

ISA ERASURE CODE PLUGIN

The *isa* plugin encapsulates the **ISA** library. It only runs on Intel processors.

CREATE AN ISA PROFILE

To create a new *isa* erasure code profile:

```
ceph osd erasure-code-profile set {name} \
  plugin=isa \
  technique={reed_sol_van|cauchy} \
  [k={data-chunks}] \
  [m={coding-chunks}] \
  [crush-root={root}] \
  [crush-failure-domain={bucket-type}] \
  [crush-device-class={device-class}] \
  [directory={directory}] \
  [--force]
```

Where:

`k={data chunks}`

Description: Each object is split in **data-chunks** parts, each stored on a different OSD.
Type: Integer
Required: No.
Default: 7

`m={coding-chunks}`

Description: Compute **coding chunks** for each object and store them on different OSDs. The number of coding chunks is also the number of OSDs that can be down without losing data.
Type: Integer
Required: No.
Default: 3

`technique={reed_sol_van|cauchy}`

Description: The ISA plugin comes in two **Reed Solomon** forms. If `reed_sol_van` is set, it is **Vandermonde**, if *cauchy* is set, it is **Cauchy**.
Type: String
Required: No.
Default: reed_sol_van

`crush-root={root}`

Description: The name of the crush bucket used for the first step of the CRUSH rule. For instance **step take default**.
Type: String
Required: No.
Default: default

`crush-failure-domain={bucket-type}`

Description: Ensure that no two chunks are in a bucket with the same failure domain. For instance, if the failure domain is **host** no two chunks will be stored on the same host. It is used to create a CRUSH rule step such as **step chooseleaf host**.
Type: String
Required: No.
Default: host

`crush-device-class={device-class}`

Description: Restrict placement to devices of a specific class (e.g., ssd or hdd), using the crush device class names in the CRUSH map.

Type: String

Required: No.

Default:

directory={directory}

Description: Set the **directory** name from which the erasure code plugin is loaded.

Type: String

Required: No.

Default: /usr/lib/ceph/erasure-code

--force

Description: Override an existing profile by the same name.

Type: String

Required: No.