

openfiler

Installation and Configuration Guide V 1.0

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<u>About</u>

Openfiler is an operating system that provides file-based network-attached storage and blockbased storage area network.

- Unified Storage
- NAS Features CIFS, NFS, HTTP
- SAN Features iSCSI, FC
- High Availability / Failover
- Block Replication (LAN & WAN)
- Web-Based Management
- Cost-free Storage Capacity Expansion

Openfiler addresses all the key data storage concerns:

Reliability - Openfiler supports both software and hardware RAID with monitoring and alert facilities; volume snapshot and recovery

Availability - Openfiler supports active/passive high availability clustering, MPIO, and block level replication

Performance - Linux 2.6 kernel supports the latest CPU, networking and storage hardware **Scalability** - filesystem scalability to 60TB+, online filesystem and volume growth support

VM Configuration used in this guide

Guest OS :	Linux Mint 17.3 Cinnamon 64bit	username : enigma
VirtualBox :	5.1.30	password : !@root123
RAM :	4GB/6GB	
OpenFiler :	2.99.1	
VDI Space / Storage :	30GB	

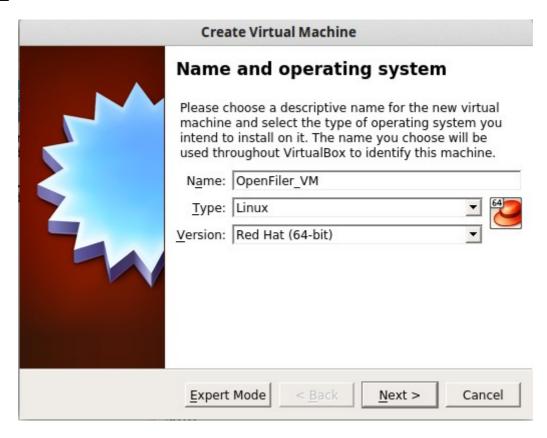
Guest OS :		username : openfiler
VirtualBox :	5.1.30	passwd : password
RAM :		root username : root
VDI Space / Storage :	15GB	root password : !@Ilg007su

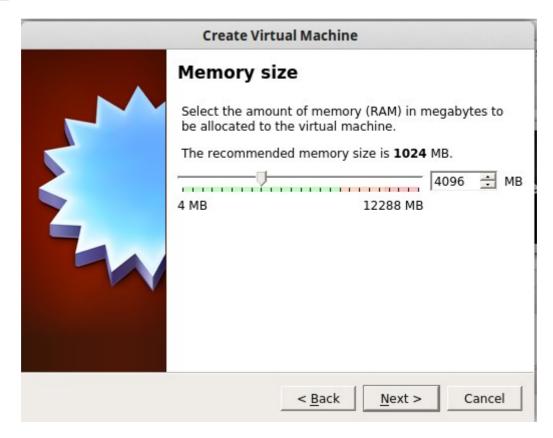
Installation

<u>Step 1</u>: Click on New and follow the steps ahead.

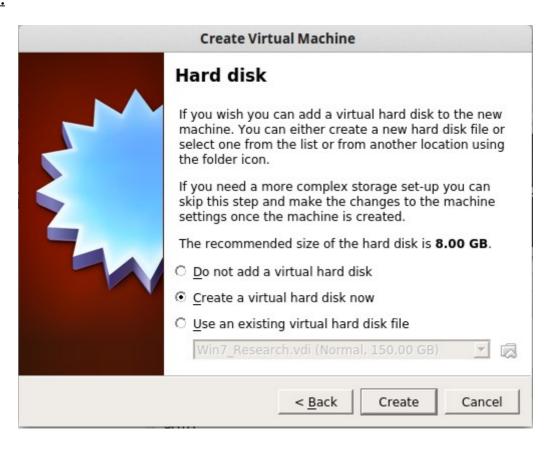
0 0 0	Oracle VM VirtualBox Manager	
ile <u>M</u> achine <u>H</u> elp		
New Settings Discard Start	•	😵 Details 💿 Snapshots
Win7_Research	🧧 General	📃 Preview
77 🕐 Powered Off	Name: Win7_Research	
Mint_Learn Powered Off	Operating System: Windows 7 (64- bit)	
CentOS7_Learn Powered Off	🔝 System	Win7_Research
	Base Memory: 4096 MB Boot Order: Floppy, Optical, Hard Disk Acceleration: VT-x/AMD-V, Nested Paging, Hyper-V Paravirtualization	
	📃 Display	
	Video Memory: 18 MB Remote Desktop Server: Disabled Video Capture: Disabled	
	Storage	
	Controller: SATA SATA Port 0: Win7_Research.vdi	(Normal, 150.00 GB)
	🍃 Audio	
	Host Driver: PulseAudio Controller: Intel HD Audio	
	- Notwork	

