

## D-Link DNS-323 network attached storage

t=0x9b60d40 [0,0]

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## Overview

### dmesg.txt

```
dlink-DFDADE:~# uname -a
Linux dlink-DFDADE 2.6.12.6-arm1 #30 Mon Aug 18 14:19:14 CST 2008 armv5tej1 GNU/Linux
```

```
dlink-DFDADE:~# free
              total         used         free      shared    buffers     cached
Mem:           61904         54808         7096          0        11824        30592
-/+ buffers/cache:      12392         49512
Swap:        1060208              0        1060208
```

```
dlink-DFDADE:~# cat /proc/cpuinfo
Processor       : ARM926EJ-Sid(wb) rev 0 (v5l)
BogoMIPS        : 331.77
Features        : swp half thumb fastmult edsp java
CPU implementer : 0x41
CPU architecture: 5TEJ
CPU variant     : 0x0
CPU part        : 0x926
CPU revision    : 0
Cache type      : write-back
Cache clean     : cp15 c7 ops
Cache lockdown  : format C
Cache format    : Harvard
I size          : 32768
I assoc         : 1
I line length   : 32
I sets          : 1024
D size          : 32768
D assoc         : 1
D line length   : 32
D sets          : 1024

Hardware        : MV-88fxx81
Revision        : 0000
Serial          : 0000000000000000
```

# RAID

```
Personalities : [linear] [raid0] [raid1]
md0 : active raid0 sda2[0] sdb2[1]
      2925532672 blocks 64k chunks

unused devices: <none>
dlink-DFDADE:~# hdparm -tT /dev/sda /dev/sdb /dev/md0

/dev/sda:
Timing cached reads:   210 MB in  2.01 seconds = 104.48 MB/sec
Timing buffered disk reads:  72 MB in  3.00 seconds = 24.00 MB/sec

/dev/sdb:
Timing cached reads:   212 MB in  2.01 seconds = 105.47 MB/sec
Timing buffered disk reads: 104 MB in  3.03 seconds = 34.32 MB/sec

/dev/md0:
Timing cached reads:   208 MB in  2.01 seconds = 103.48 MB/sec
BLKGETSIZE failed: File too large

dlink-DFDADE:~# dd_rescue /dev/sda /dev/null
dd_rescue: (info): ipos:   1044480.0k, opos:   1044480.0k, xferd:   1044480.0k
                  errs:     0, errxfer:     0.0k, succxfer:  1044480.0k
                  +curr.rate:  37169kB/s, avg.rate:   32123kB/s, avg.load: 60.7%

dlink-DFDADE:~# dd_rescue /dev/md0 /dev/null
dd_rescue: (info): ipos:   729536.0k, opos:   729536.0k, xferd:   729536.0k
                  errs:     0, errxfer:     0.0k, succxfer:  729536.0k
                  +curr.rate:  37176kB/s, avg.rate:   37502kB/s, avg.load: 76.5%
```

# Debian

- <http://www.cyrius.com/debian/orion/d-link/dns-323/install.html>

## 2.6.26-2-orion5x

### raid0

```
Linux dlink-DFDADE 2.6.26-2-orion5x #1 Thu Aug 20 05:04:03 UTC 2009 armv5tel GNU/Linux
Personalities : [raid1] [raid6] [raid5] [raid4] [raid0]
md1 : active raid0 dm-1[1] dm-0[0]
      2097024 blocks 64k chunks

md0 : active raid1 sda4[0] sdb4[1]
      513984 blocks [2/2] [UU]

unused devices: <none>

/dev/sda:
Timing cached reads:   212 MB in  2.01 seconds = 105.39 MB/sec
Timing buffered disk reads:  72 MB in  3.05 seconds = 23.58 MB/sec

/dev/sdb:
Timing cached reads:   218 MB in  2.01 seconds = 108.26 MB/sec
Timing buffered disk reads:  88 MB in  3.00 seconds = 29.33 MB/sec

/dev/md1:
```

```
Timing cached reads: 208 MB in 2.01 seconds = 103.46 MB/sec
Timing buffered disk reads: 60 MB in 3.07 seconds = 19.57 MB/sec
```

```
Linux dlink-DFDADE 2.6.26-2-orion5x #1 Thu Aug 20 05:04:03 UTC 2009 armv5tel GNU/Linux
Personalities : [raid1] [raid6] [raid5] [raid4] [raid0]
md1 : active (auto-read-only) raid1 dm-1[1] dm-0[0]
      1048512 blocks [2/2] [UU]
      resync=PENDING
```

```
md0 : active raid1 sda4[0] sdb4[1]
      513984 blocks [2/2] [UU]
```

```
unused devices: <none>
```

```
/dev/sda:
Timing cached reads: 220 MB in 2.00 seconds = 109.73 MB/sec
Timing buffered disk reads: 82 MB in 3.01 seconds = 27.22 MB/sec
```

```
/dev/sdb:
Timing cached reads: 216 MB in 2.02 seconds = 107.12 MB/sec
Timing buffered disk reads: 90 MB in 3.09 seconds = 29.14 MB/sec
```

```
/dev/md1:
Timing cached reads: 208 MB in 2.02 seconds = 103.19 MB/sec
Timing buffered disk reads: 52 MB in 3.05 seconds = 17.06 MB/sec
```

