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// TUTORIAL //

How to Install TestDisk on Linux and Recover Deleted Files

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UNIX/Linux

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While we believe that this content benefits our community, we have not yet thoroughly reviewed it. If you have any suggestions for improvements, please let us know by clicking the “report an issue“ button at the bottom of the tutorial.

Ever stuck in a situation where you accidentally deleted a file? In this tutorial, we’ll go over how to install TestDisk in Linux and recover deleted files.

In this tutorial, I’ll be using an Ubuntu server to work with, but even if you are on any other distribution, you can follow the same steps. The only thing that will be different is the package manager used for installation.

Install TestDisk on Linux

The **testdisk** package is available on all the major Linux distributions and can be easily downloaded with the use of the default package manager. Here, I've listed down the distro-specific commands to install testdisk on Linux.

Install TestDisk on Ubuntu/Debian

```
sudo apt update
sudo apt -y install testdisk
```

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We're using the apt package manager instead of the apt-get since that's the new package manager for Ubuntu/Debian.

Install TestDisk on Red Hat and CentOS 7

```
yum install epel-release
yum update
yum install testdisk
```

Copy

Install TestDisk on Red Hat and CentOS 8

```
yum install https://dl.fedoraproject.org/pub/epel/epel-release-latest-8.noar
yum update
yum install testdisk
```

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You need to also enable/install the EPEL repository. The EPEL repository is an additional package repository that provides easy access to install packages for commonly used software.

To know more about the EPEL repository, visit the official page.

Install TestDisk on Arch Linux

```
sudo pacman -S testdisk
```

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Install TestDisk on Fedora

```
sudo dnf install testdisk
```

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How To Recover Deleted Files in Linux?

Now that you have the testdisk utility installed, it's time to use it to recover our deleted files or partitions.

Testdisk works with the following partition types:

```
TestDisk checks and recovers lost partitions
It works with :
- BeFS (BeOS)                          - BSD disklabel (Free/Open/Net BSD)
- CramFS, Compressed File System       - DOS/Windows FAT12, FAT16 and FAT32
- XBox FATX                            - Windows exFAT
- HFS, HFS+, Hierarchical File System  - JFS, IBM's Journaled File System
- Linux btrfs                          - Linux ext2, ext3 and ext4
- Linux GFS2                           - Linux LUKS
- Linux Raid                           - Linux Swap
- LVM, LVM2, Logical Volume Manager    - Netware NSS
- Windows NTFS                         - ReiserFS 3.5, 3.6 and 4
- Sun Solaris i386 disklabel           - UFS and UFS2 (Sun/BSD/...)
- XFS, SGI's Journaled File System     - Wii WBFS
- Sun ZFS
```

Partition Types Testdisk Works With

You might not need to check for the partition type as the above list covers almost all the major partition types. But if you're unsure, enter one of the commands:

```
stat -f <partition>
df -T
fdisk -l
```

