

# Software RAID (mdadm) - Running RAID 0 alongside RAID 1

**Draft** - Incomplete, but kept mostly for my own sake so I can find my way back to it at a later date.

- Specific scenario: Hetzner installimage with RAID1 or RAID10
  - RAID10 with less storage for the OS and "important" stuff.
    - Make sure to comment out the `all` option, that allocates the rest of the disks to say `/home` or similar.
  - RAID0 with the remaining storage across all 4 of the disks (Linux ISOs) that's easily replacable.
1. Create empty partitions using `fdisk`. Ended up with: `/dev/sda5`, `/dev/sdb5` etc.
    - `fdisk /dev/sda`
      - `n` (new partition)
        - Note the partition number. For me the last partition number ended up being `5` for all disks, which I used in the `mdadm` command later.
      - Select start block, end block etc. (or just leave default to use remaining space)
      - `w` to write partition table
  2. Create a new RAID0 array using new partitions, with `mdadm`:
    - `mdadm --create --verbose /dev/md3 --level=0 --raid-devices=4 /dev/sda5 /dev/sdb5 /dev/sdc5 /dev/sdd5`
    - Note: Might wanna check `lsblk` to verify that `/dev/md3` isn't already taken. When I ran `installimage` I ended up with:
      - `md0` = swap
      - `md1` = boot
      - `md2` = root partition (`/`)
  3. Run `mdadm --detail --scan` and find the line that matches `/dev/md3`. Copy that line and put it at the end of `/etc/mdadm/mdadm.conf`
    - A lot of tutorials suggest piping that to `tee -a /etc/mdadm/mdadm.conf` so it appends **all** the lines to the end of `/etc/mdadm/mdadm.conf`. In this case since there's already an existing RAID array, there will be duplicate lines and potential for conflicts.
  4. Double check that `/etc/mdadm/mdadm.conf` looks correct, then run `update-initramfs -u` so that the RAID array is available during the boot process.
- TODO: Creating filesystem, mounting, append to fstab.

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