## 2.6.30

<http://www.cyrius.com/journal/debian/orion/d-link/dns-323/dns-323-fan-control>

```
dlink-DFDADE:~/mdadm# ./test.sh
+ ./remove.md1.sh
+ mdadm --manage --stop /dev/md1
mdadm: error opening /dev/md1: No such file or directory
+ mdadm --manage --remove /dev/md1
mdadm: error opening /dev/md1: No such file or directory
+ yes
+ mdadm --create --verbose /dev/md1 --level=0 --raid-devices=2 --force /dev/vga/raid.a /dev/vgb/raid.b
mdadm: chunk size defaults to 64K
mdadm: /dev/vga/raid.a appears to be part of a raid array:
      level=raid1 devices=2 ctime=Sat Sep 5 14:54:52 2009
mdadm: /dev/vgb/raid.b appears to be part of a raid array:
      level=raid1 devices=2 ctime=Sat Sep 5 14:54:52 2009
Continue creating array? mdadm: array /dev/md1 started.
+ ./hdparm-test.sh
+ test -d out
+ uname -a
+ cat /proc/mdstat
+ hdparm -tT /dev/sda /dev/sdb /dev/md1
++ date +%Y%m%d_%H%M%S
+ tee out/20090905_151032
Linux dlink-DFDADE 2.6.30-1-orion5x #1 Tue Aug 18 04:19:30 UTC 2009 armv5tel GNU/Linux
Personalities : [raid1] [raid0]
md1 : active raid0 dm-0[1] dm-1[0]
      2097024 blocks 64k chunks

md0 : active raid1 sda4[0] sdb4[1]
      513984 blocks [2/2] [UU]
```

unused devices: <none>

/dev/sda:

Timing cached reads: 246 MB in 2.01 seconds = 122.14 MB/sec  
Timing buffered disk reads: 132 MB in 3.00 seconds = 43.93 MB/sec

/dev/sdb:

Timing cached reads: 242 MB in 2.01 seconds = 120.27 MB/sec  
Timing buffered disk reads: 138 MB in 3.01 seconds = 45.87 MB/sec

/dev/md1:

Timing cached reads: 234 MB in 2.01 seconds = 116.15 MB/sec  
Timing buffered disk reads: 130 MB in 3.03 seconds = 42.85 MB/sec

```
+ ./remove.md1.sh
+ mdadm --manage --stop /dev/md1
mdadm: stopped /dev/md1
+ mdadm --manage --remove /dev/md1
+ yes
+ mdadm --create --verbose /dev/md1 --level=1 --raid-devices=2 --spare-devices=0 --force /dev/vga
mdadm: /dev/vga/raid.a appears to be part of a raid array:
    level=raid0 devices=2 ctime=Sat Sep  5 15:10:31 2009
mdadm: /dev/vgb/raid.b appears to be part of a raid array:
    level=raid0 devices=2 ctime=Sat Sep  5 15:10:31 2009
mdadm: size set to 1048512K
Continue creating array? mdadm: array /dev/md1 started.
+ ./hdparm-test.sh
+ test -d out
+ uname -a
++ date +%Y%m%d_%H%M%S
+ cat /proc/mdstat
+ hdparm -tT /dev/sda /dev/sdb /dev/md1
+ tee out/20090905_151114
Linux dlink-DFDADE 2.6.30-1-orion5x #1 Tue Aug 18 04:19:30 UTC 2009 armv5tel GNU/Linux
Personalities : [raid1] [raid0]
md1 : active (auto-read-only) raid1 dm-0[1] dm-1[0]
    1048512 blocks [2/2] [UU]
    resync=PENDING

md0 : active raid1 sda4[0] sdb4[1]
    513984 blocks [2/2] [UU]
```

