Enterprise backup & recovery

Bacula Developer's Conference
27-28 September 2010

Development plans & directions

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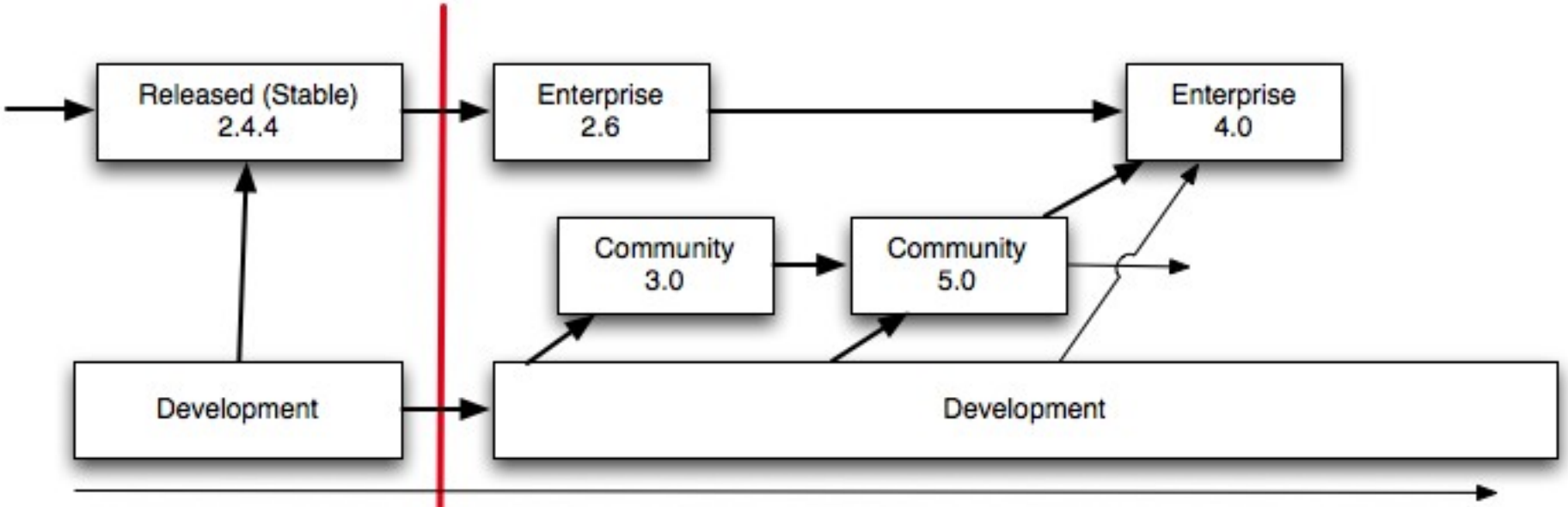
Evolution of Release Cycle



RELEASES...

- thoroughly tested
- suitable for production
- bug fixes backported
- long release cycle
- slow to release contributions

COMMUNITY RELEASES...

- rapid release cycle, new contributions released quickly
- community tested; may not be suitable for production
- bug fixes not backported
- only latest release supported

ENTERPRISE EDITION 4.0.4 (AGPLv3)

- advanced features
- thoroughly tested, suitable for production
- long term support, all releases
- bug fixes backported
- optimized for larger installations

Planned Changes

- New Bug Tracking Database (planned)
  - ✓ Migrate from Mantis to RT
  - ✓ Require registration with user info and bacula-report.pl
- Two bug levels

Community Bugs (current offering)

- Community
  - ✓ Free
  - ✓ Patches for critical bugs
  - ✓ Can see all bug reports but only own patches
  - ✓ Normal bugs in next version
  - ✓ No guarantee on response time
  - ✓ No support

Enterprise Bugs

- Advanced access to bug tracking and patches
  - ✓ €899 / year
  - ✓ Patches for all bugs
  - ✓ Can see all patches
  - ✓ Guaranteed response time
  - ✓ Bugs only, no support or consulting

Bacula Enterprise Edition – 4.0.4

- Bacula Enterprise version 4.0.4 August 2010
  - ✓ Based on 5.0.2 + new System State plugins: MSSQL, SharePoint, MSSQL, Exchange, Active Directory
  - ✓ Better Windows Bare Metal Recovery – USB Key
  - ✓ Bweb improvements (multi-director)

