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What Happens When Hard Disk Fails in RAID 5

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

Q. What happens when a hard disk fails in RAID 5? How many hard drive can fail in RAID 5?

A. RAID is acronym for Redundant Array of Independent Disks, also known as Redundant Array of Inexpensive Disks. It is use to increase reliability. You combine multiple physical hard disks into groups (arrays) that work as a single logical disk i.e. this array of drives appears to the computer as a single logical storage unit or drive.



[1]

RAID-5 features

RAID level 5 has following features:

1. Striping with distributed parity
2. Fault tolerance supported
3. Redundancy supported (parity)
4. Hot spare option supported
5. Minimum 3 or more disk needed
6. Performance: Good
7. Protection: Good (if any disk fails data can be recovered)
8. Above characteristics makes RAID 5 popular and is well suited to transaction oriented environments.

What happens when hard disk fails in raid 5

- Because of parity, information all data are available in case one of the disks fails. If extra (spare) disks are available, then reconstruction will begin immediately after the device failure.
- However if two hard disks fail at same time, all data are LOST.
- In short RAID 5 can survive one disk failure, but not two or more.

Update: [See why RAID 10 is better choice](#) ^[2] for database server instead of RAID 5 for performance and reliability.

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

[2] See why RAID 10 is better choice: <http://www.cyberciti.biz/tips/raid5-vs-raid-10-safety-performance.html>