

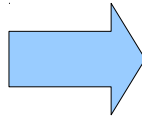
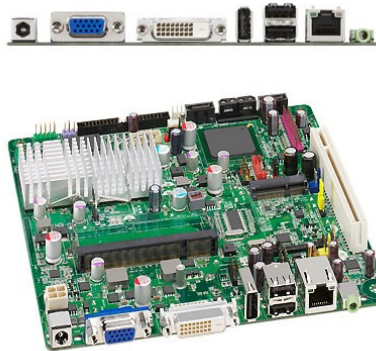
Home Server einrichten und konfigurieren



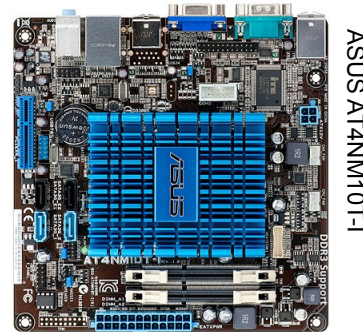
Martin Strohmayer

Entwicklung 2010 - 2011

Intel D945GSEJT



Intel Atom Pineview

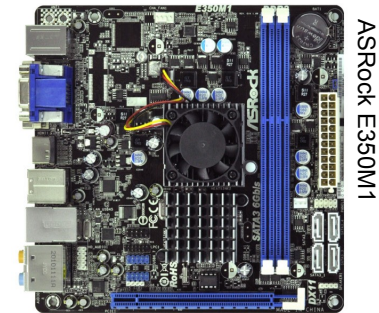


Verlustleistung größer



CPU Leistung (Dual-Core)
4 x SATA 3.0 Gbit/s

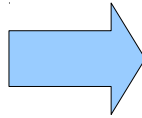
AMD E-350



Verlustleistung größer

CPU Leistung (Dual-Core)
4 x SATA 6.0 Gbit/s

Globalscale Technologies
SheevaPlug



GuruPlug Server – Plus



Preis
Lauter Mini-Lüfter



Anschlüsse (eSATA, 2x LAN)
WLAN (AP), Bluetooth

Seagate FreeAgent
DockStar GoFlex Home

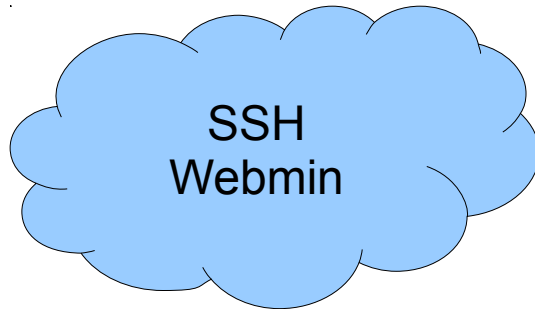


Nur 128 MB RAM
Garantieverlust

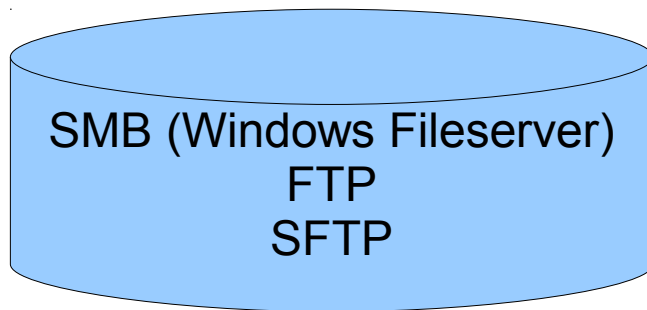
Preis!
3 x USB bei DockStar
SATA Anschluss bei GoFlex

