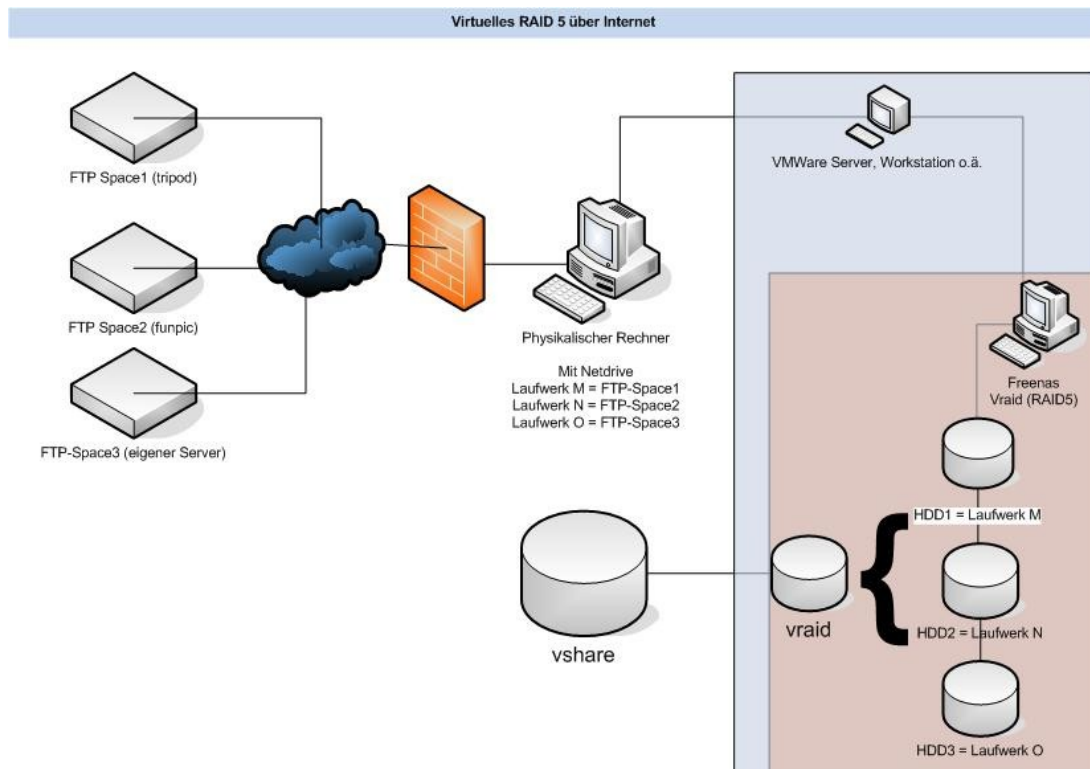


virtual Raid5 over Internet with NetDrive, FreeNAS and VMWare

There should be a VMWare machine with FreeNAS and in there are 3 HDD's for the RAID. These HDDs are coming from Free FTP-Sites on the Internet and there will be connected via NetDrive (from Novell, free download).

So the RAID5 is spread over the Internet, but vault tolerant and could be secured (e.g. TrueCrypt or anything else).

Construction:



Procedure:

- FTP Accounts config - tripod.de (1GB je Account); lima-city.de (unbegrenzt?);
- Netdrive (or alternative as web drive or the like) install and tie FTP sites
- Installing VMWare authority with Freenas
- Tying disk drives
- Software Raid in the FreeNAS configure
- Connecting disk drive with the local computer

FTP either by establish a FTP server of one's own (e.g. Filezilla). Free Webspace with a FTP upload FTP suppliers (most) gives sufficiently.

Netdrive is needed for the local connection (local drive mapping).

The following URL you can download the NetDrive program:

<http://support.novell.com/servlet/filedownload/uns/pub/ndrv41862.exe>.

I have alternatively got it under <http://forum.fh-hannover.de/archives/index.php/t4865th.HTML>.

