

How to Configure Windows CIFS with AccelStor NeoSapphire





Version History

Version	Changed	Date
V1.0	First release	20170330





Introduction

This document introduces how to set up a CIFS (Common Internet File System)/SMB (Server Message Block) between your NeoSapphire all-flash array and the Windows environment.

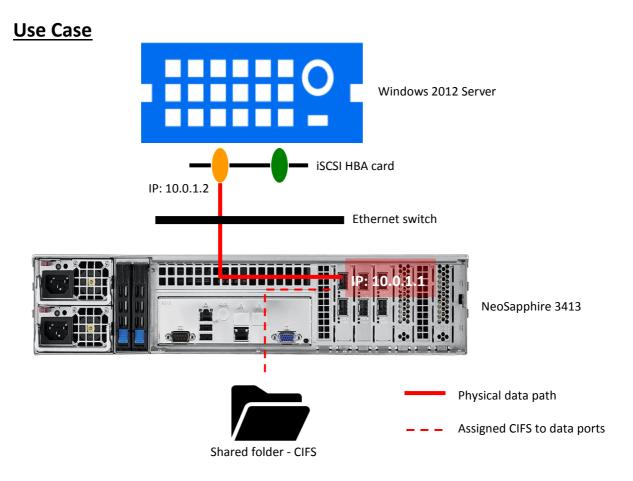
What is CIFS/SMB

SMB

SMB is a file-sharing protocol designed to allow computers to read and write files to a remote host over a local area network (LAN).

CIFS

CIFS is a dialect of SMB. It is a particular implementation of the SMB protocol, created by Microsoft. A native file-sharing protocol in the Windows environment, CIFS is the standard way to enable groups to work together and share files across corporate intranets and the Internet.



The Use Case discussed in this document assumes the user wants to create a CIFS shared folder named "cifstest" and share it to one Windows 2012 client without using a password.





NeoSapphire

Configuration involves two steps. The first step is to set up a network. The second step is to configure CIFS/SMB.

 Check the status of the link in Select System > Network > Data Port. A green indicator means the cable connection is OK. If not, ensure the cable is properly connected to the network port.

Dashboard	Genera	al Managen	nent Port	Data Port	Static Re	outes					
▼ ↑ System ↓ General Settings	+ Add - / Edit / Delete										
Date/Time	Port -	Method	Address	Net	nask	Gateway	MAC Address	MTU	Link	Ident	
The Network	01	IPv4: Disa IPv6: Disa	IPv4: - IPv6: -	IPv4 IPv6		IPv4: - IPv6: -	0c:c4:7a:1d	9000	•	۲	
Access Rights Management Certificates	02	IPv4: Disa IPv6: Disa	IPv4: - IPv6: -	IPv4 IPv6		IPv4: - IPv6: -	0c:c4:7a:1d	9000		۲	
Votifications	03	IPv4: Disa IPv6: Disa	IPv4: - IPv6: -	IPv4 IPv6		IPv4: - IPv6: -	0c:c4:7a:1d	9000		۲	
Image opdate Image opdate	04 	IPv4: Disa IPv6: Disa	IPv4: - IPv6: -	IPv4 IPv6		IPv4: - IPv6: -	0c:c4:7a:1d	9000	•	۲	

Select Port 1, then click Edit.

Dashboard	Genera	I Managen	nent Port	Data Port	Static Routes					
System General Settings	+ Add	🖌 Edit 🍂	Delete							
Date/Time	Port -	Method	Address	Net	mask	Gateway	MAC Address	MTU	Link	Ident
The Network	01	IPv4: Disa IPv6: Disa	IPv4: - IPv6: -	IPv IPv		IPv4: - IPv6: -	0c:c4:7a:1d	9000	۲	**
Access Rights Management Certificates	02	IPv4: Disa IPv6: Disa	IPv4: - IPv6: -	IPv IPv	1: -	IPv4: - IPv6: -	0c:c4:7a:1d	9000	٠	*
Votifications	03	IPv4: Disa IPv6: Disa	IPv4: - IPv6: -	IPv IPv		IPv4: - IPv6: -	0c:c4:7a:1d	9000	•	۲
Image Update Import/Export Sectory Default	04 	IPv4: Disa IPv6: Disa	IPv4: - IPv6: -	IPv IPv		IPv4: - IPv6: -	0c:c4:7a:1d	9000	•	۲

Select Static under the IPv4 Method menu.