Home Server Aufgaben

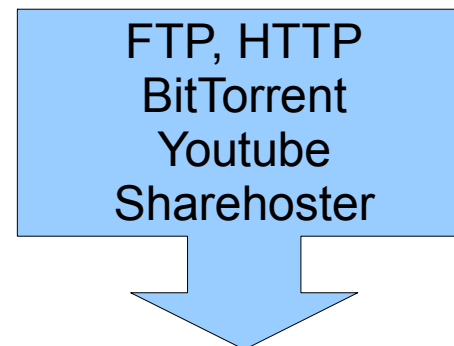
Remote Control
Fernwartung



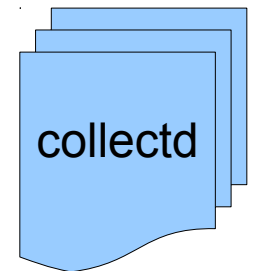
File-Server /NAS



Download-Server



System
Analyse



Gefahren



Remote Control / Fernwartung

- Login: root
 - Webmin
 - Backup Configuration Files
 - Change Language and Theme
 - Webmin Actions Log
 - Webmin Configuration
 - Webmin Servers Index
 - Webmin Users
 - System
 - Bootup and Shutdown
 - Change Passwords
 - Disk and Network Filesystems
 - Filesystem Backup
 - Initial System Bootup
 - Log File Rotation
 - MIME Type Programs
 - PAM Authentication
 - Running Processes
 - Scheduled Cron Jobs
 - Software Package Updates
 - Software Packages
 - System Documentation
 - System Logs
 - Users and Groups
 - Servers
 - Others
 - Networking
 - Hardware
 - Cluster
 - Un-used Modules
- Search:
- View Module's Logs
 - System Information
 - Refresh Modules
 - Logout



System hostname T5500
Operating system Debian Linux 6.0
Webmin version 1.530
Time on system Sun Mar 6 18:38:51 2011
Kernel and CPU Linux 2.6.32-5-486 on i586
Processor information Transmeta(tm) Crusoe(tm) Processor TMS800, 1 cores
System uptime 0 hours, 21 minutes
Running processes 73
CPU load averages 0.17 (1 min) 0.23 (5 mins) 0.18 (15 mins)
CPU usage 1% user, 1% kernel, 0% IO, 98% idle
Real memory 487.27 MB total, 58.38 MB used
Virtual memory 282.38 MB total, 0 bytes used
Local disk space 27.23 GB total, 4.29 GB used
Package updates 85 package updates are available

The 1 following Webmin module updates are now available ..

Module	Version	Fixes problem
System and Server Status	1.531	Fix error Bad arg length for Socket::pack_sockaddr_in in Remote Ping monitor

[Install Updates Now](#)

```
root@A220:/home#  
root@A220:/home#  
root@A220:/home#  
root@A220:/home#  
root@A220:/home#  
root@A220:/home#  
root@A220:/home#  
root@A220:/home#  
root@A220:/home#  
root@A220:/home#  
root@A220:/home# /etc/init.d/samba restart  
Stopping Samba daemons: nmbd smbd.  
Starting Samba daemons: nmbd smbd.  
root@A220:/home# apt-get upgrade  
Paketlisten werden gelesen... Fertig  
Abhängigkeitsbaum wird aufgebaut  
Lese Status-Informationen ein... Fertig  
Die folgenden Pakete sind zurückgehalten worden:  
  mldonkey-server  
0 aktualisiert, 0 neu installiert, 0 zu entfernen und 1 nicht aktualisiert.  
root@A220:/home# /etc/init.d/proftpd restart  
Stopping ftp server: proftpd.  
Starting ftp server: proftpd.  
root@A220:/home#
```

apt-get install ssh

/etc/ssh/sshd_config

```
LoginGraceTime 120  
PermitRootLogin no  
AllowUsers sshuser  
Port 1022
```

```
wget http://prdownloads.sourceforge.net/webadmin/webmin_1.530_all.deb  
dpkg -i webmin_1.530_all.deb  
apt-get -f install
```

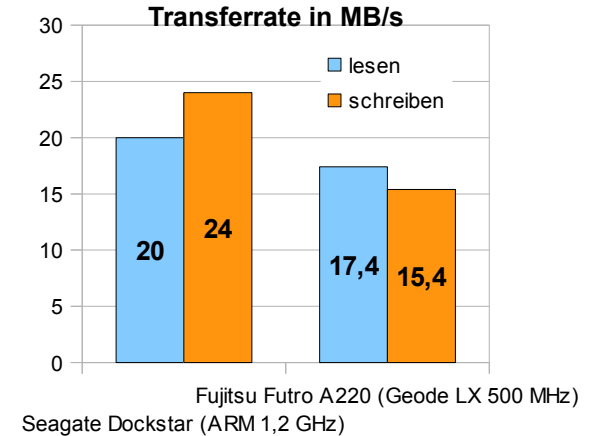
SMB Server - Samba

Installation: apt-get install samba smbfs

/etc/samba/smb.conf

```
[global]
workgroup = Arbeitsgruppe
server string = %h server (Samba %v)
log file = /var/log/samba/log.%m
max log size = 1000
security=user
#security=share # gast zugriff ermöglichen
encrypt passwords = true
invalid users = root
socket options = TCP_NODELAY SO_RCVBUF=16384 SO_SNDBUF=16384

[data]
comment = Daten
path = /data
read only = no
guest ok = yes # gast zugriff erfolgt über user: nobody group: nogroup
#valid users = user1
#force create mode = 0770
#force directory mode = 0770
```



