Burp

1 Généralités

Après avoir fait le tour de la plupart des solutions de sauvegarde, Burp est certainement la solution la plus aboutie. C'est du très lourd en fonctionnalités (codé par un cerveau) et très efficace à la tâche (codé dans un langage compilé). C'est du logiciel codé par un admin pour les admins.

Burp-UI, le compagnon graphique de Burp n'est pas en reste : bien documenté, avec une belle interface et de bonnes fonctionnalités, il peut être étendu à des configurations multi-serveurs de sauvegarde.

Alors oui, le slogan de Burp « Burp don't suck » - roter ne fait pas chier :) est validé !

❑ Caractéristiques

http://burp.grke.org/features.html

```
Server mode runs on Unix-based systems.
Client mode runs on Windows and Unix-based systems.
Windows Volume Shadow Copy Service (VSS) support (Windows XP R2 and newer).
Windows 32bit and 64bit support.
Delta differencing with librsync.
Network backups.
Network rate limiting.
Backs up and restores files, directories, symlinks, hardlinks, fifos, nodes, permissions and times-
tamps.
Backs up and restores Linux and FreeBSD acls and xattrs.
Backs up and restores Windows permissions, file attributes, and so on, via VSS.
Backs up and restores Windows EFS files.
Storage and network compression using zlib.
Ability to continue interrupted backups.
Client/server communications encryption with SSL.
Automatic SSL certificate authority and client certificate signing.
Client side file encryption - (note: this turns off delta differencing).
Scheduling.
Email backup success/failure notifications.
A single daily backup summary email.
A live ncurses monitor on the server.
Fifo read/write support.
Pre/post backup/restore client scripts.
Multiple retention periods (e.g, keep 1 backup per day for 7 days, 1 backup per week for 4 weeks, 1
backup per 4 weeks for a year).
Storage data deduplication.
Automatic client upgrade.
```

❑ Liens

http://burp.grke.org (site)
https://sourceforge.net/projects/burp (dernière stable)
https://github.com/grke/burp (sources)

❑ Tutoriaux

http://www.kudos.be/Articles/Migrating_from_Bacula_to_Burp.html
https://philpep.org/blog/sauvegarde-avec-burp (lvm)
http://www.informaticapressapochista.com/linux/burp (windows)

❑ Burp-UI

https://github.com/ziirish/burp-ui (home)
https://ziirish.info/debian/README.txt (site)
https://burp-ui.readthedocs.io/en/latest (doc)
https://burpui.ziirish.me (forum)

❑ Notes

Optimisé pour sauver des volumes LVM ou une sortie mysqldump, pg_dump.
La gestion des restaurations est également très étudiée.

2 Burp : Serveur & Client

2.1 Introduction

L'application utilise le même exécutable en mode serveur ou client. L'installation de base est donc la même. Le paquet Debian Jessie est très vieux (1.3.48 de 2014) et le logiciel a beaucoup évolué depuis (2.0.54 de 2017), il est préférable de recompiler.

Burp version 2 permet une meilleure communication avec Burp-UI, qui peut être une extension intéressante pour une tâche aussi stratégique que les sauvegardes.

❑ Notes

La compilation statique via « --enable-static --disable-libtool » génère une erreur au niveau de l'option « --disable-libtool ». Par ailleurs, il semble préférable de toujours recompiler sur la plate forme cliente, par exemple à cause du mix entre plate formes 32 et 64 bits.

Le logiciel est, pour le moins, susceptible quand au contenu des fichiers de configuration. Il faudra s'en tenir aux modèles proposés, qui ont été consciencieusement testés. La moindre erreur peut entraîner l'impossibilité de créer les certificats ou de se connecter. En clair : conserver l'arborescence par défaut des fichiers de configuration même si les chemins sont re-définissables.

2.2 Installation

Installer l'environnement de compilation :

```
root@system: aptitude install make pkg-config check g++ librsync-dev libz-dev libssl-dev uthash-dev
libyajl-dev bzip2
```

Prendre la dernière stable (2.0.54 au 01/01/2017) :

```
root@system:     wget   --no-check-certificate   http://downloads.sourceforge.net/project/burp/burp-
2.0.54/burp-2.0.54.tar.bz2?r=https%3A%2F%2Fsourceforge.net%2Fprojects%2Fburp%2Ffiles%2Fburp-
2.0.54%2F&ts=1483453415&use_mirror=netix
```

Décompresser burp-2.0.54.tar.bz2 dans /root/burp.

Configurer :

```
root@system: ./configure --prefix=/usr --sysconfdir=/etc/burp --localstatedir=/var


checking for a BSD-compatible install... /usr/bin/install -c
checking whether build environment is sane... yes
.../...
checking for listxattr... yes
checking for getxattr... yes
checking for setxattr... yes
checking whether to build the test suite with code coverage support... no
configure: creating ./config.status
config.status: creating Makefile
config.status: creating src/config.h
config.status: executing depfiles commands
config.status: executing libtool commands
configure:
configure: Configuration summary
configure: ======================
configure:
configure:                  Host: x86_64-unknown-linux-gnu
configure:          Burp version: 2.0.52
configure:       Install binaries: ${exec_prefix}/sbin
configure:   Install config files: /etc/burp
configure:             C Compiler: gcc -std=gnu99
configure:     Preprocessor flags:
configure:         Compiler flags: -Wall -g -O2
configure:           Linker flags:
configure:
configure:                   acl: no
configure:                 crypt: yes
configure:                  ipv6: yes
configure:               ncurses: no
configure:               openssl: yes
configure:                 xattr: yes
configure:                  zlib: yes
configure:
```

Compiler :

```
root@system: make

  CC     src/server/protocol1/vss_strip-vss_strip.o
  CCLD   vss_strip
  CC     src/burp-alloc.o
  CC     src/burp-asfd.o
  CC     src/burp-async.o
  CC     src/burp-attribs.o
  CC     src/burp-base64.o
  CC     src/burp-berrno.o
  CC     src/burp-bfile.o
  CC     src/burp-bu.o
  CC     src/burp-cmd.o
  CC     src/burp-cntr.o
  CC     src/burp-conf.o
  CC     src/burp-conffile.o
  CC     src/burp-cstat.o
  CC     src/burp-forkchild.o
  CC     src/burp-fsops.o
  CC     src/burp-fzp.o
  CC     src/burp-handy.o
  CC     src/burp-hexmap.o
  CC     src/burp-incexc_recv.o
  CC     src/burp-incexc_send.o
  CC     src/burp-iobuf.o
  CC     src/burp-linkhash.o
  CC     src/burp-lock.o
  CC     src/burp-log.o
  CC     src/burp-msg.o
  CC     src/burp-pathcmp.o
  CC     src/burp-prepend.o
```


