[NAS] Conceptronic CH3MNAS

- Manual en inglés

Enlaces

- CH3MNAS - sucesor y sustituto de CH3SNAS
- Conceptronic CH3MNAS
- Funplug
  - Installation of the Fonz fun_plug 0.5 for CH3SNAS, CH3MNAS, DNS-323 and many more
  - HDD-Installation of the fun_plug 0.7 on NAS-devices
    - Versión “ARM” para dispositivos EABI (como el DNS-320/325/345 y CH3MNAS)
    - Versión “OABI” para dispositivos OABI (como el DNS-323 y CH3SNAS)
  - Installation of the Fonz fun_plug 0.5 for CH3SNAS, CH3MNAS, DNS-323 and many more
  - HDD-Installation of the fun_plug 0.7 on NAS-devices
  - 4k Sector Alignment auf einem Conceptronic CH3MNAS mit RAID
  - Installation des Twonkymedia Server 6 auf dem Conceptronic CH3MNAS und D-Link DNS-320, DNS-343 und DNS-325

Descripción

- Año lanzamiento: **2009** ??
- El Grab’n’GO Media Store admite dos discos duros SATA de 2 TB como máxima capacidad.
- Es un servidor NAS con una CPU de 500 MHz, que incorpora un servidor FTP (para poder acceder a los archivos a través de Internet) y utilidades de administración de derechos de acceso para proporcionar a los usuarios diferentes permisos de lectura y/o escritura en su red.
- Puede configurar el disco o discos duros del CH3MNAS en modo Standard, JBOD, RAID 0 ó RAID 1, dependiendo de si quiere dar prioridad a la seguridad, a la flexibilidad o a la rapidez.
  - Standard: Cada disco es tratado independientemente.
  - JBOD: Los dos discos se visualizan como uno solo de capacidad igual a la suma de los dos.
  - RAID 0: Los dos discos se combinan como si fueran un solo disco, semejante a JBOD, aunque mejora la velocidad tanto de escritura como lectura.
  - RAID 1: Los dos discos son un espejo uno del otro, por lo que la capacidad del RAID 1 es igual a la capacidad

del menor de ellos. Si se estropea uno siempre tendremos la misma información en el otro.

Especificaciones

- Requisitos mínimos del sistema
  - Sistema operativo del ordenador: Windows 2000; Windows XP; Windows Vista; Linux 2.6 y superior; Mac OS X 10.5 y superior
  - Formato interno de archivos: A escoger EXT2 o EXT3.
- Conexiones / interfaces
  - 1 LAN por cable (10/100/1000 Mbps); Red con cableado CAT 5E (CAT 6 recomendado)
- Características
  - Interruptor de encendido y apagado
  - Servidor Samba incorporado
  - Servidor UPnP AV incorporado
  - Servidor iTunes incorporado
  - Servidor FTP incorporado
  - Servidor de impresión incorporado
  - Actualización/comprobación de Firmware: Manual (version 1.02, 04/23/2010)
  - Refrigeración activa
  - Configuración de administración basada en web
  - Compatible con asignación de cuotas para usuarios o grupos
  - Compatibilidad de disco duro: 3,5 pulgadas
  - Compatible con descarga o copia de seguridad programada FTP/HTTP
  - Modo autosuspensión
  - Alimentación eléctrica: Externo
  - Interruptor de alimentación automático
  - Disco duro reemplazable
  - Voltaje de entrada AC 100 V - 240 V
  - Conexiones/interfaces: LAN 1000
  - Número de puertos Ethernet 1000 (LAN): 1
  - Compatibilidad con RAID: Disco individual; JBOD; RAID 0; RAID 1
  - Host USB: 1
  - USB: USB 2.0
  - Conector/tipo de disco duro: SATA
  - Dimensiones
    - Largo (en mm): 197
    - Ancho (en mm): 131
    - Alto (en mm): 101
    - Peso (en gramos): 1666

Conexión por SSH

- ```
  $ ssh remote_username@remote_host

  $ ssh -p [PUERTO] [USUARIO]@[IP-DEL-SERVIDOR]
  ```

