502 503 504    /50x.html;
    location = /50x.html {

    }

}

[tom@jlch_web_001 conf.d]$ cat mjiaolongchuhai.conf
server {
    listen      80;
    server_name m.jiaolongchuhai.com;
    root        /home/jlch/mjiaolongchuhai;
    index index.html index.htm;

    location / {

    }

    error_page  404                /404.html;
    location = /40x.html {

    }

    error_page  500 502 503 504    /50x.html;
    location = /50x.html {

    }

}

[tom@jlch_web_001 conf.d]$ cat jiaolongchuhai.conf
server {
    listen      80;
    server_name www.jiaolongchuhai.com;
    root        /home/jlch/jiaolongchuhai;
    index index.html index.htm;

    location / {
```



```

    }

    error_page 404                /404.html;
    location = /40x.html {
    }

    error_page 500 502 503 504    /50x.html;
    location = /50x.html {
    }

}

[tom@j1ch_web_001 conf.d]$

```

## 6.3 goaccess

Contents:

### 6.3.1 goaccess

#### reference

<https://goaccess.io/download>

<http://www.itread01.com/articles/1476744943.html>

<http://www.jianshu.com/p/33e2e79d0373>

<http://chenx1242.blog.51cto.com/10430133/1882643>

192.168.31.240:/opt/goaccess-1.2/

#### goaccess

```

ps -ef | grep goacc*
sudo yum install glib2 glib2-devel GeoIP-devel ncurses-devel zlib zlib-devel -y
cd /opt/
ls
sudo wget http://tar.goaccess.io/goaccess-1.2.tar.gz
sudo tar -xvzf goaccess-1.2.tar.gz
cd goaccess-1.2/
sudo ./configure --enable-utf8 --enable-geoip=legacy
sudo make
sudo make install
ls
ls goaccess*
sudo cp /usr/local/etc/goaccess.conf .
cat >>./goaccess.conf<<EOF
time-format %H:%M:%S
date-format %d/%b/%Y
log-format %h %^[%d:%t %^] "%r" %s %b "%R" "%U"
EOF

```

## M1

```
ls /var/log/nginx/access.log
tail -f /var/log/nginx/access.log
sudo goaccess -a -d -f /var/log/nginx/access.log -p ./goaccess.conf >
sudo goaccess -a -d -f /var/log/nginx/access.log -p ./goaccess.conf
/home/tom/index.html
```

## M2

```
[root@q1w goaccess-1.2]# goaccess -a -d -f /var/log/nginx/8000.access.log -p ./
↪goaccess.conf -o /usr/share/nginx/html/qstation/statistics/report.html -real-time-
↪html
WebSocket server ready to accept new client connections
```

## M3

```
tail -f -n +0 /var/log/nginx/8000.access.log | grep --color=auto "factor-zx" |
↪goaccess -p ./goaccess.conf -o /usr/share/nginx/html/qstation/statistics/report-
↪factor-zx.html --real-time-html &
tail -f -n +0 /var/log/nginx/8000.access.log | grep --color=auto "GET /factor-zx/ " |
↪goaccess -p ./goaccess.conf -o /usr/share/nginx/html/qstation/statistics/report-
↪factor-zx.html --real-time-html &

tail -f -n +0 /var/log/nginx/8002.access.log | goaccess -p ./goaccess.conf -o /usr/
↪share/nginx/html/qstation/statistics/report-factorzx.html --real-time-html
tail -f -n +0 /var/log/nginx/443.access.log | goaccess -p ./goaccess.conf -o /data/
↪nginx/html/statistics/reports.html --real-time-html
```

```
root@10.10.11.10
mkdir -p /data/nginx/html/statistics/
tail -f -n +0 /var/log/nginx/443.access.log | grep "citics" | goaccess -p ./goaccess.
↪conf -o /data/nginx/html/statistics/reports-citics.html --real-time-html
```

## 6.4 nginx-url-rewrite

Contents:

### 6.4.1 nginx url rewrite

<http://www.cnblogs.com/czlun/articles/7010604.html>

#### env

```
192.168.31.240
```

#### step

url wget, curl

```
wget --header="accept:application/json" -d "http://192.168.31.181:3062/stocks/600006.
↪SH/factor_analysis?type=1&cycle=2" # -d
curl -v -X GET "http://192.168.31.181:3062/stocks/600006.SH/factor_analysis?type=1&
↪cycle=2" -H "accept:application/json" # -v
```

## nginx

### 6.4.2 nginx-url-rewrite-conf

```
server {
    listen      5112;
    server_name factorapi;
    #charset koi8-r;
    access_log  /var/log/nginx/log/5111.access.log  main;
    rewrite_log on;
    charset utf-8;
    charset_types text/html application/json;
    location / {
        root    /usr/share/nginx/html/rewrite;
        index   index.html index.htm;
        # rewrite /a.json /b.json permanent;
        rewrite /a.json /b.json ;
    }

    location /factor-api {
        proxy_set_header    Host            $host;
        proxy_set_header    X-Real-IP       $remote_addr;
        proxy_set_header    X-Forwarded-For $proxy_add_x_forwarded_for;

        # type=xx
        if ($args ~* type=(\d+?)(&|$)) {
            set $type $1;
        }
        # type=xx
        if ($args ~* cycle=(\d+?)(&|$)) {
            set $cycle $1;
        }

        # request_uri
        if ( $request_uri ~* '^/factor-api/stocks/(\d{6})\.S[H|Z])\/factor_analysis'↪
↪) {
            set $stockcode $1;
        }

        if (-e /usr/share/nginx/html/rewrite/data/factor/20171107/$stockcode/factor_
↪analysis.type.$type.cycle.$cycle.json){
            rewrite ^/(.*)$ /data/factor/20171107/$stockcode/factor_analysis.type.
↪$type.cycle.$cycle.json last;
        }
        proxy_pass http://192.168.31.181:3062/;
    }

    error_page 500 502 503 504 /50x.html;
    location = /50x.html {
        root    /usr/share/nginx/html;
    }
}
```

```
}
}
```

<https://stackoverflow.com/questions/43284560/nginx-try-files-rewrite-if-exists-proxy-if-doesnt>

```
server {
    listen      5112;
    server_name factorapi;
    #charset koi8-r;
    access_log  /var/log/nginx/log/5111.access.log  main;
    rewrite_log on;
    charset utf-8;
    charset_types text/html application/json;
    location / {
        root    /usr/share/nginx/html/rewrite;
        index   index.html index.htm;
        # rewrite /a.json /b.json permanent;
        rewrite /a.json /b.json ;
    }
    location /factor-api {
        proxy_set_header    Host            $host;
        proxy_set_header    X-Real-IP       $remote_addr;
        proxy_set_header    X-Forwarded-For $proxy_add_x_forwarded_for;

        # type=xx
        if ($args ~* type=(\d+?)(&|$)) {
            set $type $1;
        }
        # type=xx
        if ($args ~* cycle=(\d+?)(&|$)) {
            set $cycle $1;
        }
        # request_uri
        if ( $request_uri ~* '^/factor-api\/stocks\/(\d{6})\.S[H|Z])\/factor_analysis' ) {
            set $stockcode $1;
        }
        rewrite '^/factor-api\/stocks\/(\d{6})\.S[H|Z])\/factor_analysis' /data/factor/
        20171107/$stockcode/factor_analysis.type.$type.cycle.$cycle.json ; # _$cycle .
        $cycle

        if (!-e /usr/share/nginx/html/rewrite/data/factor/20171107/$stockcode/factor_
        analysis.type.$type.cycle.$cycle.json ) {
            # return 400;
            rewrite ^/(.+) $ /index.html last;
        }

        proxy_pass http://192.168.31.181:3062/; #
    }

    error_page 500 502 503 504 /50x.html;
    location = /50x.html {
        root    /usr/share/nginx/html;
    }
}
```

try\_files,

try\_files proxy\_pass

try\_files

```
server {
    listen      5112;
    server_name factorapi;
    #charset koi8-r;
    access_log  /var/log/nginx/log/5111.access.log  main;
    rewrite_log on;
    charset utf-8;
    charset_types text/html application/json;
    location / {
        root    /usr/share/nginx/html/rewrite;
        index   index.html index.htm;
        # rewrite /a.json /b.json permanent;
        rewrite /a.json /b.json ;
    }

    location /factor-api {
        proxy_set_header    Host            $host;
        proxy_set_header    X-Real-IP       $remote_addr;
        proxy_set_header    X-Forwarded-For $proxy_add_x_forwarded_for;

        # type=xx
        if ($args ~* type=(\d+?)(&|$)) {
            set $type $1;
        }
        # type=xx
        if ($args ~* cycle=(\d+?)(&|$)) {
            set $cycle $1;
        }

        if ( $request_uri ~* '^/factor-api\stocks\/(\d{6})\.S[H|Z])\/factor_analysis'
→) {
            set $stockcode $1;

            try_files /usr/share/nginx/html/rewrite/data/factor/20171107/$stockcode/
→factor_analysis.type.$type.cycle.$cycle.json @qwe;
            proxy_pass http://192.168.31.181:3062/; #
        }

        location @qwe {
            rewrite ^/(.+) $ /index.html last;
        }

        # try_files /data/factor/20171107/$stockcode/factor_analysis.type.$type.cycle.
→$cycle.json $request_uri;
        # try_files "http://192.168.31.181:5112/data/factor/20171107/600006.SH/c.json
→" $request_uri;
        # try_files /usr/share/nginx/html/rewrite/data/factor/20171107/$stockcode/
→factor_analysis.type.$type.cycle.$cycle.json $request_uri;
        # }
        # location @qwe {
        #     proxy_set_header    Host            $host;
        #     proxy_set_header    X-Real-IP       $remote_addr;
        #     proxy_set_header    X-Forwarded-For $proxy_add_x_forwarded_for;
        #     proxy_pass http://192.168.31.181:3062/; #
    }
```

```

# }

error_page 500 502 503 504 /50x.html;
location = /50x.html {
    root /usr/share/nginx/html;
}
}

# —— not ok —— # rewrite ^/factor-api/stocks/(d{6}).S[H|Z])/factor_analysis
/data/factor/20171107/$1/c.json permanent; # # —— ok —— # rewrite ^/factor-
api/stocks/(d{6}).S[H|Z])/factor_analysis /data/factor/20171107/$1/c.json permanent; #
rewrite ^/factor-api/stocks/([1-9]d*.S[H|Z])/factor_analysis /data/factor/20171107/$1/c.json
permanent; # rewrite ^/factor-api/stocks/(.*)/factor_analysis /data/factor/20171107/$1/c.json
permanent; # rewrite ^/factor-api/stocks/(d*.S[H|Z])/factor_analysis
/data/factor/20171107/$1/c.json permanent;

# —— if ok —— # rewrite ^/factor-api/stocks/(d{6}).S[H|Z])/factor_analysis'
/data/factor/20171107/$1/c.json ; # set $stockcode $1; # if (!-e
/usr/share/nginx/html/rewrite/data/factor/20171107/$stockcode/c.json ) { # return 400;
# }

# rewrite ^/factor-api/stocks/(d{6}).S[H|Z])/factor_analysis'
/data/factor/20171107/$1/factor_analysis_type_1_cycle_2.json ; # set $stockcode $1; # if (!-e
/usr/share/nginx/html/rewrite/data/factor/20171107/$stockcode/factor_analysis_type_1_cycle_2.json
) { # return 400; # }

# rewrite ^/factor-api/stocks/(d{6}).S[H|Z])/factor_analysis'
/data/factor/20171107/$1/$cycle.json ; # set $stockcode $1; # if (!-e
/usr/share/nginx/html/rewrite/data/factor/20171107/$stockcode/factor_analysis_type_1_cycle_2.json
) { # return 400; # }

if ( $request_uri ~* ^/factor-api/stocks/(d{6}).S[H|Z])/factor_analysis' ) { set $stockcode $1;
} try_files /usr/share/nginx/html/rewrite/data/factor/20171107/$stockcode/factor_analysis.type.$type.cycle.$cycle.json
@qwe;

# rewrite ^/factor-api/stocks/(d{6}).S[H|Z])/factor_analysis' /data/factor/20171107/$1/factor_analysis.type.$type.cycle.$cycle.json
; # _$cycle . $cycle > # set $stockcode $1; # try_files /usr/share/nginx/html/rewrite/data/factor/20171107/$stockcode/factor_analysis.type.$type.cycle.$cycle.json
@qwe;

}

location @qwe { rewrite ^/(.+)$ /index.html last; #proxy_pass http://192.168.31.181:3062/; #
}

```

## 6.5 big-data-1g-download-failure

-1G

[https://www.baidu.com/s?ie=utf-8&f=8&rsv\\_bp=0&rsv\\_idx=1&tn=baidu&wd=nginx%20%E4%B8%8B%E8%BD%BD%201G%20%E6%96%AD%E5%BC%80&rsv\\_pq=80215161000085a1&rsv\\_t=0e99I%2FzMf%2BHB7Umakbrg9zOn08tQ2h6Nc%2FAkVeEmCSu43QW%2B%2Ffyfn%2BD2zaY&rqlang=cn&rsv\\_enter=1&rsv\\_sug3=23&rsv\\_sug1=10&rsv\\_sug7=100&rsv\\_sug2=0&inputT=11519&rsv\\_sug4=11519](https://www.baidu.com/s?ie=utf-8&f=8&rsv_bp=0&rsv_idx=1&tn=baidu&wd=nginx%20%E4%B8%8B%E8%BD%BD%201G%20%E6%96%AD%E5%BC%80&rsv_pq=80215161000085a1&rsv_t=0e99I%2FzMf%2BHB7Umakbrg9zOn08tQ2h6Nc%2FAkVeEmCSu43QW%2B%2Ffyfn%2BD2zaY&rqlang=cn&rsv_enter=1&rsv_sug3=23&rsv_sug1=10&rsv_sug7=100&rsv_sug2=0&inputT=11519&rsv_sug4=11519) | nginx -1G \_ <https://segmentfault.com/q/101000000383415> | nginx - SegmentFault <http://blog.chinaunix.net/uid-20332519-id-5755724.html> | Nginx-lsstarboy-ChinaUnix <http://www.ttlsa.com/nginx/optimizing-nginx-bigger-file/> | nginx - <http://www.cnblogs.com/breezey/p/6740229.html> | nginx - breezey -

```
proxy_send_timeout 120;
proxy_read_timeout 120;
proxy_max_temp_file_size 4096m;
```

nginx,

```
[j1ch@qlw ~]$ sudo /usr/sbin/nginx -s reload
nginx: [warn] duplicate MIME type "text/html" in /etc/nginx/conf.d/8000.qstation.
↪conf:11
nginx: [warn] duplicate MIME type "text/html" in /etc/nginx/conf.d/8002.factor-zx.
↪conf:10
[j1ch@qlw ~]$ sudo systemctl restart nginx
```

## 6.6 nginx-install-by-rpm

<http://nginx.org/en/download.html>   [http://nginx.org/en/linux\\_packages.html#stable](http://nginx.org/en/linux_packages.html#stable)   [http://nginx.org/packages/centos/7/x86\\_64/RPMS/](http://nginx.org/packages/centos/7/x86_64/RPMS/)

## 6.7 nginx location

location

<http://blog.csdn.net/fay462298322/article/details/54666636>

Nginx location

```
~
~*
^~      ^~
=
@      #"@"  location error_page, try_files
```

location

```
= nginx

^~ nginxnginxlocation
"~"~*"nginx
```

```
location = / {
# "/"
[ configuration A ]
}
location / {
# "/"
#
[ configuration B ]
}
location ^~ /images/ {
# /images/  location
[ configuration C ]
}
location ~* \.(gif|jpg|jpeg)$ {
```

```
# gif, jpg, or jpeg.  
# /images/ [Configuration C].  
[ configuration D ]  
}
```



Contents:

## 7.1 mysqladmin

Contents:

### 7.1.1 mysqladmin flush-hosts

Database ErrorHost 'adonis.havehost.com' is blocked because of many connection errors; unblock with 'mysqladmin flush-hosts'

<https://stackoverflow.com/questions/21519997/how-to-do-mysqladmin-flush-hosts-on-server>

```
mysql -u root -p -e 'flush hosts'
```

## 7.2 mysql FAQ

Contents:

### 7.2.1 mysql could not be resolved: Name or service not known

,...

, tail -f ,

```
1.120119 16:26:04 [Warning] IP address '192.168.1.10' could not be resolved: Name or_
↪service not known
2.120119 16:26:04 [Warning] IP address '192.168.1.14' could not be resolved: Name or_
↪service not known
3.120119 16:26:04 [Warning] IP address '192.168.1.17' could not be resolved: Name or_
↪service not known
```

```
show processlist
```

```
1. |592|unauthenticated user|192.168.1.10:35320|NULL|Connect| |login|NULL|
2. |593|unauthenticated user|192.168.1.14:35321|NULL|Connect| |login|NULL|
3. |594|unauthenticated user|192.168.1.17:35322|NULL|Connect| |login|NULL|
```

<http://www.jb51.net/article/70893.htm>

skip-name-resolve ip

```
[mysqld]
skip-name-resolve
```

```

, , .
top
, ...
, , mv .
, kill , , .
, , , .....

```

### 7.2.2 mysql-takes-too-long-on-checking-permissions

<https://dba.stackexchange.com/questions/66215/mysql-takes-too-long-on-checking-permissions> <https://serverfault.com/questions/233963/mysql-checking-permission-takes-a-long-time>

### 7.3 jlch

mysql

1. 1031
2. 31 10

## 7.4 mysql config

## Contents:

### 7.4.1 181 config

```
[root@check my.cnf.d]# cat /etc/my.cnf.d/server.cnf
#
# These groups are read by MariaDB server.
# Use it for options that only the server (but not clients) should see
#
# See the examples of server my.cnf files in /usr/share/mysql/
#

# this is read by the standalone daemon and embedded servers
[server]

# this is only for the mysqld standalone daemon
[mysqld]
datadir=/data/mariadb/mysql
socket=/var/lib/mysql/mysql.sock
#default-character-set=utf8
character_set_server=utf8
log-bin=mysql.server
slow_query_log=on
slow_query_log_file=/data/mariadb/mysql/slow_query_log.log
long_query_time=2
event_scheduler=on

max_connections = 1000
max_allowed_packet = 8M
thread_cache_size=64
log_slow_admin_statements=1
log_slow_slave_statements=1
sort_buffer_size = 80M
read_buffer_size = 80M
join_buffer_size = 80M
max_length_for_sort_data=9196
tmp_table_size = 57108864
innodb_log_file_size= 300M
innodb_log_files_in_group=6
innodb_log_buffer_size=450M
innodb_write_io_threads = 8
innodb_read_io_threads = 8
innodb_buffer_pool_size=4G
innodb_buffer_pool_instances=6

log_bin_trust_function_creators = 1
# this is only for embedded server
[embedded]

# This group is only read by MariaDB-5.5 servers.
# If you use the same .cnf file for MariaDB of different versions,
# use this group for options that older servers don't understand
[mysqld-5.5]

# These two groups are only read by MariaDB servers, not by MySQL.
# If you use the same .cnf file for MySQL and MariaDB,
# you can put MariaDB-only options here
[mariadb]

[mariadb-5.5]

[root@check my.cnf.d]#
```

## p1

```
innodb_buffer_pool_size=4G
```

4G, 18116G. 8G, 12.8G(16\*0.8)

## p2

```
innodb_log_file_size= 300M
innodb_log_files_in_group=6
```

mysql 2 5M 6 300M

```
1. stop mysql
2. mysql (/data/mariadb/mysql/) ib_logfile*
3. server.cnf
4. start mysql
```

## p3

```
log_bin_trust_function_creators = 1
```

SET GLOBAL log\_bin\_trust\_function\_creators = 1;

```
[jlch@check ~]$ mysql -u root -p
Enter password:
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 5482
Server version: 5.5.44-MariaDB-log MariaDB Server

Copyright (c) 2000, 2015, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

MariaDB [(none)]> SET GLOBAL log_bin_trust_function_creators = 1;
Query OK, 0 rows affected (0.00 sec)

MariaDB [(none)]> show variables like '%log_bin_trust_function_creators%';
+-----+-----+
| Variable_name | Value |
+-----+-----+
| log_bin_trust_function_creators | ON    |
+-----+-----+
1 row in set (0.00 sec)

MariaDB [(none)]> exit
Bye
[jlch@check ~]$
```

on

p4

## 7.4.2 log-bin

### log-bin

log-bin=mysql.server

```
[root@check my.cnf.d]# ls /data/mariadb/mysql/
aria_log.00000001  cnpmjs_test  ibdata1      ib_logfile1  ib_logfile3  ib_logfile5
↳openquote      product  q_station  slow_query_log.log  stock20151029  stock_
↳sqlserver_df  sync  testhufei  zabbix
aria_log_control  haitong      ib_logfile0  ib_logfile2  ib_logfile4  mysql
↳performance_schema  program  rates      stock      stock_quotation  stock_
↳test          test  xiaozhao  zhongtai2
[root@check my.cnf.d]# sudo systemctl start mariadb.service
[root@check my.cnf.d]# sudo systemctl status mariadb.service
mariadb.service - MariaDB database server
Loaded: loaded (/usr/lib/systemd/system/mariadb.service; enabled; vendor preset:
↳disabled)
Active: active (running) since 2017-10-31 11:48:11 CST; 5s ago
Process: 15315 ExecStartPost=/usr/libexec/mariadb-wait-ready $MAINPID (code=exited,
↳status=0/SUCCESS)
Process: 15269 ExecStartPre=/usr/libexec/mariadb-prepare-db-dir %n (code=exited,
↳status=0/SUCCESS)
Main PID: 15314 (mysqld_safe)
Memory: 854.0M
CGroup: /system.slice/mariadb.service
        -15314 /bin/sh /usr/bin/mysqld_safe --basedir=/usr
        -15825 /usr/libexec/mysqld --basedir=/usr --datadir=/data/mariadb/mysql --
↳plugin-dir=/usr/lib64/mysql/plugin --log-error=/var/log/mariadb/mariadb.log --pid-
↳file=/var/run/mariadb/mariadb.pid --socket=/var/lib/mysql/mysql.sock

