



March 11, 2016

**Re: Adding a Hard Drive to i3 Rackmount units**

To all of our customers and partners;

i3 Rackmount HVR/NVR units are able to accept up to eight storage hard drives (with hardware upgrade). i3 Rackmount HVR/NVR Servers are shipped with a solid state OS drive and at least one storage drive by default. The customer can add up to two three more storage drives to the unit with existing hardware or up to 7 additional storage drives with hardware upgrade (RocketRaid + SBB4). This bulletin outlines the standard procedure for installing, formatting and allocating new storage drives in accordance with i3 International policy.

**WARNING:** Please use i3-approved hard drives **only**, see the list below. Using any other brand or model of the hard drives will result in void warranty and may cause compromised HVR/NVR performance, including i3 Server malfunction and irreversible loss of data.

- Handle hard drives with care. Do not subject the drive(s) to physical shock.
- Ground yourself before handling hard drives. Static electricity may cause immediate or delayed damage to the HVR/NVR components, including hard drives.

**List of i3-approved WD SATA hard drives:**

- WD1003FBYZ (Western Digital 1TB Re)
- WD1004FBYZ (Western Digital 1TB Re)
- WD2000FYYZ (Western Digital 2TB Re)
- WD2004FBYZ (Western Digital 2TB Re)
- WD3000FYYZ (Western Digital 3TB Re)
- WD4000FYYZ (Western Digital 4TB Re)
- WD4002FYYZ (Western Digital 4TB Re)
- WD6001FSYZ (Western Digital 6TB Re)
- WD6002FRYZ (Western Digital 6TB Re)

**Parts/Tools needed:**

- Grounding wrist strap
- SATA box lock keys
- i3 approved hard drive(s)
- Phillips screwdriver

**i3 factory hard drive standards:**

- Only the i3-approved Western Digital hard drive models may be installed in the i3 HVR/NVR Server.
- All hard drives are to be formatted in NTFS format.
- All partitions must be named in a continuous alphabetical sequence, with no gaps.
- Windows 7e OS must reside on the solid state drive and must take up the entire volume of that drive (mSATA or SSD).
- The first storage drive must be installed in the SATA bay #1 and must include partitions D:\, E:\ and F:\
- D:\ partition must be 100GB or more. Factory-shipped units include a unit restore image as well as software installation and other supporting files on partition D:\.
- Partitions E:\ and F:\ must be divided equally and must take up the remainder of the first storage hard drive.
- During formatting process, all storage partitions are assigned a descriptive label: "HDD#", where # = the number label attached to the SATA slot on the SBB3 or SBB4 enclosure. This simplifies servicing when a defective drive needs to be replaced in the field.
- Storage hard drives 3TB or larger, must be converted to GPT Disk format.

**Step 1.**

Safely shut down the HVR/NVR (In SRX-Pro Server, File>Shutdown), unplug the power. Switch the power switch on the Power Supply to the OFF position (if present). Open the unit door and locate the SATA hard drive enclosure.

All hard drive bays should be locked.

**Note:** All Rackmount units come with at least one storage hard drive that is always installed inside the hard drive bay labeled HDD1.

Use the hard drive bay keys shipped with the unit to unlock the empty hard drive bay(s) labeled HDD2-HDD8. The keys are normally tie-wrapped to the back panel of the unit, along with the front unit door keys.

**Step 2.**

Once the empty bays are unlocked, place your thumb on the lower portion of the empty bay and push it downwards, this will make the bay come forward and the upper portion of the bay to elevate.

**Step 3.**

Firmly hold the top portion of the hard drive bay and pull the bay forward.

**Step 4.**

The empty hard drive bay will slide out of the SATA enclosure. Remove the bay from the enclosure.

**Ground yourself. Do not handle hard drives without wearing the antistatic wrist strap. Static electricity may damage the unit and/or the new hard drive. Any such damage through user negligence is not covered by the unit warranty.**

**Step 5.**

Slide the new hard drive inside the provided hard drive bay as shown on the picture. The hard drive circuitry should remain exposed (see image).

**Step 6.**

Place the bay with the inserted hard drive flat on a clean, leveled and stable surface. Locate four (4) small bay screws (inside the plastic bag taped to the front panel of your unit). With the Philips screwdriver screw the hard drive to the hard drive bay as shown on the picture.