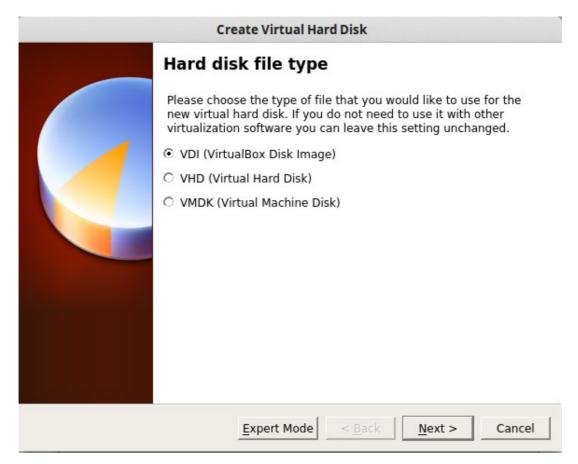
<u>Step 2 :</u>





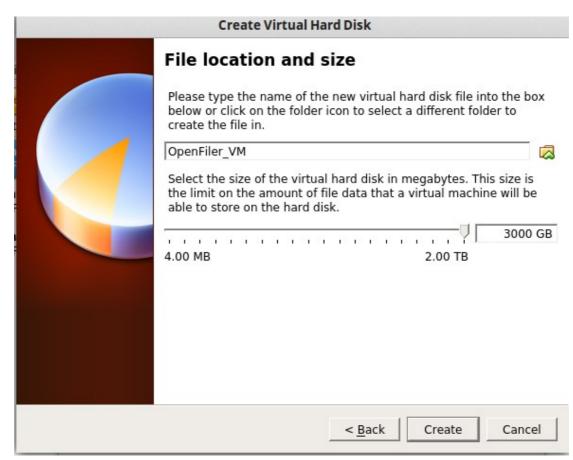
<u>Step 4 :</u>





<u>Step 6 :</u>





<u>Step 8 :</u>



<u>Step 9 :</u>

	Please choose a virtual optical disk file								
Look in:	/home/alok/Downloads/ISO Collection		• «	-> 💠 📔 🎛	≣				
Computer	Name CentOS-7.0-1406-x86_64-DVD ms office10 PowerISO Setup Files SQL 2008 Databas freamwork 4 SQL 2008 Express+Mgmt Studio VS2012 full Win 7 ultimate Full linuxmint-17.3-cinnamon-64bit.isc openfileresa-2.99.1-x86_64-disc1.	o 1.47 GE							
File <u>n</u> ame:				<u>O</u> pen					
Files of type: All	virtual optical disk files (*.dmg *.iso *.	cdr)		▼ <u>Cance</u>					

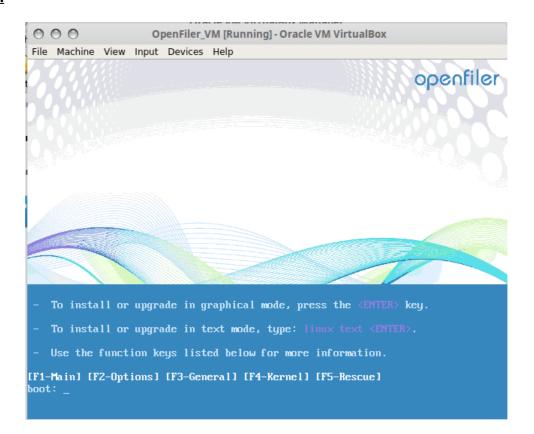
<u>Step 10 :</u>

	Please choose	a virtual opti	ical disk fi	le		
Look in:	/home/alok/Downloads/ISO	Collection		• «	-> < 🎦	:: 🔳
Computer	Name CentOS-7.0-1406-x86_6 ms office10 PowerISO Setup Files SQL 2008 Databas fre SQL 2008 Express+Mgr VS2012 full Win 7 ultimate Full linuxmint-17.3-cinnamo openfileresa-2.99.1-x86	amwork 4.5.1 nt Studio n-64bit.iso	Size 1.47 GB 507.1 MB		Date Modifi 20/04/:49 07/06/:19 15/11/:45 26/02/:18 16/02/:56 16/07/:03 20/04/:50 13/02/:33 26/01/:17	PM PM PM PM PM AM PM PM
File <u>n</u> ame: op	enfileresa-2.99.1-x86_64-dis	c1.iso			<u> </u>	<u>D</u> pen
Files of type: All	virtual optical disk files (*.d	mg *.iso *.cdr)			▼ <u>C</u>	ancel

```
Step 11 :
```



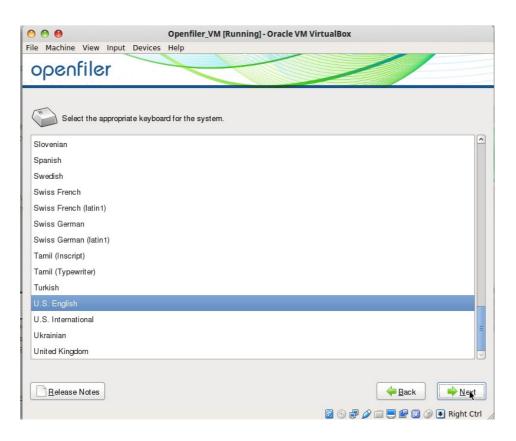
<u>Step 12 :</u>



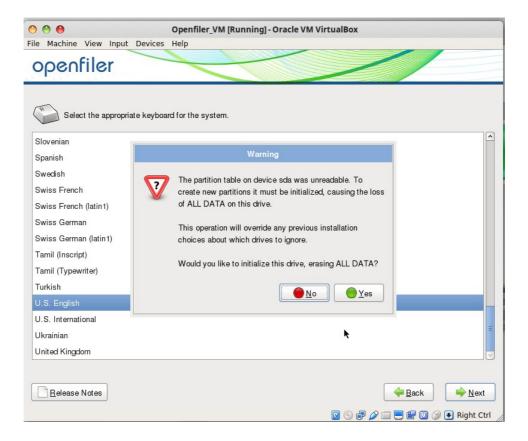
<u>Step 13 :</u>



<u>Step 14 :</u>



<u>Step 15 :</u>



<u>Step 16 :</u>

O 0	One of the Matthews is all One of a Mat Minter of Days
	Openfiler_VM [Running] - Oracle VM VirtualBox
e Machine View Input Devi	ces Help
openfiler	
nstallation requires partitioning of	your hard drive. By default, a partitioning layout is chosen which is reasonable for most users
ou can either choose to use this	or create your own.
Remove all partitions on selected	d drives and create default layout
elect the drive(s) to use for this	s installation.
🗹 sda 30718 MB A	TA VBOX HARDDISK
+ Advanced storage confi	icuration
	geraren
Vhat drive would you like to bo	ot this installation from?
sda 30718 MB ATA VBO	X HARDDISK
Review and modify partitioning	g layout
Review and modify partitioning	g layout
□ Re <u>v</u> iew and modify partitioning	g layout
□ Re <u>v</u> iew and modify partitioning	g layout
□ Re <u>v</u> iew and modify partitioning	g layout
□ Re <u>v</u> iew and modify partitioning	
Review and modify partitioning <u>Release Notes</u>	g layout ↓ Back

<u>Step 17 :</u>

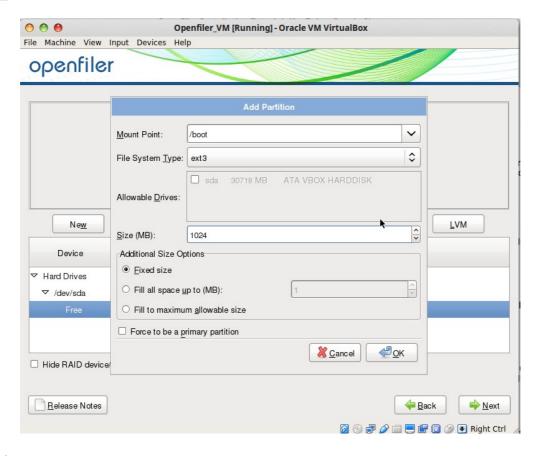
Here you need to select custom layout else you wont be able to create custom sized partitions.

