

# BackupPC su macchine virtuali

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# Outline

## I parte, *il backup*:

Perchè e come backuppare  
Backuppc

## II parte, *il backup di macchine virtuali*:

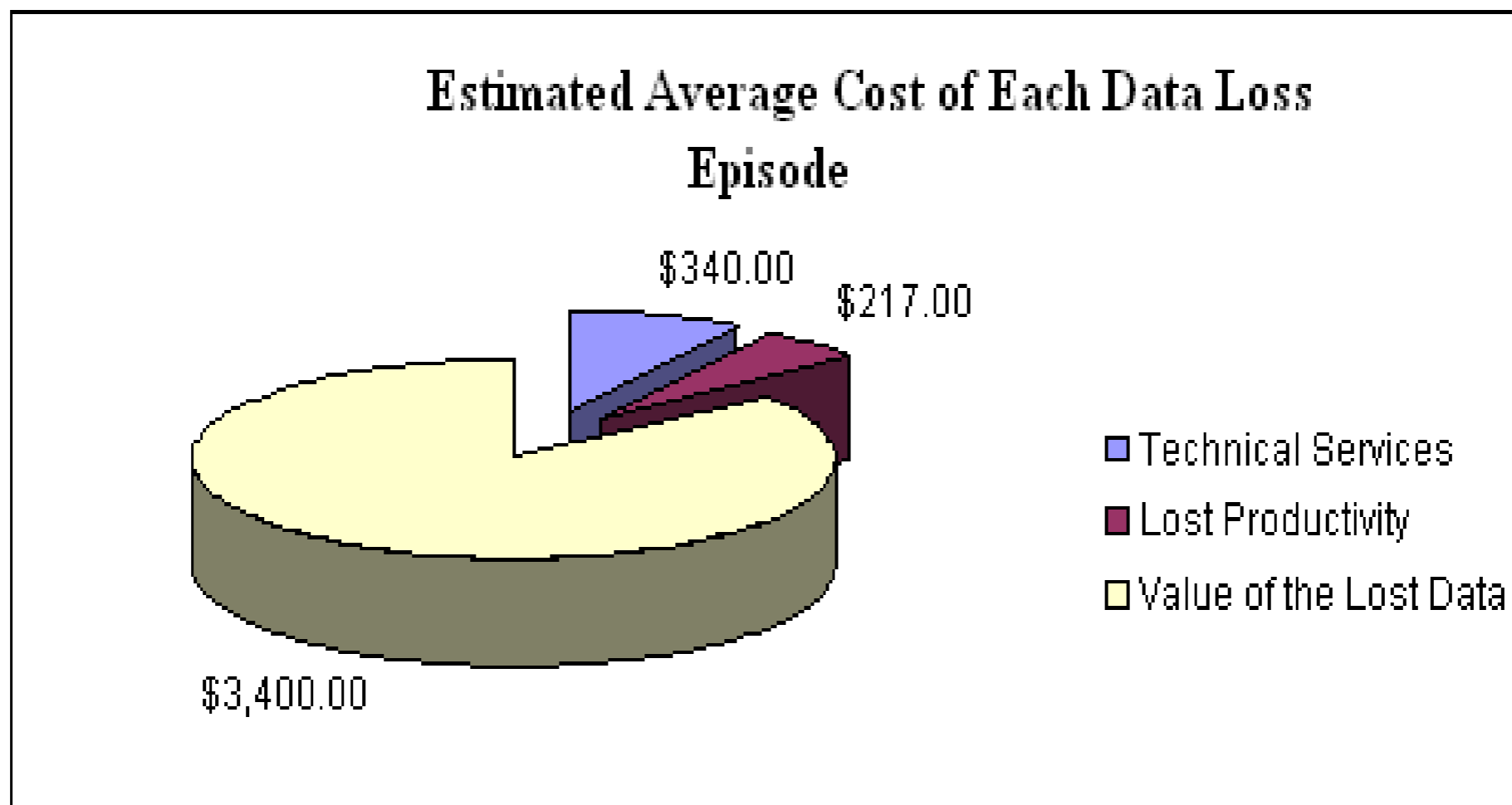
i vantaggi della virtualizzazione  
i punti critici dei servizi critici  
fare backups con gli snapshots