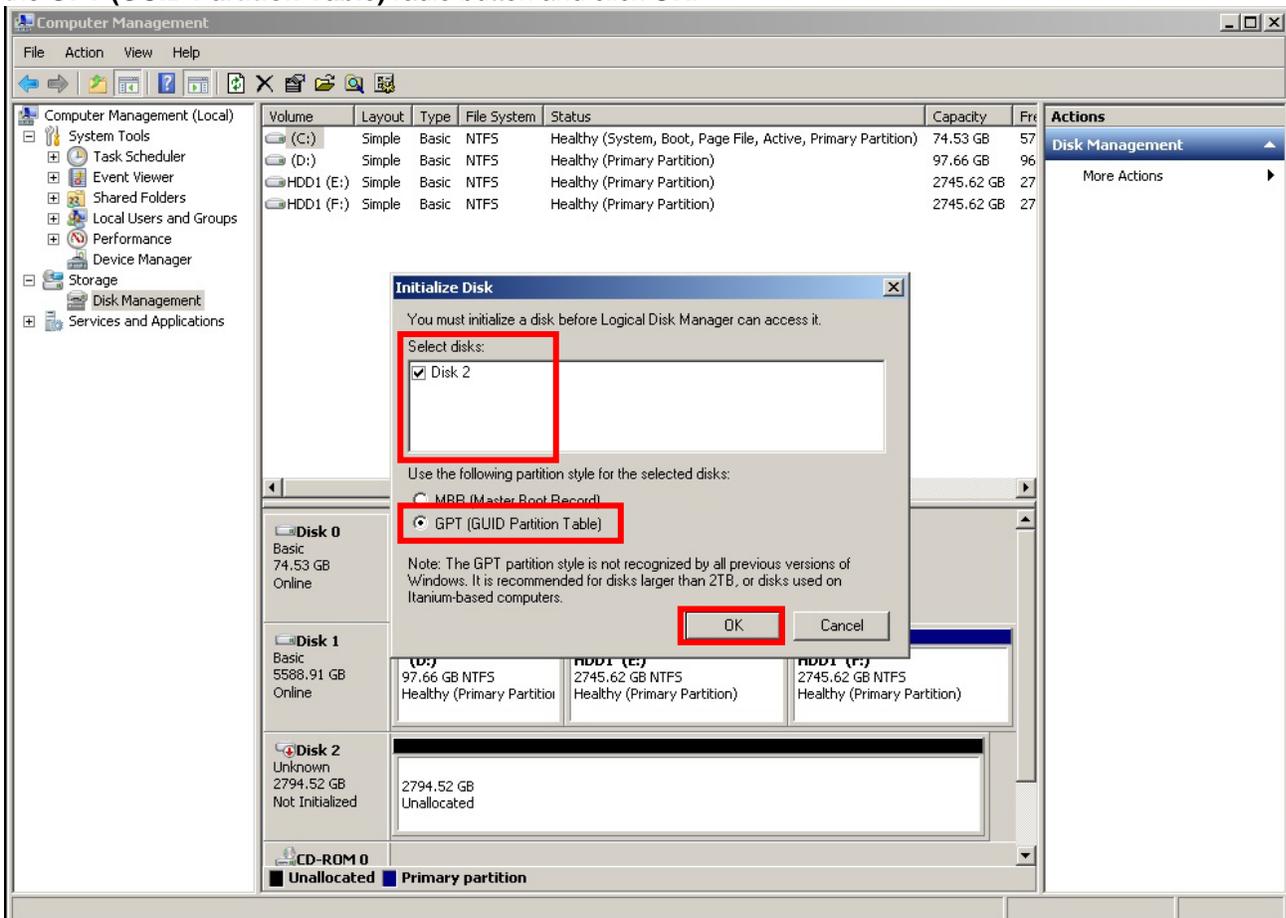
**Step 7.**

Slide the hard drive bay with the new hard drive inside the hard drive bay slot. Push the top portion of the bay into place to lock the bay into the SATA enclosure box. Use the SATA keys provided (tie-wrapped to the back of the unit) and lock all bays that contain hard drives. Repeat all above steps for all additional drives. Connect the power to the unit and power up the HVR/NVR.

