RAID Utility for Windows

1. Enter NVRAIDMAN

RAID driver is built in nVidia ALL in one driver provided in ASRock sup port CD. After you finish the driver installation, you can create, delete, or rebuild any RAID array. Please enter NVRAIDMAN by clicking on Start→ Programs→NVIDIA Corporation→RAID Manager→RAID Manager.



Then, the below screen appears.

≥ #VIDIA.	Free Disk NVTA	id	_	_		2	- x
System Tasks	Nale	Stelus	Caladiv	Interface	Channel	Cevile	1
∰Hul Pu _± Array ©Curodio Array	₩DC WE3503E-02FN70 ₩DC WE3503E 02FN70				Frimery secondary	Mæter Mæter	
Details							
		_	_	_	-		

2. Creating RAID Arrays

Creating RAID 0 (Striping)

NVRAIDMAN can be used to create a striped array from one disk up to the maximum supported number of disks in the system. To create a twodisk Striped Array do the following.

- 1. Go to the system BIOS and make sure that the drives that you want to use are RAID enabled.
- 2. Boot to Windows and launch the NVRAIDMAN application.
- 3. Create Array and the following screen will appear.





	y Wizard	6
RAID Amoy Scient Please select the	aon s type of RAID array II creste.	1
Select the type .	If PAID amay to create.	
RAID Mode:	Zimming	
Stripe size	641.	
	sTierk (Seat >	

- 5. Click the RAID Mode list arrow and select Striping, and leave the
- "Stripe Size" with its default value as shown in the following screen shot.

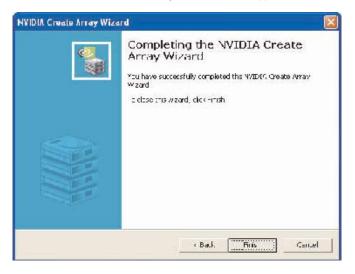
AID An ay Select Please select the	hinn 🤹 c type of RAID array to create.
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RAID Mode:	Strppg •
Stripe size	311 _

Free Disks: Name	dianel	Device	
WDC WCDYOSCHOENAD WDC WCDSSOGCHOENAD			
A Striping anay retures 1 or n or	⊧ਸਿਦਾ ਕਾਜ ਪ	bis.	

7. Select the two disks that you want to include in the stripe set.

I MANDE WE350SE-DEFNA0 Piniary Master IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII

To create a striped array with more disks, select additional disks from the list.



9. Click Finish and the following screen shot will appear.



The RAID 0 is created successfully.

Creating RAID 1 (Mirroring)

The NVRAIDMAN application can be used to create a Mirror Array. By definition, a mirrored array consists of two drives. Data is written to both two drives, and if one drive fails then data can be recovered from the other drive. To create a Mirrored Array, do the following.

- 1. Go to the system BIOS and make sure that the drives that you want to use are RAID enabled.
- 2. Boot to Windows and launch the NVRAIDMAN application, then click on Create Array and the following screen will appear.



The steate and	y Wizard	
R AID Array Select Please select the	buon E type of RAID/array III create,	
Select the type .	LÍ P.41D anay lo create.	
RAID Mode:	Zimming	
Stripe size	641.	

4. Click Next and the following screen shot will appear.

Free Dis/s: Name	Channel	Device	
MDC WD350GD-00FNA0			

5. Select the two drives that you want to use in the Mirrored array.

ree Disks: Name	Channel	Device		
MOT WEDCOSE-OTEN	An Pimaly	Master		
E Store WE SEOSE-OLEN.	40 Secondary	Master	D:	
Mirroring array requires 2	free hard dis	ke		

6. Click Next and the following screen shot will appear.

Dista selected for the new an Name	ay Channel	Device
MDC WE350GE-OCENDO WDC WE350GE OCENDO		Master Master
1		

- 7. If you want to start rebuilding the array right away (copy data from one disk to the other), select the disk that you wish to preserve. Do not select a disk if you do not want to rebuild the array at this time.
- 8. Click Next and the following screen shot appears.

