

Windows Install Instructions for the SATAboy and SATAbeast Fiber

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Nexsan

Technical Manual

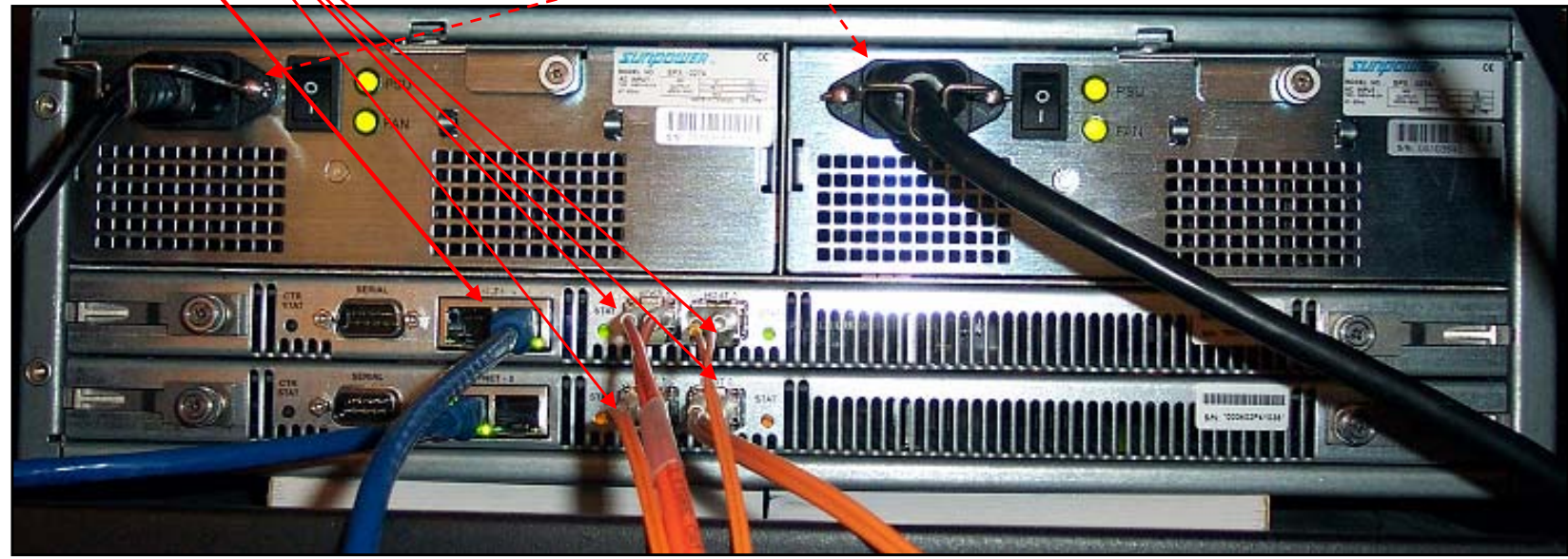
Install Cables for SATAboy/beast

- Plug in power cables
- Plug in Fibre cables
- Plug in Network cables for management access

Fibre cables

Network cable

Power cables

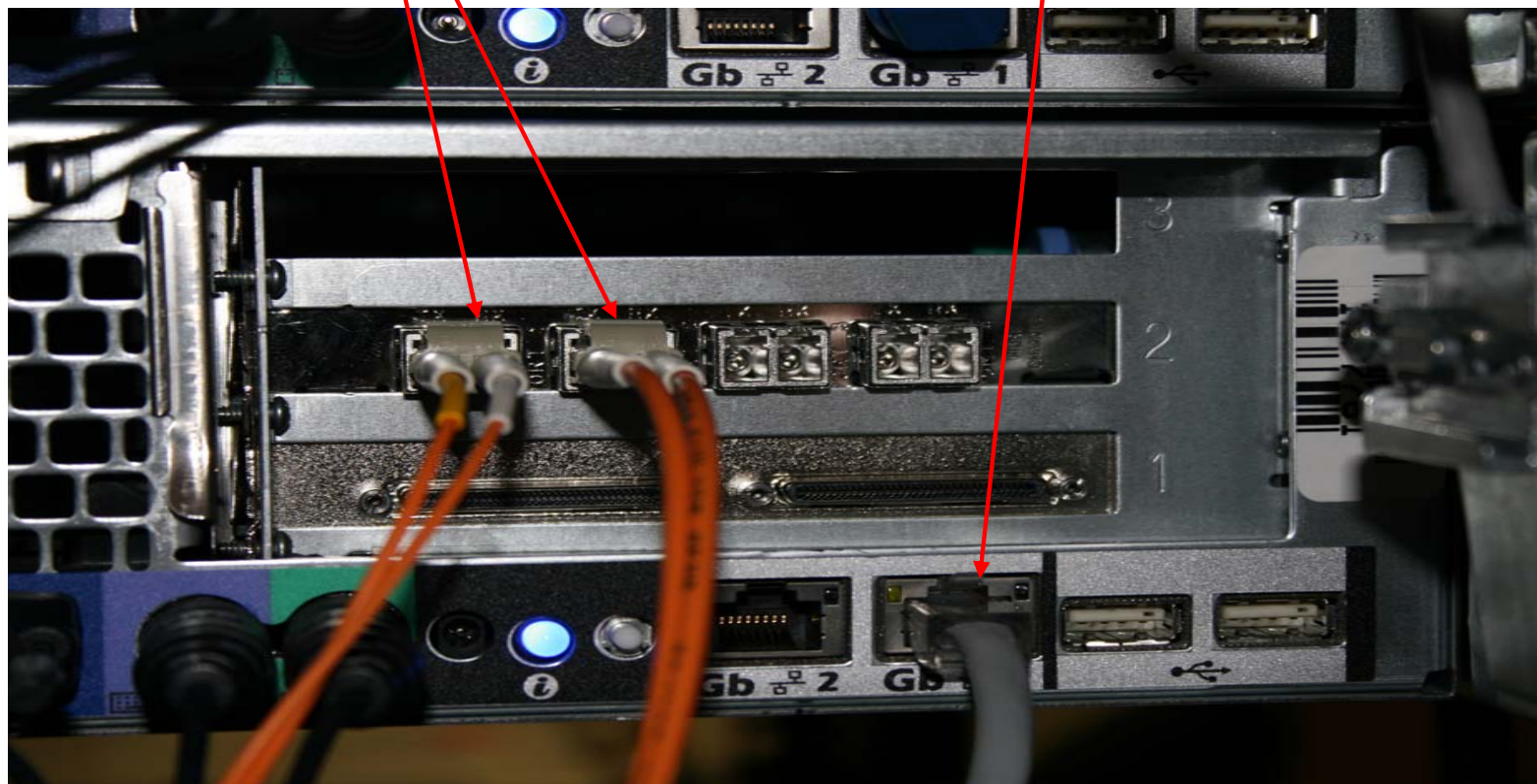


Install cables for Server

- Install Network cable
- Install fibre cable to HBA

Fibre Cable

Network Cable



Accessing the Management Interface

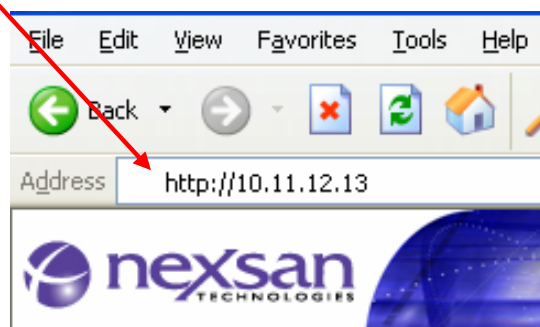
- The Nexsan controller ships with a default IP for each controller
 - C0 (top) 10.11.12.13
 - C1 (bottom) 10.11.12.14
- There are two ways to access the unit described below
 - 1) Via the GUI interface through a web browser
 - 2) The serial port via HyperTerminal or a terminal emulation

Please refer to the user's manual for further instructions.

