



OPENWRT HAMNET

Info Update

OpenWrt HAMNET + HAMNET Services

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HAMNET Treffen Grandsberg, 14.03.2015

OpenWrt HAMNET - Historie

- Erste Versionen auf Basis Trunk / unstable Code - Ende 2013
- Unterstützung von TP-Link WR703n und MR-3020



OpenWrt HAMNET - Release 14.07

- September 2014 – Release von OpenWrt 14.07 final
- Darauf basierend: Neues OpenWrt HAMNET Image
 - Basierend auf stable Code, r42742
 - Images für alle ar71xx-basierten Router
 - Repositories in HAMNET und Internet
 - <http://44.225.43.132/openwrt/ar71xx/>
 - <http://www.darc-passau.de/openwrt/> (nur packages)
 - extroot Support eingebaut
 - cdp / Neighbor Detection über WLAN Interfaces (scdp)

OpenWrt HAMNET – Ubiquiti Bullet M2



■■■ HAMNET Services: Monitoring

- URLs:
 - <http://raspi.db0pas.ampr.org>
 - <http://44.225.43.22/>
- Tools:
 - xymon
 - MRTG
 - SmokePing

HAMNET Services: xymon Monitoring

VMs	bbd	conn	cpu	disk	files	http	info	inode	memory	msgs	netstat	ports	procs	svcs	trends	uptime	who	xymond	xymongen	xymonnet
DB0HUP-VM1-BASE.DB0HUP.AMPR.ORG	-	◆	◆	◆	□	◆	◆	-	◆	◆	-	□	◆	-	◆	-	-	-	-	-
DB0HUP-VM2-COMSERV.DB0HUP.AMPR.ORG	-	◆	◆	◆	□	◆	◆	-	◆	◆	-	◆	◆	-	◆	-	-	-	-	-
DB0HUP-VM3-MONITORING.DB0HUP.AMPR.ORG	◆	◆	◆	◆	□	◆	◆	◆	◆	◆	-	□	◆	-	◆	-	-	⊕	◆	◆
DB0HUP-VM4-HAMSERV.DB0HUP.AMPR.ORG	-	◆	◆	◆	□	◆	◆	-	◆	◆	-	□	◆	-	◆	-	-	-	-	-
WIN8.1-RDP.DB0HUP.AMPR.ORG	-	□	◆	◆	-	-	◆	-	◆	◆	◆	-	◆	⊕	◆	⊕	◆	-	-	-

Raspberry Pi	conn	cpu	disk	files	info	memory	msgs	ports	procs	trends
raspi.db0pas.ampr.org	⊕	◆	◆	□	◆	◆	◆	◆	◆	◆

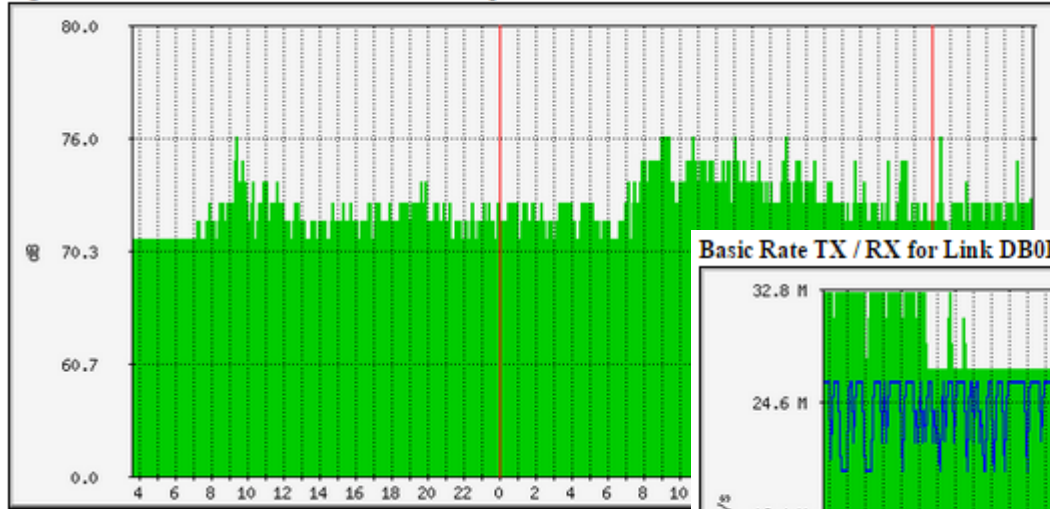
D-Star Repeater DB0PAS	conn	info	trends
dvrptrV2.db0pas.ampr.org	⊕	◆	◆