Data Port 01		×
- IPv4		_
Method	Static	~
Address	Disabled	
Netmask	DHCP	
Neumask	Static	
Gateway		
	📃 Make this default route	
		_
- IPv6	Disabled	
Method	Disabled	Ť
- Advanced Se	ttings	- 1
MTU	9000	÷ *
4		Þ
Sav	re Reset Cancel	





Enter the IP address and netmask. Note: MTU 9000 (enable a Jumbo Frame). Click Save.

Method	Static	~
Address	10.0.1.1	
Netmask	255.255.255.0	
Gateway		
	Make this default route	
IPv6	Make this default route	
IPv6	Make this def	ault route
(Pv6 lethod Advanced S	Disabled	oute

Note: Set a Jumbo Frame on the Server iSCSI HBA ports, and switch data ports. **Data Port 01**

A confirmation message will appear. Click Apply, then Yes.

▲ The configuration has been changed. You must apply the changes in order for them to take effect.					
Confirm	nation				
2	Do you really want to apply the configuration?				
	Yes No				

Port 1 configuration is completed. Repeat the above steps to configure the other ports if there are other ports available.

Genera	l Managen	nent Port	Data Port	Static Routes					
Add	- 📝 Edit 🤸	Delete							
Port 🛎	Method	Address	Netr	mask	Gateway	MAC Address	MTU	Link	Ident
01 🖃	IPv4: Static IPv6: Disa	IPv4: 10.0 IPv6: -	.1.1 IPv4 IPv6	1: 255.255.255.0 5: -	IPv4: - IPv6: -	0c:c4:7a:1d	9000	•	*
02 =	IPv4: Disa IPv6: Disa	IPv4: - IPv6: -	IPv4 IPv6		IPv4: - IPv6: -	0c:c4:7a:1d	9000	•	*
03	IPv4: Disa IPv6: Disa	IPv4: - IPv6: -	IPv4 IPv6		IPv4: - IPv6: -	0c:c4:7a:1d	9000	•	*
04 🖃	IPv4: Disa IPv6: Disa	IPv4: - IPv6: -	IPv4 IPv6		IPv4: - IPv6: -	0c:c4:7a:1d	9000	٠	*

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2. Go to Share > CIFS/SMB > Shares > Add.

	Share CIFS/SMB					
😾 Dashboard	Settings Sh	ares				
✓ ☆ System ↓ General Settings	🕂 Add 🧪 Edit	🕺 💦 Delete				
O Date/Time	Shared Folder	Name	Comment	Public	Read Only	Browseable
- Network						
Access Rights Management						
R Certificates						
+ Plug-ins						
Q Notifications						
👱 Image Update						
Import/Export						
Sectory Default						
📒 Storage						
Drive						
🗁 Share						
명 Volume Management	1					
- 🕒 NFS	1					
- 👯 CIFS/SMB						
豆 iscsi						

Click 🔹 to create a CIFS volume.

If desired, tick the box that says "If enabled, no password is required to connect to the share" as below.

Add Share						×	
Name	cifstest					^	
	The name of the share.						
Comment							
	This is a text field that is	seen next t	to a share whe	n a client queries the	e server,		
Shared Folder	Select a shared folder The location of the files to	o ob pro			× 🖶 🖬 の 오		
Public	If enabled then no pass	isword is re	equired to con	nect to the share			
Read Only	Set read only If this parameter is set, th	en users m	nay not create	or modify files in the	share.		
Browseable	Set browseable This controls whether this list.	s share is s	een in the list (of available shares in	a net view and in the browse		
Inherit ACLs	Honor existing ACLs This parameter can be use honored when creating a				t directories, they are always tories.		
Inherit Permissions	Enable permission inheritance The permissions on new files and directories are normally governed by create mask and directory mask but the inherit permissions parameter overrides this. This can be particularly useful on systems with						
		Save	Reset	Cancel			





Enter the volume name, type and size. Click Save.

Create Shared	Folder	×
Name	cifsvol	
Comment		
Туре	Shared Folder (ext4)	*
- Size	of 5138 GB 🕶 or 3 🗘 %	
Batch Creation	None	*
	Save Cancel	

Click Save to complete the configuration.

