



# 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

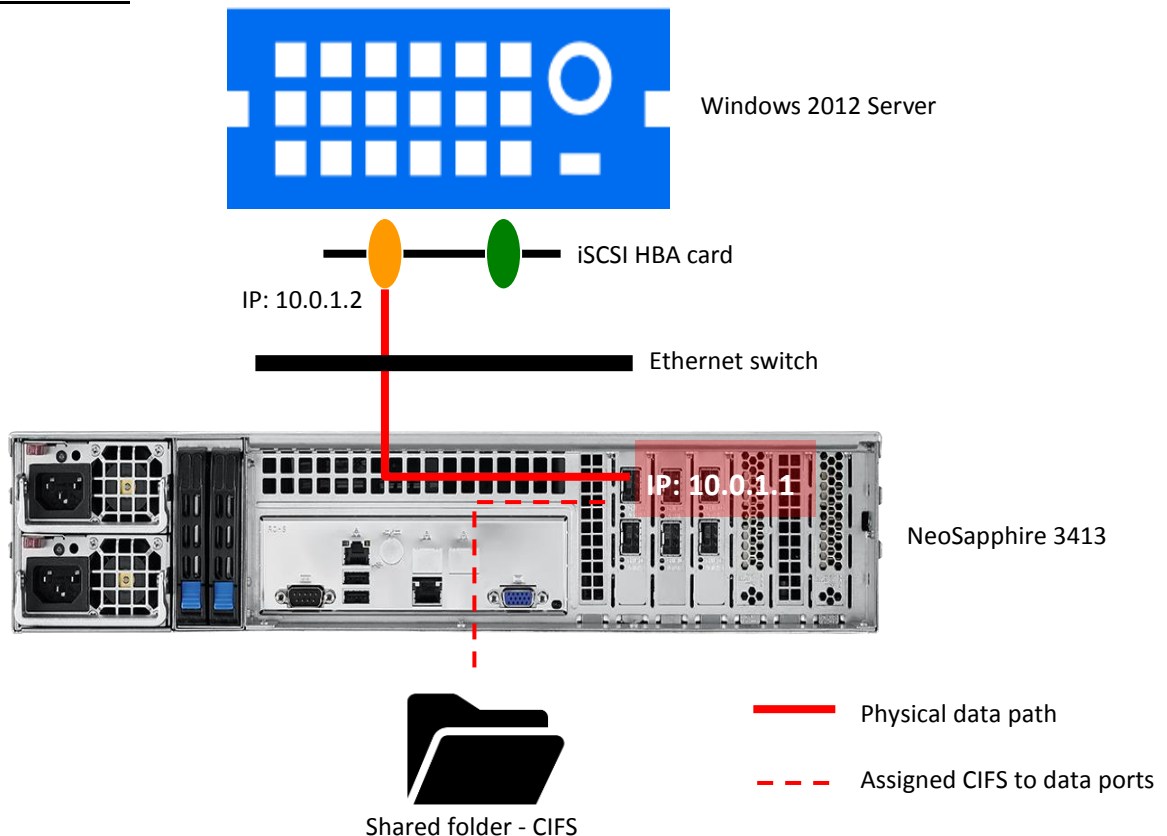
### **SMB**

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.

## Use Case

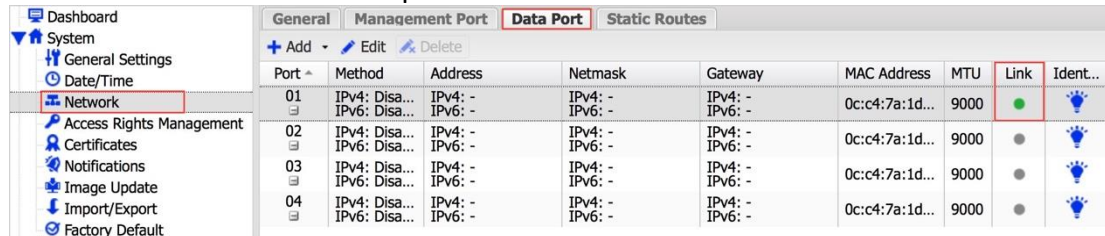


The Use Case discussed in this document assumes the user wants to create a CIFS shared folder named "cifstest" and share it to one Windows 2012 client without using a password.

