

**Table des matières**

**Rear (Relax-and-Recover)** ..... 3

- Dépendances ..... 3
- Download ..... 3
- Fichier de conf basique ..... 3
- Lancement de la sauvegarde ..... 3
- Test de restauration ..... 4



## Rear (Relax-and-Recover)

### Dépendances

```
mkisofs (or genisoimage)
mingetty (rear is depending on it in recovery mode)
syslinux (for i386 based systems)
nfs-utils (when using NFS to store the archives)
cifs-utils (when using SMB to store the archives)
```

### Download

[http://download.opensuse.org/repositories/Archiving:/Backup:/Rear/Debian\\_10/amd64/rear\\_2.6-0\\_amd64.deb](http://download.opensuse.org/repositories/Archiving:/Backup:/Rear/Debian_10/amd64/rear_2.6-0_amd64.deb)

```
apt-get install mkisofs mingetty syslinux cifs-utils nfs-utils sshfs
dpkg -i rear_2.6-0_amd64.deb
```

### Fichier de conf basique

```
root@stkoner-pmox2:~# cat /etc/rear/local.conf
# Default is to create Relax-and-Recover rescue media as ISO image
# set OUTPUT to change that
# set BACKUP to activate an automated (backup and) restore of your data
# Possible configuration values can be found in /usr/share/rear/conf/default.conf
#
# This file (local.conf) is intended for manual configuration. For configuration
# through packages and other automated means we recommend creating a new
# file named site.conf next to this file and to leave the local.conf as it is.
# Our packages will never ship with a site.conf.

OUTPUT=ISO
BACKUP=NETFS
BACKUP_URL="sshfs://ben@nas/ZP_nas/stkoner-pmox2-rear"
NETFS_KEEP_OLD_BACKUP_COPY=3
BACKUP_PROG_EXCLUDE=( '/tmp/*' '/dev/shm/*' "$VAR_DIR/output/*" "/ZP_vDisks/*" "/ZP_nas/*" "/ZP_ext/*" )
```

⇒ Si vous utiliser un adressage IP fixe, créer les fichiers ci-dessous :

- **/etc/rear/mappings/ip\_addresses**

```
eth0 192.268.1.252/24
```

- **/etc/rear/mappings/routes**

```
default 192.168.1.254 eth0
```

⇒ Penser à copier la clé SSH vers la machine distante

### Lancement de la sauvegarde

```
rear -v mkbackup
```

```
root@stkoner-pmox2:~# rear -v mkbackup
Relax-and-Recover 2.6 / 2020-06-17
Running rear mkbackup (PID 54505)
Using log file: /var/log/rear/rear-stkoner-pmox2.log
Running workflow mkbackup on the normal/original system
Using backup archive '/tmp/rear.BwoSapPOuUWjNq/outputfs/stkoner-pmox2/backup.tar.gz'
Using autodetected kernel '/boot/vmlinuz-5.4.143-1-pve' as kernel in the recovery system
Creating disk layout
Overwriting existing disk layout file /var/lib/rear/layout/disklayout.conf
Using guessed bootloader 'GRUB' (found in first bytes on /dev/sda)
Verifying that the entries in /var/lib/rear/layout/disklayout.conf are correct ...
Creating recovery system root filesystem skeleton layout
Copying logfile /var/log/rear/rear-stkoner-pmox2.log into initramfs as '/tmp/rear-stkoner-pmox2-partial-2021-11-15T12:06:02+01:00.log'
Copying files and directories
Copying binaries and libraries
Copying all kernel modules in /lib/modules/5.4.143-1-pve (MODULES contains 'all_modules')
Copying all files in /lib*/firmware/
```

```

Symlink '/usr/share/misc/magic' -> '/usr/share/file/magic' refers to a non-existing directory on the recovery system.
It will not be copied by default. You can include '/usr/share/file/magic' via the 'COPY_AS_IS' configuration variable.
Testing that the recovery system in /tmp/rear.BwoSapP0uUWgJNq/rootfs contains a usable system
Creating recovery/rescue system initramfs/initrd initrd.cgz with gzip default compression
Created initrd.cgz with gzip default compression (266267302 bytes) in 40 seconds
Making ISO image
Wrote ISO image: /var/lib/rear/output/rear-stkoner-pmox2.iso (267M)
Copying resulting files to sshfs location
Saving /var/log/rear/rear-stkoner-pmox2.log as rear-stkoner-pmox2.log to sshfs location
Copying result files '/var/lib/rear/output/rear-stkoner-pmox2.iso /tmp/rear.BwoSapP0uUWgJNq/tmp/VERSION /tmp/rear.BwoSapP0uUWgJNq/tmp/README /tmp/rear.BwoSapP0uUWgJNq/tmp/rear-stkoner-pmox2.log' to /tmp/rear.BwoSapP0uUWgJNq/outputfs/stkoner-pmox2 at sshfs location
Making backup (using backup method NETFS)
Creating tar archive '/tmp/rear.BwoSapP0uUWgJNq/outputfs/stkoner-pmox2/backup.tar.gz'
Archived 1873 MiB [avg 8127 KiB/sec] OK
WARNING: tar ended with return code 1 and below output:
---snip---
tar: /var/lib/lxcfs: file changed as we read it
tar: /var/agentx/master: socket ignored
tar: pve: Warning: Cannot flistxattr: Operation not supported
-----
This means that files have been modified during the archiving process. As a result the backup may not be completely consistent or may not be a perfect copy of the system. Relax-and-Recover will continue, however it is highly advisable to verify the backup in order to be sure to safely recover this system.

Archived 1873 MiB in 237 seconds [avg 8093 KiB/sec]
Exiting rear mkbackup (PID 54505) and its descendant processes ...
Running exit tasks
root@stkoner-pmox2:~#