000	Openfiler_VM [Running] - Oracle VM VirtualBox
File Machine View Input De	evices Help
openfiler	
Installation requires partitioning You can either choose to use tl	of your hard drive. By default, a partitioning layout is chosen which is reasonable for most users. his or create your own.
Remove all partitions on selec	sted drives and create default layout
Remove Linux partitions on se	elected drives and create default layout
Use free space on selected d	rives and create default layout
Create custom I vout	
Advanced storage co	
What drive would you like to	
Review and modify partition	ing layout
<u>R</u> elease Notes	<mark> </mark>
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<u>Step 18 :</u>

O O O File Machine View Input Devices	Openfiler_VM [Running] Help]- Oracle VM VirtualBox	
openfiler			
District			
Free 30720 MB	ı (30718 MB) (Model: ATA VBC		
Ne <u>w</u> <u>E</u> dit	Delete	Re <u>s</u> et R <u>A</u> ID	LVM
Device Label Mount RAID/	Point/ Volume Type Format	Size (MB) Start End	
✓ Hard Drives ✓ /dev/sda			
Free	Free space	30720 1 3917	
☐ Hide RAID device/LVM Volume <u>C</u>	roup members		
Release Notes		4	Back
		0 🕞 🗗 🌽 🗖	🗜 🔟 🎯 💽 Right Ctrl 🏾

<u>Step 19 :</u>



<u>Step 20 :</u>

File Machine View In	nput Devices Hel	enfiler_VM [Running] - Oracle VM VirtualBox	
openfiler			
		Add Partition	
	<u>M</u> ount Point:	<not applicable=""></not>	
	File System <u>T</u> ype:	swap 🗘	
	Allowable <u>D</u> rives:	sda 30718 MB ATA VBOX HARDDISK	
New	<u>S</u> ize (MB):	4096	LVM
Device	Additional Size Op	tions	
✓ Hard Drives	• <u>F</u> ixed size		
⊽ /dev/sda	○ Fill all space <u>u</u>	p to (MB):	
/dev/sda1	O Fill to maximum	n <u>a</u> llowable size	
Free	🗆 Force to be a p	imary partition	
□ Hide RAID device/		<mark>≹ ⊆</mark> ancel ∉ [®] OK	
<u>R</u> elease Notes		4	Back
		0 🕫 🖉 🚍 🚍	🕒 🔟 🎯 💽 Right Ctrl 🍃

Step	21	:

		Add Par	iition	_	
	<u>M</u> ount Point:	/		~	
	File System <u>T</u> ype:	ext3		\$	
	Allowable <u>D</u> rives:	🗖 sda 30718 MB	ATA VBOX HARDDISK		
Ne <u>w</u>	<u>S</u> ize (MB):	10236			LVM
Device	Additional Size Op	tions			
 Hard Drives 	• <u>F</u> ixed size				
▽ /dev/sda	○ Fill all space <u>u</u>	pto(MB):	1	$\hat{}$	
/dev/sda1	O Fill to maximu	m <u>a</u> llowable size			
/dev/sda2	Force to be a p	imary partition			
Free	_		X Cancel	9 <u>о</u> к	
			M <u>G</u> ancel N		

<u>Step 22 :</u>

Keep some space free out of total allocated to VM for later use (i.e. for creating new storage blocks / drives to share further on network)

⊖ ⊖ ⊖ File Machine View I		filer_VM	[Running] - Oracle	VM V	irtual	Box		
openfiler		-		\sim			/	/	
		_				~			
	Drive /dev/sda (30718	MB) (Mod	el: ATA VB	OX HARDI	ISK)				
	sdasda2		sda3	Free				7	
	10210236 MB	I	4094 MB	15359 MB				_	
New	Edit	De			<u>s</u> et]	RAID	LVM	
Device	Label Mount Point/ RAID/Volume	Туре	Format	Size (MB)	Start	End			
▼ /dev/sda									
/dev/sda1	/boot	ext3	1	1028	1	131			=
/dev/sda2	/	ext3	1	10237	132	1436			
/dev/sda3		swap	1	4095	1437	1958			•
Free		Free space	ce	15359	1959	3916			\sim
Hide RAID device/	LVM Volume <u>G</u> roup m	embers							
<u>R</u> elease Notes							4	Back	<u>N</u> ext
						9	0 🗗 🤌 🗖 📃	🖃 🔘 🎯 💌 F	Right Ctrl

<u>Step 23 :</u>

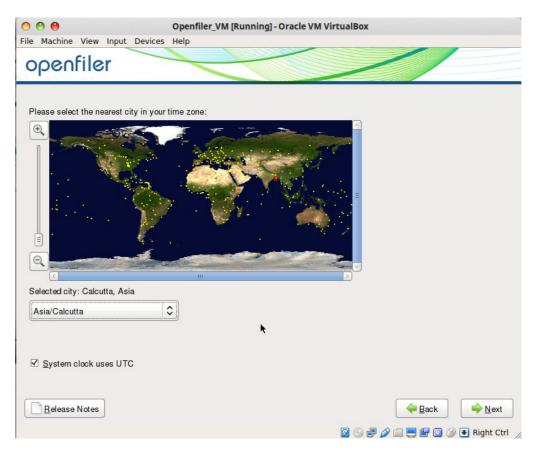
O O O		Openfiler_VM [Running] - Oracle VM VirtualBox
File Machine Vie	w Input Devices	Help
openfil	er	
○ The GRUB I ○ No boot load You can configu	boot loader will be ins ler will be installed. re the boot loader to b tically detected, click	e installed on /dev/sda. talled on /dev/sda. poot other operating systems by selecting from the list. To add an operating systems that 'Add.' To change the operating system booted by default, select 'Default' next to the
Default Label		Device
✓ Openfi	ler ESA ISO (x86_64	
recommended th	assword prevents user nat you set a password oader password Chr dvanced boot loader o	ange password
<u>R</u> elease Not	es	Image: Second secon

<u>Step 24 :</u>

Provide a hostname to your machine and keep the DHCP settings default unless you are not sure of the settings you are planning to do for your network else it may disturb the connectivity of OS on the network.