10 31 11:48:08 check systemd[1]: Starting MariaDB database server...
10 31 11:48:08 check mysqld_safe[15314]: 171031 11:48:08 mysqld_safe Logging to '/var/
↳log/mariadb/mariadb.log'.
10 31 11:48:08 check mysqld_safe[15314]: 171031 11:48:08 mysqld_safe Starting mysqld_
↳daemon with databases from /data/mariadb/mysql
10 31 11:48:11 check systemd[1]: Started MariaDB database server.
[root@check my.cnf.d]# ls /data/mariadb/mysql/
aria_log.00000001  cnpmjs_test  ibdata1      ib_logfile1  ib_logfile3  ib_logfile5
↳mysql.000001  openquote      product  q_station  slow_query_log.log
↳stock20151029  stock_sqlserver_df  sync  testhufei  zabbix
aria_log_control  haitong      ib_logfile0  ib_logfile2  ib_logfile4  mysql
↳mysql.index  performance_schema  program  rates      stock      stock_
↳quotation  stock_test          test  xiaozhao  zhongtai2
[root@check my.cnf.d]#
```

mysql /data/mariadb/mysql/ mysql.index mysql.000001 2

### log-bin

```
show binary logs;
PURGE MASTER LOGS to 'mysql.00000x';
```

## 7.5 mysql use

```
mysql -h 192.168.31.181 -u root -p stock -e "select * from baidu_20_quar ;" -N -s |
↪ sed -e 's/^"/g;s/$/"\n/g' > ./baidu_20_quar.csv
## ok
mysql -h 192.168.31.181 -u root -p stock -e "select * from baidu_20_quar ;" | sed 's/
↪ \t"/, "/g;s/^"/;/s/$"/;/s/\n//g' > ./baidu_20_quar.csv

mysql -h 192.168.31.181 -u root -p stock -ss -e "select * from baidu_20_quar ;" | sed
↪ 's/\t"/, "/g;s/^"/;/s/$"/;/s/\n//g' > ./2.csv

mysql -h 192.168.31.181 -u root -p stock -ss -e "select * from baidu_20_quar ;" > ./3.
↪ csv

##

mysql -h 192.168.31.181 -u root -p stock --execute='SELECT `FIELD`, `FIELD` FROM
↪ `TABLE` LIMIT 0, 10000 ' -X > file.csv

##

mysqldump -h 192.168.31.181 -u root -p -t -T /home/tom/draft/mysql-20170619 stock
↪ baidu_20_quar --fields-terminated-by=', '

mysqldump -h 192.168.31.181 -u root -p -T/path/to/directory dbname table_name --
↪ fields-terminated-by=', '

##

SELECT * FROM mytable INTO OUTFILE '/tmp/mytable.csv' FIELDS TERMINATED BY ','
↪ OPTIONALLY ENCLOSED BY '"' LINES TERMINATED BY '\n';

mysqldump -h 192.168.31.181 -u root -p stock czs_dgx --tab=/home/tom/draft2/ --
↪ fields-terminated-by=', '

select * from table into outfile '/tmp/table.csv' fields terminated by ',' optionally
↪ enclosed by '"' lines terminated by '\r\n';

##

mysqldump -u root -p haitong factor_info | mysql -h 192.168.31.240 test

mysqldump -u root -p haitong factor_info | mysql -h 192.168.31.240 -u root -p test

mysqldump -u root -p -T/tmp/ test factor_info --fields-terminated-by=', '
```

## CHAPTER 8

---

mongodb

---

Contents:





Contents:

## 9.1 npm-run

Contents:

### 9.1.1 npm run build 1

no such file or directory

```
[jlch@check ktraining]$ npm run build

> line@1.0.0 build /home/jlch/registry/ktraining
> node build/build.js

building for production...
Starting to optimize CSS...
Processing static/css/app.d0d16c3b538edb8384cf55d5f92bcddd.css...
Processed static/css/app.d0d16c3b538edb8384cf55d5f92bcddd.css, before: 74052, after:
  ↳ 71485, ratio: 96.53%
Hash: 004d38f2752eb4dd3ca6
Version: webpack 2.7.0
Time: 56052ms

  ↳      Asset      Size  Chunks             Chunk Names
  ↳ iconfont.js    38.9 kB          [emitted]                  static/
  ↳ 99.2 kB          [emitted]                  static/img/bg.54503c9.png
  ↳ 1 [emitted]          app      static/js/app.1302bf22af6be784678a.js    69.7 kB
```

```

static/js/manifest.83d402e7507a68529b24.js 1.51 kB
↪2 [emitted] manifest
static/css/app.d0d16c3b538edb8384cf55d5f92bcddd.css 71.5 kB 1
↪[emitted] app
static/js/vendor.4e94ca5aec8a4e524a18.js.map 7.98 MB 0
↪[emitted] vendor
static/js/app.1302bf22af6be784678a.js.map 393 kB
↪1 [emitted] app
static/css/app.d0d16c3b538edb8384cf55d5f92bcddd.css.map 92.3 kB 1 [emitted]
↪ app
static/js/manifest.83d402e7507a68529b24.js.map 14.6 kB 2
↪[emitted] manifest

index.html 820 bytes [emitted]
↪ address.js 243 bytes [emitted]
static/
↪ address.js 243 bytes [emitted]
static/
↪ flexible.js 3.49 kB [emitted]
static/js/vendor.4e94ca5aec8a4e524a18.js 924 kB
↪0 [emitted] [big] vendor
static/css/clearAd.
↪css 109 bytes [emitted]
static/img/fsRank.
↪png 2.82 kB [emitted]
static/img/
↪bg.png 99.2 kB [emitted]
static/img/kline.
↪png 19.2 kB [emitted]
static/img/kLine.
↪png 3.75 kB [emitted]
static/img/kRank.
↪png 2.42 kB [emitted]
static/img/records.
↪png 3.25 kB [emitted]
static/img/record.
↪png 19.2 kB [emitted]
static/img/share.
↪png 19.7 kB [emitted]
static/img/timeShare.png
↪ 3.12 kB [emitted]

static/users.js 44 bytes [emitted]

ERROR in ./~/_css-loader@0.28.7@css-loader?{"minimize":true,"sourceMap":true}!./~/_
↪sass-loader@6.0.6@sass-loader/lib/loader.js?{"sourceMap":true}!./src/css/base.scss
Module build failed: Error: ENOENT: no such file or directory, scandir '/home/jlch/
↪registry/ktraining/node_modules/_node-sass@4.5.3@node-sass/vendor'
    at Object.fs.readdirSync (fs.js:862:18)
    at Object.getInstalledBinaries (/home/jlch/registry/ktraining/node_modules/_
↪node-sass@4.5.3@node-sass/lib/extensions.js:124:13)
    at foundBinariesList (/home/jlch/registry/ktraining/node_modules/_node-sass@4.
↪5.3@node-sass/lib/errors.js:20:15)
    at foundBinaries (/home/jlch/registry/ktraining/node_modules/_node-sass@4.5.
↪3@node-sass/lib/errors.js:15:5)
    at Object.module.exports.missingBinary (/home/jlch/registry/ktraining/node_
↪modules/_node-sass@4.5.3@node-sass/lib/errors.js:45:5)
    at module.exports (/home/jlch/registry/ktraining/node_modules/_node-sass@4.5.
↪3@node-sass/lib/binding.js:15:30)

```

```

    at Object.<anonymous> (/home/jlch/registry/ktraining/node_modules/_node-
↪sass@4.5.3@node-sass/lib/index.js:14:35)
    at Module._compile (module.js:573:32)
    at Object.Module._extensions..js (module.js:582:10)
    at Module.load (module.js:490:32)
    at tryModuleLoad (module.js:449:12)
    at Function.Module._load (module.js:441:3)
    at Module.require (module.js:500:17)
    at require (internal/module.js:20:19)
    at Object.<anonymous> (/home/jlch/registry/ktraining/node_modules/_sass-
↪loader@6.0.6@sass-loader/lib/loader.js:3:14)
    at Module._compile (module.js:573:32)
  @ ./src/css/base.scss 4:14-180
  @ ./src/main.js

ERROR in ./src/css/base.scss
Module build failed: ModuleBuildError: Module build failed: Error: ENOENT: no such_
↪file or directory, scandir '/home/jlch/registry/ktraining/node_modules/_node-sass@4.
↪5.3@node-sass/vendor'
    at Object.fs.readdirSync (fs.js:862:18)
    at Object.getInstalledBinaries (/home/jlch/registry/ktraining/node_modules/_
↪node-sass@4.5.3@node-sass/lib/extensions.js:124:13)
    at foundBinariesList (/home/jlch/registry/ktraining/node_modules/_node-sass@4.
↪5.3@node-sass/lib/errors.js:20:15)
    at foundBinaries (/home/jlch/registry/ktraining/node_modules/_node-sass@4.5.
↪3@node-sass/lib/errors.js:15:5)
    at Object.module.exports.missingBinary (/home/jlch/registry/ktraining/node_
↪modules/_node-sass@4.5.3@node-sass/lib/errors.js:45:5)
    at module.exports (/home/jlch/registry/ktraining/node_modules/_node-sass@4.5.
↪3@node-sass/lib/binding.js:15:30)
    at Object.<anonymous> (/home/jlch/registry/ktraining/node_modules/_node-
↪sass@4.5.3@node-sass/lib/index.js:14:35)
    at Module._compile (module.js:573:32)
    at Object.Module._extensions..js (module.js:582:10)
    at Module.load (module.js:490:32)
    at tryModuleLoad (module.js:449:12)
    at Function.Module._load (module.js:441:3)
    at Module.require (module.js:500:17)
    at require (internal/module.js:20:19)
    at Object.<anonymous> (/home/jlch/registry/ktraining/node_modules/_sass-
↪loader@6.0.6@sass-loader/lib/loader.js:3:14)
    at Module._compile (module.js:573:32)
    at runLoaders (/home/jlch/registry/ktraining/node_modules/_webpack@2.7.
↪0@webpack/lib/NormalModule.js:192:19)
    at /home/jlch/registry/ktraining/node_modules/_loader-runner@2.3.0@loader-
↪runner/lib/LoaderRunner.js:364:11
    at /home/jlch/registry/ktraining/node_modules/_loader-runner@2.3.0@loader-
↪runner/lib/LoaderRunner.js:170:18
    at loadLoader (/home/jlch/registry/ktraining/node_modules/_loader-runner@2.3.
↪0@loader-runner/lib/loadLoader.js:27:11)
    at iteratePitchingLoaders (/home/jlch/registry/ktraining/node_modules/_loader-
↪runner@2.3.0@loader-runner/lib/LoaderRunner.js:169:2)
    at iteratePitchingLoaders (/home/jlch/registry/ktraining/node_modules/_loader-
↪runner@2.3.0@loader-runner/lib/LoaderRunner.js:165:10)
    at /home/jlch/registry/ktraining/node_modules/_loader-runner@2.3.0@loader-
↪runner/lib/LoaderRunner.js:173:18
    at loadLoader (/home/jlch/registry/ktraining/node_modules/_loader-runner@2.3.
↪0@loader-runner/lib/loadLoader.js:36:3)

```

```
    at iteratePitchingLoaders (/home/jlch/registry/ktraining/node_modules/_loader-
↪runner@2.3.0@loader-runner/lib/LoaderRunner.js:169:2)
    at runLoaders (/home/jlch/registry/ktraining/node_modules/_loader-runner@2.3.
↪0@loader-runner/lib/LoaderRunner.js:362:2)
    at NormalModule.doBuild (/home/jlch/registry/ktraining/node_modules/_
↪webpack@2.7.0@webpack/lib/NormalModule.js:179:3)
    at NormalModule.build (/home/jlch/registry/ktraining/node_modules/_webpack@2.
↪7.0@webpack/lib/NormalModule.js:268:15)
    at Compilation.buildModule (/home/jlch/registry/ktraining/node_modules/_
↪webpack@2.7.0@webpack/lib/Compilation.js:146:10)
    at moduleFactory.create (/home/jlch/registry/ktraining/node_modules/_
↪webpack@2.7.0@webpack/lib/Compilation.js:433:9)
    at factory (/home/jlch/registry/ktraining/node_modules/_webpack@2.7.0@webpack/
↪lib/NormalModuleFactory.js:253:5)
    at applyPluginsAsyncWaterfall (/home/jlch/registry/ktraining/node_modules/_
↪webpack@2.7.0@webpack/lib/NormalModuleFactory.js:99:14)

Build complete.

Tip: built files are meant to be served over an HTTP server.
Opening index.html over file:// won't work.

[jlch@check ktraining]$
```

*Error: ENOENT: no such file or directory, scandir '/home/jlch/registry/ktraining/node\_modules/\_node-sass@4.5.3@node-sass/vendor', node-sass vendor, node-sass*

```
cd node_modules/
ls node-sass/
cd node-sass/
ls
npm test ##
npm install
npm test ##
cd ../../../../ktraining/ ## build
npm run build
```

Contents:

## 10.1 nfs-server

Contents:

### 10.1.1 nfs-server.install.ubuntu16.04

Ubuntu 16.04 NFS server

#### reference

<http://www.linuxidc.com/Linux/2016-04/129848.htm>

<http://www.linuxidc.com/Linux/2012-09/70728.htm>

192.168.31.232 nfs-server

192.168.31.197 nfs-client,

#### step

```
sudo apt-get -y install nfs-kernel-server
sudo apt-get -y install nfs-common
```

```
mkdir -p /opt/share
chmod -R 777 /opt/share
```

/etc/exports

```
root@ubuntu:/opt/share# vi /etc/exports
root@ubuntu:/opt/share# cat /etc/exports
# /etc/exports: the access control list for filesystems which may be exported
#               to NFS clients.  See exports(5).
#
# Example for NFSv2 and NFSv3:
# /srv/homes          hostname1(rw,sync,no_subtree_check) hostname2(ro,sync,no_subtree_
↪check)
#
# Example for NFSv4:
# /srv/nfs4           gss/krb5i(rw,sync,fsid=0,crossmnt,no_subtree_check)
# /srv/nfs4/homes     gss/krb5i(rw,sync,no_subtree_check)
#
/opt/share *(rw,no_root_squash)
root@ubuntu:/opt/share#
```

```
sudo service rpcbind restart
sudo service portmap restart
sudo service nfs-kernel-server restart
```

nfs-client a.txt ,

```
cd /opt/share/
ls
cat a.txt
```

OK

over

## 10.2 nfs-client

```
echo "deb http://ftp.cn.debian.org/debian jessie main" >> sources.list
```

```
apt update
```

```
apt-get install nfs-common
```

```
ping 192.168.31.232
```

# CHAPTER 11

---

ceph

---

Contents:

## 11.1 cephfs

Contents:

### 11.1.1 cephfs

192.168.31.115 192.168.31.114 192.168.31.113

#### line1

```
admin-node, deploy-node(ceph-deploy) 192.168.31.115  cephfs5
mon.0: 192.168.31.114  cephfs4
osd.0: 192.168.31.113  cephfs3
osd.1: 192.168.31.115  cephfs5
mds.0: 192.168.31.113  cephfs3
mds.1: 192.168.31.114  cephfs4
```

<https://linux.cn/article-8182-1.html>

#### line2

<http://tonybai.com/2017/05/08/mount-cephfs-acrossing-nodes-in-kubernetes-cluster/>

over

## 11.2 ceph install

Contents:

### 11.2.1 ceph install by docker

<https://github.com/ceph/ceph-docker>

#### m1

<http://ceph.com/planet/%E5%9F%BA%E4%BA%8Edocker%E9%83%A8%E7%BD%B2ceph%E4%BB%A5%E5%8F%8A%E4%BF%AE%E6%94%B9docker-image/>

<http://www.sebastien-han.fr/blog/2015/06/23/bootstrap-your-ceph-cluster-in-docker/>

<http://www.topjishu.com/10455.html>

<http://ceph.com/planet/%E5%9F%BA%E4%BA%8Edocker-ui-%E9%85%8D%E7%BD%AEceph%E9%9B%86%E7%BE%A4/>

#### m2

<http://www.dockerinfo.net/445.html>

#### m3

<http://www.jianshu.com/p/f08ed7287416>

### 11.2.2 install FAQ

#### Q1

```
ceph-deploy install ceph-admin ceph-osd1 ceph-osd2 mon1
...
[ceph-osd1][DEBUG ] Get:40 https://download.ceph.com/debian-jewel xenial/main amd64_
↪python-rbd amd64 10.2.10-1xenial [1,449 kB]
[ceph-osd1][DEBUG ] Get:41 https://download.ceph.com/debian-jewel xenial/main amd64_
↪ceph-common amd64 10.2.10-1xenial [15.5 MB]
[ceph-osd1][DEBUG ] Get:42 https://download.ceph.com/debian-jewel xenial/main amd64_
↪ceph-base amd64 10.2.10-1xenial [50.5 MB]
[ceph-osd1][WARNIN] No data was received after 300 seconds, disconnecting...
[ceph-osd1][INFO ] Running command: sudo ceph --version
[ceph-osd1][ERROR ] Traceback (most recent call last):
[ceph-osd1][ERROR ]   File "/usr/lib/python2.7/dist-packages/ceph_deploy/lib/vendor/
↪remoto/process.py", line 119, in run
[ceph-osd1][ERROR ]       reporting(conn, result, timeout)
[ceph-osd1][ERROR ]   File "/usr/lib/python2.7/dist-packages/ceph_deploy/lib/vendor/
↪remoto/log.py", line 13, in reporting
[ceph-osd1][ERROR ]       received = result.receive(timeout)
```



```
[ceph-osd1][ERROR ] File "/usr/lib/python2.7/dist-packages/ceph_deploy/lib/vendor/
↳remoto/lib/vendor/execnet/gateway_base.py", line 704, in receive
[ceph-osd1][ERROR ] raise self._getremoteerror() or EOFError()
[ceph-osd1][ERROR ] RemoteError: Traceback (most recent call last):
[ceph-osd1][ERROR ] File "<string>", line 1036, in executetask
[ceph-osd1][ERROR ] File "<remote exec>", line 12, in _remote_run
[ceph-osd1][ERROR ] File "/usr/lib/python2.7/subprocess.py", line 711, in __init__
[ceph-osd1][ERROR ] errread, errwrite)
[ceph-osd1][ERROR ] File "/usr/lib/python2.7/subprocess.py", line 1343, in _execute_
↳child
[ceph-osd1][ERROR ] raise child_exception
[ceph-osd1][ERROR ] OSError: [Errno 2] No such file or directory
[ceph-osd1][ERROR ]
[ceph-osd1][ERROR ]
[ceph_deploy][ERROR ] RuntimeError: Failed to execute command: ceph --version

cephuser@cephfs5:~/my-cluster$
```

<https://blog.54im.com/2016/12/15/centos-install-ceph-doc/>

## Q2

<https://serverfault.com/questions/659308/unable-to-add-initial-monitor-to-ceph-in-ubuntu>

```
[global]
fsid = 33cb5c76-a685-469e-8cdd-fee7c98c3f4d
mon_initial_members = ceph1,ceph2
mon_host = 192.168.61.39,192.168.61.40
auth_cluster_required = cephx
auth_service_required = cephx
auth_client_required = cephx
filestore_xattr_use_omap = true
public_network = 192.168.61.0/24
And the running the command:

$ ceph-deploy --overwrite-conf mon create <ceph-node>
```

## 11.2.3 ceph install by ubuntu

Contents:

### README (install-by-ubuntu)

<http://docs.ceph.com/docs/master/start/>

### env

```
192.168.31.115 cephadmin # admin
192.168.31.114 mon1 #
192.168.31.113 cephfsn2 #
192.168.31.173 cephfsn3 #
192.168.31.172 ceph-client #
```

```
/etc/hosts hostname
```

## Preflight

```
# http://docs.ceph.com/docs/master/start/quick-start-preflight/#
```

## ceph-admin

with a stable Ceph release (e.g., luminous.) luminous

```
cephu@cephadmin:~/my-cluster$ sudo cat /etc/apt/sources.list.d/ceph.list
deb https://download.ceph.com/debian-luminous/ xenial main
cephu@cephadmin:~/my-cluster$
```

~/ssh/config

```
cephu@cephadmin:~/my-cluster$ cat ~/.ssh/config
Host node0
    Hostname cephadmin
    User cephu
Host node1
    Hostname mon1
    User cephu
Host node2
    Hostname cephfsn2
    User cephu
Host node3
    Hostname cephfsn3
    User cephu
cephu@cephadmin:~/my-cluster$
```

node0, node1, node2, node3, Hostname

```
cephu@cephadmin:~/my-cluster$ cat ~/.ssh/config
Host node0
    Hostname node0
    User cephu
Host node1
    Hostname node1
    User cephu
Host node2
    Hostname node2
    User cephu
Host node3
    Hostname node3
    User cephu
cephu@cephadmin:~/my-cluster$
```

```
cephu@cephadmin:~/my-cluster$ cat /etc/hosts
127.0.0.1        localhost
127.0.1.1        ubuntu
#127.0.0.1       cephfs5
```

```
# The following lines are desirable for IPv6 capable hosts
::1          localhost ip6-localhost ip6-loopback
ff02::1 ip6-allnodes
ff02::2 ip6-allrouters

192.168.31.115 cephadmin
192.168.31.114 mon1
192.168.31.113 cephfsn2
192.168.31.173 cephfsn3
```

## Storage Cluster Quick Start

# <http://docs.ceph.com/docs/master/start/quick-ceph-deploy/>

### 2.1 Create the cluster.