```

Plusieurs fichiers sont créés :

```

root@stkoner-pmox2:~# ssh nas ls -ltr /ZP_nas/stkoner-pmox2-rear/stkoner-pmox2/
total 2198723
-rw----- 1 ben ben 279052288 Nov 15 12:07 rear-stkoner-pmox2.iso
-rw----- 1 ben ben 277 Nov 15 12:07 VERSION
-rw----- 1 ben ben 202 Nov 15 12:07 README
-rw----- 1 ben ben 98085 Nov 15 12:07 rear-stkoner-pmox2.log
-rw----- 1 ben ben 1964661358 Nov 15 12:11 backup.tar.gz
-rw----- 1 ben ben 6004179 Nov 15 12:11 backup.log

```

- **rear-stkoner-pmox2.iso** : ISO bootable pour la recovery
- **backup.tar.gz** : contient la sauvegarde OS

FAQ : <http://relax-and-recover.org/documentation/faq>

### Test de restauration

```

Relax-and-Recover v2.6
Recover test-debian
Automatic Recover test-debian
Other actions
Help for Relax-and-Recover
Boot First Local disk (hd0)
Boot Second Local disk (hd1)
Boot Next device
Hardware Detection Tool
ReBoot system
Power off system

Press [Tab] to edit, [F2] for help, [F1] for version info

Rescue image kernel 4.19.0-18-amd64 Sun, 14 Nov 2021 11:16:09 +0100
BACKUP=NETFS OUTPUT=ISO BACKUP_URL=sshfs://ben@192.168.1.252/ZP_nas/rear-test-de