Benutzer anlegen:

```
smbpasswd -a user1
password:
retype password:
```

mounten:

```
mount -t smbfs -o user=<username>,pass=<password> //10.0.0.100/data /mnt
```

FTP Server - proftpd

Installation: apt-get install proftpd

```
/etc/proftpd/proftpd.conf  AuthOrder mod_auth_file.c
                          AuthUserFile /etc/proftpd/proftpd.passwd
                          TransferLog /var/log/proftpd/xferlog
                          SystemLog /var/log/proftpd/proftpd.log
                          #defaultroot /data/ftp
                          defaultroot ~
                          #TransferRate STOR 200 user ftpuser # max. KBytes/Sekunde for Upload
                          #TransferRate RETR 35 user ftpuser # max. KBytes/Sekunde for Download
                          #MaxClientsPerUser 1 # Es ist nicht mehr als 1 Client pro Nutzer erlaubt
                          #MaxClientsPerHost 1 # Es ist nur ein Client pro Host erlaubt
                          #MaxHostsPerUser 3 # Es sind nur 3 Hosts per User erlaubt
```

Benutzer anlegen:

```
id ftpuser
export FTPUSERID=`id -u ftpuser`
ftpasswd --passwd --name ftpuser --home /data/ftp --shell /bin/sh
--uid $FTPUSERID --file /etc/proftpd/proftpd.passwd
Password:
```

SFTP Server - mysecureshell

Installation: `/etc/apt/sources.list`

```
deb http://mysecureshell.free.fr/repository/index.php/debian testing main
```

```
apt-get update
apt-get install mysecureshell
```

`/etc/ssh/sftp_config`

```
GlobalDownload 42k #total speed download for all clients
Home            /home/$USER
DefaultRights  0640 0750 #Set default rights for new file and new directory

#Rules only for group sftpuser
<Group sftpuser>
    Download          32k
    LogFile           /var/log/sftp-server_sftpuser.log #Change logfile
#    ExpireDate       "2011-05-28 18:31:01"
</Group>
```

Neuen Benutzer anlegen:

```
useradd -s /bin/MySecureShell sftpuser
```

Bestehenden Benutzer aktivieren:

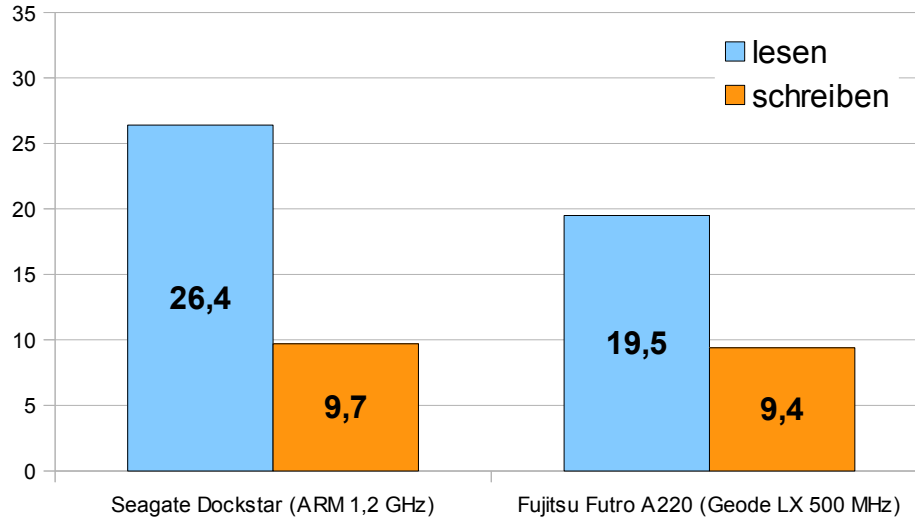
```
usermod -s /bin/MySecureShell sftpuser
```

Ntfs Support - ntfs-3g

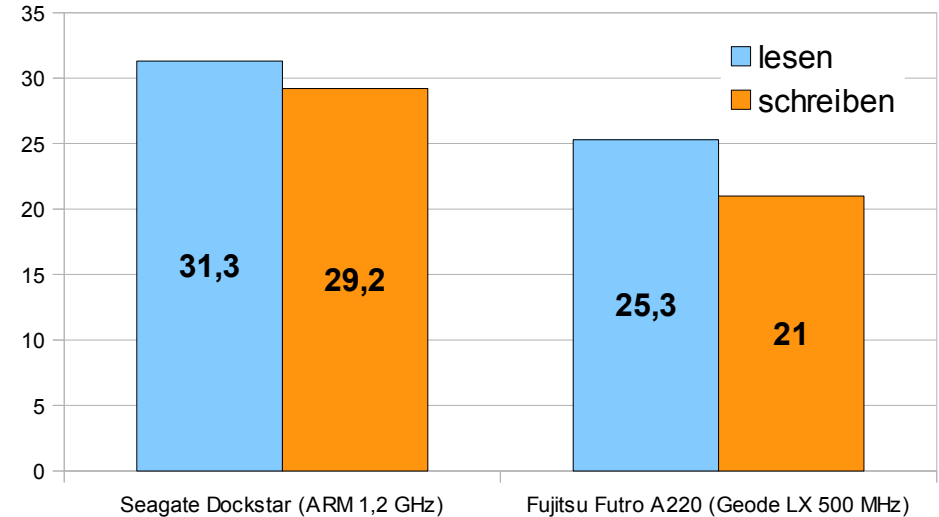
Installation: `apt-get install ntfs-3g ntfsprogs usbmount`