## III parte, *un esempio pratico*:

backuppc-lvm

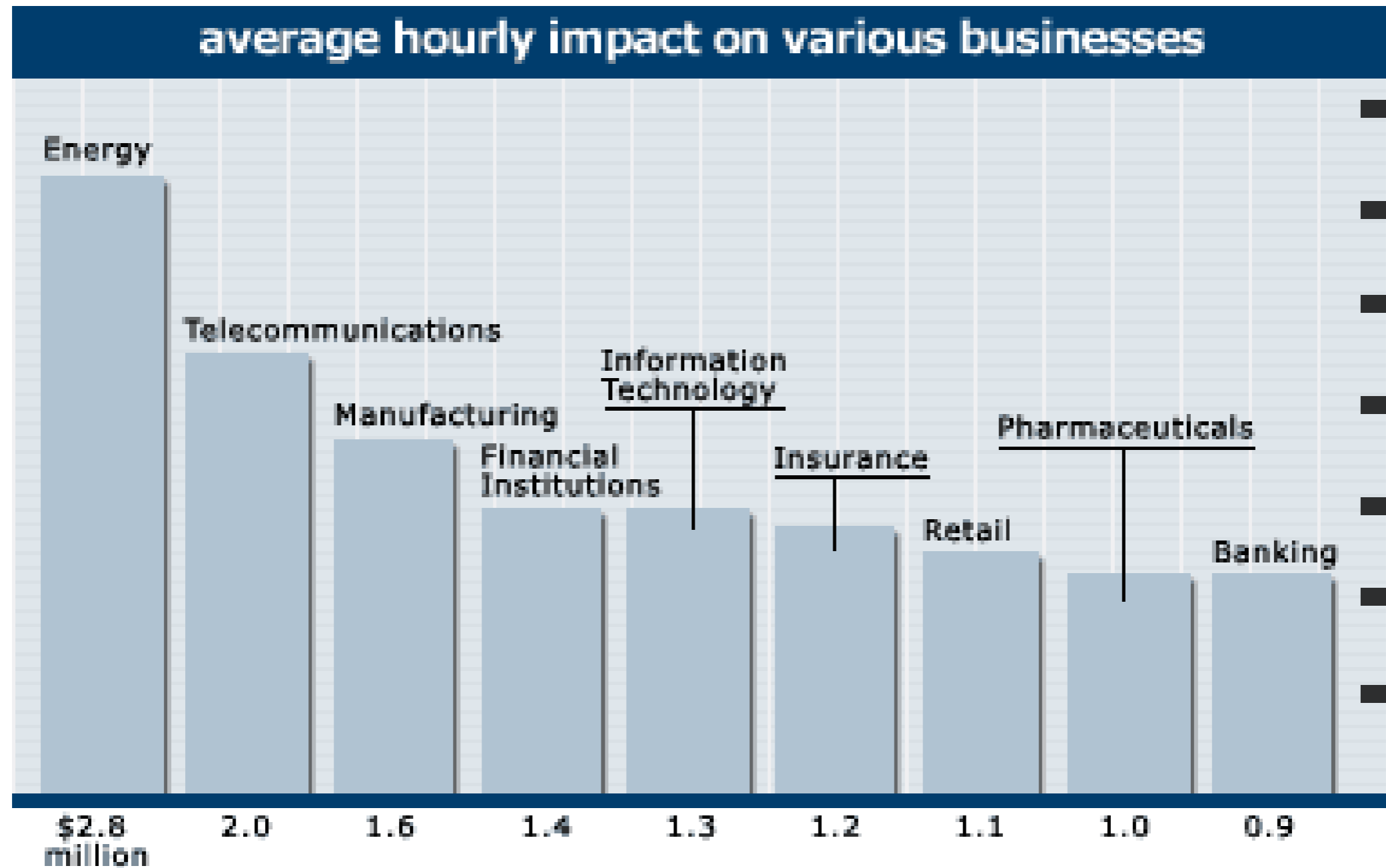






**Source:** Author's estimates based on data from Denise Deveau, "Lost all your data? Time to Call the Experts," *The Globe and Mail*, February 25, 2000; Bureau of Labor Statistics, *Employer Costs for Employee Compensation*, March 2003; and Bureau of Labor Statistics *Occupational Employment Statistics Survey*, 2001.





Source: IT Performance Engineering & Measurement Strategies: Quantifying Performance Loss, Meta Group, October 2000.