```
ceph-deploy new node1 ceph-deploy new mon1
```

```
cephu@cephadmin:~/my-cluster$ ceph-deploy new mon1
```

### 2.2 - 2.3

```
cephu@cephadmin:~/my-cluster$ cat ~/my-cluster/ceph.conf
[global]
fsid = d0aa5af1-4f8e-4953-9448-7f1b2448b8a5
mon_initial_members = mon1
mon_host = 192.168.31.114
auth_cluster_required = cephx
auth_service_required = cephx
auth_client_required = cephx

public network = 192.168.31.1/24
ms bind ipv6 = true
cephu@cephadmin:~/my-cluster$
```

### 2.4

```
cephu@cephadmin:~/my-cluster$ ceph-deploy install node1 node2 node3
```

### 2.5

```
cephu@cephadmin:~/my-cluster$ ceph-deploy mon create-initial
```

<https://my.oschina.net/u/2475751/blog/647777>

```
cephu@cephadmin:~/my-cluster$ ssh mon1 sudo ceph-create-keys --id mon1
```

```
cephu@cephadmin:~/my-cluster$ ceph-deploy mon create-initial
```

### 3.1

```
cephu@cephadmin:~/my-cluster$ ceph-deploy --overwrite-conf admin node1 node2 node3
[ceph_deploy.conf][DEBUG ] found configuration file at: /home/cephu/.cephdeploy.conf
[ceph_deploy.cli][INFO ] Invoked (1.5.32): /usr/bin/ceph-deploy --overwrite-conf_
↪admin node1 node2 node3
[ceph_deploy.cli][INFO ] ceph-deploy options:
```

```
[ceph_deploy.cli][INFO ] username           : None
[ceph_deploy.cli][INFO ] verbose           : False
[ceph_deploy.cli][INFO ] overwrite_conf    : True
[ceph_deploy.cli][INFO ] quiet             : False
[ceph_deploy.cli][INFO ] cd_conf           : <ceph_deploy.conf.
↪cephdeploy.Conf instance at 0x7f2c1fbc2440>
[ceph_deploy.cli][INFO ] cluster           : ceph
[ceph_deploy.cli][INFO ] client             : ['node1', 'node2', 'node3']
[ceph_deploy.cli][INFO ] func              : <function admin at 0x7f2c20489b18>
↪0x7f2c20489b18>
[ceph_deploy.cli][INFO ] ceph_conf         : None
[ceph_deploy.cli][INFO ] default_release   : False
[ceph_deploy.admin][DEBUG ] Pushing admin keys and conf to node1
[node1][DEBUG ] connection detected need for sudo
[node1][DEBUG ] connected to host: node1
[node1][DEBUG ] detect platform information from remote host
[node1][DEBUG ] detect machine type
[node1][DEBUG ] write cluster configuration to /etc/ceph/{cluster}.conf
[ceph_deploy.admin][DEBUG ] Pushing admin keys and conf to node2
[node2][DEBUG ] connection detected need for sudo
[node2][DEBUG ] connected to host: node2
[node2][DEBUG ] detect platform information from remote host
[node2][DEBUG ] detect machine type
[node2][DEBUG ] write cluster configuration to /etc/ceph/{cluster}.conf
[ceph_deploy.admin][DEBUG ] Pushing admin keys and conf to node3
[node3][DEBUG ] connection detected need for sudo
[node3][DEBUG ] connected to host: node3
[node3][DEBUG ] detect platform information from remote host
[node3][DEBUG ] detect machine type
[node3][DEBUG ] write cluster configuration to /etc/ceph/{cluster}.conf
cephu@cephadmin:~/my-cluster$
```

### 3.2

```
cephu@cephadmin:~/my-cluster$ ceph-deploy mgr create node1
usage: ceph-deploy [-h] [-v | -q] [--version] [--username USERNAME]
               [--overwrite-conf] [--cluster NAME] [--ceph-conf CEPH_CONF]
               COMMAND ...
ceph-deploy: error: argument COMMAND: invalid choice: 'mgr' (choose from 'new',
↪'install', 'rgw', 'mon', 'mds', '
↪gatherkeys',
↪'disk', 'osd', 'admin', 'repo', 'config', 'uninstall', 'purge', 'purgedata',
↪'calamari', 'forgetkeys
↪', 'pkg')
```

```
cephu@cephadmin:~/my-cluster$ ceph-deploy -h
usage: ceph-deploy [-h] [-v | -q] [--version] [--username USERNAME]
               [--overwrite-conf] [--cluster NAME] [--ceph-conf CEPH_CONF]
               COMMAND ...

Easy Ceph deployment

_ ^ _
/   \
| O o |  ceph-deploy v1.5.32
) . - (
' / | | | \
```

```
| ' |` |
'|`
```

Full documentation can be found at: <http://ceph.com/ceph-deploy/docs>

optional arguments:

```
-h, --help            show this help message and exit
-v, --verbose          be more verbose
-q, --quiet            be less verbose
--version              the current installed version of ceph-deploy
--username USERNAME   the username to connect to the remote host
--overwrite-conf       overwrite an existing conf file on remote host (if
                        present)
--cluster NAME         name of the cluster
--ceph-conf CEPH_CONF use (or reuse) a given ceph.conf file
```

commands:

COMMAND	description
new	Start deploying a new cluster, and write a CLUSTER.conf and keyring for it.
install	Install Ceph packages on remote hosts.
rgw	Ceph RGW daemon management
mon	Ceph MON Daemon management
mds	Ceph MDS daemon management
gatherkeys	Gather authentication keys for provisioning new nodes.
disk	Manage disks on a remote host.
osd	Prepare a data disk on remote host.
admin	Push configuration and client.admin key to a remote host.
repo	Repo definition management
config	Copy ceph.conf to/from remote host(s)
uninstall	Remove Ceph packages from remote hosts.
purge	Remove Ceph packages from remote hosts and purge all data.
purgedata	Purge (delete, destroy, discard, shred) any Ceph data from /var/lib/ceph
calamari	Install and configure Calamari nodes. Assumes that a repository with Calamari packages is already configured. Refer to the docs for examples ( <a href="http://ceph.com/ceph-deploy/docs/conf.html">http://ceph.com/ceph-deploy/docs/conf.html</a> )
forgetkeys	Remove authentication keys from the local directory.
pkg	Manage packages on remote hosts.

cephu@cephadmin:~/my-cluster\$

mgr

```
cephu@cephadmin:~/my-cluster$ pip install ceph-deploy
Collecting ceph-deploy
  Downloading ceph-deploy-1.5.39.tar.gz (114kB)
100% || 122kB 292kB/s
Collecting setuptools (from ceph-deploy)
  Downloading setuptools-36.6.0-py2.py3-none-any.whl (481kB)
100% || 481kB 968kB/s
Building wheels for collected packages: ceph-deploy
Running setup.py bdist_wheel for ceph-deploy ... done
Stored in directory: /home/cephu/.cache/pip/wheels/5e/4a/c5/
→ 5759b04fedf1eaa17d4453b562ab28a2142dbf93ced0c37e5d
```

```
Successfully built ceph-deploy
Installing collected packages: setuptools, ceph-deploy
Successfully installed ceph-deploy-1.5.32 setuptools-20.7.0
You are using pip version 8.1.1, however version 9.0.1 is available.
You should consider upgrading via the 'pip install --upgrade pip' command.
cephu@cephadmin:~/my-cluster$ ceph-deploy --version
1.5.39
cephu@cephadmin:~/my-cluster$ ceph-deploy -h
```

```
cephu@cephadmin:~/my-cluster$ ceph-deploy mgr create node1
[ceph_deploy.conf][DEBUG ] found configuration file at: /home/cephu/.cephdeploy.conf
[ceph_deploy.cli][INFO ] Invoked (1.5.39): /usr/bin/ceph-deploy mgr create node1
[ceph_deploy.cli][INFO ] ceph-deploy options:
[ceph_deploy.cli][INFO ] username                : None
[ceph_deploy.cli][INFO ] verbose                : False
[ceph_deploy.cli][INFO ] mgr                    : [('node1', 'node1')]
[ceph_deploy.cli][INFO ] overwrite_conf         : False
[ceph_deploy.cli][INFO ] subcommand             : create
[ceph_deploy.cli][INFO ] quiet                  : False
[ceph_deploy.cli][INFO ] cd_conf                : <ceph_deploy.conf.
→cephdeploy.Conf instance at 0x7fa24a321ab8>
[ceph_deploy.cli][INFO ] cluster                : ceph
[ceph_deploy.cli][INFO ] func                   : <function mgr at
→0x7fa24a993578>
[ceph_deploy.cli][INFO ] ceph_conf              : None
[ceph_deploy.cli][INFO ] default_release        : False
[ceph_deploy.mgr][DEBUG ] Deploying mgr, cluster ceph hosts node1:node1
[ceph_deploy][ERROR ] RuntimeError: bootstrap-mgr keyring not found; run 'gatherkeys'
```

#### run 'gatherkeys'

```
cephu@cephadmin:~/my-cluster$ ceph-deploy gatherkeys mon1
[ceph_deploy.conf][DEBUG ] found configuration file at: /home/cephu/.cephdeploy.conf
[ceph_deploy.cli][INFO ] Invoked (1.5.39): /usr/bin/ceph-deploy gatherkeys mon1
[ceph_deploy.cli][INFO ] ceph-deploy options:
[ceph_deploy.cli][INFO ] username                : None
[ceph_deploy.cli][INFO ] verbose                : False
[ceph_deploy.cli][INFO ] overwrite_conf         : False
[ceph_deploy.cli][INFO ] quiet                  : False
[ceph_deploy.cli][INFO ] cd_conf                : <ceph_deploy.conf.
→cephdeploy.Conf instance at 0x7fbfda5f8a70>
[ceph_deploy.cli][INFO ] cluster                : ceph
[ceph_deploy.cli][INFO ] mon                    : ['mon1']
[ceph_deploy.cli][INFO ] func                   : <function gatherkeys at
→0x7fbfda8570c8>
[ceph_deploy.cli][INFO ] ceph_conf              : None
[ceph_deploy.cli][INFO ] default_release        : False
[ceph_deploy.gatherkeys][INFO ] Storing keys in temp directory /tmp/tmpZ8THzr
[mon1][DEBUG ] connection detected need for sudo
[mon1][DEBUG ] connected to host: mon1
[mon1][DEBUG ] detect platform information from remote host
[mon1][DEBUG ] detect machine type
[mon1][DEBUG ] get remote short hostname
[mon1][DEBUG ] fetch remote file
[mon1][INFO ] Running command: sudo /usr/bin/ceph --connect-timeout=25 --
→cluster=ceph --admin-daemon=/var/run/ceph/ceph-mon.mon1.asok mon_status
[mon1][INFO ] Running command: sudo /usr/bin/ceph --connect-timeout=25 --
→cluster=ceph --name mon. --keyring=/var/lib/ceph/mon/ceph-mon1/keyring auth get
→client.admin
```

```
[mon1][INFO ] Running command: sudo /usr/bin/ceph --connect-timeout=25 --
↳cluster=ceph --name mon. --keyring=/var/lib/ceph/mon/ceph-mon1/keyring auth get_
↳client.bootstrap-mds
[mon1][INFO ] Running command: sudo /usr/bin/ceph --connect-timeout=25 --
↳cluster=ceph --name mon. --keyring=/var/lib/ceph/mon/ceph-mon1/keyring auth get_
↳client.bootstrap-mgr
[mon1][INFO ] Running command: sudo /usr/bin/ceph --connect-timeout=25 --
↳cluster=ceph --name mon. --keyring=/var/lib/ceph/mon/ceph-mon1/keyring auth get-or-
↳create client.bootstrap-mgr mon allow profile bootstrap-mgr
[mon1][INFO ] Running command: sudo /usr/bin/ceph --connect-timeout=25 --
↳cluster=ceph --name mon. --keyring=/var/lib/ceph/mon/ceph-mon1/keyring auth get_
↳client.bootstrap-osd
[mon1][INFO ] Running command: sudo /usr/bin/ceph --connect-timeout=25 --
↳cluster=ceph --name mon. --keyring=/var/lib/ceph/mon/ceph-mon1/keyring auth get_
↳client.bootstrap-rgw
[ceph_deploy.gatherkeys][INFO ] keyring 'ceph.client.admin.keyring' already exists
[ceph_deploy.gatherkeys][INFO ] keyring 'ceph.bootstrap-mds.keyring' already exists
[ceph_deploy.gatherkeys][INFO ] Storing ceph.bootstrap-mgr.keyring
[ceph_deploy.gatherkeys][INFO ] keyring 'ceph.mon.keyring' already exists
[ceph_deploy.gatherkeys][INFO ] keyring 'ceph.bootstrap-osd.keyring' already exists
[ceph_deploy.gatherkeys][INFO ] keyring 'ceph.bootstrap-rgw.keyring' already exists
[ceph_deploy.gatherkeys][INFO ] Destroy temp directory /tmp/tmpZ8THzr
cephu@cephadmin:~/my-cluster$
```

```
cephu@cephadmin:~/my-cluster$ ceph-deploy mgr create node1
[ceph_deploy.conf][DEBUG ] found configuration file at: /home/cephu/.cephdeploy.conf
[ceph_deploy.cli][INFO ] Invoked (1.5.39): /usr/bin/ceph-deploy mgr create node1
[ceph_deploy.cli][INFO ] ceph-deploy options:
[ceph_deploy.cli][INFO ] username : None
[ceph_deploy.cli][INFO ] verbose : False
[ceph_deploy.cli][INFO ] mgr : [('node1', 'node1')]
[ceph_deploy.cli][INFO ] overwrite_conf : False
[ceph_deploy.cli][INFO ] subcommand : create
[ceph_deploy.cli][INFO ] quiet : False
[ceph_deploy.cli][INFO ] cd_conf : <ceph_deploy.conf.
↳cephdeploy.Conf instance at 0x7f5d02a1bab8>
[ceph_deploy.cli][INFO ] cluster : ceph
[ceph_deploy.cli][INFO ] func : <function mgr at
↳0x7f5d0308d578>
[ceph_deploy.cli][INFO ] ceph_conf : None
[ceph_deploy.cli][INFO ] default_release : False
[ceph_deploy.mgr][DEBUG ] Deploying mgr, cluster ceph hosts node1:node1
[node1][DEBUG ] connection detected need for sudo
[node1][DEBUG ] connected to host: node1
[node1][DEBUG ] detect platform information from remote host
[node1][DEBUG ] detect machine type
[ceph_deploy.mgr][INFO ] Distro info: Ubuntu 16.04 xenial
[ceph_deploy.mgr][DEBUG ] remote host will use systemd
[ceph_deploy.mgr][DEBUG ] deploying mgr bootstrap to node1
[node1][DEBUG ] write cluster configuration to /etc/ceph/{cluster}.conf
[ceph_deploy.mgr][ERROR ] RuntimeError: config file /etc/ceph/ceph.conf exists with_
↳different content; use --overwrite-conf to overwrite
[ceph_deploy][ERROR ] GenericError: Failed to create 1 MGRs
```

use --overwrite-conf

```
cephu@cephadmin:~/my-cluster$ ceph-deploy --overwrite-conf mgr create mon1
[ceph_deploy.conf][DEBUG ] found configuration file at: /home/cephu/.cephdeploy.conf
```

```
[ceph_deploy.cli][INFO ] Invoked (1.5.39): /usr/bin/ceph-deploy --overwrite-conf mgr_
↪create mon1
[ceph_deploy.cli][INFO ] ceph-deploy options:
[ceph_deploy.cli][INFO ] username                : None
[ceph_deploy.cli][INFO ] verbose                : False
[ceph_deploy.cli][INFO ] mgr                    : [('mon1', 'mon1')]
[ceph_deploy.cli][INFO ] overwrite_conf         : True
[ceph_deploy.cli][INFO ] subcommand             : create
[ceph_deploy.cli][INFO ] quiet                  : False
[ceph_deploy.cli][INFO ] cd_conf                : <ceph_deploy.conf.
↪cephdeploy.Conf instance at 0x7fe415166ab8>
[ceph_deploy.cli][INFO ] cluster                : ceph
[ceph_deploy.cli][INFO ] func                   : <function mgr at_
↪0x7fe4157d8578>
[ceph_deploy.cli][INFO ] ceph_conf              : None
[ceph_deploy.cli][INFO ] default_release        : False
[ceph_deploy.mgr][DEBUG ] Deploying mgr, cluster ceph hosts mon1:mon1
[mon1][DEBUG ] connection detected need for sudo
[mon1][DEBUG ] connected to host: mon1
[mon1][DEBUG ] detect platform information from remote host
[mon1][DEBUG ] detect machine type
[ceph_deploy.mgr][INFO ] Distro info: Ubuntu 16.04 xenial
[ceph_deploy.mgr][DEBUG ] remote host will use systemd
[ceph_deploy.mgr][DEBUG ] deploying mgr bootstrap to mon1
[mon1][DEBUG ] write cluster configuration to /etc/ceph/{cluster}.conf
[mon1][WARNIN] mgr keyring does not exist yet, creating one
[mon1][DEBUG ] create a keyring file
[mon1][DEBUG ] create path if it doesn't exist
[mon1][INFO ] Running command: sudo ceph --cluster ceph --name client.bootstrap-mgr -
↪-keyring /var/lib/ceph/bootstrap-mgr/ceph.keyring auth get-or-create mgr.mon1 mon_
↪allow profile mgr osd allow * mds allow * -o /var/lib/ceph/mgr/ceph-mon1/keyring
[mon1][INFO ] Running command: sudo systemctl enable ceph-mgr@mon1
[mon1][WARNIN] Created symlink from /etc/systemd/system/ceph-mgr.target.wants/ceph-
↪mgr@mon1.service to /lib/systemd/system/ceph-mgr@.service.
[mon1][INFO ] Running command: sudo systemctl start ceph-mgr@mon1
[mon1][INFO ] Running command: sudo systemctl enable ceph.target
cephu@cephadmin:~/my-cluster$
```

### 3.3

```
cephu@cephadmin:~/my-cluster$ ceph-deploy --overwrite-conf osd create node1:sdb_
↪node2:sdb node3:sdsc
...
[node3][DEBUG ] Warning: The kernel is still using the old partition table.
[node3][DEBUG ] The new table will be used at the next reboot or after you
[node3][DEBUG ] run partprobe(8) or kpartx(8)
[node3][DEBUG ] The operation has completed successfully.
[node3][WARNIN] update_partition: Calling partprobe on prepared device /dev/sdc
[node3][WARNIN] command_check_call: Running command: /sbin/udevadm settle --
↪timeout=600
[node3][WARNIN] command: Running command: /usr/bin/flock -s /dev/sdc /sbin/partprobe /
↪dev/sdc
[node3][WARNIN] command_check_call: Running command: /sbin/udevadm settle --
↪timeout=600
[node3][WARNIN] command_check_call: Running command: /sbin/udevadm trigger --
↪action=add --sysname-match sdcl
[node3][INFO ] Running command: sudo systemctl enable ceph.target
[node3][INFO ] checking OSD status...
```



```
[node3][DEBUG ] find the location of an executable
[node3][INFO ] Running command: sudo /usr/bin/ceph --cluster=ceph osd stat --
↪format=json
[node3][WARNIN] there is 1 OSD down
[node3][WARNIN] there is 1 OSD out
[ceph_deploy.osd][DEBUG ] Host node3 is now ready for osd use.
cephu@cephadmin:~/my-cluster$
```

### 3.4

```
cephu@cephadmin:~/my-cluster$ ssh node1 sudo ceph health
HEALTH_OK
cephu@cephadmin:~/my-cluster$ ssh node2 sudo ceph health
HEALTH_OK
cephu@cephadmin:~/my-cluster$ ssh node3 sudo ceph health
HEALTH_OK
cephu@cephadmin:~/my-cluster$ ssh node3 sudo ceph -s
cluster:
id:      d0aa5af1-4f8e-4953-9448-7f1b2448b8a5
health: HEALTH_OK

services:
mon: 1 daemons, quorum mon1
mgr: mon1(active)
osd: 3 osds: 3 up, 3 in

data:
pools: 0 pools, 0 pgs
objects: 0 objects, 0 bytes
usage: 3164 MB used, 80500 MB / 83664 MB avail
pgs:

cephu@cephadmin:~/my-cluster$
```

## expanding your cluster

### ADD A METADATA SERVER

```
ceph-deploy mds create node1
```

### ADDING MONITORS

```
ceph-deploy mon add node2 node3
```

```
cephu@cephadmin:~/my-cluster$ ceph-deploy mon add cephfsn2
cephu@cephadmin:~/my-cluster$ ceph-deploy mon add cephfsn3
```

```
cephu@cephadmin:~/my-cluster$ ssh cephfsn2 ceph quorum_status --format json-pretty
2017-10-24 10:40:24.959942 7f261141a700 -1 auth: unable to find a keyring on /etc/
↪ceph/ceph.client.admin.keyring,/etc/ceph/ceph.keyring,/etc/ceph/keyring,/etc/ceph/
↪keyring.bin,: (2) No such file or directory
2017-10-24 10:40:24.959973 7f261141a700 -1 monclient: ERROR: missing keyring, cannot_
↪use cephx for authentication
2017-10-24 10:40:24.959975 7f261141a700 0 librados: client.admin initialization_
↪error (2) No such file or directory
```

```
[errno 2] error connecting to the cluster
cephu@cephadmin:~/my-cluster$ ssh cephfsn2 sudo ceph quorum_status --format json-
↳pretty

{
  "election_epoch": 14,
  "quorum": [
    0,
    1,
    2
  ],
  "quorum_names": [
    "cephfsn2",
    "mon1",
    "cephfsn3"
  ],
  "quorum_leader_name": "cephfsn2",
  "monmap": {
    "epoch": 3,
    "fsid": "d0aa5af1-4f8e-4953-9448-7f1b2448b8a5",
    "modified": "2017-10-24 10:32:19.273831",
    "created": "2017-10-23 15:22:32.766470",
    "features": {
      "persistent": [
        "kraken",
        "luminous"
      ],
      "optional": []
    },
    "mons": [
      {
        "rank": 0,
        "name": "cephfsn2",
        "addr": "192.168.31.113:6789/0",
        "public_addr": "192.168.31.113:6789/0"
      },
      {
        "rank": 1,
        "name": "mon1",
        "addr": "192.168.31.114:6789/0",
        "public_addr": "192.168.31.114:6789/0"
      },
      {
        "rank": 2,
        "name": "cephfsn3",
        "addr": "192.168.31.173:6789/0",
        "public_addr": "192.168.31.173:6789/0"
      }
    ]
  }
}
cephu@cephadmin:~/my-cluster$
```

## ADDING MANAGERS