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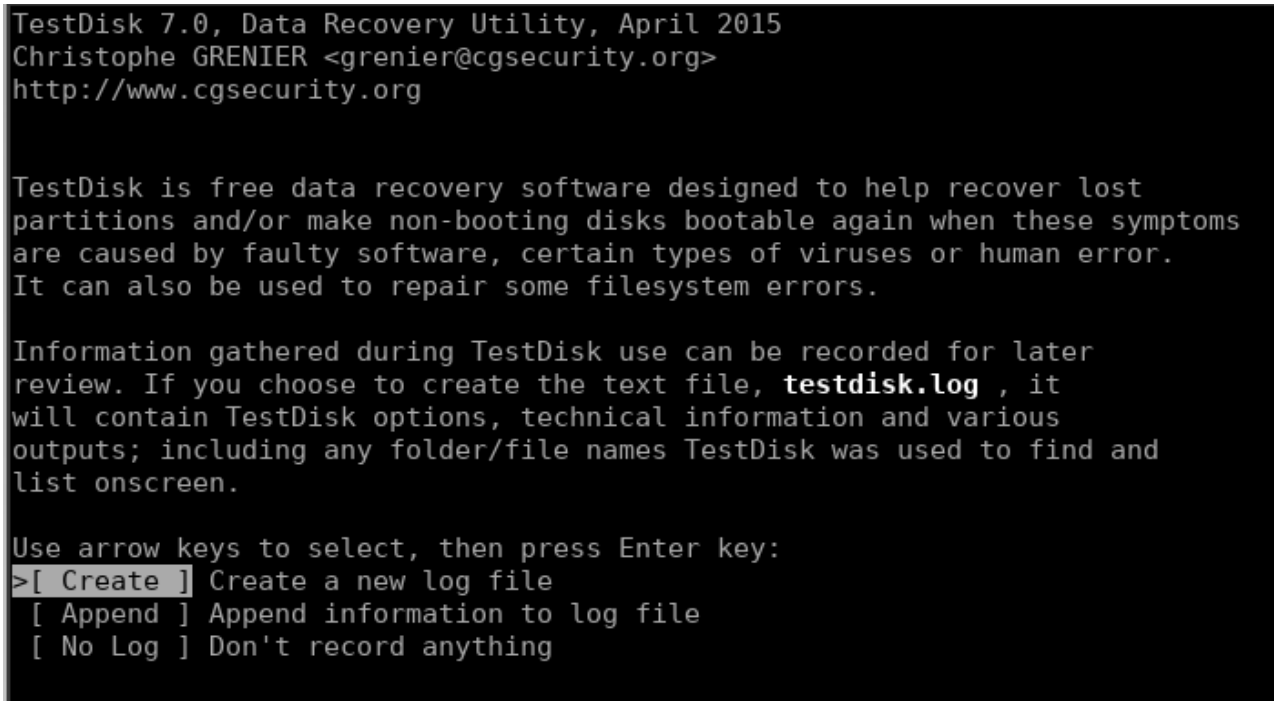
```
ninad@Phantom:~$ sudo fdisk -l
Disk /dev/sda: 20 GiB, 21474836480 bytes, 41943040 sectors
Disk model: VBOX HARDDISK
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disklabel type: dos
Disk identifier: 0x9fafde61

Device     Boot    Start      End  Sectors  Size Id Type
/dev/sda1  *        2048 13885439 13883392  6.6G 83 Linux
/dev/sda2       13887486 41940991 28053506 13.4G  5 Extended
/dev/sda5       13887488 18079743  4192256    2G 82 Linux swap / Solaris
/dev/sda6       18081792 41940991 23859200 11.4G 83 Linux


ninad@Phantom:~$ S
```

Fdisk L

Either of the commands above will give you the filesystem type information.

1. Starting TestDisk and Configuring Where it Runs

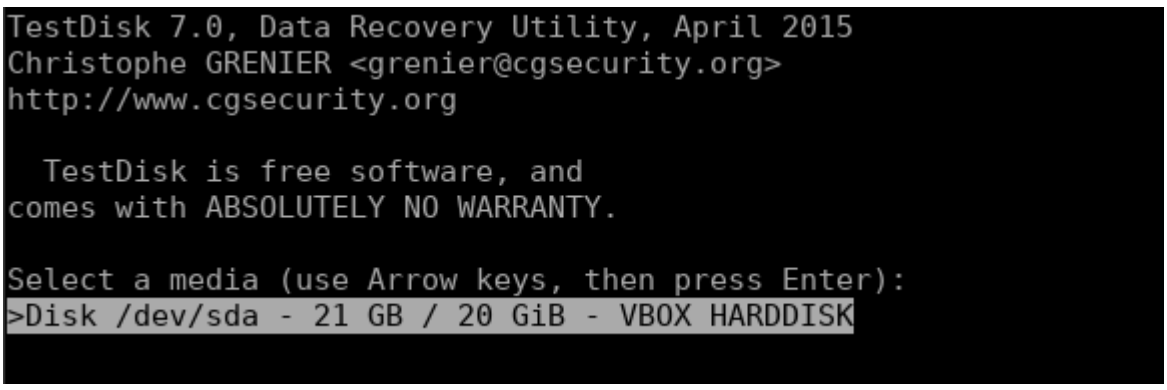
In your terminal, simply enter the command `testdisk` to run the utility and you'll be greeted with the below prompt. You can select the appropriate disk drive that you want to recover files on.