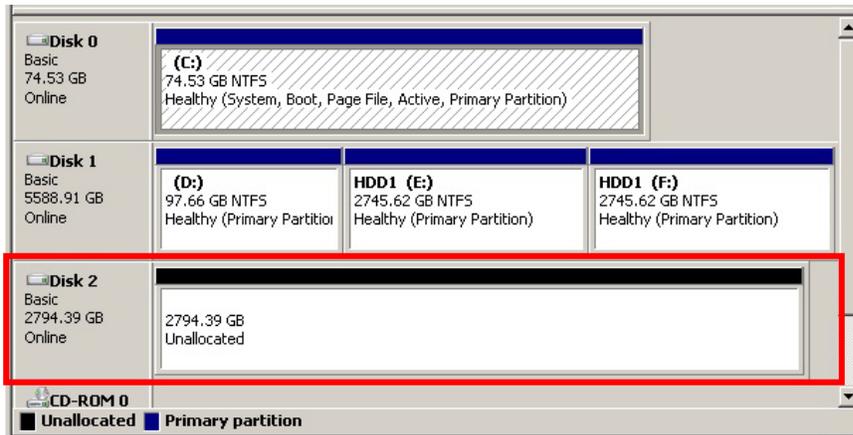
Now that the additional drive has been added to the system, it needs to be partitioned in accordance with i3 standards.

## Partitioning a storage Hard Drive in Windows 7

1. Wait as Windows 7e OS and the SRX-Pro Server finish loading. Log into the SRX-Pro Server as an administrator and press **Alt + Shift + Ctrl + F4** on your keyboard to exit SRX-Pro Server and access the Desktop. Administrator password will need to be re-entered.
2. Press the Windows key on your keyboard. In Start menu, right-click on **Computer** and select **Manage** from the context menu. Computer Management window will be displayed.
3. **Note:** This step is for HDDs 3TB and over only. Skip for 1TB and 2TB hard drives. If your newly added i3-approved WD hard drive is 3TB or larger, it must be converted to GPT format first. Initialize Disk window will be displayed automatically after the new HDDs (>3TB) are added.
4. In the Initialize Disk window, make sure all newly added drives that are 3TB and larger are selected. Select the **GPT (GUID Partition Table)** radio button and click **OK**.



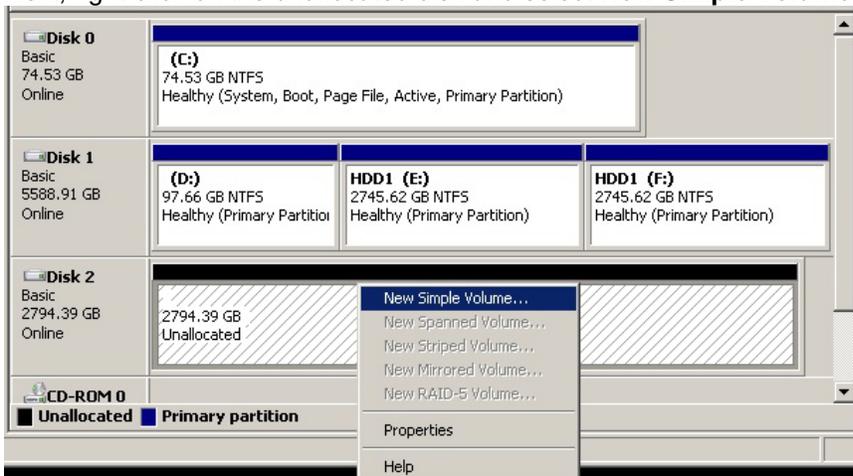
5. The newly added hard drive(s) will be marked as "Basic, Unallocated".



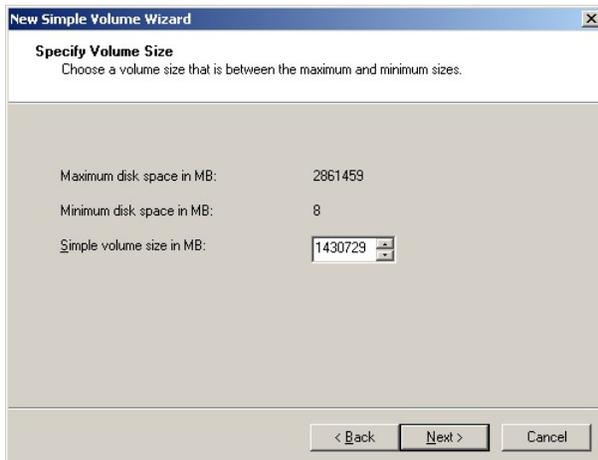
- Since all partitions, including the optical drive must be labeled in a continuous alphabetical sequence, with no gaps, start by temporarily assigning the optical drive (CD-ROM) the last available drive letter. Once all new drives are added, formatted and labeled, you will re-assign the appropriate drive letter to your optical drive. To change your CD-ROM drive letter, right-click on the CD-ROM 0 item and select **Change Drive Letter and Paths...**



