

INDEX

Symbols | **A** | **B** | **C** | **D** | **E** | **F** | **G** | **H** | **I** | **J** | **K** | **L** | **M** | **N** | **O** | **P** | **R** | **S** | **T** | **U** | **V** | **W**

SYMBOLS

--add name ip:port
 monmaptool command line option

--add-key
 ceph-authtool command line option

--auth-uid=auuid
 radosgw-admin command line option

--bucket=bucket
 radosgw-admin command line option

--build --num_osds {num-osds} layer1 ...
 crushtool command line option

--cap subsystem capability
 ceph-authtool command line option

--caps capsfile
 ceph-authtool command line option

--clobber
 crushtool command line option
 monmaptool command line option
 osdmapproot command line option

--cluster clustername
 ceph-rest-api command line option

--create
 monmaptool command line option

--createsimple numosd [--pgbits bitsperosd]
 osdmapproot command line option

--date=yyyy-mm-dd
 radosgw-admin command line option

--display-name=name
 radosgw-admin command line option

--email=email
 radosgw-admin command line option

--end-date=yyyy-mm-dd
 radosgw-admin command line option

--export-crush mapfile
 osdmapproot command line option

--filter-initial-members
 monmaptool command line option

--flush-journal
 ceph-osd command line option

--format format
 rbd command line option

--fsid uuid
 monmaptool command line option

--gen-key
 ceph-authtool command line option

--generate
 monmaptool command line option

--get-cluster-fsid
 ceph-osd command line option

--get-journal-fsid
 ceph-osd command line option

--get-osd-fsid
 ceph-osd command line option

--id username
 rbd command line option

--image-format format
 rbd command line option

--import-crush mapfile
 osdmapproot command line option

--syn workloadspect
 ceph-syn command line option

--test ...
 crushtool command line option

--uid=uid
 radosgw-admin command line option

--valgrind[_{osd,mds,mon}] 'valgrind_toolname [args...]
 command line option

--vernum
 librados-config command line option

--version
 librados-config command line option

-a, --allhosts
 mkcephfs command line option

-a, --arch
 ceph-clsinform command line option

-c --stripe_count
 cephfs command line option

-c ceph.conf
 rbd-fuse command line option

-c ceph.conf, --conf ceph.conf
 rbd command line option

-c ceph.conf, --conf=ceph.conf
 ceph command line option
 ceph-debugpack command line option
 ceph-fuse command line option
 ceph-mds command line option
 ceph-mon command line option
 ceph-osd command line option
 ceph-syn command line option
 mkcephfs command line option
 rados command line option
 radosgw command line option
 radosgw-admin command line option

-c map.txt
 crushtool command line option

-C, --create-keyring
 ceph-authtool command line option

-c/--conf conffile
 ceph-rest-api command line option

-d
 ceph-fuse command line option
 ceph-mds command line option
 ceph-mon command line option
 ceph-osd command line option
 ceph-syn command line option

-d *description*, --description *description*
 ceph-post-file command line option

-d map
 crushtool command line option

-d, --debug
 command line option

-f, --foreground
 ceph-mds command line option
 ceph-mon command line option
 ceph-osd command line option

-i infile

--init-local-daemons type -d dir
mkcephfs command line option

--keyfile filename
rbd command line option

--keyring
ceph-mon command line option

--keyring filename
rbd command line option

--lazy-remove
radosgw-admin command line option

--mkfs
ceph-mon command line option
ceph-osd command line option
mkcephfs command line option

--mkjournal
ceph-osd command line option

--mkkey
ceph-osd command line option

--no-copy-conf
mkcephfs command line option

--no-progress
rbd command line option

--nodaemon
command line option

--num_client num
ceph-syn command line option

--object=object
radosgw-admin command line option

--order bits
rbd command line option

--osd-data osddata
ceph-osd command line option

--osd-journal journal
ceph-osd command line option

--prepare-mon -d dir
mkcephfs command line option

--prepare-monmap -d dir -c ceph.conf
mkcephfs command line option

--pretty-format
rbd command line option

--print
monmaptool command line option
osdmaptool command line option

--purge-data
radosgw-admin command line option

--purge-objects
radosgw-admin command line option

--rgw-socket-path=path
radosgw command line option

--rm name
monmaptool command line option

--secret=secret
radosgw-admin command line option

--shared tag
rbd command line option

--size size-in-mb
rbd command line option

--smallmds
command line option

--snap snap
rbd command line option

--start-date=yyyy-mm-dd
radosgw-admin command line option

--stripe-count num
rbd command line option

--stripe-unit size-in-bytes
rbd command line option

ceph command line option
rados command line option

-i ip_address
command line option

-i/--id id
ceph-rest-api command line option

-k
command line option

-k /path/to/keyring
mkcephfs command line option

-l --offset
cephfs command line option

-l, --list
ceph-authtool command line option

-l, --localhost
command line option

-m ip[:port]
command line option

-m monaddress[:port]
ceph command line option
ceph-fuse command line option
ceph-mds command line option
ceph-osd command line option
ceph-syn command line option
rados command line option
radosgw command line option
radosgw-admin command line option
rbd command line option