Physical Backend	conn	info	trends
HAMNETSERVER2-ESXi	◆	◆	◆
HAMNETSERVER1-ESXi	□	◆	◆
HAMNETSERVER1-iLo	◆	◆	◆
HAMNETSERVER2-iLo	◆	◆	◆
HP1810-24G-Switch	◆	◆	◆
LANCOM_LAB	◆	◆	◆

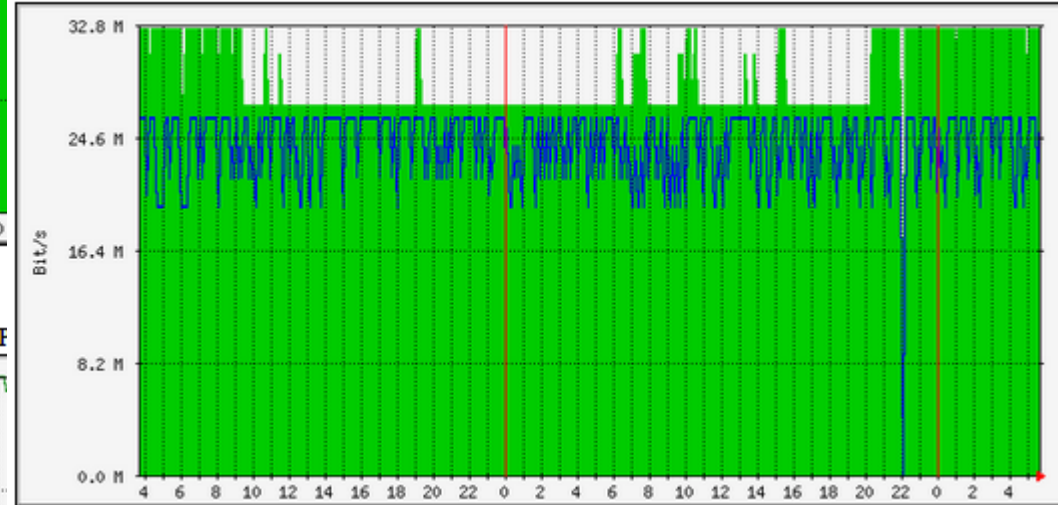
HAMNET Services: MRTG Monitoring

DEMO

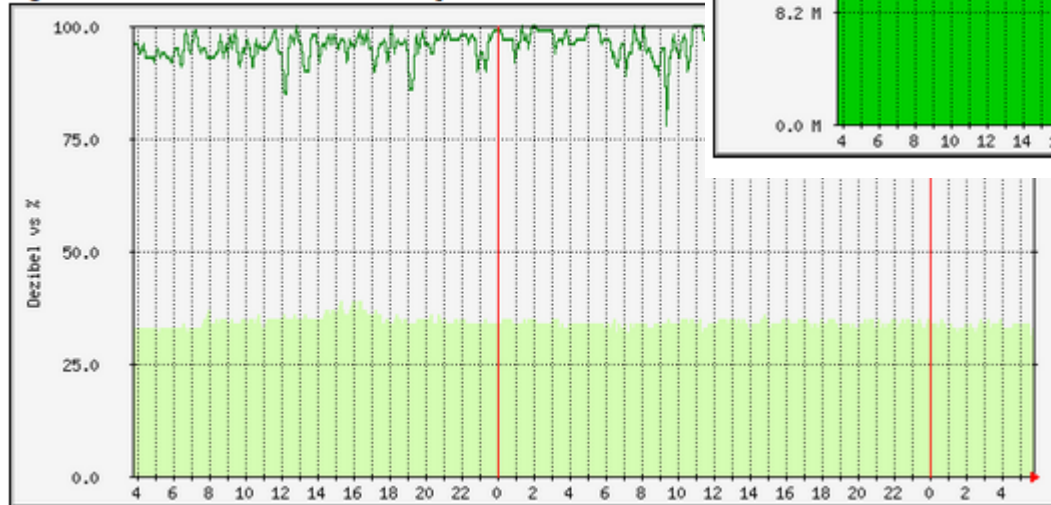
Signal-Level for a monitored Metal Router db0pas.user - User DH9RCG MAC D4-CA-6D-30-41-F7



