**How to use a ramdisk on Linux**

If you need to boost the speed of data writes to storage on your Linux data center servers, a ramdisk might be what you need. Here's how to create one, mount it, and back it up.

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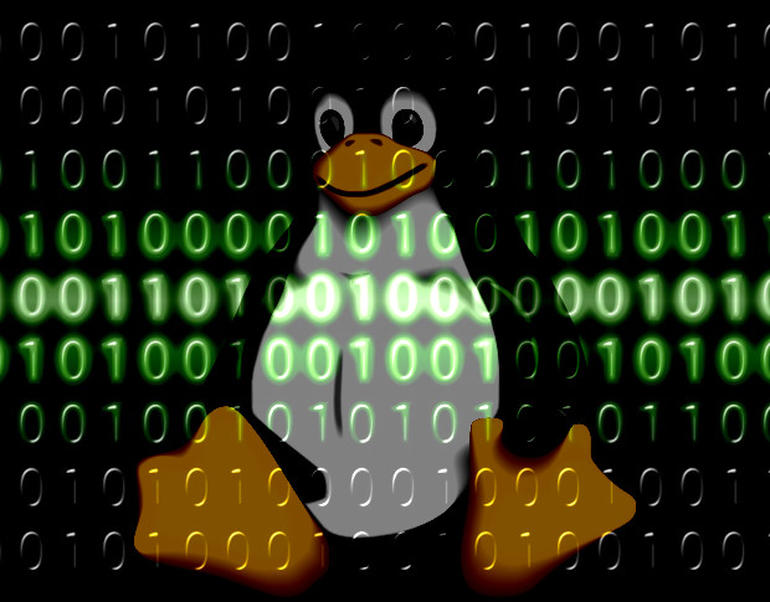


Image: Jack Wallen

There may be instances where you need to include the fastest possible storage you can find on a server. In some cases, the best route to that is by making use of a ramdisk. Effectively, a ramdisk takes a portion of your system memory and uses it as a disk drive. This method of storage is considerably faster than standard hard disk storage, so it is a great tool for when you need blistering speed on a specific app.

Ramdisks, of course, come with a serious caveat. Should you lose power (or shut down the machine), whatever you're working on could be lost. Because of that, it is important to do a regular backup of the directory used for your ramdisk (more on that in a bit).

With that said, let's create a ramdisk. I'll be working with Ubuntu 16.04, but this will work on nearly any distribution.

**Creating the ramdisk directory**

The first thing you must do is create a folder that will be used to mount the ramdisk. I'll create the folder */media/ramdisk*. To do that, open up a terminal window and issue the command:

sudo mkdir -p /media/ramdisk

You can name that folder whatever you like and place it anywhere on the directory structure. I like */media* because it is the same location other drives will be mounted into by default.

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**Mounting the ramdisk**

Now we actually mount the newly created directory to a temporary storage area (one that will use RAM as opposed to hard drive space). This is accomplished with the following command:

sudo mount -t tmpfs -o size=2048M tmpfs /media/ramdisk

You can adjust both the size and the mount point to fit your needs. In the above example, I have mounted 2GB of RAM to be used as a temporary file system to */media/ramdisk*. That mounted directory can now be used at your discretion.

When you're done using the ramdisk, you can unmount it with the command:

sudo umount /media/ramdisk

**Automounting the ramdisk**

What if you want to have the ramdisk automatically created at boot? This can be done with the help of */etc/fstab*. Open up that file and add the following (edit to suit your needs):

none /media/ramdisk tmpfs nodev,nosuid,noexec,nodiratime,size=2048M 0 0

Save and close that file. You can test the newly modified */etc/fstab* file with the command mount -a. If you receive no warnings, you're good to go.

**Backup that ramdisk data**

Because we're dealing with non-persistent memory, you're going to want to set up a regular backup. You could create a very simple bash script with the following contents:

#!/bin/bash

​cp -ru /media/ramdisk /BACKUP/PATH

Where */BACKUP/PATH* is a path to a location to house the backup of */media/ramdisk*. Save and close that file (we'll name it */root/ramdisk\_backup.sh*). Give the backup script executable permissions with the command *chmod u+x ramdisk\_backup.sh*. Next we must create a crontab entry. Issue the command *sudo crontab -e* and then add the following:

\*/15 \* \* \* \* /root/ramdisk\_backup.sh

The above crontab entry will backup your ramdisk data every fifteen minutes. Now, should you lose power or have to reboot the machine, you won't lose data.

**Use it wisely**

How you use your ramdisk is up to you. Make sure to use this type of non-persistent storage wisely. The last thing you want is to depend upon it, only to lose precious data, thanks to a black out. If used wisely, a ramdisk can be a serious benefit to your data center servers. If used poorly, well, I'm sure you know how that story ends.

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