unused devices: <none>

/dev/sda:

Timing cached reads: 116 MB in 2.01 seconds = 57.84 MB/sec  
Timing buffered disk reads: 118 MB in 3.00 seconds = 39.32 MB/sec

/dev/sdb:

Timing cached reads: 114 MB in 2.01 seconds = 56.79 MB/sec  
Timing buffered disk reads: 140 MB in 3.03 seconds = 46.27 MB/sec

/dev/md1:

Timing cached reads: 234 MB in 2.02 seconds = 116.07 MB/sec  
Timing buffered disk reads: 110 MB in 3.01 seconds = 36.49 MB/sec

## updates

Martin Michlmayr

- Research on FOSS foundations

I worked on research on FOSS foundations and published two reports:

## **Growing Open Source Projects with a Stable Foundation**

This primer covers non-technical aspects that the majority of projects will have to consider at some point. It also explains how FOSS foundations can help projects grow and succeed.

This primer explains:

- ◆ What issues and areas to consider
- ◆ How other projects and foundations have approached these topics
- ◆ What FOSS foundations bring to the table
- ◆ How to choose a FOSS foundation

You can download Growing Open Source Projects with a Stable Foundation.

## **Research report**

The research report describes the findings of the research and aims to help understand the operations and challenges FOSS foundations face.

This report covers topics such as:

- ◆ Role and activities of foundations
- ◆ Challenges faced and gaps in the service offerings
- ◆ Operational aspects, including reasons for starting an org and choice of jurisdiction
- ◆ Trends, such as the "foundation in a foundation" model
- ◆ Recommendations for different stakeholders

You can download the research report.

## **Acknowledgments**

This research was sponsored by Ford Foundation and Alfred P. Sloan Foundation. The research was part of their Critical Digital Infrastructure Research initiative, which investigates the role of open source in digital infrastructure.

- ledger2beancount 2.6 released

I released version 2.6 of ledger2beancount, a ledger to beancount converter.

Here are the changes in 2.6:

- ◆ Round calculated total if needed for `price==cost` comparison
- ◆ Add `narration_tag` config variable to set narration from metadata
- ◆ Retain unconsummated payee/payer metadata
- ◆ Ensure UTF-8 output and assume UTF-8 input
- ◆ Document UTF-8 issue on Windows systems
- ◆ Add option to move posting-level tags to the transaction itself
- ◆ Add support for the `alias` sub-directive of `account` declarations
- ◆ Add support for the `payee` sub-directive of `account` declarations
- ◆ Support configuration file called `.ledger2beancount.yaml`

- ◆ Fix uninitialised value warning in hledger mode
- ◆ Print warning if account in assertion has sub-accounts
- ◆ Set commodity for commodity-less balance assertion
- ◆ Expand path name of `beancount_header` config variable
- ◆ Document handling of buckets
- ◆ Document pre- and post-processing examples
- ◆ Add `Dockerfile` to create Docker image

Thanks to Alexander Baier, Daniele Nicolodi, and GitHub users bratekarate, faaaf0 and mefromthepast for various bug reports and other input.

Thanks to Dennis Lee for adding a Dockerfile and to Vinod Kurup for fixing a bug.

Thanks to Stefano Zacchiroli for testing.

You can get [ledger2beancount from GitHub](#).

- [beancount2ledger 1.3 released](#)

I released version 1.3 of [beancount2ledger](#), the beancount to ledger converter that was moved from `bean-report ledger` into a standalone tool.

You can get [beancount2ledger from GitHub](#) or via `pip install`.