00	Openfiler_VM [Running] - Oracle VM VirtualBox
File Machine View Input Devic	es Help
openfiler	
Network Devices	
Active on Boot Device IPv4/N	etmask IPv6/Prefix <u>E</u> dit
✓ eth0 DHCP	Auto
Hostname	
Set the hostname:	•
O <u>a</u> utomatically via DHCP	, ,
manually openfiler	(e.g., host.domain.com)
Miscellaneous Settings	
<u>G</u> ateway:	
Primary DNS:	
Secondary DNS:	
<u>R</u> elease Notes	<u> → Back</u> → Next
	🛛 💿 🖶 🌽 🛄 🚱 Right Ctrl 🖉

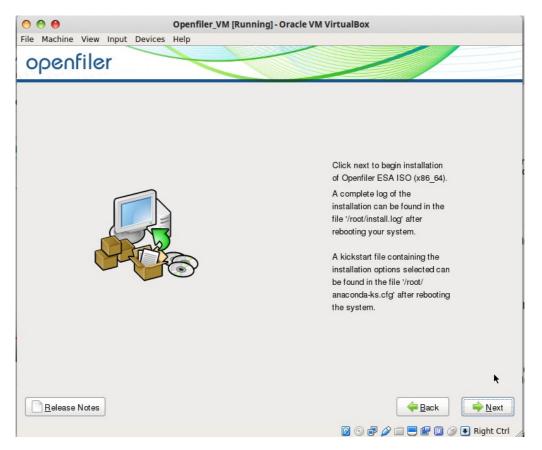
<u>Step 25 :</u>



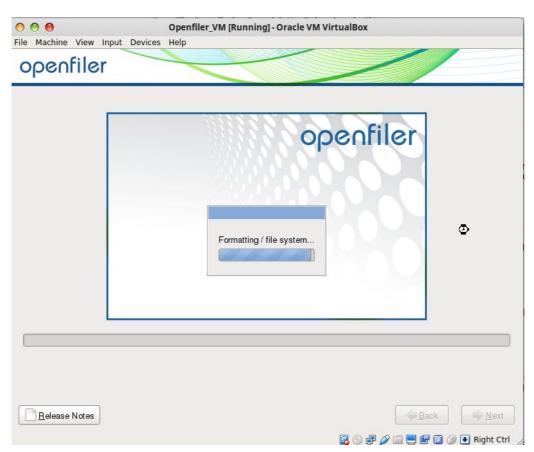
<u>Step 26 :</u>

000		ng] - Oracle VM VirtualBox	
File Machine View	nput Devices Help		
openfile			
	unt is used for administering the system. vord for the root user. *****		
			¥
<u>R</u> elease Notes		i i i i i i i i i i i i i i i i i i i	

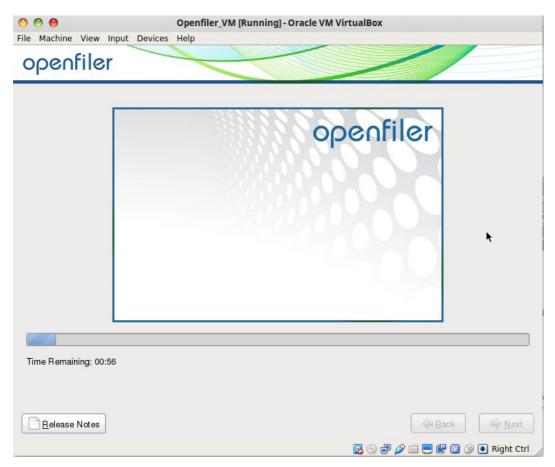
<u>Step 27 :</u>



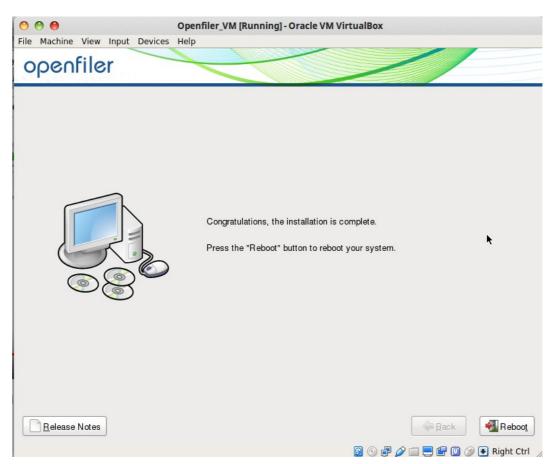
Step 28 :



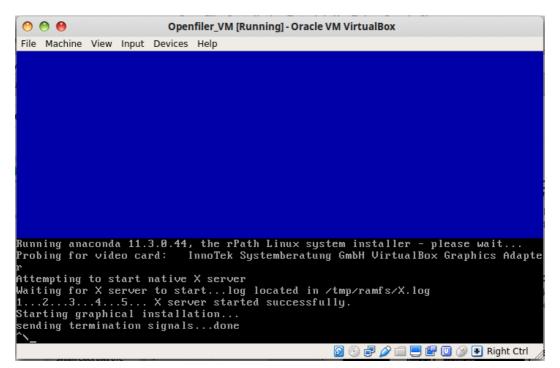
<u>Step 29 :</u>



<u>Step 30 :</u>



<u>Step 31 :</u>



<u>Step 32 :</u>

Openfiler_VM [Running] - Oracle VM VirtualBox	
File Machine View Input Devices Help	
_/	
Commercial Support: http://www.openfiler.com/support/ Administrator Guide: http://www.openfiler.com/buy/administrator-guide	:
Community Support: http://www.openfiler.com/community/forums/ I Internet Relay Chat: server: irc.freenode.net channel: #openfiler	
 (C) 2001-2011 Openfiler. All Rights Reserved. Openfiler is licensed under the terms of the GNU GPL, version 2 	1
http://www.gnu.org/licenses/gpl-2.0.html	
Welcome to Openfiler ESA, version 2.99.1	
Web administration GUI: https://192.168.0.103:446/	
openfiler login: _	
🖉 💿 🖶 🌽 🛄 🕑 💽 Rig	ght Ctrl

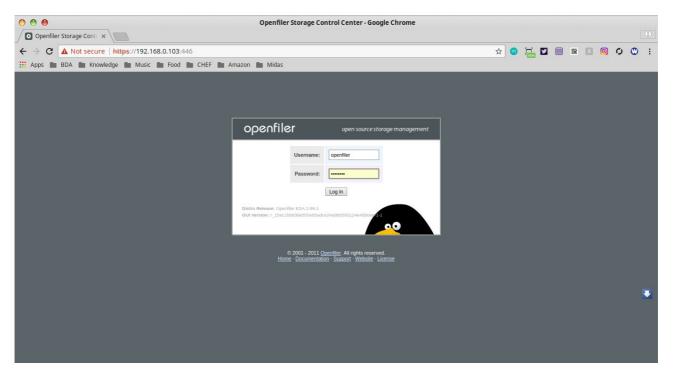
Here you can use command line option to work along with the storage provided if you know the commands well or else you have the GUI version too that makes your work lot more easier. GUI version URL is given on the terminal itself.

