

Cheesy Backups with Rsync

There's stuff you know you have to do

- Clean the cat box
- Wash the dishes
- Paint the house
- Back up your data

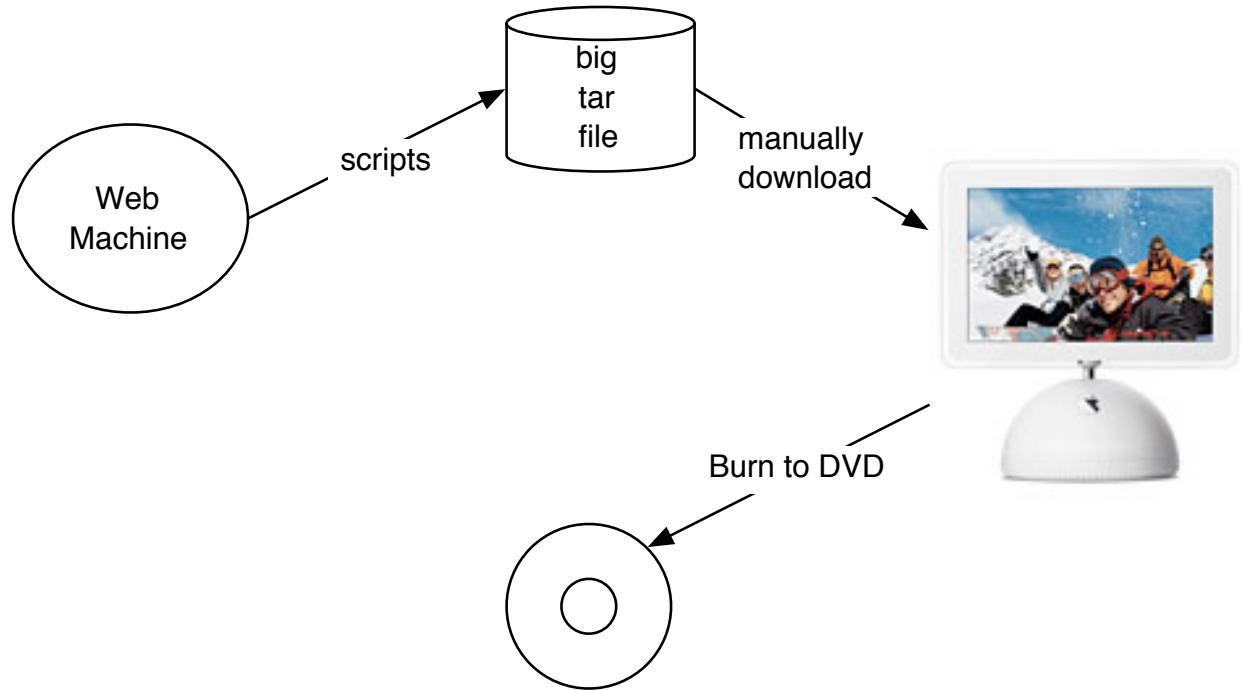
The Perils of No Backups

- Losing data
- Losing Irreplacable files
- Losing time recreating stuff
- Losing time reconfiguring stuff

Backups Involve Decisions

- What software to use?
- How to configure it?
- How to get it to run?
- What media to use?
- What do I want to back up?

I got bit by bad backup hygiene



Who are you? What do you want?

- Something easy to use
- Something automatable
- Something free (or at least cheap)
- Something open source
- Something that actually works

Things I didn't need

- Incremental Backups
- Backing up the entire machine

rsync

rsync (Remote Synchronization) keeps two directory trees synchronized by sending the differences between files across the network.

Starting out

Remote

blah
blah
blah
blah
blah
blah
blah

Local

The initial sync

Remote

blah
blah
blah
blah
blah
blah
blah

Local

blah
blah
blah
blah
blah
blah
blah

→
everything
gets copied

changes are made

Remote

blah
blah
bork
blah
blah
blah
blah
blah
bork
bork
bork

Local

blah
blah
blah
blah
blah
blah
blah
blah

changes are brought over

Remote

blah
blah
bork
blah
blah
blah
blah
bork
bork
bork



Local

blah
blah
bork
blah
blah
blah
blah
bork
bork
bork



rsync, the command

```
% rsync [flags] source destination
```

```
% rsync -a -e ssh bork@borkware.com:/home/bork/ home
```

Command flags

-v : verbose

-e : the remote shell to use

-a : "Archive mode" same as all of these flags:

-r : recursive

-l : "links" - copy symlinks rather than resolving them

-p : preserve permissions

-t : preserve times

-g : preserve the group id

-o : preserve the owner (if run as root)

-D : preserve devices

What I wanted

- My \$HOME
- A CVS repository
- Website pageroots and configuration
- Nightly postgresql database backup
- email configuration and mailboxes

Backing up the basics

```
#!/bin/sh
cd /Users/bork/rsync-backup

rsync -a -e ssh bork@borkware.com:/home/bork/ home

rsync -a -e ssh bork@borkware.com:/usr/local/cvsroot/ cvs

rsync -a -e ssh bork@borkware.com:/var/lib/aolserver/ web
```


The Database

```
#!/bin/sh
```

```
LD_LIBRARY_PATH=/usr/local/pgsql/lib:/usr/local/lib
```

```
DATENAME=`date +"%d-%b-%Y" `
```

```
BASENAME="/home/bork/db-backup/pg-`${DATENAME}`.dmp"
```

```
pg_dumpall -U webuser > `${BASENAME}`
```

```
gzip `${BASENAME}`
```

```
pg-31-Dec-2003
```

```
pg-13-Jul-2004
```

```
Or use `date + "%Y-%m-%d" ` for YYYY-MM-DD style
```

Life with qmail

```
# run at 3:05 A.M.
```

```
5 3 * * * /bin/tar zcf /home/bork/root-backup/qmail.tar.gz /var/qmail
```

```
# run at 3:30 A.M.
```

```
30 3 * * * /bin/tar zcf /home/bork/root-backup/service.tar.gz /service /service/*/run
```

Downloading to my local system

```
#!/bin/sh
cd /Users/bork/rsync-backup

rsync -a -e ssh bork@borkware.com:/home/bork/ home

rsync -a -e ssh bork@borkware.com:/usr/local/cvsroot/ cvs

rsync -a -e ssh bork@borkware.com:/var/lib/aolserver/ web
```

What about passwords?

- public/private key authentication
- Gentoo project's keychain

Burning to media

- Once a week or so I manually burn a DVD
- Put that DVD off-site

Laptop Backup

```
#!/bin/sh
cd /Users/markd/tibook-backup

echo "pre-local"
rsync -a -e ssh markd@192.168.0.42:/usr/local/ local
echo "local"

echo "pre-markd"
rsync -a -e ssh markd@192.168.0.42:/Users/markd/ markd
echo "markd"
```

Test your backups!

Make sure your backups work!

Resources

- Rsync homepage: <http://rsync.samba.org>
- My Backup strategy: <http://borkware.com/rants/rsync-backups>
- Vinod's page: http://kurup.org/blog/one-entry?entry_id=9669
- Snapshot-style backups: http://www.mikerubel.org/computers/rsync_snapshots
- Unison: <http://www.cis.upenn.edu/~bcpierce/unison/faq.html>

That's All Folks

- Backups are important, mmmmm'kay?
- Set up something as automated and convenient as possible
- Rsync is a nice, easy, and cheap system