

## vinum limits disk size to 255MB

**Source:** <http://unix.derkeiler.com/Mailing-Lists/FreeBSD/questions/2004-12/0424.html>

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To: freebsd-questions@freebsd.org

Hi all,

I'm trying to set up vinum on a freshly installed FreeBSD 5.3-BETA7 box. The system is installed on da0. I want to use three 18G SCSI drives to create a vinum volume.

For some reason vinum believes the disks hold a mere 255MB. This is what vinum sets the subdisk length if I specify "0m" as the length (meaning "use all available space" according to the manual). If I specify any larger size manually, vinum complains that there is "No space left on device" which strikes me odd. I *\*believe\** that the fdisk and bsdlable outputs reprinted below show that the disks are indeed 18G. According to my math, the appropriate size to specify in the vinum configuration would be 35566215s, that is the number of sectors of the smaller disks minus 265.

I see only one minor problem: The disks are not identical, with da1 having a slightly larger capacity than da2 and da3.

Can anyone throw me a ring here?

Thanks,  
Markus

fdisk da1 shows:

```
***** Working on device /dev/da1 *****
```

parameters extracted from in-core disklabel are:

```
cylinders=2231 heads=255 sectors/track=63 (16065 blks/cyl)
```

Figures below won't work with BIOS for partitions not in cyl 1

parameters to be used for BIOS calculations are:

```
cylinders=2231 heads=255 sectors/track=63 (16065 blks/cyl)
```

Media sector size is 512

Warning: BIOS sector numbering starts with sector 1

Information from DOS bootblock is:

The data for partition 1 is:

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sysid 165 (0xa5),(FreeBSD/NetBSD/386BSD)  
start 63, size 35840952 (17500 Meg), flag 80 (active)  
beg: cyl 0/ head 1/ sector 1;  
end: cyl 182/ head 254/ sector 63

The data for partition 2 is:

<UNUSED>

The data for partition 3 is:

<UNUSED>

The data for partition 4 is:

<UNUSED>

fdisk da2 or da3 show:

\*\*\*\*\* Working on device /dev/da2 \*\*\*\*\*

parameters extracted from in-core disklabel are:

cylinders=2213 heads=255 sectors/track=63 (16065 blks/cyl)

Figures below won't work with BIOS for partitions not in cyl 1

parameters to be used for BIOS calculations are:

cylinders=2213 heads=255 sectors/track=63 (16065 blks/cyl)

Media sector size is 512

Warning: BIOS sector numbering starts with sector 1

Information from DOS bootblock is:

The data for partition 1 is:

sysid 165 (0xa5),(FreeBSD/NetBSD/386BSD)  
start 63, size 35551782 (17359 Meg), flag 80 (active)  
beg: cyl 0/ head 1/ sector 1;  
end: cyl 1023/ head 254/ sector 63

The data for partition 2 is:

<UNUSED>

The data for partition 3 is:

<UNUSED>

The data for partition 4 is:

<UNUSED>

bsdlabel -A da1 shows:

# /dev/da1:

type: unknown

disk: amnesiac

label:

flags:

bytes/sector: 512

sectors/track: 63

tracks/cylinder: 255

sectors/cylinder: 16065

cylinders: 2231

sectors/unit: 35843670

rpm: 3600

interleave: 1

trackskew: 0

cylinderskew: 0

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headswitch: 0 # milliseconds  
track-to-track seek: 0 # milliseconds  
drivedata: 0

8 partitions:  
# size offset fstype [fsize bsize bps/cpg]  
c: 35843670 0 unused 0 0 # "raw" part, don't edit  
e: 35843670 0 vinum

bsdlabel -A da2 or da3 show:  
# /dev/da2:  
type: unknown  
disk: amnesiac  
label:  
flags:  
bytes/sector: 512  
sectors/track: 63  
tracks/cylinder: 255  
sectors/cylinder: 16065  
cylinders: 2213  
sectors/unit: 35566480  
rpm: 3600  
interleave: 1  
trackskew: 0  
cylinderskew: 0  
headswitch: 0 # milliseconds  
track-to-track seek: 0 # milliseconds  
drivedata: 0

8 partitions:  
# size offset fstype [fsize bsize bps/cpg]  
c: 35566480 0 unused 0 0 # "raw" part, don't edit  
e: 35566480 0 vinum

The vinum config file reads:  
drive ibma device /dev/da1s1e  
drive ibmb device /dev/da2s1e  
drive ibmc device /dev/da3s1e  
volume raid5 setupstate  
plex org concat  
sd length 0m drive ibma  
sd length 0m drive ibmb  
sd length 0m drive ibmc

vinum -> create vinumconfig1  
3 drives:  
D ibma State: up /dev/da1s1e A:0/256 MB (0%)  
D ibmb State: up /dev/da2s1e A:0/256 MB (0%)  
D ibmc State: up /dev/da3s1e A:0/256 MB (0%)

## freebsd-questions: vinum limits disk size to 255MB

1 volumes:

V raid5 State: up Plexes: 1 size: 767 MB

3 subdisks:

S raid5.p0.s0 State: up D: ibma Size: 255MB

S raid5.p0.s1 State: up D: ibmb Size: 255MB

S raid5.p0.s2 State: up D: ibmc Size: 255MB

uname -a shows:

FreeBSD wutz.mininet 5.3-BETA7 FreeBSD 5.3-BETA7 #0: Sat Oct 2 21:01:00 UTC 2004  
root@wv1u.samsco.home:/usr/obj/usr/src/sys/GENERIC i386

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freebsd-questions@freebsd.org mailing list

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