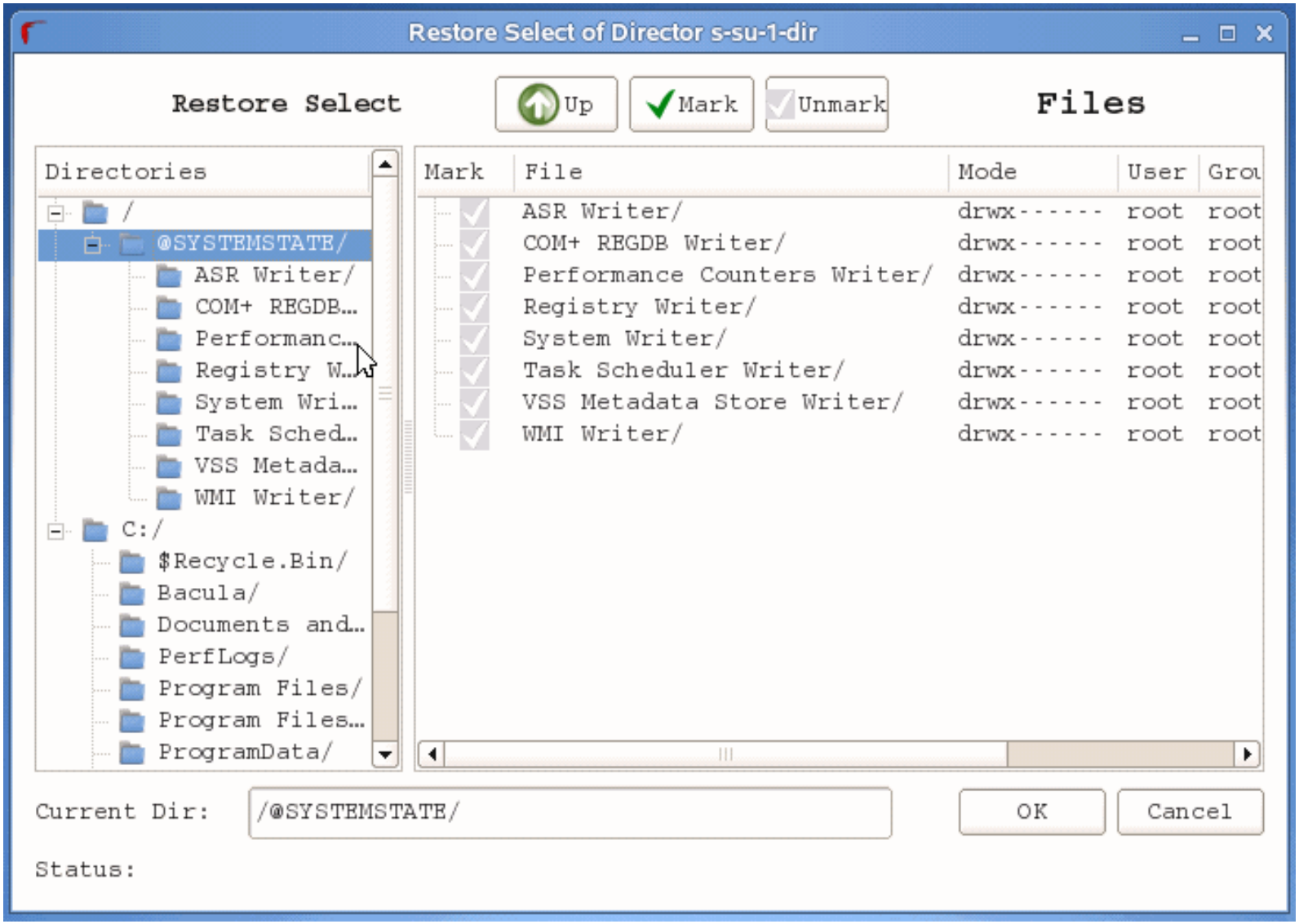
4.0.4 – System State backup

- Capture Windows' System State (Registry and critical files)
- Example:

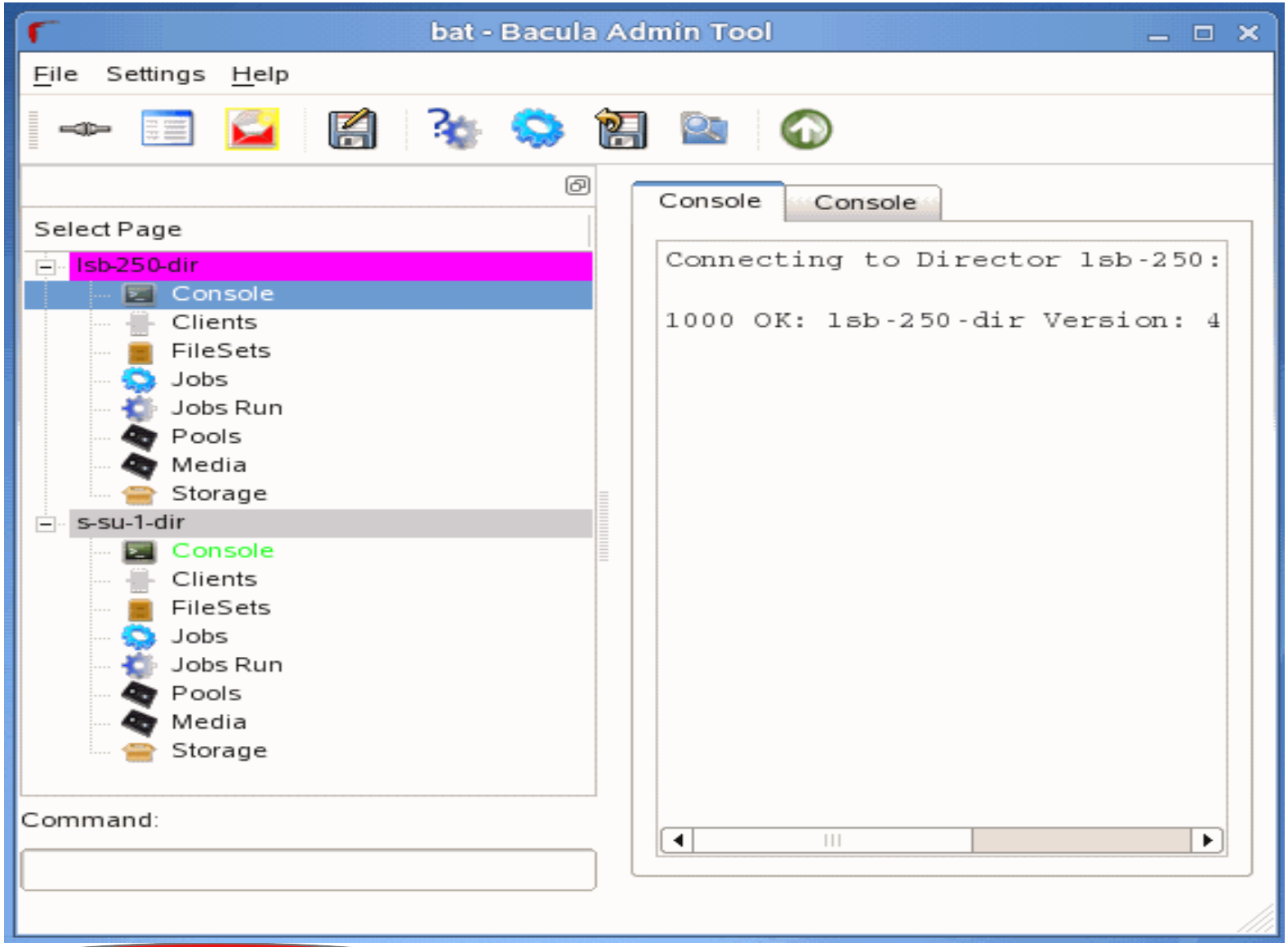
```
File Set {
  Name = "WinSysState"
  Include {
    Options {
      Signature = MD5
    }
    File = "C:/"
    Plugin =
"vss:/@SYSTEMSTATE/"
  }
}
```

```
cwd is: /
$ ls
@SYSTEMSTATE/
C:/
$ cd @SYSTEMSTATE
cwd is: /@SYSTEMSTATE/
$ ls
ASR Writer/
COM+ REGDB Writer/
Performance Counters Writer/
Registry Writer/
System Writer/
Task Scheduler Writer/
VSS Metadata Store Writer/
WMI Writer/
$ cd "System Writer"
cwd is: /@SYSTEMSTATE/System Writer/
$ ls
System Files/
instance_{5D1C2AD4-8B79-4097-83B6-
79144BCEF427}
```

