Table of Contents

Fester's Very Basic One User/One Dataset Experimental Starter Share	
Share Scenario	
Share Creation and Configuration	
User Creation	
Dataset Creation	5
Share Creation	10
CIFS/SMB Configuration	
Windows Client Configuration	18

Fester's Very Basic One User/One Dataset Experimental Starter Share

Fester is still learning about shares and in particular share permissions.

As Fester learns more I will try to pass on what I have learned by adding to this section and creating additional guides for more "real world" share scenarios (if time permits).

This particular share will not be much use to most people, but it will get you going.

Don't forget the official FreeNAS guide has lots of information on shares. But for now, this will be a very basic share on a FreeNAS system and is designed to get you started so you can experiment with shares.

Share Scenario

This share is designed for one user who wants to access the same share from different client machines.

The client machines will mostly be running Windows (or Mac OS X).

It will utilise one dataset and show you how to share it.

It is designed to get you started with shares so that you can experiment.

Share Creation and Configuration

User Creation

Go to the "Accounts" page (1) and click the "Add Group" button (2).

fester:shares_basic https://familybrown.org/dokuwiki/doku.php?id=fester:shares_basic&rev=1497870463

Account ¹ System Tasks	Network Storage Directory	Gharing	Services	Plugins	Jails	Reporting	S Wizard
Account							
Groups Users							
Add Group 2							
Group ID	Group Name			Built-	in Group		
0	wheel			true			
1	daemon			true			
2	kmem			true			
3	sys			true			
4	tty			true			
5	operator			true			

A new smaller window will pop up. Here we can create a new Group.

Leave the "Group ID:" at its default value of **1001** (1).

Now type in a name for the new group in the "Group Name:" text box (2) (because this is a starter share from which you can experiment, Fester used **TestGroup**).

Do not tick the "Permit Sudo:" or "Allow repeated GIDs:" tick boxes (3).

Now click the "OK" button (4).

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Add Group		×
Group ID:	1 1001	
Group Name:	2 TestGroup	
Permit Sudo:	3	
Allow repeated (GIDs:	
OK Cancel		

If all goes well an entry should appear in the Account \rightarrow Groups page. You should see something like this.

Account	System	D Tasks	Network	Storage	Directory	(Constraints) Sharing	Services	Plugins	Jails	Reporting	T Wizard
Account											
Groups	Users										
Add Group											
Group ID				Group	Name			Built	-in Group		
1001				TestGr	oup			false	ř.		
0				wheel				true	1		

Now go to the "Accounts" page (1) and click the "Users" button (2).

2025/07/02 04:15

3/27

Account System Tasks Netwo	k Storage Directory	Sharing	Services	Plugins	Jails	Reporting	T Wizard
Account							
Groups Users 2							
Add Group							
Group ID	Group Name			Built	in Group		
0	wheel			true			
1	daemon			true			
2	kmem			true			
3	sys			true			
4	tty			true			
5	operator			true			
6	mail			true			
7	bin			true			

A new window will pop up. Here we can create a new User.

Leave the "User ID:" at its default value of **1001** (1).

Now type in a name for the new user in the "Username:" text box (2) (because this is a starter share from which you can experiment, Fester used **TestUser**).

Untick the "Create a new primary group for the user:" tick box (3).

The "Primary Group:" drop down selection box (4) should now become active. The group we created earlier (i.e. TestGroup) should be available for selection.

Leave the "Create Home Directory In:" text box at the default /nonexistent (5).

Leave "Shell:" at its default setting (6).

Type in a name for the new user (7) (Fester chose **Test User**).

Create a password in the "Password:" text box and confirm it by retyping it in the "Password Confirmation:" text box (8) (because this is a starter share to experiment with Fester just used **test**.

Make sure you use a stronger and less predictable password when you create your real/final share/s).

Now scroll down.