Testdisk Welcome Screen Log

If its the first time you're running this utility, it will give you an option to create a log file on the welcome screen. You can select create and just move ahead with the defaults.

The next screen asks you to select the disk drive/partition:



Test Disk Partition Select

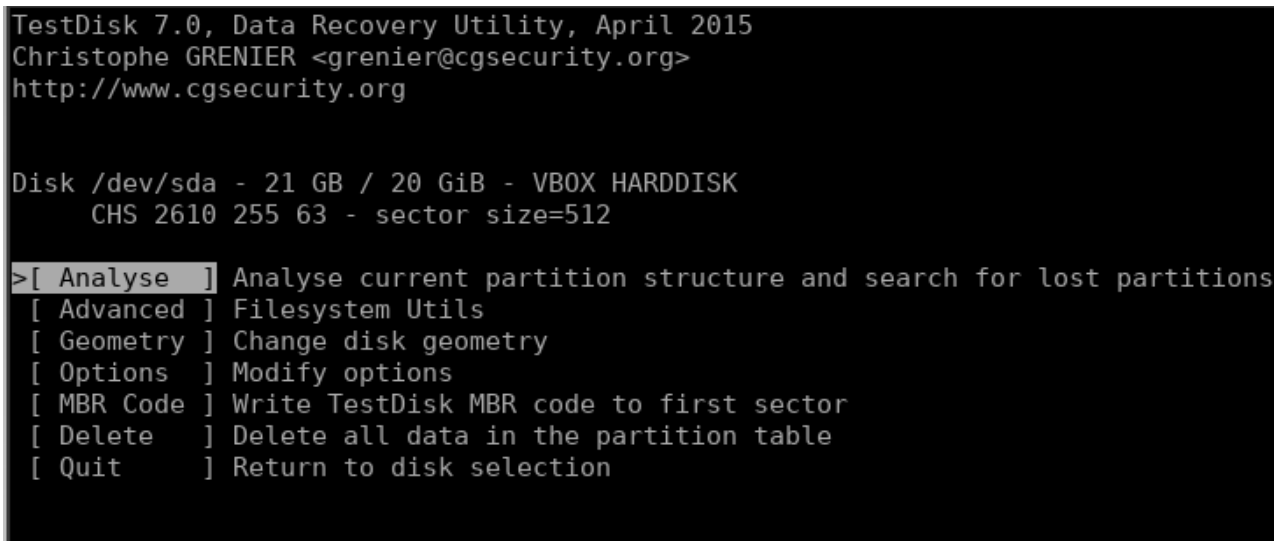
2. Selecting and Analyzing the Partition

Once you've selected the right partition, you will be asked to select the partition type.

Testdisk Partition Type Selection Screen

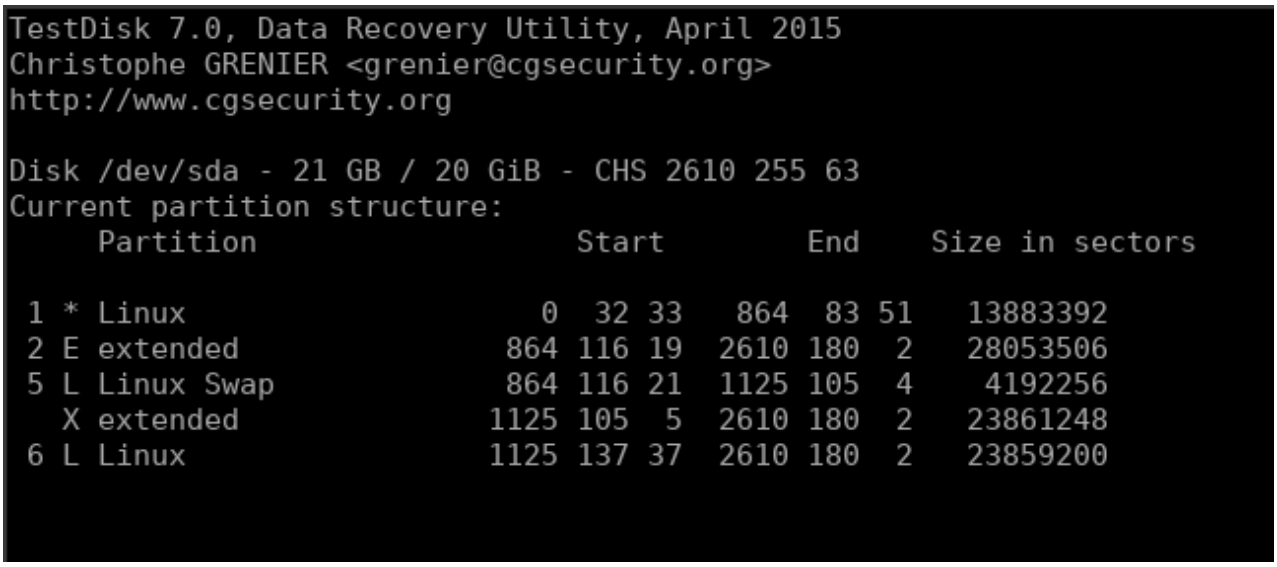
It should auto-select the correct partition type, but if it doesn't, make sure you select the correct type.