-n, --name
ceph-clsinfo command line option

-n, --new
command line option

-n/--name name
ceph-rest-api command line option

-o --osd
cephfs command line option

-o config
command line option

-o outfile
ceph command line option
crushtool command line option
rados command line option

-p --pool
cephfs command line option

-p pool
rbd-fuse command line option

-p pool, --pool pool
rados command line option
rbd command line option

-p, --print
ceph-authtool command line option

-r
command line option

-r root_directory
ceph-fuse command line option

-s --object_size
cephfs command line option

-s snap, --snap snap
rados command line option

-u *user*
ceph-post-file command line option

-u --stripe_unit
cephfs command line option

-v, --version
ceph-clsinfo command line option

-X
command line option

A

After we write [`*stripe_unit*`] bytes to [`*stripe_count*`] objects, we loop back to the initial object

`rbd command line option`

and write another stripe, until the object reaches its maximum size (as specified by [`*order*`]). At that

`rbd command line option`

architecture

Ceph Clients

Ceph Object Storage

Data Scrubbing

PG Peering

Rebalancing

Striping

calculating PG IDs

cluster map

high availability

high availability authentication

pools

smart daemons and scalability

watch/notify

B

`break_lock()` (`rbd.Image` method)

C

Ceph

Ceph Block Device

OpenStack

QEMU KVM

block device; RBD; Rados Block Device

cache options

discard trim and libvirt

image management

introduction

kernel module

livirt

snapshot layering

snapshots

Ceph Block Storage

Ceph Classes

Ceph Client

Ceph Client Libraries

Ceph Clients

Ceph Cluster Map

ceph command line option

`-c ceph.conf, --conf=ceph.conf`

`-i infile`

`-m monaddress[:port]`

`-o outfile`

Ceph Filesystem

Ceph FS

Ceph Filesystem; libcephfs; MDS; metadata server; ceph-mds

Ceph Interim Release

Ceph Kernel Modules

Ceph Metadata Server

Ceph Monitor

Paxos

ceph-mds command line option

`-c ceph.conf, --conf=ceph.conf`

`-d`

`-f, --foreground`

`-m monaddress[:port]`

ceph-mon command line option

`--keyring`

`--mkfs`

`-c ceph.conf, --conf=ceph.conf`

`-d`

`-f, --foreground`

ceph-osd command line option

`--flush-journal`

`--get-cluster-fsid`

`--get-journal-fsid`

`--get-osd-fsid`

`--mkfs`

`--mkjournal`

`--mkkey`

`--osd-data osddata`

`--osd-journal journal`

`-c ceph.conf, --conf=ceph.conf`

`-d`

`-f, --foreground`

`-m monaddress[:port]`

ceph-post-file command line option

`-d *description*, --description *description*`

`-u *user*`

ceph-rest-api command line option

`--cluster clustername`

`-c/--conf conffile`

`-i/--id id`

- bootstrapping monitors
- capacity planning
- clock
- cluster map
- configuring monitors
- consistency
- data path
- initial members
- leader
- provider
- requester
- synchronization

Ceph Node

Ceph Object Gateway

Ceph Object Storage

Ceph Object Store

Ceph OSD

Ceph OSD Daemon

Ceph Platform

Ceph Point Release

Ceph Project

Ceph Protocol

Ceph Release

Ceph Release Candidate

Ceph service

- sysvinit; operating a cluster

Ceph Stable Release

Ceph Stack

Ceph Storage Cluster

- capacity planning

Ceph System

Ceph Test Framework

ceph-authtool command line option

- add-key
- cap subsystem capability
- caps capsfile
- gen-key
- C, --create-keyring
- l, --list
- p, --print

ceph-clsinfo command line option

- a, --arch
- n, --name
- v, --version

ceph-debugpack command line option

- c ceph.conf, --conf=ceph.conf

ceph-dencoder command line option

- count_tests
- decode
- dump_json
- encode
- export <file>
- get_features
- import <file>
- list_types
- select_test <n>
- set_features <f>
- type <name>
- version

ceph-fuse command line option

- c ceph.conf, --conf=ceph.conf
- d
- m monaddress[:port]
- r root_directory

- n/--name name

ceph-syn command line option

- num_client num
- syn workloadspect
- c ceph.conf, --conf=ceph.conf
- d
- m monaddress[:port]