A	dd User		8	*
	User ID:	1	1001	
	Username:	2	TestUser	
	Create a new primary group for the user:	3		III
	Primary Group:	4	TestGroup	
	Create Home Directory In:	5	/nonexistent Browse	
	Shell:	6	csh 🔫	
	Full Name:	7	Test User	
2	E-mail:			
	Password:	2	••••	
	Password confirmation:	Ő	••••	
	Disable password login:			
	the design of the second			Ŧ

Do not tick the "Disable password login:" you will lock yourself out of the share.

Leave the "Lock user:" and "Permit Sudo:" at their default settings of unticked (9).

Fester will be accessing this account from a windows machine so I tick the "Microsoft Account:" tick box (10).

Now click the "OK" button (11).

					*
	E-mail:				
	Password:	••••			
	Password confirmation:	••••	đ		
	Disable password login:	1			
	Lock user:	9			
	Permit Sudo:				
	Microsoft Account:	10 🔽			
	SSH Public Key:				
	Auxiliary groups:	Available	Selected		Ξ
		_dhcp			
		_pflogd audit	>>		
	11	authpf avahi	-	-	
(OK Cancel Advanced Mode				
					-

Dataset Creation

Now we need to create the dataset.

Go to the "Storage" page.

ast update: 20	17/06/19	11:07	fester:sha	ares_basic	https://family	brown.org/do	okuwiki/dok	u.php?id=fes	ster:shares_b	asic&rev=1	49787046
Account S	System	Tasks	Network	Storage	Directory	(intersection) Sharing	Services	Plugins) Jails	Reporting	8 Wizard
System											
Information	General	Boot	Advanced	Email	System Dat	aset Tunabl	es Updat	e CAs	Certificate	s Support	
System In Hostname	nformatio	on E	dit								
Build	Free	AS-9.10-R	RELEASE (2def	f9c8)							
Platform	Intel(R) Xeon(R)) CPU E5-2620) v3 @ 2.4	OGHz						
Memory	1624	8MB									
System Tir	me										
Uptime											
Load Aver	200 0 00	0.06 0.13	,								

Select "Tank1" or whatever you called the volume (1) by clicking on it (it should turn blue when selected).

A series of buttons should appear on the bottom of the screen.

From these buttons click on the one that creates a dataset (2).

Storage					
Volumes	Periodic Snapshot Tas	ks Replication Tasks	Scrubs S	napshots VN	Iware-Snapshot
Volume Ma	nager Import Disk	Import Volume	iew Disks		
Name		Used		Available	
⊿ Tank1	1	443.0 MiB (0%)		29.0 TiB	
⊿ Tank1		312.0 MiB (0%)		20.0 TiB	
jails		204.8 KiB (0%)		20.0 TiB	
	2 Crea	te Dataset			

A new smaller window will pop up for creating the dataset.

In the "Dataset Name:" text box (1) give the share a name (because this is a starter share from which you can experiment, Fester used **TestShare**).

Leave the "Compression level:" drop down selection box (2) set to Iz4.

Set the "Share type:" to whatever suits the type of clients on your network (Fester has mainly Windows machines so I set this to **Windows**).

Leave the "Case Sensitivity:" drop down selection box and "Enable atime:" at their default settings as shown (4).

"ZFS Deduplication:" should be set to **off** in the drop down selection box (5) unless you understand this and you have plenty of memory.

Now click the "Add Dataset" button (6).

Create Dataset	X
Create ZFS dataset in Tar	nk1
Dataset Name:	1 TestShare
Compression level:	2 Inherit (Iz4)
Share type:	3 Windows -
Case Sensitivity:	Sensitive 💌
Enable atime:	4 •
ZFS Deduplication:	Enabling dedup may have drastic performance implications, as well as impact your ability to access your data. Consider using compression instead.
Add Dataset Cancel	Advanced Mode

The dataset will now be created and you should see something like this.

Storage Volumes Periodic Snapshot Tas Volume Manager Import Disk	Sks Replication Tasks Scrubs Si Import Volume View Disks	napshots VMware-Snapshot	
Name	Used	Available	Compression
⊿ Tank1	443.7 MiB (0%)	29.0 TiB	-
⊿ Tank1	312.3 MiB (0%)	20.0 TiB	lz4
TestShare	204.8 KiB (0%)	20.0 TiB	inherit (lz4)
jails	204.8 KiB (0%)	20.0 TiB	inherit (lz4)

Remain on this screen and select the newly created dataset (1) if it is not selected already (in Fester's case this was TestShare).