Remember : Openfiler runs on port 446 and HTTPS protocol.

Default Login Credentials for GUI are as follows :

username : openfiler password : password

<u>Step 33 :</u>



<u>Step 34 :</u>

0			Si	tatus : System S	Status - Google Chrome	
Status : System Status 🛛 🗙						
C A Not secure	https://192.168.0.1	1 03 :446/admin/statu	s.html		☆ 🔟 :	🔜 💟 📖 🕱 🔽 💿 🗘 🕚
ps 🖿 BDA 🖿 Knowle	edge 🖿 Music 🖿 F	ood 🖿 CHEF 🖿 A	mazon 💼 Mida	s		
aafilar						
penfiler					12:15:21 up 21 min, 1 user, load average: 0.00, 0.00, 0.00	
🖄 Status 🗐 System	Reg Volumes 🛛 🕞 C	Cluster 🚯 Quota	🚍 Shares 💡	Services	Accounts	
		• • • •				
						Status section
		Sustan	nformation: o	monfiler (102	169.0.102)	System Overview
		System	mormation: c	ppennier (192	108.0.103)	I ISCSI Targets
						FC Targets
	System Vita	al			Hardware Information	
Canonical Hostname	openfiler			Processors	1	Support recourses
Listening IP	192.168.0.103			Model	Intel(R) Core(TM) i3-5005U CPU @ 2.00GHz	Support resources
Kernel Version	2.6.32-71.18.1.el6-0.	20.smp.gcc4.1.x86_64	(SMP)	CPU Speed	2 GHz	Report bug
Distro Name	Openfiler NAS/SA	N		Cache Size	3.00 MB	🔀 Get support
Uptime	21 minutes			System Bogomips	3990.75	Gamma Guide
Current Users	1			PCI Devices	Bridge: Intel Corporation 82371AB/EB/MB PIIX4 ACPI	Admin Guide
Load Averages	0.00 0.00 0.00				Ethernet controller: Intel Corporation 82540EM Gigabit Ethernet	
					Controller	
	Network Usa	ige			 Host bridge: Intel Corporation 440FX - 82441FX PMC [Natoma] 	
Device	Received	Sent	Err/Drop		 IDE interface: Intel Corporation 82371AB/EB/MB PIIX4 IDE 	
lo	0.55 KB	0.55 KB	0/0		- ISA bridge: Intel Corporation 82371SB PIIX3 ISA [Natoma/Triton II]	
eth0	306.50 KB	1008.85 KB	0/0		 Multimedia audio controller: Intel Corporation 82801AA AC'97 Audio Controller 	
				'	- SATA controller: Intel Corporation 82801HBM/HEM	
				1	 System peripheral: InnoTek Systemberatung GmbH VirtualBox 	

Kudos!!... Now lets work on some configuration.

Configuration

<u>Step 1</u>: Go to **Services Tab** and nable the necessary services and start them. (CIFS, LDAP, iSCSI Target, iSCSI initiator)

Manage Services									
Service	Boot Status	Modify Boot	Current Status	Start / Stop					
CIFS Server	Disabled	Enable	Stopped	<u>Start</u>					
NFS Server	Disabled	Enable	Stopped	Start					
RSync Server	Disabled	Enable	Stopped	Start					
HTTP/Dav Server	Disabled	Enable	Running	Stop					
LDAP Container	Disabled	Enable	Stopped	Start					
FTP Server	Disabled	Enable	Stopped	Start					
iSCSI Target	Disabled	Enable	Stopped	Start					
UPS Manager	Disabled	Enable	Stopped	Start					
UPS Monitor	Disabled	Enable	Stopped	Start					
iSCSI Initiator	Disabled	Enable	Stopped	Start					
ACPI Daemon	Enabled	Disable	Running	Stop					
SCST Target	Disabled	Enable	Stopped	Start					
FC Target	Disabled	Enable	Stopped	Start					
Cluster Manager	Disabled	Enable	Stopped	Start					

Manage Services

<u>Step 2 :</u>

Go to **Accounts Tab.** Now lets configure accounts.

Select the check box : Use LDAP Select the check box : Local LDAP server Server : 127.0.0.1 Base DN : dc=example,dc=com Root bind DN : dc=openfiler,dc=example,dc=com Root bind password : <your_default_password> i.e. "password"

After making the necessary changes

What is LDAP ??? - (Lightweight Directory Access Protocol) is a software protocol for enabling anyone to locate organizations, individuals, and other resources such as files and devices in a network, whether on the public Internet or on a corporate intranet.

What is DN ??? - The LDAP API references an LDAP object by its distinguished name (DN). A DN is a sequence of relative distinguished names (RDN) connected by commas. An RDN is an attribute with an associated value in the form attribute=value; normally expressed in a UTF-8 string format.

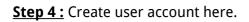
🙇 Status	System	Reg Volumes	🚺 Cluster	🚯 Quota	Shares	Services	🐊 Accounts
Standar	d View Exper	t View		Star requ	ndard View is sul irrements. Select	ficient for most auth Expert View only if you are doing.	nentication configuration you know exactly what
				U	lser Inform	ation Config	uration
			Use L	DAP			
				Loca	LDAP server:	🕑 Use Local LE	DAP Server
				L	DAP Security:	Use TLS	
					Server:	127.0.0.1	
					Base DN:	dc=example,dc=	com
					Root bind DN:	dc=openfiler,dc=	example,d
				Root b	ind password:		
				SMB LDAP	Configuration:	🕑 Login SMB s	erver to root DN
				User pas	ssword policy:	Allow user to	change password

<u>Step 3</u>: Go to **Accounts Tab.** and Click on Administration and create a user group and atleast one user account.

Here we have created **user group - "normal users"** and **user account with username - "alok"** and **password - "pass123"**. This username and password will be used at the time of accessing the shared folder over network.

