CEPH-DENCODER – CEPH ENCODER/DECODER UTILITY

SYNOPSIS

ceph-dencoder [commands…]

DESCRIPTION

ceph-dencoder is a utility to encode, decode, and dump ceph data structures. It is used for debugging and for testing inter-version compatibility.

ceph-dencoder takes a simple list of commands and performs them in order.

COMMANDS

version

Print the version string for the **ceph-dencoder** binary.

import `<file>`

Read a binary blob of encoded data from the given file. It will be placed in an in-memory buffer.

export `<file>`

Write the contents of the current in-memory buffer to the given file.

list_types

List the data types known to this build of **ceph-dencoder**.

type `<name>`

Select the given type for future encode or decode operations.

skip `<bytes>`

Seek <bytes> into the imported file before reading data structure, use this with objects that have a preamble/header before the object of interest.

decode

Decode the contents of the in-memory buffer into an instance of the previously selected type. If there is an error, report it.

encode

Encode the contents of the in-memory instance of the previously selected type to the in-memory buffer.

dump_json

Print a JSON-formatted description of the in-memory object.

count_tests

Print the number of built-in test instances of the previosly selected type that **ceph-dencoder** is able to generate.

select_test `<n>`

Select the given build-in test instance as a the in-memory instance of the type.

get_features

Print the decimal value of the feature set supported by this version of **ceph-dencoder**. Each bit represents a feature. These correspond to CEPH_FEATURE_* defines in src/include/ceph_features.h.

set_features `<f>`

Set the feature bits provided to encode to *f*. This allows you to encode objects such that they can be understood by old versions of the software (for those types that support it).

EXAMPLE

Say you want to examine an attribute on an object stored by ceph-osd. You can do this:

```
$ cd /mnt/osd.12/current/2.b_head
$ attr -l foo_bar_head_EFE6384B
Attribute "ceph.snapset" has a 31 byte value for foo_bar_head_EFE6384B
Attribute "ceph._" has a 195 byte value for foo_bar_head_EFE6384B
$ attr foo_bar_head_EFE6384B -g ceph._ -q > /tmp/a
$ ceph-dencoder type object_info_t import /tmp/a decode dump_json
{ "oid": { "oid": "foo",
      "key": "bar",
      "snapid": -2,
      "hash": 4024842315,
      "max": 0},
  "locator": { "pool": 2,
      "preferred": -1,
      "key": "bar"},
  "category": "",
  "version": "9'1",
  "prior_version": "0'0",
  "last_reqid": "client.4116.0:1",
  "size": 1681,
  "mtime": "2012-02-21 08:58:23.666639",
  "lost": 0,
  "wrlock_by": "unknown.0.0:0",
  "snaps": [],
  "truncate_seq": 0,
  "truncate_size": 0,
  "watchers": {}}
```

Alternatively, perhaps you wish to dump an internal CephFS metadata object, you might do that like this:

```
$ rados -p metadata get mds_snaptable mds_snaptable.bin
$ ceph-dencoder type SnapServer skip 8 import mds_snaptable.bin decode dump_json
{ "snapserver": { "last_snap": 1,
   "pending_noop": [],
   "snaps": [],
   "need_to_purge": {},
   "pending_create": [],
   "pending_destroy": []}}
```

AVAILABILITY

ceph-dencoder is part of Ceph, a massively scalable, open-source, distributed storage system. Please refer to the Ceph documentation at http://ceph.com/docs for more information.

SEE ALSO

ceph(8)