LG Simulator and Python api Setup

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This document contains the information of Setup and Installation process for installing the the LG Simulator in Linux/Unix and with required package for run and communication over the ROS2, below are the list of package required –

* ROS2 LGSVL Bridge
* LG Simulator
* PythonAPI’s

## Pre requisite

AutowareAuto need to be setup and install before follow the steps and commands.

## Install ROS2 LGSVL Bridge

$ ade enter

$ cd adehome

$ git clone https://github.com/lgsvl/ros2-lgsvl-bridge.git

$ cd ros2-lgsvl-bridge

$ colcon build --cmake-args '-DCMAKE\_BUILD\_TYPE=Release'

$ source ros2-lgsvl-bridge/install/setup.bash

$ lgsvl\_bridge

## Install Lg\_Simulator

* Copy or install the modified simulator which we is available on the git repo or you can use the below command to install the lg simulator.

$ git clone --single-branch <https://github.com/lgsvl/simulator.git>

* Open terminal and go to the simulator package path
* Ubuntu - Install Vulkan user space library

$ sudo apt-get install libvulkan1

Run Simulator using the below command

$ sudo ./lg\_sim\_06/ lg\_simulator\_Modified\_binary/simulator

* Click Open Browser or Open any browser, enter localhost:8080 in address bar

Note: If it asked for register then register it and login with the same credential.

* Once it is logged in successfully, you will find the 4-tab in the left corner which are Maps, Vehicles, Clusters, Simulations.
* In the Maps tab, Add new map with the URL to an environment asset bundle or use below string to add the Cube Town Map
* Name - CubeTown
* Asset Bundle String-
* https://assets.lgsvlsimulator.com/085da734088f2b584075fce2d1d478b98ca076eb/environment\_CubeTown
* In the Vehicles tab, Add new vehicle with the URL to a vehicle asset bundle or use the below string to add the Lexus
* Name - Lexus2016
* Asset Bundle String- <https://assets.lgsvlsimulator.com/ea5e32fe566065c6d1bbf1f0728d6654c94e375d/vehicle_AWFLexus2016RXHybrid>
* In the Vehicle tab after adding the vehicle, Click the wrench icon next to the vehicle name

Add Bridge and Sensor configuration

* Click on Simulations tab and create a new Simulation. Give it a name and check the **API Only** option. Click **Submit**
* Select the API\_Only simulation from the simulations tab.
* Press the Play Button

The Unity Application window should now show API\_Only on the screen.

## PythonAPI

* Open terminal and go to the Python API folder and enter the below command to install the Python files and necessary dependencies.

$ cd adehome/PythonAPI/

$ pip3 install --user -e .

* Run the following example to see the API in action:

$ python3 ./quickstart/TestScript.py