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```
  CC     src/burp-prog.o
  CC     src/burp-regexp.o
  CC     src/burp-run_script.o
  CC     src/burp-sbuf.o
  CC     src/burp-slist.o
  CC     src/burp-ssl.o
  CC     src/burp-strlist.o
  CC     src/burp-yajl_gen_w.o
  CC     src/client/burp-acl.o
  CC     src/client/burp-auth.o
  CC     src/client/burp-autoupgrade.o
  CC     src/client/burp-backup.o
  CC     src/client/burp-backup_phase1.o
  CC     src/client/burp-ca.o
  CC     src/client/burp-cvss.o
  CC     src/client/burp-delete.o
  CC     src/client/burp-extra_comms.o
  CC     src/client/burp-extrameta.o
  CC     src/client/burp-find.o
  CC     src/client/burp-glob_windows.o
  CC     src/client/burp-list.o
  CC     src/client/burp-main.o
  CC     src/client/burp-monitor.o
  CC     src/client/burp-restore.o
  CC     src/client/burp-xattr.o
  CC     src/client/monitor/burp-json_input.o
  CC     src/client/monitor/burp-lline.o
  CC     src/client/monitor/burp-sel.o
  CC     src/client/monitor/burp-status_client_ncurses.o
src/client/monitor/status_client_ncurses.c: In function ‘update_screen’:
src/client/monitor/status_client_ncurses.c:767:6:  warning:  unused  variable  ‘row’  [-Wunused-va-
riable]
  int row=24;
      ^
  CC     src/client/protocol1/burp-backup_phase2.o
  CC     src/client/protocol1/burp-restore.o
  CC     src/client/protocol2/burp-backup_phase2.o
  CC     src/client/protocol2/burp-rabin_read.o
  CC     src/client/protocol2/burp-restore.o
  CC     src/protocol1/burp-handy.o
  CC     src/protocol1/burp-msg.o
  CC     src/protocol1/burp-rs_buf.o
  CC     src/protocol1/burp-sbuf_protocol1.o
  CC     src/protocol2/burp-blist.o
  CC     src/protocol2/burp-blk.o
  CC     src/protocol2/rabin/burp-rabin.o
  CC     src/protocol2/rabin/burp-rconf.o
  CC     src/protocol2/rabin/burp-win.o
  CC     src/protocol2/burp-sbuf_protocol2.o
  CC     src/server/burp-auth.o
  CC     src/server/burp-autoupgrade.o
  CC     src/server/burp-backup.o
  CC     src/server/burp-backup_phase1.o
  CC     src/server/burp-backup_phase3.o
  CC     src/server/burp-bu_get.o
  CC     src/server/burp-ca.o
  CC     src/server/burp-child.o
  CC     src/server/burp-compress.o
  CC     src/server/burp-delete.o
  CC     src/server/burp-diff.o
  CC     src/server/burp-dpth.o
  CC     src/server/burp-extra_comms.o
  CC     src/server/burp-list.o
  CC     src/server/burp-main.o
  CC     src/server/burp-manio.o
  CC     src/server/burp-manios.o
  CC     src/server/burp-quota.o
  CC     src/server/burp-restore.o
  CC     src/server/burp-resume.o
  CC     src/server/burp-rubble.o
  CC     src/server/burp-run_action.o
  CC     src/server/burp-sdirs.o
  CC     src/server/burp-timestamp.o
  CC     src/server/monitor/burp-browse.o
  CC     src/server/monitor/burp-cache.o
  CC     src/server/monitor/burp-cstat.o
  CC     src/server/monitor/burp-json_output.o
  CC     src/server/monitor/burp-status_server.o
  CC     src/server/protocol1/burp-backup_phase2.o
  CC     src/server/protocol1/burp-backup_phase4.o
  CC     src/server/protocol1/burp-bedup.o
  CC     src/server/protocol1/burp-blocklen.o
  CC     src/server/protocol1/burp-deleteme.o
```

```
  CC     src/server/protocol1/burp-dpth.o
  CC     src/server/protocol1/burp-fdirs.o
  CC     src/server/protocol1/burp-link.o
  CC     src/server/protocol1/burp-restore.o
  CC     src/server/protocol1/burp-zlibio.o
  CC     src/server/protocol2/burp-backup_phase2.o
  CC     src/server/protocol2/burp-backup_phase4.o
  CC     src/server/protocol2/burp-bsigs.o
  CC     src/server/protocol2/champ_chooser/burp-candidate.o
  CC     src/server/protocol2/champ_chooser/burp-champ_chooser.o
  CC     src/server/protocol2/champ_chooser/burp-champ_client.o
  CC     src/server/protocol2/champ_chooser/burp-champ_server.o
  CC     src/server/protocol2/champ_chooser/burp-dindex.o
  CC     src/server/protocol2/champ_chooser/burp-hash.o
  CC     src/server/protocol2/champ_chooser/burp-incoming.o
  CC     src/server/protocol2/champ_chooser/burp-scores.o
  CC     src/server/protocol2/champ_chooser/burp-sparse.o
  CC     src/server/protocol2/burp-dpth.o
  CC     src/server/protocol2/burp-rblk.o
  CC     src/server/protocol2/burp-restore.o
  CC     src/yajl/burp-yajl.o
  CC     src/yajl/burp-yajl_alloc.o
  CC     src/yajl/burp-yajl_buf.o
  CC     src/yajl/burp-yajl_encode.o
  CC     src/yajl/burp-yajl_gen.o
  CC     src/yajl/burp-yajl_lex.o
  CC     src/yajl/burp-yajl_parser.o
  CC     src/yajl/burp-yajl_tree.o
  CC     src/yajl/burp-yajl_version.o
  CCLD   burp
  GEN    summary_script
  GEN    burp_ca
```

Installer :

```
root@system: make install

make[1]: Entering directory '/root/burp'

/bin/mkdir -p '/usr/bin'

/bin/bash ./libtool   --mode=install /usr/bin/install -c vss_strip '/usr/bin'
libtool: install: /usr/bin/install -c vss_strip /usr/bin/vss_strip

/bin/mkdir -p '/usr/sbin'

/bin/bash ./libtool   --mode=install /usr/bin/install -c burp '/usr/sbin'
libtool: install: /usr/bin/install -c burp /usr/sbin/burp

/bin/mkdir -p '/usr/sbin'

/usr/bin/install -c burp_ca '/usr/sbin'
make  install-exec-hook
make[2]: Entering directory '/root/burp'
make[2]: Leaving directory '/root/burp'

/bin/mkdir -p '/usr/share/burp/scripts'

/usr/bin/install -c summary_script '/usr/share/burp/scripts'

/bin/mkdir -p '/usr/share/doc/burp'

/usr/bin/install -c -m 644 CHANGELOG CONTRIBUTORS DONATIONS LICENSE README UPGRADING docs/add-re-
move.txt    docs/autoupgrade.txt    docs/baremetal-windows2008.txt    docs/baremetal-windows7and8.txt
docs/baremetal-windows7-hirens.txt   docs/baremetal-windows7.txt   docs/burp_ca.txt   docs/debug.txt
docs/retention.txt  docs/security-models.txt  docs/server-basics.txt  docs/shuffling.txt  docs/status-
monitor.txt            docs/tests.txt            docs/timer_script.txt            docs/working_dir.txt
src/protocol1/backup_phases.txt src/protocol1/readwrite.txt '/usr/share/doc/burp'

/bin/mkdir -p '/usr/share/burp/scripts'
       /usr/bin/install       -c       configs/server/timer_script       configs/server/notify_script
configs/server/ssl_extra_checks_script '/usr/share/burp/scripts'

/bin/mkdir -p '/usr/share/man/man8'

/usr/bin/install  -c  -m  644  manpages/bedup.8  manpages/bsigs.8  manpages/burp.8  manpages/burp_ca.8
manpages/vss_strip.8 '/usr/share/man/man8'
```

```
make[1]: Leaving directory '/root/burp'
```

Installer la configuration :

```
root@system: make install-configs

  GEN    burp.conf
  GEN    burp-server.conf
  GEN    CA.cnf
/usr/bin/install -c -m 644 configs/server/clientconfdir/testclient "/etc/burp/clientconfdir"
/usr/bin/install -c -m 644 configs/server/clientconfdir/incexc/example "/etc/burp/clientconfdir/in-
cexc"
echo burp.conf burp-server.conf CA.cnf | while read files ; do \
  /usr/bin/install -c -m 644 $files "/etc/burp" || exit $?; \
```

Conserver le répertoire /root/burp pour référence ou une éventuelle désinstallatio.

2.3 Désinstaller

