

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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