- In the Change Drive Letter and Path window, select the last available drive letter from the drop-down menu. E.g. Drive letter "Z".
- Next, right-click on the unallocated disk and select **New Simple Volume...**



- Click **Next >** in the New Simple Volume Wizard Welcome screen.
- As per i3 standards, all storage disks must be split into two equal-sized partitions. In the next New Simple Volume Wizard window, copy the value from **Maximum disk space in MB:** line. Use Calculator and divide the value in 2. Enter the resulting value into the **Simple volume size in MB:** line and click **Next >**.



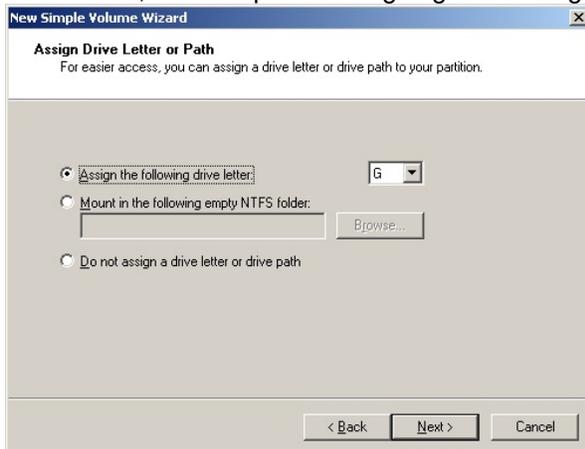
**New Simple Volume Wizard**

**Specify Volume Size**  
Choose a volume size that is between the maximum and minimum sizes.

Maximum disk space in MB: 2861459  
Minimum disk space in MB: 8  
Simple volume size in MB: 1430729

< Back Next > Cancel

11. Assign the drive letter to the new partition. Select the first letter available in the list and click **Next >**. In this case, the new partition is going to be assigned drive letter “**G**”.



**New Simple Volume Wizard**

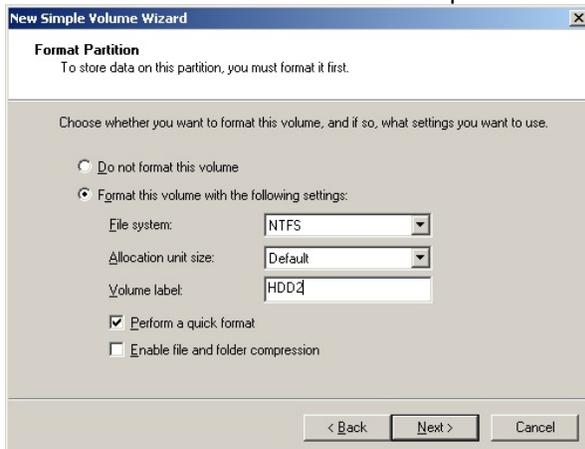
**Assign Drive Letter or Path**  
For easier access, you can assign a drive letter or drive path to your partition.

Assign the following drive letter: G  
 Mount in the following empty NTFS folder: Browse...  
 Do not assign a drive letter or drive path

< Back Next > Cancel

12. In the next screen, select **Format this volume with the following settings**: radio button. Make sure File system: is set to **NTFS**. Enter **Volume label**: and click **Next >**.

It is recommended to label the new partition in accordance with the physical SBB4 bay label, where the new drive was installed. This will aid in simpler unit servicing. In this case, volume label is **HDD2**.



**New Simple Volume Wizard**

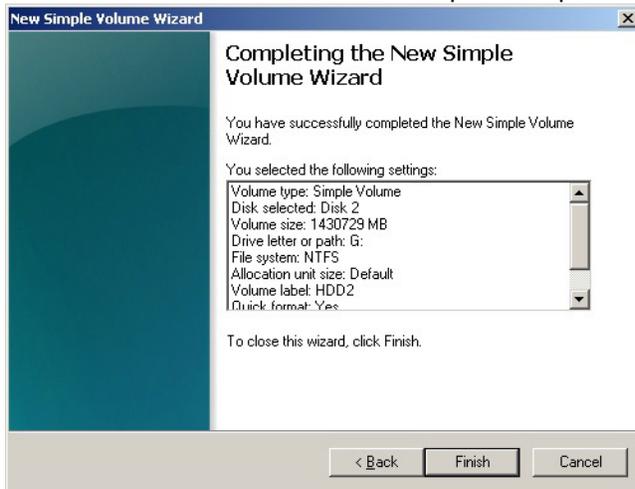
**Format Partition**  
To store data on this partition, you must format it first.