```
root@system: make uninstall
```

3 Burp : Serveur

3.1 Systemd

❑ En mode root

Créer le fichier de configuration dans /etc/systemd/system :

/etc/systemd/system/burp.service

```
[Unit]
Description=Burp
After=local-fs.target

[Service]
ExecStart=/usr/sbin/burp -c /etc/burp/burp-server.conf -F

[Install]
WantedBy=multi-user.target
```

❑ En mode user

Il serait, comme toujours, avisé d'installer Burp en mode user. Mais il me semble que la fonction du logiciel implique une utilisation en root, afin de pouvoir tout sauver sans se compliquer la vie avec les droits. Alors on laisse Burp en root et, oui, c'est probablement mal.

Configurer systemd-tmpfiles :

```
root@system: echo d /var/run/burp 0755 <user_save> <group_save> - > /etc/tmpfiles.d/burpd.conf
```

Ensuite pour créer le répertoire avec les bons droits (sachant qu'il sera normalement créé automatiquement aux prochains démarrage :

```
root@system: systemd-tmpfiles --create
```

Créer le script de service dans /etc/systemd/system/burpd.service :

/etc/systemd/system/burp.service

```
[Unit]
Description=Burp
After=network.target

[Service]
User=<user_save>
Group=<group_save>
Type=simple
PIDFile=/var/run/burp/burp.server.pid
ExecStart=/usr/sbin/burp -c /etc/burp/burp-server.conf -F

[Install]
WantedBy=multi-user.target
```

❑ Démarrage, contrôle et arrêt manuels :

```
root@system: service burp start  ou systemctl start burp
root@system: service burp status ou systemctl status burp
root@system: service burp stop   ou systemctl stop burp
```

➪ Le premier lancement de Burp se traduit par une sortie. Ce n'est pas une erreur mais la conséquence de la création des certificats SSL. Il faut toujours relancer Burp une seconde fois.

❑ Création du démarrage automatique

```
root@system: systemctl enable burp
```

Redémarrer pour tester le lancement automatique.

4 Burp : Configuration

4.1 Concept

Une périodicité de sauvegarde est égale à un « utilisateur », représenté par un fichier coté client et un fichier coté serveur.

Si un client contient deux jeux de répertoires devant être sauvés selon deux périodicités différentes, il faut créer deux « utilisateurs », représentés par deux jeux de fichiers coté client et serveur,comme si c'était deux machines différentes.

Les fichiers de configuration ci-dessous devraient être assez explicites. Pour le serveur rs1, trois « utilisateurs » sont créés : rs1-01, rs1-02 et rs1-03.

4.2 Serveur : configuration

/etc/burp/burp-server.conf

```
#--------------------------------------------------
# burp-server.conf - Server configuration file
#--------------------------------------------------
#
#
#
#--------------------------------------------------

#--- Global

mode        = server
port        = 4971
status_port = 4972
protocol    = 1

clientconfdir = /etc/burp/clientconfdir
directory     = /srv/sav
pidfile       = /var/run/burp.server.pid

# Autoupgrade clients
# autoupgrade_dir = /etc/burp/autoupgrade/server

# Ratelimit throttles the send speed. Specified in Megabits per second (Mb/s).
# ratelimit = 1.5

dedup_group = global
hardlinked_archive = 0
working_dir_recovery_method = delete
version_warn = 1

max_children = 5
max_status_children = 5
umask = 0022
syslog = 1
stdout = 0

#--- Client rights policy (full rights)

client_can_delete       = 1
client_can_force_backup = 1
client_can_list         = 1
client_can_restore      = 1
client_can_verify       = 1

#--- SSL options

ca_name = burpCA
ca_server_name = burpserver
ca_crl_check = 1

ca_burp_ca  = /usr/sbin/burp_ca
ca_conf     = /etc/burp/CA.cnf

ssl_dhfile  = /etc/burp/dhfile.pem
ssl_cert_ca = /etc/burp/ssl_cert_ca.pem
ssl_cert    = /etc/burp/ssl_cert-server.pem
ssl_key     = /etc/burp/ssl_cert-server.key

#--- Timer script (handle client requests)

timer_script = /usr/share/burp/scripts/timer_script

#--- Default setup, keep parameter mandatory to run burp server, will be overriden in ./clients
conf files

# Numbers of backup per week
keep = 7

# Ensure that 20 hours elapse between backups
# s (seconds), m (minutes), h (hours), d (days), w (weeks), n (months)
timer_arg = 20h
```

```
# Allow backups to start in the evenings and nights during weekdays
timer_arg = Mon,Tue,Wed,Thu,Fri,00,01,02,03,04,05,19,20,21,22,23

# Allow more hours at the weekend.
timer_arg = Sat,Sun,00,01,02,03,04,05,06,07,08,17,18,19,20,21,22,23

#--- Notify success

# Uncomment the notify_success_* lines for email notifications of backups that
# succeeded.
# In the subject line, the following are substituted:
# %b - "backup"/"restore"/"verify"
# %c - client name
# %w - number of warnings, if any
#notify_success_script = /usr/share/burp/scripts/notify_script
#notify_success_arg = sendmail -t
#notify_success_arg = To: youremail@example.com
#notify_success_arg = From: burp
#notify_success_arg = Subject: %b succeeded: %c %w
# Uncomment the following to have success notifications only if there were
# warnings.
#notify_success_warnings_only = 1
# Uncomment the following to have success notifications only if there were
# new or changed files.
#notify_success_changes_only = 1

#--- Notify fails

# Uncomment the following for email notifications of backups that failed.
#notify_failure_script = /usr/share/burp/scripts/notify_script
#notify_failure_arg = sendmail -t
#notify_failure_arg = To: youremail@example.com
#notify_failure_arg = From: burp
#notify_failure_arg = Subject: %b failed: %c %w

#----------------------------------------------------
# EOF
#----------------------------------------------------
```

4.3 Serveur : exclusions

/etc/burp/clientconfdir/exclude

```
#----------------------------------------------------
# exclude - Exclusion file & file systems
#----------------------------------------------------
# ven. 06 janv. 2017 16:14:23 CET
#
#
#----------------------------------------------------

# compression

    exclude_comp=7z
    exclude_comp=ace
    exclude_comp=apk
    exclude_comp=arc
    exclude_comp=ark
    exclude_comp=arj
    exclude_comp=bz2
    exclude_comp=cab
    exclude_comp=cbr
    exclude_comp=cbz
    exclude_comp=dar
    exclude_comp=deb
    exclude_comp=exe
    exclude_comp=gz
    exclude_comp=ice
    exclude_comp=jar
    exclude_comp=lhz
    exclude_comp=lz
    exclude_comp=lzo
    exclude_comp=pka
    exclude_comp=rar
    exclude_comp=rpm
    exclude_comp=sis
    exclude_comp=tgz
```


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```
    exclude_comp=uha
    exclude_comp=xz
    exclude_comp=zip
    exclude_comp=z
    exclude_comp=zoo

# filesystems
    exclude=/proc
    exclude=/sys
    exclude=/media
    exclude=/mnt

# temporary

    exclude=/tmp

# filesystem types

    exclude_fs=tmpfs
    exclude_fs=devtmpfs

#--------------------------------------------------
# EOF
#--------------------------------------------------
```

