GVT Testing Guide

Revision <0.3>

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Revision History

| Rev. | Date | Author | Reason for Changes |
| --- | --- | --- | --- |
| 0.1 | 2017-2-27 | Cao, xinglong | First draft |
| 0.2 | 2017-3-23 | Cao, xinglong | Check error steps and update layout |
| 0.3 | 2017-5-9 | Cao, xinglong | Add solution test steps |

Contents

[**1.** **Acceptance** 4](#_Toc493163716)

[**1.1.** **Prepare test file** 4](#_Toc493163717)

[**1.2.** **Setup and execution** 4](#_Toc493163718)

[**2.** **OCL** 5](#_Toc493163719)

[**2.1.** **Prepare test file** 5](#_Toc493163720)

[**2.2.** **Setup and execution** 5](#_Toc493163721)

[**3.** **UMD** 7](#_Toc493163722)

[**3.1.** **Prepare test file** 7](#_Toc493163723)

[**3.2.** **Setup and execution** 7](#_Toc493163724)

[**4.** **Solution** 8](#_Toc493163725)

[**4.1.** **Lock CPU and GPU Hz** 8](#_Toc493163726)

[**4.2.** **Mount test clips** 8](#_Toc493163727)

[**4.3.** **Check mediasdk version** 8](#_Toc493163728)

[**4.4.** **Change command “perl test\_driver.pl -p c7.2\_skl\_64 -s perf\_density\_nn\_mp” in the “run\_c7.2\_skl\_64.sh”** 8](#_Toc493163729)

[**4.5.** **Update workload.yaml in the \_testsuite/configs/performance** 8](#_Toc493163735)

1. **Acceptance**
   1. **Prepare test file**
      1. **Clips: 10.67.116.100:/datadisk/share1/Test\_Clips/GVT\_test\_clips**
      2. **Script: 10.67.116.100:/home/share/Release/GVT/script/MSDK**
   2. **Setup and execution**
      1. **Automatically test:**

**Steps:**

**Edit TestItem to review test case**

**Edit msdkMediaTest.sh to change clips and output path**

**Mount -t nfs 10.239.141.10:/opt /opt/remote**

**Cd MSS-CentosXXX/umd/MediaSample/**

**Copy sample\_fei from /opt/remote/task/MSDK/Linux\_MSS2017R2-PV\_2016\_WW50.4\_b633/lin\_x64/bin to MediaSample folder**

**Execute ./msdkMediaTest.sh testItem > MSDK.log**

**Observe MSDK.log**

* + 1. **Manually test:**

**Steps:**

**Review 1toN, NtoN, VPP test steps in the test case**

**Run execution command**

1. **OCL**
   1. **Prepare test file**
      1. **Script: 10.67.116.100:/home/share/Release/GVT/script/OCL**
   2. **Setup and execution**
      1. **Special environment on GVT**

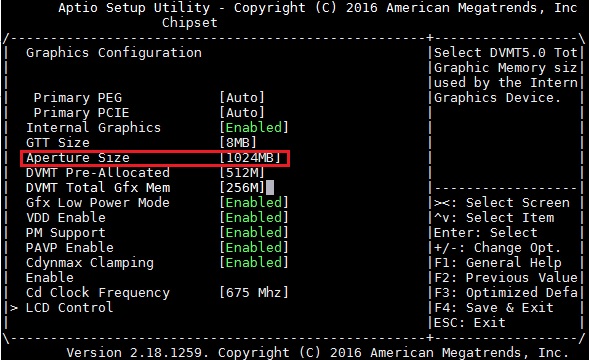
* **Add *i915.hang\_threshold=500* in the Host grub**

**linux /boot/vmlinuz-4.3.0-rc6-vgt+ root=UUID=d0f961cc-6246-4440-b0ea-eca91d510064 ro console=ttyS0,115200n8 intel\_iommu=igfx\_off i915.hvm\_boot\_foreground=1 log\_buf\_len=128M *i915.hang\_threshold=500***

* **Add *i915.enable\_hangcheck=0*** **in the Guest grub**

**linux16 /vmlinuz-3.10.0-327.el7.x86\_64 root=/dev/mapper/centos-root ro crashkernel=auto rd.lvm.lv=centos/root rd.lvm.lv=centos/swap rdshell i915.enable\_hangcheck=0 LANG=en\_US.UTF-8**

* **Change aperture size to 512 or 1024 in the Host BIOS**

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* **Change memory, low\_gm, high\_gm in the Guest start script**

**-m: set guest memory, it must less than Host memory size**

**Low\_gm: set guest aperture size, it must less than Host aperture size**

**High\_gm: set guest graphics memory, it must less than –m (guest memory)**

**/usr/bin/qemu-system-x86\_64 -m 12G -smp 2 \**

**-M pc -name kvmgt -cpu host \**

**-hda /root/centos0318.qcow \**

**-net nic -net tap,script=/etc/qemu-ifup \**

**-enable-kvm \**

**-vgt -vga vgt \**

**-vgt\_low\_gm\_sz 256 \**

**-vgt\_high\_gm\_sz 2560 \**

**-vgt\_fence\_sz 4 \**

**-machine kernel\_irqchip=on \**

**-net nic,model=e1000,macaddr=00:DE:EF:42:36:2E \**

**-bios /usr/bin/bios.bin \**

* **Other options**

**Change linux to text mode or graphics mode if need**

**Text mode: systemctl set-default multi-user.target and reboot**

**Graphics mode: systemctl set-default graphical.target and reboot**

* + 1. **Steps:**
       - **Edit run.sh to review test case**
       - **Execute ./run.sh > ocl.log**
       - **Observe ocl.log**