Basic Rate TX / RX for Link DB0PAS - OE5XDO

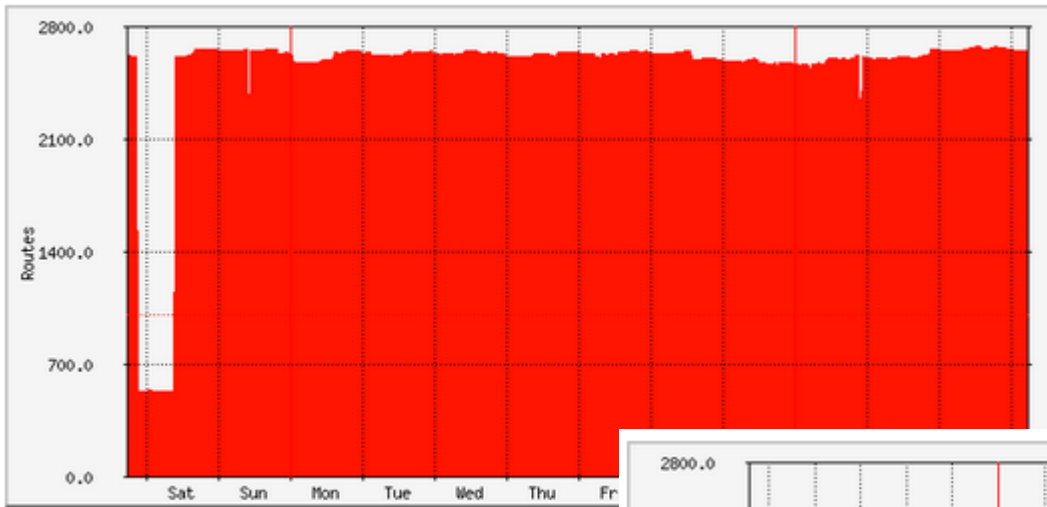


Signal Noise Ratio versus Overall TXCCQ in Percent for Link DB0F



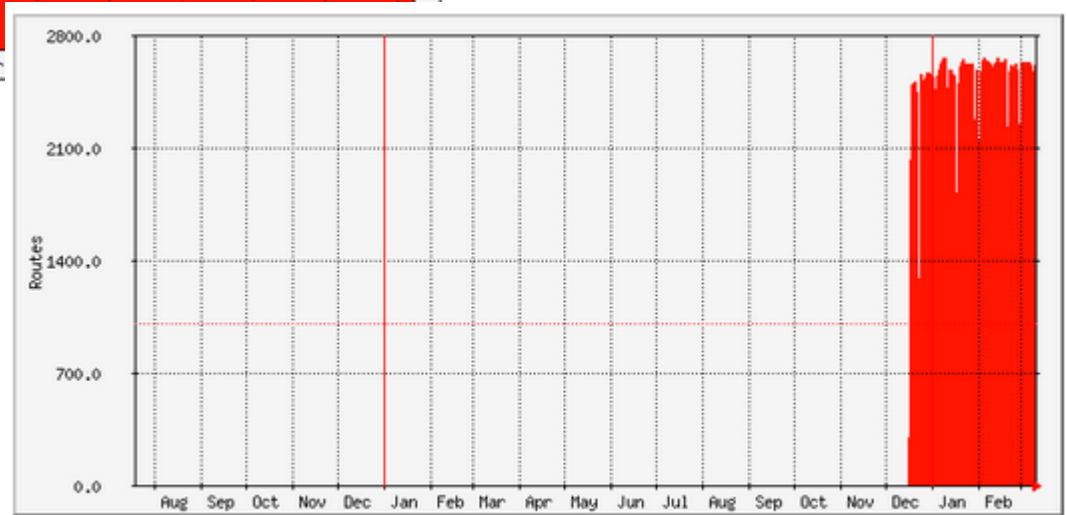
HAMNET Services: MRTG Monitoring - BGP

'Weekly' Graph (30 Minute Average)