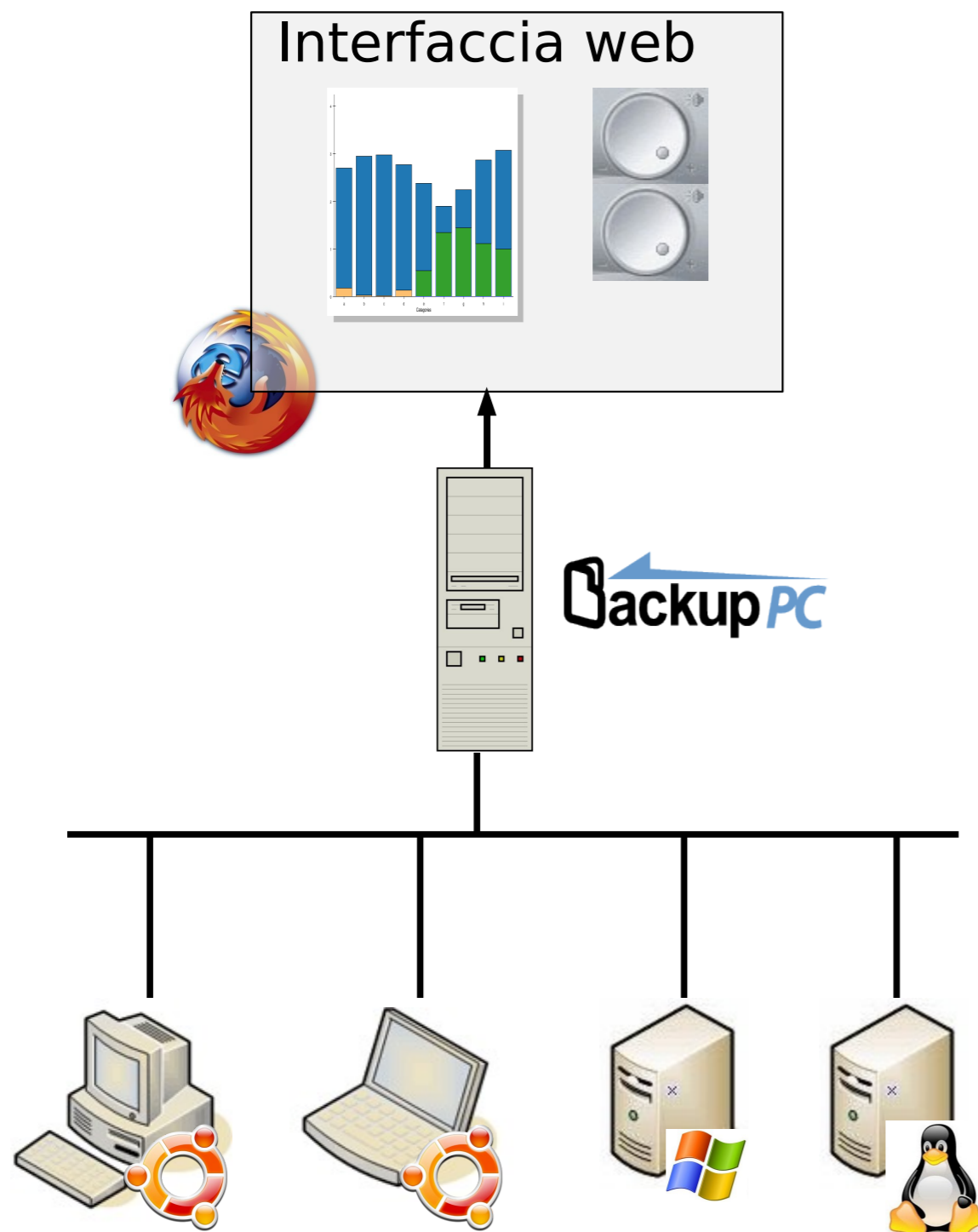


# Un buon sistema di backup

- Velocità nel ripristino
- Minima interferenza
- Facilità di utilizzo
- Integrità dei dati
- Completezza
- Ottimizzazione (*storage*, rete)
- Sicurezza



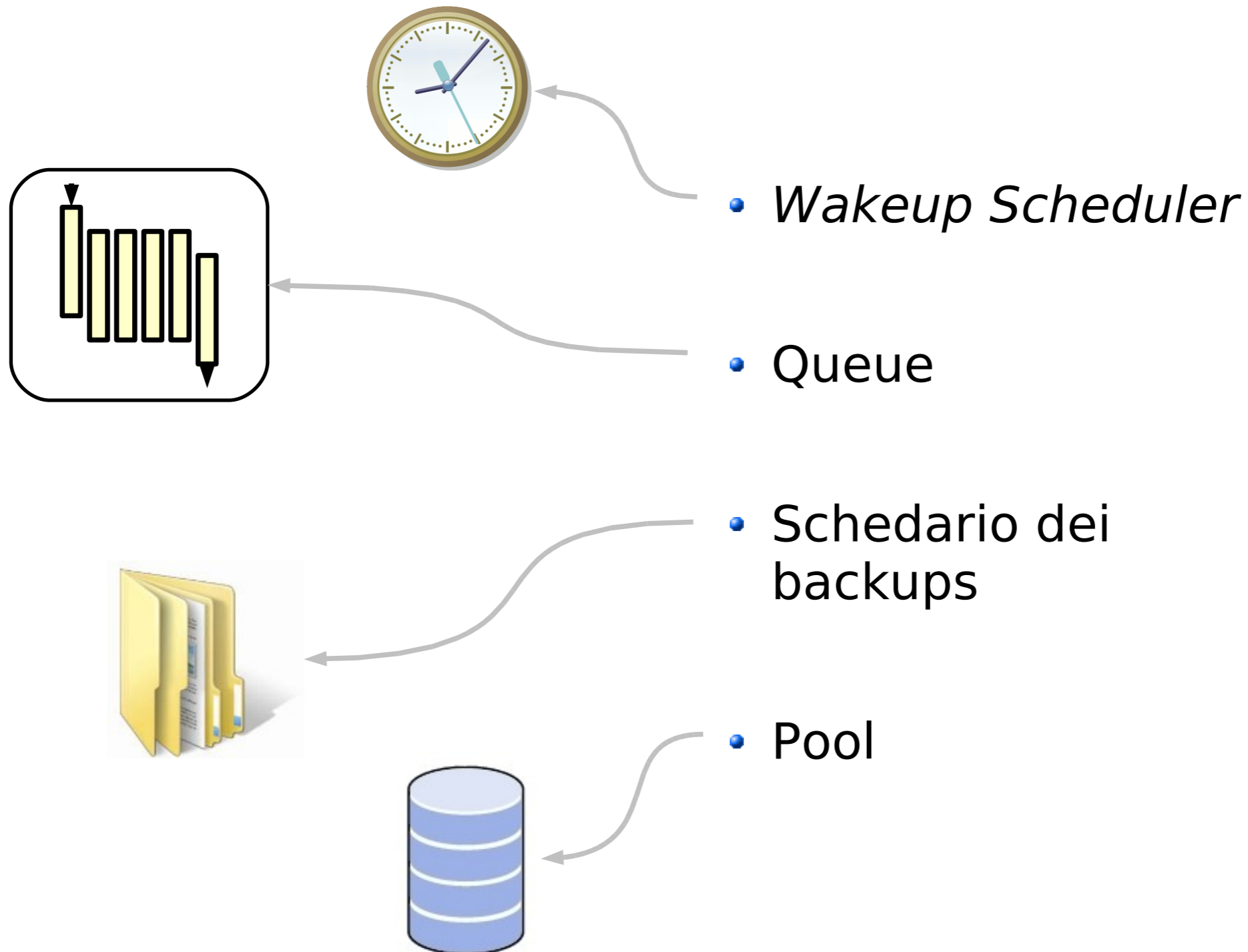
# BackupPC - Caratteristiche



- Sistemi operativi:
  - FreeBSD/NetBSD/OpenBSD/Apple Mac OS X
  - Sistemi POSIX (Linux/BSD/UNIX-like Oses), Linux, Solaris
- Perl
- Web-based (console utilities)
- Ottimizzazione delle risorse:
  - Sync differenziali
  - Data de-duplication
  - Compressione