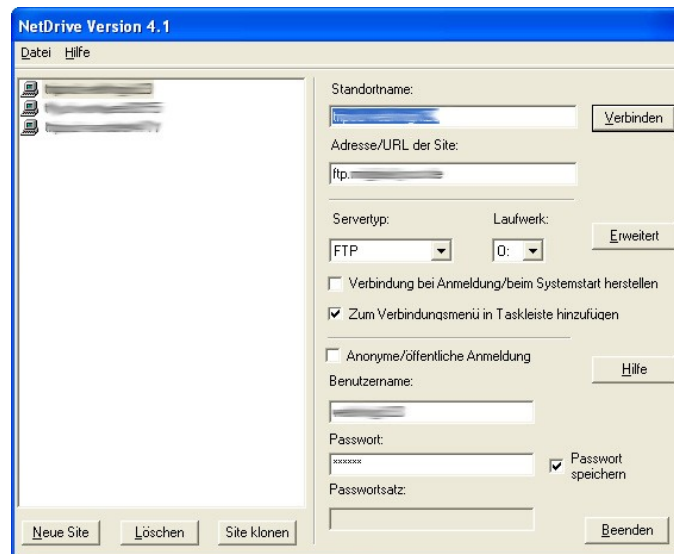
Background: Proof Of Concept – A virtual RAID5 system can be built up Proof of Concept -- without software costs without costs. This hard disk is relatively fail-safe by the RAID5 (failure safety) and one also can lay out a Truecrypt container here (data security). This vraid5 can be used as a backup disk drive when sure data logger on the Internet or as a mobile data filing distributes locations for. Even additional options arise about that to end by iSCSI support and rsync options of the Freenas. Establishing FTP accounts. One finds a list with suppliers free Webspaces among others under <http://www.informationsarchiv.net/foren/beitrag-31769th.HTML>
All Ressources are Free available on the Internet!

Sources:

- FTP-Sites: see www.tripod.de, www.lima-city.de or others
- NetDrive: <http://www.pcwelt.de/downloads/heft-cd/05-05/109253/> or <http://www.fh-hannover.de/de/rz/service/software/downloads/> or <http://www.boku.ac.at/zid-netdrive.html> or others.
- VMWare (Server): <http://www.vmware.com/products/server/>
- FreeNAS: <http://www.freenas.org> .

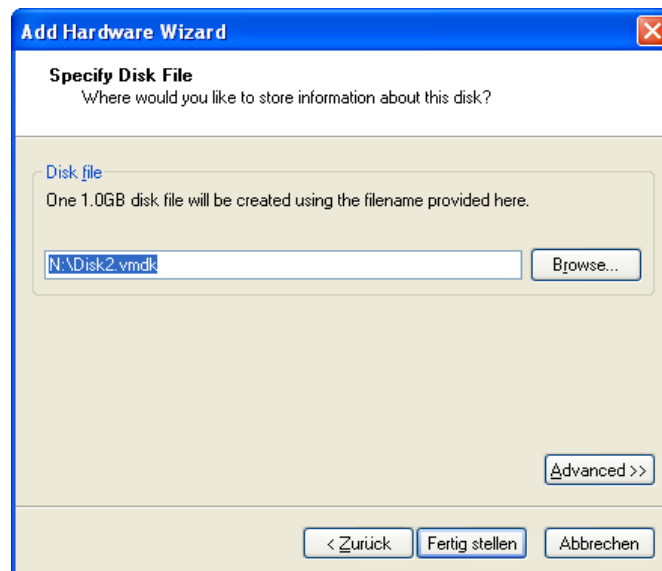
The Doing:

After laying out the accounts this comes "to connect" the FTP sites by Netdrive:

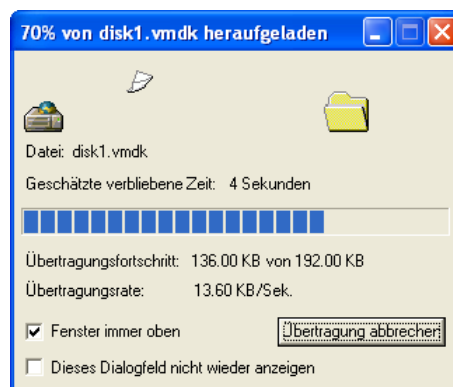


After this the FTP sites are within the Explorer and available under driveletters (others as in GMailFS). One can already work on this here now.
But I would go the steps further...