Mounten: `modprobe fuse`
`mount -t ntfs-3g /dev/sdb1 /mnt/ntfs`

ntfs-3g (USB HDD) Transferrate in MB/s



ext3 (USB HDD) Transferrate in MB/s



Fail2ban

Installation: `apt-get install fail2ban`

`/etc/fail2ban/jail.conf`

```
ignoreip = 127.0.0.1
bantime = 600
maxretry = 3
#banaction = hostsdeny
banaction = iptables-multiport
destemail = root@localhost

[ssh]
enabled = true
port = ssh
filter = sshd
logpath = /var/log/auth.log
maxretry = 3

[proftpd]
enabled = true
port = ftp,ftp-data,ftps,ftps-data
filter = proftpd
logpath =
/var/log/proftpd/proftpd.log
```

Apticron

Installation: `apt-get install apticron`

`/etc/apticron/apticron.conf`

```
#EMAIL="name@ymail.com"  
EMAIL="root"  
SYSTEM="My Home Server"
```

Beispiel Mail Benachrichtigung:

```
apticron report  
[Fri, 26 Nov 2010 15:49:13 +0100]  
=====
```

apticron has detected that some packages need upgrading on:

My Home Server
[127.0.1.1 10.0.0.38]

The following packages are currently pending an upgrade:

```
libssl0.9.8 0.9.8g-15+lenny9  
openssl 0.9.8g-15+lenny9
```

```
=====
```

Package Details:

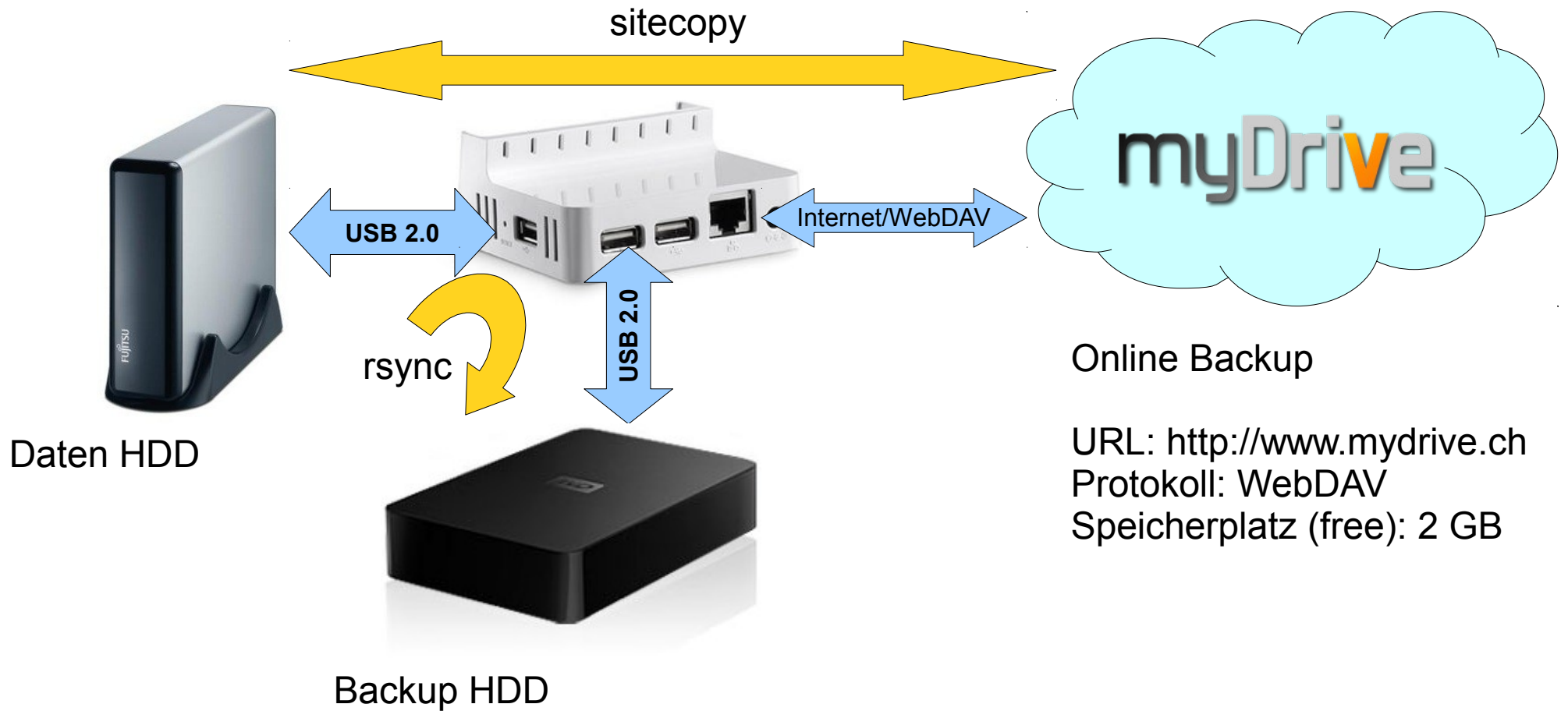
Reading changelogs...

```
--- Changes for openssl (libssl0.9.8 openssl)  
---  
openssl (0.9.8g-15+lenny9) stable-security;  
urgency=low
```

