

Extending RAID

Prepare new disk

Need to partition? Do it now. I'll wait...

Setup: The current RAID has 4 drives and we want to add a 5th drive. The current array is "md111" and we have already checked drives on the system `lsblk` to see which drive we will be adding "sdd1"

Add disk to RAID

```
mdadm --add /dev/md111 /dev/sdd1
```

`mdadm --add /current/drive/array` (array that already has the other raid drives in it)
`/new/drive/to/add` (the 1 drive that you will be adding)

Grow RAID:

```
mdadm --grow --raid-devices=4 /dev/md111
```

 This will grow your current array to accept a new drive

Now that you have expanded the underlying partition, you must now resize your filesystem to take advantage of it.

You may want to perform an `fsck` on the file system first to make sure there are no underlying issues before attempting to resize the file system

Integrity Check: `e2fsck -f /dev/md111`

Resize array: `resize2fs /dev/md111`

Mount it: `mount /dev/md111 /your/new/local/location`

Check RAID rebuild status or Current status

```
cat /proc/mdstat
```

Sources you can use:

<https://raid.wiki.kernel.org/index.php/Growing>

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