4.4 Serveur : périodicité journalière, 4 semaines, 3 mois

/etc/burp/clientconfdir/7d-4w-3m

```
#--------------------------------------------------
# 7d-4w-3m
#--------------------------------------------------
# ven. 06 janv. 2017 16:13:17 CET
#
# 7 derniers jours, 4 dernières semaines, 3 derniers mois
#
#--------------------------------------------------

# Time elapse between backups
# Units: s (seconds), m (minutes), h (hours), d (days), w (weeks), n (months)

timer_arg = 1d

# Permanentes

#timer_arg = Mon,Tue,Wed,Thu,Fri,Sat,Sun,00,01,02,03,04,05,06,07,08,17,18,19,20,21,22,23

# Semaine la nuit

timer_arg = Mon,Tue,Wed,Thu,Fri,00,01,02,03,04,05,06,07,20,21,22,23

# Week-end à toutes heures

timer_arg = Sat,Sun,00,01,02,03,04,05,06,07,08,17,18,19,20,21,22,23

#--------------------------------------------------
# EOF
#--------------------------------------------------1
```

4.5 Serveur : périodicité hebdomadaire, 4 semaines, 3 mois

/etc/burp/clientconfdir/0d-4w-3m

```
#--------------------------------------------------
# 0d-4w-3m
#--------------------------------------------------
# dim. 08 janv. 2017 09:40:20 CET
#
# 4 dernières semaines, 3 derniers mois
#
#--------------------------------------------------

# Time elapse between backups
# Units: s (seconds), m (minutes), h (hours), d (days), w (weeks), n (months)
```


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```
timer_arg = 1w

# Permanentes

#timer_arg = Mon,Tue,Wed,Thu,Fri,Sat,Sun,00,01,02,03,04,05,06,07,08,17,18,19,20,21,22,23

# Semaine la nuit

timer_arg = Mon,Tue,Wed,Thu,Fri,00,01,02,03,04,05,06,07,20,21,22,23

# Week-end à toutes heures

timer_arg = Sat,Sun,00,01,02,03,04,05,06,07,08,17,18,19,20,21,22,23

#-----------------------------------------------------
# EOF
#-----------------------------------------------------
```

4.6 Serveur : client rs1-01

```
/etc/burp/clientconfdir/rs1-01

#-----------------------------------------------------
# rs1-01 - High activity rs1 backup
#-----------------------------------------------------
# ven. 06 janv. 2017 17:28:58 CET
#
#
#-----------------------------------------------------

password = rs1pwd

#--- Schedule

. /etc/burp/clientconfdir/7d-4w-3m

#--- Exclude policy

. /etc/burp/clientconfdir/exclude

#--- Includes

include = "/srv/smb/immobilier (prv)"
include = "/srv/smb/informatique (prv)"
include = "/srv/smb/musique (prv)"
include = "/srv/smb/sonia & stéphane (prv)"
include = "/srv/smb/sonia (prv)"
include = "/srv/smb/stéphane (prv)"

#-----------------------------------------------------
# EOF
#-----------------------------------------------------
```

4.7 Serveur : client rs1-02

```
/etc/burp/clientconfdir/cat rs1-02

#-----------------------------------------------------
# rs1-02 - Low activity rs1 backup
#-----------------------------------------------------
# dim. 08 janv. 2017 09:43:34 CET
#
#
#-----------------------------------------------------

password = rs1pwd

#--- Schedule

. /etc/burp/clientconfdir/0d-4w-3m

#--- Exclude policy
```


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```
. /etc/burp/clientconfdir/exclude

#--- Includes

include = "/srv/smb/a trier"
include = "/srv/smb/administratif, commerce, comptabilité, juridique"
include = "/srv/smb/agriculture, animaux, jardinage, forestier, viticulture"
include = "/srv/smb/algorithmes, protocoles, standards et manuels"
include = "/srv/smb/architecture, maçonnerie"
include = "/srv/smb/automatismes, gtc, scada"
include = "/srv/smb/aviation, espace, astronomie"
include = "/srv/smb/biologie, cuisine, santé, psychologie"
include = "/srv/smb/chauffage, frigorifique, solaire, éolien"
include = "/srv/smb/dessin industriel, typographie, infographie"
include = "/srv/smb/dossiers (prv)"
include = "/srv/smb/économie, politique, militaire, histoire"
include = "/srv/smb/électricité, électrotechnique, électronique"
include = "/srv/smb/enseignement, langues, dessin"
include = "/srv/smb/géographie, géologie, topologie, météorologie"
include = "/srv/smb/images, photos non personnelles, photo, peinture"
include = "/srv/smb/livres, bd, jeux, humour, publicités, magie"
include = "/srv/smb/mathématiques, traitement du signal, vocodeurs"
include = "/srv/smb/personnes (prv)"
include = "/srv/smb/photos (prv)"
include = "/srv/smb/radio, télévision"
include = "/srv/smb/revues, journaux"
include = "/srv/smb/sauvegardes (prv)"
include = "/srv/smb/sciences, nucléaire, physique, chimie"
include = "/srv/smb/sécurité, serrurerie, surveillance, cryptographie"
include = "/srv/smb/téléphonie, gsm, dect, voip"
include = "/srv/smb/train, métro, bus, marine, engins, voiture, vélo"

#-------------------------------------------------------
# EOF
#-------------------------------------------------------
```

4.8 Serveur : client rs1-03

/etc/burp/clientconfdir/rs1-03

```
#-------------------------------------------------------
# rs1-03 - High volume rs1 backup
#-------------------------------------------------------
# dim. 08 janv. 2017 09:43:34 CET
#
#
#-------------------------------------------------------

password = rs1pwd

#--- Schedule

. /etc/burp/clientconfdir/0d-4w-3m

#--- Exclude policy

. /etc/burp/clientconfdir/exclude

#--- Includes

include = "/srv/smb/documentaires (pub)"
include = "/srv/smb/films (pub)"
include = "/srv/smb/musique (pub)"
include = "/srv/smb/séries (pub)"

#-------------------------------------------------------
# EOF
#-------------------------------------------------------
```

4.9 Serveur : arborescence de configuration

/etc/burp

```
├── autoupgrade
```


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```
│   └── server
│       ├── win32
│       └── win64
│           └── 2.0.54
├── burp.conf
├── burp-server.conf
├── CA
│   ├── burpserver.crt
│   ├── burpserver.csr
│   ├── burpserver.key
│   ├── CA_burpCA.crl
│   ├── CA_burpCA.crt
│   ├── CA_burpCA.key
│   ├── certs
│   │   ├── 00.pem
│   │   ├── 01.pem
│   │   ├── 02.pem
│   │   ├── 5a63e6d3.0 -> /etc/burp/CA/certs/02.pem
│   │   ├── 5dc039ca.0 -> /etc/burp/CA/certs/00.pem
│   │   └── a3f6b0ff.0 -> /etc/burp/CA/certs/01.pem
│   ├── crlnumber.txt
│   ├── crlnumber.txt.old
│   ├── index.txt
│   ├── index.txt.attr
│   ├── index.txt.attr.old
│   ├── index.txt.old
│   ├── newcerts
│   ├── rs1-01.crt
│   ├── rs1-01.csr
│   ├── rs1-02.crt
│   ├── rs1-02.csr
│   ├── serial.txt
│   └── serial.txt.old
├── CA-client
├── CA.cnf
├── clientconfdir
│   ├── 0d-4w-3m
│   ├── 7d-4w-3m
│   ├── exclude
│   ├── rs1-01
│   ├── rs1-02
│   └── rs1-03
├── dhfile.pem
├── ssl_cert_ca.pem -> /etc/burp/CA/CA_burpCA.crt
├── ssl_cert-server.key -> /etc/burp/CA/burpserver.key
└── ssl_cert-server.pem -> /etc/burp/CA/burpserver.crt
```

4.10 Client Linux : configuration RS1-01

Seuls le nom du client et le chemin sont changés pour RS1-02 et RS1-03