* Fix TLS extension parsing race condition (CVE-2010-3864)

Backup

Installation: `apt-get install sitecopy rsync`



Online Backup

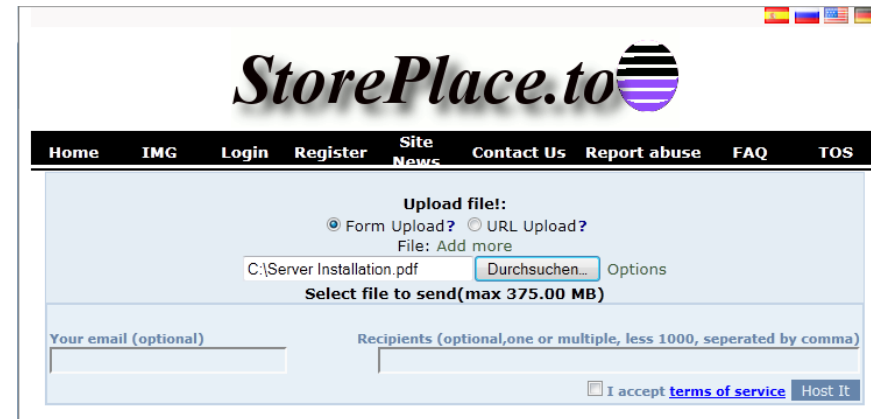
URL: <http://www.mydrive.ch>

Protokoll: WebDAV

Speicherplatz (free): 2 GB

Downloads im Internet

- HTTP/FTP: Übliche Internet Protokolle
- eDonkey2000: P2P Protokoll
Dateisuche im Client möglich
Alle Downloads werden zum Upload freigegeben
- BitTorrent: P2P Protokoll
Keine Dateisuche im Client
Download wird zum Upload freigegeben
- Youtube: Video Download
Verschieden Codecs/Container Formate (FLV, MP4, WebM, 3GP)
Verschiedene Video Auflösungen (176x144 - 1920x1080)
- Sharehoster: HTTP Download (kein P2P System)
Beispiel: rapidshare.com
megaupload.com
storeplace.to
Keine Suche möglich
Aufteilung in Free und Premium
(kostenpflichtig) Zugang/Dienst



<http://storeplace.to/?d=C2B0C3A314>

Download Server

MLDonkey

The screenshot shows the MLDonkey web interface. At the top, there are navigation tabs: Transfers, Search, Servers, Statistics, Options, Help+, and DL. Below these is a search bar with the URL `http://torrent.unix-ag.uni-kl.de/torrents/KNOPPIX_V6.4` and an Input button. A secondary row of tabs includes Downloads, Downloaders, Uploads, Uploaders, Commit, Reshare, Scan temp, Bandwidth stats, and Bandwidth toggle. A status bar displays: Down: 514.3 KB/s (0|526655), 187.5M; Up: 0.5 KB/s (0|541), 192.0k; Shared(2): 3.44G; DL 0 KB/s, UL 10 KB/s, Conn: 31 (250). Below this, a summary shows Total(1): 137.3M/698.8M @ 522.9 KB/s, with buttons for Pause all, Resume all, Clear all, and Submit changes. The main table lists active downloads:

P	R	C	R	N	File	Size	DLed	%	Cm	Srcs	A	Avail	Age	Last	Rate	ETA	Priority
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	B	KNOPPIX_V6.4.4CD-2011-01-30-DE	698.8M	137.3M	19.6	0	15	13	100	5:17	1:47	522.9	18:19	Normal

HTTP
eDonkey2000
BitTorrent

Client
Web-Interface

Pyload

The screenshot shows the Pyload web interface. At the top, there is a user profile section with 'User', 'Abmelden', and 'Administrieren' buttons. Below this are navigation tabs: Start, Warteschlange, Linksammler, Downloads, Einstellungen, and Log. A status bar displays: Start, Abbrechen, Stoppen, Hinzufügen; Download: lan; Reconnect: aus; Geschwindigkeit: 144.78 kb/s; Aktiv: 3 / 3; Aktualisieren. The main section is titled 'Aktiv' and contains a table of active downloads:

Name	Status	Information	Größe	Fortschritt
Funny Cats 3.mp4	downloading	00:00:07 @ 50.01 kb/s	4.43 MB	87% / 4 MB
Funny Animation.mp4	downloading	00:00:53 @ 39.04 kb/s	6.31 MB	47% / 3 MB
Funny Football.mp4	downloading	00:01:54 @ 56.74 kb/s	14.51 MB	28% / 4 MB

© 2008-2010 das pyLoad Team [Nach oben](#)

HTTP, FTP
Youtube
Sharehoster

Client
Web-Interface
Android Client

Dauny

The screenshot shows the JDauny Client desktop application window. The title bar reads 'JDauny Client'. The menu bar includes File, Options, Commands, Programs, and About. Below the menu bar are several icons representing different download sources. The main area contains a table of active downloads:

ID	Filename	Filesize	State	Error	Progress
211	chaos-communication-camp-2007.m4v	138.757 MB	downloading	No error	32%
212	OOo_2.4.0_LinuxIntel_install_wJRE_de.tar.gz.torrent	50.0 MB	downloading torrent	No error	30%
213	ubuntu-8.04-desktop-i386.iso.torrent	699.5 MB	finished	No error	100%

HTTP, FTP
BitTorrent
Youtube
Sharehoster

Client

System Analyse - collectd

Installation: `apt-get install collectd rrdtool`

```
/etc/collectd/collectd.conf LoadPlugin cpu
                             LoadPlugin df
                             LoadPlugin memory
                             LoadPlugin swap
                             LoadPlugin interface

                             <Plugin df>
                             Device "/dev/sda2"
                             Device "/dev/sda4"
                             Device "/dev/shm"
                             IgnoreSelected false
                             </Plugin>

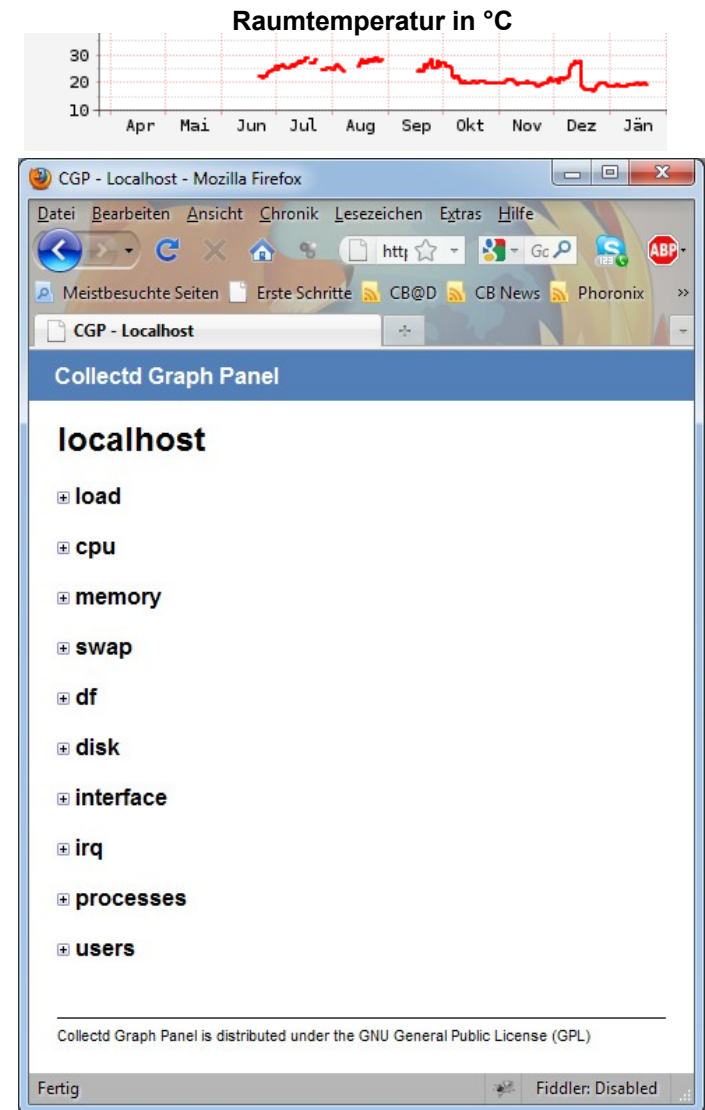
                             <Plugin interface>
                             Interface "eth0"
                             IgnoreSelected false
                             </Plugin>
```