## NeoSapphire

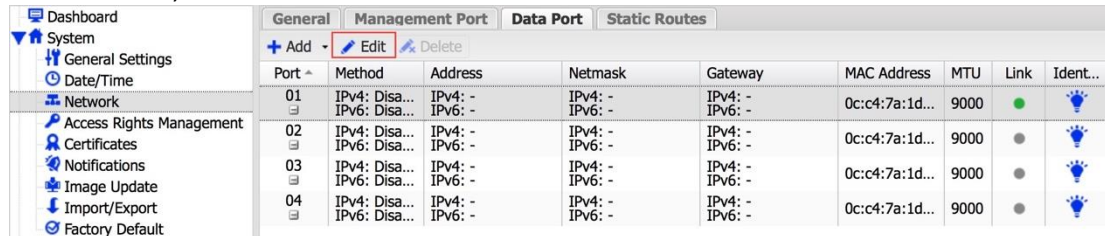
Configuration involves two steps. The first step is to set up a network. The second step is to configure CIFS/SMB.

1. 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.



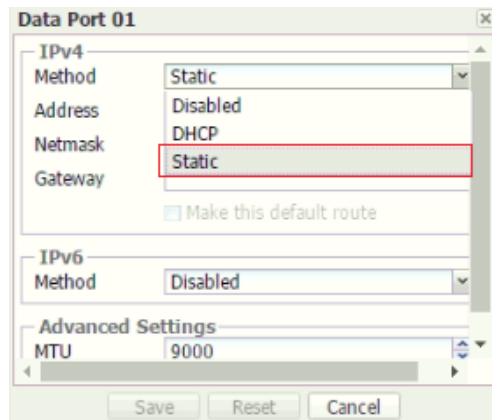
Port	Method	Address	Netmask	Gateway	MAC Address	MTU	Link	Ident...
01	IPv4: Disa... IPv6: Disa...	IPv4: - IPv6: -	IPv4: - IPv6: -	IPv4: - IPv6: -	0c:c4:7a:1d...	9000	●	💡
02	IPv4: Disa... IPv6: Disa...	IPv4: - IPv6: -	IPv4: - IPv6: -	IPv4: - IPv6: -	0c:c4:7a:1d...	9000	●	💡
03	IPv4: Disa... IPv6: Disa...	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	●	💡

Select Port 1, then click Edit.



Port	Method	Address	Netmask	Gateway	MAC Address	MTU	Link	Ident...
01	IPv4: Disa... IPv6: Disa...	IPv4: - IPv6: -	IPv4: - IPv6: -	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	●	💡

Select Static under the IPv4 Method menu.



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

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

**Data Port 01** ✕

**IPv4**

Method: Static

Address: 10.0.1.1

Netmask: 255.255.255.0

Gateway:

Make this default route

**IPv6**

Method: Disabled

**Advanced Settings**


MTU: 9000

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. ● Apply

**Confirmation** ✕

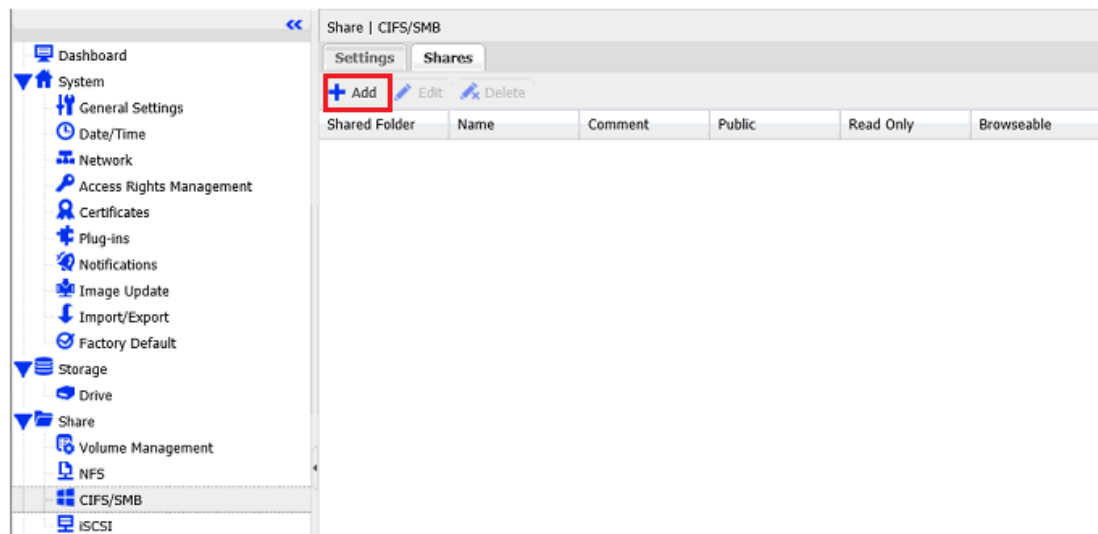
 Do you really want to apply the configuration?

Yes
No

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

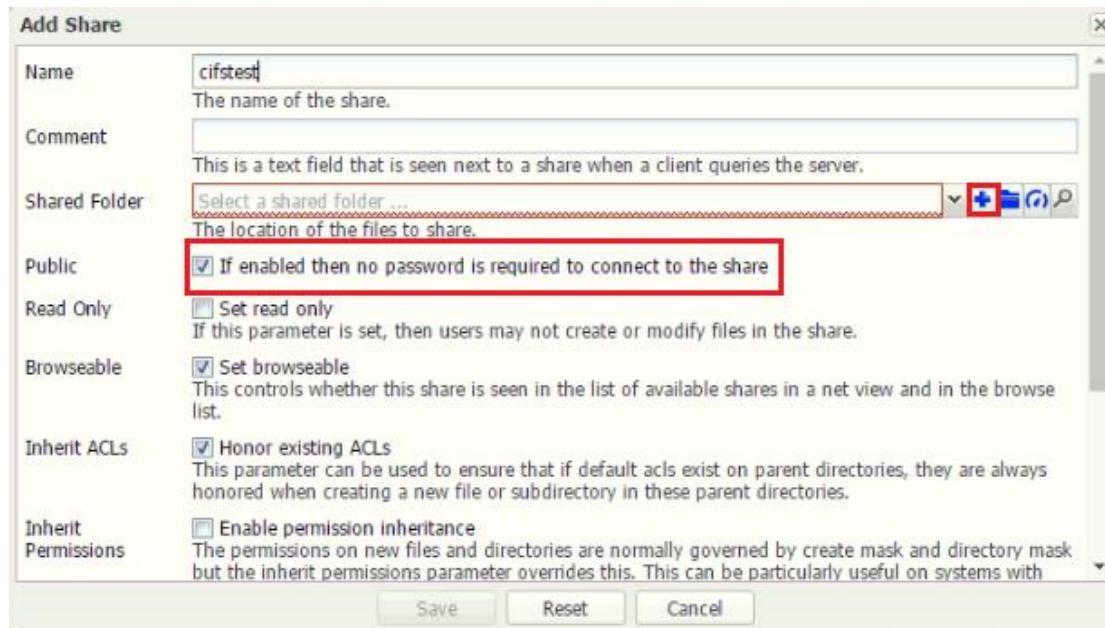
General Management Port Data Port Static Routes								
Port	Method	Address	Netmask	Gateway	MAC Address	MTU	Link	Ident...
01	IPv4: Static IPv6: Disa...	IPv4: 10.0.1.1 IPv6: -	IPv4: 255.255.255.0 IPv6: -	IPv4: - IPv6: -	0c:c4:7a:1d...	9000	●	💡
02	IPv4: Disa... IPv6: Disa...	IPv4: - IPv6: -	IPv4: - IPv6: -	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	●	💡