	Max	Average	Current
sum.bgp.routes	2670.0 Routes	2526.0 Routes	2648.0 Routes

DEMO



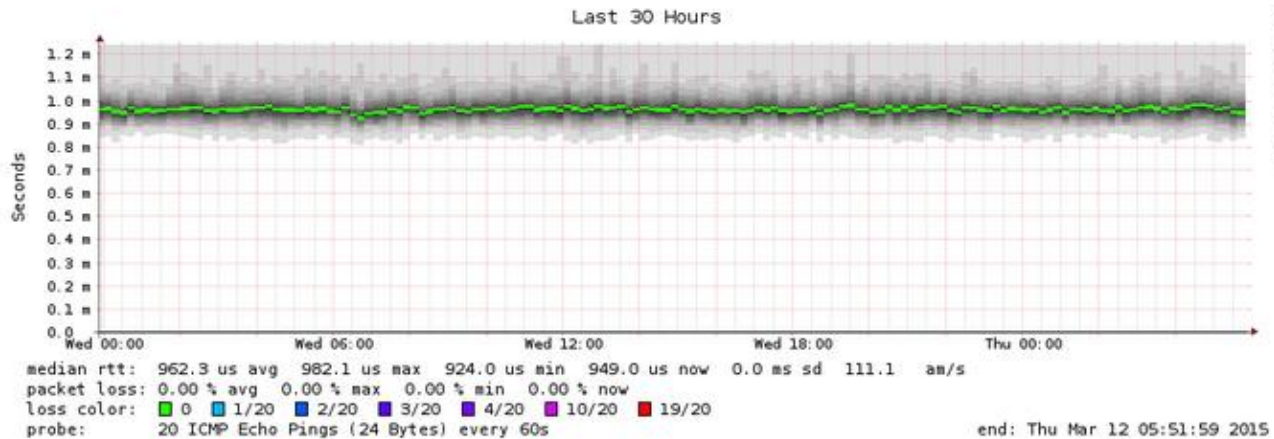
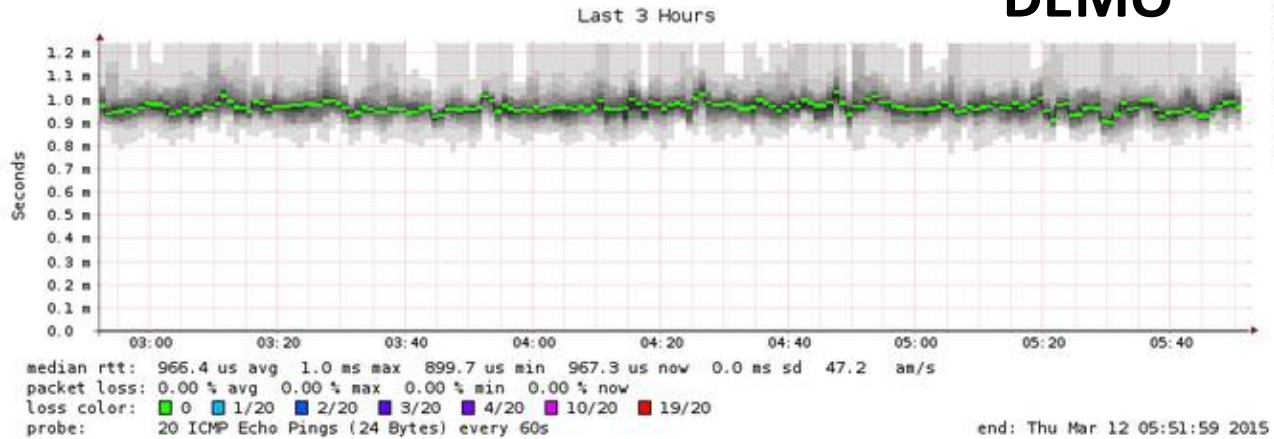
	Max	Average	Current
sum.bgp.routes	2656.0 Routes	2442.0 Routes	2611.0 Routes

