

ReadyNAS Recovery

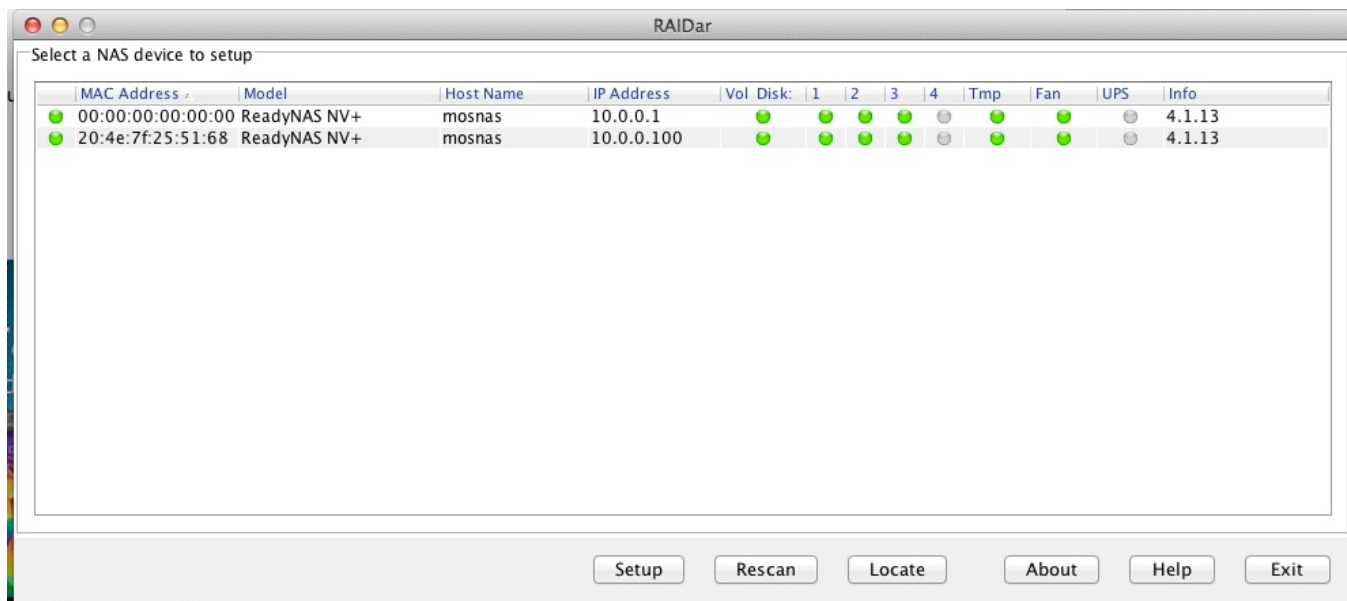
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Cause

I tried to install OpenVPN, and made a config error in server.conf, so after start of the "OpenVPN" service, I lost connection

Afterwards for every boot, the ReadyNAS got 2 IP Addresses and was non-responding on both - even though I could ping one (10.0.0.100) until OpenVPN Started...so I was pretty sure this was "just" a config issue.

In RAIDar, It looked like this:



Failed recovery Attempts

I tried OS Reinstall via the built-in function, but the problem was still there (which I find pretty wierd)

I tried USB Boot that kept on failing with "OS Index Error" on several USB Sticks.

The Solution

I googled and found <http://onlyblueatwork.wordpress.com/2012/12/04/netgear-readynas-access-recovery/>

I booted the ReadyNAS in "Tech Support" mode and used Telnet go enter:

Username: root

Password: infr8ntdebug

Now, there are 2 interesting things, 1 - the OS Partiton and 2 - The Data partition