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

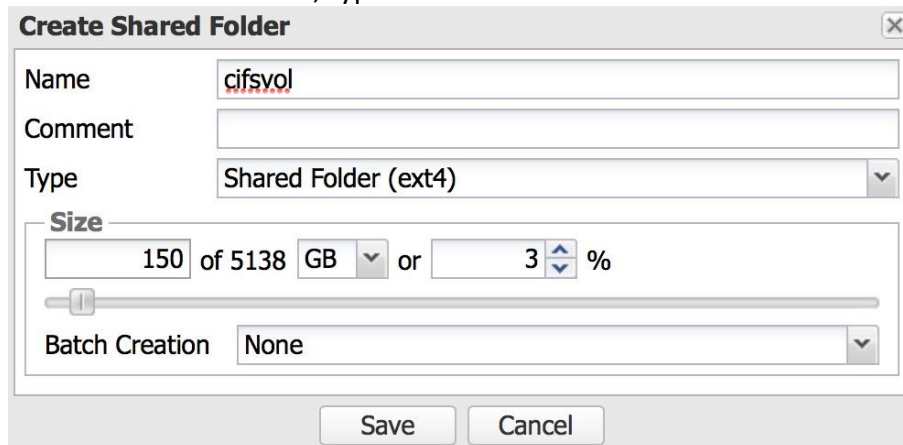


Click  to create a CIFS volume.

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



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



**Create Shared Folder**

Name:

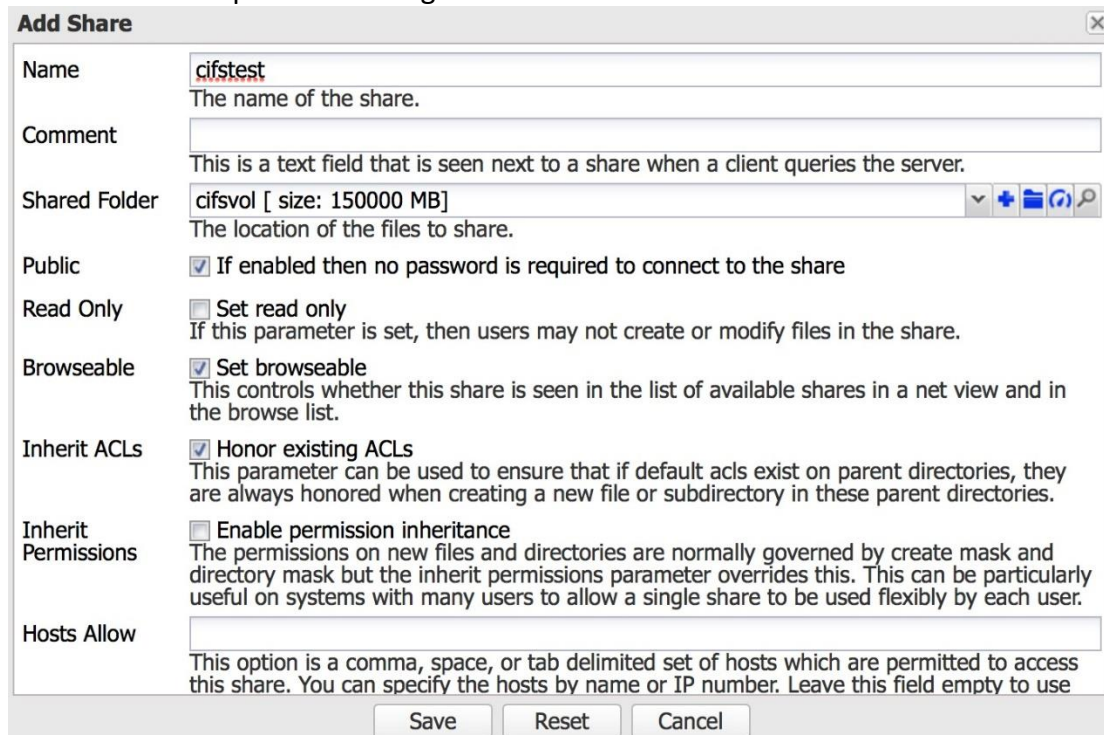
Comment:

Type:

Size:  of 5138 GB or  %

Batch Creation:

Click Save to complete the configuration.