Here are the changes in 1.3:

- ◆ Add rounding postings only when required ([issue #9](#))
- ◆ Avoid printing too much precision for a currency ([issue #21](#))
- ◆ Avoid creating two or more postings with null amount ([issue #23](#))
- ◆ Add price to cost when needed by ledger ([issue #22](#))
- ◆ Preserve posting order ([issue #18](#))
- ◆ Add config option `indent`
- ◆ Show metadata with hledger output
- ◆ Support setting auxiliary dates and posting dates from metadata ([issue #14](#))
- ◆ Support setting the code of transactions from metadata
- ◆ Support mapping of account and currency names ([issue #24](#))
- ◆ Improve documentation:
  - ◇ Add user guide
  - ◇ Document limitations ([issue #12](#))

- [ledger2beancount 2.5 released](#)

I released version 2.5 of [ledger2beancount](#), a ledger to beancount converter.

Here are the changes in 2.5:

- ◆ Don't create negative cost for lot without cost
- ◆ Support complex implicit conversions
- ◆ Handle typed metadata with value `0` correctly
- ◆ Set per-unit instead of total cost when cost is missing from lot
- ◆ Support commodity-less amounts
- ◆ Convert transactions with no amounts or only `0` amounts to notes
- ◆ Fix parsing of transaction notes
- ◆ Keep tags in transaction notes on same line as transaction header
- ◆ Add beancount config options for non-standard root names automatically
- ◆ Fix conversion of fixated prices to costs

- ◆ Fix removal of price when `price==cost` but when they use different number formats
- ◆ Fix removal of price when `price==cost` but per-unit and total notation mixed
- ◆ Fix detection of tags and metadata after posting/aux date
- ◆ Use `D` directive to set default commodity for `hledger`
- ◆ Improve support for postings with commodity-less amounts
- ◆ Allow empty comments
- ◆ Preserve leading whitespace in comments in postings and transaction headers
- ◆ Preserve indentation for tags and metadata
- ◆ Preserve whitespace between amount and comment
- ◆ Refactor code to use more data structures
- ◆ Remove dependency on `Config::Onion` module

Thanks to input from Remco RÃ³nders, Yuri Khan, and Thierry. Thanks to Stefano Zacchiroli and Kirill Goncharov for testing my changes.

You can get [ledger2beancount from GitHub](#)

- [ledger2beancount 2.4 released](#)

I released version 2.4 of [ledger2beancount](#), a ledger to beancount converter.

There are two notable changes in this release:

1. I fixed two regressions introduced in the last release. Sorry about the breakage!
2. I improved support for `hledger`. I believe all syntax differences in `hledger` are supported now.

Here are the changes in 2.4:

- ◆ Fix regressions introduced in version 2.3
  - ◇ Handle price directives with comments
  - ◇ Don't assume implicit conversion when price is on second posting
- ◆ Improve support for `hledger`
  - ◇ Fix parsing of `hledger` tags
  - ◇ Support commas as decimal markers
  - ◇ Support digit group marks through `commodity` and `D` directives
  - ◇ Support `end aliases` directive
  - ◇ Support regex aliases
  - ◇ Recognise total balance assertions
  - ◇ Recognise sub-account balance assertions
- ◆ Add support for `define` directive
- ◆ Convert all uppercase metadata tags to all lowercase
- ◆ Improve handling of ledger lots without cost
- ◆ Allow transactions without postings
- ◆ Fix parsing issue in commodity declarations
- ◆ Support commodities that contain quotation marks
- ◆ Add `--version` option to show version
- ◆ Document problem of mixing `apply` and `include`

Thanks to Kirill Goncharov for pointing out one regressions, to Taylor R Campbell for for a patch, to Stefano Zacchiroli for some input, and finally to Simon Michael for input on `hledger`!

You can get [ledger2beancount from GitHub](#)

- [beancount2ledger 1.1 released](#)

Martin Blais recently [announced that he'd like to re-organize the beancount code](#) and split out some functionality into separate projects, including the beancount to ledger/hledger

conversion code previously provided by bean-report.

I agreed to take on the maintenance of this code and I've now released [beancount2ledger](#), a [beancount to ledger/hledger converter](#).