Note : Make sure that the gid (group id) is same as that of the uid (user id). For ex. If gid for group - normal user is **1236** in below image then the user id for user – alok should be **1236**. If by default it is not so then delete the user and create it again and while creating the user select the option **Override Automatic UID** and enter the id in the textbox same as that of the group you created.

openfiler	21:17:20 up 2:57, 0 users, load average: 0.00, 0.00, 0.03	Log Out Status Update Shutdown
🖄 Status 🗐 System 📾 Volumes 😭 Cluster 🚳 Quota 🚍 Shares 🔗 Services	Accounts	
Group Administration User Administration		Accounts section
Group Administration	on	 a User List a Group List Admin Password
Add new group		
Group Name: Override automatic GID Add Group Reset		Support resources Report bug Get support Forums Admin Guide
Group Control		
空 唱 略 normal users (gld: 1236)		



		Accounts section
Group Administration	User Administration	Authentication
		administration
	User Administration	💩 User List
		💣 Group List
	Add new user	Admin Password
	Username:	Support resources
		🍓 Report bug
	Password:	🔀 Get support
	Retype password:	G Forums
		🔛 Admin Guide
	Primary Group: 1236: normal users 🔻	
	Override automatic UID	
	Add User Reset	
	User Control	
	🚯 🚯 alok (uid: 1236)	

<u>Step 5 :</u>

Here the disks attached to openfiler are listed.

openfiler					3 up 17 min, C	users, load avera	e: 0.00, 0.00, 0.00	Log Olti Status Update Shutdo
A Status 😳 System 🥯 Volumes 😭 Cluster	🔮 Quota	Block Device N		Accounts ent				Volumes section Manage Volumes Volume Groups
	Edit Disk Ty /dev/sda SC /dev/sdb SC	SI ATA VBOX HARDDISK	Size 30.00 GB 10.00 GB	Label type msdos gpt	Partitions 3 (view) 0 (view)			 Block Devices Add Volume ISCSI Targets Software RAID
								Support resources
			2001 - 2011 0	Dpenfiler. All rigt	its reserved.			 Forums Admin Guide

<u>Step 6</u>: Select /dev/sdb and click and you can see the disk space capacity details. Here you can create partitions according to your needs.

	sidoz (40%)										
		Back to the list of phy						_			
		reate a partit	on in Acersa	5					- 1		
		You can use range	s within the following	extents:					- 1		
	Mode	Starting cylinder	Ending cylinder	Space					- 1		
	Primary	526	1305	5.98 GB							
									•		
Mode	Partition Type	Starting cylinder	Ending cylinder	r Size	Create	Reset			- 1		
Primary 🔻	Physical volume	526	1305	5.98 GB	Create	In Use					

<u>Step 7 :</u>

openfiler				22:16:00) up 19 min,	0 users, lo	ad average: 0.91, 0.23, 0.07		Log Out Status Update Shutd	own
🌋 Status 🗍 System 🥽 Volt	imes 🕞 Cluster 🗳 Quota	🚍 Shares 🛛 🧳	Services	🖇 Account	5				Volumes section	
	Edit partitions in	n /dev/sdb (130	ō cylinder	s with "g	gpt" lab	el)			 Manage Volumes Volume Groups Block Devices 	
	Device Type /dev/sdb1 Linux Physical Volume (0x8e	Number Start	yl End cyl	Blocks 4212220	Size 4.02 GB	Type Primary	Delete Delete		 Add Volume iSCSI Targets Software RAID 	
	Stree (60%)									
		Back to the list of physi	al storage devic	085						

<u>Step 8</u>: Go to **Volumes Tab** and click on Volume Groups and create a volume group and select the disk you want to add to the group. Here we have created **"volgroup1"**.

openfiler				22:18:50 up 21 min, 0 us	sers, load average: 0.17, 0.17, 0.08	Log Out Status Update Shutdown
🐔 Status 🗊 System 📾 Volumes 🕞 Cluster 🧣	👂 Quota 🛛 🚍 Shar	es 🦻	Services 🤌 A	ccounts		
						Volumes section
	Volum	e Group	o Management			Manage Volumes
Volume Group Name	Size Allocated	Free	Members	Add physical storage	Delete VG	 Block Devices Add Volume
volgroup1	4.00 GB 0 bytes	4.00 GB	View member PVs	All PVs are used	Delete	 iSCSI Targets Software RAID
	Croate	2 0014	volume group			Support resources
	Cleate	anew	volume group			Support resources
4	No existing ph volumes an	vsical volum e used. You	es were found, or all ex can <u>create new physic</u>	isting physical al volumes.		Get support
						Admin Guide
			© 2001 - 2011 Openfil			

<u>Step 9:</u> Now create volumes from Add Volume option on right side of the page.

We have created one share volume (partition type : ext3 / ext4).

Free (LOOM)		•
Create a volume in "volgro	roup1"	
Volume Name (*no spaces*, Valid characters [a-z,A-Z,0-9]):	ISCSI	
Volume Description:	ISCSI Target	l
Required Space (MB):	2000	l
Filesystem / Volume type:	block (ISCSI,FC,etc) V	l
Create		
	Create a volume in "volg Volume Name ("no spaces". Valid characters (a-z,A-Z,O-3)): Volume Description: Required Space (MB): Filesystem / Volume type:	Create a volume in "volgroup1" Volume Name ("no spaces", Valid characters [a-z,A-Z,0.9]); [SCSI] Target Volume Description; [SCSI] Target Required Space (MB); [Bitesystem / Volume type; [block (SCSI,FC,etc) •]

Step 10 : Go to **System Tab** and you will see the hostname and interface configuration details. Here you have to add entry for incoming connections under **Network Access Configuration** area. i.e when we will access the volume from outside network we need to add the host and netmask entry in openfiler. For ex. If our ip address range is **192.168.x.x** and netmask range is **255.255.x** then we will add the entry as **192.168.0.0** and **255.0.0.0** so it will accept all ip address within that range.