```

cephu@cephadmin:~/my-cluster$ ceph-deploy mgr create node2 node3
[ceph_deploy.conf][DEBUG ] found configuration file at: /home/cephu/.cephdeploy.conf
[ceph_deploy.cli][INFO ] Invoked (1.5.39): /usr/bin/ceph-deploy mgr create node2_
↪node3
[ceph_deploy.cli][INFO ] ceph-deploy options:
[ceph_deploy.cli][INFO ] username                : None
[ceph_deploy.cli][INFO ] verbose                : False
[ceph_deploy.cli][INFO ] mgr                    : [('node2', 'node2'), (
↪'node3', 'node3')]
[ceph_deploy.cli][INFO ] overwrite_conf         : False
[ceph_deploy.cli][INFO ] subcommand             : create
[ceph_deploy.cli][INFO ] quiet                  : False
[ceph_deploy.cli][INFO ] cd_conf                : <ceph_deploy.conf.
↪cephdeploy.Conf instance at 0x7fb9043a4ab8>
[ceph_deploy.cli][INFO ] cluster                : ceph
[ceph_deploy.cli][INFO ] func                   : <function mgr at_
↪0x7fb904a16578>
[ceph_deploy.cli][INFO ] ceph_conf              : None
[ceph_deploy.cli][INFO ] default_release        : False
[ceph_deploy.mgr][DEBUG ] Deploying mgr, cluster ceph hosts node2:node2 node3:node3
[node2][DEBUG ] connection detected need for sudo
[node2][DEBUG ] connected to host: node2
[node2][DEBUG ] detect platform information from remote host
[node2][DEBUG ] detect machine type
[ceph_deploy.mgr][INFO ] Distro info: Ubuntu 16.04 xenial
[ceph_deploy.mgr][DEBUG ] remote host will use systemd
[ceph_deploy.mgr][DEBUG ] deploying mgr bootstrap to node2
[node2][DEBUG ] write cluster configuration to /etc/ceph/{cluster}.conf
[node2][WARNIN] mgr keyring does not exist yet, creating one
[node2][DEBUG ] create a keyring file
[node2][DEBUG ] create path if it doesn't exist
[node2][INFO ] Running command: sudo ceph --cluster ceph --name client.bootstrap-mgr_
↪--keyring /var/lib/ceph/bootstrap-mgr/ceph.keyring auth get-or-create mgr.node2 mon_
↪allow profile mgr osd allow * mds allow * -o /var/lib/ceph/mgr/ceph-node2/keyring
[node2][INFO ] Running command: sudo systemctl enable ceph-mgr@node2
[node2][WARNIN] Created symlink from /etc/systemd/system/ceph-mgr.target.wants/ceph-
↪mgr@node2.service to /lib/systemd/system/ceph-mgr@.service.
[node2][INFO ] Running command: sudo systemctl start ceph-mgr@node2
[node2][INFO ] Running command: sudo systemctl enable ceph.target
[node3][DEBUG ] connection detected need for sudo
[node3][DEBUG ] connected to host: node3
[node3][DEBUG ] detect platform information from remote host
[node3][DEBUG ] detect machine type
[ceph_deploy.mgr][INFO ] Distro info: Ubuntu 16.04 xenial
[ceph_deploy.mgr][DEBUG ] remote host will use systemd
[ceph_deploy.mgr][DEBUG ] deploying mgr bootstrap to node3
[node3][DEBUG ] write cluster configuration to /etc/ceph/{cluster}.conf
[node3][WARNIN] mgr keyring does not exist yet, creating one
[node3][DEBUG ] create a keyring file
[node3][DEBUG ] create path if it doesn't exist
[node3][INFO ] Running command: sudo ceph --cluster ceph --name client.bootstrap-mgr_
↪--keyring /var/lib/ceph/bootstrap-mgr/ceph.keyring auth get-or-create mgr.node3 mon_
↪allow profile mgr osd allow * mds allow * -o /var/lib/ceph/mgr/ceph-node3/keyring
[node3][INFO ] Running command: sudo systemctl enable ceph-mgr@node3
[node3][WARNIN] Created symlink from /etc/systemd/system/ceph-mgr.target.wants/ceph-
↪mgr@node3.service to /lib/systemd/system/ceph-mgr@.service.

```

```
[node3][INFO ] Running command: sudo systemctl start ceph-mgr@node3
[node3][INFO ] Running command: sudo systemctl enable ceph.target
cephu@cephadmin:~/my-cluster$
```

```
cephu@cephadmin:~/my-cluster$ ssh node1 sudo ceph -s
cluster:
id:      d0aa5af1-4f8e-4953-9448-7f1b2448b8a5
health: HEALTH_WARN
        clock skew detected on mon.cephfsn3

services:
mon: 3 daemons, quorum cephfsn2,mon1,cephfsn3
mgr: mon1(active), standbys: node2, node3
osd: 3 osds: 3 up, 3 in

data:
pools:  0 pools, 0 pgs
objects: 0 objects, 0 bytes
usage:   3164 MB used, 80500 MB / 83664 MB avail
pgs:

cephu@cephadmin:~/my-cluster$ ssh node3 sudo ceph -s
cluster:
id:      d0aa5af1-4f8e-4953-9448-7f1b2448b8a5
health: HEALTH_WARN
        clock skew detected on mon.cephfsn3

services:
mon: 3 daemons, quorum cephfsn2,mon1,cephfsn3
mgr: mon1(active), standbys: node2, node3
osd: 3 osds: 3 up, 3 in

data:
pools:  0 pools, 0 pgs
objects: 0 objects, 0 bytes
usage:   3164 MB used, 80500 MB / 83664 MB avail
pgs:

cephu@cephadmin:~/my-cluster$
```

## ADD AN RGW INSTANCE

```
ceph-deploy rgw create node1
```

## STORING/RETRIEVING OBJECT DATA

```
cephu@cephadmin:~/my-cluster$ sudo apt install ceph-common -y
cephu@cephadmin:~/my-cluster$ ls /etc/ceph/*
cephu@cephadmin:~/my-cluster$ ceph-deploy admin cephadmin
cephu@cephadmin:~/my-cluster$ ls /etc/ceph/*  ## 3
cephu@cephadmin:~/my-cluster$ ceph-deploy gatherkeys cephadmin
```

admin ceph-client

```
jlch@k-m:/etc/apt/sources.list.d$ sudo chmod +r /etc/ceph/ceph.client.admin.keyring
```

```
jlch@k-m:/etc/apt/sources.list.d$ echo {Test-data} > testfile.txt
jlch@k-m:/etc/apt/sources.list.d$ ceph osd pool create mytest 8
jlch@k-m:/etc/apt/sources.list.d$ rados put test-object-1 testfile.txt --pool=mytest
jlch@k-m:/etc/apt/sources.list.d$ rados -p mytest ls
jlch@k-m:/etc/apt/sources.list.d$ ceph osd map mytest test-object-1
```

## Block Device Quick Start

### env

192.168.31.172 ceph-client

hostname ceph-client

## INSTALL CEPH

admin

```
ceph-deploy install ceph-client
ceph-deploy admin ceph-client
```

ceph-client

```
sudo chmod +r /etc/ceph/ceph.client.admin.keyring
```

## CREATE A BLOCK DEVICE POOL

admin

admin rbd

sudo apt install ceph-common

```
cephu@cephadmin:~/my-cluster$ sudo apt install ceph-common -y
cephu@cephadmin:~/my-cluster$ rbd pool init jlch
2017-10-24 15:57:45.951917 7fde4fa6e0c0 -1 auth: unable to find a keyring on /etc/
↪ceph/ceph.client.admin.keyring,/etc/ceph/ceph.keyring,/etc/ceph/keyring,/etc/ceph/
↪keyring.bin,: (2) No such file or directory
2017-10-24 15:57:45.951937 7fde4fa6e0c0 -1 monclient: ERROR: missing keyring, cannot
↪use cephx for authentication
2017-10-24 15:57:45.951942 7fde4fa6e0c0 0 librados: client.admin initialization
↪error (2) No such file or directory
rbd: couldn't connect to the cluster!
cephu@cephadmin:~/my-cluster$
```

ceph-client

```
jlch@k-m:/etc/apt/sources.list.d$ sudo ls /etc/ceph/* -l
[sudo] password for jlch:
-rw-r--r-- 1 root root 63 Oct 24 15:32 /etc/ceph/ceph.client.admin.keyring
-rw-r--r-- 1 root root 249 Oct 24 15:32 /etc/ceph/ceph.conf
```

```
-rw-r--r-- 1 root root 92 Apr 21 2017 /etc/ceph/rbdmap
-rw----- 1 root root 0 Oct 24 11:20 /etc/ceph/tmp2IJh4C
jlch@k-m:/etc/apt/sources.list.d$
```

unable to find a keyring on \*\*\*?

osd create pool pool init .

pool mytest.

```
rbd pool init mytest
```

## CONFIGURE A BLOCK DEVICE

On the ceph-client node

```
cephu@ceph-client:~$ rbd create mytest --size 4096 -m mon1 -k /etc/ceph/ceph.client.
↪admin.keyring
rbd: error opening default pool 'rbd'
Ensure that the default pool has been created or specify an alternate pool name.
cephu@ceph-client:~$
```

opening default pool 'rbd' pool rbd pool mytest 21 pool rbd, 2pool, pool mytest

2.

1

ceph-admin

```
cephu@cephadmin:~/my-cluster$ ceph osd pool create rbd 8
pool 'rbd' created
cephu@cephadmin:~/my-cluster$ rbd pool init rbd
cephu@cephadmin:~/my-cluster$
```

ceph-client

```
cephu@ceph-client:~$ rbd create foo --size 4096 -m mon1 -k /etc/ceph/ceph.client.
↪admin.keyring
```

2

```
cephu@ceph-client:~$ rbd help create # -p pool
cephu@ceph-client:~$ rbd create foo --size 4096 -m mon1 -k /etc/ceph/ceph.client.
↪admin.keyring -p mytest
cephu@ceph-client:~$
```

On the ceph-client node, map the image to a block device.

```
cephu@ceph-client:~$ sudo rbd map foo --image client.admin -m mon1 -p mytest
rbd: sysfs write failed
rbd: error opening image client.admin: (2) No such file or directory
In some cases useful info is found in syslog - try "dmesg | tail".
rbd: map failed: (110) Connection timed out
cephu@ceph-client:~$
```

```
cephu@ceph-client:~$ dmesg | tail -n 100
...
[692522.117250] libceph: mon0 192.168.31.114:6789 missing required protocol features
[692532.096436] libceph: mon0 192.168.31.114:6789 feature set mismatch, my_
↪106b84a842a42 < server's 40106b84a842a42, missing 4000000000000000
[692532.099897] libceph: mon0 192.168.31.114:6789 missing required protocol features
[692542.111938] libceph: mon0 192.168.31.114:6789 feature set mismatch, my_
↪106b84a842a42 < server's 40106b84a842a42, missing 4000000000000000
[692542.115603] libceph: mon0 192.168.31.114:6789 missing required protocol features
```

<http://www.hl10502.com/2017/08/01/ceph-rbdmap-error-1/>

<http://blog.csdn.net/lk142500/article/details/78275910>

admin

```
cephu@cephadmin:~/my-cluster$ ceph -v
ceph version 12.2.1 (3e7492b9ada8bdc9a5cd0feafd42fbca27f9c38e) luminous (stable)
cephu@cephadmin:~/my-cluster$ ceph osd crush tunables optimal
adjusted tunables profile to optimal
cephu@cephadmin:~/my-cluster$ ceph osd crush rule ls
replicated_rule
cephu@cephadmin:~/my-cluster$ ceph osd crush rule dump
[
  {
    "rule_id": 0,
    "rule_name": "replicated_rule",
    "ruleset": 0,
    "type": 1,
    "min_size": 1,
    "max_size": 10,
    "steps": [
      {
        "op": "take",
        "item": -1,
        "item_name": "default"
      },
      {
        "op": "chooseleaf_firstn",
        "num": 0,
        "type": "host"
      },
      {
        "op": "emit"
      }
    ]
  }
]

cephu@cephadmin:~/my-cluster$ ceph osd crush show-tunables
{
  "choose_local_tries": 0,
  "choose_local_fallback_tries": 0,
  "choose_total_tries": 50,
  "chooseleaf_descend_once": 1,
  "chooseleaf_vary_r": 1,
  "chooseleaf_stable": 1,
  "straw_calc_version": 1,
  "allowed_bucket_algs": 54,
```

```

    "profile": "jewel",
    "optimal_tunables": 1,
    "legacy_tunables": 0,
    "minimum_required_version": "jewel",
    "require_feature_tunables": 1,
    "require_feature_tunables2": 1,
    "has_v2_rules": 0,
    "require_feature_tunables3": 1,
    "has_v3_rules": 0,
    "has_v4_buckets": 1,
    "require_feature_tunables5": 1,
    "has_v5_rules": 0
}

cephu@cephadmin:~/my-cluster$ ceph osd crush -h

General usage:
=====
usage: ceph [-h] [-c CEPHCONF] [-i INPUT_FILE] [-o OUTPUT_FILE]
          [--id CLIENT_ID] [--name CLIENT_NAME] [--cluster CLUSTER]
          [--admin-daemon ADMIN_SOCKET] [-s] [-w] [--watch-debug]
          [--watch-info] [--watch-sec] [--watch-warn] [--watch-error]
          [--watch-channel WATCH_CHANNEL] [--version] [--verbose]
          [--concise] [-f {json,json-pretty,xml,xml-pretty,plain}]
          [--connect-timeout CLUSTER_TIMEOUT]

Ceph administration tool

optional arguments:
-h, --help                request mon help
-c CEPHCONF, --conf CEPHCONF
                           ceph configuration file
-i INPUT_FILE, --in-file INPUT_FILE
                           input file, or "-" for stdin
-o OUTPUT_FILE, --out-file OUTPUT_FILE
                           output file, or "-" for stdout
--id CLIENT_ID, --user CLIENT_ID
                           client id for authentication
--name CLIENT_NAME, -n CLIENT_NAME
                           client name for authentication
--cluster CLUSTER         cluster name
--admin-daemon ADMIN_SOCKET
                           submit admin-socket commands ("help" for help)
-s, --status              show cluster status
-w, --watch                watch live cluster changes
--watch-debug             watch debug events
--watch-info              watch info events
--watch-sec               watch security events
--watch-warn              watch warn events
--watch-error             watch error events
--watch-channel WATCH_CHANNEL
                           which log channel to follow when using -w/--watch. One
                           of ['cluster', 'audit', '*']
--version, -v             display version
--verbose                 make verbose
--concise                 make less verbose
-f {json,json-pretty,xml,xml-pretty,plain}, --format {json,json-pretty,xml,xml-pretty,
↳ plain}

```



```
--connect-timeout CLUSTER_TIMEOUT
    set a timeout for connecting to the cluster

Local commands:
=====

ping <mon.id>                Send simple presence/life test to a mon
                             <mon.id> may be 'mon.*' for all mons
daemon {type.id|path} <cmd>
    Same as --admin-daemon, but auto-find admin socket
daemonperf {type.id | path} [stat-pats] [priority] [<interval>] [<count>]
daemonperf {type.id | path} list|ls [stat-pats] [priority]
    Get selected perf stats from daemon/admin socket
    Optional shell-glob comma-delim match string stat-pats
    Optional selection priority (can abbreviate name):
    critical, interesting, useful, noninteresting, debug
    List shows a table of all available stats
    Run <count> times (default forever),
    once per <interval> seconds (default 1)

Monitor commands:
=====
osd crush add <osdname (id|osd.id)> <float[0.0-]> <args> [<args>...]
    ↪ add or update crushmap position and weight for <name>
    ↪ with <weight> and location <args>
osd crush add-bucket <name> <type>
    ↪ add no-parent (probably root) crush bucket <name> of
    ↪ type <type>
osd crush class ls
    ↪ list all crush device classes
osd crush class ls-osd <class>
    ↪ list all osds belonging to the specific <class>
osd crush class rename <srcname> <dstname>
    ↪ rename crush device class <srcname> to <dstname>
osd crush create-or-move <osdname (id|osd.id)> <float[0.0-]> <args> [<args>...]
    ↪ create entry or move existing entry for <name>
    ↪ <weight> at/to location <args>
osd crush dump
    ↪ dump crush map
osd crush get-tunable straw_calc_version
    ↪ get crush tunable <tunable>
osd crush link <name> <args> [<args>...]
    ↪ link existing entry for <name> under location <args>
osd crush ls <node>
    ↪ list items beneath a node in the CRUSH tree
osd crush move <name> <args> [<args>...]
    ↪ move existing entry for <name> to location <args>
osd crush remove <name> {<ancestor>}
    ↪ remove <name> from crush map (everywhere, or just at
    ↪ <ancestor>)
osd crush rename-bucket <srcname> <dstname>
    ↪ rename bucket <srcname> to <dstname>
osd crush reweight <name> <float[0.0-]>
    ↪ change <name>'s weight to <weight> in crush map
osd crush reweight-all
    ↪ recalculate the weights for the tree to ensure they
    ↪ sum correctly
```

```

osd crush reweight-subtree <name> <float[0.0-]>
↳ change all leaf items beneath <name> to <weight> in
↳crush map
osd crush rm <name> {<ancestor>}
↳ remove <name> from crush map (everywhere, or just at
↳<ancestor>)
osd crush rm-device-class <ids> [<ids>...]
↳ remove class of the osd(s) <id> [<id>...], or use
↳<all|any|*> to remove all.
osd crush rule create-erasure <name> {<profile>}
↳ create crush rule <name> for erasure coded pool
↳created with <profile> (default default)
osd crush rule create-replicated <name> <root> <type> {<class>}
↳ create crush rule <name> for replicated pool to
↳start from <root>, replicate across buckets of type <type>, using a
↳
↳choose mode of <firstn|indep> (default firstn; indep
↳best for erasure pools)
osd crush rule create-simple <name> <root> <type> {firstn|indep}
↳ create crush rule <name> to start from <root>,
↳replicate across buckets of type <type>, using a choose mode of
↳
↳<firstn|indep> (default firstn; indep best for
↳erasure pools)
osd crush rule dump {<name>}
↳ dump crush rule <name> (default all)
osd crush rule ls
↳ list crush rules
osd crush rule ls-by-class <class>
↳ list all crush rules that reference the same <class>
osd crush rule rename <srcname> <dstname>
↳ rename crush rule <srcname> to <dstname>
osd crush rule rm <name>
↳ remove crush rule <name>
osd crush set <osdname (id|osd.id)> <float[0.0-]> <args> [<args>...]
↳ update crushmap position and weight for <name> to
↳<weight> with location <args>
osd crush set {<int>}
↳ set crush map from input file
osd crush set-device-class <class> <ids> [<ids>...]
↳ set the <class> of the osd(s) <id> [<id>...], or use
↳<all|any|*> to set all.
osd crush set-tunable straw_calc_version <int>
↳ set crush tunable <tunable> to <value>
osd crush show-tunables
↳ show current crush tunables
osd crush swap-bucket <source> <dest> [--yes-i-really-mean-it]
↳ swap existing bucket contents from (orphan) bucket
↳<source> and <target>
osd crush tree [--show-shadow]
↳ dump crush buckets and items in a tree view
osd crush tunables legacy|argonaut|bobtail|firefly|hammer|jewel|optimal|default
↳ set crush tunables values to <profile>
osd crush unlink <name> {<ancestor>}
↳ unlink <name> from crush map (everywhere, or just at
↳<ancestor>)
osd crush weight-set create <poolname> flat|positional
↳ create a weight-set for a given pool

```

```

osd crush weight-set create-compat
↪ create a default backward-compatible weight-set
osd crush weight-set dump
↪ dump crush weight sets
osd crush weight-set ls
↪ list crush weight sets
osd crush weight-set reweight <poolname> <item> <float[0.0-]> [<float[0.0-]>...]
↪ set weight for an item (bucket or osd) in a pool's
↪ weight-set
osd crush weight-set reweight-compat <item> <float[0.0-]> [<float[0.0-]>...]
↪ set weight for an item (bucket or osd) in the
↪ backward-compatible weight-set
osd crush weight-set rm <poolname>
↪ remove the weight-set for a given pool
osd crush weight-set rm-compat
↪ remove the backward-compatible weight-set
cephu@cephadmin:~/my-cluster$ ceph osd crush tunables hammer
adjusted tunables profile to hammer
cephu@cephadmin:~/my-cluster$ ceph osd crush show-tunables
{
  "choose_local_tries": 0,
  "choose_local_fallback_tries": 0,
  "choose_total_tries": 50,
  "chooseleaf_descend_once": 1,
  "chooseleaf_vary_r": 1,
  "chooseleaf_stable": 0,
  "straw_calc_version": 1,
  "allowed_bucket_algs": 54,
  "profile": "hammer",
  "optimal_tunables": 0,
  "legacy_tunables": 0,
  "minimum_required_version": "hammer",
  "require_feature_tunables": 1,
  "require_feature_tunables2": 1,
  "has_v2_rules": 0,
  "require_feature_tunables3": 1,
  "has_v3_rules": 0,
  "has_v4_buckets": 1,
  "require_feature_tunables5": 0,
  "has_v5_rules": 0
}
cephu@cephadmin:~/my-cluster$

```

## ceph-client

```

cephu@ceph-client:~$ ceph -v
ceph version 12.2.1 (3e7492b9ada8bdc9a5cd0feafd42fbca27f9c38e) luminous (stable)
cephu@ceph-client:~$ rbd ls
foo
cephu@ceph-client:~$ sudo rbd map foo --name client.admin
/dev/rbd0
cephu@ceph-client:~$ ls /dev/rbd
rbd/  rbd0
cephu@ceph-client:~$ ls /dev/rbd/rbd/foo
/dev/rbd/rbd/foo
cephu@ceph-client:~$ ls /dev/rbd0
/dev/rbd0

```

```
cephu@ceph-client:~$ ls /dev/rbd0 -l
brw-rw---- 1 root disk 251, 0 Oct 25 12:03 /dev/rbd0
cephu@ceph-client:~$
```

Use the block device by creating a file system on the ceph-client node.

```
cephu@ceph-client:~$ sudo mkfs.ext4 -m0 /dev/rbd/rbd/foo
mke2fs 1.42.13 (17-May-2015)
Discarding device blocks: done
Creating filesystem with 1048576 4k blocks and 262144 inodes
Filesystem UUID: d83ebc8d-1956-4d81-b9db-391f939634ac
Superblock backups stored on blocks:
    32768, 98304, 163840, 229376, 294912, 819200, 884736

Allocating group tables: done
Writing inode tables: done
Creating journal (32768 blocks): done
Writing superblocks and filesystem accounting information: done

cephu@ceph-client:~$
```

Mount the file system on the ceph-client node.