You can install beancount2ledger with pip:

```
pip3 install beancount2ledger
```

Please [report issues to the GitHub tracker](#).

There are a number of outstanding issues I'll fix soon, but please report any other issues you encounter.

Note that I'm not very familiar with hledger. I intend to sync up with hledger author Simon Michael soon, but please file an issue if you notice any problems with the hledger conversion.

Version 1.1 contains a number of fixes compared to the latest code in bean-report:

## 1.1 (2020-07-24)

- ◆ Preserve metadata information ([issue #3](#))
- ◆ Preserve cost information (lot dates and lot labels/notes) ([issue #5](#))
- ◆ Avoid adding two prices in hledger ([issue #2](#))
- ◆ Avoid trailing whitespace in account open declarations ([issue #6](#))
- ◆ Fix indentation issue in postings ([issue #8](#))
- ◆ Fix indentation issue in price entries
- ◆ Drop time information from price (P) entries
- ◆ Add documentation
- ◆ Relicense under GPL-2.0-or-later ([issue #1](#))

## 1.0 (2020-07-22)

- ◆ Split ledger and hledger conversion from `bean-report` into a standalone tool
- ◆ Add man page for `beancount2ledger(1)`
- [ledger2beancount 2.3 released](#)

I released version 2.3 of [ledger2beancount](#), a ledger to beancount converter.

There are three notable changes with this release:

1. Performance has significantly improved. One large, real-world test case has gone from around 160 seconds to 33 seconds. A smaller test case has gone from 11 seconds to ~3.5 seconds.
2. The documentation is [available online now](#) (via Read the Docs).
3. The [repository has moved](#) to the beancount GitHub organization.

Here are the changes in 2.3:

- ◆ Improve speed of ledger2beancount significantly
- ◆ Improve parsing of postings for accuracy and speed
- ◆ Improve support for inline math
- ◆ Handle lots without cost
- ◆ Fix parsing of lot notes followed by a virtual price

- ◆ Add support for lot value expressions
- ◆ Make parsing of numbers more strict
- ◆ Fix behaviour of dates without year
- ◆ Accept default ledger date formats without configuration
- ◆ Fix implicit conversions with negative prices
- ◆ Convert implicit conversions in a more idiomatic way
- ◆ Avoid introducing trailing whitespace with hledger input
- ◆ Fix loading of config file
- ◆ Skip ledger directive `import`
- ◆ Convert documentation to `mkdocs`

Thanks to Colin Dean for some feedback. Thanks to Stefano Zacchiroli for prompting me into investigating performance issues (and thanks to the developers of the Devel::NYTProf profiler).

You can get [ledger2beancount from GitHub](#)

- [ledger2beancount 2.2 released](#)

I released version 2.2 of [ledger2beancount](#), a ledger to beancount converter.

Here are the changes in 2.2:

- ◆ Show warning for unknown `apply` directive
- ◆ Recognize `apply rate` directive (an alias of `apply fixed`)
- ◆ Don't convert meta-data on ignored virtual postings but keep as comments
- ◆ Update location of beancount repository

You can get [ledger2beancount from GitHub](#).

Thanks to GitHub user MarinBernard for reporting a bug with virtual postings!

- [ledger2beancount 2.1 released](#)

I released version 2.1 of [ledger2beancount](#), a ledger to beancount converter.

Here are the changes in 2.1:

- ◆ Handle postings with posting dates and comments but no amount
- ◆ Show transactions with only one posting (without `bucket`)
- ◆ Adding spacing between automatic declarations
- ◆ Preserve preliminary info at the top

You can get [ledger2beancount from GitHub](#).

Thanks to Thierry (thdox) for reporting a bug and for fixing some typos in the documentation. Thanks to Stefano Zacchiroli for some good feedback.

- [ledger2beancount 2.0 released](#)

I released version 2.0 of [ledger2beancount](#), a ledger to beancount converter.

Here are the changes in 2.0:

- ◆ Handle comments in `account` and `commodity` declarations
- ◆ Handle transactions with a single posting (without `bucket`)
- ◆ Handle empty metadata values
- ◆ Rewrite Emacs modeline

You can get [ledger2beancount from GitHub](#).