Command Line Tool: `rrdtool`

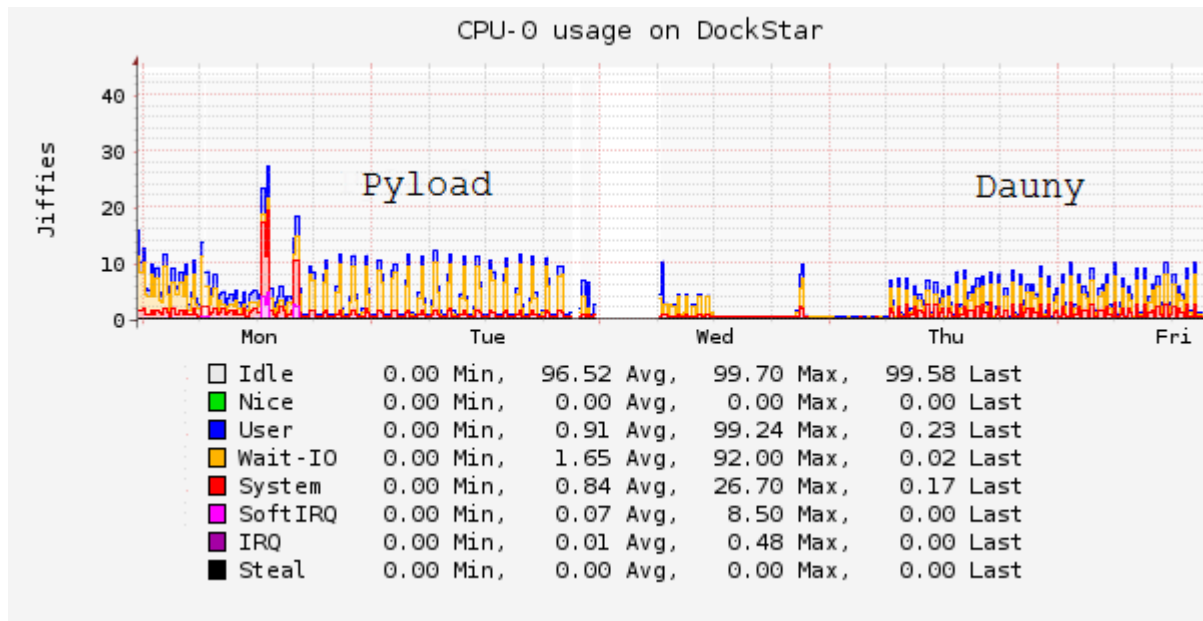
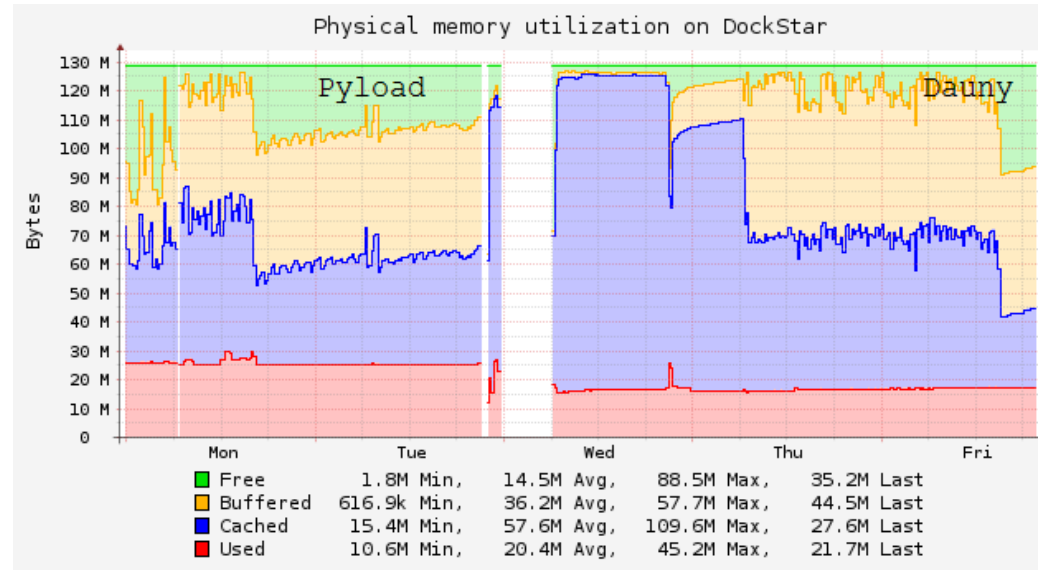
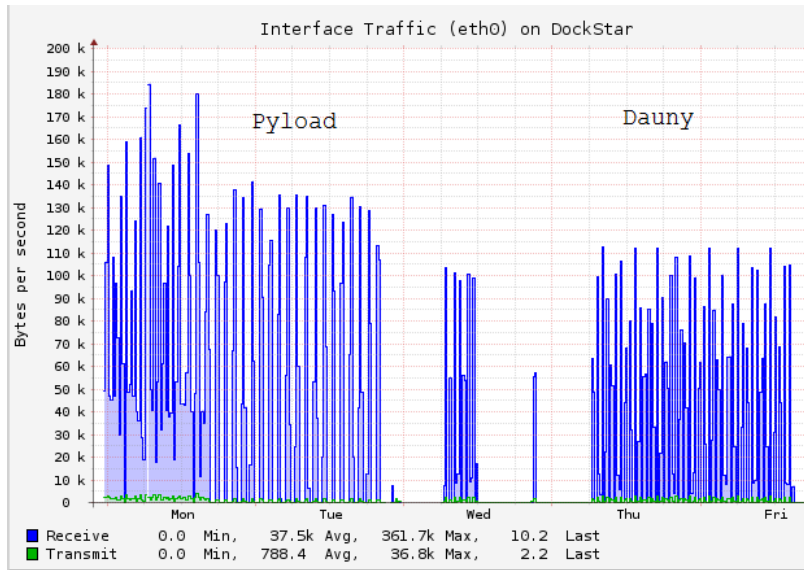
```
rrdtool graph roomtemp.png --end now --start end-365d \
DEF:Var1="temperature-0.rrd":value:AVERAGE \
LINE2:Var1#FF0000
```