Now click on the change permissions button (2).

Storage Volumes Periodic Snapsho Volume Manager Import I	ot Tasks Replication Tasks Scru Disk Import Volume View Dis	bs Snapshots VMware-Snap	shot
lame	Used	Available	Compression
Tank1	443.7 MiB (0%)	29.0 TiB	-2
⊿ Tank1 1	312.3 MiB (0%)	20.0 TiB	lz4
TestShare	204.8 KiB (0%)	20.0 TiB	inherit (lz4)
jails	204.8 KiB (0%)	20.0 TiB	inherit (lz4)
2 Change Permissions			

A new window will pop up for changing the permissions of the new dataset.

Leave the "Apply Owner (user):" tick box (1) at its default setting (with a tick).

In the "Owner (user):" drop down selection box (2) select the new user you created a moment ago (in Fester's case this was TestUser).

Leave the "Apply Owner (group):" tick box (3) at its default setting (with a tick).

In the "Owner (group):" drop down selection box (4) select the new group you created a moment ago (in Fester's case this was TestGroup).

Leave the "Apply Mode:" tick box (5) at its default setting (with a tick).

If you have chosen "Windows" as the Permission Type then the "Mode:" tick boxes (6) will be greyed out so you can not alter them. FreeNAS will prevent you from making alterations here and is correct to do so. This is because if you did you could break the share.

Set the "Permission Type:" radio button (7) to match the clients on your network (Fester has mostly Windows machines so I set this to **Windows**).

Put a tick in the "Set permission recursively:" tick box (8).

Now click the "Change" button (9).

Change permission		-
Change permission on /m	nt/Tank1/TestShare to:	
Apply Owner (user)	• 1 🔽	
Owner (user):	2 TestUser	
Apply Owner (group	o): 🗹 3	
Owner (group):	4 TestGroup	
Apply Mode:	5 🖂	
Mode:	Owner Group Other Read Write Execute	III
Permission Type:	 O Unix Mac Windows 	
Set permission recursively: 9	8	
Change Cancel		-

Share Creation

Now we need to create a CIFS share. On a network that utilises predominately Windows clients this is a good choice.

Go to the "Sharing" page.

2	025/07/02 0	4:15	11/27			F	ester's Vei	ry Basic One	e User/One [Dataset Exper	imental Sta	arter Share
	Account	System	D Tasks	Network	Storage	Directory S	(a) haring	Services	Plugins	Jails F	Reporting	T Wizard
	System											
	Information	General	Boot	Advanced	Email	System Dataset	Tunables	s Update	CAs	Certificates	Support	
	System Hostnam	Informati	on	lit								
	Build	Free	NAS-9.10-R	ELEASE (2def	9c8)							
	Platform	Intel	(R) Xeon(R)	CPU E5-2620	v3 @ 2.40)GHz						
	Memory	1624	18MB									
	System 1	Time										
	Uptime											
	Load Av	erage 0.00	, 0.06, 0.13									

Now click the "Windows (CIFS)" button (1) and then click the "Add Windows (CIFS) Share" button (2).

Name	Comment
	Name

A new smaller window will pop up.

In the "Path:" section click the "Browse" button.

A	dd Windows (CIFS) Share	×
		\sim
	Path:	/mnt/Tank1/TestShare Browse
	Use as home share:	
	Name:	Fester's Test Share
	Apply Default Permissions:	
	Allow Guest Access:	(i)
	OK Cancel Advanced M	lode

The window should now expand a little and allow you to navigate to the newly created dataset (1).

When you have it selected click the "Close" button (2).

13/27

A	dd Windows (CIFS) Shar	e 🕺	-
	Path:	/mnt/Tank1/TestShare Close 2	III
	Use as home share:		
	Name:	Fester's Test Share	
	Apply Default Permissions:		
	22	- @	-

The "Path:" text box (1) should now display the chosen dataset.