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

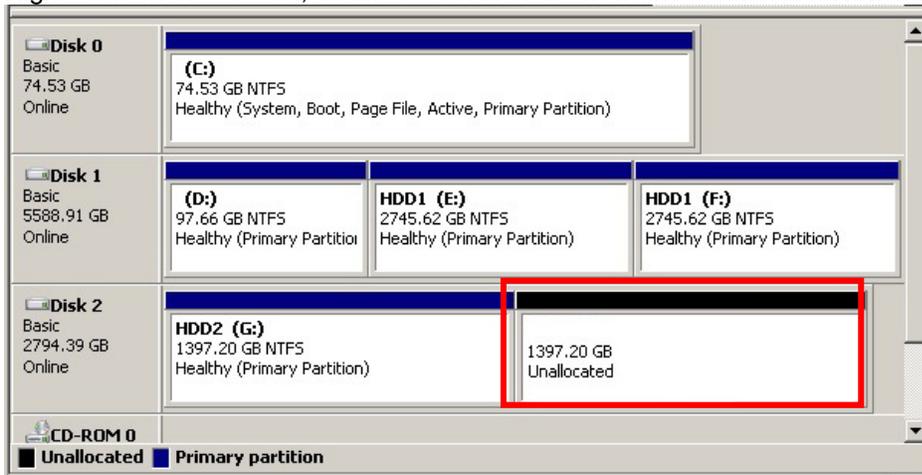
Do not format this volume  
 Format this volume with the following settings:  
File system: NTFS  
Allocation unit size: Default  
Volume label: HDD2  
 Perform a quick format  
 Enable file and folder compression

< Back Next > Cancel

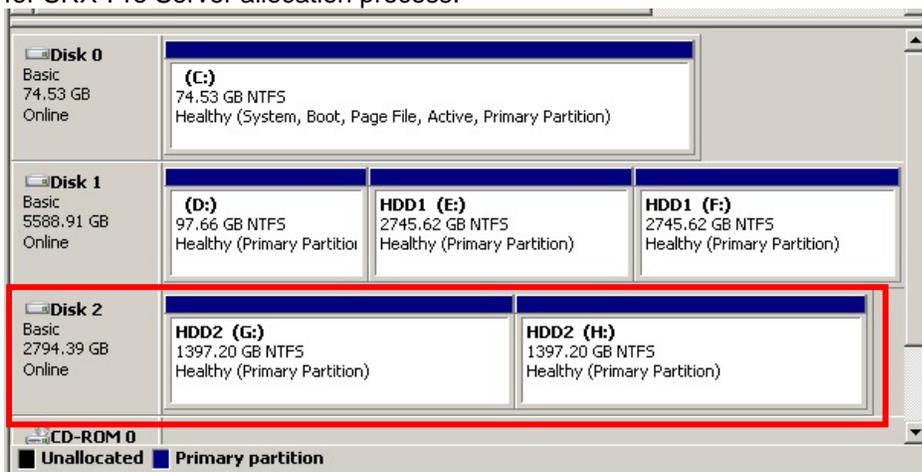
13. Click **Finish** in the final screen to complete the partitioning process.



14. Right-click on the second, unallocated half of the new drive and select **New Simple Volume...**



15. Repeat Steps 9-13 to format the second half of the new drive. The drive is now fully partitioned and ready for SRX-Pro Server allocation process.





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16. Repeat Steps 8-15 for all new unallocated drives until all new drives have been partitioned into 2 equal partitions. The drive letters of all partitions should form an uninterrupted sequence (i.e. E,F,G,H,I,J).
17. Once all new drives have been correctly partitioned, change the CD-ROM drive letter to the next in alphabetical sequence.
18. Close Computer Management window and re-start SRX-Pro Server software.
19. Once SRX-Pro Server launches log in and go to Setup -> Storage Setup and allocate all new partitions for video recording.

This completes the new hard drive configuration.

Please contact technical support if you have any questions or issues.

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Tel.: 1.877.877.7241

Live Chat: <http://i3chat.i3international.com/chat>

i3 International Inc.

Technical Support and Services