1 - OS Partiton

The googled article refers to "mdadm" - with was not on my NAS (Raidar 4.1.13), after a lot of trial-and-error, I got the raid started:

```
# ./start_raid.sh
# cat /proc/xraid/configuration
VERSION/ID::superblock=(0.1.0),ID=7f255168.00000000.00000000.00000000,create_time=4f873c3e
RAID_INFO::disks_total=3,raid_disks=3,parity_disk=2,disks_online=3,disks_working=3,disks_failed=0,spare_disk=0,
base_disk=0,size=3907008688,update_time=00000000,state=0,luns=2,extcmd=1,expandable_bitmap=0x0,lsize=3907008686,
drive_present=0x7
LOGICAL_DRIVE:0:begin_sector=32,sectors=4096000,raid_level=1,status=redundant,initialized=1,dmap=7
LOGICAL_DRIVE:1:begin_sector=4096032,sectors=3902912686,raid_level=X,status=redundant,initialized=1,dmap=7
PHYSICAL_DRIVE:0:number=0,device=hdc,major=22,minor=0,raid_id=0,state=online,present=1,size=3907008688,
r_model=ST2000DL003-9VT166,r_size=3907008688,r_fw=CC3C
PHYSICAL_DRIVE:1:number=1,device=hde,major=33,minor=0,raid_id=1,state=online,present=1,size=3907008688,
r_model=ST2000DL003-9VT166,r_size=3907008688,r_fw=CC3C
PHYSICAL_DRIVE:2:number=2,device=hdg,major=34,minor=0,raid_id=2,state=online,present=1,size=3907008688,
r_model=ST2000DL003-9VT166,r_size=3907008688,r_fw=CC3C
RUN_PARAMETERS::raid_running=1,last_word=ok,interface_start_at=1,fake=0
RAID_REBUILD::sync=0,logical=0,parity=2,sectors=0,total=4294967295,source=7,total_drives=3,auto_sync=1
RAID_P_CHECK::chck=0,current_lun=0,total_luns=2,raid_level=0,err=0,current_sector=0,total_sectors=0,report_err=1
RAID_P_INIT::initialized_bitmap=0x7,initialize_error_bitmap=0x0,initializing_bitmap=0x0,current_sector=0,
total_sector=0
```

The "mdconfig" binary on the ReadyNAS was not very verbose, but try to use "DMESG" for some output". The output above stated that the X-RAID is fine.

Here after, It should be possible to mount the OS Partition as:

```
# mkdir /mnt /mnt/root
# mount /dev/md0 /mnt/root
```

but that fails, so I did a (in the DMESG output I could determine the physical disks as /dev/hdc /dev/hde /dev/hdg):

```
# mount /dev/hdc1 /mnt/root
# rm /mnt/root/etc/openssl
```

I was a bit concerned about changing directly on /dev/hdc ...

After the simple removal of the OpenVPN Startup I did a reboot and - Ta Da - everything was ok again - Due to OS Reinstall I had lost some settings (backup settings was gone).

1 - Data Partition

To Access the data:

```
# lvm lvdisplay
--- Logical volume ---
LV Name                /dev/c/c
VG Name                c
LV UUID                fmjd5B-7MXl-Ukqp-9B1T-UvFO-GQLV-8ZbSsj
LV Write Access        read/write
LV Status              NOT available
LV Size                3.63 TB
Current LE             118930
Segments              2
Allocation              inherit
Read ahead sectors    0
# lvm lvchange -a y /dev/c/c
# mount /dev/c/c /mnt/lvm
# cd /mnt/lvm
# ls -l
drwxrwxrwx    2 65534    65534    16384 Temp
drwxrwxrwx   12 65534    65534    16384 public
drwxr-xr-x    3 0        0      16384 recovery
drwxrwxrwx    6 65534    65534    16384 develop
drwxrwxrwx   14 65534    65534    16384 media
-rw-----    1 0        0      8192 aquota.group
drwxr-xr-x    6 98       98      16384 home
drwx-----    2 0        0      16384 lost+found
-rw-----    1 0        0      8192 aquota.user
drwxrwxrwx   13 65534    65534    16384 backup
#
```

Links

http://kb.netgear.com/app/answers/detail/a_id/24874

Unofficial Recovery: <http://home.bott.ca/webserver/?p=159>

Boot menu access: http://kb.netgear.com/app/answers/detail/a_id/24874

After Power Off

Button to Hold	Time to Hold	LED flashes	Boot Menu Mode
Power	5 seconds	1	Skip Volume Check
Power	10 seconds	2	TFTP Boot
Power	15 seconds	3	Tech Support Mode
Power	20 seconds	4	USB Boot
Power	25 seconds	5	Memory Test
Reset	5 seconds	1	OS Re-install
Reset	30 seconds	2	Factory Default

Ref: http://kb.netgear.com/app/answers/detail/a_id/24874

Files

[RAIDiator-V4.1.13.zip](#)

[x86_flash_recovery.zip](#)