Do not tick the "Use as home share:" tick box (2) at the moment.

Give the share a name in the "Name:" text box (3).

Put a tick in the "Apply Default Permissions:" tick box (4) if a tick is not present.

Do not tick the "Allow Guest Access:" tick box (5).

Now click the "OK" button (6).

A	dd Windows (CIFS) Sha	re	8
	Path:	1 /mnt/Tank1/TestShare	Browse
	Use as home share:	2	
	Name:	3 Fester's Test Share	
	Apply Default Permissio	ns: 🗾 🛈 4	
	Allow Guest Access:	5 🗖 🕖	
(OK Cancel Advanc	ed Mode	

If all goes well you will see the newly created CIFS share entry (1).

You will now be asked if you wish to enable the CIFS share service.

Click the "No" button (2).

Sharing			
Apple (AFP) UNIX (NFS) WebDA	Windows (CIFS) Block (iSCSI)		
Add Windows (CIFS) Share			
	1		
Path	Name 📕	Comment	Export Read Only
/mnt/Tank1/TestShare	Fester's Test Share		false
	Ena Wor	able service & uld you like to enable this service?	

CIFS/SMB Configuration

Now go to the "Services" page.

2	025/07/02 04	4:15	15/27				Fester's Ve	ery Basic On	e User/One l	Dataset Expe	rimental St	arter Share
	Account	System	Tasks	Network	Storage	Directory	Sharing	Services	Plugins	Jails	Reporting	T Wizard
	System											
1	Information	General	Boot	Advanced	Email	System Datas	et Tunable	s Update	CAs	Certificates	Support	
	System Hostnam Build	e Freet	NAS-9.10-R	dit ELEASE (2def	⁵ 9c8)							
	Platform	Intel	(K) Xeon(K)	CPU E5-2620) V3 @ 2.4U	JGHZ						
	Memory	1624	8MB									
	System T	ime										
	Uptime											
	Load Ave	erage 0.00,	, 0.06, <mark>0.13</mark>									

Click on the little spanner next to the "CIFS" service (1).

A new window will pop up.

The NetBIOS name will already be present in the "NetBIOS Name:" text box (2).

In the "Workgroup" text box (3) type in the name of the workgroup you want to use on the client machines (Fester used **T ESTWORKGROUP** because it is an experimental starter share). If you don't know your Workgroup then skip to the relevant section on how to do this.

Type in a good name for the CIFS share in the "Description:" text box (4).

Do not alter the default values of the "DOS charset:", the "Unix charset:" and the "Log level:" (5).

Leave the "Use syslog only:" (6) at its default (no tick).

Make sure the "Local Master:" tick box (7) is ticked.

Leave "Domain logons:" (8) unticked.

Leave "Time Server for Domain:" (9) ticked.

Leave "Guest account:" (10) at **nobody**.

Services			CIFS Settings	88	
AFP	OFF	٩,			
CIFS	OFF C	5	NetBIOS name:	2 TestNAS1	
Domain Controller	OFF	4	Workgroup:	3 TESTWORKGROUP	
Dynamic DNS	OFF	2	Description:	4 Fester's Server Share	
FTP	OFF	2	DOS charset:	CP437 💌	
iscsi	OFF	*	UNIX charset:	5 UTF-8 💌	
LLDP	OFF	*	Log level:	Minimum 💌	
NFS	OFF	*	Use syslog only:	6	
Rsync	OFF	*	Local Master:	7 🛛	
S.M.A.R.T.	ON	2			
SNMP	OFF	2	Domain logons:	8	
SSH	ON	2	Time Server for Domain:	9 🗹	
TFTP	OFF	2			
UPS	OFF	2	Guest account:	10 nobody	
WebDAV	OFF	2		· · · · · · · · · · · · · · · · · · ·	

Do not put anything in the "File mask:" and "Directory mask:" text boxes (11) unless you really understand UNIX permissions (Fester can't help you here).