```

```
Verifying md5sums of the files in the Relax-and-Recover rescue system
```

```
md5sums are OK
```

```
Configuring Relax-and-Recover rescue system
```

```
Running 00-functions.sh...
```

```
Running 01-run-ldconfig.sh...
```

```
Running 10-console-setup.sh...
```

```
Running keymap of the original system
```

```
Running 20-check-boot-options.sh...
```

```
Running 40-start-udev-or-load-modules.sh...
```

```
insmod /lib/modules/4.19.0-18-amd64/kernel/fs/fuse/fuse.ko
```

```
Waiting for udev ... done.
```

```
Running 41-load-special-modules.sh...
```

```
Running 42-engage-scsi.sh...
```

```
Running 45-serial-console.sh...
```

```
Running 55-migrate-network-devices.sh...
```

```
Running 58-start-dhclient.sh...
```

```
Attempting to start the DHCP client daemon
```

```
Running 60-network-devices.sh...
```

```
Running 62-routing.sh...
```

```
Running 65-sysctl.sh...
```

```
fs.protected_hardlinks = 1
```

```
fs.protected_symlinks = 1
```

```
Running 99-makedev.sh...
```

```
Relax-and-Recover rescue system is ready
```

```
Launching 'rear recover' automatically
```

```
Relax-and-Recover 2.6 / 2020-06-17
```

```
Running rear recover (PID 382)
```

```
Using log file: /var/log/rear/rear-test-debian.log
```

```
Running workflow recover within the Rear rescue/recovery system
```

```
ben@192.168.1.252's password:
```

```
Relax-and-Recover rescue system is ready
```

```
Launching 'rear recover' automatically
```

```
Relax-and-Recover 2.6 / 2020-06-17
```

```
Running rear recover (PID 382)
```

```
Using log file: /var/log/rear/rear-test-debian.log
```

```
Running workflow recover within the Rear rescue/recovery system
```

```
ben@192.168.1.252's password:
```

```
Using backup archive /tmp/rear.uw7CxQ4yh1410w0/outputfs/test-debian/backup.tar.gz
```

```
Calculating backup archive size
```

```
Backup archive size is 8628 /tmp/rear.uw7CxQ4yh1410w0/outputfs/test-debian/backup.tar.gz (compressed)
```

```
Comparing disks
```

```
Device sda has expected (same) size 12884901888 bytes (will be used for 'recover')
```

```
Disk configuration looks identical
```

```
Proceed with 'recover' (yes) otherwise manual disk layout configuration is enforced
```

```
(default 'yes' timeout 30 seconds)
```

```
yes
```

```
24
user confirmed to proceed with 'recover'
Start system layout restoration.
Disk '/dev/sda': creating 'msdos' partition table
Disk '/dev/sda': creating partition number 1 with name 'primary'
Disk '/dev/sda': creating partition number 2 with name 'extended'
Disk '/dev/sda': creating partition number 3 with name 'logical'
Creating LDM PV /dev/sda5
Restoring LDM VG 'test-debian-vg'
Sleeping 3 seconds to let udev or systemd-udev create their devices...
Creating filesystem of type ext4 with mount point / on /dev/mapper/test--debian--vg-root.
Mounting filesystem /
Creating filesystem of type ext4 with mount point /home on /dev/mapper/test--debian--vg-home.
Mounting filesystem /home
Creating filesystem of type ext4 with mount point /tmp on /dev/mapper/test--debian--vg-tmp.
Mounting filesystem /tmp
Creating filesystem of type ext4 with mount point /var on /dev/mapper/test--debian--vg-var.
Mounting filesystem /var
Creating filesystem of type ext2 with mount point /boot on /dev/sda1.
Mounting filesystem /boot
Creating swap on /dev/mapper/test--debian--vg-swap_1
Disk layout created.
base192.168.1.252's password:
Restoring from '/tmp/rear.su/CoPgh14lDab-oujpufts/test-debian-backup.tar.gz' (restore log is /var/lib/rear/restore/recover.backup.tar.gz.382.restore.log) ...
Restored 907 MiB (avg. 596MiB/s)
Restored 2150 MiB in 14m 37.50s (156.5KiB/s) ok
Restored 2150 MiB in 136 seconds (avg. 15905 KiB/sec)
Restoring finished (verify backup restore log messages in /var/lib/rear/restore/recover.backup.tar.gz.382.restore.log)
Created SELinux /mnt/local/_restorelabel file : after reboot SELinux will relabel all files
Recreating directories (with permissions) from /var/lib/rear/recovery/directories_permissions_owner_group
Migrating disk-by-id mappings in certain restored files in /mnt/local to current disk-by-id mappings ...
Updated initramfs with new drivers for this system.
Skip installing GRUB legacy boot loader because GRUB 2 is installed (grub-probe or grub2-probe exist).
Installing GRUB2 boot loader...
Determining where to install GRUB2 (no GRUB2_INSTALL_DEVICES specified)
Found possible boot disk /dev/sda - installing GRUB2 there
Finished 'recover'. The target system is mounted at '/mnt/local'.
Exiting rear recover (PID 382) and its descendant processes ...
Running exit tasks

'rear recover' finished successfully

1) View Relax-and-Recover log file(s)
2) Go to Relax-and-Recover shell
3) Reboot
Select what to do 3
```

From:  
<https://unix-bck.ndlp.info/> - Where there is a shell, there is a way

Permanent link:  
[https://unix-bck.ndlp.info/doku.php/blog:rear\\_relax\\_recover?rev=1638432811](https://unix-bck.ndlp.info/doku.php/blog:rear_relax_recover?rev=1638432811)

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