Flashing IT Mode to the IBM-ServeRAID-M1015 SAS HBA

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The IBM M1015 is the go to Host Bus Adapter (HBA) for enthusiasts wanting a reliable and reasonably priced HBA for systems using advanced filesystems such as ZFS. I acquired a number of

these cards for my file-server upgrade. I needed cards to support my new <u>Norco RPC-4224 Chassis</u>. There is a lot of discussion on line about these cards, and re-flashing them to remove the boot & raid firmware. They are easily acquired on eBay for a reasonable cost with a little searching. I have now done this on three cards and not had any issues, however your mileage may vary.

Removing the IBM M1015 firmware

- 1. Download <u>Rufus</u> Bootable USB Key Utility
- 2. Format a USB key using the Rufus tool, making sure you choose the option to make it bootable with *FreeDOS*
- 3. Download the SAS tools & firmware from <u>SAS2008</u> and unzip to the USB Key
- 4. Boot from the key
- 5. Run the following commands to remove the IBM identity to allow it be be flashed with the LSI tools:

megarec -writesbr 0 sbrempty.bin megarec -cleanflash 0

6. Reboot and carry on to the EFI shell below

Using an EFI Shell to Flash your LSI9220-8i

- 1. Download a x86-64 (64-bit) shell and place on the USB key. Name the file shellx64.efi
- 2. My motherboard, a ASROCK Z77 Extreme 3 has an option to **Boot to EFI shell on Removable Device**

Using the UEFI Shell

- Use the map command to list block devices
- To access the USB Key, mount fs0:
- Then use the device name to select the device fs0:
- Use the DOS style cd and dir to manovure around the USB key

Erasing the existing firmware

There are only a few steps to change your firmware. The ROM is only really required if you want to boot from a drive on this controller. Otherwise it will just slowdown your boot times as the ROM Scans the SAS bus. With a number of cards in your system, it can really add to the boot time.

1. Erase the existing firmware

sas2flash.efi -o -e -6

Flash the new firmware
To Flash without the optionROM:

sas2flash.efi -o -f 2118it.bin

With the optionROM:

sas2flash.efi -o -f 2118it.bin -b mptsas2.rom

3. Grab the SAS address off the card, it's on the back on a green sticker (ie 500605B0xxxxxxx)

sas2flsh -o -sasadd 500605b0xxxxxxx

Once that is complete, the card is ready to host your disks for your ZFS filesystem.

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