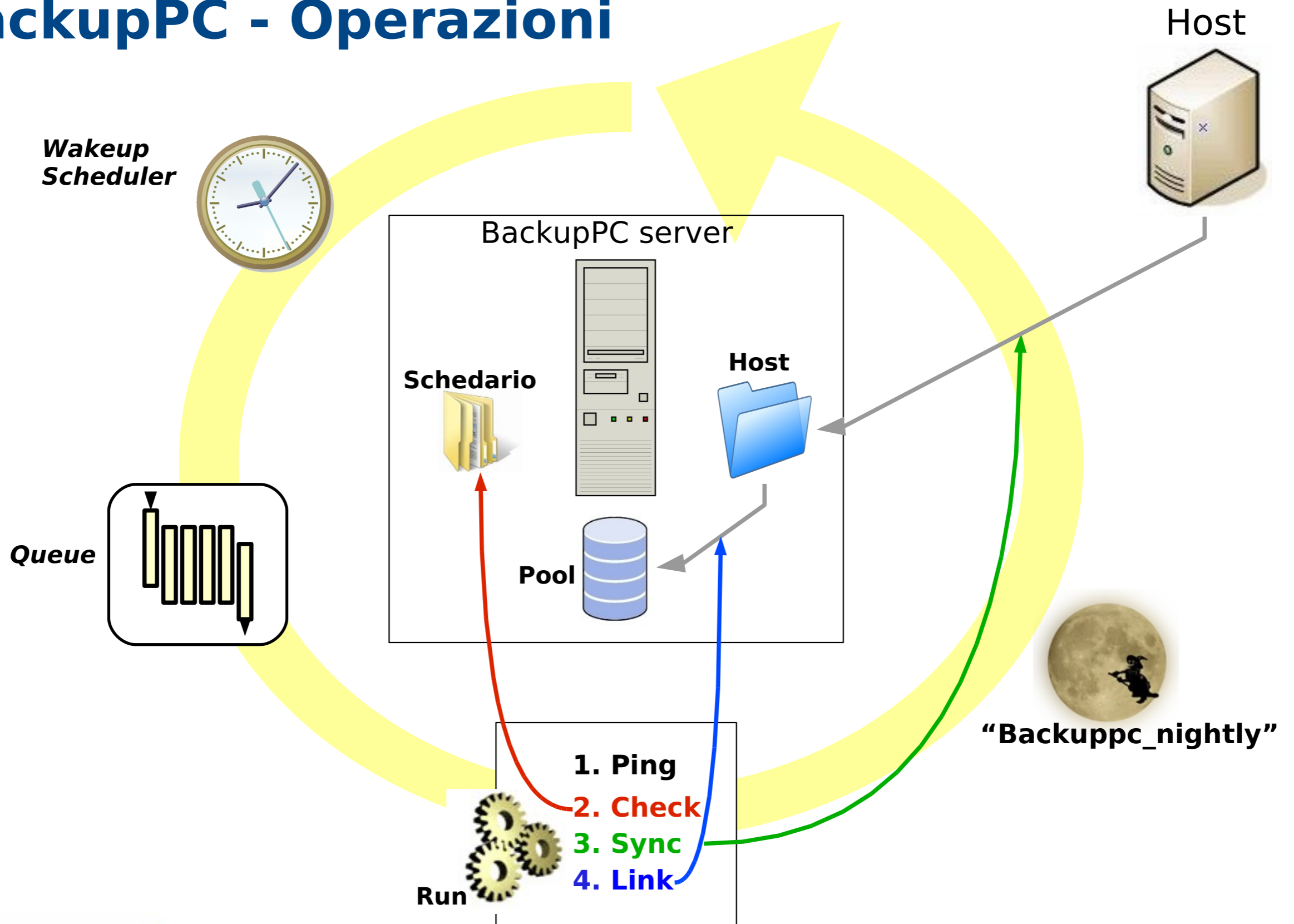


# BackupPC – Componenti fondamentali

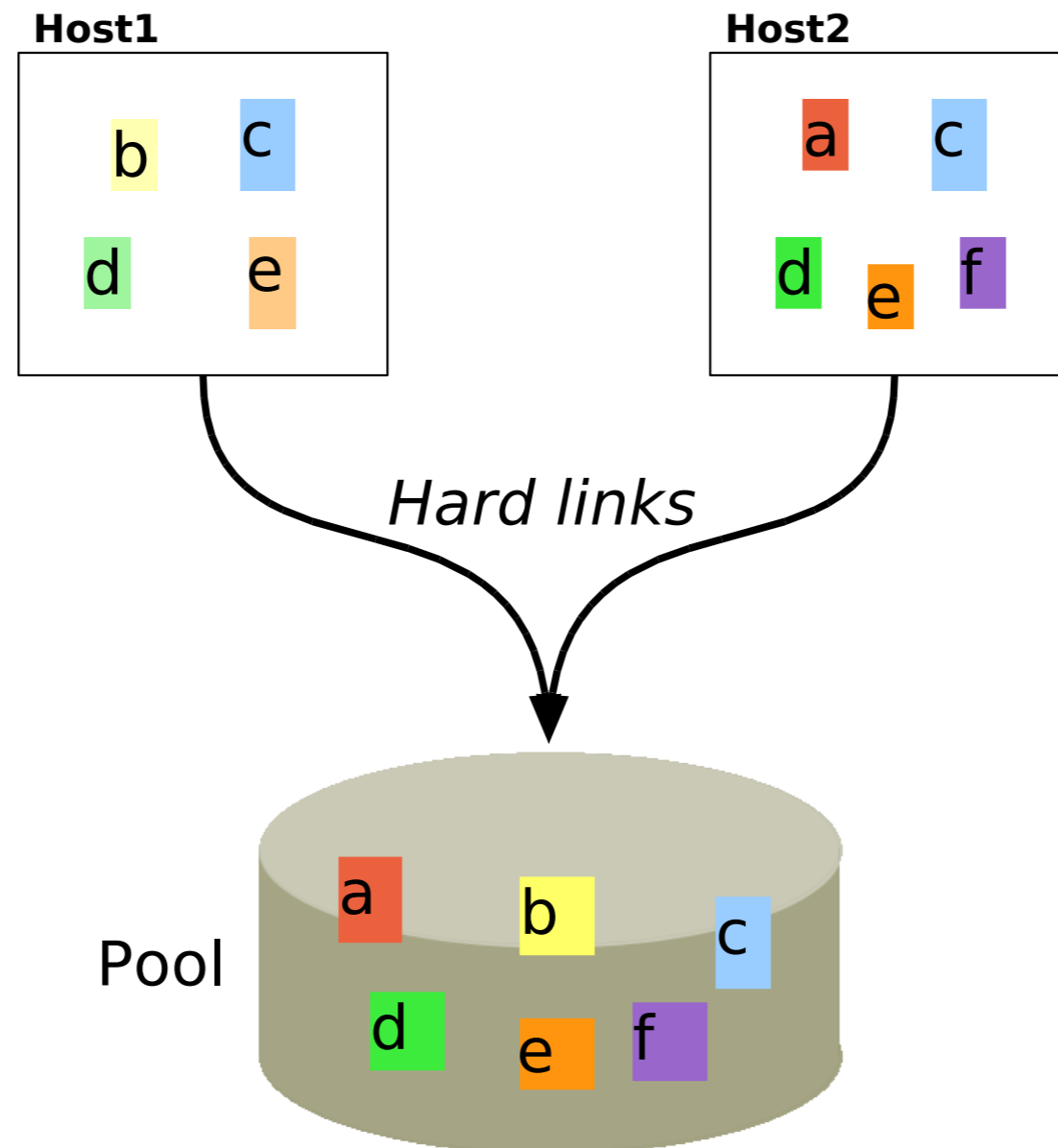