```
cephu@ceph-client:~$ sudo mkdir /mnt/ceph-block-device
cephu@ceph-client:~$ sudo mount /dev/rbd/rbd/foo /mnt/ceph-block-device
cephu@ceph-client:~$ cd /mnt/ceph-block-device
cephu@ceph-client:/mnt/ceph-block-device$ ls
lost+found
cephu@ceph-client:/mnt/ceph-block-device$
```

## Filesystem Quick Start

<http://docs.ceph.com/docs/master/start/quick-cephfs/>

## PREREQUISITES

admin

```
ceph -s
```

mds monitor

moniter 192.168.31.114

```
cephu@mon1:~$ ps -ef | grep ceph
root      7541   7227   0 Oct23 pts/0    00:00:00 su - cephu
cephu     7542   7541   0 Oct23 pts/0    00:00:00 -su
cephu    20793   7542   0 12:39 pts/0    00:00:00 ps -ef
cephu    20794   7542   0 12:39 pts/0    00:00:00 grep --color=auto ceph
ceph     21275     1   0 Oct23 ?          00:07:50 /usr/bin/ceph-mon -f --cluster ceph --
↪id mon1 --setuser ceph --setgroup ceph
ceph     22756     1   0 Oct24 ?          00:03:30 /usr/bin/ceph-mgr -f --cluster ceph --
↪id mon1 --setuser ceph --setgroup ceph
ceph     25536     1   0 Oct24 ?          00:04:25 /usr/bin/ceph-osd -f --cluster ceph --
↪id 0 --setuser ceph --setgroup ceph
```

```

ceph      26870      1  0 Oct24 ?          00:00:30 /usr/bin/ceph-mds -f --cluster ceph --
↪id node1 --setuser ceph --setgroup ceph
ceph      29545      1  0 Oct24 ?          00:03:06 /usr/bin/radosgw -f --cluster ceph --
↪name client.rgw.node1 --setuser ceph --setgroup ceph
cephu@mon1:~$
cephu@mon1:~$ ps -ef | grep ceph | grep mds
cephu      21152    7542  0 12:45 pts/0      00:00:00 grep --color=auto mds
ceph      26870      1  0 Oct24 ?          00:00:30 /usr/bin/ceph-mds -f --cluster ceph --
↪id node1 --setuser ceph --setgroup ceph
cephu@mon1:~$

```

## CREATE A FILESYSTEM

admin

```

cephu@cephadmin:~/my-cluster$ ceph osd pool create cephfs_data 8
pool 'cephfs_data' created
cephu@cephadmin:~/my-cluster$ ceph osd pool create cephfs_metadata 8
pool 'cephfs_metadata' created
cephu@cephadmin:~/my-cluster$ ceph fs new cephfs-jlch cephfs_metadata cephfs_data
new fs with metadata pool 8 and data pool 7
cephu@cephadmin:~/my-cluster$ ceph fs ls
name: cephfs-jlch, metadata pool: cephfs_metadata, data pools: [cephfs_data ]
cephu@cephadmin:~/my-cluster$
cephu@cephadmin:~/my-cluster$ ceph mds stat
cephfs-jlch-1/1/1 up {0=node1=up:active}
cephu@cephadmin:~/my-cluster$

```

## CREATE A SECRET FILE

admin

```

cephu@cephadmin:~/my-cluster$ cat ceph.client.admin.keyring
[client.admin]
    key = AQCTj+5ZnNTvGRAA2RxAGcIQZJnaJSPEz4jdGw==
cephu@cephadmin:~/my-cluster$ echo "AQCTj+5ZnNTvGRAA2RxAGcIQZJnaJSPEz4jdGw==" > admin.
↪secret
cephu@cephadmin:~/my-cluster$ ls
admin.secret          ceph.bootstrap-osd.keyring  ceph.conf              ↪
↪testfile.txt
ceph.bootstrap-mds.keyring  ceph.bootstrap-rgw.keyring  ceph-deploy-ceph.log
ceph.bootstrap-mgr.keyring  ceph.client.admin.keyring  ceph.mon.keyring
cephu@cephadmin:~/my-cluster$ cat admin.secret
AQCTj+5ZnNTvGRAA2RxAGcIQZJnaJSPEz4jdGw==
cephu@cephadmin:~/my-cluster$

```

## KERNEL DRIVER

```

cephu@cephadmin:~/my-cluster$ sudo mkdir /mnt/mycephfs
cephu@cephadmin:~/my-cluster$ sudo mount -t ceph 192.168.31.114:6789:/ /mnt/mycephfs
mount error 22 = Invalid argument

```

```
cephu@cephadmin:~/my-cluster$ sudo mount -t ceph 192.168.31.114:6789:/ /mnt/mycephfs -
↳o name=admin,secretfile=admin.secret
cephu@cephadmin:~/my-cluster$
```

cephfs 382G = 16G + 16G + 50G

```
cephu@cephadmin:~/my-cluster$ df -h
Filesystem                Size      Used Avail Use% Mounted on
udev                      3.9G         0   3.9G   0% /dev
tmpfs                     799M       79M   720M  10% /run
/dev/mapper/ubuntu--vg-root 71G     4.7G    62G   8% /
tmpfs                     3.9G         0   3.9G   0% /dev/shm
tmpfs                     5.0M         0   5.0M   0% /run/lock
tmpfs                     3.9G         0   3.9G   0% /sys/fs/cgroup
/dev/loop0                84M        84M         0 100% /snap/core/3017
/dev/loop2                82M        82M         0 100% /snap/core/2898
/dev/sda1                 472M       58M   391M  13% /boot
tmpfs                     799M         0   799M   0% /run/user/1000
/dev/loop3                84M        84M         0 100% /snap/core/3247
192.168.31.114:6789:/      82G     4.2G    78G   6% /mnt/mycephfs
cephu@cephadmin:~/my-cluster$
```

## FILESYSTEM IN USER SPACE (FUSE)

```
cephu@cephadmin:~/my-cluster$ sudo ceph-fuse -k ./ceph.client.admin.keyring -m 192.
↳168.31.114:6789 ~/mycephfs
sudo: ceph-fuse: command not found
cephu@cephadmin:~/my-cluster$
```

ceph-client

ceph-client

```
cephu@ceph-client:~$ which ceph-fuse
cephu@ceph-client:~$ apt search ceph-fuse
Sorting... Done
Full Text Search... Done
ceph-fuse/stable 10.2.10-1xenial amd64
FUSE-based client for the Ceph distributed file system

ceph-fuse-dbgs/stable 10.2.10-1xenial amd64
debugging symbols for ceph-fuse

cephu@ceph-client:~$ sudo apt install ceph-fuse
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following packages were automatically installed and are no longer required:
libboost-program-options1.58.0 libboost-random1.58.0 libboost-regex1.58.0 libcephfs1
↳libfcgi0ldbl libllvm3.8
libmircommon5 linux-headers-4.4.0-31 linux-headers-4.4.0-31-generic linux-image-4.4.0-
↳31-generic
linux-image-extra-4.4.0-31-generic
Use 'sudo apt autoremove' to remove them.
The following NEW packages will be installed:
ceph-fuse
```

```
0 upgraded, 1 newly installed, 0 to remove and 48 not upgraded.
Need to get 2,926 kB of archives.
After this operation, 7,873 kB of additional disk space will be used.
Get:1 https://download.ceph.com/debian-jewel xenial/main amd64 ceph-fuse amd64 10.2.
↪10-lxenial [2,926 kB]
Fetched 2,926 kB in 20s (145 kB/s)
Selecting previously unselected package ceph-fuse.
(Reading database ... 152232 files and directories currently installed.)
Preparing to unpack .../ceph-fuse_10.2.10-lxenial_amd64.deb ...
Unpacking ceph-fuse (10.2.10-lxenial) ...
Processing triggers for man-db (2.7.5-1) ...
Setting up ceph-fuse (10.2.10-lxenial) ...

cephu@ceph-client:~$ sudo mkdir ~/mycephfs
cephu@ceph-client:~$ sudo ceph-fuse -m 192.168.31.114:6789 ~/mycephfs
ceph-fuse[28422]: starting ceph client
2017-10-25 14:10:35.041539 7fb1f6430f00 -l init, newargv = 0x5608ad4acf60 newargc=11
ceph-fuse[28422]: starting fuse
cephu@ceph-client:~$
```

```
cephu@ceph-client:~$ ceph mds stat
cephfs-jlch-1/1/1 up {0=node1=up:active}
cephu@ceph-client:~$ df -h
Filesystem                Size      Used Avail Use% Mounted on
udev                      3.9G         0   3.9G   0% /dev
tmpfs                      799M      9.0M   790M   2% /run
/dev/mapper/ubuntu--vg-root 35G      4.2G    29G  13% /
tmpfs                      3.9G      528K   3.9G   1% /dev/shm
tmpfs                      5.0M         0   5.0M   0% /run/lock
tmpfs                      3.9G         0   3.9G   0% /sys/fs/cgroup
/dev/sda1                  472M     153M   295M  35% /boot
tmpfs                      799M         0   799M   0% /run/user/113
tmpfs                      799M         0   799M   0% /run/user/1000
/dev/rbd0                   3.9G      8.0M   3.8G   1% /mnt/ceph-block-device
ceph-fuse                   82G      4.2G    78G   6% /home/cephu/mycephfs
cephu@ceph-client:~$
```

## ADDITIONAL INFORMATION

### admin

```
cephu@cephadmin:~/my-cluster$ df -h
Filesystem                Size      Used Avail Use% Mounted on
udev                      3.9G         0   3.9G   0% /dev
tmpfs                      799M       79M   720M  10% /run
/dev/mapper/ubuntu--vg-root 71G      4.7G    62G   8% /
tmpfs                      3.9G         0   3.9G   0% /dev/shm
tmpfs                      5.0M         0   5.0M   0% /run/lock
tmpfs                      3.9G         0   3.9G   0% /sys/fs/cgroup
/dev/loop0                 84M      84M         0 100% /snap/core/3017
/dev/loop2                 82M      82M         0 100% /snap/core/2898
/dev/sda1                  472M      58M   391M  13% /boot
tmpfs                      799M         0   799M   0% /run/user/1000
```

```
/dev/loop3          84M   84M    0 100% /snap/core/3247
192.168.31.114:6789:/ 82G  4.2G   78G   6% /mnt/mycephfs
cephu@cephadmin:~/my-cluster$ touch /mnt/mycephfs/h.txt
touch: cannot touch '/mnt/mycephfs/h.txt': Permission denied
cephu@cephadmin:~/my-cluster$
```

#### Permission denied

```
cephu@cephadmin:~/my-cluster$ sudo touch /mnt/mycephfs/h.txt
cephu@cephadmin:~/my-cluster$ sudo vi /mnt/mycephfs/h.txt
cephu@cephadmin:~/my-cluster$ sudo ls -l /mnt/mycephfs/
total 1
-rw-r--r-- 1 root root 14 Oct 25 14:33 h.txt
```

```
cephu@cephadmin:~/my-cluster$ sudo chown -R cephu:cephu /mnt/mycephfs/
cephu@cephadmin:~/my-cluster$ touch /mnt/mycephfs/a.txt
cephu@cephadmin:~/my-cluster$ echo "hello, world" > /mnt/mycephfs/b.txt
cephu@cephadmin:~/my-cluster$ cat /mnt/mycephfs/b.txt
hello, world
cephu@cephadmin:~/my-cluster$ sudo ls -l /mnt/mycephfs/
total 1
-rw-rw-r-- 1 cephu cephu  0 Oct 25 14:34 a.txt
-rw-rw-r-- 1 cephu cephu  2 Oct 25 14:35 b.txt
-rw-r--r-- 1 cephu cephu 14 Oct 25 14:33 h.txt
cephu@cephadmin:~/my-cluster$
```

#### ceph-client mount ceph-fuse

##### ceph-client

```
cephu@ceph-client:~$ ls mycephfs/
a.txt  b.txt  h.txt
```

```
cephu@ceph-client:~$ echo "c" > mycephfs/b.txt
cephu@ceph-client:~$ cat mycephfs/b.txt
c
cephu@ceph-client:~$
```

OK

#### umount

##### umount adminceph-client

admin:

```
cephu@cephadmin:~/my-cluster$ sudo umount /mnt/mycephfs
```

```
cephu@cephadmin:~/my-cluster$ mount
sysfs on /sys type sysfs (rw,nosuid,nodev,noexec,relatime)
proc on /proc type proc (rw,nosuid,nodev,noexec,relatime)
udev on /dev type devtmpfs (rw,nosuid,relatime,size=4067352k,nr_inodes=1016838,
↪mode=755)
devpts on /dev/pts type devpts (rw,nosuid,noexec,relatime,gid=5,mode=620,ptmxmode=000)
tmpfs on /run type tmpfs (rw,nosuid,noexec,relatime,size=817512k,mode=755)
/dev/mapper/ubuntu--vg-root on / type ext4 (rw,relatime,errors=remount-ro,
↪data=ordered)
```



```

securityfs on /sys/kernel/security type securityfs (rw,nosuid,nodev,noexec,relatime)
tmpfs on /dev/shm type tmpfs (rw,nosuid,nodev)
tmpfs on /run/lock type tmpfs (rw,nosuid,nodev,noexec,relatime,size=5120k)
tmpfs on /sys/fs/cgroup type tmpfs (ro,nosuid,nodev,noexec,mode=755)
cgroup on /sys/fs/cgroup/systemd type cgroup (rw,nosuid,nodev,noexec,relatime,xattr,
↪release_agent=/lib/systemd/systemd-cgroups-agent,name=systemd)
pstore on /sys/fs/pstore type pstore (rw,nosuid,nodev,noexec,relatime)
cgroup on /sys/fs/cgroup/perf_event type cgroup (rw,nosuid,nodev,noexec,relatime,perf_
↪event)
cgroup on /sys/fs/cgroup/net_cls,net_prio type cgroup (rw,nosuid,nodev,noexec,
↪relatime,net_cls,net_prio)
cgroup on /sys/fs/cgroup/blkio type cgroup (rw,nosuid,nodev,noexec,relatime,blkio)
cgroup on /sys/fs/cgroup/cpu,cpuacct type cgroup (rw,nosuid,nodev,noexec,relatime,cpu,
↪cpuacct)
cgroup on /sys/fs/cgroup/freezer type cgroup (rw,nosuid,nodev,noexec,relatime,freezer)
cgroup on /sys/fs/cgroup/memory type cgroup (rw,nosuid,nodev,noexec,relatime,memory)
cgroup on /sys/fs/cgroup/devices type cgroup (rw,nosuid,nodev,noexec,relatime,devices)
cgroup on /sys/fs/cgroup/pids type cgroup (rw,nosuid,nodev,noexec,relatime,pids)
cgroup on /sys/fs/cgroup/hugetlb type cgroup (rw,nosuid,nodev,noexec,relatime,hugetlb)
cgroup on /sys/fs/cgroup/cpuset type cgroup (rw,nosuid,nodev,noexec,relatime,cpuset)
systemd-1 on /proc/sys/fs/binfmt_misc type autofs (rw,relatime,fd=27,pgrp=1,timeout=0,
↪minproto=5,maxproto=5,direct)
mqueue on /dev/mqueue type mqueue (rw,relatime)
hugetlbfs on /dev/hugepages type hugetlbfs (rw,relatime)
debugfs on /sys/kernel/debug type debugfs (rw,relatime)
fusectl on /sys/fs/fuse/connections type fusectl (rw,relatime)
/var/lib/napd/snaps/core_3017.snap on /snap/core/3017 type squashfs (ro,nodev,
↪relatime)
/var/lib/napd/snaps/core_2898.snap on /snap/core/2898 type squashfs (ro,nodev,
↪relatime)
/dev/sda1 on /boot type ext2 (rw,relatime,block_validity,barrier,user_xattr,acl)
lxcfs on /var/lib/lxcfs type fuse.lxcfs (rw,nosuid,nodev,relatime,user_id=0,group_
↪id=0,allow_other)
/dev/mapper/ubuntu--vg-root on /var/lib/docker/aufs type ext4 (rw,relatime,
↪errors=remount-ro,data=ordered)
tmpfs on /run/user/1000 type tmpfs (rw,nosuid,nodev,relatime,size=817512k,mode=700,
↪uid=1000,gid=1000)
/var/lib/napd/snaps/core_3247.snap on /snap/core/3247 type squashfs (ro,nodev,
↪relatime)
tmpfs on /run/napd/ns type tmpfs (rw,nosuid,noexec,relatime,size=817512k,mode=755)
nsfs on /run/napd/ns/core.mnt type nsfs (rw)
cephu@cephadmin:~/my-cluster$

```

~~~~~

## Object Storage Quick Start

### INSTALLING CEPH OBJECT GATEWAY

#### ceph-client

```

cephu@ceph-client:~$ sudo ufw allow 7480
Rule added
Rule added (v6)
cephu@ceph-client:~$ sudo ufw status
Status: active

```

```

To                Action      From
--              -
22                ALLOW        Anywhere
7480               ALLOW        Anywhere
22 (v6)           ALLOW        Anywhere (v6)
7480 (v6)         ALLOW        Anywhere (v6)

cephu@ceph-client:~$

```

ceph-admin:

```

cephu@cephadmin:~/my-cluster$ ping ceph-client
PING ceph-client (192.168.31.172) 56(84) bytes of data.
64 bytes from ceph-client (192.168.31.172): icmp_seq=1 ttl=64 time=0.558 ms
^C
--- ceph-client ping statistics ---
1 packets transmitted, 1 received, 0% packet loss, time 0ms
rtt min/avg/max/mdev = 0.558/0.558/0.558/0.000 ms
cephu@cephadmin:~/my-cluster$ ceph-deploy install --rgw ceph-client
[ceph_deploy.conf][DEBUG ] found configuration file at: /home/cephu/.cephdeploy.conf
[ceph_deploy.cli][INFO ] Invoked (1.5.39): /home/cephu/.local/bin/ceph-deploy_
↳install --rgw ceph-client
[ceph_deploy.cli][INFO ] ceph-deploy options:
[ceph_deploy.cli][INFO ] verbose                : False
[ceph_deploy.cli][INFO ] testing                : None
[ceph_deploy.cli][INFO ] cd_conf                : <ceph_deploy.conf.
↳cephdeploy.Conf instance at 0x7f61e87c4908>
[ceph_deploy.cli][INFO ] cluster                : ceph
[ceph_deploy.cli][INFO ] dev_commit              : None
[ceph_deploy.cli][INFO ] install_mds             : False
[ceph_deploy.cli][INFO ] stable                  : None
[ceph_deploy.cli][INFO ] default_release         : False
[ceph_deploy.cli][INFO ] username                : None
[ceph_deploy.cli][INFO ] adjust_repos            : True
[ceph_deploy.cli][INFO ] func                    : <function install at_
↳0x7f61e8e9b848>
[ceph_deploy.cli][INFO ] install_mgr             : False
[ceph_deploy.cli][INFO ] install_all             : False
[ceph_deploy.cli][INFO ] repo                    : False
[ceph_deploy.cli][INFO ] host                    : ['ceph-client']
[ceph_deploy.cli][INFO ] install_rgw             : True
[ceph_deploy.cli][INFO ] install_tests           : False
[ceph_deploy.cli][INFO ] repo_url                : None
[ceph_deploy.cli][INFO ] ceph_conf               : None
[ceph_deploy.cli][INFO ] install_osd             : False
[ceph_deploy.cli][INFO ] version_kind            : stable
[ceph_deploy.cli][INFO ] install_common          : False
[ceph_deploy.cli][INFO ] overwrite_conf          : False
[ceph_deploy.cli][INFO ] quiet                   : False
[ceph_deploy.cli][INFO ] dev                     : master
[ceph_deploy.cli][INFO ] nogpgcheck              : False
[ceph_deploy.cli][INFO ] local_mirror            : None
[ceph_deploy.cli][INFO ] release                 : None
[ceph_deploy.cli][INFO ] install_mon             : False
[ceph_deploy.cli][INFO ] gpg_url                 : None
[ceph_deploy.install][DEBUG ] Installing stable version jewel on cluster ceph hosts_
↳ceph-client

```

```
[ceph_deploy.install][DEBUG ] Detecting platform for host ceph-client ...
[ceph-client][DEBUG ] connection detected need for sudo
[ceph-client][DEBUG ] connected to host: ceph-client
[ceph-client][DEBUG ] detect platform information from remote host
[ceph-client][DEBUG ] detect machine type
[ceph_deploy.install][INFO ] Distro info: Ubuntu 16.04 xenial
[ceph-client][INFO ] installing Ceph on ceph-client
[ceph-client][INFO ] Running command: sudo env DEBIAN_FRONTEND=noninteractive DEBIAN_
→PRIORITY=critical apt-get --assume-yes -q --no-install-recommends install ca-
→certificates apt-transport-https
[ceph-client][DEBUG ] Reading package lists...
[ceph-client][DEBUG ] Building dependency tree...
[ceph-client][DEBUG ] Reading state information...
[ceph-client][DEBUG ] apt-transport-https is already the newest version (1.2.24).
[ceph-client][DEBUG ] ca-certificates is already the newest version (20170717~16.04.
→1).
[ceph-client][DEBUG ] The following packages were automatically installed and are no
→longer required:
[ceph-client][DEBUG ]   libboost-program-options1.58.0 libboost-random1.58.0 libboost-
→regex1.58.0
[ceph-client][DEBUG ]   libcephfs1 libfcgi0ldbl libllvm3.8 libmircommon5 linux-
→headers-4.4.0-31
[ceph-client][DEBUG ]   linux-headers-4.4.0-31-generic linux-image-4.4.0-31-generic
[ceph-client][DEBUG ]   linux-image-extra-4.4.0-31-generic
[ceph-client][DEBUG ] Use 'sudo apt autoremove' to remove them.
[ceph-client][DEBUG ] 0 upgraded, 0 newly installed, 0 to remove and 48 not upgraded.
[ceph-client][INFO ] Running command: sudo wget -O release.asc https://download.ceph.
→com/keys/release.asc
[ceph-client][WARNIN] --2017-10-25 14:45:28-- https://download.ceph.com/keys/release.
→asc
[ceph-client][WARNIN] Resolving download.ceph.com (download.ceph.com)... 158.69.68.
→124, 2607:5300:201:2000::3:58a1
[ceph-client][WARNIN] Connecting to download.ceph.com (download.ceph.com)|158.69.68.
→124|:443... connected.
[ceph-client][WARNIN] HTTP request sent, awaiting response... 200 OK
[ceph-client][WARNIN] Length: 1645 (1.6K) [application/octet-stream]
[ceph-client][WARNIN] Saving to: 'release.asc'
[ceph-client][WARNIN]
[ceph-client][WARNIN]      OK .
→100% 233M=0s
[ceph-client][WARNIN]
[ceph-client][WARNIN] 2017-10-25 14:45:35 (233 MB/s) - 'release.asc' saved [1645/1645]
[ceph-client][WARNIN]
[ceph-client][INFO ] Running command: sudo apt-key add release.asc
[ceph-client][DEBUG ] OK
[ceph-client][DEBUG ] add deb repo to /etc/apt/sources.list.d/
[ceph-client][INFO ] Running command: sudo env DEBIAN_FRONTEND=noninteractive DEBIAN_
→PRIORITY=critical apt-get --assume-yes -q update
[ceph-client][DEBUG ] Hit:1 http://cn.archive.ubuntu.com/ubuntu xenial InRelease
[ceph-client][DEBUG ] Hit:2 http://cn.archive.ubuntu.com/ubuntu xenial-updates
→InRelease
[ceph-client][DEBUG ] Hit:3 http://cn.archive.ubuntu.com/ubuntu xenial-backports
→InRelease
[ceph-client][DEBUG ] Hit:4 http://www.rabbitmq.com/debian testing InRelease
[ceph-client][DEBUG ] Get:5 http://security.ubuntu.com/ubuntu xenial-security
→InRelease [102 kB]
[ceph-client][DEBUG ] Hit:6 https://download.docker.com/linux/ubuntu xenial InRelease
[ceph-client][DEBUG ] Get:7 http://security.ubuntu.com/ubuntu xenial-security/
→restricted amd64 Packages [7,472 B]
```

```
[ceph-client][DEBUG ] Get:8 http://security.ubuntu.com/ubuntu xenial-security/
↳restricted i386 Packages [7,472 B]
[ceph-client][DEBUG ] Get:9 http://security.ubuntu.com/ubuntu xenial-security/
↳multiverse amd64 Packages [3,208 B]
[ceph-client][DEBUG ] Get:10 http://security.ubuntu.com/ubuntu xenial-security/
↳multiverse i386 Packages [3,384 B]
[ceph-client][DEBUG ] Hit:11 https://download.ceph.com/debian-jewel xenial InRelease
[ceph-client][DEBUG ] Fetched 124 kB in 7s (16.8 kB/s)
[ceph-client][DEBUG ] Reading package lists...
[ceph-client][INFO ] Running command: sudo env DEBIAN_FRONTEND=noninteractive DEBIAN_
↳PRIORITY=critical apt-get --assume-yes -q --no-install-recommends install -o_
↳Dpkg::Options::=--force-confnew radosgw
[ceph-client][DEBUG ] Reading package lists...
[ceph-client][DEBUG ] Building dependency tree...
[ceph-client][DEBUG ] Reading state information...
[ceph-client][DEBUG ] radosgw is already the newest version (12.2.1-1xenial).
[ceph-client][DEBUG ] The following packages were automatically installed and are no_
↳longer required:
[ceph-client][DEBUG ] libboost-program-options1.58.0 libboost-random1.58.0 libboost-
↳regex1.58.0
[ceph-client][DEBUG ] libcephfs1 libfcgi0ldbl libllvm3.8 libmircommon5 linux-
↳headers-4.4.0-31
[ceph-client][DEBUG ] linux-headers-4.4.0-31-generic linux-image-4.4.0-31-generic
[ceph-client][DEBUG ] linux-image-extra-4.4.0-31-generic
[ceph-client][DEBUG ] Use 'sudo apt autoremove' to remove them.
[ceph-client][DEBUG ] 0 upgraded, 0 newly installed, 0 to remove and 48 not upgraded.
[ceph-client][INFO ] Running command: sudo ceph --version
[ceph-client][DEBUG ] ceph version 12.2.1 (3e7492b9ada8bdc9a5cd0feafd42fbca27f9c38e)_
↳luminous (stable)
cephu@cephadmin:~/my-cluster$
```

```
cephu@cephadmin:~/my-cluster$ ceph -s
cluster:
  id:      d0aa5af1-4f8e-4953-9448-7f1b2448b8a5
  health: HEALTH_OK

services:
  mon: 3 daemons, quorum cephfsn2,mon1,cephfsn3
  mgr: mon1(active), standbys: node2, node3
  mds: cephfs-jlch-1/1/1 up {0=node1=up:active}
  osd: 3 osds: 3 up, 3 in
  rgw: 1 daemon active

data:
  pools:   8 pools, 64 pgs
  objects: 296 objects, 134 MB
  usage:   4286 MB used, 79378 MB / 83664 MB avail
  pgs:     64 active+clean

cephu@cephadmin:~/my-cluster$
```