Add Share	×
Name	cifstest The name of the share.
Comment	This is a text field that is seen next to a share when a client queries the server.
Shared Folder	cifsvol [size: 150000 MB]
Public	If enabled then no password is required to connect to the share
Read Only	Set read only If this parameter is set, then users may not create or modify files in the share.
Browseable	Set browseable This controls whether this share is seen in the list of available shares in a net view and in the browse list.
Inherit ACLs	Honor existing ACLs This parameter can be used to ensure that if default acls exist on parent directories, they are always honored when creating a new file or subdirectory in these parent directories.
Inherit Permissions	Enable permission inheritance The permissions on new files and directories are normally governed by create mask and directory mask but the inherit permissions parameter overrides this. This can be particularly useful on systems with many users to allow a single share to be used flexibly by each user.
Hosts Allow	
	This option is a comma, space, or tab delimited set of hosts which are permitted to access this share. You can specify the hosts by name or IP number. Leave this field empty to use
	Save Reset Cancel

A confirmation message will appear. Click Apply, then Yes.

The configuration has been changed. You must apply the changes in order for them to take effect.					
Confirmation	×				
Do you really want to apply the configuration Yes No	n?				
A CIFS volume has been successfully cre	eated.				

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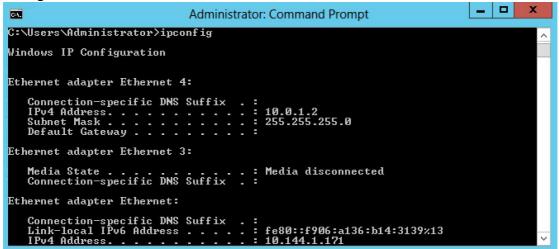
Share CIFS,	/SMB				
Settings	Shares				
🕂 Add 🥒 🗄	Edit 🔥 Delete				
Shared Folde	r Name	Comment	Public	Read Only	Browseable
cifsvol	cifstest		Yes	No	Yes

Windows

Windows 2012 will be used for demonstration purposes.

• Configure the IP address and enable a Jumbo Frame on the iSCSI HBA data ports if supported. (If you are going to deploy an iSCSI switch, enable a Jumbo Frame on the iSCSI switch too.)

Configure the IP address.



Enable a Jumbo Frame (called Jumbo Packet, in this case,) on the iSCSI HBA data ports.

Intel(R) Ethernet Server Adapter X520-2 #2 Properties						
Teaming	VLANs	Boot Option	1.000 1.000	Driver	Details	Events
General	Link	Speed	Adva	anced	Data	Center
Cintel Profile:	Advan	ced Adapter Se	ettings		1	
Settings:	Standard S			Value:]	
Interrupt Me	oderation			9014	Butes	0
Jumbo Pac Large Send Large Send Locally Adr	ket 1 Offload V2 1 Offload V2 ninistered Ad	(IPv6)		3014	Dytes	¥
Log Link St Maximum N <		SS Proceesore	✓✓		Use Default	t





Ping to check that the Jumbo Frame settings have been set successfully.

ping "IP Address of storage data ports" -f -l 8972

	Administrator: Command Prompt	x
C:\Users\Administrat		^
Pinging 10.0.1.1 wit Reply from 10.0.1.1: Reply from 10.0.1.1: Reply from 10.0.1.1:	tor>ping 10.0.1.1 -f -l 8972 th 8972 bytes of data: : bytes=8972 time<1ms ITL=64 : bytes=8972 time<1ms ITL=64 : bytes=8972 time<1ms ITL=64 : bytes=8972 time<1ms ITL=64	
Approximate round tr	10.0.1.1: 4, Received = 4, Lost = 0 (0% loss), rip times in milli-seconds: Maximum = Oms, Average = Oms	
C:\Users\Administrat		~

Go to File and enter the IP address of the remote CIFS server as below.

😂 I 🖸 🗉 = I		Libraries			 x
File Home Share	· View				~ 🕜
💿 💿 👻 🕇 🏹 \\10	.0.1.1		∨ →	Search Libraries	٩
 ☆ Favorites ■ Desktop ↓ Downloads ½ Recent places 	Documents Library Pictures Library	Library Library			
Cibraries Documents Music					

A shared folder is shown. Double click it without entering a password (assuming the "no password is required" option is enabled).



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k i 🗋 📗 = i		cifstest			_ _ ×
File Home Sha	re View				× 6
€ 💿 + ↑ 🖳 +	Network + 10.0.1.1 + cifstest		~ ¢	Search cifstest	Q
☆ Favorites	Name	Date modified	Туре	Size	
Desktop	New Text Document	11/15/2016 7:10 AM	Text Document	1 KB	
Downloads					
强 Recent places					
词 Libraries					
Documents					
Music E Pictures					
Videos					
🖳 Computer					
🙀 Network					
1 item 1 item selected	27 bytes				100

Create a file in the shared folder to make sure all of the CIFS settings are correct.

