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How large should I make root, home, usr, var, and tmp partitions?

Asked 11 years, 8 months ago Modified 2 years, 3 months ago Viewed 72k times

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i install ubuntu server 10.04, have 64 Gb VHD.

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And want to separate partitions in this mode:



```
/dev/xvda0 p on swap (2 Gb)
/dev/xvda1a0 e on /boot (128 Mb)
/dev/xvda1a1 e on / type ffs (local)
/dev/xvda1a2 e on /usr type ffs (local, nodev)
/dev/xvda1a3 e on /tmp type ffs (local, nodev)
/dev/xvda1a4 e on /var/log type ffs (local, nodev)
/dev/xvda1a5 e on /var type ffs (local, nodev, nosuid)
/dev/xvda1a6 e on /home type ffs (local, nodev, nosuid, with quotas)
/dev/xvda2 p on /new (local, nodev, nosuid, noexec) with rest of space ~50Gb.
```

But i'ma stuck, and don't know what size to give to each folder.

Also i want to encrypt partitions.

Thank you for any tips.

EDIT: System need minimum size, here will be installed about 10 apps like ufw, apache,mysql, chkrootkit and so on.

[10.04](#) [server](#) [partitioning](#) [encryption](#)

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edited Jun 5, 2012 at 14:35

asked Jun 5, 2012 at 14:23

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Mikhael Djekson

313 1 2 10

4 Answers

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First, I would put all space, except `/boot` , in a LVM2 volume. That's because it makes it so much easier to adjust partition size later, even on live systems and modern file systems.

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Then I would make root small about 1GB, `/usr` about 6GB, `/var` about 2GB, `/boot` about 512 MB, swap same size as RAM, `/var/log` , `/home` and `/srv` large enough. It can be adjusted later.



I would not used all unallocated space now, as that could later be used to expand the other partitions, as I'm using LVM2. I could even add new paritions like `/tmp` , but that is a bit more complicated. I never use anything but LVM2 anymore. With that, I can even move the installation to RAID disks in less than 30 minutes, including creating and copy files and all.

For more information about LVM2, read this: <http://www.debian-administration.org/articles/410>

Yes, about encryptions, please have a look at Luks support:

- <http://www.hermann-uwe.de/taxonomy/term/95>
- <http://www.debian-administration.org/users/dkg/weblog/71>
- (Package cryptsetup) file:/usr/share/doc/cryptsetup/README.remote.gz

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1. Shouldn't SWAP be a bit bigger than RAM?(Then again, I'm a hypocrite, as I use 256MB swap on 4GB RAM) – [nanofarad](#) Jun 6, 2012 at 20:18  edited Apr 11, 2018 at 23:39 answered Jun 6, 2012 at 13:22

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1 Swap should be as large as you need it to be, not larger. :) How large it is depends on what you run in your machine and how much RAM you got. There are recommendations about RAM to 2*RAM. But there are people that run perfectly well without any swap to. But I wouldn't recommend that unless you know what you do. And then you wouldn't ask here, would you? :) – [Anders](#) Jun 6, 2012 at 20:37

1 Yes, if you want to hibernate your system, you'll need swap to be a bit larger than your RAM. – [gerlos](#) Mar 4, 2014 at 9:25

@Anders I found this while searching for clues on LVM setup. Do you mean I don't need to set up RAID from scratch when I use LVM? How about this set up: I got server with 2 hard drives, the system is installed on /dev/sda, /dev/sdb is unused. LVM is not in use, AFAICT. Can I migrate to using LVM and RAID 1? Or should I reinstall from scratch? But then again, can I? (the machine is a server hosted by Leaseweb, I can reinstall different OS'es from their control panel, and even choose non-default options like partition layout, but I'm not sure how (if at all) can I instruct it to use LVM/RAID) – [Nickolai Leschov](#) Mar 24, 2014 at 13:40

@Nickolai, Preferably, set up RAID with BOOT on mirror RAID on all and then rest as you like (RAID5 if 3 or more disks, RAID6 on 4 or more) and make LVM on that other part. If already installed with LVM, I would do this: Clean one disk of data, pref. the one not booting from. Make a BOOT mirror RAID (where the second disk is none) and a mirror RAID (since only two disks) of the rest. I would then make the second RAID a physical disk and add to the vg. After that transfer all data from the old disk in vg and then remove from the vg. After that make and add the first disk to RAID. Finished! – [Anders](#) Mar 25, 2014 at 2:20 



There is no correct or wrong answer, personally i would make a 12GB partition for my Ubuntu installation containing:

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-> 6GB for root
-> 2GB for swap
-> 4GB for home

answered Jun 5, 2012 at 14:30



[dlin](#)

3,770 3 30 45

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Since this is an older versno 10 - my obervation using ubuntu 20 installed about 1 year ago - with 32 GB RAM and 1 TB HDD,are as: I do not have any major application other than openvpn, openssh, few drivers, virtualbox latest, additional printer drivers, I use wifi-usb dongle to connect to internet.

1. root: / - even without mysql/oracle any other software -- its already 2 gb used up! I would suggest keep min. 4gb if you just use OS /browser, otherwise keep at least 6 to 8 gb
2. /usr -- i have a single /usr with /usr/local/xx -- all local software, ClamAV, etc. etc in it right now its 6gb used up -- i would sugges keep this to 16 gb if you plan to update/add tools/etc every now and then for one year
3. /var -- I regret keeping this partition just 6gb (5.7 gb usable for installation) -- its now 94% full -- w/o any major software in use. I would suggest to keep this 8 to 16 gb as per your usage or little more if possible.
4. /tmp, swap -- keep min. 16 gb for /tmp (6 gb if you're constrained) and SWAP partitions .

All would still work with jut 64 GB -- compare it with current versions of windows which need around 80-100 gb plus PAGE files (16gb approx) to work ok after frequent updates/patches .

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answered May 14, 2021 at 17:25



Sudheer Godgeri

11 1



The correct answer is: / 500 gb (which is used by /tmp, /var, and /home. /Home is your long term storage whereas /tmp and /Var are short term; it stores almost everything so make it big. By also making it big you Enable your computer to work with say a 498 gb

s failures, 2gb spillover)

king your system that much easier.
make new one. This is how you do

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answered Oct 16, 2021 at 5:46



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Greenonline Oct 16, 2021 at 8:18

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