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Linux SATA Drive is Being Displayed as /dev/hda Instead Of /dev/sda

Posted by [Vivek Gite](#) <vivek@nixcraft.com>

Q. My SATA drive is being displayed as /dev/hda instead of /dev/sda. How do I fix this problem and make sure I get /dev/sda and speed of SATA under Linux operating systems?

A. This is usually related to BIOS settings. Reboot your system and enter into BIOS setup:



[1]

Check BIOS settings

Make sure Parallel ATA is "Enabled"

Make sure "Native Mode Operation" is set to "Serial ATA"

Also, set SATA Controller Mode option to "Enhanced"

Save the changes and reboot the server. Now Linux should rename the SATA drive from /dev/hda to /dev/sdb.

Make sure kernel is compiled with SATA support

Usually vendor kernel from Debian/RHEL/Redhat/Fedora comes with SATA enabled. Sometime you may compile custom kernel. If this is case run following command to find out if SATA kernel support is compiled:

```
grep -i SATA /boot/config-$(uname -r)
```

Sample output:

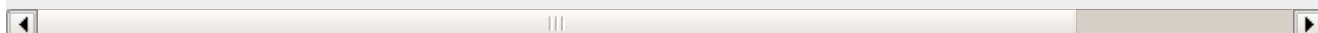
```
CONFIG_SATA_AHCI=m
CONFIG_SATA_INIC162X=m
CONFIG_SATA_MV=m
CONFIG_SATA_NV=m
CONFIG_SATA_PMP=y
CONFIG_SATA_PROMISE=m
CONFIG_SATA_QSTOR=m
CONFIG_SATA_SIL=m
CONFIG_SATA_SIL24=m
CONFIG_SATA_SIS=m
CONFIG_SATA_SVW=m
CONFIG_SATA_SX4=m
CONFIG_SATA_ULI=m
CONFIG_SATA_VIA=m
CONFIG_SATA_VITESSE=m
```

Make sure ata_piix and libata driver loaded and the disk shows as /dev/sda if DMA is enabled:

```
lsmod | egrep 'ata_piix|libata'
```

Sample output:

```
ata_piix          24580  5
libata           177312  5 pata_acpi,ata_generic,pata_marvell,ata_piix,ahci
scsi_mod         155212  9 ib_iser,iscsi_tcp,libiscsi,scsi_transport_iscsi,sbp2,sr_mod
dock             16656  1 libata
```



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