Montaje en Linux

- Ejemplo de montaje en el Debian 11 de un recurso compartido por este NAS

  ```
  mount.cifs //192.168.1.54/Volume_1 /media/usuario/ch3mnas_1 -o
  username=pedro,password=12345,vers=1.0
  ```
  ```

donde:

- Dirección IP del NAS: `192.168.1.54`
- Recurso al que nos queremos conectar: `/Volume_1`, que es el raíz del disco 1 del NAS o del RAID que tenga.
- Lugar donde se va a montar: `/media/usuario/ch3mnas_1`
- Nombre del usuario del NAS que se quiere conectar: `pedro`
- Su contraseña: 12345
- Versión SMB: `1.0`, dado que este NAS es antiguo.

- Puede que previamente tengamos que instalar:

```
# aptitude install cifs-utils
```

Memoria

Here the output of

```
cat /proc/meminfo
```

on the Conceptronic CH3MNAS:

```
MemTotal:        61860 kB
MemFree:          3760 kB
Buffers:         18368 kB
Cached:          25940 kB
SwapCached:        220 kB
Active:          21512 kB
Inactive:        27424 kB
SwapTotal:      488336 kB
SwapFree:       486500 kB
Dirty:              20 kB
Writeback:           0 kB
AnonPages:        4624 kB
Mapped:           3948 kB
Slab:             7076 kB
SReclaimable:     4240 kB
SUnreclaim:       2836 kB
PageTables:        280 kB
NFS_Unstable:        0 kB
Bounce:              0 kB
CommitLimit:    519264 kB
Committed_AS:    17060 kB
VmallocTotal:   450560 kB
VmallocUsed:     17256 kB
VmallocChunk:   425980 kB
```

CPU

Here the output of

```
cat /proc/cpuinfo
```

on the Conceptronic CH3MNAS:

```
```

```
Processor       : ARM926EJ-S rev 0 (v5l)
BogoMIPS        : 332.59
Features        : swp half thumb fastmult edsp
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        : Feroceon
Revision        : 0000
Serial          : 0000000000000000
```

dmseg

Here the output of dmesg on the Conceptronic CH3MNAS.

```
Linux version 2.6.22.7 (eve@SWTEST1) (gcc version 3.4.4 (release) (CodeSourcery ARM
2005q3-2)) #85 Thu Mar 26 09:48:50 CST 2009
CPU: ARM926EJ-S [41069260] revision 0 (ARMv5TEJ), cr=a0053177
Machine: Feroceon
Using UBoot passing parameters structure
Memory policy: ECC disabled, Data cache writeback
On node 0 totalpages: 16384
  DMA zone: 128 pages used for memmap
  DMA zone: 0 pages reserved
  DMA zone: 16256 pages, LIFO batch:3
  Normal zone: 0 pages used for memmap
CPU0: D VIVT write-back cache
CPU0: I cache: 32768 bytes, associativity 1, 32 byte lines, 1024 sets
CPU0: D cache: 32768 bytes, associativity 1, 32 byte lines, 1024 sets
Built 1 zonelists.  Total pages: 16256
Kernel command line: root=/dev/ram console=ttyS0,115200 :::DB88FXX81:egiga0:none
PID hash table entries: 256 (order: 8, 1024 bytes)
Console: colour dummy device 80x30
Dentry cache hash table entries: 8192 (order: 3, 32768 bytes)
Inode-cache hash table entries: 4096 (order: 2, 16384 bytes)
Memory: 64MB 0MB 0MB 0MB = 64MB total
Memory: 53168KB available (2880K code, 190K data, 124K init)
Calibrating delay loop... 332.59 BogoMIPS (lpj=1662976)
Mount-cache hash table entries: 512
CPU: Testing write buffer coherency: ok
NET: Registered protocol family 16
Sys Clk = 166666667, Tclk = 166666667
```

```
CPU Interface
-------------
SDRAM_CS0 ....base 00000000, size  64MB
SDRAM_CS1 ....disable
SDRAM_CS2 ....disable
SDRAM_CS3 ....disable
PEX0_MEM ....base e0000000, size 128MB
PEX0_IO ....base f2000000, size   1MB
PCI0_MEM ....base e8000000, size 128MB
PCI0_IO ....base f2100000, size   1MB
INTER_REGS ....base f1000000, size   1MB
DEVICE_CS0 ....no such
DEVICE_CS1 ....no such
DEVICE_CS2 ....no such
DEV_BOOCS ....base ff000000, size  16MB
CRYPT_ENG ....base f0000000, size  64KB

  Marvell Development Board (LSP Version 3.0.5_NAS_GDP)-- RD-88F5182-NAS-2  Soc: 88F5182 A2

