Using Bacula Community Edition

UNIVERSITY OF

SOUTHERN INDIANA®

Information Technology

Introduction

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Overview

Components

- Director

  The director supervises all operations and handles scheduling backups and restores

- Storage Daemon

  Responsible for reading and writing your data to it's storage media (whether this may be tapes, files, cloud storage, etc.)
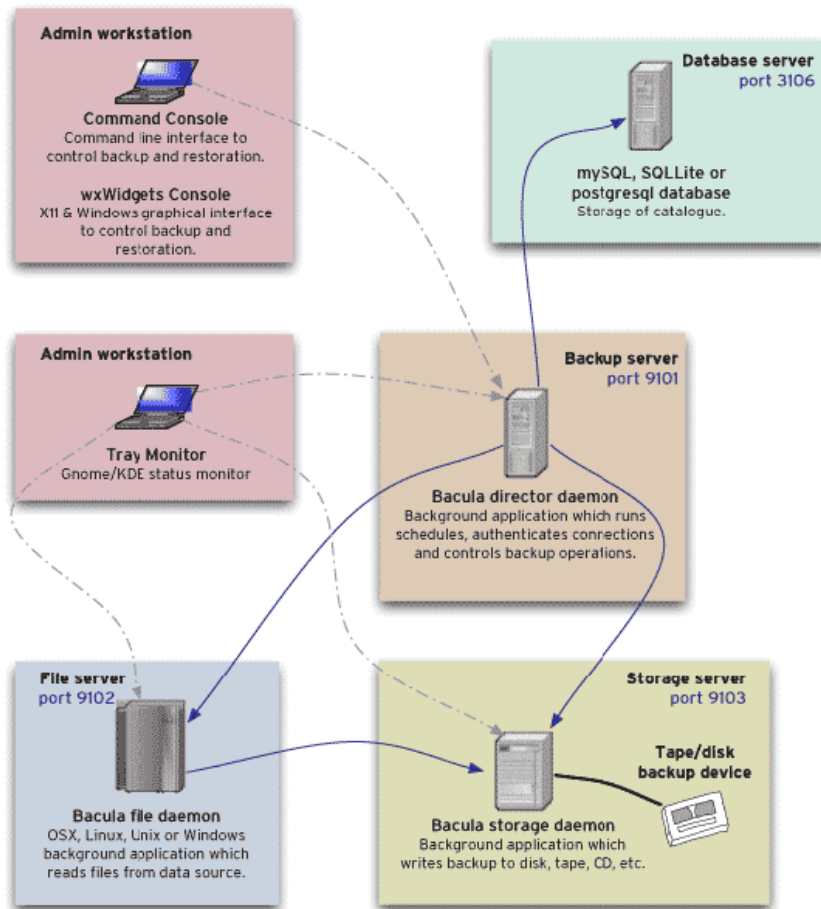
- File Daemons
  - Installed on each machine to be backed up
  - Responsible for sending the data and file attributes to the Storage Daemon when the Director requests
  - Responsible for writing the data and file attributes when the Director requests a restore

Terms

- Job

  - There are several types of job
  - Most common is "Backup" job and "Restore" job
  - Others exist, such as "Admin", "Copy", "Migrate", etc.

- Volume

  - Place where data is stored
  - For tape, a tape is a volume
  - For disk, a file is a volume