HAMNET Services: SmokePing

METAL-BB-DB0TVP-DB0HUP

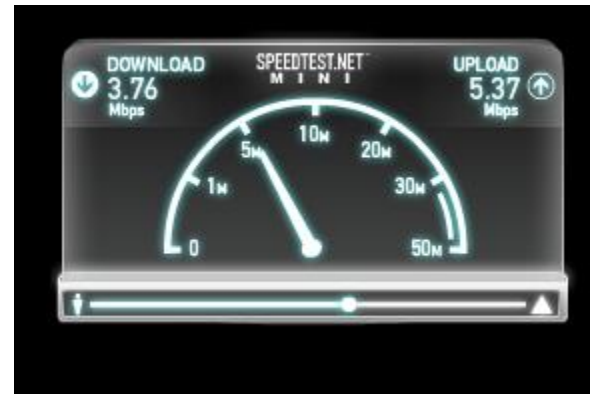
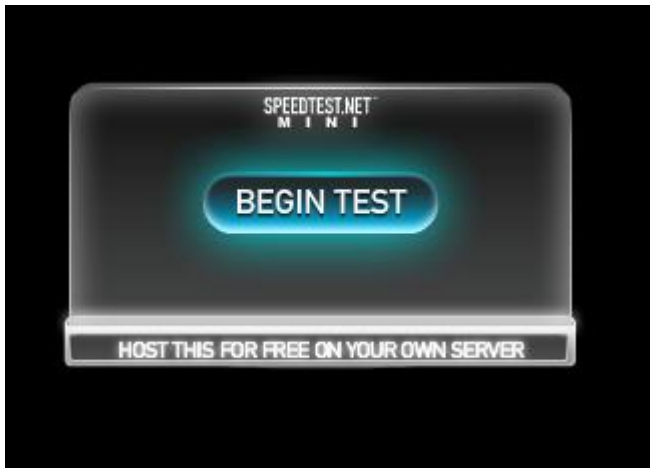


DEMO



HAMNET Services: User Speedtest ☺

- URL:
 - <http://44.225.43.132/speedtest/>
- Läuft auf RasPi
- Voraussetzung: Flash auf Client



HAMNET Services: Asterisk Monitoring

- WebGui auf RasPi



Die Daten werden automatisch alle Sekunden neu geladen.
 Letzte Aktualisierung: Sat Mar 14 2015 07:27:52 GMT+0100 (Mitteleuropäische Zeit)

User	PhoneNumber	Host	Dyn	Forcerport	ACL	Port	PeerStatus	LatencyMS	ActiveChannel	Channel	Location	ChannelStatus	Application	Data
suchen...	suchen...	suchen...	suchen...	suchen...	suchen...	10..20 =50	suchen...	10..20 =50	<input checked="" type="checkbox"/>	suchen...	suchen...	suchen...	suchen...	suchen...
DC7DS Stefan U11	3123703174	44.225.43.91	D			5062	OK	70	<input type="checkbox"/>					
DH9RCG Ull U11	314290722341	44.225.43.185	D			5062	OK	12	<input type="checkbox"/>					
DK1RWS Hans U11	315210739174	44.225.43.188	D			5060	OK	16	<input type="checkbox"/>					
DL7JP Joachim U11	3153705171	192.168.182.45	D			5064	OK	21	<input type="checkbox"/>					
DN3UA Ausb.RZ Ralf DH3WR	3162308221	44.225.57.91	D			37960	OK	330	<input type="checkbox"/>					