# BackupPC - Operazioni



# BackupPC – *data deduplication*

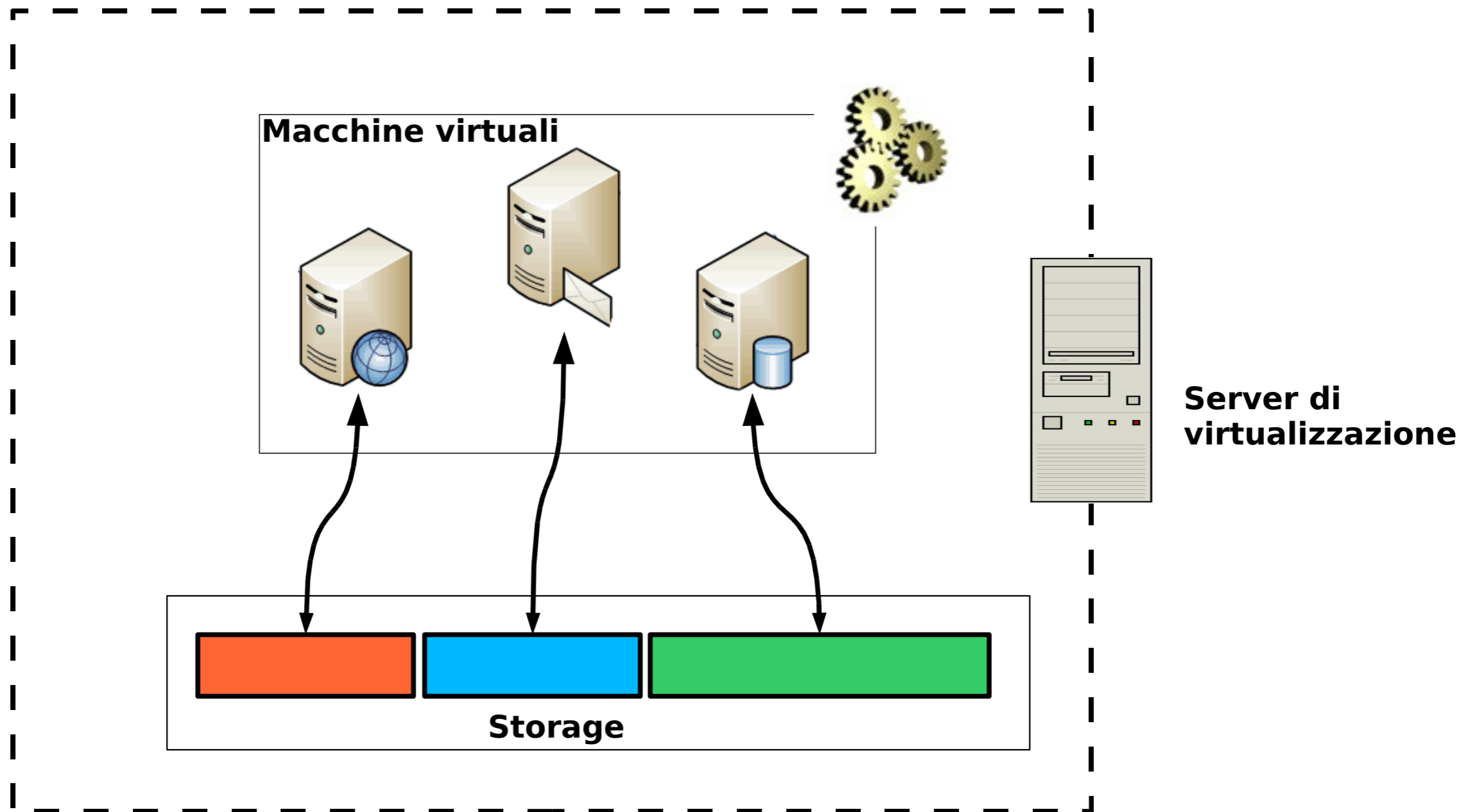


# BackupPC live session

...