CEPH_OSD_TMAP_CREATE (C macro)

CEPH_OSD_TMAP_HDR (C macro)

CEPH_OSD_TMAP_RM (C macro)

CEPH_OSD_TMAP_SET (C macro)

CephFS

cephfs command line option

- c --stripe_count
- l --offset
- o --osd
- p --pool
- s --object_size
- u --stripe_unit

cephx

- authentication; cephx configuration

clone() (rbd.RBD method)

close() (rbd.Image method)

Cloud Platforms

Cloud Stacks

cluster map

command line option

- nodaemon
- smallmds
- valgrind[_{osd,mds,mon}] 'valgrind_toolname [args...]'
- X
- d, --debug
- i ip_address
- k
- l, --localhost
- m ip[:port]
- n, --new
- o config
- r
- x

commands

control

copy() (rbd.Image method)

count_tests

- ceph-dencoder command line option

create() (rbd.RBD method)

create_snap() (rbd.Image method)

CRUSH

- architecture

crushtool command line option

- build --num_osds {num-osds} layer1 ...
- clobber
- test ...
- c map.txt
- d map
- o outfile

names, see crushtool --help for more information.

will perform a dry run of a CRUSH mapping for a range of input object

decode

ceph-dencoder command line option

diff_iterate() (rbd.Image method)

discard() (rbd.Image method)

dump_json

ceph-dencoder command line option

E

Each [*stripe_unit*] contiguous bytes are stored adjacently in the same object, before we move on

export <file>

ceph-dencoder command line option

Extensibility

encode

ceph-dencoder command line option

F

filestore

btrfs

extended attributes

flusher

journal

queue

synchronization

timeouts

filesystems

flatten() (rbd.Image method)

flush() (rbd.Image method)

G

get_features

ceph-dencoder command line option

H

hard drive preparation

heartbeat, [1]

heartbeat interval

high availability

monitor architecture

quorum

Host

I

Image (class in rbd)

import <file>

ceph-dencoder command line option

invalidate_cache() (rbd.Image method)

is 22, or 4 MB.

rbd command line option

is_protected_snap() (rbd.Image method)

J

journal

journal configuration

K

kb (C member)

kb_avail (C member)

kb_used (C member)

keys

keyring

L

librados

LIBRADOS_VER_MINOR (C macro)

librados-config command line option
--vernum
--version
LIBRADOS_LOCK_FLAG_RENEW (C macro)
LIBRADOS_SNAP_DIR (C macro)
LIBRADOS_SNAP_HEAD (C macro)
LIBRADOS_SUPPORTS_WATCH (C macro)
LIBRADOS_VER_EXTRA (C macro)
LIBRADOS_VER_MAJOR (C macro)

LIBRADOS_VERSION (C macro)
LIBRADOS_VERSION_CODE (C macro)
list() (rbd.RBD method)
list_children() (rbd.Image method)
list_lockers() (rbd.Image method)
list_snaps() (rbd.Image method)
list_types
ceph-dencoder command line option
lock_exclusive() (rbd.Image method)
lock_shared() (rbd.Image method)

M

MDS

mkcephfs command line option
--init-local-daemons type -d dir
--mkfs
--no-copy-conf
--prepare-mon -d dir
--prepare-monmap -d dir -c ceph.conf
-a, --allhosts
-c ceph.conf, --conf=ceph.conf
-k /path/to/keyring

MON

monitor
monitor heartbeat
monmaptool command line option
--add name ip:port
--clobber
--create
--filter-initial-members
--fsid uuid
--generate
--print
--rm name

N

names, see crushtool --help for more information.
crushtool command line option

Node

num_bytes (C member)
num_kb (C member)
num_object_clones (C member)
num_object_copies (C member)

num_objects (C member), [1]
num_objects_degraded (C member)
num_objects_missing_on_primary (C member)
num_objects_unfound (C member)
num_rd (C member)
num_rd_kb (C member)
num_wr (C member)
num_wr_kb (C member)

O

Object Storage Device

order
rbd command line option

OSD, [1]

backfilling
config settings
configuration
journal settings
operations settings
osdmap
recovery
scrubbing

OSD down report
OSD heartbeat
OSD status
osdmapprool command line option
--clobber
--createsimple numosd [--pgbits bitsperosd]
--export-crush mapfile
--import-crush mapfile
--print

