

LVM Snapshot Backup Wrapper

`lvm-snapshot-backup-wrapper`

A wrapper script for creating
full system backups

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LVM Snapshot Backup Wrapper

Introduction & Features

lvm-snapshot-backup-wrapper is a wrapper script for creating full system backups using lvm-snaptool in system mirror mode.

- Uses Bashinator for message handling etc.
- Uses lvm-snaptool for creating a mirror of the currently running system using LVM snapshots wherever possible for best possible backup consistency
- Supports rdiff-backup and rsnapshot

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File system layout of a typical installation

```
## package 'app-admin/lvm-snapshot-backup-wrapper' from 'wschlich' overlay

## bashinator configuration
/etc/lvm-snapshot-backup-wrapper/bashinator.cfg.sh

## lvm-snapshot-backup-wrapper configuration
/etc/lvm-snapshot-backup-wrapper/lvm-snapshot-backup-wrapper.cfg.sh

## lvm-snapshot-backup-wrapper library
/usr/lib/lvm-snapshot-backup-wrapper.lib.sh

## lvm-snapshot-backup-wrapper script
/usr/sbin/lvm-snapshot-backup-wrapper.sh
```

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Use cases: creating backups using rsnapshot, part 1

On the backup server host that backs up the client host:

```
## install rsnapshot
$ emerge rsnapshot

## create rsnapshot config directory
$ mkdir -p /local/adm/rsnapshot

## create rsnapshot backup storage directory
$ mkdir -p /backup/rsnapshot

## create an SSH keypair for logging in to the client
ssh-keygen -t rsa -b 4096 -f /local/adm/rsnapshot/id_rsa -C "backup@$(hostname -f)" -N ''

## create /local/adm/rsnapshot/rsnapshot.conf from template
cp /etc/rsnapshot.conf.default /local/adm/rsnapshot/rsnapshot.conf

## adjust /local/adm/rsnapshot/rsnapshot.conf
snapshot_root      /backup/rsnapshot
retain daily       7
retain weekly      4
retain monthly     3
rsync_short_args   -aSAX
rsync_long_args    --delete --numeric-ids --relative --delete-excluded
ssh_args           -i /local/adm/rsnapshot/id_rsa
link_dest          1
backup             backup@client.example.com:/    client.example.com/
include_file=/local/adm/rsnapshot/hostconfig/client.example.com.include,
exclude_file=/local/adm/rsnapshot/hostconfig/client.example.com.exclude
```

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Use cases: creating backups using rsnapshot, part 2

On the backup server host that backs up the client host, continued:

```
## create host configuration base directory
$ mkdir -p /local/adm/rsnapshot/hostconfig

## create /local/adm/rsnapshot/hostconfig/client.example.com.include (empty by default)
$ touch /local/adm/rsnapshot/hostconfig/client.example.com.include

## create /local/adm/rsnapshot/hostconfig/client.example.com.exclude (shortened example)
/usr/portage/**
/local/portage/distfiles/**
/local/portage/layman/**
/local/portage/packages/**
/tmp/**
/usr/src/**
/usr/local/src/**
/var/cache/edb/**
/var/log/[...]
[...]
/var/tmp/**

## create /local/adm/rsnapshot/rsnapshot.sh (rsnapshot wrapper script)
#!/bin/bash
rsnapshot -c "${0%*/}rsnapshot.conf" "${@}"

## create /etc/cron.d/rsnapshot (example using fcron syntax)
50 01 * * * /local/adm/rsnapshot/rsnapshot.sh daily
30 01 * * 7 /local/adm/rsnapshot/rsnapshot.sh weekly
10 01 1 * * /local/adm/rsnapshot/rsnapshot.sh monthly
```

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Use cases: creating backups using rsnapshot, part 3

On the client host that is to be backed up:

```
## install required packages
$ layman -a wschlich
$ emerge --noreplace sudo rsync lvm-snapshot-backup-wrapper

## create unprivileged user account for logins from the backup server
$ groupadd backup
$ useradd -m -g backup -c "Backup User" backup

## configure /home/backup/.ssh/authorized_keys as follows:
command="sudo /usr/sbin/lvm-snapshot-backup-wrapper.sh",
  from="backupserver1.example.com",no-port-forwarding,no-X11-forwarding,no-pty
  ssh-rsa KEYDATA backup@backupserver1.example.com

## configure /etc/sudoers as follows:
Defaults:backup always_set_home,env_keep=SSH_ORIGINAL_COMMAND
backup ALL=(ROOT) NOPASSWD: /usr/sbin/lvm-snapshot-backup-wrapper.sh

## adjust /etc/lvm-snapshot-backup-wrapper/lvm-snapshot-backup-wrapper.cfg.sh
## as needed, for example like this:
export LvmSnapToolSystemMirrorCreateArgs="-f 0.2,vgs/lvhome:0.1,vgs/lvusr:0.1"
export SystemMirrorCreatePreExecCommand="/path/to/database/backup/script"
export SystemMirrorDeletePostExecCommand="rm -rf /path/to/database/backups"
```

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Questions? Feedback?

Please ask your questions now and/or send me your feedback and suggestions:

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