											ereen eerep
		Hostname:	openfiler			1					UPS Management Shutdown/Reboot
		Primary DNS:	192.168.0.1			1					Notification System Update
		Secondary DNS:				1				B	Backup/Restore Secure Console
		Gateway:	DHCP Control	lled							Secure Console
		outring.								Su	oport resources
			Update Cano	cel							Report bug
		Network	Interface Co	onfiguratio	n						Get support Forums
											Admin Guide
Interface	e Boot Proto	IP Address	Network Mas	sk Speed	MTU	Link	Edit				
eth0	DHCP	192.168.0.10	3 255.255.255.	.0 1000Mb/s	1500	Yes	Configure				
		<u>c</u>	Create bonded inte	erface							
		Network	Access Co	onfiguration	i.						
	Delete Na	ne Ne	twork/Host N	letmask		Туре					
	ser			255.0.0.0		Share					
	_				_						
	New			0.0.0.0	•	Share					
			Update								

<u>Step 11</u>: Go to **Shares Tab** and you will see the share volume you created listed under the volume group. Right click on the shared volume and create a folder to share.

openfiler	23:56:04 up 1:59, 0 users, load average: 0.05, 0.03, 0.02	Log Out Status Update Shutdown
🚴 Status 🗐 System 📾 Volumes 🚯 Cluster 🗳 Quota 🚍 Shares 🥖 Services	🖉 Accounts	
Network Shares		Shares section Existing Shares Snapshot Shares
Folder name: myShare Create Sub-folder Create Sub-folder Close Window		Support resources Report bug Get support Forums Admin Guide
© 2001 - 2011 Home - Documentation -	<u>Openilier</u> , All rights reserved. Support - <u>Website</u> - <u>License</u> - <u>Log Out</u>	۵

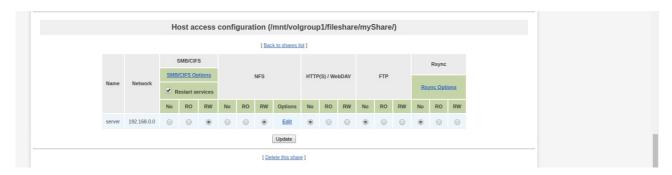
Step 12 : Right click on the folder you created and click on **Make Share** button. It wil redirect you to access controls page where you will set the read / write permissions as shown in the image below.

openfiler	23:56:14 up 1:59, 0 users, load average: 0.04, 0.03, 0.02	Log Out Status Update Shutdown
🔌 Status 🗊 System 🖨 Volumes 🕼 Cluster 🗳 Quota 🖨 Shares 🌾 Services	Accounts	Shares section
Network Shares volgroup1 (/mrt/volgroup1/) myfile share (/mrt/volgroup1/fileshare/)		Existing Shares
Folder name: Create Sub-folder New folder name:		Support resources
myShare Rename Folder Make Share Make Homes Share Close Window	reserved. - License - Log Out r	

<u>Step 13 :</u>

	Public gues Controlled a Update	access	S		
Group a	iccess co	onfigu	iration	ı	
I	Back to share	es list]			
A primary group has until a primary group	s not been set ip is set first or shi	t yet. Thi: r the sha nare.	s share w ire has be	ill not b en mad	e enabled le a guest
If you want to see gr	roups from net re them in the	twork dire authenti	ectory se ication se	rvers he <u>ction</u> .	re, please
GID Group Name	Type	PG	NO	RO	RW
497 <u>riak</u>	Local	0	•	0	•
1234 <u>desktop admin r</u>	Local	0	•	0	•
1005	Local	0	•	0	0
1235 <u>desktop user r</u>		۲	•	0	۲

<u>Step 14 :</u>



<u>Step 15</u>: To access your volume type in the URL bar of the explorer

smb://<ip_address>/

here the ip address is of your openfiler OS



<u>Step 16</u>: Go to **Volumes Tab** and click on iSCSI Targets on right side of the page.

🙇 Status 🗍 System 🚍	Volumes 🕞 Cluster 🜍 Que	ta 📄 Shares 🌽 Services	& Accounts
			Volumes section
		Select Volume Gro	a Manage Volumes
		Please select a volume grou	
		volgroup2 Change	a iSCSI Targets B Software RAID
	Volum	es in volume group "volgr	roup2" (9760 MB)
			 [™] Report bug [™] Get support [™] Forums [™] Ladmin Guide [™] [™]
	Free	19%)	Incuil (41%)

<u>Step 17 :</u>

It will by default create a target name which we have to add by clicking on Add Button.

🖄 Status 🗊 System 🥽 Volumes 🕼 Cluster 💋 Quota 🚍 Shares 🍠 Services 🧬 Accounts	
	Volumes section
Target Configuration LUN Mapping Network ACL CHAP Authentication	Manage Volumes
	Volume Groups
Add new iSCSI Target	Block Devices
	Reference Add Volume
Target IQN Add	iSCSI Targets
im ger i Via	Software RAID
iqn.2006-01.com.openfiler.tsn.4b7d6e389316	
	Support resources
Select iSCSI Target	🍓 Report bug
	Get support
Please select an iSCSI target to display and/or edit.	Forums
1	Admin Guide
iqn.2006-01.com.openfiler.tsn.763ad3974bce 🔻 Change	
Settings for target: iqn.2006-01.com.openfiler:tsn.763ad3974bce	

<u>Step 18 :</u>

The added target name will appear under LUN mapping tab where we have to actually map the iSCSI volume we created earlier to the target name. Select the appropriate volume name and map it to target name.

🕙 Status	🗊 System	👼 Volu	umes [Cluster	👂 Quota	📄 Shares	y Servic	es 🦻 🍰 Accour	its		
Targe	t Configuration	LUN Ma	apping N	Network ACL	CHAP Auth	entication					
			L	.UNs mapp	ed to tar	get: iqn.2	006-01.com	n.openfiler:ts	n.763ad397	74bce	
			LUN Id.	LUN Path	R/W I	lode SCS	Serial No.	SCSI Id.	Transfer Mod	e Unma	p LUN
			0	/dev/volgroup1/i	scsi write	thru PfspG	e-QcL4-ZIkD	PfspGe-QcL4-ZIkD	blockio	Unr	nap
			Ma	ap New LUI	V to Targ	et: "iqn.2	006-01.con	n.openfiler:ts	n.763ad39	74bce"	
		Na	me	LUN Path	RA	V Mode	SCSI Serial N	o. SCSI Id.	Transf	fer Mode	Map LU
		iSC	CSI Target 3	/dev/volgroup2	/iscsi3 v	rite-thru 🔻	9s8ZNr-8eL2-U	UjHp 9s8ZNr-8eL	2-UjHp block	kio 🔻	Мар
		iSC	CSI Target 4	/dev/volgroup2	/iscsi4 v	rite-thru 🔻	t95sst-etl8-d0N	M2 t95sst-etl8-d	0M2 block	kio 🔻	Мар

<u>Step 19 :</u>

After mapping the volume then enable the access for the requests coming via incoming connections. Select **Allow** from the dropdown under **Access** column show below and click on **Update button**. Thats it your iSCSI volume is ready to export now and accessed from another location.