1. **UMD**
   1. **Prepare test file**
      1. **Clips: 10.239.141.10:/opt/local**
      2. **Script: 10.239.173.38:/home/media/work/share/lucas/lucasbdw\_114.tar.gz, lucasskl\_ori.tar.gz, lucas\_hevc.tar.gz  
         GVT script: 10.67.116.100:/home/share/Release/GVT/script/Lucas**
   2. **Setup and execution**
      1. **Setup test script  
         Steps:**

**Copy and extract lucasskl\_ori or lucasbdw to your local folder from 10.239.173.38**

**Copy all \*.sh from GVT script to lucas folder**

* + 1. **Setup remote clips  
       Steps:**

**mkdir -p** **/opt/remote**

**mkdir -p /opt/local\_2TB**

**mkdir -p /opt/local/logs**

**mkdir -p /opt/local/temp**

**mount -t nfs 10.239.141.10:/opt /opt/remote**

**mount -t nfs 10.239.140.19:/opt/local\_2TB /opt/local\_2TB**

**cd lucas folder**

**ln –s /opt/local\_2TB/content content**

**ln –s /opt/local\_2TB/content/EncoderContent EncoderContent**

**ln –s /opt/local\_2TB/content/EncoderContent mv\_encoder\_hevc**

**ln –s /opt/local/logs logs**

**ln –s /opt/local/temp temp**

* + 1. **Check mediasdk version**
       - * **/opt/intel/mediasdk/lib64/libmfxhw64.so should be the same as lucas/imports/mediasdk/libmfxhw64.so**
         * **Check command: strings libmfxhw64.so | grep version**
         * **If they are different, please replace lucas ones with /opt/remote/task/MSDK/Linux\_MSS2017-PV\_2016\_WWxx.x\_bxxx/lin\_x64/mediasdk/**
    2. **Copy config file for HEVC transcoding**

**copy HEVC sw and hw \*.so from MSDK (/opt/remote/task/MSDK/Linux…./lin\_x64/bin to /opt/intel/mediasdk/plugins/ for transcoding (or run /opt/remote/verify/test\_env.sh hevc)**

* + 1. **Execution**
       - * **Source setup.sh**
         * **Run ./new\_go\_ec/dc/tc\_skl.sh**
         * **Test log will generate in logs folder**

1. **Solution**
   1. **Lock CPU and GPU Hz**
      * **Copy follow command line to cpu\_lock.sh and execute**

**for((i=0;i<8;i++))**

**do**

**sudo echo 2000000 > /sys/devices/system/cpu/cpu${i}/cpufreq/scaling\_min\_freq**

**sleep 1**

**cat /sys/devices/system/cpu/cpu${i}/cpufreq/scaling\_min\_freq**

**sudo echo 2000000 > /sys/devices/system/cpu/cpu${i}/cpufreq/scaling\_max\_freq**

**sleep 1**

**cat /sys/devices/system/cpu/cpu${i}/cpufreq/scaling\_max\_freq**

**done**

**cat /proc/cpuinfo |grep MHz**

* + - **Copy follow command line to gpu\_lock.sh and execute**

**sudo echo 700 > /sys/kernel/debug/dri/0/i915\_max\_freq**

**sleep 1**

**cat /sys/kernel/debug/dri/0/i915\_max\_freq**

**sudo echo 700 > /sys/kernel/debug/dri/0/i915\_min\_freq**

**sleep 1**

**cat /sys/kernel/debug/dri/0/i915\_min\_freq**

* 1. **Mount test clips**

**mount -t nfs 10.239.129.129:/home/media/streams /home/media/streams**

* 1. **Check mediasdk version**
     + - * **/opt/intel/mediasdk/lib64/libmfxhw64.so should be the same as build/lin\_x64/bin/libmfxhw64.so**
         * **Check command: strings libmfxhw64.so | grep version**
         * **mount -t nfs 10.239.141.10:/opt /opt/remote**
         * **If they are different, please replace lucas ones with /opt/remote/task/MSDK/Linux\_MSS2017-PV\_2016\_WWxx.x\_bxxx/lin\_x64/mediasdk/**
  2. **Change command “perl test\_driver.pl -p c7.2\_skl\_64 -s perf\_density\_nn\_mp” in the “run\_c7.2\_skl\_64.sh”**

1. 5. **Update workload.yaml in the \_testsuite/configs/performance**
2. **Auto\_MSDK**
   1. **Copy test system from:** \\nnlmdpfls02.inn.intel.com\lab\_msdk\linux\_val\2017\_ww14.5\_Linux\_16.5.2\_FULL\_b676\_prod\_16.5.2-62001-ubit
   2. **Setup test environment by :**

**MSDK\_Test\_Cases\_Getting\_Started\_Guide.doc**

* 1. **Collect test case from 2ndos report**