Accessing the GUI

- Once the routing has been established, you will be able to access the unit's web interface using a standard browser. It is important to complete the network configuration of the ATABeast
- To do this you must type the IP address of the unit into your Internet Browser

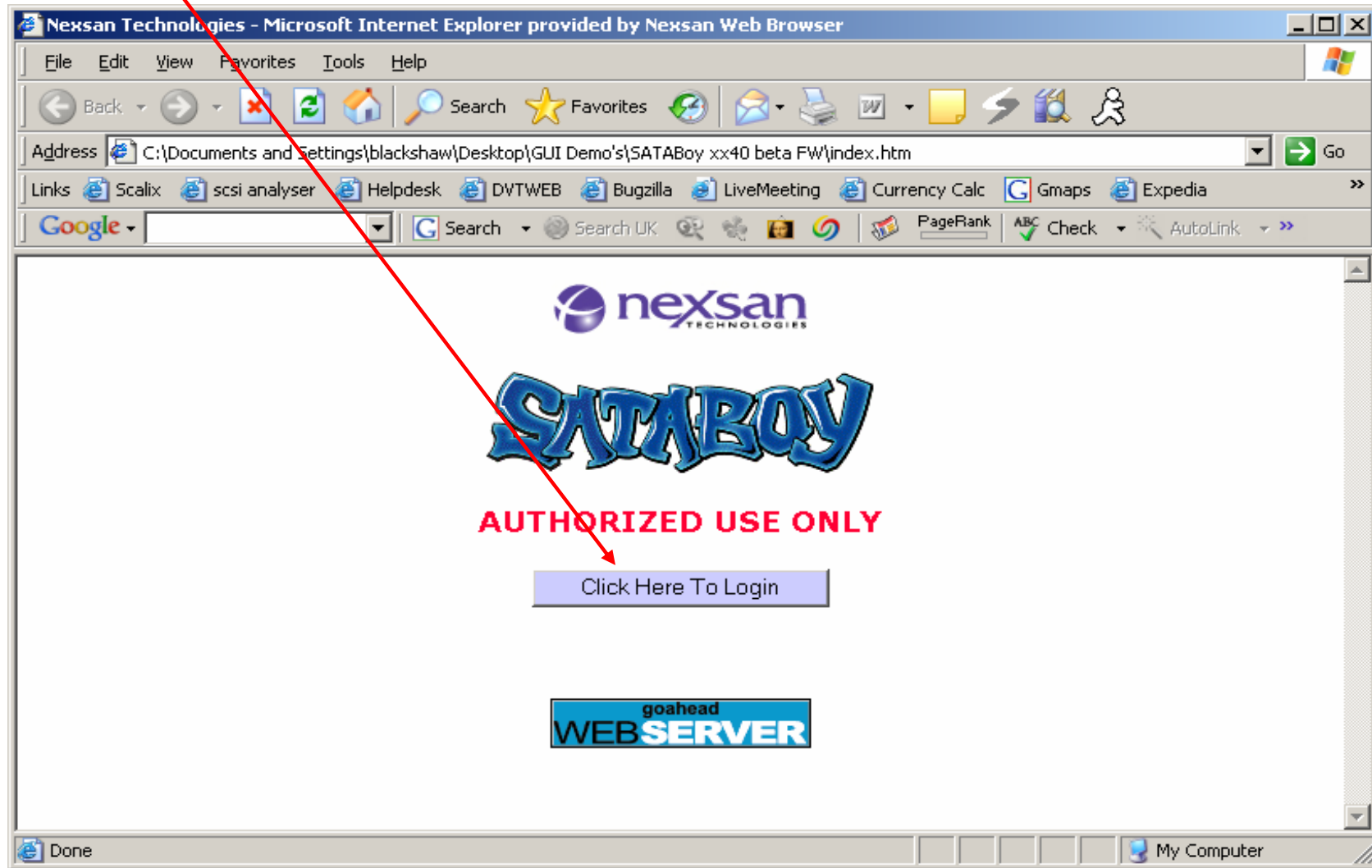
Default IP



- Once you have typed the IP hit go and log into the Nexsan. The initial install does not require a username or password

Click on the Login Tab

Login tab



Considering the large amount of possibilities, one of the most essential factors in creating or recreating a RAID ARRAY is proper planning. Make sure you have your requirements defined before moving ahead.

Keep in mind that all of the Nexsan units will come preconfigured, which may require additional steps of deleting existing volumes and Arrays.

If you're recreating an existing ARRAY you will need to BACKUP up all your data before proceeding.

This document will cover the creation of a RAID5 ARRAY which may be used to as a example in creating any other RAID set.

Deleting the Volume

Once the data is backed up you can delete all volumes one by one.

- 1. CONFIGURE VOLUMES
- 2. DELETE VOLUME
- 3. CHECK RADIO BUTTON
- 4. DELETE VOLUME TAB

- > > > MAIN MENU
- HOME
- RAID INFORMATION
- SYSTEM INFORMATION
- CONFIGURE RAID
- CONFIGURE VOLUMES
- CONFIG HOST ACCESS
- SYSTEM ADMIN.
- CONFIGURE NETWORK
- QUICK START
- LOG OFF

ADD VOLUME EXPAND VOLUME **DELETE VOLUME** RENAME VOLUME MAP VOLUME

Configure Volumes

Delete a Logical Volume

Free space areas on 'array1'
Array 1, Controller 1
Total capacity 3.2 TB (2.9 TiB)

Free Area	Size in MB	Size in GB
There are no free space areas, all of the array capacity is used		


Volume ID (3) on 'array 1' (Array 1)

Volume name	vol1
Volume capacity	1600085 MB, 1600.0 GB (1490.1 GiB)
% of total array used	50%
Number of bad blocks	0
LUN mapping	Click to view
Volume serial number	6D45443E
Volume created	Thursday 02 Nov 2006 16:59:10

Delete Volume

Existing on array 1, controller 1
1600085 MB, 1600.0 GB
(1490.1 GiB)

Below bar represents the size and position of the above volume

0%  100%

Free space after this volume - 0 MB, 0.0 GB

Deleting the Volume

Continue deleting the volumes one by one, until all volumes have been deleted.

- 1. CHECK RADIO BUTON
- CONFIRM DELETE COMMAND

>>> MAIN MENU

HOME

RAID INFORMATION

SYSTEM INFORMATION

CONFIGURE RAID

CONFIGURE VOLUMES

CONFIG HOST ACCESS

SYSTEM ADMIN.