Once that's done, you'll be given a menu of options out of which we need to go ahead with "Analyse" to search for lost data.



Test Disk Analyse Partitions

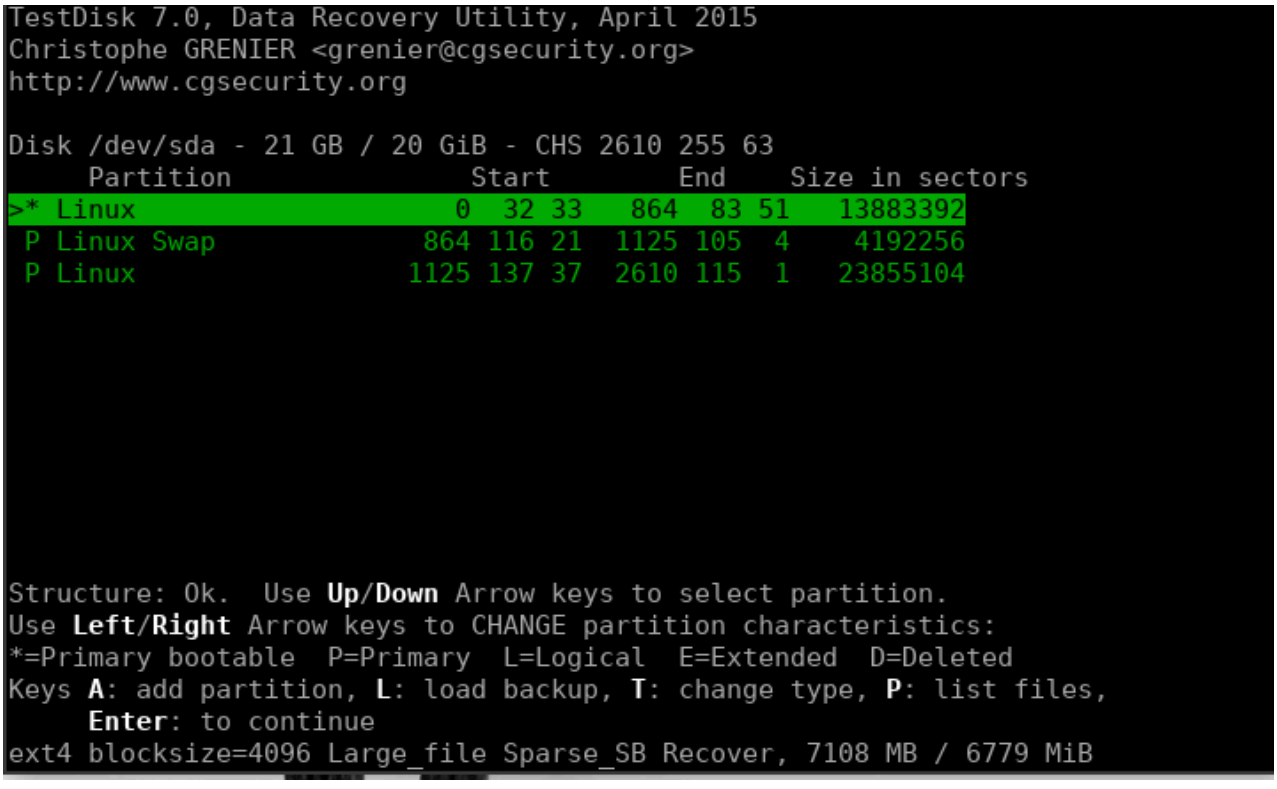
You can go with "Quick Search" or "Deeper Search" as it fits your needs and let the search run until it has scanned all the inodes.