Rows 1-5 of 5

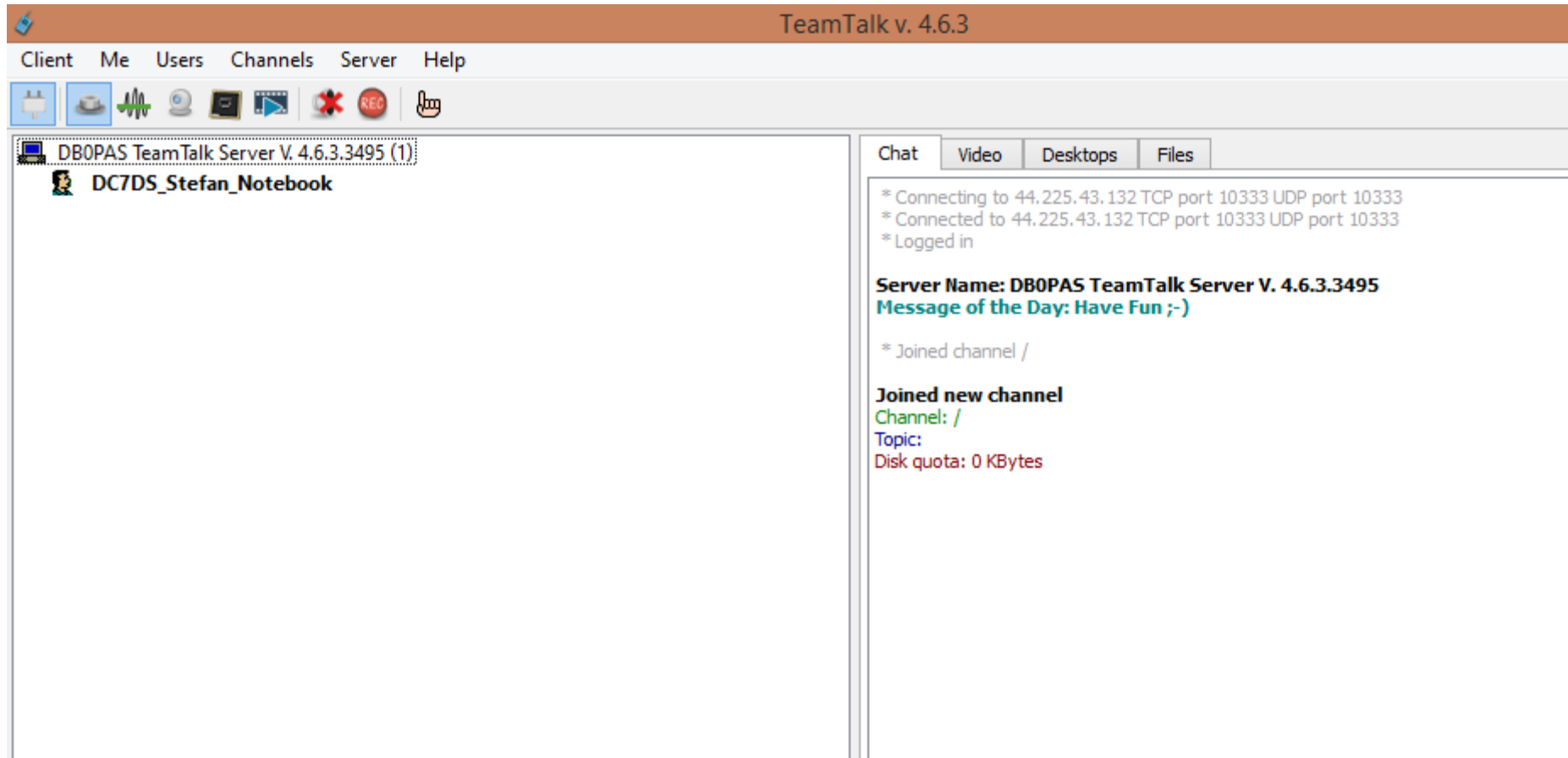
« 1 2 3 4 5 » Rows ▾ Columns ▾ □ ▴

■ ■ ■ HAMNET Services: TeamTalk (I)