## CREATING THE CEPH OBJECT GATEWAY INSTANCE

admin:

```

cephu@cephadmin:~/my-cluster$ ceph-deploy rgw create ceph-client
[ceph_deploy.conf][DEBUG ] found configuration file at: /home/cephu/.cephdeploy.conf
[ceph_deploy.cli][INFO ] Invoked (1.5.39): /home/cephu/.local/bin/ceph-deploy rgw_
↳create ceph-client
[ceph_deploy.cli][INFO ] ceph-deploy options:
[ceph_deploy.cli][INFO ] username                : None
[ceph_deploy.cli][INFO ] verbose                : False
[ceph_deploy.cli][INFO ] rgw                    : [('ceph-client', 'rgw.ceph-
↳client')]
[ceph_deploy.cli][INFO ] overwrite_conf         : False
[ceph_deploy.cli][INFO ] subcommand             : create
[ceph_deploy.cli][INFO ] quiet                  : False
[ceph_deploy.cli][INFO ] cd_conf                : <ceph_deploy.conf.
↳cephdeploy.Conf instance at 0x7f1dc4631bd8>
[ceph_deploy.cli][INFO ] cluster                : ceph
[ceph_deploy.cli][INFO ] func                   : <function rgw at_
↳0x7f1dc4c7e140>
[ceph_deploy.cli][INFO ] ceph_conf              : None
[ceph_deploy.cli][INFO ] default_release        : False
[ceph_deploy.rgw][DEBUG ] Deploying rgw, cluster ceph hosts ceph-client:rgw.ceph-
↳client
[ceph-client][DEBUG ] connection detected need for sudo
[ceph-client][DEBUG ] connected to host: ceph-client
[ceph-client][DEBUG ] detect platform information from remote host
[ceph-client][DEBUG ] detect machine type
[ceph_deploy.rgw][INFO ] Distro info: Ubuntu 16.04 xenial
[ceph_deploy.rgw][DEBUG ] remote host will use systemd
[ceph_deploy.rgw][DEBUG ] deploying rgw bootstrap to ceph-client
[ceph-client][DEBUG ] write cluster configuration to /etc/ceph/{cluster}.conf
[ceph_deploy.rgw][ERROR ] RuntimeError: config file /etc/ceph/ceph.conf exists with_
↳different content; use --overwrite-conf to overwrite
[ceph_deploy][ERROR ] GenericError: Failed to create 1 RGWs

cephu@cephadmin:~/my-cluster$ ceph-deploy --overwrite-conf rgw create ceph-client
[ceph_deploy.conf][DEBUG ] found configuration file at: /home/cephu/.cephdeploy.conf
[ceph_deploy.cli][INFO ] Invoked (1.5.39): /home/cephu/.local/bin/ceph-deploy --
↳overwrite-conf rgw create ceph-client
[ceph_deploy.cli][INFO ] ceph-deploy options:
[ceph_deploy.cli][INFO ] username                : None
[ceph_deploy.cli][INFO ] verbose                : False
[ceph_deploy.cli][INFO ] rgw                    : [('ceph-client', 'rgw.ceph-
↳client')]
[ceph_deploy.cli][INFO ] overwrite_conf         : True
[ceph_deploy.cli][INFO ] subcommand             : create
[ceph_deploy.cli][INFO ] quiet                  : False
[ceph_deploy.cli][INFO ] cd_conf                : <ceph_deploy.conf.
↳cephdeploy.Conf instance at 0x7fb62d844bd8>
[ceph_deploy.cli][INFO ] cluster                : ceph
[ceph_deploy.cli][INFO ] func                   : <function rgw at_
↳0x7fb62de91140>
[ceph_deploy.cli][INFO ] ceph_conf              : None
[ceph_deploy.cli][INFO ] default_release        : False
[ceph_deploy.rgw][DEBUG ] Deploying rgw, cluster ceph hosts ceph-client:rgw.ceph-
↳client
[ceph-client][DEBUG ] connection detected need for sudo
[ceph-client][DEBUG ] connected to host: ceph-client
[ceph-client][DEBUG ] detect platform information from remote host
[ceph-client][DEBUG ] detect machine type

```

```
[ceph_deploy.rgw][INFO ] Distro info: Ubuntu 16.04 xenial
[ceph_deploy.rgw][DEBUG ] remote host will use systemd
[ceph_deploy.rgw][DEBUG ] deploying rgw bootstrap to ceph-client
[ceph-client][DEBUG ] write cluster configuration to /etc/ceph/{cluster}.conf
[ceph-client][WARNIN] rgw keyring does not exist yet, creating one
[ceph-client][DEBUG ] create a keyring file
[ceph-client][DEBUG ] create path recursively if it doesn't exist
[ceph-client][INFO ] Running command: sudo ceph --cluster ceph --name client.
↪bootstrap-rgw --keyring /var/lib/ceph/bootstrap-rgw/ceph.keyring auth get-or-create_
↪client.rgw.ceph-client osd allow rwx mon allow rw -o /var/lib/ceph/radosgw/ceph-rgw.
↪ceph-client/keyring
[ceph-client][INFO ] Running command: sudo systemctl enable ceph-radosgw@rgw.ceph-
↪client
[ceph-client][WARNIN] Created symlink from /etc/systemd/system/ceph-radosgw.target.
↪wants/ceph-radosgw@rgw.ceph-client.service to /lib/systemd/system/ceph-radosgw@.
↪service.
[ceph-client][INFO ] Running command: sudo systemctl start ceph-radosgw@rgw.ceph-
↪client
[ceph-client][INFO ] Running command: sudo systemctl enable ceph.target
[ceph_deploy.rgw][INFO ] The Ceph Object Gateway (RGW) is now running on host ceph-
↪client and default port 7480
cephu@cephadmin:~/my-cluster$
```

## CONFIGURING THE CEPH OBJECT GATEWAY INSTANCE

web 80 .

ceph-client IP 192.168.31.172 <http://192.168.31.172:7480/>

```
This XML file does not appear to have any style information associated with it. The_
↪document tree is shown below.
<ListAllMyBucketsResult xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
  <Owner>
    <ID>anonymous</ID>
    <DisplayName/>
  </Owner>
  <Buckets/>
</ListAllMyBucketsResult>
```

# CHAPTER 12

---

vs code

---

Contents:

## 12.1 vs code nodejs fork

OpenX/OpenQuote2/tick\_signaller.js fork

### 12.1.1

```
this._procChild = cp.fork(__dirname + this.TSFile);  
// this._procChild = cp.fork(__dirname + this.TSFile, [], {execArgv: ['--debug=5859']})  
↪);
```

node tick\_signaller.js SZ

### launch.json

vs code , launch.json // “nodejs: ”,

::

“configurations”: [

```
  { “type”: “node”, “request”: “attach”, “name”: “Attach”, “port”: 5859 # 5859 -debug=5859  
    },
```

F5

F5

**12.1.2**



Contents:

## 13.1 update-kernel

Contents:

### 13.1.1 ubuntu16.04 update-kernel

**env**

```
192.168.31.118  
192.168.31.119
```

**step**

<http://kernel.ubuntu.com/~kernel-ppa/mainline/>

v4.12),

(linux-image-4.12.0-041200-generic\_4.12.0-041200.201707022031\_amd64.deb)

```
wget http://kernel.ubuntu.com/~kernel-ppa/mainline/v4.12/linux-image-4.12.0-041200-  
↪generic_4.12.0-041200.201707022031_amd64.deb
```



## CHAPTER 14

---

javascript

---

Contents:



Contents:

## 15.1 linux tools

Contents:

### 15.1.1 linux tools

**tldr**

<https://github.com/tldr-pages/tldr>

**boringSSL**

<http://tech.huanqiu.com/news/2015-10/7809980.html>

## 15.2 windows tools

Contents:

### 15.2.1 remote-desktop-organizer

<http://www.softpedia.com/get/Internet/Remote-Utils/Remote-Desktop-Organizer.shtml>

<https://jingyan.baidu.com/article/656db918fff600e381249c14.html>

## 15.3 PostgreSQL

marmelab.com postgresql UI

# CHAPTER 16

---

## zabbix

---

Contents:

### 16.1 zabbix

```
sudo rpm -ivh http://repo.zabbix.com/zabbix/3.4/rhel/7/x86_64/zabbix-release-3.4-1.
↪el7.centos.noarch.rpm
sudo yum install -y zabbix-agent
sudo systemctl start zabbix-agent.service
sudo systemctl restart zabbix-agent.service
sudo systemctl status zabbix-agent.service
```

```
sudo firewall-cmd --permanent --add-port=10050/tcp; sudo firewall-cmd --reload; sudo ↪
↪firewall-cmd --permanent --list-port
sudo ufw allow 10050
```

```
sudo yum install -y sysstat
sudo systemctl status sysstat
sudo systemctl enable sysstat
```

```
vi /etc/zabbix/zabbix-agent.conf
```

```
##
# Server=10.10.11.20
Server=zabbix_server
ServerActive=10.10.11.20
Hostname=IP

##
##LinuxIOPS
##-----
```

```
# (block) IO
UserParameter=disk.rrqm[*],iostat -dx | sed -n '4p' | awk '{print $$2}'
#
UserParameter=disk.wrqm[*],iostat -dx | sed -n '4p' | awk '{print $$3}'
#
UserParameter=disk.rps[*],iostat -dx | sed -n '4p' | awk '{print $$4}'
#
UserParameter=disk.wps[*],iostat -dx | sed -n '4p' | awk '{print $$5}'
#
UserParameter=disk.iops[*],iostat -d | sed -n '4p' | awk '{print $$2}'
# (MB )
UserParameter=disk.rMBps[*],iostat -dxm | sed -n '4p' | awk '{print $$6}'
# (MB)
UserParameter=disk.wMBps[*],iostat -dxm | sed -n '4p' | awk '{print $$7}'
# I/O ()
UserParameter=disk.await[*],iostat -dx | sed -n '4p' | awk '{print $$10}'
#)
UserParameter=disk.rawait[*],iostat -dx | sed -n '4p' | awk '{print $$11}'
# ()
UserParameter=disk.wawait[*],iostat -dx | sed -n '4p' | awk '{print $$12}'
# IO()
UserParameter=disk.svctm[*],iostat -dx | sed -n '4p' | awk '{print $$13}'
# IOIO
UserParameter=disk.util[*],iostat -dx | sed -n '4p' | awk '{print $$14}'
##-----
```

```
## centos
192.168.31.249

10.10.15.181
10.10.15.240
10.10.12.17
10.10.12.18
10.10.12.16
10.10.13.100
10.10.13.101
10.10.13.12
10.10.13.11
10.10.13.110
10.10.12.10
10.10.11.20
10.10.13.10

## ubuntu
12.19
13.103
```

## over

## 16.2 zabbix debug level

/etc/zabbix/zabbix\_agentd.conf DebugLevel=3

```
[root@mariadb-node-0 ~]# cat /etc/zabbix/zabbix_agentd.conf | grep Debug
### Option: DebugLevel
```



```
DebugLevel=3
[root@mariadb-node-0 ~]#
```

DebugLevel=5

```
[root@mariadb-node-0 ~]# tail -f /var/log/zabbix/zabbix_agentd.log
148519:20171010:103802.537 __zbx_zbx_setproctitle() title:'collector [processing data]
↪ '
148519:20171010:103802.537 In update_cpustats()
148519:20171010:103802.538 End of update_cpustats()
148519:20171010:103802.538 __zbx_zbx_setproctitle() title:'collector [idle 1 sec]'
148520:20171010:103802.563 __zbx_zbx_setproctitle() title:'listener #1 [processing
↪ request]'
148520:20171010:103802.563 Requested [disk.rawait[sda]]
148520:20171010:103802.563 In zbx_popen() command:'iostat -dx | sed -n '4p' | awk '
↪ {print $11}''
148520:20171010:103802.564 End of zbx_popen():7
148997:20171010:103802.564 zbx_popen(): executing script
148520:20171010:103802.571 In zbx_waitpid()
148520:20171010:103802.571 zbx_waitpid() exited, status:0
148520:20171010:103802.571 End of zbx_waitpid():148997
148520:20171010:103802.571 EXECUTE_STR() command:'iostat -dx | sed -n '4p' | awk '
↪ {print $11}'' len:4 cmd_result:'3.18'
148520:20171010:103802.571 Sending back [3.18]
148520:20171010:103802.571 __zbx_zbx_setproctitle() title:'listener #1 [waiting for
↪ connection]'
148525:20171010:103802.581 In send_buffer() host:'zabbix_server' port:10051 entries:0/
↪ 100
148525:20171010:103802.581 End of send_buffer():SUCCEED
148525:20171010:103802.581 __zbx_zbx_setproctitle() title:'active checks #1 [idle 1
↪ sec]'
^C^C
```

DebugLevel=3

```
[root@mariadb-node-0 ~]# tail -f /var/log/zabbix/zabbix_agentd.log
150001:20171010:103908.063 IPv6 support: YES
150001:20171010:103908.063 TLS support: YES
150001:20171010:103908.063 *****
150001:20171010:103908.063 using configuration file: /etc/zabbix/zabbix_agentd.conf
150001:20171010:103908.064 agent #0 started [main process]
150002:20171010:103908.065 agent #1 started [collector]
150003:20171010:103908.065 agent #2 started [listener #1]
150004:20171010:103908.065 agent #3 started [listener #2]
150005:20171010:103908.066 agent #4 started [listener #3]
150006:20171010:103908.066 agent #5 started [active checks #1]
^C
[root@mariadb-node-0 ~]#
```

## 16.3 zabbix-debug-1

10.10.12.17 zabbix-agent

```
[root@mariadb-node-0 zabbix]# systemctl start zabbix-agent.service
Job for zabbix-agent.service failed because a configured resource limit was exceeded.
↪ See "systemctl status zabbix-agent.service" and "journalctl -xe" for details.
```

```
[root@mariadb-node-0 zabbix]# journalctl -xe
10 10 10:04:08 mariadb-node-0 systemd[1]: Starting Zabbix Agent...
-- Subject: Unit zabbix-agent.service has begun start-up
-- Defined-By: systemd
-- Support: http://lists.freedesktop.org/mailman/listinfo/systemd-devel
--
-- Unit zabbix-agent.service has begun starting up.
10 10 10:04:08 mariadb-node-0 systemd[1]: PID file /var/run/zabbix/zabbix_agentd.pid
↳not readable (yet?) after start.
10 10 10:04:08 mariadb-node-0 systemd[1]: zabbix-agent.service: Supervising process
↳124777 which is not our child. We'll most like
10 10 10:04:08 mariadb-node-0 systemd[1]: zabbix-agent.service: main process exited,
↳code=exited, status=1/FAILURE
10 10 10:04:08 mariadb-node-0 kill[124779]: kill: 124777 :
10 10 10:04:08 mariadb-node-0 systemd[1]: zabbix-agent.service: control process
↳exited, code=exited status=1
10 10 10:04:08 mariadb-node-0 systemd[1]: Failed to start Zabbix Agent.
-- Subject: Unit zabbix-agent.service has failed
-- Defined-By: systemd
-- Support: http://lists.freedesktop.org/mailman/listinfo/systemd-devel
--
-- Unit zabbix-agent.service has failed.
--
-- The result is failed.
10 10 10:04:08 mariadb-node-0 systemd[1]: Unit zabbix-agent.service entered failed
↳state.
10 10 10:04:08 mariadb-node-0 systemd[1]: zabbix-agent.service failed.
10 10 10:04:18 mariadb-node-0 systemd[1]: zabbix-agent.service holdoff time over,
↳scheduling restart.
10 10 10:04:18 mariadb-node-0 systemd[1]: Starting Zabbix Agent...
-- Subject: Unit zabbix-agent.service has begun start-up
-- Defined-By: systemd
-- Support: http://lists.freedesktop.org/mailman/listinfo/systemd-devel
--
-- Unit zabbix-agent.service has begun starting up.
10 10 10:04:18 mariadb-node-0 systemd[1]: PID file /var/run/zabbix/zabbix_agentd.pid
↳not readable (yet?) after start.
10 10 10:04:18 mariadb-node-0 systemd[1]: zabbix-agent.service: Supervising process
↳125011 which is not our child. We'll most like
10 10 10:04:18 mariadb-node-0 systemd[1]: Started Zabbix Agent.
-- Subject: Unit zabbix-agent.service has finished start-up
-- Defined-By: systemd
-- Support: http://lists.freedesktop.org/mailman/listinfo/systemd-devel
--
-- Unit zabbix-agent.service has finished starting up.
--
-- The start-up result is done.
10 10 10:04:18 mariadb-node-0 systemd[1]: zabbix-agent.service: main process exited,
↳code=exited, status=1/FAILURE
10 10 10:04:18 mariadb-node-0 kill[125014]:
10 10 10:04:18 mariadb-node-0 kill[125014]: kill [] <pid> [...]
10 10 10:04:18 mariadb-node-0 kill[125014]:
10 10 10:04:18 mariadb-node-0 kill[125014]: -a, --all          id
10 10 10:04:18 mariadb-node-0 kill[125014]: -id
10 10 10:04:18 mariadb-node-0 kill[125014]: -s, --signal <>
10 10 10:04:18 mariadb-node-0 kill[125014]: -q, --queue <>      sigqueue(2)  kill(2)
10 10 10:04:18 mariadb-node-0 systemd[1]: zabbix-agent.service: control process
↳exited, code=exited status=1
```

```
10 10 10:04:18 mariadb-node-0 kill[125014]: -p, --pid          pid
10 10 10:04:18 mariadb-node-0 kill[125014]: -l, --list [=<>]
10 10 10:04:18 mariadb-node-0 kill[125014]: -L, --table
10 10 10:04:18 mariadb-node-0 kill[125014]: -h, --help
10 10 10:04:18 mariadb-node-0 kill[125014]: -V, --version
10 10 10:04:18 mariadb-node-0 kill[125014]: kill(1)
10 10 10:04:18 mariadb-node-0 systemd[1]: Unit zabbix-agent.service entered failed_
↳state.
10 10 10:04:18 mariadb-node-0 systemd[1]: zabbix-agent.service failed.
[root@mariadb-node-0 zabbix]#
```

```
[root@mariadb-node-0 zabbix]# ps -ef | grep zabbix
root      132576 131957  0 10:15 pts/2    00:00:00 grep --color=auto zabbix
[root@mariadb-node-0 zabbix]# tail -f /var/log/zabbix/zabbix_agentd.log
zabbix_agentd [131649]: cannot open log: cannot create semaphore set: [28] No space_
↳left on device
zabbix_agentd [131712]: cannot open log: cannot create semaphore set: [28] No space_
↳left on device
zabbix_agentd [131939]: cannot open log: cannot create semaphore set: [28] No space_
↳left on device
zabbix_agentd [131948]: cannot open log: cannot create semaphore set: [28] No space_
↳left on device
zabbix_agentd [132150]: cannot open log: cannot create semaphore set: [28] No space_
↳left on device
zabbix_agentd [132279]: cannot open log: cannot create semaphore set: [28] No space_
↳left on device
zabbix_agentd [132288]: cannot open log: cannot create semaphore set: [28] No space_
↳left on device
zabbix_agentd [132456]: cannot open log: cannot create semaphore set: [28] No space_
↳left on device
zabbix_agentd [132579]: cannot open log: cannot create semaphore set: [28] No space_
↳left on device
zabbix_agentd [132586]: cannot open log: cannot create semaphore set: [28] No space_
↳left on device
zabbix_agentd [132875]: cannot open log: cannot create semaphore set: [28] No space_
↳left on device
^C
[root@mariadb-node-0 zabbix]# tail -f /var/log/messages
Oct 10 10:15:48 mariadb-node-0 kill: -q, --queue <>          sigqueue(2) kill(2)
Oct 10 10:15:48 mariadb-node-0 systemd: zabbix-agent.service: control process exited,
↳code=exited status=1
Oct 10 10:15:48 mariadb-node-0 kill: -p, --pid          pid
Oct 10 10:15:48 mariadb-node-0 kill: -l, --list [=<>]
Oct 10 10:15:48 mariadb-node-0 kill: -L, --table
Oct 10 10:15:48 mariadb-node-0 kill: -h, --help
Oct 10 10:15:48 mariadb-node-0 kill: -V, --version
Oct 10 10:15:48 mariadb-node-0 kill: kill(1)
Oct 10 10:15:48 mariadb-node-0 systemd: Unit zabbix-agent.service entered failed_
↳state.
Oct 10 10:15:48 mariadb-node-0 systemd: zabbix-agent.service failed.
Oct 10 10:15:59 mariadb-node-0 systemd: zabbix-agent.service holdoff time over,
↳scheduling restart.
Oct 10 10:15:59 mariadb-node-0 systemd: Starting Zabbix Agent...
Oct 10 10:15:59 mariadb-node-0 systemd: PID file /run/zabbix/zabbix_agentd.pid not_
↳readable (yet?) after start.
Oct 10 10:15:59 mariadb-node-0 systemd: zabbix-agent.service: Supervising process_
↳132893 which is not our child. We'll most likely not notice when it exits.
Oct 10 10:15:59 mariadb-node-0 systemd: Started Zabbix Agent.
```

```
Oct 10 10:15:59 mariadb-node-0 systemd: zabbix-agent.service: main process exited,
↳code=exited, status=1/FAILURE
Oct 10 10:15:59 mariadb-node-0 kill:
Oct 10 10:15:59 mariadb-node-0 kill: kill [] <pid> [...]
Oct 10 10:15:59 mariadb-node-0 kill:
Oct 10 10:15:59 mariadb-node-0 kill: -a, --all id
Oct 10 10:15:59 mariadb-node-0 kill: -id
Oct 10 10:15:59 mariadb-node-0 kill: -s, --signal <>
Oct 10 10:15:59 mariadb-node-0 kill: -q, --queue <> sigqueue(2) kill(2)
Oct 10 10:15:59 mariadb-node-0 kill: -p, --pid pid
Oct 10 10:15:59 mariadb-node-0 kill: -l, --list [= <>]
Oct 10 10:15:59 mariadb-node-0 kill: -L, --table
Oct 10 10:15:59 mariadb-node-0 kill: -h, --help
Oct 10 10:15:59 mariadb-node-0 kill: -V, --version
Oct 10 10:15:59 mariadb-node-0 kill: kill(1)
Oct 10 10:15:59 mariadb-node-0 systemd: zabbix-agent.service: control process exited,
↳code=exited status=1
Oct 10 10:15:59 mariadb-node-0 systemd: Unit zabbix-agent.service entered failed
↳state.
Oct 10 10:15:59 mariadb-node-0 systemd: zabbix-agent.service failed.
^C
[root@mariadb-node-0 zabbix]#
```

zabbix\_agentd [132875]: cannot open log: cannot create semaphore set: [28]  
No space left on device

Oct 10 10:15:59 mariadb-node-0 systemd: PID file  
/run/zabbix/zabbix\_agentd.pid not readable (yet?) after start.