```
/etc/burp/rs1-01/rs1-01

#--------------------------------------------------
# rs1-01 - Client config file
#--------------------------------------------------

#--- Client ID

cname       = rs1-01
password    = rs1pwd

ssl_cert    = /etc/burp/rs1-01/ssl_cert-client.pem
ssl_key     = /etc/burp/rs1-01/ssl_cert-client.key

#--- Global

mode        = client
server      = 192.168.0.242
port        = 4971
status_port = 4972

pidfile = /var/run/burp.client.pid

# autoupgrade_dir=/etc/burp/autoupgrade/client
# autoupgrade_os=test_os

syslog = 0
```

```
stdout = 1
progress_counter = 1

#-- Clients rights policy

server_can_restore = 0

# Directories containing .nobackup will not be backed up
nobackup = .nobackup

#--- SSL options

ca_burp_ca  = /usr/sbin/burp_ca
ca_csr_dir  = /etc/burp/CA-client

ssl_cert_ca = /etc/burp/ssl_cert_ca.pem
ssl_peer_cn = burpserver

#----------------------------------------------------
# EOF
#----------------------------------------------------
```

4.11 Client Linux : cron

```
/etc/cron.d# cat burp

#----------------------------------------------------
# burp
#----------------------------------------------------
# dim. 08 janv. 2017 10:20:35 CET
#
#
#----------------------------------------------------

#--- Lancer toutes les 20 minutes un backup planifié (-a t=timed)

10,30,50 * * * * root    /usr/sbin/burp -c /etc/burp/rs1-00/rs1-00 -a t
11,31,51 * * * * root    /usr/sbin/burp -c /etc/burp/rs1-01/rs1-01 -a t
12,32,52 * * * * root    /usr/sbin/burp -c /etc/burp/rs1-02/rs1-02 -a t
13,33,53 * * * * root    /usr/sbin/burp -c /etc/burp/rs1-03/rs1-03 -a t

#----------------------------------------------------
# EOF
#----------------------------------------------------
```

4.12 Client Linux : Arborescence de configuration

```
/etc/burp

├── autoupgrade
│   └── server
│       ├── win32
│       └── win64
│           └── 2.0.54
├── burp.conf
├── burp-server.conf
├── CA-client
│   ├── rs1-01.csr
│   └── rs1-02.csr
├── CA.cnf
├── clientconfdir
│   ├── incexc
│   │   └── example
│   └── testclient
├── rs1-01
│   ├── rs1-01
│   ├── ssl_cert-client.key
│   └── ssl_cert-client.pem
├── rs1-02
│   ├── rs1-02
│   ├── ssl_cert-client.key
│   └── ssl_cert-client.pem
├── rs1-03
│   └── rs1-03
```


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```
├── ssl_cert_ca.pem
├── ssl_cert-client.key
└── ssl_cert-client.pem
```

4.13 Client Windows : Installation

❑ Installation interactive

Lancer l'installateur et sélectionner n'importe quel répertoire, afin de pouvoir terminer l'installation.

Une tâche planifiée est créée à l'installation.

Editer burp.conf et supprimer les lignes ci-dessous barrées :

```
c:\program files\burp\burp.conf

mode = client
server = 192.168.0.242
port = 4971
status_port = 4972
cname = ro4-00
password = ro4pwd
~~include = C:/srn~~
exclude_regex = ^[A-Z]:/recycler$
exclude_regex = ^[A-Z]:/\$recycle\.bin$
exclude_regex = ^[A-Z]:/pagefile\.sys$
exclude_regex = ^[A-Z]:/swapfile\.sys$
exclude_regex = ^[A-Z]:/hiberfil\.sys$
stdout = 1
progress_counter = 1
nobackup = .nobackup
lockfile = C:/Program Files/Burp/lockfile
ca_burp_ca = C:/Program Files/Burp/bin/burp_ca.bat
ca_csr_dir = C:/Program Files/Burp/CA
ssl_cert_ca = C:/Program Files/Burp/ssl_cert_ca.pem
ssl_cert = C:/Program Files/Burp/ssl_cert-client.pem
ssl_key = C:/Program Files/Burp/ssl_cert-client.key
~~ssl_key_password = password~~
ssl_peer_cn = burpserver
server_can_restore = 0
split_vss = 0
strip_vss = 0
autoupgrade_os = win64
autoupgrade_dir = C:/Program Files/Burp/autoupgrade
```

Générer les certificats :

```
root@system: c:\program files\burp\bin\burp -a l
```

❑ Installation silencieuse

L'installateur peut être utilisé en ligne de commande avec les options suivantes :

```
/S                              Silent install.
/server=[address]               Set the address of the burp server.
/port=[port]                    Set the port of the burp server.
/cname=[name]                   Set the client name.
/password=[password]            Set the client password.
/autoupgrade=[0|1]              Set whether autoupgrades are allowed.
/server_can_restore=[0|1]       Set whether the server can initiate restores
                                or not.
/encryption_password=[password] Set an encryption password.
```

```
/poll=[minutes]                  Set the poll interval.
/overwrite                       Allow existing client configuration to be
                                 overwritten.
/skippages                       Skip installer configuration pages but keep
                                 the initial splash screen and final
                                 confirmation
/minutetext=[text]               When setting up the Windows scheduler, the
                                 Windows 'schtasks' command stupidly needs
                                 different text given to it depending on the
                                 language of the system. The default is
                                 'MINUTE'. If your Windows is for example,
                                 Polish, this option lets you set it to the
                                 Polish version of 'MINUTE'.
/encryption_password=[password]  Set the encryption password.
```

4.14 Client Windows : Arborescence de configuration

```
c:\program files\burp\bin\burp c:\program files\burp\bin\burp

|
|   burp.conf
|   install.log
|   openssl.conf
|   ssl_cert-client.key
|   ssl_cert-client.pem
|   ssl_cert_ca.pem
|   Uninstall.exe
|
+---autoupgrade
+---bin
|       burp.dll
|       burp.exe
|       burp_ca.bat
|       libeay32.dll
|       libgcc_s_sjlj-1.dll
|       libpcre-1.dll
|       libpcreposix-0.dll
|       libyajl.dll
|       openssl.exe
|       ssleay32.dll
|       zlib1.dll
|
\---CA
        ro4-00.csr
```

5 Burp : Utilisation

5.1 Symboles employés

```
  a: Append to a file
  b: Backup timestamp
  c: Generic command
  d: Directory
  e: Error message
  f: Plain file
  i: Interrupt
  k: Windows EFS file
  l: Soft link
  m: Extra meta data
  n: Encrypted meta data
  p: Message
  q: Save path part of a signature
  r: File attribute information
  s: Special file - fifo, socket, device node
  t: Path to data on the server
  u: Windows VSS footer
  v: Windows VSS header
  w: Warning
  x: End of file transmission
  y: Encrypted file
  z: Plain file changed
  B: Block data
```

```
  D: Request for block of data
  E: Timestamp now/end
  F: Fingerprint part of a signature
  G: Bytes estimated
  L: Hard link
  M: Path to a manifest
  O: Bytes
  P: Bytes received
  Q: Bytes sent
  R: File attribute information preceding block signatures
  S: Block signature
  U: Encrypted windows VSS footer
  V: Encrypted windows VSS header
  W: Control packet
  Y: Total counter
  Z: Grand total counter
```

5.2 Client Linux : Backup manuel

Lancer le backup « rs1-01 » par :

```
root@system: burp -c /etc/burp/rs1-01/rs1-01 -a b
```

```
2017-01-06 14:53:23: burp[28075] auth ok
2017-01-06 14:53:23: burp[28075] Server version: 2.0.54
2017-01-06 14:53:23: burp[28075] nocsr ok
2017-01-06 14:53:23: burp[28075] SSL is using cipher: DHE-RSA-AES256-GCM-SHA384 TLSv1.2 Kx=DH
Au=RSA Enc=AESGCM(256) Mac=AEAD

2017-01-06 14:53:23: burp[28075] extra_comms_begin
ok:autoupgrade:incexc:orig_client:uname:sincexc:counters_json:msg:csetproto:
2017-01-06 14:53:23: burp[28075] Server is setting includes/excludes.
2017-01-06 14:53:23: burp[28075] Client accepts.
2017-01-06 14:53:24: burp[28075] Server has protocol=0 (auto)
2017-01-06 14:53:24: burp[28075] Using protocol=1
2017-01-06 14:53:24: burp[28075] Server is overriding the configuration
2017-01-06 14:53:24: burp[28075] with the following settings:
2017-01-06 14:53:24: burp[28075] include = /srv/smb/sonia & stéphane (prv)
2017-01-06 14:53:24: burp[28075] include = /srv/smb/sonia (prv)
2017-01-06 14:53:24: burp[28075] include = /srv/smb/stéphane (prv)
2017-01-06 14:53:24: burp[28075] exclude = /media
2017-01-06 14:53:24: burp[28075] exclude = /mnt
2017-01-06 14:53:24: burp[28075] exclude = /proc
2017-01-06 14:53:24: burp[28075] exclude = /sys
2017-01-06 14:53:24: burp[28075] exclude = /tmp
2017-01-06 14:53:24: burp[28075] exclude_fs = devtmpfs
2017-01-06 14:53:24: burp[28075] exclude_fs = tmpfs
2017-01-06 14:53:24: burp[28075] exclude_comp = 7z
2017-01-06 14:53:24: burp[28075] exclude_comp = ace
.../...
2017-01-06 14:53:24: burp[28075] exclude_comp = zip
2017-01-06 14:53:24: burp[28075] exclude_comp = zoo
2017-01-06 14:53:24: burp[28075] cross_all_filesystems = 0
2017-01-06 14:53:24: burp[28075] read_all_fifos = 0
2017-01-06 14:53:24: burp[28075] read_all_blockdevs = 0
2017-01-06 14:53:24: burp[28075] min_file_size = 0
2017-01-06 14:53:24: burp[28075] max_file_size = 0
2017-01-06 14:53:24: burp[28075] split_vss = 0
2017-01-06 14:53:24: burp[28075] strip_vss = 0
2017-01-06 14:53:24: burp[28075] acl = 1
2017-01-06 14:53:24: burp[28075] xattr = 1
2017-01-06 14:53:24: burp[28075] atime = 0
2017-01-06 14:53:24: burp[28075] scan_problem_raises_error = 0
2017-01-06 14:53:24: burp[28075] overwrite = 0
2017-01-06 14:53:24: burp[28075] strip = 0
2017-01-06 14:53:24: burp[28075] Compression level: 9
2017-01-06 14:53:24: burp[28075] do backup client
2017-01-06 14:53:24: burp[28075] Using librsync hash md4
2017-01-06 14:53:24: burp[28075] Phase 1 begin (file system scan)

ddfddddfddfffffdfffdfffffffffffdfffdfffddffffdmfffffffffdfffffffff 64
ffffdfffffffffffffffddfffdfffffffffffdfffdddfddfdfffffffffffffffff 128
.../...
fffffffffdfffffffffddfffffffdfffdfdfdfffffdfffdfffffdfffffdfffddffd 1920
```

```
ffdfffdfffddfffffffffffffffffffffffffdfffffffffffffffffffffffff 1984
fffffffffffff 1998

2017-01-06 14:53:24: burp[28075] Phase 1 end (file system scan)
2017-01-06 14:53:24: burp[28075] Phase 2 begin (send backup data)

fffffffffffffffffffffffffffffmfffffffffffff   ffffffffffffffffff 64
ffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffff 128
.../...
fffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffff 1728
fffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffff 1792
fffffffffffffffffffffffffffffffffff 1828

------------------------------------------------------------------------------
Start time: 2017-01-06 14:53:23
  End time: 2017-01-06 15:06:31
Time taken: 13:08
                       New   Changed Duplicate   Deleted     Total |  Scanned
                  ------------------------------------------------------------
             Files:     1813         0         0         0      1813 |     1813
         Meta data:       15         0         0         0        15 |       15
       Directories:        0         0         0         0         0 |      170
       Grand total:     1828         0         0         0      1828 |     1998
                  ------------------------------------------------------------

             Messages:             0
             Warnings:             0

      Bytes estimated:   36889849062 (34.36 GB)
      Bytes in backup:   36889850562 (34.36 GB)
       Bytes received:        275582 (269.12 KB)
           Bytes sent:   36818936639 (34.29 GB)
------------------------------------------------------------------------------
2017-01-06 15:06:31: burp[28075] Phase 2 end (send file data)
2017-01-06 15:06:31: burp[28075] backup finished ok
```

5.3 Client Windows : Backup manuel

Lancer le backup « ro4-00 » par :

```
root@system: c:\program files\burp\bin\burp -a b
```

```
2017-01-08 17:26:35: burp[3024] auth ok
2017-01-08 17:26:35: burp[3024] Server version: 2.0.54
2017-01-08 17:26:35: burp[3024] nocsr ok
2017-01-08  17:26:35:  burp[3024]  SSL  is  using  cipher:  DHE-RSA-AES256-GCM-SHA384  TLSv1.2  Kx=DH
Au=RSA  Enc=AESGCM(256) Mac=AEAD

2017-01-08                 17:26:35:                burp[3024]                extra_comms_begin
ok:autoupgrade:incexc:orig_client:uname:sincexc:counters_json:msg:forceproto=1:
2017-01-08 17:26:35: burp[3024] Server is setting includes/excludes.
2017-01-08 17:26:35: burp[3024] Client accepts.
2017-01-08 17:26:35: burp[3024] Server is forcing protocol 1
2017-01-08 17:26:35: burp[3024] Server is overriding the configuration
2017-01-08 17:26:35: burp[3024] with the following settings:
2017-01-08 17:26:35: burp[3024] include = c:/Users/sr/.pan2
2017-01-08 17:26:35: burp[3024] include = c:/Users/sr/AppData/Roaming/LibreOffice
2017-01-08 17:26:35: burp[3024] include = c:/Users/sr/AppData/Roaming/Mozilla
2017-01-08 17:26:35: burp[3024] include = c:/Users/sr/AppData/Roaming/Thunderbird
2017-01-08 17:26:35: burp[3024] include = c:/srn
2017-01-08 17:26:35: burp[3024] cross_all_filesystems = 0
2017-01-08 17:26:35: burp[3024] read_all_fifos = 0
2017-01-08 17:26:35: burp[3024] read_all_blockdevs = 0
2017-01-08 17:26:35: burp[3024] min_file_size = 0
2017-01-08 17:26:35: burp[3024] max_file_size = 0
2017-01-08 17:26:35: burp[3024] split_vss = 0
2017-01-08 17:26:35: burp[3024] strip_vss = 0
2017-01-08 17:26:35: burp[3024] acl = 1
2017-01-08 17:26:35: burp[3024] xattr = 1
2017-01-08 17:26:35: burp[3024] atime = 0
2017-01-08 17:26:35: burp[3024] scan_problem_raises_error = 0
2017-01-08 17:26:35: burp[3024] overwrite = 0
2017-01-08 17:26:35: burp[3024] strip = 0
2017-01-08 17:26:36: burp[3024] Compression level: 9
```


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```
2017-01-08 17:26:36: burp[3024] do backup client
2017-01-08 17:26:36: burp[3024] Using librsync hash md4
2017-01-08 17:26:36: burp[3024] Control handler registered.
Generate VSS snapshots.
Driver="VSS Vista", Drive(s)="C"
2017-01-08 17:27:00: burp[3024] VSS drive letters: 0
2017-01-08 17:27:00: burp[3024] VSS Writer (PrepareForBackup): "Task Scheduler Writer", State: 0x1 (VSS_WS_STABLE)
2017-01-08 17:27:00: burp[3024] VSS Writer (PrepareForBackup): "VSS Metadata Store Writer", State: 0x1 (VSS_WS_STABLE)
2017-01-08 17:27:00: burp[3024] VSS Writer (PrepareForBackup): "Performance Counters Writer", State: 0x1 (VSS_WS_STABLE)
2017-01-08 17:27:00: burp[3024] VSS Writer (PrepareForBackup): "ASR Writer", State: 0x1 (VSS_WS_STABLE)
2017-01-08 17:27:00: burp[3024] VSS Writer (PrepareForBackup): "System Writer", State: 0x1 (VSS_WS_STABLE)
2017-01-08 17:27:00: burp[3024] VSS Writer (PrepareForBackup): "WMI Writer", State: 0x1 (VSS_WS_STABLE)
2017-01-08 17:27:00: burp[3024] VSS Writer (PrepareForBackup): "Shadow Copy Optimization Writer", State: 0x1 (VSS_WS_STABLE)
2017-01-08 17:27:00: burp[3024] VSS Writer (PrepareForBackup): "Registry Writer", State: 0x1 (VSS_WS_STABLE)
2017-01-08 17:27:00: burp[3024] VSS Writer (PrepareForBackup): "COM+ REGDB Writer", State: 0x1 (VSS_WS_STABLE)
2017-01-08 17:27:00: burp[3024] Phase 1 begin (file system scan)

ffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffff 64
ffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffff 128
.../...
ffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffff 18112
ffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffff 18165

2017-01-08 17:27:05: burp[3024] Phase 1 end (file system scan)
2017-01-08 17:27:05: burp[3024] Phase 2 begin (send backup data)

ffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffff 64
ffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffff 128
.../...
ffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffff 18112
ffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffff 18165

------------------------------------------------------------------------------
Start time: 2017-01-08 17:26:35
  End time: 2017-01-08 19:28:07
Time taken: 02:01:32
                     New   Changed Duplicate   Deleted     Total |  Scanned
                  ------------------------------------------------------------
             Files:    18165         0         0         0     18165 |    18165
       Grand total:    18165         0         0         0     18165 |    18165
                  ------------------------------------------------------------

             Messages:             0
             Warnings:             0

      Bytes estimated:   64320424871 (59.90 GB)
      Bytes in backup:   64324082049 (59.91 GB)
       Bytes received:       2434613 (2.32 MB)
           Bytes sent:   34595766974 (32.22 GB)
------------------------------------------------------------------------------
2017-01-08 19:28:07: burp[3024] Phase 2 end (send file data)
2017-01-08 19:28:19: burp[3024] VSS Writer (BackupComplete): "Task Scheduler Writer", State: 0x1 (VSS_WS_STABLE)
2017-01-08 19:28:19: burp[3024] VSS Writer (BackupComplete): "VSS Metadata Store Writer", State: 0x1 (VSS_WS_STABLE)
2017-01-08 19:28:19: burp[3024] VSS Writer (BackupComplete): "Performance Counters Writer", State: 0x1 (VSS_WS_STABLE)
2017-01-08 19:28:19: burp[3024] VSS Writer (BackupComplete): "ASR Writer", State: 0x1 (VSS_WS_STABLE)
2017-01-08 19:28:19: burp[3024] VSS Writer (BackupComplete): "System Writer", State: 0x1 (VSS_WS_STABLE)
2017-01-08 19:28:19: burp[3024] VSS Writer (BackupComplete): "WMI Writer", State: 0x1 (VSS_WS_STABLE)
2017-01-08 19:28:19: burp[3024] VSS Writer (BackupComplete): "Shadow Copy Optimization Writer", State: 0x1 (VSS_WS_STABLE)
2017-01-08 19:28:19: burp[3024] VSS Writer (BackupComplete): "Registry Writer", State: 0x1 (VSS_WS_STABLE)
2017-01-08 19:28:19: burp[3024] VSS Writer (BackupComplete): "COM+ REGDB Writer", State: 0x1 (VSS_WS_STABLE)
2017-01-08 19:28:19: burp[3024] backup finished ok
```

6 Burp-UI : Installation

6.1 Préalables

❑ Création des certificats

Burp-ui va spawner la commande burp -a m pour communiquer avec burp. Pour que burp-ui puisse exécuter une commande burp -a m, il faut que les certificats clients (ssl_cert_client.pem et ssl_cert_client.key) soients créés. Pour ce faire, le mieux est de créer une vrai tâche rs2-00 de sauvegarde locale (par exemple /etc, /root, /home et /var/log), puis de lancer manuellement burp -a l pour créer les certificats. Ensuite, une commande burp -a m permettra de vérifier que burp-ui pourra fonctionner.

❑ Modification du fichier de configuration serveur

/etc/burp/burp-server.conf

```
...

#--- Burp-ui specifics

restore_client = rs2-00
monitor_browse_cache = 1

...
```

6.2 Installation

Installer burp-ui :

```
root@system: aptitude install python-pip python-dev supervisor

root@system: aptitude install libffi-dev python-werkzeug python-jinja2 python-itsdangerous python-
click python-flask python-aniso8601 python-jsonschema

root@system: pip install --upgrade burp-ui
root@system: pip install "burp-ui[local_authentication]"
root@system: pip install "burp-ui[debian_jessie]"
```

Tester le serveur (login:admin & password:admin) :

```
root@system: burp-ui -- -h 192.168.0.242 -p 8000
```

6.3 Systemd

Créer le fichier de configuration dans /etc/systemd/system :

/etc/systemd/system/burp-ui.service

```
[Unit]
Description=Burp-UI
After=network.target

[Service]
ExecStart=/usr/local/bin/burp-ui -- -h 192.168.0.242 -p 63242

[Install]
WantedBy=multi-user.target
```

❑ Démarrage, contrôle et arrêt manuels :

```
root@system: service burp-ui start  ou systemctl start burp-ui

root@system: service burp-ui status ou systemctl status burp-ui

root@system: service burp-ui stop   ou systemctl stop burp-ui
```

Création du démarrage automatique

```
root@system: systemctl enable burp-ui
```

Redémarrer pour tester le lancement automatique.

7 Burp-UI : Production

En production, il est nécessaire de revoir la section 6.3 et d'envisager un environnement plus évolué, comprenant Celery, Gunicorn, SSL & BuiAgent.

<<<TODO>>>

8 Burp-UI : Utilisation

8.1 Création d'un utilisateur

```
root@system: bui_manage create_user <user> -a // -a=ask for a password
```

<<<TODO>>>

8.2 Copies d'écran

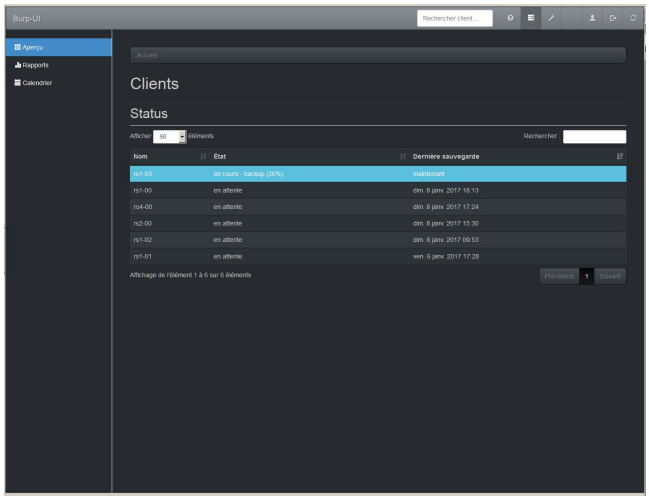

Fig. 1: Liste des sauvegardes

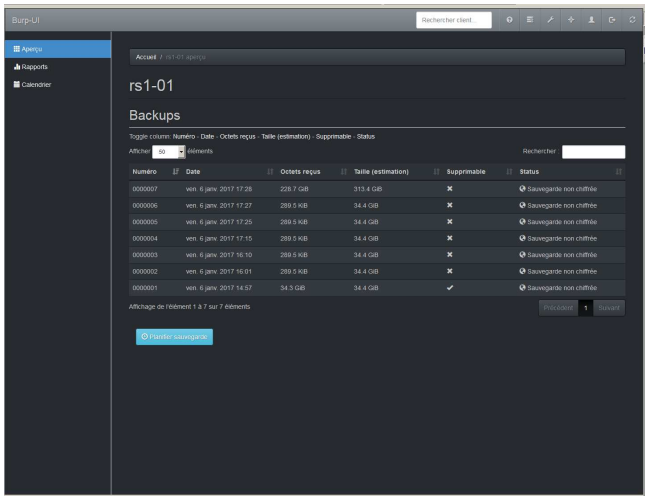

Fig. 2: Historique d'une sauvegarde

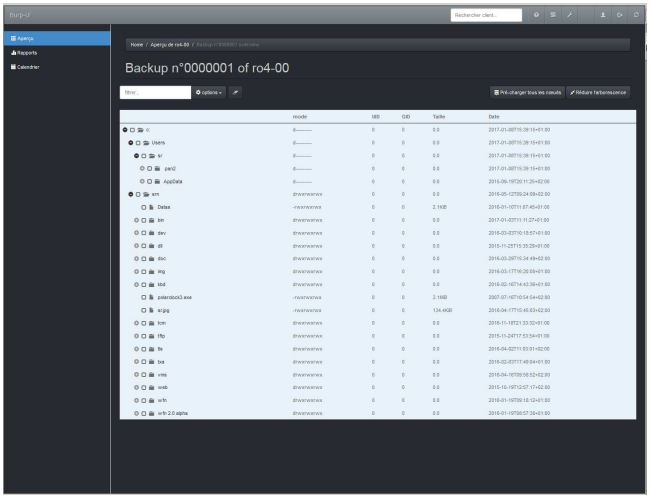

Fig. 3: Liste des fichiers d'une sauvegarde

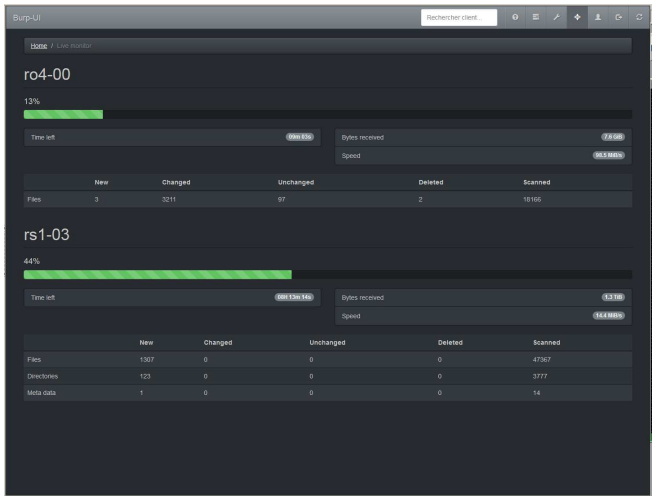

Fig. 4: Progression de sauvegardes en cours

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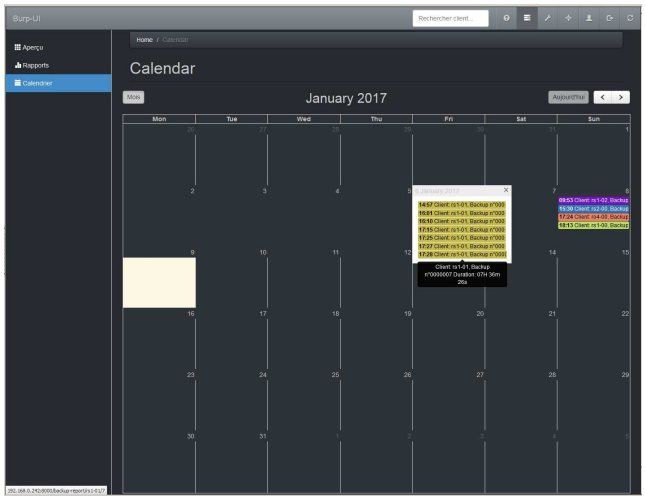

Fig. 5: Calendrier des sauvegardes effectuées

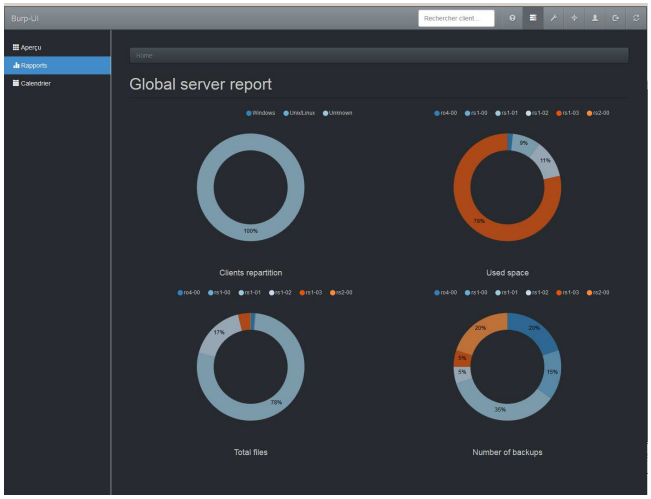

Fig. 6: Statistiques des sauvegardes effectuées

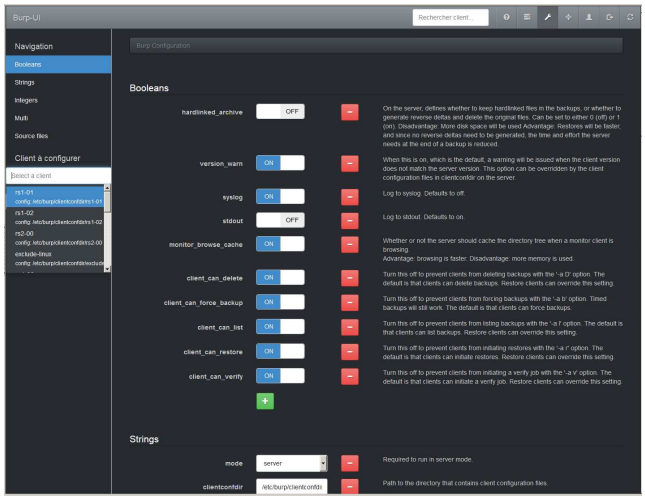

Fig. 7: Paramétrage

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