 Detected Tclk 166666667 and SysClk 166666667
Marvell USB EHCI Host controller #0: c1072600
Marvell USB EHCI Host controller #1: c1072400
PCI: bus0: Fast back to back transfers enabled
SCSI subsystem initialized
usbcore: registered new interface driver usbfs
usbcore: registered new interface driver hub
usbcore: registered new device driver usb
NET: Registered protocol family 2
Time: orion_clocksource clocksource has been installed.
IP route cache hash table entries: 1024 (order: 0, 4096 bytes)
TCP established hash table entries: 2048 (order: 2, 16384 bytes)
TCP bind hash table entries: 2048 (order: 1, 8192 bytes)
TCP: Hash tables configured (established 2048 bind 2048)
TCP reno registered
checking if image is initramfs...it isnt (no cpio magic); looks like an initrd
Freeing initrd memory: 8503K
RTC registered
Use the XOR engines (acceleration) for enhancing the following functions:
  o RAID 5 Xor calculation
  o kernel memcpy
  o kenrel memzero
  o copy user to/from kernel buffers
Number of XOR engines to use: 2
VFS: Disk quotas dquot_6.5.1
Dquot-cache hash table entries: 1024 (order 0, 4096 bytes)
squashfs: version 3.3 (2007/10/31) Phillip Lougher
io scheduler noop registered
io scheduler anticipatory registered (default)
Serial: 8250/16550 driver $Revision: 1.1.1.1 $ 4 ports, IRQ sharing disabled
serial8250.0: ttyS0 at MMIO 0xf1012000 (irq = 3) is a 16550A
serial8250.0: ttyS1 at MMIO 0xf1012100 (irq = 4) is a 16550A
RAMDISK driver initialized: 2 RAM disks of 14336K size 1024 blocksize
loop: module loaded
Marvell Ethernet Driver 'mv_ethernet':
  o Uncached descriptors in DRAM
  o DRAM SW cache-coherency
  o TCP segmentation offload enabled
  o Checksum offload enabled
  o Marvell ethtool proc enabled
  o Rx desc: 128
  o Tx desc: 256
  o Loading network interface 'egiga0'
```

```
PPP generic driver version 2.4.2
PPP Deflate Compression module registered
PPP BSD Compression module registered
PPP MPPE Compression module registered
NET: Registered protocol family 24
Intergrated Sata device found
scsi0 : Marvell SCSI to SATA adapter
scsi1 : Marvell SCSI to SATA adapter
scsi 0:0:0:0: Direct-Access     SAMSUNG  HD203WI          1AN1 PQ: 0 ANSI: 5
scsi 1:0:0:0: Direct-Access     SAMSUNG  HD203WI          1AN1 PQ: 0 ANSI: 5
scsi 0:0:0:0: Attached scsi generic sg0 type 0
scsi 1:0:0:0: Attached scsi generic sg1 type 0
physmap-flash.0: failed to claim resource 0
flash VppMin = "0" , VppMax = "0"
cfi_flash_0: Found 1 x16 devices at 0x0 in 8-bit bank
 Amd/Fujitsu Extended Query Table at 0x0040
cfi_flash_0: CFI does not contain boot bank location. Assuming top.
number of CFI chips: 1
cfi_cmdset_0002: Disabling erase-suspend-program due to code brokenness.
Creating 6 MTD partitions on "cfi_flash_0":
0x00000000-0x00020000 : "MTD1"
0x00020000-0x00040000 : "MTD2"
0x00040000-0x00240000 : "Linux Kernel"
0x00240000-0x00c40000 : "File System"
0x00f80000-0x01000000 : "u-boot"
0x00c40000-0x00f80000 : "Module"
ehci_marvell ehci_marvell.4523: Marvell Orion EHCI
ehci_marvell ehci_marvell.4523: new USB bus registered, assigned bus number 1
ehci_marvell ehci_marvell.4523: irq 17, io base 0xf1050100
ehci_marvell ehci_marvell.4523: USB 2.0 started, EHCI 1.00, driver 10 Dec 2004
usb usb1: configuration #1 chosen from 1 choice
hub 1-0:1.0: USB hub found
hub 1-0:1.0: 1 port detected
ehci_marvell ehci_marvell.167817: Marvell Orion EHCI
ehci_marvell ehci_marvell.167817: new USB bus registered, assigned bus number 2
ehci_marvell ehci_marvell.167817: irq 12, io base 0xf10a0100
ehci_marvell ehci_marvell.167817: USB 2.0 started, EHCI 1.00, driver 10 Dec 2004
usb usb2: configuration #1 chosen from 1 choice
hub 2-0:1.0: USB hub found
hub 2-0:1.0: 1 port detected
ohci_hcd: 2006 August 04 USB 1.1 'Open' Host Controller (OHCI) Driver
mice: PS/2 mouse device common for all mice
md: linear personality registered for level -1
md: raid0 personality registered for level 0
md: raid1 personality registered for level 1
device-mapper: ioctl: 4.11.0-ioctl (2006-10-12) initialised: dm-devel@redhat.com
TCP cubic registered
NET: Registered protocol family 1
NET: Registered protocol family 17
md: Autodetecting RAID arrays.
md: autorun ...
md: ... autorun DONE.
RAMDISK: Compressed image found at block 0
EXT2-fs warning: maximal mount count reached, running e2fsck is recommended
VFS: Mounted root (ext2 filesystem).
Freeing init memory: 124K
usb 1-1: new high speed USB device using ehci_marvell and address 2
usb 1-1: configuration #1 chosen from 1 choice
sd 0:0:0:0: [sda] 3907029168 512-byte hardware sectors (2000399 MB)
sd 0:0:0:0: [sda] Write Protect is off
```