4.0.4 – System State backup



4.0.4 – Multi-Director in Bat



4.0.4 – Multi-Director Bweb

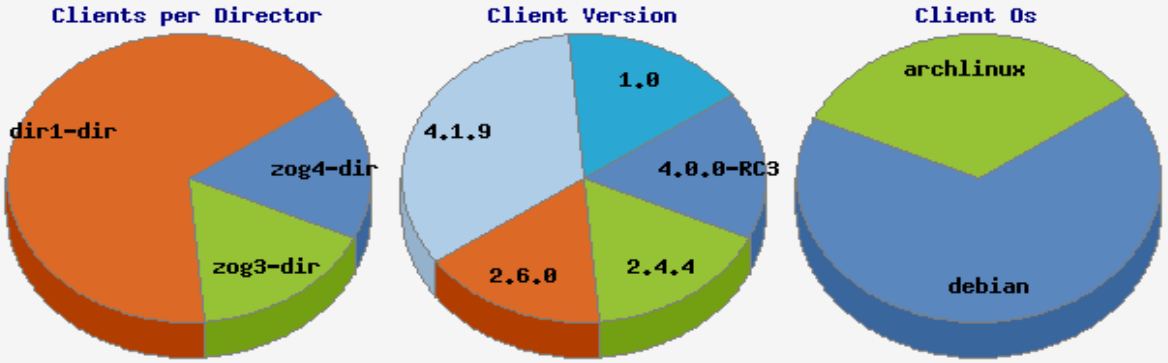
- Manage multiple sites
- Group clients across directors
- Manage jobs on several directors
- Enhanced statistics
- Statistics for several sites in one front-end
- Centralized, customized reporting

Multi-Director bweb

Bweb - Bacula Web Interface

Main | Directors | Clients | Jobs | Media | Statistics | Configuration | About | search...

Clients Overview



Clients

Name	Select	Desc	Auto Prune	File Retention	Job Retention
admin-fd	☐	4.0.0-RC3 (20Jun10) x86_64-pc-linux-gnu-bacula-enterprise,debian,5.0.4	1	90 days	180 days
admin2-fd	☐	2.4.4 (28Dec08) x86_64-pc-linux-gnu,debian,lenny/sid	1	90 days	180 days
bstest-fd	☐	1.0 (30Mar09) x86_64-pc-linux-gnu-bacula-systems,debian,lenny/sid	1	90 days	180 days
dir1-fd	☐	4.1.9 (18Sep10) x86_64-unknown-linux-gnu,archlinux,	1	30 days	180 days
dir2-fd	☐	4.1.9 (18Sep10) x86_64-unknown-linux-gnu,archlinux,	1	30 days	180 days
freepbx-fd	☐	2.6.0 (20Aug09) x86_64-pc-linux-gnu,debian,lenny/sid	1	90 days	180 days

Last jobs | View groups | Status | Stats | Edit groups

Managing Bacula Versions

- Enterprise “Branch-4.0”
  - ✓ git repository (repo)
  - ✓ Bug fixes, minor new features for Enterprise 4.0.x
- Enterprise “master”
  - ✓ git repository
  - ✓ Development for next major Enterprise version
- Community “Branch-5.0”
  - ✓ git repository → Source Forge branch-5.0
  - ✓ Bug fixes, minor new features for community 5.0.x
- Community “Branch-5.1”
  - ✓ git repository → Source Forge branch-5.1
  - ✓ Development for next major Community version

Future Directions

- Bacula community version 5.2.0 Feb 2011
- Bacula Enterprise 4.2.0 April 2011 (possible)
- Bacula Enterprise version 6.0.0 – Sept-Dec 2011

Next Community Version

- Bacula community version 5.2.0 Feb 2011
  - ✓ Community submissions
  - ✓ Restart failed jobs
  - ✓ FTP Storage daemon device
  - ✓ Bat enhancements
  - ✓ Compatibility with MySQL 5.5
  - ✓ Automatic correction of Volume size between Volume and catalog
  - ✓ New safer pruning algorithm
  - ✓ New CRC32 implementation (much faster)
  - ✓ Many but not all of Bacula Systems contributions

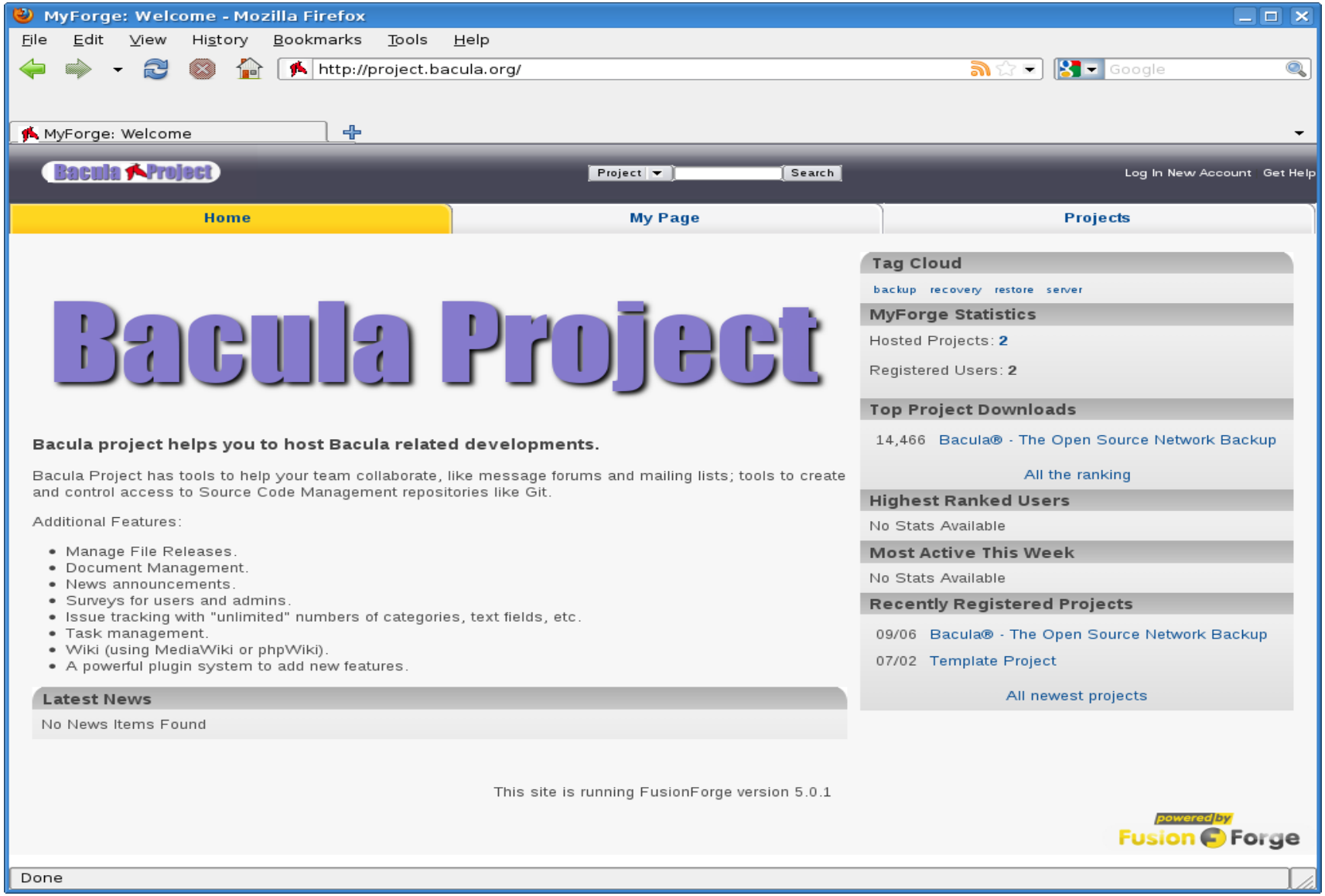
Next Minor Enterprise Version (possible)