Firewall Needs

- Console talks to director on 9101/tcp

- Director talks to File Daemon on 9102/tcp

- Director talks to Storage Daemon on 9103/tcp

- File Daemon talks to Storage Daemon on 9103/tcp

- Volume

  - Place where data is stored
  - For tape, a tape is a volume
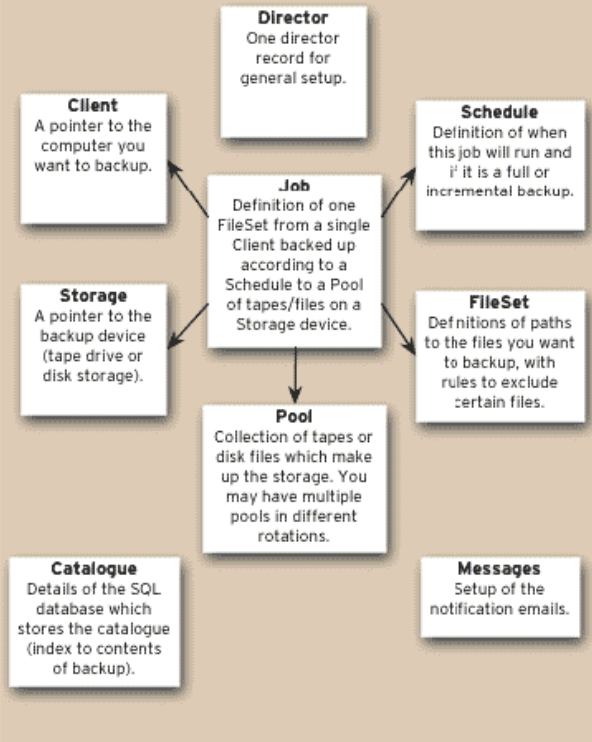 - For disk, a file is a volume

Admin workstation

Command Console
Command line interface to
control backup and restoration.

wxWidgets Console
X11 & Windows graphical interface
to control backup and
restoration.

Database server
port 3106

**mySQL, SQLLite or
postgresql database**
Storage of catalogue.

Admin workstation

Tray Monitor
Gnome/KDE status monitor

Backup server
port 9101

Bacula director daemon
Background application which runs
schedules, authenticates connections
and controls backup operations.

File server
port 9102

Bacula file daemon
OSX, Linux, Unix or Windows
background application which
reads files from data source.

Storage server
port 9103

**Tape/disk
backup device**

Bacula storage daemon
Background application which
writes backup to disk, tape, CD, etc.

**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 ocal tape or disk.

Port numbers are the defaults and can be changed.
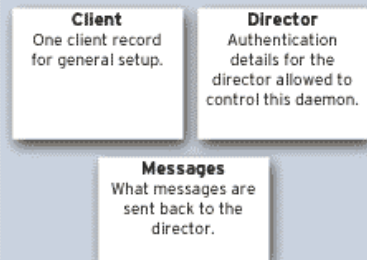
Director config (bacula-dir.conf)

Director
One director record for general setup.

Client
A pointer to the computer you want to backup.

Schedule
Definition of when this job will run and if it is a full or incremental backup.

Job
Definition of one FileSet from a single Client backed up according to a Schedule to a Pool of tapes/files on a Storage device.

Storage
A pointer to the backup device (tape drive or disk storage).

FileSet
Definitions of paths to the files you want to backup, with rules to exclude certain files.

Pool
Collection of tapes or disk files which make up the storage. You may have multiple pools in different rotations.

Catalogue
Details of the SQL database which stores the catalogue (index to contents of backup).

Messages
Setup of the notification emails.

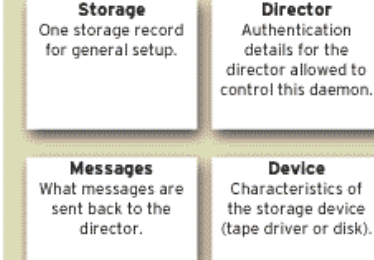**Console config** (bconsole.conf)

Director
Which directors this console can connect to. (Usually you have only one director.)

Simplified Bacula object definitions

File daemon config (bacula-fd.conf)

Client
One client record for general setup.

Director
Authentication details for the director allowed to control this daemon.

Messages
What messages are sent back to the director.

Storage daemon config (bacula-sd.conf)

Storage
One storage record for general setup.

Director
Authentication details for the director allowed to control this daemon.

Messages
What messages are sent back to the director.

Device
Characteristics of the storage device (tape driver or disk).

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Questions?