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Throttle The Disk I/O Rate: Limit disk I/O for rsync Tool

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Q. I run a backup script called /root/backup.sh which runs rsync command. However, rsync makes a lots of disk I/O and network I/O. I'd like to reduce both disk I/O and network I/O. I've 10Mbps server connection and 160GiB SATA hard disk. How do reduce disk I/O so that the entire system doesn't die or become unresponsive?

A. This is well known issue. There are two methods to control or throttle the disk and network I/O rate under UNIX / Linux.



[1]

Method # 1: Limit I/O bandwidth

The --bwlimit option limit I/O bandwidth. You need to set bandwidth using KBytes per second. For example, limit I/O bandwidth to 10000KB/s (9.7MB/s), enter:

```
# rsync --delete --numeric-ids --relative --delete-excluded --bwlimit=10000  
/path/to/source /path/to/dest/
```

Method # 2: Take control of I/O bandwidth using ionice utility

ionice command provide more control as compare to nice command. This program sets the io scheduling class and priority for a program or script. You can totally control disk i/o. Please see following article for detailed examples:

- [How To Avoid Sudden Outburst Of Backup Shell Script / Program Disk I/O](#) [2]

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[1] Image: <http://www.cyberciti.biz/faq/faq/category/troubleshooting/>

[2] How To Avoid Sudden Outburst Of Backup Shell Script / Program Disk I/O: <http://www.cyberciti.biz/tips/linux-set-io-scheduling-class-priority.html>