- Bacula Enterprise 4.0.x or 4.2.0 April 2011
  - ✓ Ingres DB driver
  - ✓ AFS support
  - ✓ Restart failed jobs
  - ✓ More certified binaries (SLES 10 and 11, RedHat 5.5, Solaris)
  - ✓ Working on HP-UX and AIX FD binaries
  - ✓ Improved SD statistics (dynamic rates)
  - ✓ Volume and Device logs

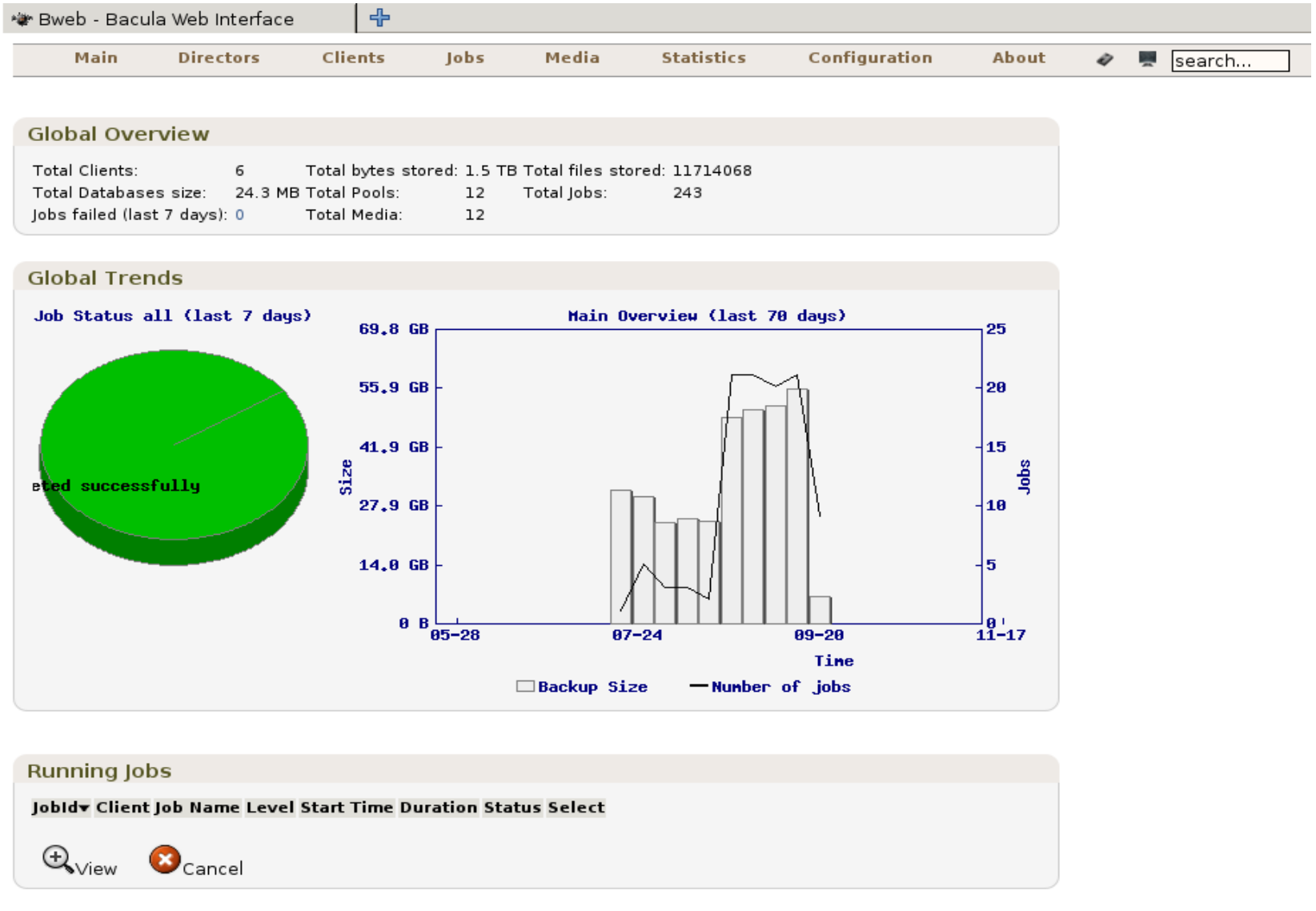
Next Major Enterprise Version

- Bacula Enterprise version 6.0.0 – Sept-Dec 2011
  - ✓ SD redesign -- one thread per drive will double speed for despooling and migration/copy jobs
  - ✓ Snapshot backup by images
  - ✓ Deduplication of images (i.e. Deltas)
  - ✓ Deduplication of comm line data for better laptop support
  - ✓ New (additional) Volume format that permits easier deduplication
  - ✓ More automatic archival features
  - ✓ Additional Modules (plugins or scripts)
    - SAP (Oracle and MaxDB – Swisscom) (EricS/Arno)
    - Oracle (Arno)
    - Zimbra
    - Zarafa
    - Lotus Notes
  - ✓ NDMP backup (Marco)
  - ✓ Configuration GUI (Philip Storz)
  - ✓

Source Forge replacement



Multi-Director bweb



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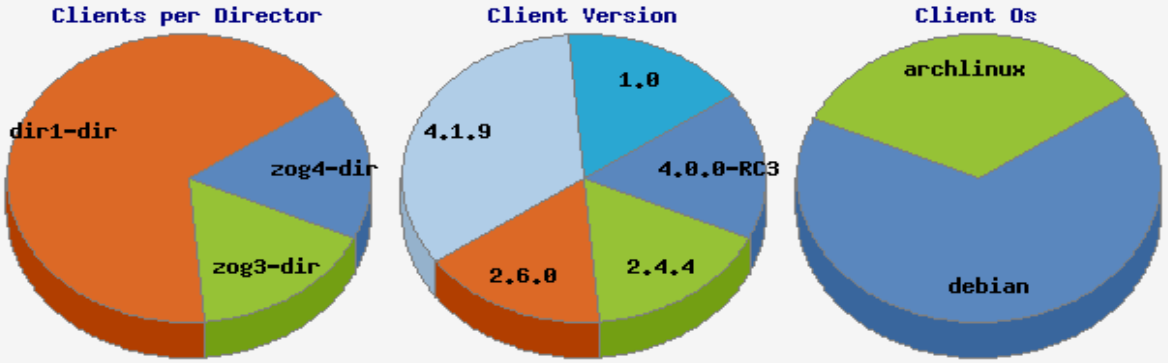

