Steps : -Setup the SSD for caching : -

1. Get the block size of the attached SSD

sudo blockdev --getsize64 usb-Generic\_Flash\_Disk\_008A8EBA-0:01200341237762013265920

1. Once the block size of SSD is know we need to calculate the SSD meta-data and remaining caching size.

Metadata size is calculated by 4 MB + (16 bytes \* nr\_blocks )

(for our configuration we took 256KB block size)

The result of above will be given in bytes, so to convert in sectors divide it by 512. The obtained result will be meta-data size on cache(SSD)

1. Create the SSD meta-data

sudo dmsetup create ssd-metadata --table '0 22502 linear /dev/disk/by-id/ata-Patriot\_Blaze\_09BC075C1E1700180353 0'

1. sudo dd if=/dev/zero of=/dev/mapper/ssd-metadata
2. Calculate the remaining size of SSD that will be used soley for caching purpose.

Total size of SSD /512 – (SSD size (calculated in step 2))

1. Now create the SSD cache

sudo dmsetup create ssd-blocks --table '0 234419146 linear /dev/disk/by-id/ata-Patriot\_Blaze\_09BC075C1E1700180353 22502'

1. Now get the block size of the partition you need to cache and create ssd block

sudo blockdev --getsz /dev/centos\_x130-65-157-206/home

do dmsetup create ssd-blocks --table '0 234419146 linear /dev/disk/by-id/ata-Patriot\_Blaze\_09BC075C1E1700180353 22502'

1. Finally create the actual cache with the below command

sudo dmsetup create home-cached --table '0 641851392 cache /dev/mapper/ssd-metadata /dev/mapper/ssd-blocks /dev/sda3 512 1 writeback default 0'

(For our configuration we used the writeback mode)

1. We can check the caching mechanism with the below command.

sudo dmsetup status /dev/mapper/home-cached

O/P:-  
0 1048576000 cache 1105/65536 144554 179602 336023 1797 0 1 28139 28139 0 2 migration\_threshold 2048 4 random\_threshold 4 sequential\_threshold 512