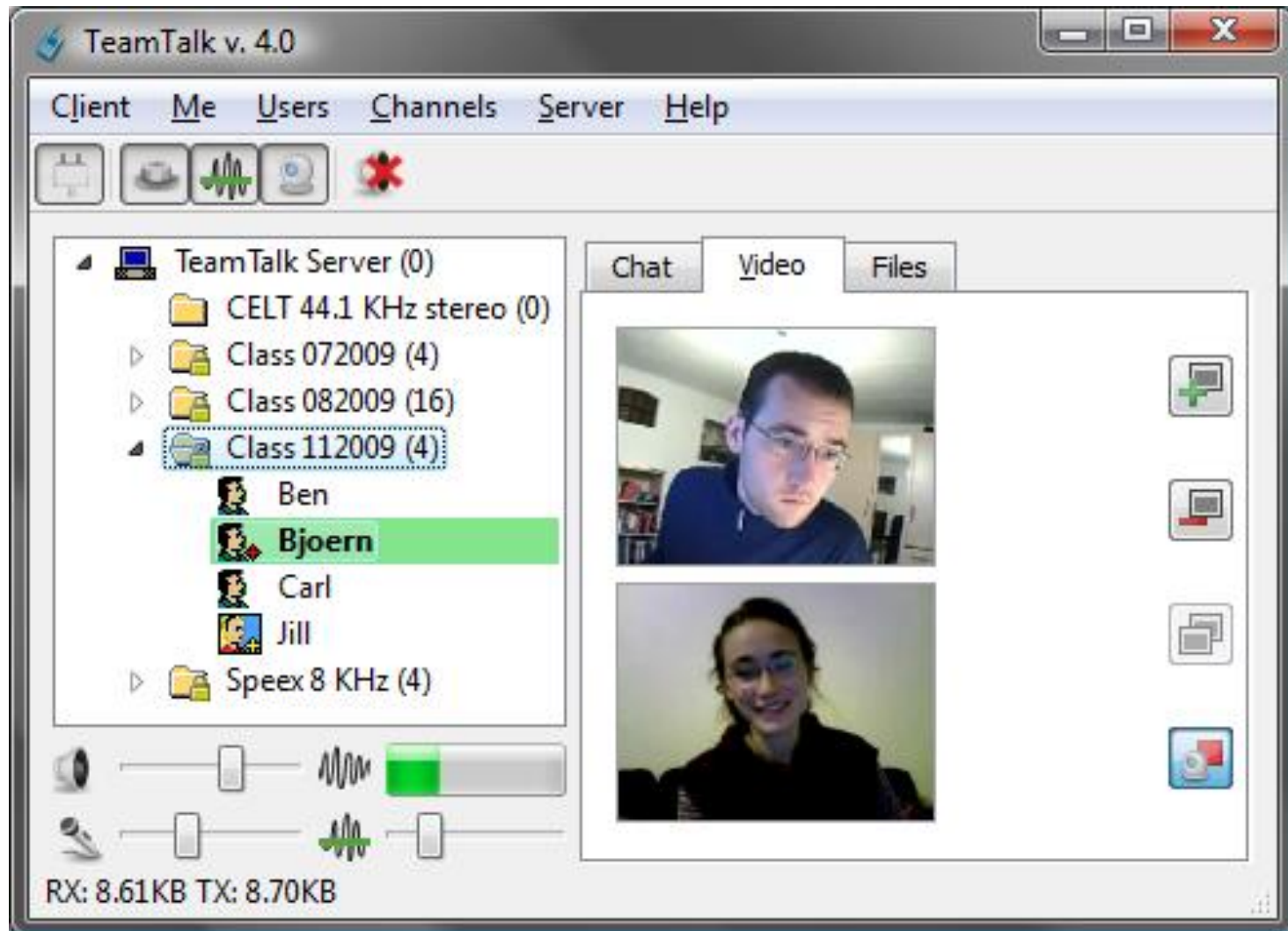
- TeamTalk Conferencing System
 - Audio und Videochat
 - Desktop Sharing
 - File Sharing
 - Client verfügbar für Windows, MAC, Linux
 - Server läuft auf ARM oder x86