# Le macchine virtuali



# Perche` virtualizziamo?

- Consolidamento
- Ottimizzazione delle risorse
- Facilità di gestione
- Semplificare le singole installazioni
- Sicurezza
- *High availability* (migrazioni e ripristino)

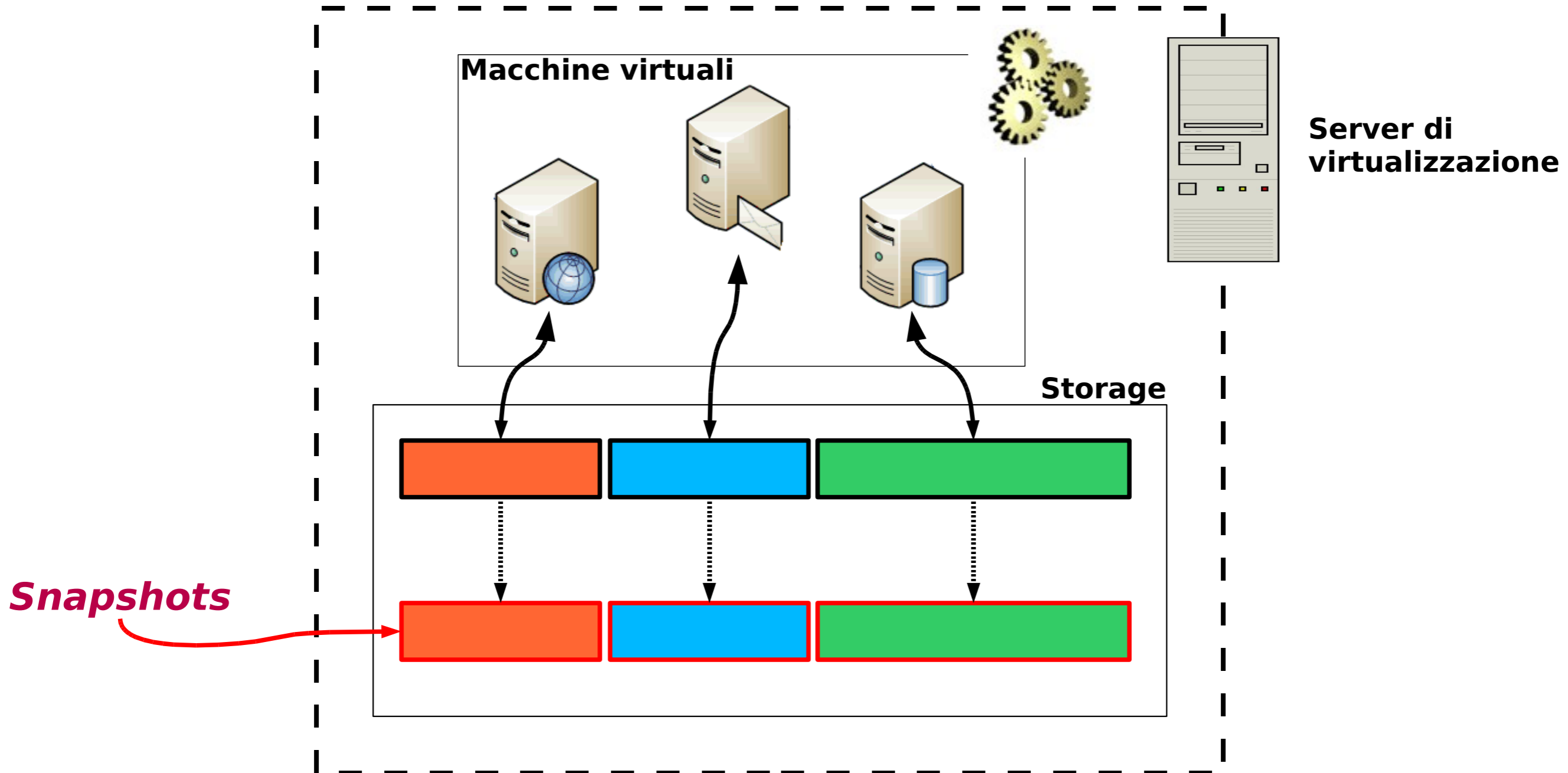


# Il backup di server *high availability*

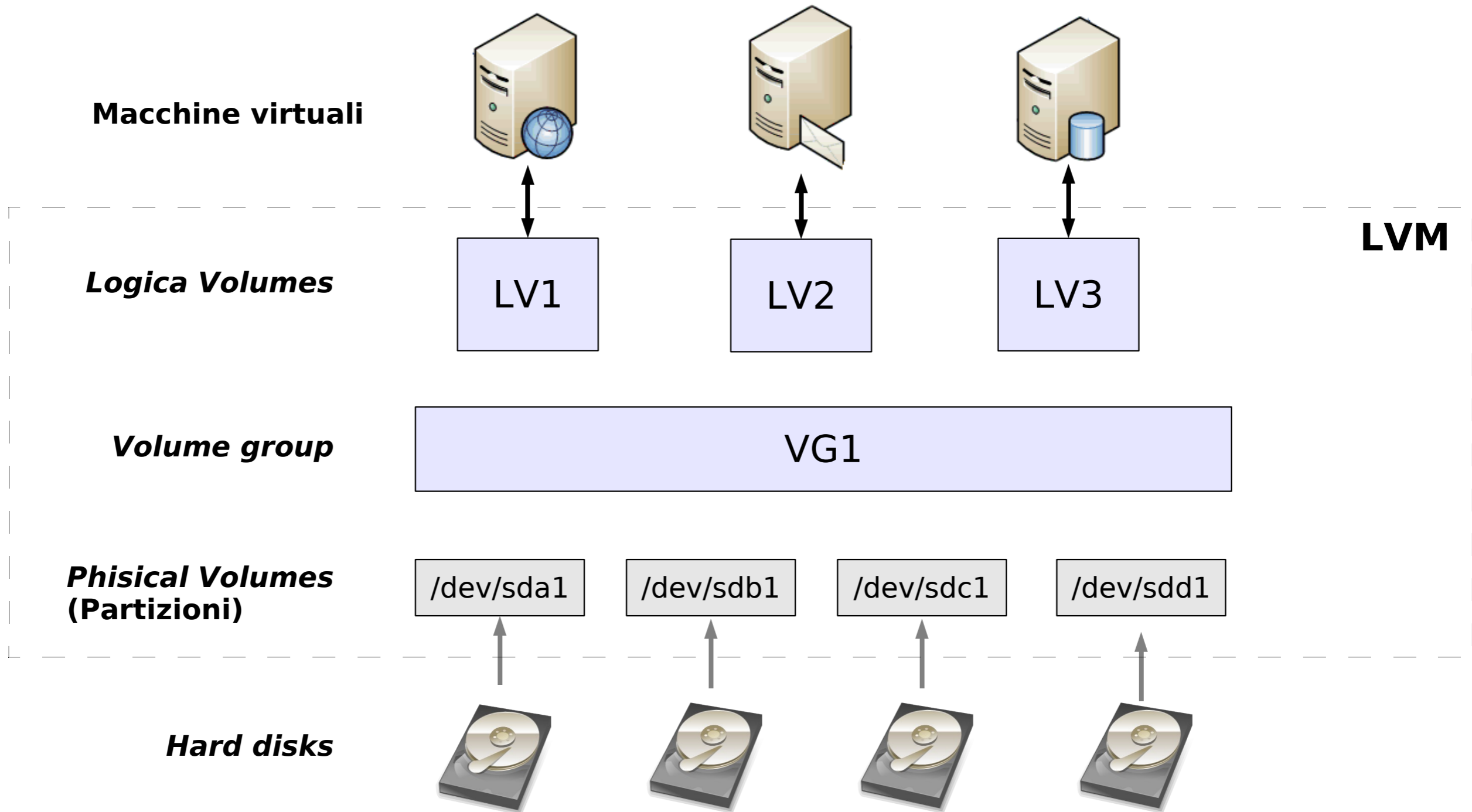
- Non vogliamo che il backup interferisca togliendo risorse
- Backup di servizi attivi:
  - Integrità dei dati/fuzzy backups
  - Verifica della copia o pausa del servizio
- Downtime minimo
- Ripristino rapido (*Bare-metal restore*)