**Add Share**

Name:   
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:   
The location of the files to share.

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.

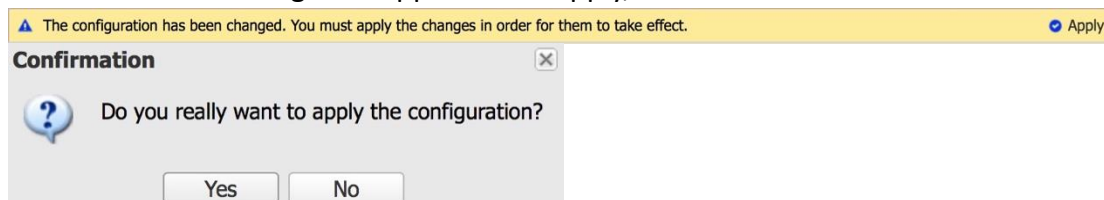
Browseable:  Set browseable  
This controls whether this share is seen in the list of available shares in a net view and in the browse list.

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

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



**Confirmation**

Do you really want to apply the configuration?

A CIFS volume has been successfully created.



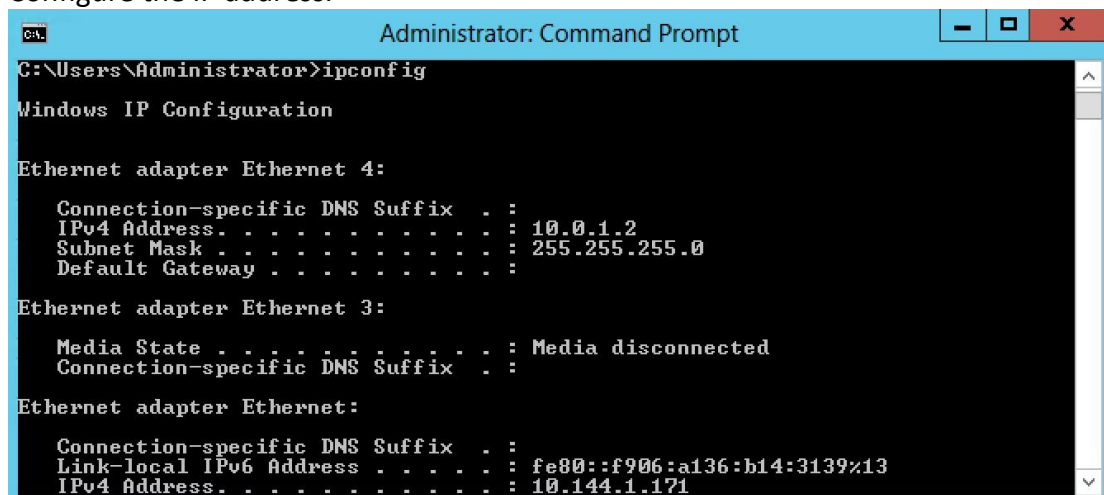
Share   CIFS/SMB						
Settings		Shares				
<a href="#">+ Add</a> <a href="#">Edit</a> <a href="#">Delete</a>						
Shared Folder	Name	Comment	Public	Read Only	Browseable	
cifsvol	cifstest		Yes	No	Yes	