NVIDIA Create Array Wiz	ard 🛛 🔀
	Completing the NVIDIA Create Annay Wizard You have successfully completed the NVIDIA Greate Array wizard Is doed the Arzard, dock-mish
	< Rank Tride Centrel

9. Click Finish. If you selected a disk to preserve in step 7, the rebuilding process begins.

🛃 NVIDIA.	nvra	id	_	_	_	- 1	>
System Lasks	Name	Status	Capadity	Interface	Channel	Device	
WHot Plus Array	Mirroring	Healthy	9× 48 GB				
Create Array	woo webeuge olenpo	Healthy	37 18 CB	SALA	HINCHY	Master	
	📲 🔤 Wort WEDODSE-DEENAD	Liealthy	04 40 GD	SATA	Terrondary:	Maste:	
Details							
		_	_	_	_	_	

A mirrored array has been created, while the other two disks are set to free disks.

Creating JBOD (Spanning)

NVRAIDMAN can be used to create a Spanning Array which requires at least one disk to start such an array. To create a Spanning Array do the following:

- 1. Go to the system BIOS and make sure that the drives that you want to use are RAID enabled.
- Boot to Windows and launch the NVRAIDMAN application, then click on Create Array and the following screen will appear.

NVIDIA Create Array Wize	ar d	×
	Welcome to the NVIDIA Create Array Wilcard This woard will guide you through the creation of a new RALM array. Is continue, clock Next.	
	charl Next > Cent	1

3. Click Next and the following screen will appear.

10.50 300.001	c type of RAID array to croote.
Select the type .	ul PAID anay lo create.
RAID Mode:	Zimulia
Stripe size	641.

4. Click the RAID Mode list arrow and select "Spanning" while leaving the Stripe Size set to its default value as shown in the following screen

shot.

RAID Amoy Scient Please select the	ion ∶type o ^s RAID anrav :: creste,	
Select the type .	Í P.AID an ay lo create.	
RAID Mode:	Staron:	
Stripe size	641.	

5. Click Next and the following screen shot will appear.

Free Disks:			
Nan e	dianel	Device	
WDT WEB10SE-OTENAD		Master	
A Spanning array requires 1 or	more free ha	rd disks.	

6. Select the two drives that you want to use in the Spanned array.

WEC WE350SE-OCENA0	Pristary	Master		
mos moscoab-our 4.0	Secondary			
			12	

7. Click Next and the following screen shot will appear.

NVIDIA Create Array Wiza	ird	
	Completing the NVIDIA Create Array Wizard You have successfully completed the NVIDIG Greate Array wizard I close one wizard, closenish	
	< flork Timer Cent	el 🔤

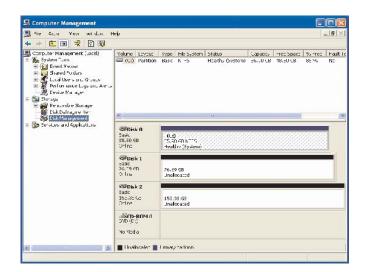
System Lasks	Neme	Status	Capadity	Interface	Channel	Device
💰 Hot Filig Array	Spanning	Healthy	68 95 GB			
Create Array	2 7/DC W0360G2 (00HN40	Healthy	37 48 GB	SALA	HIDTHY	Paster
	2 WDC W000050-000940					
Details						

A Spanned Array has been created.

3. Initializing NVRAID Array Disks

Now that the two-disk array has been created, it needs to be partitioned and formatted.

- 1. Click on Start \rightarrow Settings \rightarrow Control Panel.
- 2. Double click on Administrative Tools.
- 3. Double click on Computer Management.
- 4. Click on Disk Management. The following screen is displayed.



 The 153.38 GB is for the two disk striped array that was created earlier. To create a partition on it, right click on the Unallocated partition and select New Partition.

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mgl Dick Planagement Compare 1 Stage Services and Opplexitions Compare 1	System Toos Shared Fodes Cal Users and Grups Verformance Log and Alerts Covid Panager Storage Penformance Covid Panager Storage				-a_l: No
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Adholek 2 2005 1	4 H	STOP ROM 0	si 35 G5 alocated 2 New Fa Finter	12	

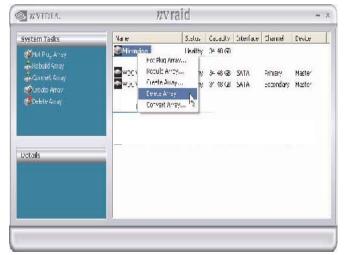
6. Follow the Wizard for setting up and formatting the partition. Once that is done, you can start using the newly created stripped array.

4. Deleting a RAID Array

NVRAIDMAN can be used to delete an Array. To delete an Array do the following.

