

sfsccon 2007

Bacula – an Open Source Backup System

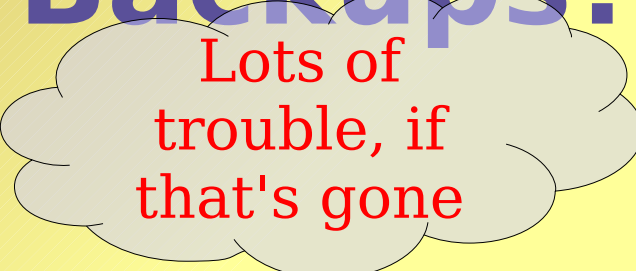
An Overview

What does Bacula do?

- backs up data
- in a network
- centrally managed
- from many different platforms
- to different media
- reliable
- open

Why do you want Backups?

- Backup is important
 - Keeping data is required by laws, e.g. tax and bookkeeping data
 - Even smaller companies today have lots of data sources: E-Mail, accounting, CRM, electronic catalogues and order information for example



Lots of trouble, if that's gone



Out of business, if that's gone

Network Backups

- Because you...
 - don't want to run backups on all your servers and workstations separately
 - only need one set of hardware
 - only have one application to manage
 - can keep all your data under common control

Centrally managed

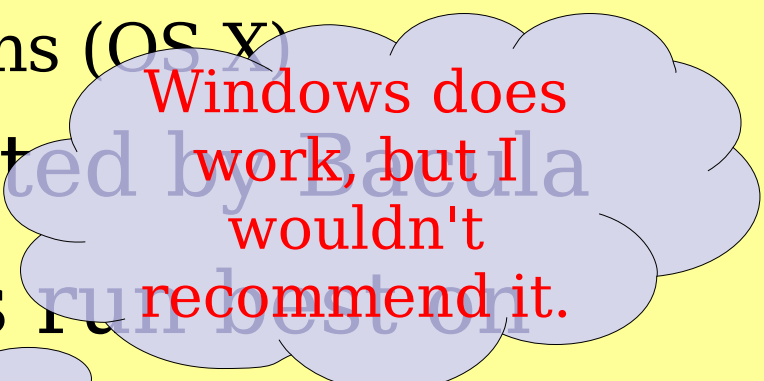
- Once you defined which data is to be saved, users must not interfere
- Users don't have to worry about backups
 - How to handle failed backups? How to ensure proper operation? But: Your users have more important things to do.
- Users don't have to initiate backups themselves
 - Because they forget it, or skip it "just once". In the end, you don't have backups.

Like delivering services, internally or externally

That's what really happens. And it hurts.

Different Platforms

- Your IT environment isn't homogenous
 - Windows servers, Windows Workstations (2000, 2003, XP, Vista, 2008, ...)
 - Unix and linux servers and workstations (linux, FreeBSD, Solaris, AIX, ...)
 - Mac servers and workstations (OS X)
- All more or less supported
- The server components run best on unix(like) systems

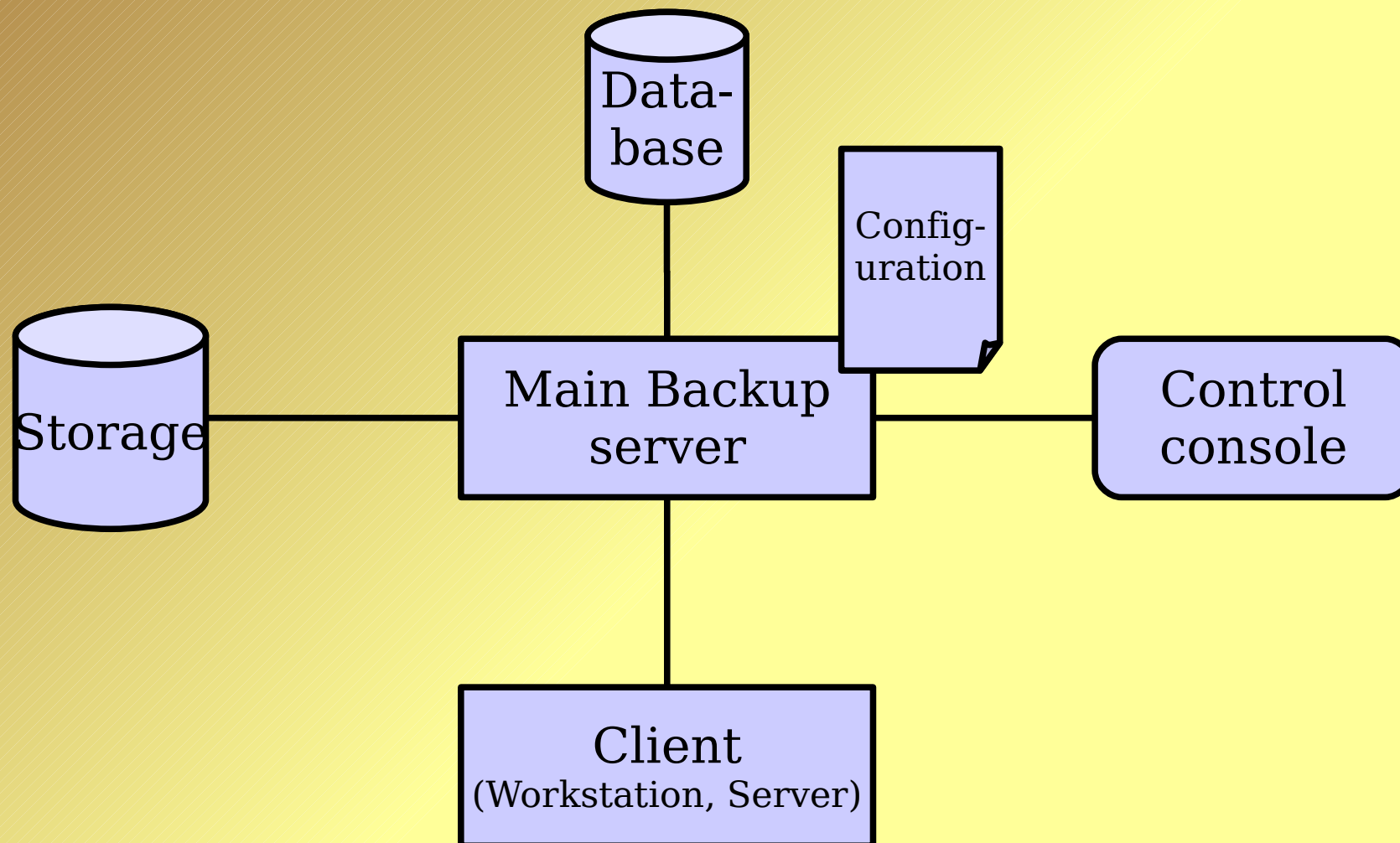


Windows does work, but I wouldn't recommend it.

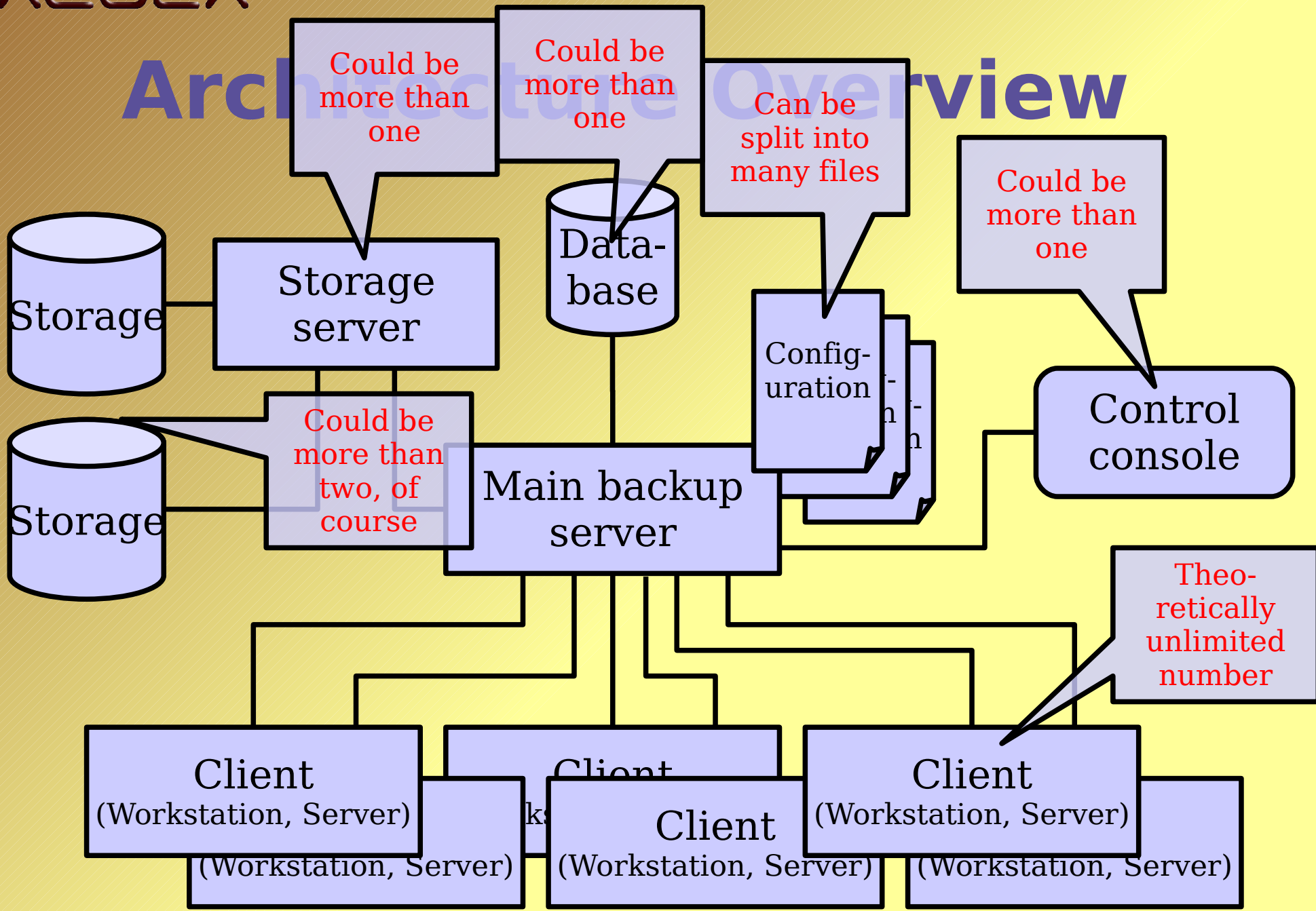
Media

- Backups can be stored on
 - Disk files internal, USB, SAN/NAS
 - Tapes single drives, autochangers
 - CDs / DVDs capacity and reliability are issues
- In principle, you could store to ftp servers, email servers, etc. Theoretically.
- Storage can be local to the main backup server, or attached to remote machines

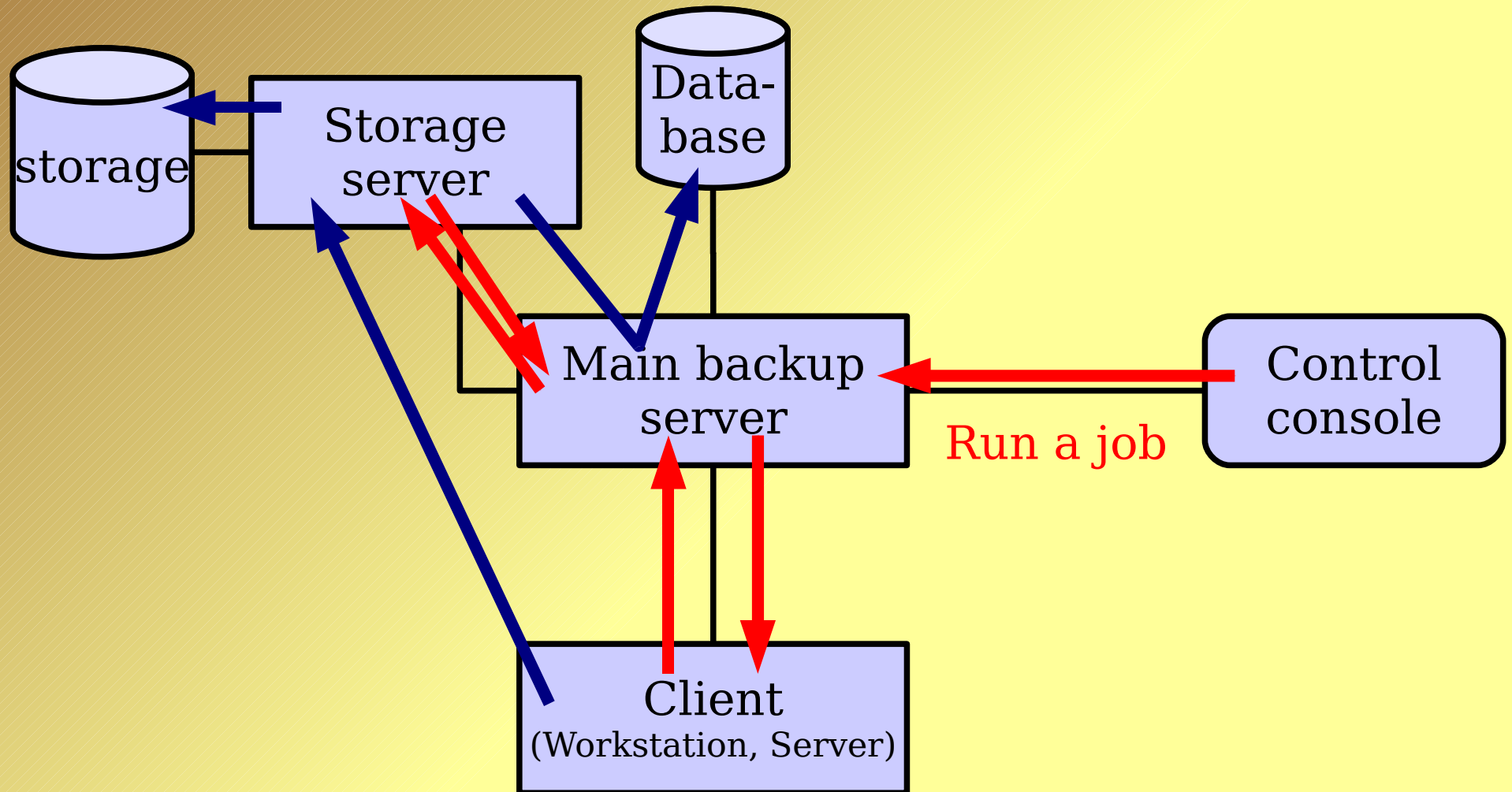
Architecture Overview



Architecture Overview



Operation Overview



Reliability I

- Works in many many installations
- Really no serious complaints about reliability
- Developed for more than seven years by a skilled programmer
- Developers fix bugs
- About 420,000 downloads from sourceforge – not counting betas and direct cvs/svn access
- A single download can be installed on many computers – especially the clients

Reliability II

- I – and my customers – have never experienced a major malfunction
- Volumes written by Bacula are fully backwards compatible, i.e. you can restore from volumes created years ago
- Bacula is being used for research data, business data, and whatever is collected at home sites
- Large consulting companies, banks, and public services use Bacula

Real-life installations

- 53 TB, 150,000,000 files, 90 clients, linux
- 40 TB, 40,000,000 files, 30 clients, solaris
- LTO-3 libraries with several drives
- Large libraries with 100's of tape slots
- Libraries and drives connected through FC SAN
- But also 3 GB, two clients, one USB disk

Open

- Why do you want your Backup software to be Open Source?
 - You can actually verify its operation.
Admittedly, few users do or need to do this.
 - You can keep it running on newer platforms.
Ever had to purchase a newer version of your software following an OS upgrade?
 - You can fix bugs, or have them fixed for you.
Ever tried to get problems fixed by the commercial companies?
 - You can ensure your data is accessible after many years.
Ever tried to use your old MS-DOS backup disk under Windows 95 or NT?

At the end of the day...

- ... you need reliable Backups
 - Ask others for their experiences
- ... you need support
 - Just have a look at the -users mailing list.
 - There are commercial service providers available, typically really experienced.
- ... you need to know what it costs
 - Bacula is free. Also as in “free beer”.
 - Support is free – if that's enough for you.

Upcoming Support Co.

- Bacula Systems SA is coming soon!
- Some experienced people
 - Support
 - Developers
 - Consulting
 - Administration
 - Management
- Professional Support
- Mainly directed at 2nd level support providers
- Reasonable fees
- See www.baculasystems.com

More Information

- Project web site: <http://www.bacula.org>
- Bacula at sourceforge.net:
<http://sourceforge.net/projects/bacula/>
- Bug tracking (yes, there are bugs):
<http://bugs.bacula.org>
- Wiki: <http://wiki.bacula.org>
User-contributed contents: examples, add-ons, howtos
- Mailing lists:
<http://dir.gmane.org/search.php?match=bacula>

Even more Information

- Bacula is a registered trademark
- The FSFE holds the Copyright
- Many licenses apply; it is believed that they are all compatible with the GPLv2
- Bacula itself is licensed under the GPLv2 with some additions, giving extra freedom (no, I will not discuss license philosophy...)
- Bacula, even though created, maintained and mostly written by Kern Sibbald, would not be what it is today without many contributors.

Thank you for your attention

Talk given by
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All errors are mine.