P

peering failure
point, we move on to the next [*stripe_count*] objects.
rbd command line option
pools
OpenStack
configuration

protect_snap() (rbd.Image method)
Python Enhancement Proposals
PEP 343

R

RADOS

RADOS Cluster

rados command line option

-c ceph.conf, --conf=ceph.conf
-i infile
-m monaddress[:port]
-o outfile
-p pool, --pool pool
-s snap, --snap snap

RADOS Gateway

[rados_aid](#) (C function)
[rados_aid_create_completion](#) (C function)
[rados_aid_flush](#) (C function)
[rados_aid_flush_async](#) (C function)
[rados_aid_get_return_value](#) (C function)
[rados_aid_is_complete](#) (C function)
[rados_aid_is_complete_and_cb](#) (C function)
[rados_aid_is_safe](#) (C function)
[rados_aid_is_safe_and_cb](#) (C function)
[rados_aid_read](#) (C function)
[rados_aid_release](#) (C function)
[rados_aid_remove](#) (C function)
[rados_aid_stat](#) (C function)
[rados_aid_wait_for_complete](#) (C function)
[rados_aid_wait_for_complete_and_cb](#) (C function)
[rados_aid_wait_for_safe](#) (C function)
[rados_aid_wait_for_safe_and_cb](#) (C function)
[rados_aid_write](#) (C function)
[rados_aid_write_full](#) (C function)
[rados_append](#) (C function)
[rados_break_lock](#) (C function)
[rados_buffer_free](#) (C function)
[rados_callback_t](#) (C type)
[rados_cct](#) (C function)
[rados_clone_range](#) (C function)
[rados_cluster_fsid](#) (C function)
[rados_cluster_stat](#) (C function)
[rados_cluster_stat_t](#) (C type)
[rados_completion_t](#) (C type)
[rados_conf_get](#) (C function)
[rados_conf_parse_argv](#) (C function)
[rados_conf_parse_argv_remainder](#) (C function)
[rados_conf_parse_env](#) (C function)
[rados_conf_read_file](#) (C function)
[rados_conf_set](#) (C function)
[rados_config_t](#) (C type)
[rados_connect](#) (C function)
[rados_create](#) (C function)
[rados_create2](#) (C function)
[rados_create_with_context](#) (C function)
[rados_exec](#) (C function)
[rados_get_instance_id](#) (C function)
[rados_get_last_version](#) (C function)
[rados_getxattr](#) (C function)
[rados_getxattrs](#) (C function)
[rados_getxattrs_end](#) (C function)
[rados_getxattrs_next](#) (C function)
[rados_ioctx_cct](#) (C function)
[rados_ioctx_create](#) (C function)
[rados_ioctx_destroy](#) (C function)
[rados_ioctx_get_cluster](#) (C function)
[rados_ioctx_get_id](#) (C function)
[rados_ioctx_get_pool_name](#) (C function)
[rados_ioctx_locator_set_key](#) (C function)
[rados_ioctx_pool_get_aid](#) (C function)
[rados_ioctx_pool_set_aid](#) (C function)
[rados_ioctx_pool_stat](#) (C function)
[rados_ioctx_selfmanaged_snap_create](#) (C function)
[rados_ioctx_selfmanaged_snap_remove](#) (C function)
[rados_ioctx_selfmanaged_snap_rollback](#) (C function)
[rados_ioctx_selfmanaged_snap_set_write_ctx](#) (C function)

[rados_osd_command](#) (C function)
[rados_pg_command](#) (C function)
[rados_pool_create](#) (C function)
[rados_pool_create_with_all](#) (C function)
[rados_pool_create_with_aid](#) (C function)
[rados_pool_create_with_crush_rule](#) (C function)
[rados_pool_delete](#) (C function)
[rados_pool_list](#) (C function)
[rados_pool_lookup](#) (C function)
[rados_pool_reverse_lookup](#) (C function)
[rados_pool_stat_t](#) (C type)
[rados_read](#) (C function)
[rados_remove](#) (C function)
[rados_rmxattr](#) (C function)
[rados_rollback](#) (C function)
[rados_setxattr](#) (C function)
[rados_shutdown](#) (C function)
[rados_snap_t](#) (C type)
[rados_stat](#) (C function)
[rados_t](#) (C type)
[rados_tmap_get](#) (C function)
[rados_tmap_put](#) (C function)
[rados_tmap_update](#) (C function)
[rados_trunc](#) (C function)
[rados_unlock](#) (C function)
[rados_unwatch](#) (C function)
[rados_version](#) (C function)
[rados_watch](#) (C function)
[rados_watchcb_t](#) (C type)
[rados_write](#) (C function)
[rados_write_full](#) (C function)
[rados_xattrs_iter_t](#) (C type)