CONFIGURE NETWORK

QUICK START

LOG OFF

Confirm that you wish to DELETE the below Volume

3: 'vol1'
Array: 'array1', Controller 1
Capacity: 1.6 TB (1490.1 GiB)

Controller 0 Ports

Controller 1 Ports
Fibre - Host 0, LUN 0

Confirm by clicking the checkbox and then clicking the 'Confirm Delete Command' or Cancel by clicking the 'CANCEL Delete' button.

Confirm Delete Command

CANCEL Delete

After each volume have been deleted you will get confirmation screen.

Deleting the Arrays

Once the volumes have been deleted from an ARRAY, you can delete the ARRAY.

- 1. CONFIGURE RAID
- 2. DELETE ARRAY
- 3. CHECK RADIO BUTON
- 4. DELETE RAID ARRAY

- >>> MAIN MENU
- HOME
- RAID INFORMATION
- SYSTEM INFORMATION
- CONFIGURE RAID
- CONFIGURE VOLUMES
- CONFIG HOST ACCESS
- SYSTEM ADMIN.
- CONFIGURE NETWORK
- QUICK START
- LOG OFF

ADD ARRAY RENAME ARRAY **DELETE ARRAY** ARRAY OWNER ADD SPARE DELETE SPARE SPARE MODE LOST DATA REBUILD ACK

Delete a RAID array

Configure RAID
Delete a RAID Array

Array name : 'array1' Array number : 1, Controller 1 RAID level : RAID 6 (rotating dual parity) Number of members : 10		 Fault tolerant 3.2 TB (2.9 TiB)
Array name : 'array4' Array number : 2, Controller 1 RAID level : RAID 6 (rotating dual parity) Number of members : 10		 Fault tolerant 3.2 TB (2.9 TiB)
Array name : 'array2' Array number : 3, Controller 0 RAID level : RAID 6 (rotating dual parity) Number of members : 10		 Fault tolerant 3.2 TB (2.9 TiB)
Array name : 'array3' Array number : 4, Controller 1 RAID level : RAID 6 (rotating dual parity) Number of members : 10		 Fault tolerant 3.2 TB (2.9 TiB)

Delete RAID Array

Deleting the Arrays (cont.)

Continue with deleting the ARRAY.

1. CHECK RADIO BUTTON

2. CONFIRM DELETE COMMAND

> > > MAIN MENU
HOME
RAID INFORMATION
SYSTEM INFORMATION
CONFIGURE RAID
CONFIGURE VOLUMES
CONFIG HOST ACCESS
SYSTEM ADMIN.
CONFIGURE NETWORK
QUICK START
LOG OFF

Confirm that you wish to DELETE the below array

Array name : array1
Array number : 1

RAID level : RAID 6 (rotating dual parity)
Number of members : 10
Array capacity : 3.2 TB (2.9 TiB)
Stripe size : 128 Kbytes
Created : Thursday 02-Nov-2006 16:54:13

Confirm by clicking the checkbox and then clicking the 'Confirm Delete Command' or Cancel by clicking the 'CANCEL Delete' button.

Confirm Delete Command

CANCEL Delete

After each array have been deleted you will get confirmation screen.

Checking RAID Array Progress

1. SELECT RAID INFORMATION TAB

2. SELECT THE PROGRESS TAB

The screenshot shows a navigation menu on the left with options: >>> MAIN MENU, HOME, RAID INFORMATION, SYSTEM INFORMATION, CONFIGURE RAID, CONFIGURE VOLUMES, CONFIG HOST ACCESS, SYSTEM ADMIN., CONFIGURE NETWORK, QUICK START, and LOG OFF. A red arrow points from the 'RAID INFORMATION' menu item to the 'RAID ARRAY' tab in the top navigation bar. Another red arrow points from the 'PROGRESS' tab to the 'PROGRESS BAR' label. The main content area displays 'RAID Information' and 'RAID Array Utility Progress'. A table shows the status for 'ARRAY #1' (Array number : 1, Controller 0):

'ARRAY #1'	
Array number : 1, Controller 0	
Utility	Array construct
Progress %	39%

Below the table is a progress bar showing 0% on the left and 100% on the right, with a blue bar indicating the current progress level.

Note: The array creation varies depending on the size of the drives and the amount of drives added to the array.

Create Volume(s)

When you create an ARRAY one volume will be created automatically. However if you like to have more than one volume in the ARRAY you should go trough the procedure of deleting the default volume and creating multiple volumes.

1. SELECT CONFIGURE RAID

2. SELECT ADD VOLUME

3. SELECT APROPRIATE OPTIONS

4. CREATE VOLUME

ADD VOLUMEEXPAND VOLUMEDELETE VOLUMERENAME VOLUMEMAP VOLUME

Configure Volumes

Create a Logical Volume

**Array has been successfully configured
Volumes will not be accessible until initialisation is completed**

Array# 1 selected, Controller 0, RAID5, 3.6 TB (3.2 TiB)

Enter the name for the new volume	<input type="text" value="ARRAY #1"/>
Enter the size of the new volume in % of array capacity	<input type="text" value="100"/> %
Reserve an optional free space area at beginning of the new volume for future expansion of a previous volume	<input type="text" value=""/> %
Limit volume size to less than 2TB	<input type="checkbox"/>

Create Volume Reset

MB GB % MiB GiB Change Units

NOTE: Any time a different unit is selected acknowledge it by clicking on "Change Units"

Mapping The Volumes

Once volumes are created you will need to map them to the appropriate port(s), this depends on your unit's configuration settings.

1. CONFIGURE VOLUMES

2. MAP VOLUME TO THE APPROPRIATE PORT

Configure Volumes
Map Logical Volumes

Volumes on Controller 1	Fibre		iSCSI	
	Host 0	Host 1	Net 0	Net 1
1: 'vol1' Array: 'speed', Controller 1 Capacity: 640.0 GB (596.0 GiB)	LUN 0	LUN 0	-	-
2: 'iscsi' Array: 'array3', Controller 1 Capacity: 672.0 GB (625.8 GiB)	LUN 1	LUN 1	-	-

Save settings Reset

3. SELECT THE SAVE SETTINGS TAB

WARNING: Mapping the same volume to 2 different servers without file locking or clustering software will result in data corruption !

Checking FC Host Ports

Select either loop, point to point or auto, loop topology is used when you have more than one fibre device connected to a host bus adapter (HBA) via a fibre hub. Point to point is the preferred topology used when you are connecting this system to a fibre switch or directly to a fibre HBA (no hub). Selecting auto will make this system attempt to discover the topology automatically.