# Gli snapshots

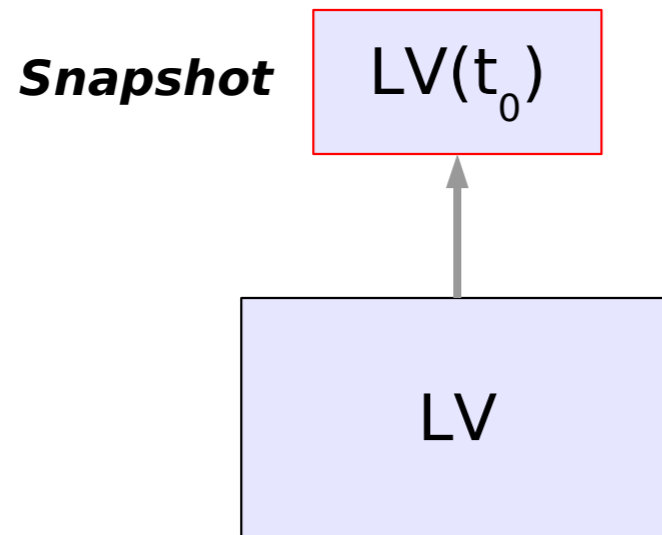


# Logical Volume Manager (LVM)





# Esempio: gli *snapshots* con LVM



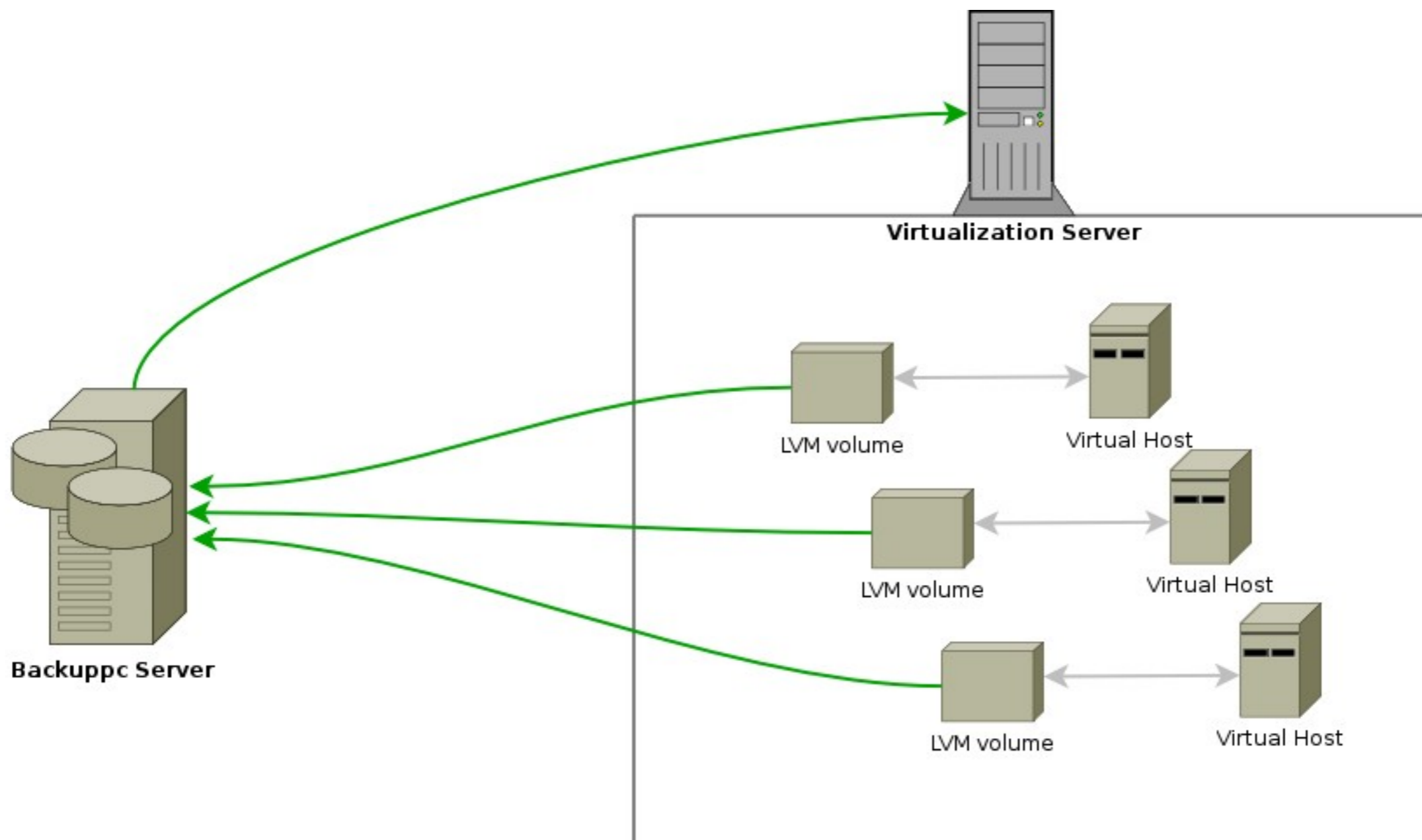
- Rapido
- Copy-on-write
- Poco spazio

**BackupPC**

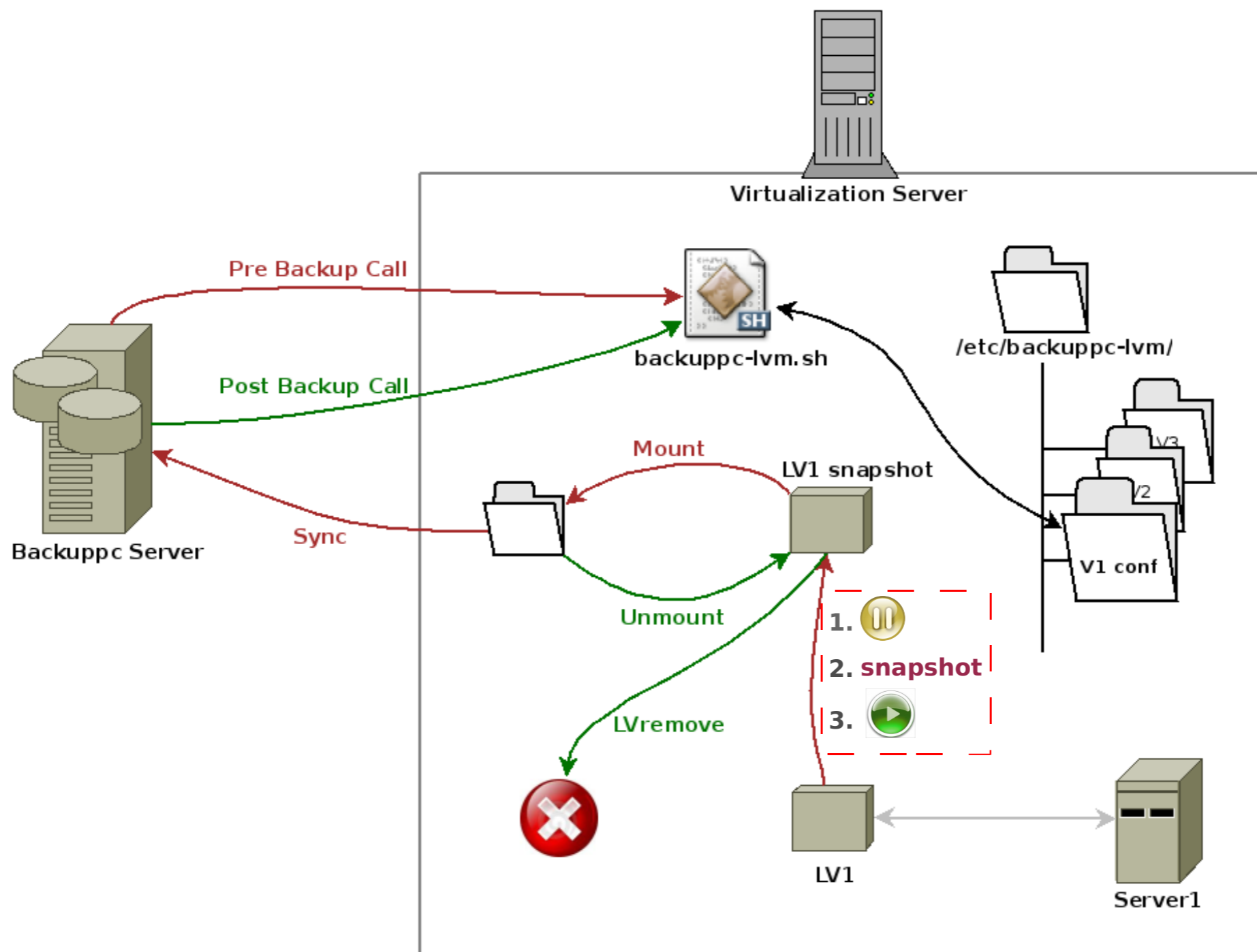
```
lvcreate -L10G -s -n server1.snap /dev/vg1/server1
mount /dev/vg1/server1.snap /mnt/server1-snap
tar -pczf /backups/server1.tar.gz /mnt/server1
```



# BackupPC + LVM



# “Backuppc-lvm”



# “Backuppc-lvm” setup

Guida e download:

<http://www.biodec.com/tools/software/backuppc-lvm>

Install:

Debian/Ubuntu package



**GRAZIE PER L'ATTENZIONE**