Web Client: Collectd Graph Panel – `cgp`

(Benötigt: Webserver + PHP)



collectd Auswertung



Ende

Danke für die Aufmerksamkeit ...

Vortrag kann auf
<http://glt11-programm.linuxtage.at/>
bewertet werden

Links

Seagate FreeAgent GoFlex Home

Shops: <http://geizhals.at/a554781.html>
Anleitung: <http://www.mikrocontroller.net/articles/GoFlexHome>

Mini-ITX Boards (min. 4 x SATA)

AMD E-350: http://geizhals.at/?cat=mb1ppga_ddr&xf=1123_AMD+E-350&sort=p
Intel Atom: http://geizhals.at/?cat=mb1ppga_ddr&xf=492_4~317_NM10&sort=p

Download Server

MLDonkey: <http://mldonkey.sourceforge.net/>
Pyload: <http://pyload.org/>
Dauny: <http://evilx99.ev.funpic.de/dauny/>

Online Speicher

Mydrive: <http://www.mydrive.ch/>
GMX: <http://www.gmx.at/>

GLT Vorträge aus vergangenen Jahren:

Systemadministration	Unterlagen:	http://glt08.linuxtage.at/132/	(Michael Prokop)
	Video Stream:	http://streaming.linux-magazin.de/events/froscon08/archive/mprokop/	
collectd	Unterlagen:	http://glt10.linuxtage.at/collectd/	(Sebastian Harl)
	Audio Stream:	http://blog.radiotux.de/2011/03/04/cebit-2011-sebastian-harl-collectd/	

c't Sonderheft Linux - Server-Praxis

http://www.heise-shop.de/heise-zeitschriften-verlag/ct-kompakt-01-2011-linux_pid_13789732.html

Installationsanleitungen zum Vortrag:

[http://evilx99.ev.funpic.de/linux/ThinClient/server/Server Installation.pdf](http://evilx99.ev.funpic.de/linux/ThinClient/server/Server%20Installation.pdf) oder <http://tinyurl.com/4yggxhc>

Meine Page: <http://evilx99.ev.funpic.de/linux/ThinClient/ThinClients.html> oder <http://tinyurl.com/y4d5fm3>

Meine e-mail: m.stroh@ymail.com

Twitter: @m_stroh