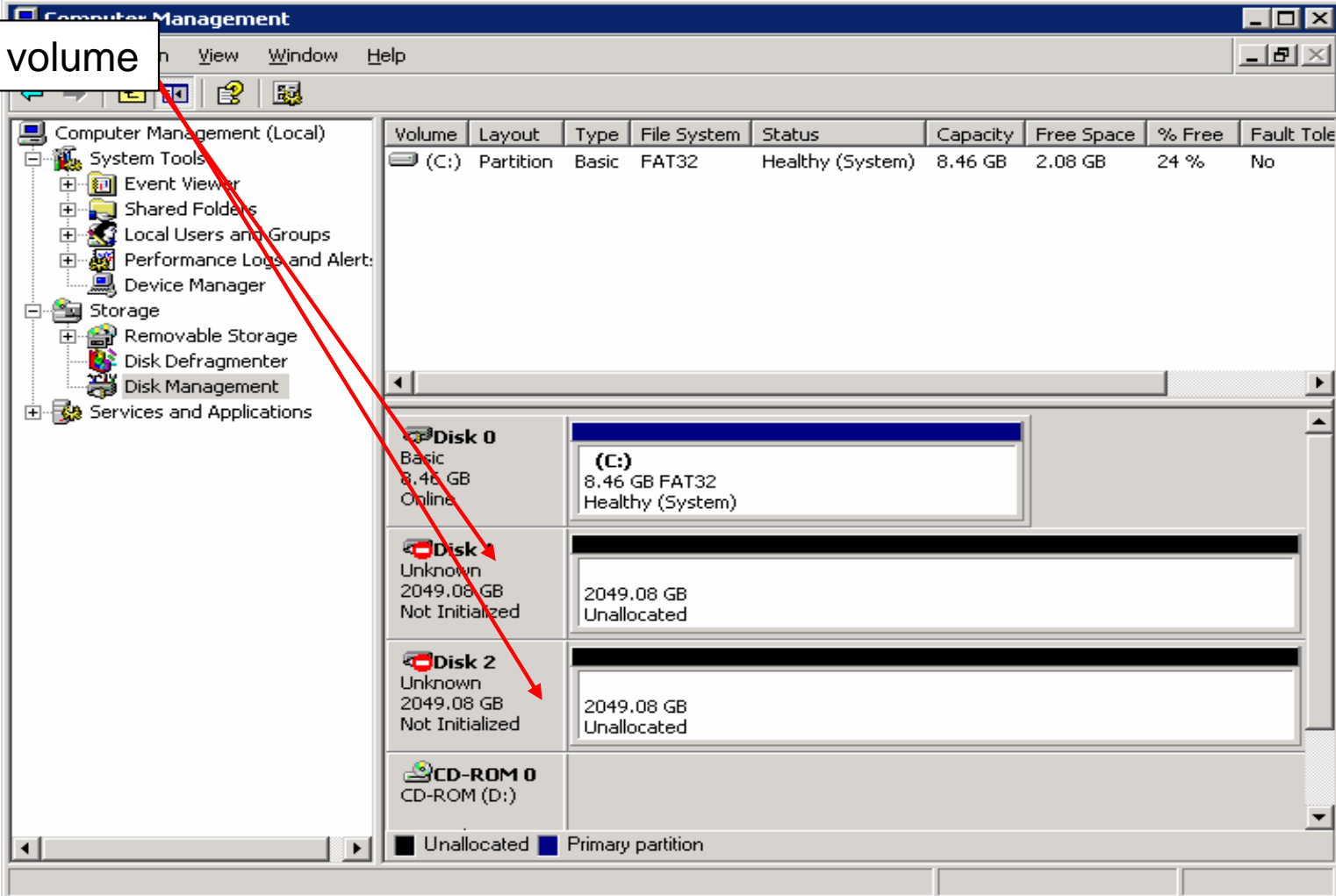
**System Admin
Configure Fibre**

Controller 0	Fibre - Host 0		Fibre - Host 1	
	Current status	New state	Current status	New state
Topology	P2P, full fabric	AUTO	Loop Down	Point to point
Loop ID	?(N.A)	5	?(Loop Down)	AUTO
Link speed	2Gbit	AUTO	Loop Down	AUTO
Frame size	2112	2112	2112	2112
Host port cleanup	Yes	Yes	Yes	Yes

Disk Management Config

- Scan for new volumes
- Once volumes appear add a initialize the volume through the signature wizard

New volume



The screenshot shows the Windows Computer Management console. The left pane shows the 'Storage' tree with 'Disk Management' selected. The right pane displays a table of volumes and a detailed view of the disks below it.

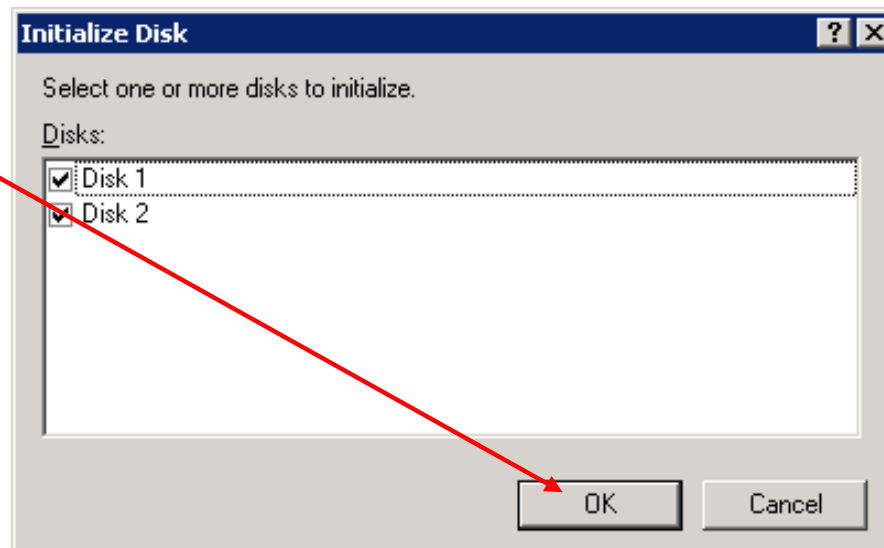
Volume	Layout	Type	File System	Status	Capacity	Free Space	% Free	Fault Tole
(C:)	Partition	Basic	FAT32	Healthy (System)	8.46 GB	2.08 GB	24 %	No

Disk	Layout	Type	Capacity	Free Space	Status
Disk 0	Basic	8.46 GB	Online		
Disk 1	Unknown	2049.08 GB	Not Initialized	2049.08 GB	Unallocated
Disk 2	Unknown	2049.08 GB	Not Initialized	2049.08 GB	Unallocated
CD-ROM 0	CD-ROM (D:)				

Legend: ■ Unallocated ■ Primary partition

Initializing the Disk

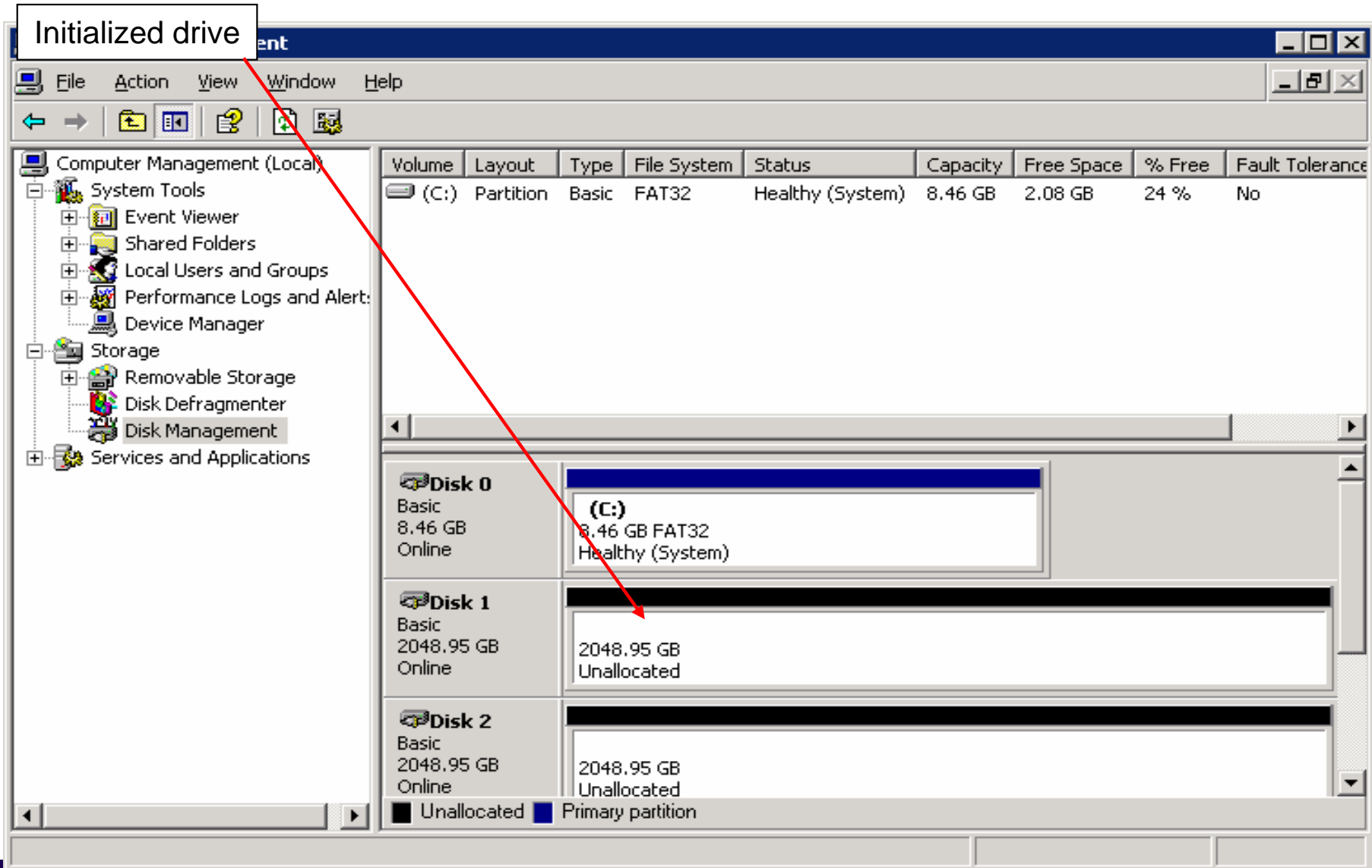
Click OK



Initialize Disk

After disk drive is initialized The drives should look like this

Initialized drive



The screenshot shows the Windows Computer Management console. The left pane shows the tree view with 'Disk Management' selected. The right pane displays a table of disk information and a graphical representation of the disks.

Volume	Layout	Type	File System	Status	Capacity	Free Space	% Free	Fault Tolerance
(C:)	Partition	Basic	FAT32	Healthy (System)	8.46 GB	2.08 GB	24 %	No

Disk	Type	Capacity	Status	Partition Information
Disk 0	Basic	8.46 GB	Online	(C:) 8.46 GB FAT32 Healthy (System)
Disk 1	Basic	2048.95 GB	Online	2048.95 GB Unallocated
Disk 2	Basic	2048.95 GB	Online	2048.95 GB Unallocated

Legend: Unallocated Primary partition

Creating a New Partition

New Partition

Right click on the drive and select new Partition

The screenshot shows the Windows Computer Management console. The left pane shows the tree view with 'Disk Management' selected. The right pane displays a table of disk partitions and a graphical representation of the disks below.

Volume	Layout	Type	File System	Status	Capacity	Free Space	% Free	Fault Tolerance
(C:)	Partition	Basic	FAT32	Healthy (System)	8.46 GB	2.08 GB	24 %	No

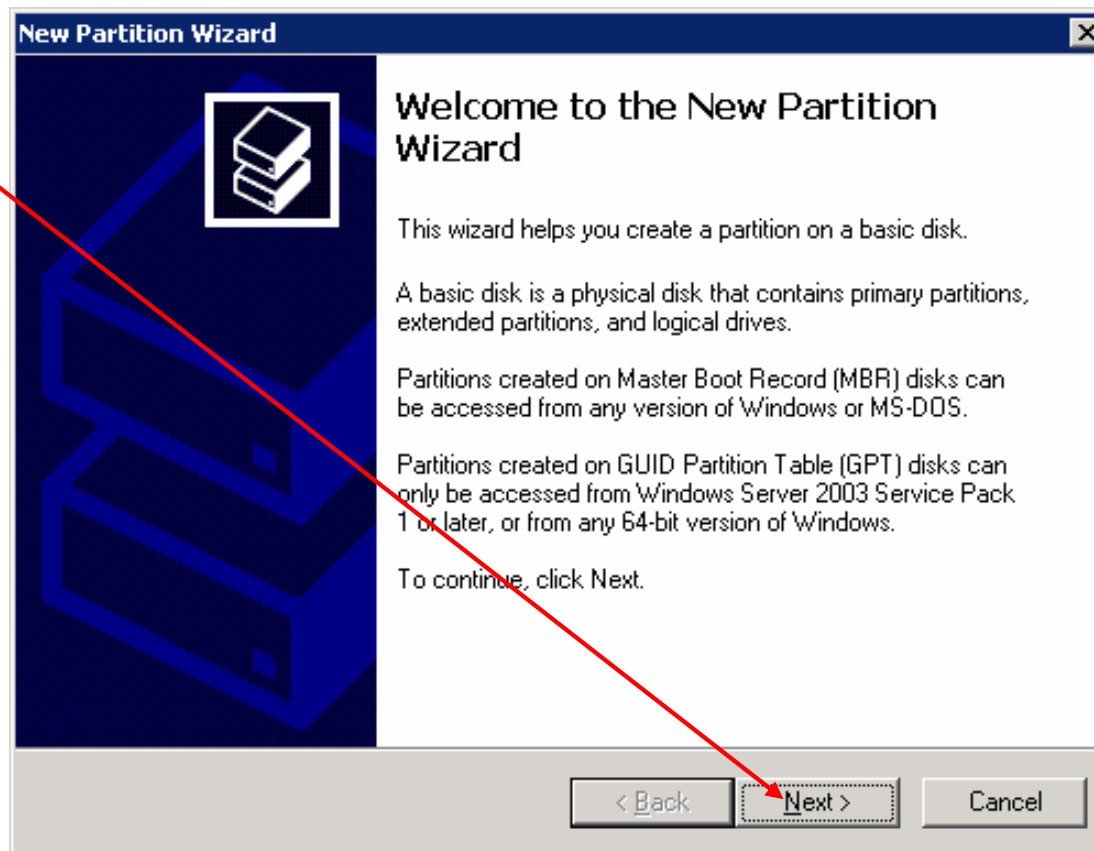
Disk	Type	Capacity	Status	Partitions
Disk 0	Basic	8.46 GB	Online	(C:) 8.46 GB FAT32 Healthy (System)
Disk 1	Basic	2048.95 GB	Online	2048.95 GB Unallocated
Disk 2	Basic	2048.95 GB	Online	2048.95 GB Unallocated

Legend: Unallocated Primary partition

New Partition Window

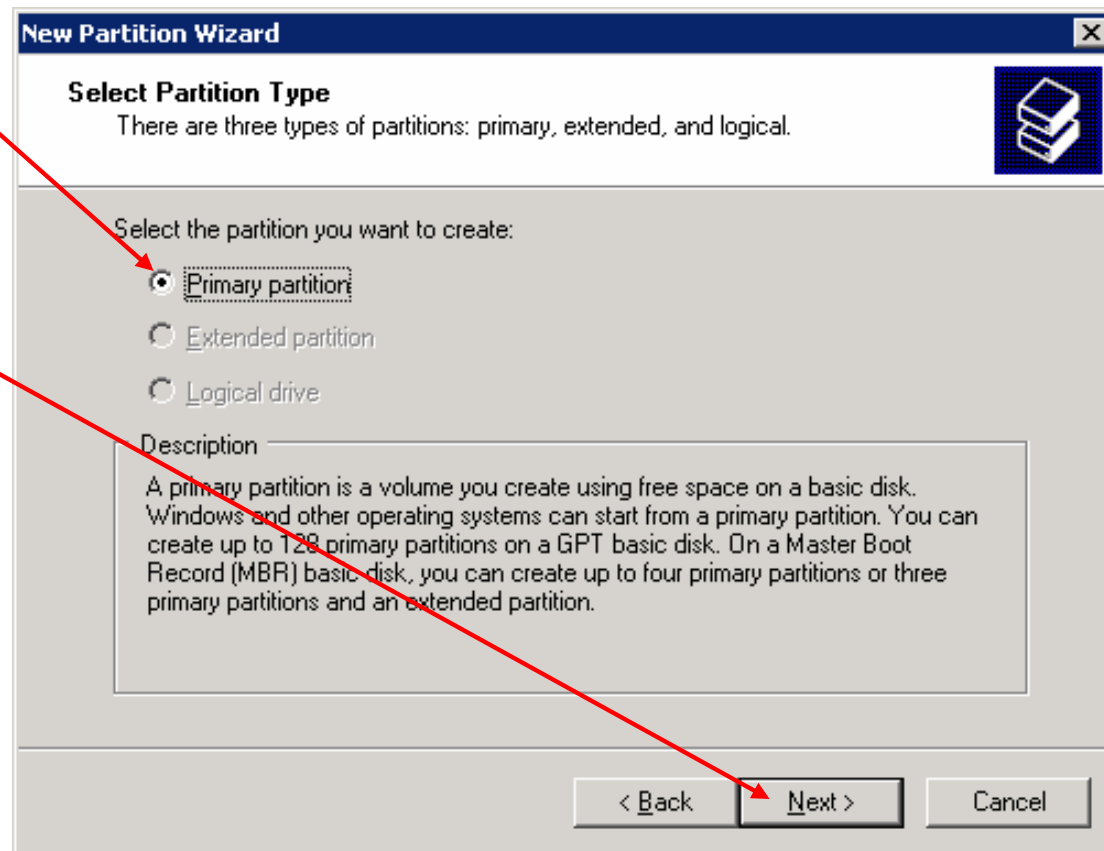
Click next

Next Tab



Select Partition Type

- Select Partition type and click next



New Partition Wizard

Select Partition Type
There are three types of partitions: primary, extended, and logical.

Select the partition you want to create:

Primary partition

Extended partition

Logical drive

Description

A primary partition is a volume you create using free space on a basic disk. Windows and other operating systems can start from a primary partition. You can create up to 128 primary partitions on a GPT basic disk. On a Master Boot Record (MBR) basic disk, you can create up to four primary partitions or three primary partitions and an extended partition.

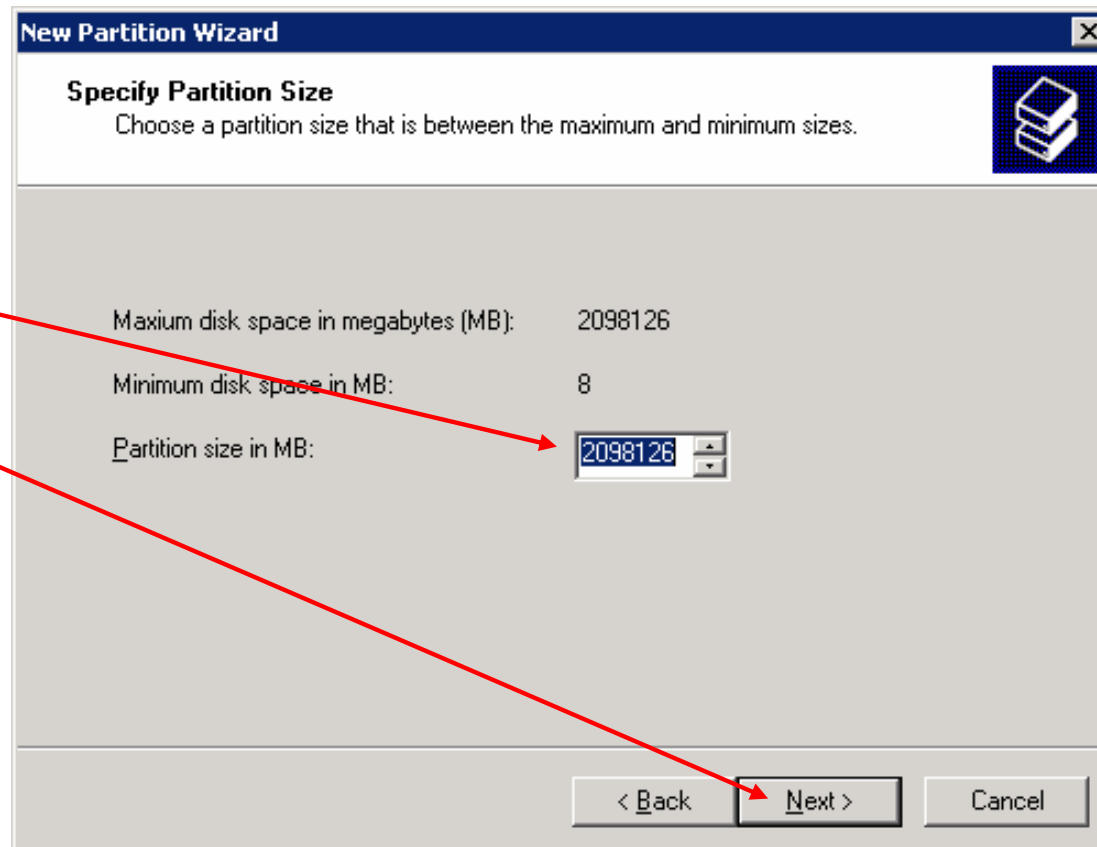
< Back **Next >** Cancel

Partition Type

Next

Specify Partition Size

- Specify Partition size and click next



New Partition Wizard

Specify Partition Size
Choose a partition size that is between the maximum and minimum sizes.

Maximum disk space in megabytes (MB): 2098126

Minimum disk space in MB: 8

Partition size in MB: 2098126

< Back **Next >** Cancel

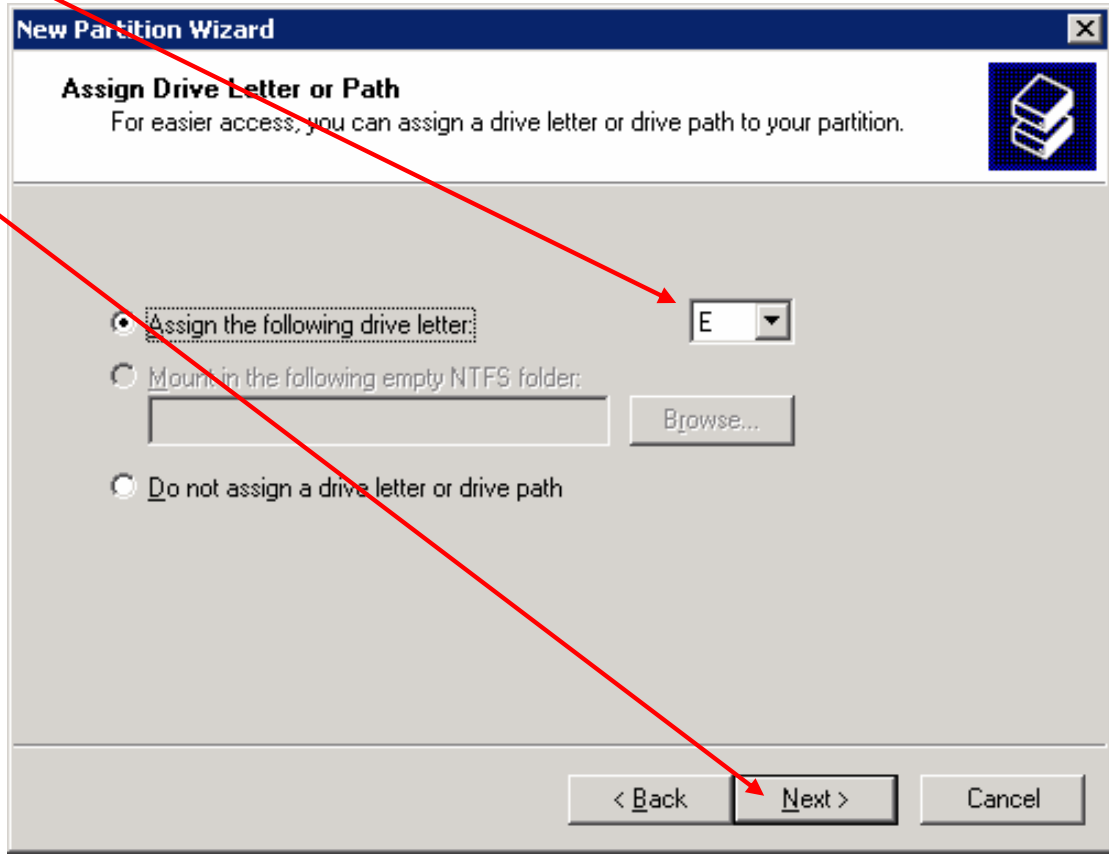
Partition Size

Next

Assign Drive Letter or Path

Drive Letter

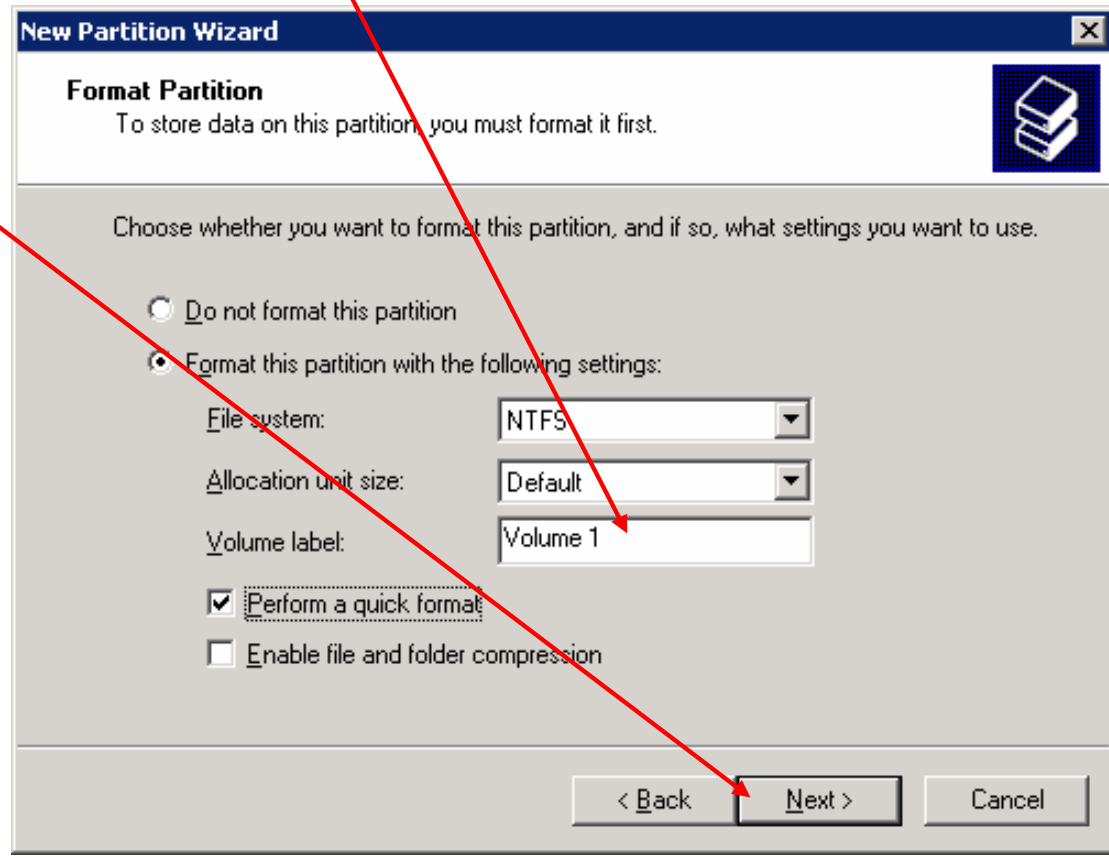
Click Next



Format Partition

Name the Volume label

Next



New Partition Wizard

Format Partition
To store data on this partition, you must format it first.

Choose whether you want to format this partition, and if so, what settings you want to use.

Do not format this partition

Format this partition with the following settings:

File system: NTFS

Allocation unit size: Default

Volume label: Volume 1

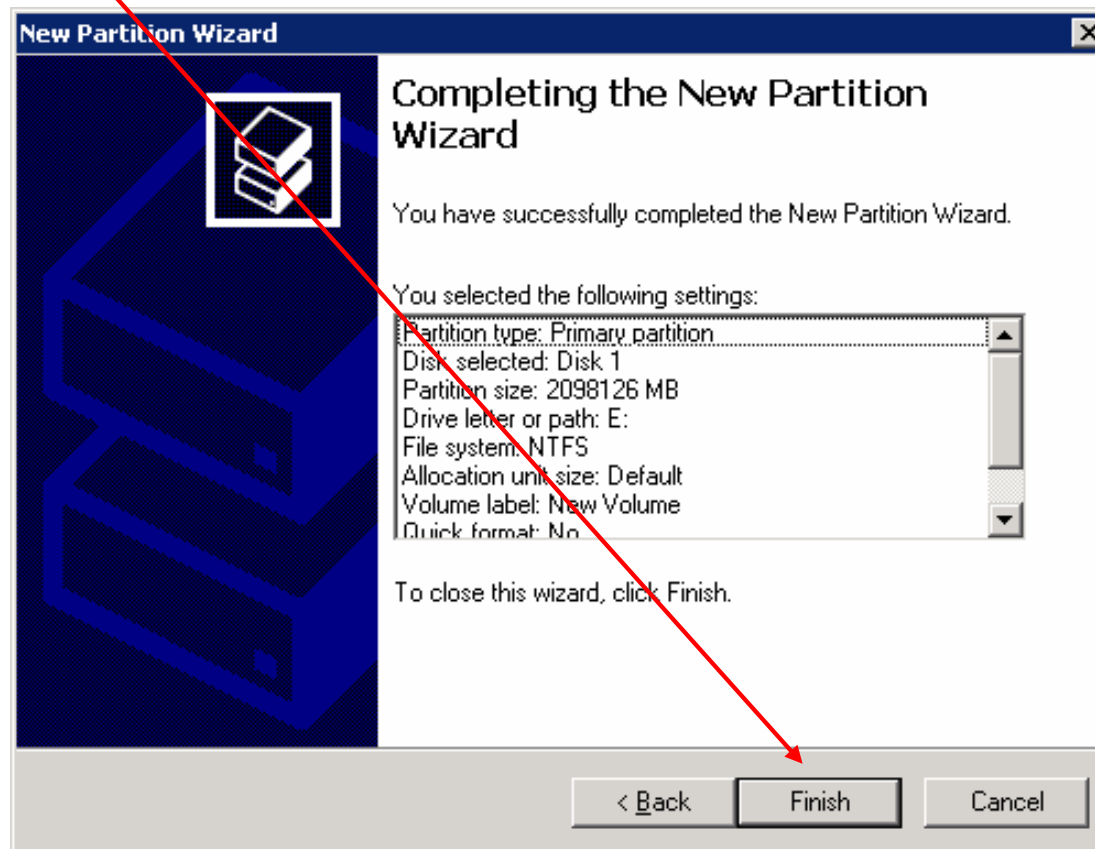
Perform a quick format

Enable file and folder compression

< Back Next > Cancel

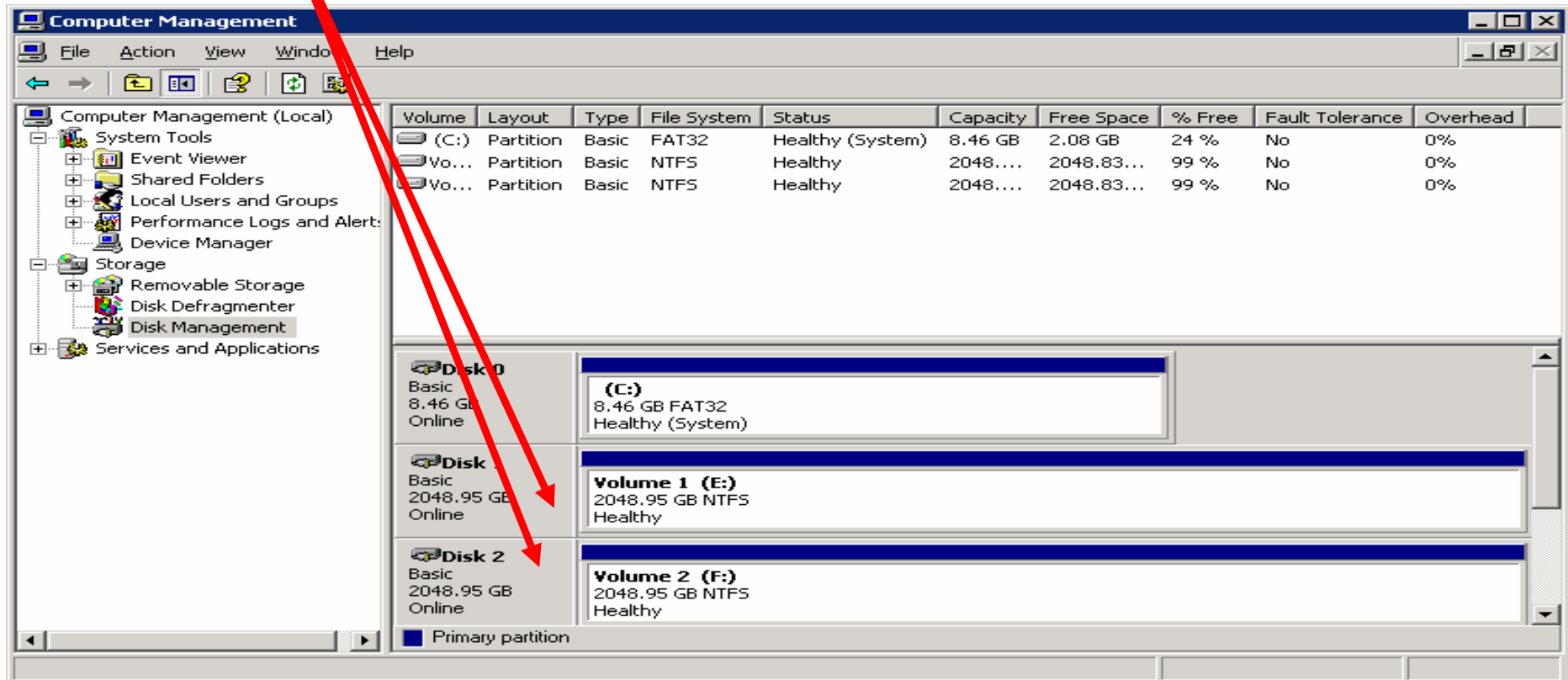
Completing the New Partition

Click Finish



Viewing the new volumes

New Volumes



The screenshot shows the Windows Computer Management console. The left pane shows the navigation tree with 'Disk Management' selected. The right pane displays a table of volumes and their details.

Volume	Layout	Type	File System	Status	Capacity	Free Space	% Free	Fault Tolerance	Overhead
(C:)	Partition	Basic	FAT32	Healthy (System)	8.46 GB	2.08 GB	24 %	No	0%
Vo...	Partition	Basic	NTFS	Healthy	2048....	2048.83...	99 %	No	0%
Vo...	Partition	Basic	NTFS	Healthy	2048....	2048.83...	99 %	No	0%

Disk	Volume
Disk 0 Basic 8.46 GB Online	(C:) 8.46 GB FAT32 Healthy (System)
Disk 1 Basic 2048.95 GB Online	Volume 1 (E:) 2048.95 GB NTFS Healthy
Disk 2 Basic 2048.95 GB Online	Volume 2 (F:) 2048.95 GB NTFS Healthy

Legend: ■ Primary partition

Note: For your more information on Dynamic disks click on the link below for best practices

<http://support.microsoft.com/kb/816307>

**If you are still having issues feel free to contact
Technical Support**

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Thank you