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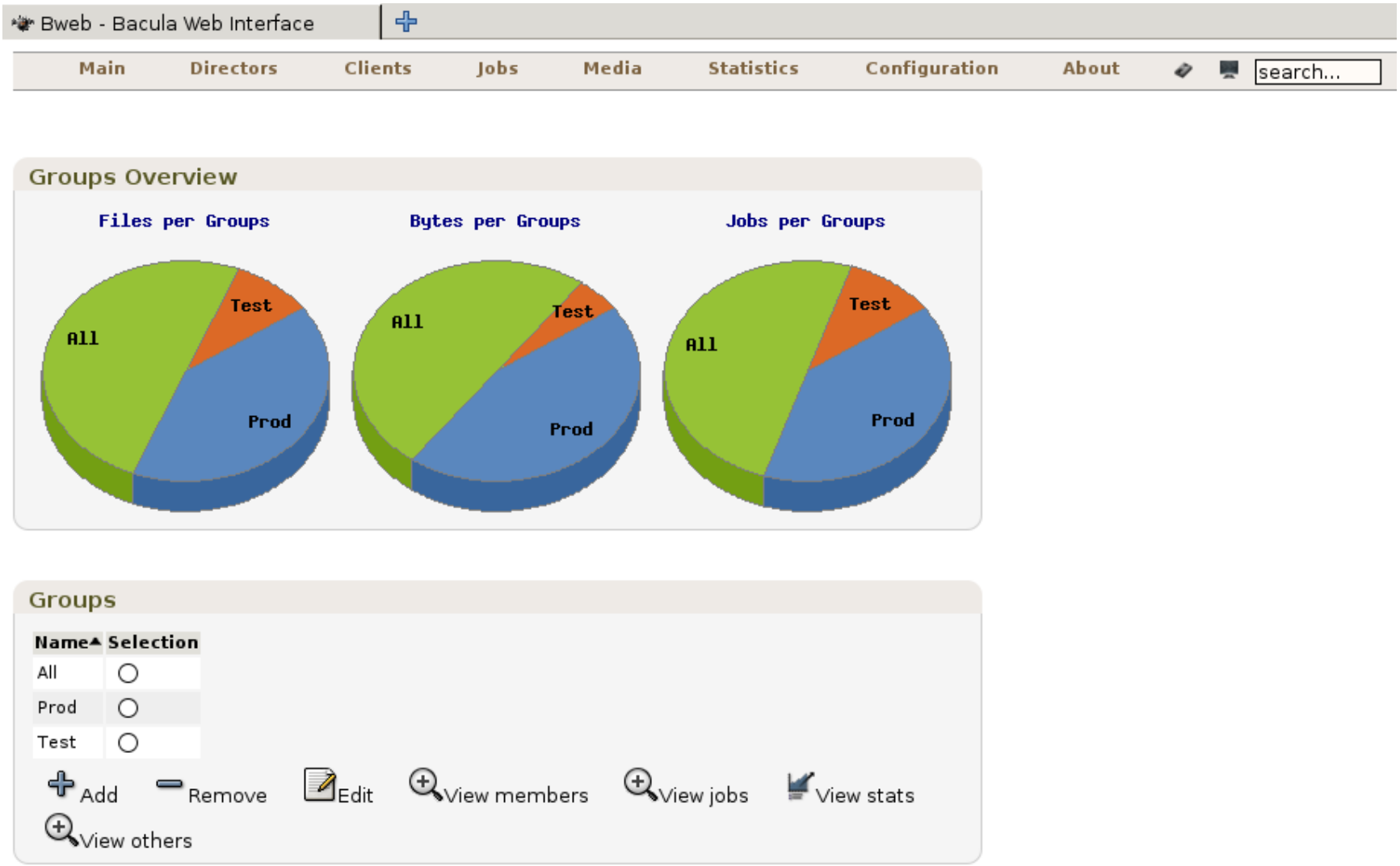

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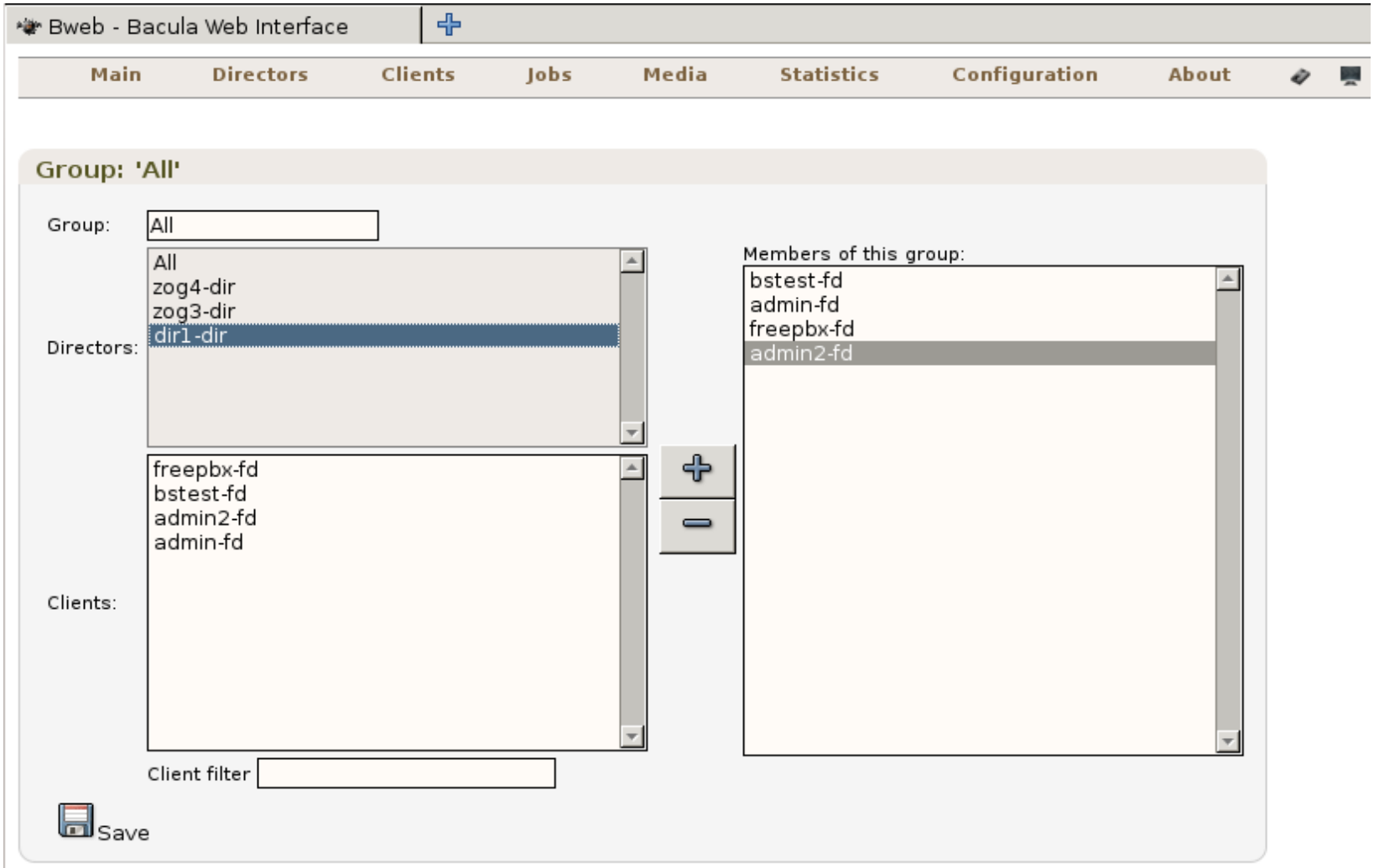