## 1. df -h

OK

## 1. No space left on device

root /run/zabbix/

```
sudo -u zabbix echo 'hello' > /run/zabbix/zabbix_agentd.pid ## sudo -u zabbix,
↳sudo su - zabbix
cat /run/zabbix/zabbix_agentd.pid
cd /run/zabbix/
ls
ls -la ##
sudo -u root echo 'hello' > /run/zabbix/zabbix_agentd.pid ## root
cat zabbix_agentd.pid
ls
ls ## ##
sudo -u root echo 'hello' > /run/zabbix/a.txt ## root
cat a.txt
ls
ls ## ##
```

## 1. google

ipcs ipcrm

```
[jlch@mariadb-node-0 zabbix]$ which ipcs
/usr/bin/ipcs
[jlch@mariadb-node-0 zabbix]$
[root@mariadb-node-0 zabbix]# ipcs
```

```
-----
msqid
-----
```

```
-----
shmid          nattch
0x00000000 65536      tom      600      4194304    2
0x00000000 163841     tom      600      4194304    2
0x00000000 262146     tom      600      1048576    2
0x00000000 360451     tom      600      4194304    2
0x00000000 458756     tom      600      393216     2
-----
```

```
-----
semid          nsems
0x00000000 98304      zabbix   600      13
0x00000000 131073     zabbix   600      13
0x00000000 163842     zabbix   600      13
0x00000000 196611     zabbix   600      13
0x00000000 229380     zabbix   600      13
0x00000000 262149     zabbix   600      13
0x00000000 294918     zabbix   600      13
0x00000000 327687     zabbix   600      13
0x00000000 360456     zabbix   600      13
0x00000000 393225     zabbix   600      13
0x00000000 425994     zabbix   600      13
0x00000000 458763     zabbix   600      13
0x00000000 491532     zabbix   600      13
0x00000000 524301     zabbix   600      13
0x00000000 557070     zabbix   600      13
0x00000000 589839     zabbix   600      13
0x00000000 622608     zabbix   600      13
0x00000000 655377     zabbix   600      13
0x00000000 688146     zabbix   600      13
0x00000000 720915     zabbix   600      13
0x00000000 753684     zabbix   600      13
0x00000000 786453     zabbix   600      13
0x00000000 819222     zabbix   600      13
0x00000000 851991     zabbix   600      13
0x00000000 884760     zabbix   600      13
0x00000000 917529     zabbix   600      13
0x00000000 950298     zabbix   600      13
0x00000000 983067     zabbix   600      13
0x00000000 1015836    zabbix   600      13
0x00000000 1048605    zabbix   600      13
0x00000000 1081374    zabbix   600      13
0x00000000 1114143    zabbix   600      13
0x00000000 1146912    zabbix   600      13
0x00000000 1179681    zabbix   600      13
0x00000000 1212450    zabbix   600      13
0x00000000 1245219    zabbix   600      13
0x00000000 1277988    zabbix   600      13
0x00000000 1310757    zabbix   600      13
0x00000000 1343526    zabbix   600      13
0x00000000 1376295    zabbix   600      13
```

|            |         |        |     |    |
|------------|---------|--------|-----|----|
| 0x00000000 | 1409064 | zabbix | 600 | 13 |
| 0x00000000 | 1441833 | zabbix | 600 | 13 |
| 0x00000000 | 1474602 | zabbix | 600 | 13 |
| 0x00000000 | 1507371 | zabbix | 600 | 13 |
| 0x00000000 | 1540140 | zabbix | 600 | 13 |
| 0x00000000 | 1572909 | zabbix | 600 | 13 |
| 0x00000000 | 1605678 | zabbix | 600 | 13 |
| 0x00000000 | 1638447 | zabbix | 600 | 13 |
| 0x00000000 | 1671216 | zabbix | 600 | 13 |
| 0x00000000 | 1703985 | zabbix | 600 | 13 |
| 0x00000000 | 1736754 | zabbix | 600 | 13 |
| 0x00000000 | 1769523 | zabbix | 600 | 13 |
| 0x00000000 | 1802292 | zabbix | 600 | 13 |
| 0x00000000 | 1835061 | zabbix | 600 | 13 |
| 0x00000000 | 1867830 | zabbix | 600 | 13 |
| 0x00000000 | 1900599 | zabbix | 600 | 13 |
| 0x00000000 | 1933368 | zabbix | 600 | 13 |
| 0x00000000 | 1966137 | zabbix | 600 | 13 |
| 0x00000000 | 1998906 | zabbix | 600 | 13 |
| 0x00000000 | 2031675 | zabbix | 600 | 13 |
| 0x00000000 | 2064444 | zabbix | 600 | 13 |
| 0x00000000 | 2097213 | zabbix | 600 | 13 |
| 0x00000000 | 2129982 | zabbix | 600 | 13 |
| 0x00000000 | 2162751 | zabbix | 600 | 13 |
| 0x00000000 | 2195520 | zabbix | 600 | 13 |
| 0x00000000 | 2228289 | zabbix | 600 | 13 |
| 0x00000000 | 2261058 | zabbix | 600 | 13 |
| 0x00000000 | 2293827 | zabbix | 600 | 13 |
| 0x00000000 | 2326596 | zabbix | 600 | 13 |
| 0x00000000 | 2359365 | zabbix | 600 | 13 |
| 0x00000000 | 2392134 | zabbix | 600 | 13 |
| 0x00000000 | 2424903 | zabbix | 600 | 13 |
| 0x00000000 | 2457672 | zabbix | 600 | 13 |
| 0x00000000 | 2490441 | zabbix | 600 | 13 |
| 0x00000000 | 2523210 | zabbix | 600 | 13 |
| 0x00000000 | 2555979 | zabbix | 600 | 13 |
| 0x00000000 | 2588748 | zabbix | 600 | 13 |
| 0x00000000 | 2621517 | zabbix | 600 | 13 |
| 0x00000000 | 2654286 | zabbix | 600 | 13 |
| 0x00000000 | 2687055 | zabbix | 600 | 13 |
| 0x00000000 | 2719824 | zabbix | 600 | 13 |
| 0x00000000 | 2752593 | zabbix | 600 | 13 |
| 0x00000000 | 2785362 | zabbix | 600 | 13 |
| 0x00000000 | 2818131 | zabbix | 600 | 13 |
| 0x00000000 | 2850900 | zabbix | 600 | 13 |
| 0x00000000 | 2883669 | zabbix | 600 | 13 |
| 0x00000000 | 2916438 | zabbix | 600 | 13 |
| 0x00000000 | 2949207 | zabbix | 600 | 13 |
| 0x00000000 | 2981976 | zabbix | 600 | 13 |
| 0x00000000 | 3014745 | zabbix | 600 | 13 |
| 0x00000000 | 3047514 | zabbix | 600 | 13 |
| 0x00000000 | 3080283 | zabbix | 600 | 13 |
| 0x00000000 | 3113052 | zabbix | 600 | 13 |
| 0x00000000 | 3145821 | zabbix | 600 | 13 |
| 0x00000000 | 3178590 | zabbix | 600 | 13 |
| 0x00000000 | 3211359 | zabbix | 600 | 13 |
| 0x00000000 | 3244128 | zabbix | 600 | 13 |
| 0x00000000 | 3276897 | zabbix | 600 | 13 |

|            |         |        |     |    |
|------------|---------|--------|-----|----|
| 0x00000000 | 3309666 | zabbix | 600 | 13 |
| 0x00000000 | 3342435 | zabbix | 600 | 13 |
| 0x00000000 | 3375204 | zabbix | 600 | 13 |
| 0x00000000 | 3407973 | zabbix | 600 | 13 |
| 0x00000000 | 3440742 | zabbix | 600 | 13 |
| 0x00000000 | 3473511 | zabbix | 600 | 13 |
| 0x00000000 | 3506280 | zabbix | 600 | 13 |
| 0x00000000 | 3539049 | zabbix | 600 | 13 |
| 0x00000000 | 3571818 | zabbix | 600 | 13 |
| 0x00000000 | 3604587 | zabbix | 600 | 13 |
| 0x00000000 | 3637356 | zabbix | 600 | 13 |
| 0x00000000 | 3670125 | zabbix | 600 | 13 |
| 0x00000000 | 3702894 | zabbix | 600 | 13 |
| 0x00000000 | 3735663 | zabbix | 600 | 13 |
| 0x00000000 | 3768432 | zabbix | 600 | 13 |
| 0x00000000 | 3801201 | zabbix | 600 | 13 |
| 0x00000000 | 3833970 | zabbix | 600 | 13 |
| 0x00000000 | 3866739 | zabbix | 600 | 13 |
| 0x00000000 | 3899508 | zabbix | 600 | 13 |
| 0x00000000 | 3932277 | zabbix | 600 | 13 |
| 0x00000000 | 3965046 | zabbix | 600 | 13 |
| 0x00000000 | 3997815 | zabbix | 600 | 13 |
| 0x00000000 | 4030584 | zabbix | 600 | 13 |
| 0x00000000 | 4063353 | zabbix | 600 | 13 |
| 0x00000000 | 4096122 | zabbix | 600 | 13 |
| 0x00000000 | 4128891 | zabbix | 600 | 13 |
| 0x00000000 | 4161660 | zabbix | 600 | 13 |
| 0x00000000 | 4194429 | zabbix | 600 | 13 |
| 0x00000000 | 4227198 | zabbix | 600 | 13 |
| 0x00000000 | 4259967 | zabbix | 600 | 13 |

```
[root@mariadb-node-0 zabbix]# ipcrm --help

ipcrm [options]
ipcrm <shm|msg|sem> <id> [...]

-m, --shmem-id <id>          id
-M, --shmem-key <>
-q, --queue-id <id>          id
-Q, --queue-key <>
-s, --semaphore-id <id>      id
-S, --semaphore-key <>
-a, --all[=<shm|msg|sem>]
-v, --verbose

-h, --help
-V, --version

ipcrm(1)
[root@mariadb-node-0 zabbix]# ipcrm -s 98304
[root@mariadb-node-0 zabbix]#
```

### shell

```
[root@mariadb-node-0 zabbix]# cat ~/t.sh
#!/usr/bin/bash
```

```
for line in `cat ./sem-id.txt`
do
    echo $line
    ipcrm -s $line
done
echo "game over!"
[root@mariadb-node-0 zabbix]#
```

ok,

OK

---

<http://www.itzgeek.com/how-tos/linux/centos-how-tos/how-to-install-zabbix-agent-on-centos-7-ubuntu-16-04-debian-8.html>

selinux

```
[jlch@mariadb-node-0 zabbix]$ getenforce
Permissive
[jlch@mariadb-node-0 zabbix]$ sudo setenforce 0
[jlch@mariadb-node-0 zabbix]$ sudo getenforce
Permissive
```

```
[jlch@mariadb-node-0 zabbix]$ sudo cat /var/log/audit/audit.log |grep failed
... ##
'unit=zabbix-agent comm="systemd" exe="/usr/lib/systemd/systemd" hostname=? addr=?
↪terminal=? res=failed'
type=SERVICE_STOP msg=audit(1507601499.089:102137): pid=1 uid=0 auid=4294967295
↪ses=4294967295 subj=system_u:system_r:init_t:s0 msg='unit=zabbix-agent comm="systemd
↪" exe="/usr/lib/systemd/systemd" hostname=? addr=? terminal=? res=failed'
[jlch@mariadb-node-0 zabbix]$ ^C
```

audit

```
[jlch@mariadb-node-0 zabbix]$ sudo cat /var/log/audit/audit.log |grep zabbix-agent
↪|audit2allow
[sudo] password for jlch:
Nothing to do
[jlch@mariadb-node-0 zabbix]$ sudo cat /var/log/audit/audit.log |grep zabbix-agent
↪|audit2why
Nothing to do
[jlch@mariadb-node-0 zabbix]$
```

ipcs

selinux

## 16.4 zabbix bug spell

```
[root@mongodb1 jlch]# sudo systemctl status zabbix-agent.service [root@mongodb1 jlch]# journalctl
-xe [root@mongodb1 jlch]# tail -n 200 /var/log/messages
```

```
systemd: [/usr/lib/systemd/system/anaconda-pre.service:18] Unknown lvalue
↪'StardardInput' in section 'Service'
```



google

[https://bugzilla.redhat.com/show\\_bug.cgi?id=1401333](https://bugzilla.redhat.com/show_bug.cgi?id=1401333)

Change “Stardard” to “Standard”.

```
[root@mongodb1 jlch]# vi /usr/lib/systemd/system/anaconda-pre.service [root@mongodb1 jlch]# sudo
systemctl status anaconda-pre.service anaconda-pre.service - pre-anaconda logging service
```

```
Loaded: loaded (/usr/lib/systemd/system/anaconda-pre.service; static; vendor preset: dis-
abled) Active: inactive (dead)
```

```
6 30 12:50:17 mongodb1 systemd[1]: [/usr/lib/systemd/system/anaconda-pre.service:18] Un-
known lvalue 'StardardInput' in section 'Service' 6 30 12:50:17 mongodb1 systemd[1]:
[/usr/lib/systemd/system/anaconda-pre.service:18] Unknown lvalue 'StardardInput' in section 'Ser-
vice' 6 30 12:50:17 mongodb1 systemd[1]: [/usr/lib/systemd/system/anaconda-pre.service:18]
Unknown lvalue 'StardardInput' in section 'Service' 6 30 12:50:17 mongodb1 systemd[1]:
[/usr/lib/systemd/system/anaconda-pre.service:18] Unknown lvalue 'StardardInput' in section 'Ser-
vice' 6 30 12:50:17 mongodb1 systemd[1]: [/usr/lib/systemd/system/anaconda-pre.service:18]
Unknown lvalue 'StardardInput' in section 'Service' 6 30 12:50:17 mongodb1 systemd[1]:
[/usr/lib/systemd/system/anaconda-pre.service:18] Unknown lvalue 'StardardInput' in section 'Ser-
vice' 6 30 12:50:17 mongodb1 systemd[1]: [/usr/lib/systemd/system/anaconda-pre.service:18]
Unknown lvalue 'StardardInput' in section 'Service' 6 30 12:50:17 mongodb1 systemd[1]:
[/usr/lib/systemd/system/anaconda-pre.service:18] Unknown lvalue 'StardardInput' in section 'Ser-
vice' 6 30 12:50:17 mongodb1 systemd[1]: [/usr/lib/systemd/system/anaconda-pre.service:18]
Unknown lvalue 'StardardInput' in section 'Service' 6 30 12:50:17 mongodb1 systemd[1]:
[/usr/lib/systemd/system/anaconda-pre.service:18] Unknown lvalue 'StardardInput' in section 'Ser-
vice' [root@mongodb1 jlch]# sudo systemctl start anaconda-pre.service
```

anaconda-pre zabbix-agent



Contents:

## 17.1 ruby install

Contents:

### 17.1.1 ruby install by rpm

**ruby**

[http://mirrors.aliyun.com/centos/7/os/x86\\_64/Packages/](http://mirrors.aliyun.com/centos/7/os/x86_64/Packages/)

```
[jlch@check ruby]$ cat t.sh
#!/bin/bash
for rpm_packages in `cat packages.txt`
do
    echo $rpm_packages
    wget http://mirrors.aliyun.com/centos/7/os/x86_64/Packages/$rpm_packages
done
[jlch@check ruby]$ cat packages.txt
libyaml-0.1.4-11.el7_0.x86_64.rpm
ruby-2.0.0.648-30.el7.x86_64.rpm
ruby-libs-2.0.0.648-30.el7.x86_64.rpm
rubygem-io-console-0.4.2-30.el7.x86_64.rpm
rubygem-rdoc-4.0.0-30.el7.noarch.rpm
rubygem-bigdecimal-1.2.0-30.el7.x86_64.rpm
rubygem-psych-2.0.0-30.el7.x86_64.rpm
rubygems-2.0.14.1-30.el7.noarch.rpm
ruby-irb-2.0.0.648-30.el7.noarch.rpm
rubygem-json-1.7.7-30.el7.x86_64.rpm
[jlch@check ruby]$
```

ruby, gem

```
rpm -ivh libyaml-0.1.4-11.el7_0.x86_64.rpm
rpm -ivh ruby-2.0.0.648-30.el7.x86_64.rpm ruby-libs-2.0.0.648-30.el7.x86_64.rpm
↪ rubygem-io-console-0.4.2-30.el7.x86_64.rpm rubygem-rdoc-4.0.0-30.el7.noarch.rpm
↪ rubygem-bigdecimal-1.2.0-30.el7.x86_64.rpm rubygem-psych-2.0.0-30.el7.x86_64.rpm
↪ rubygems-2.0.14.1-30.el7.noarch.rpm ruby-irb-2.0.0.648-30.el7.noarch.rpm rubygem-
↪ json-1.7.7-30.el7.x86_64.rpm
which ruby
ruby help
ruby --help
ruby gems ##
gem
gem list --local
ruby -v
```

ruby

```
[root@localhost ruby-install-by-rpm]# cat xm.sh
rpm -ef rubygem-io-console-0.4.2-30.el7.x86_64 rubygem-psych-2.0.0-30.el7.x86_64
↪ rubygems-2.0.14.1-30.el7.noarch ruby-irb-2.0.0.648-30.el7.noarch ruby-libs-2.0.0.
↪ 648-30.el7.x86_64 rubygem-bigdecimal-1.2.0-30.el7.x86_64 rubygem-json-1.7.7-30.el7.
↪ x86_64 ruby-2.0.0.648-30.el7.x86_64 rubygem-rdoc-4.0.0-30.el7.noarch
```

### 17.1.2 ruby 2.4 install by rpm

ruby

sh [https://gitee.com/tomt/tom\\_ruby\\_install\\_by\\_rpm](https://gitee.com/tomt/tom_ruby_install_by_rpm)

[http://mirrors.aliyun.com/centos/7/os/x86\\_64/Packages/](http://mirrors.aliyun.com/centos/7/os/x86_64/Packages/)

```
[j1ch@check ruby]$ cat t.sh
#!/bin/bash
for rpm_packages in `cat packages.txt`
do
    echo $rpm_packages
    wget http://mirrors.aliyun.com/centos/7/os/x86_64/Packages/$rpm_packages
done
[j1ch@check ruby]$ cat packages.txt
libyaml-0.1.4-11.el7_0.x86_64.rpm
ruby-2.0.0.648-30.el7.x86_64.rpm
ruby-libs-2.0.0.648-30.el7.x86_64.rpm
rubygem-io-console-0.4.2-30.el7.x86_64.rpm
rubygem-rdoc-4.0.0-30.el7.noarch.rpm
rubygem-bigdecimal-1.2.0-30.el7.x86_64.rpm
rubygem-psych-2.0.0-30.el7.x86_64.rpm
rubygems-2.0.14.1-30.el7.noarch.rpm
ruby-irb-2.0.0.648-30.el7.noarch.rpm
rubygem-json-1.7.7-30.el7.x86_64.rpm
[j1ch@check ruby]$
```

ruby, gem

```
rpm -ivh libyaml-0.1.4-11.el7_0.x86_64.rpm
rpm -ivh ruby-2.0.0.648-30.el7.x86_64.rpm ruby-libs-2.0.0.648-30.el7.x86_64.rpm
↪ rubygem-io-console-0.4.2-30.el7.x86_64.rpm rubygem-rdoc-4.0.0-30.el7.noarch.rpm
↪ rubygem-bigdecimal-1.2.0-30.el7.x86_64.rpm rubygem-psych-2.0.0-30.el7.x86_64.rpm
↪ rubygems-2.0.14.1-30.el7.noarch.rpm ruby-irb-2.0.0.648-30.el7.noarch.rpm rubygem-
↪ json-1.7.7-30.el7.x86_64.rpm
```

```
which ruby
ruby help
ruby --help
ruby gems ##
gem
gem list --local
ruby -v
```

```
[root@localhost rh-ruby24]# find / -name ruby
[root@localhost rh-ruby24]# pwd
/opt/rh/rh-ruby24
[root@localhost rh-ruby24]# ls
enable root
[root@localhost rh-ruby24]# cat enable >> /etc/profile
[root@localhost rh-ruby24]# source /etc/profile
```

```
[root@localhost rh-ruby24]# ruby --help
```

ruby

```
[root@localhost ruby-install-by-rpm]# cat rm.sh
rpm -ef rubygem-io-console-0.4.2-30.el7.x86_64 rubygem-psych-2.0.0-30.el7.x86_64
↪ rubygems-2.0.14.1-30.el7.noarch ruby-irb-2.0.0.648-30.el7.noarch ruby-libs-2.0.0.
↪ 648-30.el7.x86_64 rubygem-bigdecimal-1.2.0-30.el7.x86_64 rubygem-json-1.7.7-30.el7.
↪ x86_64 ruby-2.0.0.648-30.el7.x86_64 rubygem-rdoc-4.0.0-30.el7.noarch
```

draft:

```
export RUBYLIB=/opt/jlch/ruby-2.4.2/lib/
```

## 17.2 gem install package

Contents:

### 17.2.1 gem install redis

<https://rubygems.org/gems/redis/versions/3.3.5>

```
pwd
ls /home/jlch/
pwd
wget https://rubygems.org/downloads/redis-3.3.5.gem
gem install /home/jlch/redis-4.0.1.gem ## ruby-2.4
gem install /home/jlch/redis-4.0.0.gem ##
gem install /home/jlch/redis-3.3.5.gem ##
```



Contents:

## 18.1 jenkins.io

Contents:

## 18.2 jenkins line

Contents:

### 18.2.1 jenkins line

<http://www.jianshu.com/p/144254a055ba>

[https://m.baidu.com/from=844b/bd\\_page\\_type=1/ssid=0/uid=0/pu=usm%402%2Csz%40320\\_1001%2Cta%40iphone\\_2\\_6.0\\_3\\_537/baiduid=9BA967E9C8E4C323A6AEA4C66F00BD27/w=0\\_10\\_/t=iphone/l=3/tc?ref=www\\_iphone&lid=8222400941243796067&order=3&fm=alop&tj=www\\_normal\\_3\\_0\\_10\\_title&vit=osres&m=8&srd=1&cltj=cloud\\_title&asres=1&title=Jenkins%2BMaven%2BGit%E6%90%AD%E5%BB%BA%E6%8C%81%E7%BB%AD%E9%9B%86%E6%88%90%E5%92%8C%E8%87%AA%E5%8A%A8%E5%8C%96%E9%83%A8%E7%BD%B2%E7%9A%84%E9%85%8D%E7%BD%AE...&dict=22&w\\_qd=IIPT2AEptyoA\\_yivGU7mIisbRyIRt9hanzZNsfCG&sec=24731&di=c12c7a5259691502&bdenc=1&tch=124.141.276.726.2.997&nsrc=IIPT2AEptyoA\\_yixCFOxXnANedT62v3IEQGG\\_yJROcumpEm9xP4kHREsRFv7Lmq3ZpPPdj0PtAIFxmGdWWUn9RR0qrIwdzW&eqid=721bd61787ac8c001000000059e49ed3&wd=&clk\\_info=%7B%22srcid%22%3A%221599%22%2C%22tplname%22%3A%22www\\_normal%22%2C%22t%22%3A1508155108445%2C%22sig%22%3A%2217439%22%2C%22xpath%22%3A%22div-a-h3%22%7D&sfOpen=1](https://m.baidu.com/from=844b/bd_page_type=1/ssid=0/uid=0/pu=usm%402%2Csz%40320_1001%2Cta%40iphone_2_6.0_3_537/baiduid=9BA967E9C8E4C323A6AEA4C66F00BD27/w=0_10_/t=iphone/l=3/tc?ref=www_iphone&lid=8222400941243796067&order=3&fm=alop&tj=www_normal_3_0_10_title&vit=osres&m=8&srd=1&cltj=cloud_title&asres=1&title=Jenkins%2BMaven%2BGit%E6%90%AD%E5%BB%BA%E6%8C%81%E7%BB%AD%E9%9B%86%E6%88%90%E5%92%8C%E8%87%AA%E5%8A%A8%E5%8C%96%E9%83%A8%E7%BD%B2%E7%9A%84%E9%85%8D%E7%BD%AE...&dict=22&w_qd=IIPT2AEptyoA_yivGU7mIisbRyIRt9hanzZNsfCG&sec=24731&di=c12c7a5259691502&bdenc=1&tch=124.141.276.726.2.997&nsrc=IIPT2AEptyoA_yixCFOxXnANedT62v3IEQGG_yJROcumpEm9xP4kHREsRFv7Lmq3ZpPPdj0PtAIFxmGdWWUn9RR0qrIwdzW&eqid=721bd61787ac8c001000000059e49ed3&wd=&clk_info=%7B%22srcid%22%3A%221599%22%2C%22tplname%22%3A%22www_normal%22%2C%22t%22%3A1508155108445%2C%22sig%22%3A%2217439%22%2C%22xpath%22%3A%22div-a-h3%22%7D&sfOpen=1)

<http://m.blog.csdn.net/wh211212/article/details/53484028>

<http://hengyunabc.github.io/deploy-system-build-with-jenkins-ansible-supervisor/>

[http://m.it168.com/article\\_1673109.html](http://m.it168.com/article_1673109.html)

<https://zhuanlan.zhihu.com/p/23255035#comment-177559091>

<http://skyseraph.com/2016/07/18/Tools/Jenkins%E6%8C%81%E7%BB%AD%E9%9B%86%E6%88%90%E6%89%93%E5%8C%85%E5%B9%B3%E5%8F%B0%E6%90%AD%E5%BB%BA/>

## line

<http://www.jianshu.com/p/052a2401595a>

## line 1

<http://www.showerlee.com/archives/1880>

## line2

<http://www.jianshu.com/p/64b498304d07>

## line3

<http://www.cnblogs.com/wangkuan/p/5440149.html>

## line4

<https://rc.mbd.baidu.com/9wx0qbp>

firewalld,

## line

[http://www.moye.me/2016/03/03/nodejs\\_ci\\_by\\_jenkins/](http://www.moye.me/2016/03/03/nodejs_ci_by_jenkins/) <https://johnhamelink.com/2012/11/13/testing-nodejs-with-jenkins> <https://cnnodejs.org/topic/58439ca33ebad99b336b1d50> <https://codeforgeek.com/2016/04/continuous-integration-deployment-jenkins-node-js/> [https://mp.weixin.qq.com/s/ETo\\_IGKu8ia0uWFs798arw](https://mp.weixin.qq.com/s/ETo_IGKu8ia0uWFs798arw)

[http://www.cnblogs.com/moye/p/nodejs\\_project\\_with\\_jenkins\\_ci.html](http://www.cnblogs.com/moye/p/nodejs_project_with_jenkins_ci.html) <https://www.jianyuajianyu.com/using-github-and-jenkins-deploy-hexo/> <https://www.ctolib.com/topics-120724.html> <https://segmentfault.com/a/1190000010200161>

<http://www.jianshu.com/p/b524b151d35f>

<https://juejin.im/entry/58f18fc2570c3500562cb433> <http://www.jianshu.com/p/98db1b956fc7>



IIPT2AEptyoA\_yixCFOxXnANedT62v3IEQGG\_ytK1DK6mlrte4viZQRAWCTqLmuTEFGwdoSOxBt8x8Sh\_mle7gwTaPls&eqid=58fd2c844ed254001000000059e7f751&wd=&clk\_info=%7B%22srcid%22%3A%221599%22%2C%22tplname%22%3A%22www\_normal%22%2C%22t%22%3A1508374555853%2C%22sig%22%3A%2255471%22%2C%22xpath%22%3A%22div-a-h3%22%7D&sfOpen=1

<http://www.jianshu.com/p/22b7860b4e81>

## 18.3 jenkins install

Contents:

### 18.3.1 jenkins install centos yum

8080

```
sudo lsof -i:8080
```

```
sudo wget -O /etc/yum.repos.d/jenkins.repo https://pkg.jenkins.io/redhat-stable/
↪jenkins.repo
sudo rpm --import https://pkg.jenkins.io/redhat-stable/jenkins.io.key
sudo yum install jenkins -y
sudo systemctl status jenkins.service
sudo systemctl start jenkins.service
sudo systemctl status jenkins.service
sudo /etc/rc.d/init.d/jenkins start
sudo journalctl -xe
```

```
Oct 18 13:13:11 jlch_web_001 runuser[21226]: pam_unix(runuser:session): session_
↪opened for user jenkins by (uid=0)
Oct 18 13:13:11 jlch_web_001 jenkins[21225]: Starting Jenkins bash: /usr/bin/java: No_
↪such file or directory
Oct 18 13:13:11 jlch_web_001 runuser[21226]: pam_unix(runuser:session): session_
↪closed for user jenkins
Oct 18 13:13:11 jlch_web_001 jenkins[21225]: [FAILED]
Oct 18 13:13:11 jlch_web_001 systemd[1]: jenkins.service: control process exited,
↪code=exited status=1
Oct 18 13:13:11 jlch_web_001 systemd[1]: Failed to start LSB: Jenkins Automation_
↪Server.
-- Subject: Unit jenkins.service has failed
-- Defined-By: systemd
-- Support: http://lists.freedesktop.org/mailman/listinfo/systemd-devel
--
-- Unit jenkins.service has failed.
--
-- The result is failed.
```

java

```
sudo yum list installed |grep java
sudo yum search java|grep jdk
```

```
sudo yum install java-1.8.0-openjdk -y
```

```
sudo systemctl start jenkins.service  
sudo systemctl status jenkins.service
```

```
sudo firewall-cmd --help  
sudo firewall-cmd --permanent --add-port=8080/tcp  
sudo firewall-cmd --reload  
sudo firewall-cmd --list-ports
```

<http://120.25.204.216:8080/>

## 18.3.2 jenkins install jenkins.war

### Jenkins install

192.168.31.181:/home/tom/

```
java -jar jenkins.war --httpPort=8011
```

<http://192.168.31.181:8011/>

jlch, jlch, uuiduuid, 273412935@qq.com

### Jenkins+github+nodejs

<https://segmentfault.com/a/1190000010200161>

github.com webhook, jenkinsIP, nginx

jenkins

?

1.

[http://blog.csdn.net/frank\\_good/article/details/68930286](http://blog.csdn.net/frank_good/article/details/68930286)

<http://www.jianshu.com/p/22b7860b4e81> ()

tomtsang- personal access token -

91e4a74a0ec87f7fce9b6344ead0caa86e7644a0

120.25.204.216

centos

2.

### Jenkins+gitlab+nodejs

## 18.4 test

<http://blog.csdn.net/qiyueqinglian/article/details/50699008>

## 18.5 using-jenkins-to-build-a-java-maven-project

### 18.5.1 reference

<https://jenkins.io/doc/tutorials/using-jenkins-to-build-a-java-maven-project/>

### 18.5.2 env

192.168.31.240

api-cm.zhangtl.com:8011

### 18.5.3 step

```
docker pull jenkinsci/blueocean
docker volume create jenkins-data

#docker run --rm -u root -p 8011:8080 -v jenkins-data:/var/jenkins_home -v /var/run/
↪docker.sock:/var/run/docker.sock -v "$HOME"/home jenkinsci/blueocean
docker run --rm -u root -p 8011:8080 -v jenkins-data:/var/jenkins_home -v /var/run/
↪docker.sock:/var/run/docker.sock -v /home/tom/jenkins/home:/home jenkinsci/
↪blueocean
#
# ...

*****

Jenkins initial setup is required. An admin user has been created and a password_
↪generated.
Please use the following password to proceed to installation:

f4509cc0cf6543b6a85896fcad11c7ad

This may also be found at: /var/jenkins_home/secrets/initialAdminPassword

*****
*****
*****

Oct 23, 2017 2:42:14 AM hudson.model.UpdateSite updateData
```

.

.



Contents:

## 19.1 web-test

Contents:

### 19.1.1 web-test line

<https://www.zhihu.com/question/41440770?sort=created>

<http://www.cnblogs.com/imyalost/p/5622867.html>

<https://www.zhihu.com/question/24248575>

<http://www.testclass.net/>

selenium + python

[http://www.testclass.net/selenium\\_python/](http://www.testclass.net/selenium_python/)

[http://www.seleniumhq.org/download/#side\\_plugins](http://www.seleniumhq.org/download/#side_plugins)

<https://pypi.python.org/pypi/selenium>

[http://www.yiibai.com/selenium/selenium\\_overview.html](http://www.yiibai.com/selenium/selenium_overview.html)



## CHAPTER 20

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vsphere

---

Contents:

### 20.1 vsphere-60

<https://jingyan.baidu.com/article/3c48dd3499c717e10be358ee.html>

<http://www.mamicode.com/info-detail-1488564.html>

VMWare:vSphere6

192.168.31.196

|                               |
|-------------------------------|
| HV4WC-01087-1ZJ48-031XP-9A843 |
|-------------------------------|





## CHAPTER 21

---

code

---

Contents:

### 21.1 kids code

Contents:

#### 21.1.1 kidscode

<http://www.kidscode.cn/>



Contents:

## 22.1 deploy

Contents:

### 22.1.1 factor

CentOS

#### [rubyredis]

```
~/ruby~/redis
1 cd ~/ruby/ruby ruby 2 ./rpm-install-ruby-2.4.sh 3 cd ~/ruby/gem-install-redis redis 4 ./install.sh
5 cd ~/redis/by-rpm 6 ./install.sh
   emalloc-3.6.0-1.el7.x86_64.rpm,
7 cd ~/redis/redis-conf-haitong redis 8 ./redis-deploy-ip-port-passwd.sh $1 $2 $3
   $1ip$2$3redis node-{$2} redis.conf eg : ./redis-deploy-ip-port-passwd.sh 188.190.117.122
   7000 wudang
       node-7000node-7000redis.conf
9 systemctl stop redis redis 10redis-server ./node-{$2}/redis.conf &redis"&"eg: redis-server ./node-
7000/redis.conf & 11ps -ef | grep redis redis 12ip188.190.117.122cd ~/redis/redis-conf-haitongredis
   ./redis-trib.rb create --replicas 1 188.190.117.122:7000 188.190.117.122:7001
188.190.117.123:7002 188.190.117.123:7003 188.190.117.124:7004
188.190.117.124:7005(redis)
```

### 13redis

```
redis-cli -h 188.190.117.122 -p 7000 -c 188.190.117.122:7000> CONFIG SET requirepass "wudang" OK 188.190.117.122:7000> AUTH wudang OK 188.190.117.122:7000> exit
```

```
14redis-cli -h 188.190.117.122 -p 7000 -a wudang -c
```

### [node]

#### 1cd ~/nodenode:

```
xz -d node-v6.11.4-linux-x64.tar.xz tar -xvf node-v6.11.4-linux-x64.tar sudo ln -s /home/jlch/node-v6.11.4-linux-x64/bin/node /usr/bin/node node -v
```

#### 2pm2

```
tar -zxvf pm2.tar.gz mv ~/pm2/ node-v6.11.4-linux-x64/lib/node_modules/ sudo ln -s /home/jlch/node-v6.11.4-linux-x64/lib/node_modules/pm2/bin/pm2 pm2 -v
```

### [API]

```
1cd ~/api 2tar -xvf factor_ht_svr*.tar.gz 3./conf/
```

```
1conf/app.jsAPIport 2conf/mysql.jsmysql 3conf/redis.jsredis
```

```
4pm2APIeg pm2 start index.js --name "factor_ht_svr"
```

### [Nginx]

```
1cd ~/node/nginxnginx 2./install.sh 3NginxNginxsystemctl status nginx.service systemctl stop nginx.service 4Nginxsystemctl start nginx.service
```

```
nginx/etc/nginx/nginx.conf 1cp /etc/nginx/nginx.conf /etc/nginx/nginx.conf.20171030 2) cp ./nginx.conf /etc/nginx/
```

```
5APIcp 3001.conf /etc/nginx/conf.d/ 6Nginxsystemctl restart nginx.service
```

### [Web]

```
1nginx
```

```
mv /usr/share/nginx/html/factor/ /usr/share/nginx/html/factor.20171027/
```

```
2cd ~/html
```

```
tar -zxvf factor.20171030.tar.gz
```

```
3 mv factor/ /usr/share/nginx/html/factor/
```

## 22.1.2 factor

### redis

```
tar -zxvf redis.tar.gz
```

## nginx

```
ls
wget http://nginx.org/packages/centos/7/x86_64/RPMS/nginx-1.12.1-1.el7ngx.x86_64.rpm
ls
rpm -ivh nginx-1.12.1-1.el7ngx.x86_64.rpm
sudo rpm -ivh nginx-1.12.1-1.el7ngx.x86_64.rpm
ls
which nginx
ls /etc/nginx/conf.d/
ls /usr/share/nginx/html/
```

## nodejs

```
ls
which xz
xz -d node-v6.11.4-linux-x64.tar.xz
ls
tar -xvf node-v6.11.4-linux-x64.tar
ls
cd node-v6.11.4-linux-x64/
ls
cd bin/
sudo ln -s /home/jlch/node-v6.11.4-linux-x64/bin/node /usr/bin/node
cd
node
```

## pm2

```
ls
tar -zxvf pm2.tar.gz
ls
cd pm2/
ls
cd bin/
ls
pwd
./pm2 list
pwd
cd ~
ls
cd node-v6.11.4-linux-x64/
ls
cd lib/node_modules/
ls
cd npm/
ls
cd ..
pwd
ls
mv ~/pm2/ .
ls
cd pm2
ls
```

```
cd bin
ls
pwd
sudo ln -s /home/jlch/node-v6.11.4-linux-x64/lib/node_modules/pm2/bin/pm2 /usr/bin/pm2
cd
pm2 l
```

**pm2**, `~/pm2/` `rm -rf ~/pm2/`

### factor\_svr

```
tar -zxvf factor_svr.tar.gz
```

### factor-html

```
cp factor-html/ /usr/share/nginx/html/factor/
```

## 22.1.3

120.234.23.100 IP 202.104.136.202 120.234.23.99

120.234.23.99:6379 => 10.10.12.19:6379 202.104.136.202:6379 => 10.10.13.103:6379

### 22.1.4 transmitter

```
curl -X POST "http://qliang.com.cn/transmitter_api/v1/session" -H "accept:↵
↵application/json" -H "content-type: application/json" -d "{ \"login_name\": ↵
↵\"htqilei\", \"login_pwd\": \"123456\"}"
curl -X POST "https://api-cm.zhangtl.com/transmitter_api/v1/session" -H "accept:↵
↵application/json" -H "content-type: application/json" -d "{ \"login_name\": ↵
↵\"htqilei\", \"login_pwd\": \"123456\"}"
curl -X POST "https://api-ct.zhangtl.com:8443/transmitter_api/v1/session" -H "accept:↵
↵application/json" -H "content-type: application/json" -d "{ \"login_name\": ↵
↵\"htqilei\", \"login_pwd\": \"123456\"}"
```

## 22.2 openx

Contents:

### 22.2.1 singals

Contents:

## tick signals debug

### config.json

redis 192.168.31.240

```
node quote_player.js 201710311448
```

## redis

### 2 terminal

```
psubscribe Topics.signals.quote.1Min.S*
```

```
psubscribe Topics.market.snapshot.SZ
```

```
node tick-signals.js SZ
```

```
node quote_test.js
```

## tick singals feedback

### 20171031 obj.ID: 002036 GTTS

1

obj.TM: 20171031 145406 000 change5: -0.02016546018614274 price: 18.95

1 obj.TM: 20171031 145415 000 change5: -0.019658561821003572 price: 18.95

2

obj.TM: 20171031 145418 000 change5: -0.020175892395240407 price: 18.94

2

obj.TM: 20171031 145421 000 change5: -0.019141231246766553 price: 18.96

3

obj.TM: 20171031 145427 000 change5: -0.02016546018614274 price: 18.95

3

obj.TM: 20171031 145439 000 change5: -0.019141231246766553 price: 18.96

002036.SZ, GTTS

## 22.3 jlch record

Contents:

### 22.3.1 zhongtai-a

1

- 15:00-17:00
- 17:00-20:00
- 103000\*7\*10
- 3000\*7,

## 22.4

Contents:



## CHAPTER 23

---

Hello World

---



EvaEngine is a PHP5 & Zend Framework 2.0 based development engine which is still **under developing**.

Our goal is make EvaEngine to the best way to create your own custom website or webservice.

## 24.1 Features

### 24.1.1 Real Module Based

Every feature is an independent module in EvaEngine. What you need is just pick out features when you need them.

You could combine different modules into various websites : blog, social networking SNS, E-commerce or anything you want.

### 24.1.2 Everything is RESTFul

In EvaEngine, everything is designed by RESTFul style, you could build up a RESTFul webserice easily.

### 24.1.3 Plugins and Customize

EvaEngine is complete follow Zend Framework 2.0 code standards, it make developers easy to add features and install 3rd-part modules.

## 24.2 Installation

### 24.2.1 Get source code from github

```
mkdir evaengine cd evaengine git clone git://github.com/AlloVince/eva-engine.git git submodules update
-init
```

### 24.2.2 Create mysql db tables

Create a database “eva” (or any name you want), run sql query file in this database

evaengine/data/database/eva.sql

### 24.2.3 Connect database

Create EvaEngine local config file by:

evaengine/config/autoload/local.config.php

Write config file as below and change the username/password to yours:

```
<?php return array(
    'db' => array( 'dsn' => 'mysql:dbname=eva;hostname=localhost', 'username'
        => 'dbusername', 'password' => 'dbpassword',
    ), 'superadmin' => array(
        'username' => 'root', 'password' => '123456',
    ),
);
```

### 24.2.4 Bind local domain

Bind a local domain local.evaengine (or anything you want) to path

evaengine/public

Then visit the local domain <http://local.evaengine> .

## 24.3 Example

Check a blog made by EvaEngine: <http://avnpc.com/>

Blog source code is here:

<https://github.com/AlloVince/eva-engine/tree/avnpc>

## 24.4 Resources

Contact author AlloVince by his [blog](<http://avnpc.com/>) or email [i#av2.me](mailto:i#av2.me)(replace # to @) .

## CHAPTER 25

---

### Indices and tables

---

- `genindex`
- `modindex`
- `search`