

Retour d'expérience sur Borg Backup

Laurent Guerby

tetaneutral.net

Capitoul - Toulouse - 23 juin 2016



Ce document est sous licence

Creative Commons Paternité - Partage à l'Identique 3.0 non transposé.

Le texte complet de cette licence est disponible à l'adresse :

<http://creativecommons.org/licenses/by-sa/3.0/>

Laurent Guerby

- Ingénieur Télécom Bretagne 1996
- Président de l'association tetaneutral.net
- Ingénieur d'étude IRIT-UT2J depuis le 1er juin 2016
- <mailto:laurent@guerby.net>

Agenda

1 Introduction

2 Running

3 Internals

4 Conclusion

Agenda

1 Introduction

2 Running

3 Internals

4 Conclusion

BorgBackup Project

- Documentation <https://borgbackup.readthedocs.io>
- Source <https://github.com/borgbackup>
- Tracker <https://github.com/borgbackup/borg/issues>
- IRC channel #borgbackup on irc.freenode.net
- ThomasWaldmann

BorgBackup ?

- BorgBackup (short : Borg) is a deduplicating backup program. Optionally, it supports compression and authenticated encryption.
- The main goal of Borg is to provide an efficient and secure way to backup data. The data deduplication technique used makes Borg suitable for daily backups since only changes are stored. The authenticated encryption technique makes it suitable for backups to not fully trusted targets.

- Borg is a fork of Attic <https://github.com/jborg/attic>
- Current version is 1.0.3, 1.0 march 2016
- Python 3.4 (91 %) plus some C code

Agenda

1 Introduction

2 Running

3 Internals

4 Conclusion

Step by Step

- `borg init /path/to/repo`
- `borg create /path/to/repo::20160623 /src /Documents -exclude '*.pyc'`
- `borg list /path/to/repo`
- `borg extract /path/to/repo::20160623`
- `borg extract /path/to/repo::20160623 home/USERNAME/src`

Mount Access

- `borg mount /path/to/repo::20160623 /tmp/mymountpoint`
- `ls /tmp/mymountpoint`
- `fusermount -u /tmp/mymountpoint`

- `borg init user@hostname:/path/to/repo`
- `borg init ssh://user@hostname:port/path/to/repo`
- `command="borg serve -restrict-to-path
/path/to/repo",
no-pty,no-agent-forwarding,
no-port-forwarding,no-X11-forwarding,
no-user-rc ssh-rsa ...`

Encryption

- `borg init -encryption=keyfile -v /path/to/repo`
- Enter new passphrase:
- Key in `"/root/.config/borg/keys/mnt_backup"` created
- `export BORG_PASSPHRASE=xxx`

- Duration: 7 minutes 5.34 seconds
- Number of files: 2410575
- Original size Compressed size Deduplicated size
This archive: 239.23 GB 162.11 GB 294.81 MB
All archives: 19.16 TB 13.08 TB 166.94 GB

Agenda

1 Introduction

2 Running

3 Internals

4 Conclusion

Repo Format

- Simple directory, a few files `repo/data/config` and `data` subdirectory
- `repo/data/0/9996`, max 10000 files per directory, files about 5 megabytes
- independant from number of files to backup
- `rsync` works perfectly for duplicating a repo

Checkpointing

- `-checkpoint-interval SECONDS`
write checkpoint every SECONDS seconds (Default: 300)
- You can restart a backup
- or just create a new, will go faster one thanks to deduplication

Agenda

1 Introduction

2 Running

3 Internals

4 Conclusion

Borg is great

- Borg solves lots of backup management issues
- All sysadmins I told about borg switched to it

Questions ?

<mailto:question@tetaneutral.net>