

Hardware Hacking - Feature #586

Partitioning a Western Digital Black2 For Dual Booting

03/26/2015 06:02 PM - Daniel Curtis

Status:	Closed	Start date:	03/26/2015																																										
Priority:	Normal	Due date:																																											
Assignee:	Daniel Curtis	% Done:	100%																																										
Category:		Estimated time:	3.00 hours																																										
Target version:		Spent time:	3.00 hours																																										
Description																																													
<p>I recently bought a Western Digital Black2 Hybrid SSD drive for my laptop. My initial assumption was that the drive would show up as two different drives, however this assumption was wrong; whole drive shows up as a single contiguous drive and NOT as a 120GB SSD and 1TB spinning disk.</p> <p>When I received the drive, only 120GB were accessible, and the extra 1TB was missing; the extra 1TB can only be initialized with the partitioning utility provided by Western Digital.</p> <p>To start, the 1TB needed to be initialized; I needed to download the hard drive partitioning utility (which is Windows only) in order for the extra 1TB to show up. Once the extra 1TB was initialized I wanted to partition my drive using gparted on a live lubuntu disc.</p> <ul style="list-style-type: none">This is the partition layout of my hybrid drive for a Windows 7 partition (100MB + 50GB) and an Arch Linux Partition (~61.5GB); along with a 1TB extended partition holding an NTFS partition for shared storage: <pre>fdisk -l</pre> <ul style="list-style-type: none"><i>Example output:</i> <pre>Disk /dev/sda: 1120.2 GB, 1120239009792 bytes 255 heads, 63 sectors/track, 136194 cylinders, total 2187966816 sectors Units = sectors of 1 * 512 = 512 bytes Sector size (logical/physical): 512 bytes / 512 bytes I/O size (minimum/optimal): 512 bytes / 512 bytes Disk identifier: 0x00075f14</pre> <table border="1"><thead><tr><th>Device</th><th>Boot</th><th>Start</th><th>End</th><th>Blocks</th><th>Id</th><th>System</th></tr></thead><tbody><tr><td>/dev/sda1</td><td></td><td>2048</td><td>206847</td><td>102400</td><td>7</td><td>HPFS/NTFS/exFAT</td></tr><tr><td>/dev/sda2</td><td>*</td><td>206848</td><td>105064447</td><td>52428800</td><td>7</td><td>HPFS/NTFS/exFAT</td></tr><tr><td>/dev/sda3</td><td></td><td>105064448</td><td>234440703</td><td>64688128</td><td>83</td><td>Linux</td></tr><tr><td>/dev/sda4</td><td></td><td>234440704</td><td>2187966815</td><td>976763056</td><td>5</td><td>Extended</td></tr><tr><td>/dev/sda5</td><td></td><td>234442753</td><td>2187966463</td><td>976761855+</td><td>7</td><td>HPFS/NTFS/exFAT</td></tr></tbody></table> <p>From the looks of it the SSD is 120032.592MB and when the western digital utility initialized the extra 1TB it split the SSD off at sector 234440703. So when working with tools like fdisk or gparted make sure the partitions for the SSD and HDD are created correctly.</p>				Device	Boot	Start	End	Blocks	Id	System	/dev/sda1		2048	206847	102400	7	HPFS/NTFS/exFAT	/dev/sda2	*	206848	105064447	52428800	7	HPFS/NTFS/exFAT	/dev/sda3		105064448	234440703	64688128	83	Linux	/dev/sda4		234440704	2187966815	976763056	5	Extended	/dev/sda5		234442753	2187966463	976761855+	7	HPFS/NTFS/exFAT
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History

#1 - 03/28/2015 07:36 AM - Daniel Curtis

- Description updated

- Status changed from New to In Progress

- % Done changed from 0 to 30

#2 - 04/08/2015 08:05 AM - Daniel Curtis

- Description updated

- Status changed from In Progress to Resolved

- % Done changed from 30 to 100

#3 - 04/11/2015 01:20 PM - Daniel Curtis

- Status changed from Resolved to Closed