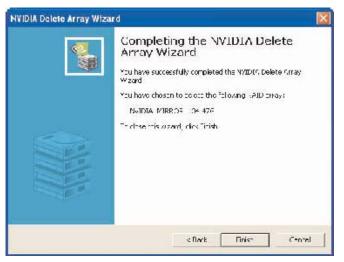
1. Launch the NVRAIDMAN application and right click on the RAID array that you want to delete (assuming that you have a RAID array already

created) as shown in the following screen shot.

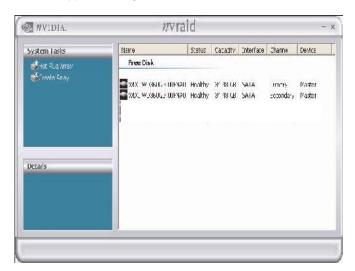


The above screen shot shows that there is a Mirrored array that will be deleted. After the "Delete Array..." has been selected, the following screen shot appear.

Welcome to the NVIDIA Delete Array Wizard This ward will guide you through the selection of a RAID array. Is continue, clok howt.
client Least > Center



 Click Finish and the array will be deleted and the following screen shot will appear showing all the free disks.



A similar process can be applied to delete any array created by NVIDIA RAID.

5. Rebuilding a RAID 1 Array

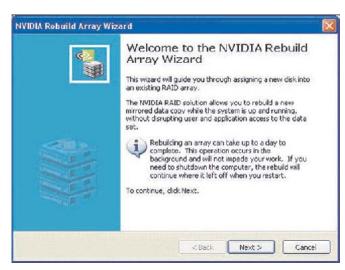
Rebuilding is the process of recovering data from one hard drive to another. All data is copied from one hard drive to another and then the data is synchronized between the two hard drives. After creating a mirrored array, you can rebuild the array using the following steps: 1. Go to Windows and run the NVIDIA RAID Management utility.

System Lasks	Nerre	Status	Capadity	Interface	Channel	Device
💰 Hot Filig Piraz	Mirroring	And a start of the	9× 48 GB			Lesson
Treate Array	2 WDC W0360G2 (00H943)	Healthy	37 18 08	SALA	HINCHY	Master
	WDC W006050-000940					
Details						

2. Right-click on Mirroring. Then the popup menu appears.

🕲 nvidia.		nvrai	d	_	_		1	- X
System Lasks	Vame		Status	Capadity	Interface	Channel	Cevice	
ØHot Pus Array ♣ Rebuild Grosy ♣ Convert Groay ∰ Ucodo Array ∰ Delete Groay		Hol, Eluy Array Rebuild Array Create Array Udets Array Convert Arra	۶ ۲۰۰۰ ۲۰۰۰	୨୦-48 ଉତ୍ତ ୬/ 18 ପଥ ୦୦-40 ଜମ	SATA GATA	rmary Terrondary	Master Mørte :	
Defnils						_		

3. From the popup menu, click Rebuild Array. The NVIDIA Rebuild Array Wizard appears.



4. Click Next. The Disk Selection page appears.

VVIDIA Rebui	ld Array Wizard			X
Disk Select Select a	inn disk from within the R	AL) array,		
1	member disk from the		Locaster	
Name		Channel	Device	-1
	. WE35060 0.1490 - WEGTOSE-OTTARO	Peroperty Secondary	Master	
			s Back. Steel 7	Cance

5. Select the drive that you want to rebuild by clicking it from the list, then click Next. The Completing the NVIDIA Rebuild Array page appears.

NVIDIA Rebuild Array Wiz	ard	X
	Completing the NVIDIA Rebuild Array Wizard ^{Nou have successfully conpleted the NVIDIA Repuile Array Wave ^{Onu have chosen to the id the tolewing diss:} WDC wDDMFD-000KA0 In the tolewing RAID array: NVIDIA MIRROS 1.94-476 Tole set to assert a difference to but the SR, the Brick}	
	c Back Trish Cance	

6. Click Finish.

More About Rebuilding Arrays

- Rebuilding Occurs in the Background
- The rebuilding process takes some time to complete, and occurs in the background so as not to affect the performance of the system.
- Rebuilding Applies Only to RAID 1 Rebuilding an array works only when using RAID 1. Rebuilding does not apply to RAID 0 and JBOD arrays.
- Rebuilding applies to a degraded fault tolerant array You can rebuild a degraded mirrored array using any available Free Disk or Dedicated Disk.