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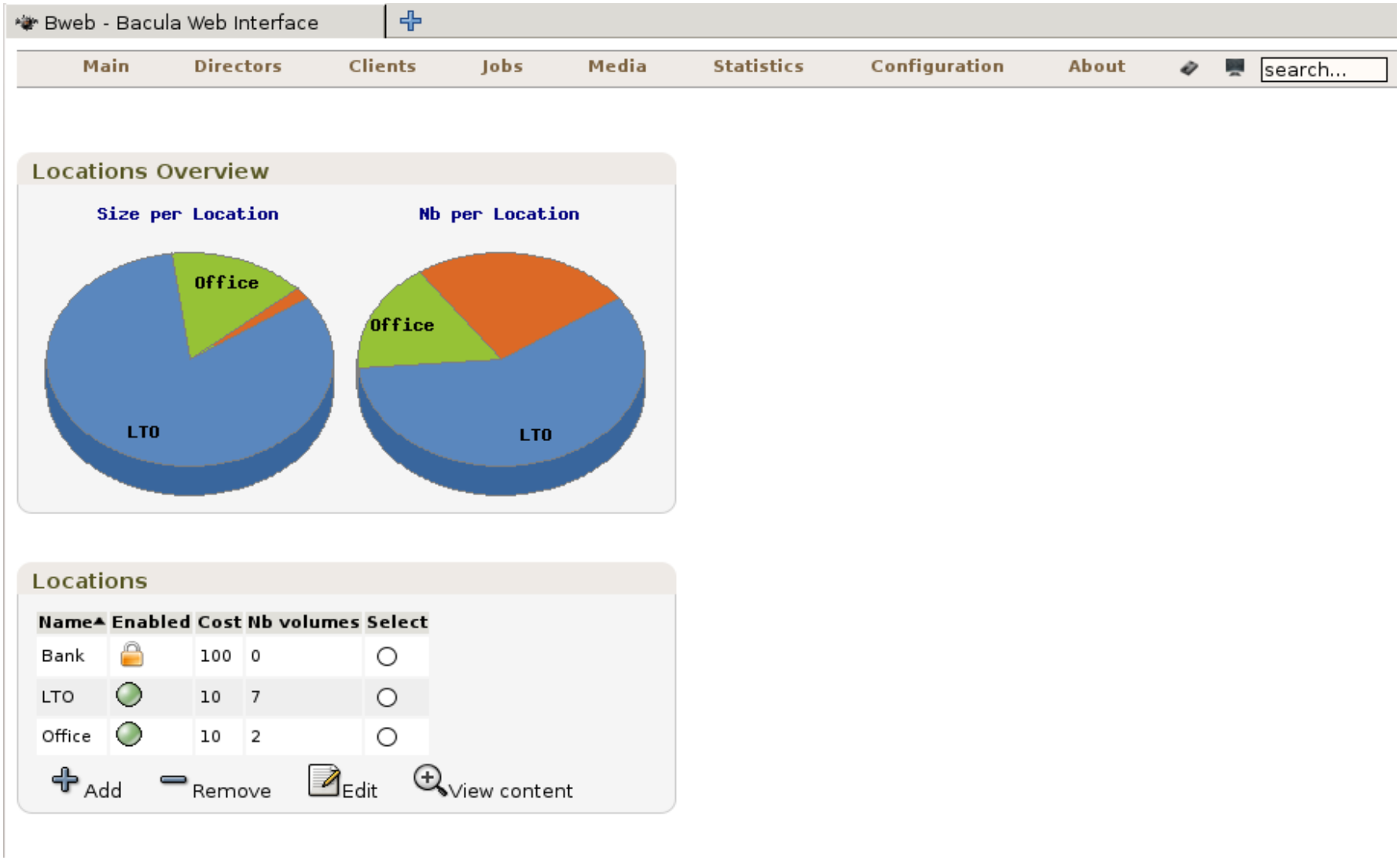

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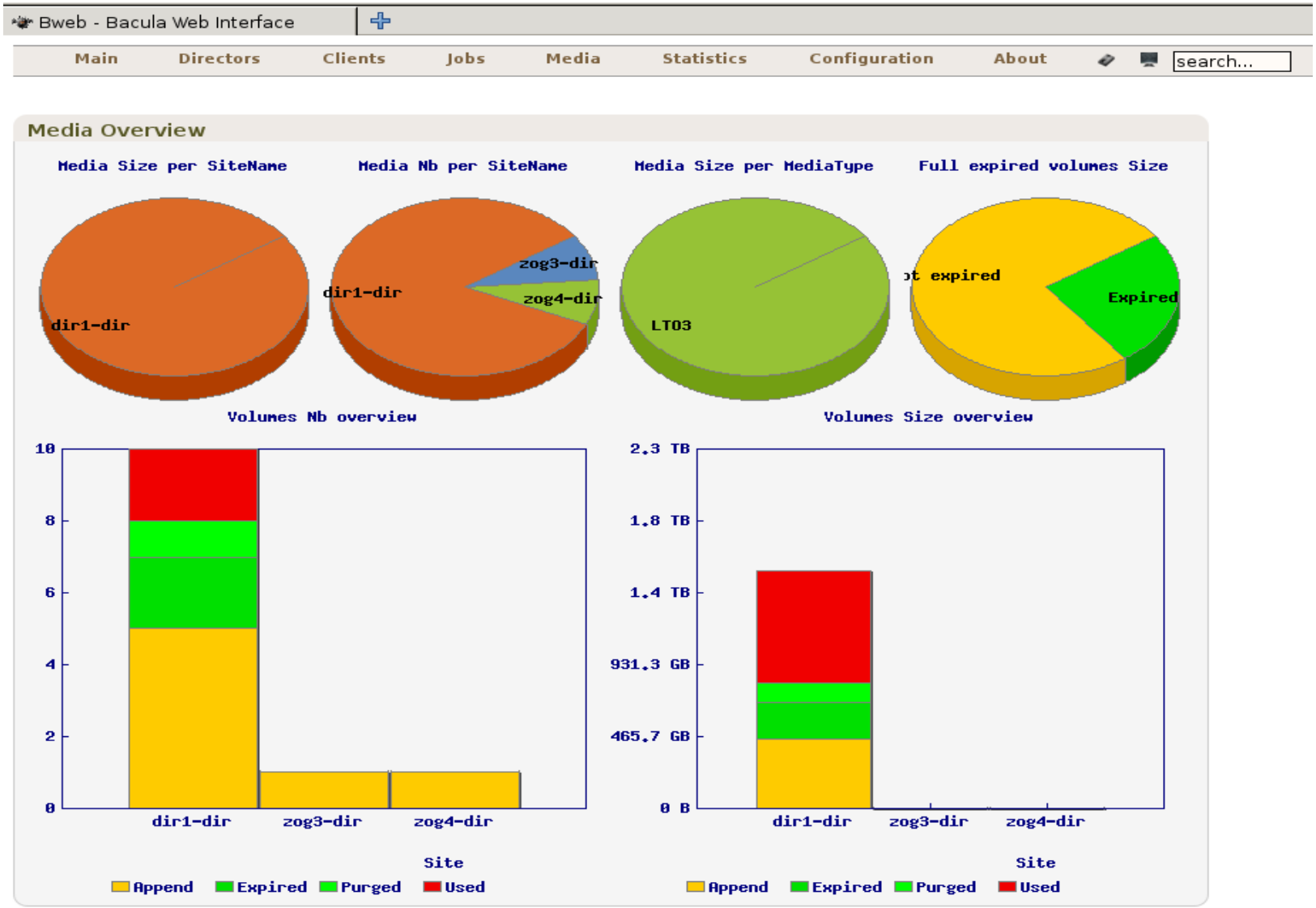