HAMNET Services: TeamTalk (II)



HAMNET Services: TeamTalk (III)



HAMNET Services: TeamTalk (IV)

- Setup-Demo

```
#!/bin/sh
#LSB conform init for teamtalk server by Stefan Dambeck DC7DS
### BEGIN INIT INFO
# Provides:          teamtalkd
# Required-Start:    $local_fs
# Required-Stop:     $local_fs
# Default-Start:     2 3 4 5
# Default-Stop:      0 1 6
# Short-Description: starts and stops the teamtalkd daemon
# Description:       teamtalkd is a unified communications service
### END INIT INFO

case "$1" in
'start')
    /opt/teamtalk/server/teamtalkd -d -c /opt/teamtalk/server/tt4svc.xml -wd /opt/teamtalk/server
    ;;
'stop')
    killall teamtalkd
    ;;
'restart')
    killall teamtalkd
    /opt/teamtalk/server/teamtalkd -d -c /opt/teamtalk/server/tt4svc.xml -wd /opt/teamtalk/server
    ;;
*)
    echo "Usage: $0 { start | stop | restart}"
    ;;
esac
exit 0
```


HAMNET Services: TeamTalk (V)

- Monitoring



The screenshot shows a web browser window with the address bar containing the URL `44.225.43.132/teamtalk-global-state/index.php`. The page content displays the results of a network scan for TeamTalk servers. It includes the start and end times of the scan, followed by three entries for different TeamTalk servers, each with its IP address, port, and a table of open ports.

```
Starte Ermittlung um: 09:29:17am
Ermittlung fertig um: 09:29:48am
teamtalk4 Users DB0PAS Passau Maxhöhe Adresse: 44.225.43.132 Port 10333
teamtalk4 Users DB0HUP Universität Passau Adresse: 44.225.43.21 Port 10333
PORT      STATE SERVICE
10333/tcp open  teamtalk
teamtalk4 Users DB0HAM Hagen Adresse: db0ham.ampr.org Port 10333
PORT      STATE SERVICE
10333/tcp open  teamtalk
nickname="DB0HAM" udpaddr="44.225.125.3:57340" channel="/" channelid=1
teamtalk4 Users DB0NTV Neustadt / Donau Adresse: db0ntv.ampr.org Port 10333
PORT      STATE SERVICE
10333/tcp open  teamtalk
```

HAMNET Services: TeamTalk (VI)

- Administration

```
<?xml version="1.0" encoding="UTF-8" ?>

<!-- For those not familiar with XML, this is a comment! Each field in -->
<!-- this XML file has a description of its purpose. Note the encoding -->
<!-- used is UTF-8 so make sure you use an UTF-8 aware editor when -->
<!-- changing this file if you're using non-English characters. -->

<!-- Read the section 'Server Setup' in the SDK's documentation for a -->
<!-- complete description on how to configure the TeamTalk 4 Server. -->

<teammtalk version="4.0">
  <general>
    <file-storage>
      <!-- Directory of where to store files uploaded by users. -->
      <files-root></files-root>
      <!-- The maximum number of bytes the server can use for
      storing files. -->
      <max-diskusage>0</max-diskusage>
      <!-- The default disk quota for new channels created by
      users. -->
      <channel-diskquota>0</channel-diskquota>
    </file-storage>
  
```

Fragen?



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