```
sd 0:0:0:0: [sda] Mode Sense: 23 00 10 00
sd 0:0:0:0: [sda] Write cache: enabled, read cache: enabled, supports DPO and FUA
sd 0:0:0:0: [sda] 3907029168 512-byte hardware sectors (2000399 MB)
sd 0:0:0:0: [sda] Write Protect is off
sd 0:0:0:0: [sda] Mode Sense: 23 00 10 00
sd 0:0:0:0: [sda] Write cache: enabled, read cache: enabled, supports DPO and FUA
 sda: sda1 sda2 sda4
sd 0:0:0:0: [sda] Attached SCSI disk
sd 1:0:0:0: [sdb] 3907029168 512-byte hardware sectors (2000399 MB)
sd 1:0:0:0: [sdb] Write Protect is off
sd 1:0:0:0: [sdb] Mode Sense: 23 00 10 00
sd 1:0:0:0: [sdb] Write cache: enabled, read cache: enabled, supports DPO and FUA
sd 1:0:0:0: [sdb] 3907029168 512-byte hardware sectors (2000399 MB)
sd 1:0:0:0: [sdb] Write Protect is off
sd 1:0:0:0: [sdb] Mode Sense: 23 00 10 00
sd 1:0:0:0: [sdb] Write cache: enabled, read cache: enabled, supports DPO and FUA
 sdb: sdb1 sdb2 sdb4
sd 1:0:0:0: [sdb] Attached SCSI disk
usbcore: registered new interface driver usblp
drivers/usb/class/usblp.c: v0.13: USB Printer Device Class driver
Installing knfsd (copyright (C) 1996 okir@monad.swb.de).
egiga0: mac address changed
egiga0: link down
Adding 530104k swap on /dev/sda1.  Priority:-1 extents:1 across:530104k
Adding 530104k swap on /dev/sdb1.  Priority:-2 extents:1 across:530104k
egiga0: link up, full duplex, speed 1 Gbps
ext3: No journal on filesystem on sda4
EXT2-fs warning: mounting unchecked fs, running e2fsck is recommended
ext3: No journal on filesystem on sdb4
EXT2-fs warning: mounting unchecked fs, running e2fsck is recommended
ext3: No journal on filesystem on sda2
EXT2-fs warning: mounting unchecked fs, running e2fsck is recommended
ext3: No journal on filesystem on sdb2
EXT2-fs warning: mounting unchecked fs, running e2fsck is recommended
ext3: No journal on filesystem on sda2
EXT2-fs warning: mounting unchecked fs, running e2fsck is recommended
ext3: No journal on filesystem on sdb2
EXT2-fs warning: mounting unchecked fs, running e2fsck is recommended
ext3: No journal on filesystem on sda4
EXT2-fs warning: mounting unchecked fs, running e2fsck is recommended
ext3: No journal on filesystem on sdb4
EXT2-fs warning: mounting unchecked fs, running e2fsck is recommended
```

Información para fun-plug

- Application binary interface: EABI
- ...