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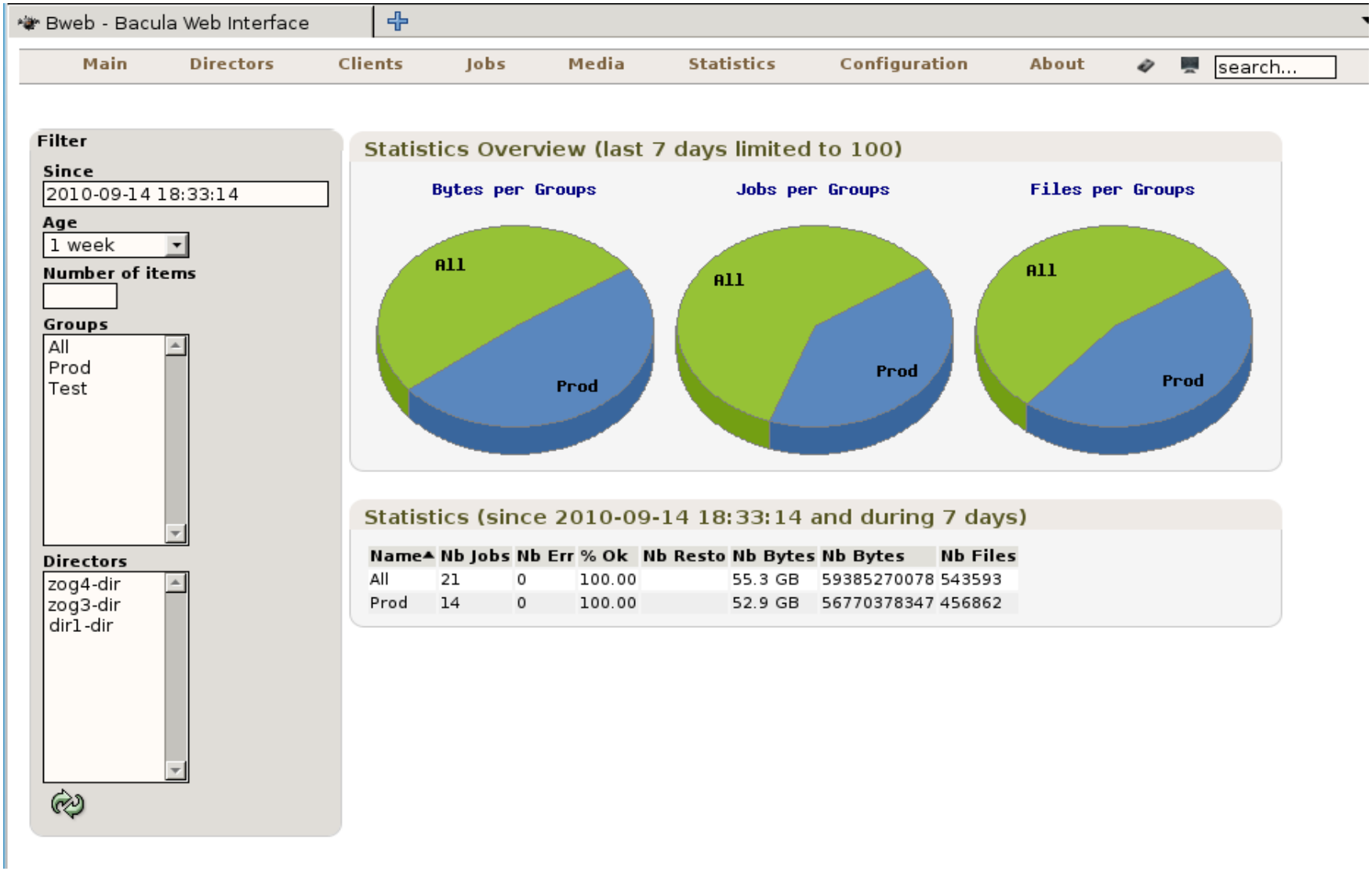

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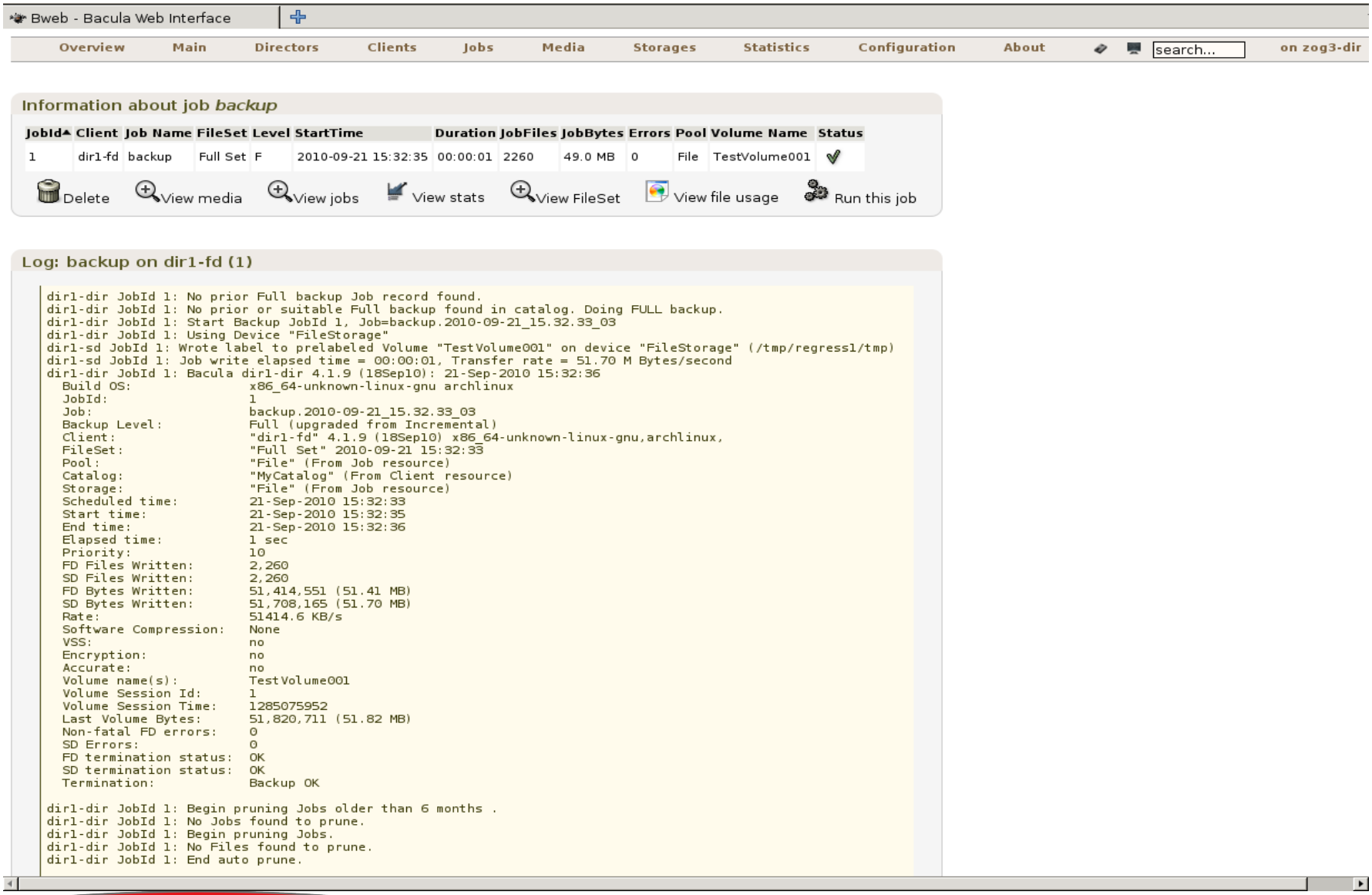
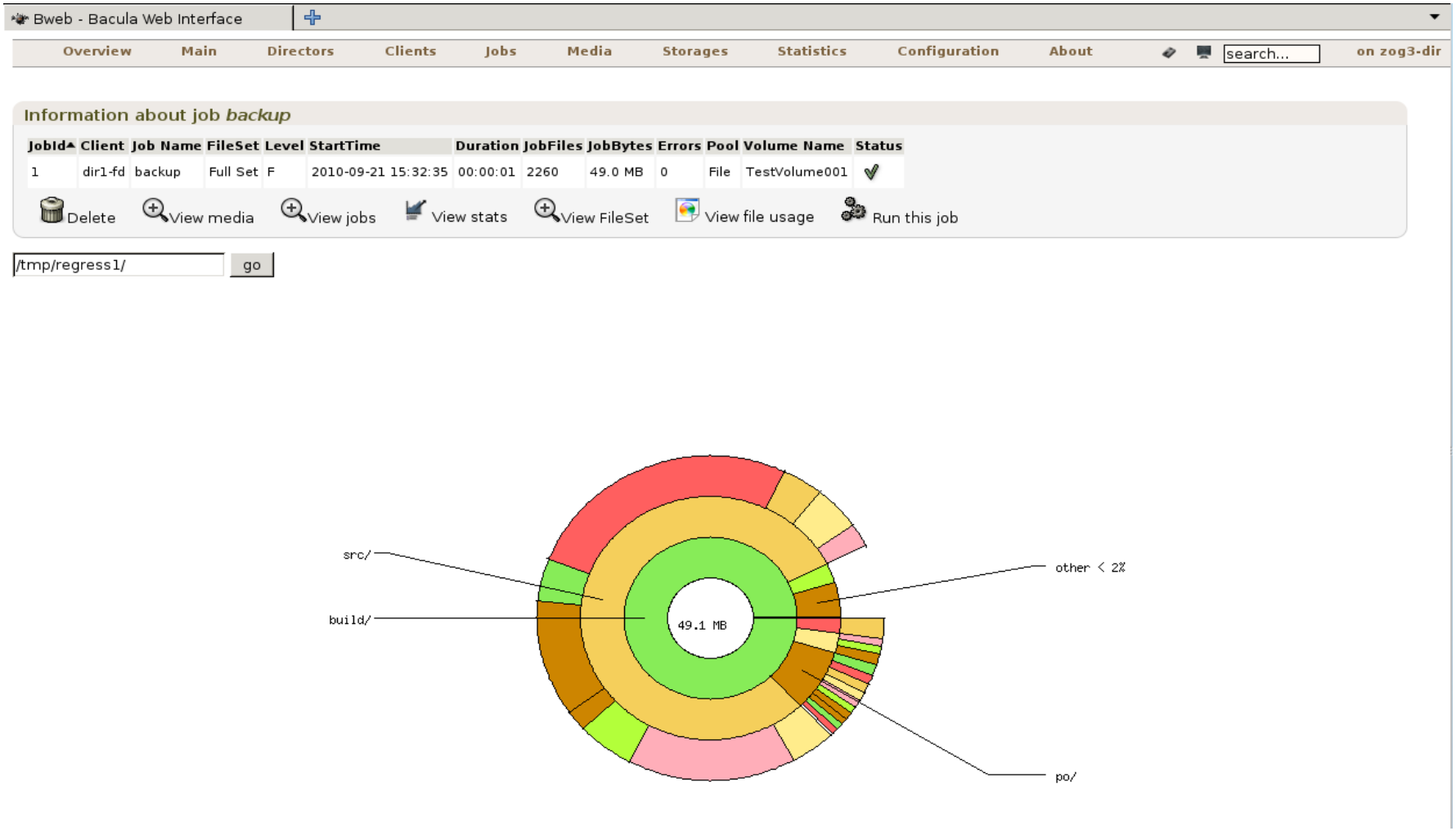
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