Do not tick the "Allow Empty Password:" tick box (12) as this weakens the security of the share.

Leave the "Unix Extensions:" and "Zeroconf share discovery:" tick boxes (13) as they are.

Untick the "Hostnames lookups:" tick box (14) otherwise you will keep getting a name mismatch error.

Set the "Server maximum protocol:" (15) to SMB2.

Leave the "Allow execute always:" tick box (16) in its default setting (with a tick).



Fester has no idea what the "Obey pam restrictions:" setting (17) actually does. I just leave it ticked, but I have no idea how it should be set.

Don't tick any of the IP address text boxes (18) in the "Bind IP Addresses:" section.

The "Idmap Range Low:" and "Idmap Range High:" settings (19) Fester does not touch as I don't know what they do.

Now click on the "OK" button (20).



<u>Do not turn on the CIFS share service yet</u>. We first need to check if the Workgroup on the Windows client is set correctly.

Windows Client Configuration

Click on the "Start" button and go into the "Control Panel" in Windows and select "System and Security" (this was on a Windows 7 machine).

🧾 🕨 Co	ntrol Panel 🕨	✓ 4 Search Control Panel
Adjust	our computer's settings	View by: Category -
₹ <u>e</u>	System and Security Review your computer's status Back up your computer Find and fix problems	User Accounts and Family Safety Add or remove user accounts Set up parental controls for any user
	Network and Internet View network status and tasks Choose homegroup and sharing options	Change the theme Change desktop background Adjust screen resolution
-0	Hardware and Sound View devices and printers Add a device	Clock, Language, and Region Change keyboards or other input methods
	Connect to a projector Adjust commonly used mobility settings	Ease of Access Let Windows suggest settings Optimize visual display
	Programs Uninstall a program	

Now click on "System".



In the "System" page we can see the Workgroup is set to **TWERKGROUP** (1). This must be changed to match the Workgroup name you created in the CIFS settings a moment ago (in Fester's case this was TESTWORKGROUP).

Click on "Change settings" blue text (2) to access the screen where we can change the Workgroup name.

You will probably be asked for the administrator's password at this point.



A smaller window will now pop up.

Click on the "Change" button.



Another window will now pop up.

Change the text in the Workgroup text box (1) to the one you created in the CIFS settings page (in Fester's case this was **TESTWORKGROUP**) and click the "OK" button (2).

System Properties	X
Computer Name/Domain Changes	
You can change the name and workgroup membership of this computer. You cannot join a computer running Windows 7 Home Premium to a domain. <u>More information</u>	uter on
Computer name:	3
Full computer name:	
Member of O Domain:	ge
Workgroup: TESTWORKGROUP 1	
2 OK Cancel	
OK Cancel	Apply

Yet another window will pop up showing the Workgroup has now been changed.

Click the "OK" button.

	System Properties	X
powe	Computer Name/Domain Changes	
	You can change the name and workgroup membership of this computer. You cannot join a computer running Windows 7 Home Premium to a domain. More information	
Cor	mputer Name/Domain Changes	
	Welcome to the TESTWORKGROUP workgroup.	
	Workgroup: TESTWORKGROUP	
	OK Cancel	
	OK Cancel Apply	

A message window will now appear telling you the changes will be implemented when the computer is restarted.

Click the "OK" button.

	System Properties	X
n a powe	Computer Name/Domain Changes	
Compu	iter Name/Domain Changes	uter on
	You must restart your computer to apply these changes Before restarting, save any open files and close all programs.	3
	Member of Domain: Workgroup: TESTWORKGROUP OK Cancel	ge
	OK Cancel	Apply

As can be seen from the next screen shot the Workgroup has been changed to "TESTWORKGROUP" (1).

Click the "Close" button (2).



The system will now ask to be restarted. This must be done before going any further.

Close any open windows, save and close any open programs, etc.

Now click on the "Restart Now" button.



That's the Windows Workgroup configured.

The client computer will now reboot, when it does log back into the FreeNAS GUI.

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