## 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.



```

Administrator: Command Prompt
C:\Users\Administrator>ipconfig

Windows IP Configuration

Ethernet adapter Ethernet 4:

    Connection-specific DNS Suffix  . : 
    IPv4 Address. . . . .             : 10.0.1.2
    Subnet Mask . . . . .             : 255.255.255.0
    Default Gateway . . . . .         : 

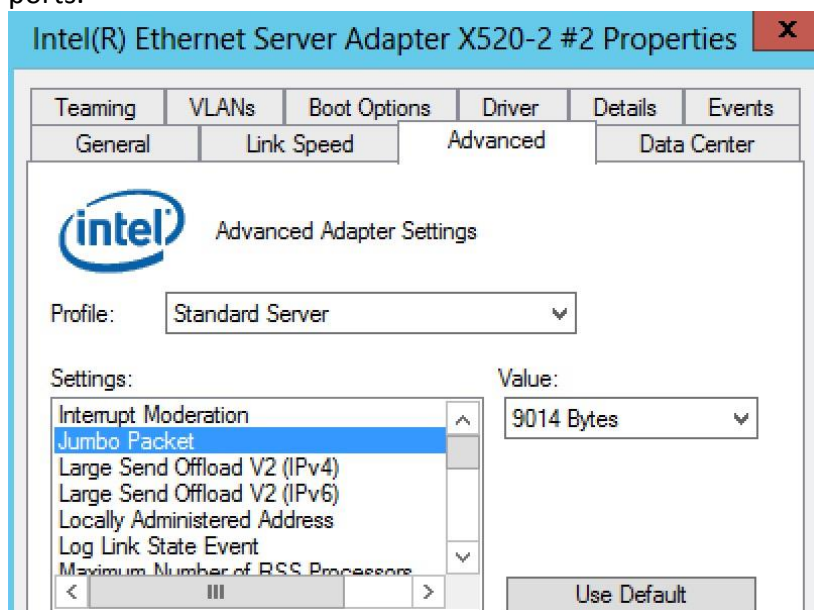
Ethernet adapter Ethernet 3:

    Media State . . . . .             : Media disconnected
    Connection-specific DNS Suffix  . : 
    IPv4 Address. . . . .             : 
    Subnet Mask . . . . .             : 
    Default Gateway . . . . .         : 

Ethernet adapter Ethernet:

    Connection-specific DNS Suffix  . : 
    Link-local IPv6 Address . . . . . : fe80::f906:a136:b14:3139%13
    IPv4 Address. . . . .             : 10.144.1.171
  
```

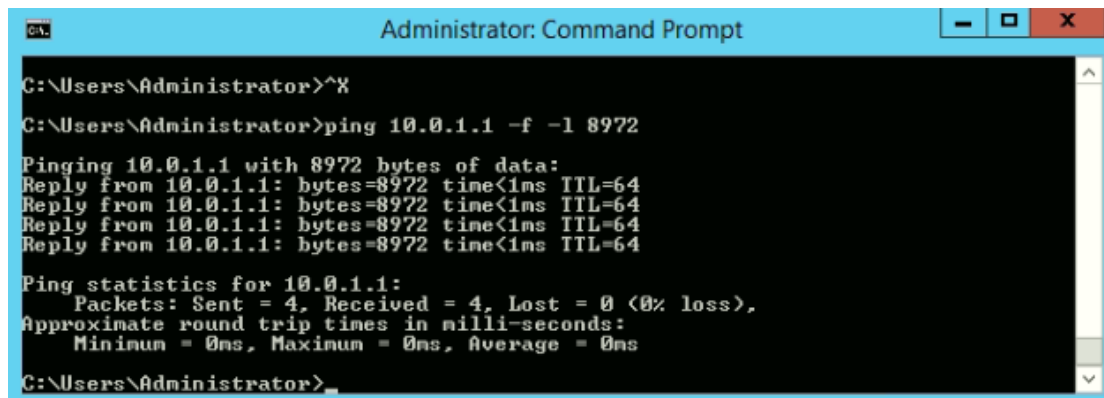
Enable a Jumbo Frame (called Jumbo Packet, in this case,) on the iSCSI HBA data ports.





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
C:\Users\Administrator>^X
C:\Users\Administrator>ping 10.0.1.1 -f -l 8972
Pinging 10.0.1.1 with 8972 bytes of data:
Reply from 10.0.1.1: bytes=8972 time<1ms TTL=64
Reply from 10.0.1.1: bytes=8972 time<1ms TTL=64
Reply from 10.0.1.1: bytes=8972 time<1ms TTL=64
Reply from 10.0.1.1: bytes=8972 time<1ms TTL=64

Ping statistics for 10.0.1.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms
C:\Users\Administrator>
```

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



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



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