🕿 Status 🗐 System and Volumes 🕞 Cluster 🕼 Quota and Shares 🥖 Services 🧬 Accounts	
Target Configuration LUN Mapping Network ACL CHAP Authentication	Volumes section Manage Volumes Volume Groups
iSCSI host access configuration for target "iqn.2006-01.com.openfiler:tsn.763ad3974bce"	Block Devices Add Volume ISCSI Targets
NameNetwork/HostNetmaskAccessserver192.168.0.0255.0.0.0Allow •	G Software RAID
Update	Support resources
	 Report bug Get support Forums Admin Guide

<u>Step 20</u>: Go to control panel and open iSCSI initiator.



<u>Step 21</u>: Enter the target ip address and click on **Quick connect**.

rgets p	iscovery	Favorite Targets	Volumes and Devices	RADIUS	Configuration
uick Cor				1	
o discov	er and log	on to a target usin arget and then dick	g a basic connection, to Quick Connect.	ype the IP	address or
Target:	192	168.0.103		Qu	ick Connect
iscovere	d targets				
					Refresh
Name				Status	
ign. 2006	5-01.com.	openfiler:tsn.56f5e	44cc7f8	Reconnec	ting
o conne	ct using a	dvanced options, s	elect a target and then		Connect
dick Conr	nect.		elect a target and then		Connect
dick Conr	nect.	nnect a target, sel			Connect Disconnect
dick Conr To comple then dick For targe	etely disco Disconnect t propertie	nnect a target, sel ct.			
dick Conr To complet then dick For targe select the	t propertie target ar	onnect a target, sel ct. es, including configu nd click Properties.	ect the target and		Disconnect

<u>Step 22</u>: Your mapped iSCSI target names should appear here. Select the name and click Done.

ick Connect	×
Targets that are available for connection at the IP provided are listed below. If multiple targets are a to each target individually.	
Connections made here will be added to the list of to restore them will be made every time this compu-	
Discovered targets	Status
ign.2006-01.com.openfiler:tsn.56f5e44cc7f8	Connected
Progress report Immediate Login Succeeded.Persistent Login faile after system reboot	ed, target will not be available
Immediate Login Succeeded.Persistent Login faile	ed, target will not be available
Immediate Login Succeeded.Persistent Login faile	ed, target will not be available
Immediate Login Succeeded.Persistent Login faile after system reboot	

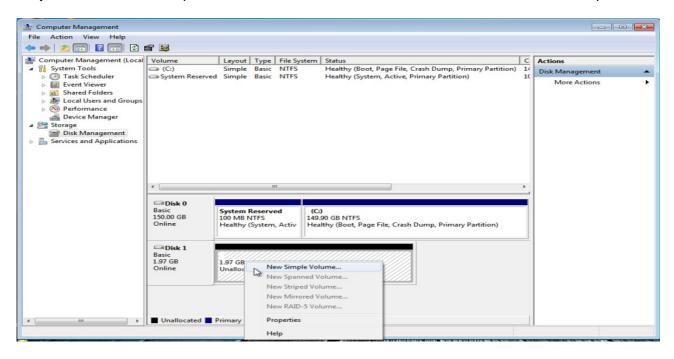
<u>Step 23</u>: Now open Computer Management window and check for the new disk added under Disk Management section. The new disk will be appear as unallocated space.

Remote Desktop Connection	Computer Open Contro Manage
Magnifier Solitaire	Device Map network drive Defaul
All Programs	Help a Rename
Search programs and files	Shut de Properties

<u>Step 24 :</u>

Computer Management				
File Action View Help	x 🖻 🚅 🔍 🗄	4		
Computer Management (Local	Volume	Layout Type File System Status Simple Basic NTFS Healthy (Boot, Page File, Crash Dump, Primary Partition) sd Simple Basic NTFS Healthy (System, Active, Primary Partition)	C 14 10	Actions Disk Management A More Actions
O Performance Device Manager Storage Disk Management Services and Applications		Initialize Disk Vou must initialize a disk before Logical Disk Manager can access it. Select disks: V[Disk 1		
Basic 150.00 Gi Online Unknown 1.97 GB	Basic 150.00 GB	Use the following partition style for the selected disks:	•	
	Contended and Co	1.97 GB Unallocated		
< Þ	Unallocated	Primary partition		

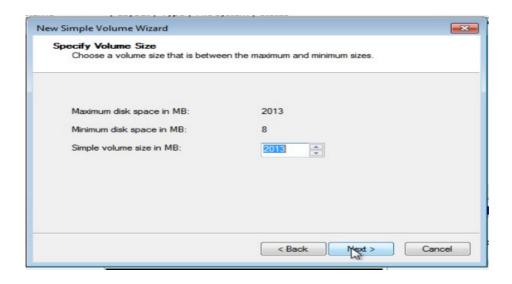
Step 25 : Perform the steps below to create a new volume to use from the unallocated space.



<u>Step 26 :</u>



<u>Step 27:</u>



<u>Step 28 :</u>

Assign Drive Letter or Path For easier access, you can assign a drive l	letter or drive path to your partition.
 Assign the following drive letter: Mount in the following empty NTFS fold Do not assign a drive letter or drive path 	Browse
	< Back Next > Cancel

<u>Step 29:</u>

Format Partition To store data on this partition, yo	u must format it first.	
Choose whether you want to form	at this volume, and if so, what settings	you want to use.
O Do not format this volume		
Format this volume with the	following settings:	
File system:	NTFS -	
Allocation unit size:	Default -	
Volume label:	Openfiler Disk	
Perform a quick form	at	
Enable file and folde	compression	

<u>Step 30 :</u>

New Simple Volume Wizard		×			
	Completing the New Simple Volume Wizard				
	You have successfully completed the New Simple Volume Wizard.				
	You selected the following settings: Volume type: Simple Volume Disk selected: Disk 1 Volume size: 2013 MB Drive letter or path: E:				
	File system: NTFS Allocation unit size: Default Volume label: Openfiler Disk Outick format: Yes				
	To close this wizard, click Finish.				
	< Back Finish Cano	el			

Step 31:

