

Backups - The Most Important Topic of the Semester

Systems Administration

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The Sysadmin's Lifeboat

Good backups will rescue you from many of the worst problems in systems administration.

- Somebody gets a case of the stupid and deletes important files: Restore from backup
- Your server's hard drive burns up: Restore from backup
- Bad guys break into your server: Wipe it and restore from backup
- Your office burns down and you have to rebuild from scratch: Restore from backup

Start With a Plan

- What to back up
- When to back up
- How to store and manage your backup data
- How to restore data from backup

Is Backup a Service?

Does it need an opsdoc?

- Do you advertise it to your users?
- Is it just invisible infrastructure that other services use?
- I lean towards saying yes, it is a service, but it's one that the Ops team provides to itself

Backup everything!

- Easy to restore after a major problem, but...
- You'll wind up storing a lot of data, much of it redundant.
- Bigger backups require more time to back up and restore
- You may not want to retain some data

Back up selectively

- Identify data that is valuable
- Identify data that you can't get elsewhere
- Identify data you don't want to save
- Consult appropriate polices and regulations

When to back up

- Should you backup daily, weekly?
- Full vs. incremental backups?
- How much can you afford to lose?
- How long does it take to perform a backup?
- Do you need to take any services offline while backing up?

Managing Backup Media

- Tape, disk, offsite service
- Rotation schedule
- Maintain a catalog of backup media - which leads to a lot of data.

Restoring from Backups

- There's no point in backing up if you can't restore
- Typically a complicated process
 - Identify storage media
 - Mount and restore in the correct order
 - Execute restore commands
- Needs to be well documented
- Procedures and tools must be tested regularly

A Backup System is Needed

- Identifies what needed backing up - which machines, which files
- Performs the backups on a defined schedule
- Manages storage media
- Helps automate restores

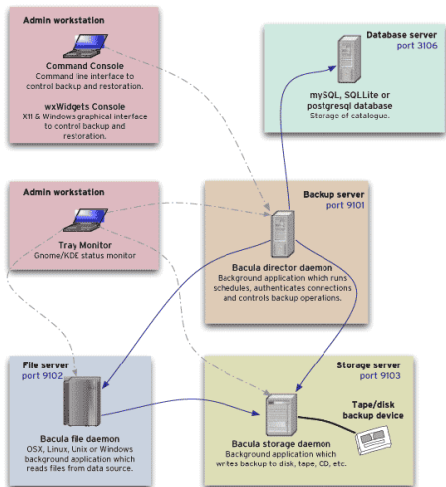
Many Systems Are Available

- ARCServe
- Arkeia
- Barracuda
- AMANDA
- Bacula

Bacula Components

- Director
- Console
- File Service (client)
- Storage
- Catalog (database)
- Monitor

Bacula



Bacula application interactions

Note that these applications may actually run on fewer machines than shown here. You could run everything on one machine if you only wanted to back up a local disk to a local tape or disk.

Port numbers are the defaults and can be changed.

Bacula Concepts

- Jobs
- Schedules
- Pools
- Volumes
- Labels

Full documentation is available at http://www.bacula.org/5.0.x-manuals/en/main/main/Bacula_Main_Reference.html