Testdisk Analyse Screen

3. Scanning the Partition for Deleted Files

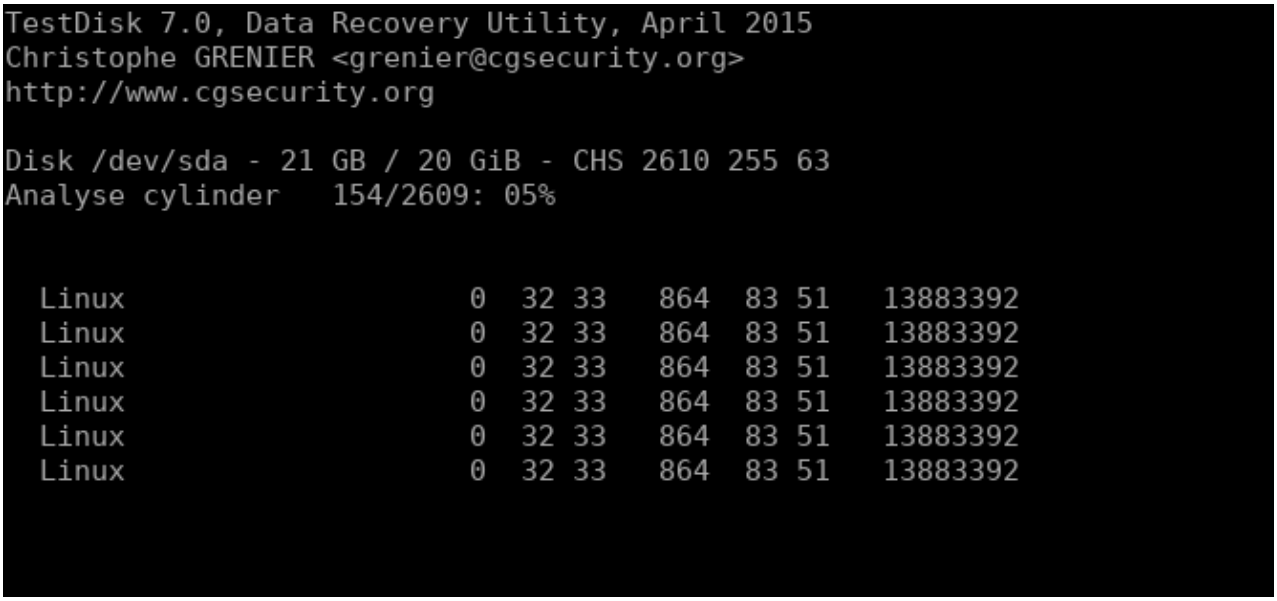
With the option selected, you'll be greeted with which specific partition you want to scan.



Analyze Specific Partitions

Select the correct partition, and let the utility scan the entire drive. Within some time, you'll get the list of files within the partition. When the scanning is in progress, you'll see

a screen similar to the one below.



Testdisk Working

Now once the progress is completed, it provides you with the option to select the partition that you want to browse the files in. All the files that are highlighted in “red” or any color or text style (can also be influenced by terminal configuration) are the files that have been recovered by the TestDisk utility.

To restore those files, simply press the letter `"C"` and it will allow you to copy that file and paste it in some other directory that you want to restore it to.

Conclusion

Well, there you have it. You’ve learned how to recover deleted files in Linux! Go ahead and explore this utility more on a virtual machine to get a hang of it before using it in real-life situations so you know exactly how to work with it on an advanced scale.

We hope you’ve understood the use of the testdisk utility in Linux and know how to use it now. If you have any questions, let us know in the comments below.

About the authors

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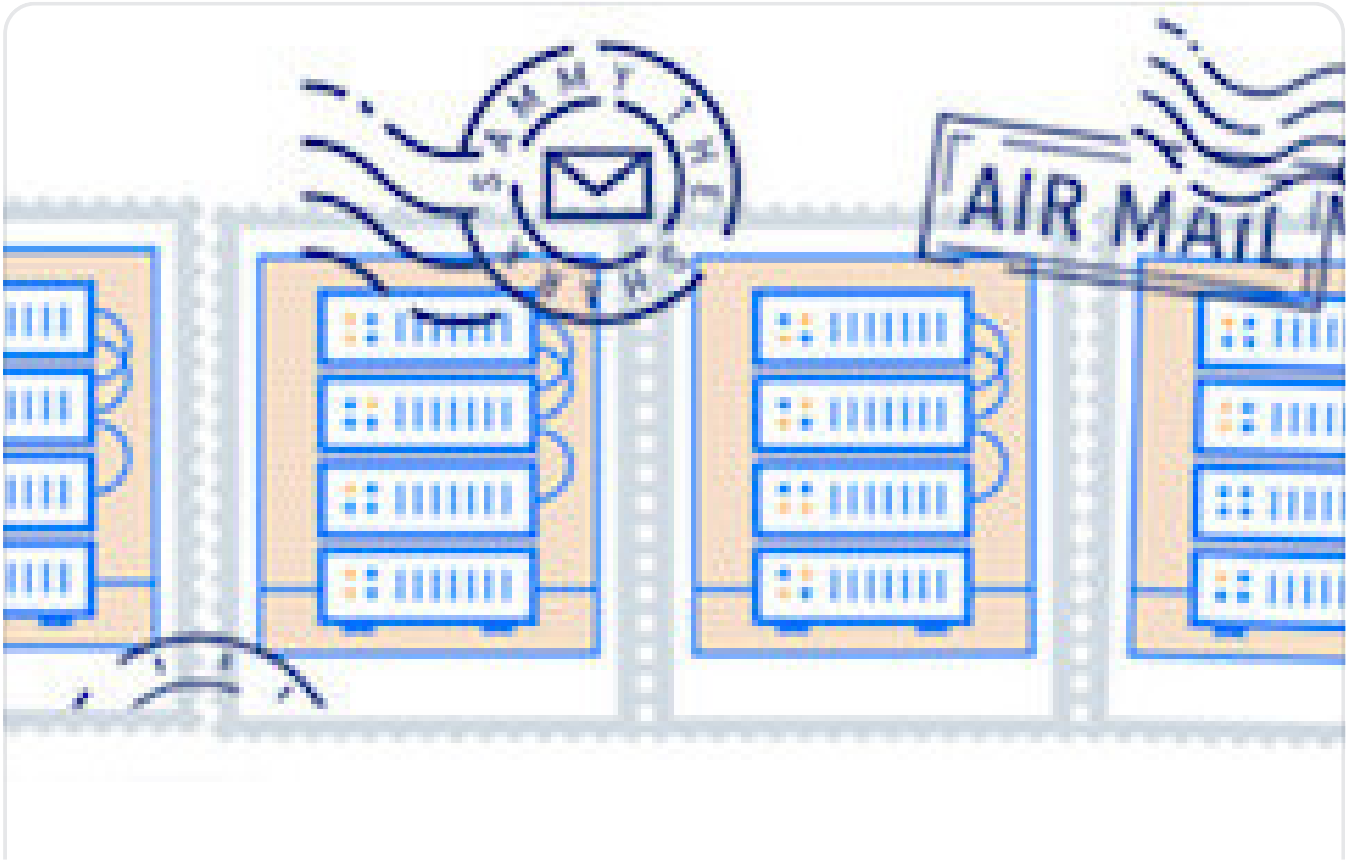

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