radosgw command line option

--rgw-socket-path=path
-c ceph.conf, --conf=ceph.conf
-m monaddress[:port]

radosgw-admin command line option

--auth-uid=aid
--bucket=bucket
--date=yyyy-mm-dd
--display-name=name
--email=email
--end-date=yyyy-mm-dd
--lazy-remove
--object=object
--purge-data
--purge-objects
--secret=secret
--start-date=yyyy-mm-dd
--uid=uid
-c ceph.conf, --conf=ceph.conf
-m monaddress[:port]

RBD

[radosgw_admin](#) (class in rbd)

[radosgw_admin](#) (module)

rbd command line option

--format format
--id username
--image-format format
--keyfile filename
--keyring filename
--no-progress
--order bits
--pretty-format
--shared tag
--size size-in-mb
--snap snap
--stripe-count num

[rados_ioctx_set_namespace](#) (C function)
[rados_ioctx_snap_create](#) (C function)
[rados_ioctx_snap_get_name](#) (C function)
[rados_ioctx_snap_get_stamp](#) (C function)
[rados_ioctx_snap_list](#) (C function)
[rados_ioctx_snap_lookup](#) (C function)
[rados_ioctx_snap_remove](#) (C function)
[rados_ioctx_snap_set_read](#) (C function)
[rados_ioctx_t](#) (C type)
[rados_list_ctx_t](#) (C type)
[rados_list_lockers](#) (C function)
[rados_lock_exclusive](#) (C function)
[rados_lock_shared](#) (C function)
[rados_log_callback_t](#) (C type)
[rados_mon_command](#) (C function)
[rados_mon_command_target](#) (C function)
[rados_monitor_log](#) (C function)
[rados_notify](#) (C function)
[rados_objects_list_close](#) (C function)
[rados_objects_list_next](#) (C function)
[rados_objects_list_open](#) (C function)

[--stripe-unit size-in-bytes](#)
[-c ceph.conf, --conf ceph.conf](#)
[-m monaddress\[:port\]](#)
[-p pool, --pool pool](#)
 After we write `[*stripe_unit*]` bytes to `[*stripe_count*]` objects, we loop back to the initial object
 Each `[*stripe_unit*]` contiguous bytes are stored adjacently in the same object, before we move on
 The size of objects we stripe over is a power of two, specifially $2^{[*order*]}$ bytes. The default and write another stripe, until the object reaches its maximum size (as specified by `[*order*]`). At that is 22, or 4 MB.
[order](#)
 point, we move on to the next `[*stripe_count*]` objects.
[stripe_count](#)
[stripe_unit](#)
 to the next object.
[rbd-fuse](#) command line option
[-c ceph.conf](#)
[-p pool](#)
[read\(\)](#) (rbd.Image method)
[remove\(\)](#) (rbd.RBD method)
[remove_snap\(\)](#) (rbd.Image method)
[rename\(\)](#) (rbd.RBD method)
[resize\(\)](#) (rbd.Image method)
RGW
[rollback_to_snap\(\)](#) (rbd.Image method)

S

[scalability](#)
[select_test <n>](#)
[ceph-dencoder](#) command line option
[set_features <f>](#)
[ceph-dencoder](#) command line option
[set_snap\(\)](#) (rbd.Image method)
[signatures](#)
[size\(\)](#) (rbd.Image method)

[SnapIterator](#) (class in rbd)
[stat\(\)](#) (rbd.Image method)
[stripe_count](#)
[rbd](#) command line option
[stripe_count\(\)](#) (rbd.Image method)
[stripe_unit](#)
[rbd](#) command line option
[stripe_unit\(\)](#) (rbd.Image method)

T

Teuthology

The size of objects we stripe over is a power of two, specifially $2^{[*order*]}$ bytes. The default
[rbd](#) command line option

to the next object.
[rbd](#) command line option
[type <name>](#)
[ceph-dencoder](#) command line option

U

[unlock\(\)](#) (rbd.Image method)
[unprotect_snap\(\)](#) (rbd.Image method)

[Upstart](#)
[operating a cluster](#)

V

[version](#)
[ceph-dencoder](#) command line option

[version\(\)](#) (rbd.RBD method)

W

will perform a dry run of a CRUSH mapping for a range of input object
[write\(\)](#) (rbd.Image method)

