Automated Backup in Linux Systems

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Need for a backup

Source media:

hard disk, flash drive

Failure:

H/W failure, MBR corruption

Personal experience:

melissa, nimda viruses

lost flash drive

Current Backup Scenario

Asynchronous flash drive backup

- rsync
- intranet or inter-networks

Synchronous hard disk backup

- rsnapshot (built over rsync)

Intelligent Backup

70GB Data

18 backups (7 daily, 4 weekly, 3 monthly, 4 quarterly)

Total space for all backups < 160GB

Any backup can be deleted entirely

Instantaneous access to any backup

How is this possible?

- Linux file system (ext3, ext4, …)

  inode

  hard links

- Separate hard drives for live data

  and backup

Limitations of this backup

- All backups must reside in the same disk partition
- The file system must support hard links
- rsnapshot must be configured correctly

Implementation

- sync flash drive script
- rsnapshot configuration
- scheduling backups (crontab)

Conclusion

- Fast and reliable backup mechanism
- Limited storage overhead
- Fully automated through cron

http://users.cis.fiu.edu/~prabakar/resource/Linux

Thank you