## 一、 vulkan 开发环境的搭建

### 1、兼容驱动的更新

a、windows上的兼容驱动更新可在官网直接下载，运行

b、Linux Ubuntu 16.04 Intel (更新Intel 兼容驱动 )

Vulkan tools and drivers —— https://launchpad.net/~canonical-x/+archive/ubuntu/vulkan

（1）Adding this PPA to your system

You can update your system with unsupported packages from this untrusted PPA by adding .

:: sudo add-apt-repository ppa:canonical-x/vulkan

:: sudo apt-get update

(2) vulkan loader has dropped it's demos (can't ship prebuilt shaders) and vkcube is broken, but the driver is now fixed and Willems demos work (some might crash though)

::sudoapt-add-repository ppa:canonical-x/vulkan

:: sudo apt update

:: sudo apt install vulkan-utils mesa-vulkan-drivers

then run "vulkaninfo"

### 2、sdk的配置

sdk 下载(Windows /Linux/Android) <https://vulkan.lunarg.com/>

sdk 安装教程

[https://vulkan-](https://vulkan-tutorial.com/Development_environment#page_Vulkan_SDK)tutorial.com/Development\_environment#page\_Vulkan\_SDK

a、windows下安装可参考教程

b、在ubuntu 16.04下安装

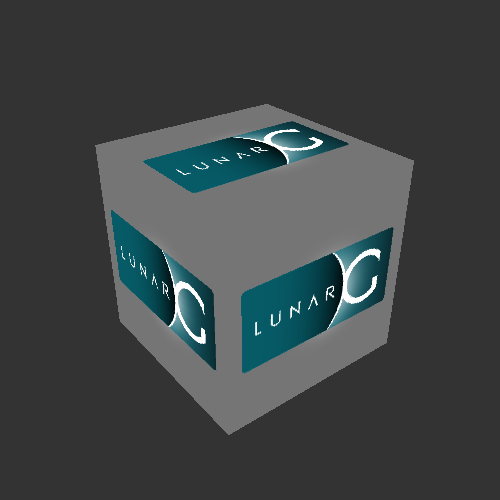
打开终端，执行以下命令 ,随后会自动生成一个VulkanSDK文件，

chmod +x vulkansdk-linux-x86\_64-xxx.run

./vulkansdk-linux-x86\_64-xxx.run

随后执行 sudo apt install libxcb1-dev xorg-dev 安装XCB依赖库

run ./build\_examples.sh 会生成./exmaples/build/cube可执行文件。运行该cube可看到



**notice**: 如果只下载了sdk ,但是显卡不支持vulkan的话，则会在运行cube示例时fail

### 3、依赖库的附加GLFW GLM

glfw 下载链接 http://www.glfw.org/ glm 下载链接 https://github.com/g-truc/glm/releases

a、windows 在vs 2015上开发可直接参考教程

b、linux的安装

必备工具：gcc的版本需支持c++(4.8 or later) cmake make

（1）glfw的install

进入 glfw目录下 ，运行

cmake .

make

然后执行 sudo make install 安装GLFW

（2）glm 的 install 可直接执行sudo apt install libglm-dev 安装

/home/sensetime/VulkanSDK/1.0.26.0/x86\_64/bin/glslangValidator -V shader.vert

/home/sensetime/VulkanSDK/1.0.26.0/x86\_64/glslangValidator -V shader.frag