Making a virtual disk in **VMWare** (You could download the free Server, additional Tools to build VM-Containers ar available also from 3rd Party) on the NetDrive mapped Drives:



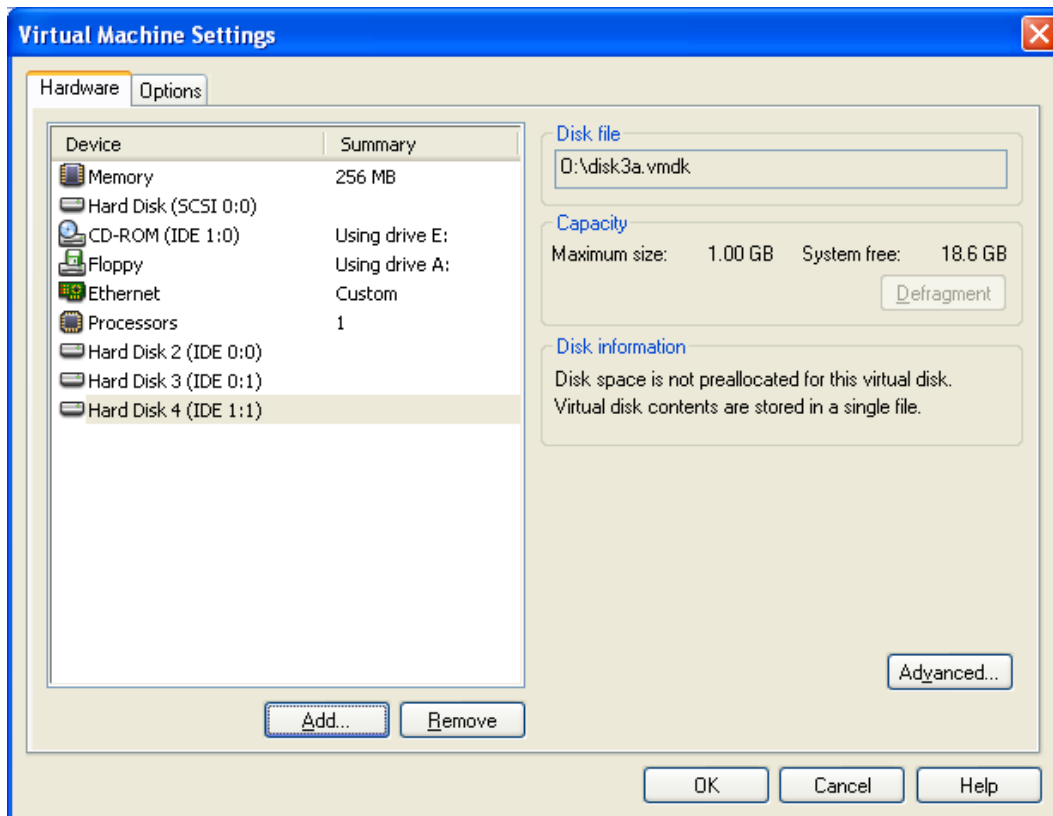
Laying out the vmdks actually can last for some time depending on FTP connection speed.



Making the VM after this or amending a prefabricated one correspondingly.

For **Freenas** (see www.freenas.org) becomes merely an image of approx. 100 MB required of (64 MB minimum).

After this the three local disk drives are tied.



To the Freenas of CD (ISO) in the VMWare boots and open HDD (the approx. 100-200 MB local) install.
Tying the three tied disk drives as Raid 5 after this.

- System
 - General
 - Advanced
 - Static Routes
 - Hosts
 - Packages
 - Firmware
 - Backup/Restore
 - Factory Defaults
 - Reboot
 - Shutdown
- Interfaces
 - Management
 - LAN
- Disks
 - Management
 - Software RAID
 - Encryption
 - Format
 - Mount Point
- Services
 - CIFS/SMB
 - FTP
 - SSH
 - NFS
 - AFP
 - RSYNCD
 - Unison
 - iSCSI Target
 - UPnP
 - Dynamic DNS
 - SNMP

Disks: Management: Disk: Add

Management
iSCSI Initiator

Disk	<input type="text" value="ad0: 1024MB (VMware Virtual IDE Hard Drive/00000001)"/> <ul style="list-style-type: none"> ad0: 1024MB (VMware Virtual IDE Hard Drive/00000001) ad1: 1024MB (VMware Virtual IDE Hard Drive/00000001) ad3: 1024MB (VMware Virtual IDE Hard Drive/00000001) da0: 512000MB (VMware, VMware Virtual S 1.0) acd0: NA (VMware Virtual IDE CDROM Drive/00000001)
UDMA mode	<input type="text" value=""/> <p><small>message with your hard</small></p>
Hard disk standby time	<input type="text" value="Always on"/> <p><small>Puts the hard disk into standby mode when the selected amount of time after the last access has elapsed. Do not set this for CF cards.</small></p>
Advanced Power Management	<input type="text" value="Disabled"/> <p><small>This allows you to lower the power consumption of the drive, at the expense of performance. Do not set this for CF cards.</small></p>
Acoustic level	<input type="text" value="Disabled"/> <p><small>This allows you to set how loud the drive is while it's operating. Do not set this for CF cards.</small></p>
Preformatted FS	<input type="text" value="Unformatted"/> <p><small>This allows you to set FS type for preformatted disk with data. Leave 'unformatted' for unformatted disk and then use format menu.</small></p>

Disks: Management

Management **iSCSI Initiator**

Disk	Size	Description	Standby time	File system	Status	
ad0	1024MB	VMware Virtual IDE Hard Drive/00000001	Always on	SoftRaid	ONLINE	<input type="button" value="e"/> <input type="button" value="x"/>
ad1	1024MB	VMware Virtual IDE Hard Drive/00000001	Always on	SoftRaid	ONLINE	<input type="button" value="e"/> <input type="button" value="x"/>
ad3	1024MB	VMware Virtual IDE Hard Drive/00000001	Always on	SoftRaid	ONLINE	<input type="button" value="e"/> <input type="button" value="x"/>

Note:
First configuration step: Add your harddrive to the disk list.

Connecting Raid in the menu point software to a disk drive together.

System

- General
- Advanced
- Static Routes
- Hosts
- Packages
- Firmware
- Backup/Restore
- Factory Defaults
- Reboot
- Shutdown

Interfaces

- Management
- LAN

Disks

- Management
- Software RAID
- Encryption
- Format
- Mount Point

Disks: Geom Raid5: Manage RAID

JBOD RAID 0 RAID 1 **RAID 5** Geom Vinum (unstable)

Manage RAID Tools Information



The Raid configuration has been changed.
You must apply the changes in order for them to take effect.

Apply changes

Volume Name	Type	Size	Status
vraid	5	Configuring	Configuring



Note:

Optional configuration step: Configuring a virtual RAID disk using your [previously configured disk](#).
Wait for the 'COMPLETE' status before format and mount it!

And putting the Mountpoint after this.

System

- General
- Advanced
- Static Routes
- Hosts
- Packages
- Firmware
- Backup/Restore
- Factory Defaults
- Reboot
- Shutdown

Interfaces

- Management
- LAN

Disks

- Management
- Software RAID

Disks: Mount Point: Management

Management Tools Fsck

Disk	File system	Name	Description	Status
/dev/raid5/vraidp1	ufs	vraidvol		OK



Note:

Second configuration step: Declaring the filesystem used by your [previously configured disk](#).

Warning:

UFS and variants are the NATIVE file format for FreeBSD (the underlying OS of FreeNAS). Attempting to use other file formats such as FAT, FAT32, EXT2, EXT3, or NTFS can result in unpredictable results, file corruption, and loss of data!


Still activating CIFS/samba after this so that the disk drive can be tied under Windows.

System

- General
- Advanced
- Static Routes
- Hosts
- Packages
- Firmware
- Backup/Restore
- Factory Defaults
- Reboot
- Shutdown
- Interfaces**
- Management

Services: CIFS/SMB: Shares

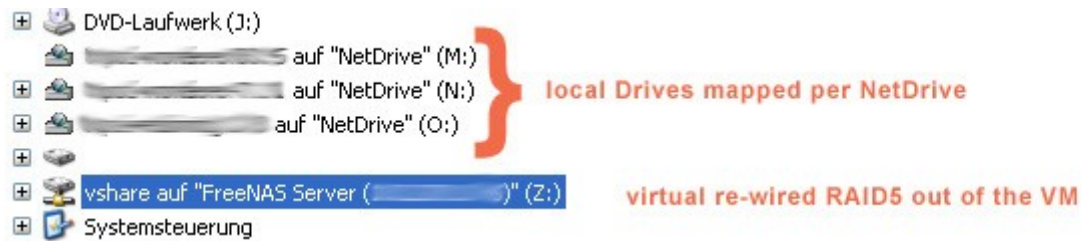
Settings Shares

 The changes have been applied successfully.

Path	Name	Comment	Browseable
/mnt/vraidvol/	vshare	virtual share	Yes



After this one can connect with network disk drive: \\ <ip-adresse der VM mit Freenas>/<share> on the disk drive grasp it.



Please send suggestions a message in case of questions, suggestions, opinions, to wonderer4711 @ gmx.de. I hope so helps.